MARINE CORPS ORDER P3500.15C W/CH 1

From: Commandant of the Marine Corps
To: Distribution List

Subj: AVIATION TRAINING AND READINESS MANUAL, VOLUME 2, TACTICAL FIXED-WING (SHORT TITLE: T&R MANUAL, VOLUME 2)

Encl: (1) Locator Sheet

1. Purpose. To revise training standards, procedures and policies regarding the training of tactical fixed-wing aircrews.

2. Cancellation. MCO P3500.15B.

3. Summary of Revision. Each chapter of this revision was substantially changed to incorporate the tenets of the Marine Aviation Campaign Plan. The major changes are as follows:

a. Each pilot chapter contains a unit template describing all like squadrons' core competencies, core and core plus skills, aircrew designations, and required minimum instructor designations and numbers.

b. Simulator events are Combat Readiness Percentage (CRP) weighted.

c. All core skills are contained in the Combat Ready and Combat Qualification Phases of training. Core plus skills are in the Full-Combat Qualification Phase of training.

4. Reserve Applicability. This Manual is applicable to the Marine Corps Reserve.

5. Certification. Reviewed and approved this date.

T. S. JONES
By direction

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MARINE CORPS ORDER P3500.15C Ch 1

From: Commandant of the Marine Corps
To: Distribution List

Subj: AVIATION TRAINING AND READINESS MANUAL, VOLUME 2, TACTICAL FIXED-WING, EA-6B SYLLABUS (SHORT TITLE: T&R MANUAL, VOLUME 2)

Encl: (1) New page inserts to MCO P3500.15C

1. Purpose. To transmit new page inserts to the basic Manual.

2. Action. Remove pages 2-1 through 2-88 of the Basic Manual and replace with pages 2-1 through 2-89 contained in the enclosure.

3. Summary of Changes. Chapter 2 for the EA-6B has been revised.

4. Filing Instructions. This change transmittal will be filed immediately following the signature page of the basic Manual.

5. Reserve Applicability. This Manual is applicable to the Marine Corps Reserve.

6. Certification. Reviewed and approved this date.

T. S. JONES
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LOCATOR SHEET

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(Indicate location(s) of cop(ies) of this Manual.)

T&R MANUAL, VOLUME 2

RECORD OF CHANGES

Log completed change action as indicated.

Change Number	Date of Change	Date Entered	Signature of Person Incorporated Change

T&R MANUAL, VOLUME 2

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2	EA-6B PILOT AND ELECTRONIC COUNTERMEASURES OFFICER (ECMO)
3	F/A-18 PILOT/WSO
6	KC-130 PILOT
7	KC-130 NAVIGATOR
8	KC-130 FLIGHT ENGINEER
9	KC-130 AIRBORNE RADIO OPERATOR (ARO) LOADMASTER (LM)
10	KC-130 FLIGHT MECHANIC

CHAPTER 1

AV-8B PILOT

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*** * NOTE * ***

Aircrew coordination shall be briefed on all flights and/or events.

MARINE ATTACK SQUADRON - AV-8B

UNIT TEMPLATE

NOTE

The capabilities defined and described in the core capability and unit template sections are provided to ensure each like squadron maintains a common base of training and depth of capabilities. When resources permit, and when in the judgment of the commander additional training would significantly increase the unit's Warfighting capability, training to a level above these base Capabilities is permitted. It is incumbent upon, and expected of, the Commander to balance any increase in the depth of core capabilities Against the long term health and readiness of his unit while staying Within his resource constraints.

1. **TABLE OF ORGANIZATION**

a. T/O 8860

b. The full squadron is 16 aircraft (10 Radar/Night Attack; 6 Day Attack) with 24 pilots, 29 officers and 172 enlisted Marines. The Detachment will be 6 aircraft of any mix acceptable in accordance with MEF tasking (Radar/Night and Day Attack) and comprised of nine pilots, 10 officers and 69 enlisted Marines. The squadron (-) will be the remaining aircraft (Radar/Night, and Day Attack), remaining pilots, officers and enlisted Marines once the detachment is deployed.

2. **SQUADRON CORE CAPABILITY.** A Core Capable Squadron is able to sustain the following minimum performance on a daily basis during sustained contingency/combat operations, assuming 100% PAA, 90% in reporting status and 90% T/O on hand in all MOS's. If < 90%, core capability will be degraded by a like percentage. The extent to which a core capable squadron is able to surge beyond its core capability is situation dependent.

a. During a 24 hour period, a Core Capable Squadron (i.e., a full 16 aircraft squadron), **at a minimum**, is able to sortie six mission capable Radar/Night Attack aircraft crewed by NSQ pilots. Within one hour of landing, launch three sorties, same criteria. Additionally, be able to provide at least six sorties of mission capable aircraft, not requiring NSQ pilots, in any mix necessary to perform any OAS mission. Perform the above from a main base, appropriate sized expeditionary bases, and/or from sea-based platforms when mission dictates. Up to 50% of the available sorties must be able to be applied to air defense operations, within the capabilities of the aircraft.

b. During a 24 hour period, a Core Capable Detachment is, **at a minimum**, able to sortie two mission capable Radar/Night Attack aircraft crewed by NSQ pilots. Within one hour of landing, launch two sorties, same criteria. Additionally, be able to provide two sorties of mission capable aircraft, not requiring NSQ pilots, in any mix necessary to perform any OAS mission. Perform the above from a main base, appropriate sized expeditionary bases, and/or sea-based platforms when mission dictates. Up to 100% of the available sorties must be able to be applied to air defense operations, within the capabilities of the aircraft.

c. During a 24 hour period, a squadron (-) (i.e., 10 aircraft remaining after a detachment is deployed from the full squadron) is, **at a minimum**, able to sortie four mission capable Radar/Night Attack aircraft crewed by NSQ pilots. Within one hour of landing, launch two sorties, same criteria. Additionally, be able to provide at least four sorties of mission capable aircraft, not requiring NSQ pilots, in any mix necessary to perform any OAS mission. Perform the above from a main base, appropriate sized expeditionary bases, and/or sea-based platforms when mission dictates. Up to 50% of the available sorties must be able to be applied to air defense operations, within the capabilities of the aircraft.

3. **BASIC SQUADRON CORE COMPETENCIES**. As a minimum, in order to be considered Core Competent, a squadron must possess the following numbers of aircrew who are at least 75% complete in each listed core skill. (Note: If a squadron is < T/O, required numbers are reduced by a like %)

CORE SKILL	FULL SQDN	DET	SQDN (-)
A/G	14	6	8
A/A	8	4	4
Radar A/A	8	4	4
LAT	9	4	5
NS	6	2	4
NSLAT	3	2	1
DEF ECM	4	2	2
PGM	8	4	4
AR	14	9	5
FBO	14	6	8
FCLP(D)	12	9	3
FCLP(N)	9	6	3
CQ(D)	12	9	3
CQ(N)	4	4	0

4. **REQUIRED INDIVIDUAL CORE SKILLS AND SORTIES**. As a minimum, in order to be considered core skills complete, an individual must complete the sorties below. Initial qualifications must fly initial sorties. Refresher aircrew, previously core skill complete in a specific core skill, at a minimum must complete the "R" coded sorties.

	AG	AA	Radar AA	LAT	NS	NSL	Def ECM	PGM	AR	FBO	FCLP	CQ	TOTAL
Initial	12	6	2	5	9	4	1	1	2	2	2	2	48
Refresher	8	3	1	4	6	2	1	1	0	2	2	2	32
T&R Codes	FAM 203R	AA 264R	AA 341	LAT 222R	NS 277R	NS 362	EW 229R	AG 217R	AR 207	FBO 372R	FCLP 292R	CQ 296R	
R=REFRESHER	AG 215R	AA 265	AA 342R	LAT 223R	NS 278R	NS 363R			AR 208	FBO 373R	FCLP 293R	CQ 297R	
	AG 216R	AA 266		LAT 224R	NS 279R	NS 364							
	AG 218R	AA 267		LAT 225	NS 280R	NS 365R							
	AG 219R	AA 268R		LAT 226R	NS 281								
	OAS 236	AA 269R			NS 282R								
	OAS 237				NS 283								
	OAS 238				NS 284								
	OAS 239R				NS 285R								
	OAS 240R												
	OAS 241R												
	ESC 242												

5. **SORTIES REQUIRED TO MAINTAIN INDIVIDUAL CORE SKILLS**. For each three month period after achieving core skills completion, a pilot shall be required to fly the following number of sorties in each skill area to maintain that competency. These sorties are an absolute minimum, meant to maintain basic Core Skills and do not meet OPNAV flight minimums. Refer to Volume II, Figure 1-1, 7509 Refly interval; CRP.

A/G	A/A	Radar A/A	LAT	NS	NSL	DEF ECM	PGM	AR	FBO	FCLP	CQ
4	2	1	1	3	1	1	1	#	1	*	*

* CQ will be updated per NAVAIR 00-80-104T, LSO NATOPS. FCLP is updated in preparation for CQ. If pilot is CQ current, FCLP currency is automatically updated.

\# AR. After initial qualification, annual competency is maintained by flying aerial refueling in conjunction with another core skill sortie.

6. **SQUADRON FLIGHT LEADER/INSTRUCTOR QUALIFICATIONS**. As a minimum, in order for a squadron to be considered Core Competent, it must possess the following numbers of aircrew in the listed flight leadership/instructor categories. (Note: If the squadron is < T/O, required numbers are reduced by a like %)

DESIGNATION	FULL SQDN	DET	SQDN(-)	REMARKS
SECTION LDR	10	4	6	Includes DIV LDR, ACMFL
DIVISION LDR	6	2	4	
ACM FLIGHT LDR	4	2	2	Includes ACTI, WTI
LATI	3	1	2	Includes NSI, WTI
NSI	3	1	2	May Include WTI
ACTI	2	1	1	Includes WTI
WTO	3	1	2	Includes WTI
WTI	2	0	2	Includes WTI
MISSION CDR	3	1	2	Includes WTI
LSO	3	2	1	Includes TLSO, ALSO, V/STOL LSO
LSS	3	2	1	

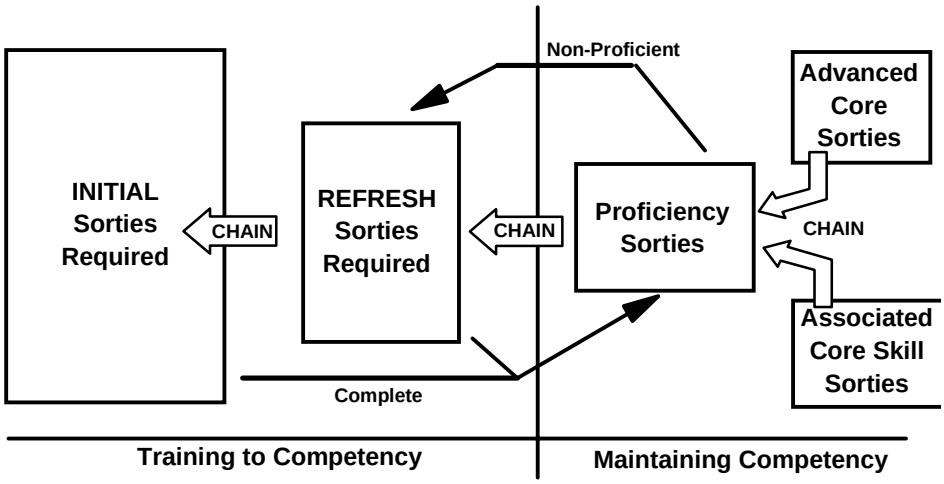
7. **SORTIES REQUIRED TO QUALIFY FOR DESIGNATION AS FLIGHT LD/IP**

	SL	DL	ACMFL	LATI#	NSI#	ACTI #	WTO#	WTI	MC
Refresher	1	1	1	3	2	3	2	*	1

* See MAWTS Catalog.

\# For planning factors the anticipated minimum work up sorties are: LATI = 3, NSI = 4, ACTI = 8, WTO = 4. Squadron Commanders may develop and tailor flight lead designation programs that reflect the experience, currency and proficiency of prospective designees.

Proficiency Management Model

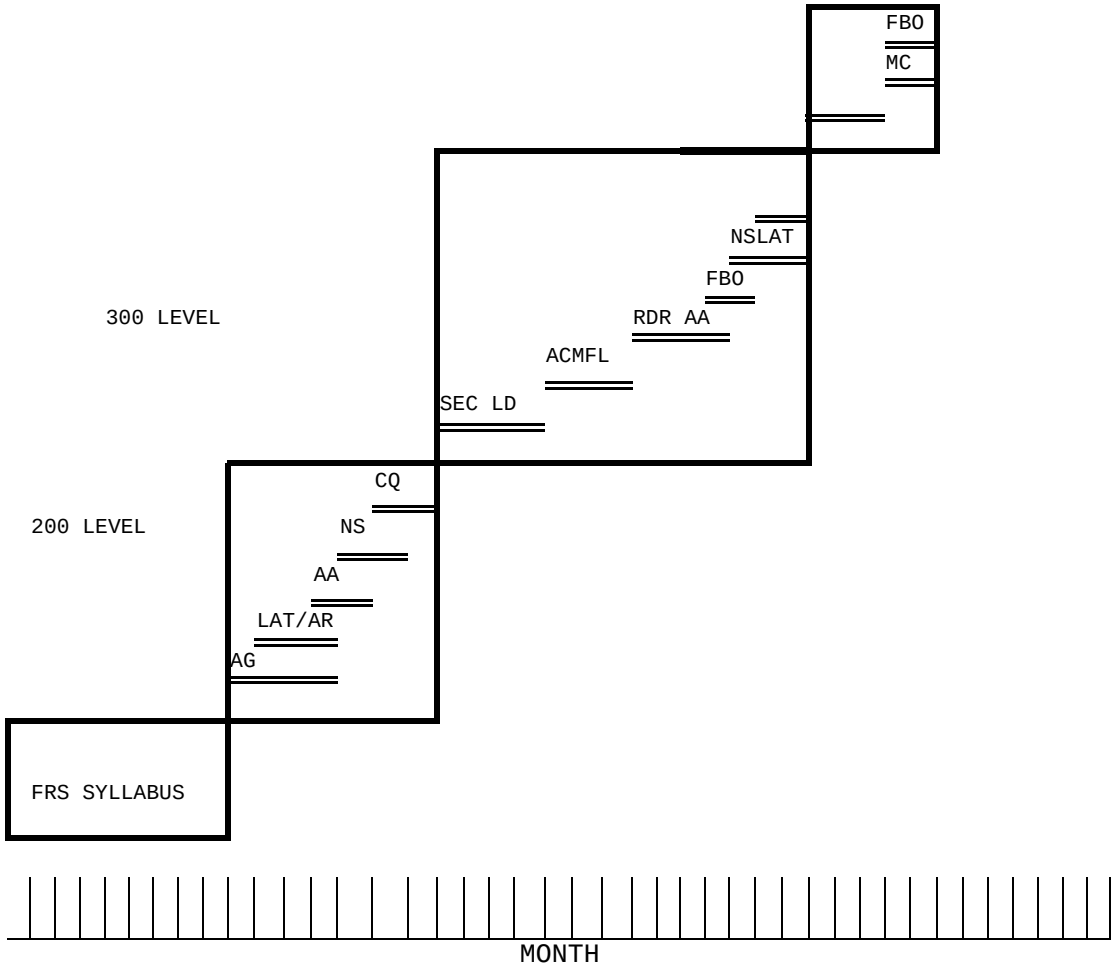


Standards:

- **Core Skill Competent @ 75% of Initial or Refresh Sorties complete**
- **Core Skill Complete @ 100% of Initial or Refresh Sorties complete**
- **Proficiency Interval begins after Core Complete**
- **Proficiency Interval applies in a particular Core Skill <u>only</u>**

-Proficiency sorties required every 3 months to maintain core skill competency.
-If 3 month proficiency expires, 100% refresh sorties required for competency.

AV-8B CORE PROGRESSION MODEL



100. PROGRAMS OF INSTRUCTION (POI) FOR BASIC AND TRANSITION PILOT

WEEKS	COURSE/PHASE	ACTIVITY
1-4	TAV-8B Ground Training and Flight Simulator	Training Squadron
5-7	TAV-8B V/STOL Familiarization	Training Squadron
8-36	Combat Capable Training	Training Squadron
37-65	Combat Ready Training	Tactical Squadron
66-80	Combat Qualification Training	Tactical Squadron
81-85	Full-Combat Qualification Training	Tactical Squadron

101. POI FOR REFRESHER PILOT

WEEKS	COURSE/PHASE	ACTIVITY
1-2	AV-8B Ground Training and Flight Simulator	Training Squadron
3-8	Combat Capable Training	Training Squadron
9-20	Combat Ready Training	Tactical Squadron
21-30	Combat Qualification Training	Tactical Squadron
31-48	Full-Combat Qualification Training	Tactical Squadron

102. POI FOR MODIFIED REFRESHER PILOT

WEEKS	COURSE/PHASE	ACTIVITY
1	AV-8B Ground Training and Flight Simulator	Training Squadron
2-3	Combat Capable Training	Training Squadron
4-15	Combat Ready Training	Tactical Squadron
16-25	Combat Qualification Training	Tactical Squadron
26-43	Full-Combat Qualification Training	Tactical Squadron

103. POI FOR INSTRUCTOR UNDER TRAINING (IUT)

WEEKS	COURSE/PHASE	ACTIVITY
1-5	AV-8B Instructor Pilot (IP)	Training Squadron

104. POI FOR RADAR/NIGHT ATTACK DIFFERENCES

WEEKS	COURSE/PHASE	ACTIVITY
1-2	RADAR/NIGHT ATTACK Ground Training and Flight Simulator	Tactical Squadron
3-4	Combat Ready Training	Tactical Squadron

110. GROUND TRAINING COURSES OF INSTRUCTION

COURSE	ACTIVITY
TAV-8B Familiarization and Fundamentals	Training Squadron
BCWD	Training Squadron
TCWD	Tactical Squadron
Offensive Air Support	Tactical Squadron
Air-to-Air Warfare	Trng/Tact Squadron
Low Altitude Tactics	Trng/Tact Squadron
Electronic Warfare	Tactical Squadron

Night Attack/Radar Night Attack Differences	Tactical Squadron
Night Systems	Tactical Squadron
RADAR Systems	Tactical Squadron
RADAR Tactics	Tactical Squadron

112. SQUADRON LEVEL TRAINING. Local Course Rules, squadron SOP, and Airframe Differences.

120. FLIGHT TRAINING FOR BASIC AND TRANSITION PILOT

1. Combat Capable Training

STAGE	FLIGHTS	HOURS	PERCENT
Basic Qualification	-	-.-	25.0
AV-8B Familiarization	15	22.5	3.4
Night Familiarization	3	4.5	1.2
Instruments	2	3.0	1.2
Formation	4	6.0	1.0
Aerial Refueling	0	0.0	0.0
Navigation	2	2.8	1.2
Air-to-Ground	10	10.0	8.5
Low Altitude Tactics (LAT)	1	1.0	1.5
Air-to-Air	4	4.0	5.5
Forward Base Operations (FBO)	10	5.3	6.0
Field Carrier Landing Practice (FCLP)	6	3.0	4.8
Combat Capable/NATOPS Eval	0	0.0	0.0
TOTAL	**57**	**62.1**	**59.3**

2. Combat Ready Training

STAGE	FLIGHTS			HOURS			PERCENT		
	D	N	R	D	N	R	D	N	R
Familiarization	1	1	1	1.5	1.5	1.5	0.2	0.2	0.2
Aerial Refueling	2	2	2	2.0	2.0	2.0	0.2	0.2	0.2
Air-to-Ground	4	5	5	4.0	5.0	5.0	1.5	1.5	1.5
Low Altitude Tactics	5	5	5	5.0	5.0	5.0	1.6	1.6	1.6
Electronic Warfare	1	1	1	1.0	1.0	1.0	0.3	0.3	0.3
Offensive Air Support	6	6	6	6.0	6.0	6.0	1.9	1.9	1.9
Escort	1	1	1	1.3	1.3	1.3	0.3	0.3	0.3
Air-to-Air	6	6	6	6.0	6.0	6.0	1.8	1.8	1.8
Night Systems	0	9	9	0.0	9.9	9.9	0.0	2.7	2.7
FCLP	2	2	2	2.0	2.0	2.0	0.6	0.6	0.6
Carrier Qualification	2	2	2	2.0	2.0	2.0	0.8	0.8	0.8
TOTAL	**30**	**40**	**40**	**30.8**	**41.7**	**41.7**	**9.2**	**11.9**	**11.9**

3. Combat Qualification Training

STAGE	FLIGHTS			HOURS			PERCENT		
	D	N	R	D	N	R	D	N	R
Section OAS	7	7	7	7.0	7.0	7.0	6.4	6.4	6.4
Escort	1	1	1	1.3	1.3	1.3	0.5	0.5	0.5
ACM Flight Lead	4	4	4	4.0	4.0	4.0	3.7	3.7	3.7
Radar Air-to-Air	0	0	2	0.0	0.0	2.0	0.0	0.0	1.0
Division OAS	5	5	5	5.0	5.0	5.0	4.6	4.6	4.6
Night Systems	0	4	4	0.0	4.0	4.0	0.0	2.3	2.3
Forward Base Operations	2	2	2	2.0	2.0	2.0	1.0	1.0	1.0
TOTAL	**19**	**23**	**25**	**19.3**	**23.3**	**25.3**	**16.2**	**18.5**	**19.5**

4. Full-Combat Qualification Training

STAGE	FLIGHTS			HOURS			PERCENT		
	D	N	R	D	N	R	D	N	R
Offensive Air Support	3	3	3	4.0	4.0	4.0	3.0	3.0	3.0
Mission Commander	1	1	1	1.5	1.5	1.5	1.0	1.0	1.0
Forward Based Ops	1	1	1	1.5	1.5	1.5	1.0	1.0	1.0
TOTAL	**5**	**5**	**5**	**7.0**	**7.0**	**7.0**	**5.0**	**5.0**	**5.0**

TOTAL FOR BASIC AND TRANSITION PILOT	**111**	**125**	**127**	**119.2**	**134.1**	**136.1**

121 FLIGHT TRAINING FOR REFRESHER PILOT

1. Combat Capable Training

STAGE	FLIGHTS	HOURS
TAV-8B Familiarization	5	7.5
AV-8B Familiarization	3	4.5
Night Familiarization	1	1.5
Instruments	1	1.5
Formation	2	3.0
Navigation	1	1.3
Air-to-Ground	7	7.0
Combat Capable Eval	1	1.3
TOTAL	**21**	**27.6**

2. Combat Ready Training

STAGE	FLIGHTS			HOURS		
	D	N	R	D	N	R
Familiarization	1	1	1	1.5	1.5	1.5
Air-to-Ground	5	5	5	5.0	5.0	5.0
Low Altitude Tactics	4	4	4	4.0	4.0	4.0
Electronic Warfare	1	1	1	1.0	1.0	1.0
Offensive Air Support	3	3	3	3.0	3.0	3.0
Air-to-Air	3	3	3	3.0	3.0	3.0
Night Systems	6	6	6	6.9	6.9	6.9
FCLP	2	2	2	2.0	2.0	2.0
CQ	2	2	2	2.0	2.0	2.0
TOTAL	**27**	**27**	**27**	**28.4**	**28.4**	**28.4**

3. Combat Qualification Training

STAGE	FLIGHTS			HOURS		
	D	N	R	D	N	R
Offensive Air Support	2	2	2	2.0	2.0	2.0
Air-to-Air	2	2	2	2.0	2.0	2.0
Night Systems (NS)	0	2	2	0.0	2.0	2.0
FBO	2	2	2	2.0	2.0	2.0
TOTAL	**6**	**8**	**8**	**6.0**	**8.0**	**8.0**

4. Full-Combat Qualification Training

STAGE	FLIGHTS			HOURS		
	D	N	R	D	N	R
Offensive Air Support	1	1	1	1.5	1.5	1.5
Mission Commander	1	1	1	1.5	1.5	1.5
Forward Base Operations	2	2	2	2.0	2.0	2.0
TOTAL	**4**	**4**	**4**	**5.0**	**5.0**	**5.0**
TOTAL FOR REFRESHER PILOT	**58**	**60**	**60**	**67.0**	**69.0**	**69.0**

122. FLIGHT TRAINING FOR MODIFIED REFRESHER PILOT (DIFDEN/out of type 486 days or greater but less than 730 days)

1. Combat Capable Training

STAGE	FLIGHTS	HOURS
TAV-8B Familiarization	2	3.0
AV-8B Familiarization	1	1.5
Instruments	2	3.0
Formation	1	1.5
Navigation	1	1.3
Air-to-Ground	1	1.0
Combat Capable Check	1	1.3
TOTAL	**9**	**12.6**

123. FLIGHT TRAINING FOR SAFE FOR SOLO REFRESHER PILOT (DIFDEN/out of type 366 days or greater but less than 485 days)

STAGE	FLIGHTS	HOURS
Safe for Solo	1	1.3

124. FLIGHT TRAINING FOR INSTRUCTOR UNDER TRAINING

STAGE	FLIGHTS	HOURS
TAV-8B Familiarization	5	7.5
AV-8B Instructor Pilot	6	6.5
TOTAL	**11**	**14.0**

125. FLIGHT TRAINING FOR RADAR/NIGHT ATTACK DIFFERENCES

1. Combat Capable Training. NONE.

2. Combat Ready Training

STAGE	FLIGHTS			HOURS		
	D-N	D-R	N-R	D-N	D-R	N-R
Familiarization	1	1	1	1.5	1.5	1.5
Air-to-Ground	0	1	1	0	1.0	1.0
Offensive Air Support	3	3	0	3.0	3.0	0
Air-to-Air	0	1	1	0	1.0	1.0
TOTAL	**4**	**6**	**3**	**4.5**	**6.5**	**3.5**

126. SPECIAL TRAINING FLIGHTS

STAGE	FLIGHTS	HOURS
Requirements, Quals, Designations	6	6.0
Forward Based Operations	4	4.0
Special Weapons Delivery	4	4.0
TOTAL	**14**	**14.0**

130. SIMULATOR TRAINING FOR BASIC AND TRANSITION PILOT

1. Combat Capable Training

STAGE	PERIODS	HOURS	CRP
Day Familiarization	13	22.0	0.0
Night Familiarization	1	1.5	0.0
Instruments	4	6.0	0.0
Navigation	3	5.0	0.0
Air-to-Ground	8	9.3	0.0
Low Altitude Tactics (LAT)	0	0.0	0.0
Air-to-Air	1	1.0	0.0
Forward Base Operations	2	2.0	0.0
Field Carrier Landing Practice	2	1.6	0.0
Combat Capable/NATOPS Evaluation	2	2.3	0.7
TOTAL	**36**	**50.7**	**0.7**

2. Combat Ready Training

STAGE	PERIODS			HOURS			CRP		
	D	N	R	D	N	R	D	N	R
Familiarization	1	1	3	1.5	1.5	4.5	0.1	0.1	0.1
Instrument	1	1	1	1.0	1.0	1.0	0.1	0.1	0.1
Navigation	1	1	2	1.5	1.5	3.0	0.1	0.1	0.1
Air-to-Ground	3	5	5	3.0	5.0	5.0	0.5	0.5	0.5
Low Altitude Tactics	2	2	2	2.0	2.0	2.0	0.2	0.2	0.2
Electronic Warfare	2	2	2	2.0	2.0	2.0	0.2	0.2	0.2
Offensive Air Support	6	6	6	6.0	6.0	6.0	0.6	0.6	0.6
Air-to-Air	2	2	14	2.0	2.0	14.0	0.2	0.2	0.2
Night Systems	0	7	7	0.0	8.5	8.5	0.0	0.7	0.7
FCLP	2	2	2	3.0	3.0	3.0	0.2	0.2	0.2
Carrier Qualification	2	2	2	2.0	2.0	2.0	0.2	0.2	0.2
TOTAL	**22**	**31**	**46**	**24.0**	**34.5**	**51.0**	**2.4**	**3.1**	**3.1**

3. Combat Qualification Training

STAGE	PERIODS	HOURS	CPR
Radar Air-to-Air	1	1.0	0.1
Night Systems	2	3.0	0.2
Forward Based Operations	2	2.0	0.2
Total	**5**	**6.0**	**0.5**

4. Full-Combat Qualification Training

STAGE	PERIODS	HOURS
TOTAL	**0**	**0.0**

	PERIODS			HOURS		
	D	N	R	D	N	R
TOTAL SIMS FOR BASIC AND TRANSITION PILOT	**63**	**72**	**87**	**80.7**	**91.2**	**107.7**

131. SIMULATOR TRAINING FOR REFRESHER PILOT

1. Combat Capable Training

STAGE	PERIODS	HOURS
Familiarization	9	15.0
Navigation	1	2.0
Air-to-Ground	7	8.3
Combat Capable Evaluation	1	1.0
TOTAL	**18**	**26.3**

2. Combat Ready Training

STAGE	PERIODS			HOURS		
	D	N	R	D	N	R
Familiarization	1	1	1	1.5	1.5	1.5
Instrument	1	1	1	1.0	1.0	1.0
Navigation	1	1	2	1.5	1.5	3.0
Low Altitude Tactics	2	2	2	2.0	2.0	2.0
Offensive Air Support	6	6	6	6.0	6.0	6.0
Air to Air	1	1	12	1.0	1.0	12.0
Night Systems	0	4	4	0.0	8.5	8.5
FCLP	2	2	2	3.0	3.0	3.0
CQ	2	2	2	2.0	2.0	2.0
TOTAL	**16**	**20**	**32**	**18.0**	**26.5**	**39.0**

3. Combat Qualification Training

STAGE	PERIODS	HOURS
Air-to-Air	1	1.0
Night Systems	2	3.0
TOTAL	**3**	**4.0**

4. Full-Combat Qualification Training

STAGE	PERIODS			HOURS		
TOTAL	**0**			**0.0**		
	D	N	R	D	N	R
TOTAL FOR SIMULATOR REFRESHER	**34**	**41**	**53**	**48.3**	**56.8**	**69.3**

132. SIMULATOR TRAINING FOR INSTRUCTOR UNDER TRAINING

STAGE	PERIODS	HOURS
TAV-8B Familiarization	1	1.0
Landing Site Instructor	1	1.0
Instruments	4	4.3
TOTAL	**6**	**6.3**

133. SIMULATOR TRAINING FOR NIGHT ATTACK AND RADAR NIGHT ATTACK DIFFERENCES

1. Combat Capable Training. NONE

2. Combat Ready Training

STAGE	PERIODS			HOURS		
	D-N	D-R	N-R	D-N	D-R	N-R
Familiarization	1	3	2	1.5	4.5	3.0
Navigation	1	2	1	1.5	3.0	1.5
Air to Ground	0	1	1	0.0	1.0	1.0
Offensive Air Support	3	3	0	3.0	3.0	0.0
Air to Air	0	1	1	0.0	1.0	1.0
TOTAL	**5**	**10**	**5**	**6.0**	**12.5**	**6.5**

140. FLIGHT/EVENT/SIMULATOR PERFORMANCE REQUIREMENTS

1. General

a. This manual generalizes mission guidance to allow for local conditions and to allow this manual to remain unclassified. CMC(A) and CG MCCDC encourage squadrons to use the full range of tactics in the tactical manuals and adopt the latest developed and proven tactics.

b. This manual designs the combat capable training phase for an instructor and trainee to maximize training and to minimize syllabus support hours.

c. All flights shall terminate with a comprehensive debrief with emphasis on the aircrew's performance using all evaluation techniques, i.e., TACTS, VTR, participating aircrews, and GCI personnel.

d. Pilots will fly events annotated with an "N" at/after official sunset. Pilots may fly events annotated with "(N)" at night. Pilots may fly events annotated with "(NVD)" with the option of wearing night vision devices.

e. An instructor pilot shall evaluate all flights annotated with an "E" per T&R Manual, Volume 1, Chapter 4.

f. The squadron training officer shall ensure all Aircrew Evaluation Forms are entered in section 3 of the APR for all initial sorties flown by all transition and refresher pilots for all flights designated by a "T", or "R" in the flight description. These aircrew Evaluation Forms will replace Aircrew Evaluation Forms previously entered in Section 3.

2. Ordnance. Best judgments within the community determine ordnance requirements for this manual; consequently, squadrons should use the exact ordnance mix, but substitution may be made based upon availability.

3. Aircrew Coordination. Aircrews shall include aircrew coordination as part of their brief.

141. COMBAT CAPABLE TRAINING

1. AV-8B Familiarization

a. Purpose. Demonstrate familiarity with the systems management requirements of the AV-8B and proficiency in all takeoff and landing modes.

b. General. Pilots shall fly all events with no more than a 10 Kt crosswind component; and they may fly them in either a TAV-8B or an AV-8B as specified by the T&R. A qualified LSS shall supervise all solos.

c. Ground Training. Squadron FAM stage lecture and TAV-8B ground school completed.

d. Simulator Training (13 Periods, 22.0 hours)

SFAM-100 1.5 T OFT/WST S

Goal. Introduce AV-8B cockpit, UFCS, DDI, communication equipment, HUD, navigation symbology and information, prestart/poststart/postflight checklists, external power and ground intercom procedures.

Requirement. Cockpit FAM, UFCS, DDI, HUD, COMM/NAV systems, prestart, poststart and shutdown checks, and VTR procedures.

SFAM-101 1.5 T,R OFT/WST S

Goal. Introduce normal cockpit check procedures.

Requirement. Perform all NATOPS cockpit checklists and blindfold cockpit checks.

SFAM-102 1.5 T,R OFT/WST S

Goal. Introduce V/STOL, conventional handling procedures, and GCA.

Requirement

(1) Perform multiple takeoffs, landings, and basic familiarization maneuvers. CTO to VFR departure, approach to stalls (clean and dirty), aerobatics, handling (flaps, SAAHS, and altitude hold system) and GCA. Introduce Auto Flap STO's to FNSL and Press-up.

(2) Refresher will complete the tasks as above, with introduction to VTO/Accel to Decel/VL and Press-up.

SFAM-103 1.5 T OFT/WST S

Goal. Practice V/STOL and introduce AWLS approach.

Requirement. Perform multiple takeoffs and landings plus an AWLS approach. STO to AWLS approach (tower downwind) FNSL, STO to FNSL, STO to VNSL, STO to CL, VTO/Accel to Decel/VL. All STO's and FNSL in STOL Flaps.

SFAM-104 1.5 T,R OFT/WST S

Goal. Practice V/STOL operations and introduce RVL.

Requirement. Perform multiple takeoffs and landings. STO to FNSL, RVL's, VTO/Accel to Decel/VL, Press-up, box pattern, wave off from SL. Preselected emergencies.

SFAM-105 2.0 T,R OFT/WST S

Goal. Practice V/STOL operations and introduce navigation systems management.

Requirement. Perform multiple takeoffs and landings. Fly a closed-loop navigation course using INS steering information with overfly and designate updates. STO and FNSL, RVL, VTO/Accel to Decel/VL. Preselected emergencies.

SFAM-106 2.0 T OFT/WST S

Goal. Practice V/STOL operations and instrument procedures.

Requirement. Perform multiple takeoffs and landings, INS navigation and all weather landing system (AWLS) approaches. Preselected emergencies.

SFAM-107 2.0 T OFT/WST S

Goal. Practice V/STOL and TACAN approaches.

Requirement. Perform multiple takeoffs and landings, TACAN navigation and an approach. Preselected emergencies.

SFAM-108 2.0 T,R OFT/WST S

Goal. Practice V/STOL, introduce braking stop Decel, and RVTO.

Requirement. Perform one of each type landing, to include two braking stop decels and two RVTO's. No emergencies.

SFAM-109 2.0 T,R OFT/WST S

Goal. Practice V/STOL, introduce "out-of-wind" Accels & Decels and touch & go landings.

Requirement. Perform instructor selected area work, GCA to an FNSL touch & go, continue pattern work with all landing types to touch & go's. Must do a CL touch & go "with intent to PNB". All VTO/Accels & Decel/VL's must be accomplished using out-of-wind technique. No emergencies.

SFAM-110 1.5 T,R OFT/WST S

Goal. Practice V/STOL and Emergency procedures.

Requirement. Perform all previous FAM phase maneuvers with emphasis on emergency procedures application as per NATOPS. Stabs off Decel/VL required.

SFAM-111 2.0 T,R OFT/WST S

Goal. Progress check.

Requirement. Perform all previous FAM phase procedures with emphasis on V/STOL operations. Instructor selected emergencies.

SFAM-112 1.0 T,R OFT/WST S

Goal. Emergency Procedures Consolidation

Requirement. Perform all Emergency procedures per NATOPS. Emphasize compound emergencies.

e. Flight Training (15 Flights, 22.5 Hours)

TFAM-113 1.5 T 1 TAV-8B A

Goal. Perform CTO, AUTO Flap STO's and FNSL's and a Press-up.

Requirement. Perform CTO, area orientation, slow flight, clean and dirty stalls, GCA to low approach, FNSL, CTO, FNSL, STO, FNSL. Waveoff from SL, touch & go, and Press-up.

TFAM-114 1.5 T,R 1 TAV-8B A

Goal. Perform STOL Flap V/STOL, and a Press-up.

Requirement. Perform STO, aerobatics, INS introduction, basic VIFF, VFR entry, FNSL, STO, FNSL, and Press-up.

TFAM-115 1.5 T 1 TAV-8B A

Goal. STO, FNSL, conventional landings, VNSL, and box pattern.

Requirement. Perform STO, aerobatics, TACAN, FNSL, STO, VNSL, CL x2, VTO, box pattern, and a VL.

TFAM-116 1.5 T,R 1 TAV-8B A

Goal. Introduce rolling vertical landings (RVL's) and Decel/VL.

Requirement. Perform STO, TACAN, low approach, FNSL, STO, RVLx2, Decel/VL, VTO, spot-turn, and a VL.

TFAM-117 1.5 T 1 TAV-8B A

Goal. Introduce VTO, Accel, Decel, and VL.

Requirement. Perform STO, aerobatics, GCA, FNSL, STO, FNSL, STO, VNSL, STO, CL, STO, RVL, VTO, Accel, Decel, VL, and Press-up.

TFAM-118 1.5 T,R 1 TAV-8B A

Goal. Practice VNSL and RVL.

Requirement. Perform STO, aerobatics, LAT course, VFR recovery/break, VNSL x3, RVL x3, VTO/Accel, and Decel/VL.

TFAM-119 1.5 T 1 TAV-8B A

Goal. Introduce RVTO, practice V/STOL, and instrument approaches.

Requirement. Perform STO, GCA x2, FNSL, VNSL, CL, RVL, RVTO, and Decel/VL.

TFAM-120 1.5 T,R 1 TAV-8B A

Goal. Practice V/STOL, introduce braking stop Decels and touch & go landings.

Requirement. Perform STO, LAT course, break, FNSL (touch & go), VNSL (touch & go), CL (touch & go with PNB), RVL (full stop), VTO/Accel, braking stop Decel, and Press-up.

TFAM-121 1.5 T 1 TAV-8B A

Goal. Practice V/STOL and introduce out-of-wind transitions.

Requirement. Perform STO, aerobatics, visual straight-in FNSL, practice FNSL, VNSL, CL, and RVL. Perform out-of-wind transitions (VTO/Accel/Decel/VL).

TFAM-122 1.5 T 1 TAV-8B A

Goal. Practice V/STOL, introduce stabs off Decel/VL or RVL.

Requirement. Perform CTO, TACAN, touch & go landings, VNSL, FNSL, RVL x2, VTO/Accel, Decel/VL, and Press-up.

TFAM-123 1.5 T,R 1 TAV-8B A

Goal. V/STOL progress check/safe for solo.

Requirement. Demonstrate proficiency in navigation systems, STO's, FNSL, VNSL, CL, RVL, and Decel/VL. Stabs off RVL or Decel/VL required.

FAM-130 1.5 T,R 1 AV-8B A

Goal. AV-8B V/STOL introduction.

Requirement. Perform CTO, aerobatics, LAT course, GCA (low approach), depart re-enter for break, FNSL, STO, VNSL, STO, FNSL, STO, CL, STO, RVL, and Press-up.

FAM-131 1.5 T,R 1 AV-8B A

Goal. V/STOL consolidation.

Requirement. Perform STO, aerobatics, TACAN (low approach), depart re-enter for break, FNSL, STO, VNSL, STO, CL, STO, RVL, VTO/Accel, Decel/VL, and Press-up.

FAM-132 1.5 T,R 1 AV-8B A

Goal. V/STOL consolidation.

Requirement. Perform STO, aerobatics, GCA (option approach), perform FNSL, VNSL, CL, RVL, and Decel/VL.

FAM-133 1.5 T 1 AV-8B A

Goal. V/STOL consolidation.

Requirement. Perform STO, TACAN, to option, GCA to option, VNSL, FNSL, CL, RVL, VTO/Accel, Decel/VL, and Press-up.

2. Night Familiarization

a. Purpose. Introduce and practice night V/STOL procedures and techniques.

b. General. Ten hours in-model and completion of in-type instrument check (INST-124) required before commencing this stage. A qualified Landing Site Instructor (LSI) will supervise all Solos.

c. Ground Training. Squadron Night Stage Lecture.

d. Simulator Training (1 Period, 1.5 Hours)

SFAM-160 1.5 T OFT/WST S

Goal. Introduce night V/STOL and instrument procedures.

Requirement. Perform cockpit checks, multiple takeoffs, landings and instrument approaches. CTO to IAF, TACAN approach, GCA approach, AWLS approach, STO to FNSL, STO to RVL, VTO, hover, and VL. Instructor selected emergencies.

e. Flight Training (3 Flights, 4.5 Hours)

TNFAM-161 1.5 T 1 TAV-8B A N (NS)

Goal. Night introduction and V/STOL consolidation.

Requirement. Perform STO into GCA pattern for two approaches, downwind to VFR pattern, FNSL to low approach, FNSL, VNSL, RVL, CL, STO, Decel/VL, and Press-up.

TNFAM-162 1.5 T 1 TAV-8B A N (NS)

Goal. Night instruments and V/STOL consolidation.

Requirement. Perform STO, TACAN, GCA (option), downwind to VFR pattern, FNSL, VNSL, CL, RVL, VTO/Accel, Decel/VL, and Press-up.

NFAM-163 1.5 T,R 1 AV-8B A N (NS)

Goal. Solo night V/STOL consolidation.

Requirement. Perform STO into GCA pattern for two approaches, downwind to VFR pattern, FNSL to low approach, FNSL, STO, RVL (until 1400 pounds fuel remaining), and a Press-up.

3. Instruments

a. Purpose. Practice using heads-up instruments, DDI, and backup instruments with INS and conventional NAVAID's. Demonstrate ability to fly instruments in accordance with instrument procedures.

b. General. Introduce INS navigation system with emphasis on HUD and DDI displays. Pilots shall fly all types of approaches at suitable airfields. Emphasize ATC procedures. Pilots should fly all sorties in TAV-8B's; however, pilots may fly INST 122-124 in AV-8B's if a TAV-8B is not available.

c. Ground Training. Squadron instrument stage lecture.

d. Simulator Training (4 Periods, 6.0 Hours)

SINST-124 1.5 T OFT/WST S

Goal. Introduce airways navigation and practice instrument approaches.

Requirement. Perform airways navigation during simulated IFR flight. STO, SID, INS, TACAN airways navigation, TACAN approach to the option and 2 PAR approaches.

SINST-125 1.5 T OFT/WST S

Goal. Practice airways navigation and instrument approaches.

Requirement. Perform airways navigation during simulated IFR flight. Mission planning, ITO, climb procedures, INS, partial panel & unusual attitudes, TACAN airways navigation, TACAN approach/missed approach. GCA to option, and minimum fuel GCA to FNSL.

SINST-126 1.5 T OFT/WST S

Goal. Practice airways navigation and instrument approaches.

Requirement. Perform airways navigation during simulated IFR flight. Mission planning, ITO, climb procedures, INS, partial panel, unusual attitudes, TACAN airways navigation and TACAN approach/missed approach. GCA to missed approach and minimum fuel GCA to FNSL.

SINST/INST-129 1.5 T OFT/WST/1 TAV-8B S/A

Goal. Complete in type instrument check.

Requirement. PUI to perform a simulated IFR flight, to include a non-precision approach to an unfamiliar field followed by a precision approach at that field or at homefield. V/STOL to include RVL.

e. Flight Training (2 Flights, 3.0 Hours)

INST-127 1.5 T 1 TAV-8B A/S

Goal. Instrument flight introduction and practice.

Requirement. PUI to perform a round-robin flight to include 2 TACAN approaches and 3 PAR's. V/STOL to include HSSL and a Decel/VL.

INST-128 1.5 T 1 TAV-8B A/S

Goal. Review instrument flight procedures.

Requirement. PUI to perform round-robin flight, to include 1 precision approach and 1 non-precision approach at an unfamiliar field. A total of 3 precision and 2 non-precision approaches should be flown. V/STOL practice to include VNSL in STOL Flaps and RVL.

4. Formation

a. Purpose. Demonstrate and practice close formation during takeoffs and conventional flight. Develop proficiency in offensive/defensive combat spread formation flying, to include called and uncalled turns, division TacForm, formation aerobatics, and a TACAN rendezvous.

b. General. This stage requires a thorough knowledge of NATOPS, HEFOE and formation hand signals. Instructor pilots shall stress systems management as a wingman. Pilots may substitute a AV-8B for TAV-8B on FORM 128/129, if a TAV-8B is not available.

c. Ground Training. Squadron formation stage lecture.

d. Simulator Training. None.

e. Flight Training (4 Flights, 6.0 Hours)

FORM-134 1.5 T 2 AV-8B A

Goal. Section formation introduction.

Requirement. Perform section CTO as wingman. Introduce parade formation, cross-unders, configuration changes, lead changes (one as wingman, one as lead), breakup and rendezvous, and cruise formation. Execute section TACAN approach as wingman to tower downwind, and V/STOL to include RVL.

FORM-135 1.5 T,R 2 AV-8B A

Goal. Review section formation, introduce tactical formation.

Requirement. Stream STO as wingman. Review parade, cross-unders, and breakup and rendezvous (minimum of two). Introduce tactical formations. Introduce comm-out maneuvering. Section approach, depart/reenter for the overhead. V/STOL to include Decel/VL x 2.

FORM-164 1.5 T,R 2 T/AV-8B A N

Goal. Night formation introduction.

Requirement. Section CTO under dusk conditions (if dark, perform running rendezvous). Parade formation, cross-unders, lead changes, configuration changes, breakup and rendezvous. Introduce deployed echelon and lead trail. Section TACAN approach/missed approach to section GCA low approach, followed by individual V/STOL to include RVL and Decel/VL.

Prerequisite. FAM-163.

FORM-136 1.5 T 3 or 4 T/AV-8B A

Goal. Division formation introduction.

Requirement. Division stream STO as wingman. Introduce division parade, cross-unders, breakup and rendezvous (minimum of three). Introduce TacForm and division comm. Overhead break to RVL, Decel/VL x 2 under LSS supervision.

Prerequisite. FORM-135.

5. Navigation

a. Purpose. Demonstrate the ability to plan and execute navigation flights using aeronautical charts, visual checkpoints, and the inertial navigational system.

b. General. Instructor pilots shall stress the importance of dead reckoning, pilotage, systems management, and precise fuel planning. Pilots should fly all flights in this stage in a TAV-8B. A qualified LSS shall supervise all V/STOL landing practice.

c. Ground Training. Prior to first flight, the PUI will have completed a map interpretation and terrain analysis course (MITAC) and the squadron navigation phase lecture.

d. Simulator Training (3 Periods, 5.0 Hours)

SNAV-137 1.5 T WST/OFT S

Goal. Introduce low level navigation using both systems and visual navigation techniques.

Requirement. Perform INS and visual navigation over a planned low level route to include climb profile, cruise profile, maximum range descent, and tactical descent. Instructor selected emergencies during recovery phase only.

SNAV-138 1.5 T WST/OFT S

Goal. Practice low level navigation.

Requirement. Perform visual navigation over a planned low level training route to include map/chart interpretation, visual checkpoint identification, route control, and initial point/target acquisition. Instructor selected emergencies during recovery phase only.

SNAV-139 2.0 T,R WST/OFT S

Goal. Refine systems navigation.

Requirement. Perform INS and visual navigation over a planned low level training route using the command speed option for timing (use "Real Time"). Include map/chart interpretation, visual checkpoint identification, route control, and initial point/target acquisition. Instructor selected emergencies during recovery phase only.

e. Flight Training (2 Flights, 2.8 Hours)

NAV-140 1.4 T 1 TAV-8B A

Goal. Practice Low level navigation.

Requirement. Perform INS and visual navigation on a military training route using full aircraft systems. The route will be flown no slower then 360 KCAS and no lower than 1000 feet AGL; accuracy should be within ±1 mile, ±30 seconds, and ±500 pounds of planned fuel. V/STOL to include Decel/VL and RVL.

NAV-141 1.4 T 1 TAV-8B A

Goal. Introduce medium altitude armed recce.

Requirement. System assisted visual navigation to perform a route, strip, and area search from a medium altitude.

6. Air-to-Ground

a. Purpose. Expose PUI to the delivery of air-to-ground ordnance on a raked range during VMC conditions. Introduce basic section attack mechanics per the TACMAN. At the completion of this stage, the PUI should:

(1) From an academic pattern, achieve an acceptable CEP delivering inert ordnance in each assigned dive angle. Standards are; AA- < 5 Mr, A- 5.1 to 8 Mr, BA- 8.1 to 12 Mr, Unsat- > 12 Mr.

(2) Demonstrate a working knowledge of weapon system delivery theory and application including: target designation, computed weapons delivery methods, backup delivery methods.

b. General. Each flight requires video analysis and scored raked ranges. A qualified LSS shall supervise all V/STOL landing practice.

c. Ground Training. All pilots shall have completed Air-to-Ground school as delineated by the VMAT-203 Air-to-Ground phase head.

d. Simulator Training (8 Periods, 9.3 Hours)

SAG-143 1.3 T,R WST S

Goal. Introduce weapon system programming for CCIP and DIR via the armament control panel and UFCS. Introduce CCIP/designated and undesignated releases from 300 dive deliveries.

Requirement. Perform 30 degree dive deliveries using BCIP mode, and DIR mode.

Ordnance. 12 MK-76.

SAG-144 1.0 T,R WST S

Goal. Introduce weapon system programming for RCIP and DIR using armament control panel and UFCS. Introduce CCIP releases from a 10 degree dive deliveries.

Requirement. Perform 10 degree dive deliveries using RCIP mode, and DIR mode.

Ordnance. 12 MK-76.

SAG-145 1.5 T,R WST S

Goal. Introduce and practice high angle ARBS deliveries.

Requirement. Perform boresight checks for the angle rate bombing system (ARBS). Employ the ARBS in the AUTO and CCIP modes. Perform 30 and 45 degree dive deliveries.

Ordnance. 12 MK-76.

SAG-146 1.0 T WST S

Goal. Practice and refine high angle ARBS deliveries.

Requirement. Employ the ARBS in the AUTO and CCIP modes with a TV designation. Perform 30 and 45 degree dive deliveries. Repeat SAG-145.

Ordnance. 12 MK-76.

SAG-147 1.0 T,R WST S

Goal. Introduce low angle ARBS deliveries.

Requirement. Designate the target with the ARBS for a CCIP delivery.

Ordnance. 12 MK-76.

SAG-148 1.0 T,R WST S

Goal. Introduce pop-up attacks.

Requirement. Perform 10, 45, and 60 degree dive deliveries and pop-up attacks from a low altitude ingress to a computed mode release point.

Ordnance. 12 MK-76.

SAG-149 1.5 T,R WST S

Goal. Introduce close air support (CAS) profiles for high and low angle deliveries.

Requirement. Perform 45/10 degree dive deliveries from CAS profiles.

Ordnance. 12 MK-76.

SAG-165 1.0 T,R WST S

Goal. Introduce night deliveries.

Requirement. Perform multiple 30 degree dive deliveries on a lighted raked range. Introduce LST operation. Introduce JLASER communication procedures. Use of simulated flare illumination if available.

e. Flight Training (10 Flights, 10.0 Hours)

AG-151` 1.0 T,R 1 TAV-8B A

Goal. Introduce high/low angle systems delivery. (WX dependent)

Requirement. Perform 45/10 degree computed dive deliveries. Emphasize sensor management, delivery parameters, hits, and off-target maneuvers. V/STOL to include braking stop Decel/VL.

Prerequisite. SAG-146.

Ordnance. 6 MK-76.

AG-152 1.0 T,C,R 2 AV-8B A

Goal. Practice high/low angle systems delivery. (WX dependent).

Requirement. PUI will perform 45/10 degree computed dive deliveries. Emphasize sensor management, delivery parameters, hits, and off-target maneuvers. V/STOL to include Decel/VL.

Prerequisite. AG-151.

Ordnance. 12 MK-76.

AG-153 1.0 T,C 2 AV-8B A

Goal. Review high/low angle systems delivery. (WX dependent).

Requirement. PUI will perform 45/10 degree computed dive deliveries. Emphasize sensor management, delivery parameters, hits, and off-target maneuvers. V/STOL to include Decel/VL.

Prerequisite. AG-152.

Ordnance. 6 MK-76.

AG-154 1.0 T,C 2 AV-8B A

Goal. Review high/low angle systems delivery. (WX dependent).

Requirement. PUI will perform 45/10 degree computed dive deliveries. Emphasize sensor management, cascade plan, delivery parameters, hits, and off-target maneuvers. V/STOL to include Stol Flap VNSL and RVL.

Prerequisite. AG-153.

Ordnance. 6 MK-76.

AG-155 1.0 T,C 2 AV-8B A

Goal. Introduce heavy weight ordnance/dive toss and review high/low angle deliveries. (WX dependent)

Requirement. Perform 45/10 degree computed dive deliveries. V/STOL to include VNSL and RVL.

Prerequisite. AG-154.

Ordnance. 6 BDU-45. (when available).

AG-156 1.0 T,C 1 TAV-8B A

Goal. Introduce high/low angle pop-ups and loft deliveries. (WX dependent).

Requirement. Perform dive delivery from a low level (1000 ft) ingress to a pop-up attack. Emphasize pre-flight planning, delivery parameters, hits, and off-target maneuvers. V/STOL to include RVL.

Prerequisite. SAG-148 and AG-154.

Ordnance. 6 MK-76.

AG-157 1.0 T,C 1 TAV-8B A

Goal. Practice high/low angle pop-ups. (WX dependent)

Requirement. Perform dive delivery from a low level (1000 ft) ingress to a pop-up attack. Emphasize pre-flight planning, delivery parameters, hits, and off target maneuvers. V/STOL to include RVL.

Prerequisite. SAG-148 and AG-156.

Ordnance. 6 MK-76.

AG-158 1.0 T,C 1 TAV-8B A

Goal. Introduce close air support profile.

Requirement. Perform simulated close air support profiles executing computed deliveries to tactical targets. Emphasize attack cone entry, timing, JCAS comm, C3, target acquisition, hits, and off-target maneuvers. V/STOL to include Decel/VL.

Prerequisite. SAG-149 and AG-154.

Ordnance. 6 MK-76.

AG-159 1.0 T,C 2 TAV-8B A

Goal. Introduce section medium/low altitude target area mechanics. (WX dependent)

Requirement. Perform section attacks. Perform standard, split and same side attacks per the TACMAN. Emphasize attack geometry mutual support, comm, and off-target maneuvers. V/STOL to include RVL.

Prerequisite. AG-157.

Ordnance. 6 MK-76.

AG-166 1.0 T,C 1 TAV-8B A N

Goal. Introduce bombing at night.

Requirement. Perform high-angle (CCIP) deliveries at night. V/STOL to include Decel/VL.

Prerequisite. SAG-165, within 7 days.

Ordnance. 6 MK-76 with MK-4 signal cartridges.

7. Low Altitude Tactics (LAT)

a. Purpose. Develop low altitude flying skills. Upon completion of this stage, the PUI should be able to:

(1) Demonstrate introductory proficiency in scan techniques that enable aerodynamic control, vector control, AGL control, and time control.

b. General. Pilots shall fly each flight at the highest comfort level of all pilots in the flight, but never below LAT minimum.

c. Prerequisites. NAV-141.

d. Ground Training. Complete from NAV phase.

e. Flight Training (1 Flights, 1.0 Hours)

LAT-142 1.0 T,C 1 TAV-8B A

Goal. Practice navigation systems procedures.

Requirement. Practice INS management, to include waypoint/offset data entry. Practice system navigation at MTR no lower than 500 feet AGL, make use or waypoint steering and offsets along the route to achieve visual acquisition of the assigned item of interest, ± 25 seconds and ± 400 pounds of fuel accuracy. Practice "OVFY", "TCN", and "DESG" updates as applicable. Use "WOF" and "TOO" options at various points along the route. V/STOL to include RVL and Decel/VL.

8. Air-to-Air

a. Purpose. Introduce and practice defensive maneuvering (DM) in the AV-8B.

b. General. Pilots should review all aircraft and engine limitations prior to flight. An ACT(I) shall fly in all flights within this stage.

c. Ground Training. Pilots must complete the basic fighter maneuvers (BFM) lecture, 2vl, AIM-9, air-to-air gunnery.

d. Simulator Training (1 Periods, 1.0 Hours)

SAA-167 1.0 T WST S D

Goal. Introduce defensive maneuvering to include break turns and departures from controlled flight.

Requirement. Perform gunsight tracking, slow speed/high AOA maneuvering and hard/break turns in the level/oblique and vertical. Review aircraft limitations and perform accelerated stall and spin recovery procedures.

e. Flight Training (4 Flights, 4.0 Hours)

AA-168 1.0 T,C 2 AV-8B A

Goal. Introduce AA weapons systems employment and aircraft handling.

Requirement. Introduce and practice AIM-9 switchology and employment. Perform gunsight tracking and deflection shooting exercises. Introduce hard/break turns in the level/oblique and vertical and slow flight characteristics. Introduce 3000' offensive perches. Introduce expendable usage. VSTOL to include DECEL/VL.

Prerequisite. SAA-167.

Ordnance. CATM-9, TACTS, and 20 flares.

External Support. Use ACMR, if available.

AA-169 1.0 T,C 2 AV-8B A

Goal. Introduce offensive perches.

Requirement. Perform deflection shooting exercise. Practice offensive maneuvering from a 3K/6K/9K perch. Practice break turns and threat reaction drills. VSTOL to include DECEL/VL.

Prerequisite. AA-168.

Ordnance. CATM-9, TACTS, and 20 flares.

External Support. Use ACMR, if available.

AA-170 1.0 T,C 2 AV-8B A

Goal. Introduce defensive perches.

Requirement. Practice offensive BFM. Introduce defensive perches from 3K/6K/9K' starts. Practice threat reaction drills. Practice deflection shooting exercise. VSTOL to include RVL.

Prerequisite. AA-169.

Ordnance. CATM-9, TACTS, and 20 flares.

External Support. Use ACMR, if available.

AA-171 1.0 T,C 2 AV-8B A

Goal. Introduce neutral starts.

Requirement. Review all BFM maneuvers to include deflection shooting, offensive perches, defensive perches. Introduce neutral maneuvering. Neutral maneuvering should stress gameplan formulation and disengagement technique. VSTOL to include breaking stop DECEL/VL.

Prerequisites. AA-170.

Ordnance. CATM-9, TACTS, and 20 flares.

External Support. Use ACMR, if available.

9. Forward Base Operations

a. Purpose. Introduce the PUI to operations in the Forward Operating Base (FOB) environment with special emphasis on confined area landings (CAL).

b. General. All events will be under LSS supervision. Pilots shall fly all initial work-ups to an unrestricted pad.

c. Ground Training. Squadron FCLP/CAL lectures.

d. Simulator Training (2 Periods, 2.0 Hours)

SFBO-172 1.0 T,C OFT/WST S

Goal. Introduce V/STOL operations in an FOB environment.

Requirement. Perform multiple STO's to precision RVL's. Instructor selected emergencies. Syllabus requires the pilot to complete six STO's and six RVL's.

SFBO-173 1.0 T,C OFT/WST S

Goal. Introduce V/STOL operations in a restricted site environment.

Requirement. Perform multiple vertical takeoffs and landings. Instructor selected emergencies. Syllabus requires the pilot to complete six VTO's and six VL's.

e. Flight Training (10 Flights, 5.3 Hours)

FBO-174 0.8 T,C 1 TAV-8B A

Goal. Introduction to forward base landing practice. Calculate max. performance STO.

Requirement. Perform precision RVL's down to 1,500 pounds of fuel. VTO, Accel, Decel and VL to an unrestricted pad. All landings under LSS control. Syllabus requires three RVL's and one Decel/VL to complete.

Prerequisite. SFBO-172.

FBO-175 0.5 T,C 1 TAV-8B A

Goal. Refine VTO and VL techniques.

Requirement. Perform Decel and VL at pad or runway at an EAF. VTO, Accel, Decel and VL. Demonstrate control in VTOL, and proper response to LSS transmissions. Syllabus requires two VL's to complete.

Prerequisite. SFBO-173.

FBO-176 0.5 T,C 1 AV-8B A

Goal. Refine VTO and VL techniques.

Requirement. Perform VTO and VL's at an EAF. Perform Decel/VL at PAD or runway at an EAF. VTO/Accel/Decel/VL. Demonstrate control in VTOL and proper response to LSS transmissions. Syllabus requires two VL's to complete.

Prerequisite. FBO-175.

FB0-177 0.5 T,C 1 AV-8B A

Goal. Refine max. performance STO's, RVL's, VTO, VL's at an EAF.

Requirement. Perform minimum of three STO's, three RVL's, one VTO/Accel, and one Decel/VL at an EAF. (Emphasize RVL's).

Prerequisite. FBO-176.

FBO-178 0.5 T,C 1 AV-8B A

Goal. Refine max. performance STO's, RVL's, VTO/Accel's, and Decel/VL's at an EAF.

Requirement. Perform a minimum of two STO's, two RVL's, one VTO/Accel, and two Decel/VL's.

Prerequisite. FBO-177.

FBO-179 0.5 T,C 1 AV-8B A

Goal. Refine VL's at an EAF.

Requirement. Perform a minimum of two VL's at an EAF.

Prerequisite. FBO-178.

FBO-180 0.5 T,C 1 AV-8B A

Goal. Refine RVL and VL techniques at an EAF.

Requirement. Perform a minimum of two RVL's and two VL's at an EAF.

Prerequisite. FBO-179.

FBO-181 0.5 T,C 1 T/AV-8B A

Goal. EAF VTO and VL progress check.

Requirement. PUI must demonstrate safe and correct techniques for VTO's and VL's at an EAF. Proper response to LSS calls mandatory. Syllabus requires a minimum of two VTO's and two VL's.

Prerequisite. FBO-180.

FBO-182 0.5 T,C 1 AV-8B A

Goal. Refine VTO and VL techniques prior to restricted site operations.

Requirement. Perform STO to low approach over unrestricted pad at FOB. Perform Decel/VL at pad. VTO/Accel/Decel/VL. Demonstrate control in VTOL and proper response to LSS transmissions.

Prerequisite. FBO-181.

FBO-183 0.5 T,C 1 AV-8B A

Goal. Introduce restricted site operations.

Requirement. From FOB, perform STO to low approach (under LSS control) at confined site. Perform Decel/VL at restricted pad. VTO/Accel from pad, and recover at FOB for precision RVL. (Minimum of one restricted site VL to complete.)

Prerequisite. FBO-182 within past 24 hours.

10. Field Carrier Landing Practice (FCLP)

a. Purpose. Develop shipboard V/STOL skills. Pilots shall brief and use all shipboard procedures while embarked, including Day VMC Visual Landing Pattern.

(1) Marshaling procedures.

(2) Initial and break procedures.

(3) Various case recoveries.

(4) Landing and deck procedures.

(5) Launch signals and abort procedures.

(6) Run line and nozzle rotation line accuracy.

(7) Maximum performance climb out.

(8) LSO procedures and terminology.

(9) Side and 450 translations.

b. General

(1) This stage requires an advanced LSO for all events; pilots shall fly to a simulated carrier deck and an optical landing system. Pilots should use this stage conjunction with the combat capable phase FBO flights to prepare the PUI for CQ evaluations.

(2) This stage requires a minimum 24 vertical landings to complete this stage.

c. Ground Training. An FCLP stage brief including: AV-8B NATOPS procedures, applicable ship NATOPS manuals, and LSO Manual.

d. Simulator Training (2 Periods, 1.6 Hours)

SFCLP-184 0.8 T,C WST/OFT S

Goal. Introduce FCLP procedures and course rules.

Requirement. Perform departure from homefield to recover at simulated LHA facility with VL. Perform max. performance STO's and shipboard VL's aboard simulated deck only. Syllabus requires a minimum of four STO's and four VL's.

SFCLP-185 0.8 T,C WST/OFT S

Goal. Introduction to shipboard operations.

Requirement. Perform shipboard STO's into the GCA pattern for one approach (low approach), turn to downwind for VFR pattern. Syllabus requires a minimum of four maximum performance STO's and four VL's to spot 7 1/2. Preselected emergencies relating to shipboard operations at instructor's discretion.

e. Flight Training (6 Flights, 3.0 Hours)

FCLP-186 0.5 T,C 1 AV-8B A

Goal. Introduce V/STOL carrier patterns.

Requirement. Lightweight STO, visual pattern, and vertical landing. Stress run line and nozzle rotation accuracy. Introduce launch signals and abort procedures. Syllabus requires a minimum of three VL's. Use water injection as appropriate.

FCLP-187 0.5 T,C 1 AV-8B A

Goal. Practice V/STOL carrier patterns.

Requirement. Stress pattern accuracy and proper V/STOL techniques. Introduce waveoff technique and minimum fuel pattern. Syllabus requires a minimum of three STO's and three VL's aboard a simulated LHA facility.

FCLP-188 0.5 T,C 1 AV-8B A

Goal. Refine V/STOL carrier patterns.

Requirement. Stress water conservation and performance margins. Perform a minimum of three STO's and three VL's to LHA facility.

FCLP-189 0.5 T,C 1 AV-8B A

Goal. Refine V/STOL carrier pattern.

Requirement. Perform a minimum of three STO's and three VL's to LHA facility.

FCLP-190 0.5 T 1 AV-8B A

Goal. Refine V/STOL carrier pattern.

Requirement. Perform a minimum of three STO's and three VL's to LHA facility.

FCLP-191 0.5 T,C E 1 AV-8B A

Goal. Field carrier landing practice progress check.

Requirement. Perform a minimum of three STO's and three VL's to LHA facility. Procedures must be correct, proper response to LSO is mandatory. Successful completion requires three (OK) passes (or better).

11. NATOPS/Combat Capable Evaluation

a. Purpose. Conduct combat capable evaluation as required by AV-8B NATOPS Flight Manual.

b. General. A designated NATOPS check pilot will observe and certify that the PUI is NATOPS qualified per NATOPS Manual, Chapter 10. Satisfactory completion of the NATOPS ground evaluation is a prerequisite for the NATOPS flight evaluation.

c. Ground Training. Students shall complete NATOPS open/closed book tests prior to flight.

d. Simulator Training (2 Period, 2.3 Hour)

SCK-198 1.0 T,R,M E OFT/WST S

Goal. Evaluate pilot knowledge of aircraft systems and normal and emergency procedures.

Requirement. Perform all takeoff and landing modes while operating in a homefield VFR environment. Instructor selects emergencies.

SCK-199 1.3 T,R,M E OFT/WST/2 AV-8B/1 TAV-8B S/A

Goal. Pilot standardization check.

Requirement. Satisfactorily perform all tasks as outlined in the AV-8B NATOPS Flight Manual pertaining to the NATOPS evaluation program.

142. COMBAT READY TRAINING

1. Initial Combat Ready Training

a. Purpose. To provide structured and standardized instruction in tactics and weapon systems for the development of a combat ready wingman. This instruction covers the tactical employment of the various sensors associated with three variants of the AV-8B.

b. General

(1) The intent is to build flight leaders by training and maintaining Combat Ready pilots who are thoroughly practiced as wingmen. As experience and performance dictate, pilots are then selected for flight leadership training. The designated Flight Leader is responsible for planning, briefing and execution of the flight. Wingmen will be given the opportunity to assume TAC-LEAD as deemed appropriate, both tactically and for training purposes, by the designated MIL-LEAD.

(2) Imbedded within the design and intent of the combat ready syllabus is AV-8B II (Night Attack) and AV-8B II+ (Radar/Night Attack) differences training for the combat capable pilot. The combat ready syllabus develops proficiency and ensures exposure to all the assigned mission areas in the AV-8B II (night attack) or AV-8B II+ (radar/night attack). Initial combat ready training should be completed in the AV-8B II (night attack) or AV-8B II+ (radar/night attack) aircraft.

2. AV-8B II (Night Attack) and AV-8B II+ (Radar/Night Attack) Combat Ready Differences Training

a. Purpose. To train an AV-8B (day attack) combat capable/ready pilot in the basic differences of the AV-8B II (night attack) or AV-8B II+ (radar/night attack). To train an AV-8B II (night attack) combat capable/ready pilot in the basic differences of the AV-8B II+ (radar/night attack).

b. General

(1) The following syllabi are designed to train a combat capable/ready AV-8B pilot (day attack) to AV-8B II (night attack) or AV-8B II+ (radar/night attack) standards.

(2) These syllabi are outlined to facilitate necessary follow-on training to ensure standardization in the operation of all sensors and cockpit configurations which they may be required to employ. Three separate scenarios apply to accommodate the combination of aircrew experience levels and airframe variations.

(a) Combat capable/ready pilot (day attack) to AV-8B II (night attack) standard.

(b) Combat capable/ready pilot (day attack) to AV-8B II+ (radar/night attack) standard.

(c) Combat capable/ready pilot AV-8B II (night attack) to AV-8B II+ (radar/night attack) standard.

(3) The design of each syllabus is to ensure that each individual pilot receives baseline standardization training in the AV-8B variant to which assigned to fly. The FRS is not equipped to conduct this training. In order to ensure it is accomplished to the mutual benefit of pilot, squadron and community, FMF operational squadrons must fulfill this requirement.

(4) Detailed instruction and evaluation of sortie requirements must be accomplished to ensure the goal of standardized differences training.

(5) Upon completion of the differences syllabus a pilot is considered qualified to operate the AV-8B II (night attack) or AV-8B II+ (radar/night attack).

c. Training Syllabus. Training syllabus for combat capable/ready AV-8B (day attack) pilot to begin combat capable/ready training in the AV-8B II (night attack). Following this differences training the pilot must fulfill all applicable AV-8B II (night attack) peculiar sorties remaining in the combat ready syllabus to be considered combat ready in that airframe variant.

(1) AV-8B II (night attack) Ground Training

Mission Planning Standards.
Day-Radar/Night Attack Differences.
-408 Differences.
Night Attack Navigation Systems.
Night Attack Expendable Countermeasures.
Forward Looking Infrared.

(2) Simulator Training

SFAM	200	Cockpit orientation, -408 operation, night attack controls and displays, and ground procedures.
SNAV	205	Intro. NA navigation and RBGM.
SOAS	231	Air Interdiction.
SOAS	232	Armed Reconnaissance.
SOAS	235	Close Air Support.

(3) Flight Training

FAM	203	Review night attack procedures
OAS	237	Air Interdiction
OAS	238	Armed Reconnaissance
OAS	240	Close Air Support

d. Training Syllabus. Training syllabus for combat capable/ready AV-8B (day attack) pilot to begin combat capable/ready training in the AV-8B II+ (radar/night attack). Following this differences training the pilot must fulfill all applicable AV-8B II+ (radar/night attack) peculiar sorties remaining in the combat ready syllabus to be considered combat ready in that airframe variant.

(1) AV-8B II(night attack) AV-8B II+(radar/night attack) Ground Training

Mission Planning Standards.
Day-Radar/Night Attack Differences.
-408 Differences.

Night Attack Navigation Systems.
Night Attack Expendable Countermeasures.
Forward Looking Infrared.

(2) AV-8B II+ (Radar/Night Attack) Ground Training

Introduction to the Radar.
A/S Controls and Displays.
A/S Radar Considerations.
A/S Radar Procedures.
Radar Navigation Techniques.
Radar Attack Techniques.
A/A Controls and Displays.
A/A Radar Considerations.
A/A Radar Procedures.
Basic Radar Search Techniques.
Radar Intercept Geometry.

(3) Simulator Training

SFAM	200	Cockpit orientation, -408 operation, radar/night attack controls and displays, and ground procedures.
SFAM	201	Intro. moving map, FLIR and A/S radar procedures.
SFAM	202	Intro. A/A radar procedures.
SNAV	205	Intro. NA navigation and RBGM.
SNAV	206	Intro. radar navigation procedures.
SAG	210	Intro. radar desig/track and delivery procedures.
SOAS	231	Air Interdiction using NA/radar systems.
SOAS	232	Armed Reconnaissance using NA and radar systems.
SOAS	235	Close Air Support using NA and radar systems.
SAA	254	Intro. radar intercepts and radar trail departure.

(4) Flight Training

FAM	203	Review NA/radar procedures.
AG	215	Review radar desig/track and delivery procedures.
OAS	237	Air Interdiction using NA and radar systems.
OAS	238	Armed Reconnaissance using NA and radar systems.
OAS	240	Close Air Support using NA and radar systems.
AA	267	Review radar intercepts.

e. Training Syllabus. Training syllabus for combat ready AV-8B II (night attack) pilot to begin combat ready training for AV-8B II+ (radar/night attack). Following this differences training the pilot must fulfill all AV-8B II+ (radar/night attack) peculiar sorties remaining in the combat ready syllabus to be considered combat ready in the AV-8B II+ (radar/night attack).

(1) AV-8B II+ (radar/night attack) Ground Training

Introduction to the Radar.
A/S Controls and Displays.
A/S Radar Considerations.
A/S Radar Procedures.
Radar Navigation Techniques.
Radar Attack Techniques.
A/A Controls and Displays.
A/A Radar Considerations.
A/A Radar Procedures.
Basic Radar Search Techniques.
Radar Intercept Geometry.

(2) Simulator Training

SFAM	201	Intro. moving map, FLIR and A/S radar procedures.
SFAM	202	Intro. A/A radar procedures.
SNAV	206	Intro. radar navigation procedures.
SAG	210	Intro. radar desig/track and delivery procedures.
SAA	254	Intro. radar intercepts and radar trail departure.

(3) Flight Training

FAM	203	Review radar procedures.
AG	215	Review radar desig/track and delivery procedures.
AA	267	Review radar intercepts.

3. Familiarization

a. Purpose. Maintain proficiency and familiarity with V/STOL flight characteristics, limitations, and normal operating procedures.

b. General. This stage provides an arrival inventory of V/STOL proficiency and allows the pilot to meet currency requirements of V/STOL flying. Squadrons shall use these events for the following:

(1) Squadron introduction/Area familiarization.

(2) Introduction to the night attack/radar night attack configuration.

(3) Back-in-the-saddle.

c. Ground Training. Prior to flight, the pilot must be current per AV-8B NATOPS Flight Manual. Prior to training in the night attack/radar night attack aircraft, a pilot shall complete all appropriate academics as outlined in paragraph 142.1 and 142.2 of the night attack/radar night attack differences syllabus in this manual.

d. Simulator Training (3 Periods, 4.5 Hours)

SFAM-200 1.5 T,R OFT/WST/NAWST/RNWST S DNR

Goal. Fleet arrival skills inventory, refresher and emergency procedures simulator for the OFT/WST. In addition, night attack/radar night attack cockpit orientation and systems familiarization for the NAWST and RNWST.

Requirements. In OFT/WST, practice all start, taxi, takeoff and landing procedures to include departure to local working area PER local course rules. In NAWST/RNWST, introduce differences in normal and emergency procedures for night attack/radar night attack aircraft to include: MPCDs, FLIR, Moving Map and APG-65 displays. Introduce 100% LERX and -408 performance differences, conventional handling and VSTOL takeoffs and landings.

Prerequisite. None.

Ordnance. None.

Performance Standards. Demonstrate familiarity with normal/emergency procedures and understanding of night attack/radar night attack differences, as applicable.

SFAM 201 1.5 T, RNWST S R

Goal. Introduce Air to Surface Radar Program Displays, Controls and Procedures.

Requirement. Review all normal procedures for radar night attack aircraft to include the EHSD, Map and FLIR. Introduce and practice all A/S modes displays, controls and procedures. Introduce and practice inflight management of all air to surface program radar modes.

Prerequisite. SFAM-200.

Ordnance. None.

Performance Standard. Demonstrate proficiency with A/S functions, HOTAS and all normal procedures for Radar Night Attack aircraft.

SFAM 202 1.5 T, RNWST S R

Goal. Introduce Air Radar Program Displays, Controls and Procedures.

Requirement. Review all normal procedures as modified for night attack/radar night attack aircraft. Introduce all Air Radar Program modes displays, controls and procedures. Introduce Air Radar Program Sets. Introduce inflight management of all Air Radar Program Modes. Review EHSD, Moving Map & FLIR controls displays and procedures.

Prerequisite. SFAM-200, 201.

Ordnance. None.

Performance Standard. Demonstrate proficiency with A/A functions, HOTAS and all normal procedures for radar night attack aircraft.

e. Flight Training (1 Flights, 1.5 Hours)

FAM 203 1.5 T,R 2 AV-8B A DNR

Goal. Fleet arrival skills inventory. Familiarization refresher if flown in the day, night, radar attack aircraft. Introduce airborne management of the MPCD, FLIR, and APG-65 displays, if applicable. Introduce conventional handling and VSTOL characteristics.

Requirement. Practice standardized ground procedures, STO, and departure to assigned working area following local course rules. Conduct familiarization of local area as required. Review post start standardized ground procedures, enhanced alignment procedures and combat checklist as modified for night attack/radar night attack aircraft. Review all night attack/radar night attack displays controls and procedures using push-button and HOTAS access to include: MPCDs, FLIR, Moving Map and APG-65. Introduce all A/S and Air Radar Program modes/displays, controls and procedures using push-button and/or HOTAS and associated assignment cues. Introduce inflight management of all air to surface and air program radar modes. Introduce Air Radar Program sets. Introduce 100% LERX and -408 performance differences. Return to base for practice precautionary VNSL straight-in landing. Practice VSTOL.

Prerequisite. SFAM-200 (SFAM-201, 202 required for Radar Night Attack.)

Ordnance. None.

Performance Standard. Demonstrate proficiency with all normal operating procedures. For night attack/radar night attack, demonstrate knowledge of cockpit/engine/LERX differences, and proficiency with HOTAS, APG-65 and FLIR.

4. Instruments

a. Purpose. Maintain currency and proficiency flying in IMC.

b. General. Pilots shall complete annual Instrument Evaluation as RQD-601.

c. Ground Training. None.

d. Simulator Training (1 Period, 1.0 Hour)

SINST-204 1.0 T,R OFT/WST/NAWST/RNWST S DNR

Goal. Instrument procedures practice.

Requirement. Practice instrument procedures using varying visibilities. Introduce use of APG-65 for radar trail departures, weather avoidance and emergency radar approaches. Conduct PAR, ASR, TACAN, AWLS, and degraded system approaches.

Prerequisite. SFAM-200

Ordnance. None.

Performance Standard. IFM.

5. Navigation

a. Purpose. Develop proficiency in planning and executing low altitude navigation while optimizing the use of all available systems. At the completion of this stage, the PUI should be able to:

(1) Demonstrate proficiency in planning, briefing, and navigating.

(2) Arrive at final point of navigation route within 15 seconds of planned time and 300 pounds of planned fuel.

(3) Demonstrate proper coast-in and coast-out point planning.

(4) Demonstrate knowledge of radar horizon impact on altitude selection and conduct planning appropriately.

b. General. These events are designed to provide for arrival inventory of navigation proficiency and introduction/review of aircraft navigation systems. Pilots should use these events for the following:

(1) Coast-in/coast-out low level.

(2) Radar horizon/hi-lo-hi profile.

(3) Use of APG-65 in navigation.

(4) Use of moving map and FLIR display for navigation.

c. Prerequisite. None.

d. Ground Training. None.

e. Simulator Training (2 Period, 3.0 Hours)

SNAV-205 1.5 T,R OFT/WST/NAWST/RNWST S DNR

Goal. Practice low level navigation. Introduce use of NA and radar avionics suite for low level navigation.

Requirement. Plan a navigation route to TACSOP standards. Emphasize fuel planning, timing, system utilization, hi-lo-hi profile, and available INS update capabilities. Introduce low altitude cockpit management procedures to include aiding navigation by optimizing night attack and radar avionics systems.

Prerequisite. SFAM-200.

Performance Standard. Arrive at final point of navigation route within 15 seconds of planned time and 300 pounds of planned fuel.

SNAV 206 1.5 T,R RNWST S R

Goal. Introduce A/S radar (RBGM & EXP) capabilities and associated limitations during a hi-lo-hi navigation profile. Apply radar predictions.

Requirements. Introduce the capabilities and limitations of the A/S radar program for navigation. Introduce radar expand updates, both on and off route. Introduce practical application of radar prediction, mission planning factors and display interpretation in the MAP and expand modes. Introduce Terrain Avoidance (TA) mode. Introduce Emergency Approach procedures using the radar.

Prerequisite. SFAM-201.

Performance Standard. Arrive at final point of navigation route within 15 seconds of planned time and 300 pounds of planned fuel.

6. Aerial Refueling (AR)

a. Purpose. Record refueling operations in day and night VMC conditions.

b. General. Squadrons may conduct aerial refueling within ferry missions or as part of a tactical sortie, as long as previous T&R requirements are met.

c. Ground Training. Squadrons shall complete the AR stage briefs before completing any AR flight, per the NATOPS Flight Manual, Air Refueling Manual, and local SOP's.

d. Simulator Training. None.

e. Flight Training (2 Flight,2.0 Hours)

AR-207 1.0 T 2 AV-8B A DNR

Goal. Review aerial refueling.

Requirement. Perform all AR procedures to include: tanker rendezvous, observation position, pre-contact position, refueling procedures, and tanker departure procedures. Conclude with a simulated damaged aircraft recovery to a full stop landing.

External Support. Aerial refueling platform.

Prerequisites. FAM-203.

Performance Standard. Per Air Refueling NATOPS.

AR-208 1.0 T 2 AV-8B A N (NVD) DNR

Goal. Night aerial refueling qualification.

Requirement. Perform all NATOPS refueling procedures to include: tanker rendezvous, observation position, pre-contact position, and departure procedures. Complete at least six plugs if not current.

External Support. Compatible tanker.

Prerequisites. AR-207.

Performance Standard. Per Air Refueling NATOPS.

7. Air-to-Ground

a. Purpose. Refine skills in the delivery of air-to-ground ordnance during VMC conditions. At the end of this stage the PUI should be able to:

(1) Demonstrate low and high angle dive deliveries on a scored range.

(2) Demonstrate a thorough knowledge of weapon system delivery theory and application including: target designation, computed weapons delivery methods, tracking techniques, and backup delivery methods.

(3) Demonstrate a working knowledge of delivery parameters, multiple weapons release planning, fragmentation envelopes, and fuzing considerations for conventional weapons.

(4) Demonstrate a thorough knowledge of level entry, ramp down, cruise climb, and medium altitude pop-up attack computations.

(5) Demonstrate capability to perform night deliveries with and without flare illumination.

(6) Ordnance requirements may include any authorized TACMAN AG store.

b. General. Pilots shall complete the combat ready familiarization stage prior to commencing this stage. Other specific prerequisites are identified as appropriate under the individual mission. Each flight requires video analysis.

c. Ground Training. All pilots shall be current in BCWD and appropriate TCWD subjects prior to commencing this stage.

d. Simulator Training (2 Periods, 2.0 Hours)

SAG-210 1.0 T,R WST/NWST/RNWST S DNR

Goal. Review high and low angle systems deliveries and loft delivery profiles.

Requirement. Conduct high and low angle systems deliveries on a scored range. Review loft delivery profiles. Introduce Air to Ground Ranging (AGR) Deliveries and Radar Designation/Track Displays, Controls, Procedures and Deliveries. Optimize available sensors.

Prerequisite. FAM-203.

Ordnance. 6 MK-82 LD/MK-82 HD and 300 rds.

Performance Standard. CEP must be < 10 mils about MPI.

SAG-211 1.0 T, R WST/NWST/RNWST S DNR

Goal. Introduce 25mm strafe and 5.00" rocket deliveries.

Requirement. Perform strafe and rocket deliveries on a scored range. Emphasize gun/rocket emergencies.

Prerequisite. SAG-210, parameters, etc.

Ordnance. 8 5.00" rockets and 300 rds.

Performance Standard. Perform Gun not clear/Hung Rocket emergency procedures.

SAG-212 1.0 T, R WST/NWST/RNWST S NR

Goal. Introduce Laser Maverick.

Requirement. Perform Multiple LMAV deliveries against tactical targets. Review Launch envelopes, environmental factors, target planning and designator limitations.

Ordnance. 4 AGM-65E.

Performance Standard. Demonstrate successful LMAV employment.

SAG-213 1.0 T, R NWST/RNWST S NR

Goal. Introduce IR Maverick.

Requirement. Perform multiple IRMAV deliveries against tactical targets, include Ship Attacks. Review launch, environmental and target considerations.

Ordnance. 4 AGM-65F.

Performance Standard. Demonstrate successful IRMAV employment.

SAG-214 1.0 T, R WST/NWST/RNWST S DNR

Goal. Night Bombing Consolidation.

Requirement. Review night high angle dive deliveries on a scored range. Practice use of LST, if available, and JLASER terminology.

Prerequisites. SAG-210.

Ordnance. 6 MK-82, 40 flares and 20 chaff.

Performance Standard. CEP must be < 10 mils about MPI.

e. Flight Training (4 Flights, 4.0 Hours)

AG-215 1.0 T,R 2 AV-8B A DNR

Goal. Introduce and practice sensor assisted deliveries using AGR, EXP designations, DMT as available while practicing hi/lo dive delivery techniques.

Requirements. Practice Air-to-Ground deliveries on a scored range (when available) using EXP designations and radar track modes against moving and fixed targets.

Prerequisite. SAG-210, 211.

Ordnance. 12 MK-76, 300 Rds, 20 flares and 10 chaff.

Performance Standard. Evaluate performance using VTR and WRD, per MCCRES standard.

AG-216 1.0 T,R E 2 AV-8B A DNR

Goal. Review day target area mechanics using medium/low altitude and standoff delivery profiles.

Requirement. While incorporating section target area mechanics, conduct medium/high altitude and loft/toss delivery profiles, using a scored range (when available). Conclude sortie with a simulated stuck throttle approach to a full stop landing.

Prerequisite. AG-215.

Ordnance. 6 MK-76, 6 BDU-48, 300 Rds, 20 flares and 10 chaff.

Performance Standard. Conduct a minimum 1 medium/high and 1 loft/toss delivery profile. Demonstrate acceptable aircraft interval and weapons delivery parameters.

AG-217 1.0 T,R AV-8B A NR

Goal. Introduce AGM-65E/F.

Requirements. Conduct multiple AGM-65E/F deliveries using preplanned target area tactics.

Prerequisite. SAG-212,213.

Ordnance. CAGM-65 E/F.

Performance Standard. Three successful deliveries of each with VTR verification.

AG-218 1.0 T,R,E 2 AV-8B A N (NVD) DNR

Goal. Night Bombing Consolidation.

Requirement. Review night high/low angle deliveries on a scored range (when available). Use artificial illumination and LASER designator, if available.

Prerequisite. SAG-214, AG-215.

Ordnance. 6 MK-76 and 8 LUU-2.

Performance Standard. Two successful deliveries in both the High and Low angle patterns. Access performance based on MCCRES standards using VTR/target scoring.

AG-219 1.0 T,R 2 AV-8B A N (NVD) DNR

Goal. Introduce night target area mechanics with self-illumination using LUU-2 flares.

Requirement. Perform target area mechanics using LUU-2 flares. Attacks should be run from IP to a tactical target. Emphasize proper planning, spacing, and delivery of LUU-2 flares. PUI to drop flares as well as perform high angle deliveries.

Prerequisites. AG-218.

Ordnance. 6 MK-76 and 8 LUU-2.

Performance Standard. Two successful deliveries. Access performance based on MCCRES standards using VTR/target scoring.

8. Low Altitude Tactics

a. Purpose. Refine skills in all basic LAT maneuvers (single aircraft and section maneuvering). Develop proficiency in advanced vertical maneuvers and threat reaction. Upon completion of this stage, the PUI should be able to demonstrate the following:

(1) Proficiency in all basic LAT maneuvers as defined in the MAWTS-1 ASP.

(2) Proficiency in efficient scan techniques which enable aerodynamic control, vector control, AGL control, and time control.

(3) Proficiency in time management of terrain clearance tasking and mission tasking.

(4) Proficiency in section maneuvering at comfort level.

(5) Proficiency in all advanced LAT maneuvers.

(6) Proficiency in threat reaction.

(7) Proficiency in low altitude target area mechanics.

b. General

(1) For initial LAT qualification, a LAT(I) will evaluate all flights in this stage; pilots will sequentially fly this stage. Pilots shall fly all flights at the highest comfort level of any pilot in the flight, but never below LAT minimum.

(2) Forced performance (altitude, airspeed, aerodynamic, vector and time control) is required during each simulator sortie so instructors may evaluate terrain clearance tasks and mission cross checks. Obstruction clearance in any simulator or flight of less than 100 feet AGL requires, at a minimum, a refly of that particular sortie.

(3) Successful completion of stage constitutes LAT qualification.

c. Prerequisite. NAV-209.

d. Ground Training

(1) Squadrons shall require the MAWTS-1 ASP LAT lectures as defined in the AV-8B LAT Course of the MAWTS-1 Course Catalog prior to the first flight.

(2) Successfully complete the LAT written examination prior to flight phase.

e. Simulator Training (2 Periods, 2.0 Hours)

SLAT-220	1.0	T,R	WST/NAWST/RNWST	S	DNR

Goal. Review basic low altitude maneuvers and rules of conduct. Introduce advanced LAT maneuvers.

Requirement. Perform low altitude basic flight maneuvers while flying a short, closed LAT circuit. PUI practice straight and level flight, level turns, sustained and hard turns, ridgeline crossings, terrain masking, and climb-to-cope procedures. Practice efficient scan techniques which enable aerodynamic control, vector control, AGL control, and time control. Emphasize TCT/MCT. Introduce all advanced LAT maneuvers, to include transition to LAT, vertical jink, SOJ, TOJ, ROJ, 3D maneuver, SCT, guns jink, break turns, and MAC. Emphasize adherence to the 10 degree rule, 50% dive recovery rule and step down recovery altitudes. Flight should be flown in mountainous terrain data base.

Prerequisite. Advanced LAT written examination and MAWTS-1 LAT ASP lectures.

Performance Standard. Demonstrate understanding of LAT mechanics and safety parameters. Minimum altitudes per T&R, Vol 1.

SLAT-221 1.0 T,R WST/NAWST/RNWST S DNR

Goal. Practice advanced LAT maneuvers and introduce threat reaction.

Requirement. Practice all advanced LAT maneuvers, as introduced in SLAT-220. Introduce SAM/AAA countertactics on a reactive LAT circuit. Practice low altitude standard target attack. Emphasize threat recognition, identification and assessment, decision points, communication brevity, and appropriate/timely reactions vs threat engagement timelines. Threat data base should include various category SAM/AAA threats.

Prerequisite. SLAT-220.

Performance Standard. Demonstrate understanding of LAT mechanics and safety parameters. Minimum altitudes per (MCO P3500.14F, T&R Manual, Vol 1).

f. Flight Training (5 Flights, 5.0 Hours)

LAT-222 1.0 T,R,E 2 AV-8B A DNR

Goal. Introduce/practice basic LAT maneuvering and rules of conduct.

Requirement. As a single chased aircraft on a short, closed LAT course, practice straight and level flight, level turns, sustained and hard turns, ridgeline crossings and terrain masking as terrain permits. Emphasize efficient scan techniques to enable aerodynamic control, vector control, AGL control and time control in support of TCT/MCT. As a wingman, practice all tactical turns in combat spread formation. Emphasize turn geometry and formation position keeping. Conclude sortie with a simulated bird strike resulting in damaged RCS to a full stop landing.

Prerequisite. SLAT-221.

Performance Standard. Demonstrate safe adherence to LAT ROC and minimum altitudes per (MCO P3500.14F T&R Manual, Vol 1).

LAT-223 1.0 T,R 2 AV-8B A DNR

Goal. Introduce/practice advanced LAT maneuvers.

Requirement. As a single chased aircraft, introduce all advanced LAT maneuvers, to include transition to LAT, vertical jink, SOJ, TOJ, ROJ, SCT, guns jink, break turns, and MAC. Emphasize adherence to the 10 degree rule, 50% dive recovery rule and step down recovery altitudes.

Prerequisites. LAT-222.

Performance Standard. Demonstrate safe adherence to LAT ROC and minimum altitudes per (MCO P3500.14F T&R Manual, Vol 1).

LAT-224 1.0 T,R 2 AV-8B A DNR

Goal. Introduce/practice threat reaction and low altitude target area mechanics.

Requirement. Practice advanced LAT maneuvers. Introduce SAM/AAA countertactics on a reactive LAT circuit. Introduce low altitude target attacks per the TACMAN. Emphasize threat recognition, identification and assessment, decision points, communication brevity, and appropriate/timely reactions vs threat engagement timelines. Use of EW range is encouraged if available.

Prerequisites. LAT-223.

Performance Standard. Demonstrate knowledge of RWR and threats. Demonstrate proper reaction to threat engagement. Minimum altitude per (MCO P3500.14F T&R Manual, Vol 1).

LAT-225 1.0 T 2 AV-8B A DNR

Goal. Introduce/practice heavyweight LAT.

Requirement. Perform basic and advanced LAT and threat reaction with heavyweight ordnance. Practice low altitude target attacks (per the TACMAN) in section. Emphasize airspeed and AOA Control. Emphasize heavyweight handling characteristics vice ordnance expenditure.

Prerequisite. LAT-224.

Ordnance. 6 BDU-45 (2 full external fuel tanks are adequate substitute for heavyweight flight).

Performance Standard. Demonstrate safe adherence to LAT ROC and minimum altitudes per (MCO P3500.14F, T&R Manual, Vol 1).

LAT-226 1.0 T,R E 2 AV-8B A DNR

Goal. LAT Qualification.

Requirement. As a wingman, fly a reactive LAT circuit to a low altitude target attack. Emphasize appropriate and timely reaction to threat, decision points, communication brevity, mutual support, target area mechanics and combat spread formation/position keeping.

Prerequisite. LAT-225.

Ordnance. As required.

Performance Standard. Demonstrate safe adherence to LAT ROC, knowledge of threat considerations. Minimum altitudes per (MCO P3500.14F, T&R Manual, Vol 1).

9. Electronic Warfare

a. Purpose. Practice defensive electronic countermeasures and employment of onboard ECM equipment. At the completion of this stage, the pilot should be able to:

(1) Describe and perform counter-radar maneuvers.

(2) Perform threat avoidance, counter-threat maneuvering, and formation reconsolidation.

(3) Employ the ALQ-164/ALR-67 in a tactical environment against appropriate emitters.

(4) Employ the Sidearm in a tactical environment against appropriate emitters.

b. General. This stage requires an EW range or active emitters, and emphasizes threat recognition and countertactics.

c. Prerequisite. None.

d. Ground Training. Complete AV-8 Electronic Warfare Course of the MAWTS-1 Course Catalog prior to the first flight.

e. Simulator Training (2 Periods, 2.0 Hours)

SEW-227 1.0 T WST/NWST/RNWST S DNR

Goal. Introduce ALQ-164, ALR-67, and practice ALE-39 employment.

Requirement. Perform threat avoidance and counter threat maneuvering. Employ ALQ-164 in tactical environment.

Prerequisite. SLAT-221.

Performance Standard. Successfully ingress and egress a target defended by sophisticated IADS.

SEW-228 1.0 T WST/NWST/RNWST S DNR

Goal. Introduce AGM-122 Sidearm employment.

Requirement. Ingress against threats at high, medium, and low altitudes. Complete at least 2 runs per altitude, the first run non-maneuvering and the second maneuvering. The Sidearm should be employed against an appropriate emitter.

Prerequisite. SEW-227.

Ordnance. AGM-122.

Performance Standard. Successfully ingress and egress a target defended by unlinked IADS. Employ AGM-122.

f. Flight Training (1 Flight, 1.0 Hour)

EW-229 1.0 T R E 2 AV-8B A DNR

Goal. Introduce and practice employment of the AV-8B EW suite in a tactical environment.

Requirement. Emphasize communication, proper notch geometry, expendable usage, decision points and mutual support. Introduce ground and in-flight operation of ALQ-164. Complete at least three runs on an EW range or against an active emitter as described below:

(1) Familiarization run, concentrating on threat recognition.

(2) Two tactical runs medium and low altitude with counter-threat maneuvering, to include simulated target attacks.

(3) Conclude sortie with a simulated engine overtemp to a full stop landing.

Prerequisite. SEW-227, 228, and SLAT-221.

Ordnance. ALQ-164, TAGM-122 and full ALE-39.

External Support. Electronic warfare range or active emitters.

Performance Standard. Successfully ingress and egress a target defended by unlinked IADS. Employ AGM-122.

10. Offensive Air Support

a. Purpose. Developing the skills as a wingman in all mission areas is the purpose of this stage. Develop proficiency in the tactical employment of the AV-8B in the offensive air support role as a wingman in the low and medium altitude regimes. Specific sorties require either medium and low altitude tactics. Flight leads are responsible for designing threat level that supports the tactically sound execution of the profiles. At the completion of this stage the PUI should be able to:

(1) Demonstrate proficiency as a wingman (in section or division) in air interdiction, armed reconnaissance, and close air support at applicable altitude.

(2) Deliver conventional ordnance on tactical targets both day and night demonstrating the proper use of sensors/systems. No Bomb Drop Scoring (NBDS) is a suitable substitute for conventional ordnance.

(3) Use the TACMAN to develop reactive weaponeering for various target arrays.

(4) Ordnance requirements may include any authorized TACMAN AG store.

b. General

(1) The pilot should have exposure to all mission areas during this stage and he must be familiar with the use of the following external agencies:

(a) MACCS integration.

(b) Supporting arms.

(c) TACP.

(d) SCAR platforms.

(e) FAC/FAC(A).

(2) Specifics concerning the threat will be at the discretion of the flight lead.

(3) All sorties require videotape analysis.

c. Ground Training. All pilots should be current in BCWD, TCWD, and OAS courses as listed in the MAWTS-1 course catalog.

d. Simulator Training (5 Periods, 5.0 Hours)

SOAS-230 1.0 T,R WST/NWST/RNWST S DNR

Goal. Introduce medium altitude air interdiction to include use of ALQ-164/ALR-67.

Requirement. Conduct a medium altitude interdiction mission. Emphasize target detection/acquisition/ID, mutual support, target area mechanics, and communication. Target area mechanics should incorporate compressed TOTs, off-target maneuvers and expendable usage and threat reaction.

Prerequisite. SAG-210.

Ordnance. 6 MK-83, ALE-39 and ALQ-164.

Performance Standard. Timing and weapons delivery per the AV-8B MCCRES standard.

SOAS-231 1.0 T,R WST/NWST/RNWST S DNR

Goal. Introduce low altitude air interdiction. Practice use of ALQ-164/ALR-67.

Requirement. Conduct an air interdiction mission with a low altitude ingress/egress. Emphasize weapons planning, low/high altitude pop parameters, target acquisition, expendable usage, off target maneuvers and threat reaction.

Prerequisite. SAG-210, SNAV-205.

Ordnance. 6 MK-82, ALE-39 and ALQ-164.

Performance Standard. Timing and weapons delivery per the AV-8B MCCRES standard.

SOAS-232 1.0 T,R WST/NWST/RNWST S DNR

Goal. Introduce armed reconnaissance.

Requirement. Conduct armed reconnaissance in a TAI at medium altitude. Emphasize systems usage and management, visual footprints, target detection/acquisition/ID, and target attacks.

Prerequisite. SAG-210.

Ordnance. 4 MK20, 300RDS and ALE-39.

Performance Standard. Proper utilization of AV-8B avionics suite and sensors for route, strip or area searches.

SOAS-233 1.0 T,R NWST/RNWST S NR

Goal. Introduce ship attack tactics.

Requirement. Conduct ship attacks utilizing various profiles. Emphasize target detection/acquisition/ID, weapons system optimization, mutual support and deconfliction. Emphasize use of Radar sea search mode, if available. Also, emphasize use of FLIR and IMAV for target detection.

Prerequisites. SAG-213.

Ordnance. CAGM-65F, 300RDS, 20 chaff and 20 flares.

Performance Standard. 3 successful ship attacks.

SOAS-234 1.0 T,R WST/NWST/RNWST S DNR

Goal. Introduce medium altitude close air support.

Requirement. Conduct a medium altitude close air support mission under the control of a simulated FAC. Emphasize timing, target acquisition, target area mechanics, and communication. Target area mechanics should incorporate medium altitude attacks per the TACMAN.

Prerequisite. SAG-210.

Ordnance. 2 GBU-12, 300RDS, ALE-39, 1 AGM-65E and 1 AGM-65F.

Performance Standard. Successful PGM employment. Timing and deliveries per AV-8B MCCRES standard.

SOAS-235 1.0 T,R WST/NWST/RNWST S DNR

Goal. Introduce low altitude close air support.

Requirement. Conduct close air support under a simulated 3000 ft overcast. Emphasize timing, mutual support, target area mechanics, and frag avoidance. Target area mechanics per the low altitude attacks in the TACMAN.

Prerequisite. SOAS-234.

Ordnance. 4 MK-83, 300 RDS, ALE-39 per TACMAN, ALQ-164.

Performance Standard. Timing and deliveries per AV-8B MCCRES standard.

e. Flight Training (10 Flights, 10.0 Hours)

OAS-236 1.0 T 2 AV-8B A DNR

Goal. Introduce section medium altitude air interdiction.

Requirement. Conduct a medium altitude interdiction mission. Emphasize target detection/acquisition/ID, mutual support, threat reaction, target area mechanics, optimizing weapons systems. Target area mechanics should incorporate compressed TOTs, off target maneuvers and expendable usage.

Prerequisite. SOAS-230.

Ordnance. 4 MK-83, ALE-39 and ALQ-164.

Performance Standard. Timing and deliveries per AV-8B MCCRES standard.

OAS-237 1.0 T 2 AV-8B A DNR

Goal. Introduce low altitude air interdiction.

Requirement. Conduct an air interdiction mission with a low altitude ingress/egress. Emphasize low altitude target area mechanics, threat reaction, mutual support, communication, and fragmentation avoidance, if applicable.

Prerequisite. SOAS-231, SLAT-221.

Ordnance. 4 CBU-99/100, 20 chaff and 20 flares.

Performance Standard. Demonstrate knowledge of Cluster Bomb Unit employment.

OAS-238 1.0 T 2 AV-8B A DNR

Goal. Introduce section armed reconnaissance.

Requirement. Conduct medium altitude armed reconnaissance in an assigned TAI. Emphasize systems setup and management, visual footprints, predicted apparent target mil size, target detection/acquisition/identification, reactive weaponeering, weapons system optimization, and target attacks.

Prerequisites. SOAS-232.

Ordnance. 6 MK-76, 300RDS, 20 chaff and 20 flares.

Performance Standard. 3 successful target attacks.

OAS-239 1.0 T,R 2 AV-8B/1 A SCAR DNR

Goal. Introduce SCAR in support of section armed reconnaissance.

Requirement. Conduct medium altitude armed reconnaissance with a SCAR platform. Emphasize shooter/cover responsibilities, integration/deconfliction with the SCAR and battlefield handover. SCAR aircraft should have a LASER designation capability.

Prerequisite. OAS-238.

Ordnance. 4 MK-82, AGM-65E, 300RDS, 20 chaff and 20 flares.

External Support. SCAR platform, MACCS support if available.

Performance Standard. Timing and deliveries per AV-8B MCCRES standard.

OAS-240 1.0 T,R E 2 AV-8B A DNR

Goal. Introduce medium altitude close air support.

Requirement. Conduct medium altitude close air support. Emphasize target detection/acquisition/ID, target area mechanics, mutual support and deconfliction. Emphasize predicted target apparent Mil size and aiming Mil corrections. Target area mechanics should incorporate a shooter/cover responsibilities. Use LASER designator, if available.

Prerequisites. SOAS-234.

Ordnance. 3 BDU-45, 1 GBU-12, 300RDS, 20 chaff and 20 flares.

External Support. Terminal control.

Performance Standard. Minimum 3 successful attacks. Timing and deliveries per AV-8B MCCRES standard.

OAS-241 1.0 T,R E 2 AV-8B A DNR

Goal. Introduce low altitude close air support.

Requirement. Conduct close air support with a low altitude ingress/egress. Emphasize timing, mutual support, target area mechanics, weapons systems optimization, and fragmentation avoidance.

Prerequisites. SOAS-235, SLAT-221.

Ordnance. 4 MK-77, 300RDS, 20 chaff and 20 flares.

External Support. Terminal control.

Performance Standard. Timing and deliveries per AV-8B MCCRES standard.

11. Escort

a. Purpose. Introduce and develop proficiency in the techniques of escorting assault support aircraft. Upon completion of this stage, the pilot should be able to:

(1) Demonstrate proficiency as a wingman in an assault support escort mission.

(2) Understand attached, detached and combined escort techniques.

(3) Understand assault support routing.

(4) Provide reaction support against the threats.

(5) Understand execution checklist.

b. General. The pilot must have a thorough knowledge of assault support routing. Be ready to provide protection from aggressor fixed and rotary-wing aircraft, provide protection from ground threats, be prepared to clear landing zones, and provide assistance for TRAP and ResCAP.

c. Ground Training. Assault support escort as described in the TACMAN.

d. Simulator Training. None.

e. Flight Training (1 Flight, 1.3 Hours)

ESC-242 1.3 T 2 AV-8B A DNR

Goal. Introduce assault support escort.

Requirement. Fly as an element in an assault support team (AST). Emphasize planning and integrating with the assault support package.

Prerequisite. OAS-238.

Ordnance. 4 BDU-45, CATM-9, 40 chaff and 20 flares.

External Support. Assault support aircraft.

Performance Standard. Demonstrate knowledge of assault support and escort tactics.

12. Air-to-Air

a. Purpose. Introduce the tactical employment of the AV-8B against an air threat and develop proficiency as a wingman in this environment.

b. General. All flights should make use of available instrumented air combat maneuvering ranges.

c. Ground training. Complete in the air-to-air course as outlined in the MAWTS-1 course catalog.

d. Simulator Training (13 Periods, 13.0 Hours)

SAA-250 1.0 T,R E WST/NAWST/RNAWST S DNR

Goal. Practice offensive maneuvers and departures from controlled flight. Introduce TVC.

Requirement. Perform gunsight tracking, slow speed/high AOA maneuvering and hard/break turns. Review aircraft limitations and perform accelerated stall and spin recovery procedures. Introduce slow speed nozzle handling drills. Practice AIM-9 HOTAS.

Prerequisite. SFAM-200.

Ordnance. 4 AIM-9M, ALE-39 and ALQ-164.

Performance Standard. Per TACMAN and TOPGUN Cat III ROT.

SAA-251 1.0 T WST/NAWST/RNAWST S DNR

Goal. Introduction to GCI tactics and review of AIM-9 tactics.

Requirement. Perform GCI intercepts from all quadrants on non-maneuvering bogey and execute successful AIM-9 launch to destroy target.

Prerequisite. None.

Ordnance. 4 AIM-9M, ALE-39 and ALQ-164.

Performance Standard. Per TACMAN and TOPGUN Cat III ROT.

SAA-252 1.0 T RNAWST S R

Goal. Introduce APG-65 Air Program controls and displays.

Requirement. Introduce Air Radar program displays and controls. Select A/A options and radar sets via the MPCD/HOTAS. Perform manual, fast, and auto acquisitions. Use AIM-9 in both boresight and SEAM.

Prerequisite. None.

Ordnance. 4 AIM-9M, ALE-39 and ALQ-164.

Performance Standard. Per TACMAN and TOPGUN Cat III ROT.

SAA-253 1.0 T,R RNAWST S R

Goal. Introduce forward quarter intercepts.

Requirement. Introduce pilot management of RADAR search volume. Evaluate target Mach, altitude, closure, and aspect. Use antenna train angle, and target aspect to establish a collision course intercept with flanking aspect. Adversary should be non-maneuvering.

Ordnance. 4 AIM-9M, ALE-39 and ALQ-164.

Performance Standard. Per TACMAN, TOPGUN Cat III ROT.

SAA-254 1.0 T,R RNAWST S R

Goal. Practice radar trail departure. Introduce tactical forward quarter intercepts.

Requirement. Practice a radar trail departure. Refine pilot management of radar search volume using radar sets. Evaluate target Mach, altitude, closure, and aspect. Use antenna train angle, and target aspect to establish a collision course intercept with flanking aspect. Introduce use of the Normalized In-Range Display (NIRD) for weapons employment, introduce ACM acquisition modes. Adversary should be non-maneuvering.

Ordnance. 4 AIM-9M, ALE-39 and ALQ-164.

Performance Standard. Per AV-8B TACSOP and TOPGUN Cat III ROT.

SAA-255 1.0 T,R RNAWST S R

Goal. Introduction to AIC and CAP procedures. Practice tactical forward quarter intercepts.

Requirement. Introduce CAP procedures and the use of AIC to complement on board systems. Integrate communication with the AIC. Refine radar engagement timeline. Adversary should be non-maneuvering with at least a 60 kt speed advantage.

Ordnance. 4 AIM-9M, ALE-39 and ALQ-164.

Performance Standard. Per TACMAN, TOPGUN Cat III ROT and MAWTS Air Control Manual.

SAA-256 1.0 T,R RNAWST S R

Goal. Introduce intercepts against a maneuvering adversary.

Requirement. Introduce tactical intercepts against a maneuvering adversary. Emphasize aspect assessment and refinement of lateral separation. Refine integration with AIC and executing the radar engagement timeline. Adversary should be maneuvering with at least a 60 kt speed advantage.

Ordnance. 4 AIM-9M, ALE-39 and ALQ-164.

Performance Standard. Per TACMAN, TOPGUN Cat III ROT.

SAA-257 1.0 T,R RNAWST S R

Goal. Introduce forward quarter to stern conversion.

Requirement. Introduce forward quarter to stern conversions against a non-maneuvering adversary. Adversary should be co-speed.

Ordnance. 4 AIM-9M, and ALE-39 and ALQ-164.

Performance Standard. Per TACMAN, TOPGUN Cat III ROT.

SAA-258 1.0 T,R RNAWST S R

Goal. Introduce radar set handling as part of radar missile defense.

Requirement. Integrate radar set handling techniques into a RADAR missile defense.

Ordnance. 4 AIM-9M, ALE-39 and ALQ-164.

Performance Standard. Per TACMAN and TOPGUN Cat III ROT.

SAA-259 1.0 T,R RNAWST S R

Goal. Introduce formation analysis/sorting.

Requirement. Incorporate formation analysis and sorting into a tactical intercept. Adversaries should be in section and presented in a variety of tactical formations. Adversaries should be non-maneuvering.

Ordnance. 4 AIM-9M, ALE-39 and ALQ-164.

Performance Standard. Per TACMAN, AV-8B TACSOP and TOPGUN Cat III ROT.

SAA-260 1.0 T,R RNAWST S R

Goal. Introduce section VID tactics.

Requirement. Refine formation analysis and sorting in a tactical intercept with merge geometry that reflects a VID requirement. Adversaries should be in section and presented in a variety of tactical formations. Adversaries should be non-maneuvering.

Ordnance. 4 AIM-9M, ALE-39 and ALQ-164.

Performance Standard. Per TACMAN and TOPGUN Cat III ROT.

SAA-261 1.0 T,R RNAWST S R

Goal. Introduce intercepts from a CAP against two group presentations.

Requirement. Introduce intercepts from a CAP against two adversary groups. These adversaries should be presented in both range and azimuth with the distance between groups varied to teach targeting skills. Adversary groups should each be in section and presented in a variety of tactical formations/ altitudes. Adversaries should be non-maneuvering within 20 miles from the merge.

Ordnance. 4 AIM-9M, ALE-39 and ALQ-164.

Performance Standard. Per TACMAN and TOPGUN Cat III ROT. Demonstrate knowledge of FBR for sorting.

SAA-262 1.0 T,R RNAWST S R

Goal. Introduce intercepts from a CAP against adversaries performing decoy tactics.

Requirement. Refine targeting skills against adversaries performing pre-briefed decoy tactics.

Ordnance. 4 AIM-9M, ALE-39 and ALQ-164.

Performance Standard. Per TACMAN, MCM 3-1 and TOPGUN Cat III ROT.

SAA-263 1.0 T,R RNAWST S R

Goal. Review intercepts from a CAP against adversaries performing decoy tactics.

Requirement. Refine targeting skills against adversaries performing pre-briefed decoy tactics.

Ordnance. 4 AIM-9M, ALE-39 and ALQ-164.

Performance Standard. Per TACMAN, MCM 3-1 and TOPGUN Cat III ROT.

e. Flight Training (9 Flights, 9.0 Hours)

AA-264 1.0 T,R, E 2 AV-8 A DNR

Goal. Review 1 v 1 maneuvering and introduce nozzle handling drills.

Requirement. Perform nozzle handling drills. Perform offensive engagements against a similar or dissimilar adversary. Emphasize valid weapons employment, in-plane/out of plane maneuvering, and disengagements. Conclude sortie with a section GCA to simulate circling minimums to individual full stop landings.

Prerequisite. SAA 250.

Ordnance. CATM-9, TACTS, and 20 flares.

Performance Standard. Per TACMAN, NATOPS and TOPGUN Cat III ROT.

AA-265 1.0 T, 2 AV-8B A DNR

Goal. Review 1 v 1 maneuvering.

Requirement. Perform offensive, defensive, and neutral engagements against a similar or dissimilar adversary. Emphasize valid weapons employment, rear quarter/forward quarter missile and gun defense, in-plane/out of plane maneuvering, and disengagements.

Prerequisite. AA 264.

Ordnance. CATM-9, TACTS, and 20 flares.

Performance Standard. Per TACMAN and TOPGUN Cat III ROT.

AA-266 1.0 T 2 AV-8B A DNR

Goal. Review 2 v 1 maneuvering.

Requirement. Perform forward quarter, lead-trail, and rear quarter set-ups. Emphasize tactical communications, mutual support, minimizing time-to-kill, and effective disengagements.

Prerequisite. AA 264.

Ordnance. CATM-9, TACTS, and 20 flares.

External Support. Adversary.

Performance Standard. Per TACMAN and TOPGUN Cat III ROT.

AA-267 1.0 T 1 AV-8B A DNR

Goal. Review utilization of AIC.

Requirement. As a single aircraft, prosecute intercepts to a successful AIM-9 solution against a single adversary simulating a strike profile. Adversary maneuvering should be benign and limited to no more than flanking aspect. Emphasize intercept geometry, ROE, comm integration with AIC, and weapons employment. AIC required.

Prerequisite. AA 265.

Ordnance. CATM-9, TACTS, and 20 flares.

External Support. Adversary and AIC required.

Performance Standard. Per TACMAN, and TOPGUN Cat III ROT.

AA-268 1.0 T, R, E 2 AV-8B vs Adversary A DNR

Goal. 2 v 1 against a maneuvering adversary.

Requirement. Prosecute intercepts against a single maneuvering bandit. Emphasize ROE, communication cadence, RWR reactions, mutual support, and weapons employment. AIC and radar adversary required.

Prerequisites. AA 266.

Ordnance. CATM-9, TACTS, and 20 flares.

External Support. AIC required; BVR Adversary if available.

Performance Standard. Per TACMAN, and TOPGUN Cat III ROT.

AA-269 1.0 T,R 2 AV-8B vs 2 Adversaries A DNR

Goal. 2 v 2 against RADAR missile equipped adversaries.

Requirement. Conduct a strike against a vital area defended by two radar missile equipped adversaries. Emphasize counter radar tactics, ROE, communications, RWR reactions, and mutual support. AIC and radar adversary required. Perform one visual set up.

Prerequisite. AA 268.

Ordnance. CATM-9, TACTS, 20 flares and 20 chaff.

External Support. AIC required. BVR Adversary, if available.

Performance Standard. Per TACMAN, MCM 3-1 and TOPGUN Cat III ROT.

13. Night Systems (NS)

a. Purpose. Develop proficiency in the use of Night Vision Devices (NVD's) and aircraft night systems in the night environment. The intent is to develop proficiency in night sensor management during OAS mission profiles. At the completion of this stage, the pilot should be able to demonstrate proficiency with the following:

(1) Night systems (aided) flying during high/low light level(HLL/LLL).

(2) Night systems (aided) navigation.

(3) Night systems (aided) formation flying as a wingman.

(4) Night systems (aided) weapons delivery.

(5) Night systems (aided) air interdiction, armed reconnaissance, and close air support missions.

(6) No Bomb Drop Scoring (NBDS) is a suitable substitute for conventional ordnance.

b. General. Pilots shall complete this training per (MCO P3500.14F T&R Manual, Vol 1, Chapter 9). A non-NSQ pilot shall fly NS 277-279 in sequence with an NSI under high light level conditions. Non-NSQ pilots may fly remaining flights with an NSQ under high light level conditions. The following flights, NS-282 and NS-284, must be flown under low light level conditions with an NSI for non-NSQ pilots. Completion of this stage constitutes night systems qualification (NSQ).

c. Prerequisites. Pilots shall complete night attack or radar night attack differences training prior to commencing this stage of training.

d. Ground Training. MAWTS-1 Night Attack course and "NITE Lab".

e. Simulator Training (7 Periods, 8.5 Hours)

SNS-270 1.5 T,R NWST/RNWST S N NVD NR

Goal. Introduce NS ground operations, NS environment, and NS management.

Requirement. Practice donning and doffing NVD's both on the ground and airborne. Perform cockpit checks (NVG and FLIR setup) and taxi under varying airfield light conditions. Evaluate environmental conditions at high, medium, and low altitudes. Conduct sustained and hard turns in level, climbing, and descending flight. Conduct free navigation, maintaining an altitude between 700-1,000 ft AGL. VFR entry to low approach (X2), FNSL, STO and an RVL. Simulate varying light level conditions.

Prerequisite. SFAM-200.

Performance Standard. Cockpit management and NVD scan technique.

SNS-271 1.5 T,R NWST/RNWST S N NVD NR

Goal. Introduce NS terrain analysis with various light levels and altitudes.

Requirement. Perform STO, area navigation, turns at 500-1,000 ft and airspeed between 400-500 kts with normal mission tasking. Show effects of lunar azimuth on targets and terrain. Introduction to inadvertent IMC, reduced light levels and dynamic shadowing. Stress MCT workload management habit development. VFR entry to FNSL, STO, RVL, VTO Accel, and Decel to a VL.

Prerequisite. SNS-270.

Performance Standard. Cockpit management and NVD scan technique.

SNS-272 1.5 T,R NWST/RNWST S N NVD NR

Goal. Introduce NS high-low-high navigation.

Requirement. Perform NS flight on a prebriefed high-low-high profile using a military training route (MTR). Maximize the use of night systems. IP should assign an identifiable target and TOT at a specific point along the route. Practice night systems navigation, timing, and target/detection/acquisition identification. Perform level 500 ft AGL target overfly. Fuel planning should be ± 300 lbs.

Prerequisite. SNS-271, SNAV-205.

Performance Standard. Make TOT ± 15 seconds, plan fuel ± 300 pounds.

SNS-273 1.0 T,R NWST/RNWST S N NVD NR

Goal. Introduce NS high and low angle system dive deliveries.

Requirement. Perform high and low angle system deliveries on a raked range or tactical targets under various light levels. Stress sensor management and map overlays for SA enhancement. Emphasize optimum sensor/system options for target detection, acquisition and identification, and weapons delivery parameters.

Prerequisite. SNS-271, SAG-210.

Ordnance. 12 MK-76 and ALE-39.

Performance Standard. CEP must be < 10 mils about MPI.

SNS-274 1.0 T,R NWST/RNWST S N NVD NR

Goal. Introduce NS tactical attack profiles.

Requirement. Perform multiple dive deliveries on tactical targets using level and ramp-down entries to 30 and 45 degree dive deliveries. Perform cruise climb and pop-up attacks from medium altitude starts to 30 and 45 degree dive deliveries. Emphasize optimizing sensor/system options for target detection, acquisition and identification, target area mechanics, attack profiles/parameters and tactical communication as a lead-in to section tactics.

Prerequisite. SNS-273, AG-216.

Ordnance. 4 MK-82, 2 AGM-65F, ALE-39 and ALQ-164.

Performance Standard. Perform minimum of 1 cruise climb, 1 pop-up and 1 ramp down profile.

SNS-275 1.0 T,R NWST/RNWST S N NVD NR

Goal. Introduce NS armed reconnaissance.

Requirement. Conduct NS armed reconnaissance in an assigned TAI. Stress TAI analysis, MOMS planning, map overlay use, visual footprint predictions and optimal sensor/systems use for target detection/acquisition and identification. Use strip, route, or area searches as required. Emphasize section search and attack options from medium and low altitude using various options for sensors and tactical profiles.

Prerequisite. SNS-274, SOAS-232.

Ordnance. 4 MK-82, 2 AGM-65F, ALE-39 and ALQ-164.

Performance Standard. Minimum 3 successful attacks on 3 separate searches.

SNS-276 1.0 T,R NWST/RNWST S N NVD NR

Goal. Introduce NS medium altitude CAS.

Requirement. Conduct preplanned and immediate CAS missions under the control of a FAC. Execute multiple, medium or high altitude attacks from various initial points. Emphasize timing, target detection/acquisition/identification, target area mechanics, delivery parameters, off target maneuvering, tactical communication, mutual support and expendable usage.

Prerequisite. SNS-274, SOAS-234.

Ordnance. 4 MK-82, 2 AGM-65F, ALE-39 and ALQ-164.

Performance Standard. Minimum 3 attacks.

f. Flight Training (9 Flights, 9.9 Hours)

NS-277 1.3 T,R 2 AV-8B A N NVD NR

Goal. NS environment and NS management.

Requirement. As a chased aircraft, practice donning and doffing of NVD's. Perform cockpit checks (NVG and FLIR setup), ground ops and taxi. Evaluate environmental conditions at high, medium, and low altitudes. Conduct sustained and hard turns in level, climbing, and descending flight. Conduct free navigation at high, medium and low altitude. Conduct range/depth perception and peripheral vision exercise. Practice NS V/STOL as airfield environment allows. Chase NSI required. Conclude sortie with a precision RVL/VL under LSS control, stress FBO standards.

Prerequisite. SNS-270, 271.

Ordnance. None.

Performance Standard. Demonstrate thorough knowledge of Night systems employment.

NS-278 1.3 T,R E 2 AV-8B A N NVD NR

Goal. NS formation flying.

Requirement. As a wingman, fly all formations as outlined in the AV-8B TACMAN. As wingman and lead, perform break-ups and both CV and running rendezvous. As a wingman, practice section maneuvering on an area navigation route. Lead aircraft present various light packages to demonstrate differing range cues. Stress position keeping in all formations during turns into/away from wingman. NSI required.

Prerequisite. NS-277.

Performance Standard. Per TACMAN and TACSOP.

NS-279 1.3 T,R 2 AV-8B A N NVD NR

Goal. NS high-low-high navigation.

Requirement. As a chased aircraft, conduct NS navigation on a prebriefed high-low-high profile using a military training route. IP should assign a TOT at a target along the route. Introduce NVD techniques for terrain avoidance and target detection. Emphasize navigation, timing, target detection, acquisition and identification, level overflight of target and fuel planning. Practice NS V/STOL as environment allows. Chase NSI required.

Prerequisites. SNS-272, NS-278.

Performance Standard. TOT $\pm$ 15 seconds and $\pm$ 300 pounds fuel from planning.

NS-280 1.0 T,R E 2 AV-8B A N NVD NR

Goal. NS high and low angle system dive deliveries.

Requirement. As a chased aircraft, perform high and low angle system dive deliveries on a raked range or tactical targets. Stress sensor management and map overlays for SA enhancement. Emphasize optimal sensor use for target detection/acquisition and identification, tactical comm, weapons delivery parameters, off-target maneuvering, and expendable usage.

Prerequisite. SNS-273, NS-279.

Ordnance. 12 MK-76, 20 flares and 10 chaff.

Performance Standard. CEP must be < 10 mils about MPI.

NS-281 1.0 T 2 AV-8B A N NVD NR

Goal. NS tactical attack profiles.

Requirement. As a wingman, perform multiple attacks on tactical targets or a raked range using level and ramp-down entries to 30 and 45 degree dive deliveries. Conduct cruise climb and pop-up attacks from medium altitude starts to 30 and 45 degree dive deliveries. Sortie emphasis is target area tactics/mechanics, mutual support and deconfliction.

Prerequisite. SNS-274, NS-280.

Ordnance. 12 MK-76, 20 flares and 10 chaff.

Performance Standard. Minimum 1 cruise climb, 1 pop up and 1 ramp down or level delivery.

NS-282 1.0 T,R E 2 AV-8B A N NVD NR

Goal. NS air interdiction.

Requirement. As a wingman, under low light level conditions, conduct a medium altitude NS air interdiction mission. Emphasize mission planning, MCT workload management, sensor options for target detection/acquisition/ID, target area tactics/mechanics, delivery parameters, mutual support and expendable usage. Additionally, stress MCT, workload management, formation position keeping and mutual support. NSI required for non-NSQ pilot.

Prerequisite. NS-281.

Ordnance. 6 MK-76, 20 flares and 10 chaff.

Performance Standard. Target acquisition, hits and proper attack geometry.

NS-283 1.0 T 2 AV-8B A N NVD NR

Goal. NS armed reconnaissance.

Requirement. As a wingman, conduct NS armed reconnaissance in an assigned TAI. Stress TAI analysis, MOM's planning, visual footprint predictions and target detection/ID. Use strip, route, or area searches as required. Emphasize section search and attack techniques from medium and low altitude using various sensor and tactical options. The pilot under instruction should carry both bombs and LUU-2 flares. Additionally, stress formation positioning, mutual support, and MCT workload management.

Prerequisite. NS-281.

Ordnance. 4 MK-82, 8 LUU-2, 1 CAGM-65F, 20 flares and 10 chaff

Performance Standard. Target acquisition, hits and proper attack geometry.

NS-284 1.0 T 2 AV-8B A N NVD NR

Goal. NS CAS.

Requirement. As a chased aircraft, under low light level conditions, conduct preplanned and immediate CAS missions. Execute multiple, medium altitude, high angle attacks from various initial points. Emphasize timing, optimal system/sensor management for target detection/acquisition/ID, target area tactics/mechanics, delivery parameters, tactical comm, mutual support and expendable usage. Should use artificial illumination.

Prerequisites. NS-281.

Ordnance. 6 MK-76, 16 LUU-2, 300 rds, 20 flares and 10 chaff.

Performance Standards. Cockpit management, target acquisition, hits and mutual support.

NS-285 1.0 T,R E 2 AV-8B A N NVD NR

Goal. NS CAS.

Requirement. As a wingman, repeat NS-284. Additionally stress formation position keeping, mutual support and MCT workload management. Should use artificial illumination.

Prerequisite. NS-284.

Ordnance. 6 MK-76, 16 LUU-2, 300 rds, 20 flares and 10 chaff.

Performance Standard. Same as NS-284.

14. Field Carrier Landing Practice

a. Purpose. Prepare a pilot for shipboard V/STOL operations. All procedures to be used while embarked shall be briefed and practiced where possible, including:

(1) Day VMC Visual Landing Pattern.

(a) Marshaling procedures.

(b) Initial and break procedures.

(c) Case 1-3 departures and recoveries.

(d) Landing/Deck procedures.

(e) Launch signals and abort procedures.

(f) Tram line and nozzle rotation line accuracy.

(g) Maximum performance climb out.

(h) LSO procedures and terminology.

(i) Abeam and over the stern translations.

(2) Night/CCA Pattern.

(a) Marshaling/arrival to CCA procedures.

(b) CCA procedures.

(c) Optical landing aids utilization.

(d) Landing/Deck procedures.

(e) Launch signals and techniques.

(f) Abort procedures.

(g) LSO procedures.

(h) Ship procedures.

b. General. This stage requires an LSO for all events. Pilots should use a simulated carrier deck and an optical landing system.

c. Ground Training. An FCLP/CQ stage brief including: AV-8B NATOPS procedures, LHA/LPH/LHD NATOPS manual, and VSTOL LSO NATOPS Manual.

d. Simulator Training (2 Periods, 3.0 Hours)

SFCLP-290 1.5 T,R OFT/WST/NWST/RNWST S DNR

Goal. Introduce shipboard operations.

Requirement. Perform multiple approaches, takeoffs, and landings. Maximum performance STO, VTO, accel to decel, VL, CCA, AWLS approach, and case recoveries. Preselected emergency procedures to include abort decisions.

Prerequisite. SFAM-200.

Performance Standard. Per LSO NATOPS. Minimum 6 Case I Recoveries.

SFCLP-291 1.5 T,R OFT/WST/NWST/RNWST S DNR

Goal. Introduce night shipboard operations.

Requirement. Repeat SFCLP-290 at night.

Prerequisite. SFCLP-290.

Performance Standard. Per LSO NATOPS. Minimum 4 night Case III Recoveries.

e. Flight Training (2 Flights, 2.0 Hours)

FCLP-292 1.0 T,R E 1 AV-8B A DNR

Goal. Introduce V/STOL carrier patterns/FCLP Qualification.

Requirement. Perform STO, visual pattern, and vertical landing. Stress Tram line control and nozzle rotation. Introduce launch signals and abort procedures. Currency per LSO NATOPS.

Prerequisite. SFCLP-290, FAM-203.

Performance Standard. Per LSO NATOPS. Minimum 6 Case I Recoveries.

FCLP-293 1.0 T,R E 1 AV-8B A N DNR

Goal. Introduce night V/STOL carrier patterns/FCLP Qualification.

Requirement. Perform STO to Night CCA pattern and transition to OLS and perform VL. Introduce night deck handling and launch procedures/signals. A lighted simulated carrier deck shall be used. Two CCA patterns to OLS to VL shall be flown in daylight conditions prior to commencing night ops for initial qualifications.

Prerequisite. SFCLP-291, FCLP-292, SINST-204.

Performance Standard. Per LSO NATOPS. Minimum 4 Case III Recoveries.

15. Carrier Qualification

a. Purpose. Develop and certify the PUI for day and night operations aboard certified ships.

b. General. Per NAVAIR 00-80T-111.

c. Ground Training. The squadron LSO will conduct CQ stage training prior to commencing the flight training. Training will include AV-8B NATOPS, LHA/LPH/LHD Manual, VSTOL LSO NATOPS Manual, Shipboard Operating Bulletin, squadron SOP's, and the particular ship's SOP required information.

d. Simulator Training (2 Periods, 2.0 Hours)

SCQ-294 1.0 T,R OFT/WST/NWST/RNWST S DNR

Goal. Practice shipboard operations, to include nonstandard approaches.

Requirement. Perform multiple approaches, takeoffs, and landings. Maximum performance STO, VTO, accel to decel, VL, CCA, AWLS approach, and case recoveries. Preselected emergency procedures, degraded systems, and weather operations.

Prerequisite. SFCLP-290.

Performance Standard. Per LSO NATOPS. Minimum 6 Case I Recoveries.

SCQ-295 1.0 T,R OFT/WST/NWST/RNWST S DNR

Goal. Practice night shipboard operations.

Requirement. Repeat SCQ-294 at night.

Prerequisite. SFCLP-291, SCQ-294.

Performance Standard. Per LSO NATOPS. Minimum 4 night Case III Recoveries.

e. Flight Training (2 Flights, 2.0 Hours)

CQ-296 1.0 T,R E 1 AV-8B A DNR

Goal. Day CQ certification.

Requirement. As fuel and time permit, fly CASE III recoveries until on the fuel ladder or until "charlie" time. When required, fly to marshaling and perform a Case I or II recovery to the overhead pattern. STO's and VL's as appropriate. Successful completion leads to day qualification. Number of required landings is per VSTOL LSO NATOPS.

Prerequisite. FCLP-292, SCQ-294.

Performance Standard. Per LSO NATOPS.

CQ-297 1.0 T,R E 1 AV-8B A N DNR

Goal. Practice night CQ.

Requirement. Night carrier qualification. Depart marshall for a Case III recovery to low approach, wave off into the CCA pattern. Repeat CCA circuit as fuel allows. Successful completion leads to night qualification. Number of required landings per VSTOL LSO NATOPS.

Prerequisite. FCLP-293, SCQ-295, CQ-296

Performance Standard. Per LSO NATOPS.

143. COMBAT QUALIFICATION TRAINING

1. Initial Combat Qualification Training

a. Purpose. To provide structured and standardized instruction in tactics and weapon systems for the development of a combat qualified pilot. This instruction covers the tactical employment of the various sensors associated with all three variants of the AV-8B.

b. General. This phase of instruction is focused on developing advanced core skills and flight leader skills essential to mission success. The instruction provides exposure to all mission areas assigned to the AV-8B.

2. Offensive Air Support

a. Purpose. Develop proficiency in the tactical employment of the AV-8B in offensive air support missions as a flight lead. Pilots may fly Night OAS sorties either aided or unaided, but if pilots use NVDs, flight participants shall meet all applicable directives. At the completion of this stage the pilot should be able to:

(1) Conduct air interdiction, armed reconnaissance, and close air support as a section lead.

(2) Deliver conventional ordnance on tactical sized targets in either day or night conditions using available sensors. No Bomb Drop Scoring (NBDS) is a suitable substitute for conventional ordnance.

(3) Demonstrate proficiency in identifying and evaluating threat systems and devising appropriate countertactics.

b. General. The following areas should be used throughout this stage to enhance pilot training:

(1) MACCS.

(2) TACP.

(3) SCAR Aircraft.

(4) FAC(A).

(5) Supporting arms.

(6) VRS tape debrief all sorties to the maximum extent possible.

c. Ground Training. All pilots will be current in BCWD, TCWD, and OAS as listed in the MAWTS-1 course catalog.

d. Flight Training (7 Flights 7.0 Hours)

OAS-310 1.0 T 2 AV-8B A DNR

Goal. Introduce medium altitude air interdiction as a section lead.

Requirement. As a section lead conduct medium altitude air interdiction. Emphasize flight leadership, target acquisition, threat reaction, mutual support, weapons system optimization, and comm. Target area mechanics should employ the concept of compressed TOTs.

Prerequisite. OAS-236.

Ordnance. 6 MK-83, 20 flares and 20 chaff.

Performance Standards. Timing within AV-8B MCCRES standards, weapons delivery parameters met.

OAS-311 1.0 T 2 AV-8B A DNR

Goal. Introduce low altitude air interdiction as a section lead.

Requirement. As a section lead conduct an air interdiction mission with a low altitude ingress/egress. Emphasize flight leadership, low altitude target area mechanics, mutual support, threat reaction, and frag avoidance (if applicable).

Prerequisite. OAS-237, SLAT-221.

Ordnance. 4 CBU-99/100, 20 flares and 20 chaff.

Performance Standards. Timing within MCCRES standards, weapons delivery parameters met.

OAS-312 1.0 T 2 AV-8B A DNR

Goal. Introduce medium altitude armed reconnaissance as a section lead.

Requirement. As a section lead, conduct medium altitude armed reconnaissance in a TAI. Conduct a route, strip, or area search as appropriate for the assigned TAI. Emphasize flight leadership, target acquisition, mutual support, reactive weaponeering, weapons system optimization and area threat mechanics. Conclude sortie with a simulated NORDO approach to a full stop landing.

Prerequisite. OAS-238.

Ordnance. 6 MK-76, 300RDS, 20 flares and 20 chaff.

Performance Standard. Target acquisition, hits, mutual support and attack geometry.

OAS-313 1.0 T 2 AV-8B A DNR

Goal. Introduce close air support as a section lead at medium altitude.

Requirement. As a section lead, conduct close air support at medium altitude. Emphasize flight leadership, target acquisition, mutual support, target area mechanics, weapons system optimization, and communication.

Prerequisite. OAS-240.

Ordnance. 2 BDU-45, 1 GBU-12, 1 CAGM-65E, 300RDS, 20 flares and 20 chaff.

External Support. FAC/FAC(A) w/laser designator.

Performance Standards. Timing within AV-8B MCCRES standards, weapons delivery parameters met, target acquisition and hits.

OAS-314 1.0 T 2 AV-8B A DNR

Goal. Introduce low altitude close air support as a section lead.

Requirement. As a section lead, conduct close air support requiring a low altitude ingress/egress. Emphasize flight leadership, timing, mutual support, target area mechanics, and comm.

Prerequisite. OAS-241, SLAT-221.

Ordnance. 4 MK-77, 300RDS, 20 flares and 20 chaff.

External Support. FAC/FAC(A).

Performance Standards. Timing within AV-8B MCCRES standards, weapons delivery parameters met.

OAS-315 1.0 T 2 AV-8B A N (NVD) DNR

Goal. Introduce night armed reconnaissance as a section lead.

Requirement. As a section lead conduct medium altitude night armed reconnaissance under artificial illumination, if required. Emphasize flight leadership, flare placement, target acquisition, mutual support and comm. Conclude sortie with a simulated oil light to a full stop landing.

Prerequisite. OAS-312.

Ordnance. 8 LUU-2, 4 BDU-45, 300RDS, 20 flares and 20 chaff.

Performance Standards. Target acquisition, mutual support, hits, attack geometry.

OAS-316 1.0 T,R E 2 AV-8B A N (NVD) DNR

Goal. Night close air support as a section lead check ride.

Requirement. Perform night close air support under artificial illumination, if required. Emphasize flight leadership, target area mechanics, flare placement, and mutual support.

Prerequisite. OAS-314.

Ordnance. 8 LUU-2, 4 MK-82, CAGM-65F, 20 flares and 20 chaff.

External Support. FAC/FAC(A).

Performance Standards. Timing within AV-8B MCCRES standards, weapons delivery parameters met, target acquisition, hits.

3. Escort

a. Purpose. Introduce and develop proficiency in the techniques of escorting assault support aircraft. Upon completion of this stage, the pilot should be able to:

(1) Demonstrate proficiency as a section lead in an assault support escort mission.

(2) Understand attached, detached and combined escort techniques.

(3) Understand assault support routing.

(4) Provide reaction support against the threats.

(5) Understand execution checklist.

b. General. The pilot must have a thorough knowledge of assault support routing. Be ready to provide protection from aggressor fixed and rotary-wing aircraft, provide protection from ground threats, be prepared to clear landing zones and provide assistance for TRAP and ResCAP.

c. Ground Training. Assault support escort as described in the TACMAN.

d. Simulator Training. None.

e. Flight Training (1 Flight, 1.3 Hours)

ESC-320 1.3 T 2 AV-8B A DNR

Goal. Practice assault support escort/ResCAP.

Requirement. As a section lead in a section or division, fly as an element in an assault support team (AST). Emphasize planning and integrating with the assault support package.

Ordnance. 4 BDU-45, 300 rds, CATM-9, CAGM-122, 20 flares and 40 chaff.

External Support. Assault support aircraft.

Prerequisite. ESC-242.

Performance Standard. Provide effective mutual support for Assault Support aircraft.

4. ACM Flight Lead

a. Purpose. Introduce the tactical employment of the AV-8B against an air threat, and develop proficiency in this environment as a section lead. Develop flight leadership skills and inflight decision-making ability.

b. General. All flights should make use of available instrumented air combat maneuvering ranges. PUI is ready for designation as an ACM Flight Lead upon completion of this syllabus.

c. Ground Training. Complete the air-to-air course as outlined in the MAWTS-1 course catalog.

d. Simulator Training. None.

e. Flight Training (4 Flights, 4.0 Hours)

AA-330 1.0 T 2 AV-8B A DNR

Goal. Introduce/practice 2 v 1 maneuvering as a section lead.

Requirement. Perform forward quarter, lead-trail, and rear quarter set ups. Emphasize tactical communications, mutual support, minimizing time-to-kill, and effective disengagements.

Prerequisite. AA-268.

Ordnance. CATM-9, TACTS, and 20 flares.

External Support. Adversary.

Performance Standard. Section mutual support maintained while achieving a minimum engaged time.

AA-331 1.0 T 2 AV-8B A DNR

Goal. Practice 2 v 1 maneuvering as a section lead.

Requirement. Perform forward quarter, lead-trail, and rear quarter set ups. Emphasize tactical communications, mutual support, minimizing time-to-kill, and effective disengagements.

Prerequisite. AA-330.

Ordnance. CATM-9, TACTS, and 20 flares.

External Support. Adversary.

Performance Standard. Section mutual support maintained while achieving a minimum engaged time.

AA-332 1.0 T 2 AV-8B A DNR

Goal. As a section lead, introduce 2 v 2 point defense against a section of radar equipped adversaries.

Requirement. Perform a point defense against a section of radar equipped adversaries. Emphasize threat assessment, comm integration, mutual support, and counter radar tactics. AIC and adversary capable of supporting BVR missiles required. Perform one visual set up.

Prerequisite. AA-269, AA-330.

Ordnance. CATM-9, TACTS, 20 flares and 20 chaff.

External Support. AIC, 2 adversaries.

Performance Standard. Recognized air picture (RAP), weapons employment.

AA-333 1.0 T,R 2 AV-8B A DNR

Goal. 2 v 2 Strike against a section of radar equipped adversaries as an ACM Flight Lead check ride.

Requirement. Perform a strike against a target defended by a section of radar equipped adversaries. Emphasize counter radar tactics, ROE, communications, RWR reactions, and mutual support. AIC and adversary capable of supporting BVR radar missiles required.

Prerequisite. AA-332.

Ordnance. CATM-9, TACTS, 20 flares and 20 chaff.

External Support. AIC, 2 adversaries.

Performance Standard. Same as AA-332.

5. RADAR AIR TO AIR

a. Purpose. Introduce the tactical employment of the APG-65 against an air threat, and develop proficiency in this environment.

b. General. All flights should make use of available instrumented air combat maneuvering ranges. Upon completion of this syllabus, pilot is considered core competent in radar air-to-air skills.

c. Ground Training. Complete the radar air-to-air course as outlined in the MAWTS-1 course catalog prior to the first flight.

d. Simulator Training (1 Period, 1.0 Hour).

SAA-340 1.0 T,R RNAWST S R

Goal. Review intercepts, sorting, VID requirements and utilization of APG-65 sets and AIM-9 employment.

Requirement. Refine formation analysis and sorting in a tactical intercept with merge geometry that reflects a VID requirement. Adversaries should be in section and presented in a variety of tactical formations. Adversaries should be non-maneuvering. Console instructor will act as wingman/GCI.

Ordnance. 4 AIM-9M, ALE-39 and ALQ-164.

Prerequisite. SAA-260.

Performance Standard. Demonstrate radar interpretation for successful controlled aspect conversion, develop recognized air picture (RAP).

e. Flight Training (2 Flights, 2.0 Hours).

AA-341 1.0 T 1 AV-8B A R

Goal. 1 v 1 intercepts against a maneuvering adversary.

Requirements. As a single aircraft, conduct beyond visual range intercepts against a single adversary executing strike mission profiles. Adversary tactics should consist of maneuvers designed to deceive onboard systems. Emphasize integration with AIC, refining intercept geometry, and valid shot opportunities.

Prerequisites. AA-267, SAA-340.

Ordnance. CATM-9, TACTS, and 20 flares.

External Support. AIC/adversary.

Performance Standard. Demonstrate radar interpretation for successful controlled aspect conversion.

AA-342 1.0 T,R E 2 AV-8B A R

Goal. 2 v 2 radar intercepts against maneuvering adversaries.

Requirements. Perform a point defense employing APG-65 tactics against a section of radar equipped adversaries. Emphasize threat assessment, communication integration, mutual support, and counter radar tactics. AIC and adversary capable of supporting BVR missiles required.

Prerequisites. AA-269.

Ordnance. CATM-9, TACTS, 20 flares and 20 chaff.

External Support. AIC/ACMR/2 BVR adversaries.

Performance Standard. Demonstrate radar interpretation, RAP, weapons employment and threat assessment.

6. Offensive Air Support

a. Purpose. Develop proficiency in the tactical employment of the AV-8B in offensive air support missions as a division lead. Pilots may fly Night OAS sorties either aided or unaided, but if NVDs are used, flight participants shall meet all applicable directives. At the completion of this stage the pilot should be able to:

(1) Conduct air interdiction, armed reconnaissance, and close air support as a division lead in the medium and low altitude regimes.

(2) Deliver conventional ordnance and PGM’s on tactical sized targets in either day or night conditions using available sensors. No Bomb Drop Scoring (NBDS) is a suitable substitute for conventional ordnance.

(3) Demonstrate proficiency in identifying and evaluating threat systems and devising appropriate countertactics.

b. General

(1) Upon completion of this stage the pilot should be exposed to several missions using the following:

(a) MACCS.

(b) TACP.

(c) SCAR Aircraft.

(d) FAC/FAC(A)s.

(e) Supporting arms.

c. Ground Training. All pilots will be current in BCWD, TCWD, and OAS as listed in the MAWTS-1 course catalog.

d. Flight Training (5 Flights, 5.0 Hours)

OAS-350 1.0 T 4 AV-8B A DNR

Goal. As a division lead, introduce and practice division target area mechanics.

Requirement. As a division lead, introduce division target area mechanics, include compressed TOTs. Introduce shooter/cover coordinated section. Attacks should be run from an IP to a tactical target. Emphasize mutual support and deconfliction.

Prerequisite. AG-216.

Ordnance. 6 MK-76 and 300 Rounds.

Performance Standard. Target area communication, shooter/cover techniques, hits and deconfliction.

OAS-351 1.0 T 4 AV-8B A DNR

Goal. Introduce/practice leading division air interdiction at medium altitude.

Requirement. As a division lead, conduct medium altitude air interdiction. Emphasize target acquisition, division target area mechanics, threat reaction, comm, and mutual support within the sections and division. Target area mechanics should incorporate compressed TOTs or shooter/cover sections as appropriate for the threat and target array.

Prerequisite. OAS-310.

Ordnance. 2 MK-83, 20 flares and 20 chaff.

Performance Standards. Timing and weapons employment within AV-8B MCCRES standards.

OAS-352 1.0 T 4 AV-8B A DNR

Goal. Introduce/practice leading division air interdiction at low altitude.

Requirement. As a division lead, conduct an air interdiction mission requiring a low altitude ingress/egress. Emphasize flight leadership, low altitude target area mechanics, threat reaction, mutual support, and frag avoidance.

Prerequisite. OAS-311.

Ordnance. 4 BDU-45, 20 flares and 20 chaff.

Performance Standards. Timing and weapons employment within MCCRES standards; conduct per TACSOP.

OAS-353 1.0 T 4 AV-8B A DNR

Goal. Introduce/practice leading medium altitude armed reconnaissance as a division lead.

Requirement. As a division lead, conduct medium altitude armed reconnaissance. Emphasize target acquisition, threat reaction, mutual support, target area mechanics, and deconfliction. Target area mechanics should incorporate shooter/cover sections.

Prerequisite. OAS-312.

Ordnance. 4 MK-82, 300RDS, 20 flares and 20 chaff.

Performance Standards. Demonstrate successful target area mechanics using shooter/cover techniques, target acquisition and hits.

OAS-354 1.0 T,R,E 4 AV-8B/SCAR A DNR

Goal. Practice medium altitude armed reconnaissance as a division lead with a SCAR platform. This constitutes a division leader checkride sortie.

Requirement. As a division lead, perform armed reconnaissance incorporating a SCAR platform. Emphasize mutual support, target area mechanics, and deconfliction between sections strikers and SCAR. Target area mechanics should incorporate shooter/cover section. SCAR is to have a LASER designator capability.

Prerequisite. OAS-353.

Ordnance. 4 MK-82, CAGM-65E, CAGM-65F, 300RDS, 20 flares and 20 chaff.

External Support. SCAR platform.

Performance Standard. Per AV-8B TACMAN, MCCRES.

7. Night Systems

a. Purpose. Develop proficiency in the use of Night Vision Devices (NVD's) and aircraft night systems in the night LAT environment.

b. General. The PUI is night systems LAT qualified at successful completion of this stage.

(1) Pilots shall conduct training per (MCO P3500.14F, T&R Manual, Volume I).

(2) Forced performance (minimum altitude, airspeed, aerodynamic, vector and time control) is required during each simulator sortie so instructors may evaluate terrain clearance tasks and mission cross checks. Obstruction clearance in any simulator or flight of less than 100 feet AGL requires, at a minimum, a refly of that particular sortie.

(3) NS LAT simulator and flight training for initial qualification requires an NSI as a monitor/flight lead.

(4) Completion of SNS 360-361 and NS 362-365 constitutes NS LAT qualification.

c. Prerequisites. Night Systems Qualified prior to flight training.

d. Ground Training. Review LAT portion of MAWTS-1 ASP Night System course.

e. Simulator Training (2 Periods, 3.0 Hours)

SNS-360 1.5 T,R NWST/RNWST S N NVD NR

Goal. Introduce basic and advanced NS LAT.

Requirement. Perform low altitude basic flight maneuvers on a closed LAT circuit. PUI practice straight and level flight, level turns, sustained and hard turns, ridgeline crossings, terrain masking, and climb-to-cope procedures. Practice efficient scan techniques which enable aerodynamic control, vector control, AGL control, and time control. Emphasize TCT/MCT. Introduce all advanced LAT maneuvers, to include transition to LAT, vertical jink, SOJ, TOJ, ROJ, SCT, guns jink and break turns. Emphasize adherence to the 10 degree rule, 50% dive recovery rule and step down recovery altitudes. Demonstrate low angle high illumination NVD problems. Flight should be flown in a mountainous terrain data base and in a high to medium light environment.

Prerequisites. NS-285, LAT-226.

Ordnance. None.

Performance Standard. Per MAWTS ASP.

SNS-361 1.5 T,R NWST/RNWST S N NVD NR

Goal. Review basic and advanced NS LAT. Introduce target attacks in the LAT environment.

Requirement. Practice basic and advanced low altitude tactical maneuvers over a planned low altitude route. Include advanced LAT during a threat reaction circuit. Introduce standard target attacks in the LAT environment. Demonstrate proficiency at 200-500 ft AGL (+100/-50 ft). Emphasize efficient scan techniques, aerodynamic control, vector control, AGL control and time control.

Prerequisite. SNS-360.

Ordnance. None.

Performance Standard. Altitude control +100/-50 feet. Adherence to tactical abort parameters.

f. Flight Training (4 Flights, 4.0 Hours)

NS-362 1.0 T 2 AV-8B A N NVD NR

Goal. Introduce basic NS LAT.

Requirement. As a chased aircraft, perform low altitude basic flight maneuvers on closed LAT circuit. PUI practice straight and level flight, level turns, sustained and hard turns, ridgeline crossings, terrain masking, and climb-to-cope procedures. Practice efficient scan techniques which enable aerodynamic control, vector control, AGL control, and time control. Emphasize TCT/MCT.

Prerequisite. SNS-361.

Ordnance. None.

Performance Standard. Tape review of performance/maneuvers per MAWTS ASP.

NS-363 1.0 T,R E 2 AV-8B A N NVD NR

Goal. Introduce advanced NS LAT.

Requirement. As a single chased aircraft on a closed LAT course, the PUI shall repeat advanced LAT maneuvers performed during SNS-360/361 and react to simulated SAM and AAA. Emphasize scan and all LAT rules.

Prerequisite. NS-362.

Ordnance. None.

Performance Standard. Tape review of performance/maneuvers per MAWTS ASP.

NS-364 1.0 T 2 AV-8B A N NVD NR

Goal. Introduction to NS LAT as a wingman.

Requirement. As a wingman, conduct basic and advanced section maneuvering on a planned LAT circuit. Stress MCT workload management, formation position keeping, mutual support, deconfliction, and roles/responsibilities within the formation.

Prerequisite. NS-363.

Ordnance. None.

Performance Standard. Maintains proper position and Mutual support.

NS-365 1.0 T,R E 2 AV-8B A N NVD NR

Goal. Introduce low altitude target area mechanics in the NS environment.

Requirement. As a lead and then wingman, introduce low altitude target area mechanics. Practice section reactive maneuvering versus simulated SAM/AAA threat. Emphasize MCT workload management, attack geometry, frag avoidance, tactical communication and mutual support.

Prerequisite. NS-364.

Ordnance. 6 MK-82, 300 RDS, 20 flares and 20 chaff.

Performance Standard. Maintains Mutual support in the target area.

8. Forward Base Operations

a. Purpose

(1) Develop V/STOL techniques and proficiency required for forward basing.

(2) Demonstrate a tactical proficiency to operate from: main base or air facility.

b. General. Pilots shall use the day visual carrier pattern as a standard pattern, but they may use the straight-in tactical arrivals from an initial point on refly.

c. Ground Training. Appropriate stage brief for EAF operations.

d. Simulator Training (2 Periods, 2.0 Hours)

SFBO-370 1.0 T,R OFT/WST/NWST/RNWST S DNR

Goal. Introduction to FBO procedures.

Requirement. Practice precision V/STOL at a FBO. FOD should be a major concern throughout this simulator period. Instructor selected emergencies to include RPM rollback on T/O, abort and ejection decisions, water failure in the decel, and no flaps programming on a STO.

Prerequisite. SFAM-200.

Performance Standard. Perform precision STO, RVL, and VL's under LSS supervision. LSS critique required.

SFBO-371 1.0 T,R OFT/WST/NWST/RNWST S DNR

Goal. Introduction to night FBO procedures.

Requirement. Repeat SFBO-370 at night to include night lighting brief and appropriate emergencies.

Prerequisite. SFBO-370.

Performance Standard. Perform precision STO, RVL, and VL's under LSS supervision. LSS critique required.

e. Flight training (2 Flights, 2.0 Hours)

FBO-372 1.0 T,R E 1 AV-8B A DNR

Goal. Introduction to FBO procedures.

Requirement. Practice precision V/STOL on a simulated/actual air facility. Perform precision VL's and maximum performance STO's under LSS control. Emphasize line-up, ground speed and touch down point. A minimum of 4 takeoffs and landings is required.

Prerequisite. SFBO-370.

Performance Standard. Perform precision STO, RVL, and VL's under LSS supervision. LSS critique required.

FBO-373 1.0 T,R E 1 AV-8B A N (NVD) DNR

Goal. Introduction to night FBO procedures.

Requirement. Repeat FBO-372 at night.

Prerequisite. SFBO-371, FBO-372.

Performance Standards. Perform precision STO, RVL, and VL's under LSS supervision. LSS critique required.

144. FULL-COMBAT QUALIFICATION TRAINING

1. Initial Full Combat Qualification Training

a. Purpose. To train for large scale integrated missions, events having unique mission tasking, or those events having a low probability and/or a relatively high risk. This phase also trains pilots capable of leading/directing flights of numerous aircraft in a complex wartime scenario.

b. General. This phase of instruction is focused on developing the full combat qualified flight leader skills essential to mission success. The instruction provides exposure to all mission areas assigned to the AV-8B and includes flight lead responsibilities for large force exercises.

2. Offensive Air Support

a. Purpose. Refine proficiency in the tactical employment of the AV-8B in offensive air support missions in a division. Pilots may fly Night OAS sorties either aided or unaided, but if NVDs are used, flight participants shall meet all applicable directives. At the completion of this stage the pilot should be able to:

(1) Conduct air interdiction against a point defense.

(2) Participate in a large force integrated exercise, day and night.

(3) Deliver conventional ordnance and PGM’s on tactical sized targets in either day or night conditions using available sensors. No Bomb Drop Scoring (NBDS) is a suitable substitute for conventional ordnance.

(4) Demonstrate proficiency in identifying and evaluating threat systems and devising appropriate countertactics.

b. General. Squadrons should use the full spectrum of USMC/USN/Joint command and control, to include command and control assets, SEAD, EA/ES, Air refueling, and fighters. Qualified Mission Commander participation is required.

c. Ground Training. All pilots will be current in BCWD, TCWD, and OAS as listed in the MAWTS-1 course catalog.

d. Flight Training (3 Flights, 4.0 Hours)

OAS-400 1.0 T 4 AV-8B A DNR

Goal. 4 v X division strike tactics against a defended point target.

Requirement. As part of a division, conduct a strike against a vital area defended by an unknown number of adversaries. Emphasize gameplan formulation, sound tactical decision making, and communication integration. Division gameplans should exploit deception/decoy tactics. AIC required. A minimum of two dissimilar adversaries required.

Prerequisite. Combat Ready OAS/AA complete.

Ordnance. 4 Sim MK82, CATM-9, TACTS, 20 flares and 20 chaff.

External Support. AIC/2 dissimilar adversaries required.

Performance Standard. Recognized air picture (RAP), decoy/strip tactics, target prosecution, must egress out to 10 NM (minimum).

OAS-401 1.5 T 4+ AV-8B A DNR

Goal. Participate in a large force integrated strike mission.

Requirement. As part of a division, participate in a large force exercise strike package. Strike should be supported with command and control assets, SEAD, EA, ES, Air refueling, and fighters. This flight is a prerequisite for designation as a Mission Commander.

Prerequisite. Combat Ready OAS/AA complete.

Ordnance. 4 MK-83, 40 flares and 20 chaff.

External Support. Tanker, AEW, MACCS, DASC(A), ABCCC, EA/ES assets, and fighters as applicable, dissimilar adversaries required.

Performance Standard. Decoy/strip tactics, RAP, threat gameplan, deconfliction.

OAS-402 1.5 T,R 4+ AV-8B A N (NVD) DNR

Goal. Participate in a large force integrated strike mission at night.

Requirement. Participate in a large force exercise as part of a strike package. Strike should be supported with command and control assets, SEAD, EA, ES, Air refueling, and fighters. NVD's should be used if applicable. This flight is a prerequisite for designation as a Mission Commander.

Prerequisite. Combat Ready OAS/AA complete.

Ordnance. 4 MK-83, 4 LUU-2, 40 flares and 20 chaff.

External Support. Tanker, AEW, MACCS, DASC(A), ABCCC, EA/ES assets, and fighters as applicable, dissimilar adversaries required.

Performance Standard. Same as OAS-401.

3. Missions Commander (MC)

a. Purpose

(1) Demonstrate proficiency in planning, coordinating and leading a strike mission as part of a large force under day or night conditions.

(2) Plan, brief, and lead a large force exercise as an MC.

b. General. Squadrons should use the full spectrum of USMC/USN/Joint command and control, to include command and control assets, SEAD, EA/ES, Air refueling, and fighters.

c. Ground Training. NWP 55-3 AV-8B Tactical Manual, Volume 3.

d. Simulator Training. None.

e. Flight Training (1 Flights, 1.5 Hours)

MC-410 1.5 T,R E 4+ AV-8B A DNR

Goal. Plan, coordinate, brief, and lead a large force integrated strike mission as the MC.

Requirement. As the mission commander, lead a large force exercise strike package. Strike should be supported with command and control assets, SEAD, EA, ES, Air refueling, and Fighters. Successful brief, execution, and debrief of this sortie is required for designation as an MC.

Prerequisite. OAS-401 or OAS-402.

Ordnance. 4 MK-83, 40 flares and 20 chaff.

External Support. Tanker, AEW, MACCS, DASC(A), ABCCC, EA/ES assets, and fighters as applicable, dissimilar adversaries required.

Performance Standard. No blue on blue engagements, RAP, decoy/strip tactics, deconfliction, target prosecution.

4. Forward Based Operations

a. Purpose. Introduction to day road operations.

b. General. Pilots should use the day visual carrier pattern as a standard pattern, and straight-in tactical arrivals from an initial point can be used on refly.

c. Ground Training. Appropriate stage brief for road operations.

d. Simulator Training. None.

e. Flight Training (1 Flights, 1.0 Hours)

FBO-420 1.0 T,R 1 AV-8B A DNR

Goal. Introduction to day road operations.

Requirement. Practice precision V/STOL at a road. Perform multiple precision RVL's and maximum performance STO's under LSS control. FOD should be a major concern throughout this period. A minimum of 4 takeoffs and landings is required.

Prerequisite. FBO-372.

Ordnance. None.

External Support. LSS.

Performance Standard. Planned touchdown A/S ± 5 kts; Line-up ± 3 ft.

150. INSTRUCTOR AND SPECIAL FLIGHT/SIMULATOR PERFORMANCE REQUIREMENTS

1. TAV-8B Familiarization

a. Purpose. Demonstrate proficiency and familiarization with the aircraft flight envelope, V/STOL characteristics and limitations, emergency procedures, and aerobatics. In addition, familiarize the IUT with training objectives, instructional methods, and common student problem areas.

b. General. Because the combat capable FAM stage uses a building block concept, complete standardization among instructor pilots is paramount in this stage. Differing individual techniques are useful instructional tools as long as instructors achieve overall standardization. All VMAT-203 instructors will qualify in the TAV-8B, using the training in paragraphs 150.1c and below.

c. Ground Training. IUT must be knowledgeable in the squadron SOP and FAM briefing guide. IUT must attend all FAM stage briefings and receive the Flight Instructor Training Course (FITC) at the squadron.

d. Simulator Training (1 Period, 1.0 Hour)

SFAM-500 1.0 OFT/WST S

Goal. V/STOL consolidation/intro to simulator handling characteristics.

Requirement. IUT to perform SFAM-110 maneuvers with emphasis on "Simulator" basic airwork, projected visuals and limitations with the AV-8B simulator. This period is also intended to be focused on standardizing V/STOL procedures, for consistent demonstration to students. IP will brief/debrief.

e. Flight Training (5 Flights, 7.5 Hours)

FAM-501 1.5 E 1 TAV-8B A

Goal. V/STOL consolidation flight.

Requirement. IUT perform all FAM stage maneuvers from the front cockpit to become familiar with the handling characteristics of the TAV-8B. IP will brief/debrief.

FAM-502 1.5 E 1 TAV-8B A

Goal. Introduction to V/STOL from rear cockpit.

Requirement. IUT perform all FAM stage maneuvers to become familiar with the rear cockpit of the TAV-8B. IP will brief/debrief.

FAM-503 1.5 E 1 TAV-8B A

Goal. V/STOL consolidation flight.

Requirement. IUT to practice instructional techniques from the rear cockpit. IUT will fly FAM stage maneuvers (with major concentration on V/STOL from the rear cockpit) exhibiting demonstration techniques. IP will brief/debrief characteristics of the TAV-8B.

FAM-504 1.5 E 1 TAV-8B A

Goal. Introduce IUT to common student errors.

Requirement. IUT will brief/debrief a local area FAM event. IP will fly aircraft from front seat and introduce IUT to common student mistakes. IUT practice airborne instructional techniques.

FAM-505 1.5 E 1 TAV-8B A

Goal. FAM standardization check.

Requirement. IUT is to brief/debrief a local area FAM event, to include all FAM stage V/STOL maneuvers. IP in front seat will fly aircraft and make student mistakes. IUT demonstrate procedures to IP when necessary. IP ensure complete standardization.

2. Landing Site Instructor

a. Purpose. Standardization check of AV-8B instructor pilots with emphasis on correct instructional and briefing/debriefing techniques for specific landing evolutions.

b. General. Ensure standardization of the AV-8B combat capable training stage of instruction. All instructor pilots will display a thorough knowledge of squadron SOP and comply with this manual and the syllabus guide.

c. Ground Training

(1) LSI-1. Review of NATOPS, squadron SOP, airfield course rules, V/STOL aerodynamics (to include all types of takeoffs and landings), and LSI responsibilities. Observe a qualified LSI briefing, controlling, and debriefing V/STOL evolutions. Become familiar with proper communication procedures, voice calls, position of "paddles", and flight evaluations.

(2) LSI-2. Introduction to LSI control. Control V/STOL evolutions under the supervision of a designated LSI. IUT to brief/debrief local FAM solo flight. Not required for current LSO/LSS qualified IUT's.

(3) LSI-3. Review LSI control of FAM solo flights. Brief/Debrief under supervision of a designated LSI. At completion, Day LSI qualification will be awarded. Ensure complete standardization.

(4) LSI-4. Review LSI control introducing night LSI procedures. IUT to control and supervise night V/STOL evolutions under direction of a designated LSI. At the completion, Night LSI qualification will be awarded.

(5) LSI-5. Review LSI control and introduce FBO operations from an approved EAF site. IUT must control a minimum of one of each of the following events/evolutions: RVL, VTO, ACCEL, DECEL, VL to the runway and CAL site operation. Squadrons may award FBO qualification at successful completion of this stage.

(6) LSI-6. Review LSO control per LSO NATOPS for FCLP operations. IUT must be a designated Day V/STOL LSO. IUT will observe two passes and waive two passes. Not required for LSO's who are current within 6 months. Squadrons may award FCLP qualification at successful completion of this stage.

(7) LSI-7. Review LSS control at an approved road site. IUT must be familiar with road operations, course rules, and pattern control. Must be a previously designated LSS. Squadrons may award LSS qualification at the successful completion of this stage.

d. Simulator Training (1 Period, 1.0 Hour)

SIUT-506 1.0 E OFT/WST S

Goal. Simulator for FBO, FCLP, and ROAD OPS instructional techniques flight.

Requirement. IUT will monitor an IP conducting an FBO, FCLP, and ROAD OPS simulator. All three must be monitored to complete SIUT-506.

e. Flight Training. None.

3. AV-8B Instructor Pilot

a. Purpose. Standardization check of AV-8B IP's with emphasis on correct instructional and briefing/debriefing techniques.

b. General. Ensure standardization of the AV-8B combat capable training stage of instruction. All IP's will display a thorough knowledge of and comply with the squadron SOP and this manual.

c. Ground Training. An instructor pilot shall pass a written and oral standardization test administered by that particular stage's STAN officer, before an IP qualification in a particular stage of instruction (i.e., AG, NAV, INST.)

d. Simulator Training (3 Periods, 3.3 Hours)

SIUT-507 1.5 E OFT/WST S

Goal. AV-8B FAM/INST instructional techniques check, introduction to simulator mission set-up, and capabilities.

Requirement. IUT will setup a FAM/INST mission with direction of the STAN Officer, to include modifying missions. IUT will also brief, monitor, and debrief a FAM sortie (SFAM-12 profile) with emphasis on instructional techniques.

SIUT-508 0.8 E WST S

Goal. AV-8B weapons proficiency check.

Requirement. IUT will demonstrate proficiency in WST weapons deliveries for 45° and 10° computed deliveries. Squadron STAN Officer or WTI to evaluate. IP brief/debrief.

SIUT-509 1.0 E WST S

Goal. AV-8B weapons instructional techniques check.

Requirement. IUT will brief/debrief the WTI or STAN Officer for an instructional sortie of 45° and 10° computed deliveries. IUT to monitor the IP flying.

e. Flight Training (6 Flights, 6.5 Hours)

IUT-510 1.5 E 2 AV-8B/2 TAV-8B A

Goal. AV-8B instructor pilot qualification (FORM, INST/NAV).

Requirement. The IUT will brief, lead, and demonstrate the ability to instruct map interpretation, systems management, and dead reckoning techniques (low-level portion to terminate in a restricted area for a minimum of two break-up & rendezvous and TACFORM). RTB via an instrument recovery demonstrating instructional techniques. IUT will be introduced to LSI from rear cockpit. May be flown with an RP syllabus flight.

IUT-511 1.0 E 1 TAV-8B A

Goal. Demonstrate proficiency from front cockpit in AUTO, CCIP, and DSL bombing techniques.

Requirement. IUT will brief and fly a consolidated raked range sortie demonstrating proficiency in 45° or 10° computed deliveries. Emphasize standardized tracking techniques and bombing proficiency. MRE must be 50 ft and CEP must be 175 ft or less. May be flown with an RP syllabus flight with IUT monitoring brief.

IUT-512 1.0 E 1 TAV-8B A

Goal. AV-8B instructor pilot qualification for AG sorties.

Requirement. IUT will brief and lead an instructional raked range hop with IP in front seat of TAV-8B demonstrating common student errors. Emphasize instructional techniques, error detection and correction, and pattern control if flown with other aircraft. May be flown with RP's in the flight.

IUT-513 1.0 E 2 TAV-8B A

Goal. AV-8B LAT instructor qualification.

Requirement. IUT will monitor brief, conduct, and debrief of a LAT sortie with an IP controlling the flight and the IUT in the back seat (to be flown with an actual RP as wingman). Emphasize observing errors and standardizing LAT procedures. LAT qualification (IUT must be a LAT(I)).

IUT-514 1.0 E 2 AV-8B A

Goal. Review 1V1 instructional techniques. For non-current ACT(I)'s.

Requirement. IUT to brief, lead, and debrief an instructional consolidation sortie (1 vs 1 ACM). Emphasize standardization and ACM currency renewal (if Air Combat has not been flown within last 6 months). This sortie may be flown as a proficiency hop for a non-ACT(I) to work up to a bogey qualification.

IUT-515 1.0 E 2 AV-8B/1 TAV-8B A

Goal. Review 2V1.

Requirement. IUT to monitor brief, conduct, and debrief of an actual RP on a 2V1 flight. IUT to ride in rear seat of TAV-8B and be introduced to Air Combat/Bogey in the TAV-8B. Air Combat qualification updated at completion of flight.

SLATI-520 1.0 OFT/WST/NWST/RNWST S DNR

Goal. LATI Certification Sortie.

Requirement. See MAWTS-1 course catalog.

SLATI-521 1.0 OFT/WST/NWST/RNWST S DNR

Goal. LATI Certification Sortie.

Requirement. See MAWTS-1 course catalog.

SLATI-522 1.0 OFT/WST/NWST/RNWST S DNR

Goal. LATI Certification Sortie.

Requirement. See MAWTS-1 course catalog.

LATI-523 1.0 T,R 2 AV-8B A DNR

Goal. LATI Certification Sortie.

Requirement. See MAWTS-1 course catalog.

LATI-524 1.0 T,R 2 AV-8B A DNR

Goal. LATI Certification Sortie.

Requirement. See MAWTS-1 course catalog.

LATI-525 1.0 T,R 2 AV-8B A DNR

Goal. LATI Certification Sortie.

Requirement. See MAWTS-1 course catalog.

SWTO-530 1.0 WST/NWST/RNWST S DNR

Goal. WTO certification sortie.

Requirement. See MAWTS-1 course catalog.

SWTO-531 1.0 WST/NWST/RNWST S DNR

Goal. WTO certification sortie.

Requirement. See MAWTS-1 course catalog.

SWTO-532 1.0 WST/NWST/RNWST S DNR

Goal. WTO certification sortie.

Requirement. See MAWTS-1 course catalog.

SWTO-533 1.0 WST/NWST/RNWST S DNR

Goal. WTO certification sortie.

Requirement. See MAWTS-1 course catalog.

WTO-534 1.0 T,R 2 AV-8B A DNR

Goal. WTO certification sortie.

Requirement. See MAWTS-1 course catalog.

WTO-535 1.0 T,R 2 AV-8B A DNR

Goal. WTO certification sortie.

Requirement. See MAWTS-1 course catalog.

AA-540 1.0 T,R 2 AV-8B A DNR

Goal. ACTI certification sortie.

Requirement. See MAWTS-1 course catalog.

AA-541 1.0 T,R 2 AV-8B A DNR

Goal. ACTI certification sortie.

Requirement. See MAWTS-1 course catalog.

External Support. Dissimilar adversaries required.

AA-542 1.0 T,R 2 AV-8B A DNR

Goal. ACTI certification sortie.

Requirement. See MAWTS-1 course catalog.

External Support. Dissimilar adversaries required.

SNSI-550 1.0 T,R WST/NWST/RNWST S N NVD DNR

Goal. NSI certification flight.

Requirement. See MAWTS-1 course catalog.

NSI-551 1.0 T,R E 2 AV-8B A N NVD NR

Goal. NSI certification flight.

Requirement. See MAWTS-1 course catalog.

NSI-552 1.0 T,R E 2 AV-8B A N NVD NR

Goal. NSI certification flight.

Requirement. See MAWTS-1 course catalog.

SNSI-553 1.0 T,R WST/NWST/RNWST S N NVD NR

Goal. NSI certification flight.

Requirement. See MAWTS-1 course catalog.

151. SPECIAL TRAINING

1. Requirements, Qualifications, and Designations

a. Purpose

(1) Qualify the pilot with various requirements, designations, and qualifications as outlined in the AV-8B NATOPS Flight Manual and OPNAVINST 3710.7.

(2) Determine qualification for designation in specific flight skills, system, and knowledge.

b. General. This section enables squadrons to document completion of flight leadership checkrides and ensures standardization across the Marine Corps.

c. Prerequisites. See OPNAVINST 3710.7, OPNAVINST 4790.2, and the AV-8B NATOPS Flight Manual.

d. Simulator Training. None.

e. Flight Training (6 Flights, 6.0 Hours)

RQD-600 1.0 E 1 AV-8B S/A DNR

Goal. Complete annual NATOPS evaluation.

Requirement. Perform annual NATOPS check per OPNAVINST 3710.

RQD-601 1.0 E 1 AV-8B S/A DNR

Goal. Conduct annual instrument evaluation.

Requirement. Conduct annual instrument qualification sortie per OPNAVINST 3710.

RQD-602 1.0 E OFT/WST/NAWST/RNAWST S DNR

Goal. Functional check flight workup sortie.

Requirement. Completion of an FCF profile in simulator.

RQD-603 1.0 E 1 AV-8B A DNR

Goal. Conduct a functional check flight evaluation.

Requirement. Completion of an FCF profile in a FMC AV-8B.

Prerequisite. Per Squadron SOP.

2. Forward Based Operations

a. Purpose. To conduct FBO day/night CAL, grass and night road.

b. General. Pilots should use the day visual carrier pattern as a standard pattern. Straight-in tactical arrivals from an initial point can be used on refly.

c. Ground Training. Appropriate stage brief for CAL/grass/road operations.

d. Simulator Training. None.

e. Flight Training (4 Flights, 4.0 Hours)

STF-620 1.0 T,R 1 AV-8B A DNR

Goal. Introduction to CAL site operations.

Requirement. Practice precision V/STOL at a CAL site. Perform multiple precision VL's and VTO's under LSS control. A minimum of 4 takeoffs and landings is required. Proficiency must be demonstrated prior to conducting other missions from a CAL site.

Prerequisite. FAM-203.

STF-621 1.0 T,R 1 AV-8B A N (NVD) DNR

Goal. Introduction to night CAL site operations.

Requirements. Repeat STF-620 at night.

Prerequisite. STF-620.

STF-622 1.0 T,R 1 AV-8B A DNR

Goal. Introduction to Grass operations.

Requirement. Practice precision V/STOL at a grass strip. Perform multiple precision RVL's and maximum performance STO's under LSS control. FOD should be a major concern throughout this period. A minimum of 4 takeoffs and landings is required.

Prerequisite. FAM-203.

STF-623 1.0 T,R 1 AV-8B A N (NVD) DNR

Goal. Introduction to night road operations.

Requirement. Repeat FBO-420 at night.

Prerequisite. FBO-420.

3. Special Weapons Delivery

a. Purpose. Develop proficiency in the tactical employment and delivery of special weapons. At the completion of this stage, the PUI shall have demonstrated:

(1) Successful delivery of the AIM-9 against a drone/flare.

(2) Successful delivery of an AGM-122 Sidearm.

(3) Successful delivery of an AGM-65E/F Maverick.

(4) Employment of the gun against aerial targets.

b. General. The AV-8B TACMAN provides weapon system descriptions, delivery parameters, firing exercises, employment concepts, and safety requirements for all SWD flights.

c. Ground Training. TCWD, OAS, and AAW courses, as appropriate, from MAWTS-1 Course Catalog.

d. Simulator Training. None.

e. Flight Training (4 Flights, 4.0 Hours)

STF-630 1.0 2-4 AV-8B A DNR

Goal. Introduction to air-to-air gunnery.

Requirement. Air-to-air gunnery using the circular dart pattern or banner pattern. Video analysis is required.

Ordnance. 300 rds.

External Support. Banner/Dart and tow aircraft.

STF-631 1.0 2 AV-8B A DNR

Goal. Introduction to AIM-9 Sidewinder missile firing.

Requirement. Flight should be conducted per the approved live missile firing scenario and LOI. It is designed to meet prerequisite requirements as a practice event, if required.

Ordnance. AIM-9.

STF-632 1.0 2 AV-8B A DNR

Goal. Introduction to AGM-122 Sidearm missile firing.

Requirement. Flight should be conducted per the approved live missile firing scenario and LOI.

Prerequisite. SEW-228.

Ordnance. AGM-122.

STF-633 1.0 2 AV-8B A DNR

Goal. Introduction to AGM-65E/F Maverick missile firing.

Requirement. Flight should be conducted per the approved live missile firing scenario and LOI.

Prerequisite. SAG-212, 213

Ordnance. AGM-65E/F.

160. EXPENDABLE ORDNANCE REQUIREMENTS. Annual ordnance requirements are developed on a "per crew" basis per OPNAVNOTE 8010.

BASIC

ORDNANCE	100 SERIES	200 SERIES	300 SERIES	400 SERIES	ANNUAL*
MK-76	60	78	12	0	120
BDU-48	0	6	0	0	24
25MM AMMO	0	2,400	2,700	0	8050(2)
CHAFF	0	240	340	80	924
DECOY FLARES	80	400	380	140	1,290
MK-82	0	8	18	0	64(3)
BDU-45	6	13	14	0	29(3)
MK-83	0	4	8	12	9(3)
AIM-9	0	0	0	0	0
LUU-2 FLARES	0	56	16	4	137
CBU-99/100	0	4	4	0	0(2)
AGM-122	0	0	0	0	0
AGM-65E	0	1	0	0	1
AGM-65F	0	1	0	0	1
GBU-12/16	0	1	1	0	1
MK-77	0	4	4	0	4

Notes: (Apply to annual requirements only)

(1) Thirty percent HEI, 70 percent TPT.
(2) Forty percent HE, 60 percent inert.
(3) Seventy percent RET, 30 percent conical fins.

161. CAPTIVE ORDNANCE REQUIREMENTS

ORDNANCE	100 SERIES	200 SERIES	300 SERIES	400 SERIES	ANNUAL*
AIM-9	1	1	1	1	1
TACTS POD	1	1	1	1	1
AGM-65E	0	1	1	1	1
AGM-65F	0	1	1	1	1
AGM-122	0	1	1	1	1

AIRCRAFT: AV-8B MOS: 7509 CREW POSITION: PILOT

STAGE	TRNG CODE	HRS	REFLY INTERVAL	CRP	T	C	R	E	REMARKS	ACFT
COMBAT CAPABLE TRAINING										
SFAM	100	1.5	*	0.0	X					DNR
	101	1.5	*	0.0	X			X		DNR
	102	1.5	*	0.0	X			X		DNR
	103	1.5	*	0.0	X					DNR
	104	1.5	*	0.0	X			X		DNR
	105	2.0	*	0.0	X			X		DNR
	106	2.0	*	0.0	X					DNR
	107	2.0	*	0.0	X					DNR
	108	2.0	*	0.0	X			X		DNR
	109	2.0	*	0.0	X			X		DNR
	110	1.5	*	0.0	X			X		DNR
	111	2.0	*	0.0	X			X		DNR
	112	1.0	*	0.0	X			X		DNR
TFAM	113	1.5	*	0.2	X					DNR
	114	1.5	*	0.2	X			X		DNR
	115	1.5	*	0.2	X					DNR
	116	1.5	*	0.2	X			X		DNR
	117	1.5	*	0.2	X					DNR
	118	1.5	*	0.2	X			X		DNR
	119	1.5	*	0.2	X					DNR
	120	1.5	*	0.2	X			X		DNR
	121	1.5	*	0.2	X					DNR
	122	1.5	*	0.2	X					DNR
	123	1.5	*	0.2	X			X		DNR
FAM	130	1.5	*	0.2	X			X		DNR
	131	1.5	*	0.2	X			X		DNR
TFAM	132	1.5	*	0.4	X					DNR
FAM	133	1.5	*	0.4	X			X		DNR
SFAM	160	1.5	*	0.0	X					DNR
TNFAM	161	1.5	*	0.4	X				N	DNR
	162	1.5	*	0.4	X				N	DNR
NFAM	163	1.5	*	0.4	X			X	N	DNR
SINST	124	1.5	*	0.0	X					DNR
	125	1.5	*	0.0	X					DNR
	126	1.5	*	0.0	X					DNR
INST	127	1.5	*	0.6	X				TAV-8B	DNR
	128	1.5	*	0.6	X				TAV-8B	DNR
SINST	129	1.5	*	0.3	X				(TAV-8B)	DNR

Figure 1-1--MOS. 7509 Refly Interval, Combat Readiness Percentage

AIRCRAFT: AV-8B MOS: 7509 CREW POSITION: PILOT

STAGE	TRAINING CODE	HRS	REFLY INTERVAL	CRP	T	C	R	E	REMARKS	ACFT
FORM	134	1.5	*	0.3	X				2 A/C	DNR
	135	1.5	*	0.3	X			X	2 A/C	DNR
	164	1.5	*	0.2	X			X	2 A/C N	DNR
	136	1.5	*	0.2	X				3+ A/C	DNR
SNAV	137	1.5	*	0.0	X					DNR
	138	1.5	*	0.0	X					DNR
	139	1.5	*	0.0	X					DNR
NAV	140	1.3	*	0.6	X					DNR
	141	1.3	*	0.6	X					DNR
SAG	143	1.3	*	0.0	X		X			DNR
	144	1.0	*	0.0	X		X			DNR
	145	1.5	*	0.0	X		X			DNR
	146	1.0	*	0.0	X					DNR
	147	1.0	*	0.0	X		X			DNR
	148	1.0	*	0.0	X					DNR
	149	1.0	*	0.0	X		X			DNR
	165	1.5	*	0.0	X		X			DNR
AG	151	1.0	*	0.8	X		X			DNR
	152	1.0	*	0.8	X			2 A/C		DNR
	153	1.0	*	0.8	X		X	2 A/C		DNR
	154	1.0	*	0.8	X		X			DNR
	155	1.0	*	0.8	X		X	2 A/C		DNR
	156	1.0	*	0.9	X		X	2 A/C		DNR
	157	1.0	*	0.9	X					DNR
	158	1.0	*	0.9	X			2 A/C		DNR
	159	1.0	*	0.9	X		X	2 A/C		DNR
	166	1.0	*	0.9	X					DNR
LAT	142	1.0	*	1.5	X					DNR
SAA	167	1.0	*	0.0	X					DNR
AA	168	1.0	*	1.3	X					DNR
	169	1.0	*	1.3	X					DNR
	170	1.0	*	1.3	X					DNR
	171	1.0	*	1.3	X					DNR
SFBO	172	1.0	*	0.0	X					DNR
	173	1.0	*	0.0	X					DNR
FBO	174	0.8	*	0.6	X					DNR
	175	0.5	*	0.6	X					DNR
	176	0.5	*	0.6	X					DNR
	177	0.5	*	0.6	X					DNR
	178	0.5	*	0.6	X					DNR
	179	0.5	*	0.6	X					DNR
	180	0.5	*	0.6	X					DNR
	181	0.5	*	0.6	X					DNR
	182	0.5	*	0.6	X					DNR
	183	0.5	*	0.6	X					DNR

Figure 1-1--MOS. 7509 Refly Interval, Combat Readiness Percentage (Cont)

AIRCRAFT: AV-8B MOS: 7509 CREW POSITION: PILOT

STAGE	TRAINING CODE	HRS	REFLY INTERVAL	CRP	T	C	R	E	REMARKS	ACFT
SFCLP	184	0.8	*	0.0	X	X				DNR
	185	0.8	*	0.0	X	X				DNR
FCLP	186	0.5	*	0.8	X	X				DNR
	187	0.5	*	0.8	X	X				DNR
	188	0.5	*	0.8	X	X				DNR
	189	0.5	*	0.8	X	X				DNR
	190	0.5	*	0.8	X					DNR
	191	0.5	*	0.8	X	X		X		DNR
SCK	198	1.0	*	0.0	X	X	X	X		DNR
S/CK	199	1.3	*	0.7	X	X	X	X	(S)	DNR
COMBAT READY TRAINING										
SFAM	200	1.5	*	0.1	X		X			DNR
	201	1.5	*	0.0	X		X			R
	202	1.5	*	0.0	X		X			R
FAM	203	1.5	3	0.2	X		X			DNR
SINST	204	1.0	*	0.1	X		X			DNR
SNAV	205	1.5	*	0.1	X		X			DNR
	206	1.5	*	0.0	X		X			R
AR	207	1.0	12	0.1	X				2A/C	DNR
	208	1.0	12	0.1	X				2A/C N(NVD)	DNR
SAG	210	1.0	*	0.1	X		X			DNR
	211	1.0	*	0.1	X		X			DNR
	212	1.0	*	0.1	X		X			NR
	213	1.0	*	0.1	X		X			NR
	214	1.0	*	0.1	X		X			DNR
AG	215	1.0	12	0.3	X		X		2A/C	DNR
	216	1.0	3	0.3	X		X		2A/C	DNR
	217	1.0	3	0.3	X		X		2A/C	DNR
	218	1.0	8	0.3	X		X	X	2A/C N(NVD)	DNR
	219	1.0	6	0.3			X		2A/C N(NVD)	DNR
SLAT	220	1.0	*	0.1	X		X			DNR
	221	1.0	*	0.1	X		X			DNR
LAT	222	1.0	12	0.3	X		X	X	2 A/C	DNR
	223	1.0	12	0.3	X		X		2 A/C	DNR
	224	1.0	12	0.3	X		X		2 A/C	DNR
	225	1.0	12	0.3	X				2 A/C	DNR
	226	1.0	12	0.4	X		X	X	2 A/C	DNR
SEW	227	1.0	*	0.1	X					DNR
	228	1.0	*	0.1	X					DNR

Figure 1-1--MOS. 7509 Refly Interval, Combat Readiness Percentage(Cont)

AIRCRAFT: AV-8B MOS: 7509 CREW POSITION: PILOT

STAGE	TRAINING CODE	HRS	REFLY INTERVAL	CRP	T	C	R	E	REMARKS	ACFT
EW	229	1.0	*	0.3	X		X	X		DNR
SOAS	230	1.0	*	0.1	X		X			DNR
	231	1.0	*	0.1	X		X			DNR
	232	1.0	*	0.1	X		X			DNR
	233	1.0	*	0.1	X		X			DNR
	234	1.0	*	0.1	X		X			DNR
	235	1.0	*	0.1	X		X			DNR
OAS	236	1.0	9	0.3	X				2 A/C	DNR
	237	1.0	3	0.3	X				2 A/C	DNR
	238	1.0	3	0.3	X				2 A/C	DNR
	239	1.0	12	0.3	X		X		2 A/C	DNR
	240	1.0	9	0.3	X		X	X	2 A/C	DNR
	241	1.0	3	0.4	X				2 A/C	DNR
ESC	242	1.3	12	0.3	X				2 A/C	DNR
SAA	250	1.0	*	0.1	X		X	X		DNR
	251	1.0	*	0.1	X		X			DNR
	252	1.0	*	0.0	X		X			R
	253	1.0	*	0.0	X		X			R
	254	1.0	*	0.0	X		X			R
	255	1.0	*	0.0	X		X			R
	256	1.0	*	0.0	X		X			R
	257	1.0	*	0.0	X		X			R
	258	1.0	*	0.0	X		X			R
	259	1.0	*	0.0	X		X			R
	260	1.0	*	0.0	X		X			R
	261	1.0	*	0.0	X		X			R
	262	1.0	*	0.0	X		X			R
	263	1.0		0.0	X		X			R
AA	264	1.0	6	0.3	X		X	X	2 A/C	DNR
	265	1.0	3	0.3	X		X		2 v 1	DNR
	266	1.0	6	0.3	X				2 v 1	DNR
	267	1.0	6	0.3	X				1 v 1	DNR
	268	1.0	6	0.3	X		X	X	2 v 1	DNR
	269	1.0	3	0.3	X		X	X	2 v 1	DNR
SNS	270	1.5	*	0.1	X		X		N NVD	NR
	271	1.5	*	0.1	X		X		N NVD	NR
	272	1.5	*	0.1	X		X		N NVD	NR
	273	1.0	*	0.1	X		X		N NVD	NR
	274	1.0	*	0.1	X		X		N NVD	NR
	275	1.0	*	0.1	X		X		N NVD	NR
	276	1.0	*	0.1	X		X		N NVD	NR
NS	277	1.3	12	0.3	X		X		N NVD	NR
	278	1.3	12	0.3	X		X	X	N NVD	NR
	279	1.3	12	0.3	X		X		N NVD	NR
	280	1.0	12	0.3	X		X	X	N NVD	NR
	281	1.0	12	0.3	X				N NVD	NR

Figure 1-1--MOS. 7509 Refly Interval, Combat Readiness Percentage(Cont)

AIRCRAFT: AV-8B MOS: 7509 CREW POSITION: PILOT

STAGE	TRAINING CODE	HRS	REFLY INTERVAL	CRP	T	C	R	E	REMARKS	ACFT
NS	282	1.0	3	0.3	X		X	X	N NVD	NR
	283	1.0	3	0.3	X				N NVD	NR
	284	1.0	12	0.3	X				N NVD	NR
	285	1.0	3	0.3	X		X	X	N NVD	NR
SFCLP	290	1.5	*	0.1	X		X			DNR
	291	1.5	*	0.1	X		X			DNR
FCLP	292	1.0	*	0.3	X		X	X		DNR
	293	1.0	*	0.3	X		X	X		DNR
SCQ	294	1.0	*	0.1	X		X			DNR
	295	1.0	*	0.1	X		X			DNR
CQ	296	1.0	*	0.4	X		X	X		DNR
	297	1.0	*	0.4	X		X	X		DNR
COMBAT QUALIFICATION TRAINING										
OAS	310	1.0	9	0.9	X				2 A/C	DNR
	311	1.0	9	0.9	X				2 A/C	DNR
	312	1.0	9	0.9	X				2 A/C	DNR
	313	1.0	9	0.9	X				2 A/C	DNR
	314	1.0	3	0.9	X				2 A/C	DNR
	315	1.0	8	0.9	X				2 A/C N(NVD)	DNR
	316	1.0	6	1.0	X		X	X	2 A/C N(NVD)	DNR
ESC	320	1.3	12	0.5	X					DNR
AA	330	1.0	6	0.9	X					DNR
	331	1.0	6	0.9	X					DNR
	332	1.0	6	0.9	X					DNR
	333	1.0	3	1.0	X		X			DNR
SAA	340	1.0	*	0.1	X		X			R
AA	341	1.0	3	0.5	X					R
	342	1.0	3	0.5	X		X	X	2 A/C	R
OAS	350	1.0	6	0.9	X				4 A/C	DNR
	351	1.0	6	0.9	X				4 A/C	DNR
	352	1.0	3	0.9	X				4 A/C	DNR
	353	1.0	3	0.9	X				4 A/C	DNR
	354	1.0	12	1.0	X		X	X	4 A/C	DNR
SNS	360	1.5	*	0.1	X		X		N NVD	NR
	361	1.5	*	0.1	X		X		N NVD	NR
NS	362	1.0	12	0.5	X				N NVD	NR
	363	1.0	12	0.6	X		X	X	N NVD	NR
	364	1.0	12	0.6	X				N NVD	NR
	365	1.0	3	0.6	X		X		N NVD	NR

Figure 1-1--MOS. 7509 Refly Interval, Combat Readiness Percentage (Cont)

AIRCRAFT: AV-8B MOS: 7509 CREW POSITION: PILOT

STAGE	TRAINING CODE	REFLY HRS	INTERVAL	CRP	T	C	R	E	REMARKS	ACFT
SFBO	370	1.0	*	0.1		X		X		DNR
	371	1.0	*	0.1		X		X		DNR
FBO	372	1.0	3	0.5		X		X		DNR
	373	1.0	12	0.5	X			X	N (NVD)	DNR
FULL-COMBAT QUALIFICATION TRAINING										
OAS	400	1.0	9	1.0	X				4 A/C	DNR
	401	1.5	9	1.0	X				4+A/C	DNR
	402	1.5	9	1.0	X		X		4+A/C N(NVD)	DNR
MC	410	1.5	12	1.0	X		X	X	4+A/C	DNR
FBO	420	1.0	*	1.0	X		X			DNR
INSTUCTOR AND SPECIAL FLIGHT/SIMULATOR PERFORMANCE REQUIREMENTS										
SFAM	500	1.0	*	N/A						
FAM	501	1.5	*	N/A				X		DNR
	502	1.5	*	N/A				X		DNR
	503	1.5	*	N/A				X		DNR
	504	1.5	*	N/A				X		DNR
	505	1.5	*	N/A				X		DNR
SIUT	506	1.0	*	N/A				X		DNR
	507	1.5	*	N/A				X		DNR
	508	0.8	*	N/A				X		DNR
	509	1.0	*	N/A				X		DNR
IUT	510	1.5	*	N/A				X	2 A/C	DNR
	511	1.0	*	N/A				X		DNR
	512	1.0	*	N/A				X		DNR
	513	1.0	*	N/A				X	2 A/C	DNR
	514	1.0	*	N/A				X	2 A/C	DNR
	515	1.0	*	N/A				X	2 A/C	DNR
SLATI	520	1.0	*	N/A						DNR
	521	1.0	*	N/A						DNR
	522	1.0	*	N/A						DNR
LATI	523	1.0	*	N/A						DNR
	524	1.0	*	N/A						DNR
	525	1.0	*	N/A						DNR
SWTO	530	1.0	*	N/A						DNR
	531	1.0	*	N/A						DNR
	532	1.0	*	N/A						DNR
	533	1.0	*	N/A						DNR
SWTO	534	1.0	*	N/A						DNR

Figure 1-1--MOS. 7509 Refly Interval, Combat Readiness Percentage (Cont)

AIRCRAFT: AV-8B MOS: 7509 CREW POSITION: PILOT

STAGE	TRAINING CODE	REFLY HRS	INTERVAL	CRP	T	C	R	E	REMARKS	ACFT
WTO	535	1.0	*	N/A						DNR
AA	540	1.0	*	N/A						DNR
	541	1.0	*	N/A						DNR
	542	1.0	*	N/A						DNR
SNSI	550	1.0	*	N/A					N NVD	DNR
	551	1.0	*	N/A					N NVD	DNR
NSI	552	1.0	*	N/A					N NVD	DNR
	553	1.0	*	N/A					N NVD	DNR
REQUIREMENTS, QUALIFICATIONS, AND DESIGNATIONS										
RQD	600	1.0	12	N/A				X	S(A)	DNR
	601	1.0	12	N/A				X	S(A)	DNR
	602	1.0	*	N/A				X	S(A)	DNR
	603	1.0	*	N/A				X	2 A/C	DNR
SPECIAL TRAINING FLIGHTS										
STF	620	1.0	*	N/A					1+ A/C	DNR
	621	1.0	*	N/A					1+ A/C	DNR
	622	1.0	*	N/A					1+ A/CN(NVD)	DNR
	623	1.0	*	N/A					1+ A/CN(NVD)	DNR
	630	1.0	*	N/A	X		X			DNR
	631	1.0	*	N/A	X		X		N (NVD)	DNR
	632	1.0	*	N/A	X		X			DNR
	633	1.0	*	N/A	X		X			DNR

Figure 1-1--MOS. 7509 Refly Interval, Combat Readiness Percentage (Cont)

PILOT FLIGHT UPDATE CHAINING

STAGE	FLIGHT	FLIGHTS UPDATED
SFAM	200	
	201	
	202	
FAM	203	
SINST	204	
SNAV	205	
	206	
AR	207	203
	208	203
SAG	210	
	211	
	212	
	213	
	214	
AG	215	203
	216	203, 215
	217	203
	218	203, 215
	219	203, 215, 218
SLAT	220	
	221	
LAT	222	203
	223	203, 222
	224	203, 222, 223
	225	203, 222, 223, 224
	226	203, 222, 223, 224, 225
SEW	227	
	228	
EW	229	
SOAS	230	
	231	
	232	
	233	
	234	
	235	
OAS	236	203, 215
	237	203, 215
	238	203, 215
	239	203, 215
	240	203, 215
	241	203, 215
ESC	242	203

Figure 1-2--MOS. 7509 Flight Update Chaining

PILOT FLIGHT UPDATE CHAINING

STAGE	FLIGHT	FLIGHTS UPDATED
SAA	250	
	251	
	252	
	253	
SAA	254	
	255	
	256	
	257	
	258	
	259	
	260	
	261	
	262	
	263	
AA	264	203
	265	203, 264
	266	203
	267	203, 264, 265
	268	203, 266
	269	203
SNS	270	
	271	
	272	
	273	
	274	
	275	
	276	
NS	277	203
	278	203, 277
	279	203, 277, 278
	280	203, 277, 278, 279
	281	203, 218, 219, 277, 278, 279, 280
	282	203, 218, 219, 236, 277, 278, 279, 280, 281
	283	203, 218, 219, 238, 277, 278, 279, 280, 281
	284	203, 218, 219, 240, 277, 278, 279, 280, 281
	285	203, 218, 219, 240, 241, 277, 278, 279, 280, 281, 284
SFCLP	290	
	291	
FCLP	292	203
	293	203, 292
SCQ	294	
	295	
CQ	296	203, 292
	297	203, 292, 293

Figure 1-2--MOS. 7509 Flight Update Chaining (Cont)

PILOT FLIGHT UPDATE CHAINING

STAGE	FLIGHT	FLIGHTS UPDATED
OAS	310	203, 215, 236
	311	203, 215, 237
	312	203, 215, 238
	313	203, 215, 240
	314	203, 215, 241
	315	203, 215, 238
	316	203, 215, 240
ESC	320	203
AA	330	203, 266
	331	203, 266, 330
	332	203, 269
	333	203
SAA	340	
AA	341	203
	342	203
OAS	350	203, 215
	351	203, 215, 236, 310
	352	203, 215, 231, 237, 311
	353	203, 215, 238, 312
	354	203, 215, 239
SNS	360	
	361	
NS	362	203, 222, 277, 278
	363	203, 222, 223, 277, 278, 362
	364	203, 222, 223, 224, 362, 363
	365	203, 222, 223, 224, 225, 226, 277, 278, 362, 363, 364
SFBO	370	
	371	
FBO	372	203
	373	203
OAS	400	203, 215, 236, 310, 351
	401	203, 215, 236, 310, 351, 400
	402	203, 215, 236, 310, 351, 400, 401
MC	410	203, 215, 236, 310, 351, 400, 401
FBO	420	203

Figure 1-2--MOS. 7509 Flight Update Chaining (Cont)

CHAPTER 2

EA-6B PILOT AND ELECTRONIC COUNTERMEASURES OFFICER (ECMO)

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FIGURE 2-4.--ECMO Flight Update Chaining 2-87

* * NOTE * *

A***ircrew coordination shall be briefed on all flights and/or events.***

MARINE ELECTRONIC WARFARE SQUADRON EA-6B UNIT TEMPLATE

NOTE

The capabilities defined and described in the core capability and unit template sections are provided to ensure each like squadron maintains a common base of training and depth of capabilities. When resources permit, and when in the judgment of the commander additional training would significantly increase the unit's warfighting capability, training to a level above these base capabilities is permitted. It is incumbent upon, and expected of, the Commander to balance any increase in the depth of core capabilities against the long term health and readiness of his unit while staying within his resource constraints.

1. **TABLE OF ORGANIZATION** T/O SQDN= 5 ACFT, 8 PILOTS, 21 ECMOS (T/O 36 OFFICERS, 136 ENLISTED).

2. **SQUADRON CORE CAPABILITY**

a. A core capable squadron is able to sustain the following minimum performance on a daily basis during sustained contingency/combat operations, assuming at least 100% PAA, 90% in reporting status and 90% T/O on hand in all MOS's. If < 90%, core capability will be degraded by a like percentage. The extent to which a core capable squadron is able to surge beyond its core capability is situational dependent.

b. A core capable squadron will, over a 24 hour period, provide six sorties of mission capable aircraft with the following capabilities:

-Must be able to be flown either day or night.
-Four sorties can be flown in section or division.
-Four sorties will be capable of providing EW in support of Deep Air Support, Close Air Support, or Electronic Surveillance.
-Two sorties will be capable of providing EW in support of Force Protection.
-Will perform these missions from a main base or an appropriate size expeditionary air field.

3. **BASIC AIRCREW QUALIFICATIONS**. As a minimum, in order to be considered Core Competent, a squadron must possess the following numbers of aircrew who are at least 75% complete in each listed core skill. (Note: If a squadron is < T/O, required numbers are reduced by a like %).

CORE SKILL	PILOT	ECMO
PREREQS	7	18
HARM	6	16
ES	6	16
DAS	6	14
RSEAD	6	14
FP	4	10
DEFTAC	3	9
LAT	4	4

4. **SORTIES (EVENTS) REQUIRED TO GAIN COMPETENCY IN CORE SKILLS**. An aircrew would be required to fly the following number of sorties (events) in each skill area to gain competency.

	PREREQS	HARM	ES	DAS	RSEAD	VAD
RAC Pilot	25	XX	XX	XX	XX	XX
Refresher Pilot	14	XX	XX	XX	XX	XX
RAC ECMO	12	1	2	2	XX	XX
Refresher ECMO	11	1	XX	1	XX	XX
T&R CODES *REFRESHER #ECMO	FAM 105-111, INST 117- 120, NAV 126-127,FORM 134-141,AR 144-145, CK 199, *FAM 105-106,FAM 110-111, INST 116, NAV 126, FORM 134, FORM 136 -138, FORM 140,AR 144- 145, CK 199, #FAM 112 -114, NAV 130-133, FORM 142-143, CK 199, #*FAM 112-114, NAV 128-131, FORM 142-143, CK 199	#EW 177 #*EW177	#EW 174-175	#EW 176, EW 178 #*EW 178		
	DEFTAC NOTE 1	LAT	TOTALS			
RAC Pilot	2	XX	27			
Refresher Pilot	2	XX	16			
RAC ECMO	2	XX	19			
Refresher ECMO	2	XX	15			
T&R CODES *REFRESHER #ECMO	DEFTAC 146-147 *DEFTAC 146-147 #DEFTAC 148-149 #*DEFTAC 148-149					

	PREREQS	HARM	ES	DAS	RSEAD	FP
1ST TOUR PILOTS	11 (15)	1 (3)	2 (2)	2 (4)	3 (5)	1 (2)
2ND TOUR PILOTS	10 (13)	1 (3)	2 (2)	2 (4)	2 (3)	1 (2)
1ST TOUR ECMOs	10 (13)	2 (5)	4 (6)	4 (7)	6 (10)	1 (3)
2ND TOUR ECMOs	9 (11)	2 (5)	4 (6)	4 (7)	4 (6)	1 (3)
T&R CODES *FIRST TOUR S-SIM P-PILOT ONLY E-ECMO ONLY	202, 203, 205, 206, 211, 220, 221, 222, 272, 300P, 204*, 200S, 201S*, 207SP, 210S	233, 234E, 230S, 231S, 232SE	242, 243E, 340, 341E, 240SE, 241SE	253, 254E, 350, 351E, 250S, 251S, 252SE	262*, 263E*, 362, 363E, 364, 365E, 260S*, 261SE*, 360S, 361SE	370, 270S, 271SE
	DEFTAC NOTE 1	LAT	TOTALS			
1ST TOUR PILOTS	3 (4)	3 (4)	26 (39)			
2ND TOUR PILOTS	3 (4)	3 (4)	24 (35)			
1ST TOUR ECMOs	3 (4)	3 (4)	33 (52)			
2ND TOUR ECMOs	3 (4)	3 (4)	30 (46)			
T&R CODES	310, 311S, 312, 313	321, 322, 323, 320S				

5. **SORTIES (EVENTS) REQUIRED TO MAINTAIN CORE SKILLS**. For each one year period after achieving competency, a pilot would be required to fly the following number of sorties (events) in each skill area to maintain that competency.

	PREREQS	HARM	ES	DAS	RSEAD	FP
1ST TOUR PILOTS	22 (32)	4 (6)	2 (2)	3 (5)	3 (4)	1 (3)
2ND TOUR PILOTS	22 (32)	4 (6)	2 (2)	3 (5)	3 (4)	1 (3)
1ST TOUR ECMOs	14 (24)	8 (12)	5 (9)	6 (9)	6 (8)	1 (4)
2ND TOUR ECMOs	14 (24)	8 (12)	5 (9)	6 (9)	6 (8)	1 (4)
T&R CODES S-SIM P-PILOT ONLY E-ECMO ONLY	202, 203, 205, 206, 211, 220, 221, 222, 272, 300P, 200S, 207SP, 210S, 600S, 601SE, 602S, 604S	233, 234E, 230S, 231S, 232SE	242, 243E, 340, 341E, 240SE, 241SE	253, 254E, 350, 351E,250S, 251S, 252SE	362, 363E, 364, 365E, 360S, 361SE	370, 270S, 271SE

	DEFTAC	LAT	TOTAL			
1ST TOUR PILOTS	2 (2)	4 (5)	41 (59)			
2ND TOUR PILOTS	2 (2)	4 (5)	41 (59)			
1ST TOUR ECMOs	2 (2)	4 (5)	46 (73)			
2ND TOUR ECMOs	2 (2)	4 (5)	46 (73)			
T&R CODES	310, 313	321, 323, 320S				

6. **FLIGHT LEADER/INSTRUCTOR QUALIFICATIONS.** As a minimum, in order for a squadron to be considered Core Competent, it must possess the following numbers of aircrew in the listed flight leadership/ instructor categories. (Note: If the squadron is < T/O, required numbers are reduced by a like %)

DESIGNATION	PILOTS	ECMO	REMARKS
SEC LDR	4	NA	INCLUDES DIV LEADS
DEFTAC SEC LDR	2	NA	INCLUDES 2 SEC LEADS INCLUDES 2 DEFTACI PILOTS
DIV LDR	2	NA	
MSN CDR	4	10	MIN 50% OF ALL AIRCREW
FCF	3	5	
LATI	2	2	INCLUDES WTI #'S
DEFTACI	2	2	INCLUDES WTI #'S
WTI	1	2	
LSO	2	NA	FIELD QUAL ONLY FOR EAF

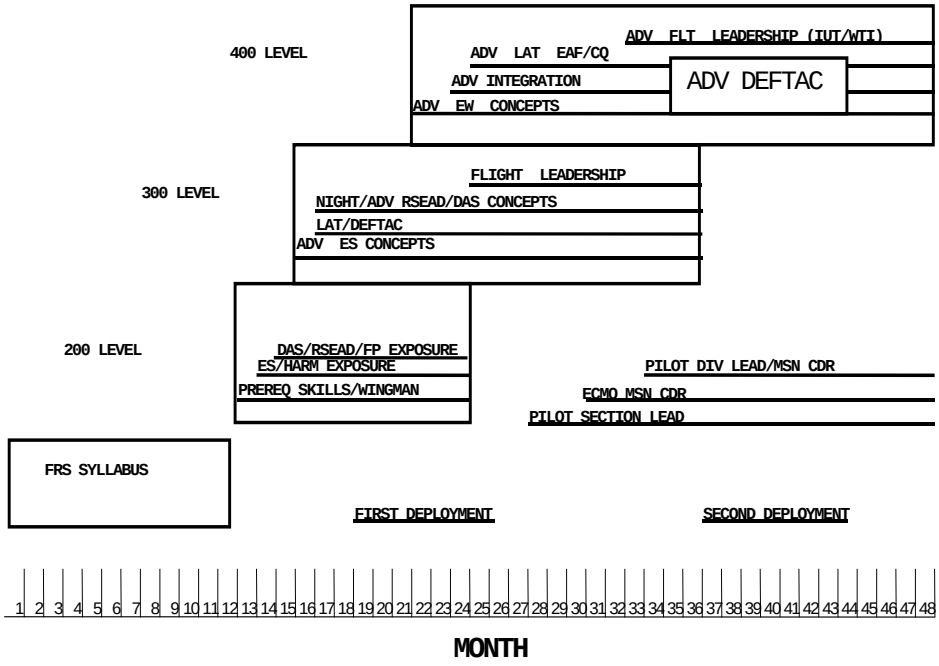
7. **SORTIES REQUIRED TO QUALIFY FOR DESIGNATION AS FLIGHT LD/IP**

	SEC LDR	DEFTAC SEC LDR	DIV LDR	MSN CDR	FCF
SORTIES	4	1	3	13	1
T&R CODES *REFRESHER	324, 325, 326, 327, *622	314	328, 329, 330, *624	331, 332, 342, 343, 352, 353, 366, 367, 368, 369, 372, 373, 380, *650	603

	LATI	DEFTACI	WTI	LSO
SORTIES	4	7	NOTE 2	NOTE 3
T&R CODES *REFRESHER	520, 521, 522, 523	510, 511, 512, 513, 514, 515, 516		

1. CURRENT PREREQUISITES FOR WTI INCLUDE MISSION COMMANDER, LAT QUALIFIED, DEFTAC QUALIFIED, SECTION LEAD (PILOTS), DIVISION LEAD (PILOT).
2. THERE ARE NO SORTIES REQUIRED TO FIELD QUALIFY AN LSO, HOWEVER THE INDIVIDUAL DOES REQUIRE EVALUATION OF HIS PERFORMANCE DURING EAF/FCLP OPERATIONS.

EA-6B CORE PROGRESSION MODEL



200. PROGRAMS OF INSTRUCTION (POI) FOR BASIC, TRANSITION PILOT AND ECMO, AND CONVERSION ECMO. EA-6B pilots and ECMO's will complete all Combat Capable training under training programs designed and administered by Commander, Electronic Warfare Wing Pacific (COMMVAQWINGPAC). Other training is administered through the tactical squadron.

1. Pilot

WEEKS	COURSE/PHASE	ACTIVITY
1-5	EW Introduction	NTTC Corry Station
6-39	Category I Flight Training (See par 241)	Training Squadron
39-51	Combat Ready Training	Tactical Squadron
52-64	Combat Qualification Training	Tactical Squadron
65-71	Full-Combat Qualification Training	Tactical Squadron

2. ECMO

WEEKS	COURSE/PHASE	ACTIVITY
1-12	EW Introduction	NTTC Corry Station
13-46	Category I Flight Training Syllabus (See par 241)	Training Squadron
47-63	Combat Ready Training	Tactical Squadron
64-76	Combat Qualification	Tactical Squadron
77-81	Full-Combat Qualification Training	Tactical Squadron

201. CONVERSION PILOT

WEEKS	COURSE/PHASE	ACTIVITY
1-5	EW Introduction	NTTC Corry Station
6-32	Category II Flight Training Syllabus	Training Squadron
33-45	Combat Ready Training	Tactical Squadron
46-58	Combat Qualification Training	Tactical Squadron
59-63	Full-Combat Qualification Training	Tactical Squadron

202. POI FOR REFRESHER PILOT AND ECMO

1. Greater than 365 days(pilot)/485 days (ECMO) since last EA-6B flight.

WEEKS	COURSE/PHASE	ACTIVITY
1	NAMO	NAMTRAGRUDET
2-28	Category III Flight Training Syllabus (See par 241)	Training Squadron
29-36	Refresher Training	Tactical Squadron

2. If an individual has not flown an EA-6B flight in more than 30 days but less than or equal to 365 days, the commanding officer will designate proficiency flights, FAM-606 and selected 200 series flights, to refamiliarize refreshing aircrew. If an individual has not flown in 365 days, T&R, Volume 1 requirements for refresher training apply.

203. POI FOR PILOT AND ECMO INSTRUCTORS UNDER TRAINING (IUT)

1. Pilot and ECMO DEFTAC IUT

WEEKS	COURSE/PHASE	ACTIVITY
1	IUT reviews DEFTAC lectures	Tactical Squadron
2	IUT presents designated lectures and practices briefing	Tactical Squadron
3-5	IUT fly's DEFTACI syllabus	Tactical Squadron/MAWTS-1

2. Pilot and ECMO LAT IUT

WEEKS	COURSE/PHASE	ACTIVITY
1	IUT reviews LAT lectures	Tactical Squadron
2	IUT presents designated LAT lectures/practice briefing	Tactical Squadron
3-5	IUT flies LATI syllabus	Tactical Squadron/MAWTS-1

3. Pilot and ECMO NATOPS IUT

WEEKS	COURSE/PHASE	ACTIVITY
1	IUT evaluated on SCHK-600	Tactical Squadron
2	IUT evaluates on SCHK-600 for instructor certification	Tactical Squadron

4. ECMO Back-Seat NATOPS IUT

WEEKS	COURSE/PHASE	ACTIVITY
1	IUT evaluated on S/ACHK-601	Tactical Squadron
2	IUT conducts S/ACHK-601 for instructor certification	Tactical Squadron

5. Pilot and ECMO Instrument Evaluators Under Training (EUT)

WEEKS	COURSE/PHASE	ACTIVITY
1	EUT evaluated on SCHK-602	Tactical Squadron
2	EUT completes SCHK-602 for Instr Eval certification	Tactical Squadron

210. GROUND TRAINING COURSES OF INSTRUCTION

COURSE/PHASE	ACTIVITY
NAMONAMTRAGRUDET	
Defensive Tactics (DEFTAC)	Tactical Squadron
Low Altitude Tactics (LAT)	Tactical Squadron
Advanced Low Altitude Tactics	Tactical Squadron
Defensive Tactics Instructor (DEFTACI)	Tactical Squadron/MAWTS-1
Low Altitude Tactics Instructor (LATI)	Tactical Squadron/MAWTS-1
Aircrew Coordination Training Instructor	As Appropriate
Shipboard Aircraft Fire Fighting	As Appropriate
JEST	As Appropriate
SERE	As Appropriate
Weapons and Tactics Instructor (WTI)	MAWTS-1
Landing Signal Officer (LSO)	LSO School

211. SQUADRON LEVEL TRAINING

Operations/Squadron Flight SOP/T&R Manual In-brief
TACSOP
Aircrew Coordination Training
Course Rules Brief/Exam
Mission Commander Syllabus
Electronic Warfare Support (ES)/TERPES
Aerial Refueling Procedures
Low Altitude Tactics (LAT) Lecture Series
Defensive Tactics (DEFTAC) Lecture Series
Basic Aircraft Maneuvering (BAM)
Electronic Attack (EA) General Tactics
Jammer Technique Optimization (JATO)
Jamming Fundamentals
ES General Tactics
Fighter Tactics
Reactive Suppression of Enemy Air Defenses (RSEAD)
Electronic Warfare in support of Close Air Support (EWCAS)
HARM Lectures
MACCS
War-at-Sea
ACE SEAD Planning
Expeditionary Airfield Operations
Carrier Procedures
EA-6B in support of Helicopter Operations
EA-6B in support of the Ground Combat Element (GCE)
USQ-113 Basic Operation
USQ-113 Tactical Operations
Bulk Chaff Tactical Employment
Vital Area Defense
National Asset Integration
Multi-Mission Advanced Tactical Terminal (MATT)/Commanders Tactical Terminal (CTT)

NOTE: This list is not restrictive, lectures shall be given as deemed appropriate by the Commanding Officer.

212. TRAINING REFERENCES

Appropriate Marine Aircraft Wing Air Ops Manual
Appropriate Marine Aircraft Wing SOP for EW
VMAQ Squadron Operating Procedures
EA-6B NATOPS Flight Manual
Landing Signal Officer NATOPS
NATOPS Instrument Flight Manual
CV NATOPS Manual
NATOPS General Flight and Operating Instructions
NATOPS Air Refueling Manual
EA-6B Tactical Manual, NWP-55-4-EA-6B
Prowler Tactics Guide (Vol I-IV)
HARM TACMAN
SLATs Notebook
MAWTS-1 Course Catalog
MAWTS-1 Academic Support Package
VAQ-129 Syllabus Guide
EA-6B ICAP II Weapon System Operators Manual (WSOM)
TEAMS System Operators Manual
EA-6B Training Syllabus for the 2F143 Flight Simulator
EA-6B Training Syllabus for the 15E22C Flight Simulator

AFTTP 3-1
TOPGUN Manual
VMAQ TACSOP

220. FLIGHT TRAINING: BASIC, TRANSITION, AND CONVERSION PILOT AND ECMO

1. Combat Capable Training. A flight/simulator description of the VAQ-129 training syllabus and its Marine Corps counterpart are provided in paragraph 241. FRS training provides 60.0 percent CRP (Combat Readiness Percentage) for the pilot and ECMO.

a. Pilot	FLIGHTS/EVENTS	HOURS	PERCENT
	52/23	91.5/46.0	60

b. ECMO	FLIGHTS/EVENTS	HOURS	PERCENT
	20/43	44.0/86.0	60

2. Combat Ready Training

a. Pilot

STAGE	FLIGHTS/EVENTS	HOURS	PERCENT
Prerequisites			
Emergency Procedures	0/1	0.0/1.5	0.00/0.50
Navigation	4/1	6.8/1.5	2.75/0.30
Aerial Refueling	1/0	1.7/0.0	0.70/0.00
Familiarization	1/2	1.5/3.4	0.50/0.80
Tactical Formation	3/0	5.1/0.0	3.00/0.00
HARM	1/2	1.7/3.5	0.75/0.80
Electronic Warfare Support	1/0	1.7/0.0	1.00/0.00
Deep Air Support	1/2	1.7/3.5	1.00/0.80
Reactive SEAD	1/1	1.7/1.5	1.00/0.50
Force Protection	0/1	0.0/1.5	0.00/0.30
Fleet Electronic Protection	**1/0**	**1.7/0.0**	**0.30/0.00**
	14/10	**23.6/16.4**	**11.0/4.0**
Total	**24**	**40.0**	**15.0**

b. ECMO

STAGE	FLIGHTS/EVENTS	HOURS	PERCENT
Prerequisites			
Emergency Procedures	0/1	0.0/1.5	0.00/0.50
Navigation	4/1	6.8/1.5	2.00/0.30
Aerial Refueling	1/0	1.7/0.0	0.25/0.00
Familiarization	1/1	1.5/1.7	0.50/0.30
Tactical Formation	3/0	5.1/0.0	1.75/0.00
HARM	2/3	3.4/5.0	1.00/1.50
Electronic Warfare Support	2/2	3.4/4.0	1.25/0.60
Deep Air Support	2/3	3.4/5.0	1.25/0.90
Reactive SEAD	2/2	3.4/3.0	1.00/1.00
Force Protection	0/2	0.0/3.0	0.00/0.60
Fleet Electronic Protection	1/0	1.7/0.0	0.30/0.00
	18/15	**30.4/24.7**	**9.30/5.70**
Total	**33**	**55.1**	**15.00**

3. Combat Qualification Training

a. Pilot

STAGE	FLIGHTS/EVENTS	HOURS	PERCENT
Prerequisites			
Aerial Refueling	1/0	1.7/0.0	0.50/0.00
Defensive Tactics (DEFTAC)	3/1	4.5/1.0	1.50/0.25
DEFTAC Section Leader Training	1/0	1.5/0.0	0.25/0.00
Low Altitude Tactics	3/1	4.5/1.5	1.50/0.25
Section Leader Training	4/0	6.8/0.0	2.00/0.00
Division Leader Training	3/0	5.1/0.0	1.50/0.00
Electronic Warfare Support	1/0	1.7/0.0	0.75/0.00
Deep Air Support	1/0	1.7/0.0	1.00/0.00
Reactive SEAD	2/1	3.4/1.5	1.75/1.00
Force Protection	1/0	1.7/0.0	1.00/0.00
Mission Commander Training	13/0	0.0/0.0	6.50/0.00
	33/3	**32.6/4.0**	**18.25/1.50**
Total	**36**	**36.6**	**19.75**

b. ECMO

STAGE	FLIGHTS/EVENTS	HOURS	PERCENT
Defensive Tactics (DEFTAC)	3/1	4.5/1.0	1.75/0.25
Low Altitude Tactics	3/1	4.5/1.5	1.50/0.25
Electronic Warfare Support	2/0	3.4/0.0	2.00/0.00
Deep Air Support	2/0	3.4/0.0	2.00/0.00
Reactive SEAD	4/2	6.8/3.0	3.50/1.00
Force Protection	1/0	1.7/0.0	1.00/0.00
Mission Commander Training	13/0	0.0/0.0	6.50/0.00
	28/4	**24.3/5.5**	**18.25/1.50**
Total	**32**	**29.8**	**19.75**

4. Full-Combat Qualification Training

a. Pilot

STAGE	FLIGHTS/EVENTS	HOURS	PERCENT
Prerequisites			
Aerial Refueling	1/0	1.0/0.0	0.50/0.00
Advanced DEFTAC	1/0	1.5/0.0	0.25/0.00
Advanced LAT	1/0	1.5/0.0	0.25/0.00
HARM	1/0	1.7/0.0	0.25/0.00
Electronic Warfare Support	1/0	1.7/0.0	0.50/0.00
Deep Air Support	2/0	3.4/0.0	0.75/0.00
Reactive SEAD	1/0	1.7/0.0	0.25/0.00
Deep Air Support	2/0	3.4/0.0	0.75/0.00
War at Sea Exercise	1/0	1.7/0.0	0.50/0.00
EAF Operations	2/1	2.0/1.5	0.50/0.25
FCLP	2/0	2.0/0.0	0.50/0.00
CQ	2/1	3.5/1.5	0.50/0.25
	15/2	**21.7/3.0**	**4.75/0.50**
Total	**17**	**24.7**	**5.25**

b. ECMO

STAGE	FLIGHTS/EVENTS	HOURS	PERCENT
Advanced DEFTAC	1/0	1.5/0.0	0.25/0.00
Advanced LAT	1/0	1.5/0.0	0.25/0.00
HARM	1/0	1.7/0.0	0.25/0.00
Electronic Warfare Support	1/0	1.7/0.0	0.50/0.00
Deep Air Support	2/0	3.4/0.0	0.75/0.00
Reactive SEAD	1/0	1.7/0.0	0.25/0.00
War at Sea Exercise	1/1	1.7/2.0	0.50/0.50
EAF Operations	2/1	2.0/1.5	0.50/0.25
FCLP	2/0	2.0/0.0	0.50/0.00
CQ	2/1	3.5/1.5	0.50/0.25
	14/3	**20.7/5.0**	**4.25/1.00**
Total	**17**	**25.7**	**5.25**

Syllabus Totals (100-400) Basic, Transition, Conversion (Flight/Simulator)

Pilot	114/38	169.4/69.4	34.0/6.0 ***40.00**
ECMO	80/65	119.4/121.2	31.8/8.2 ***40.00**

***Add to 60.00 from Combat Capable training for a total of 100.00.**

221. REFRESHER PILOT AND ECMO TRAINING

1. If greater than or equal to 366 days (pilots)/486 days (ECMO's) since last EA-6B flight, VAQ-129 is the designated training squadron for refresher training, either category III, category IV or Safe-for-solo.

2. Pilots with greater than or equal to 366 days but less than or equal to 485 days since last EA-6B flight require FRS ground school, simulators and Safe-for-solo check. (See T&R, Vol. 1)

STAGE	FLIGHTS/EVENTS	HOURS
Warm-up/Proficiency	2/6	3.4/13.0

3. All aircrew with greater than or equal to 486 days but less than or equal to 730 days since last EA-6B flight require Category IV refresher training. This consists of ground school, simulators, 10 hours of flight time and NATOPS check.

STAGE	FLIGHTS/EVENTS	HOURS
FAM	4/6	10.0/13.0

4. All aircrew with greater than 730 days last EA-6B flight require Category III refresher training. A VAQ-129 flight/simulator syllabus description and it's Marine Corps counterpart are provided in paragraph 241.

222. INSTRUCTOR UNDER TRAINING (IUT)

1. Pilot and ECMO DEFTAC IUT

STAGE	FLIGHTS/EVENTS	HOURS
DEFTAC IUT	6/1	9.0/1.5

2. Pilot and ECMO LAT IUT

STAGE	FLIGHTS/EVENTS	HOURS
LAT IUT	4/1	6.8/1.5

3. Pilot and ECMO NATOPS IUT

STAGE	FLIGHTS/EVENTS	HOURS
NATOPS IUT	2	3.0

4. ECMO Back-seat NATOPS IUT

STAGE	FLIGHTS/EVENTS	HOURS
Back-seat NATOPS IUT	2	3.0

5. Pilot and ECMO Instrument Evaluator Under Training (EUT)

STAGE	FLIGHTS/EVENTS	HOURS
Instrument IUT	1	1.5

230. SIMULATOR TRAINING. The following simulator devices are currently in use: 2F143 (front-seat training device) and 15E22C (back-seat training device).

240. FLIGHT/EVENT/SIMULATOR PERFORMANCE REQUIREMENTS

1. The EA-6B training syllabus conducted at the VMAQ is oriented toward bringing the pilot/ECMO from a Combat Capable graduate of VAQ-129 to Full Combat Qualification while maintaining core skills and capabilities. Refly interval and combat readiness percentage are shown in figures 2-1 and 2-3.

2. There are provisions in the VMAQ syllabus to warm-up/refresh aircrew who have not flown the EA-6B for up to 12 months. Initial NATOPS qualification or refresher training for aircrewmen out of the EA-6B for more than 12 months is prescribed in T&R, Volume 1 and delineated in paragraph 221 and 241.

3. The sequence of flight training for initial qualification progresses in a systematic manner and should be accomplished in order.

4. The effective operation and employment of the on-board system (OBS) and tactical jamming system (TJS), is as important as developing good airmanship skills in the ECMO 1 position. Proper management of the EW sorties is critical in ensuring that once the EA-6B is positioned on station the ECMO is capable of employing the weapons system and the pilot fully understands his role in optimizing the aircraft's capabilities.

241. COMBAT CAPABLE TRAINING: PILOT AND ECMO

1. General. Combat Capable training is conducted at VAQ-129, NAS Whidbey Island. The training consists of ground school, simulators, and aircraft flights. A detailed description of each stage of training may be found in the VAQ-129 Course Catalog. The following lists for pilots and ECMO's were developed by the syllabus sponsor to correlate VAQ-129 flights with the Marine Corps training and readiness manuals. Navy designations appear first, T&R equivalents and the descriptive titles follow. Note: * Represents Category III (Refresher) syllabus.

2. Category I Pilot

a. Familiarization (5 Periods/2F143; 7 Flights/EA-6B)

USN	USMC	Duration	Description
*PW 1	SFAM-100	2.0	Normal Cockpit Procedures
*PW 4	SFAM-101	1.5	Emergency Procedures I
*PW 5	SFAM-102	1.5	Emergency Procedures II
*PW 6	SFAM-103	1.5	Emergency Procedures III
*PW 8	SFAM-104	2.0	Stalls/Spins/Out-of-Control Procedures
*PF 1	FAM-105	2.5	FAM Introduction
*PF 2	FAM-106	2.5	FAM Intro (Stalls)
PF 3	FAM-107	2.5	FAM Landing Pattern
PF 4	FAM-108	2.5	FAM Aerobatics
PF 6	FAM-109	2.5	Safe-for-ECMO
*PF 12	FAM-110	2.5	FAM/Aerobatics/HARM
*PF 23	FAM-111	1.5	Basic Aircraft Maneuvering

b. Instruments/Navigation (3 Periods/2F143; 7 Flights/EA-6B)

*PW 2	SINST-115	2.0	Instrument Navigation
*PW 3	SNAV-122	2.0	RADAR Navigation
*PW 7	SNAV-123	2.0	Degraded Navigation
*PF 7	INST-116	2.5	Night Instruments I
*PF 10	NAV-126	2.0	Low Level/Aerobatics
PF 13	NAV-127	2.5	Low Level Navigation
PF 17	INST-117	2.5	Night Instruments II
PF 19	INST-118	2.5	Night Instruments III
PF 26/27	INST-119/120	2.5	Airways Instrument Nav I/II

c. Formation (8 Flights/EA-6B)

*PF 5	FORM-134	2.5	Day Formation I
PF 8	FORM-135	2.5	Day Formation II
*PF 9	FORM-136	2.5	Night Formation
*PF 14	FORM-137	2.5	Tactical Formation
*PF 15	FORM-138	2.5	Section Low Level Navigation
PF 16	FORM-139	3.0	Section Low Level Tactics II
*PF 18	FORM-140	2.5	Division Formation
PF 22	FORM-141	3.0	Division Low Level/Tactics

d. Aerial Refueling (2 Flights/EA-6B)

*PF 20	AR-144	2.5	Low Level/Day Tanking
*PF 21	AR-145	1.5	Night Aerial Refueling

e. Defensive Tactics (2 Flights/EA-6B)

*PF 24	ACM-146	1.5	Defensive Tactics I
*PF 25	ACM-147	1.5	Defensive Tactics II

f. Electronic Warfare/Special Weapons Delivery (4 Periods/15E22C; 1 Period/2F143)

*PT 1	SEW-150	2.0	TJS Operations and Computer Displays
*PT 2	SEW-151	2.0	Introduction to Jammers
*PT 3	SEW-152	2.0	DECM
PT 4	SEW-153	2.0	Integrated Mission Introduction
*PW 10	SSWD-180	2.0	HARM

g. Carrier Qualification (2 Periods/2F143; 18 Flights/EA-6B)

*PW 13	SCQ-190	2.0	Carrier Landing Trainer I
*PW 14	SCQ-190	2.0	Carrier Landing Trainer II
*PF 28-31	CQ-191	4.0	Day FCLP's
*PF 32-42	CQ-192	10.0	Night FCLP's
*PF 50-51	CQ-193	5.0	Day CV Qualification
*PF 52-53	CQ-194	5.0	Night CV Qualification

h. Instrument and NATOPS Evaluations (3 Periods/2F143; 1 Flight/EA-6B)

*PW 9	SCK-195	2.0	Instrument Check
*PW 11	SCK-196	2.0	Low Level/NATOPS Warm-up
*PW 12	SCK-197	2.0	Simulator NATOPS Check
*PF 11	CK-199	2.5	NATOPS Check

3. Category I ECMO

a. Familiarization (5 Periods/2F143; 3 Flights/EA-6B)

*NW 1	SFAM-100	2.0	Normal Cockpit Procedures
*NW 4	SFAM-101	1.5	Emergency Procedures I
*NW 5	SFAM-102	1.5	Emergency Procedures II
*NW 6	SFAM-103	1.5	Emergency Procedures III
*NW 8	SFAM-104	2.0	Stalls/Spins/Out-of-Control Procedures
*NF 1	FAM-112	2.5	Familiarization/Normal Procedures
*NF 2	FAM-113	2.5	Instrument Procedures/Aerobatics
*NF 12	FAM-114	1.5	Basic Aircraft Maneuvering

b. Instruments/Navigation (3 Periods/2F143; 6 Flights/EA-6B)

*NW 2	SINST-121	2.0	Instrument Scan
*NW 3	SNAV-124	2.0	Radar Navigation I
*NW 7	SNAV-125	2.0	Degraded Navigation
*NF 3	NAV-128	2.5	Radar Navigation I/HARM
*NF 4	NAV-129	2.5	Radar Navigation II/ Degraded Navigation I
*NF 5	NAV-130	2.5	Radar Navigation III
*NF 8	NAV-131	2.5	Low Level Navigation
NF 9	NAV-132	2.5	Section Low Level Navigation
NF 10	NAV-133	2.5	Radar Navigation IV/ Degraded Navigation II

c. Formation (2 Flights/EA-6B)

*NF 6	FORM-142	2.5	Day Formation
*NF 7	FORM-143	2.5	Tactical Formation

d. Aerial Refueling (1 Period/2F143)

*NW 10	SAR-144	2.0	Case I and II/In-flight Refueling

e. Defensive Tactics (2 Flights/EA-6B)

*NF 13	ACM-148	1.5	Defensive Tactics I
*NF 13b	ACM-149	1.5	Defensive Tactics II

f. Electronic Warfare/Special Weapons Delivery (19 Periods/15E22C; 5 Flights/EA-6B; 1 Period/2F143)

*NT 1	SEW-154	2.0	TJS Operations and Computer Displays
*NT 2	SEW-155	2.0	System Initialization/ Receiver Calibration
*NT 3	SEW-156	2.0	Signal Acquisition/ID III
*NT 4	SEW-157	2.0	TJS Pods/Jammer Assignments
*NT 5	SEW-158	2.0	Jammer Adjustments
*NT 6	SEW-159	2.0	Full System Mission I
*NT 7	SEW-160	2.0	Test Mode
*NT 8	SEW-161	2.0	Degraded Operations
*NT 9	SEW-162	2.0	HARM Operations
*NT 10	SEW-163	2.0	Full System Mission II
NT 11	SEW-164	2.0	ESM Mission/C^3I
NT 12	SEW-165	2.0	ASUW I
NT 13	SEW-166	2.0	ASMD/CTTG
NT 14	SEW-167	2.0	SEAD/Power Projection I
*NT 15	SEW-168	2.0	EW CAS
*NT 16	SEW-169	2.0	Power Projection II
*NT 17	SEW-170	2.0	Brown Water Operations
*NT 18	SEW-171	2.0	SEAD/Power Projection III
*NT 19	SEW-172	2.0	SEAD/Power Projection IV
*SF 1	EW-174	2.5	ES Methods/War-At-Sea
*SF 2	EW-175	2.5	ES Methods/ASMD
SF 3	EW-176	3.0	Power Projection
*SF 4	EW-177	3.0	HARM Procedures
*SF 5	EW-178	3.0	Power Projection Graduation Mission
*NW 12	SSWD-180	2.0	HARM

g. Carrier Qualification (1 Period/2F143; At Least 1 Flight/EA-6B)

*NW 11	SCQ-190	2.0	Case III Procedures/CV Emergencies
*NF 14	CQ-191	1.0	Day FCLP

h. Instrument and NATOPS Evaluations (1 Period/15E22C; 3 Periods/2F143; 1 Flight/EA-6B)

*NW 9	SCK-195	2.0	Instrument Check
*NW 13	SCK-196	2.0	Simulator NATOPS Warm-up
*NW 14	SCK-197	2.0	Simulator NATOPS Check
*NT 20	SCK-198	2.0	ALQ-99/TJS NATOPS Check
*NF 11	CK-199	2.5	NATOPS Evaluation

242. COMBAT READY TRAINING: PILOT AND ECMO

1. Ground Training.

a. Purpose. To provide the necessary ground instruction to successfully complete flights in this phase.

b. General. This ground instruction is designed to develop the knowledge required for proficiency in the combat ready training syllabus. These courses should be complete prior to flight in the combat qualification phase. Prerequisite lectures will be annotated in Ground Training subparagraph portion of the specific skill area.

c. Lectures.

(1) Course Rules
(2) TACSOP
(3) WING/GROUP/SQUADRON SOP
(4) Base Air Ops manual
(5) HARM Lectures
(6) Aerial refueling
(7) LAT lectures
(8) Mission Commander Program
(9) Aerodynamics
(10) BAM
(11) DEFTAC lectures
(12) EA General Tactics
(13) JATO
(14) Jamming Fundamentals
(15) ES General Tactics
(16) EWCAS

2. Emergency Procedures.

a. Purpose. To review and practice emergency procedures (EPs) in the ground, takeoff, in-flight, and landing phases. To develop crew coordination skills specific to emergencies. To refresh aircrew with the aircraft systems/limits, and the decision making involved in problem solving.

b. General. These simulators are designed to provide aircrew proficiency in dealing with emergencies. Emphasis is placed on immediate action items in NATOPS, situational awareness, aircraft limits/systems and crew coordination.

c. Ground Training. Aircrew shall complete a monthly written EP quiz.

d. Simulator Training (1 Period, 1.5 Hours)

SEP-200	1.5	T,C,R 2F143 S

Goal. Maintain pilot/ECMO proficiency in dealing with ground/takeoff, inflight, and landing emergencies.

Requirement. Accurately respond to the aforementioned emergencies. The pilot and ECMO 1 should switch positions, time permitting. Complete the following:

Performance standards. IAW NATOPS:

(1) Respond to ground emergencies.
(2) Respond to takeoff emergencies.
(3) Respond to in-flight emergencies.
(4) Respond to landing emergencies
(5) Spin recovery procedures.
(6) Out of control flight procedures.

3. Navigation

a. Purpose. To review and practice visual and radar navigation procedures and navigation system integration. To develop crew coordination skills required for successful mission completion during day and night conditions.

b. General. These sorties are designed to develop and increase proficiency in all skill areas required for tactical navigation. Emphasis is placed on situational awareness, navigational accuracy, degraded operations of the navigation system, timing, and fuel computation.

c. Pilot/ECMO Simulator Training (1 Period, 1.5 Hours)

SNAV-201 1.5 T,C,R 2F143 S

Goal. Maintain pilot/ECMO proficiency in day EA-6B radar and navigation system integration. Be able to identify and accurately deal with navigation system failures. Expose the pilot/ECMO to local course rules and squadron operating procedures.

Requirement. Local area radar sortie. Complete one TACAN approach and one precision approach to a local airfield. Accurately deal with the following navigation (NAV) system failures using Airmass (AM), Stand Alone (SA), and Dead Reckoning (DR) modes:

(1) Tactical Computer (TC) failure.
(2) Air Data Computer (ADC) failure.
(3) Inertial Navigation System (INS) failure.
(4) A/D Converter failure.
(5) TACAN update.
(6) Radar update.
(7) GPS procedures.
(8) ASN-50 failure.

Performance Standards. IAW NATOPS and Instrument Flight Manual

Crew. Pilot/ECMO 1.

d. Pilot/ECMO Flight Training (4 Flights, 6.8 Hours)

NAV-202 1.7 T,C,R EA-6B A

Goal. Maintain pilot/ECMO proficiency in day radar navigation and EA-6B radar navigation system integration.

Requirements. May be flown on a published IR Military Training Route (MTR)or squadron approved route. No lower than 1000 ft AGL.

Performance Standards. Complete the following:

(1) Conduct 1/4 of the route in AM.
(2) Conduct 1/4 of the route in DR.
(3) Multiple updates.
(4) Calculate mission completion fuel.
(5) Navigation system accuracy within ±10 secs.
(6) Can be flown in IFR conditions.

Crew. Pilot/ECMO 1.

NAV-203 1.7 T,C,R 1 EA-6B A N

Goal. Maintain pilot/ECMO proficiency in night radar navigation and EA-6B radar navigation system integration.

Requirements. Same as for NAV-202 except conducted at night.

Performance Standards. Same as NAV-202

Crew. Pilot/ECMO 1.

NAV-204 1.7 T,C,R 1 EA-6B A

Goal. Maintain pilot/ECMO proficiency in visual low level navigation.

Requirements. Conducted on a suitable MTR; 1000 ft AGL minimum altitude.

Performance Standards. Complete the following:

(1) Navigate using timing, visual references, and calculated headings.
(2) Full navigation system.
(3) TOT/JOT ±10 seconds.
(4) Calculate mission completion fuel.

Crew. Pilot/ECMO 1.

NAV-205 1.7 T,C,R 1 EA-6B A

Goal. Maintain proficiency in day, radar, and visual navigation utilizing a high-low-high profile.

Requirements. Suitable MTR; no lower than 1000 ft AGL. Emphasis is on accurate navigation with a degraded system.

Performance Standards. Complete the following:

(1) Conduct half of the low level in AM and at least 3legs of the low level in DR.
(2) Execute multiple updates.
(3) Maintain NAV system accuracy to within 2nm at the target.
(4) TOT/JOT ±10 seconds.
(5) Calculate mission completion fuel.

Crew. Pilot/ECMO 1.

Prerequisites. NAV-204.

4. Aerial Refueling

a. Purpose. To introduce the Pilot/ECMO to aerial refueling procedures.

b. General. The type of aircraft utilized for aerial refueling shall be determined by mission requirements.

c. Ground Training. Aircrew shall receive all applicable aerial refueling lectures prior to flight in this stage.

AR-206 1.7 T,C,R 1 EA-6B A

Goal. Introduce/practice the techniques/procedures for day high altitude tanking.

Requirements. May be flown in conjunction with any other scheduled mission. NATOPS Aerial Refueling Manual provides further guidance.

Performance Standards. Complete the following:

(1) Brief aerial refueling emergencies.
(2) Execute the proper:
    (a) Communications procedures
    (b) Tanker rendezvous
    (c) Aerial refueling procedures/techniques
    (d) Departure from tanker
(3) 4 plugs (wet or dry) for initial/refresher aircrew.
(4) 1 plug required for currency.

Crew. Pilot/ECMO 1.

External Support. Aerial refueling platform; KC-130,135 etc.

5. Familiarization

a. Purpose. To introduce the pilot and ECMO to the flight characteristics and maneuvering capabilities of the EA-6B. To introduce the pilot to the back seat operating characteristics.

b. General.

(1) The FAM-207 is designed to familiarize the pilot with ECMO responsibilities and the procedures required to operate the OBS. FAM-207 may be conducted in either the EA-6B or the 15E22C.

(2) FAM-211 may be flown in conjunction with other sorties. Only a designated Defensive Tactics Instructor (DEFTACI) shall be the flight instructor for the initial FAM-211 and when currency/proficiency lapses. For SFAM-210, the ECMO shall fly the trainer for at least three spins/out-of-control flight maneuvers. The DEFTACI may sit at the instructor's console or in the simulator. ACM Training Rules apply for these events and must be briefed as per T&R Manual, Volume 1 and OPNAV 3710.7.

(3) Emphasis is on preparing the aircrew for progression to DEFTAC qualification. The maneuvers outlined in these sorties should point out the EA-6B's maneuvering characteristics and how they apply to the air-to-air environment.

c. Ground Training. MAWTS-1 EA-6B BAM lecture will be completed prior to any sorties in this stage.

d. Pilot/ECMO Simulator training (2 Periods, 3.4 Hour)

SFAM-207 1.7 T,C,R 15E22C/1 EA-6B S

Goal. Introduce the pilot to OBS and HARM procedures.

Requirements. May be conducted in the airplane.

Performance Standards. Complete the following:

(1) Load of the Tactical Computer (TC), Display Processor (DP), and all required mission libraries.
(2) Review various computer displays.
(3) Review software tree.
(4) Review various jammer assignments.
(5) Hardware checks.
(6) Pod radiation.
(7) HARM procedures.
(8) Built-in-Tests (BITs).
(9) Degraded operations.
(10) Basic signal analysis.
(11) Software checks.

Crew. Pilot.

SFAM-210 1.7 T,C,R 1 EA-6B S

Goal. To introduce the pilot and ECMO to the flight characteristics and maneuvering capabilities of the EA-6B.

Requirements. Knowledge of the FAM-211 maneuvers outlined in the MAWTS-1 DEFTAC syllabus. Overhead maneuvers are required. Overheads may be accomplished in sequence, i.e., squirrel cage.
Performance Standards. Complete the following:

(1) Acceleration Demo.
(2) 1 G Approach-to-Stall and Recovery.
(3) 2 G Approach-to-Accelerated Stall and Recovery.
(4) Rolling G / Stab Aug Demo.
(5) Break and Hard Turns at 10,000 ft. MSL.
(6) Nose High Unusual Attitude and Recovery.
(7) Break and Hard Turns at 20,000 ft. MSL.
(8) Nose Low Unusual Attitude and Recovery.
(9) Dynamic Zoom / Transient Wing Drop.
(10) Slice Turn.
(11) Confidence Maneuvers:
- Flaperon Roll
- Wingover
- Barrel Roll
(12) Overhead Maneuvers:
- Loop
- 1/2 Cuban Eight
- Immelmann
- Split S
(13) SAM Evasive Maneuver.
(14) 50% Rule recoveries from 15,000 and 10,000 ft. MSL, to no lower than 2,000 ft. AGL using the dive recovery rules.
(15) Multiple departures/out-of-control flight/spins. ECMOs shall fly the simulator for at least three departures/out-of-

control/spins maneuvers.

Performance Standards. IAW NATOPS and applicable TAC Manuals.

Prerequisites. Aerodynamics and BAM lectures.

Crew. Pilot and/or ECMO 1 and DEFTACI.

e. Pilot/ECMO Flight Training (1 Flight, 1.5 Hours)

FAM-211 1.5 T,C,R E 1 EA-6B A

Goal. Introduce/practice maneuvers designed to familiarize the Pilot/ECMO with flight characteristics and maneuvering capabilities of the EA-6B.

Requirements. Knowledge of the FAM-211 maneuvers outlined in the MAWTS-1 DEFTAC syllabus. Overhead maneuvers are recommended and shall be completed at aircraft gross weights at or below 45,000 pounds. When configured with external fuel tanks, they shall be empty before commencing overheads. Overheads may be accomplished in sequence, i.e., squirrel cage. For refresher, requirements 3,4,5 may be omitted.

Performance Standards. Complete the following:

(1) Acceleration Demo.
(2) 1 G Approach-to-Stall and Recovery.
(3) 2 G Approach-to-Accelerated Stall and Recovery.
(4) Rolling G / Stab Aug Demo.
(5) Break and Hard Turns at 10,000 ft. MSL.
(6) Nose High Unusual Attitude and Recovery.
(7) Break and Hard Turns at 20,000 ft. MSL.
(8) Nose Low Unusual Attitude and Recovery.
(9) Dynamic Zoom / Transient Wing Drop.
(10) Slice Turn.
(11) Confidence Maneuvers:
- Flaperon Roll
- Wingover
- Barrel Roll
(12) Overhead Maneuvers:
- Loop
- 1/2 Cuban Eight
- Immelmann
- Split S
(13) SAM Evasive Maneuver.
(14) 50% Rule recoveries from 15,000 and 10,000 ft. MSL, to no lower than 2,000 ft. AGL using the dive recovery rules.

Crew. Pilot or ECMO 1 and DEFTACI (initial only).

Prerequisites. SFAM-210.

6. Tactical Formation

a. Purpose. To review basic section air-work and to introduce the aircrew to tactical formation (TACFORM).

b. General. FORM-220 and 222 are meant to be a build-up for the DEFTAC and LAT phase. The ability to recognize and execute the tactical turns on FORM-220 is a prerequisite for conducting them in the low altitude environment on FORM-222. **TACFORM is conducted to allow formation navigation with mutual support. TACFORM is not a low altitude Max. 'G" exercise. Emphasis should be on turn recognition and lookout in the comm out environment.**

c. Ground/Academic Training. LAT III (Section Maneuvering) and LAT IV (Advanced Maneuvers) lectures shall be completed prior to flight in this stage.

d. Pilot/ECMO Flight Training (3 Flights, 5.1 Hours)

FORM-220 1.7 T,C,R 2 EA-6B A

Goal. Introduce/practice day formation work.

Requirements. Review the tactical turns outlined in the MAWTS-1 LAT Syllabus. Tactical turns will not be conducted below 5,000 ft AGL. 'G' Awareness and FOD check maneuvers will be completed prior to tactical maneuvering.

Performance Standards. Complete the following:

(1) Section takeoff, 10 sec. or simultaneous.
(2) NATOPS TACAN/ADF rendezvous.
(3) NATOPS breakup and rendezvous.
(4) Section maneuvering utilizing Defensive Combat Spread and Fighter Wing. Section maneuvering in preparation for low level TACFORM (below 5,000 ft. AGL) uses the same formations but without wingman descending below the lead's altitude.
(5) Complete the following turns IAW MAWTS-1 LAT syllabus:
    (a) NAV turn into/away
    (b) TAC turn into/away
    (c) Shackle turn
    (d) CROSS turn
    (e) IN PLACE turn into/away
(6) NATOPS/unit SOP section approach/missed approach procedures.
(7) Unit SOP section landing recommended.

Crew. Pilot/ECMO 1.

FORM-221 1.7 T,C,R 2 EA-6B A N

Goal. Review/practice EA-6B night formation flight and procedures.

Requirements. Complete the following:

(1) Section takeoff.
(2) NATOPS TACAN/ADF rendezvous recommended.
(3) Break-up and rendezvous as lead and wing.
(4) Section approach/missed approach procedures as lead and wing.

Performance Standards. IAW NATOPS

Crew. Pilot/ECMO 1.

Prerequisites. A formation flight must have been flown within the last 60 days. A night flight must have been flown within the last 45 days.

FORM-222 1.7 T,C,R E 2 EA-6B A

Goal. Introduce section tactical navigation, tactical turns, and mutual support in the low-altitude environment.

Requirements. Flown on a suitable MTR, or certified route, no lower than 1000 ft AGL. Tactical turns will be IAW the MAWTS-1 LAT Syllabus. Lead will be exchanged during the low level portion to provide equal training for both aircrews. 'G' Awareness and FOD check maneuvers will be completed prior to tactical maneuvering. Introduce/practice section maneuvering/formations.

Performance Standards. Complete the following turns IAW MAWTS-1 LAT syllabus:

(1) NAV into/away
(2) TAC into/away
(3) Shackle
(4) Cross-turn
(5) In-place into/away

Crew. Pilot/ECMO 1.

Prerequisites. NAV-204, FORM-220.

7. HARM Employment.

a. Purpose. To introduce the aircrew to the coordination and system/airplane requirements for timely and accurate HARM delivery.

b. General. THARM-230 is a TUT planning mission only and shall be completed prior to SHARM-231,232. HARM-233, 234 can be flown in conjunction with other missions. SHARM-231, 232 are comprehensive trainers and shall be an evaluation of the techniques/procedures required for HARM employment. Emphasis should be placed on mission planning, tailoring libraries, reactive shots and timing.

c. Ground/Academic Training. The following squadron level lectures should be accomplished prior to flight in this stage:

(1) MAWTS-1 HARM lecture series.

d. HARM Mission Planning (1 Period, 2.0 Hours)

THARM-230 2.0 T,C,R 1 TUT S

Goal. Introduce/practice HARM planning on the Teams Upgrade Terminal (TUT).

Requirements. Complete the following:

(1) Plan a minimum of 3 HARM shots:
(a) Deconflicting geometrically
(b) Deconflicting parametrically

(c) Utilizing MME/MNT
(2) Utilize 3 different profiles (PB, RK, RU) for each shot, comparing time of flights (TOF), launch points, fields of view, probability of hit footprints (POHF), ETC.
(3) Discuss friendly emitter deconfliction.

Performance Standard. To be evaluated during execution on SHARM missions.

Crew. Pilot and ECMO 1/2/3.

e. Pilot/ECMO Simulator Training (2 Period, 3.0 Hours)

SHARM-231 1.5 T,C,R E 2F143 S

Goal. Introduce Pilot and ECMO 1 to HARM employment procedures.

Requirements. Shall be completed using integrated simulators with SHARM-232. THARM-230 scenario and planning shall be employed.

Performance Standards. Complete the following:

(1) Execute multiple HARM launches utilizing various modes (PB, RK, RU)
(2) Meet timing/routing requirements.
(3) Proper crew coordination with respect to pre and post-launch responsibilities.
(4) Perform ABL procedures.
(5) Employ missile with various system malfunctions.
(6) Shots in AM and DR.
(7) Review abort codes.
(8) Practice hung ordnance approach procedures.

Crew. Pilot and ECMO 1.

Prerequisites. THARM-230.

SHARM-232 1.5 T,C,R E 15E22C S

Goal. Introduce ECMO 2/3 to HARM employment procedures.

Requirements. Utilize THARM-230 scenario. May be flown using integrated simulator with SHARM-231.

Performance Standards. Complete the following:

(1) Execute multiple HARM launches utilizing various modes (PB, RK, RU)
(2) Develop target packages using Target Hook, Emitter Hook, OP Create, and ELINT modifications.
(3) Perform ABL procedures.
(4) Practice proper crew coordination with respect to pre and post-launch responsibilities.
(5) Employ missile with various system malfunctions.

Crew. ECMO 2/3.

Prerequisites. THARM-230.

f. Pilot/ECMO Flight Training (Pilot: 1 Flight, 1.7 Hours; ECMO 2 Flights, 3.4 Hours)

HARM-233 1.7 T,C,R 1 EA-6B A

Goal. Practice HARM employment procedures for Pilot and ECMO1.

Requirements. May be flown in conjunction with other missions.

Performance Standards. Complete the following:

(1) Integrate HARM shot into SEAD gameplan.
(2) Navigate to launch point within 3 nm.
(3) Meet HARM launch timing ±10 seconds.
(4) Meet HARM TOT ±10 seconds.

Crew. Pilot and ECMO1.

Ordnance. Captive AGM-88 Block III or IV.

HARM-234 1.7 T,C,R 1 EA-6B A

Goal. Practice HARM employment procedures for ECMO 2/3.

Requirements. May be flown in conjunction with other missions.

Performance Standards. Complete the following:

(1) Integrate HARM shot into SEAD gameplan.
(2) Navigate to launch point within 3 nm.
(3) Meet HARM launch timing ±10 seconds.
(4) Meet HARM TOT ±10 seconds.

Crew. ECMO 2/3.

Ordnance. Captive AGM-88 Block III or IV.

8. Electronic Warfare Support.

a. Purpose. Introduce and practice ES procedures and TERPES integration.

b. General. SES-240, 241 are designed to increase the signal recognition and identification proficiency in a dense electromagnetic environment. ES-242, 243 should be flown against an EW range with real world signals. To the greatest extent possible, ES-242, 243 should include an S-2 intel. scenario/brief/debrief and TERPES brief/debrief.

c. Ground/Academic Training. The following squadron level lectures should be accomplished prior to flight in this stage:

(1) ES General Tactics.

(2) HARM as a sensor.

d. ECMO Simulator Training (2 Periods, 4.0 Hours)

SES-240 2.0 T,C,R 15E22C S

Goal. Review the procedures necessary to properly conduct the OBS Built-in-Tests (BITs). Increase ECMO signal recognition

capabilities of EW/GCI/ACQ/FC/TT/IL/AI radar signals.

Requirements. Identify EW/GCI/ACQ/FC/TT/IL/AI radar signals and respond to system malfunctions. Review general radar characteristics as per function.

Performance Standards. Complete the following:

(1) System power-up and initialization.
(2) Recorder operations.
(3) OBS and A/D Converter BITs.
(4) Identify, localize, and record signals of interest.
(5) Recorder initialize.
(6) Library activation.
(7) FR-AZ initialize.
(8) GEO initialize.
(9) Practice degraded modes of operation.

Crew. ECMO 2/3.

SES-241 2.0 T,C,R 15E22C S

Goal. Increase ECMO signal recognition capabilities in a dense electromagnetic environment.

Requirements. Identify/localize signals of interest and respond to system malfunctions.

Performance Standards. Complete the following:

(1) Identify, localize, and record signals of interest in a dense signal environment.
(2) Coordinate NAV track for ES optimization.
(3) Properly initialize the OBS to maximize the ES effort.
(4) Maintain ES logs, focusing on SOI.
(5) Reference EPL for SOI characteristics.
(6) Introduce coord. with National Assets.
(7) Introduce MATT/CTT integration.

Crew. ECMO 2/3.

e. Pilot/ECMO Flight Training (Pilot 1 Flight, 1.7 Hours; ECMO 2 Flights, 3.4 Hours)

ES-242 1.7 T,C,R 1 EA-6B A

Goal. Introduce the EA-6B aircrew to front seat single-ship ES techniques in the EA-6B and mission planning capabilities of TERPES.

Requirements. May be conducted in conjunction with other sorties.

Performance Standards. Complete the following:

(1) Coordinate with TERPES and S-2/EWO on given scenario.
(2) Pre-flight briefing by S-2 and TERPES.
(3) Ensure navigation track optimizes OBS detection capabilities.
(4) Develop a TUT mission.
(5) Conduct a surveillance mission against an EW range, local ATC

radars, or surface ship radars.
(6) Utilize the HARM as a sensor.
(7) Maintain appropriate logs for post mission reconciliation.
(8) Complete TUT and TERPES post mission analysis.
(9) Plan for and utilize the USQ-113 in the record mode.

Crew. Pilot and ECMO 1.

Ordnance. Captive AGM-88 Block III or IV.

ES-243 1.7 T,C,R 1 EA-6B A

Goal. Introduce the EA-6B aircrew to the single-ship backseat ES techniques in the EA-6B and mission planning capabilities of TERPES.

Requirements. Same as ES-242.

Performance Standards. Same as ES-242 with the addition of:

(1) Properly initialize the OBS.
(2) Identify, localize and record SOI.

Crew. ECMO 2/3.

Ordnance. Captive AGM-88 Block III or IV.

9. Deep Air Support.

a. Purpose. Introduce the aircrew to tactical employment of the EA-6B in the DAS environment.

b. General. Scenarios should attempt to integrate external assets to the maximum extent possible. Sorties should include an S-2 intel brief/debrief/scenario and a TERPES brief/debrief.

c. Ground/Academic Training. The following squadron level lectures should be accomplished prior to flight in this stage:

(1) ASE.
(2) Jamming Fundamentals.
(3) USQ tactical considerations.
(4) USQ basic operations.
(5) EA General tactics.
(6) JATO.

d. Pilot/ECMO Simulator Training (2 Periods, 3.0 Hours)

SDAS-250 1.5 T,C,R 1 2F143 S

Goal. Introduce/practice the aircrew requirements for jamming in support of a coordinated strike scenario.

Requirements. Shall be flown integrated with SDAS-251.

Performance Standards. Complete the following:

(1) Determine EA-6B jammer and track timing in accordance with the S-2 scenario.
(2) Determine optimum load-out.

(3) Meet timing requirement +/- 10 seconds.
(4) TERPES brief of scenario parametrics.
(5) Develop HARM plan.
(6) Brief HVU escort plan.
(7) USQ-113 integration and targeting.
(8) Expendable gameplan.
(9) Practice degraded modes of operation.

Crew. Pilot and ECMO 1.

SDAS-251 1.5 T,C,R 1 15E22C S

Goal. Introduce/practice the aircrew requirements for jamming in support of a coordinated strike scenario.

Requirements. May be flown integrated with SDAS-250.

Performance Standards. Complete the following:

(1) Develop TUT mission based on intel. scenario.
(2) Determine optimum support profile and navigation track
(3) Determine optimum load-out.
(4) Meet timing requirement ±10 seconds.
(5) TERPES brief of scenario parametrics.
(6) Develop HARM and jammer game plan.
(7) USQ-113 integration and targeting.
(8) Initialize OBS and TJS.
(9) Make/adjust jammer assignments in accordance with jammer gameplan.
(10) Maintain EA logs.
(11) Execute hardware and software checks.
(12) Practice degraded modes of operation.

Crew. ECMO 2/3.

e. USQ-113 Trainer (1 Period, 2.0 Hours)

TDAS-252 2.0 T,C,R 1 USQ-113 S

Goal. Become familiar with the operating characteristics of the USQ-113.

Requirements. May be conducted in a USQ equipped aircraft or the USQ mobile trainer.

Performance Standards. Complete the following:

(1) Coordinate with S-2 and National assets concerning signals of interest.
(2) Develop target tables.
(3) Initialize USQ-113.
(4) Employ the USQ in all modes (normal, priority, selective, and blind).
(5) Employ the USQ in the limited search mode.
(6) Employ the USQ in the COMM-1 mode.
(7) Employ the USQ record mode.
(8) Review data loader procedures.
(9) Perform BITs.
(10) Maintain ES/EA logs.

f. Pilot/ECMO Flight Training (Pilot: 1 Flight, 1.7 Hour; ECMO: 2 Flights, 3.4 Hours)

DAS-253 1.7 T,C,R 1 or 2 EA-6B(s) A

Goal. Introduce/practice the aircrew requirements for jamming in support of a DAS strike scenario.

Requirements. This sortie shall be planned and briefed as a section. However, it may be executed as a single.

Performance Standards. Complete the following:

(1) Develop TUT mission for a section of EA-6B.
(2) Determine EA-6B jammer and track timing in accordance with the S-2 scenario.
(3) Determine optimum load-out.
(4) Meet timing requirement ±10 seconds.
(5) TERPES brief of scenario parametrics.
(6) Develop HARM plan.
(7) Brief HVU escort plan.
(8) USQ-113 integration and targeting.
(9) Expendables gameplan.

Crew. Pilot and ECMO 1.

DAS-254 1.7 T,C,R 1 or 2 EA-6B(s) A

Goal. Introduce/practice the aircrew requirements for jamming in support of a coordinated strike scenario.

Requirements. This sortie shall be planned and briefed as a section. However, it may be executed as a single.

Performance Standards. Complete the following:

(1) Develop TUT mission based on intel scenario.
(2) Determine optimum support profile and navigation track.
(3) Determine optimum load-out.
(4) Meet timing requirement ±10 seconds.
(5) TERPES brief of scenario parametrics.
(6) Develop HARM and jammer game plan.
(7) USQ-113 integration and targeting.
(8) Initialize OBS and TJS.
(9) Make/adjust jammer assignments in accordance with jammer gameplan.
(10) Maintain EA logs.
(11) Execute hardware and software checks.
(12) Coord. with S-2 and TERPES for post flight debrief.

Crew. ECMO 2/3.

10. Reactive Suppression of Enemy Air Defenses (RSEAD).

a. Purpose. Introduce the aircrew to EA support in the CAS environment.

b. General. Scenarios should attempt to integrate external assets to the maximum extent possible. Sorties should include an S-2 intel brief/debrief/scenario and a TERPES brief/debrief. Missions in this phase will focus on scenarios where the target and threat are both co-located and not co-

located.

c. Ground/Academic Training. The following squadron level lectures should be accomplished prior to flight in this stage:

(1) EWCAS.

d. Pilot/ECMO Simulator Training (2 Periods, 3.0 Hours)

SRSEAD-260 1.5 T,C,R 2F143 S

Goal. Introduce single-ship EWCAS techniques. These missions will utilize both threat is the target and threat is not the target profiles.

Requirements. Shall be flown integrated with SRSEAD-261.

Performance Standards. Complete the following:

(1) Plot all appropriate fire support coordination measures and control points.
(2) Develop appropriate TUT mission.
(3) Practice ONA and OFFA procedures.
(4) Conduct runs using both time hacks and real world TOT.
(5) Conduct a minimum of 4 threat is the target missions.
(6) Conduct a minimum of 4 threat is not the target missions.
(7) Prepare communications flow and reporting procedures.
(8) Practice degraded modes of operation.
(9) Gain alignment to within $\pm$ 3 Deg.

Crew. Pilot and ECMO 1.

SRSEAD-261 1.5 T,C,R 15E22C S

Goal. Introduce single-ship EWCAS techniques. These missions will utilize both threat is the target and threat is not the target profiles.

Requirements. May be flown integrated with SRSEAD-260.

Performance Standards. Same as SRSEAD-260. Additionally, complete the following:

(1) Prepare chart/Geo display with all control points.
(2) Prepare jammer gameplan.

Crew. ECMO 2/3.

e. Pilot/ECMO Flight Training (Pilot: 1 Flight, 1.7 Hour; ECMO: 2 Flights, 3.4 Hours)

RSEAD-262 1.7 T,C,R 1 EA-6B A/S

Goal. Introduce single-ship EWCAS techniques. These missions will utilize both threat is the target and threat is not the target profiles.

Requirements. S-2 scenario providing friendly and enemy ground order of battle, SAMs/AAA, and Fire Support Coordination Measures is required.

Performance Standards. Complete the following:

(1) Plot all appropriate fire support coordination measures and control points.
(2) Develop appropriate TUT mission.
(3) Practice ON AXIS and OFF AXIS procedures.
(4) Conduct runs using both time hacks and real world TOT.
(5) Conduct a minimum of 2 threat is the target missions.
(6) Conduct a minimum of 2 threat is not the target missions.
(7) Prepare communications flow and reporting procedures.

Prerequisites. SRSEAD-260.

Crew. Pilot and ECMO 1.

RSEAD-263 1.7 T,C,R EA-6B A/S

Goal. Introduce single-ship EWCAS techniques. These missions will utilize both threat is the target and threat is not the target profiles.

Requirements. Same as RSEAD-262.

Performance Standards. Same as RSEAD-262. Additionally, complete the following:

(1) Prepare chart/Geo display with all control points.
(2) Prepare jammer gameplan.

Prerequisite. SRSEAD-261

Crew. ECMO 2/3.

11. Force Protection.

a. Purpose. Introduce EA-6B tactics and techniques in the force protection role.

b. General. These missions are intended to familiarize the EA-6B aircrew with tactics and techniques for the defense of a vital area or supported unit. They may include, but are not limited to, Anti-Ship Missile Defense (ASMD), helicopter support, airfield defense, GCE support, counter-battery artillery raids, or vital area defense.

c. Ground Training.

(1) EA-6B in support of Helicopter Operations.
(2) EA-6B in support of GCE.
(3) Bulk Chaff Operations.

d. Pilot/ECMO Simulator Training (2 Periods, 3.0 Hours)

SFP-270 1.5 T,C,R 2F143 S

Goal. Introduce/practice procedures for force protection.

Requirements. May be flown integrated with SFP-271.

Performance Standards. Complete the following:

(1) Coordinate with supported unit.
(2) Determine threat to supported unit.
(3) Determine SOI for threat warning.
(4) Determine criteria for flex to reactionary defense.
(5) Determine and execute proper reporting procedures.
(6) Prepare TUT mission.
(7) Prepare expendables gameplan, to include chaff corridors (if available).
(8) Prepare go/no go criteria.
(9) Practice degraded modes of operation.

Crew. Pilot and ECMO 1.

SFP-271 1.5 T,C,R 15E22C S

Goal. Introduce/practice procedures for force protection.

Requirements. May be flown integrated with SFP-271

Performance Standards. Same as SFP-270, with the addition of the following:

(1) Prepare jammer and HARM gameplan.

Crew. ECMO 2/3.

12. Fleet Electronic Protection.

a. Purpose. Introduce the aircrew to employment of the EA-6B in the EP environment.

b. General. These missions are to train other units in a hostile electromagnetic environment. Requirements will depend on the training required by the supported unit. Examples include break-lock training for F/A-18 units and jamming missions against an operating MACCS.

FEP-272 1.7 T,C,R 1 EA-6B A/S

Goal. Introduce/practice the requirements for successful completion of EP training support for Fleet units.

Requirements. Can be conducted against any Fleet unit requesting EP support.

Performance Standards. Introduce/practice the following:

(1) Coordinate with the supported unit.
(2) Develop TUT mission.
(3) Prepare communications plan and codewords as necessary.
(4) Maintain EA logs.

Crew. Pilot and ECMO 1/2/3.

243. COMBAT QUALIFICATION TRAINING: PILOT AND ECMO

1. Night Aerial Refueling

a. Purpose. Introduce the Pilot/ECMO to night aerial refueling procedures.

b. General. The type of aircraft utilized for aerial refueling shall be

determined by mission requirements.

c. Ground Training. Aircrew shall receive all applicable aerial refueling lectures prior to flight in this stage.

AR-300 1.7 T,C,R 1 EA-6B A N

Goal. Introduce/practice the techniques specific to night high altitude aerial refueling. Practice tanker communications and engagement/disengagement procedures.

Requirements. Same as AR-206.

Performance Standards. IAW Aerial Refueling NATOPS.

Prerequisites. AR-206 for initial currency aircrew.

Crew. Pilot.

External Syllabus Support. 1 KC-130 or other suitable refueler.

2. Air-to-Air (Defensive Tactics (DEFTAC))

a. Purpose. This stage is designed to introduce the EA-6B aircrew to the capabilities and limitations of the EA-6B in the air-to-air environment. This includes BVR/WVR maneuvering and section defensive tactics.

b. General.

(1) Current OPNAVINST 3710.7, T&R VOL.1, MAWTS-1 Course Catalog, and Fleet/Wing/Group orders define the limitations for the conduct of ACM. All air-to-air training is subject to the guidelines set forth in these orders.

(2) Only those aircrew certified by MAWTS-1 and designated by the Commanding Officer as DEFTAC Instructors (DEFTACI) will conduct the ground and in-flight instruction associated with DEFTAC. **The T&R Vol. 1 ACM flight lead designation does not apply to the EA-6B.** ACMI/TACTS pods shall be used if available.

(3) Initial Qualification. A DEFTACI shall occupy either the pilot or ECMO 1 position for all initial qualification sorties for the pilot and ECMO(s). The ECMO(s) may qualify/update DEFTAC-310 through 313 and DEFTAC-410 in either the ECMO 1, 2, or 3 position. A DEFTACI pilot shall fly as section lead for the initial qualification sortie DEFTAC-313. A DEFTACI pilot shall fly as wingman for a pilot's DEFTAC Section Leader qualification sortie DEFTAC-314. ECMO(s) record DEFTAC-314 sorties as DEFTAC-313. All aircrew shall be proficient in SFAM-210 (BAM simulator), FAM-211 (BAM flight), and FORM-220 (Section maneuvering) prior to flight in this stage. **Multiple Xs are not permitted per flight**.

(4) Reflys and Refresher. The pilot and ECMO remain DEFTAC qualified as long as they are DIFOP to the VMAQ/MAG/Wing/MAWTS-1 and meet their OPNAV flight hour minimums in the EA-6B. If proficiency lapses, the commanding officer will designate which portions of the DEFTAC stage will be flown to regain proficiency. When proficiency lapses, an EA-6B DEFTACI will be present in the initial qualification designated positions.

(5) Evaluations. DEFTAC-313 is the evaluation sortie for the DEFTAC stage. Upon successful completion of DEFTAC-313, aircrew may be designated DEFTAC qualified with a letter from the squadron commanding officer. DEFTAC-314

is the pilot evaluation sortie for DEFTAC Section Leader. Upon successful completion of DEFTAC-314, the pilot shall be designated a DEFTAC Section Leader with a letter from the squadron commanding officer.

(6) Utilizing Adversary Aircraft. One dissimilar aircraft is required. DEFTAC-310 does not require a radar-missile/BVR capable adversary. DEFTAC-312 through DEFTAC-314 require either radar-missile capable dissimilar adversaries (i.e., FA-18, F-16, F-15, F-14, etc.) or professional adversaries (i.e., VMFT-401, TOPGUN, VC squadrons, etc.). Aircrew qualifications for adversary aircraft are specified in T&R Volume 1.

c. Ground Training. All DEFTAC ground training specified in the MAWTS-1 Course Catalog must be completed prior to flight in this stage and within the 6 months prior to DEFTAC qualification. All aircrew must successfully complete a MAWTS-1 developed and squadron DEFTACI administered DEFTAC academic exam prior to qualification.

d. Pilot/ECMO Simulator Training (1 Event, 1.0 Hour)

e. Pilot/ECMO Flight Training (3 Flights, 4.5 Hours)

f. Pilot DEFTAC Section Leader Training (1 Flight, 1.5 Hours)

DEFTAC-310 1.5 T,C,R 1 EA-6B A vs 1 Dissimilar Adversary A

Goal. Within Visual Range (WVR) maneuvering. Practice basic 1V1 WVR maneuvering.

Requirements. Complete the following:

(1) Eyeball calibration and demos:
- Bogey demo 20/40/60^0 Angle-off-tail (AOT), IR-1 or IR-2 and gun Weapons Engagement Zones (WEZ), lead/pure/lag pursuit, aircraft top/bottom, blind zone.
- Bogey demo low-to-high Yo-Yo and Barrel Roll Attack to both sides of EA-6B.

(2) Guns Snapshot Drill.
(3) Defensive counters against a bogey simulating a Category I or II aircraft using an IR-1 or IR-2 WEZ.
- Low Angle Threat, bogey 20^0 AOT/1.5 nm/bogey with at least 100 KIAS airspeed advantage.
- High Angle Threat, bogey 60^0 AOT/1.5 nm.

(4) Head-on starts with bogey simulating a Category II or III aircraft using an IR-I or IR-2 WEZ:
- EA-6B drive engagement to one-circle flow.
- EA-6B drive engagement to two-circle flow.

(5) Butterfly set-ups:
- Bogey uses vertical at merge simulating a Category II or III aircraft with an IR-1 or IR-2 WEZ.
- Bogey uses vertical at "fights on" call simulating a Category II or III aircraft with an IR-1 or IR-2 WEZ.
- Bogey uses highest category aircraft capable with an IR-1 or IR-2 WEZ (as fuel/time permit).

(6) Proper expendables employment.

Performance Standards. IAW TAC Manual and MAWTS-1 Course Catalog.

Crew. Pilot and ECMO 1/2/3.

Prerequisites. DEFTAC lecture series, SFAM-210, FAM-211 and FORM-

220 current.

Ordnance. Appropriate mix of expendables and at least two jamming pods per aircraft. TACTS/ACMI pod shall be used if available.

SDEFTAC-311 1.0 T,C,R 1 EA-6B S

Goal. Introduce the communications and situational awareness required for Intercept Control and BVR engagements. Introduce determination of slide/scram criteria. Introduce forward- quarter missile defense.

Requirements. Utilize Broadcast and Tactical Control to build intercept timeline situational awareness.

Performance Standards. Complete the following:
- Determine timely Slide/Scram ranges and directions.
- Interpret AIC/GCI communications.
- Build intercept timeline situational awareness.
- DEFTACI makes appropriate shot calls for simulated bogey.

Conduct:

(1) Simulate bogey at 30 nm (EA-6B non-maneuvering).
(2) Simulate bogey at Scram.
(3) Simulate bogey inside Scram and outside of E-Pole.
(4) Simulate "Pop-up Threat" inside E-Pole.
- Determine notch direction/timing.
- Initiate Forward Quarter Missile Defense (FQMD) on "smoke in the air" call.
- Post simulated merge, determine "Green" direction.
(5) Execute 50% rule recoveries to no lower than 2,000 ft AGL using the dive recovery rules.
(6) Proper expendables employment.

Crew. Pilot and ECMO 1 (ECMO 2&3 if integrated simulator) and DEFTACI (at console).

Ordnance. Simulate appropriate mix of expendables and at least two jammer pods.

Prerequisites. SFAM-210.

DEFTAC-312 1.5 T,C,R 1 EA-6B A vs 1 Dissimilar Adversary A

Goal. Practice the communications and situational awareness required for Intercept Control and BVR engagements, determination of slide/scram criteria, and forward- quarter missile defense.

Requirements. GCI/AEW required if available. If no radar control available, an air-intercept radar equipped bogey flown by an ACM Flight Lead may be substituted. Utilize Broadcast and Tactical Control to build intercept timeline situational awareness.

Performance Standards. Complete the following:

- Determine timely Slide/Scram ranges and directions.
- Interpret AIC/GCI communications.
- Build intercept timeline situational awareness.

- Bogey makes valid shot calls.

(1) Eyeball calibration.
- Bogey at 30 nm (EA-6B non-maneuvering).
- When appropriate, EA-6B call notional slide; determine and call notional scram direction.
- EA-6B note range of "Tally-Ho".

(2) Bogey at Scram.
- When appropriate, EA-6B call notional slide; determine scram direction.
- Bogey makes appropriate shot calls; all note ranges and times.

(3) Bogey inside Scram and outside of E-Pole.
- Bogey makes appropriate shot calls; all note ranges and times.

(4) Bogey "Pop-up Threat" inside E-Pole.
- Determine notch direction/timing.
- Initiate Forward Quarter Missile Defense (FQMD) on "smoke in the air" call.
- Post merge, EA-6B practice WVR tactics.
- Bogey makes appropriate shot calls; all note ranges and times.

(5) Execute 50% rule recoveries to no lower than 2,000 ft AGL using the dive recovery rules.

(6) Proper expendables employment.

Crew. Pilot and ECMO 1/2/3.

Ordnance. Appropriate mix of expendables and at least two jammer pods.

Prerequisites. SDEFTAC-311.

External Support Requirements. A dissimilar adversary and GCI/AEW.

DEFTAC-313 1.5 T,C,R E 2 EA-6B A vs 1 Dissimilar Adversary A

Goal. Introduce section DEFTAC. Practice Slide/Scram determination and WVR maneuvering. This is the pilot/ECMO qualification sortie.

Requirements. GCI/AEW required if available. If no radar control available, an air-intercept radar equipped bogey flown by an ACM Flight Lead may be substituted. Practice broadcast control and tactical control. A DEFTACI pilot shall be section lead whenever the wingman is not a qualified DEFTAC Section Leader (see DEFTAC-314).

Performance Standards. Complete the following:

- Determine proper Slide/Scram ranges.
- Interpret AIC/GCI communications.
- Execute proper Scram tactics.
- Establish deconfliction criteria.

Conduct:

(1) Successfully maneuver section to counter a Zone 1 threat outside of E-Pole.
- EA-6Bs in Defensive Combat Spread.

(2) Successful section FQMD to counter a Zone 1 threat inside of E-Pole.

- EA-6Bs in Defensive Combat Spread.
- AIC/GCI gives "Picture Clean" calls until bogey inside E-Pole.
- EA-6Bs execute FQMD.
- Bogey calls any valid shots.
- Bogey call targeted EA-6B if no "Tally-Ho" call from EA-6Bs by 3 nm.
- Targeted EA-6B (only one) executes merge and WVR tactics.
- Bogey calls any additional valid shots.

(3) Successfully maneuver section to counter a Zone 2 threat outside of E-Pole.
- EA-6Bs in Defensive Combat Spread.

(4) Successfully counter a threat outside of E-Pole from a non-visual set-up in an EW Track.
- Wingman is at least 1000K' above lead's track altitude.
- Both EA-6Bs execute proper Scram tactics/deconfliction.
- Bogey makes valid shot calls.

(5) Successfully counter a threat inside of E-Pole from a non-visual set-up in an EW Track.
- Wingman is at least 1000K' above lead's track altitude.
- EA-6Bs determine who has threat inside E-Pole (may or may not be both EA-6Bs).
- EA-6B(s) with threat inside E-Pole executes FQMD; the other EA-6B Scrams.
- Bogey calls any valid shots.
- Bogey call targeted EA-6B if no "Tally-Ho" call from EA-6B by 3 nm.
- Targeted EA-6B (only one) executes merge and WVR tactics.
- Bogey calls any additional valid shots.

Crew. Pilot, ECMO 1/2/3.

Ordnance. Appropriate mix of expendables and at least two jammer pods. TACTS pods (EA-6Bs and adversary) are required, if available.

Prerequisites. DEFTAC-312.

External Support Requirements. A dissimilar adversary and GCI/AEW.

DEFTAC-314 1.5 T,C,R E 2 EA-6B A vs 1 Dissimilar Adversary A

Goal. Evaluate the pilot's ability to successfully lead a section DEFTAC mission. This is the Pilot's DEFTAC Section Leader qualification sortie.

Requirements. Same as DEFTAC-313 with the following modification: The pilot under training shall lead the entire flight, and a DEFTACI pilot shall be wingman for the entire flight. Only the pilot under training receives the DEFTAC-314 code, all others record DEFTAC-313.

Performance Standards. Same as DEFTAC-313.

Crew. Pilot, ECMO 1/2/3.

Ordnance. Same as DEFTAC-313.

Prerequisites. DEFTAC-313. Pilot under training must be a designated Section Leader.

External Support Requirements. Same as DEFTAC-313.

3. Low Altitude Tactics (LAT)

a. Purpose. To expose aircrews to the tactical low altitude environment. Introduce defensive maneuvering, formation flight at Comfort Level, defensive maneuvering in section, and techniques to utilize terrain for defensive purposes.

b. General.

(1) LAT applies to tactical operations where the briefed intent is to fly below 1000 ft AGL. T&R Volume 1, the MAWTS-1 Course Catalog, and the MAWTS-1 LAT Syllabus provide definitions and currency requirements for the conduct of LAT training. This stage will be flown in strict compliance with the above mentioned sources. In addition, it is recognized that commanders may impose altitude limits that impinge on CL . Altitude limits will always be observed and treated as applicable Rules of Conduct (ROC), as per T&R Volume 1. Only front-seat aircrew are subject to the altitude constraints imposed by the Rules of Conduct. LAT qualification will always be accomplished in restricted airspace, MOA's, suitable MTR's, or other areas designated by the appropriate Wing/MAGTF commander.

(2) LAT qualification is not a function of refly interval. Aircrew can still be LAT qualified and not proficient in a certain LAT sortie. When a qualified aircrew loses proficiency in a particular syllabus flight, they may regain proficiency by satisfactorily completing that sortie in which they are delinquent. **Multiple LAT Xs are not permitted per flight.**

c. Ground/Academic Training. MAWTS-1 LAT lecture series will be completed before flight in this stage.

d. Simulator Training (1 Period, 1.5 Hours)

SLAT-320 1.5 T,C,R 2F143 S

Goal. Introduce and practice low altitude crew coordination and flight skills.

Requirements. This is the warm-up simulator for LAT. Part of the sortie will be completed at no lower than 500 ft AGL; as per LAT requirements, and part at 2,000 ft AGL; as per LAT-420 requirements. The LAT instructor will brief the event and be in the simulator device or at the simulator console. The aircrew under instruction will demonstrate a knowledge of all maneuvers.

Performance Standards. Complete the following:

(1) Hard and break turns (500 ft and 2,000 ft AGL).
(2) Defensive turns at CL and 2K.
(3) Transitions from 25,000, 20,000, and 18,000 ft MSL to no lower than 500 and 2,000 ft AGL utilizing the 50% rule.
(4) Medium and high altitude less than corner airspeed SAM evasive maneuvering.
(5) Multiple vertical jinks (VJ), straight ahead oblique jinks (SOJ), turning oblique jinks (TOJ), and reverse oblique jinks (ROJ) using the 10 degree rule from 2000 ft AGL.
(6) Level "S", 3D Maneuver, SAM Break, and Gun Jink in response to

a simulated ground threat from NLT 2000 ft AGL.
(7) Brief and set-up expendables panel as required for the briefed threat.
(8) Employ chaff and flares in conjunction with the maneuvers.

Crew. Pilot and ECMO 1.

e. Flight Training (3 Flights, 4.5 Hours)

LAT-321 1.5 T,C,R 1 EA-6B A

"This event is classified as LAT and its execution below 1,000 ft is administratively restricted by DC/S Aviation. Each individual occurrence of this training event below 1,000 ft must receive advanced written consent from DC/S Aviation (Code: APP) prior to execution. Execution of this event with a 1,000 ft "hard deck" shall satisfy the requirements for completion and CRP/core-skills credit."

Goal. Attain initial LAT ROC currency. Introduce flight at CL, ridgeline crossings, and defensive turns.

Requirements. LATI pilot or ECMO; instructor will brief. Brief LAT ROC.

Performance Standards. Completion of the following:

(1) 'G' Awareness and FOD check maneuvers.
(2) Attain initial LAT ROC currency; no lower than 1000 ft AGL.
(3) Minimum of two Defensive Turns in each direction at no lower than 1000 ft AGL.
(4) Descent below 1000 ft AGL at LATI discretion.
(5) Ridgeline crossings - 90 degree, 45 degree, natural breaks, with unloaded and 90 AOB comedowns. Utilize dive recovery rules on the descent.
(6) Currency established, cleared to no lower than 500 ft AGL.
(7) Minimum of four Defensive Turns at no lower than 500 ft AGL.
(8) One circuit at NLT 500 ft AGL.
(9) Flight at CL on remaining legs of route or course, NLT T&R Vol. I mins.
(10) Speed rush baseline demo. at 500 and 1000 ft AGL.
(11) Proper KIO procedures.

Prerequisites. SLAT-320, current in NAV-204.

Crew. Pilot and ECMO 1.

LAT-322 1.5 T,C,R 2 EA-6Bs A

"This event is classified as LAT and its execution below 1,000 ft is administratively restricted by DC/S Aviation. Each individual occurrence of this training event below 1,000 ft must receive advanced written consent from DC/S Aviation (Code: APP) prior to execution. Execution of this event with a 1,000 ft "hard deck" shall satisfy the requirements for completion and CRP/core-skills credit."

Goal. Introduce section maneuvering in the LAT environment.

Requirements. LATI pilot or ECMO; instructor briefs conduct and LAT ROC. Turns in accordance with MAWTS-1 course catalog. **Pilot under instruction will fly as wingman only**.

Performance Standards. Complete the following:

(1) 'G' Awareness and FOD check maneuvers.
(2) Defensive turns prior to section maneuvering for Pilot initial qualification sorties.
(3) Section maneuvering at CL, no lower than T&R Vol I mins.
(4) **Complete the following turns:**
- NAV into/away
- TAC into/away
- Shackle
- Cross-turn
- In-place into/away
(5) Section ridgeline crossings.

Prerequisites. Current in NAV-204, FORM-220, FORM-222, LAT-321.

Crew. Pilot and ECMO 1.

LAT-323 1.5 T,C,R 2 EA-6Bs A

"This event is classified as LAT and its execution below 1,000 ft is administratively restricted by DC/S Aviation. Each individual occurrence of this training event below 1,000 ft must receive advanced written consent from DC/S Aviation (Code: APP) prior to execution. Execution of this event with a 1,000 ft "hard deck" shall satisfy the requirements for completion and CRP/core-skills credit."

Goal. LAT qualify the pilot or ECMO under instruction.

Requirements. LATI pilot or ECMO; instructor briefs conduct and LAT ROC. Pilot or ECMO under instruction briefs turns in accordance with MAWTS-1 syllabus.

Performance Standards. Completion of the following:

(1) 'G' Awareness and FOD check maneuvers.
(2) Section maneuvering at CL.
(3) Lead will be switched halfway through route or on second lap on LAT course.

Prerequisites. LAT-322.

Crew. Pilot and ECMO 1.

4. Section/Division Leadership Training

a. Purpose. To provide formal training to qualify the EA-6B pilot as a Section/Division Leader.

b. General

(1) These sorties are intended to expose the EA-6B pilot to the section/division situations they will most likely experience. Squadrons will be responsible for outlining the build-up for this stage. The Section/Division Leader in the flight will evaluate the Section/Division Leader under training. The listed sorties are the minimums required of a pilot to be designated a section/division lead in the EA-6B.

(2) The pilot under training should complete a daytime and nighttime

tanker rendezvous as the lead pilot of two aircraft during section lead training and at least three aircraft during division lead training. Preferably, these events will incorporate both KC-130 and Strategic tanker assets prior to designation.

(3) Completion of Section/Division Leader Test. Squadrons will designate the prerequisites prior to flight in this stage.

(4) It is recommended that the section/divison lead under training be LAT and DEFTAC qualified prior to the flight leadership work-up.

c. Ground/Academic Training. Squadrons will designate the specific ground and academic training.

d. Simulator Training. None.

e. Pilot Flight Training (7 Flights, 11.9 Hours)

FORM-324 1.7 E 2 EA-6Bs A

Goal. Evaluate the pilot's ability to successfully lead a section high altitude sortie, break-up and rendezvous practice and section approaches during daylight conditions.

Requirements. Evaluated pilot briefs the flight. Flight requirements IAW FORM-220. Section lead in the other airplane.

Performance Standards. IAW NATOPS, Instrument Flight Manual and Local SOP.

Crew. Pilot.

Prerequisites. FORM-220.

FORM-325 1.7 E 2 EA-6Bs A

Goal. Evaluate the pilot's ability to successfully lead a section low altitude sortie.

Requirements. Evaluated pilot briefs the flight. Flight requirements IAW FORM-222. Section lead in the other airplane.

Performance Standards. IAW NATOPS, TAC Manual and Local SOP.

Crew. Pilot.

Prerequisites. FORM-222.

FORM-326 1.7 E 2 EA-6B A N

Goal. Evaluate the pilot's ability to successfully lead a section night high altitude sortie, break-up and rendezvous practice and night section approaches.

Requirements. Evaluated pilot briefs the flight. Flight requirements IAW FORM-221. Section lead in the other airplane.

Performance Standards. IAW NATOPS and Instrument Flight Manual.

Crew. Pilot.

Prerequisites. FORM-221.

FORM-327 1.7 E 2 EA-6B A (N)

Goal. Evaluate the pilot's ability to successfully lead a section DAS or RSEAD mission.

Requirements. Evaluated pilot briefs the flight. Evaluated pilot functions as the section lead during a DAS or RSEAD mission (day or night). Section lead in the other airplane.

Performance Standards. IAW NATOPS and TAC Manual.

Crew. Pilot.

Ordnance and External Syllabus Support. Same as required for DAS or RSEAD mission.

FORM-328 1.7 E 3 EA-6Bs or 2EA-6Bs and 1 Dissimilar Aircraft A

Goal. Evaluate the pilot's ability to successfully lead a day division flight.

Requirements. Evaluated pilot briefs the flight. Division leader in at least 1 other airplane.

Performance Standards. IAW NATOPS and Local SOP. Including:

(1) Division departure/join-up.
(2) Minimum two break-up and rendezvous as the division lead.
(3) Division Recovery

Crew. Pilot.

Prerequisites. Section leader designation.

FORM-329 1.7 E 3 EA-6Bs A N

Goal. Evaluate the pilot's ability to successfully lead a night division flight.

Requirements. Evaluated pilot briefs the flight. Division leader in at least 1 other airplane.

Performance Standards. Same as FORM-328.

Crew. Pilot.

Prerequisites. FORM-328.

FORM-330 1.7 E 3 EA-6Bs (N) or 2 EA-6Bs and 1 Dissimilar Aircraft A

Goal. Evaluate the pilot's ability to successfully lead a day or night division DAS/RSEAD flight.

Requirements. Evaluated pilot briefs the flight. Evaluated pilot

functions as the division lead during DAS or RSEAD mission Division leader in at least one other airplane.

Performance Standards. IAW NATOPS and TAC Manual.

Crew. Pilot.

Prerequisites. FORM-329.

Ordnance Same as ordnance requirements for DAS/RSEAD mission.

External Syllabus Support. Dissimilar aircraft (if needed).

5. Section Electronic Warfare Support.

a. Purpose. Introduce and practice section ES procedures and TERPES integration.

b. General. ES-340, 341 are designed to increase the signal recognition and identification proficiency in a dense electromagnetic environment. ES-340, 341 shall be flown against an EW range with real world signals. To the greatest extent possible, they shall include an S-2 intel scenario brief/debrief and TERPES brief/debrief.

c. Ground/Academic Training. The following squadron level lectures should be accomplished prior to flight in this stage:

(1) ES General Tactics.
(2) HARM as a sensor.

d. Flight Training (Pilot: 1 Flight, 1.7 Hours; ECMO: 2 Flights, 3.4 Hours)

ES-340 1.7 T,C,R 2 EA-6Bs A

Goal. Front seat section ES responsibilities.

Requirements. May be conducted in conjunction with other sorties.

Performance Standards. Complete the following:

(1) Coordinate with TERPES and S-2/EWO on given scenario.
(2) Pre-flight briefing by S-2 and TERPES.
(3) Ensure navigation track optimizes OBS detection capabilities.
(4) Develop a TUT mission.
(5) Conduct a surveillance mission against an EW range, local ATC radars, or surface ship radars.
(6) Utilize the HARM as a sensor.
(7) Maintain appropriate logs for post mission reconciliation.
(8) Complete TUT and TERPES post mission analysis.
(9) Plan for and utilize the USQ-113 in the record mode.
(10) Coordinate ES inter-plane communications.
(11) Optimize section ES tracks.

Prerequisites. ES-242.

Crew. Pilot and ECMO 1.

ES-341 1.7 T,C,R 2 EA-6Bs A

Goal. Back seat section ES responsibilities.

Requirements. May be conducted in conjunction with other sorties.

Performance Standards. Complete the following:

(1) Coordinate with TERPES and S-2/EWO on given scenario.
(2) Pre-flight briefing by S-2 and TERPES.
(3) Ensure navigation track optimizes OBS detection capabilities.
(4) Develop a TUT mission.
(5) Conduct a surveillance mission against an EW range, local ATC radars, or surface ship radars.
(6) Utilize the HARM as a sensor.
(7) Maintain appropriate logs for post mission reconciliation.
(8) Complete TUT and TERPES post mission analysis.
(9) Plan for and utilize the USQ-113 in the record mode.
(10) Properly initialize the OBS.
(11) Identify, localize and record SOI.
(12) Coordinate ES inter-plane communications.
(13) Optimize section ES tracks.

Crew. ECMO 2/3.

Ordnance. Captive AGM-88 Block III or IV.

6. Deep Air Support.

a. Pilot/ECMO Flight Training (Pilot: 1 Flight, 1.7 Hour; ECMO: 2 Flights, 3.4 Hours)

DAS-350 1.7 T,C,R 1 or 2 EA-6Bs A (N)

Goal. Plan and execute a night DAS strike. Introduce/practice coordination with strike communities, time-line adherence, HARM support, navigation, and crew responsibilities.

Requirements. This sortie shall be planned and briefed as a section. However, it may be executed as a single.

Performance Standards. Complete the following:

(1) Develop TUT mission for a section of EA-6B.
(2) Determine EA-6B jammer and track timing in accordance with the S-2 scenario.
(3) Determine optimum load-out.
(4) Meet timing requirement ± 10 seconds.
(5) TERPES brief of scenario parametrics.
(6) Develop HARM plan.
(7) Brief HVU escort plan.
(8) USQ-113 integration and targeting.
(9) Expendables gameplan.

Crew. Pilot/ECMO 1.

Ordnance. 30 Chaff and 30 Flares.

External Syllabus Support. A min. of 2 strike aircraft recommended.

DAS-351 1.7 T,C,R 1 or 2 EA-6Bs A (N)

Goal. Same as DAS-350.

Requirements. Done in conjunction with DAS-350.
This sortie shall be planned and briefed as a section. However, it may be executed as a single.

Performance Standards. Complete the following:

(1) Develop TUT mission based on intel. scenario.
(2) Determine optimum support profile and navigation track.
(3) Determine optimum load-out.
(4) Meet timing requirement ± 10 seconds.
(5) TERPES brief of scenario parametrics.
(6) Develop HARM and jammer game plan.
(7) USQ-113 integration and targeting.
(8) Initialize OBS and TJS.
(9) Make/adjust jammer assignments in accordance with jammer gameplan.
(10) Maintain EA logs.
(11) Execute hardware and software checks.
(12) Coord. with S-2 and TERPES for post flight debrief.

Crew. ECMO 2/3.

Ordnance. Same as for DAS-350.

External Syllabus Support. Same as for DAS-350.

7. Reactive Suppression of Enemy Air Defenses (RSEAD).

a. Pilot/ECMO Simulator Training (2 Periods, 3.0 Hours)

SRSEAD-360 1.5 T,C,R 2F143 S

Goal. Practice single-ship EWCAS techniques. Introduce HARM in support of OAS. These missions will utilize both threat is the target and threat is not the target profiles.

Requirements. Shall be flown integrated with SRSEAD-361.

Performance Standards. Complete the following:

(1) Plot all appropriate fire support coordination measures and control points.
(2) Develop appropriate TUT mission.
(3) Practice ON AXIS and OFF AXIS procedures.
(4) Conduct runs using both time hacks and real world TOT.
(5) Conduct a minimum of 2 attacks against the threat SAM.
(6) Conduct a minimum of 2 attacks against a target not co-located with threat SAM.
(7) Practice MAWTS-1 FW/RW RSEAD cards for briefed threats.
(8) Prepare communications flow and reporting procedures.
(9) Practice degraded modes of operation.

Crew. Pilot and ECMO 1.

SRSEAD-361 1.5 T,C,R 15E22C S

Goal. Practice single-ship EWCAS techniques. Introduce HARM in support of OAS. These missions will utilize both threat is the target and threat is not the target profiles.

Requirements. May be flown integrated with SRSEAD-360.

Performance Standards. Same as SRSEAD-360. Additionally, complete the following:

(1) Prepare chart/Geo display with all control points.
(2) Prepare jammer gameplan.

Crew. ECMO 2/3.

b. Pilot/ECMO Flight Training (Pilot: 2 Flights, 3.4 Hours; ECMO: 4 Flights, 6.8 Hours)

RSEAD-362 1.7 T,C,R EA-6B A/S (N)

Goal. Practice single-ship EWCAS techniques. Introduce HARM in support of OAS. These missions will utilize both threat is the target and threat is not the target profiles.

Requirements. S-2 scenario providing friendly and enemy ground order of battle, SAMs/AAA, and Fire Support Coordination Measures is required.

Performance Standards. Complete the following:

(1) Plot all appropriate fire support coordination measures and control points.
(2) Develop appropriate TUT mission.
(3) Practice ON AXIS and OFF AXIS procedures.
(4) Conduct runs using both time hacks and real world TOT.
(5) Conduct a minimum of 2 attacks against the threat SAM.
(6) Conduct a minimum of 2 attacks against a target not co-located with threat SAM.
(7) Practice MAWTS-1 FW/RW RSEAD cards for briefed threats.
(8) Prepare communications flow and reporting procedures.

Prerequisite. SRSEAD-360.

Crew. Pilot and ECMO 1.

RSEAD-363 1.7 T,C,R EA-6B A/S (N)

Goal. Practice single-ship EWCAS techniques. Introduce HARM in support of OAS. These missions will utilize both threat is the target and threat is not the target profiles.

Requirements. Same as SRSEAD-361.

Performance Standards. Same as SRSEAD-361. Additionally, complete the following:

(1) Prepare chart/Geo display with all control points.
(2) Prepare jammer gameplan.

Prerequisite. SRSEAD-361

Crew. ECMO 2/3.

RSEAD-364 1.7 T,C,R 1 EA-6B A/S N

Goal. Introduce single-ship night EWCAS techniques. These missions will utilize both threat is the target and threat is not the target profiles. HARM shall be integrated at the discretion of the mission commander.

Requirements. S-2 scenario providing friendly and enemy ground order of battle, SAMs/AAA, and Fire Support Coordination Measures as required.

Performance Standards. Complete the following:
(1) Plot all appropriate fire support coordination measures and control points.
(2) Develop appropriate TUT mission.
(3) Practice ON AXIS and OFF AXIS procedures.
(4) Conduct runs using both time hacks and real world TOT.
(5) Conduct a minimum of 2 attacks against the threat SAM.
(6) Conduct a minimum of 2 attacks against a target not co-located with threat SAM.
(7) Prepare communications flow and reporting procedures.

Prerequisites.

Crew. Pilot and ECMO 1.

RSEAD-365 1.7 T,C,R 1 EA-6B A/S N

Goal. Introduce single-ship EWCAS techniques. These missions will utilize both threat is the target and threat is not the target profiles. HARM shall be integrated at the discretion of the mission commander.

Requirements. Same as RSEAD-364.

Performance Standards. Same as RSEAD-364. Additionally, complete the following:

(1) Prepare chart/Geo display with all control points.
(2) Prepare jammer gameplan.

Prerequisite.

Crew. ECMO 2/3.

8. Force Protection.

a. Purpose. Introduce EA-6B tactics and techniques in the force protection role.

b. General. These missions are intended to utilize the concepts of the FP-270/271 events in the flight environment.

c. Ground Training. None.

d. Pilot/ECMO Simulator Training. None.

e. Pilot/ECMO Flight Training (1 Flights, 1.7 Hours)

FP-370 1.7 T,C,R 2F143 S

Goal. Introduce/practice procedures for force protection.

Requirements. None.

Performance Standards. Complete the following:

(1) Coordinate with supported unit.
(2) Determine threat to supported unit.
(3) Determine SOI for threat warning.
(4) Determine criteria for flex to reactionary defense.
(5) Determine and execute proper reporting procedures.
(6) Prepare TUT mission.
(7) Prepare expendables gameplan, to include chaff corridors (if available).
(8) Prepare go/no go criteria.
(9) Practice degraded modes of operation.
(10) Prepare jammer and HARM gameplan.

Crew. Pilot ECMO 1/2/3.

External Support. External units as applicable for selected FP mission.

9. Flight Leadership Training - Mission Commander Program

a. Purpose. To provide formal training to qualify the EA-6B pilot/ECMO as a Mission Commander.

b. General

(1) Individual Marine Air Groups/Squadrons will be responsible for outlining the build-up for this stage. Typically, a mission commander will meet minimum total sortie requirements, have made at least one overseas deployment and been exposed to the DEFTAC and LAT programs.

(2) These sorties are intended to expose the EA-6B pilot/ECMO Mission Commander Under Training (MCUT) to the coordinated mission sorties they will most likely experience. The mission commander sorties are broken down into three types:

(a) Exposure. The intent is to expose the MCUT to the proper employment of the EA-6B in various mission areas. Exposure for the bulk of the required missions will occur in the Combat Ready syllabus.

(b) Plan and Brief Flights. The MCUT, under the supervision of a designated mission commander, will participate in the detailed mission planning and execution of the specified missions. It is imperative that the actual mission commander stay actively involved and assist the MCUT in the mission planning process during Plan and Brief missions. If actual sorties are not available due to operational commitments, Plan and Brief sortie requirements can be met utilizing a Marine Aviation Planning Exercise (MAPEX). If a MAPEX is utilized, it must be logged as such on the applicable write-up.

(c) Performance. The MCUT will take complete responsibility as mission commander for the specific mission. The MCUT will be responsible for ensuring optimum integration and tactical employment of the EA-6B. As such, it is imperative that Performance flight evaluations include external support sorties to insure that the prospective mission commander is capable of coordinating with other communities/services/countries.

(3) This syllabus constitutes the minimum required sorties prior to mission commander designation. Squadron commanders can increase the syllabus requirements as they see fit. The relevant question which must be answered of an EA-6B mission commander is: Can the individual plan, brief, execute and debrief an effective electronic warfare mission and represent the community to external agencies?

(4) Sortie lengths are not designated because MCUT flights will be flown in conjunction with Squadron core training sorties. The ATRIMS codes will serve as tracking tools for an MCUT's performance to date. CRP values assigned will numerically raise the readiness of the individual and the Squadron as a whole. In essence, a mission commander will add more combat readiness value to a deploying unit than a Cat I aircrew who has only been exposed to missions.

c. Ground/Academic Training.

(1) MCUTs will be required to Demonstrate Knowledge of applicable EW topics to Squadron mission commanders. Optimally, these topics will be presented on a regular basis to the entire Squadron to educate all aircrew and to evaluate the MCUT's ability to speak in an open forum. These should include, but are not limited to:

(a) The six functions of Marine Aviation

(b) Relevant technical publications (MCM 3-1, Tac Manual, OTG)
(c) Adversary IADS, Weapon Systems, Tactics
(d) MACCS system
(e) TUT, TERPES
(f) Applicable aircraft systems (USQ-113, ALE-43, ALE-39, CTT/MATT)

(2) Completion of the Mission Commander Test and evaluation by the Squadron mission commander board if directed by Squadron order.

d. Simulator Training. None.

e. Pilot/ECMO Flight Training (13 Flights, 0.0 Hours)

MCUT-331 0.0 E 1 EA-6B A (N)

Goal. Evaluate the aircrew's ability to effectively Plan and Brief a HARM mission.

Requirements. Evaluated aircrew plans and briefs the mission specifics of a HARM sortie. Mission commander in the aircraft.

Performance Standards. Plan and Brief complete flight requirements IAW HARM-233/234.

Crew. Pilot/ECMO 1/2/3.

Prerequisites. HARM-233/234.

External Support. Same as required for HARM-233/234.

MCUT-332 0.0 E 1 EA-6B A (N)

Goal. Evaluate aircrew's ability to effectively perform as a mission commander for a HARM mission.

Requirements. Flight requirements IAW HARM-233/234. Mission commander in the aircraft.

Performance Standards. Evaluated aircrew effectively performs as a mission commander for a HARM sortie.

Crew. Pilot/ECMO 1/2/3.

Prerequisites. MCUT-331.

External Support. Same as required for HARM-233/234.

MCUT-342 0.0 E 1 EA-6B A (N)

Goal. Evaluate the aircrew's ability to effectively Plan and Brief an Electronic Warfare Support mission.

Requirements. Flight requirements IAW ES-242/243. Mission commander in the aircraft.

Performance Standards. Evaluated aircrew plans and briefs the mission specifics of an Electronic Warfare Support mission.

Crew. Pilot/ECMO 1/2/3.

Prerequisites. ES-242/243.

External Support. Same as required for ES-242/243.

MCUT-343 0.0 E 1 EA-6B A (N)

Goal. Evaluate aircrew's ability to effectively perform as a mission commander for an Electronic Warfare Support mission.

Requirements. Flight requirements IAW ES-242/243. Mission commander in the aircraft.

Performance Standards. Evaluated aircrew effectively performs as a mission commander for an Electronic Warfare Support mission.

Crew. Pilot/ECMO 1/2/3.

Prerequisites. MCUT-342.

External Support. Same as required for ES-242/243.

MCUT-352 0.0 E 1 EA-6B A (N)

Goal. Evaluate the aircrew's ability to effectively Plan and Brief a Deep Air Support mission.

Requirements. Flight requirements IAW DAS-253/254. Mission commander in the aircraft.

Performance Standards. Evaluated aircrew plans and briefs the mission specifics of a Deep Air Support mission.

Crew. Pilot/ECMO 1/2/3.

Prerequisites. DAS-253/254.

External Support. Same as required for DAS-253/254.

MCUT-353 0.0 E 1 EA-6B A (N)

Goal. Evaluate aircrew's ability to effectively perform as a mission commander for a Deep Air Support mission.

Requirements. Flight requirements IAW DAS-253/254. Mission commander in the aircraft.

Performance Standards. Evaluated aircrew effectively performs as a mission commander for a Deep Air Support mission.

Crew. Pilot/ECMO 1/2/3.

Prerequisites. MCUT-352.

External Support. Same as required for DAS-253/254.

MCUT-366 0.0 E 1 EA-6B A (N)

Goal. Evaluate the aircrew's ability to effectively Plan and Brief a Reactive SEAD mission.

Requirements. Flight requirements IAW RSEAD-262/263. Mission commander in the aircraft.

Performance Standards. Evaluated aircrew plans and briefs the mission specifics of a Reactive SEAD mission.

Crew. Pilot/ECMO 1/2/3.

Prerequisites. RSEAD-262/263.

External Support. Same as required for RSEAD-262/263.

MCUT-367 0.0 E 1 EA-6B A (N)

Goal. Evaluate the aircrew's ability to effectively Plan and Brief a Reactive SEAD with HARM mission.

Requirements. Flight requirements IAW RSEAD-364/365. Mission commander in the aircraft.

Performance Standards. Evaluated aircrew plans and briefs the mission specifics of a Reactive SEAD with HARM mission.

Crew. Pilot/ECMO 1/2/3.

Prerequisites. RSEAD-364/365.

External Support. Same as required for RSEAD-364/365.

MCUT-368 0.0 E 1 EA-6B A (N)

Goal. Evaluate the aircrew's ability to act as a mission commander for a Reactive SEAD mission.

Requirements. Flight requirements IAW RSEAD-262/263. Mission commander in the aircraft.

Performance Standards. Evaluated aircrew effectively performs as a mission commander for a Reactive SEAD mission.

Crew. Pilot/ECMO 1/2/3.

Prerequisites. MCUT-366.

External Support. Same as required for RSEAD-262/263.

MCUT-369 0.0 E 1 EA-6B A (N)

Goal. Evaluate the aircrew's ability to act as a mission commander for a Reactive SEAD with HARM mission.

Requirements. Flight requirements IAW RSEAD-364/365. Mission commander in the aircraft.

Performance Standards. Evaluated aircrew effectively performs as a mission commander for a Reactive SEAD with HARM mission.

Crew. Pilot/ECMO 1/2/3.

Prerequisites. MCUT-367.

External Support. Same as required for RSEAD-364/365.

MCUT-372 0.0 E 1 EA-6B A (N)

Goal. Evaluate the aircrew's ability to effectively Plan and Brief a Fleet EP mission.

Requirements. Mission commander in the aircraft.

Performance Standards. Evaluated aircrew plans and briefs a Fleet EP sortie. Flight requirements IAW FEP-272.

Crew. Pilot/ECMO 1/2/3.

Prerequisites. FEP-272.

External Support. Same as required for FEP-272.

MCUT-373 0.0 E 1 EA-6B A (N)

Goal. Evaluate the aircrew's ability to effectively perform as the mission commander on a Force Protection mission.

Requirements. Flight requirements IAW FEP-272. Mission commander in the aircraft.

Performance Standards. Evaluated aircrew plans and briefs a Force Protection sortie.

Crew. Pilot/ECMO 1/2/3.

Prerequisites. FP-370.

External Support. Same as required for FEP-272.

MCUT-380 0.0 E 1 EA-6B A (N)

Goal. Evaluate the aircrew's ability to effectively Plan and Brief a War-at-Sea mission.

Requirements. Mission commander in the aircraft.

Performance Standards. Evaluated aircrew takes plans and briefs a War-at-Sea mission.

Crew. Pilot/ECMO 1/2/3.

Prerequisites. None.

External Support. Naval Surface Unit.

244. FULL-COMBAT QUALIFICATION TRAINING: PILOT AND ECMO

1. Low Altitude Aerial Refueling.

a. Purpose. Introduce/practice the techniques/procedures required for low altitude aerial refueling.

b. General. The primary type of aircraft utilized for aerial refueling is the KC-130.

c. Ground Training. Aircrew shall receive all applicable aerial refueling lectures prior to flight in this stage.

d. Pilot/ECMO Flight Training (1 Periods, 1.0 Hour)

AR-400 1.0 T,C,R 1 EA-6B A

Goal. Introduce/practice the techniques/procedures required for low altitude aerial refueling.

Requirements. Same as for AR-206, with the addition:

(1) T&R Vol. I altitude restrictions.
(2) Below 5000 ft AGL.

Performance Standards. Same as AR-206.

Crew. Pilot.

Prerequisites. AR-206 for initial currency.

External Syllabus Support. 1 KC-130 or other suitable refueler.

2. Advanced Defensive Tactics.

a. Purpose. Introduce advanced DEFTAC, escort tactics, and escort coordination.

b. General. The intent of this sortie is to reinforce aircrew situational awareness in BVR/WVR DEFTAC, particularly during large force exercises.

c. Pilot/ECMO Flight Training (1 Periods, 1.5 Hours)

DEFTAC-410 1.5 T,C,R E 1 or 2 EA-6Bs with Escort(s) vs at least 1 Adversary A

Goal. Introduce escort coordination. Practice Slide/Scram determination, defensive tactics, and BVR/WVR maneuvering.

Requirements. GCI/AEW required if available. If no radar control available, an air-intercept radar equipped bogey flown by an ACM Flight lead may be substituted. Utilize Broadcast and Tactical Control to build intercept timeline situational awareness.

Performance Standards.

(1) Coordinate with GCI/AEW assets.
(2) Coordinate with HVAA CAP.
(3) Coordinate escort and, if applicable, wingman communications and signals.

(4) Determine Slide/Scram criteria.
(5) Determine reset criteria.

Crew. Pilot and ECMO 1/2/3 of each aircraft.

Ordnance. Appropriate mix of expendables and at least two pods. TACTS pods are required, if available.

Prerequisites. DEFTAC-313; For EA-6B section DEFTAC, a designated DEFTAC Section Leader or a DEFTACI pilot.

External Support Requirements. GCI/AEW, at least 1 escort, and at least 1 adversary.

3. Advanced Low Altitude Tactics.

a. Purpose. Introduce advanced maneuvering and dive recovery transitions.

b. General

(1) The intent of these sorties is to develop aircrew skills and confidence in evasive maneuvering. Maneuvering will not take place below 2,000 ft AGL. Only LATIs will act as instructors on these sorties. All flights will be conducted in an appropriate training area. For training enhancement, it is recommended that LAT-420 be conducted on a suitable EW range with feedback capabilities. The use of "smokey SAMs," and TACTS pods are desired.

(2) Front-seat aircrew for these flights will be qualified and current LAT prior to flight in this stage.

c. Ground Training. The MAWTS-1 Advanced Maneuvering lecture will be accomplished prior to commencing the flight stage.

d. Pilot/ECMO Flight Training (1 Periods, 1.5 Hour)

LAT-420	1.5	T,C,R	1 EA-6B A

"This event is classified as LAT and its execution below 1,000 ft is administratively restricted by DC/S Aviation. Each individual occurrence of this training event below 1,000 ft must receive advanced written consent from DC/S Aviation (Code: APP) prior to execution. Execution of this event with a 1,000 ft "hard deck" shall satisfy the requirements for completion and CRP/core-skills credit."

Goal. Introduce/practice advanced defensive maneuvering and dive recovery rules.

Requirements. No lower than 2,000 ft AGL. The instructor will brief the event. The aircrew under instruction will demonstrate a knowledge of all maneuvers.

Performance Standards. Complete the following:

(1) Hard turns.
(2) Transitions from 20,000 and 18,000 ft MSL to no lower than 2,000 ft AGL utilizing the 50% rule.
(3) At 20,000 ft MSL and less than corner airspeed (300 KIAS) SAM evasive maneuvering.
(4) Multiple vertical jinks (VJ), straight ahead oblique jinks (SOJ), turning oblique jinks (TOJ), and reverse oblique jinks

(ROJ) using the 10 degree rule.
(5) Level "S", 3D Maneuver, SAM Break, and Gun Jink in response to a simulated ground threat.
(6) Employ chaff and flares in conjunction with the maneuvers.

Crew. Pilot and ECMO 1.

Prerequisites. SLAT-320.

Ordnance. Chaff/flare mix.

4. Live HARM Shoot.

a. Purpose. To expose aircrews to the requirements and planning for successful firing of a live HARM.

b. General. The EA-6B is the recommended HARM shooter in a dense electromagnetic environment. The detailed TUT mission planning required and HARM shot tailoring is essential to ensure proper deconfliction and coordination in the OAS environment.

SWD-430 1.7 T,C,R 1 EA-6B A

Goal. Successful firing of live HARM.

Requirements. Appropriately cleared range space and threat emitter is required.

Performance Standards. Complete the following:

(1) Plan/employ HARM in the RK mode if possible.
(2) Construct "tailored" DAs (do not employ HARM utilizing standard HARM DAs).
(3) Compare/contrast the use of different Blocks of missiles.
(4) Utilize ABL.
(5) Utilize H-Code and OpCreate as appropriate.
(6) Conduct electronic BDA.

Prerequisites. Current in all SWD sorties.

Crew. Pilot and ECMO 1/2/3.

Ordnance. AGM-88 B/C1.

External Syllabus Support. Range clearing asset (P-3, AWACS, etc.), target emitter, and target placement equipment.

5. Electronic Warfare Support - National Assets Integration.

a. Purpose. To review the capabilities that National Assets can provide to the EA-6B during pre-mission planning and execution.

b. General. These missions will attempt to integrate the EA-6B with National Assets such as; Rivet Joint, Compass Call, Reef Point, and various ELINT broadcasts, in order to increase the effectiveness of the EA-6B's ES and EA efforts. MATT/CTT will be used to the maximum extent possible.

c. Ground Training. None

d. Pilot/ECMO Flight Training (Pilot/ECMO: 1 Flights 1.7 Hours)

ES-440 1.7 T,C,R 1 EA-6B A

Goal. To introduce/practice the requirements necessary to integrate with National Assets during pre-mission planning and execution.

Requirements. Every attempt shall be made to receive capabilities briefs of the assets involved in the mission.

Performance Standards. Complete the following:

(1) Develop TUT mission.
(2) Develop communications plan and reporting procedures.
(3) Correlate OBS signals with National sources in order to provide more accurate indications and warning to other tactical assets.
(4) Correlate OBS signals to increase EA.
(5) Utilize TERPES data-link if available.
(6) Verify ELINT broadcast airborne if capable.
(7) Properly initialize MATT/CTT.

Prerequisites. ES-242, 243.

Crew. Pilot and ECMO 1/2/3.

External Syllabus Support. National Asset.

6. Deep Air Support.

a. Purpose. Introduce the aircrew to tactical employment of an EA-6B division (3 aircraft minimum) in the DAS environment.

b. General. Scenarios should attempt to integrate external assets to the maximum extent possible. Sorties should include an S-2 intel brief/debrief/scenario and a TERPES brief/debrief.

c. Ground Training. None

d. Pilot/ECMO Flight Training (Pilot/ECMO: 2 Flights 3.4 Hours)

DAS-450 1.7 T,C,R 1 or 2 EA-6B(s) A

Goal. Introduce/practice the aircrew requirements for jamming in support of a DAS strike scenario.

Requirements. Same as DAS-253,254. Division considerations.

Performance Standards. Complete the following:

(1) Develop TUT mission for a section of EA-6B.
(2) Determine EA-6B jammer and track timing in accordance with the S-2 scenario.
(3) Determine optimum load-out.
(4) Meet timing requirement $\pm$ 10 seconds.
(5) TERPES brief of scenario parametrics.
(6) Develop HARM plan.
(7) Brief HVU escort plan.
(8) USQ-113 integration and targeting.
(9) Expendables gameplan.

Prerequisites. DAS-253, 254.

Crew. Pilot and ECMO 1,2,3.

DAS-451 1.7 T,C,R 1 or 2 EA-6B(s) A

Goal. Introduce/practice the aircrew requirements for bulk chaff operations. Sortie may be accomplished in conjunction with DAS, FEP, WASEX or RSEAD.

Requirements. Same as DAS-253, 254.

Performance Standards. Same as DAS-253, 254. With the addition of the following:

(1) Prepare TUT mission.
(2) Prepare jammer gameplan, to optimize chaff corridor.

Prerequisites. MAWTS-1 Bulk chaff lecture recommended.

Crew. Pilot and ECMO 1,2,3.

7. Reactive Suppression of Enemy Air Defenses (RSEAD).

a. Purpose. Practice the tactical employment of the EA-6B in the OAS environment. The intent of the RSEAD-460 is to integrate strike aircraft for the destruction of mobile SAMs.

b. General. Scenarios should attempt to integrate external assets to the maximum extent possible. Sorties should include an S-2 intel brief/debrief/scenario and a TERPES brief/debrief.

c. Ground Training.

(1) MAWTS-1 RSEAD lecture.
(2) Fire Support Coordination Measures.
(3) DASC/FSCC.

d. Pilot/ECMO Flight Training (1 Period, 1.7 Hours)

RSEAD-460 1.7 T,C,R 1 or 2 EA-6B(s) A

Goal. These sorties will utilize actual or simulated Fixed-wing and Rotary-wing strikers targeting SAM's short of and beyond the FSCL. Aircrew will practice the RSEAD manager mission.

Requirements. S-2 scenario providing friendly and enemy ground order of battle, SAMs/AAA, and Fire Support Coordination Measures is required.

Performance Standards. Complete the following:

(1) Plot all appropriate fire support coordination measures and control points.
(2) Develop appropriate TUT mission.
(3) Practice ON AXIS, OFF AXIS, and RSEAD procedures.
(4) Conduct runs using both time hacks and real world TOT.
(5) Conduct a minimum of 1 fixed-wing RSEAD mission.
(6) Conduct a minimum of 1 rotary-wing RSEAD mission.

(7) Prepare communications flow and reporting procedures.
(8) Utilize MAWTS-1 Fixed-wing and HELO RSEAD cards.

Prerequisites. RSEAD-262,263.

Crew. Pilot and ECMO 1/2/3.

Ordnance. BLK III,IV CATM.

8. War At Sea (WASEX)

a. Purpose. To expose aircrews to the requirements and planning associated with a War at Sea exercise.

b. General. The EA-6B should focus on WASEX in the littoral environment, and supporting the MEU. Mission planning should focus on the specifics of shipborne radars and REC.

c. ECMO Simulator Training (1 Period, 2.0 Hours)

SWASEX-480 2.0 T,C,R 1 EA-6B S/A

Goal. Introduce WASEX tactics in the littoral.

Requirements. Event may be flown in the aircraft if simulator is unavailable or if it promotes training efficiency.

Performance Standards. Completion of the following:

(1) Develop a TUT mission.
(2) Develop HARM and jammer game-plan.
(3) Employment of EA-6B iso amphibious operations.
(4) S-2 scenario required.
(5) S-2 and TERPES brief and debrief required.
(6) Recommend at least two strikers.
(7) Practice degraded operations.

Prerequisites. None.

Crew. ECMO 2/3.

d. Pilot/ECMO Flight Training (1 Period, 1.7 Hours)

WASEX-481 1.7 T,C,R EA-6B A (N)

Goal. Introduce WASEX tactics in the littoral.

Requirements. None.

Performance Standards. Same as SWASEX-480, in addition:

(1) Optimum NAV track.
(2) USQ operations.
(3) Expendables gameplan.

Prerequisites. None.

Crew. Pilot and ECMO 1.

Ordnance. 60 rounds chaff and CATM-88 Block III or IV.

9. Expeditionary Airfield (EAF) Operations

a. Purpose. To prepare aircrews for operation from a short, tactical, expeditionary airfield (EAF).

b. General. EAF qualification may be conducted as required when operational requirements dictate. Appropriate facility requirements include FCLP capability and short-field arresting gear. The pilot/ECMO 1 are considered EAF qualified upon the completion of one day and one night arrested landing.

c. Ground Training. The EAF lecture must be given prior to flight in this stage.

d. Pilot and ECMO Simulator Training (1 Period, 1.5 Hours)

SEAF-490 1.5 T,C,R 2F143 S

Goal. Introduce the procedures and techniques required for EAF and FCLP operations.

Requirements. None.

Performance Standards. Complete the following:

(1) Proper entry and departure procedures at the EAF.
(2) Two Mode 2 approaches, 2 "Bullseye" approaches, and 2 GCAs.
(3) Two night and two day arrested landings.
(4) Deal with various landing emergencies associated with EAF operations.

Crew. Pilot/ECMO 1.

e. Pilot/ECMO Flight Training (2 Flights, 2.0 hours)

EAF-491 1.0 T,C,R E 1 EA-6B A

Goal. Obtain day EAF qualification.

Requirements. Field qualified LSO.

Performance Standards. Complete the following:

(1) 1 arrested landing.
(2) Proper entry and departure procedures from the EAF.

Crew. Pilot and ECMO 1.

Prerequisites. SEAF-490.

EAF-492 1.0 T,C,R E 1 EA-6B A N

Goal. Obtain night EAF qualification.

Requirements. Field qualified LSO.

Performance Standards. Same as EAF-410 except flown at night.

Crew. Pilot and ECMO 1.

Prerequisites. EAF-491.

10. Field Carrier Landing Practice (FCLP)/Carrier Qualification (CQ)

a. Purpose. To prepare the aircrew for operation from an aircraft carrier.

b. General

(1) FCLP will be conducted IAW current NATOPS and other applicable guidelines and under the control of a qualified LSO. Totals of graded passes may vary and the LSO is responsible for ensuring that the proficiency demonstrated by each pilot is sufficient for successful carrier qualification. The LSO will monitor the pilot's tendencies for all simulator events. Upon completion of the appropriate work-up period the LSO will provide written certification for all pilots. There is no requirement for certification/ evaluation of ECMO's, but they will receive CRP credit for front-seat CQ sorties.

(2) All CQ aircrew will complete SCQ-495 prior to commencing CQ.

c. Ground Training. As directed by the LSO.

d. Pilot and ECMO Flight Training (2 Flights, 2.0 Hours)

FCLP-493 1.0 T,C,R E 1 EA-6B A

Goal. Practice day FCLP's.

Requirements. Field qualified EA-6B LSO. May be conducted as a single sortie or at the completion of another sortie.
Performance Standards. Six graded passes under the control of a qualified LSO.

Crew. Pilot and ECMO 1.

External Syllabus Support. A field qualified LSO if the squadron does not possess one.

FCLP-494 1.0 T,C,R E 1 EA-6B A N

Goal. Practice night FCLP's.

Requirements. Same as FCLP-493 except at night.

Performance Standards. Same as FCLP-493 except at night.

Crew. Pilot and ECMO 1.

Prerequisites. At least 1 day FCLP period.

External Syllabus Support. A field qualified LSO if the squadron does not possess one.

e. Pilot/ECMO Simulator Training (1 Periods, 1.5 Hours)

SCQ-495 1.5 T,C,R 2F143 S

Goal. Introduce CV check-in, marshal, recovery, and departure procedures. Introduce communications and crew coordination requirements for successful carrier operations. Introduce CV emergencies.

Requirements. Instructor at the console.

Performance Standards. Complete the following:

(1) 2 touch-and-go landings, 4 traps, and at least 4 cat shots.
(2) Multiple Case I and II approaches.
(3) Appropriate arrival and departure communications and procedures.
(4) Deal with selected CV emergencies.

Crew. Pilot/ECMO 1.

f. Pilot and ECMO Flight Training (2 Flights, 3.5 Hours)

CQ-496 1.5 T,C,R E 1 EA-6B A

Goal. Day qualify for carrier operations.

Requirements. Under the control of a CV qualified EA-6B LSO.

Performance Standards. Complete required number of touch-and-go's and arrested landings per CV NATOPS.

Crew. Pilot and ECMO 1.

Prerequisites. LSO work-up certification.

External Syllabus Support. CV qualified EA-6B LSO if the squadron does not possess one.

CQ-497 2.0 T,C,R E 1 EA-6B A N

Goal. Night qualify for carrier operations.

Requirements. Under the control of a CV qualified EA-6B LSO.

Performance Standards. Complete required number of touch-and-go's and arrested landings per CV NATOPS.

Crew. Pilot and ECMO 1.

Prerequisites. LSO work-up certification.

External Syllabus Support. CV qualified EA-6B LSO if the squadron does not possess one.

250. INSTRUCTOR QUALIFICATION FLIGHTS/EVENTS

1. Defensive Tactics Instructor

a. Purpose. To prepare selected aircrew for certification as a Defensive Tactics Instructor (DEFTACI), capable of instructing EA-6B Defensive Tactics in flight and on the ground.

b. General

(1) The EA-6B DEFTAC and DEFTACI syllabi are developed by MAWTS-1 and are outlined in the MAWTS-1 Course Catalog.

(2) All DEFTAC IUT's must be DEFTAC qualified and proficient in all DEFTAC sorties and have successfully completed the MAWTS-1 DEFTACI test prior to certification. DEFTAC IUT pilots must be designated DEFTAC section leads.

(3) The squadron WTI's (MOS 7577) and DEFTACIs will conduct a build-up to ensure that the Instructor Under Training (IUT) is prepared for certification by MAWTS-1. DEFTACI build-up will include, at a minimum, FAM-510 through DEFTAC-516. The IUT will brief, conduct, and debrief each event with a current DEFTACI or MAWTS- 1 Instructor. Each build-up sortie should be flown in order and will be flown as a single event.

(4) All DEFTACI's will be certified by MAWTS-1. DEFTAC-512 and DEFTAC-516 are the certification flights and will be conducted IAW the MAWTS-1 Course Catalog. Upon certification by MAWTS-1, the DEFTACI designation will be made by the squadron commanding officer.

(5) The DEFTACI is subject to the same proficiency requirements as the DEFTAC qualified aircrew. If the DEFTACI loses currency, he may regain the ability to conduct in-flight instruction for all sorties by flying FAM-211 and DEFTAC-312. The DEFTACI qualification remains valid as long as the DEFTACI is DIFOP to the VMAQ/MAG/Wing/MAWTS-1 and meets his OPNAV flight hour minimums in the EA-6B.

(6) All flights in this stage will be flown IAW the ACM requirements delineated in T&R Manual, Volume 1.

c. Ground/Academic Training. The squadron DEFTACIs are responsible for ensuring that the IUT receives sufficient ground training before commencing the IUT syllabus. The DEFTAC IUT will be required to present one DEFTAC series lecture to the MAWTS-1 Instructor.

d. Simulator Training (1 Period, 1.5 hours)

e. DEFTAC IUT Flight Training (6 Flights, 9.0 Hours)

FAM-510 1.5 E 1 EA-6B A

Goal. Develop the DEFTAC IUT's ability to instruct/evaluate FAM-211.

Requirements. Flight requirements are set forth in the MAWTS-1 Course Catalog and FAM-211.

Performance Standards. The IUT will demonstrate to a DEFTACI, the ability to brief, debrief, instruct, and safely conduct FAM-211.

Crew. DEFTACI and IUT.

Prerequisites. Successful completion of the DEFTACI Test, DEFTAC-313.

DEFTAC-511 1.5 E 1 EA-6B vs 1 Dissimilar adversary A

Goal. Develop the DEFTAC IUT's ability to instruct/evaluate DEFTAC-310 (1v1 WVR).

Requirements. Flight requirements set forth in the MAWTS-1 Course Catalog and DEFTAC-310.

Performance Standards. The IUT will demonstrate to a proficient DEFTACI, the ability to brief, debrief, instruct, and safely conduct DEFTAC-310.

Crew. DEFTACI and IUT.

Prerequisites. FAM-510.

Ordnance. Same as DEFTAC-310.

External Syllabus Support. Same as DEFTAC-310.

DEFTAC-512 1.5 E 1 EA-6B A vs 1 Dissimilar Adversary A

Goal. 1 v 1 WVR Certification.

Requirements. Flight requirements set forth in the MAWTS-1 Course Catalog and DEFTAC-310.

Performance Standards. The IUT will demonstrate to a MAWTS-1 EA-6B instructor, the ability to brief, debrief, instruct, and safely conduct DEFTAC-310.

Crew. MAWTS-1 instructor and IUT.

Prerequisites. DEFTAC-511.

Ordnance. Same as DEFTAC-310.

External Syllabus Support. Same as DEFTAC-310.

SDEFTAC-513 1.5 E 1 EA-6B S

Goal. Develop the DEFTAC IUT's ability to instruct/evaluate SDEFTAC-311.

Requirements. Flight requirements set forth in the MAWTS-1 Course Catalog and SDEFTAC-311.

Performance Standards. The IUT will demonstrate to a squadron DEFTACI, the ability to brief, debrief, instruct, and conduct an SDEFTAC-311.

Crew. DEFTACI and IUT.

Prerequisites. DEFTAC-512.

Ordnance. Same as SDEFTAC-311.

DEFTAC-514 1.5 E 1 EA-6B vs 1 Dissimilar Adversary A

Goal. Develop the IUT's ability to instruct the DEFTAC-312 sortie.

Requirements. MAWTS-1 EA-6B Instructor. Flight requirements are set forth in the MAWTS-1 Course Catalog and DEFTAC-312.

Performance Standards. The IUT will demonstrate to a squadron DEFTACI the ability to brief, debrief, instruct, and safely conduct DEFTAC-312.

Crew. IUT and DEFTACI.

Prerequisites. DEFTAC-513.

Ordnance. Same as DEFTAC-312.

External Syllabus Support. Same as DEFTAC-312.

DEFTAC-515 1.5 E 2 EA-6B vs 1 Dissimilar Adversary A

Goal. Develop the IUT's ability to instruct the DEFTAC-313 sortie.

Requirements. MAWTS-1 EA-6B Instructor. Flight requirements are set forth in the MAWTS-1 Course Catalog and DEFTAC-313.

Performance Standards. The IUT will demonstrate to a squadron DEFTACI the ability to brief, debrief, instruct, and safely conduct DEFTAC-313.

Crew. IUT and DEFTACI.

Prerequisites. DEFTAC-313 for ECMOs, DEFTAC-314 for pilots and DEFTAC-514.

Ordnance. Same as DEFTAC-313.

External Syllabus Support. Same as DEFTAC-313.

DEFTAC-516 1.5 E 2 EA-6B vs 1 Dissimilar Adversary A

Goal. MAWTS-1 DEFTACI Certification.

Requirements. MAWTS-1 EA-6B Instructor. Flight requirements are set forth in the MAWTS-1 Course Catalog and DEFTAC-313.

Performance Standards. The IUT will demonstrate to a MAWTS-1 EA-6B instructor the ability to brief, debrief, instruct, and safely conduct DEFTAC-313.

Crew. IUT, MAWTS-1 Instructor, and DEFTACI if required.

Prerequisites. DEFTAC-515.

Ordnance. Same as DEFTAC-313.

External Syllabus Support. Same as DEFTAC-313.

2. Low Altitude Tactics Instructor (LATI)

a. Purpose. To prepare and certify selected aircrew as Low Altitude Tactics Instructors (LATI's) capable of instructing low altitude tactics in- flight and on the ground.

b. General

(1) The LAT and LATI programs are developed by MAWTS-1 and administered by MAWTS-1 or the squadron WTI. Certification requirements are outlined in the MAWTS-1 Course Catalog.

(2) Aircrew will be LAT qualified, proficient in all LAT sorties, current in the LAT series lectures, and have successfully completed the LATI Test prior to commencing the LAT IUT syllabus.

(3) The squadron WTI's will conduct a build-up program to ensure that the Instructor Under Training (IUT) is prepared for certification. The LATI build-up will include, at a minimum, SLAT-520, and LAT-521 through LAT-522. The IUT will brief, conduct, and debrief each event with a current LATI, WTI, or MAWTS-1 Instructor flying in the front-seat of his aircraft. Each build-up sortie should be flown in order. Two training events CANNOT be completed on one event.

(4) LATI's will be certified by a squadron WTI or MAWTS-1 Instructor. LAT-524 is the certification flight and will be conducted IAW the MAWTS-1 Course Catalog and T&R Manual, Volume 1. Upon certification, the LATI designation will be made by the squadron commanding officer.

(5) LATI's are subject to the same currency requirements as the LAT qualified aircrew and all flights in this stage will be flown IAW the LAT requirements outlined in T&R Volume 1.

c. Ground/Academic Training. The squadron WTI's will be responsible for establishing the LATI ground/academic training build-up. The LAT IUT will be required to present one LAT series lecture to the squadron WTI(s) or LAT I(s).

d. LAT IUT Simulator Training (1 Periods, 1.5 Hours)

SLAT-520 1.5 E 2F143 S

Goal. Develop the IUT's ability to instruct/evaluate LAT in the simulator (SLAT-320).

Requirements. LATI in the trainer with the IUT. Flight requirements are set forth in the MAWTS-1 Course Catalog and SLAT-320.

Performance Standards. The LATI will demonstrate to a LATI/WTI the ability to brief, debrief, instruct, and safely conduct SLAT-320.

Crew. LAT IUT and LATI.

Prerequisites. Successful completion of the LATI Test.

e. LAT IUT Flight Training (4 Flights, 6.8 Hours)

LAT-521 1.7 E 1 EA-6B A

"This event is classified as LAT and its execution below 1,000 ft is administratively restricted by DC/S Aviation. Each individual occurrence of this training event below 1,000 ft must receive advanced written consent from DC/S Aviation (Code: APP) prior to execution. Execution of this event with a 1,000 ft "hard deck" shall satisfy the requirements for completion and CRP/core-skills credit."

Goal. Develop the IUT's ability to instruct/evaluate single ship LAT (LAT-321).

Requirements. Flight requirements are set forth in the MAWTS-1 Course Catalog and LAT-321.

Performance Standards. The IUT will demonstrate to a LATI/WTI the ability to brief, debrief, instruct, and safely conduct LAT-321.

Crew. LAT IUT and LATI.

Prerequisites. SLAT-520.

LAT-522 1.7 E 2 EA-6Bs A

"This event is classified as LAT and its execution below 1,000 ft is administratively restricted by DC/S Aviation. Each individual occurrence of this training event below 1,000 ft must receive advanced written consent from DC/S Aviation (Code: APP) prior to execution. Execution of this event with a 1,000 ft "hard deck" shall satisfy the requirements for completion and CRP/core-skills credit."

Goal. Develop the IUT's ability to instruct and evaluate LAT-322.

Requirements. Flight requirements are set forth in the MAWTS-1 Course Catalog and LAT-322.

Performance Standards. The IUT will demonstrate to a LATI/WTI the ability to brief, debrief, instruct, and safely conduct LAT-322.

Crew. LAT IUT and LATI.

Prerequisites. LAT-521.

LAT-523 1.7 E 2 EA-6Bs A

"This event is classified as LAT and its execution below 1,000 ft is administratively restricted by DC/S Aviation. Each individual occurrence of this training event below 1,000 ft must receive advanced written consent from DC/S Aviation (Code: APP) prior to execution. Execution of this event with a 1,000 ft "hard deck" shall satisfy the requirements for completion and CRP/core-skills credit."

Goal. Develop the IUT's ability to instruct/evaluate LAT-323.

Requirements. Flight requirements are set forth in the MAWTS-1 Course Catalog and LAT-323.

Performance Standards. The IUT will demonstrate to a LATI/WTI the ability to brief, debrief, instruct, and safely conduct LAT-323.

Crew. LAT IUT and LATI.

Prerequisites. LAT-522.

LAT-524 1.7 E 2 EA-6Bs A

"This event is classified as LAT and its execution below 1,000 ft is administratively restricted by DC/S Aviation. Each individual occurrence of this training event below 1,000 ft must receive advanced written consent from DC/S Aviation (Code: APP) prior to execution. Execution of this event with a 1,000 ft "hard deck" shall satisfy the requirements for completion and CRP/core-skills credit."

Goal. Certify the LAT IUT as a LATI. Develop the IUT's ability to instruct/evaluate LAT-420.

Requirements. Flight requirements are set forth in the MAWTS-1 Course Catalog and LAT-420.

Performance Standards. The IUT will demonstrate to a LATI/WTI the ability to brief, debrief, instruct, and safely conduct LAT-420.

Crew. LAT IUT and LATI.

Prerequisites. LAT-523.

251. SPECIAL PURPOSE TRACKING SORTIES

1. Check Flights

a. Purpose. Evaluate the aircrew's knowledge of NATOPS, the back-seat system, and instrument flight procedures. Evaluate the aircrew's knowledge of aircraft systems and adherence to post-maintenance procedures required for designation as a Functional Check Flight (FCF) pilot or ECMO. These flights/events are incorporated to facilitate tracking by ATRIMS.

b. General

(1) All checks will be IAW all applicable directives. NATOPS front seat and back-seat, Instrument, and FCF checks may be accomplished in the trainer or the airplane. ECMO's will complete instrument and front-seat NATOPS checks in the front-seat only. For pilots, the NATOPS Instructor will occupy the right front-seat. SCK-603 will be used to track Post Maintenance Evaluator training as well as daily PMCF's.

(2) The open-book NATOPS, closed-book NATOPS, and NATOPS simulator should be accomplished prior to the NATOPS flight. Instrument Ground School will be completed prior to the instrument check. The PME Test must be completed prior to the PMCF check.

(3) Squadrons, under the cognizance of the Marine Air Group, shall develop minimum requirements to designate Squadron NATOPS and Instrument Instructors/assistant instructors. The check sorties will also be utilized as part of the qualification phase for this training.

c. Ground/Academic Training. As per 250.4b. (2).

d. Pilot/ECMO Simulator Training (3 Periods, 4.5 Hours)

SCHK-600 1.5 E 2F143/1 EA-6B S/A

Goal. Evaluate the aircrew's knowledge of the front-seat system. NATOPS qualification. This sortie will also be used to qualify Squadron front-seat NATOPS instructors/assistant instructors.

Requirements. Set forth in applicable directives.

Performance Standards. IAW NATOPS.

Crew. Evaluated crewmember and NATOPS Instructor or NATOPS evaluator if applicable.

SCHK-601 1.5 E 15E22C/1 EA-6B S/A

Goal. Evaluate the aircrew's knowledge of the back-seat system. Back-seat NATOPS qualification. This sortie will also be used to qualify Squadron back-seat NATOPS instructors/assistant instructors.

Requirements. Set forth in applicable directives.

Performance Standards. IAW NATOPS.

Crew. Evaluated crewmember and back-seat NATOPS Instructor or NATOPS evaluator if applicable.

SCHK-602 1.5 E 2F143/1 EA-6B S/A

Goal. Evaluate the aircrew's knowledge of and adherence to standard instrument procedures. Instrument qualification. This sortie will also be used to qualify Squadron Instrument instructors/assistant instructors.

Requirements. Set forth in applicable directives.

Performance Standards. IAW NATOPS and the Instrument Flight Manual.

Crew. Evaluated crewmember and Instrument Instructor or Instrument evaluator if applicable.

SCHK-603 1.5 E 2F143/1 EA-6B S/A

Goal. Evaluate the aircrew's knowledge of aircraft systems and adherence to standard FCF procedures. FCF qualification.

Requirements. Set forth in applicable directives.

Performance Standards. Per local directive.

Crew. FCF under instruction and FCF pilot or ECMO.

2. Aircrew Coordination Training

a. Purpose. Expose the EA-6B aircrew to various scenarios that reinforce sound and optimum crew coordination techniques.

b. General

(1) Aircrew Coordination Training (ACT) should occur throughout the year at the squadron level. Once a year the aircrew will complete a course that includes a more in-depth look at crew coordination.

(2) Aircrew must complete the ground portion of the ACT course and be current in SEP-200.

c. Ground/Academic Training. Aircrew should complete all squadron level academic classes associated with Aircrew Coordination Training (ACT) before commencing the yearly ACT course. Squadron level lectures dealing with aircrew coordination should be given throughout the year by graduates of an approved aircrew coordination course. Aircrew coordination lectures will be IAW T&R Manual, Volume 1.

d. Pilot/ECMO Simulator Training (1 Periods, 1.5 Hours)

SACT-604 1.5 T,C,R E 2F143/1 EA-6B S/A

Goal. When presented with a challenge, the aircrew will be able to establish/re-establish normal conditions and logical thought patterns using the seven crew coordination skills.

Requirements. Requirements will be delineated by the selected ACT scenario.

Performance Standards. Per ACT course objectives.

Prerequisites. ACT course completion.

Crew. Pilot/ECMO 1. Aircrew Coordination Training Instructor as an evaluator.

3. Strategic Tanking Requirements

a. Purpose. Aerial Refueling proficiency and currency on the KC-135 Strategic Tanker.

b. General

(1) These codes are utilized to track aerial refueling currency on the KC-135. TRANSLANT/TRANSPAC movements and specific Theaters of Operation require 90 day currency in Strategic tanking.

c. Ground/Academic Training. Aircrew shall receive applicable KC-135 lecture and video training.

d. Pilot Flight Training (2 Periods, 3.0 Hours)

AR-605 1.5 E 1 EA-6B A

Goal. Maintain pilot proficiency in KC-135 tanking.

Requirements. KC-135 tanker.

Performance Standards. Complete the following:

(1) Proper Communications procedures.
(2) Proper rendezvous procedures.
(3) At least 3 wet/dry plugs for initial/refresher aircrew.
(4) Minimum 1 successful plug for core squadron aircrew.

Crew. Pilot.

AR-606 1.5 E 1 EA-6B A N

Goal. Maintain pilot proficiency in KC-135 tanking.

Requirements. KC-135 tanker.

Performance Standards. Same as AR-605 except flown at night.

Crew. Pilot.

Prerequisites. AR-605.

4. Initial/Refresher Training

a. Purpose. Back-in-the-saddle instrument training for aircrews who have not flown in the EA-6B for greater than 30 days and less than 12 months.

b. General. These codes may be used by aircrew for flights that do not complete the requirements set forth in the tactical portion of this syllabus. Squadron commanding officers will designate other refresher flights as they deem necessary.

c. Ground/Academic Training. None.

d. Simulator Training. At the discretion of the commanding officer.

e. Pilot and ECMO Flight Training (2 Flights, 3.4 Hours)

INST-607 1.7 R 1 EA-6B A

Goal. Review instrument procedures, aircraft systems, and squadron standard operating procedures.

Requirements. Flight within the air traffic control system. Squadrons may delineate further requirements for completion.

Performance Standards. Time/weather permitting, complete the following:

(1) Normal ground, takeoff, and climb procedures.
(2) Radar and instrument procedures.
(3) Navigation system and radar integration.
(4) TACAN approach.
(5) Normal PAR.
(6) No flap/no slat PAR.
(7) Simulated single engine approach.
(8) Simulated minimum fuel GCA.
(9) Normal VFR pattern and touch-and-go's.

Crew. Initial/Refresher aircrew.

Prerequisites. Squadrons will designate the prerequisites.

INST-608 1.7 R 1 EA-6B A N

Goal. Review instrument procedures, aircraft systems, and squadron standard operating procedures.

Requirements. Flight within the air traffic control system. Squadrons may delineate further requirements for completion.

Performance Standards. Same as for INST-607 except flown at night.

Crew. Refresher aircrew.

Prerequisites. Squadrons will designate the prerequisites.

5. Formation Proficiency/Leadership Performance

a. Purpose. Maintain section/division proficiency in the EA-6B. Track/maintain flight leadership performance in the EA-6B.

b. General.

(1) The proficiency codes shall be used by aircrew for flights that do not complete the requirements set forth in the tactical formation syllabus. A good example would be section sorties utilized to move aircraft to Yuma for the WTI course.

(2) The leadership performance codes shall be assigned to aircrew acting as the section/division lead during tactical sorties. These codes will update the Flight Leadership Training codes in the 300 series and thus maintain the allotted CRP for those missions.

(3) The leadership performance flights may also be utilized by Squadron Commanding Officers as "check hops" for prospective section/division leads. Additionally, these sorties will be utilized as warm-ups for Refresher aircrew prior to redesignation as section or division leaders.

c. Ground/Academic Training. None.

d. Simulator Training. At the discretion of the commanding officer.

e. Pilot and ECMO Flight Training (2 Flights, 3.4 Hours)

FORM-620 1.7 R 2 EA-6Bs A

Goal. Maintain proficiency in day section formation.

Requirements. This code is utilized primarily for scheduled tactical formation sorties which do not meet the requirements set forth in the 200 level syllabus. It also serves as a formation tracking tool for formation/division formation requirements/prerequisites.

Performance Standards. None.

Crew. Pilot/ECMO 1.

FORM-621 1.7 R 2 EA-6B A N

Goal. Maintain proficiency in night section formation.

Requirements. This code is utilized primarily for scheduled night formation sorties which do not meet the requirements set forth in the 200 level syllabus. It also serves as a tracking tool for night formation/division formation requirements/prerequisites.

Performance Standards. None.

Crew. Pilot/ECMO 1.

FORM-622 1.7 R 2 EA-6Bs A (N)

Goal. Demonstrate section leadership.

Requirements. This code is utilized to track and maintain section flight leadership performance and readiness and will be assigned to an aircrew who acts as a section lead for any mission. This sortie may also be utilized by Commanding Officers as a "check hop" for prospective section leads and for Refresher aircrew.

Performance Standards. Per local directive.

Crew. Pilot.

FORM-623 1.7 R 2 EA-6Bs A (N)

Goal. Maintain proficiency in division formation procedures.

Requirements. This code is utilized to track division proficiency such as an aircrew performing as dash-4 of a division leader under training sortie where no other tactical missions are accomplished.

Performance Standards. None.

Crew. Pilot/ECMO 1.

FORM-624 1.7 R 2 EA-6Bs A (N)

Goal. Demonstrate division leadership.

Requirements. This code is utilized to track and maintain division flight leadership performance and readiness and will be assigned to an aircrew who acts as a division lead for any mission. This sortie may also be utilized by Commanding Officers as a "check hop" for prospective division leads and for Refresher aircrew.

Performance Standards. Per local directive.

Crew. Pilot.

6. Mission Leadership Performance

a. Purpose. Maintain mission leadership proficiency.

b. General.

(1) Mission commanders must act in that capacity to maintain their proficiency and readiness as flight leaders. This flight allows Squadrons to track mission commander performance and will update all of the mission commander under training sorties in the combat qualification stage.

(2) The leadership performance flight may also be utilized by Squadron Commanding Officers as a "check hop" for prospective mission commanders. Additionally, it shall be used as a warm-up sortie for Refresher aircrew who have been out of the fleet for extended periods prior to redesignation as a mission commander.

c. Ground/Academic Training. None.

d. Simulator Training. None.

e. Pilot and ECMO Flight Training (1 Flights, 0.0 Hours)

MCUT-650 0.0 R 1 EA-6B A (N)

Goal. Maintain proficiency in mission commander performance.

Requirements. Act as the mission commander for a tactical EA-6B mission.

Performance Standards. Per local directive.

Crew. Pilot/ECMO 1/2/3.

Prerequisites. Complete all mission commander under training sorties and designation as a mission commander.

7. Back Seat Procedures Proficiency

a. Purpose. Maintain proficiency in back seat operation of the Tactical Jamming System.

b. General

(1) The proficiency codes shall be used by aircrew for flights that do not complete the requirements set forth in the tactical syllabus.

c. Ground/Academic Training. None.

d. Simulator Training. At the discretion of the commanding officer.

e. Pilot and ECMO Flight Training (1 Flight, 1.7 Hours)

EW-651 1.7 R 1 EA-6B S/A

Goal. Maintain proficiency in the back seat operation of the TJS.

Requirements. This code is utilized primarily for scheduled sorties which do not meet the requirements set forth in the tactical syllabus. Complete the following:

(1) System turn-on
(2) System bits
(3) Pod burnout if applicable

Performance Standards. None.

Crew. ECMO 2/3.

252. WEAPONS AND TACTICS INSTRUCTOR (WTI). The student, after successfully completing the course of instruction conducted at MAWTS-1, fulfilling all the prerequisites set forth in the WTI operations Guide, and obtaining the DEFTACI and LATI is awarded the WTI MOS. The responsibilities of the WTI within the squadron are stated in MCO P3500.12.

260. ORDNANCE REQUIREMENTS. Annual ordnance requirements are developed on a "per crew" basis per OPNAVNOTE 8010.

1. Expendable Ordnance

ORDNANCE	200 Series	300 Series	400 Series	500 Series	ANNUAL	
AGM-88			1		1*	
	CHAFF	60	120	210		390
MJU-8 FLARES		300	210	240	750	

2. Captive Ordnance

ORDNANCE	200 Series	300 Series	400 Series	500 Series	ANNUAL
ATM-88	2**	2**	2**		4**

* One missile per squadron per year minimum requirement.
** Indicates that there are that many sorties where one captive AGM-88 is required.

AIRCRAFT: EA-6B MOS: 7543 CREW POSITION: PILOT

FLIGHT STAGE	TRNG CODE	HRS	REFLY INTERVAL	CRP	T	C	R	E	REMARKS
COMBAT READY TRAINING									
SEP	200	1.5	3	0.50	X	X	X		S
SNAV	201	1.5	12	0.30	X	X	X		S
NAV	202	1.7	6	0.50	X	X	X		
	203	1.7	6	0.75	X	X	X		N
	204	1.7	6	0.50	X	X			
	205	1.7	6	1.00	X	X	X		
AR	206	1.7	3	0.70	X	X	X		
SFAM	207	1.7	12	0.30	X	X	X		S
SFAM	210	1.7	6	0.50	X	X	X		S
FAM	211	1.5	6	0.50	X	X	X	X	
FORM	220	1.7	6	1.00	X	X	X		
	221	1.7	6	1.00	X	X	X		N
	222	1.7	6	1.00	X	X	X		
THARM	230	2.0	12	0.30	X	X	X		TUT
SHARM	231	1.5	6	0.50	X	X	X		S
HARM	233	1.7	3	0.75	X	X	X		
ES	242	1.7	12	1.00	X	X	X		
SDAS	250	1.5	12	0.50	X	X	X		S
TDAS	252	2.0	12	0.30	X	X	X		TUT/S
DAS	253	1.7	6	1.00	X	X	X		
SRSEAD	260	1.5	6	0.50	X	X	X		S
RSEAD	262	1.7	6	1.00	X	X	X		
SFP	270	1.5	6	0.30	X	X	X		S
EW	272	1.7	12	0.30	X	X	X		
COMBAT QUALIFICATION TRAINING									
AR	300	1.7	6	0.50	X	X	X		N
DEFTAC	310	1.5	9	0.50	X	X	X		
SDEFTAC	311	1.0	9	0.25	X	X	X		S
DEFTAC	312	1.5	9	0.50	X	X	X		
	313	1.5	9	0.50	X	X	X	X	
	314	1.5	24	0.25	X	X	X	X	
SLAT	320	1.5	12	0.25	X	X	X		S
LAT	321	1.5	6	0.50	X	X	X	X	
	322	1.5	6	0.50	X	X	X	X	
	323	1.5	6	0.50	X	X	X	X	

Figure 2-1.--MOS 7543 Refly Interval, Combat Readiness Percentage, Continued.

AIRCRAFT: EA-6B MOS: 7543 CREW POSITION: PILOT

FLIGHT STAGE	TRNG CODE	HRS	REFLY INTERVAL	CRP	T	C	R	E	REMARKS
FORM	324	1.7	24	0.50	X	X	X	X	
	325	1.7	24	0.50	X	X	X	X	
	326	1.7	24	0.50	X	X	X	X	N
	327	1.7	24	0.50	X	X	X	X	(N)
FORM	328	1.7	24	0.50	X	X	X	X	
	329	1.7	24	0.50	X	X	X	X	N
	330	1.7	24	0.50	X	X	X	X	(N)
MCUT	331	0.0	24	0.50	X	X	X	X	(N)
	332	0.0	24	0.50	X	X	X	X	(N)
ES	340	1.7	12	0.75	X	X	X		
MCUT	342	0.0	24	0.50	X	X	X	X	(N)
	343	0.0	24	0.50	X	X	X	X	(N)
DAS	350	1.7	12	1.00	X	X	X	X	(N)
MCUT	352	0.0	24	0.50	X	X	X	X`	(N)
	353	0.0	24	0.50	X	X	X	X	(N)
SRSEAD	360	1.5	12	1.00	X	X	X		S
RSEAD	362	1.7	6	1.00	X	X	X		(N)
	364	1.7	12	0.75	X	X	X	X	N
MCUT	366	0.0	24	0.50	X	X	X	X	(N)
	367	0.0	24	0.50	X	X	X	X	(N)
	368	0.0	24	0.50	X	X	X	X	(N)
	369	0.0	24	0.50	X	X	X	X	(N)
FP	370	1.7	12	1.00	X	X	X		(N)
MCUT	372	0.0	24	0.50	X	X	X	X	(N)
	373	0.0	24	0.50	X	X	X	X	(N)
MCUT	380	0.0	24	0.50	X	X	X	X	(N)
FULL-COMBAT QUALIFICATION TRAINING									
AR	400	1.0	12	0.50	X	X	X		
DEFTAC	410	1.5	12	0.25	X	X	X	X	
LAT	420	1.5	6	0.25	X	X	X	X	
HARM	430	1.7	36	0.25	X	X	X	X	
ES	440	1.7	12	0.50	X	X	X		
DAS	450	1.7	12	0.50	X	X	X		
	451	1.7	12	0.25	X	X	X	X	
RSEAD	460	1.7	12	0.25	X	X	X		
WASEX	481	1.7	12	0.50	X	X	X		(N)

Figure 2-1.--MOS 7543 Refly Interval, Combat Readiness Percentage, Continued.

AIRCRAFT: EA-6B MOS: 7543 CREW POSITION: PILOT

FLIGHT STAGE	TRNG CODE	HRS	REFLY INTERVAL	CRP	T	C	R	E	REMARKS
SEAF	490	1.5	12	0.25	X	X	X		S
EAF	491	1.0	12	0.25	X	X	X	X	
	492	1.0	12	0.25	X	X	X	X	N
FCLP	493	1.0	12	0.25	X	X	X	X	
	494	1.0	12	0.25	X	X	X	X	N
SCQ	495	1.5	12	0.25	X	X	X		S
CQ	496	1.5	12	0.25	X	X	X	X	
	497	2.0	12	0.25	X	X	X	X	N
INSTRUCTOR QUALIFICATION FLIGHTS/EVENTS									
FAM	510	1.5	N/A	--				X	
DEFTAC	511	1.5	N/A	--				X	
	512	1.5	N/A	--				X	
	513	1.5	N/A	--				X	S
	514	1.5	N/A	--				X	
	515	1.5	N/A	--				X	
	516	1.5	N/A	--				X	
SLAT	520	1.5	N/A	--				X	S
LAT	521	1.7	N/A	--				X	
	522	1.7	N/A	--				X	
	523	1.7	N/A	--				X	
	524	1.5	N/A	--				X	
SPECIAL PURPOSE TRACKING SORTIES									
SCHK	600	1.5	12	--				X	S/A
SCHK	602	1.5	12	--				X	S/A
	603	1.5	N/A	--				X	S/A
SACT	604	1.5	12	--			X	X	
AR	605	1.5	3	--			X		KC-135
	606	1.5	3	--			X		KC-135, N
INST	607	1.7	N/A	--					
	608	1.7	N/A	--					N
FORM	620	1.7	N/A	--					
	621	1.7	N/A	--					N
FORM	622	1.7	N/A	--				X	(N)
FORM	623	1.7	N/A	--					(N)
FORM	624	1.7	N/A	--				X	(N)
MCUT	650	0.0	N/A	--				X	(N)

Figure 2-1.--MOS 7543 Refly Interval, Combat Readiness Percentage.

PILOT FLIGHT UPDATE CHAINING

STAGE	FLIGHT	FLIGHTS UPDATED
SEP	200	
SNAV	201	
NAV	202	
	203	202
	204	
	205	204
AR	206	
SFAM	207	
SFAM	210	
FAM	211	210
FORM	220	
	221	
	222	204, 220
THARM	230	
SHARM	231	230
HARM	233	
ES	242	
SDAS	250	
TDAS	252	
DAS	253	
SRSEAD	260	
RSEAD	262	260
SFP	270	
EW	272	
AR	300	206
DEFTAC	310	
SDEFTAC	311	
	312	311
	313	311, 312
	314	311, 312, 313
SLAT	320	
LAT	321	204
	322	204, 222, 321
	323	204, 222, 321, 322
FORM	324	220
	325	222
	326	221
	327	

Figure 2-2.--MOS 7543 Flight Update Chaining, Continued.

PILOT FLIGHT UPDATE CHAINING

STAGE	FLIGHT	FLIGHTS UPDATED
FORM	328	
	329	
	330	
MCUT	331	230, 233
	332	230, 233, 331
ES	340	242
MCUT	342	
	343	242, 342
DAS	350	253
MCUT	352	253, 254
	353	253, 352
SRSEAD	360	260
RSEAD	362	260, 262, 360
	364	260, 262
MCUT	366	262
	367	262, 366
	368	262, 366, 367
	369	262, 366, 367, 368
FP	370	
MCUT	372	272
	373	370
MCUT	380	
AR	400	206
DEFTAC	410	
LAT	420	
HARM	430	233
ES	440	
DAS	450	
	451	
WASEX	481	
SEAF	490	
EAF	491	
	492	491
FCLP	493	
	494	493
SCQ	495	
	496	491, 493
	497	491, 492, 493, 494

Figure 2-2.--MOS 7543 Flight Update Chaining, Continued.

PILOT FLIGHT UPDATE CHAINING

STAGE	FLIGHT	FLIGHTS UPDATED
FAM	510	211
DEFTAC	511	310
	512	310
SDEFTAC	513	311
	514	312, 311
	515	313, 311, 312
	516	313, 311, 312
SLAT	520	
LAT	521	204, 321
	522	204, 220, 222, 321, 322, 323
	523	204, 220, 222, 321, 322, 323
	524	420
SCHK	600	
	602	
	603	
SCHK	604	
AR	605	206
	606	206, 300
INST	607	
	608	
FORM	620	
	621	
FORM	622	324, 325, 326, 327, 620
FORM	623	
	624	328, 329, 330, 623
MCUT	650	331, 332, 342, 343, 352, 353, 366, 367, 368, 369, 372, 373, 380

Figure 2-2.--MOS 7543 Flight Update Chaining.

AIRCRAFT: EA-6B MOS: 7588 CREW POSITION: ECMO

FLIGHT STAGE	TRNG CODE	HRS	REFLY INTERVAL	CRP	T	C	R	E	REMARKS
COMBAT READY TRAINING									
SEP	200	1.5	3	0.50	X	X	X		S
SNAV	201	1.5	12	0.30	X	X	X		S
NAV	202	1.7	6	0.50	X	X	X		
	203	1.7	6	0.50	X	X	X		N
	204	1.7	6	0.50	X	X	X		
	205	1.7	6	0.50	X	X	X		
AR	206	1.7	6	0.25	X	X	X		
SFAM	210	1.7	6	0.30	X	X	X		S
FAM	211	1.5	12	0.50	X	X	X	X	
FORM	220	1.7	12	0.50	X	X	X		
	221	1.7	12	0.50	X	X	X		N
	222	1.7	6	0.75	X	X	X		
THARM	230	2.0	6	0.50	X	X	X		
SHARM	231	1.5	6	0.50	X	X	X		S
	232	1.5	6	0.50	X	X	X		S
HARM	233	1.7	3	0.50	X	X	X		
	234	1.7	3	0.50	X	X	X		
SES	240	2.0	6	0.30	X	X	X		S
	241	2.0	6	0.30	X	X	X		S
ES	242	1.7	12	0.50	X	X	X		
	243	1.7	6	0.75	X	X	X		
SDAS	250	1.5	12	0.30	X	X	X		S
	251	1.5	12	0.30	X	X	X		S
TDAS	252	2.0	12	0.30	X	X	X		S
DAS	253	1.7	6	0.50	X	X	X		
	254	1.7	6	0.75	X	X	X		
SRSEAD	260	1.5	6	0.50	X	X	X		S
	261	1.5	6	0.50	X	X	X		S
RSEAD	262	1.7	6	0.50	X	X	X		
	263	1.7	6	0.50	X	X	X		
SFP	270	1.5	6	0.30	X	X	X		S
	271	1.5	12	0.30	X	X	X		S
EW	272	1.7	12	0.30	X	X	X		
COMBAT QUALIFICATION TRAINING									
DEFTAC	310	1.5	9	0.50	X	X	X		
SDEFTAC	311	1.0	9	0.25	X	X	X		S
DEFTAC	312	1.5	9	0.50	X	X	X		
	313	1.5	9	0.75	X	X	X	X	

Figure 2-3.--MOS 7588 Refly Interval, Combat Readiness Percentage, Continued.

AIRCRAFT: EA-6B MOS: 7588 CREW POSITION: ECMO

FLIGHT STAGE	TRNG CODE	HRS	REFLY INTERVAL	CRP	T	C	R	E	REMARKS
SLAT	320	1.5	12	0.25	X	X	X		S
LAT	321	1.5	6	0.50	X	X	X	X	
	322	1.5	6	0.50	X	X	X	X	
	323	1.5	6	0.50	X	X	X	X	
MCUT	331	0.0	24	0.50	X	X	X	X	(N)
	332	0.0	24	0.50	X	X	X	X	(N)
ES	340	1.7	12	1.00	X	X	X		
	341	1.7	12	1.00	X	X	X		
MCUT	342	0.0	24	0.50	X	X	X	X	(N)
	343	0.0	24	0.50	X	X	X	X	(N)
DAS	350	1.7	12	1.00	X	X	X	X	(N)
	351	1.7	12	1.00	X	X	X	X	(N)
MCUT	352	0.0	24	0.50	X	X	X	X	(N)
	353	0.0	24	0.50	X	X	X	X	(N)
SRSEAD	360	1.5	12	0.50	X	X	X		S
	361	1.5	12	0.50	X	X	X		S
RSEAD	362	1.7	6	1.00	X	X	X		(N)
	363	1.7	6	1.00	X	X	X		(N)
	364	1.7	12	0.75	X	X	X	X	N
	365	1.7	12	0.75	X	X	X	X	N
MCUT	366	0.0	24	0.50	X	X	X	X	(N)
	367	0.0	24	0.50	X	X	X	X	(N)
	368	0.0	24	0.50	X	X	X	X	(N)
	369	0.0	24	0.50	X	X	X	X	(N)
FP	370	1.7	12	1.00	X	X	X		
MCUT	372	0.0	24	0.50	X	X	X	X	(N)
	373	0.0	24	0.50	X	X	X	X	(N)
	380	0.0	24	0.50	X	X	X	X	(N)
FULL-COMBAT QUALIFICATION TRAINING									
DEFTAC	410	1.5	12	0.25	X	X	X	X	
LAT	420	1.5	6	0.25	X	X	X	X	
HARM	430	1.7	36	0.25	X	X	X	X	
ES	440	1.7	12	0.50	X	X	X		
DAS	450	1.7	12	0.50	X	X	X		
	451	1.7	12	0.25	X	X	X	X	
RSEAD	460	1.7	12	0.25	X	X	X		
SWASEX	480	2.0	12	0.50	X	X	X		S
WASEX	481	1.7	12	0.50	X	X	X		(N)
SEAF	490	1.5	12	0.25	X	X	X		S
EAF	491	1.0	12	0.25	X	X	X		
	492	1.0	12	0.25	X	X	X	X	N

Figure 2-3.--MOS 7588 Refly Interval, Combat Readiness Percentage, Continued.

AIRCRAFT: EA-6B MOS: 7588 CREW POSITION: ECMO

FLIGHT STAGE	TRNG CODE	HRS	REFLY INTERVAL	CRP	T	C	R	E	REMARKS
FCLP	493	1.0	12	0.25	X	X	X	X	
	494	1.0	12	0.25	X	X	X	X	N
SCQ	495	1.5	12	0.25	X	X	X		
CQ	496	1.5	12	0.25	X	X	X	X	
	497	2.0	12	0.25	X	X	X	X	N
INSTRUCTOR QUALIFICATION FLIGHTS/EVENTS									
FAM	510	1.5	N/A	--				X	
DEFTAC	511	1.5	N/A	--				X	
	513	1.5	N/A	--				X	S
	514	1.5	N/A	--				X	
	515	1.5	N/A	--				X	
	516	1.5	N/A	--				X	
SLAT	520	1.5	N/A	--				X	S
LAT	521	1.7	N/A	--				X	
	522	1.7	N/A	--				X	
	523	1.7	N/A	--				X	
	524	1.7	N/A	--				X	
SPECIAL PURPOSE TRACKING SORTIES									
SCHK	600	1.5	12	--				X	S/A
	601	1.5	12	--				X	S/A
	602	1.5	12	--				X	S/A
	603	1.5	N/A	--				X	S/A
SACT	604	1.5	12	--			X	X	S/A
INST	607	1.7	N/A	--			X		
	608	1.7	N/A	--			X		N
FORM	620	1.7	N/A	--			X		
	621	1.7	N/A	--			X		N
FORM	623	1.7	N/A	--					(N)
MCUT	650	0.0	N/A	--				X	(N)
EW	651	1.7	N/A	--					

Figure 2-3.--MOS 7588 Refly Interval, Combat Readiness Percentage.

ECMO FLIGHT UPDATE CHAINING

STAGE	FLIGHT	FLIGHTS UPDATED
SEP	200	
SNAV	201	
NAV	202	
	203	202
	204	
	205	204
AR	206	
SFAM	210	
FAM	211	210
FORM	220	
	221	
	222	204, 220
THARM	230	
SHARM	231	230
	232	230
HARM	233	
	234	
SES	240	
	241	240
ES	242	
	243	
SDAS	250	
	251	
TDAS	252	
DAS	253	
	254	
SRSEAD	260	
RSEAD	261	
	262	260
	263	261
SFP	270	
	271	
EW	272	
DEFTAC	310	
SDEFTAC	311	
	312	311
	313	311, 312
SLAT	320	
LAT	321	204
	322	204, 222, 321
	323	204, 222, 321, 322

Figure 2-4.--MOS 7588 Flight Update Chaining, Continued.

ECMO FLIGHT UPDATE CHAINING

STAGE	FLIGHT	FLIGHTS UPDATED
MCUT	331	230, 233, 234
	332	230, 233, 234, 331
ES	340	242
	341	243
MCUT	342	242, 243
	343	242, 243, 342
DAS	350	253
	351	254
MCUT	352	253, 254
	353	253, 254, 352
SRSEAD	360	260
	361	261
RSEAD	362	260, 262, 360
	363	261, 263, 361
	364	260, 262
	365	261, 263
MCUT	366	262, 263
	367	262, 263, 366
	368	262, 263, 366, 367
	369	262, 263, 366, 367, 368
FP	370	
MCUT	372	272
	373	370
MCUT	380	
DEFTAC	410	
LAT	420	
HARM	430	233, 234
ES	440	
DAS	450	
	451	
SWASEX	480	
WASEX	481	
SEAF	490	
EAF	491	
	492	491
FCLP	493	
	494	493
SCQ	495	
	496	491, 493
	497	491, 492, 493, 494

Figure 2-4.--MOS 7588 Flight Update Chaining, Continued.

ECMO FLIGHT UPDATE CHAINING

STAGE	FLIGHT	FLIGHTS UPDATED
FAM	510	211
DEFTAC	511	310
	512	310
SDEFTAC	513	311
	514	312, 311
	515	313, 311, 312
	516	313, 311, 312
SLAT	520	
LAT	521	204, 321
	522	204, 220, 222, 321, 322, 323
	523	204, 220, 222, 321, 322, 323
	524	420
SCHK	600	
	601	
	602	
	603	
SACT	604	
INST	607	
	608	
FORM	620	
	621	
FORM	623	
MCUT	650	331, 332, 342, 343, 352, 353, 366, 367, 368, 369, 372, 373, 380
EW	651	

Figure 2-4.--MOS 7588 Flight Update Chaining.

CHAPTER 3

F/A-18 PILOT/WSO

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* * NOTE * *

AIRCREW COORDINATION SHALL BE BRIEFED ON ALL FLIGHTS AND/OR EVENTS.

SECTION I - ADMINISTRATIVE INFORMATION

MARINE FIGHTER ATTACK SQUADRON - F/A-18A/C UNIT TEMPLATE

NOTE

The capabilities defined and described in the core capability and unit template sections are provided to ensure each like squadron maintains a common base of training and depth of capabilities. When resources permit, and when in the judgment of the commander additional training would significantly increase the unit's Warfighting capability, training to a level above these base Capabilities is permitted. It is incumbent upon, and expected of, the Commander to balance any increase in the depth of core capabilities Against the long term health and readiness of his unit while staying Within his resource constraints.

1. **TABLE OF ORGANIZATION**. T/O for an F/A-18 A/C squadron is 19 pilots (CV squadrons = 18).

2. **SQUADRON CORE CAPABILITY**

a. A core capable squadron is able to sustain the following **minimum** performance on a daily basis during sustained contingency/combat operations, assuming 100% PAA, ≥ 90% in reporting status and ≥ 90% T/O on hand in all MOS's. If < 90%, core capability will be degraded by a like percentage. The extent to which a core capable squadron is able to surge beyond its core capability is situation dependent.

b. A core capable squadron is able to sortie two divisions of mission capable aircraft in day/night OAS or AAW within six hours of frag order with the following imbedded capabilities:

-SEAD and HVAA escort as required for each division.

-Night capable for operations as appropriate by series.

-Operate from a main base, appropriate sized EAF or conventional carrier.

-Employ PGM's and Air-to-Air missiles as appropriate by series.

-Provide self-escort.

c. Within four hours of landing, sortie one division, same criteria.

3. **BASIC AIRCREW QUALIFICATIONS**. **As a minimum**, in order to be considered Core Competent, a squadron must possess the following numbers of aircrew who are complete through the combat qualification syllabus for each core skill (Note: If a squadron is < T/O, required numbers are reduced by a like %).

CORE SKILL	FA-18A	FA-18C
A/A	12	12
A/S	12	12
SSWD	8	8
ASWD	8	8
LAT	12	12
NS	12*	12
AR	12	12
FCLP/EQ	12	12
DAS	12	12
CAS	12	12

*WHEN NVD COMPATIBLE

4. **SORTIES REQUIRED TO ATTAIN CORE SKILLS**

a. T&R CODES. To attain competency in core skills, aircrew must be current in 75% of the sorties listed in the 200 and 300 level syllabi for each skill.

b. Sortie Totals. Assuming successful attainment of required proficiency during the first sortie attempt, the number of sorties required to achieve competency in each skill area is contained in the following table.

	A/A	A/S	SSWD	ASWD	LAT	CAS
Pilot FA-18A	26	10	6	3	4	4
Pilot FA-18C	26	10	7	3	4	4

	NS	AR	FCLP/EQ	DAS	TOTALS
Pilot FA-18A	0	2	2	5	**62**
Pilot FA-18C	4*/8	2	2	5	**67*/71**

*Sorties required for F/A-18C night systems modified aircraft.

5. **SORTIES REQUIRED TO MAINTAIN CORE SKILLS**

a. After attaining initial competency in a skill area, individual aircrew are required to periodically redemonstrate proficiency in order to maintain competency.

b. Competency retention/redemonstration is managed through the completion of specific sorties at a directed refly interval. Assuming successful redemonstration of proficiency in each sortie and optimum chaining of lower level skills, the table below lists the number of semiannual sorties required in order to maintain competency.

	A/A	A/S	SSWD	ASWD	LAT	CAS
Pilot FA-18A	18	7	3	N/A	1	4
Pilot FA-18C	18	7	4	N/A	1	4

	NS	AR	FCLP/EQ	DAS	TOTALS
Pilot FA-18A	N/A	1	N/A	4	**38**
Pilot FA-18C	N/A	1	N/A	4	**39**

6. **FLIGHT LEADER/INSTRUCTOR QUALIFICATIONS**. **As a minimum**, in order for a squadron to be considered Core Competent, it must possess the following numbers of aircrew in the listed flight leadership/instructor categories (Note: If the squadron is < T/O, required numbers are reduced by a like %).

DESIGNATION	FA-18A CORE	FA-18C CORE	REMARKS
MSN CDR	4	4	
DIV LDR	6	6	
SEC LDR	8	8	
LATI	2	2	
ACTI	5	5	
NSI	2*	2	
WTI	2	2	
LSO	1#	2	#Field Qual

*WHEN NVD COMPATIBLE

7. **SORTIES REQUIRED TO QUALIFY FOR DESIGNATION AS FLIGHT LEAD**. The syllabus listed is only a guide and may be modified by the commanding officer as required. Flight lead qualifications will be developed and evaluated by the commanding officer or his designated representative with the group commander's approval

	MSN CDR	DIV LDR	SEC LDR
SORTIES	2	2	4
T&R CODES	DAS-352 DAS-454	AA-321 DAS-251	AA-216 AA-315 AS-233 CAS-241

8. **SORTIES REQUIRED FOR INSTRUCTOR CERTIFICATIONS**. Listed in the MAWTS-1 course catalog.

MARINE FIGHTER ATTACK SQUADRON - F/A-18D UNIT TEMPLATE

NOTE

The capabilities defined and described in the core capability and unit template sections are provided to ensure each like squadron maintains a common base of training and depth of capabilities. When resources permit, and when in the judgment of the commander additional training would significantly increase the unit's Warfighting capability, training to a level above these base Capabilities is permitted. It is incumbent upon, and expected of, the Commander to balance any increase in the depth of core capabilities Against the long term health and readiness of his unit while staying Within his resource constraints.

1. **TABLE OF ORGANIZATION**. T/O for an F/A-18 D squadron is 19 pilots and 19 WSO's.

2. **SQUADRON CORE CAPABILITY**

a. A core capable squadron is able to sustain the following minimum performance on a daily basis during sustained contingency/combat operations, assuming 100% PAA, $\geq$ 90% in reporting status and $\geq$ 90% T/O on hand in all MOS's. If < 90%, core capability will be degraded by a like percentage. The extent to which a core capable squadron is able to surge beyond its core capability is situation dependent.

b. A core capable squadron is able to sortie two divisions of mission capable aircraft in day/night OAS or AAW within six hours of frag order with the following imbedded capabilities:

-SEAD and HVAA escort as required for each division.

-Night capable.

-Operate from a main base or appropriate sized EAF.

-Employ PGM's and Air-to-Air missiles.

-Provide self-escort.

c. Be able to sortie four sections in FAC(A) role in lieu of other missions.

d. Within four hours of landing, sortie one division or two FAC(A) sections, same criteria.

3. **BASIC AIRCREW QUALIFICATIONS**. **As a minimum**, in order to be considered Core Competent, a squadron must possess the following numbers of aircrew who are Combat Qualification syllabus complete in each core skill (Note: If a squadron is < T/O, required numbers are reduced by a like %).

CORE SKILL	PILOT	WSO
A/A	12	12
A/S	12	12
SSWD	8	8
ASWD	8	8
LAT	12	12
NS	12	12
AR	12	12
FCLP/EQ	12	12
DAS	12	12
CAS	12	12
FAC (A)	6	6
TAC (A)	2	2

4. **SORTIES REQUIRED TO ATTAIN CORE SKILLS**

a. T&R CODES. To attain competency in core skills, aircrew must be current in 75% of the sorties listed in the 200 and 300 level syllabi for each skill.

b. Sortie Totals. Assuming successful attainment of required proficiency during the first sortie attempt, the number of sorties required to achieve competency in each skill area is contained in the following table.

PILOT	A/A	A/S	SSWD	ASWD	LAT	CAS
Pilot	26	10	7	3	4	4
WSO	26	10	7	3	4	4

PILOT	NS	AR	FCLP/EQ	DAS	CACC	**TOTAL**
Pilot	8	2	2	5	10	**81**
WSO	8	2	2	5	10	**81**

5. **SORTIES REQUIRED TO MAINTAIN CORE SKILLS**

a. After attaining initial competency in a skill area, individual aircrew are required to periodically redemonstrate proficiency in order to maintain competency.

b. Competency retention/redemonstration is managed through the completion of specific sorties at a directed refly interval. Assuming successful redemonstration of proficiency in each sortie and optimum chaining of lower level skills, the table below lists the number of semiannual sorties required in order to maintain competency.

PILOT	A/A	A/S	SSWD	ASWD	LAT	CAS
Pilot	18	7	4	N/A	1	4
WSO	18	7	4	N/A	1	4

PILOT	NS	AR	FCLP/EQ	DAS	CACC	**TOTAL**
Pilot	N/A	1	N/A	4	2	**41**
WSO	N/A	1	N/A	4	2	**41**

6. **FLIGHT LEADER/INSTRUCTOR QUALIFICATIONS**. **As a minimum**, in order for a squadron to be considered Core Competent, it must possess the following numbers of aircrew in the listed flight leadership/instructor categories (Note: If the squadron is < T/O, required numbers are reduced by a like %).

DESIGNATION	PILOT	WSO	REMARKS
MSN CDR	4		
DIV LDR	6	NA	
SEC LDR	8	NA	
LATI	2	NA	
ACTI	4	4	
NSI	2	2	
WTI	2	2	
LSO	1#	N/A	#Field Qual
FAC(A)I	2	2	
TAC(A) I	1		

7. **SORTIES REQUIRED TO QUALIFY FOR DESIGNATION AS FLIGHT LEAD.** The syllabus listed is only a guide and may be modified by the commanding officer as required. Flight lead qualifications will be developed and evaluated by the commanding officer or his designated representative with the group commander's approval

	MSN CDR	DIV LDR	SEC LDR
SORTIES	2	2	4
T&R CODES	DAS-352 DAS-454	AA-321 DAS-251	AA-216 AA-315 AS-233 CAS-241

8. **SORTIES REQUIRED FOR INSTRUCTOR CERTIFICATIONS**. Listed in the MAWTS-1 course catalog.

F/A-18 A/C CORE PROGRESSION MODEL

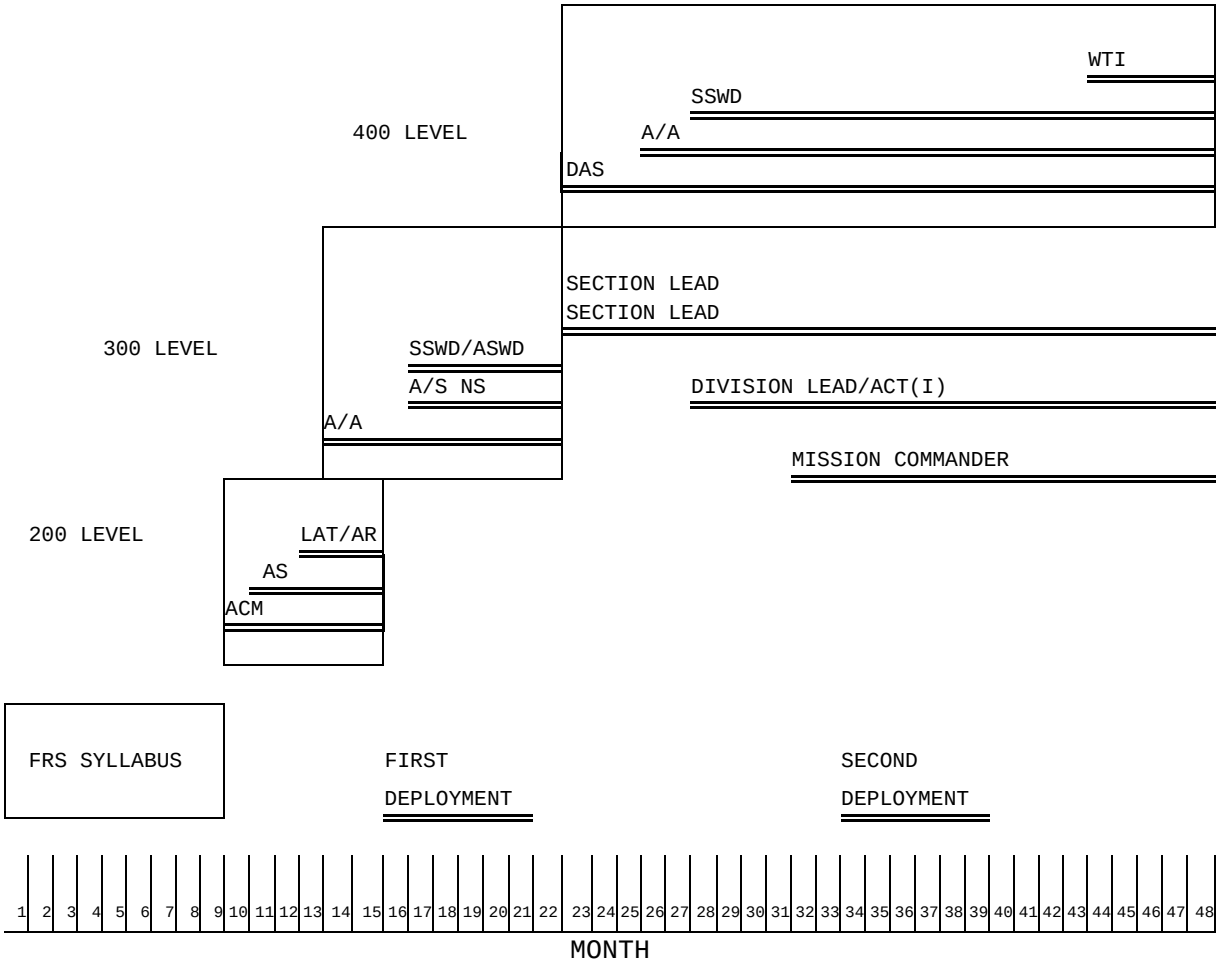

Figure 3.1.--F/A-18 A/C CORE PROGRESSION MODEL

F/A-18 D CORE PROGRESSION MODEL

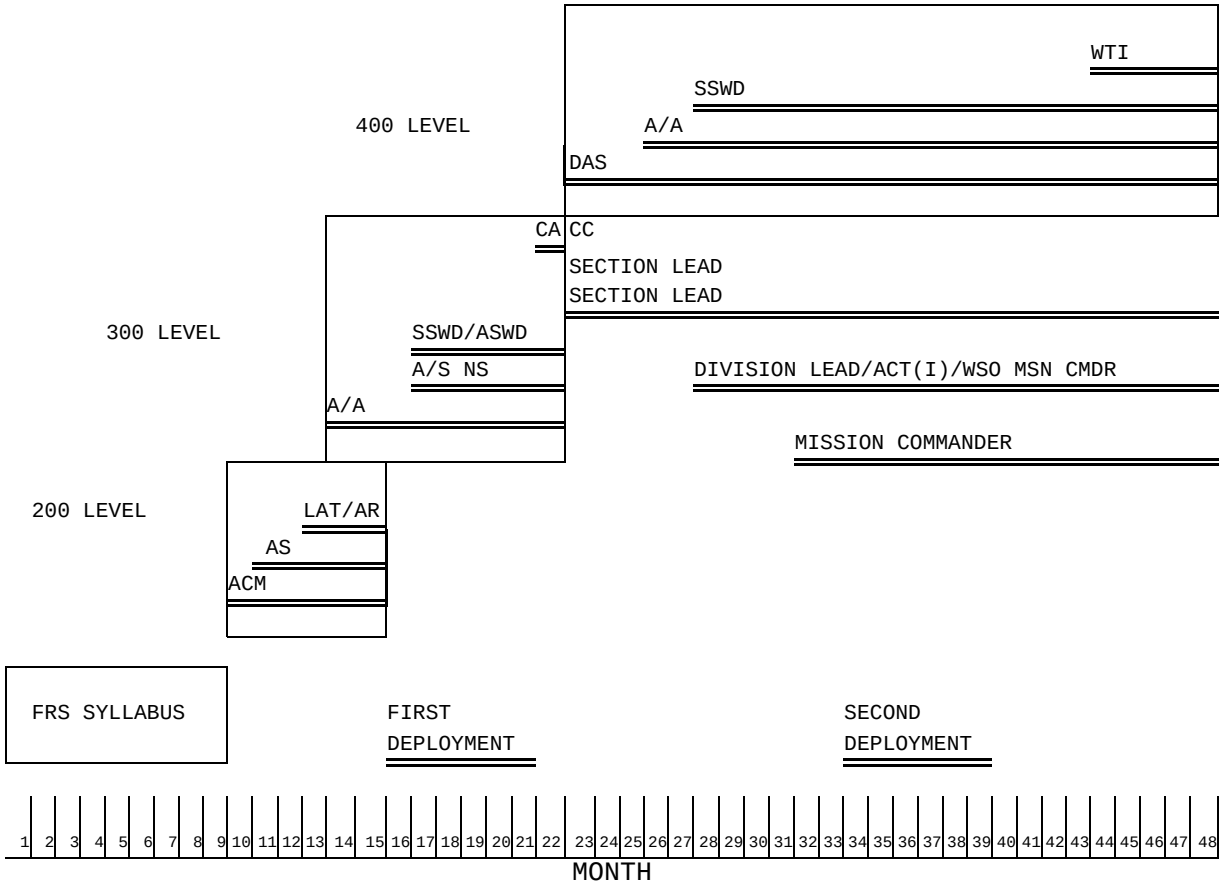

Figure 3.2.--F/A-18D CORE PROGRESSION MODEL

300. PROGRAM OF INSTRUCTION (POI) FOR BASIC PILOT AND WSO

WEEKS	COURSE/PHASE	ACTIVITY
1-33	Ground School/ISD, Flight Simulator Training, Combat Capable Training	Training Squadron
34-57	Combat Ready Training	Tactical Squadron
58-68	Combat Qualification Training	Tactical Squadron
69-79	Full-Combat Qualification Training	Tactical Squadron

301. POI FOR TRANSITION PILOT AND WSO

WEEKS	COURSE/PHASE	ACTIVITY
1-33	Ground School/ISD, Flight Simulator Training, Combat Capable Training	Training Squadron
34-57	Combat Ready Training	Tactical Squadron
58-68	Combat Qualification Training	Tactical Squadron
69-79	Full-Combat Qualification Training	Tactical Squadron

302. POI FOR COMPREHENSIVE REFRESHER PILOT AND WSO. (*731 days or greater since last F/A-18 flight.)*

WEEKS	COURSE/PHASE	ACTIVITY
1-21	Ground School/ISD, Flight Simulator Training, Combat Capable Training	Training Squadron
22-33	Combat Ready Training	Tactical Squadron
34-41	Combat Qualification Training	Tactical Squadron
42-49	Full-Combat Qualification Training	Tactical Squadron

303. POI FOR MODIFIED REFRESHER PILOT AND WSO. (*486 days or greater but less than 730 days since last F/A-18 flight.)*

WEEKS	COURSE/PHASE	ACTIVITY
1-6	Ground School/ISD, Flight Simulator Training, 10 Hours of Flight Time, and a NATOPS Check	Training Squadron
7-18	Combat Ready Training	Tactical Squadron
19-26	Combat Qualification Training	Tactical Squadron
27-34	Full-Combat Qualification Training	Tactical Squadron

304. POI FOR REFRESHER PILOT SAFE-FOR-SOLO. *(366 days or greater but less than 485 days since last F/A-18 flight.)*

WEEKS	COURSE/PHASE	ACTIVITY
1-5	Ground School/ISD, Flight Simulator Training, Safe-for-solo Check Flight	Training Squadron
6-18	Combat Ready Training	Tactical Squadron
19-26	Combat Qualification Training	Tactical Squadron
27-34	Full-Combat Qualification Training	Tactical Squadron

310. ACADEMIC TRAINING COURSES OF INSTRUCTION. To ensure the highest quality of training and readiness, squadron commanding officers will ensure that a comprehensive academic syllabus is conducted. This academic syllabus should focus on the unit's tactical mission and will be conducted once a week as a minimum. To add to the quality and scope of lectures given, the commanding officer should ensure that appropriately qualified individuals are sent to the schools listed below as a minimum.

COURSE	ACTIVITY
WTI	MAWTS-1 MCAS YUMA, AZ
Marine Division Tactics Course (MDTC)	MAWTS-1 MCAS YUMA, AZ
Navy Fighter Weapons School	NAS FALLON, NV
HARM University	CHINA LAKE, CA
SLAM School	POINT MUGU, CA
SLATS	NAS FALLON, NV

311. REFRESHER PILOT AND WSO

1. Purpose. Update training for pilots with a 7523 MOS and WSO's with a 7525 MOS who have not flown the F/A-18 within the previous 365 days.

2. General. All flights will be conducted in daylight VMC until the pilot or WSO is night and instrument qualified in the F/A-18.

a. Aircrew who have not flown the F/A-18 in 366 days or greater but less than 485 days will complete a modified refresher program which consists of ground school, simulator training, and a safe-for-solo check in the F/A-18. This training will be accomplished at a designated training squadron. Combat ready training will be accomplished in the tactical squadrons.

b. Aircrew who have not flown the F/A-18 in 486 days or greater but less than 730 days will complete a modified refresher program which consists of ground school, simulator training, 10 hours of flight time, and a NATOPS check in the F/A-18. This training will be accomplished at a designated training squadron. Combat ready training will be accomplished in the tactical squadrons.

c. Aircrew who have not flown the F/A-18 in 731 days or greater will complete a comprehensive refresher syllabus. Each phase of training in the combat capable stage is represented to ensure a comprehensive refresher syllabus. Completion of appropriate ground, simulator, and refresher flight training will be accomplished at a designated training squadron. Combat ready training will be accomplished in the tactical squadrons.

3. CRP Accounting. Aircrew completing a modified refresher syllabus are considered 60 percent CRP upon completion of the NATOPS check. Combat capable training proficiency is considered refreshed with 10 hours of flight time and a NATOPS check since the last flight in the F/A-18 has not exceeded 24 months.

320. FLIGHT TRAINING: BASIC, TRANSITION, AND REFRESHER

1. Combat Capable (CNO FRS) Pilot Training

a. Basic Syllabus

STAGE	FLIGHTS	HOURS	PERCENT
Familiarization and Instruments	7	10.3	0.0
Formation	3	4.5	0.0
Aerial Refueling	2	3.0	0.0
Navigation	3	4.5	0.0
Low Altitude Tactics	3	3.9	0.0
Air-to-Ground	16	21.6	0.0
All Weather Intercept	5	7.5	0.0
Fighter Intercept	4	5.6	0.0
Air-to-Air	17	17.0	0.0
Air-to-Air Gunnery	3	3.6	0.0
FCLP/Carrier Qualification	20	26.0	0.0
Night Attack	4	6.0	0.0
Total	**87**	**113.5**	**60.0%**

b. Transition Syllabus

STAGE	FLIGHTS	HOURS	PERCENT
Familiarization and Instruments	7	10.3	0.0
Formation	1	1.5	0.0
Aerial Refueling	1	1.5	0.0
Navigation	2	3.0	0.0
Low Altitude Tactics	3	3.9	0.0
Air-to-Ground	16	21.6	0.0
All Weather Intercept	5	7.5	0.0
Fighter Intercept	4	5.6	0.0
Air-to-Air	17	17.0	0.0
Air-to-Air Gunnery	3	3.6	0.0
Night Attack	4	6.0	0.0
Total	**63**	**81.5**	**60.0%**

c. Comprehensive Refresher

STAGE	FLIGHTS	HOURS	PERCENT
Familiarization and Instruments	6	9.6	0.0
Formation	1	1.5	0.0
Navigation	1	1.5	0.0
Low Altitude Tactics	2	2.6	0.0
Air-to-Ground	4	5.2	0.0
All Weather Intercept	2	3.0	0.0
Fighter Intercept	2	2.8	0.0
Air-to-Air	8	8.0	0.0
Total	**26**	**34.2**	**60.0%**

d. Modified Refresher

STAGE	FLIGHTS	HOURS	PERCENT
Familiarization and Instruments	7	10.3	0.0
Total	**7**	**10.3**	**60.0%**

e. Safe-for-Solo Refresher

STAGE	FLIGHTS	HOURS	PERCENT
Familiarization and Instruments	1	1.5	0.0
Total 1	**1**	**1.5**	**60.0%**

2. Combat Capable (CNO FRS) WSO Training

a. Basic Syllabus

STAGE	FLIGHTS	HOURS	PERCENT
Familiarization and Instruments	5	8.0	0.0
Navigation	3	4.5	0.0
Low Altitude Tactics	2	2.6	0.0
Air-to-Ground	16	22.0	0.0
All Weather Intercept	7	10.5	0.0
Fighter Intercept	4	5.6	0.0
Air-to-Air	16	16.0	0.0
Night Attack	4	5.6	0.0
Total	**57**	**74.8**	**60.0%**

b. Transition Syllabus

STAGE	FLIGHTS	HOURS	PERCENT
Familiarization and Instruments	5	8.0	0.0
Navigation	2	3.0	0.0
Low Altitude Tactics	1	1.3	0.0
Air-to-Ground	13	17.9	0.0
All Weather Intercept	6	9.0	0.0
Fighter Intercept	4	5.6	0.0
Air-to-Air	16	16.0	0.0
Night Attack	4	5.6	0.0
Total	**51**	**66.4**	**60.0%**

c. Comprehensive Refresher

STAGE	FLIGHTS	HOURS	PERCENT
Familiarization and Instruments	5	8.0	0.0
Navigation	2	3.0	0.0
Low Altitude Tactics	1	1.3	0.0
Air-to-Ground	7	9.5	0.0
All Weather Intercept	2	3.0	0.0
Fighter Intercept	2	2.8	0.0
Air-to-Air	9	9.0	0.0
Total	**28**	**36.6**	**60.0%**

d. Modified Refresher

STAGE	FLIGHTS	HOURS	PERCENT
Familiarization and Instruments	7	10.3	0.0
Total	**7**	**10.3**	**60.0%**

321. FLIGHT TRAINING: COMBAT READY/COMBAT QUALIFICATION/FULL COMBAT QUALIFICATION

1. COMBAT READY

Stage	A Sort	A Hrs	A CRP	C Sort	C Hrs	C CRP	D Sort	D Hrs	D CRP
Navigation	2	2.8	0.7	2	2.8	0.7	2	2.8	0.7
Air-to-Air	14	15.5	6.1	14	15.5	6.1	14	15.5	6.1
Aerial Refueling	2	3	0.7	2	3	0.7	2	3	0.7
Field Carrier Landing Prac	2	2	0.6	2	2	0.6	2	2	0.6
Low Altitude Training	2	2	0.8	2	2	0.8	2	2	0.8
Electronic Warfare	1	1.5	0.4	1	1.5	0.4	1	1.5	0.4
Air-to-Surface	6	9	3.4	6	9	3.4	6	9	3.4
Close Air Support	2	3	1.1	2	3	1.1	2	3	1.1
Deep Air Support	2	3	1.2	2	3	1.2	2	3	1.2
Totals	33	41.8	15	33	41.8	15	33	41.8	15

2. COMBAT QUALIFICATION

Stage	A Sort	A Hrs	A CRP	C Sort	C Hrs	C CRP	D Sort	D Hrs	D CRP
Air-to-Air	12	15.6	8	12	15.6	6.3	12	15.6	4.1
Low Altitude Training	2	2	1	2	2	1	2	2	0.8
Aerial Specific Weapons Del	3	3.5	2	3	3.5	2	3	3.5	1.6
Surface Specific Weapons Del	6	9	2.8	7	10.5	3.2	7	10.5	2
Air-to-Surface	4	6	2.7	4	6	2.4	4	6	2
Close Air Support	2	3	1.6	2	3	1.6	2	3	1.2
Deep Air Support	3	4.5	1.9	3	4.5	1.5	3	4.5	1.5
Night Systems				8	10.4	2	8	10.4	2
Combat Arms Coord and Cntl							10	15	4.8
Totals	32	43.6	20	41	55.5	20	51	70.5	20

3. FULL COMBAT QUALIFICATION

Stage	A Sort	A Hrs	A CRP	C Sort	C Hrs	C CRP	D Sort	D Hrs	D CRP
Carrier Qualification				2	3	1			
Air-to-Air	2	2.6	0.6	2	2.6	0.6	2	2.6	0.6
Surface Specific Weapons Del	2	3	0.6	5	7.5	1.2	2	3	0.6
Deep Air Support	6	9	3.8	6	9	2.2	6	9	3.8
Totals	10	14.6	5	15	22.1	5	10	14.6	5

4. SUMMARY

Stage	A Sort	A Hrs	A CRP	C Sort	C Hrs	C CRP	D Sort	D Hrs	D CRP
Combat Ready	33	41.8	15	33	41.8	15	33	41.8	15
Combat Qualified	32	43.6	20	41	55.5	20	51	70.5	20
Full Combat Qualified	10	14.6	5	15	22.1	5	10	14.6	5
Totals	75	100	40	89	119.4	40	94	126.9	40

5. FLIGHT SIMULATORS

a. Flight simulators will be utilized to the maximum extent possible. To enhance flight training and airborne proficiency, simulators will be flown as a prerequisite for all stages of training when squadrons are located near mission capable simulators. Where simulators are not available, commanders may authorize the simulator events to be waived or flown in the aircraft as required.

b. During combat qualification and full combat qualification training simulators can be used to update SSWD sorties when the mission has first been flown in the aircraft. For example, if an aircrew completes an SSWD in the aircraft and flies a simulator event within the appropriate refly interval, the simulator will update the SSWD CRP for that particular SSWD.

6. CRP ACCOUNTABILITY. Logging multiple training codes on a single sortie shall be avoided. Exceptions should be made for sorties during which multiple unique training events can be completely accomplished. For example, it is appropriate to log three separate training codes if, during the conduct of a sortie, the flight completes all of the specific event requirements for a syllabus event, conducts air-to-air refueling and completes all AR requirements, then completes a third syllabus event prior to landing. If multiple syllabus events are to be accomplished during a single flight evolution, appropriate planning, briefing, and debriefing time must be allotted to ensure that requisite training objectives can be met.

7. FLIGHT TRAINING GENERAL

a. Mission guidance is generalized to allow for local conditions and to allow this document to remain unclassified. Squadrons are encouraged to use the full range of tactics in the tactical manuals and to adopt the latest developed and proven tactics.

b. All flights shall terminate with a comprehensive debrief with emphasis on aircrew performance utilizing all evaluation techniques available (e.g., TACTS, VTR/CVRS, participating aircrews, and GCI personnel).

c. The T&R Manual is the Marine Corps aircrew training document. It relates the training requirements and standards for Marine aircrew. When operational commanders assign F/A-18 squadrons to prolonged commitments where specific T&R training is not available (e.g., deployed aboard CV), it is expected that degradation in some mission areas will occur. Commanding officers are authorized and encouraged to employ the F/A-18 in specific missions relating to their current situation and avoid those mission areas not relevant to their situation. It is not intended for squadrons to train to specific mission areas and avoid capabilities that the F/A-18 is very capable of conducting, but are difficult to coordinate. This type of mission specific training is granted only to squadron commanding officers deployed in austere conditions that prevent them from employing the T&R manual as written.

d. **The events in this syllabus should be flown in order**. Aircrew should not be scheduled to fly a higher stage syllabus event before flying the entire lower stage. For example, an aircrew should not fly any 300 level AA event until all of the 200 level AA codes are flown. The commanding officer may waive this requirement based on aircrew experience and operational necessity.

8. AIRCREW COORDINATION. Aircrew coordination shall be briefed for all flights and/or events.

9. NIGHT AND NIGHT OPTIONAL (N) PREREQUISITES

a. The following table depicts the minimum requirements necessary before an individual is allowed to fly a Night or Night Optional flight.

	Night	Night Optional (N)
Non-NVD	1. Meet Night currency requirements of Vol 1	1. Meet Night currency requirements of Vol 1
NVD	Note 1 (above) applies and 2. NSQ-HI/LO	Note 1 (above) applies and 2. NSQ-HI/LO

10. EVALUATED (E CODED) SORTIES. E coded sorties are used to evaluate whether an aircrew has mastered the skills outlined for that particular stage. Evaluations shall be conducted the first time each event is flown, when an aircrew is returning to the fleet as a transition or refresher aircrew, and anytime an evaluated (E coded) event is flown. Evaluations shall be conducted by an ACTI for air-to-air sorties, a LATI for LAT sorties, the flight lead for air-to-surface sorties, a mission commander for DAS sorties, a FAC(A)I or TAC(A)I for CACC sorties, a section or division lead for the appropriate section or division lead work-up sorties, a NSI-HI/LO for night systems sorties, and an LSO for landing sorties.

11. MISSION PERFORMANCE STANDARDS (MPSs). Mission Performance Standards (MPSs) are listed for each T&R event description. These MPSs are training standards for individual aircrew performance and should be utilized by the evaluator as a guideline to determine the satisfactory completion of each event.

SECTION II - F/A-18 A/C/D COMMON TRAINING

330. COMBAT CAPABLE/FRS PILOT AND WSO PHASE

1. General

a. DC/S for aviation has authorized the F/A-18A/C/D syllabi to deviate in the 300 and above events provided that "like events" maintain the same Goals, Requirements and Mission Performance Standards. The intent is to provide adequate flexibility to the F/A-18 community in order to maximize training in series specific missions (i.e., TAC(A), FAC(A), and RECCE) while maintaining as close to a commonly trained F/A-18 aircrew as possible.

b. Pilot training is provided at one of three "joint" FRSs (VMFAT-101, VFA-106, or VFA-125). The pilot training standard is the CNO approved F/A-18A/C pilot syllabus. WSO training is provided only at VMFAT-101.

c. The WSO training standard is the VMFAT-101, CNO sanctioned F/A-18D WSO syllabus. This section lists the approved syllabi in CNO format. Syllabus event acronyms and number identifiers are from the CNO syllabus and should not be confused with the 200-600 series T&R syllabus events which follow. In some stages, gaps in numbering the sorties were carried over from the CNO syllabus to the T&R manual to retain standardization with the FRS CNO syllabi.

2. Syllabus

a. The following tables summarize Combat Capable FRS training (100 level T&R) F/A-18 simulator and flight training by category, Pilot and WSO. CNO/T&R terminology: Category I/Basic, Category II/Transition, Category III/ Comprehensive Refresher, and Category IV/Modified Refresher. Pilot simulators and sorties are denoted with a number and WSO simulators and sorties are denoted by a number followed by a "W" symbol. In cases where pilot and WSO simulators and sorties have the same duration and similar learning objectives the description is condensed into one entry such as "SFAM 102/102W." Goals and requirements listed in a condensed entry that apply only to a replacement pilot (RP) alone are preceded by an RP and those that apply only to a replacement WSO (RWSO) are preceded by an RWSO. There exists no Conversion syllabus for F/A-18A/C pilot conversion to F/A-18D. All F/A-18 pilots are qualified to fly the F/A-18A/C/D after assignment of the 7523 MOS.

b. Simulators

			CATEGORY					
			PILOT			WSO		
EVENT	DURATION	DESCRIPTION	I	II	III	I	II	III
SFAM-100W	1.0	VFR FLIGHT FAM				X	X	X
SFAM-101/101W	1.0	DISPLAYS/CNI	X	X	X	X	X	X
SFAM-102/102W	1.5	GRND OPS AND EPS	X	X	X	X	X	X
SFAM-103/103W	1.5	GRND OPS AND EPS	X	X	X	X	X	X
SFAM-104	1.5	GRND OPS PRACTICE	X	X	X			
SFAM-104W	1.5	RCP DISP/CREW COORD				X	X	X
SFAM-105/105W	1.5	FUEL AND ENG EPS	X	X	X	X	X	X
SFAM-106	1.5	APPROACH PRACTICE	X	X	X			
SFAM-107/107W	1.5	HYD/ELEC EPS	X	X	X	X	X	X
SFAM-108/108W	1.5	FLT CONTROL EPS	X	X	X	X	X	X
SFAM-109	1.5	SOLO CHECK	X	X	X			
SFAM-110/110W	1.5	NATOPS CHECK	X	X	X	X	X	X

(Simulators, continued)

EVENT	DURATION	DESCRIPTION	CATEGORY PILOT I	PILOT II	PILOT III	WSO I	WSO II	WSO III
SINT-001	1.5	INSTRUMENT CHECK	X	X	X			
SNAV-170/170W	1.5	VIS/INS NAV INTRO	X	X		X	X	
SLAT-175	1.0	LAT INTRO	X	X	X			
SLAT-176/176W	1.0	LAT BASICS	X	X	X	X	X	X
SSTK-181/181W	1.5	SMS DISPLAYS/CCIP	X	X		X	X	
SSTK-182/182W	1.0	AUTO COMPUTED DIVE	X	X	X	X	X	X
SSTK-183/183W	1.0	LOW ANGLE/STRAFE/POP	X	X		X	X	
SSTK-184/184W	1.5	SYSTEM DEGD/SECTION	X	X	X	X	X	X
SSTK-185/185W	1.5	RDR NAV AND BOMBING	X	X		X	X	
SSTK-188/188W	1.5	LOW/MED THT CAS INTRO	X	X		X	X	
SSTK-189/189W	1.5	HIGH THREAT CAS INTRO	X	X		X	X	
SSTK-284/284W	1.5	WALLEYE/ERDL WALLEYE	X	X		X	X	
SSTK-285/285W	1.0	FLIR/LDT/LGB BOMBING	X	X		X	X	
SSTK-286/286W	1.5	MAVERICK DELIVERY	X	X		X	X	
SEWT-101/101W	1.5	EW EQUIP/SAM COUNTERS	X	X		X	X	
SEWT-102/102W	1.0	RADAR ECCM	X	X		X	X	
SEWT-103/103W	1.0	DATA LINK	X	X		X	X	
SEWT-104/104W	1.0	HARM INTRO	X	X		X	X	
SEWT-105/105W	1.0	HARM DELIVERY	X	X		X	X	
SAWI-121/121W	1.5	A/A DISPLAYS/OPS	X	X		X	X	
SAWI-122/122W	1.0	BASIC INTERCEPT GEO	X	X		X	X	
SAWI-123/123W	1.0	STERN CONVERSIONS	X	X	X	X	X	X
SAWI-124/124W	1.0	STERN CONVERSIONS	X	X		X	X	
SAWI-125/125W	1.0	ATTK/REATTK	X	X	X	X	X	X
SAWI-126/126W	1.0	ATTK/REATTK	X	X		X	X	
SAWI-127/127W	1.0	HI/LOW INTERCEPTS	X	X		X	X	
SAWI-128/128W	1.0	JINKING BOGEY	X	X		X	X	
SAWI-129/129W	1.0	UNKNOWN BOGEY	X	X	X	X	X	X
SAWI-130/130W	1.0	SUPERSONIC INTRCPTS	X	X		X	X	
SAWI-131/131W	1.0	PASSIVE INTERCEPTS	X	X		X	X	X
SSRA-135/135W	1.0	FWD QTR SORT/ATTK	X	X	X	X	X	X
SSRA-136/136W	1.0	VID INTERCEPTS	X	X	X	X	X	X
SFWT-151/151W	1.5	FWD QTR MSL DEF	X	X	X	X	X	X
SGUN-160/160W	1.0	A/A GUNS BANNER	X	X		X	X	
SCQL-201	1.0	CV PROCEDURES	X					
SCQL-202	1.0	CV PROCEDURES	X					
SCQL-203	1.0	CV PROCEDURES	X					
SCQL-204	1.0	CV PROCEDURES	X					
SCQL-205	1.0	CV PROCEDURES	X					
SCQL-206	1.5	CV PROCEDURES	X					
SNATK-146/146W	1.0	NVD INTRO/FAM	X	X		X	X	
SNATK-147/147W	1.0	NVD LO LEVEL PROC	X	X		X	X	
TOTAL SIMULATORS			**52**	**46**	**21**	**43**	**43**	**19**
TOTAL HOURS			**63.5**	**57.0**	**27.5**	**52.0**	**52.0**	**23.5**

c. Flights

EVENT	DURATION	DESCRIPTION	CATEGORY PILOT I	PILOT II	PILOT III	WSO I	WSO II	WSO III
FFAM-101	1.5	BASIC FAM	X	X	X			
FFAM-101W	1.6	INSTRUMENT INTRO				X	X	X
FFAM-102	1.8	INST ROUND ROBIN	X	X	X			
FFAM-102W	1.6	INSTRUMENT FLIGHT				X	X	X
FFAM-103	1.8	INST ROUND ROBIN	X	X	X			
FFAM-103W	1.6	INSTRUMENT FLIGHT				X	X	X
FFAM-104	1.5	FAM PROGRESS CHECK	X	X	X			
FFAM-104W	1.6	FAM PROGRESS CHECK				X	X	X
FFAM-105	1.5	FAM SOLO	X	X	X			
FFAM-105W	1.6	NIGHT INST FLIGHT				X	X	X
FFAM-106	0.7	FCLP	X	X				
FFAM-107	1.5	NIGHT FAM	X	X	X			
FFRM-111	1.5	SECT FORM	X					
FFRM-112	1.5	DIV FORM	X					
FFRM-113	1.5	NIGHT FORM	X	X	X			
FIFR-115	1.5	INFLT REFUEL (DAY)	X	X				
FIFR-116	1.5	INFLT REFUEL (NITE)	X					
FNAV-171/171W	1.5	VISUAL/INS NAV	X			X		
FNAV-172/172W	1.5	VISUAL/INS NAV	X	X	X	X	X	X
FNAV-173/173W	1.5	RADAR NAV	X	X		X	X	X
FLAT-175	1.3	LAT MANUEVERING	X	X	X			
FLAT-176/176W	1.3	LOW ALT TACTICS	X	X	X	X	X	X
FLAT-177/177W	1.3	LAT TACTICAL CIRCUIT	X	X		X		
FSTK-181/181W	1.3	SENSOR(RDR/FLIR) BOMB	X	X		X	X	X
FSTK-182	1.3	CCIP/MANUAL DELIVERY	X	X	X			
FSTK-182W	1.3	CCIP/AUTO DELIVERY				X	X	X
FSTK-183	1.3	AUTO DESIGNATE SLEW	X	X				
FSTK-184	1.3	AUTO DESIGNATE SLEW	X	X	X			
FSTK-185W	1.3	RADAR/FLIR BOMB	X	X		X	X	X
FSTK-186/186W	1.3	LO ANGLE BOMB/STRAFE	X	X		X		
FSTK-187	1.3	POP-UP/LEVEL LAYDOWN	X	X				
FSTK-188/188W	1.3	POP-UP DELIVERY	X	X	X	X		
FSTK-189/189W	1.3	SECTION ATTACKS	X	X	X	X	X	X
FSTK-190/190W	1.3	HEAVY ORD/STRAFE	X	X		X	X	X
FSTK-191/191W	1.5	NIGHT COMPUTED BOMB	X	X		X	X	
FSTK-192/192W	1.3	HIGH ALT TACTICS	X	X		X	X	
FSTK-280/280W	1.5	LOW THREAT CAS	X			X		
FSTK-281/281W	1.5	MEDIUM THREAT CAS	X	X	X	X	X	X
FSTK-282/282W	1.5	HIGH THREAT CAS	X	X		X	X	X
FSTK-283/283W	1.3	OPPOSED COORD STRIKE	X	X		X	X	
FSTK-284/284W	1.3	HIGH ALT TGT ACQ	X	X		X	X	
FSTK-290W	1.5	LOW THREAT FAC(A)				X	X	

(Flights, continued)

EVENT	DURATION	DESCRIPTION	CATEGORY PILOT I	PILOT II	PILOT III	WSO I	WSO II	WSO III
FSTK-291W	1.5	MEDIUM THREAT FAC(A)				X	X	
FAWI-121/121W	1.5	STERN CONVERSIONS	X	X		X	X	
FAWI-122/122W	1.5	ATTACK/REATTACK	X	X		X		X
FAWI-123/123W	1.5	ATTACK/REATTACK	X	X	X	X	X	
FAWI-124/124W	1.5	HI TO LOW INTCPT	X	X		X	X	
FAWI-125/125W	1.5	JINKING/UNKNOWN BOGEY	X	X	X	X	X	X
FAWI-126W	1.5	PASSIVE INTERCEPTS				X	X	
FAWI-127W	1.5	NIGHT ATTACK/REATTACK				X	X	
FSRA-130/130W	1.4	1V2 SORT/ATTACK	X	X		X	X	X
FSRA-131/131W	1.4	2V1 RDR ATTACK	X	X		X	X	
FSRA-132/132W	1.4	2V2 SORT/ATTACK	X	X	X	X	X	X
FSRA-133/133W	1.4	2V2 SORT/ATTACK	X	X	X	X	X	
FBFM-140/140W	1.0	1V0 BASIC MAN	X	X	X	X	X	X
FBFM-141/141W	1.0	SCISSORS MAN	X	X	X	X	X	X
FBFM-142	1.0	OFFENSIVE MAN	X	X				
FBFM-143/143W	1.0	DEFENSIVE MAN	X	X	X	X	X	X
FBFM-144	1.0	OFF/DEF MAN	X	X				
FBFM-145/145W	1.0	SEPARATION GAMEPLANS	X	X	X	X	X	X
FBFM-146/146W	1.0	PRESSURE GAMEPLANS	X	X		X	X	
FBFM-147W	1.0	LOOKOUT DRILL/DEF MAN				X	X	X
FFWT-151/151W	1.0	1V1 DISSIMILAR	X	X		X	X	
FFWT-152	1.0	1V1 DISSIMILAR	X	X	X			
FFWT-153/153W	1.0	1V1 DISSIMILAR	X	X	X	X	X	X
FFWT-154W	1.0	1V2 DISSIMILAR				X	X	X
FFWT-155/155W	1.0	2V1 DISSIMILAR	X	X		X	X	
FFWT-251/251W	1.0	2V2 DISSIMILAR/VID	X	X		X	X	
FFWT-252/252W	1.0	2V2 DISSIMILAR/VID	X	X	X	X	X	X
FFWT-253/253W	1.0	2V2 DIS FQTR TACTICS	X	X		X	X	
FFWT-254/254W	1.0	2V UNKNOWN	X	X		X	X	
FFWT-255/255W	1.0	2V2 THREAT TACTICS	X	X		X	X	
FFWT-256/256W	1.0	2/4V UNKNOWN	X	X	X	X	X	X
FGUN-161	1.2	A/A GUNS BANNER	X	X				
FGUN-162	1.2	A/A GUNS BANNER	X	X				
FGUN-163	1.2	A/A GUNS BANNER	X	X				
FCQL-201	1.2	DAY FCLP	X					
FCQL-202	1.2	NIGHT FCLP	X					
FCQL-203	1.2	NIGHT FCLP CASE III	X					
FCQL-204	1.2	NIGHT FCLP CASE III	X					
FCQL-205	1.2	NIGHT FCLP CASE III	X					
FCQL-206	1.2	DAY FCLP	X					
FCQL-207	1.2	NIGHT FCLP CASE III	X					
FCQL-208	1.2	NIGHT FCLP	X					
FCQL-209	1.2	NIGHT FCLP	X					
FCQL-210	1.2	DAY FCLP	X					

(Flights, continued)

EVENT	DURATION	DESCRIPTION	CATEGORY PILOT I	PILOT II	PILOT III	WSO I	WSO II	WSO III
FCQL-211	1.2	NIGHT FCLP CASE III	X					
FCQL-212	1.2	DAY FCLP DEGRADED	X					
FCQL-213	1.2	NIGHT FCLP CASE III	X					
FCQL-214	1.2	NIGHT FCLP CASE III	X					
FCQL-215	1.2	NIGHT FCLP CASE III	X					
FCQL-216	1.2	DAY FCLP CASE I	X					
FCQL-217	1.7	DAY CQ	X					
FCQL-218	1.7	NIGHT CQ	X					
FCQL-219	1.7	DAY CQ	X					
FCQL-220	1.7	NIGHT CQ	X					
FNATK-146	1.5	NVD INTRO AND NAVIG	X	X				
FNATK-146W	1.5	NVD AWI AND FORMATION				X	X	
FNATK-147	1.5	NVD LOW LEVEL PROC	X	X				
FNATK-147W	1.5	NVD VISUAL/RDR NAVIG				X	X	
FNATK-148	1.5	NVD BOMBING INTRO	X	X				
FNATK-148W	1.3	NVD NAV/ROLL-IN BOMB				X	X	
FNATK-149	1.5	NVD LL TO POP ATTACKS	X	X				
FNATK-149W	1.3	NVD POP ATTACKS				X	X	
TOTAL SORTIES			**88**	**63**	**27**	**57**	**51**	**28**
TOTAL HOURS			**114.8**	**91.3**	**35.7**	**74.8**	**66.4**	**36.6**

331. COMBAT READY PHASE (F/A-18A/C/D)

1. NAVIGATION (NAV)

a. Purpose. Maintain proficiency in instrument flight, airways navigation, and low level navigation.

b. General. NAV-200 may be flown in the simulator for proficiency with appropriate CRP increase.

c. Simulator Training. None.

d. Flight Training. (2 Flights, 2.8 Hours)

NAV-200 1.5 T,R 1+ F/A-18A/C/D A (N)

Goal. Maintain instrument flight proficiency and familiarize aircrew with local course rules and field SOP.

Requirement. Conduct instrument flight IAW existing instrument flight rules. One instrument approach required for completion.

Prerequisite. None.

Ordnance. None.

External Syllabus Support. None.

NAV-201 1.3 T,R 2 F/A-18A/C/D A (N)

Goal. Develop aircrew proficiency in planning and executing a low altitude navigation mission using the F/A-18 navigation system. Emphasis should be placed on accurate navigation, fuel management, timing, sensor usage, update techniques, and recognizing visual check points.

Requirement. Fly a published MTR. Plan a high-low-high profile with fuel figures utilizing a mission planning system. Find three checkpoints with either the radar or FLIR, and identify three visual checkpoints along the route. Perform one sensor update during flight.

Prerequisite. None.

Ordnance. As required if combined with an A/G syllabus flight.

External Syllabus Support. Local MTR.

2. Aerial Refueling (AR)

a. Purpose. Become proficient in aerial refueling operations.

b. General

(1) These sorties may be combined with other syllabus flights.

(2) Aerial refueling sorties should be flown IAW MCCRES mission performance standards.

c. Ground Training. None.

d. Simulator Training. None.

e. Flight Training. (2 Flights, 3.0 Hours).

AR-202 1.5 T,R F/A-18A/C/D A

Goal. Become proficient in day aerial refueling.

Requirement. Five plugs required for completion. If proficient, one plug required for completion.

Mission Performance Standards

(a) Executes safe rendezvous procedures.
(b) Uses proper communications procedures.
(c) From a stabilized position, engages the basket expeditiously.
(d) Responds quickly and safely to all communications and communications out signals from the tanker aircraft.

Prerequisite. None.

Ordnance. None.

External Syllabus Support. One tanker.

AR-203 1.5 T,R 2 F/A-18A/C/D A N

Goal. Become proficient in night aerial refueling and evaluate refueling technique.

Requirement. Five plugs required for completion. If proficient, one plug required for completion.

Mission Performance Standards

(a) Executes safe rendezvous procedures.
(b) Uses proper communications procedures.
(c) From a stabilized position, successfully engages the basket expeditiously.
(d) Responds quickly and safely to all communications and communications out signals from the tanker aircraft.

Prerequisite. AR-202.

Ordnance. None.

External Syllabus Support. One tanker.

3. Field Carrier Landing Practice/Expeditionary Qualification (FCLP/EQ)

a. Purpose. Practice for carrier operations or qualify for EAF operations.

b. General. Each FCLP simulator is a prerequisite for the corresponding training flight when qualification is aboard a CV. Each FCLP flight is a training flight for CV qualification in the 400 level stage.

c. Ground Training. IAW LSO NATOPS.
d. Simulator Training. (2 Periods, 2.0 Hours).

SFCLP/EQ-204 1.0 T,R WTT S

Goal. Conduct simulated carrier landings using Case I and Case III procedures. Emphasis should be placed on pattern procedures, landing technique, deck procedures, and emergency procedures.

Requirement. Perform a Case I and two Case III recoveries to multiple carrier landings. Four passes required for completion. Simulator must be monitored by an LSO.

External Syllabus Support. LSO.

e. Flight Training. (2 Flights, 2.0 Hours).

FCLP/EQ-204 1.0 T,R F/A-18A/C/D A

Goal. Practice day FCLP procedures or qualify for day expeditionary landing operations.

Requirement. For FCLPs perform touch and go's under the control of an LSO. Six touch and go's required for completion. For EQ, perform four touch and go’s, an arrested landing, and a launch from an expeditionary airfield.

Mission Performance Standards

(a) Fly 5 Fair ((OK)) passes IAW LSO NATOPS Criteria.
(b) Responds quickly and safely to all communications and communications out signals from LSO if required.

Prerequisite. SEQ-204.

Ordnance. None.

External Syllabus Support. LSO.

FCLP/EQ-205 1.0 T,R F/A-18A/C/D A N

Goal. Practice night FCLP procedures or qualify for night expeditionary landing operations.

Requirement. For FCLPs perform touch and go's under the control of an LSO. Six touch and go's required for completion. For EQ, perform four touch and go’s, an arrested landing, and a launch from an expeditionary airfield.

Mission Performance Standards

(a) Fly 5 Fair ((OK)) passes IAW LSO NATOPS Criteria.
(b) Responds quickly and safely to all communications and communications out signals from LSO if required.

Prerequisite. FCLP/EQ-204.

Ordnance. None.

External Syllabus Support. LSO.

4. Electronic Warfare

a. Purpose. Develop proficiency in medium to high altitude tactics, techniques, and procedures (TTPs) for survival in a surface-to-air threat environment. These TTPs will be utilized in subsequent phases of training where a surface-to-air threat exists.

b. General. The events in this stage of training are designed to be flown on an electronic warfare range with scorable threat flyout simulations. A TACTS range with simulated RWR and missile flyout can be substituted.

c. Ground Training. Prior to beginning this stage of training, aircrew should receive ground training in the weapons and tactics which are employed by the F/A-18 and all threat weapons and tactics. The MAWTS-1 Academic Support Package (ASP) contains lectures appropriate for this stage. At a minimum, the squadron WTI should give the following lectures to aircrew under instruction.

(1) Non-Radar SAMs and AAA.
(2) SAM Counter Tactics (SCT).
(3) F/A-18 EW Suite and Expendables.
(4) Radar SAMs.
(5) F/A-18 Threat Countertactics.

d. Simulator Training. (1 Period, 1.0 Hour).

SEW-206 1.0 T,R WTT S

Goal. Practice medium and high altitude TTPs to survive in a surface-to-air threat environment. Emphasis should be placed on correctly assessing the relative threat level and performing the appropriate preemptive or reactive maneuvers.

Requirement. Conduct a simulated two-ship air interdiction mission in a medium to high threat surface-to-air environment. Conduct preemptive and reactive maneuvers to defeat the simulated IADS. Consult current Tactical Manuals (TACMANs) for appropriate maneuvers.

e. Flight Training. (1 Flight, 1.5 Hours).

EW-206 1.5 T,R 2 F/A-18A/C/D A (N)

Goal. Practice medium and high altitude TTPs to survive in a surface-to-air threat environment. Emphasis should be placed on correctly assessing the relative threat level and performing the appropriate preemptive or reactive maneuvers.

Requirement. Conduct a two-ship air interdiction mission in a medium to high threat surface-to-air environment. Conduct preemptive and reactive maneuvers to defeat the simulated IADS. Consult current TACMANS for appropriate maneuvers.

Mission Performance Standards

(a) Correctly assesses the threat based upon the briefed scenario and aircraft system cueing (i.e. ALR-67, etc.).
(b) Correctly performs briefed TTPs while maintaining situational awareness on position relative to flight.

(c) Able to survive the simulated threat and continue with mission.

Prerequisite. SEW-206.

Ordnance. 6 Mk-76, 20 chaff, and 10 flares.

External Syllabus Support. EW/TACTS range with ground based simulators.

5. Low Altitude Tactics

a. Purpose. Develop proficiency in F/A-18 low altitude tactics.

b. General

(1) Emphasis should be placed on LAT procedures, communications, and maneuver techniques. Upon completion of the LAT stage, aircrew should be able to perform low altitude navigation, tactical ingress into a heavily defended target at low altitude, and execute defensive maneuvers against surface-to-air or air-to-air threats.

(2) SLAT-208 is a prerequisite for the corresponding training flight when the sortie has not been previously flown or when the aircrew is returning to the fleet as a transition or refresher aircrew. Simulators are not prerequisites for sorties that are being reflown.

(3) Flights shall be flown on a published MTR or approved LAT course.

(4) LAT-208 and 209 require a LATI chase when the aircrew is not LAT qualified or when an aircrew loses proficiency.

(5) Currency and altitude restrictions, as stated in MCO P3500.14, apply. (T&R Vol I)

(6) Aircraft should be configured with an operable VTR/CVRS, ALQ-126B, ALR-67, CATM-9, KY-58, and chaff and flares.

c. Ground Training. Completion of the MAWTS-1 Low Altitude Training Academic Support Package parts I-IV.

d. Simulator Training. (1 Period, 1.0 Hour).

SLAT-208	1.0	T,R WTT S

Goal. Practice conventional and three dimensional LAT. Emphasis should be placed on LAT procedures, communications, and maneuver techniques.

Requirement. Perform 50% dive recoveries, Nav/Hard/Break turns, speed rush baseline, MAC, vertical jinks, straight ahead oblique jinks, turning oblique jinks, and reverse oblique jinks.

e. Flight Training. (2 Flights, 2.0 Hours).

LAT-208 1.0 T,R 2 F/A-18A/C/D A

Goal. Develop proficiency in single ship and section conventional LAT. Emphasis should be placed on LAT procedures, communications, and maneuver techniques.

Requirement. As a single ship, perform descent to comfort level, straight and level, ridgeline crossings, speed rush base line, and Nav/Hard/Break turns. As a section, perform called and uncalled turns, ridgeline crossings, and execute a simulated target attack.

Mission Performance Standards

(a) Performs maneuvers as briefed.
(b) Remains above briefed minimum altitude.

Prerequisite. SLAT-208.

Ordnance. 5 chaff/5 flares.

External Syllabus Support. None.

LAT-209 1.0 T,R 2 F/A-18A/C/D A

Goal. Practice conventional and three dimensional LAT. Emphasis should be placed on LAT procedures, communications, and maneuver techniques.

Requirement. Perform 50% dive recoveries, level turns, ridgeline crossings, MAC, Nav/Hard/Break turns, vertical jinks, straight ahead oblique jinks, turning oblique jinks, reverse oblique jinks, and a section target attack.

Mission Performance Standards

(a) Performs maneuvers as briefed.
(b) Adheres to dive recovery rules.
(c) Remains above briefed minimum altitude.

Prerequisite. LAT-208.

Ordnance. 5 chaff/5 flares.

External Syllabus Support. None.

6. Air-to-Air (AA)

a. Purpose

(1) Increase aircrew proficiency in employing the F/A-18 in basic fighter maneuvering and air-to-air missions.

(2) Knowledge of air-to-air aircraft systems and performance characteristics should be emphasized throughout this phase. Employment envelopes and shot validity for air-to-air weapons will be stressed on every mission.

(3) GCI and Data Link should be utilized to the maximum extent possible. If co-located with GCI controllers, a face-to-face brief and debrief should be conducted for all engagements that begin from beyond visual range.

(4) The TACTS range shall be utilized to the maximum extent possible. If units are not co-located with an appropriate TACTS facility, every effort possible should be given to ensure aircrew have the ability to fly on and debrief in a TACTS facility prior to gaining their ACM qualification.

b. General

(1) AA-210 and AA-211 are not considered ACM by the definitions in OPNAVINST 3710.7 or MCO 3500.14 and, therefore, do not require an ACTI for non-ACM qualified aircrew or ACM flight lead for ACM qualified aircrew. However, aircrew are limited to a maximum of 180 degrees of turn at the merge. If AA-210 or AA-211 are flown with the intent of conducting ACM, then these ACTI/ACM flight lead requirements do apply.

(2) AA-212 through AA-220 are considered ACM by the definitions in OPNAVINST 3710.7 and MCO 3500.14. These sorties require an ACTI in the flight when any participating aircrew is not ACM qualified. For F/A-18D aircrew, a non-ACM qualified pilot requires an ACTI WSO in the aircraft and an ACTI pilot flight lead. A non-ACM qualified WSO requires an ACTI pilot in the aircraft. An ACM flight lead is required for sorties in which all participating aircrew are ACM qualified.

(3) After flying AA-210 through AA-223 and successfully completing the AA-223 evaluation, the aircrew is eligible to be designated ACM qualified by the commanding officer.

(4) Aircraft should be configured with an operable VTR/CVRS, ALQ-126B, ALR-67, CATM-9, CATM-7/120, KY-58, and chaff and flares.

c. Ground Training. Prior to beginning this stage of training, aircrew should receive ground training in the weapons and tactics which are employed by the F/A-18 and all adversary weapons and tactics. The MAWTS-1 ASP contains lectures appropriate for this phase. At a minimum, the squadron WTI or an ACTI should give the following lectures to aircrew under instruction.

(1) F/A-18 Basic Fighter Maneuvers.
(2) F/A-18 and 1V1 BFM.
(3) Fighter Performance Comparison.
(4) F/A-18 Air-to-Air Gunnery.
(5) AIM-9.
(6) AIM-7.
(7) AIM-120.
(8) APG-65/73 RADAR Employment.
(9) Threat Aircraft.

d. Simulator Training. (1 Period, 1.0 Hour).

SAA-210	1.0	T,R WTT S

Goal. Conduct section radar attacks against an unknown number of bandits with SAR-1 missiles. Emphasis should be placed on section intercept procedures, sorting, RWR tactics, weapons employment, and standardized communications.

Requirement. With a minimum of 40 NM separation, the fighters commence the intercept at medium altitude. The bogies commence the intercept at any altitude and airspeed, maneuvering. Fighter weapons control status is tight with PID criteria set by flight lead according to theater of operation. On this sortie, PID criteria will be satisfied in time to allow BVR weapons employment. Four intercepts required for completion.

e. Flight Training. (14 Flights, 15.5 Hours).

AA-210 1.3 T,R 2 F/A-18A/C/D A (N)

Goal. Conduct radar attacks against a single bandit armed with SAR-1 missiles.

Requirement. With a minimum of 40 nm separation, the fighter commences the intercept at 15,000 ft. The bandit will commence one intercept from 10,000-25,000 ft, one intercept from 30,000-40,000 ft, and one intercept from 1000-5000 ft, any airspeed, maneuvering ($\pm$ 45^0). Three forward quarter intercepts and one stern intercept required for completion.

Mission Performance Standards

(a) Arrives at a valid forward quarter or rear quarter weapons envelope.
(b) Takes valid shots.

Prerequisite. SAA-210 completed.

Ordnance. CATM-9 and CATM-7 or CATM-120.

External Syllabus Support. None.

AA-211 1.3 T,R 2 F/A-18A/C/D A (N)

Goal. Conduct radar intercepts against a high altitude, supersonic, nonmaneuvering bandit armed with SAR-1 missiles.

Requirement. With a minimum of 40 NM separation, the fighter commences the intercept at 20,000 ft. The bandit commences the intercept from 30,000-40,000 ft, supersonic, nonmaneuvering. Two forward quarter intercepts to a valid AIM-7 WEZ required for completion.

Mission Performance Standards

(a) Achieves supersonic airspeed and altitude within 5,000 ft of bandit altitude.
(b) Arrives at a valid forward quarter weapons envelope.
(c) Takes valid shots.

Prerequisite. AA-210.

Ordnance. CATM-9 and (CATM-7 or CATM-120).

External Syllabus Support. None.

AA-212 1.0 T,R 2 F/A-18A/C/D A

Goal. Practice guns snap-shot-drill (SSD) and maneuvering the F/A-18. Emphasis should be placed on energy management, assessment, sight, expendable usage, and weapons employment recognition.

Requirement. One SSD, two flat scissors, and two rolling scissors.

Mission Performance Standards

(a) Manages F/A-18 energy to maximize performance of the aircraft.
(b) Recognizes WEZs and employs the appropriate weapons.
(c) Takes valid shots.

Prerequisite. None.

Ordnance. CATM-9, 5 chaff, 10 flares.

External Syllabus Support. None.

AA-213 1.0 T,R 2 F/A-18A/C/D A

Goal. Practice the SSD and the mechanics of offensive BFM. Emphasis should be placed on energy management, assessment, turn circle theory, and weapons employment recognition.

Requirement. One SSD and three offensive perch setups required. Offensive perch setups will be conducted with 3000 ft, 6000 ft, and 9000 ft separation between aircraft.

Mission Performance Standards

(a) Maintains offensive position and achieves a valid follow-on shot.
(b) Recognizes WEZs and employs appropriate weapons.
(c) Takes valid shots.

Prerequisite. AA-212.

Ordnance. CATM-9, 5 chaff, 10 flares.

External Syllabus Support. None.

AA-214 1.0 T,R 2 F/A-18A/C/D A

Goal. Practice the mechanics of defensive maneuvering. Emphasis should be placed on energy management, assessment, turn circle theory, and weapons employment recognition.

Requirement. One SSD, three defensive perch setups and 1 guns defense required. Defensive perch setups will be conducted with 3000 ft, 6000 ft, and 9000 ft separation between aircraft. The guns defense start is at the discretion of the flight lead.

Mission Performance Standards

(a) Manages F/A-18 energy to deny valid follow-on shot by offensive aircraft.
(b) Recognizes bandit WEZ and conducts appropriate defense.
(c) Executes timely expendable usage (defeats IR MSLs).

Prerequisite. AA-213.

Ordnance. CATM-9, 5 chaff, 10 flares.

External Syllabus Support. None.

AA-215 1.0 T,R 2 F/A-18A/C/D A

Goal. Practice maneuvering against Category I, II, and III adversaries. Emphasis should be placed on energy management and assessment, appropriate game plans to achieve a timely kill, weapons employment, and expendable usage.

Requirement. One SSD and one engagement from a known start versus a Cat I , II, and III bandit simulator.

Mission Performance Standards

(a) Employs appropriate game plan against adversary.
(b) Recognizes WEZs and employs appropriate weapons.
(c) Takes valid shots.

Prerequisite. AA-214.

Ordnance. CATM-9, 5 chaff, 10 flares.

External Syllabus Support. None.

AA-216 1.0 T,R 2 F/A-18A/C/D A

Goal. Practice FQMD and BFM against a Cat IV adversary. Emphasis should be placed on energy management and assessment, game plans, weapons employment, and expendable usage.

Requirement. One SSD, two neutral engagements from a known start, and two FQMDs to engagements. The altitude for known start engagements should be varied to demonstrate the impact of altitude on fighter performance and game plan.

Mission Performance Standards

(a) Valid FQMD to defeat SAR-1 missile and follow-on CAT-III missile.
(b) Execute valid game plan.
(c) Takes valid shots.

Prerequisite. AA-215.

Ordnance. CATM-9, 5 chaff, 10 flares.

External Syllabus Support. None.

AA-217 1.0 T,R E 1 F/A-18A/C/D vs 1 Dissimilar Adversary A

Goal. Evaluate BFM skills versus a dissimilar adversary simulating various category bandits.

Requirement. The evaluator will determine the category bandit to be simulated and engagement setup to be utilized. Three engagements required for completion.

Mission Performance Standards

(a) Executes appropriate game plan for type bandit simulation.
(b) Takes valid shots.

Prerequisite. AA-216.

Ordnance. CATM-9, 10 chaff, 20 flares.

External Syllabus Support. One dissimilar adversary. The adversary flight lead will be instructor qualified.

AA-218 1.0 T,R 2 F/A-18A/C/D vs 1 Adversary A

Goal. Practice section maneuvering against a single CAT IV adversary with CAT-III and SAR-1 missiles. Emphasis should be placed on mutual support, engaged communications, expendable usage, and minimizing time to kill.

Requirement. One engagement from a neutral start and two engagements from a defensive start are required for completion.

Mission Performance Standards

(a) Section able to survive and achieve valid kill shot.
(b) Utilizes coordinated maneuvering as wingman.
(c) Utilizes proper communications brevity.

Prerequisite. AA-217.

Ordnance. CATM-9, 10 chaff, 10 flares, and CATM-7 or CATM-120.

External Syllabus Support. One adversary.

AA-219 1.0 T,R 1 F/A-18A/C/D vs 2 Adversaries A

Goal. Practice tactical employment of the F/A-18 against two adversaries with Cat III missiles. Emphasis should be placed on visual lookout, weapons employment, and survival.

Requirement. One intercept and two offensive starts required for completion. Fighter weapons control status is tight with PID criteria that prevents weapons employment prior to a visual identification (VID). Fuel permitting, a 1V1V1 may be performed.

Mission Performance Standards

(a) Maintains sight of both adversaries.
(b) Recognizes bandit WEZs and performs appropriate defense.
(c) Takes valid shots.

Prerequisite. AA-218.

Ordnance. CATM-9, 10 chaff, 10 flares, and CATM-7 or CATM-120.

External Syllabus Support. Two adversaries. The adversary flight lead will be instructor qualified.

AA-220 1.0 T,R E 2 F/A-18A/C/D vs 2 Dissimilar Adversaries A

Goal. Practice section maneuvering against a section of dissimilar adversaries armed with CAT-III missiles. Emphasis should be placed on section maneuvering from offensive, neutral, and defensive starts.

Requirement. One forward quarter intercept to an engagement, one beam entry (by fighters) to an engagement, and one beam entry (by bandits) to an engagement are required for completion. No kills should occur prior to the first merge.

Mission Performance Standards

(a) Performs visual sort.
(b) Utilizes coordinated maneuvering to defeat the bandits.
(c) Employs proper communications brevity.
(d) Takes valid shots.

Prerequisite. AA-219.

Ordnance. CATM-9, 10 chaff, 20 flares, and CATM-7 or CATM-120.

External Syllabus Support. Two dissimilar adversaries.

AA-221 1.3 T,R 2 F/A-18A/C/D vs 2 Adversaries A (N)

Goal. Practice section VID intercepts versus a section of nonmaneuvering bandits armed with SAR-1 missiles. Focus on radar mechanics, formation, communications, tactical time line employment, and VID intercept mechanics.

Requirement. With a minimum of 40 NM separation, the fighters commence an intercept at 15,000 ft. Fighter weapons control status is tight with a PID criteria that prevents weapons employment until a VID. Bandit weapons employment status is unknown. Bandits will commence the intercepts at an altitude between 5,000 ft and 40,000 ft and will not maneuver. Three intercepts required for completion.

Mission Performance Standards

(a) Achieves sort as briefed.
(b) Maintains mutual support.
(c) Achieves valid shot at the merge.

Prerequisite. AA-220.

Ordnance. CATM-9, 20 chaff, 10 flares, and CATM-7 or CATM-120.

External Syllabus Support. Two adversaries.

AA-222 1.3 T,R 2 F/A-18A/C/D vs 2 Adversaries A

Goal. Practice section VID intercepts versus a section of maneuvering bandits armed with SAR-1 missiles. Focus on radar mechanics, formation, communications, tactical timeline employment, and VID intercept mechanics.

Requirement. With a minimum of 40 NM separation, the fighters commence the intercept at 15,000 ft. Fighter weapons control status is tight with a PID criteria that prevents weapons employment until a VID. Bandits weapons control status is unknown. Bandits will commence intercepts from between 1,000 ft and 40,000 ft and are cleared to maneuver. Bandits will maintain sortable formations throughout the intercepts and all bandit tactics will be complete NLT 10 NM prior to the merge. Three intercepts required for completion.

Mission Performance Standards

(a) Achieve radar sort.
(b) Maintains mutual support.
(c) Achieves valid shot at the merge.

Prerequisite. AA-221.

Ordnance. CATM-9, 20 chaff, 10 flares, and CATM-7 or CATM-120.

External Syllabus Support. Two adversaries.

AA-223 1.3 T,R E 4 F/A-18A/C/D vs Unknown Adversaries A (N)

Goal. Conduct a division Sweep mission against four adversaries with SAR-1 missiles. Emphasis should be placed on division intercept procedures, maintaining proper formation, targeting and sorting, BVR weapons employment, and standardized communications.

Requirement. With a minimum of 40 NM separation, the fighters commence the intercept at medium altitude. Bandits commence the intercept at any altitude and airspeed, maneuvering. Bandits present MCM 3-1 Vol II threat tactics as briefed and have weapons employment criteria unknown to the fighters. Fighter weapons control status is tight, with PID criteria set by flight lead according to theater of operation. Three intercepts required for completion.

Mission Performance Standards

(a) Sanitizes assigned airspace.
(b) Targets as assigned and achieves a valid sort.
(c) Takes valid shots.

Prerequisite. AA-222.

Ordnance. CATM-9, 20 chaff, 10 flares, CATM-7 or CATM-120.

External Syllabus Support. Four adversaries.

7. Air-to-Surface (AS)

a. Purpose. Develop proficiency in conventional ordnance delivery techniques.

b. General

(1) Emphasis should be placed on attack parameters, delivery modes, and designation techniques.

(2) AS-230 through AS-235 should be flown on a raked range with bomb impact scoring capability.

(3) Aircraft should be configured with an operable VTR/CVRS, ALQ-126B, ALR-67, CATM-9, CATM-7/120, KY-58, chaff, and flares.

c. Ground Training. Prior to beginning this stage of training, aircrew should receive ground training in the weapons and tactics which are employed by the F/A-18. The MAWTS-1 ASP contains lectures appropriate for this stage. At a minimum, the squadron WTI should give the following lectures to aircrew under instruction.

(1) F/A-18 Fuzing.
(2) TFLIR Tactical Employment.
(3) LGBs Part I.

d. Simulator Training. None.

e. Flight Training. (6 Flights, 9.0 Hours).

AS-230 1.5 T,R 2+ F/A-18A/C/D A (N)

Goal. Practice low, medium, and high angle ordnance delivery using the F/A-18 computed delivery modes. Emphasis should be placed on attack parameters, delivery modes, and designation techniques on a raked range.

Requirement. Conduct low, medium, and high angle ordnance delivery on a raked range using Auto Slew and CCIP. Three runs low angle, three runs medium angle, and three runs high angle required for completion.

Mission Performance Standards

(a) Adheres to briefed delivery parameters.
(b) Adheres to tactical abort parameters.
(c) Achieves a CEP less than 25 meters.

Prerequisite. None.

Ordnance. 9 MK-76, 10 chaff, and 10 flares.

External Syllabus Support. Raked Range.

AS-231 1.5 T,R 2+ F/A-18A/C/D A (N)

Goal. Practice ordnance delivery using the TFLIR. Emphasis should be placed on attack parameters, delivery modes, and designation techniques.

Requirement. Conduct ordnance delivery using the TFLIR. Three runs Auto Track or Scene Track and three runs Nav stabilized required for completion. If on a LASER safe range, use LTD/R for ranging and target designation.

Mission Performance Standards

(a) Able to locate targets using the TFLIR.
(b) Adheres to briefed delivery parameters.
(c) Adheres to tactical abort parameters.
(d) Able to maintain LASER spot on target until weapons impact.
(e) Achieves a CEP less than 50 meters.

Prerequisite. None.

Ordnance. 2xLGTR (6xMK-76), 20 chaff, and 10 flares.

External Syllabus Support. None.

AS-232 1.5 T,R 2+ F/A-18A/C/D A (N)

Goal. Practice low and high angle pop up attacks using the F/A-18 computed delivery modes. Emphasis should be placed on attack parameters, delivery modes, and designation techniques.

Requirement. Conduct low and high angle pop up attacks on a raked range using Auto Slew and CCIP. Four runs low angle pop and four runs high angle pop required for completion.

Mission Performance Standards

(a) Adheres to briefed delivery parameters.
(b) Adheres to tactical abort parameters.
(c) Achieves a CEP less than 25 meters.

Prerequisite. LAT-208, AS-230.

Ordnance. 4 BDU-48, 4 MK-76, 10 chaff, and 10 flares.

External Syllabus Support. Raked Range.

AS-233 1.5 T,R E 2+ F/A-18A/C/D A N

Goal. Practice conventional ordnance delivery and evaluate delivery technique.

Requirement. Conduct high, medium, and low angle ordnance delivery using Auto Slew and CCIP. Three runs high angle, three runs medium angle, and three runs low angle on a raked range.

Mission Performance Standards

(a) Adheres to briefed delivery parameters.
(b) Adheres to tactical abort parameters.
(c) Achieves a CEP less than 25 meters.

Prerequisite. AS-230.

Ordnance. 3 BDU-48, 6 MK-76, 10 chaff, and 10 flares.

External Syllabus Support. Raked Range.

AS-234 1.5 T,R 2+ F/A-18A/C/D A (N)

Goal. Practice high altitude ordnance delivery using the F/A-18 computed delivery modes. Emphasis should be placed on attack parameters, delivery modes, and designation techniques.

Requirement. Conduct high altitude ordnance delivery on a raked range using a recovery altitude of no lower than 10,000 to 15,000 ft. Six delivery runs required for completion.

Mission Performance Standards

(a) Able to acquire targets using on-board sensors.
(b) Adheres to briefed delivery parameters.
(c) Adheres to tactical abort parameters.
(d) Achieves a CEP less than 50 meters.

Prerequisite. AS-231.

Ordnance. 6 MK-76, 10 chaff, and 5 flares.

External Syllabus Support. Raked Range.

AS-235 1.5 T,R E 2 F/A-18A/C/D A (N)

Goal. Practice section low and high angle pop up attacks on a raked range. Emphasis should be placed on attack parameters, delivery modes, designation techniques, frag avoidance timing, and deconfliction.

Requirement. Conduct section low and high angle pop up attacks on a raked range. Two section low angle pop up attacks, two lead low pop/wing high pop attacks, one section Hornet high attack, and one section Hornet cool pop required for completion.

Mission Performance Standards

(a) Able to achieve a CEP of 25 meters in each pattern.
(b) Adheres to tactical abort parameters.
(c) Maintains mutual support throughout attack.

Prerequisite. AS-232.

Ordnance. 8 MK-76, 10 chaff, and 10 flares.

External Syllabus Support. Raked Range.

8. Close Air Support (CAS)

a. Purpose. Develop proficiency in delivering ordnance on a CAS mission.

b. General

(1) Emphasis should be placed on mission planning, attack parameters, delivery modes, designation techniques, information flow through the C^3 system, and adherence to all FAC or FAC(A) instructions.

(2) The commanding officer may authorize substitution of inert ordnance.

(3) Aircraft should be configured with an operable VTR/CVRS, ALQ-126B, ALR-67, CATM-9, KY-58, and chaff and flares when possible.

c. Ground Training. Prior to beginning this stage of training, aircrew should receive ground training in the weapons and tactics which are employed by the F/A-18. The MAWTS-1 ASP contains lectures appropriate for this stage. At a minimum, the squadron WTI should give the following lectures to aircrew under instruction.

(1) Close Air Support (Part I/II).
(2) The Close Air Support Mission Sequence.
(3) OAS Planning and Execution.
(4) OAS Reactive Weaponeering.
(5) Target Area Mechanics.

d. Simulator Training. None.

e. Flight Training. (2 Flights, 3.0 Hours).

CAS-240 1.5 T,R 2 F/A-18A/C/D A

Goal. Conduct day low threat CAS under FAC or FAC(A) control. Emphasis should be placed on CAS procedures, mission planning, attack parameters, delivery modes, designation techniques, and information flow through the C^3 system.

Requirement. Conduct day low threat CAS under FAC or FAC(A) control. Two deliveries using talk-on and two deliveries using either a WP or laser mark required for completion.

Mission Performance Standards

(a) Accurately copies CAS brief from terminal controller.
(b) Delivers accurate weapons on time.
(c) Delivers weapons only when cleared by the terminal controller.
(d) Adheres to tactical abort parameters.

Prerequisite. AS-233.

Ordnance. 4 MK-82, 250 rds of 20 mm, 10 chaff, and 10 flares.

External Syllabus Support. FAC or FAC(A), 2 WP rds or laser designation platform.

CAS-241 1.5 T,R E 2 F/A-18A/C/D A (N)

Goal. Conduct day medium/high threat CAS under FAC or FAC(A) control and evaluate CAS procedures.

Requirement. Conduct day medium/high threat CAS under FAC or FAC(A) control. Two deliveries using either a WP or laser mark required for completion.

Mission Performance Standards

(a) Maintains appropriate separation for frag avoidance.
(b) Makes an accurate correction from mark or lead's hit.
(c) Delivers weapons only when cleared by the terminal controller.
(d) Adheres to tactical abort parameters.
(e) Delivers weapons within ±15 seconds of TOT.

Prerequisite. CAS-240, AS-235.

Ordnance. 4 MK-82, 250 rds of 20 mm, 20 chaff, and 20 flares.

External Syllabus Support. FAC or FAC(A), 8 HE rds, 2 WP rds or laser designation platform.

9. Deep Air Support (DAS)

a. Purpose. Develop proficiency in conducting DAS missions.

b. General

(1) Emphasis should be placed on mission planning, attack parameters, delivery modes, designation techniques, and information flow through the C^3 system.

(2) The commanding officer may authorize substitution of inert ordnance.

(3) Aircraft should be configured with an operable VTR/CVRS, ALQ-126B, ALR-67, CATM-9, KY-58, chaff, and flares when possible.

c. Ground Training. Prior to beginning this stage of training, aircrew should receive ground training in the weapons and tactics which are employed by the F/A-18. The MAWTS-1 ASP contains lectures appropriate for this phase. At a minimum, the squadron WTI should give the following lectures to aircrew under instruction.

(1) Armed Reconnaissance.
(2) F/A-18 Use of Imagery.

d. Simulator Training. None.

e. Flight Training. (2 Flights, 3.0 Hours).

DAS-250 1.5 T,R 2 or 4 F/A-18A/C/D A (N)

Goal. Conduct day high altitude armed reconnaissance. Emphasis should be placed on mission planning, target precedence, search pattern, attack parameters, delivery modes, designation techniques, and information flow through the C^3 system.

Requirement. Conduct high altitude armed reconnaissance to locate, plot, and destroy targets of opportunity.

Mission Performance Standards

(a) Able to conduct visual reconnaissance of assigned area and detect targets.
(b) Able to plot targets with an error less than 500 meters.
(c) Performs target attacks appropriate for scenario.

Prerequisite. None.

Ordnance. 1 Maverick (live or captive), 4 MK-82, 10 chaff and 10 flares.

External Syllabus Support. None.

DAS-251 1.5 T,R 4 F/A-18A/C/D A

Goal. Conduct a day Air Interdiction (AI) mission in a high threat environment. Emphasis should be placed on mission planning, attack parameters, delivery modes, and designation techniques as the division lead.

Requirement. Conduct a day AI mission in a medium/high threat environment. Plan a strike route using a mission planning system. Use JMEMs to weaponeer a specific target. Perform an INS update using the radar or FLIR. Execute a delivery consistent with the threat.

Mission Performance Standards

(a) Maintains briefed tactical formations on ingress/egress.
(b) Recognizes and reacts appropriately to simulated threats.
(c) Delivers weapons on planned DMPI within $\pm$ 15 seconds of the planned TOT.

Prerequisite. None.

Ordnance. 4 MK-83, 10 chaff, and 10 flares.

External Syllabus Support. One tanker (if AR required).

SECTION III - F/A-18 A/C UNIQUE TRAINING

332. COMBAT QUALIFICATION PHASE (F/A-18A/C)

1. Low Altitude Tactic (LAT)

a. Purpose. Continue to develop proficiency in F/A-18 low altitude tactics by practicing all 200 series maneuvers and introducing various threat reaction drills.

b. General

(1) All general notes from the Combat Ready LAT stage apply to this stage.

(2) Upon completion of this stage, aircrew may be designated LAT qualified by their commanding officer.

(3) Emphasis should be placed on LAT procedures, communications, and maneuver techniques. Upon completion of the LAT stage, aircrew should be able to perform low altitude navigation, tactical ingress into a heavily defended target at low altitude, and execute defensive maneuvers against surface-to-air or air-to-air threats.

(4) LAT-308 and 309 require a LATI chase when the aircrew is not LAT qualified or when an aircrew loses proficiency.

(5) Aircraft should be configured with an operable VTR/CVRS, ALQ-126B, ALR-67, CATM-9, KY-58, and chaff and flares.

c. Ground Training. LAT I-V from MAWTS-1 ASP.

d. Simulator Training. None. SLAT-208 should be reflown for proficiency if more than 90 days have elapsed since the aircrew was last exposed to the LAT environment.

e. Flight Training. (2 Flights, 2.0 Hours).

LAT-308 1.0 T,R 2 F/A-18A/C A

Goal. Develop proficiency in single ship and section threat reaction drills and to introduce low altitude intercepts. Emphasis should be placed on LAT procedures, communications, and maneuver techniques.

Requirement. As a single ship, perform a level S, SAM break, guns jink, SCT, and a simulated target attack. Perform the same maneuvers as a section. Conduct low altitude intercepts with the fighter at 300-500 ft AGL and the bogey at 500-1000 ft AGL. Two intercepts required for completion.

Mission Performance Standards

(a) Knows 50% rule, 10^0 rule, dive recovery rules, small descent ROT, and mission cross-check times for straight and level and turning flight.
(b) Uses standardized communication.
(c) Able to fly maneuvers in accordance with LAT rules.

(d) Quickly responds to commands from chase aircraft.
(e) Adheres to LAT rules of conduct.

Prerequisite. All previous LAT sorties completed.

Ordnance. 10 chaff and 10 flares.

External Syllabus Support. None.

LAT-309 1.0 T,R E 2 F/A-18A/C A

Goal. Practice all LAT maneuvers and evaluate LAT procedures, communications, and maneuver techniques.

Requirement. Perform 50% dive recoveries, level turns, ridgeline crossings, MAC, break turns, vertical jinks, straight ahead oblique jinks, turning oblique jinks, reverse oblique jinks, threat reaction drills, and a section target attack.

Mission Performance Standards

(a) Knows 50% rule, 10^0 rule, dive recovery rules, small descent ROT, and mission cross-check times for straight and level and turning flight.
(b) Uses standardized communication.
(c) Able to fly maneuvers in accordance with LAT rules.
(d) Quickly responds to commands from chase aircraft.
(e) Adheres to LAT rules of conduct.

Prerequisite. All previous LAT sorties completed.

Ordnance. 10 chaff and 10 flares.

External Syllabus Support. None.

2. Air-to-Air (AA)

a. Purpose. To refine skills developed in the Combat Ready Phase.

b. General

(1) All general notes from the Combat Ready AA stage apply to this stage.

(2) Events in this stage do not require an ACTI unless a non-ACM qualified aircrew participates. If a non-ACM qualified aircrew participates in an event in this stage, the ACTI requirements contained in MCO 3500.14 and paragraph 331.6.B.(2) of this manual apply.

(3) Aircraft should be configured with an operable VTR/CVRS, ALQ-126B, ALR-67, CATM-9, KY-58, and chaff and flares when possible.

c. Ground Training. Prior to beginning this stage of training, aircrew should receive ground training in the weapons and tactics which are employed by the F/A-18 and all adversary weapons and tactics. The MAWTS-1 ASP contains lectures appropriate for this stage. At a minimum, the squadron WTI or an ACTI should give the following lectures to aircrew under instruction.

(1) Fighter Missions.

(2) Threat Tactics.
(3) Self-protection Considerations.
(4) F/A-18 Data Link.

d. Simulator Training. (1 Period, 1.0 Hour).

SAA-310 1.0 T,R WTT S

Goal. Conduct section attacks against an unknown number of bogies with SAR-1 missiles. Emphasis should be placed on section intercept procedures, maintaining proper formation, targeting and sorting, BVR weapons employment, and standardized communications.

Requirement. With a minimum of 40 NM separation, the fighters commence the intercept at medium altitude. The bogies commence the intercept at any altitude and airspeed, maneuvering. Bogey presentations include any threat tactic contained in the MCM 3-1 Vol II. Fighter weapons control status is tight with PID criteria set by flight lead according to theater of operation. Four intercepts required for completion.

e. Flight Training. (12 Flights, 15.6 Hours).

AA-310 1.3 T,R 2 F/A-18A/C vs Unknown Adversaries A (N)

Goal. Conduct section attacks against an unknown number of bogies with SAR-1 missiles. Emphasis should be placed on section intercept procedures, maintaining proper formation, targeting and sorting, BVR weapons employment, and standardized communications.

Requirement. With a minimum of 40 NM separation, the fighters commence the intercept at medium altitude. The bogies commence the intercept at any altitude and airspeed, maneuvering. Bogey presentations include any threat tactic contained in the MCM 3-1, Vol II. Fighter weapons control status is tight with PID criteria set by flight lead according to theater of operation. Three intercepts required for completion.

Mission Performance Standards

(a) Maintains proper formation.
(b) Sanitizes assigned airspace.
(c) Targets as directed.
(d) Recognizes threat tactics.
(e) Takes valid shots.

Prerequisite. SAA-310.

Ordnance. CATM-9, 20 chaff, 10 flares, and CATM-7 or CATM-120.

External Syllabus Support. Two or more adversaries.

AA-311 1.3 T,R 2 F/A-18A/C vs Unknown Adversaries A (N)

Goal. Conduct section attacks against an unknown number of bogies with SAR-1 missiles. Emphasis should be placed on section intercept procedures, maintaining proper formation, targeting and sorting, VID weapons employment, and standardized communications.

Requirement. With a minimum of 40 NM separation, the fighters commence the intercept at medium altitude. The bogies commence the intercept at any altitude and airspeed, maneuvering. Bogey presentations include any threat tactic contained in the MCM 3-1, Vol II. Fighter weapons control status is tight with a PID criteria that prevents weapons employment until a VID. Three intercepts required for completion.

Mission Performance Standards

(a) Maintains proper formation.
(b) Sanitizes assigned airspace.
(c) Targets as directed.
(d) Recognizes threat tactics.
(e) Takes valid shots.

Prerequisite. AA-310.

Ordnance. CATM-9, 20 chaff, 10 flares, and CATM-7 or CATM-120.

External Syllabus Support. Two or more adversaries.

AA-312 1.3 T,R 2 F/A-18A/C vs Unknown Dissimilar Adversaries A (N)

Goal. Introduce the Sweep mission against an unknown number of bogies with SAR-1 missiles. Emphasis should be placed on section intercept procedures, maintaining proper formation, targeting and sorting, valid weapons employment, and standardized communication.

Requirement. Fighter weapons control status is tight with PID criteria set by flight lead according to theater of operation. Three runs required for completion.

Mission Performance Standards

(a) Maintains proper formation.
(b) Sanitizes assigned airspace.
(c) Targets as directed.
(d) Recognizes threat tactics.
(e) Takes valid shots.

Prerequisite. AA-311.

Ordnance. CATM-9, 20 chaff, 10 flares, and CATM-7 or CATM-120.

External Syllabus Support. Two or more dissimilar adversaries.

AA-313 1.3 T,R 2 F/A-18A/C vs Unknown Dissimilar Adversaries A (N)

Goal. Introduce the Escort/Barcap mission against an unknown number of bogies with SAR-1 missiles. Emphasis should be placed on section intercept procedures, maintaining proper formation, targeting and sorting, valid weapons employment, and standardized communications.

Requirement. Three runs required for completion. Fighter weapons control status is tight with PID criteria set by flight lead according to theater of operation.

Mission Performance Standards

(a) Maintains proper formation.
(b) Sanitizes assigned airspace.
(c) Targets as directed.
(d) Recognizes threat tactics.
(e) Takes valid shots.

Prerequisite. AA-312.

Ordnance. CATM-9, 20 chaff, 10 flares, and CATM-7 or CATM-120.

External Syllabus Support. Two or more dissimilar adversaries.

AA-314 1.3 T,R 2 F/A-18A/C vs Unknown Adversaries A (N)

Goal. Introduce the Area Defense or HVAA escort mission against an unknown number of bogies with SAR-1 missiles. Emphasis should be placed on commit criteria, reset criteria, desired engagement zone, targeting/sorting, valid weapons employment, and standardized communications.

Requirement. One defined vulnerability period required for completion. Fighter weapons control status is tight with PID criteria set by flight lead according to theater of operation. On one run, PID criteria will not be satisfied until after planned weapons employment range.

Mission Performance Standards

(a) Maintains proper formation.
(b) Sanitizes assigned airspace.
(c) Targets as directed.
(d) Recognizes threat tactics.
(e) Takes valid shots.

Prerequisite. AA-313.

Ordnance. CATM-9, 20 chaff, 10 flares, and CATM-7 or CATM-120.

External Syllabus Support. Two or more adversaries.

AA-315 1.0 T,R E 2 F/A-18A/C vs Unknown Adversaries A (N)

Goal. Practice section maneuvering against an unknown number of adversaries with SAR-1 missiles. The mission and bogey tactics will be determine by the evaluator. Evaluation of radar work, RWR situational awareness, communications, and valid weapons employment.

Requirement. Three intercepts required for completion. Fighter weapons control status is tight with PID criteria set by evaluator according to theater of operation. On one run, PID criteria will not be satisfied until after planned weapons employment range.

Mission Performance Standards

(a) Maintains proper formation.
(b) Sanitizes assigned airspace.
(c) Targets as directed.
(d) Recognizes threat tactics.
(e) Takes valid shots.

Prerequisite. AA-314.

Ordnance. CATM-9, 20 chaff, 10 flares, and CATM-7 or CATM-120.

External Syllabus Support. Two or more adversaries.

AA-316 1.3 T,R 4 F/A-18A/C vs Unknown Dissimilar Adversaries A

Goal. Conduct division attacks against an unknown number of adversaries with SAR-1 missiles. Emphasis should be placed on division intercept procedures, maintaining proper formation, targeting and sorting, VID weapons employment, and standardized communications.

Requirement. With a minimum of 40 NM separation, the fighters commence the intercept at medium altitude. The bogies commence the intercept at any altitude and airspeed, maneuvering. Bogey presentations include any threat tactic contained in the MCM 3-1, Vol II. Fighter weapons control status is tight with PID criteria set by flight lead according to theater of operation. Three intercepts required for completion.

Mission Performance Standards

(a) Maintains proper formation.
(b) Sanitizes assigned airspace.
(c) Targets as directed.
(d) Recognizes threat tactics.
(e) Takes valid shots.

Prerequisite. AA-315.

Ordnance. CATM-9, 20 chaff, 10 flares, and CATM-7 or CATM-120.

External Syllabus Support. Two or more dissimilar adversaries.

AA-317 1.3 T,R 4 F/A-18A/C vs Unknown Dissimilar Adversaries A (N)

Goal. Introduce the division Sweep mission against an unknown number of bogies with SAR-2 or AR-1 missiles. Emphasis should be placed on division intercept procedures, maintaining proper formation, targeting and sorting, valid weapons employment, and standardized communications.

Requirement. Three runs required for completion. Fighter weapons control status is tight with PID criteria set by flight lead according to theater of operation.

Mission Performance Standards

(a) Maintains proper formation.
(b) Sanitizes assigned airspace.
(c) Targets as directed.
(d) Recognizes threat tactics.
(e) Takes valid shots.

Prerequisite. AA-316.

Ordnance. CATM-9, 20 chaff, 10 flares, and CATM-7 or CATM-120.

External Syllabus Support. Two or more dissimilar adversaries.

AA-318 1.3 T,R 4 F/A-18A/C vs Unknown Adversaries A (N)

Goal. Introduce the division Area Defense or HVAA escort mission against an unknown number of bogies with SAR-2 or AR-1 missiles. Emphasis should be placed on commit criteria, reset criteria, desired engagement zone, targeting/sorting, valid weapons employment, and standardized communications.

Requirement. One defined vulnerability period required for completion. Fighter weapons control status is tight with PID criteria set by flight lead according to theater of operation. On one run, PID criteria will not be satisfied until after planned weapons employment range.

Mission Performance Standards

(a) Maintains proper formation.
(b) Sanitizes assigned airspace.
(c) Targets as directed.
(d) Recognizes threat tactics.
(e) Takes valid shots.

Prerequisite. AA-317.

Ordnance. CATM-9, 20 chaff, 10 flares, and CATM-7 or CATM-120.

External Syllabus Support. Two or more adversaries.

AA-319 1.3 T,R 2 F/A-18A/C vs Unknown Dissimilar Adversaries A (N)

Goal. Introduce the Escort/Barcap mission against an unknown number of bogies with SAR-1 missiles. Emphasis should be placed on division intercept procedures, maintaining proper formation, targeting and sorting, valid weapons employment, and standardized communications.

Requirement. Three runs required for completion. Fighter weapons control status is tight with PID criteria set by flight lead according to theater of operation.

Mission Performance Standards

(a) Maintains proper formation.
(b) Sanitizes assigned airspace.
(c) Targets as directed.
(d) Recognizes threat tactics.
(e) Takes valid shots.

Prerequisite. All previous AA sorties completed.

Ordnance. CATM-9, 20 chaff, 10 flares, and CATM-7 or CATM-120.

External Syllabus Support. Two or more dissimilar adversaries.

AA-320 1.3 T,R 2 or 4 F/A-18A/C vs 2 Adversaries A (N)

Goal. Conduct section or division attacks against a section of bogies with SAR-1 missiles in an ECM environment.

Requirement. With a minimum of 40 NM separation, the fighters commence the intercept at medium altitude. The bogies commence the intercept at any altitude and airspeed, maneuvering. Bogies should use self-protect jamming techniques or be screened by a stand-off jammer. Fighter weapons control status is tight with PID criteria set by flight lead according to theater of operation. Three intercepts required for completion.

Mission Performance Standards

(a) Maintains proper formation.
(b) Sanitizes assigned airspace.
(c) Appropriate response to observed ECM.
(d) Passive ranging techniques.
(e) Takes valid shots.

Prerequisite. AA-319.

Ordnance. CATM-9, 20 chaff, 10 flares, and CATM-7 or CATM-120.

External Syllabus Support. Two adversaries with self-protect jamming equipment or two adversaries and one stand-off jammer.

AA-321 1.3 T,R E 4 F/A-18A/C vs Unknown Dissimilar Adversaries A (N)

Goal. Practice division maneuvering against an unknown number of adversaries with SAR-1 missiles. The mission and bogey tactics will be determined by the evaluator. Evaluation of radar work, RWR situational awareness, communications, and valid weapons employment.

Requirement. Three intercepts required for completion. Weapons control status is tight. PID criteria is set by evaluator according to theater of operation. On one run, PID criteria will not be satisfied until after planned weapons employment range.

Mission Performance Standards

(a) Maintains proper formation.
(b) Sanitizes assigned airspace.
(c) Targets as directed.
(d) Recognizes threat tactics.
(e) Takes valid shots.

Prerequisite. AA-320.

Ordnance. CATM-9, 20 chaff, 10 flares, and CATM-7 or CATM-120.

External Syllabus Support. Two or more dissimilar adversaries.

3. Air-to-Surface (AS)

a. Purpose. Develop proficiency in ordnance delivery techniques.

b. General

(1) Emphasis should be placed on designation techniques and delivery modes.

(2) Aircraft should be configured with an operable VTR/CVRS, ALQ-126B, ALR-67, CATM-9, KY-58, chaff and flares.

c. Ground Training. None.

d. Simulator Training. (1 Period, 1.0 Hour).

SAS-330 1.5 T,R WTT S

Goal. Practice guiding PGMs with the LTD/R, designating targets with the surface modes of the APG-65/73, and tracking laser energy with the LDT. Emphasis should be placed on capabilities and limitations, cockpit displays, and employment techniques.

Requirement. Guide PGMs to impact using the LTD/R, four self lasing deliveries, four radar designations to LTD/R guidance, and four runs utilizing the LDT required for completion.

e. Flight Training. (4 Flights, 6.0 Hours).

AS-330 1.5 T,R 1+ F/A-18A/C A (N)

Goal. Practice ordnance delivery using an LDT designation. Emphasis should be placed on attack parameters, delivery modes, and designation techniques.

Requirement. Conduct ordnance delivery using an LDT designation. Three runs Auto and three runs CCIP required for completion.

Mission Performance Standards

(a) Able to acquire LASER spot.
(b) Able to achieve a CEP less than 25 meters.

Prerequisite. Completion of SAS-330.

Ordnance. 6 MK-76, 10 chaff, and 10 flares.

External Syllabus Support. LASER capable raked or tactical impact range. One laser designation platform.

AS-331 1.5 T,R 1+ F/A-18A/C A (N)

Goal. Practice level and low angle low drag ordnance delivery and strafe using the FA-18 computed delivery modes. Emphasis should be placed on attack parameters, delivery modes, and designation techniques.

Requirement. Conduct level and low angle low drag ordnance delivery and strafe on a raked range using Auto Slew and CCIP. Six runs level, six runs low angle low drag, and four runs low angle strafe required for completion.

Mission Performance Standards

(a) Able to perform safe separation maneuvers and achieve suitable stand-off for frag avoidance.
(b) CEP less than 25 meters.
(c) A minimum of 10% hits for strafe.

Prerequisite. LAT qualified.

Ordnance. 12 MK-76, 250 rds of 20 mm, 10 chaff, and 10 flares.

External Syllabus Support. Raked Range.

AS-332 1.5 T,R E 2 F/A-18A/C A (N)

Goal. Practice section “buddy lase” ordnance deliveries. Emphasis should be placed on section attack parameters, delivery modes, and designation techniques.

Requirement. Conduct ordnance deliveries using a TFLIR-LDT/R to designate for another delivery platform. Three runs Auto Track or Scene Track and three runs Nav stabilized required for completion.

Mission Performance Standards

(a) Able to acquire target on TFLIR.
(b) Able to maintain proper geometry to illuminate target with LTD/R until weapons impact.
(c) Able to achieve a CEP less than 50 meters.

Prerequisite. SAS-330, AS-231.

Ordnance. 2xLGTR (6xMK-76), 10 chaff, and 10 flares.

External Syllabus Support. LASER capable range.

AS-333 1.5 T,R 1+ F/A-18A/C A (N)

Goal. Practice ordnance delivery using a radar designation. Emphasis should be placed on attack parameters, delivery modes, and designation techniques.

Requirement. Conduct ordnance delivery using radar expand modes. Six runs required for completion.

Mission Performance Standards

(a) Able to locate target using APG-65/73 air-to-ground modes.
(b) Achieves a CEP less than 50 meters.

Prerequisite. None.

Ordnance. 6 MK-76, 20 chaff, and 10 flares.

External Syllabus Support. None.

4. Close Air Support (CAS)

a. Purpose. Develop proficiency in performing CAS missions.

b. General

(1) Emphasis should be placed on mission planning, attack parameters, delivery modes, designation techniques, information flow through the C^3 system, and adherence to all FAC or FAC(A) instructions.

(2) The commanding officer may authorize substitution of inert ordnance.

(3) Aircraft should be configured with an operable VTR/CVRS, ALQ-126B, ALR-67, CATM-9, KY-58, and chaff and flares.

c. Ground Training. None.

d. Simulator Training. None.

e. Flight Training. (2 Flights, 3 Hours).

CAS-340 1.5 T,R 2 F/A-18A/C A N

Goal. Conduct night low threat CAS under FAC or FAC(A) control. Emphasis should be placed on CAS procedures, mission planning, proper LUU-2 placement (if required), attack parameters, delivery modes, designation techniques, and information flow through the C^3 system.

Requirement. Conduct night low threat CAS under FAC or FAC(A) control using illumination. Two deliveries using talk-on and two deliveries using either a WP or laser mark required for completion.

Mission Performance Standards

(a) Accurately copies CAS brief from terminal controller.
(b) Delivers accurate weapons on time.
(c) Delivers weapons only when cleared by the terminal controller.
(d) Adheres to tactical abort parameters.

Prerequisite. CAS-241.

Ordnance. 4 MK-82, 250 rds of 20 mm, 4 LUU-2, 20 chaff, and 20 flares.

External Syllabus Support. FAC or FAC(A), 2 WP marks or laser designation platform, and 4 Illum rds.

CAS-341 1.5 T,R E 2 F/A-18A/C A N

Goal. Conduct night medium/high threat CAS under FAC or FAC(A) control. Emphasis should be placed on CAS procedures, mission planning, attack parameters, delivery modes, designation techniques, and information flow through the C^3 system.

Requirement. Conduct night medium/high threat CAS under FAC or FAC(A) control. Two deliveries using either a WP or laser mark required for completion.

Mission Performance Standards

(a) Accurately copies CAS brief from terminal controller.
(b) Delivers accurate weapons within $\pm$15 seconds of TOT.
(c) Delivers weapons only when cleared by the terminal controller.
(d) Adheres to tactical abort parameters.

Prerequisite. CAS-340.

Ordnance. 4 MK-82, 250 rds of 20 mm, 4xLUU-2, 20 chaff, and 20 flares.

External Syllabus Support. FAC or FAC(A), 8 HE rds, 2 WP marks or laser designation platform, and 4 Illum rds.

5. Deep Air Support (DAS)

a. Purpose. Develop proficiency in conducting DAS missions.

b. General

(1) Emphasis should be placed on mission planning, attack parameters, delivery modes, designation techniques, and information flow through the C^3 system.

(2) The commanding officer may authorize substitution of inert ordnance.

(3) Aircraft should be configured with an operable VTR/CVRS, ALQ-126B, ALR-67, CATM-9, KY-58, and chaff and flares.

c. Ground Training. None.

d. Simulator Training. None.

e. Flight Training. (3 Flights, 4.5 Hours).

DAS-350 1.5 T,R E 2 or 4 F/A-18A/C A (N)

Goal. Conduct low altitude armed reconnaissance. Emphasis should be placed on mission planning, target precedence, search pattern, attack parameters, delivery modes, designation techniques, and information flow through the C^3 system.

Requirement. Conduct low altitude armed reconnaissance to locate, plot, and destroy targets of opportunity.

Mission Performance Standards

(a) Able to conduct visual reconnaissance of assigned area and detect targets.
(b) Able to plot targets with an error less than 500 meters.
(c) Performs target attacks appropriate for scenario.

Prerequisite. DAS-250.

Ordnance. 1 Maverick (live or captive), 4 MK-82, 10 chaff and 10 flares.

External Syllabus Support. None.

DAS-351 1.5 T,R 4 F/A-18A/C vs Unknown Adversaries A

Goal. Conduct a day Air Interdiction (AI) mission in a medium/high threat environment which includes an air-to-air threat. Emphasis should be placed on mission planning, attack parameters, self-escort fighter game plan, delivery modes, and designation techniques as the mission commander.

Requirement. Conduct a day AI mission in a medium/high threat environment. Plan a strike route using a mission planning system. Use JMEMs to weaponeer a specific target. Provide self-escort to counter the air-to-air threat. Perform an INS update using the radar or FLIR. Execute a delivery consistent with the threat.

Mission Performance Standards

(a) Maintains briefed tactical formations on ingress/egress.
(b) Recognizes and reacts appropriately to simulated threats, to include air-to-surface and air-to-air threats.
(c) Delivers weapons on planned DMPI within ±15 seconds of the planned TOT.

Prerequisite. DAS-251.

Ordnance. 4 MK-83, 10 chaff, and 10 flares.

External Syllabus Support. One or more adversaries and one tanker (if AR required).

DAS-352 1.5 T,R E 4 F/A-18A/C vs Unknown Adversaries A N

Goal. Conduct a night air interdiction mission in a medium/high threat environment which includes an air-to-air threat. Emphasis should be placed on mission planning, attack parameters, self-escort fighter game plan, delivery modes, and designation techniques as the mission commander.

Requirement. Conduct a night AI mission in a medium/high threat environment. Plan a strike route using a mission planning system. Use JMEMs to weaponeer a specific target. Provide self-escort to counter the air-to-air threat. Perform an INS update using the radar or FLIR. Execute a delivery consistent with the threat.

Mission Performance Standards

(a) Maintains briefed tactical formations on ingress/egress.
(b) Recognizes and reacts appropriately to simulated threats, to include air-to-surface and air-to-air threats.
(c) Delivers weapons on planned DMPI within ±15 seconds of the planned TOT.

Prerequisite. DAS-351.

Ordnance. 4 MK-83, 10 chaff, and 10 flares.

External Syllabus Support. One or more adversaries and one tanker (if AR required).

6. Aerial Specific Weapons Delivery (ASWD)

a. Purpose. Train aircrew in air-to-air gunnery.

b. General

(1) Emphasis should be placed on safe and effective employment of air-to-air weapons system.

(2) Since air-to-air weapons employment involves live firing, flight leads, lead safes, and tractor aircrew will closely monitor aircrew for any unsafe tendencies.

(3) Due to the dynamic nature of employing air-to-air weapons systems, commanding officers will ensure each ASWD brief includes detailed discussion of avoiding airborne debris and towed targets after air-to-air weapons employment.

(4) In order to perform proper post flight analysis, all aircraft participating in ASWD sorties require an operable VTR/CVRS.

c. Ground Training. None.

d. Simulator Training. (1 Period, 1.0 Hour).

SASWD-360 1.0 T,R WTT S

Goal. Introduce the aerial gunnery pattern. Emphasis should be placed on pattern procedures, pipper control, firing technique, and postflight analysis.

Requirement. Eight runs on a maneuvering or nonmaneuvering banner/dart required for completion.

e. Flight Training. (3 Flights, 3.5 Hours).

ASWD-360 1.0 T,R 1+ F/A-18A/C A

Goal. Introduce the aerial gunnery pattern. Emphasis should be placed on pattern procedures, pipper control, firing technique, and postflight analysis.

Requirement. Conduct a dry or live fire aerial gunnery pattern. Eight runs on a maneuvering or nonmaneuvering banner/dart required for completion.

Prerequisite. Completion of SASWD-360.

Mission Performance Standards

(a) Able to achieve 10% hits.
(b) Flies a safe consistent pattern.
(c) Responds to range safety officer commands.

Ordnance. 500 rds of 20 mm.

External Syllabus Support. One banner/dart tow aircraft.

ASWD-361 1.0 T,R E 1+ F/A-18A/C A

Goal. Practice the aerial gunnery pattern and evaluate firing technique.

Requirement. Conduct a live fire aerial gunnery pattern. Eight runs on a maneuvering or nonmaneuvering banner/dart required for completion.

Mission Performance Standards

(a) Able to achieve 10% hits.
(b) Flies a safe consistent pattern.
(c) Responds to range safety officer commands.

Prerequisite. ASWD-360 completed.

Ordnance. 500 rds of 20 mm.

External Syllabus Support. One banner/dart tow aircraft.

ASWD-362 1.5 T,R 2 F/A-18A/C A

Goal. Employ the AIM-9, AIM-7, or AIM-120.

Requirement. Fire an AIM-9, AIM-7, or AIM-120 against an airborne target.

Prerequisite. None.

Ordnance. 1 AIM-9, AIM-7, or AIM-120.

External Syllabus Support. Missile test range and airspace control agency. Surface search and aerial search radar platform, (EP-3, E-2C, etc). One BQM, AQM, or TALD with radar and/or IR augmentation package.

7. Surface Specific Weapons Delivery (SSWD)

a. Purpose. Train aircrew in the employment of precision guided munitions (PGMs).

b. General

(1) Emphasis should be placed on capabilities and limitations, cockpit displays, and employment techniques.

(2) Each SSWD simulator is a prerequisite for the corresponding training flight when the sortie has not been previously flown or when the aircrew is returning to the fleet as a transition or refresher aircrew. Simulators are not prerequisites for sorties that are being reflown.

(3) Aircraft should be configured with an operable VTR/CVRS for proper post flight analysis.

(4) An aircrew is considered qualified in a specific SSWD when he has completed the respective syllabus including ground training, simulator(s), and flight sortie(s). Once qualified, proficiency and CRP can be maintained through either an aircraft or simulator sortie. If a simulator sortie is used to maintain proficiency, the aircrew must also log the appropriate aircraft flight event (SSWD-370 through SSWD-376) in order to update ATRIMS and achieve CRP credit.

c. Ground Training. Prior to beginning this stage of training, aircrew should receive ground training in the weapons and tactics which are employed by the F/A-18. The MAWTS-1 ASP contains lectures appropriate for this stage.

d. Simulator Training. (4 Periods, 4.0 Hours).

SSSWD-370 1.0 T,R WTT S

Goal. Practice employment of the AGM-88 HARM. Emphasis should be placed on capabilities and limitations, cockpit displays, and employment techniques.

Requirement. Employ the AGM-88 against a ground based emitter. Three PB shots, three TOO shots, a HARM designation, and a manually modified entry (MME) required for completion.

Prerequisite. HARM Planning lecture from the MAWTS-1 ASP.

SSSWD-371 1.0 T,R WTT S

Goal. Practice employment of the Walleye. Emphasis should be placed on capabilities and limitations, cockpit displays, and employment techniques. Also, practice guiding Walleye with the Extended Range Data Link (ERDL) pod. Emphasis should be placed on capabilities and limitations, cockpit displays, and guidance techniques.

Requirement. Employ the Walleye against a surface target. Three medium altitude deliveries and three loft deliveries required for completion.

Prerequisite. Walleye Tactical Employment lecture from the MAWTS-1 ASP.

SSSWD-374 1.0 T,R WTT S

Goal. Practice employment of the AGM-65E Laser Maverick. Emphasis should be placed on capabilities and limitations, cockpit displays, and employment techniques.

Requirement. Employ the AGM-65E against a surface target. Three launches with a ground based laser and three launches with an on board laser required for completion.

Prerequisite. AGM-65E Laser Maverick lecture from the MAWTS-1 ASP.

SSSWD-375 1.0 T,R WTT S

Goal. Practice employment of the AGM-65F IR Maverick. Emphasis should be placed on capabilities and limitations, cockpit displays, and employment techniques.

Requirement. Employ the AGM-65F against a surface target. Six launches required for completion.

Prerequisite. AGM-65F IR Maverick lecture from the MAWTS-1 ASP.

e. Flight Training. (6/7 Flights, 9.0/10.5 Hours).

SSWD-370 1.5 T,R, E F/A-18A/C A (N)

Goal. Practice employment of the AGM-88 against ground based emitters on an EW range. Emphasis should be placed on capabilities and limitations, cockpit displays, and employment techniques.

Requirement. Practice entering MNT/MME. Three PB and three TOO simulated shots required for completion.

Mission Performance Standards

(a) Properly enters MNT/MME data.
(b) Is capable of setting up UTC missions for specific theater.
(c) Employs multiple PB HARM shots on single pass with shot parameters within ±15 seconds, ±25 KCAS, ±500 feet, and ±.5 NM of planned parameters.
(d) Properly hand-off TOO shots and employ in a valid shot envelope.

Prerequisite. SSSWD-370.

Ordnance. CAGM-88.

External Syllabus Support. EW Range.

SSWD-371 1.5 T,R 1+ F/A-18A/C A (N)

Goal. Practice employment of the Walleye. Emphasis should be placed on capabilities and limitations, cockpit displays, and employment techniques. Utilize DL pod when available.

Requirement. Captive carry the Walleye and simulate delivery against a surface target. Three simulated high deliveries and three simulated medium altitude deliveries required for completion or one live drop constitutes completion.

Mission Performance Standards

(a) Able to achieve contrast lock on briefed aimpoint.
(b) Able to guide Walleye to briefed DMPI.

Prerequisite. SSSWD-341.

Ordnance. Live or captive Walleye.

External Syllabus Support. None.

SSWD-372 1.5 T,R 1+ F/A-18A/C A (N)

Goal. Drop a Tactical Air Launched Decoy (TALD), ADM-141.

Requirement. Plan a profile and launch a TALD.

Prerequisite. None.

Ordnance. 1 TALD, ADM-141.

External Syllabus Support. None.

SSWD-373 1.5 T,R 1+ F/A-18A/C A N

Goal. Employ battlefield illumination.

Requirement. Plan a profile and launch of LUU-2.

Prerequisite. None.

Ordnance. 4 LUU-2.

External Syllabus Support. None.

SSWD-374 1.5 T,R 1+ F/A-18A/C A (N)

Goal. Practice employment of the AGM-65E Laser Maverick. Emphasis should be placed on capabilities and limitations, cockpit displays, and employment techniques.

Requirement. Captive carry the AGM-65E and simulate launches against a surface target. Six simulated launches required for completion or one live fire constitutes completion.

Mission Performance Standards

(a) Able to acquire LASER spot.
(b) Able to meet launch permit constraints.
(c) Able to keep LASER spot on DMPI until impact (If self lasing).

Prerequisite. SSSWD-374.

Ordnance. Live or captive laser Maverick.

External Syllabus Support. Laser designation platform if unable to self lase.

SSWD-375 1.5 T,R 1+ F/A-18C A (N)

Goal. Practice employment of the AGM-65F IR Maverick. Emphasis should be placed on capabilities and limitations, cockpit displays, and employment techniques.

Requirement. Captive carry the AGM-65F and simulate launches against a surface target. Six simulated launches required for completion. One live fire constitutes completion.

Mission Performance Standards

(a) Able to acquire target with AGM-65F.
(b) Able to achieve launch permit restraints.

Prerequisite. SSSWD-375.

Ordnance. Live or captive IR Maverick.

External Syllabus Support. None.

SSWD-376 1.5 T,R 1+ F/A-18A/C A (N)

Goal. Employ the AGM-88, Walleye, AGM-65E, or AGM-65F. Emphasis should be placed on capabilities and limitations, cockpit displays, and employment techniques.

Requirement. Live fire constitutes completion.

Prerequisite. Appropriate SSWD captive carry flight completed.

Ordnance. Appropriate weapon.

External Syllabus Support. Tactical impact range with appropriate EW, IR, LASER, or visual target suitable for live ordnance delivery.

8. Night Systems (NS)

a. Purpose. Develop proficiency using Night Vision Devices (NVDs).

b. General

(1) A MAWTS-1 certified NSI-HI/LO is required to fly with NON-NSQ-HI/LO aircrew for NS-380 through NS-385. NS-386 and NS-387 (NS LAT sorties) require an NSI-LO pilot flight lead and an NSI-LO Pilot/WSO crewed with the NON-NSQ-LO aircrew.

(2) Upon completion of NS-380 through NS-383 with a designated NSI-HI/LO, an aircrew may be designated Night Systems Qualified High(NSQ-HI).

(3) At the discretion of the commanding officer, NSQ-HI aircrew may fly any night or night optional event in the T&R with the aid of NVGs. Except when conducting NSQ-LO qualification events (NS-384-387) with an NSI, NSQ-HI aircrew are limited to minimum altitude of 1000 ft AGL for all night sorties. However, no lower than NAVAIR minimums for applicable model/series.

(4) After the successful completion of NS-387, an NS-HI qualified aircrew is eligible to be designated NS-LO qualified by the commanding officer.

(5) NS-386 and NS-387 require that all members of the flight are LAT Qualified. Consult MCO P3500.14 for night LAT currency and altitude restrictions.

(6) Consult MCO P3500.14 for applicable light level and currency restrictions for NS sorties.

c. Ground Training

(1) Attendance at a CNO/MAWTS-1 certified Night Imaging & Threat Evaluation (NITE) Lab Training course (Locations MAG-31, VMFAT-101, VFA-106, VFA-125, Futenma MCAS Okinawa, Japan).

(2) Completion of the Night Systems Tactical Considerations from the MAWTS-1 ASP.

d. Simulator Training. (2 Periods, 2.0 Hours).

SNS-380	1.0	T,R WTT S	

Goal. Practice donning and removing NVGs, formation flight, radar intercepts, and high altitude ordnance delivery using NVDs.

Requirement. Perform formation flight and radar intercepts with the aid of NVGs. Perform medium and high altitude ordnance deliveries. Two radar intercepts and four simulated ordnance deliveries using high and medium angle dives are required for completion.

SNS-381 1.0 T,R WTT S

Goal. Develop proficiency in low level navigation and single ship night conventional LAT with the aid of NVGs.

Requirement. As a section, perform a low level using NVGs, the NFLIR, and the TFLIR. Introduce various visual effects by adjusting lunar illumination. As a single ship, perform descent to comfort level, straight and level, level turns, ridgeline crossings, speed rush base line, break turns, and pop up attacks.

e. Flight Training. (8 Flights, 10.4 Hours).

NS-380 1.3 T,R 2 F/A-18C A N

Goal. Introduce formation flying and intercept procedures with the aid of NVDs.

Requirement. Fly goggle tac wing formation enroute to the area. Practice goggle parade/cruise/tac wing/spread/trail formations above 5,000 ft AGL. Introduce various combinations of light options and range cues. Perform four break up and rendezvous. Conduct one forward quarter radar intercept to an AIM-7 LAR and one stern intercept to an AIM-9 LAR.

Mission Performance Standards

(a) Maintains sight of lead.
(b) Conducts safe rendezvous.

Prerequisite. SNS-380.

Ordnance. CATM-9 and CATM-7 or CATM-120.

External Syllabus Support. None.

NS-381 1.3 T,R 2 F/A-18C vs 2 Adversaries A N

Goal. Conduct section attacks against medium altitude, nonmaneuvering forward quarter capable bogies using NVDs. Emphasis should be placed on section intercept procedures using NVDs, maintaining proper formation, sorting, BVR weapons employment, and standardized communications. Demonstrate the effect of expendables on NVGs.

Requirement. With a minimum of 40 NM separation, the fighters commence the intercept at 15,000 ft. The bogies commence the intercept from 10,000-30,000 ft, any airspeed, nonmaneuvering. Fighter weapons control status is tight with PID criteria set by flight lead according to theater of operation. Three runs required for completion. One intercept will be a night ICAO intercept and escort. Expendables should be used by the bogey and fighter on at least one run.

Mission Performance Standards

(a) Maintains visual mutual support.
(b) Conduct proper radar usage.

Prerequisite. NS-380.

Ordnance. CATM-9, 10 chaff, 5 flares, and CATM-7 or CATM-120.

External Syllabus Support. Two adversaries.

NS-382 1.3 T,R 1+ F/A-18C A N

Goal. Introduce high angle dive deliveries utilizing NVDs.

Requirement. Conduct high angle dive deliveries on a raked range using NVDs. Minimum recovery altitude should be 5,000 ft AGL. Six high angle dive deliveries are required for completion.

Mission Performance Standards

(a) Knows and understands visual illusions associated with NVD usage.
(b) Achieves a CEP of 25 meters.
(c) Adheres to tactical abort parameters.

Prerequisite. NS-381.

Ordnance. 6 MK-76, 20 chaff.

External Syllabus Support. Raked Range.

NS-383 1.3 T,R E 2 F/A-18C A N

Goal. Introduce section high altitude target attacks.

Requirement. Conduct section high angle dive deliveries on a raked range using NVDs. Minimum recovery altitude should be 5,000 ft. Six high angle dive deliveries are required for completion.

Mission Performance Standards

(a) Knows and understands visual illusions associated with NVD usage.
(b) Achieves a CEP of 25 meters.
(c) Adheres to tactical abort parameters.

Prerequisite. NS-382.

Ordnance. 6 MK-76, 20 chaff.

External Syllabus Support. Raked range.

NS-384 1.3 T,R 2 F/A-18C A N

Goal. Introduce section low level to single ship low altitude pop deliveries.

Requirement. Conduct a section low level and single ship target attack using a low pop delivery maneuver. One low level and six ordnance deliveries on a raked range required for completion.

Mission Performance Standards

(a) Knows and understands visual illusions associated with NVD usage.
(b) Achieves a CEP of 25 meters.
(c) Adheres to tactical abort parameters.

Prerequisite. SNS-381, NSQ-HI.

Ordnance. 6 MK-76, 10 chaff.

External Syllabus Support. Raked range.

NS-385 1.3 T,R 2 F/A-18C A N

Goal. Conduct a section low level to section attacks.

Requirement. Conduct a section low level and section attacks. One low level and four section attacks on a raked range required for completion.

Mission Performance Standards

(a) Knows and understands visual illusions associated with NVD usage.
(b) Achieves a CEP of 25 meters.
(c) Adheres to tactical abort parameters.

Prerequisite. NS-384.

Ordnance. 6 MK-76, 10 chaff.

External Syllabus Support. Raked range.

NS-386 1.3 T,R 2 F/A-18C A N

Goal. Introduce night single ship conventional LAT using NVDs. Emphasis should be placed on LAT procedures using NVDs, communications, and maneuver techniques.

Requirement. As a single ship, perform descent to comfort level, straight and level, ridgeline crossings, and Nav/Hard/Break turns. Two circuits required for completion, the first circuit at CL no lower than 500 ft AGL and the remaining circuits at CL no lower than 200 ft AGL.

Mission Performance Standards

(a) Knows and understands visual illusions associated with NVD usage.
(b) Knows and understands mission cross check times.

Prerequisite. NS-385, day LAT qualified.

Ordnance. None.

External Syllabus Support. None.

NS-387 1.3 T,R E 2 F/A-18C A N

Goal. Introduce night section conventional LAT using NVDs and evaluate Night Systems procedures.

Requirement. As a wingman, perform descent to comfort level, straight and level, turns, ridgeline crossings, formations introduced in NS-38O, and section attacks. Two circuits required for completion, the first circuit at CL no lower than 500 ft AGL and the remaining circuits at CL no lower than 200 ft AGL.

Mission Performance Standards

(a) Able to maintain formation in the LAT environment.
(b) Knows guidelines for NVD use outlined in Volume I.
(c) Executes successful target attack with a CEP of 25 meters.
(d) Adheres to tactical abort parameters.

Prerequisite. NS-386.

Ordnance. 6 MK-76, 10 chaff.

External Syllabus Support. None.

333. FULL-COMBAT QUALIFICATION PHASE (F/A-18A/C)

1. Carrier Qualification (CQ)

a. Purpose. Qualify aircrew for CV operations.

b. General. None.

c. Ground Training. IAW LSO NATOPS.

d. Simulator Training. IAW LSO NATOPS.

e. Flight Training. (2 Flights, 3.0 Hours).

CQ-400 1.5 T,R E F/A-18C A

Goal. Qualify for day CV procedures.

Requirement. Perform touch and go's and arrested landings under the control of a Landing Signal Officer (LSO).

Mission Performance Standards. IAW LSO NATOPS.

Prerequisite. Completion of the Combat Ready FCLP Stage.

Ordnance. None.

External Syllabus Support. LSO and CV.

CQ-401 1.5 T,R E F/A-18C A N

Goal. Qualify for night CV procedures.

Requirement. Perform touch and go's and arrested landings under the control of an LSO.

Mission Performance Standards. IAW LSO NATOPS.

Prerequisite. Completion of CQ-400.

Ordnance. None.

External Syllabus Support. LSO and CV.

2. Air-to-Air (AA)

a. Purpose. Conduct advanced air-to-air missions.

b. General

(1) All general notes from the Combat Qualification AA stage apply to this stage.

(2) These sorties are designed to be flown by experienced and qualified aircrew.

c. Ground Training. None.

d. Simulator Training. None.

e. Flight Training. (2 Flights, 2.6 Hours).

AA-410 1.3 T,R 2 F/A-18A/C vs Unknown Adversaries A (N)

Goal. Introduce aircrew to peacetime intercept and escort procedures. Emphasis should be placed on adherence to ICAO procedures, standing ROE, and appropriate tactics, techniques, and procedures.

Requirement. With a minimum of 40 NM separation, fighters commence intercept of bogies. Fighters perform a point defense/HVAA mission in a peace-time scenario with a weapons control status of tight. Bogies simulate fighter aircraft armed with SAR-1 weapons and having unknown ROE and intentions. Bogies commence intercepts at any altitude, subsonic, and nonmaneuvering. Fighters intercept and escort bogies according to briefed procedures. On at least one intercept bogies demonstrate hostile intent. Two intercept and escorts required for completion.

Mission Performance Standards

(a) Intercepts bogies and arrives in an offensive position.
(b) Adheres to ICAO procedures and standing ROE.
(c) Recognizes display of hostile intentions by bogies and react appropriately.

Prerequisite. None.

Ordnance. CATM-9, 20 chaff, 10 flares, and CATM-7 or CATM-120.

External Syllabus Support. Two or more adversaries.

AA-411 1.3 T,R 2 F/A-18A/C vs 1-2 Helicopters/Prop Aircraft A (N)

Goal. Introduce aircrew to helicopter/prop aircraft attack. Emphasis should be placed on optimum weapons employment.

Requirement. Conduct visual attacks against helicopters/prop aircraft using appropriate captive air-to-air and simulated air-to-ground ordnance. One attack with a radar missile, one attack with the CATM-9, one attack with the air-to-air gun, one attack with the air-to-ground gun, and one attack with a GP bomb required for completion.

Mission Performance Standards

(a) Maintains offensive position on adversary aircraft.
(b) Valid air-to-air and air-to-ground weapons employment.

Prerequisite. Aircrew shall be ACM and LAT qualified in order to participate in this sortie.

Ordnance. CATM-9, 20 chaff, 10 flares, and CATM-7 or CATM-120.

External Syllabus Support. One or more helicopters/prop aircraft.

3. Deep Air Support (DAS)

a. Purpose. Conduct advance DAS missions.

b. General

(1) All general notes applicable to the DAS Combat Ready and Qualification stage apply here.

c. Ground Training. None.

d. Simulator Training. None.

e. Flight Training. (6 Flights, 9.0 Hours).

DAS-450 1.5 T,R 2+ F/A-18A/C A

Goal. Conduct day Strike Coordination And Reconnaissance (SCAR). Emphasis should be placed on locating and plotting targets in accordance with a target precedence list, notifying armed reconnaissance assets of target locations and current threat, and proper information flow through the C^3 system.

Requirement. Coordination of one element of armed reconnaissance required for completion.

Mission Performance Standards

(a) Locates and plots targets with an error less than 100 meters.
(b) Prioritizes targets according to target precedence list.
(c) Assists armed reconnaissance assets in locating targets and coordinates target attacks.

Prerequisite. Completion of DAS-250 and DAS-350.

Ordnance. 7 2.75-inch WP rockets, 10 chaff, and 10 flares.

External Syllabus Support. None.

DAS-451 1.5 T,R 2+ F/A-18A/C A N

Goal. Conduct Night SCAR. Emphasis should be placed on locating and plotting targets in accordance with a target precedence list, notifying armed reconnaissance assets of target locations and current threat, and proper information flow through the C^3 system.

Requirement. Coordination of one element of armed reconnaissance required for completion.

Mission Performance Standards

(a) Locates and plots targets with an error less than 100 meters.
(b) Prioritizes targets according to target precedence list.
(c) Assists armed reconnaissance assets in locating targets and coordinates target attacks.

Prerequisite. Completion of DAS-450.

Ordnance. 7 2.75-inch WP rockets, 10 chaff, and 10 flares.

External Syllabus Support. None.

DAS-452 1.5 T,R 2 F/A-18A/C A (N)

Goal. Conduct assault support escort. Emphasis should be placed on mission planning, target precedence, search pattern, attack parameters, delivery modes, designation techniques, and information flow through the C^3 system.

Requirement. Conduct armed reconnaissance along a route to locate, plot, and destroy targets of opportunity in a low or medium threat environment.

Mission Performance Standards

(a) Locates and attacks targets.
(b) Informs assault support flight of threat.

Prerequisite. None.

Ordnance. CATM-9, 4 MK-82, 10 chaff, and 10 flares.

External Syllabus Support. Assault support package.

DAS-453 1.5 T,R E F/A-18A/C A (N)

Goal. Conduct FAC(A)/SCAR escort. Emphasis should be placed on detection and suppression of surface-to-air and air-to-air threats.

Requirement. Fly as a FAC(A)/SCAR escort and suppress any detected threats.

Mission Performance Standards

(a) Detects surface-to-air and air-to-air threats.
(b) Prosecutes surface-to-air and air-to-air threats.

Prerequisite. None.

Ordnance. CATM-9, captive HARM, 2 MK-82, 10 chaff, 10 flares, and CATM-7 or CATM-120.

External Syllabus Support. Ground based emitter or 1 adversary.

DAS-454 1.5 T,R 4+ F/A-18A/C vs Unknown Adversaries A

Goal. Conduct an integrated day AI mission on an EW range simulating a high threat environment that includes bogies with SAR-1 missiles. Emphasis should be placed on mission planning, self protect, attack parameters, delivery modes, and designation techniques.

Requirement. Conduct a day AI mission in a high threat environment. Integrate SEAD, escort, and AR assets. Perform an INS update using the radar or FLIR. Execute a delivery consistent with the threat.

Mission Performance Standards

(a) Choose TTPs appropriate for mission and threat scenario.
(b) Targets or avoids all enemy surface-to-air and air-to-air threats.
(c) Achieves weapons impact within ±15 seconds of planned TOT.
(d) Achieves required level of destruction on surface targets.

Prerequisite. Completion of DAS-351.

Ordnance. Minimum of 4xMK-82, CAGM-88, CATM-9, 10 chaff, 10 flares, and CATM-7 or CATM-120.

External Syllabus Support. Two or more adversaries, EW Range and a tanker (if AR required).

DAS-455 1.5 T,R E 4+ F/A-18A/C vs Unknown Adversaries A N

Goal. Conduct an integrated night AI mission on an EW range in a high threat environment that includes bogies with SAR-1 missiles. Emphasis should be placed on mission planning, self protect, attack parameters, delivery modes, and designation techniques.

Requirement. Conduct an AI mission at night in a high threat environment. Integrate SEAD assets. Perform an INS update using the radar or FLIR. Execute a delivery consistent with the threat.

Mission Performance Standards

(a) Choose TTPs appropriate for mission and threat scenario.
(b) Targets or avoids all enemy surface-to-air and air-to-air threats.
(c) Achieves weapons impact within ±15 seconds of planned TOT.
(d) Achieves required level of destruction on surface targets.

Prerequisite. Completion of DAS-352.

Ordnance. CATM-9, CAGM-88, 2 MK-84, 10 chaff, 10 flares, and CATM-7 or CATM-120.

External Syllabus Support. Two or more adversaries, EW range and a tanker (if AR required).

4. Surface Specific Weapons Delivery

a. Purpose. Employ advanced surface specific weapons.

b. General

(1) Aircraft should be configured with an operable VTR/CVRS for proper post-flight analysis.

(2) Initial qualification in SSWD requires completion of ground training, associated simulators, and captive carry flights. Once qualified, proficiency can be maintained by flying the appropriate simulator IAW individual sortie refly intervals.

c. Ground Training. Appropriate pages and OTGs.

d. Simulator Training. (4 Periods, 4.0 Hours).

SSSWD-470 1.0 T,R WTT S

Goal. Practice employment of Mines. Emphasis should be placed on capabilities and limitations, cockpit displays, and employment techniques.

Requirement. Employ Mines utilizing flight director modes. Six mine laying runs required for completion.

SSSWD-471 1.0 T,R WTT S

Goal. Practice employment of the AGM-84 Harpoon. Emphasis should be placed on capabilities and limitations, cockpit displays, and employment techniques.

Requirement. Employ the AGM-84 against a ship. Three launches required for completion.

SSSWD-472 1.0 T,R WTT S

Goal. Practice employment of the AGM-154A JSOW. Emphasis should be placed on capabilities and limitations, cockpit displays, and employment techniques.

Requirement. Employ the AGM-154A against a variety of point and area targets. Six launches required for completion.

SSSWD-473 1.0 T,R WTT S

Goal. Practice employment of the AGM-84E SLAM. Emphasis should be placed on capabilities and limitations, cockpit displays, and employment techniques.

Requirement. Employ and guide the AGM-84E against a surface target. Three launches with guidance to impact required for completion.

e. Flight Training. (2/5 Flights, 3.0/7.5 Hours).

SSWD-470 1.5 T,R 1+ F/A-18A/C A (N)

Goal. Practice employment of Mines. Emphasis should be placed on capabilities and limitations, cockpit displays, and employment techniques.

Requirement. Employ Mines utilizing flight director modes. One mine laying run on a scored range required for completion.

Prerequisite. Completion of SSSWD-440.

Ordnance. Captive MK-41,55,64 (Mines).

External Syllabus Support. Scored mine range.

SSWD-471 1.5 T,R 1+ F/A-18C A (N)

Goal. Practice employment of the AGM-84 Harpoon. Emphasis should be placed on capabilities and limitations, cockpit displays, and employment techniques.

Requirement. Employ the AGM-84 against a ship. Three launches required for completion.

Prerequisite. Completion of SSSWD-471.

Ordnance. Captive Harpoon.

External Syllabus Support. None.

SSWD-472 1.5 T,R 1+ F/A-18C A (N)

Goal. Practice employment of the AGM-154A JSOW. Emphasis should be placed on capabilities and limitations, cockpit displays, and employment techniques.

Requirement. Employ the AGM-154A against a variety of point and area targets. Three launches required for completion.

Prerequisite. Completion of SSSWD-472.

Ordnance. Captive JSOW.

External Syllabus Support. None.

SSWD-473 1.5 T,R 1+ F/A-18C A (N)

Goal. Practice employment of the AGM-84E SLAM. Emphasis should be placed on capabilities and limitations, cockpit displays, and employment techniques.

Requirement. Employ and guide the AGM-84E against a surface target. Three launches with guidance to impact required for completion.

Prerequisite. Completion of SSSWD-473.

Ordnance. Captive SLAM.

External Syllabus Support. None.

SSWD-474 1.5 T,R 1+ F/A-18A/C A (N)

Goal. Employment of Mines, AGM-84, AGM-154A, or the AGM-84E SLAM. Emphasis should be placed on capabilities and limitations, cockpit displays, and employment techniques.

Requirement. Employ Mines, AGM-84, AGM-154A, or AGM-84E against a surface target per aircraft model.

Prerequisite. Completion of appropriate SSSWD and SSWD.

Ordnance. Mines, AGM-84, AGM-154A, or AGM-84E.

External Syllabus Support. None.

SECTION IV - F/A-18D UNIQUE TRAINING

334. COMBAT QUALIFICATION PHASE (F/A-18D)

1. Low Altitude Tactic (LAT)

a. Purpose. Continue to develop proficiency in F/A-18 low altitude tactics by practicing all 200 series maneuvers and introducing various threat reaction drills.

b. General

(1) All general notes from the Combat Ready LAT stage apply to this stage.

(2) Upon completion of this stage, aircrew may be designated LAT qualified by their commanding officer.

(3) Emphasis should be placed on LAT procedures, communications, and maneuver techniques. Upon completion of the LAT stage, aircrew should be able to perform low altitude navigation, tactical ingress into a heavily defended target at low altitude, and execute defensive maneuvers against surface-to-air or air-to-air threats.

(4) LAT-308 and 309 require a LATI chase when the aircrew is not LAT qualified or when an aircrew loses proficiency.

(5) Aircraft should be configured with an operable VTR/CVRS, ALQ-126B, ALR-67, CATM-9, KY-58, and chaff and flares.

c. Ground Training. LAT I-V from MAWTS-1 Academic Support Package.

d. Simulator Training. None. SLAT-208 should be reflown for proficiency if more than 90 days have elapsed since the aircrew was last exposed to the LAT environment.

e. Flight Training. (2 Flights, 2.0 Hours).

LAT-308 1.0 T,R 2 F/A-18D A

Goal. Develop proficiency in single ship and section threat reaction drills and to introduce low altitude intercepts. Emphasis should be placed on LAT procedures, communications, and maneuver techniques.

Requirement. As a single ship, perform a level S, SAM break, guns jink, SCT, and a simulated target attack. Perform the same maneuvers as a section. Conduct low altitude intercepts with the fighter at 300-500 ft AGL and the bogey at 500-1000 ft AGL. Two intercepts required for completion.

Mission Performance Standards

(a) Knows 50% rule, 10^0 rule, dive recovery rules, small descent ROT, and mission cross-check times for straight and level and turning flight.
(b) Uses standardized communication.
(c) Able to fly maneuvers in accordance with LAT rules.

(d) Quickly responds to commands from chase aircraft.
(e) Adheres to LAT rules of conduct.

Prerequisite. All previous LAT sorties completed.

Ordnance. 10 chaff and 10 flares.

External Syllabus Support. None.

LAT-309 1.0 T,R E 2 F/A-18D A

Goal. Practice all LAT maneuvers and evaluate LAT procedures, communications, and maneuver techniques.

Requirement. Perform 50% dive recoveries, level turns, ridgeline crossings, MAC, break turns, vertical jinks, straight ahead oblique jinks, turning oblique jinks, reverse oblique jinks, threat reaction drills, and a section target attack.

Mission Performance Standards

(a) Knows 50% rule, 10^0 rule, dive recovery rules, small descent ROT, and mission cross-check times for straight and level and turning flight.
(b) Uses standardized communication.
(c) Able to fly maneuvers in accordance with LAT rules.
(d) Quickly responds to commands from chase aircraft.
(e) Adheres to LAT rules of conduct.

Prerequisite. All previous LAT sorties completed.

Ordnance. 10 chaff and 10 flares.

External Syllabus Support. None.

2. Air-to-Air (AA)

a. Purpose. To refine skills developed in the Combat Ready Stage.

b. General

(1) All general notes from the Combat Ready AA stage apply to this stage.

(2) Sorties in this phase do not require an ACTI unless a non-ACM qualified aircrew participates. If a non-ACM qualified aircrew participates in a sortie in this phase, the ACTI requirements contained in MCO 3500.14 and paragraph 331.6.B.(2) of this manual apply.

(3) Aircraft should be configured with an operable VTR/CVRS, ALQ-126B, ALR-67, CATM-9, KY-58, and chaff and flares when possible.

c. Ground Training. Prior to beginning this stage of training, aircrew should receive ground training in the weapons and tactics which are employed by the F/A-18 and all adversary weapons and tactics. The MAWTS-1 ASP contains lectures appropriate for this phase. At a minimum, the squadron WTI or an ACTI should give the following lectures to aircrew under instruction.

(1) Fighter Missions.

(2) Threat Tactics.
(3) Self-protection Considerations.
(4) F/A-18 Data Link.

d. Simulator Training. (1 Period, 1.0 Hour).

SAA-310 1.0 T,R WTT S

Goal. Conduct section attacks against an unknown number of bogies with SAR-1 missiles. Emphasis should be placed on section intercept procedures, maintaining proper formation, targeting and sorting, BVR weapons employment, and standardized communications.

Requirement. With a minimum of 40 NM separation, the fighters commence the intercept at medium altitude. The bogies commence the intercept at any altitude and airspeed, maneuvering. Bogey presentations include any threat tactic contained in the MCM 3-1, Vol II. Fighter weapons control status is tight with PID criteria set by flight lead according to theater of operation. Four intercepts required for completion.

e. Flight Training. (12 Flights, 15.6 Hours).

AA-310 1.3 T,R 2 F/A-18D vs Unknown Adversaries A (N)

Goal. Conduct section attacks against an unknown number of bogies with SAR-1 missiles. Emphasis should be placed on section intercept procedures, maintaining proper formation, targeting and sorting, BVR weapons employment, and standardized communications.

Requirement. With a minimum of 40 NM separation, the fighters commence the intercept at medium altitude. The bogies commence the intercept at any altitude and airspeed, maneuvering. Bogey presentations include any threat tactic contained in the MCM 3-1 Vol II. Fighter weapons control status is tight with PID criteria set by flight lead according to theater of operation. Three intercepts required for completion.

Mission Performance Standards

(a) Maintains proper formation.
(b) Sanitizes assigned airspace.
(c) Targets as directed.
(d) Recognizes threat tactics.
(e) Takes valid shots.

Prerequisite. SAA-310.

Ordnance. CATM-9, 20 chaff, 10 flares, and CATM-7 or CATM-120.

External Syllabus Support. Two or more adversaries.

AA-311 1.3 T,R 2 F/A-18D vs Unknown Adversaries A (N)

Goal. Conduct section attacks against an unknown number of bogies with SAR-1 missiles. Emphasis should be placed on section intercept procedures, maintaining proper formation, targeting and sorting, VID weapons employment, and standardized communications.

Requirement. With a minimum of 40 NM separation, the fighters commence the intercept at medium altitude. The bogies commence the intercept at any altitude and airspeed, maneuvering. Bogey presentations include any threat tactic contained in the MCM 3-1, Vol II. Fighter weapons control status is tight with a PID criteria that prevents weapons employment until a VID. Three intercepts required for completion.

Mission Performance Standards

(a) Maintains proper formation.
(b) Sanitizes assigned airspace.
(c) Targets as directed.
(d) Recognizes threat tactics.
(e) Takes valid shots.

Prerequisite. AA-310.

Ordnance. CATM-9, 20 chaff, 10 flares, and CATM-7 or CATM-120.

External Syllabus Support. Two or more adversaries.

AA-312 1.3 T,R 2 F/A-18D vs Unknown Dissimilar Adversaries A (N)

Goal. Introduce the Sweep mission against an unknown number of bogies with SAR-1 missiles. Emphasis should be placed on section intercept procedures, maintaining proper formation, targeting and sorting, valid weapons employment, and standardized communication.

Requirement. Fighter weapons control status is tight with PID criteria set by flight lead according to theater of operation. Three runs required for completion.

Mission Performance Standards

(a) Maintains proper formation.
(b) Sanitizes assigned airspace.
(c) Targets as directed.
(d) Recognizes threat tactics.
(e) Takes valid shots.

Prerequisite. AA-311.

Ordnance. CATM-9, 20 chaff, 10 flares, and CATM-7 or CATM-120.

External Syllabus Support. Two or more dissimilar adversaries.

AA-313 1.3 T,R 2 F/A-18D vs Unknown Dissimilar Adversaries A (N)

Goal. Introduce the Escort/Barcap mission against an unknown number of bogies with SAR-1 missiles. Emphasis should be placed on section intercept procedures, maintaining proper formation, targeting and sorting, valid weapons employment, and standardized communications.

Requirement. Three runs required for completion. Fighter weapons control status is tight with PID criteria set by flight lead according to theater of operation.

Mission Performance Standards

(a) Maintains proper formation.
(b) Sanitizes assigned airspace.
(c) Targets as directed.
(d) Recognizes threat tactics.
(e) Takes valid shots.

Prerequisite. AA-312.

Ordnance. CATM-9, 20 chaff, 10 flares, and CATM-7 or CATM-120.

External Syllabus Support. Two or more dissimilar adversaries.

AA-314 1.3 T,R 2 F/A-18D vs Unknown Adversaries A (N)

Goal. Introduce the Area Defense or HVAA escort mission against an unknown number of bogies with SAR-1 missiles. Emphasis should be placed on commit criteria, reset criteria, desired engagement zone, targeting/sorting, valid weapons employment, and standardized communications.

Requirement. One defined vulnerability period required for completion. Fighter weapons control status is tight with PID criteria set by flight lead according to theater of operation. On one run, PID criteria will not be satisfied until after planned weapons employment range.

Mission Performance Standards

(a) Maintains proper formation.
(b) Sanitizes assigned airspace.
(c) Targets as directed.
(d) Recognizes threat tactics.
(e) Takes valid shots.

Prerequisite. AA-313.

Ordnance. CATM-9, 20 chaff, 10 flares, and CATM-7 or CATM-120.

External Syllabus Support. Two or more adversaries.

AA-315 1.0 T,R E 2 F/A-18D vs Unknown Adversaries A (N)

Goal. Practice section maneuvering against an unknown number of adversaries with SAR-1 missiles. The mission and bogey tactics will be determine by the evaluator. Evaluation of radar work, RWR situational awareness, communications, and valid weapons employment.

Requirement. Three intercepts required for completion. Fighter weapons control status is tight with PID criteria set by evaluator according to theater of operation. On one run, PID criteria will not be satisfied until after planned weapons employment range.

Mission Performance Standards

(a) Maintains proper formation.
(b) Sanitizes assigned airspace.
(c) Targets as directed.
(d) Recognizes threat tactics.
(e) Takes valid shots.

Prerequisite. AA-314.

Ordnance. CATM-9, 20 chaff, 10 flares, and CATM-7 or CATM-120.

External Syllabus Support. Two or more adversaries.

AA-316 1.3 T,R 4 F/A-18D vs Unknown Dissimilar Adversaries A

Goal. Conduct division attacks against an unknown number of adversaries with SAR-1 missiles. Emphasis should be placed on division intercept procedures, maintaining proper formation, targeting and sorting, VID weapons employment, and standardized communications.

Requirement. With a minimum of 40 NM separation, the fighters commence the intercept at medium altitude. The bogies commence the intercept at any altitude and airspeed, maneuvering. Bogey presentations include any threat tactic contained in the MCM 3-1, Vol II. Fighter weapons control status is tight with PID criteria set by flight lead according to theater of operation. Three intercepts required for completion.

Mission Performance Standards

(a) Maintains proper formation.
(b) Sanitizes assigned airspace.
(c) Targets as directed.
(d) Recognizes threat tactics.
(e) Takes valid shots.

Prerequisite. AA-315.

Ordnance. CATM-9, 20 chaff, 10 flares, and CATM-7 or CATM-120.

External Syllabus Support. Two or more dissimilar adversaries.

AA-317 1.3 T,R 4 F/A-18D vs Unknown Dissimilar Adversaries A (N)

Goal. Introduce the division Sweep mission against an unknown number of bogies with SAR-2 or AR-1 missiles. Emphasis should be placed on division intercept procedures, maintaining proper formation, targeting and sorting, valid weapons employment, and standardized communications.

Requirement. Three runs required for completion. Fighter weapons control status is tight with PID criteria set by flight lead according to theater of operation.

Mission Performance Standards

(a) Maintains proper formation.
(b) Sanitizes assigned airspace.
(c) Targets as directed.
(d) Recognizes threat tactics.
(e) Takes valid shots.

Prerequisite. AA-316.

Ordnance. CATM-9, 20 chaff, 10 flares, and CATM-7 or CATM-120.

External Syllabus Support. Two or more dissimilar adversaries.

AA-318 1.3 T,R 4 F/A-18D vs Unknown Adversaries A (N)

Goal. Introduce the division Area Defense or HVAA escort mission against an unknown number of bogies with SAR-2 or AR-1 missiles. Emphasis should be placed on commit criteria, reset criteria, desired engagement zone, targeting/sorting, valid weapons employment, and standardized communications.

Requirement. One defined vulnerability period required for completion. Fighter weapons control status is tight with PID criteria set by flight lead according to theater of operation. On one run, PID criteria will not be satisfied until after planned weapons employment range.

Mission Performance Standards

(a) Maintains proper formation.
(b) Sanitizes assigned airspace.
(c) Targets as directed.
(d) Recognizes threat tactics.
(e) Takes valid shots.

Prerequisite. AA-317.

Ordnance. CATM-9, 20 chaff, 10 flares, and CATM-7 or CATM-120.

External Syllabus Support. Two or more adversaries.

AA-319 1.3 T,R 2 F/A-18D vs Unknown Dissimilar Adversaries A (N)

Goal. Introduce the Escort/Barcap mission against an unknown number of bogies with SAR-1 missiles. Emphasis should be placed on division intercept procedures, maintaining proper formation, targeting and sorting, valid weapons employment, and standardized communications.

Requirement. Three runs required for completion. Fighter weapons control status is tight with PID criteria set by flight lead according to theater of operation.

Mission Performance Standards

(a) Maintains proper formation.
(b) Sanitizes assigned airspace.
(c) Targets as directed.
(d) Recognizes threat tactics.
(e) Takes valid shots.

Prerequisite. All previous AA sorties completed.

Ordnance. CATM-9, 20 chaff, 10 flares, and CATM-7 or CATM-120.

External Syllabus Support. Two or more dissimilar adversaries.

AA-320 1.3 T,R 2 or 4 F/A-18D vs 2 Adversaries A (N)

Goal. Conduct section or division attacks against a section of bogies with SAR-1 missiles in an ECM environment.

Requirement. With a minimum of 40 NM separation, the fighters commence the intercept at medium altitude. The bogies commence the intercept at any altitude and airspeed, maneuvering. Bogies should use self-protect jamming techniques or be screened by a stand-off jammer. Fighter weapons control status is tight with PID criteria set by flight lead according to theater of operation. Three intercepts required for completion.

Mission Performance Standards

(a) Maintains proper formation.
(b) Sanitizes assigned airspace.
(c) Appropriate response to observed ECM.
(d) Passive ranging techniques.
(e) Takes valid shots.

Prerequisite. AA-319.

Ordnance. CATM-9, 20 chaff, 10 flares, and CATM-7 or CATM-120.

External Syllabus Support. Two adversaries with self-protect jamming equipment or two adversaries and one stand-off jammer.

AA-321 1.3 T,R E 4 F/A-18D vs Unknown Dissimilar Adversaries
A (N)

Goal. Practice division maneuvering against an unknown number of adversaries with SAR-1 missiles. The mission and bogey tactics will be determined by the evaluator. Evaluation of radar work, RWR situational awareness, communications, and valid weapons employment.

Requirement. Three intercepts required for completion. Weapons control status is tight. PID criteria is set by evaluator according to theater of operation. On one run, PID criteria will not be satisfied until after planned weapons employment range.

Mission Performance Standards

(a) Maintains proper formation.
(b) Sanitizes assigned airspace.
(c) Targets as directed.
(d) Recognizes threat tactics.
(e) Takes valid shots.

Prerequisite. AA-320.

Ordnance. CATM-9, 20 chaff, 10 flares, and CATM-7 or CATM-120.

External Syllabus Support. Two or more dissimilar adversaries.

3. Air-to-Surface (AS)

a. Purpose. Develop proficiency in ordnance delivery techniques.

b. General

(1) Emphasis should be placed on designation techniques and delivery modes.

(2) Aircraft should be configured with an operable VTR/CVRS, ALQ-126B, ALR-67, CATM-9, KY-58, chaff and flares.

c. Ground Training. None.

d. Simulator Training. (1 Period, 1.0 Hour).

SAS-330 1.5 T,R WTT S

Goal. Practice guiding PGMs with the LTD/R, designating targets with the surface modes of the APG-65/73, and tracking laser energy with the LDT. Emphasis should be placed on capabilities and limitations, cockpit displays, and employment techniques.

Requirement. Guide PGMs to impact using the LTD/R, four self lasing deliveries, four radar designations to LTD/R guidance, and four runs utilizing the LDT required for completion.

e. Flight Training. (4 Flights, 6.0 Hours).

AS-330 1.5 T,R 1+ F/A-18D A (N)

Goal. Practice ordnance delivery using an LDT designation. Emphasis should be placed on attack parameters, delivery modes, and designation techniques.

Requirement. Conduct ordnance delivery using an LDT designation. Three runs Auto and three runs CCIP required for completion.

Mission Performance Standards

(a) Able to acquire LASER spot.
(b) Able to achieve a CEP less than 25 meters.

Prerequisite. Completion of SAS-330.

Ordnance. 6 MK-76, 10 chaff, and 10 flares.

External Syllabus Support. LASER capable raked or tactical impact range. One laser designation platform.

AS-331 1.5 T,R 1+ F/A-18D A (N)

Goal. Practice level and low angle low drag ordnance delivery and strafe using the FA-18 computed delivery modes. Emphasis should be placed on attack parameters, delivery modes, and designation techniques.

Requirement. Conduct level and low angle low drag ordnance delivery and strafe on a raked range using Auto Slew and CCIP. Six runs level, six runs low angle low drag, and four runs low angle strafe required for completion.

Mission Performance Standards

(a) Able to perform safe separation maneuvers and achieve suitable stand-off for frag avoidance.
(b) CEP less than 25 meters.
(c) A minimum of 10% hits for strafe.

Prerequisite. LAT qualified.

Ordnance. 12 MK-76, 250 rds of 20 mm, 10 chaff, and 10 flares.

External Syllabus Support. Raked Range.

AS-332 1.5 T,R E 2 F/A-18D A (N)

Goal. Practice section “buddy lase” ordnance deliveries. Emphasis should be placed on section attack parameters, delivery modes, and designation techniques.

Requirement. Conduct ordnance deliveries using a TFLIR-LDT/R to designate for another delivery platform. Three runs Auto Track or Scene Track and three runs Nav stabilized required for completion.

Mission Performance Standards

(a) Able to acquire target on TFLIR.
(b) Able to maintain proper geometry to illuminate target with LTD/R until weapons impact.
(c) Able to achieve a CEP less than 50 meters.

Prerequisite. SAS-330, AS-231.

Ordnance. 2xLGTR (6xMK-76), 10 chaff, and 10 flares.

External Syllabus Support. LASER capable range.

AS-333 1.5 T,R 1+ F/A-18D A (N)

Goal. Practice ordnance delivery using a radar designation. Emphasis should be placed on attack parameters, delivery modes, and designation techniques.

Requirement. Conduct ordnance delivery using radar expand modes. Six runs required for completion.

Mission Performance Standards

(a) Able to locate target using APG-65/73 air-to-ground modes.
(b) Achieves a CEP less than 50 meters.

Prerequisite. None.

Ordnance. 6 MK-76, 20 chaff, and 10 flares.

External Syllabus Support. None.

4. Close Air Support (CAS)

a. Purpose. Develop proficiency in performing CAS missions.

b. General

(1) Emphasis should be placed on mission planning, attack parameters, delivery modes, designation techniques, information flow through the C^3 system, and adherence to all FAC or FAC(A) instructions.

(2) The commanding officer may authorize substitution of inert ordnance.

(3) Aircraft should be configured with an operable VTR/CVRS, ALQ-126B, ALR-67, CATM-9, KY-58, and chaff and flares.

c. Ground Training. None.

d. Simulator Training. None.

e. Flight Training. (2 Flights, 3 Hours).

CAS-340 1.5 T,R 2 F/A-18D A N

Goal. Conduct night low threat CAS under FAC or FAC(A) control. Emphasis should be placed on CAS procedures, mission planning, proper LUU-2 placement (if required), attack parameters, delivery modes, designation techniques, and information flow through the C^3 system.

Requirement. Conduct night low threat CAS under FAC or FAC(A) control using illumination. Two deliveries using talk-on and two deliveries using either a WP or laser mark required for completion.

Mission Performance Standards

(a) Accurately copies CAS brief from terminal controller.
(b) Delivers accurate weapons on time.
(c) Delivers weapons only when cleared by the terminal controller.
(d) Adheres to tactical abort parameters.

Prerequisite. CAS-241.

Ordnance. 4 MK-82, 250 rds of 20 mm, 4 LUU-2, 20 chaff, and 20 flares.

External Syllabus Support. FAC or FAC(A), 2 WP rds or laser designation platform, and 4 Illum rds.

CAS-341 1.5 T,R E 2 F/A-18D A N

Goal. Conduct night medium/high threat CAS under FAC or FAC(A) control. Emphasis should be placed on CAS procedures, mission planning, attack parameters, delivery modes, designation techniques, and information flow through the C^3 system.

Requirement. Conduct night medium/high threat CAS under FAC or FAC(A) control. Two deliveries using either a WP or laser mark required for completion.

Mission Performance Standards

(a) Accurately copies CAS brief from terminal controller.
(b) Delivers accurate weapons within $\pm$15 seconds of TOT.
(c) Delivers weapons only when cleared by the terminal controller.
(d) Adheres to tactical abort parameters.

Prerequisite. CAS-340.

Ordnance. 4 MK-82, 250 rds of 20 mm, 4xLUU-2, 20 chaff, and 20 flares.

External Syllabus Support. FAC or FAC(A), 8 HE rds, 2 WP marks or laser designation platform, and 4 Illum rds.

5. Deep Air Support (DAS)

a. Purpose. Develop proficiency in conducting DAS missions.

b. General

(1) Emphasis should be placed on mission planning, attack parameters, delivery modes, designation techniques, and information flow through the C^3 system.

(2) The commanding officer may authorize substitution of inert ordnance.

(3) Aircraft should be configured with an operable VTR/CVRS, ALQ-126B, ALR-67, CATM-9, KY-58, and chaff and flares.

c. Ground Training. None.

d. Simulator Training. None.

e. Flight Training. (3 Flights, 4.5 Hours).

DAS-350 1.5 T,R E 2 or 4 F/A-18D A (N)

Goal. Conduct low altitude armed reconnaissance. Emphasis should be placed on mission planning, target precedence, search pattern, attack parameters, delivery modes, designation techniques, and information flow through the C^3 system.

Requirement. Conduct low altitude armed reconnaissance to locate, plot, and destroy targets of opportunity.

Mission Performance Standards

(a) Able to conduct visual reconnaissance of assigned area and detect targets.
(b) Able to plot targets with an error less than 500 meters.
(c) Performs target attacks appropriate for scenario.

Prerequisite. DAS-250.

Ordnance. 1 Maverick (live or captive), 4 MK-82, 10 chaff and 10 flares.

External Syllabus Support. None.

DAS-351 1.5 T,R 4 F/A-18D vs Unknown Adversaries A

Goal. Conduct a day Air Interdiction (AI) mission in a medium/high threat environment which includes an air-to-air threat. Emphasis should be placed on mission planning, attack parameters, self-escort fighter game plan, delivery modes, and designation techniques as the mission commander.

Requirement. Conduct a day AI mission in a medium/high threat environment. Plan a strike route using a mission planning system. Use JMEMs to weaponeer a specific target. Provide self-escort to counter the air-to-air threat. Perform an INS update using the radar or FLIR. Execute a delivery consistent with the threat.

Mission Performance Standards

(a) Maintains briefed tactical formations on ingress/egress.
(b) Recognizes and reacts appropriately to simulated threats, to include air-to-surface and air-to-air threats.
(c) Delivers weapons on planned DMPI within ±15 seconds of the planned TOT.

Prerequisite. DAS-251.

Ordnance. 4 MK-83, 10 chaff, and 10 flares.

External Syllabus Support. One or more adversaries and one tanker (if AR required).

DAS-352 1.5 T,R E 4 F/A-18D vs Unknown Adversaries A N

Goal. Conduct a night air interdiction mission in a medium/high threat environment which includes an air-to-air threat. Emphasis should be placed on mission planning, attack parameters, self-escort fighter game plan, delivery modes, and designation techniques as the mission commander.

Requirement. Conduct a night AI mission in a medium/high threat environment. Plan a strike route using a mission planning system. Use JMEMs to weaponeer a specific target. Provide self-escort to counter the air-to-air threat. Perform an INS update using the radar or FLIR. Execute a delivery consistent with the threat.

Mission Performance Standards

(a) Maintains briefed tactical formations on ingress/egress.
(b) Recognizes and reacts appropriately to simulated threats, to include air-to-surface and air-to-air threats.
(c) Delivers weapons on planned DMPI within ±15 seconds of the planned TOT.

Prerequisite. DAS-351.

Ordnance. 4 MK-83, 10 chaff, and 10 flares.

External Syllabus Support. One or more adversaries and one tanker (if AR required).

6. Aerial Specific Weapons Delivery (ASWD)

a. Purpose. Train aircrew in air-to-air gunnery.

b. General

(1) Emphasis should be placed on safe and effective employment of air-to-air weapons system.

(2) Since air-to-air weapons employment involves live firing, flight leads, lead safes, and tractor aircrew will closely monitor aircrew for any unsafe tendencies.

(3) Due to the dynamic nature of employing air-to-air weapons systems, commanding officers will ensure each ASWD brief includes detailed discussion of avoiding airborne debris and towed targets after air-to-air weapons employment.

(4) In order to perform proper post flight analysis, all aircraft participating in ASWD sorties require an operable VTR/CVRS.

c. Ground Training. None.

d. Simulator Training. (1 Period, 1.0 Hour).

SASWD-360 1.0 T,R WTT S

Goal. Introduce the aerial gunnery pattern. Emphasis should be placed on pattern procedures, pipper control, firing technique, and postflight analysis.

Requirement. Eight runs on a maneuvering or nonmaneuvering banner/dart required for completion.

e. Flight Training. (3 Flights, 3.5 Hours).

ASWD-360 1.0 T,R 1+ F/A-18D A

Goal. Introduce the aerial gunnery pattern. Emphasis should be placed on pattern procedures, pipper control, firing technique, and postflight analysis.

Requirement. Conduct a dry or live fire aerial gunnery pattern. Eight runs on a maneuvering or nonmaneuvering banner/dart required for completion.

Prerequisite. Completion of SASWD-360.

Mission Performance Standards

(a) Able to achieve 10% hits.
(b) Flies a safe consistent pattern.
(c) Responds to range safety officer commands.

Ordnance. 500 rds of 20 mm.

External Syllabus Support. One banner/dart tow aircraft.

ASWD-361 1.0 T,R E 1+ F/A-18D A

Goal. Practice the aerial gunnery pattern and evaluate firing technique.

Requirement. Conduct a live fire aerial gunnery pattern. Eight runs on a maneuvering or nonmaneuvering banner/dart required for completion.

Mission Performance Standards

(a) Able to achieve 10% hits.
(b) Flies a safe consistent pattern.
(c) Responds to range safety officer commands.

Prerequisite. ASWD-360 completed.

Ordnance. 500 rds of 20 mm.

External Syllabus Support. One banner/dart tow aircraft.

ASWD-362 1.5 T,R 2 F/A-18D A

Goal. Employ the AIM-9, AIM-7, or AIM-120.

Requirement. Fire an AIM-9, AIM-7, or AIM-120 against an airborne target.

Prerequisite. None.

Ordnance. 1 AIM-9, AIM-7, or AIM-120.

External Syllabus Support. Missile test range and airspace control agency. Surface search and aerial search radar platform, (EP-3, E-2C, etc). One BQM, AQM, or TALD with radar and/or IR augmentation package.

7. Surface Specific Weapons Delivery (SSWD)

a. Purpose. Train aircrew in the employment of precision guided munitions (PGMs).

b. General

(1) Emphasis should be placed on capabilities and limitations, cockpit displays, and employment techniques.

(2) Each SSWD simulator is a prerequisite for the corresponding training flight when the sortie has not been previously flown or when the aircrew is returning to the fleet as a transition or refresher aircrew. Simulators are not prerequisites for sorties that are being reflown.

(3) Aircraft should be configured with an operable VTR/CVRS for proper post flight analysis.

(4) An aircrew is considered qualified in a specific SSWD when he has completed the respective syllabus including ground training, simulator(s), and flight sortie(s). Once qualified, proficiency and CRP can be maintained through either an aircraft or simulator sortie. If a simulator sortie is used to maintain proficiency, the aircrew must also log the appropriate aircraft flight event (SSWD-370 through SSWD-376) in order to update ATRIMS and achieve CRP credit.

c. Ground Training. Prior to beginning this stage of training, aircrew should receive ground training in the weapons and tactics which are employed by the F/A-18. The MAWTS-1 Academic Support Package (ASP) contains lectures appropriate for this phase.

d. Simulator Training. (4 Periods, 4.0 Hours).

SSSWD-370 1.0 T,R WTT S

Goal. Practice employment of the AGM-88 HARM. Emphasis should be placed on capabilities and limitations, cockpit displays, and employment techniques.

Requirement. Employ the AGM-88 against a ground based emitter. Three PB shots, three TOO shots, a HARM designation, and a manually modified entry (MME) required for completion.

Prerequisite. HARM Planning lecture from the MAWTS-1 ASP.

SSSWD-371 1.0 T,R WTT S

Goal. Practice employment of the Walleye. Emphasis should be placed on capabilities and limitations, cockpit displays, and employment techniques. Also, practice guiding Walleye with the Extended Range Data Link (ERDL) pod. Emphasis should be placed on capabilities and limitations, cockpit displays, and guidance techniques.

Requirement. Employ the Walleye against a surface target. Three medium altitude deliveries and three loft deliveries required for completion.

Prerequisite. Walleye Tactical Employment lecture from the MAWTS-1 ASP.

SSSWD-374 1.0 T,R WTT S

Goal. Practice employment of the AGM-65E Laser Maverick. Emphasis should be placed on capabilities and limitations, cockpit displays, and employment techniques.

Requirement. Employ the AGM-65E against a surface target. Three launches with a ground based laser and three launches with an on board laser required for completion.

Prerequisite. AGM-65E Laser Maverick lecture from the MAWTS-1 ASP.

SSSWD-375 1.0 T,R WTT S

Goal. Practice employment of the AGM-65F IR Maverick. Emphasis should be placed on capabilities and limitations, cockpit displays, and employment techniques.

Requirement. Employ the AGM-65F against a surface target. Six launches required for completion.

Prerequisite. AGM-65F IR Maverick lecture from the MAWTS-1 ASP.

e. Flight Training. (7 Flights, 10.5 Hours).

SSWD-370 1.5 T,R E F/A-18D A (N)

Goal. Practice employment of the AGM-88 against ground based emitters on an EW range. Emphasis should be placed on capabilities and limitations, cockpit displays, and employment techniques.

Requirement. Practice entering MNT/MME. Three PB and three TOO simulated shots required for completion.

Mission Performance Standards

(a) Properly enters MNT/MME data.
(b) Is capable of setting up UTC missions for specific theater.
(c) Employs multiple PB HARM shots on single pass with shot parameters within ±15 seconds, ±25 KCAS, ±500 feet, and ±.5 NM of planned parameters.
(d) Properly hand-off TOO shots and employ in a valid shot envelope.

Prerequisite. SSSWD-370.

Ordnance. CAGM-88.

External Syllabus Support. EW Range.

SSWD-371 1.5 T,R 1+ F/A-18D A (N)

Goal. Practice employment of the Walleye. Emphasis should be placed on capabilities and limitations, cockpit displays, and employment techniques. Utilize DL pod when available.

Requirement. Captive carry the Walleye and simulate delivery against a surface target. Three simulated high deliveries and three simulated medium altitude deliveries required for completion or one live drop constitutes completion.

Mission Performance Standards

(a) Able to achieve contrast lock on briefed aimpoint.
(b) Able to guide Walleye to briefed DMPI.

Prerequisite. SSSWD-341.

Ordnance. Live or captive Walleye.

External Syllabus Support. None.

SSWD-372 1.5 T,R 1+ F/A-18D A (N)

Goal. Drop a Tactical Air Launched Decoy (TALD), ADM-141.

Requirement. Plan a profile and launch a TALD.

Prerequisite. None.

Ordnance. 1 TALD, ADM-141.

External Syllabus Support. None.

SSWD-373 1.5 T,R 1+ F/A-18D A N

Goal. Employ battlefield illumination.

Requirement. Plan a profile and launch of LUU-2.

Prerequisite. None.

Ordnance. 4 LUU-2.

External Syllabus Support. None.

SSWD-374 1.5 T,R 1+ F/A-18D A (N)

Goal. Practice employment of the AGM-65E Laser Maverick. Emphasis should be placed on capabilities and limitations, cockpit displays, and employment techniques.

Requirement. Captive carry the AGM-65E and simulate launches against a surface target. Six simulated launches required for completion or one live fire constitutes completion.

Mission Performance Standards

(a) Able to acquire LASER spot.
(b) Able to meet launch permit constraints.
(c) Able to keep LASER spot on DMPI until impact (If self lasing).

Prerequisite. SSSWD-374.

Ordnance. Live or captive laser Maverick.

External Syllabus Support. Laser designation platform if unable to self lase.

SSWD-375 1.5 T,R 1+ F/A-18D A (N)

Goal. Practice employment of the AGM-65F IR Maverick. Emphasis should be placed on capabilities and limitations, cockpit displays, and employment techniques.

Requirement. Captive carry the AGM-65F and simulate launches against a surface target. Six simulated launches required for completion. One live fire constitutes completion.

Mission Performance Standards

(a) Able to acquire target with AGM-65F.
(b) Able to achieve launch permit restraints.

Prerequisite. SSSWD-375.

Ordnance. Live or captive IR Maverick.

External Syllabus Support. None.

SSWD-376 1.5 T,R 1+ F/A-18D A (N)

Goal. Employ the AGM-88, Walleye, AGM-65E, or AGM-65F. Emphasis should be placed on capabilities and limitations, cockpit displays, and employment techniques.

Requirement. Live fire constitutes completion.

Prerequisite. Appropriate SSWD captive carry flight completed.

Ordnance. Appropriate weapon.

External Syllabus Support. Tactical impact range with appropriate EW, IR, LASER, or visual target suitable for live ordnance delivery.

8. Night Systems (NS)

a. Purpose. Develop proficiency using Night Vision Devices (NVDs).

b. General

(1) A MAWTS-1 certified NSI-HI/LO is required to fly with NON-NSQ-HI/LO aircrew for NS-380 through NS-385. NS-386 and NS-387 (NS LAT sorties) require an NSI-LO pilot flight lead and an NSI-LO Pilot/WSO crewed with the NON-NSQ-LO aircrew.

(2) Upon completion of NS-380 through NS-383 with a designated NSI-HI/LO, an aircrew may be designated Night Systems Qualified High(NSQ-HI).

(3) At the discretion of the commanding officer, NSQ-HI aircrew may fly any night or night optional event in the T&R with the aid of NVGs. Except when conducting NSQ-LO qualification sorties (NS-384-387) with an NSI, NSQ-HI aircrew are limited to minimum altitude of 1000 ft AGL for all night sorties.

(4) After the successful completion of NS-387, an NS-HI qualified aircrew is eligible to be designated NS-LO qualified by the commanding officer.

(5) NS-386 and NS-387 require that all members of the flight are LAT Qualified. Consult MCO P3500.14 for night LAT currency and altitude restrictions.

(6) Consult MCO P3500.14 for applicable light level and currency restrictions for NS sorties.

c. Ground Training

(1) Attendance at a CNO/MAWTS-1 certified Night Imaging & Threat Evaluation (NITE) Lab Training course (Locations MAG-31, VMFAT-101, VFA-106, VFA-125, Futenma MCAS Okinawa, Japan).

(2) Completion of the Night Systems Tactical Considerations from the MAWTS-1 ASP.

d. Simulator Training. (2 Periods, 2.0 Hours).

SNS-380	1.0	T,R	WTT S

Goal. Practice donning and removing NVGs, formation flight, radar intercepts, and high altitude ordnance delivery using NVDs.

Requirement. Perform formation flight and radar intercepts with the aid of NVGs. Perform medium and high altitude ordnance deliveries. Two radar intercepts and four simulated ordnance deliveries using high and medium angle dives are required for completion.

SNS-381 1.0 T,R WTT S

Goal. Develop proficiency in low level navigation and single ship night conventional LAT with the aid of NVGs.

Requirement. As a section, perform a low level using NVGs, the NFLIR, and the TFLIR. Introduce various visual effects by adjusting lunar illumination. As a single ship, perform descent to comfort level, straight and level, level turns, ridgeline crossings, speed rush base line, break turns, and pop up attacks.

e. Flight Training. (8 Flights, 10.4 Hours).

NS-380 1.3 T,R 2 F/A-18D A N

Goal. Introduce formation flying and intercept procedures with the aid of NVDs.

Requirement. Fly goggle tac wing formation enroute to the area. Practice goggle parade/cruise/tac wing/spread/trail formations above 5,000 ft AGL. Introduce various combinations of light options and range cues. Perform four break up and rendezvous. Conduct one forward quarter radar intercept to an AIM-7 LAR and one stern intercept to an AIM-9 LAR.

Mission Performance Standards

(a) Maintains sight of lead.
(b) Conducts safe rendezvous.

Prerequisite. SNS-380.

Ordnance. CATM-9 and CATM-7 or CATM-120.

External Syllabus Support. None.

NS-381 1.3 T,R 2 F/A-18D vs 2 Adversaries A N

Goal. Conduct section attacks against medium altitude, nonmaneuvering forward quarter capable bogies using NVDs. Emphasis should be placed on section intercept procedures using NVDs, maintaining proper formation, sorting, BVR weapons employment, and standardized communications. Demonstrate the effect of expendables on NVGs.

Requirement. With a minimum of 40 NM separation, the fighters commence the intercept at 15,000 ft. The bogies commence the intercept from 10,000-30,000 ft, any airspeed, nonmaneuvering. Fighter weapons control status is tight with PID criteria set by flight lead according to theater of operation. Three runs required for completion. One intercept will be a night ICAO intercept and escort. Expendables should be used by the bogey and fighter on at least one run.

Mission Performance Standards

(a) Maintains visual mutual support.
(b) Conduct proper radar usage.

Prerequisite. NS-380.

Ordnance. CATM-9, 10 chaff, 5 flares, and CATM-7 or CATM-120.

External Syllabus Support. Two adversaries.

NS-382 1.3 T,R 1+ F/A-18D A N

Goal. Introduce high angle dive deliveries utilizing NVDs.

Requirement. Conduct high angle dive deliveries on a raked range using NVDs. Minimum recovery altitude should be 5,000 ft AGL. Six high angle dive deliveries are required for completion.

Mission Performance Standards

(a) Knows and understands visual illusions associated with NVD usage.
(b) Achieves a CEP of 25 meters.
(c) Adheres to tactical abort parameters.

Prerequisite. NS-381.

Ordnance. 6 MK-76, 20 chaff.

External Syllabus Support. Raked Range.

NS-383 1.3 T,R E 2 F/A-18D A N

Goal. Introduce section high altitude target attacks.

Requirement. Conduct section high angle dive deliveries on a raked range using NVDs. Minimum recovery altitude should be 5,000 ft. Six high angle dive deliveries are required for completion.

Mission Performance Standards

(a) Knows and understands visual illusions associated with NVD usage.
(b) Achieves a CEP of 25 meters.
(c) Adheres to tactical abort parameters.

Prerequisite. NS-382.

Ordnance. 6 MK-76, 20 chaff.

External Syllabus Support. Raked range.

NS-384 1.3 T,R 2 F/A-18D A N

Goal. Introduce section low level to single ship low altitude pop deliveries.

Requirement. Conduct a section low level and single ship target attack using a low pop delivery maneuver. One low level and six ordnance deliveries on a raked range required for completion.

Mission Performance Standards

(a) Knows and understands visual illusions associated with NVD usage.
(b) Achieves a CEP of 25 meters.
(c) Adheres to tactical abort parameters.

Prerequisite. SNS-381, NSQ-HI.

Ordnance. 6 MK-76, 10 chaff.

External Syllabus Support. Raked range.

NS-385 1.3 T,R 2 F/A-18D A N

Goal. Conduct a section low level to section attacks.

Requirement. Conduct a section low level and section attacks. One low level and four section attacks on a raked range required for completion.

Mission Performance Standards

(a) Knows and understands visual illusions associated with NVD usage.
(b) Achieves a CEP of 25 meters.
(c) Adheres to tactical abort parameters.

Prerequisite. NS-384.

Ordnance. 6 MK-76, 10 chaff.

External Syllabus Support. Raked range.

NS-386 1.3 T,R 2 F/A-18D A N

Goal. Introduce night single ship conventional LAT using NVDs. Emphasis should be placed on LAT procedures using NVDs, communications, and maneuver techniques.

Requirement. As a single ship, perform descent to comfort level, straight and level, ridgeline crossings, and Nav/Hard/Break turns. Two circuits required for completion, the first circuit at CL no lower than 500 ft AGL and the remaining circuits at CL no lower than 200 ft AGL.

Mission Performance Standards

(a) Knows and understands visual illusions associated with NVD usage.
(b) Knows and understands mission cross check times.

Prerequisite. NS-385, day LAT qualified.

Ordnance. None.

External Syllabus Support. None.

NS-387 1.3 T,R E 2 F/A-18D A N

Goal. Introduce night section conventional LAT using NVDs and evaluate Night Systems procedures.

Requirement. As a wingman, perform descent to comfort level, straight and level, turns, ridgeline crossings, formations introduced in NS-38O, and section attacks. Two circuits required for completion, the first circuit at CL no lower than 500 ft AGL and the remaining circuits at CL no lower than 200 ft AGL.

Mission Performance Standards

(a) Able to maintain formation in the LAT environment.
(b) Knows guidelines for NVD use outlined in Volume I.
(c) Executes successful target attack with a CEP of 25 meters.
(d) Adheres to tactical abort parameters.

Prerequisite. NS-386.

Ordnance. 6 MK-76, 10 chaff.

External Syllabus Support. None.

9. Combat Arms Coordination and Control (CACC)

a. Purpose. Develop proficiency in Forward Air Controller (Airborne) [FAC(A)] and Tactical Air Coordinator (Airborne) [TAC(A)] procedures.

b. General

(1) This phase of combat qualification training is designed for experienced aircrew.

(2) Nonqualified aircrew will fly CACC-390 through CACC-397 with a MAWTS-1 certified FAC(A)I designated by the commanding officer. The FAC(A)I may be in the FAC(A) or escort aircraft. The FAC(A)I may simulate the ground FAC if one is not available.

(3) The commanding officer may designate aircrew as FAC(A) qualified upon successful completion of this phase of training through CACC-397.

(4) A FAC(A) qualified crew (Pilot and WSO) designated by the commanding officer must be in the aircraft during any syllabus sortie controlling CAS within close proximity to friendly troops. Close proximity is defined as 1000 meters unless more stringent restrictions are required or for danger close requirements for specific munitions.

(5) Prior to commencing the TAC(A) syllabus, aircrew must be a qualified FAC(A). Nonqualified aircrew will fly CACC-398 and CACC-399 with a MAWTS-1 certified TAC(A)I designated by the commanding officer. The TAC(A)I may be in the escort aircraft.

(6) The commanding officer may designate aircrew as TAC(A) qualified upon successful completion of this phase of training through CACC-399.

c. Ground Training. Ground school will consist of the MAWTS-1 ASP and will be taught by a MAWTS-1 instructor, WTI, or MAWTS-1 certified FAC(A)I or TAC(A)I.

d. Simulator Training. (3 Periods, 3.0 Hours).

SCACC-390 1.0 T,R WTT S

Goal. Introduce FAC(A) procedures in a low threat environment.

Requirement. Perform visual reconnaissance of three separate targets on a tactical range. Plot targets on a 1:50,000 map and prepare target briefs. Control three separate attacks by attack aircraft utilizing low threat tactics. Use standard CAS briefing and control procedures. Perform authentication procedures. Deliver marking rounds on target 30 seconds prior to TOT. Demonstrate ability to provide timely, accurate corrections for attack aircraft. Provide BDA.

SCACC-391 1.0 T,R WTT S

Goal. Introduce FAC(A) procedures in a medium threat environment.

Requirement. Perform visual reconnaissance of three separate targets on a tactical range using LAT tactics. Plot targets on a 1:50,000 map and prepare target briefs. Control at least three separate attacks by attack aircraft. Deliver marking rounds on target 30 seconds prior to expiration of TOT by flying a low level ingress from control point to initial point to a pop-up delivery. Demonstrate ability to provide timely, accurate corrections for attack aircraft. Provide BDA.

SCACC-392 1.0 T,R WTT S

Goal. Introduce naval surface fire/mortar/artillery airspot in a low threat environment.

Requirement. Plan, brief, and control a naval surface fire/mortar/artillery airspot mission. Emphasis is on call-for-fire, adjust fire, and communications procedures.

e. Flight Training. (10 Flights, 15.0 Hours).

CACC-390 1.5 T,R F/A-18D and 1 Escort A

Goal. Introduce FAC(A) procedures in a low threat environment.

Requirement. Perform visual reconnaissance of three separate targets on a tactical range. Plot targets on a 1:50,000 map and prepare target briefs. Control 4 separate attacks by attack aircraft utilizing low threat tactics. Use appropriate CAS briefing and control procedures. Perform authentication procedures. Deliver or coordinate marking rounds on target. Demonstrate the ability to provide timely, accurate corrections for CAS aircraft, and the ability to provide talk-ons. Provide BDA. Four controls required for completion.

Mission Performance Standards

(a) Locates targets and plots with an error less than 100 meters.
(b) Provides accurate verbal description during “talk-on” attacks.

(c) If required, marks the target with a CEP less than 100 meters.
(d) Visually acquires CAS assets and provides timely control and corrections.

Prerequisite. Completion of SCACC-390. If artillery or mortars are used for marking, completion of SCACC-392 and CACC-392 are required prior to the conduct of this sortie.

Ordnance. 7 2.75-inch WP rockets, 10 chaff, and 10 flares.

External Syllabus Support. One or two fixed-wing CAS elements and a ground FAC. Indirect Fire Support (IDFS) asset with 4 WP rds if IDFS is to be used for marking or suppression.

CACC-391 1.5 T,R E F/A-18D and 1 Escort A

Goal. Introduce FAC(A) procedures in an elevated threat environment.

Requirement. Perform reconnaissance of three separate targets on a tactical range. Plot targets on a 1:50,000 map and prepare target briefs. Control at least 4 separate attacks by CAS aircraft. Deliver or coordinate marking rounds on target 30 seconds prior to TOT using appropriate medium threat tactics. Demonstrate ability to provide timely, accurate corrections for CAS aircraft. Provide BDA. Four controls required for completion.

Mission Performance Standards

(a) Locates targets and plots with an error less than 100 meters.
(b) Marks the target with a CEP less than 100 meters.
(c) Employs tactics, techniques, and procedures (TTPs) commensurate with the briefed threat.
(d) Visually acquires CAS assets and provides timely control and corrections.

Prerequisite. Completion of SCACC-391 and CACC-390. If artillery or mortars are used for marking, completion of SCACC-393 and CACC-392 are required prior to the conduct of this sortie.

Ordnance. 7 2.75-inch WP rockets, 10 chaff, and 10 flares.

External Syllabus Support. One to two fixed-wing CAS elements and a ground FAC. IDFS asset with 4 WP rds and 8 HE rds if IDFS is to be used for marking or suppression.

CACC-392 1.5 T,R F/A-18D and 1 Escort A (N)

Goal. Introduce day naval gunfire/mortar/artillery airspot.

Requirement. Perform visual reconnaissance on tactical targets, plot on a 1:50,000 map and prepare a call-for-fire brief. Emphasis on accurate call-for-fire communications and adjustment procedures and appropriate tactics, techniques, and procedures (TTPs) for the threat scenario. One low threat adjust fire, one immediate suppression, one mark and SEAD mission, and one high threat mark and SEAD mission are required for completion.

Mission Performance Standards

(a) Locates targets and plots with an error less than 100 meters.
(b) Employs proper communications format with the firing unit.
(c) Provides timely and accurate corrections to the firing unit. Requires four rounds or less to achieve a bracket sufficient for a fire for effect (FFE). Completes an immediate suppression CFF within 60 seconds of receiving the mission from the FAC/FO.

Prerequisite. Completion of SCACC-392.

Ordnance. 10 chaff and 10 flares.

External Syllabus Support. Naval gunfire/mortar/artillery unit and a minimum of 10 HE rds and 2 WP rds. A ground FAC or FO.

CACC-393 1.5 T,R E F/A-18D and 1 Escort A N

Goal. Practice night naval gunfire/mortar/artillery airspot.

Requirement. Perform visual reconnaissance on tactical targets, plot on a 1:50,000 map and prepare a call-for-fire brief. Emphasis on accurate call-for-fire communications and adjustment procedures and appropriate tactics, techniques and procedures (TTPs) for the threat scenario. One low threat adjust fire, one immediate suppression, one mark and SEAD mission, and one high threat mark and SEAD mission. At least one mission must include coordinated illumination.

Mission Performance Standards

(a) Locates targets and plots with an error less than 100 meters.
(b) Employs proper communications format with the firing unit.
(c) Provides timely and accurate corrections to the firing unit. Requires four rounds or less to achieve a bracket sufficient for a FFE. Completes an immediate suppression CFF within 60 seconds of receiving the mission from the FAC/FO.
(d) Employs TTPs appropriate for the threat.

Prerequisite. Completion of SCACC-392 and CACC-392 sorties.

Ordnance. 10 chaff and 10 flares. 4 LUU-2s.

External Syllabus Support. Naval gunfire/mortar/artillery unit and a minimum of 10 HE rds, 2 WP rds, and 8 Illum rds. A FAC or FO.

CACC-394 1.5 T,R F/A-18D and 1 Escort A (N)

Goal. Introduce FAC(A) procedures controlling rotary wing CAS in all threat environments.

Requirement. Perform visual reconnaissance of three targets on a tactical range. Plot the targets and prepare target briefs. Control 4 separate attacks by attack helicopters using low threat tactics. Use appropriate rotary wing CAS control procedures, and authentication as required. Deliver or coordinate marking rounds and provide accurate, timely corrections. Demonstrate the ability to use "talk-ons" in lieu of ordnance marks. If conducted at night, use appropriate flare tactics for target illumination.

Mission Performance Standards

(a) Locates targets and plots with an error less than 100 meters.
(b) Employs proper communications format with the firing unit.
(c) Provides timely and accurate corrections to the firing unit. Requires four rounds or less to achieve a bracket sufficient for a FFE. Completes an immediate suppression CFF within 60 seconds of receiving the mission from the FAC/FO.
(d) Employs TTPs appropriate for the threat.

Prerequisite. Completion of CACC-393 sorties.

Ordnance. 7 2.75-inch WP rockets, 10 chaff, and 10 flares. 4 LUU-2s/LUU-19s if conducted at night.

External Syllabus Support. Two rotary wing CAS aircraft and a ground FAC. IDFS asset with 8 HE rds and 4 WP rds if IDFS is to be used for marking.

CACC-395 1.5 T,R E F/A-18D and 1 Escort A N

Goal. Practice night FAC(A) procedures in a low threat environment.

Requirement. Perform reconnaissance of three separate targets on a tactical range. Plot targets on a 1:50,000 map and prepare target briefs. Control at least 4 separate attacks by CAS aircraft. Deliver or coordinate marking rounds on target 30 seconds prior to TOT using appropriate threat tactics. Demonstrate ability to provide timely, accurate corrections for CAS aircraft. Provide BDA. Four controls required for completion. Use flare tactics for target illumination.

Mission Performance Standards

(a) Locates targets and plots with an error less than 100 meters.
(b) Provides accurate verbal description during “talk-on” attacks.
(c) If required, marks the target with a CEP less than 100 meters.
(d) Visually acquires CAS assets and provides timely control and corrections.

Prerequisites. Completion of CACC-390. If rotary-wing CAS assets are used, completion of CACC-394 is required. If artillery or mortars are used for target marking or threat suppression, CACC-392 is required.

Ordnance. 7 2.75-inch WP rockets, 10 chaff, and 10 flares. 4 LUU-2s.

External Syllabus Support. One to two CAS elements and a ground FAC. IDFS asset with 4 WP rds and 8 Illum rds if IDFS is to be used for marking or suppression.

CACC-396 1.5 T,R F/A-18D and 1 Escort A N

Goal. Practice night FAC(A) procedures in an elevated threat environment.

Requirement. Perform reconnaissance of three separate targets on a tactical range. Plot targets on a 1:50,000 map and prepare target briefs. Control at least 4 separate attacks by rotary wing and/or fixed wing CAS aircraft. Deliver or coordinate marking rounds on target 30 seconds prior to TOT using appropriate threat tactics. Use flare tactics for target illumination if threat allows. Demonstrate ability to provide timely, accurate corrections for CAS aircraft. Provide BDA. Four controls required for completion.

Mission Performance Standards

(a) Able to locate and plot targets with an error less than 100 meters.
(b) Marks the target with a CEP less than 100 meters.
(c) Visually acquires CAS assets and provide timely control and corrections.
(d) Employs appropriate TTPs commensurate with threat scenario.

Prerequisite. Completion of CACC-391 and CACC-395. If rotary-wing CAS assets are utilized, completion of CACC-394 is required. If artillery or mortars are used for marking or suppression, completion of CACC-393 is required.

Ordnance. 7 2.75-inch WP rockets, 20 chaff, and 10 flares. 4 LUU-2s/LUU-19s.

External Syllabus Support. One to two CAS elements and a ground FAC. IDFS asset with 8 HE rds, 4 WP rds, and 8 Illum rds if IDFS is to be used for marking or suppression.

CACC-397 1.5 T,R E F/A-18D and 1 Escort A (N)

Goal. Practice supporting arms integration in any threat environment.

Requirement. Perform visual reconnaissance and plot three targets on a 1:50,000 map. Prepare CAS briefs. Employ appropriate TTPs to control coordinated attacks on the targets, managing air space as required to achieve maximum effect on target, aircraft deconfliction, and deconfliction of ordnance effects (i.e. fragmentation, forward firing ordnance, etc). At least one target attack should incorporate simultaneous target attacks by two or more dissimilar assets.

Mission Performance Standards

(a) Locates targets and plots with an error less than 100 meters.
(b) Coordinates target attacks using appropriate TTPs.
(c) If required, marks the target with a CEP less than 100 meters.
(d) Visually acquires CAS assets and provides timely control and corrections.

Prerequisite. Completion of all previous CACC sorties.

Ordnance. 7 2.75-inch WP rockets, 10 chaff, and 10 flares. 4 LUU-2s/LUU-19s if at night.

External Syllabus Support. Two or more dissimilar supporting arms assets with a minimum of 8 HE rds and 4 WP rds, either fixed wing or rotary wing CAS aircraft and artillery and/or mortars. This evaluation sortie should be flown in a MAGTF level operation if possible.

CACC-398 1.5 T,R F/A-18D and 1 Escort A (N)

Goal. Introduce TAC(A) procedures.

Requirement. Integrate CAS with a single terminal controller (FAC/FAC(A)). Manage airspace and multiple ingressing/egressing aircraft. Conduct airborne relay of target briefs. Minimum of two CAS elements required for completion.

Mission Performance Standards

(a) Able to accurately copy immediate JTAR.
(b) Able to coordinate timely CAS in response to immediate request.
(c) Able to pass CAS aircraft BDA via the C^3 system.

Prerequisite. Completion of CACC-397 and designation as a FAC(A).

Ordnance. None.

External Syllabus Support. Two CAS elements and one terminal controller.

CACC-399 1.5 T,R E F/A-18D and 1 Escort A (N)

Goal. Practice TAC(A) procedures with multiple terminal controllers.

Requirement. Perform coordination of attack aircraft and multiple terminal controllers. Receive attack briefings from the FAC/FAC(A) and assign appropriate CAS aircraft. Coordinate target mark and control with the FAC/FAC(A). Manage assigned airspace and provide command and control system with essential elements of information. Perform authentication procedures (as required).

Mission Performance Standards

(a) Able to accurately copy immediate JTAR.
(b) Able to coordinate timely CAS in response to immediate request.
(c) Able to pass CAS aircraft BDA via the C^3 system.

Prerequisite. None.

Ordnance. None.

External Syllabus Support. FAC(A) platform and one to four CAS elements.

335. FULL-COMBAT QUALIFICATION PHASE (F/A-18D)

1. Air-to-Air (AA)

a. Purpose. Conduct advanced air-to-air missions.

b. General

(1) All general notes from the Combat Qualification AA stage apply to this stage.

(2) These sorties are designed to be flown by experienced and qualified aircrew.

c. Ground Training. None.

d. Simulator Training. None.

e. Flight Training. (2 Flights, 2.6 Hours).

AA-410 1.3 T,R 2 F/A-18D vs Unknown Adversaries A (N)

Goal. Introduce aircrew to peacetime intercept and escort procedures. Emphasis should be placed on adherence to ICAO procedures, standing ROE, and appropriate TTPs.

Requirement. With a minimum of 40 NM separation, fighters commence intercept of bogies. Fighters perform a point defense/HVAA mission in a peace-time scenario with a weapons control status of tight. Bogies simulate fighter aircraft armed with SAR-1 weapons and having unknown ROE and intentions. Bogies commence intercepts at any altitude, subsonic, and nonmaneuvering. Fighters intercept and escort bogies according to briefed procedures. On at least one intercept bogies demonstrate hostile intent. Two intercept and escorts required for completion.

Mission Performance Standards

(a) Intercepts bogies and arrives in an offensive position.
(b) Adheres to ICAO procedures and standing ROE.
(c) Recognizes display of hostile intentions by bogies and react appropriately.

Prerequisite. None.

Ordnance. CATM-9, 20 chaff, 10 flares, and CATM-7 or CATM-120.

External Syllabus Support. Two or more adversaries.

AA-411 1.3 T,R 2 F/A-18D vs 1-2 Helicopters/Prop Aircraft
A (N)

Goal. Introduce aircrew to helicopter/prop aircraft attack. Emphasis should be placed on optimum weapons employment.

Requirement. Conduct visual attacks against helicopters/prop aircraft using appropriate captive air-to-air and simulated air-to-ground ordnance. One attack with a radar missile, one attack with the CATM-9, one attack with the air-to-air gun, one attack with the air-to-ground gun, and one attack with a GP bomb required for completion.

Mission Performance Standards

(a) Maintains offensive position on adversary aircraft.
(b) Valid air-to-air and air-to-ground weapons employment.

Prerequisite. Aircrew shall be ACM and LAT qualified in order to participate in this sortie.

Ordnance. CATM-9, 20 chaff, 10 flares, and CATM-7 or CATM-120.

External Syllabus Support. One or more helicopters/prop aircraft.

2. Deep Air Support (DAS)

a. Purpose. Conduct advance DAS missions.

b. General

(1) All general notes applicable to the DAS Combat Ready and Qualification stage apply here.

c. Ground Training. None.

d. Simulator Training. None.

e. Flight Training. (6 Flights, 9.0 Hours).

DAS-450 1.5 T,R 2+ F/A-18D A

Goal. Conduct day Strike Coordination And Reconnaissance (SCAR). Emphasis should be placed on locating and plotting targets in accordance with a target precedence list, notifying armed reconnaissance assets of target locations and current threat, and proper information flow through the C^3 system.

Requirement. Coordination of one element of armed reconnaissance required for completion.

Mission Performance Standards

(a) Locates and plots targets with an error less than 100 meters.
(b) Prioritizes targets according to target precedence list.
(c) Assists armed reconnaissance assets in locating targets and coordinates target attacks.

Prerequisite. Completion of DAS-250 and DAS-350.

Ordnance. 7 2.75-inch WP rockets, 10 chaff, and 10 flares.

External Syllabus Support. None.

DAS-451 1.5 T,R 2+ F/A-18D A N

Goal. Conduct Night (SCAR). Emphasis should be placed on locating and plotting targets in accordance with a target precedence list, notifying armed reconnaissance assets of target locations and current threat, and proper information flow through the C^3 system.

Requirement. Coordination of one element of armed reconnaissance required for completion.

Mission Performance Standards

(a) Locates and plots targets with an error less than 100 meters.
(b) Prioritizes targets according to target precedence list.
(c) Assists armed reconnaissance assets in locating targets and coordinates target attacks.

Prerequisite. Completion of DAS-450.

Ordnance. 7 2.75-inch WP rockets, 10 chaff, and 10 flares.

External Syllabus Support. None.

DAS-452 1.5 T,R 2 F/A-18D A (N)

Goal. Conduct assault support escort. Emphasis should be placed on mission planning, target precedence, search pattern, attack parameters, delivery modes, designation techniques, and information flow through the C^3 system.

Requirement. Conduct armed reconnaissance along a route to locate, plot, and destroy targets of opportunity in a low or medium threat environment.

Mission Performance Standards

(a) Locates and attacks targets.
(b) Informs assault support flight of threat.

Prerequisite. None.

Ordnance. CATM-9, 4 MK-82, 10 chaff, and 10 flares.

External Syllabus Support. Assault support package.

DAS-453 1.5 T,R E F/A-18D A (N)

Goal. Conduct FAC(A)/SCAR escort. Emphasis should be placed on detection and suppression of surface-to-air and air-to-air threats.

Requirement. Fly as a FAC(A)/SCAR escort and suppress any detected threats.

Mission Performance Standards

(a) Detects surface-to-air and air-to-air threats.
(b) Prosecutes surface-to-air and air-to-air threats.

Prerequisite. None.

Ordnance. CATM-9, CAGM-88, 2 MK-82, 10 chaff, 10 flares, and CATM-7 or CATM-120.

External Syllabus Support. Ground based emitter or 1 adversary.

DAS-454 1.5 T,R 4+ F/A-18D vs Unknown Adversaries A

Goal. Conduct an integrated day AI mission on an EW range simulating a high threat environment that includes bogies with SAR-1 missiles. Emphasis should be placed on mission planning, self protect, attack parameters, delivery modes, and designation techniques.

Requirement. Conduct a day AI mission in a high threat environment. Integrate SEAD, escort, and AR assets. Perform an INS update using the radar or FLIR. Execute a delivery consistent with the threat.

Mission Performance Standards

(a) Choose TTPs appropriate for mission and threat scenario.
(b) Targets or avoids all enemy surface-to-air and air-to-air threats.
(c) Achieves weapons impact within $\pm$15 seconds of planned TOT.
(d) Achieves required level of destruction on surface targets.

Prerequisite. Completion of DAS-351.

Ordnance. Minimum of 4xMK-82, CAGM-88, CATM-9, 10 chaff, 10 flares, and CATM-7 or CATM-120.

External Syllabus Support. Two or more adversaries, EW Range and a tanker (if AR required).

DAS-455 1.5 T,R E 4+ F/A-18D vs Unknown Adversaries A N

Goal. Conduct an integrated night AI mission on an EW range in a high threat environment that includes bogies with SAR-1 missiles. Emphasis should be placed on mission planning, self protect, attack parameters, delivery modes, and designation techniques.

Requirement. Conduct an AI mission at night in a high threat environment. Integrate SEAD assets. Perform an INS update using the radar or FLIR. Execute a delivery consistent with the threat.

Mission Performance Standards

(a) Choose TTPs appropriate for mission and threat scenario.
(b) Targets or avoids all enemy surface-to-air and air-to-air threats.
(c) Achieves weapons impact within ±15 seconds of planned TOT.
(d) Achieves required level of destruction on surface targets.

Prerequisite. Completion of DAS-352.

Ordnance. CATM-9, CAGM-88, 2 MK-84, 10 chaff, 10 flares, and CATM-7 or CATM-120.

External Syllabus Support. Two or more adversaries, EW range, and a tanker (if AR required).

3. Surface Specific Weapons Delivery (SSWD)

a. Purpose. Employ advanced surface specific weapons.

b. General

(1) Aircraft should be configured with an operable VTR/CVRS for proper post-flight analysis.

(2) Initial qualification in SSWD requires completion of ground training, associated simulators, and captive carry flights. Once qualified, proficiency can be maintained by flying the appropriate simulator IAW individual sortie refly intervals.

c. Ground Training. Appropriate pages and OTGs.

d. Simulator Training. (4 Periods, 4.0 Hours).

SSSWD-470 1.0 T,R WTT S

Goal. Practice employment of Mines. Emphasis should be placed on capabilities and limitations, cockpit displays, and employment techniques.

Requirement. Employ Mines utilizing flight director modes. Six mine laying runs required for completion.

SSSWD-471 1.0 T,R WTT S

Goal. Practice employment of the AGM-84 Harpoon. Emphasis should be placed on capabilities and limitations, cockpit displays, and employment techniques.

Requirement. Employ the AGM-84 against a ship. Three launches required for completion.

SSSWD-472 1.0 T,R WTT S

Goal. Practice employment of the AGM-154A JSOW. Emphasis should be placed on capabilities and limitations, cockpit displays, and employment techniques.

Requirement. Employ the AGM-154A against a variety of point and area targets. Six launches required for completion.

SSSWD-473 1.0 T,R WTT S

Goal. Practice employment of the AGM-84E SLAM. Emphasis should be placed on capabilities and limitations, cockpit displays, and employment techniques.

Requirement. Employ and guide the AGM-84E against a surface target. Three launches with guidance to impact required for completion.

e. Flight Training. (2 Flights, 3.0 Hours).

SSWD-470 1.5 T,R 1+ F/A-18D A (N)

Goal. Practice employment of Mines. Emphasis should be placed on capabilities and limitations, cockpit displays, and employment techniques.

Requirement. Employ Mines utilizing flight director modes. One mine laying run on a scored range required for completion.

Prerequisite. Completion of SSSWD-440.

Ordnance. Captive MK-41,55,64 (Mines).

External Syllabus Support. Scored mine range.

SSWD-474 1.5 T,R 1+ F/A-18D A (N)

Goal. Employment of Mines, AGM-84, AGM-154A, or the AGM-84E SLAM. Emphasis should be placed on capabilities and limitations, cockpit displays, and employment techniques.

Requirement. Employ Mines, AGM-84, AGM-154A, or AGM-84E against a surface target.

Prerequisite. Completion of appropriate SSSWD and SSWD.

Ordnance. Mines, AGM-84, AGM-154A, or AGM-84E.

External Syllabus Support. None.

SECTION V

340. INSTRUCTOR CERTIFICATIONS

1. Instructor Under Training (IUT). IUT training shall be conducted in the F/A-18 FRS using the CNO approved IUT syllabus.

2. Air Combat Tactics Instructor (ACTI)

a. Purpose. Produce an instructor capable of providing standardized, tactical, ground, and airborne instruction in the air-to-air mission.

b. General. The MAWTS-1 course catalog contains the POI for the ACTI program.

3. Low Altitude Tactics Instructor (LATI)

a. Purpose. Produce an instructor capable of providing tactical, standardized instruction in low altitude tactics.

b. General. The MAWTS-1 course catalog contains the POI for the LATI program.

4. Night System Instructor (Hi or Low) (NSI-HI/LO)

a. Purpose. Produce an instructor capable of providing tactical, standardized, ground, and airborne instruction in night tactics using NVDs in the F/A-18. NSI-HI is a certification applicable only to instructors in F/A-18A and F/A-18C (Lot XI and below) aircraft. F/A-18C/D (Lot XII and above) squadrons require an NSI-LO certified instructor.

b. General. The MAWTS-1 course catalog contains the POI for the NSI program.

5. Forward Air Controller (Airborne) Instructor (FAC(A)I)

a. Purpose. Produce an instructor capable of providing tactical, standardized, ground, and airborne instruction of the FAC(A) mission.

b. General. The MAWTS-1 course catalog contains the POI for the FAC(A)I program.

6. Tactical Air Coordinator (Airborne) Instructor (TAC(A)I)

a. Purpose. Produce an instructor capable of providing tactical, standardized, ground, and airborne instruction of the TAC(A) mission.

b. General. The MAWTS-1 course catalog contains the POI for the TAC(A)I program.

341. FLIGHT LEADER QUALIFICATIONS

a. Purpose. To provide a guide to commanding officers for certification of Section/Division leaders and Mission Commanders.

b. General. The syllabus listed is only a guide and may be modified by the commanding officer as required. Flight lead qualifications will be evaluated by the commanding officer or his designated representative.

(1) Section Lead Syllabus

(a) Completion and evaluation of the prospective section lead's ability to brief, lead, and debrief the following events:

AA-216, AA-315, AS-233, CAS-241

(2) Division Lead Syllabus

(a) Completion and evaluation of the prospective division lead's ability to brief, lead, and debrief the following events:

AA-321, DAS-251

(3) Mission Commander Syllabus

(a) Completion and evaluation of the prospective mission commander's ability to brief, lead, and debrief the following events:

DAS-352, DAS-454

350. SPECIAL SORTIE TRACKING

1. Annual NATOPS and Instrument Checks

a. Purpose. To track annual NATOPS and Instrument check rides.

RQD-600	1.0	E OFT, WTT, 1+ F/A-18A/C/D A/S
	Goal. Complete Annual NATOPS Check.	
RQD-601	1.0	E OFT, WTT, 1+ F/A-18A/C/D A/S
	Goal. Complete Annual Instrument Check.	

2. Strategic Aerial Refueling

a. Purpose. Track proficiency in strategic aerial refueling operations.

b. General

(1) These sorties are to be used for tracking purposes only.

(2) No CRP is assigned to these sorties.

(3) These sorties may be combined with other syllabus flights.

(4) Aerial refueling training codes in the combat ready stage should be logged for combat readiness.

c. Ground Training. Ground training will consist of required US Air Force training at the squadron level.

d. Simulator Training. None.

e. Flight Training. (1 Flight, 1.5 Hours).

AR-602 1.5 T,R 1+ F/A-18A/C/D A

Goal. Track proficiency in day or night strategic aerial refueling.

Requirement. One plug required for completion.

Prerequisite. None.

Ordnance. None.

External Syllabus Support. One KC-135 or KC-10 tanker.

3. Specific Weapons Delivery

a. Purpose. Track specific weapons delivery.

b. General

(1) These events are to be used for tracking purposes only.

(2) No CRP is assigned to these sorties.

(3) These events may be combined with other syllabus flights.

(4) Other training codes in the combat ready, combat qualified, and full combat qualification phases should be logged for combat readiness.

c. Ground Training. Ground training will consist of squadron and higher level training as required for proficiency and training.

d. Simulator Training. As required by combat ready, combat qualification, and full combat qualification phases for similar event.

e. Flight Training. (17 Flights, 27.0 Hours).

ASWD-660 1.5 T,R 1+ F/A-18A/C/D A

Goal. Track proficiency in delivering the AIM-9.

Requirement. Must employ one AIM-9 for completion.

Prerequisite. None.

Ordnance. One AIM-9.

External Syllabus Support. Missile test range and airspace control agency. Surface search and aerial search radar platform, (EP-3, E-2C, etc). One BQM, AQM, or TALD with IR augmentation package.

ASWD-661 1.5 T,R 1+ F/A-18A/C/D A

Goal. Track proficiency in delivering the AIM-7.

Requirement. Must employ one AIM-7 for completion.

Prerequisite. None.

Ordnance. One AIM-7.

External Syllabus Support. Missile test range and airspace control agency. Surface search and aerial search platform (EP-3, E-2C, etc). One BQM, AQM, or TALD with radar augmentation package.

ASWD-662 1.5 T,R 1+ F/A-18C/D A

Goal. Track proficiency in delivering the AIM-120.

Requirement. Must employ one AIM-120 for completion.

Prerequisite. None.

Ordnance. One AIM-120.

External Syllabus Support. Missile test range and airspace control agency. Surface search and aerial search radar platform (EP-3, E-2C, etc). One BQM, AQM, or TALD with radar augmentation package.

SSWD-670 1.5 T,R 1+ FA-18A/C/D A N

Goal. Track proficiency in dropping live MK-82, 83, or 84 bombs.

Requirement. Must drop one bomb for completion.

Prerequisite. None.

Ordnance. At least one MK-82, 83, or 84 bomb.

External Syllabus Support. None.

SSWD-671 1.5 T,R 1+ FA-18A/C/D A N

Goal. Track proficiency in shooting live or inert 5.0" or 2.75" rockets.

Requirement. Must shoot one pod of rockets for completion.

Prerequisite. None.

Ordnance. At least four 5" or seven 2.75" rocket.

External Syllabus Support. None.

SSWD-672 1.5 T,R 1+ FA-18A/C/D A N

Goal. Track proficiency in dropping live or inert CBU-99/100 Rockeye.

Requirement. Must drop one Rockeye for completion.

Prerequisite. None.

Ordnance. At least one Rockeye.

External Syllabus Support. None.

SSWD-673 1.5 T,R 1+ FA-18A/C/D A N

Goal. Track proficiency in dropping live or inert CBU-78 Gator.

Requirement. Must drop one CBU-78 Gator for completion.

Prerequisite. None.

Ordnance. At least one CBU-78 Gator.

External Syllabus Support. None.

SSWD-674 1.5 T,R 1+ FA-18A/C/D A (N)

Goal. Track proficiency in dropping laser guided bombs.

Requirement. Must drop one GBU-10, 12, or 16, or an LGTR for completion.

Prerequisite. None.

Ordnance. At least one GBU-10, 12, 16, or an LGTR.

External Syllabus Support. None.

SSWD-675 1.5 T,R 1+ FA-18A/C/D A (N)

Goal. Track proficiency in dropping live or inert MK-41, 55, or 64 mines.

Requirement. Must drop one MK-41, 55, or 64 mine for completion.

Prerequisite. None.

Ordnance. At least one MK41, 55, or 64 mine.

External Syllabus Support. None.

SSWD-676 1.5 T,R 1+ F/A-18A/C/D A (N)

Goal. Track proficiency in shooting the AGM-88 HARM.

Requirement. Must shoot one AGM-88 HARM.

Prerequisite. None.

Ordnance. At least one AGM-88 HARM.

External Syllabus Support. None.

SSWD-677 1.5 T,R 1+ FA-18C/D A (N)

Goal. Track proficiency in shooting the AGM-65F IR Maverick.

Requirement. Must shoot one AGM-65F IR Maverick.

Prerequisite. None.

Ordnance. At least one AGM-65F IR Maverick.

External Syllabus Support. None.

SSWD-678 1.5 T,R 1+ FA-18A/C/D A (N)

Goal. Track proficiency in shooting the AGM-65E LASER Maverick.

Requirement. Must shoot one AGM-65E LASER Maverick.

Prerequisite. None.

Ordnance. At least one AGM-65E LASER Maverick.

External Syllabus Support. None.

SSWD-679 1.5 T,R 1+ FA-18A/C/D A

Goal. Track proficiency in dropping the Walleye.

Requirement. Must drop one Walleye.

Prerequisite. None.

Ordnance. At least one Walleye.

External Syllabus Support. None.

SSWD-680 1.5 T,R 1+ FA-18A/C/D A

Goal. Track proficiency in controlling an ERDL Walleye via Data Link POD.

Requirement. Must control one ERDL Walleye via Data Link POD.

Prerequisite. None.

Ordnance. At least one ERDL Walleye on release aircraft and one Data Link POD on controlling aircraft or both on same aircraft.

External Syllabus Support. None.

SSWD-681 1.5 T,R 1+ F/A-18C A (N)

Goal. Track proficiency in shooting the Harpoon.

Requirement. Must shoot one Harpoon.

Prerequisite. None.

Ordnance. At least one Harpoon.

External Syllabus Support. None.

SSWD-682 1.5 T,R 1+ F/A-18C A (N)

Goal. Track proficiency in shooting the SLAM.

Requirement. Must shoot one SLAM.

Prerequisite. None.

Ordnance. At least one SLAM.

External Syllabus Support. None.

SSWD-683 1.5 T,R 1+ F/A-18C A (N)

Goal. Track proficiency in delivering JSOW.

Requirement. Must deliver one JSOW.

Prerequisite. None.

Ordnance. One JSOW.

External Syllabus Support. None.

360. EXPENDABLE ORDNANCE REQUIREMENTS

1. General. Annual ordnance requirements are developed on a per crew basis as outlined in OPNAVNOTE 8010. Support sortie ordnance requirements are not included in this table.

a. F/A-18 A/C/D

	RP				ANNUAL
ORDNANCE	100	200	300	400	REQUIREMENTS
BDU-48	26	7	0	0	6
MK-76	86	39	54	0	98
BDU-45	16	0	0	0	0
MK-82	4	12	12	10	54
MK-83	0	4	8	0	24
MK-84	0	0	0	2	2
LGTR	0	2	2	0	8
LUU-2	8	0	32	0	44
2.75" ROCKET	0	0	42	14	70
AIM-9	0	0	1	0	0.34
20 MM	1,250	500	1,750	0	2,750
CHAFF	560	275	550	100	1,205
FLARES	400	265	335	80	1,020
TALD	0	0	1	0	0.34
AGM-65E	0	0	1	0	0.34

b. FRS 100 LEVEL NOTES

(1) FSTK-281/282/282W can substitute 6 BDU-48 for 4 BDU-45.

(2) FSTK-283/283W/284/284W can substitute 6 MK-76 for 4 BDU-45.

c. T&R 200,300 AND 400 LEVEL NOTES

(1) Can substitute 4 MK-20 for 4 MK-82.

(2) Can substitute 8 5" WP rockets for 7 2.75" rockets.

(3) SSWD can substitute corresponding live rounds for captive rounds.

(4) Can substitute GBU for LGTR.

(5) Can substitute AIM-7 or AIM-120 for AIM-9.

(6) Can substitute Walleye, HARM, or AGM-65F for AGM-65E.

361. CAPTIVE ORDNANCE REQUIREMENTS

1. General. Annual captive ordnance requirements to maintain an aircrew at core competency level. Support sortie ordnance requirements are not included in this table.

a. F/A-18/A/C/D.

CAPTIVE ORDNANCE	100	200	300	400	ANNUAL REQUIREMENTS
HARM	0	0	1	1	1
AGM-65E	0	0	1	1	1
AGM-65F	0	0	1	1	1
WALLEYE	0	0	1	1	1
SLAM	0	0	1	1	1
AIM-7	0	1	1	1	1
AIM-9	1	1	1	1	1
AIM-120	0	1	1	1	1
ERDL POD	0	0	1	1	1

b. T&R 200, 300, AND 400 LEVEL NOTES.

(1) Captive AIM-120 may be substituted for captive AIM-7 for all sorties.

362. GROUND ORDNANCE

BASIC/TRANSITION/CONVERSION

ORDNANCE	100 SERIES	200 SERIES	300 SERIES	400 SERIES	REFRESHER	ANNUAL*
HE Artillery	0	8	60	0	0	84
WP Artillery	0	4	32	0	0	52
Ill. Artillery	0	0	32	0	0	48

NOTE: * Annual ordnance requirements maintain an aircrew member at core competency level.

AIRCRAFT: FA-18A/C/D MOS: 7523/5 CREW POSITION: PILOT/WSO

STAGE	TRNG CODE	HRS	REFLY INTERVAL	CRP A	CRP C	CRP D	T	C	R	E	REMARKS
COMBAT CAPABLE PHASE											
SFAM	101/101W	1.0	*	0.0	0.0	0.0	X		X	X	
SFAM	100W	1.0	*	0.0	0.0	0.0	X		X	X	
SFAM	102/102W	1.5	*	0.0	0.0	0.0	X		X	X	
SFAM	103/103W	1.5	*	0.0	0.0	0.0	X		X	X	
SFAM	104	1.5	*	0.0	0.0	0.0	X		X	X	
SFAM	104W	1.5	*	0.0	0.0	0.0	X		X	X	
SFAM	105/105W	1.5	*	0.0	0.0	0.0	X		X	X	
SFAM	106	1.5	*	0.0	0.0	0.0	X		X	X	
SFAM	107/107W	1.5	*	0.0	0.0	0.0	X		X	X	
SFAM	108/108W	1.5	*	0.0	0.0	0.0	X		X	X	
SFAM	109	1.5	*	0.0	0.0	0.0	X		X	X	
SFAM	110/110W	1.5	*	0.0	0.0	0.0	X		X	X	
SINT	001	1.5	*	0.0	0.0	0.0	X		X	X	
FFAM	101	1.5	*	0.0	0.0	0.0	X		X	X	
FFAM	101W	1.6	*	0.0	0.0	0.0	X		X	X	
FFAM	102	1.8	*	0.0	0.0	0.0	X		X	X	
FFAM	102W	1.6	*	0.0	0.0	0.0	X		X	X	
FFAM	103	1.8	*	0.0	0.0	0.0	X		X	X	
FFAM	103W	1.6	*	0.0	0.0	0.0	X				
FFAM	104	1.5	*	0.0	0.0	0.0	X		X	X	
FFAM	104W	1.6	*	0.0	0.0	0.0	X		X	X	
FFAM	105	1.5	*	0.0	0.0	0.0	X		X	X	
FFAM	105W	1.6	*	0.0	0.0	0.0	X		X	X	N
FFAM	106	0.7	*	0.0	0.0	0.0	X		X		
FFAM	107	1.5	*	0.0	0.0	0.0	X		X	X	N
FFRM	111	1.5	*	0.0	0.0	0.0	X				
FFRM	112	1.5	*	0.0	0.0	0.0	X				
FFRM	113	1.5	*	0.0	0.0	0.0	X		X	X	N
FIFR	115	1.5	*	0.0	0.0	0.0	X			X	
FIFR	116	1.5	*	0.0	0.0	0.0	X				N
SNAV	170/170W	1.5	*	0.0	0.0	0.0	X			X	
FNAV	171/171W	1.5	*	0.0	0.0	0.0	X				
FNAV	172/172W	1.5	*	0.0	0.0	0.0	X		X	X	
FNAV	173/173W	1.5	*	0.0	0.0	0.0	X		X		
SLAT	175	1.0	*	0.0	0.0	0.0	X		X	X	
SLAT	176/176W	1.0	*	0.0	0.0	0.0	X		X	X	
FLAT	175	1.3	*	0.0	0.0	0.0	X		X	X	
FLAT	176/176W	1.3	*	0.0	0.0	0.0	X		X	X	
FLAT	177/177W	1.3	*	0.0	0.0	0.0	X			X	

Figure 3.3.--MOS 7523/5 Refly Interval, Combat Readiness Percentage.

AIRCRAFT: FA-18A/C/D MOS: 7523/5 CREW POSITION: PILOT/WSO

STAGE	TRNG CODE	HRS	REFLY INTERVAL	CRP A	CRP C	CRP D	T	C	R	E	REMARKS
COMBAT CAPABLE PHASE (Continued)											
SSTK	181/181W	1.5	*	0.0	0.0	0.0	X			X	
SSTK	182/182W	1.0	*	0.0	0.0	0.0	X		X	X	
SSTK	183/183W	1.0	*	0.0	0.0	0.0	X			X	
SSTK	184/184W	1.0	*	0.0	0.0	0.0	X		X	X	
SSTK	185/185W	1.5	*	0.0	0.0	0.0	X			X	
SSTK	188/188W	1.0	*	0.0	0.0	0.0	X			X	
SSTK	189/189W	1.0	*	0.0	0.0	0.0	X			X	
SSTK	284/284W	1.5	*	0.0	0.0	0.0	X			X	
SSTK	285/285W	1.0	*	0.0	0.0	0.0	X			X	
SSTK	286/286W	1.5	*	0.0	0.0	0.0	X			X	
FSTK	181/181W	1.3	*	0.0	0.0	0.0	X			X	
FSTK	182/182W	1.3	*	0.0	0.0	0.0	X		X	X	
FSTK	183	1.3	*	0.0	0.0	0.0	X			X	
FSTK	184	1.3	*	0.0	0.0	0.0	X		X	X	
FSTK	185	1.3	*	0.0	0.0	0.0	X			X	N
FSTK	186/186W	1.3	*	0.0	0.0	0.0	X			X	
FSTK	187	1.3	*	0.0	0.0	0.0	X			X	
FSTK	188/188W	1.3	*	0.0	0.0	0.0	X		X	X	
FSTK	189/189W	1.3	*	0.0	0.0	0.0	X		X	X	
FSTK	190/190W	1.3	*	0.0	0.0	0.0	X			X	
FSTK	191/191W	1.5	*	0.0	0.0	0.0	X			X	N
FSTK	192/192W	1.5	*	0.0	0.0	0.0	X			X	
FSTK	280/280W	1.5	*	0.0	0.0	0.0	X				
FSTK	281/281W	1.5	*	0.0	0.0	0.0	X		X	X	
FSTK	282/282W	1.5	*	0.0	0.0	0.0	X			X	
FSTK	283/283W	1.3	*	0.0	0.0	0.0	X			X	
FSTK	284/284W	1.3	*	0.0	0.0	0.0	X			X	N
FSTK	290W	1.5	*	0.0	0.0	0.0	X			X	
FSTK	291W	1.5	*	0.0	0.0	0.0	X			X	
SEWT	101/101W	1.5	*	0.0	0.0	0.0	X			X	
SEWT	103/103W	1.0	*	0.0	0.0	0.0	X			X	
SEWT	104/104W	1.0	*	0.0	0.0	0.0	X			X	
SEWT	105/105W	1.0	*	0.0	0.0	0.0	X			X	
SAWI	121/121W	1.5	*	0.0	0.0	0.0	X			X	
SAWI	122/122W	1.0	*	0.0	0.0	0.0	X			X	
SAWI	123/123W	1.0	*	0.0	0.0	0.0	X		X	X	
SAWI	124/124W	1.0	*	0.0	0.0	0.0	X			X	
SAWI	125/125W	1.0	*	0.0	0.0	0.0	X		X	X	
SAWI	126/126W	1.0	*	0.0	0.0	0.0	X			X	
SAWI	127/127W	1.0	*	0.0	0.0	0.0	X			X	
SAWI	128/128W	1.0	*	0.0	0.0	0.0	X			X	
SAWI	129/129W	1.0	*	0.0	0.0	0.0	X		X	X	
SAWI	130/130W	1.0	*	0.0	0.0	0.0	X			X	
SAWI	131/131W	1.0	*	0.0	0.0	0.0	X			X	

Figure 3.3.--MOS 7523/5 Refly Interval, Combat Readiness Percentage-Continued.

AIRCRAFT: FA-18A/C/D MOS: 7523/5 CREW POSITION: PILOT/WSO

STAGE	TRNG CODE	HRS	REFLY INTERVAL	CRP A	CRP C	CRP D	T	C	R	E	REMARKS
COMBAT CAPABLE PHASE (Continued)											
FAWI	121/121W	1.5	*	0.0	0.0	0.0	X			X	
FAWI	122/122W	1.5	*	0.0	0.0	0.0	X			X	
FAWI	123/123W	1.5	*	0.0	0.0	0.0	X		X	X	
FAWI	124/124W	1.5	*	0.0	0.0	0.0	X			X	
FAWI	125/125W	1.5	*	0.0	0.0	0.0	X		X	X	
FAWI	126W	1.5	*	0.0	0.0	0.0	X			X	
FAWI	127W	1.5	*	0.0	0.0	0.0	X			X	N
SSRA	135/135W	1.5	*	0.0	0.0	0.0	X		X	X	
SSRA	136/136W	1.5	*	0.0	0.0	0.0	X		X	X	
FSRA	130/130W	1.4	*	0.0	0.0	0.0	X			X	
FSRA	131/131W	1.4	*	0.0	0.0	0.0	X			X	
FSRA	132/132W	1.4	*	0.0	0.0	0.0	X		X	X	
FSRA	133/133W	1.4	*	0.0	0.0	0.0	X		X	X	
FBFM	140/140W	1.0	*	0.0	0.0	0.0	X		X	X	
FBFM	141/141W	1.0	*	0.0	0.0	0.0	X		X	X	
FBFM	142	1.0	*	0.0	0.0	0.0	X			X	
FBFM	143/143W	1.0	*	0.0	0.0	0.0	X		X	X	
FBFM	144	1.0	*	0.0	0.0	0.0	X			X	
FBFM	145/145W	1.0	*	0.0	0.0	0.0	X		X	X	
FBFM	146/146W	1.0	*	0.0	0.0	0.0	X			X	
FBFM	147W	1.0	*	0.0	0.0	0.0	X		X	X	
SFWT	151/151W	1.5	*	0.0	0.0	0.0	X		X	X	
FFWT	151/151W	1.0	*	0.0	0.0	0.0	X			X	
FFWT	152	1.0	*	0.0	0.0	0.0	X			X	
FFWT	153/153W	1.0	*	0.0	0.0	0.0	X		X	X	
FFWT	154W	1.0	*	0.0	0.0	0.0	X		X	X	
FFWT	155/155W	1.0	*	0.0	0.0	0.0	X			X	
FFWT	251/251W	1.0	*	0.0	0.0	0.0	X		X	X	
FFWT	252/252W	1.0	*	0.0	0.0	0.0	X			X	
FFWT	253/253W	1.0	*	0.0	0.0	0.0	X			X	
FFWT	254/254W	1.0	*	0.0	0.0	0.0	X		X	X	
FFWT	256/256W	1.0	*	0.0	0.0	0.0	X			X	
SGUN	160/160W	1.0	*	0.0	0.0	0.0	X			X	
FGUN	161	1.2	*	0.0	0.0	0.0	X			X	
FGUN	162	1.2	*	0.0	0.0	0.0	X			X	
FGUN	163	1.2	*	0.0	0.0	0.0	X			X	
SNATK	146/146W	1.0	*	0.0	0.0	0.0	X			X	N
SNATK	147/147W	1.0	*	0.0	0.0	0.0	X			X	N

Figure 3.3.--MOS 7523/5 Refly Interval, Combat Readiness Percentage-Continued.

AIRCRAFT: FA-18A/C/D MOS: 7523/5 CREW POSITION: PILOT/WSO

STAGE	TRNG CODE	HRS	REFLY INTERVAL	CRP A	CRP C	CRP D	T	C	R	E	REMARKS
COMBAT CAPABLE PHASE (Continued)											
FNATK	146/146W	1.5	*	0.0	0.0	0.0	X			X	N
FNATK	147/147W	1.5	*	0.0	0.0	0.0	X			X	N
FNATK	148	1.5	*	0.0	0.0	0.0	X			X	N
FNATK	148W	1.3	*	0.0	0.0	0.0	X			X	N
FNATK	149	1.5	*	0.0	0.0	0.0	X			X	N
FNATK	149W	1.3	*	0.0	0.0	0.0	X			X	N
SCQL	201	1.0	*	0.0	0.0	0.0				X	
SCQL	202	1.0	*	0.0	0.0	0.0					
SCQL	203	1.0	*	0.0	0.0	0.0					
SCQL	204	1.0	*	0.0	0.0	0.0					
SCQL	205	1.0	*	0.0	0.0	0.0					
SCQL	206	1.5	*	0.0	0.0	0.0					
FCQL	201	1.2	*	0.0	0.0	0.0					
FCQL	202	1.2	*	0.0	0.0	0.0					N
FCQL	203	1.2	*	0.0	0.0	0.0					N
FCQL	204	1.2	*	0.0	0.0	0.0					N
FCQL	205	1.2	*	0.0	0.0	0.0					N
FCQL	206	1.2	*	0.0	0.0	0.0					
FCQL	207	1.2	*	0.0	0.0	0.0					N
FCQL	208	1.2	*	0.0	0.0	0.0					N
FCQL	209	1.2	*	0.0	0.0	0.0					N
FCQL	210	1.2	*	0.0	0.0	0.0					
FCQL	211	1.2	*	0.0	0.0	0.0					N
FCQL	212	1.2	*	0.0	0.0	0.0					
FCQL	213	1.2	*	0.0	0.0	0.0					N
FCQL	214	1.2	*	0.0	0.0	0.0					N
FCQL	215	1.2	*	0.0	0.0	0.0					N
FCQL	216	1.2	*	0.0	0.0	0.0					
FCQL	217	1.7	*	0.0	0.0	0.0					
FCQL	218	1.7	*	0.0	0.0	0.0					N
FCQL	219	1.7	*	0.0	0.0	0.0					
FCQL	220	1.7	*	0.0	0.0	0.0					N

Figure 3.3.--MOS 7523/5 Refly Interval, Combat Readiness Percentage-Continued.

AIRCRAFT: FA-18A/C/D MOS: 7523/5 CREW POSITION: PILOT/WSO

STAGE	TRNG CODE	HRS	REFLY INTERVAL	CRP A	CRP C	CRP D	T	C	R	E	REMARKS
COMBAT READY PHASE											
NAV	200	1.5	6	0.3	0.3	0.3	X		X		(N)
NAV	201	1.3	12	0.4	0.4	0.4	X		X		(N)
AR	202	1.5	6	0.3	0.3	0.3	X		X		
AR	203	1.5	12	0.4	0.4	0.4	X		X		N
EQ	204	1.0	12	0.3	0.3	0.3	X		X	X	
EQ	205	1.0	12	0.3	0.3	0.3	X		X	X	N
EW	206	1.5	18	0.4	0.4	0.4	X		X		(N)
LAT	208	1.0	*	0.3	0.3	0.3	X		X		
LAT	209	1.0	*	0.5	0.5	0.5	X		X		
AA	210	1.3	*	0.3	0.3	0.3	X		X		(N)
AA	211	1.3	*	0.4	0.4	0.4	X		X		(N)
AA	212	1.0	6	0.4	0.4	0.4	X		X		
AA	213	1.0	3	0.4	0.4	0.4	X		X		
AA	214	1.0	3	0.4	0.4	0.4	X		X		
AA	215	1.0	6	0.5	0.5	0.5	X		X		
AA	216	1.0	3	0.5	0.5	0.5	X		X		
AA	217	1.0	6	0.5	0.5	0.5	X		X	X	
AA	218	1.0	*	0.5	0.5	0.5	X		X		
AA	219	1.0	*	0.5	0.5	0.5	X		X		
AA	220	1.0	12	0.5	0.5	0.5	X		X	X	
AA	221	1.3	*	0.3	0.3	0.3	X		X		(N)
AA	222	1.3	*	0.4	0.4	0.4	X		X		
AA	223	1.3	*	0.5	0.5	0.5	X		X	X	(N)
AS	230	1.5	6	0.4	0.4	0.4	X		X		(N)
AS	231	1.5	6	0.5	0.5	0.5	X		X		(N)
AS	232	1.5	*	0.5	0.5	0.5	X		X		(N)
AS	233	1.5	6	0.6	0.6	0.6	X		X	X	N
AS	234	1.5	6	0.6	0.6	0.6	X		X		(N)
AS	235	1.5	6	0.8	0.8	0.8	X		X	X	(N)
CAS	240	1.5	6	0.5	0.5	0.5	X		X		
CAS	241	1.5	6	0.6	0.6	0.6	X		X	X	(N)
DAS	250	1.5	12	0.6	0.6	0.6	X		X		(N)
DAS	251	1.5	6	0.6	0.6	0.6	X		X		
COMBAT QUALIFICATION PHASE											
LAT	308	1.0	*	0.5	0.5	0.4	X		X		
LAT	309	1.0	6	0.5	0.5	0.4	X		X	X	
AA	310	1.3	*	0.5	0.5	0.3	X		X		(N)
AA	311	1.3	*	0.5	0.5	0.3	X		X		(N)
AA	312	1.3	6	0.5	0.5	0.3	X		X		(N)

Figure 3.3.--MOS 7523/5 Refly Interval, Combat Readiness Percentage-Continued

AIRCRAFT: FA-18A/C/D MOS: 7523/5 CREW PPOSITION: PILOT/WSO

STAGE	TRNG CODE	HRS	REFLY INTERVAL	CRP A	CRP C	CRP D	T	C	R	E	REMARKS
AA	313	1.3	6	0.5	0.5	0.3	X		X		(N)
AA	314	1.3	6	0.6	0.5	0.3	X		X		(N)
AA	315	1.3	3	0.7	0.5	0.3	X		X	X	(N)
AA	316	1.3	*	0.7	0.5	0.3	X		X		
AA	317	1.3	6	0.8	0.5	0.3	X		X		(N)
AA	318	1.3	6	0.9	0.5	0.3	X		X		(N)
AA	319	1.3	6	0.8	0.8	0.8	X		X		(N)
AA	320	1.3	12	0.5	0.5	0.3	X		X		(N)
AA	321	1.3	3	1.0	0.5	0.3	X		X	X	(N)
AS	330	1.5	6	0.8	0.6	0.5	X		X		(N)
AS	331	1.5	12	0.6	0.6	0.5	X		X		(N)
AS	332	1.5	6	0.8	0.7	0.5	X		X	X	(N)
AS	333	1.5	12	0.5	0.5	0.5	X		X		(N)
CAS	340	1.5	6	0.8	0.8	0.6	X		X		N
CAS	341	1.5	6	0.8	0.8	0.6	X		X	X	N
DAS	350	1.5	6	0.6	0.5	0.5	X		X	X	(N)
DAS	351	1.5	6	0.5	0.5	0.5	X		X		
DAS	352	1.5	6	0.8	0.5	0.5	X		X	X	N
ASWD	360	1.0	*	0.5	0.5	0.3	X		X		
ASWD	361	1.0	12	0.5	0.5	0.3	X		X	X	
ASWD	362	1.5	36	1.0	1.0	1.0	X		X		
SSWD	370	1.5	6	0.4	0.4	0.2	X		X		(N)
SSWD	371	1.5	6	0.4	0.4	0.2	X		X		(N)
SSWD	372	1.5	36	0.4	0.4	0.2	X		X		(N)
SSWD	373	1.5	12	0.4	0.4	0.2	X		X		N
SSWD	374	1.5	6	0.4	0.4	0.2	X		X		(N)
SSWD	375	1.5	6		0.4	0.2	X		X		(N)
SSWD	376	1.5	36	0.8	0.8	0.8	X		X		(N)
NS	380	1.3	*		0.2	0.2	X		X		N
NS	381	1.3	*		0.2	0.2	X		X		N
NS	382	1.3	*		0.2	0.2	X		X		N
NS	383	1.3	*		0.2	0.2	X		X	X	N
NS	384	1.3	*		0.3	0.3	X		X		N
NS	385	1.3	*		0.3	0.3	X		X		N
NS	386	1.3	*		0.3	0.3	X		X		N
NS	387	1.3	12		0.3	0.3	X		X	X	N
CACC	390	1.5	6			0.4	X		X		
CACC	391	1.5	12			0.5	X		X	X	
CACC	392	1.5	12			0.4	X		X		(N)
CACC	393	1.5	12			0.5	X		X	X	N
CACC	394	1.5	12			0.5	X		X		(N)
CACC	395	1.5	6			0.5	X		X	X	N
CACC	396	1.5	12			0.5	X		X		N
CACC	397	1.5	12			0.5	X		X	X	(N)
CACC	398	1.5	12			0.5	X		X		(N)
CACC	399	1.5	12			0.5	X		X	X	(N)

Figure 3.3.--MOS 7523/5 Refly Interval, Combat Readiness Percentage-Continued

AIRCRAFT: FA-18A/C/D MOS: 7523/5 CREW PPOSITION: PILOT/WSO

STAGE	TRNG CODE	HRS	REFLY INTERVAL	CRP A	CRP C	CRP D	T	C	R	E	REMARKS
FULL-COMBAT QUALIFICATION PHASE											
CQ	400	1.5	12		0.5		X		X	X	
CQ	401	1.5	12		0.5		X		X	X	N
AA	410	1.3	12	0.3	0.3	0.3	X		X		(N)
AA	411	1.3	12	0.3	0.3	0.3	X		X		(N)
DAS	450	1.5	12	0.5	0.3	0.5	X		X		
DAS	451	1.5	12	0.5	0.3	0.5	X		X		N
DAS	452	1.5	12	0.4	0.3	0.4	X		X		(N)
DAS	453	1.5	12	0.4	0.3	0.4	X		X	X	(N)
DAS	454	1.5	12	1.0	0.5	1.0	X		X		
DAS	455	1.5	12	1.0	0.5	1.0	X		X	X	N
SSWD	470	1.5	36	0.3	0.3	0.3	X		X		(N)
SSWD	471	1.5	36		0.2		X		X		(N)
SSWD	472	1.5	12		0.2		X		X		(N)
SSWD	473	1.5	12		0.2		X		X		(N)
SSWD	474	1.5	36	0.3	0.3	0.3	X		X		(N)
SPECIAL TRACKING SORTIES											
RQD	600	1.0	12							X	
RQD	601	1.0	12							X	
AR	602	1.5	*								
ASWD	660	1.5	*								
ASWD	661	1.5	*								
ASWD	662	1.5	*								
SSWD	670	1.5	*								
SSWD	671	1.5	*								
SSWD	672	1.5	*								
SSWD	673	1.5	*								
SSWD	674	1.5	*								
SSWD	675	1.5	*								
SSWD	676	1.5	*								
SSWD	677	1.5	*								
SSWD	678	1.5	*								
SSWD	679	1.5	*								
SSWD	680	1.5	*								
SSWD	681	1.5	*								
SSWD	682	1.5	*								
SSWD	683	1.5	*								

Figure 3.3.--MOS 7523/5 Refly Interval, Combat Readiness Percentage-Continued

PILOT/WSO FLIGHT UPDATE CHAINING

STAGE	FLIGHT	FLIGHTS UPDATED
	200	
	201	
	202	
	203	202
	204	
	205	204
	206	
	208	
	209	
	210	
	211	
	212	
	213	
	214	
	215	
	216	215
	217	
	218	
	219	
	220	
	221	
	222	
	223	
	230	
	231	
	232	
	233	230
	234	
	235	
	240	
	241	
	250	
	251	
	308	
	309	
	310	
	311	
	312	
	313	
	314	
	315	
	316	
	317	
	318	
	319	
	320	
	321	
	330	
	331	
	332	
	333	

Figure 3.4.--MOS 7523/5 Flight Update Chaining.

PILOT/WSO FLIGHT UPDATE CHAINING

STAGE	FLIGHT	FLIGHTS UPDATED
	340	
	341	
	350	
	351	
	352	
	360	
	361	
	362	
	370	
	371	
	372	
	373	
	374	
	375	
	376	
	380	
	381	
	382	
	383	
	384	
	385	
	386	
	387	
	390	
	391	
	392	
	393	
	394	
	395	
	396	
	397	
	398	
	399	
	400	
	401	
	410	
	411	
	450	
	451	
	452	
	453	
	454	351
	455	352
	470	
	471	
	472	
	473	
	474	

Figure 3.4.--MOS 7523/5 Flight Update Chaining--Continued.

CHAPTER 6

KC-130 PILOT

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*** * NOTE * ***

Aircrew coordination shall be briefed before all flights and events.

MARINE AERIAL REFUELING SQUADRON - KC-130
UNIT TEMPLATE

NOTE

The capabilties defined and described in the core capability and unit template sections are provided to ensure each like squadron maintains a common base of training and depth of capabilities. When resources permit, and when in the judgement of the commander additional training would significantly increase the unit's warfighting capability, training to a level above these base capabilities is permitted. It is incumbent upon, and expected of, the commander to balance any increase in the depth of core capabilities against the long term health and readiness of his unit while staying within his resource constraints.

1. **TABLE OF ORGANIZATION**

PAA-12 A/C: 26 TPC/16 T2P or T3P/23 NAV/25 F ENG/24 LOADM/24 F MECH

2. **SQUADRON CORE CAPABILITY**

a. A core capable squadron is able to sustain the following minimum performance on a daily basis during sustained contingency/combat operations, assuming 100% PAA, 90% in reporting status and 90% T/O on hand in all MOS's. If < 90%, core capability will be degraded by a like percentage. The extent to which a core capable squadron is able to surge beyond its core capability is situation dependent.

b. A core capable squadron is able to sortie two divisions (-) of mission capable aerial refueling aircraft and within four hours of landing, sortie two more sections or sortie three sections of mission capable assault support aircraft and within four hours of landing, sortie two more sections. Perform the above from either a main base location or appropriate sized expeditionary airfield. All aircraft are capable of aerial and rapid ground refueling, assault support and two platforms being DE/IRCM equipped.

3. **BASIC AIRCREW QUALIFICATIONS**. As a minimum, in order to be considered Core Competent, a squadron must possess the following numbers of aircrew who are at least 75% complete in each listed core skill.

CORE SKILL	CREWS	REMARKS
RW/FW AR'	12	
RGR	8	
TLZ/EAF	8	
AD	6	
FORM	12	
LONG RANG NAV	12	
LOW LEVEL	6	

4. **REQUIRED CORE SKILLS AND SORTIES**

	RW/FW AR	RGR	TLZ/EAF	AD	FORM	LR NAV	LOW LEVEL	TOTAL
RAC	4	0	1	1	4	2	3	15
	110, 111, 112, 113X		170	140	130, 131, 132, 133X	150, 151	120, 121, 122X	
1st TOUR	10	2	5	7	8	2	2	36
2nd TOUR	4	0	1	1	0	0	1	7
T&R CODES	200*, 201*, 210, 211, 212*, 213 310, 311, 312, 333*	273, 274	270, 271*, 272, 370, 371	240,241, 240*, 341, 342, 343, 344	230, 231, 232, 233, 234, 330, 331, 332	250, 251	220*, 221	

* = 2nd Tour

5. **SORTIES REQUIRED TO MAINTAIN CORE SKILLS**. For each twelve month period after achieving competency, a pilot would be required to fly the following number of sorties in each skill area to maintain that competency.

	RW/FW AR	RGR	TLZ/EAF	AD	FORM	LR NAV	LOW LEVEL	TOTAL
PILOT	14	2	9	7	12	2	2	48

6. **FLIGHT LEADER/INSTRUCTOR QUALIFICATIONS**. As a minimum, in order for a squadron to be considered Core Competent, it must possess the following numbers of aircrew in the listed flight leadership/ instructor categories. (Note: If the squadron is < T/O, required numbers are reduced by a like %)

DESCRIPTION	CORE MINIMUM	REMARKS
TPC	16	
SEC LDR	8	
DIV LDR	6	
LATI	4	
ANI/INSTI	4	PER CREW POSITION
WTI/WTACI	2	PER CREW POSITION
RAC	4	
DEFTAC I	2	
NSI	2	PER CREW POSITION
FCF	12	
RC	2	

7. **SORTIES REQUIRED TO QUALIFY FOR DESIGNATION AS FLIGHT LD/IP**

	TPC	SECT LDR	DIV LDR	LATI	DEFTACI	NSI
SORTIES	5	1	1	4	4	1
T&R CODES	390,391, 392, 393, 394	395	396	532, 533, 534, 591	462, 463, 464, 592	593

KC-130 PILOT CORE PROGRESSION MODEL

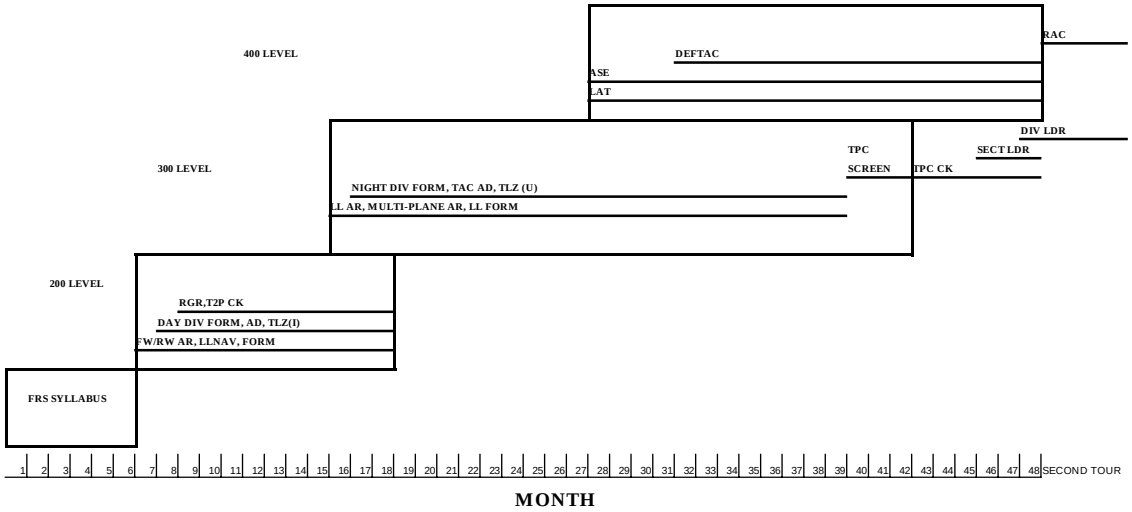

Fig 6-1.. Notional Pilot Training Progression Model

600. PROGRAMS OF INSTRUCTION (POI) FOR BASIC/TRANSITION/CONVERSION PILOT

WEEKS	COURSE/PHASE	ACTIVITY
1-7	C-130P Course	34th TATG/VMGRT-253
8-28	Combat Capable Training	VMGRT-253
29-81	Combat Ready Training	Tactical Squadron
82-156	Combat Qualification Training	Tactical Squadron
157-208	Full-Combat Qualification Training	Tactical Squadron

601. POI FOR REFRESHER PILOT

WEEKS	COURSE/PHASE	ACTIVITY
1-8	Combat Capable Training	Training Squadron
9-26	Combat Ready Training	Tactical Squadron
27-39	Combat Qualification Training	Tactical Squadron
40-52	Full-Combat Qualification Training	Tactical Squadron

602. POI FOR INSTRUCTOR PILOT

WEEKS	COURSE/PHASE	ACTIVITY
1	Simulator (OFT/WST)	Training/Tactical Squadron
1	Familiarization/Instruments	Training/Tactical Squadron
1	Formation	Training Squadron
1	Low Level Navigation	Training Squadron
1	Air Refueling	Training Squadron
1	NATOPS	Training/Tactical Squadron
1	Low Altitude Tactics	MAWTS-1/Tactical Squadron
1	Defensive Tactics	MAWTS-1
7	Weapons and Tactics	MAWTS-1
4	Night Systems	MAWTS-1

603. SPECIAL DESIGNATIONS

WEEKS	COURSE/PHASE	ACTIVITY
1	Functional Check Flight	Training/Tactical Squadron
104	Transport Plane Commander	Tactical Squadron
52	Transport Second Pilot (T2P)	Tactical Squadron
24	Transport Third Pilot (T3P)	Training Squadron
1	Instrument Flight Board	Training/Tactical Squadron
3	Section Leader	Training/Tactical Squadron
3	Division Leader	Tactical Squadron
1	Refueling Area Commander (RAC)	Tactical Squadron

610. GROUND TRAINING COURSES OF INSTRUCTION

1. Ground/academic training shall be conducted for each phase/stage of the syllabus.

2. Squadron level ground/academic courses of instruction required to complete the syllabus are listed in each phase/stage description.

3. External ground/academic courses of instruction required to complete the syllabus are listed below (asterisked courses also have flight and/or simulator training:

COURSE	ACTIVITY
USAF C-130P/PRU Course	34 TATG/VMGRT-253
Level C Survival, Evasion, Resistance, and Escape (SERE) Course	NAS Brunswick, ME or NAS North Island, CA
Central Altitude Reservation Facility Indoc.	Regional ARTCC
* Weapons and Tactics Instructor Course	MAWTS-1
* Defensive Tactics	MAWTS-1/Tactical Squadron

4. External ground/academic courses of instruction recommended to complete the syllabus listed below (asterisked courses also have flight and/or simulator training):

COURSE	ACTIVITY
* Advanced Airlift Tactics Training Course	AATTC, St. Joseph, MO
Combat Aircrew Training	MAC CATS, Nellis AFB
Environmental Survival Courses	Regional/Seasonal Survival Schools

611. AIRCREW TRAINING REFERENCES. The following references shall be utilized to ensure safe and standardized training procedures, grading criteria, and aircraft operation:

NATOPS General Flight and Operating Instructions (OPNAV 3710.7_)
NATOPS Flight Manuals (NFM)
NATOPS Instrument Flight Manual
NATOPS Air Refueling Manual
KC-130 Tactical Manual (TACMAN)
T&R Manual, Volume 1
MAWTS-1 Course Catalog

620. FLIGHT TRAINING: BASIC, TRANSITION, AND CONVERSION PILOT

1. Combat Capable Training

STAGE	FLIGHTS/EVENTS	HOURS	PERCENT
Basic Qualification	--	-.-	25.0
Simulator Training	20	72.0	11.0
Familiarization/Instruments	10	30.0	7.0
Air Refueling	4	12.0	3.5
Low Level Navigation	3	6.0	3.0
Formation	4	8.0	3.5
Air Delivery	1	2.0	1.0
Long Range Navigation	2	16.0	2.0
Temporary Landing Zone	1	2.0	1.0
NATOPS Check	1	3.0	3.0
Aircraft/Simulator	**26/20**	**79.0/72.0**	**60.0**

2. Combat Ready Training

STAGE	FLIGHTS	HOURS	PERCENT
Familiarization/Instruments	2	6.0	1.0
Air Refueling (Fixed-Wing)	2	8.0	1.8
Air Refueling (Rotary-wing)	2	8.0	1.8
Low Level Navigation	2	8.0	1.0
Formation	5	18.0	3.0
Air Delivery	2	6.0	1.0
Long Range Navigation	2	18.0	0.9
Temporary Landing Zone (TLZ)	3	8.0	2.5
Rapid Ground Refueling (RGR)	2	4.0	1.0
NATOPS Check	1	3.0	1.0
	23	**87.0**	**15.0**

3. Combat Qualification Training

STAGE	FLIGHTS	HOURS	PERCENT
Air Refueling (Fixed-Wing)	2	8.0	1.8
Multi-plane Air Refueling	2	12.0	2.0
Section Low Level Form	2	7.0	1.6
Formation (Div)	1	4.0	0.8
Air Delivery	5	17.0	3.0
Aircraft Survivability Equipment	1	2.0	0.3
Temporary Landing Zone (TLZ)	2	6.0	2.5
Transport Pilot Check	5	42.0	6.0
Formation Leader Check	2	8.0	2.0
	22	**106.0**	**20.0**

4. Full-Combat Qualification Training

STAGE	FLIGHTS	HOURS	PERCENT
Low Altitude Tactics (LAT)	3	9.0	1.5
Aircraft Survivability Equipment	2	6.0	1.0
DEFTAC	3	6.0	1.5
Refueling Area Commander	1	8.0	1.0
	9	**29.0**	**5.0**
SYLLABUS TOTAL (100-400)	**80**	**301.0**	**100.0**

621. REFRESHER PILOT TRAINING

1. Combat Capable Training

STAGE	FLIGHTS	HOURS
Familiarization/Instruments	**5**	**15.0**

2. Combat Ready Training

STAGE	FLIGHTS	HOURS
Familiarization	2	6.0
Air Refueling	1	4.0
Low Level Nav	1	4.0
Temporary Landing Zone	1	3.0
T2P Check	1	3.0
	6	**20.0**

3. Combat Qualification Training

STAGE	FLIGHTS	HOURS
Air Refueling	1	6.0
Air Delivery	1	3.0
TPC Check	1	3.0
	3	**12.0**
TOTAL	**14**	**47.0**

622. INSTRUCTOR UNDER TRAINING (IUT) PILOT

1. Simulator (OFT/WST) Instructor

STAGE	FLIGHTS	HOURS
Familiarization and Standardization	**2**	**4.0**

2. Instructor Under Training

STAGE	FLIGHTS	HOURS
Familiarization/Instruments	3	7.0
Formation	2	4.0
Low Level Navigation	2	4.0
Air Refueling	2	6.0
	9	**21.0**

3. NATOPS Instructor

STAGE	FLIGHTS	HOURS
Standardization	**1**	**3.0**

4. Low Altitude Tactics Instructor (LATI)

STAGE	FLIGHTS	HOURS
Low Altitude Tactics	**4**	**4.0**

5. Defensive Tactics Instructor (DEFTACI). See the MAWTS-1 Course Catalog.

6. Weapons and Tactics Instructor (WTI). See the MAWTS-1 Course Catalog.

7. Night Systems Instructor (NSI). See the MAWTS-1 Course Catalog.

623. SPECIAL FLIGHT TRAINING

STAGE	FLIGHTS	HOURS
Functional Check Flight Pilot	1	2.0
Night Systems Qualification (NSQ)	9	13.5
Instrument	2	4.0
	12	**19.5**

630. SIMULATOR TRAINING. Approved IFARS simulators are contained in OPNAVINST 3710.7_. If an approved simulator is not available, unapproved simulators may be used for simulator training at the discretion of the squadron commander. Unapproved simulator time may not be usable for annual flight time minima.

631. SIMULATOR TRAINING FOR BASIC, TRANSITION, AND CONVERSION PILOT

1. Combat Capable Training

STAGE	FLIGHTS	HOURS
Familiarization/Instruments	15	60.0
Air Refueling	1	4.0
Low Level Navigation	2	4.0
Post Maintenance Check Flight	1	2.0
Temporary Landing Zone	1	2.0
	20	**72.0**

2. Combat Ready Training

STAGE	FLIGHTS	HOURS
Familiarization/Instruments	1	2.0
Low Level Navigation	2	4.0
Formation	2	6.0
Air Delivery	1	3.0
Temporary Landing Zone	1	3.0
	7	**18.0**

3. Combat Qualification Training

STAGE	FLIGHTS	HOURS
Low Level Formation	1	3.0
TPC Upgrade	9	27.0
Air Delivery	1	3.0
Aircraft Survivability Equipment	1	3.0
Temporary Landing Zone	1	3.0
	13	**39.0**

4. Full-Combat Qualification Training

STAGE	FLIGHTS	HOURS
Low Altitude Tactics	2	6.0
Aircraft Survivability Equipment	1	3.0
TOTAL	**3**	**9.0**
SYLLABUS TOTAL (100-400)	**43**	**138.0**

632. SIMULATOR TRAINING FOR REFRESHER PILOT

STAGE	FLIGHTS	HOURS
Familiarization/Instruments	**5**	**20.0**

640. FLIGHT/SIMULATOR PERFORMANCE REQUIREMENTS

1. General

a. The time required to train a KC-130 pilot to full-combat qualification will vary depending on previous pilot experience. Basic, transition, and conversion pilots should fly the entire syllabus. Refresher pilots represent a varying background and should fly flights coded with an "R." Commanding officers will review the qualifications, previous experience, currency, and demonstrated ability of refresher pilots with a view towards waiving and/or combining required flights.

b. Once a pilot has completed the combat capable series and maintains currency in type and model, no requirement exists to refly combat capable flights.

c. Flights annotated with an "N" shall be flown at night. Flights annotated with an "(N)" may be flown at night.

d. All simulator ("S") training codes should be flown prior to the first flight in the aircraft for that stage/phase.

e. All flights annotated with an "E" shall be evaluated per the T&R Manual, Volume 1.

f. Minimum required refresher flights are indicated with an "R." Additional guidance concerning refresher pilots is contained in the T&R Manual, Volume 1.

2. Aircrew Coordination. Aircrew coordination shall be briefed for all flights and/or events.

641. COMBAT CAPABLE TRAINING

1. Familiarization/Instruments

a. Purpose. Familiarize pilots with fundamental KC-130 NATOPS, instrument, and crew coordination procedures.

b. General

(1) Basic, transition, conversion, and refresher third pilots (T3P) shall be trained and evaluated in the right seat. TPC and T2P refresher pilots should be trained and evaluated in the left seat. A minimum of two (N) coded flights shall be flown at night.

(2) Basic, transition, and conversion pilots should complete the USAF C-130P course prior to this stage.

c. Ground Training

(1) Prior to FAM-100, all basic/transition/conversion pilots will complete a familiarization training evolution to include cockpit management, aircraft preflight, emergency evacuation and use and donning of all emergency equipment to include bailout training.

(2) Combat Capable Syllabus Overview.

(3) NATOPS Flight Manual.

(4) TFOA Inspections.

(5) USMC VMGR Squadron Mission Statement and Tasks.

(6) Six Functions of Marine Aviation and VMGR Involvement.

(7) KC-130 Capabilities Review.

(8) Introduction to Nite Lab.

d. Simulator Training (15 Periods, 60.0 Hours)

SFAM-00 14.0 CPT/OFT/WST S

Goal. Train the pilot in checklist procedures.

Requirement. Introduce expanded cockpit checklists up to and including the run up checklist.

Performance Standard. Per the NFM.

SFAM-002 4.0 CPT/OFT/WST S

Goal. Train the pilot in checklist procedures.

Requirement. Introduce expanded cockpit checklists up to and including the after landing checklist. Practice previously introduced checklists.

Performance Standard. Per the NFM.

SFAM-003 4.0 CPT/OFT/WST S

Goal. Train the pilot in normal procedures and system malfunctions.

Requirement. Introduce start malfunctions. Practice normal checklists.

Performance Standard. Per the NFM.

SFAM-004 4.0 CPT/OFT/WST S

Goal. Train the pilot in normal procedures, system malfunctions, and emergency procedures.

Requirement. Introduce ground emergencies. Practice normal checklists and start malfunctions.

Performance Standard. Per the NFM.

SFAM-005 4.0 R E CPT/OFT/WST S

Goal. Cockpit procedures stage progress review.

Requirement. Review normal checklists and start malfunctions. Practice ground emergencies.

Performance Standard. Per the NFM.

SFAM-006 4.0 OFT/WST S

Goal. Train the pilot in normal procedures, system malfunctions, and emergency procedures.

Requirement. Introduce VFR departure and climb, basic airwork, VFR approach, landings, and aborts.

Performance Standard. Per the NFM.

SFAM-007 4.0 OFT/WST S

Goal. Train the pilot in normal procedures, system malfunctions, and emergency procedures.

Requirement. Introduce steep turns and approach to stalls.

Performance Standard. Per the NFM.

SINST-008 4.0 OFT/WST S

Goal. Train the pilot in normal procedures, system malfunctions, emergency procedures, and instrument procedures.

Requirement. Introduce flight planning, clearance procedures, radio navaid IFF/SIF management, and GCA approaches.

Performance Standard. Per the NFM.

SINST-009 4.0 OFT/WST S

Goal. Train the pilot in normal procedures, system malfunctions, emergency procedures, and instrument procedures.

Requirement. Introduce ILS procedures.

Performance Standard. Per the NFM.

SINST-010 4.0 OFT/WST S

Goal. Train the pilot in normal procedures, system malfunctions, emergency procedures, and instrument procedures.

Requirement. Introduce TACAN, VOR, and ADF approaches. Introduce holding.

Performance Standard. Per the NFM.

SINST-011 4.0 OFT/WST S

Goal. Train the pilot in normal procedures, system malfunctions, emergency procedures, and instrument procedures.

Requirement. Introduce circling approaches, and penetrations/high approaches.

Performance Standard. Per the NFM.

SINST-012 4.0 R OFT/WST S

Goal. Train the pilot in normal procedures, system malfunctions, emergency procedures, and instrument procedures.

Requirement. Introduce engine-out approaches, landings, and missed approach/go-around procedures. Introduce takeoff continued after engine failure.

Performance Standard. Per the NFM.

SINST-013 4.0 R OFT/WST S

Goal. Train the pilot in normal procedures, system malfunctions, emergency procedures, and instrument procedures.

Requirement. Introduce two engine approach, landing, and go-around. Introduce partial panel/no gyro approach.

Performance Standard. Per the NFM.

SINST-014 4.0 R OFT/WST S

Goal. Train the pilot in normal procedures, system malfunctions, emergency procedures, and instrument procedures.

Requirement. Practice all previously introduced procedures and system malfunctions.

Performance Standard. Per the NFM.

SINST-015 4.0 R E OFT/WST S

Goal. Simulator stage progress review.

Requirement. Review all previously introduced procedures and system malfunctions.

Performance Standard. Per the NFM.

e. Flight Training (10 Flights, 30.0 Hours)

FAM-100 3.0 1 KC-130 A

Goal. Train the pilot in normal flight procedures.

Requirement. Introduce preflight, taxi, take-off, VFR departure, aerodynamic performance, stability & control, approach to stalls, VFR approach, VFR break, 100 percent and 50 percent flap landings.

Performance Standard. Per the NFM.

INST-101 3.0 R 1 KC-130 A

Goal. Train the pilot in normal and instrument flight procedures.

Requirement. Introduce instrument departure, basic instrument maneuvers (to include timed turns, climbs, and descents), and GCA procedures. Practice 100 percent and 50 percent flap landings. Refreshers should complete this flight concurrently with FAM-100.

Performance Standard. Per the NFM and IFM.

INST-102 3.0 1 KC-130 A (N)

Goal. Train the pilot in normal procedures, instrument flight procedures, system malfunctions, and emergency procedures.

Requirement. Introduce ILS/Localizer procedures. Introduce ground emergencies. Practice 100 percent and 50 percent flap landings.

Performance Standard. Per the NFM and IFM.

INST-103 3.0 R 1 KC-130 A (N)

Goal. Train the pilot in normal procedures, instrument flight procedures, system malfunctions, and emergency procedures.

Requirement. Introduce TACAN, VOR, and ADF approaches. Practice 100 percent and 50 percent flap landings. Refreshers should complete this flight concurrently with INST-102.

Performance Standard. Per the NFM and IFM.

INST-104 3.0 1 KC-130 A (N)

Goal. Train the pilot in normal procedures, instrument flight procedures, system malfunctions, and emergency procedures.

Requirement. Introduce abort procedure. Introduce holding, circling approaches, and penetrations/high approaches. Introduce in-flight emergencies. Practice 100 percent and 50 percent flap landings.

Performance Standard. Per the NFM and IFM.

INST-105 3.0 R 1 KC-130 A

Goal. Train the pilot in normal procedures, instrument flight procedures, system malfunctions, and emergency procedures.

Requirement. Introduce engine-out operations. Introduce three engine precision approaches, landings, missed approaches/ go-arounds. Flight will be conducted in day VMC conditions. Refreshers should complete this flight concurrently with INST-104. Refreshers do not have the day VMC restriction.

Performance Standard. Per the NFM and IFM.

INST-106 3.0 1 KC-130 A

Goal. Train the pilot in normal procedures, instrument flight procedures, system malfunctions, and emergency procedures.

Requirement. Introduce three-engine non-precision approaches, missed approaches and go-arounds. Practice aborts and engine out landings. Flight will be conducted in daylight VFR conditions.

Performance Standard. Per the NFM and IFM.

INST-107 3.0 R 1 KC-130 A

Goal. Train the pilot in normal procedures, instrument flight procedures, system malfunctions, and emergency procedures.

Requirement. Introduce three-engine circling approach and take-off continued after engine failure. Demonstrate two-engine and no-flap approaches and landings. Flight will be conducted in daylight VFR conditions. Refreshers should complete this flight concurrently with INST-106. Refreshers do not have the day VMC restriction.

Performance Standard. Per the NFM and IFM.

INST-108 3.0 1 KC-130 A (N)

Goal. Train the pilot in normal procedures, instrument flight procedures, system malfunctions, and emergency procedures.

Requirement. Introduce partial panel/no-gyro approach. Practice all previously introduced procedures.

Performance Standard. Per NFM and IFM.

INST-109 3.0 R E 1 KC-130 A (N)

Goal. Fam/Inst stage progress review.

Requirement. Review NATOPS normal, emergency, and instrument flight procedures. Pilot shall perform all maneuvers required for a standard instrument rating. Refreshers should complete this flight concurrently with INST-108.

Performance Standard. Per the NFM, the IFM, and OPNAVINST 3710.7_.

2. Air Refueling

a. Purpose. Familiarize pilots with basic air refueling procedures.

b. Ground Training

(1) Air Refueling Procedures Lecture.

(2) Introduction to Air Refueling.

(3) Inflight Refueling System.

(4) Air Refueling Procedures.

(5) Voice Procedures.

(6) Tactical Briefing Guide.

c. Simulator Training (1 Period, 4.0 Hours)

SAR-016 4.0 OFT/WST S

Goal. Train the pilot in fixed-wing and rotary-wing air refueling procedures.

Requirement. Introduce radio procedures, tanker/receiver management, rotary-wing rendezvous procedures and emergency procedures related to AR. Two pilots, 2 hours in each seat per OFT flight.

Performance Standard. Per the NFM, KC-130 TACMAN and the Air Refueling Manual.

d. Flight Training (4 Flights, 12.0 Hours)

AR-110 3.0 1 KC-130 A

Goal. Train the pilot in fixed-wing air refueling procedures.

Requirement. Introduce radio procedures, tanker/receiver management, and emergency procedures related to AR.

Performance Standard. Per the NFM, KC-130 TACMAN and the Air Refueling Manual.

AR-111 3.0 1 KC-130 A (N)

Goal. Train the pilot in fixed-wing air refueling procedures.

Requirement. Practice radio procedures, tanker/receiver management, and emergency procedures related to AR.

Performance Standard. Per the NFM, KC-130 TACMAN and the Air Refueling Manual.

AR-112 3.0 1 KC-130 A

Goal. Train the pilot in rotary-wing AR procedures.

Requirement. Introduce rendezvous procedures, rotary-wing refueling procedures, and emergency procedures related to rotary-wing air refueling. Flight will be conducted in day VMC conditions. Two (2) rendezvous are required for completion.

Performance Standard. Per the NFM, KC-130 TACMAN and the AR Manual.

AR-113X 3.0 E 1 KC-130 A (N)

Goal. AR stage progress review.

Requirement. Sortie may be fixed-wing or rotary-wing air refueling.

Performance Standard. Per the NFM, KC-130 TACMAN and the Air Refueling Manual.

3. Low Level Navigation

a. Purpose. Provide the pilot with skills in low level navigation and air delivery.

b. Ground Training

(1) Military Interpretation of Terrain.

(2) Chart Preparation.

(3) Low Level Flight Planning.

(4) Low Level Procedures and Navigation Techniques.

(5) Basic Cargo Air Delivery Procedures.

(6) Basic Troop Air Delivery Procedures.

c. Simulator Training (2 Periods, 4.0 Hours)

SLLNAV-017 2.0 OFT/WST S

Goal. Train the pilot in low level navigation procedures.

Requirement. Pilot will plan and navigate two low level routes of at least five checkpoints. Minimum altitude per T&R, Vol 1 minimums. Two pilots, 2 hours in each seat per flight.

Performance Standard. Per the NFM and KC-130 TACMAN.

SLLNAV-018 2.0 OFT/WST S

Goal. Train the pilot in low level navigation to an air delivery.

Requirement. Pilot will plan and navigate two low level routes of at least five checkpoints. Minimum altitude per T&R, Vol 1 minimums. Perform AD procedures on each LL. Two pilots, 2 hours in each seat per flight.

Performance Standard. Per the NFM and KC-130 TACMAN.

d. Flight Training (3 Flights, 6.0 Hours)

LLNAV-120 2.0 1 KC-130 A

Goal. Train the pilot in low level navigation procedures.

Requirement. Pilot will plan and navigate a low level route of at least six checkpoints. Minimum altitude per T&R, Vol 1 minimums.

Performance Standard. Per the NFM and KC-130 TACMAN. Arrive at the target within ± 2 minutes.

LLNAV-121 2.0 1 KC-130 A

Goal. Train the pilot in low level navigation to an air delivery.

Requirement. Pilot will plan and navigate a low level route of at least six checkpoints. Minimum altitude per T&R, Vol 1 minimums. Perform AD procedures on LL in conjunction with a modified slowdown.

Performance Standard. Per the NFM and KC-130 TACMAN. Arrive at the target within 90 seconds.

LLNAV-122X 2.0 E 1 KC-130 A

Goal. Low level navigation stage progress review.

Requirement. Pilot will plan and navigate a low level route of at least six checkpoints. Minimum altitude per T&R, Vol 1 minimums. Perform AD procedures on LL in conjunction with a modified slowdown.

Performance Standard. Per the NFM and KC-130 TACMAN. Arrive at target ± 60 seconds.

4. Formation

a. Purpose. Familiarize pilots with basic section formation procedures.

b. Ground Training. Formation Techniques and Procedures.

c. Flight Training (4 Flights, 8.0 Hours)

FORM-130 2.0 2 KC-130 A

Goal. Train the pilot in section formation procedures.

Requirement. Introduce ground formation procedures, takeoff, climb, and a minimum of four join-ups. Introduce parade, trail, and free cruise positions. Introduce VFR section recovery.

Performance Standard. Per the NFM.

FORM-131 2.0 2 KC-130 A

Goal. Train the pilot in section formation procedures.

Requirement. Introduce Low level formation position. Practice ground formation procedures, takeoff, climb, and a minimum of four join-ups. Practice parade, trail, and free cruise positions. Practice VFR section recovery.

Performance Standard. Per the NFM and KC-130 Tactical Manual.

FORM-132 2.0 2 KC-130 A

Goal. Train the pilot in section formation procedures.

Requirement. Introduce IFR weather penetrations procedures. Practice a minimum of four join-ups. Review parade, trail positions and Low Level formation position.

Performance Standard. Per the NFM.

FORM-133X 2.0 E 2 KC-130 A

Goal. Formation stage progress review.

Requirement. Review formation procedures and techniques.

Performance Standard. Per the NFM.

5. Air Delivery

a. Purpose. Familiarize the pilot with basic skills in Air Delivery.

b. Ground Training

(1) KC-130 TACMAN chapter and appendix.

(2) MAWTS-1 Air Delivery Academics Courseware.

(3) NATOPS Flight Manual.

c. External Support

(1) Air Delivery Platoon.

(2) USAF Combat Control Team.

(3) USMC MMT.

d. Flight Training (1 Flight, 2.0 Hours)

AD-140 2.0 1 KC-130 A

Goal. Familiarize the pilot with cargo or personnel Air Delivery procedures.

Requirements. Introduce the pilot to the Air Delivery Mission. Low level route may be utilized as the ingress/egress route. Emphasis shall be on airdrop checklist execution and crew coordination. A minimum of 2 runs from a designated IP to the DZ will be performed. An actual drop of equipment or personnel is required. Equipment may be CDS or modular platform configured.

Performance Standard.

6. Post Maintenance Check Flight (PMCF)

a. Purpose. Familiarize the pilot with PMCF procedures.

b. General. Flight will be conducted in OFT/WST.

c. Simulator (1 Period, 2.0 Hours)

SPMCF 019 2.0 E OFT/WST S

Goal. Train the pilot in functional checkflight procedures.

Requirement. Introduce profile A, B, C, and D functional checkflights.

Performance Standard. Per the NFM.

7. Long Range Navigation

a. Purpose. Familiarize the pilot with over water navigation and ICAO procedures.

b. Ground Training. ICAO procedures, FLIP AP's, and the foreign clearance guide.

c. Flight Training (2 Flights, 16.0 Hours)

LRNAV-150 8.0 1 KC-130 A (N)

Goal. Train the pilot in long range overwater and ICAO procedures.

Requirement. Introduce overwater navigation, crew coordination, flight publications, and fuel management. Flight will be conducted in an ICAO environment.

Performance Standard. Per the NFM.

LRNAV-151 8.0 E 1 KC-130 A (N)

Goal. Train the pilot in long range over water and ICAO procedures.

Requirement. Review over water navigation, crew coordination, flight publications, and fuel management. Flight will be conducted in an ICAO environment.

Performance Standard. Per the NFM.

8. Temporary Landing Zone (TLZ)

a. Purpose. Familiarize the pilot with Temporary Landing Zone operations.

b. Ground Training

(1) KC-130 TACMAN chapter and appendix.

(2) MAWTS-1 Temporary Landing Zone Academics courseware.

(3) NATOPS Flight Manual.

c. External Support

(1) USAF Combat Control Team.

(2) USMC MMT.

d. Simulator Training (1 Period, 2.0 Hours)

STLZ-020 2.0 OFT/WST S

Goal. Familiarize the pilot with procedures associated with short field operations.

Requirements. Replacement pilot will perform maximum effort takeoffs and landings to include touch and go's. Review appropriate NFM performance charts and the Tactical Manual. Use minimum length landing zones (5,000 ft or less).

Performance Standard. Per the NFM and KC-130 TACMAN.

e. Flight Training (1 Flight, 1.0 Hour)

TLZ-170 1.0 1 KC-130 A

Goal. Introduce the pilot to short field operations.

Requirements. Introduce the pilot to Temporary Landing Zone Operations. Review all appropriate NFM performance charts. TPC will introduce touch and go landings and demonstrate a minimum of 1 maximum effort takeoff and landing. Use a hard surface of 5,000 ft or longer (incorporating a displaced threshold) where a 500 ft touchdown zone can be determined. The Replacement Pilot will perform a minimum of 3 touch and go landings.

Performance Standard. Per the NFM and KC-130 TACMAN.

9. NATOPS Check

a. Purpose. Conduct a T3P/T2P NATOPS evaluation.

b. General. An annual NATOPS check may be conducted any time after completion of the combat capable FAM/INST stage. Commanders shall not designate replacement pilots as a T3P and assign MOS 7556 until satisfactory completion of the entire combat capable stage. Level C SERE school should also be completed prior to T3P designation. The provisions of the NFM and OPNAVINST 3710.7_ apply.

c. Flight Training (1 Flight, 3.0 Hours)

CK-190 3.0 E 1 KC-130 A (N)

Goal. NATOPS evaluation flight.

Requirement. Conduct NATOPS evaluation flight.

Performance Standard. Per the NFM and OPNAVINST 3710.7_.

642. COMBAT READY TRAINING

1. Familiarization/Instruments

a. Purpose. Train the pilot in left seat flight procedures and crew coordination.

b. Simulator Training (1 Period, 3.0 Hours)

SFAM-200 3.0 OFT/WST S

Goal. Train the pilot in left seat normal, emergency, and instrument procedures.

Requirement. Introduce left seat normal, emergency, and instrument procedures under day and night conditions.

Performance Standard. Per the NFM.

c. Flight Training (2 Flights, 6.0 Hours)

FAM-200 3.0 R E 1 KC-130 A

Goal. Train the pilot in left seat normal, emergency, and instrument procedures.

Requirement. Instructor will introduce left seat normal, emergency, and instrument procedures.

Performance Standard. Per the NFM.

FAM-201 3.0 R E 1 KC-130 A N

Goal. Train the pilot in left seat normal, emergency, and instrument procedures under night conditions.

Requirement. Instructor will introduce left seat normal, emergency, and instrument procedures under night conditions.

Performance Standard. Per the NFM.

2. Air Refueling

a. Purpose. Refine pilot air refueling procedures.

b. Ground Training. Review the AR, Tactical Manual and MAWTS-1 Tactical AR Courseware relating to fixed-wing and rotary-wing AR procedures.

c. Flight Training (2 Flights, 8.0 Hours).

AR-210 4.0 E 1 KC-130 A

Goal. Maintain proficiency in single plane, fixed-wing AR procedures.

Requirement. Review radio procedures, tanker/receiver management, and the emergency procedures related to air refueling. Use of EMCON procedures is optional.

Performance Standard. Per the NFM and the AR Manual.

AR-211 4.0 1 KC-130 A N

Goal. Train the pilot in single plane, fixed-wing, night AR procedures.

Requirement. Review radio procedures, tanker/receiver management, and the emergency procedures related to air refueling. Use of EMCON procedures is optional.

Performance Standard. Per the NFM and the AR Manual.

3. Rotary-wing Air Refueling

a. Purpose. Train the pilot in rotary-wing air refueling procedures.

b. Ground Training. Review the AR Manual and Tactical Manual chapters pertaining to rotary-wing AR procedures.

c. Flight Training (2 Flights, 8.0 Hours)

AR-212 4.0 R E 1 KC-130 A

Goal. Maintain proficiency in rotary-wing AR procedures.

Requirement. Review rendezvous procedures, rotary-wing refueling procedures, and emergency procedures related to rotary-wing air refueling. Flight will be conducted in day VMC conditions. Use of EMCON procedures is optional. Two (2) rendezvous are required for initial qualification.

Performance Standard. Per the NFM and the AR Manual.

AR-213 4.0 1 KC-130 A N

Goal. Train the pilot in night rotary-wing AR procedures.

Requirement. Review rendezvous procedures, rotary-wing refueling procedures, and emergency procedures related to rotary-wing air refueling. Flight will be conducted in night VMC conditions. Use of EMCON procedures is optional. Two (2) rendezvous are required for initial qualification.

Performance Standard. Per the NFM and the AR Manual.

4. Low Level Navigation

a. Purpose. Train the pilot in day/night low level procedures.

b. Ground Training. Review Tactical Manual chapter pertaining to low level navigation, and MAWTS-1 Low Level Navigation Courseware.

c. Simulator Training (2 Periods, 4.0 Hours)

SLLNAV-220 2.0 OFT/WST S

Goal. Train the pilot in day LL procedures.

Requirement. Pilot will plan and navigate a low level route of at least six checkpoints at day. Minimum altitude per T&R, Vol 1 minimums.

Performance Standard. Per the NFM and KC-130 TACMAN.

SLLNAV-221 2.0 OFT/WST S N

Goal. Train the pilot in night LL procedures.

Requirement. Pilot will plan and navigate a low level route of at least six checkpoints at night. Minimum altitude per T&R, Vol 1 minimums.

Performance Standard. Per the NFM and KC-130 TACMAN.

d. Flight Training (2 Flights, 8.0 Hours)

LLNAV-220 4.0 R E 1 KC-130 A

Goal. Practice day LL navigation procedures.

Requirement. Pilot will plan and navigate a Low Level route of at least six checkpoints. Minimum altitude per T&R, Vol 1 minimums.

Performance Standard. Per the NFM and the KC-130 Tactical Manual. Arrive at target within $\pm$ 30 seconds.

LLNAV-221 4.0 E 1 KC-130 A N

Goal. Train the pilot in night LL procedures.

Requirement. Pilot will plan and navigate a Low Level route of at least six checkpoints at night. Minimum altitude per T&R, Vol 1 minimums. Use of NVG's in the hand held mode by the non-flying pilot is encouraged.

Prerequisite. LLNAV-220.

Performance Standard. Per the NFM and the KC-130 Tactical Manual. Arrive at target within ± 30 seconds.

5. Formation

a. Purpose. Refine pilot formation procedures.

b. Ground Training. Day and night formation procedures and techniques.

c. Simulator Training (1 Period, 3.0 Hours)

SFORM-230 3.0 WST S

Goal. Maintain pilot proficiency in section formation procedures.

Requirement. Review day/night section formation procedures.

Performance Standard. Per the NFM.

d. Flight Training (3 Flights, 10.0 Hours)

FORM-230 4.0 2 KC-130 A

Goal. Maintain pilot proficiency in day section formation procedures.

Requirement. Left seat required for initial qualification. Review day section formation procedures. Perform break up and rendezvous and 1 lead change. Introduce trail and echelon night formation positions.

Performance Standard. Per the NFM.

FORM-231 3.0 2 KC-130 A N

Goal. Train the pilot in night section formation procedures.

Requirement. Introduce night section formation procedures. Perform four break up and rendezvous and lead changes. Practice trail and echelon night formation positions.

Prerequisite. FORM-230.

Performance Standard. Per the NFM.

FORM-232 3.0 E 2 KC-130 A N

Goal. Train the pilot in night section formation procedures.

Requirement. Left seat required for initial qualification. Practice night section formation procedures.

Prerequisite. FORM-231.

Performance Standard. Per the NFM.

6. Division Formation

a. Purpose. Train the pilot in division formation procedures.

b. Ground Training. Division formation procedures.

c. Simulator Training (1 Period, 3.0 Hours)

SFORM-233 3.0 WST S

Goal. Introduce the pilot to day division formation procedures.

Requirement. Introduce division formation procedures.

Performance Standard. Per the NFM.

d. Flight Training (2 Flights, 8.0 Hours)

FORM-233 4.0 3 or more KC-130 A

Goal. Introduce the pilot to day division formation procedures.

Requirement. Introduce division formation procedures, to include lead changes, breakup and rendezvous, and division formations.

Prerequisite. FORM-230.

Performance Standard. Per the NFM and KC-130 TACMAN.

FORM-234 4.0 E 3 or more KC-130 A

Goal. Train and evaluate the pilot in day division formation procedures.

Requirement. Practice division formation procedures as introduced in FORM 233.

Prerequisite. FORM-233.

Performance Standard. Per the NFM and KC-130 TACMAN.

7. Air Delivery

a. Purpose. Refine pilot air delivery procedures.

b. Ground Training. Review MAWTS-1 AD courseware and KC-130 TACMAN information regarding personnel and cargo delivery procedures.

c. External Support

(1) Air delivery platoon.

(2) Combat control team.

(3) MMT.

d. Simulator Training (1 Period, 3.0 Hours)

SAD-240 3.0 OFT/WST S

Goal. Train the pilot in cargo air delivery procedures.

Requirement. Train the pilot to cargo/troop air delivery mission.

Performance Standard. Per the NFM and KC-130 TACMAN.

e. Flight Training (2 Flights, 6.0 Hours)

AD-240 3.0 E 1 KC-130 A

Goal. Train and evaluate the pilot in cargo air delivery procedures.

Requirement. Review heavy equipment and CDS aerial delivery procedures. If a low level ingress is used, IP inbound should be flown twice. Emphasis should be placed on crew coordination and AD procedures. An actual cargo AD is required for initial qualification.

Performance Standard. Per the NFM and KC-130 TACMAN.

External Support. Air delivery platoon for cargo rigging and DZ control Use of MMT is encouraged.

AD-241 3.0 E 1 KC-130 A

Goal. Train and evaluate the pilot in troop air delivery procedures.

Requirement. Review personnel aerial delivery procedures. If a low level ingress is used, IP inbound should be flown twice. Emphasis should be placed on crew coordination and AD procedures. An actual personnel AD is required for initial qualification.

Performance Standard. Per the NFM and KC-130 TACMAN.

External Support. Air delivery platoon or MMT for DZ set-up and control.

8. Long Range Navigation

a. Purpose. Train for extended operations in an ICAO environment.

b. Flight Training (2 Flights, 18 Hours)

LRNAV-250 9.0 1 KC-130 A (N)

Goal. Maintain proficiency in all weather overland operations within the capabilities of the aircraft. (ICAO environment optional).

Requirement. Pilot will fly an overland mission. Review ICAO procedures as required.

Performance Standard. Per the NFM.

LRNAV-251 9.0 E 1 KC-130 A (N)

Goal. Maintain proficiency in extended over water operations in ICAO environment.

Requirement. Pilot will fly a extended over water mission. Review ICAO procedures.

Performance Standard. Per the NFM.

9. Temporary Landing Zone (TLZ)

a. Purpose. Train the pilot in short field takeoffs and landings.

b. Ground Training. Review temporary landing zone operations in KC-130 TACMAN.

c. External Support

(1) MMT.

(2) Combat control team.

d. Simulator Training (1 Period, 3.0 Hours)

STLZ-270 3.0 OFT/WST S

Goal. Train the pilot in short field operations.

Requirement. Introduce maximum effort takeoffs and landings. Review all appropriate NFM performance charts. Use a hard surface runway where a 500 ft touchdown zone can be determined. Conduct a minimum of 1 maximum effort takeoff, 6 touch-and-go's, and 1 full stop landing. Flight will be conducted under day and night conditions.

Performance Standard. Per the NFM and KC-130 TACMAN.

e. Flight Training (3 Flights, 8.0 Hours)

TLZ-270 3.0 E 1 KC-130 A

Goal. Train the pilot in short field operations.

Requirement. Introduce maximum effort takeoffs and landings. Review all appropriate NFM performance charts. Use a hard surface landing area. For initial qualification, conduct a minimum of 1 maximum effort takeoff, 4 touch-and-go's, and one full stop landing.

Prerequisite. FAM-200.

Performance Standard. Per the NFM and KC-130 TACMAN.

TLZ-271 3.0 R E 1 KC-130 A N

Goal. Train the pilot in night short field operations.

Requirement. Review maximum effort takeoffs and landings. Review all appropriate NFM performance charts. Use a hard surface landing area. For initial qualification, conduct a minimum of 1 maximum effort takeoff, 4 touch-and-go's, and one full stop landing.

Prerequisite. FAM-201, TLZ-270.

Performance Standard. Per the NFM and KC-130 TACMAN.

TLZ-272 2.0 1 KC-130 A (N)

Goal. Train the pilot in combat offload procedures.

Requirement. Plan, brief and conduct combat offload.

Prerequisite. FAM-200.

Performance Standard. Per NFM and KC-130 TACMAN.

10. Rapid Ground Refueling (RGR)

a. Purpose. Introduce rapid ground refueling operations.

b. External Support

(1)Crash fire rescue (if available).

(2)Rotary-wing support teams (if desired).

c. Flight Training (2 Flights, 4.0 Hours)

RGR-273 2.0 1 KC-130 A

Goal. Train the pilot in RGR procedures.

Requirement. Plan, brief, and conduct RGR mission involving actual transfer of fuel. EMCON procedures are optional.

Performance Standard. Per KC-130 TACMAN.

RGR-274 2.0 E 1 KC-130 A N

Goal. Train the pilot in night RGR operations.

Requirement. Plan, brief, and conduct RGR mission involving actual transfer of fuel at night. EMCON procedures are optional. Use of night vision devices is encouraged.

Prerequisite. RGR 273

Performance Standard. Per KC-130 TACMAN.

11. Transport Second Pilot (T2P) Check

a. Purpose. Qualify the T3P as a T2P.

b. General. Upon completion of the initial examination and evaluation, this flight will be used as the annual NATOPS evaluation. The written tactical examination will not be required for subsequent evaluations.

c. Prerequisites. Completion of combat ready training, currency/flight time per NFM, Chapter 5, and the specific requirements for T2P designation per OPNAVINST 3710.7_, Chapter 12.

d. Ground Training. Open book tactics examination.

e. Flight Training (1 Flight, 3.0 Hours)

CK-290 3.0 R E 1 KC-130 A (N)

Goal. T2P evaluation flight.

Requirement. Conduct NATOPS check.

Performance Standard. Per the NFM and OPNAVINST 3710.7_.

643. COMBAT QUALIFICATION TRAINING

1. Low Altitude Air Refueling

a. Purpose. Train the pilot for refueling in a low altitude environment.

(1) MAWTS-1 Tactical Aerial Refueling Courseware.

(2) KC-130 TACMAN Low Level and EMCON Procedures.

(3) NATOPS AR Manual.

b. Ground Training. Low level and EMCON refueling procedures.

c. Flight Training (2 Flights, 8.0 Hours)

AR-310 4.0 1-2 KC-130 A

Goal. Train the pilot in low altitude AR procedures.

Requirement. Plan, brief, and fly an AR mission below 5,000 ft AGL. Minimum altitude per T&R, Vol 1. EMCON procedures are encouraged. If flown in conjunction with a low level route, plan for an ARCP, ARCT and ENDAR.

Prerequisite. AR-210.

Performance Standard. Per NFM, Air Refueling Manual, and KC-130 TACMAN.

AR-311 4.0 E 1-2 KC-130 A N

Goal. Train the pilot in low altitude night AR procedures.

Requirement. Plan, brief, and fly a night AR mission below 5,000 ft AGL. Minimum altitude per T&R, Vol 1. EMCON procedures are encouraged. If flown in conjunction with a low level route, plan for an ARCP, ARCT and ENDAR.

Prerequisite. AR-211.

Performance Standard. Per NFM, Air Refueling Manual, and KC-130 TACMAN.

2. Multi-plane Air Refueling

a. Purpose. Train the pilot for multi-plane air refueling procedures used in ALTRAV and long-range missions and to train the pilot for future Refueling Area Commander and lead designations.

b. Ground Training. Multi-plane Air Refueling.

c. Prerequisite. If flight is to consist of 3 or more KC-130's, ensure FORM-234 is completed prior to the event.

d. Flight Training (2 Flight, 12.0 Hours)

AR-312 6.0 R E 2 or more KC-130 A (N)

Goal. Train the pilot in multi-plane AR procedures.

Requirement. Conduct multi-plane AR.

Prerequisite. FORM-230/234/(231).

Performance Standard. Per NFM, Air Refueling Manual, and KC-130 TACMAN.

AR-333 6.0 E 3 or more KC-130 A N

Goal. Train the pilot in night division AR procedures.

Requirement. Conduct night division AR.

Prerequisite. FORM-332, AR-312.

Performance Standard. Per NFM, Air Refueling Manual, and KC-130 TACMAN.

3. Low Level Formation

a. Purpose. Introduce the pilot to low level formation procedures.

b. Ground Training. Review low level form procedures in KC-130 Tactical Manual.

c. Simulator Training (1 Period, 3.0 Hours)

SLLFORM-330 3.0 WST S

Goal. Train the pilot in formation LL procedures.

Requirement. Pilot will fly as wingman on a low level route of at least six checkpoints under day and night conditions. Minimum altitude per T&R, Vol 1 minimums.

Performance Standard. Per the NFM and KC-130 TACMAN.

d. Flight Training (2 Flights, 7.0 Hours)

LLFORM-330 4.0 2 KC-130 A

Goal. Train the pilot in formation LL procedures.

Requirement. Pilot will fly as wingman on a low level route of at least six checkpoints. Minimum altitude per T&R, Vol 1.

Performance Standard. Per the NFM and KC-130 TACMAN.

Prerequisite. LLNAV 220, FORM 230.

LLFORM-331 3.0 E 2 KC-130 A N

Goal. Train the pilot in night formation LL procedures.

Requirement. Pilot will fly as wingman on a low level route of at least six checkpoints at night. Minimum altitude per T&R, Vol 1.

Performance Standard. Per the NFM and KC-130 TACMAN.

Prerequisite. LLNAV 221, FORM 232.

4. Night Division Formation

a. Purpose. Train the pilot in night division formation procedures.

b. Ground Training. Division formation procedures.

c. Flight Training (1 Flight, 4.0 Hours)

FORM-332 4.0 E 3 or more KC-130 A N

Goal. Train the pilot in night division formation procedures.

Requirement. Practice night division formation procedures.

Prerequisite. FORM-232/234.

Performance Standard. Per the NFM and KC-130 TACMAN.

5. Air Delivery

a. Purpose. Refine pilot air delivery (AD) procedures.

b. Ground Training

(1) Cargo Air Delivery Procedures and Techniques.

(2) Troop Air Delivery Procedures and Techniques.

c. External Support

(1) Air delivery platoon.

(2) Combat control team.

(3) MMT.

d. Simulator Training (1 Period, 3.0 Hours)

SAD-340 3.0 WST S

Goal. Train the pilot in tactical AD procedures.

Requirement. Plan and execute a AD mission using tactical procedures. Drop may be either CDS, modular platforms, paratroops or combination. Low level routes should be used as ingress/egress. If a multi-plane mission, use random target approaches. Use of escort planning is optional.

Performance Standard. Per NFM, OPNAVINST 3710.7__ and KC-130 TACMAN.

e. Flight Training (4 Flights, 13.0 Hours)

AD-340 3.0 R E 1-2 KC-130 A

Goal. Train the pilot in tactical AD procedures.

Requirement. Plan and execute a AD mission using tactical procedures. Low level routes should be used as ingress/egress. If a multi-plane mission, use random target approaches. Use of escort planning is optional.

Prerequisite. AD-240 or 241.

Performance Standard. Per NFM, OPNAVINST 3710.7__ and KC-130 TACMAN.

AD-341 3.0 1-2 KC-130 A N

Goal. Train the pilot in night AD procedures.

Requirement. Plan and execute a night AD mission utilizing the appropriate all weather tactical systems required for navigation to the target. Use of low level ingress/egress is recommended. If a multi-plane mission, use random approaches. Use of escort planning is optional. Recommend 3 passes from the IP to the target.

Prerequisite. AD-340.

Performance Standard. Per NFM, OPNAVINST 3710.7__ and KC-130 TACMAN.

AD-342 4.0 E KC-130 A (N)

Goal. Train the pilot in high altitude AD procedures.

Requirement. Plan and execute a high altitude para operation during day or night. Review applicable physiology requirements for high altitude para operations. Mission must be conducted above 10,000 ft MSL.

Prerequisite. AD-241.

Performance Standard. Per NFM, OPNAVINST 3710.7__ and KC-130 TACMAN.

AD-343 3.0 1 KC-130 A (N)

Goal. Train the pilot in combination AD procedures.

Requirement. Introduce the pilot to combination AD mission. If a multi-plane mission, use random approaches. Use of escort planning is optional. Minimum of 3 passes from the IP to the target.

Prerequisite. AD 240 or 241.

Performance Standard. Per the NFM and KC-130 TACMAN.

External Support. Air delivery platoon for cargo rigging and DZ control. Use of MMT is encouraged.

6. Air Delivery/Area Illumination

a. Purpose. Train the pilot in area illumination procedures.

b. Ground Training. Flare procedures.

c. External Support

(1) MMT.

(2) PPN-19 RABFAC beacon.

(3) Combat control team.

d. Flight Training (1 Flight, 4.0 Hours)

AD-344	4.0	1 KC-130 A N

Goal. Train in area illumination procedures.

Requirement. Provide illumination using patterns and procedures per the TACMAN. Emphasis will be on mission planning and area illumination procedures.

Performance Standard. Per the NFM, KC-130 TACMAN, and applicable Naval weapons publications.

External Support

(1) MMT.

(2) Combat Control Team.

(3) PPN-19 RABFAC Beacon.

Ordnance. LUU-2 flares as required.

7. Aircraft Survivability Equipment (ASE)

a. Purpose. Train the pilot in skills required to plan for and operate the KC-130 ASE suite during normal operational.

b. General. Aircraft must have a fully operational ASE suite.

c. Ground Training. Prior to this flight phase the pilot shall receive the MAWTS-1 ASP course on:

(1) Basic Radar Principles (U).

(2) AN/ALE-39 Chaff & Flare Dispenser (U).

(3) AN/ALE-39 Programming (S).

(4) AN/AAR-47 Missile Warning System (S).

(5) AN/ALQ-157 Infrared Jammer (S).

(6) AN/APR-39 Radar Warning Receiver (S).

(7) IR and Radar SAM.

(8) Anti-Aircraft Artillery Systems.

d. Simulator Training (1 Period, 3.0 Hours)

SASE 360 3.0 WST S

Goal. Introduce the basic in-flight operation of the ASE system with emphasis on setup of the system for automatic defense.

Requirement. Plan and setup the ASE suite to defeat an unforeseen threat in any operational mission. Demonstrate the basic understanding of and ability to operate the system, specifically the ALE-39 programmer, and ALQ-157 IR jammer for automatic & continuous defense.

Performance Standard. MAWTS-1 ASP

e. Flight Training (1 Flight, 2.0 Hours)

ASE 360 2.0 1 KC-130 A/S

Goal. Introduce the basic in-flight operation of the ASE system with emphasis on setup of the system for automatic defense.

Requirement. Plan and setup the ASE suite to defeat an unforeseen threat in any operational mission. Demonstrate the basic understanding of and ability to operate the system, specifically the ALE-39 programmer and ALQ-157 IR jammer for automatic and continuous defense.

Performance Standard. MAWTS-1 ASP

8. Temporary Landing Zone (TLZ)

a. Purpose. Train the pilot in unimproved/marginal airfield operations.

b. Ground Training. Review temporary landing zone operations in KC-130 TACMAN.

c. External Support

(1) MMT.

(2) Combat control team.

(3) MWSS support (if LZ conditions dictate).

d. Simulator Training (1 Period, 3.0 Hours)

STLZ-370 3.0 OFT/WST S

Goal. Train the pilot in unimproved field operations.

Requirement. Introduce maximum effort takeoffs and landings at an unimproved airfield. Minimum four touch-and-go's and one full-stop landing. Emphasize ground operations at an unimproved airfield. Conduct under day and night conditions.

Performance Standard. Per the NFM and KC-130 TACMAN.

e. Flight Training (2 Flights, 6.0 Hours)

TLZ-370 3.0 E 1 KC-130 A

Goal. Train the pilot in unimproved field operations.

Requirement. Introduce maximum effort takeoffs and landings at an unimproved airfield. Minimum four touch-and-goes, one maximum effort full-stop landing, and one maximum effort take-off for initial qualification. Emphasize ground operations at an unimproved airfield.

Prerequisite. TLZ-370.

Performance Standard. Per the NFM and KC-130 TACMAN.

TLZ-371 3.0 E 1 KC-130 A N

Goal. Train the pilot in night unimproved field operations.

Requirement. Review maximum effort takeoffs and landings at an unimproved airfield. Minimum four touch-and-goes, one maximum effort full-stop landing and one maximum effort take-off for initial qualification. Emphasize ground operations at an unimproved airfield. Flight will be conducted at night. Use of initial terminal guidance (ITG) is encouraged.

Prerequisite. TLZ-371.

Performance Standard. Per the NFM and KC-130 TACMAN.

9. Transport Plane Commander

a. Purpose. Train the T2P for upgrade to TPC.

b. General. TPC-390 through 392 will be flown to screen T2P's for upgrade; each flight should be flown with a separate evaluator. Upon successful completion of TPC-392, the T2P will complete STPC-390 through 398, TPC-393, and TPC-394. If a pilot attends USAF Aircraft Commander Qualification Course (ACQ), commanders may waive STPC-390-398 requirement. Upon successful completion of TPC-394, the TPC should be designated a single plane Refueling Area Commander.

c. Prerequisites. Completion of combat qualification training (except flight leadership designations), currency/flight time per NFM, and the specific requirements for TPC designation per OPNAVINST 3710.7_.

d. Flight Training (3 Flights, 9.0 Hours)

TPC-390 3.0 E 1 KC-130 A

Goal. Screen for TPC designation.

Requirement. Review NATOPS normal, emergency, and instrument procedures.

Prerequisite. See paragraph c. above.

Performance Standard. Per the NFM.

TPC-391 3.0 E 1 KC-130 A (N)

Goal. Screen for TPC designation.

Requirement. Review NATOPS normal, emergency, and instrument procedures.

Prerequisite. TPC-390.

Performance Standard. Per the NFM.

TPC-392 3.0 E 1 KC-130 A

Goal. Screen for TPC designation.

Requirement. Review NATOPS normal, emergency, and instrument procedures.

Prerequisite. TPC-391.

Performance Standard. Per the NFM.

e. Simulator Training (9 Periods, 27.0 Hours)

STPC-390 3.0 E OFT/WST S

Goal. Prepare T2P for upgrade to TPC.

Requirement. Review NATOPS normal, emergency, and instrument procedures.

Performance Standard. Per the NFM.

STPC-391 3.0 E OFT/WST S

Goal. Prepare T2P for upgrade to TPC.

Requirement. Review NATOPS normal, emergency, and instrument procedures.

Performance Standard. Per the NFM.

STPC-392 3.0 E OFT/WST S

Goal. Prepare T2P for upgrade to TPC.

Requirement. Review NATOPS normal, emergency, and instrument procedures.

Performance Standard. Per the NFM.

STPC-393 3.0 E OFT/WST S

Goal. Prepare T2P for upgrade to TPC.

Requirement. Review NATOPS normal, emergency, and instrument procedures.

Performance Standard. Per the NFM.

STPC-394 3.0 E OFT/WST S

Goal. Prepare T2P for upgrade to TPC.

Requirement. Review NATOPS normal, emergency, and instrument procedures.

Performance Standard. Per the NFM.

STPC-395 3.0 E OFT/WST S

Goal. Prepare T2P for upgrade to TPC.

Requirement. Review NATOPS normal, emergency, and instrument procedures.

Performance Standard. Per the NFM.

STPC-396 3.0 E OFT/WST S

Goal. Prepare T2P for upgrade to TPC.

Requirement. Review NATOPS normal, emergency, and instrument procedures.

Performance Standard. Per the NFM.

STPC-397 3.0 E OFT/WST S

Goal. Prepare T2P for upgrade to TPC.

Requirement. Review NATOPS normal, emergency, and instrument procedures.

Performance Standard. Per the NFM.

STPC-398 3.0 E OFT/WST S

Goal. Simulator upgrade progress review.

Requirement. Review NATOPS normal, emergency, and instrument procedures.

Performance Standard. Per the NFM.

10. Transport Plane Commander Evaluation

a. Purpose. Qualify the T2P as a TPC.

b. General. Prerequisites are completion of TPC 390-392 and STPC 390-398. Upon successful completion of TPC-394, the TPC should be designated a single plane Refueling Area Commander.

c. Flight Training (2 Flights, 33 Hours)

TPC-393 30.0 E 1 KC-130 A (N)

Goal. TPC NATOPS Route Check evaluation.

Requirement. T2P pilot will demonstrate the ability to manage all aspects of an extended mission. Evaluation should involve one or more RON's and in an ICAO environment.

Prerequisite. TPC-392, STPC-398.

Performance Standard. Per the NFM and OPNAVINST 3710.7_.

TPC-394 3.0 E 1 KC-130 A (N)

Goal. TPC NATOPS evaluation.

Requirement. Complete NATOPS evaluation.

Prerequisite. TPC-392, STPC-398.

Performance Standard. Per the NFM.

12. Formation Leader Evaluation

a. Purpose. Qualify the pilot as a flight lead.

b. Ground Training. Flight lead procedures and responsibilities.

c. Flight Training (2 Flights, 8.0 Hours)

FORM-395 4.0 E 2 KC-130 A

Goal. Qualify a pilot as a section leader.

Requirement. The pilot is to brief a section formation evolution from takeoff to landing. Discuss flight leadership responsibilities as outlined in OPNAVINST 3710.7_. Flight shall be evaluated by a qualified flight lead.

Prerequisite. TPC designation.

Performance Standard. Per the NFM and OPNAVINST 3710.7_.

FORM-396 4.0 E 3 KC-130 A

Goal. Qualify a pilot as a division lead.

Requirement. The pilot is to brief a division formation evolution from takeoff to landing. Discuss flight leadership responsibilities as outlined in OPNAVINST 3710.7_. Flight shall be evaluated by a qualified division lead.

Prerequisite. Section Leader Designation.

Performance Standard. Per the NFM and OPNAVINST 3710.7_.

644. FULL-COMBAT QUALIFICATION TRAINING

1. Low Altitude Tactics (LAT)

a. Purpose. Train aircrews in LAT and develop proficiency in flying the KC-130 at low altitudes.

b. External Support

(1) Threat Emitters.

(2) Smokey SAMs.

c. General. LAT rules of conduct are contained in T&R Manual, Volume 1.

d. Ground Training. Per the MAWTS-1 Course Catalog. Review MAWTS-1 ASE courseware and KC-130 TACMAN.

e. Simulator Training (2 Periods, 6.0 Hours)

SLAT-420 3.0 OFT/WST S

Goal. Train the pilot in LAT procedures.

Requirement. Introduce flying at comfort level, terrain masking, ridgeline crossing, and lookout doctrine. Fly in left and right seat.

Performance Standard. Per the KC-130 TACMAN navigate the route arriving over each checkpoint while maintaining situational awareness.

SLAT-421 3.0 OFT/WST S

Goal. Train the pilot in formation LAT procedures.

Requirement. Fly as wingman. Practice flying at comfort level, terrain masking, ridgeline crossing, and lookout doctrine. Fly in left and right seat.

Performance Standard. Per the KC-130 TACMAN navigate the route arriving over each checkpoint while maintaining situational awareness.

f. Flight Training (3 Flights, 9.0 Hours)

LAT-420 3.0 E 1 KC-130 A

Goal. Train the pilot in LAT procedures.

Requirement. Introduce flying at comfort level, terrain masking, ridgeline crossing, lookout doctrine, break turns, hard turns, climb to cope and descent to MAC. Minimum altitude per T&R, Vol 1. Route flown should be one that affords the opportunity to perform LAT maneuvering, e.g., ridges, valleys, open areas and easily identifiable terrain features. Fly in right seat.

Prerequisite. LLNAV-220.

Performance Standard. Per the KC-130 TACMAN navigate the route arriving over each checkpoint while maintaining situational awareness.

LAT-421 3.0 E 1 KC-130 A

Goal. Train the pilot in LAT procedures.

Requirement. Review flying at comfort level, terrain masking, ridgeline crossing, lookout doctrine, break turns, hard turns, climb to cope and descent to MAC. Minimum altitude per T&R, Vol 1. Route flown should be one that affords the opportunity to perform LAT maneuvering, e.g., ridges, valleys, open areas and easily identifiable terrain features. Use of functioning ASE gear is encouraged. Fly in left seat.

Prerequisite. LAT-420. (If ASE gear is used, ASE-360).

Performance Standard. Per the KC-130 TACMAN navigate the route arriving over each checkpoint while maintaining situational awareness.

LAT-422 3.0 E 2 KC-130 A

Goal. Qualify the pilot in LAT procedures.

Requirement. Fly as wingman. Introduce section LAT procedures. Practice flying at comfort level, terrain masking, ridgeline crossing, lookout doctrine, break turns, hard turns, climb to cope and descent to MAC. Minimum Altitude per T&R, Vol 1. Route flown should be one that affords the opportunity to perform LAT maneuvering, e.g., ridges, valleys, open areas and easily identifiable terrain features. Use of functioning ASE gear is encouraged.

Prerequisite. LAT-421, FORM-330. (If ASE gear is used, ASE-360).

Performance Standard. Per the KC-130 TACMAN navigate the route arriving over each checkpoint while maintaining situational awareness.

2. Aircraft Survivability Equipment (ASE)

a. Purpose. Train the pilot in skills required to plan for and operate the KC-130 ASE suite in a tactical scenario in a low to medium threat environment.

b. General

(1) Aircraft must have fully operational ASE suite.

(2) Appropriate Chaff and Decoy Flares must be loaded prior to flight.

(3) Threat emitters must be available.

c. Ground Training. Prior to this flight phase the pilot shall receive the MAWTS-1 ASP courses on:

(1) Radio Electronic Combat.

(2) MAGTF Ground Based Air Defense System (GBADS).

(3) KC-130 Specific Threat Countertactics.

d. Simulator Training (1 Period, 3.0 Hours)

SASE-460 3.0 WST S

Goal. Refine the utilization of the ASE suite to include use in a low to medium threat tactical environment.

Requirement. Demonstrate the ability to assess a threat scenario and plan for the proper setup and utilization of the complete ASE suite. Correctly identify and correlate threat symbology display on the APR-39. Demonstrate the proper response to displayed threats including use of expendable and recommended maneuvers.

Performance Standard. MAWTS-1 ASP.

e. Flight Training (2 Flight, 6.0 Hours)

ASE-460 3.0 1 KC-130 A

Goal. Refine the utilization of the ASE suite to include a low to medium threat tactical environment.

Requirement. Demonstrate the ability to assess a threat scenario and plan for the proper setup and utilization of the complete ASE suite. Correctly identify and correlate threat symbology display on the APR-39. Demonstrate the proper response to displayed threats including use of expendable and recommended maneuvers.

Prerequisite. ASE-360.

Performance Standard. MAWTS-1 ASP.

External Syllabus Requirement. Threat emitters.

Ordnance. Chaff/Flares.

ASE-461 3.0 E 1 KC-130 A (N)

Goal. Teach effective use of expendables against a simulated threat scenario provided by an EW range.

Requirement. Correctly plan for utilization and setup of ASE suite against specific threat provided by EW range. Demonstrate the capability to use ASE to degrade/defeat threat.

Prerequisite. ASE-460, LAT-422.

Performance Standard. MAWTS-1 ASP.

External Syllabus Requirement. EW Range or threat emitters.

Ordnance. Chaff/Flares.

3. Defensive Tactics (DEFTAC)

a. Purpose. Train the pilot in defensive tactics.

b. General. Prerequisites are qualification in Low Altitude Tactics. Initial qualification flight will be flown with a DEFTACI. Academic prerequisites Per MAWTS-1 KC-130 Defensive Tactics Course.

c. Flight Training (3 Flights, 6.0 Hours)

DEFTAC-462 2.0 1 KC-130, 1 Adversary A

Goal. Train in aircraft defensive maneuvering.

Requirement. Introduce defensive maneuvers with emphasis on hard turns, break turns, maneuvering velocity, and lookout doctrine.

Prerequisite. LAT-422.

Performance Standard. Per the NFM and KC-130 TACMAN.

DEFTAC-463 2.0 E 1 KC-130, 1 Adversary A

Goal. Train in aircraft defensive maneuvering.

Requirement. Practice defensive maneuvers with emphasis on hard turns, break turns, maneuvering velocity, and lookout doctrine.

Prerequisite. DEFTAC-462.

Performance Standard. Per the NFM and KC-130 TACMAN.

DEFTAC-464 2.0 E 1 KC-130, 2 Adversaries A

Goal. Qualify in aircraft defensive maneuvering.

Requirement. Practice defensive maneuvers with two adversary aircraft. Emphasis on lookout doctrine and negating tracking solutions.

Prerequisite. DEFTAC-463.

Performance Standard. Per the NFM and KC-130 TACMAN.

4. Refueling Area Commander (RAC)

a. Purpose. Qualify the TPC as a Refueling Area Commander for long range refueling operations.

b. General. Prerequisites include AR-333 and FORM-396.

c. Ground Training. CARF indoctrination.

d. Flight Training (1 Flights 8.0 Hours)

RAC-493 8.0 E 2 or more KC-130 A (N)

Goal. Qualify a TPC as a Refueling Area Commander.

Requirement. Brief, conduct, and control a multi-tanker extended AR mission. Discuss responsibilities of Refueling Area Commander, lead, Rendezvous Controller, Movement Control Officer, Tanker Force Commander, and Receiver Force Commander. Emphasis on ALTRV execution. Flight shall be evaluated by a qualified Refueling Area Commander.

Prerequisite. AR-333, FORM-396.

Performance Standard. Per the NFM and the Air Refueling Manual.

650. IUT FLIGHT/SIMULATOR PERFORMANCE REQUIREMENTS

1. Simulator (OFT/WST) Instructor

a. Purpose. Qualify the pilot as an OFT/WST instructor.

b. Simulator Training (1 Periods, 2.0 Hours)

SFAM-500 2.0 E OFT/WST S

Goal. Introduce the IUT to the proper operation and use of the simulator.

Requirement. Demonstrate how to set initial conditions and modify parameters to influence instrument and systems learning objectives.

Performance Standard. Per the NFM and the Simulator Operator's Manual.

2. Instructor Under Training

a. Purpose. Qualify the pilot as an instructor pilot.

b. General. Standardization will be emphasized throughout IUT training. IUT must have a minimum of 200 hours as a TPC.

c. Flight Training (13 Flights, 28.0 Hours)

FAM-500 2.0 E 1 KC-130 A

Goal. Train IUT for FAM/INST stage training.

Requirement. Instructor under training will practice all FAM maneuvers in combat capable syllabus. Demonstrate ability to correct common student errors as simulated by qualified instructor in right seat. Standardize maneuver instruction.

Performance Standard. Per the NFM.

INST-501 2.0 E 1 KC-130 A

Goal. Train IUT for FAM/INST stage training.

Requirement. Instructor under training will practice all INST maneuvers in combat capable syllabus. Demonstrate ability to correct common student errors as simulated by qualified instructor in right seat. Standardize maneuver instruction.

Performance Standard. Per the NFM.

INST-502 3.0 E 1 KC-130 A

Goal. Qualify IUT for FAM/INST stage training.

Requirement. Instructor under training in left seat conducts combat capable FAM/INST training with student in right seat. Flight supervised by qualified instructor.

Performance Standard. Per the NFM.

AR-510 3.0 E 1 KC-130 A

Goal. Train IUT for AR stage training.

Requirement. Instructor under training will practice all AR procedures in combat capable syllabus. Demonstrate ability to correct common student errors as simulated by qualified instructor in right seat. Standardize maneuver instruction.

Performance Standard. Per the NFM and the Air Refueling Manual.

AR-511 3.0 E 1 KC-130 A

Goal. Qualify IUT for AR stage training.

Requirement. Instructor under training in left seat conducts Combat Capable AR training with student in right seat. Flight supervised by qualified instructor.

Performance Standard. Per the NFM and the Air Refueling Manual.

NAV-520 2.0 E 1 KC-130 A

Goal. Train IUT for LL NAV stage training.

Requirement. Instructor under training will practice all LLNAV procedures in combat capable syllabus. Demonstrate ability to correct common student errors as simulated by qualified instructor in right seat. Standardize maneuver instruction.

Performance Standard. Per NFM and KC-130 TACMAN.

NAV-521 2.0 E 1 KC-130 A

Goal. Qualify IUT for LL stage training.

Requirement. Instructor under training in left seat conducts combat capable NAV training with student in right seat. Flight supervised by qualified instructor.

Performance Standard. Per the NFM and KC-130 TACMAN.

FORM-530 2.0 E 2 KC-130 A

Goal. Train IUT for FORM stage training.

Requirement. Instructor under training will practice all FORM maneuvers in combat capable syllabus. Demonstrate ability to correct common student errors as simulated by qualified instructor in right seat. Standardize maneuver instruction.

Performance Standard. Per the NFM.

FORM-531 2.0 E 2 KC-130 A

Goal. Qualify IUT for FORM stage training.

Requirement. Instructor under training in left seat conducts combat capable FORM training with student in right seat. Flight supervised by qualified instructor.

Performance Standard. Per the NFM.

AD-540 2.0 E 1 KC-130 A

Goal. Train IUT for AD stage training.

Requirement. Instructor under training will practice all AD procedures in combat capable syllabus. Demonstrate ability to correct common student errors as simulated by qualified instructor in right seat. Standardize maneuver instruction.

Performance Standard. Per the NFM and KC-130 TACMAN.

AD-541 2.0 E 1 KC-130 A

Goal. Qualify IUT for AD stage training.

Requirement. Instructor under training in left seat conducts combat capable AD training with student in right seat. Flight supervised by qualified instructor.

Performance Standard. Per the NFM and KC-130 TACMAN.

TLZ-570 1.0 E 1 KC-130 A

Goal. Train IUT for TLZ stage training.

Requirement. Instructor under training will practice all TLZ procedures in combat capable syllabus. Demonstrate ability to correct common student errors as simulated by qualified instructor in right seat. Standardize maneuver instruction.

Performance Standard. Per the NFM and KC-130 TACMAN.

TLZ-571 2.0 E 1 KC-130 A

Goal. Qualify IUT for TLZ stage training.

Requirement. Instructor under training in left seat conducts combat capable TLZ training with student in right seat. Flight supervised by qualified instructor.

Performance Standard. Per the NFM and KC-130 TACMAN.

3. Low Altitude Tactics Instructor (LATI)

a. Purpose. Qualify the TPC as a LATI.

b. General. The T&R Manual, Volume 1 and the MAWTS-1 Course Catalog are germane. Completion of the LAT syllabus is a prerequisite. The build-up phase will be developed and supervised by the Squadron WTI. Upon certification by MAWTS-1 or the Squadron WTI, the LATI designation will be assigned by the squadron commanding officer. Currency in LAT is not required to maintain instructor designation. However, the LATI must satisfy 15 day currency requirements in order to instruct as a LATI. In instances where a disparity exists between the MAWTS-1 Course Catalog and the T&R Manual, the MAWTS-1 Course Catalog shall be germane.

c. Prerequisites. Completion of LAT-422.

d. Ground Training. KC-130 LATI Academics.

(1) The IUT will review and be capable of presenting the following lectures from the LAT Academic Support Package:

a LAT Part I: Philosophy and Concepts.

b LAT Part II: LAT Considerations.

c KC-130 LAT Maneuvering Considerations.

(2) LAT Part V: Instructional Techniques will be taught by the squadron WTI or a MAWTS-1 instructor.

e. Flight Training (3 Flights, 9.0 Hours)

(1) LATI Build-up. The squadron WTI should conduct a flight build-up to ensure that the prospective LATI is prepared for certification. During the LATI build-up phase, the squadron WTI should demonstrate to the prospective LATI appropriate flight brief techniques, structure and objectives, and should highlight common errors in every maneuver. There should be particular emphasis in safety and absolute adherence to the Rules of Conduct for all portions of the LAT flight. The squadron will ensure that the prospective LATI demonstrates a working knowledge of, and an elevated level of proficiency in, all of the maneuvers delineated in the KC-130 LAT T&R syllabus prior to recommendation for certification. The LAT IUT build-up syllabus codes are LAT-532, 533, 534 and 591.

(2) LATI Certification. The LATI certification may be conducted by a KC-130 WTI pilot. The following evaluation sorties are required for LATI certification.

LAT-532 3.0 E 1 KC-130 A

Goal. Re-establish currency/begin certification for the LAT IUT on the LAT course. Practice flying at comfort level, terrain masking, ridgeline crossing, and proper lookout doctrine. Fly in right seat.

Requirement. The IUT will brief, instruct and debrief a low altitude flight on a low level route or closed course. Flight conduct and requirements are the same as for LAT-420.

Performance Standard. Per NFM, KC-130 TACMAN, MAWTS-1 course catalog.

LAT-533 3.0 E 1 KC-130 A

Goal. Continue build-up/continue certification phase with IUT flying in left seat. IUT will establish comfort level and demonstrate proficiency in the performance of hard turns, break turns, bunt maneuvers, zoom climbs, and ridgeline crossings as well as supervision of navigation and proper lookout doctrine.

Requirement. The IUT will brief, instruct, and debrief a low altitude flight on a low level route or closed course. Flight conduct and requirements are the same as for LAT-421.

Performance Standard. Per NFM, KC-130 TACMAN, MAWTS-1 course catalog.

LAT-534 3.0 R E 2 KC-130 A

Goal. Finish build-up/continue certification phase with formation LAT procedures.

Requirement. The IUT will brief, instruct, and debrief a low altitude formation flight on a low level route or closed course. Flight conduct and requirements are the same as LAT 422. Additionally, IUT will demonstrate proper formation turn procedures.

Performance Standard. Per NFM, KC-130 TACMAN, MAWTS-1 course catalog.

4. NATOPS Instructor

a. Purpose. Qualify the pilot as a NATOPS/Assistant NATOPS instructor.

b. Flight Training (1 Flight, 3.0 Hours)

NATOPS-590 3.0 E 1 KC-130 A

Goal. Evaluate the pilot for NATOPS Instructor/Assistant Instructor designation.

Requirement. NATOPS evaluator will conduct a comprehensive evaluation with emphasis on standardization and grading criteria.

Performance Standard. Per the NFM and OPNAV 3710.7_.

5. Low Altitude Tactics Instructor Evaluation

a. Purpose. Qualify the TPC as a LATI.

b. General. The T&R Manual, Volume 1 and the MAWTS-1 Course Catalog are germane. Completion of either the LAT syllabus or WTI is a prerequisite.

c. Prerequisites. Completion of LAT 532-534.

d. Flight Training (1 Flight, 3.0 Hour)

LAT-591 3.0 R E 1 KC-130 A

Goal. Certify the IUT as a LATI for designation by the squadron commanding officer.

Requirement. The IUT will brief, instruct, and debrief a low altitude flight on a low level route or closed course. Flight conduct is the same as LAT-533 and the IUT will demonstrate the proficiency and knowledge required to safely and properly instruct single ship and section LAT.

Performance Standard. Per NFM, KC-130 TACMAN, MAWTS-1 course catalog.

6. DEFTAC Instructor

a. Purpose. Qualify the pilot as a DEFTACI.

b. General. The T&R Manual Volume I and the MAWTS-1 course catalog are germane. Completion of the DEFTAC syllabus is a prerequisite. The build-up phase may be developed and supervised by the Squadron DEFTACI. Upon certification by MAWTS-1, the DEFTACI designation will be assigned by the squadron commanding officer.

c. Flight Training. DEFTAC-592. See the MAWTS-1 Course Catalog.

7. Night System Instructor

a. Purpose. Qualify the pilot as an NSI.

b. General. The T&R Manual Volume I and the MAWTS-1 Course Catalog are germane. Night System Qualification is a prerequisite. The build-up phase may be developed and supervised by the Squadron NSI. Upon certification by MAWTS-1, the NSI designation will be assigned by the squadron commanding officer.

c. Flight Training. NVG-593. See the MAWTS-1 Course Catalog.

8. Weapons and Tactics Instructor (WTI)

a. Purpose. Develop highly qualified pilots into effective unit tactics instructors and expose them to current Marine Corps tactical doctrine. Additionally, this stage is designed to increase knowledge and experience of the capabilities and associated tasks of the KC-130.

b. General. Tactics and techniques will be taught per the KC-130 Tactical Manual and the MAWTS-1 supplements. Only MAWTS-1 instructors shall instruct/qualify flights in this stage. Qualification shall only be achieved as shown in each flight description.

c. Flight Training. WTI-594. See the MAWTS-1 Course Catalog.

651. SPECIAL FLIGHT REQUIREMENTS

1. Functional Check Flight Pilot

a. Purpose. Qualify the TPC as a post maintenance check flight pilot.

b. Ground Training. Functional Check Flight Examination.

c. Flight Training (1 Flight, 2.0 Hours)

FCF-600 2.0 E 1 KC-130 A

Goal. PMCF evaluation flight.

Requirement. Conduct a flight phase inspection upon completion of post maintenance discrepancies. The flight shall include the shutdown and airstart of at least one engine inflight.

Performance Standard. Per the NFM, OPNAVINST 3710.7_, OPNAVINST 4790.2.

2. Night Systems Qualification (NSQ)

a. Purpose. Qualify the pilot in basic Night Systems operations. The NVG sorties identified here are used to train the pilot leading to Night System Qualification (NSQ), and to review concepts associated with night visual phenomena.

b. General. Pilots receiving instruction leading to NSQ in the KC-130 will be qualified in the respective 200, 300 or 400 series equivalent unaided sortie. All ground training shall be completed prior to flight training.

(1) The NSQ syllabus is the following sorties: NVG-601, 611, 620, 621, 670, 602. After the qualification flight (NVG-602), the pilot may be designated as night systems qualified by the Squadron Commanding Officer. The remaining NVG sorties may also be flown by a pilot who is not NSQ provided that an NSI is in a pilot seat and is providing appropriate instruction.

(2) High light level requirements pertains only to the first time the sortie is flown. A total of 5 hours shall be flown in Low Light Level conditions prior to flying NVG 602 and designation as NSQ.

(3) The intent of the NSQ syllabus is to fly NVG-601 as the pilot's initial familiarization flight. If NVG-601 has not been completed, takeoffs and landings shall be performed unaided. NVG-670, 671, 672, 680, and 681 shall not be flown without having completed NVG-601.

(4) Night currency requirements are identified in the T&R, Vol I.

c. Instructor Requirements. Shall be in accordance with T&R, Vol I. A designated Night Systems Instructor (NSI) is required to occupy a pilot's seat for all flights prior to NSQ. An NSI is also required for the initial time all "E" coded sorties are flown.

d. Ground Training (10.0 Hours)

(1) NITE Lab.

(2) MAWTS-1 KC-130 NS Course.

e. Simulator Training (2 Periods, 2.0 Hours). Every attempt will be made to complete simulator sorties if a night vision devices (NVD) compatible OFT/WST is available.

SNVG-601 1.0 E OFT/WST S N

Goal. Introduce the crew to the use and wear of NVD's. Emphasis will be on cockpit preflight, inflight donning of the NVD, and aircrew coordination. Familiarize crew with ground taxi, takeoff, and landing procedures. If able, the pilot should be exposed to various light levels throughout the training period.

Requirement. Brief and fly local area familiarization utilizing NVD's. A minimum of 4 touch and go and 2 full-stop landings should be performed.

Performance Standard. Per the NFM and KC-130 TACMAN.

SNVG-602 1.0 R E OFT/WST S N

Goal. Review and practice SNVG-601. Introduce low level navigation procedures utilizing NVD's. Emphasis on point to point navigation and aircrew coordination. If able, the pilot should be exposed to various light levels throughout the training period.

Requirement. Brief and fly local area FAM/LLNAV sorties utilizing NVD's. Minimum altitude will be 500 ft AGL and a minimum of 6 checkpoints. A minimum of 4 touch and go and 2 full stop landings should be performed.

Performance Standard. Per the NFM and KC-130 TACMAN.

f. Flight Training (2 Flight, 3.0 Hours)

NVG-601 1.5 R E 1 KC-130 A N

Goal. Introduce the pilot to KC-130 Night Systems and the use of NVD's in the KC-130. Emphasis will be on pre-flight, donning of the NVD's, oxygen mask, taxi procedures, aborts, takeoffs, cockpit orientation at altitude, landings, aircraft ground reversing operations, and NVD aircrew coordination.

Requirement. High light level conditions for initial flight. A minimum of 4 touch and go and 2 full stop landings should be performed.

Performance Standard. Per the NFM and KC-130 TACMAN.

NVG-602 1.5 E 1 KC-130 A N

Goal. Qualify the pilot as NSQ. Demonstrate the required skills to conduct KC-130 night operations using NVD's.

Requirement. Low or high light level conditions. Pilot to be qualified will have completed the MAWTS-1 KC-130 Night Systems exam prior to flying this sortie. This sortie may be flown in conjunction with: NVG-610, 611, 620, 621, 622, 630, 640, 670, 671, 672.

Prerequisite. NVG 601, 611, 620, 621, 670 and 5 hrs LLL.

Performance Standard. Per the NFM and KC-130 TACMAN.

3. Night Systems Fixed-Wing Air Refueling

a. Purpose. Provide flight training in Night Systems fixed-wing air refueling operations and review concepts associated with night visual phenomena.

b. General. All general, instructor, and ground training requirements in the basic NSQ section apply to NS fixed-wing air refueling operations.

c. Flight Training (1 Flight, 1.5 Hours)

NVG-610 1.5 1 KC-130 A N

Goal. Introduce the pilot to fixed-wing aerial refueling utilizing NVD's with specific emphasis on aircrew coordination, exterior lighting considerations and refueling procedures.

Requirement. Low or high light level conditions. Conduct a rendezvous with fixed-wing receivers and perform refueling. Rendezvous and refueling altitudes shall be in accordance with T&R Manual, Volume 1 and the NATOPS Air Refueling manual. Use of EMCON procedures is optional.

Performance Standard. Per the NFM, TACMAN and the AR manual.

4. Night Systems Rotary-wing Air Refueling

a. Purpose. Provide flight training and qualify aircrews in Basic Night Systems rotary-wing air refueling operations and to review concepts associated with night visual phenomena.

b. General. All general, instructor, and ground training requirements in the basic NSQ section apply to NVG rotary-wing air refueling operations.

c. Flight Training (1 Flight, 1.5 Hours)

NVG-611 1.5 R E 1 KC-130 A N

Goal. Introduce the pilot to NS aerial refueling of helicopters with specific emphasis on aircrew coordination, rendezvous procedures and exterior lighting considerations.

Requirement. High or low light level conditions. In the left seat, perform at least 2 head-on and 2 random rendezvous with rotary-wing(s). Refueling altitudes shall be in accordance with T&R Manual, Volume 1 and the NATOPS Air Refueling manual.

Performance Standard. Per the NFM, TACMAN and the AR manual.

5. Night Systems Low Level Operations

a. Purpose. Provide flight training and qualify aircrews in Night Systems low level operations and review concepts associated with night visual phenomena.

b. General. All general, instructor, and ground training requirements in the basic NSQ section apply to NS low level operations.

c. Flight Training (3 Flight, 4.5 Hours)

NVG-620 1.5 R E 1 KC-130 A N

Goal. Conduct a low level navigation route in high light level conditions while utilizing NVD's.

Requirement. High light level conditions. Brief and fly a night low level navigation route of at least 6 checkpoints in the right seat, utilizing NVD's. Minimum altitude shall be per T&R, Vol I. Emphasis will be on point to point navigation, crew coordination, and cockpit voice procedures.

Performance Standard. Per the NFM and the KC-130 Tac manual.

NVG-621 1.5 R E 1 KC-130 A N

Goal. Conduct a low level navigation route in low light level conditions while utilizing NVD's.

Requirement. Low light level conditions. Brief and fly a night low level navigation route of at least 6 checkpoints in the left seat, utilizing NVD's. Minimum altitude shall be per T&R, Vol I. Emphasis will be on point to point navigation, crew coordination, and cockpit voice procedures.

Performance Standard. Per the NFM and the KC-130 Tac manual.

Prerequisite. NVG-620.

NVG-622 1.5 1 KC-130 A N

Goal. Introduce LAT procedures while utilizing NVG's.

Requirement. The NSI for this flight must be a LAT instructor. Flight is to be conducted in 2 phases. First phase: To be conducted above 1000 feet AGL. Introduce flying at comfort level, terrain masking, ridgeline crossing, lookout doctrine, break turns, hard turns, climb to cope. Second phase: To be conducted at comfort level but no lower than 500 feet AGL. Practice flying at comfort level, terrain masking, lookout doctrine, climb to cope (but no lower than T&R, Vol I mins). Hard turns and break turns will not be flown in this phase of the flight. Area to be used for LAT training should be one that affords the opportunity to perform LAT maneuvering, e.g., ridges, valleys, open areas and easily identifiable terrain features. Fly in left seat.

Prerequisite. Must be NSQ and LAT qualified. Currency per T&R, Vol I. The NSI will be a LAT I.

Performance Standard. Per the NFM and KC-130 TACMAN.

6. Night Systems Formation

a. Purpose. Provide flight training in Night Systems formation operations and to review concepts associated with night visual phenomena.

b. General. All general, instructor, and ground training requirements in the basic NSQ section apply to NS formation operations.

c. Flight Training (1 Flight, 1.5 Hours)

NVG-630 1.5 E 2 KC-130 A N

Goal. Introduce the pilot to formation flight utilizing NVD's. Emphasis should be placed on aircraft exterior lighting configurations, recognition of relative motion and closure rates with NVD's, and crew coordination.

Requirement. High or low light level conditions. Wingman must be NSQ or have an NSI in one of the front seats. Brief and fly a formation flight, practicing lead and trail position flying. For initial qualification, perform at least 4 breakup and rendezvous maneuvers.

Performance Standard. Per the NFM and KC-130 TACMAN.

7. Night Systems Air Delivery

a. Purpose. Provide flight training in Night Systems air delivery operations and review concepts associated with night visual phenomena.

b. General. All general, instructor, and ground training requirements in the basic NSQ section apply to NVG air delivery operations.

c. Flight Training (1 Flight, 1.5 Hours)

NVG-640	1.5	E 1 KC-130 A N

Goal. Introduce the pilot to air delivery operations utilizing NVD's. Emphasis should be placed on various DZ marking procedures and visual acquisition of the DZ.

Requirement. High or low light level conditions. Brief and fly an air delivery mission consisting of CDS, heavy equipment, or personnel static line. From a low level navigation course, perform a modified slowdown tactic to include an air delivery. Emphasis will be on low level navigation, checklist procedures, and aircrew coordination. The pilot shall be in the left seat for the initial sortie.

External Support. Use of the air delivery platoon and MATC Mobile Team assets are highly recommended for load prep, DZ set-up/control, and terminal area guidance using the PPN-19, RABFAC beacon, IR strobes and lights.

Performance Standard. Per the NFM and KC-130 Tac Manual.

8. Search and Rescue (SAR)

a. Purpose. Familiarize the pilot with SAR operations and procedures.

b. Ground Training

(1) SAR Operations and Procedures.

(2) On-scene Commander Duties and Responsibilities.

c. Flight/Simulator Training (1 Flight, 3.0 Hours)

SAR-650	3.0	1 KC-130/OFT/WST S

Goal. Familiarize the pilot with SAR operations and procedures.

Requirement. The pilot will plan, brief, fly, and debrief a preplanned SAR mission using at least two different search methods. On-scene commander duties will be optional.

Performance Standard. KC-130 TACMAN and NWP 19-1.

9. Direct Air Support Center (Airborne) (DASC(A))

a. Purpose. Familiarize the pilot in DASC(A)/C3 procedures and operations.

b. Ground Training

(1) MACCS/NTACS Direct Air Support Operations UYQ-3.

(2) DASC(A) Operations.

c. Flight Training (1 Flight, 1.0 Hours)

DASC-651	1.0	1 KC-130, 1 UYQ-3A A

Goal. Familiarize the pilot in DASC/C3 operations.

Requirement. Pilot plans, briefs, debriefs, and flies a DASC(A) mission in coordination with the SAD.

Performance Standard. KC-130 TACMAN.

10. Casualty Evacuation

a. Purpose. Familiarize the pilot with casualty evacuation operations and procedures.

b. Ground Training

(1) Tactical Casualty Regulating/Handling Procedures.

(2) Casualty Evacuation Operations and Procedures.

c. Flight Training (1 Flight, 3.0 Hours)

CPL-652	3.0	1 KC-130 A

Goal. Familiarize the pilot with casualty evacuation operations and procedures.

Requirement. Pilot plans, briefs, debriefs, and flies a casualty evacuation mission. Casualties may be simulated.

Performance Standard. KC-130 TACMAN.

11. Night Systems Aircraft Survivability Equipment

a. Purpose. Provide flight training in the use of Aircraft Survivability Equipment (ASE) while flying with NVD's.

b. General. All general, instructor, and ground training requirements in the basic NSQ section apply to NS ASE operations.

c. Flight Training (1 Flight, 1.5 hours)

NVG-660 1.5 1 KC-130 A

Goal. Refine the utilization of the ASE suite and NVD's to include a low to medium threat tactical environment.

Requirement. High light level conditions. Demonstrate the ability to access a threat scenario and plan for the proper setup and utilization of the complete ASE suite. Correctly identify and correlate threat symbology display on the APR-39. Demonstrate the proper response to displayed threats including use of expendable and recommended maneuvers. Demonstrate the ability to use night systems and crew coordination to increase aircraft survivability.

Performance Standard. MAWTS-1 ASP.

External Support. Threat emitters.

Ordnance. Chaff/Flares.

12. Night Systems Temporary Landing Zone

a. Purpose. Provide flight training and qualify aircrews in Basic Night Systems temporary landing zone operations and review concepts associated with night visual phenomena.

b. General. All general, instructor, and ground training requirements in the basic NSQ section apply to NS temporary landing zone operations.

c. Flight Training (3 Flights, 4.5 Hours)

NVG-670 1.5 R E 1 KC-130 A N

Goal. Conduct touch and go landings and full stops at an improved TLZ while utilizing NVD's. Emphasis shall be on aircrew coordination during takeoff and landing phases of flight.

Requirement. High light level conditions. The pilot shall observe from the right seat at least 2 touch and go landings and 1 full stop landing demonstrated by the NSI. A seat change shall be conducted and subsequent takeoffs and landings shall be performed by the student. A minimum of 4 touch and go landings and one full stop shall be performed by the pilot. The pilot should demonstrate the ability to fly the aircraft to the intended point of touchdown. At least 2 self contained approaches should be flown.

Performance Standard. As per the NFM and KC-130 TACMAN.

NVG-671 1.5 R E 1 KC-130 A

Goal. Conduct unimproved TLZ landings while utilizing NVD's. Emphasis shall be placed on unimproved TLZ NVD considerations, to include ground operations.

Requirement. High light level conditions. A minimum of 4 touch and go and 2 full stop landings should be accomplished at an unimproved TLZ. The pilot should demonstrate the ability to fly the aircraft to the intended point of touchdown. At least 2 self contained approaches should be flown.

Performance Standard. As per the NFM and KC-130 TACMAN.

NVG-672 1.5 R E 1 KC-130 A

Goal. Conduct unimproved or improved TLZ landings in low light level conditions while utilizing NVD's. Emphasis shall be placed on differences in TLZ operations in low light level conditions from TLZ operations in high light level conditions.

Requirement. Low light level conditions. A minimum of 4 touch and go landings and 1 full stop landing should be accomplished at an unimproved TLZ. The pilot should demonstrate the ability to fly the aircraft to the intended point of touchdown. At least 2 self contained approaches should be flown.

Prerequisite. NVG 670 or 671.

Performance Standard. As per the NFM and KC-130 TACMAN.

13. Assisted Take-Off

a. Purpose. Train the pilot in assisted takeoff (ATO) procedures.

b. Ground Training. ATO procedures.

c. Simulator Training (1 Period, 3.0 Hours)

SATO-673 3.0 OFT/WST S

Goal. Train for ATO.

Requirement. Brief and fly a minimum of 2 assisted takeoffs in the right seat and 2 assisted takeoffs in the left seat.

Performance Standard. Per the NFM and KC-130 TACMAN.

Ordnance. Eight Mk-6 JATO units.

d. Flight Training (2 Flights, 1.0 Hour)

ATO-674 0.5 E 1 KC-130 A

Goal. Train for ATO.

Requirement. Brief and fly one assisted takeoff in the right seat.

Performance Standard. Per the NFM and KC-130 TACMAN.

Ordnance. Eight Mk-6 JATO units.

ATO-675 0.5 E 1 KC-130 A

Goal. Train for ATO.

Requirement. Brief and fly one assisted takeoff in the left seat.

Performance Standard. Per the NFM and KC-130 TACMAN.

Ordnance. Eight Mk-6 JATO units.

14. ANVIS Heads Up Display

a. Purpose. Provide ground/flight training in use of ANVIS Heads Up Display (HUD) and review concepts associated with night visual phenomena.

b. General. All general, instructor, and ground training requirements in the basic NSQ section apply to ANVIS HUD operations.

c. Ground Training (2.0 Hours)

d. Flight Training (2 Flight, 3.0 Hours)

NVG-680 1.5 1 KC-130 A N

Goal. Introduce the pilot to KC-130 ANVIS HUD its use. Emphasis will be on pre-flight, donning of the NVD and HUD, takeoffs, ANVIS HUD orientation at altitude and landings.

Requirement. High light level conditions. The pilot should be exposed to the ANVIS HUD's various modes of operation. A minimum of 4 touch and go landings and 1 full stop landing should be performed.

Performance Standard. Per NFM, and KC-130 TACMAN.

NVG-681 1.5 1 KC-130 A N

Goal. Refine the use of the KC-130 ANVIS HUD. The pilot will use ANVIS HUD while executing a Night Systems training flight. Emphasis should be placed on information available to the pilot from the various modes of ANVIS HUD and use of the modes in the appropriate phases of flight.

Requirement. High or low light level conditions. Brief and fly a Night Systems training sortie. The sortie can be any one of the following: NVG-620, 621, 640. This sortie may also be done in combination with any of the following: NVG-610, 611, 630, 670, 671, 672. When flying this as an initial code, this sortie should not be flown in combination with the following: NVG-622, 660. The flight brief for the pilot should contain information on the various modes of ANVIS HUD operation the pilot intends to use and when he intends to use them.

Performance Standard. Per the NFM and KC-130 Tac Manual.

15. Instrument

a. Purpose. Evaluate the pilot's knowledge and application of NATOPS instrument procedures and techniques.

b. General

(1) General policy, requirements, and prerequisites concerning NATOPS instrument evaluations are contained in OPNAV 3710.7_ and the IFM.

(2) Instrument evaluations will be conducted in an aircraft unless otherwise authorized by the commanding officer.

c. Ground Training/Evaluation. Ground training and evaluation shall be conducted per OPNAVINST 3710.7_ and IFM.

d. Flight Training (2 Flights, 4.0 Hours)

INST-690 2.0 T, C, R, E 1 KC-130/OFT/WST (N) S/A

Goal. Conduct a standard instrument flight evaluation.

Requirement. Per OPNAV 3710.7_ and the IFM.

Performance Standard. OPNAV 3710.7_ and the IFM.

INST-691 2.0 T, C, R, E 1 KC-130/OFT/WST (N) S/A

Goal. Conduct a special instrument flight evaluation.

Requirement. Per OPNAV 3710.7_ and the IFM.

Performance Standard. OPNAV 3710.7_ and the IFM.

660. EXPENDABLE ORDNANCE REQUIREMENTS

BASIC/TRANSITION/CONVERSION/REFRESHER

ORDNANCE	100 SERIES	200 SERIES	300 SERIES	400 SERIES	IUT	ANNUAL
LUU-2A/B,B/B			32			32
ATO BOTTLES						16
FLARES MK-46				40	40	80
CHAFF RR-129/AL				24	24	48

AIRCRAFT: KC-130 MOS: 7557 CREW POSITION: PILOT

STAGE	TRAINING CODE	HRS	REFLY INTERVAL	CRP	T	C	R	E	REMARKS
COMBAT CAPABLE TRAINING									
SFAM	001	4.0	*	0.5	X	X			
	002	4.0	*	0.5	X	X			
	003	4.0	*	0.5	X	X			
	004	4.0	*	0.5	X	X			
	005	4.0	*	1.0	X	X	X	X	
	006	4.0	*	0.5	X	X			
	007	4.0	*	0.5	X	X			
SINST	008	4.0	*	0.5	X	X			
	009	4.0	*	0.5	X	X			
	010	4.0	*	0.5	X	X			
	011	4.0	*	0.5	X	X			
	012	4.0	*	0.5	X	X	X		
	013	4.0	*	0.5	X	X	X		
	014	4.0	*	0.5	X	X	X		
	015	4.0	*	1.0	X	X	X	X	
SAR	016	4.0	*	0.5	X	X			
SLLNAV	017	2.0	*	0.5	X	X			
	018	2.0	*	0.5	X	X			
SPMCF	019	2.0	*	0.5	X	X		X	
STLZ	020	2.0	*	0.5	X	X			
FAM	100	3.0	*	0.5	X	X			
INST	101	3.0	*	0.5	X	X	X		
	102	3.0	*	0.5	X	X			(N)
	103	3.0	*	0.5	X	X	X		(N)
	104	3.0	*	1.0	X	X			(N)
	105	3.0	*	0.5	X	X	X		
	106	3.0	*	0.5	X	X			
	107	3.0	*	0.5	X	X	X		
	108	3.0	*	0.5	X	X			(N)
	109	3.0	*	2.0	X	X	X	X	(N)
AR	110	3.0	*	0.5	X	X			
	111	3.0	*	0.5	X	X			(N)
	112	3.0	*	0.5	X	X			
	113	3.0	*	2.0	X	X		X	(N)
LLNAV	120	2.0	*	0.5	X	X			
	121	2.0	*	0.5	X	X			
	122	2.0	*	2.0	X	X		X	
FORM	130	2.0	*	0.5	X	X			2 A/C
	131	2.0	*	0.5	X	X			2 A/C
	132	2.0	*	0.5	X	X			2 A/C
	133	2.0	*	2.0	X	X		X	2 A/C
AD	140	2.0	*	1.0	X	X			
LRNAV	150	8.0	*	1.0	X	X			(N)
	151	8.0	*	1.0	X	X		X	(N)
TLZ	170	2.0	*	1.0	X	X			
CK	190	3.0	*	3.0	X	X		X	(N)

Figure 6-2.--Pilot Refly Interval, Combat Readiness Percentage.

AIRCRAFT: KC-130 MOS: 7557 CREW POSITION: PILOT

STAGE	TRAINING CODE	HRS	REFLY INTERVAL	CRP	T	C	R	E	REMARKS
COMBAT READY TRAINING									
FAM	200	3.0	6	0.5	X	X	X	X	
	201	3.0	6	0.5	X	X	X	X	N
AR	210	4.0	12	1.0	X	X		X	
	211	4.0	12	0.8	X	X			N
AR	212	4.0	12	1.0	X	X	X	X	
	213	4.0	12	0.8	X	X			N
LLNAV	220	4.0	12	0.5	X	X	X	X	
	221	4.0	12	0.5	X	X		X	N
FORM	230	4.0	12	0.6	X	X			2 A/C
	231	3.0	6	0.6	X	X			N 2 A/C
	232	3.0	6	0.6	X	X		X	N 2 A/C
	233	4.0	12	0.6	X	X			3 A/C
	234	4.0	12	0.6	X	X		X	3 A/C
AD	240	3.0	12	0.5	X	X		X	
	241	3.0	12	0.5	X	X		X	
LRNAV	250	9.0	12	0.3	X	X			(N)
	251	9.0	12	0.6	X	X		X	(N)
TLZ	270	3.0	6	1.0	X	X		X	
	271	3.0	6	1.0	X	X	X	X	N
	272	2.0	12	0.5	X	X			(N)
RGR	273	2.0	12	0.5	X	X			
	274	2.0	12	0.5	X	X		X	N
CK	290	3.0	12	1.0	X	X	X	X	(N)
COMBAT QUALIFICATION TRAINING									
AR	310	4.0	12	0.9	X	X			
	311	4.0	6	0.9	X	X		X	N
AR	312	6.0	12	1.0	X	X	X	X	2+ A/C
	333	6.0	6	1.0	X	X		X	N 3+ A/C
LLFORM	330	4.0	12	0.8	X	X			2 A/C
	331	3.0	6	0.8	X	X		X	N 2 A/C
FORM	332	4.0	6	0.8	X	X		X	N 3+ A/C
AD	340	3.0	12	0.5	X	X	X	X	
	341	3.0	12	0.5	X	X			N
	342	4.0	12	0.5	X	X		X	(N)
	343	3.0	12	0.5	X	X			(N)
	344	4.0	12	1.0	X	X			N

Figure 6-2.--Pilot Refly Interval, Combat Readiness Percentage--Continued.

AIRCRAFT: KC-130 MOS: 7557 CREW POSITION: PILOT

STAGE	TRAINING CODE	HRS	REFLY INTERVAL	CRP	T	C	R	E	REMARK
ASE	360	2.0	12	0.3	X	X			
TLZ	370	3.0	6	1.2	X	X		X	
	371	3.0	6	1.3	X	X		X	N
TPC	390	3.0	*	0.5	X	X		X	
	391	3.0	*	0.5	X	X		X	(N)
	392	3.0	*	1.0	X	X		X	
	393	30.0	*	2.0	X	X		X	(N)
	394	3.0	12	2.0	X	X	X	X	(N)
FORM	395	4.0	12	1.0	X	X		X	2 A/C
	396	4.0	12	1.0	X	X		X	3 A/C
FULL-COMBAT QUALIFICATION TRAINING									
LAT	420	3.0	6	0.5	X	X			
	421	3.0	6	0.5	X	X		X	
	422	3.0	6	0.5	X	X		X	2 A/C
ASE	460	3.0	12	0.5	X	X			
	461	3.0	12	0.5	X	X		X	(N)
DEFTAC	462	2.0	12	0.5	X	X		X	
	463	2.0	12	0.5	X	X		X	
	464	2.0	12	0.5	X	X		X	
RAC	493	8.0	12	1.0	X	X		X	(N) 2+ A/C
IUT FLIGHTS									
FAM	500	2.0	*	0.0				X	
INST	501	2.0	*	0.0				X	
	502	3.0	*	0.0				X	
AR	510	3.0	*	0.0				X	
	511	3.0	*	0.0				X	
NAV	520	2.0	*	0.0				X	
	521	2.0	*	0.0				X	
FORM	530	2.0	*	0.0				X	
	531	2.0	*	0.0				X	
AD	540	2.0	*	0.0				X	
	541	2.0	*	0.0				X	
TLZ	570	1.0	*	0.0				X	
	571	2.0	*	0.0				X	

Figure 6-2.--Pilot Refly Interval, Combat Readiness Percentage--Continued.

AIRCRAFT: KC-130 MOS: 7557 CREW POSITION: PILOT

STAGE	TRAINING CODE	HRS	REFLY INTERVAL	CRP	T	C	R	E	REMARKS
LAT	532	1.0	*	0.0				X	
	533	1.0	*	0.0				X	
	534	1.0	*	0.0				X	
NATOPS	590	3.0	*	0.0			X	X	
LAT	591	1.0	*	0.0			X	X	
DEFTACI	592	1.0	*	0.0				X	#
NVGI	593	1.0	*	0.0				X	#

#= SEE MAWTS COURSE CATALOG

SPECIAL FLIGHTS

FCF	600	2.0	*	0.0				X	
NVG	601	1.5	12	0.0			X	X	N
	602	1.5	*	0.0			X	X	N
	610	1.5	12	0.0					N
	611	1.5	12	0.0			X	X	N
	620	1.5	12	0.0			X	X	N
	621	1.5	6	0.0			X	X	N
	622	1.5	12	0.0					N
	630	1.5	*	0.0				X	N
	640	1.5	*	0.0				X	N
SAR	650	3.0	*	0.0					
DASC	651	1.0	*	0.0					
CPL	652	3.0	*	0.0					
NVG	660	1.5	12	0.0					N
NVG	670	1.5	6	0.0			X	X	N
	671	1.5	6	0.0			X	X	N
	672	1.5	6	0.0			X	X	N
ATO	674	0.5	*	0.0				X	
	675	0.5	*	0.0				X	
NVG	680	1.5	12	0.0					N
	681	1.5	*	0.0					N
INST	690	2.0	12	0.0	X	X	X	X	
	691	2.0	12	0.0	X	X	X	X	

Figure 6-2.--Pilot Refly Interval, Combat Readiness Percentage--Continued.

PILOT FLIGHT CHAINING

FLIGHT	FLIGHT UPDATED
200	
201	200 210
211	210
212	
213	212
220	
221	220
230	
231	230
232	230, 231
233	230
234	230, 233
240	
241	
250	
251	250
270	200
271	200, 201, 270
272	
273	
274	273
290	200
310	210
311	210, 211, 310
312	210, 230
333	210, 211, 230, 231, 232, 233, 234, 312, 332
330	220, 230
331	220, 221, 230, 231, 232, 330
332	230, 231, 232, 233, 234
340	240, 241
341	240, 241, 340
342	241
343	240, 241
344	240
360	
370	200, 270
371	200, 201, 270, 271, 370
390	200
391	200, 390
392	200, 390, 391
393	250, 251
394	200, 290, 390, 391, 392, 393
395	230
396	230, 233, 234, 395
420	220
421	200, 220, 420
422	220, 230, 330, 420, 421
460	360
461	360, 460
462	
463	462
464	462, 463
493	210, 230, 250, 312

Figure 6-3.--Pilot Flight Update Chaining.

PILOT FLIGHT CHAINING

FLIGHT	FLIGHT UPDATED
500	
501	
502	
510	
511	
520	
521	
530	
531	
540	
541	
570	
571	
532	420
533	421
534	422
590	
591	
592	
593	
594	
601	200,201
602	
610	210, 211, 601
611	213, 601, 610
620	220, 221, 601
621	220, 221, 601, 620
622	220, 221, 421, 601, 620
630	230, 232, 601
640	341, 601, 620, 621
650	
651	
652	
653	
660	360, 460
670	271, 601
671	371, 601, 670
672	271, 371, 601, 670, 671
680	601
681	601
690	
691	

Figure 6-3.--Pilot Flight Update Chaining--Continued.

CHAPTER 7

KC-130 NAVIGATOR

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*** * NOTE * ***

Aircrew coordination shall be briefed on all flights and/or events.

MARINE AERIAL REFUELING SQUADRON - KC-130
UNIT TEMPLATE

NOTE

The capabilties defined and described in the core capability and unit template sections are provided to ensure each like squadron maintains a common base of training and depth of capabilities. When resources permit, and when in the judgement of the commander additional training would significantly increase the unit's warfighting capability, training to a level above these base capabilities is permitted. It is incumbent upon, and expected of, the commander to balance any increase in the depth of core capabilities against the long term health and readiness of his unit while staying within his resource constraints.

1. TABLE OF ORGANIZATION

PAA-12 A/C: 26 TPC/16 T2P or T3P/23 NAV/25 F ENG/24 LOADM/24 F MECH

2. SQUADRON CORE CAPABILITY

a. A core capable squadron is able to sustain the following minimum performance on a daily basis during sustained contingency/combat operations, assuming 100% PAA, 90% in reporting status and 90% T/O on hand in all MOS's. If < 90%, core capability will be degraded by a like percentage. The extent to which a core capable squadron is able to surge beyond its core capability is situation dependent.

b. A core capable squadron is able to sortie two divisions (-) of mission capable aerial refueling aircraft and within four hours of landing, sortie two more sections or sortie three sections of mission capable assault support aircraft and within four hours of landing, sortie two more sections. Perform the above from either a main base location or appropriate sized expeditionary airfield. All aircraft are capable of aerial and rapid ground refueling, assault support and two platforms being DE/IRCM equipped.

3. **BASIC AIRCREW QUALIFICATIONS**. As a minimum, in order to be considered Core Competent, a squadron must possess the following numbers of aircrew who are at least 75% complete in each listed core skill.

CORE SKILL	CREWS	REMARKS
RW/FW AR	12	
RGR	8	
TLZ/EAF	8	
AD	6	
FORM	12	
LONG RANG NAV	12	
LOW LEVEL	6	

4. **REQUIRED CORE SKILLS AND SORTIES**

	RW/FW AR	RGR	TLZ/EAF	AD	ASE	LR NAV	LOW LEVEL
Initial Qual	3	1	1	3	1	4	2
Refresher Qual	3	1	1	3	1	4	2
T&R CODES	210,211, 212	271	270	240,241, 242	260	250,251, 252,253	220,221

5. **SORTIES REQUIRED TO MAINTAIN CORE SKILLS**. For each twelve month period after achieving competency, a navigator would be required to fly the following number of sorties in each skill area to maintain that competency.

	RW/FW AR	RGR	TLZ/EAF	AD	ASE	LR NAV	LOW LEVEL
AIRCREW	2	1	1	3	1	2	2

6. **FLIGHT LEADER/INSTRUCTOR QUALIFICATIONS**. As a minimum, in order for a squadron to be considered Core Competent, it must possess the following numbers of aircrew in the listed flight leadership/instructor categories. (Note: If the squadron is < T/O, required numbers are reduced by a like %).

DESCRIPTION	CORE MINIMUM	REMARKS
TPC	16	
SEC LDR	8	
DIV LDR	6	
LATI	4	
ANI/INSTI	4	PER CREW POSITION
WTI/WTACI	2	PER CREW POSITION
RAC	4	
DEFTAC I		
NSI	2	PER CREW POSITION
FCF	12	
RC	2	

7. **SORTIES REQUIRED TO QUALIFY FOR DESIGNATION AS CELNAV/NAVI/RC**

	NAVI	CELNAV	WTI/ WTACI	NSI	RC
SORTIES	1	8	MAWTS-1	10	2
T&R CODES	590	250,251, 252,253, 350,351, 450,451		601,602, 610,620, 621,622, 640,660, 670,671	312,410

KC-130 NAVIGATOR CORE PROGRESSION MODEL

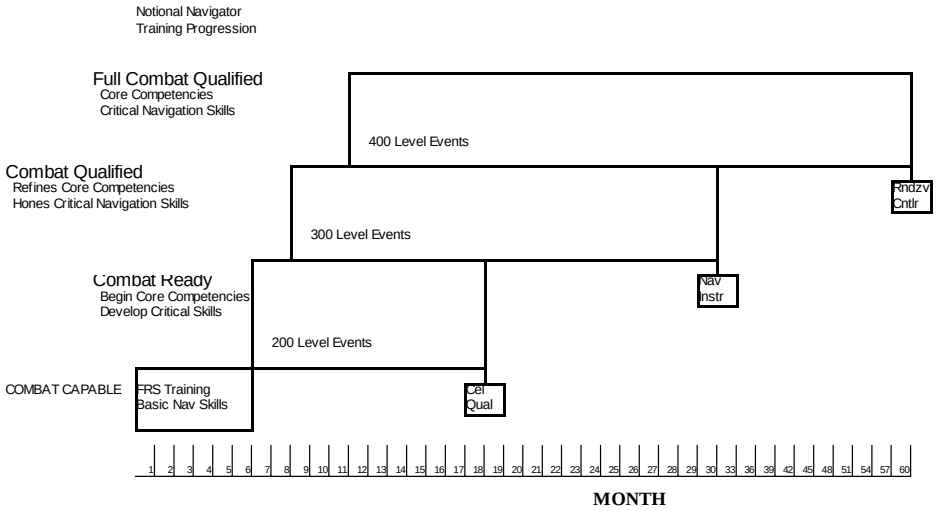

Fig 7-1..Navigator Notional Training Progression Model

700. PROGRAMS OF INSTRUCTION (POI) FOR BASIC NAVIGATOR

WEEKS	COURSE/PHASE	ACTIVITY
1-2	Squadron Ground Training	Training Squadron
3-22	Combat Capable Training	Training Squadron
23-29	Combat Ready Training	Tactical Squadron
30-33	Combat Qualification Training	Tactical Squadron
34-37	Full-Combat Qualification Training	Tactical Squadron

701. POI FOR REFRESHER NAVIGATOR

WEEKS	COURSE/PHASE	ACTIVITY
1	Squadron Ground Training	Training Squadron
2-3	Combat Ready Training	Training Squadron

710. GROUND TRAINING COURSES OF INSTRUCTION

COURSE/PHASE	ACTIVITY
Naval Aircrew Candidate Course	NAS Pensacola, FL
Marine Aerial Navigators School	Randolf AFB, TX
Water Survival Training	NAWSTP
Survival, Evasion, Resistance and Escape School	NAS Brunswick, ME
Central Altitude Reservation Facility Indoctrination ARTCC Facility	NAS North Island, CA
Weapons Tactics Instructor (WTI)	MAWTS-1, MCAS Yuma, AZ
Weapons Tactics Aircrew Instructor (WTACI)	MAWTS-1, MCAS Yuma,
AZAdvanced Airlift Tactics Training Course	St Joseph, MO
Combat Aircrew Training School (CATS)	Nellis AFB, NV

711. SQUADRON LEVEL TRAINING

Aircraft, Emergency Equipment, and Emergency Procedures Familiarization
Route Procedures
Publications and Foreign Clearance Guide
Mission Planning and Fuel Requirements
Meteorology Review
Radio Navigation and Flight Instruments
RADAR Techniques
Maintenance of In-flight Publications
Aerial Refueling
Rendezvous Control
Air Delivery Techniques
Introduction to Altitude Reservations
Low Level Navigation Techniques
Temporary Landing Zone (TLZ) Operations
Search and Rescue Operations
Jet Assisted Takeoff Operations
Low Altitude Tactics
Computed Air Release Points
Tactical Aircraft Mission Planning System
Twenty Minute Checklist Procedures Rapid Ground Refueling Procedures
Customs and Agriculture Inspection Requirements
Navigator's Responsibility During Ground/Airborne Emergencies
NATOPS Open Book Examination
NATOPS Closed Book Examination

720. FLIGHT TRAINING. The number of hours depicted in the flight training syllabus are considered to be the optimum instructional hours necessary to accomplish training objectives for each flight.

721. BASIC NAVIGATOR TRAINING

1. Combat Capable Training

STAGE	FLIGHTS	HOURS	PERCENT
Basic Qualification	-	-.-	25.0
Ground Familiarization	0	0.0	0.0
Overland Familiarization	6	12.0	6.0
Aerial Refueling Familiarization	3	6.0	3.0
Low Level Familiarization	3	3.0	3.0
Aerial Delivery Familiarization	1	1.0	1.0
Extended Over-water Familiarization	3	24.0	3.0
Extended Over-water Navigation	6	48.0	12.0
Navigator Check	1	8.0	7.0
	23	**102.0**	**60.0**

2. Combat Ready Training

STAGE	FLIGHTS	HOURS	PERCENT
Overland Familiarization	1	4.0	1.0
Aerial Refueling	3	9.0	3.0
Low Level Navigation	2	4.0	2.0
Aerial Delivery	3	3.0	3.0
Extended Over-water Navigation	4	32.0	5.0
EAF/TLZ	1	2.0	0.5
RGR	1	1.0	0.5
	15	**55.0**	**15.0**

3. Combat Qualification Training

STAGE	FLIGHTS	HOURS	PERCENT
Aerial Refueling	3	8.0	4.5
Low Level Navigation	1	2.0	1.5
Aerial Delivery	5	6.0	5.0
Extended Over-water Navigation	4	32.0	7.0
EAF/TLZ	2	4.0	2.0
	15	**52.0**	**20.0**

4. Full-Combat Qualification Training

STAGE	FLIGHTS	HOURS	PERCENT
Aerial Refueling	1	8.0	0.6
Low Altitude Tactics	2	4.0	1.2
Aircraft Survivability Equipment	3	4.5	1.8
DEFTAC	2	3.0	1.4
	5	**19.5**	**5.0**
TOTAL	**58**	**228.5**	**100.0**

722. REFRESHER NAVIGATOR TRAINING

STAGE	FLIGHTS	HOURS
Overland Familiarization	2	4.0
Extended Over-water Navigation	2	16.0
NATOPS Check	1	8.0
	5	**28.0**

723. INSTRUCTOR UNDER TRAINING (IUT)

STAGE	FLIGHTS	HOURS
Navigation Instructor Check	1	3.0
Night Vision Goggle Instructor Check	1	3.0
NATOPS Instructor Check	1	3.0

Weapons Tactics Instructor Course
Weapons Tactics Aircrew Instructor Course
MAWTS-1
Advanced Airlift Tactics Training Course (AATTC)
Combat Aircrew Training School (CATS) Nellis AFB, NV

730. SIMULATOR TRAINING. Approved IFARS WST simulators are contained in OPNAVINST 3710.7_. If an approved simulator is not available, unapproved simulators may be used for simulator training at the discretion of the squadron commander.

1. Combat Ready Training

STAGE	FLIGHTS	HOURS
Aerial Refueling	1	2.0
Low Level Navigation	2	4.0
Aerial Delivery	2	3.0
Search and Rescue (600 level)	1	3.0
	6	**12.0**

2. Combat Qualified Training

STAGE	FLIGHTS	HOURS
Aerial Refueling	1	2.0
Aerial Delivery	1	1.0
EAF/TLZ	2	4.0
	4	**7.0**

3. Full-Combat Qualified Training

STAGE	FLIGHTS	HOURS
Low Altitude Tactics	1	2.0
Aircraft Survivability Equipment	2	3.0
	3	**5.0**
TOTAL	**13**	**24.0**

740. FLIGHT/SIMULATOR PERFORMANCE REQUIREMENTS

1. Route Selection. Route selection should offer maximum variations in enroute conditions.

2. Crew Seat. The trainee is required to occupy the navigator's position in the flight station on all syllabus training flights unless the syllabus specifically allows for the training to be accomplished elsewhere.

3. Refly Intervals. Syllabus refly intervals can be located in Figure 7-1. Combat Capable events (100 series) are one-time events and are not repeated. An aircrewman returning from a DIFDEN tour exceeding 12 months will complete the refresher syllabus.

4. Aircrew Coordination. Aircrew coordination shall be briefed for all flights and/or events.

741. COMBAT CAPABLE TRAINING

1. Ground Familiarization

a. Purpose. Familiarize the navigator trainee with the KC-130 aircraft and associated equipment. Specifically, at the end of this stage of training the trainee will be:

(1) Able to perform a preflight and postflight of the KC-130.

(2) Able to demonstrate the proper use of all emergency equipment and procedures PER Chapter 5 of the KC-130 NATOPS manual.

(3) Familiar with current FLIP procedures.

b. General. No flight training is required in this stage.

c. Ground Training

(1) Trainee will attend the Instrument Ground School (IGS).

(2) Trainee will have completed squadron level instruction prior to this stage.

2. Overland Familiarization

a. Purpose. Familiarize the navigator trainee with the location and operation of navigation equipment aboard the KC-130 aircraft, and the associated publications. Introduce publications, forms, and procedures relative to airways/random route flying. Specifically, at the end of this stage the trainee will be able to:

(1) Perform a complete pre/postflight of the aircraft navigation equipment and publications.

(2) Understand and use current flight information publications, enroute charts, and airways logs.

(3) Select the best route of flight by means of weather analysis. Properly complete and file the DD-175 form.

(4) Understand basic radio/ICS procedures and obtain flight clearances by UHF/VHF radio.

(5) Understand the basic RADAR operation with ground and weather interpretation.

(6) Use the ADF, VOR, TACAN, GPS, and INS as navigational aids.

(7) Explain/perform the emergency procedures on all sorties as they pertain to the navigator.

(8) File a flight plan with and obtain a weather briefing from a Flight Service Station via phone or UHF/VHF radio.

(9) Understand crew coordination and the duties of the navigator as a crewmember of the aircraft.

b. General. Current planning procedures as defined in current flight publications shall be utilized.

(1) Trainee will receive a minimum of two cross-country flights to an airfield more than one hour distant from home station. During these missions the trainee will be required to file a flight plan and obtain a weather brief at destination airfield.

(2) Actual weather avoidance shall be satisfactorily demonstrated at least once by the trainee before completing this stage of training.

(3) Current planning procedures as defined in current flight publications shall be utilized.

c. Ground Training. Trainee will have completed the required ground training, to include Aircrew Coordination Training, prior to the first flight.

d. Flight Training (6 Flights, 12.0 Hours)

FAM-100 2.0 1 KC-130 A

Goal. Introduce KC-130 navigation responsibilities.

Requirement. Introduce the trainee to all KC-130 overland duties. Perform a complete pre-/post-flight inspection of the aircraft navigation equipment and publications. Understand and use current flight information publication enroute charts and airways log.

Performance Standard. Per NFM, FLIP, Squadron SOP, OPNAVINST 3710.7x and FRS Student Guide.

FAM-101 2.0 1 KC-130 A

Goal. Familiarize the trainee with all KC-130 overland navigation aids and duties.

Requirement. Obtain a DD-175-1 weather brief. Select the best route of flight by means of weather analysis. Properly complete and file a DD-175 flight plan. Demonstrate and refine training included in FAM-100.

Performance Standard. Per NFM, FLIP, Squadron SOP, OPNAVINST 3710.7x and FRS Student Guide.

FAM-102 2.0 1 KC-130 A

Goal. Refine KC-130 navigation skills and responsibilities.

Requirement. Understand basic ICS/radio procedures. Obtain flight clearance via UHF/VHF radio. Explain the requirements and procedures for an emergency ground evacuation. Demonstrate and refine training contained in FAM-100 and FAM-101.

Performance Standard. Per NFM, FLIP, Squadron SOP, OPNAVINST 3710.7x and FRS Student Guide.

FAM-103 2.0 1 KC-130 A

Goal. Refine KC-130 navigation skills and responsibilities.

Requirement. Understand the basic RADAR operation with ground and weather interpretation. Use ADF, VOR, TACAN, INS, and GPS as navigation aids. Explain the navigator's duties during all inflight emergencies. Demonstrate and refine all training contained in FAM-100, FAM-101, and FAM-102.

Performance Standard. Per NFM, FLIP, Squadron SOP, OPNAVINST 3710.7x and FRS Student Guide.

FAM-104 2.0 R 1 KC-130 A

Goal. Review KC-130 navigation procedure and equipment.

Requirement. Explain and perform the procedures for all inflight and ground emergencies. Demonstrate mission planning ability to include; fuel planning, departure/destination alternates, and weather minimum criteria. Demonstrate and refine all training contained in FAM-100, FAM-101, FAM-102 and FAM-103.

Performance Standard. Per NFM, FLIP, Squadron SOP, OPNAVINST 3710.7x and FRS Student Guide.

FAM-105 2.0 R, E 1 KC-130 A

Goal. Qualify the trainee to fly local overland non-tactical training missions without an instructor navigator aboard the aircraft.

Requirement. Perform overland navigation flight planning and crew duties. Understand crew coordination and the duties of the navigator as a crewmember in the aircraft. The trainee shall have flown two cross-country flights and demonstrated the ability to identify and avoid hazardous weather during this stage of training.

Performance Standard. Per NFM, FLIP, Squadron SOP, OPNAVINST 3710.7x and FRS Student Guide.

3. Aerial Refueling

a. Purpose. Introduce the navigator trainee to air refueling procedures, mission planning, and crew coordination. At the end of this stage the trainee will be able to perform navigator duties associated with local refueling missions above 5,000 ft AGL.

b. General

(1) The trainee will observe the refueling mission from the navigator's position and from the observer's position.

(2) Flights should be accomplished in local refueling areas.

(3) Introduce all appropriate navigation aids (APX-76, Air to Air TACAN, UHF/DF) and join-up procedures.

c. Ground Training. Trainee will review the Aerial Refueling Lecture prior to this stage.

d. Flight Training (3 Flights, 6.0 Hours)

AR-110 2.0 1 KC-130 A

Goal. Introduce fixed-wing air refueling procedures.

Requirement. On local refueling missions, trainee will observe air refueling procedures and maintain the aircraft's position.

Performance Standard. Per NFM, Air Refueling Man, and FRS Student Guide.

AR-111 2.0 1 KC-130 A

Goal. Refine fixed-wing air refueling procedures.

Requirement. On local refueling missions, trainee will observe air refueling procedures and maintain the aircraft's position.

Performance Standard. Per NFM, Air Refueling Man, and FRS Student Guide.

AR-112 2.0 1 KC-130 A

Goal. Introduce helicopter air refueling procedures.

Requirement. On local refueling missions, trainee will observe helicopter air refueling procedures and maintain the aircraft's position.

Performance Standard. Per NFM, Air Refueling Man, and FRS Student Guide.

4. Low Level Navigation

a. Purpose. Introduce the trainee to low level navigation. At the end of this stage the trainee will be able to:

(1) Construct a low level chart PER current procedures and directives.

(2) Maintain the aircraft's position and direct the aircraft on a low level route utilizing terrain and cultural features.

(3) Act as the primary navigator utilizing all available internal navigation equipment during one low level syllabus flight.

b. General

(1) Training shall be conducted in VMC.

(2) All flights will be flown in accordance with T&R Volume 1 altitude criteria.

(3) Emphasis shall be placed on position awareness and time control.

c. Ground Training. Trainee must have completed the Low Level Navigation Techniques Lecture prior to this stage.

d. Flight Training (3 Flights, 3.0 Hours)

LL-120 1.0 1 KC-130 A

Goal. Introduce navigator responsibilities on low level missions.

Requirement

(1) Familiarize trainee with low level navigation utilizing terrain and cultural features.

(2) The low level route shall consist of a minimum of 6 preselected points.

Performance Standard. Per TACMAN, AIRNAVMAN, and FRS Student Guide.

LL-121 1.0 1 KC-130 A

Goal. Refine navigator responsibilities on low level missions.

Requirement

(1) Familiarize trainee with all low level navigation aids and navigator duties.

(2) The low level route shall consist of a minimum of 6 preselected points.

Performance Standard. Per TACMAN, AIRNAVMAN, and FRS Student Guide.

LL-122 1.0 1 KC-130 A

Goal. Perform low level planning and act as the primary navigator while navigating a low level mission.

Requirement

(1) Refine training included in LL-120 and LL-121.

(2) The low level route shall consist of a minimum of 6 preselected points.

Performance Standard. Per TACMAN, AIRNAVMAN, and FRS Student Guide.

5. Aerial Delivery Familiarization

a. Purpose. Introduce the trainee to aerial delivery procedures. Specifically, at the end of this stage the trainee will have a basic knowledge of:

(1) Slowdown procedures.

(2) Drop Zone Markings.

(3) Computed Air Release Point.

(4) Speed and altitude restrictions.

b. General

(1) Training shall be conducted in VMC.

(2) Airdrops require ground support for load and zone.

c. Ground Training. Trainee must have completed the Introduction to Aerial Delivery Lecture prior to this stage.

d. Flight Training (1 Flight, 1.0 Hour)

AD-140	1.0	1 KC-130 A

Goal. Introduce trainee to aerial delivery procedures.

Requirements. Familiarize trainee with all aspects of aerial delivery operations.

Performance Standard. Per TACMAN and FRS Student Guide.

6. Extended Over-water Familiarization

a. Purpose. Familiarize the navigator trainee with the requirements of extended over-water navigation for safe conduct of transoceanic flights. At the end of this stage the trainee will be able to:

(1) Prepare a standard form flight plan and an ICAO flight plan.

(2) Construct a chart using correct symbols.

(3) Construct a range control and understand its in-flight use.

(4) Use weather analysis and computation of winds to determine the best route of flight.

(5) Demonstrate position reporting requirements and proper log entries.

(6) Demonstrate the ability to integrate all available navigation aids in resolving fixes.

(7) Demonstrate customs and foreign clearance procedures.

b. General

(1) All flights in this stage may be flown while tracking a more advanced navigator.

(2) Flights shall be accomplished on extended over-water missions with a minimum of one 6 hour great circle route each.

c. Ground Training. Trainee must have completed the Customs and Agriculture Inspection Requirements Lecture prior to this stage.

d. Flight Training (3 Flights, 24.0 Hours)

EON-150-152	8.0	1 KC-130 A

Goal. Introduce extended over-water navigation responsibilities.

Requirement. Plan and navigate extended over-water navigation flights utilizing appropriate navigation equipment.

Performance Standard. Per the NFM, FLIP, ICAO, and FRS Student Guide.

7. Extended Over Water Navigation

a. Purpose. Provide the trainee an opportunity to develop the proficiency and confidence required for safe extended over-water navigation. Specifically, at the end of this stage the trainee will be able to:

(1) Integrate all available navigation aids.

(2) Accurately compute and plot celestial lines of position.

(3) Accurately compute and plot pressure lines of position.

(4) Use the aircraft's RADAR for fixing and/or weather avoidance.

(5) Maintain a 30 minute day or 40 minute night fix-to-fix routine.

(6) Correctly determine the required fuel load, ensuring fuel consumption and corresponding progress toward destination are within safe limits.

b. General

(1) Flights shall be accomplished on extended over-water missions with a minimum of one 6 hour great circle route each.

(2) Flights will be designed to allow the trainee to develop proficiency and practice integrating all available navigational aids.

(3) Emphasis will be placed on increasing accuracy and technique in computations and plotting.

(4) A minimum of two flights shall be flown at night.

c. Ground Training. Trainee will review all classes relating to extended over-water navigation.

d. Flight Training (6 Flights, 48.0 Hours)

EON-153-158 8.0 R 1 KC-130 A (N)

Goal. Integrate all available navigation aids emphasizing INS and GPS operations.

Requirement. The trainee will demonstrate the ability to navigate along a predetermined course using a fix-to-fix routine where Celestial INS and/or GPS are all compared to determine the aircraft's position within FLIP tolerances.

Performance Standard. Per NFM, FLIP, ICAO, and FRS Student Guide.

8. Navigator Check

a. Purpose. A NATOPS evaluation is given to determine if the minimum basic requirements for overland and extended over-water navigation have been attained by the trainee. Upon successful completion the trainee will be designated as qualified and receive the MOS 7372. The navigator will be qualified to navigate outside RADAR coverage when capable of fixing the aircraft's position once an hour utilizing available radio aids or when the aircraft is equipped:

(1) With operable single INS and GPS.

(2) With operable dual INS.

b. General

(1) Flight shall be accomplished on an extended over-water mission with a minimum of one 6 hour great circle route.

(2) A member of the Standardization Board shall evaluate this flight.

(3) Trainee will be evaluated on all phases of overland and extended over-water navigation per NATOPS.

(4) Trainee must obtain a grade of qualified in all areas.

c. Ground Training. Trainee must successfully complete the NATOPS open and closed book examinations prior to this flight.

d. Flight Training (1 Flight, 8.0 Hours)

NAVCK-190 8.0 R, E 1 KC-130 A (N)

Goal. Evaluation flight.

Requirement. Over-water and overland NATOPS check.

Performance Standard. Per NFM, FLIP, ICAO procedures, and FRS Student Guide.

742. COMBAT READY TRAINING

1. Overland Familiarization

a. Purpose. Familiarize the navigator with the local squadron procedures.

b. General

(1) Flight shall be conducted within the local area.

(2) Emphasis shall be on local field and squadron operating procedures.

c. Ground Training. The navigator will review the squadron/navigation SOP's prior to this flight and shall successfully complete a local course rules examination.

d. Flight Training (1 Flight, 4.0 Hours)

OL-200	4.0	1 KC-130 A

Goal. Introduce the navigator with the local area and squadron operating procedures.

Requirement. Perform overland local flight planning per local and squadron SOP's.

Performance Standard. Per local and squadron directives, the NFM, FLIP, and ICAO procedures.

2. Aerial Refueling

a. Purpose. Develop the navigator's knowledge, understanding, and proficiency to that point required for the various types of air refueling missions.

b. General. Aircraft should have an operating APX-76.

c. Ground Training. The navigator will review the NFM and air refueling procedures and receive classes on "Air Refueling Procedures" prior to this stage.

d. Simulator Training (1 Flight, 2.0 Hours)

SAR-210	2.0	WST S

Goal. Introduce day/night air refueling responsibilities, join-up procedures, and crew coordination with fixed-wing & rotary-wing aircraft.

Requirement. On a air refueling mission, plan and perform navigation duties.

Performance Standard. Per NMF, TACMAN, and Air Refueling Man.

e. Flight Training (3 Flights, 9.0 Hours)

AR-210 3.0[1.5] 1 KC-130 A (N)

Goal. Introduce day/night air refueling responsibilities, join-up procedures and crew coordination with fixed-wing aircraft.

Requirement. On local air refueling mission, plan and perform navigation duties.

Prerequisite. OL-200.

Performance Standard. Per NMF, TACMAN, and Air Refueling Man.

External Syllabus Support. Fixed-wing receivers required.

AR-211 3.0[1.5] 1 KC-130 A

Goal. Introduce day air refueling responsibilities, join-up procedures, and crew coordination with rotary-wing aircraft.

Requirement. Repeat the training included in AR-210.

Prerequisite. OL-200

Performance Standard. Per NFM, TACMAN, and Air Refueling Man.

External Syllabus Support. Rotary-wing receivers required.

AR-212 3.0[1.5] 1 KC-130 A N

Goal. Introduce night air refueling responsibilities, join-up procedures, and crew coordination with rotary-wing aircraft.

Requirement. Repeat the training included in AR-210 and 211.

Prerequisite. AR-211.

Performance Standard. Per NFM, TACMAN, and Air Refueling Man.

External Syllabus Support. Rotary-wing receivers required.

3. Low Level Navigation

a. Purpose. Develop the navigator's knowledge and proficiency in low level navigation.

b. General

(1) Flights shall be accomplished in VMC.

(2) Flights will be flown in accordance with T&R Volume 1 altitude criteria.

(3) Emphasis shall be placed on terrain following and time control to destination.

c. Ground Training. The navigator will review the class on "Low Level Navigation" and receive classes on "Tactical Aircraft Mission Planning System (TAMPS)" where available prior to this stage.

d. Simulator Training (2 Flights, 4.0 Hours)

SLL-220 2.0 WST S

Goal. Refine low level navigation techniques.

Requirement

(1) Plan and navigate along a low level route integrating all available navigation aids.

(2) The low level route shall consist of a minimum of 6 preselected points.

Performance Standard. Per NFM, TACMAN, and AIRNAVMAN.

SLL-221 2.0 WST S

Goal. Introduce night low level navigation techniques.

Requirement

(1) Plan and navigate along a low level route integrating all available navigation aids.

(2) The low level route shall consist of a minimum of 6 preselected points.

Performance Standard. Per NFM, TACMAN, and AIRNAVMAN.

e. Flight Training (2 Flights, 4.0 Hours)

LL-220 2.0[1.0] 1 KC-130 A

Goal. Refine low level navigation techniques.

Requirement

(1) Plan and navigate along a low level route integrating all available navigation aids.

(2) The low level route shall consist of a minimum of 6 preselected points.

Prerequisite. OL-200.

Performance Standard. Per NFM, TACMAN, and AIRNAVMAN.

LL-221 2.0[1.0] 1 KC-130 A N

Goal. Introduce night low level navigation techniques, emphasizing use of search radar and crew coordination considerations.

Requirement

(1) Plan and navigate along a low level route integrating all available navigation aids.

(2) The low level route shall consist of a minimum of 6 preselected points.

Prerequisite. LL-220.

Performance Standard. Per NFM, TACMAN, and AIRNAVMAN.

4. Aerial Delivery

a. Purpose. Instruct the navigator in aerial delivery techniques. At the end of this stage the navigator will be able to compute an air delivery release point, understand all checklists & time warnings, and call the airdrop.

b. General

(1) Flights shall be conducted during day VMC conditions.

(2) Instruction should be conducted by a WTI/WTACI.

c. Ground Training. The navigator shall receive lectures on Air Delivery Techniques and Computed Air Release Points prior to this stage.

d. Simulator Training (2 Flights, 3.0 Hours)

SAD-240 1.5 WST S

Goal. Introduce air delivery techniques and navigation to release points in connection with static line personnel drops.

Requirement. Plan a route to a drop zone, relay all time warnings, and compute/call a drop.

Performance Standard. Per TACMAN, MCCRESMAN, and NFM.

SAD-241 1.5 WST S

Goal. Introduce air delivery techniques and navigation to release points in connection with containerized delivery system (CDS) drops.

Requirement. Plan a route to a drop zone, relay all time warnings, and compute/call a drop.

Performance Standard. Per TACMAN, MCCRESMAN, and NFM.

e. Flight Training (2 Flights, 2.0 Hours)

AD-240 1.0 1 KC-130 A

Goal. Introduce air delivery techniques and navigation to release points in connection with static line personnel drops.

Requirement. Plan a route to a drop zone, relay all time warnings, and compute/call a drop.

Prerequisite. OL-200.

Performance Standard. Per TACMAN, MCCRESMAN, and NFM.

External Syllabus Support. Requires qualified Static Line Parachutists.

AD-241 1.0 1 KC-130 A

Goal. Introduce air delivery techniques and navigation to release points in connection with containerized delivery system (CDS) drops.

Requirement. Plan a route to a drop zone, relay all time warnings, and compute/call a drop.

Prerequisite. CR-200.

Performance Standard. Per TACMAN, MCCRESMAN, and NFM.

External Syllabus Support. Air Delivery Platoon or equivalent support required.

AD-242 1.0 1 KC-130 A (N)

Goal. Conduct aerial delivery of heavy equipment.

Requirement. Successfully plan and navigate to a drop zone and compute/call an actual drop of heavy equipment.

Prerequisite. OL-200.

Performance Standard. Per TACMAN, MCCRESMAN and NFM.

External Syllabus Support. Requires qualified Air Delivery Platoon or Combat Control Team (USAF) personnel.

5. Extended Over-water Navigation

a. Purpose

(1) Develop the navigator's knowledge, understanding, and proficiency to the degree required of an extended over-water navigator operating in an ICAO environment.

(2) Develop a thorough knowledge of applicable KC-130 systems and mission planning.

(3) Upon successful completion of this stage of training, the navigator will be qualified to operate outside of radar coverage with a minimum of one operable computer navigation system (INS or GPS).

b. General

(1) Flights shall be accomplished on extended over-water missions with a minimum of one 6 hour great circle route each.

(2) Emphasis shall be placed on course control, fuel management, and developing a celestial fix-to-fix routine. Flight training in this stage will begin utilizing all available navigation systems, progressing toward a celestial only environment.

(3) Flights may be conducted during day or night missions.

c. Ground Training. The navigator shall review flight planning procedures and receive lectures on ICAO, FCG, OPAR's, and Flight Advisory Procedures prior to this stage.

d. Flight Training (4 Flights, 32.0 Hours)

EON-250 8.0[6.0] 1 KC-130 A (N)

Goal. Prepare the navigator for extended over-water celestial navigation designation.

Requirement

(1) Plan and execute an extended over-water mission.

(2)Refine extended over-water techniques.

(3) Navigate along a predetermined course using a 40 minute fix-to-fix routine where celestial, pressure, INS, and/or GPS are all compared to determine the aircraft's position within FLIP tolerances.

Performance Standard. Per NFM, FLIP, FCG, AIRNAVMAN, and ICAO procedures.

EON-251 8.0[6.0] 1 KC-130 A (N)

Goal. Prepare the navigator for extended over-water celestial navigation designation.

Requirement

(1) Plan and execute an extended over-water mission.

(2) Refine extended over-water techniques.

(3) Navigate along a predetermined course using a 30 minute fix-to-fix routine. All available navigation aids will be used to determine the aircraft's position from take-off to ETP. From ETP to landing, aircraft position will be determined using all navigational aids except for the on-board computer navigation systems.

Prerequisite. EON-250.

Performance Standard. Per NFM, FLIP, FCG, AIRNAVMAN, and ICAO procedures.

EON-252 8.0[6.0] 1 KC-130 A (N)

Goal. Prepare the navigator for extended over-water celestial navigation designation.

Requirement

(1) Plan and execute an extended over-water mission.

(2) Refine extended over-water techniques.

(3) Navigate along a predetermined course using a 30 minute fix-to-fix routine. All available navigation aids expect for on-board computer navigation systems will be used to determine the aircraft's position from take-off to ETP. From ETP to landing, aircraft position will be determined using all available navigation aids.

Prerequisite. EON-251.

Performance Standard. Per NFM, FLIP, FCG, AIRNAVMAN, and ICAO procedures.

EON-253 8.0[6.0] E 1 KC-130 A (N)

Goal. Qualify the navigator for extended over-water celestial navigation utilizing a single computer. Upon successful completion of this training code, the navigator will be qualified to operate outside of radar coverage with a minimum of one operable computer navigation system (INS or GPS).

Requirement

(1) Plan and execute an extended over-water mission.

(2) Refine extended over-water techniques.

(3) Navigate along a predetermined course using a 30 minute fix-to-fix routine. All available navigation aids will be used to determine the aircraft's position from take-off to ETP. From ETP to radar contact, aircraft position will be determined utilizing celestial MPP procedures.

Prerequisite. EON-252.

Performance Standard. Per NFM, FLIP, FCG, AIRNAVMAN and ICAO procedures.

6. Expeditionary Airfield/Temporary Landing Zone Operations (EAF)/(TLZ)

a. Purpose. Develop the necessary skills to plan and navigate to VFR airfields (including unimproved TLZ's) and conduct RGR operations.

b. General. Flights shall be accomplished in day or night VMC.

c. Ground Training. The navigator shall receive instruction from the MAWTS-1 ASP on "Temporary Landing Zone Operations" and "Rapid Ground Refueling Operations" prior to this stage.

d. Flight Training (1 Flight, 2.0 Hours)

TLZ-270 2.0[1.0] 1 KC-130 A (N)

Goal. Refine planning and navigation techniques required to operate at temporary landing zones equipped with minimum or no navigation aids, including execution of a low level ingress to the temporary landing zone.

Requirement. Demonstrate during TLZ operations the following:

(1) Knowledge of airfield and approach assessment factors.

(2) Knowledge of tactical airfield marking procedures.

(3) The ability to DR from the initial point to a planned approach point.

(4) The ability to integrate all navigation aids available.

Prerequisite. OL-200.

Performance Standard. Per TACMAN and MCCRESMAN.

RGR-271 1.0[0.0] 1 KC-130 A (N)

Goal. Demonstrate an understanding of RGR procedures.

Requirement. Plan and execute a flight to an RGR site and conduct an RGR mission.

Prerequisite. OL-200.

Performance Standard. Per TACMAN, MAWTS-1 ASP, and NFM.

External Syllabus Support. Fixed-wing or rotary-wing receivers required.

743. COMBAT QUALIFICATION TRAINING

1. Aerial Refueling

a. Purpose. Qualify navigators for advanced air refueling missions.

b. General

(1) Flights shall be accomplished utilizing all navigation systems within an air refueling profile.

(2) The navigator shall assist in the planning and execution of an air refueling mission.

(3) The navigator shall lead a minimum of one TRANSCON and one TRANSOCEANIC mission utilizing an altitude reservation.

(4) Flight should be conducted within a multiplane profile.

c. Ground Training. The navigator should complete the Central Altitude Reservation Indoctrination Course and shall review the lecture on Aerial Refueling prior to this stage.

d. Simulator Training (1 Flight, 2.0 Hours)

SAR-310 2.0[1.5] WST S

Goal. Plan and navigate a low level fixed-wing or rotary-wing air refueling mission.

Requirement

(1) Use appropriate navigation equipment to arrive at a rendezvous point and maintain course.

(2) Refueling shall be conducted in a low level tactical environment.

(3) The low level route shall consist of a minimum of 6 preselected points.

Prerequisite. LL-220 and AR-210.

Performance Standard. Per NFM, TACMAN, AIRNAVMAN, and MAWTS-1 ASP.

e. Flight Training (3 Flights, 8.0 Hours)

AR-310 2.0[1.5] 1 KC-130 A

Goal. Plan and navigate a day low level fixed-wing or rotary-wing air refueling mission.

Requirement

(1) Use appropriate navigation equipment to arrive at a rendezvous point and maintain course.

(2) Refueling shall be conducted in a low level tactical environment.

(3) The low level route shall consist of a minimum of 6 preselected points.

Prerequisite. AR-210, AR-211, and LL-220.

Performance Standard. Per NFM, TACMAN, AIRNAVMAN, and MAWTS-1 ASP.

External Syllabus Support. Fixed-wing or rotary-wing receivers required.

AR-311 2.0[1.5] 1 KC-130 A N

Goal. Plan and navigate a night low level fixed-wing or rotary-wing air refueling mission.

Requirement

(1) Use appropriate navigation equipment to arrive at a rendezvous point and maintain course.

(2) Refueling shall be conducted in a low level tactical environment.

(3) The low level route shall consist of a minimum of 6 preselected points.

Prerequisite. AR-210, AR-212, LL-221, and AR-310.

Performance Standard. Per NFM, TACMAN, AIRNAVMAN, and MAWTS-1 ASP.

External Syllabus Support. Fixed-wing or rotary wing receivers required.

AR-312 4.0 1 KC-130 A

Goal. Assist in planning and lead navigate a long-range air refueling mission.

Requirement. Use appropriate navigation aids to arrive at a rendezvous point and maintain course on a refueling track while using the appropriate aircraft equipment to observe the rendezvous.

Prerequisite. AR-210 and AR-211.

Performance Standard. Per NFM, TACMAN, and AIRNAVMAN.

External Syllabus Support. Fixed-wing or rotary-wing receivers required.

2. Low Level Navigation

a. Purpose. Introduce the navigator to the skills required to use the aircraft's RADAR to navigate in a night low level environment.

b. General

(1) Flights require an operating aircraft RADAR.

(2) Initial flight shall be conducted in night VMC.

(3) Refly may be conducted simulating night conditions during a day low level flight.

(4) Flights will be flown in accordance with T&R Volume 1 altitude criteria.

c. Ground Training. The navigator will review all lectures on RADAR Techniques and receive MAWTS-1 ASP instruction on RADAR and Electronic Navigation Techniques prior to this stage.

d. Flight Training (1 Flight, 2.0 Hours)

RADLL-320 2.0[1.0] 1 KC-130 A N

Goal. Instruct the navigator in the skills necessary to perform RADAR navigation in a low level environment.

Requirement. Demonstrate the skills required to properly plan and execute a low level flight utilizing the RADAR as a primary navigation aid.

Prerequisite. LL-221.

Performance Standard. Per TACMAN and MCCRESMAN.

3. Aerial Delivery

a. Purpose. Demonstrate a thorough understanding of advanced air delivery techniques.

b. General

(1) Instruction should be conducted by a WTI/WTACI.

(2) AD-343 requires an operating aircraft radar.

c. Ground Training. The navigator will review MAWTS-1 ASP's on "Air Delivery Techniques", "Radar and Electronic Navigation Techniques", and "Battlefield Illumination" prior to applicable initial flights in this stage.

d. Simulator Training (1 Flight, 1.0 Hour)

SAD-340 1.0 WST S

Goal. Conduct night aerial delivery of personnel stressing delivery techniques and navigation to release points.

Requirement. Successfully plan and navigate to a drop zone and compute/call an actual drop of personnel, utilizing static line techniques.

Performance Standard. Per TACMAN, MCCRESMAN, and NFM.

e. Flight Training (5 Flights, 6.0 Hours)

AD-340 1.0 1 KC-130 A N

Goal. Conduct night aerial delivery of personnel stressing delivery techniques and navigation to release points.

Requirement. Successfully plan and navigate to a drop zone and compute/call an actual drop of personnel, utilizing static line techniques.

Prerequisite. AD-240.

Performance Standard. Per TACMAN, MCCRESMAN, and NFM.

External Syllabus Support. Requires qualified Static Line Parachutists.

AD-341 1.0 1 KC-130 A N

Goal. Conduct night aerial delivery of HE or CDS stressing delivery techniques and navigation to release points.

Requirement. Successfully plan and navigate to a drop zone and compute/call an actual drop of HE or CDS.

Prerequisite. AD-241 and AD-242.

Performance Standard. Per TACMAN, MCCRESMAN, and NFM.

External Syllabus Support. Requires qualified Air Delivery Platoon or Combat Control Team (USAF) personnel.

AD-342 1.0 1 KC-130 A

Goal. Conduct aerial delivery of personnel utilizing Military Free-fall techniques stressing delivery techniques and navigation to release points.

Requirement. Successfully plan and navigate to a drop zone and compute/call an actual drop of personnel utilizing Military Free-fall techniques.

Prerequisite. AD-240.

Performance Standard. Per TACMAN, MCCRESMAN, and NFM.

External Syllabus Support. Requires qualified Military Free-fall Parachutists.

AD-343 1.0 1 KC-130 A (N)

Goal. Instruct the navigator in the skills necessary to perform blind airdrops at night or in less than VMC.

Requirement. Demonstrate the ability to use the aircraft RADAR to perform a blind airdrop.

Prerequisite. AD-240, AD-241, and AD-242.

Performance Standard. Per TACMAN, MCCRESMAN, and MAWTS-1 ASP.

External Syllabus Support. Requires qualified drop zone controller and RABFAC beacon.

AD-344 2.0[1.0] 1 KC-130 A N

Goal. Instruct the navigator in the skills necessary to perform Battlefield Illumination.

Requirement. Demonstrate the ability to provide illumination using any of the following patterns: Figure 8, 90-270, racetrack or continuous orbit. Emphasis will be on mission planning and illumination procedures. Conduct at least one area illumination pattern and one point target illumination pattern utilizing a standoff orbit.

Prerequisite. OL-200.

Performance Standard. Per the NFM, TACMAN, and applicable naval weapons publications.

External Syllabus Support. Optional drop zone controller and RABFAC (PPN-19) beacon.

Ordnance. LUU-2 series flares.

4. Extended Over-water Navigation

a. Purpose

(1) Develop the navigator's knowledge, understanding and proficiency to that degree required of a celestial qualified navigator operating in an ICAO environment.

(2) Develop a thorough knowledge of applicable KC-130 systems and mission planning.

(3) Develop extended over-water navigation skills using celestial navigation techniques as the primary means of navigation.

(4) Designate the navigator as a "Celestial Qualified Navigator," after successful completion of EON-353. This designation negates the requirement for operable computer navigation systems.

b. General

(1) Flights shall be accomplished on extended over-water missions with a minimum of one 6 hour great circle route each. Flights shall be designed to allow the navigator the maximum use of celestial navigation techniques.

(2) Emphasis shall be placed on course control, fuel management, developing a celestial MPP fix-to-fix routine, and celestial accuracy. The over water flight training in codes EON-351, EON-352, and EON-353 will be conducted without the use of on-board computer navigation systems.

(3) Flights may be conducted during day or night missions.

c. Ground Training. The navigator shall know flight planning, ICAO, FCG, OPAR's and flight advisory procedures. The navigator shall demonstrate the ability to plan and execute an extended over-water mission.

d. Flight Training (2 Flights, 16.0 Hours)

EON-350 8.0[6.0] 1 KC-130 A (N)

Goal. Prepare the navigator for extended over-water celestial navigation designation.

Requirement

(1) Plan and execute an extended over-water mission.

(2) Refine extended over-water techniques.

(3) Navigate along a predetermined course using a 30 minute fix-to-fix routine to ETP, then a 20 minute routine from ETP to landing. All available navigation aids will be used to determine the aircraft's position from take-off to initial cruise fix. From initial cruise fix to terminal radio range, position will be determined using celestial MPP procedures.

Prerequisite. EON-253

Performance Standard. Per NFM, FLIP, FCG, AIRNAVMAN, and ICAO procedures.

EON-351 8.0[6.0] 1 KC-130 A (N)

Goal. Prepare the navigator for extended over-water celestial navigation designation.

Requirement

(1) Plan and execute an extended over-water mission.

(2) Refine extended over-water techniques.

(3) Navigate along a predetermined course using a 20 minute fix-to-fix routine. All available navigation aids, excluding on-board computer navigation systems, will be used to determine the aircraft's position. Beyond radio range, position will be determined using celestial MPP procedures.

Prerequisite. EON-350

Performance Standard. Per NFM, FLIP, FCG, AIRNAVMAN, and ICAO procedures.

EON-352 8.0[6.0] R 1 KC-130 A (N)

Goal. Celestial navigator pre-qualification flight.

Requirement

(1) Plan and execute an extended over-water mission.

(2) Refine extended over-water techniques.

(3) Navigate along a predetermined course using a 30 minute fix-to-fix routine where celestial techniques are used to determine the aircraft's position within FLIP tolerances. All available navigation aids, excluding on-board computer navigation systems, will be used to determine the aircraft's position.

Prerequisite. EON-351

Performance Standard. Per NFM, FLIP, FCG, AIRNAVMAN and ICAO procedures.

EON-353 8.0[6.0] R, E 1 KC-130 A (N)

Goal. Celestial navigator qualification flight. Evaluation required on initial EON-451 only.

Requirement

(1) Plan and execute an extended over-water mission.

(2) Refine extended over-water techniques.

(3) Navigate along a predetermined course using a 30 minute fix-to-fix routine where celestial techniques are used to determine the aircraft's position within FLIP tolerances. All available navigation aids, excluding on-board computer navigation systems, will be used to determine the aircraft's position.

(4) Successful completion of this training code will qualify the navigator for the "Celestial Qualified Navigator" designation.

Prerequisite. EON-352

Performance Standard. Per NFM, FLIP, FCG, AIRNAVMAN, and ICAO procedures.

5. Expeditionary Airfield/Temporary Landing Zone (EAF)/(TLZ)

a. Purpose. Refine the skills necessary to plan and navigate to unimproved TLZ's.

b. General

(1) TLZ-370 shall be accomplished in night VMC conditions in conjunction with a low level navigation mission to a TLZ.

(2) TLZ-371 shall be accomplished in day or night VMC.

c. Ground Training. The navigator shall review classes from the MAWTS-1 ASP on Temporary Landing Zone Operations prior to this stage.

d. Simulator Training (2 Flights, 4.0 Hours)

SRADTLZ-370 2.0 WST S

Goal. Refine the techniques required to assist the pilot in a self-contained approach.

Requirement. Demonstrate the ability to:

(1) Construct a self-contained approach plate.

(2) Fly a self-contained approach to a TLZ utilizing all available navigation aids with an emphasis on search RADAR techniques in conjunction with a RABFAC beacon.

(3) Under day VMC conditions, the navigator will not have access to visual navigation aids.

(4) The navigator will provide advisories to the pilots throughout the approach phase from initial descent to touchdown.

Performance Standard. Per TACMAN, MCCRESMAN, and MAWTS-1 ASP.

STLZ-371 2.0 WST S

Goal. Refine the planning and navigation considerations required to low level ingress to temporary landing zones equipped with minimum or no navigation aids.

Requirement. Demonstrate the ability to assist in the conduct of an approach to a TLZ under day or night VMC conditions utilizing all available navigation aids.

Prerequisite. LL-220 and LL-221.

Performance Standard. Per TACMAN, MAWTS-1 ASP, and MCCRESMAN.

e. Flight Training (2 Flights, 4.0 Hours)

RADTLZ-370 2.0[0.5] 1 KC-130 A N

Goal. Refine the techniques required to assist the pilot in a self-contained approach.

Requirement. Demonstrate the ability to:

(1) Construct a self-contained approach plate.

(2) Fly a self-contained approach to a TLZ utilizing all available navigation aids with an emphasis on search RADAR techniques in conjunction with a RABFAC beacon.

(3) Under day VMC conditions, the navigator will not have access to visual navigation aids.

(4) The navigator will provide advisories to the pilots throughout the approach phase from initial descent to touchdown.

Prerequisite. TLZ-270.

Performance Standard. Per TACMAN, MCCRESMAN, and MAWTS-1 ASP.

External Syllabus Support. Requires qualified initial terminal guidance teams equipped with RABFAC beacons.

TLZ-371 2.0[1.0] 1 KC-130 S (N)

Goal. Refine the planning and navigation considerations required to low level ingress to temporary landing zones equipped with minimum or no navigation aids.

Requirement. Demonstrate the ability to assist in the conduct of an approach to a TLZ under day or night VMC conditions utilizing all available navigation aids.

Prerequisite. LL-220 and TLZ-270.

Performance Standard. Per TACMAN, MAWTS-1 ASP, and MCCRESMAN.

External Syllabus Support. Requires qualified Initial Terminal Guidance personnel for assessing and marking landing zones.

744. FULL-COMBAT QUALIFICATION TRAINING

1. Aerial Refueling

a. Purpose

(1) Develop the necessary skills to perform the tasks required of the navigator/rendezvous controller on air refueling missions.

(2) Designate the navigator as a "Rendezvous Controller" after successful completion of AR-410.

b. General

(1) Flights shall be accomplished utilizing all navigation systems within an air refueling profile.

(2) A minimum of four successful rendezvous' shall be completed prior to designation as a rendezvous controller.

(3) Initial rendezvous training may be conducted with the same type aircraft (KC-130 to KC-130) for no more than 50 percent of the successful rendezvous'.

(4) Flights should be conducted within a multiplane profile.

(5) The navigator shall have demonstrated an ability to plan and execute extended air refueling missions including ALTRV and other coordination measures.

c. Ground Training. The navigator shall have completed the Central Altitude Reservation Indoctrination Course and shall receive lectures on Rendezvous Control Procedures prior to this stage.

d. Flight Training (1 Flight, 4.0 Hours)

AR-410 4.0[2.0] 1 KC-130 A (N)

Goal. Plan and execute a fixed-wing or rotary-wing long range air refueling mission.

Requirement. Demonstrate the ability to successfully perform a rendezvous without assistance on a long range air refueling mission.

Prerequisite. AR-312.

Performance Standard. Per NFM, TACMAN, ARMAN, and SPECMILOPSMAN.

External Syllabus Support. Fixed-wing or rotary-wing receivers required.

2. Low Altitude Tactics

a. Purpose. Introduce low altitude tactics, increase the navigator's knowledge/proficiency in low level navigation, and to familiarize him with the phenomena peculiar to flight at or near the comfort level.

b. General

(1) Flights shall be accomplished in VMC.

(2) Flights will be flown in accordance with T&R Volume 1 altitude criteria.

(3) Low altitude flight currency restrictions contained within T&R Volume 1 do not apply to this crew position.

(4) Emphasis shall be placed on terrain following, time control to the destination, and crew coordination to minimize overtasking the pilot.

c. Ground Training. The navigator shall review the lectures on Low Level Navigation Techniques and Low Altitude Tactics (LAT) prior to this stage.

d. Simulator Training (2 Flights, 2.0 Hours)

SLAT-430 1.0 WST S

Goal. Familiarize the navigator with low altitude tactics, introducing comfort levels, and crew coordination duties.

Requirement. Demonstrate crew coordination during LAT flight.

Prerequisite. LL-220.

Performance Standard. Per TACMAN and T&R Manual, VOL 1.

SLAT-431 1.0 WST S

Goal. Demonstrate the proficiency to plan and execute a LAT mission.

Requirement. Plan and navigate a LAT mission with a minimum of six check points using all available navigation aids.

Prerequisite. SLAT-430.

Performance Standard. Per TACMAN and T&R Manual, VOL 1.

e. Flight Training (2 Flights, 2.0 Hours)

LAT-430 1.0[0.5] 1 KC-130 A

Goal. Familiarize the navigator with low altitude tactics, introducing comfort levels, and crew coordination duties.

Requirement. Demonstrate crew coordination during LAT flight.

Prerequisite. LL-220.

Performance Standard. Per TACMAN and T&R Manual, VOL 1.

LAT-431 1.0[0.5] 1 KC-130 A

Goal. Demonstrate the proficiency to plan and execute a LAT mission.

Requirement. Plan and navigate a LAT mission with a minimum of six check points using all available navigation aids.

Prerequisite. LAT-430.

Performance Standard. Per TACMAN and T&R Manual, VOL 1.

3. Defensive Tactics (DEFTAC)

a. Purpose. Train the navigator in defensive tactics.

b. General

(1) Flights shall be accomplished in VMC.

(2) Flights will be flown in accordance with T&R Volume 1 altitude criteria.

(3) Low altitude flight currency restrictions contained within T&R Volume 1 do not apply to this crew position.

c. Ground Training. Prior to this flight phase the navigator shall receive the MAWTS-1 ASP Course on KC-130 Defensive Tactics (DEFTAC).

d. Flight Training (2 Flights, 3.0 Hours)

DEFTAC-432 1.5[1.0] 1 KC-130 A

Goal. Familiarize the navigator with the skills required to perform coordinated aircrew duties during defensive tactics against a single aggressor aircraft.

Requirement

(1) Demonstrate an understanding of KC-130 defensive maneuvers.

(2) During 1V1 DEFTAC, demonstrate the proper maneuver calls and crew coordination.

Prerequisite. LAT-431.

Performance Standard. Per MAWTS-1 ASP.

External Syllabus Support. Aggressor aircraft required.

DEFTAC-433 1.5[1.0] 1 KC-130 A

Goal. Refine the skills required to perform coordinated aircrew duties during defensive tactics against two or more aggressor aircraft.

Requirement

(1) Demonstrate an understanding of KC-130 defensive maneuvers.

(2) During 2V1 DEFTAC, demonstrate the proper maneuver calls and crew coordination.

Prerequisite. DEFTAC-432.

Performance Standard. Per MAWTS-1 ASP.

External Syllabus Support. Aggressor aircraft required.

4. Aircraft Survivability Equipment (ASE)

a. Purpose. Train the navigator in the skills required to plan for and operate the KC-130 ASE suite in a tactical scenario in a permissive and restrictive threat environment.

b. General

(1) Aircraft shall have fully operational ASE suite.

(2) Appropriate chaff and decoy flares shall be loaded prior to each flight.

(3) Threat emitters and/or electronic warfare range must be available.

c. Ground Training. Navigator shall be introduced to the purpose, functioning and scheduling of threat emitters and electronic warfare ranges prior to the completion of this phase. Prior to inflight training, the navigator shall receive the MAWTS-1 ASP courses on:

(1) Soviet REC (S).

(2) Soviet IADS (S).

(3) Soviet Air to Air Missiles (Part I and II) (S).

(4) Non-Soviet Air to Air Missiles (Part I and II) (S).

(5) KC-130 Specific Threat Counter-tactics (S).

(6) KC-130 Defensive Tactics (DEFTAC) (S).

(7) Basic RADAR Principles (U).

(8) AN/ALE-39 Chaff and Flare Dispenser (U).

(9) AN/ALE-39 Programming (S).

(10) AN/AAR-47 Missile Warning System (S).

(11) AN/ALQ-157 Infrared Jammer (S).

(12) AN/APR-39 RADAR Warning Receiver (S).

(13) Soviet Tactical Surface To Air Threat SAMS/AAA (S).

(14) Non-Soviet SAMS/AAA (S).

d. Simulator Training (2 Flights, 4.5 Hours).

SASE-460 3.0 WST S

Goal. Introduce the basic in-flight operation of the ASE systems with emphasis on setup of the system for automatic and continuous defense.

Requirement. Plan and setup the ASE suite to defeat an unforeseen threat. Demonstrate the basic understanding of and ability to operate the system (specifically the ALE-39 programmer), and ALQ-157 IR jammer for automatic & continuous defense.

Performance Standard. Per MAWTS-1 ASP and MCCRESMAN.

d. Simulator Training (1 Flight, 1.5 Hours).

SASE-461 1.5 WST S

Goal. Refine the utilization of the ASE suite to include use in a permissive tactical environment.

Requirement

(1) Demonstrate the ability to assess a threat scenario and plan for the proper setup & utilization of the complete ASE suite.

(2) Correctly identify & correlate threat symbology displayed on the APR-39.

(3) Demonstrate the proper response to displayed threats including use of expendables and recommended maneuvers.

Performance Standard. Per MAWTS-1 ASP and MCCRESMAN.

e. Flight Training (3 Flights, 4.5 Hours)

ASE-460 1.5[1.0] 1 KC-130 A

Goal. Introduce the basic in-flight operation of the ASE systems with emphasis on setup of the system for automatic and continuous defense.

Requirement. Plan and setup the ASE suite to defeat an unforeseen threat. Demonstrate the basic understanding of and ability to operate the system (specifically the ALE-39 programmer), and ALQ-157 IR jammer for automatic & continuous defense.

Prerequisite. OL-200.

Performance Standard. Per MAWTS-1 ASP and MCCRESMAN.

ASE-461 1.5[1.0] 1 KC-130 A (N)

Goal. Refine the utilization of the ASE suite to include use in a permissive tactical environment.

Requirement

(1) Demonstrate the ability to assess a threat scenario and plan for the proper setup & utilization of the complete ASE suite.

(2) Correctly identify & correlate threat symbology displayed on the APR-39.

(3) Demonstrate the proper response to displayed threats including use of expendables and recommended maneuvers.

Prerequisite. ASE-460.

Performance Standard. Per MAWTS-1 ASP and MCCRESMAN.

External Syllabus Support. Qualified ordnance personnel, ordnance and threat emitters.

ASE-462 1.5[1.0] 1 KC-130 A

Goal. Introduce effective tactical use of expendables to counter a simulated threat provided by an EW range.

Requirement

(1) Correctly plan for and setup ASE suite against specific threat provided by an EW range.

(2) Demonstrate the capability to use ASE to degrade and/or defeat the threat.

Prerequisite. ASE-461.

Performance Standard. Per MAWTS-1 ASP, and MCCRESMAN.

External Syllabus Support. Requires qualified ordnance personnel, ordnance and threat emitter support.

750. IUT FLIGHT/SIMULATOR PERFORMANCE REQUIREMENTS

1. Navigation Instructor Check (NAVI)

a. Purpose. Standardize the instructor navigator's procedures for the KC-130 aircraft.

b. General

(1) Emphasis shall be placed on standardization and the ability of the navigator to instruct navigation procedures.

(2) Ability to instruct all phases of flight training shall be evaluated in which the navigator has previously demonstrated proficiency.

(3) A member of the Standardization Board shall evaluate this flight.

c. Ground Training. Navigation shall complete MAWTS-1 Instructor Training Series ASP prior to this stage.

d. Flight Training (1 Flight, 3.0 Hours)

NAVI-590 3.0 E 1 KC-130 A (N)

Goal. Standardize instructional techniques.

Requirement. Use standard navigation instructional techniques with all available navigation aids.

2. Night Systems Instructor (NSI)

a. Purpose. Qualify the Navigator as a Night Systems Instructor.

b. General

(1) The T&R Vol I and the MAWTS-1 Course Catalog are germane. Designation as night systems qualified is a prerequisite.

(2) A MAWTS-1 instructor shall provide certification for this qualification.

c. Ground Training. The navigator shall review instructions from the MAWTS-1 ASP on Night Vision Device Usage.

d. Flight Training. NVGI-591. See the MAWTS-1 Course Catalog.

NSI-591 PER MAWTS-1 Course of Instruction

Goal. Standardize instructional techniques.

Requirement. Use standard night systems instructional techniques.

Prerequisite. NAVI-590 and all NVG 600 series training codes.

Performance Standard. Per MAWTS-1 course of instruction.

3. Weapons Tactics Instructor (WTI)

a. Purpose. Provide squadrons with Weapons and Tactics Instructors.

b. General. Successfully complete the WTI course of instruction.

c. Ground Training. The navigator shall receive all instructions in accordance with the MAWTS-1 course of instruction.

d. Flight Training. All flights are PER MAWTS-1 course of instruction.

WTI-592 PER MAWTS-1 Course of Instruction

Goal. Develop Weapons and Tactics Instructors for the squadron.

Requirement. Use standard Weapons and Tactics instructional techniques as taught at the MAWTS-1 WTI course.

Prerequisite. PER MAWTS-1 Operations Guide.

Performance Standard. Per MAWTS-1 course of instruction.

4. Weapons Tactics Aircrew Instructor (WTACI)

a. Purpose. Certify the KC-130 Navigator Instructor as a Weapons and Tactics Aircrew Instructor capable of conducting ground and airborne instruction in the KC-130 Navigators Combat Qualified and Full Combat Qualified flight syllabus as outlined in MCO P3500.15.

b. General. The KC-130 WTACI Course is developed by MAWTS-1 and is conducted in conjunction with the WTI Course. Upon graduation the candidate will be certified by MAWTS-1 as a WTACI Navigator. WTACI designation can be made by the squadron Commanding Officer.

c. Ground Training. The navigator shall receive all instruction in accordance with the MAWTS-1 course of instruction.

d. Flight Training. All flights are in accordance with MAWTS-1 course of instruction.

WTACI-593 PER MAWTS-1 Course of Instruction

Goal. Develop Weapons and Tactics Aircrew Instructors for the squadron.

Requirement. Use standard WTACI instruction techniques as taught at the MAWTS-1 WTACI course.

Prerequisite. PER MAWTS-1 Operations Guide.

Performance Standard. Per MAWTS-1 course of instruction.

5. NATOPS Instructor Check (NTPSI)

a. Purpose. Standardize NATOPS instructor procedures.

b. General

(1) Emphasis shall be placed on standardization of instruction procedures.

(2) An assistant NATOPS evaluator will be evaluated by instructing the senior squadron NATOPS evaluator.

(3) The senior NATOPS evaluator will be evaluated by instructing the group NATOPS evaluator.

c. Flight Training (1 Flight, 3.0 Hours)

NTPSI-594 3.0 E 1 KC-130 A (N)

Goal. Standardize NATOPS Instructor procedures.

Requirement. Evaluate an assistant NATOPS instructor using standardized procedures.

Prerequisite. NAVI-590.

Performance Standard. Per NATOPS and all current flight publications.

6. Advanced Airlift Tactics Course

a. Purpose. Develop the navigator's skills in KC-130 tactical procedures and aerial delivery techniques.

b. General. Training conducted at St. Joseph, MO.

c. Ground Training. Training conducted at St. Joseph, MO.

d. Flight Training. Training conducted at St. Joseph, MO.

751. SPECIAL TRAINING

1. Night Systems Qualification (NSQ)

a. Purpose. Introduce and qualify the navigator in Night Systems (NS) operations, or maintain proficiency for NSQ navigators, and review concepts associated with night visual phenomena.

b. General.

(1) The NSQ training syllabus (NVG-601 through NVG-606) is intended to be flown with a squadron NSI. After the qualification flight (NVG-606), the navigator may be designated as night systems qualified by the Squadron Commanding Officer.

(2) Navigators receiving NVG training in the KC-130 shall be qualified in the respective 200, 300, or 400 series equivalent unaided sortie code/mission.

(3) Upon initial completion of a NVG sortie, the NSQ navigator may refly that sortie without a navigator NSI, provided all prerequisites are met.

(4) All NVG sorties (NVG-601 through NVG-670) may be flown by a navigator who is not NSQ, provided that an NSI is providing appropriate instruction and all prerequisites are met.

(5) A total of 5 hours in low light level conditions shall be accumulated prior to flying NVG-606 and qualification as NSQ.

(6) All ground training shall be completed prior to flight training.

(7) Training rules, as identified in T&R Vol. 1, Chapter 9 are germane.

(8) Minimum training altitudes shall be in accordance with T&R Vol. 1.

c. Instructor Requirements. Shall be in accordance with MCO P3500.14. A designated Navigator Night Systems Instructor (NSI) is required to instruct all flights prior to NSQ qualification. An NSI is also required for all NVG "E" coded sorties.

d. Ground Training (6.0 Hours)

(1) NITE Lab.

(2) KC-130 NVG Use.

(3) MAWTS-1 KC-130 Night Systems exam.

e. Simulator Training (2 Periods, 2.0 Hours). Every attempt will be made to complete simulator sorties if a night vision devices (NVG) compatible OFT/WST is available.

SNVD-601 1.0 OFT/WST A N

Goal. Introduce the navigator to the use and wear of NVG's. Emphasis will be on cockpit preflight, inflight donning of the NVG, and aircrew coordination. Familiarize navigator with ground taxi, takeoff, and landing procedures. If able, the navigator should be exposed to various light levels throughout the training period.

Requirement. Brief and fly local area familiarization utilizing NVG's.

Performance Standard. Per the NFM and TACMAN.

SNVD-602 1.0 OFT/WST A N

Goal. Review and practice SNVG-601. Introduce low level navigation procedures utilizing NVG's. Emphasis on point to point navigation and aircrew coordination. If able, the navigator should be exposed to various light levels throughout the training period.

Requirement. Brief and fly local area FAM/LLNAV sorties utilizing NVG's. Minimum altitude will be 500 ft AGL and a minimum of 6 checkpoints.

Performance Standard. Per the NFM and TACMAN.

f. Flight Training (6 Flights, 9.0 Hours)

NVG-601 1.5 1 KC-130 A N

Goal. Introduce the navigator to KC-130 Night Systems and the use of NVG's in the KC-130. Emphasis will be on pre-flight, donning of the NVG's, taxi procedures, aborts, takeoffs, cockpit orientation at altitude, landings, aircraft ground reversing operations, and NVG aircrew coordination.

Requirement. High light level conditions. Navigator's initial familiarization flight with NVG's; flown as an observation flight and not as a duty navigator.

Prerequisite. OL-200.

NVG-602 1.5 R 1 KC-130 A N

Goal. Introduce the navigator to aerial refueling operations, either fixed-wing or rotary-wing, utilizing NVG's with specific emphasis on aircrew coordination, rendezvous and refueling procedures, to include EMCON and general training rules.

Requirement

(1) High or low light level conditions.

(2) Conduct a rendezvous with fixed-wing or rotary-wing receivers and perform refueling.

(3) Rendezvous and refueling altitudes shall be in accordance with T&R Manual, Volume 1 and the NATOPS Air Refueling Manual.

(4) Use of EMCON procedures is optional.

Prerequisite. AR-210, AR-212 and NVG-601.

Performance Standard. Per the NFM, TACMAN and the AR manual.

NVG-603 1.5 R 1 KC-130 A N

Goal. Introduce the navigator to low level operations with emphasis on point to point navigation (utilizing all navigational aids, i.e, GPS, INS and Radar), crew coordination, and cockpit voice procedures.

Requirement

(1) High light level conditions for initial qualification only.

(2) Brief and fly a night low level navigation route of at least 6 checkpoints utilizing NVG's.

Prerequisite. RADLL-320 and NVG-601.

Performance Standard. Per the NFM and TACMAN.

NVG-604 1.5 R 1 KC-130 A N

Goal. Introduce the navigator to aerial delivery operations utilizing NVG's. Emphasis should be placed various DZ marking procedures, visual acquisition of the DZ, and aircrew coordination.

Requirement

(1) High or low light level conditions.

(2) Brief and fly an aerial delivery mission, either, CDS, heavy equipment, or personnel static line.

(3) Runs from the initial point to the drop zone may be repeated for aircrew proficiency based on aircrew experience levels.

Prerequisite. AD-340, AD-341 and NVG-601.

External Support. Use of the air delivery platoon and MATCS Mobile Team assets are highly recommended for load prep, DZ set-up/control and terminal area guidance using the PPN-19 (RABFAC beacon), IR strobes and lights.

Performance Standard. Per the NFM and the TACMAN.

NVG-605 1.5 1 KC-130 A N

Goal. Introduce the navigator to planning and navigational considerations required to ingress to an improved or unimproved temporary landing zones equipped with minimum or no navigational aids utilizing NVG's. Emphasis shall be on landing area assessment, self contained approach procedures and aircrew coordination during the take-off and landing phases of flight utilizing NVG's.

Requirement

(1) High light level conditions.

(2) Construct a self contained approach plate.

(3) Brief and fly a night self contained approach, providing appropriate advisories throughout the approach phase.

(4) The navigator shall demonstrate the ability to assist in the plan and conduct of a self contained approach with appropriate advisories to temporary landing zones equipped with minimum or no navigational aids.

Prerequisite. TLZ-370 and RADLL-320.

Performance Standard. As per the NFM and the TACMAN.

NVG-606 1.5 R,E 1 KC-130 A N

Goal. Navigator night systems qualification flight. The navigator will demonstrate the required skills to fly a mission combined of low level ingress and subsequent TLZ/EAF, aerial deliveries or aerial refueling missions and/or conduct self-contained approaches to full stop landings while utilizing NVG's.

Requirement

(1) High or low light level conditions.

(2) The navigator to be qualified shall plan, brief, fly, and debrief an NVG sortie with a squadron NSI as the evaluator.

(3) The navigator will demonstrate an understanding of Night Systems operations, an understanding of Night Systems training rules, and the ability to conduct an NVG sortie.

(4) Construct a self contained approach plate.

(5) Brief and fly a night low level navigation route of at least 6 checkpoints to a TLZ, AD, or AR track utilizing NVG's.

(6) Brief and fly a night self contained approach, providing appropriate advisories throughout the approach phase.

Prerequisite. NVG-600, NVG-601, NVG-602, NVG-603, NVG-604, NVG-605 and a total of at least five hours of NVG low light level time.

Performance Standard. As per the NFM and the TACMAN.

2. Advanced Night Systems Qualification

a. Purpose. Develop and refine Night Systems (NS) operations, or maintain proficiency for NSQ navigators, and review concepts associated with night visual phenomena.

b. General. All general, instructor, and ground training requirements in the basic NSQ section apply.

c. Flight Training (5 Flights, 7.5 Hours)

NVG-610 1.5 R 1 KC-130 A N

Goal. Refine planning and navigational considerations required to perform aerial refueling on a low level route. Emphasis shall be on use of on board computer navigation systems, tactical checklist procedures, arriving at the ARCP at the ARCT, night systems low level techniques, and aircrew coordination.

Requirement

(1) High or low light level conditions.

(2) Brief and fly a night low level navigation route of at least 6 checkpoints utilizing NVG's.

(3) Rendezvous with and refuel fixed-wing or rotary-wing receivers in a low level tactical environment.

Prerequisite. AR-311, NVG-602 and NVG-603.

Performance Standard. Per the NFM, AR Manual and TACMAN.

NVG-630 1.5 R 1 KC-130 A N

Goal. Introduce LAT procedures while utilizing NVG's. Emphasis shall be on use of tactical checklist procedures, low altitude tactics, and aircrew coordination.

Requirement

(1) High or low light level conditions.

(2) Introduce flying at comfort level, terrain masking, ridgeline crossing, lookout doctrine, break turns, hard turns, and climb to cope while utilizing NVG's.

(3) Area to be used for LAT training should be one that affords the opportunity to perform LAT maneuvering, e.g., ridges, valleys, open areas and easily identifiable terrain features.

Prerequisite. LAT-431 and NVG-601.

Performance Standard. Per the NFM and TACMAN.

NVG-640 1.5 R 1 KC-130 A N

Goal. Refine planning and navigational considerations required to low level ingress to an aerial delivery utilizing NVG's. Emphasis shall be placed on use of on board computer navigation systems, tactical checklist procedures and aircrew coordination.

Requirement

(1) High or low light level conditions.

(2) Brief and fly a night low level navigation route of at least 6 checkpoints to an aerial delivery mission (CDS, heavy equipment, or personnel static line), utilizing NVG's.

(3) Runs from the initial point to the drop zone may be repeated for aircrew proficiency based on aircrew experience levels.

Prerequisite. AD-340, AD-341, NVG-603 and NVG-604.

External Support. Use of the air delivery platoon and MATCS Mobile Team assets are highly recommended for load prep, DZ set-up/control and terminal area guidance using the PPN-19 (RABFAC beacon), IR strobes and lights.

Performance Standard. Per the NFM and the TACMAN.

NVG-660 1.5 R 1 KC-130 A N

Goal. Refine the use of the ASE suite while utilizing NVG's. Emphasis shall be on use of tactical checklist procedures, threat identification, defensive maneuvering, and aircrew coordination.

Requirement

(1) High or low light level conditions.

(2) Demonstrate the ability to access a threat scenario and plan for proper setup and utilization of the ASE suite.

(3) Correctly identify and correlate threat symbology displayed on the APR-39.

(4) Demonstrate the proper response to displayed threat including use of expendables and recommended maneuver's.

Prerequisite. ASE-462 and NVG-601.

Performance Standard. Per the NFM and TACMAN.

NVG-670 1.5 R 1 KC-130 A N

Goal. Refine planning and navigational considerations required to low level ingress to an improved or unimproved TLZ equipped with minimum or no navigational aids utilizing NVG's. Emphasis shall be on use of on board computer navigation systems, tactical checklist procedures, landing area assessment, self contained approach procedures and aircrew coordination.

Requirement

(1) High or low light level conditions.

(2) Construct a self contained approach plate.

(3) Brief and fly a night low level navigation route of at least 6 checkpoints to a TLZ utilizing NVG's.

(4) Brief and fly a night self contained approach, providing appropriate advisories throughout the approach phase.

Prerequisite. NVG-603 and NVG-605.

Performance Standard. Per the NFM and the TACMAN.

3. Jet Assisted Take-Off (JATO)

a. Purpose. Familiarize the navigator with JATO procedures and crew coordination duties.

b. General. Emphasis will be placed on safety and timing procedures.

c. Ground Training. The navigator shall receive lectures on JATO Operations prior to this stage.

d. Flight Training (1 Flight, 0.5 Hours)

JATO-680	0.5	1 KC-130 A

Goal. Familiarize the navigator in all the duties involving TLZ, EAF, and short field operations that would require the use of JATO.

Requirement. Demonstrate the ability to assist in the planning for either minimum ground roll or obstacle takeoff and conduct time warning countdown during JATO burn.

Performance Standard. Per NFM and TACMAN.

Prerequisite. OL-200

External Support. Qualified ordnance personnel and MK-6 JATO bottles.

4. Search and Rescue (SAR)

a. Purpose. Familiarize the navigator with SAR operations and procedures.

b. General. Emphasis will be placed on search patterns and techniques.

c. Ground Training. The navigator shall receive lectures on SAR Operations prior to this stage.

d. Simulator Training (1 Flight, 3.0 Hours)

SSAR-681	3.0	WST S

Goal. Familiarize the navigator with SAR operations and procedures.

Requirement. Demonstrate the ability to plan, brief, debrief, and execute a preplanned SAR mission.

Performance Standard. Per NFM and TACMAN.

e. Flight Training (1 Flight, 3.0 Hours)

SAR-681	3.0	1 KC-130 A

Goal. Familiarize the navigator with SAR operations and procedures.

Requirement. Demonstrate the ability to plan, brief, debrief and execute a preplanned SAR mission.

Prequisite. OL-200.

Performance Standard. Per NFM and TACMAN.

5. Aerial Navigator Annual Requalification Check

a. Purpose. Conduct annual NATOPS requalification.

b. General. A NATOPS/Assistant NATOPS Instructor shall evaluate this flight.

c. Ground Training. Navigator must successfully pass the open and closed book examinations per NATOPS prior to the flight.

d. Flight Training (1 Flight, 3.0 Hours)

NAVCK-690 8.0[3.0] E 1 KC-130 A (N)

Goal. Annual NATOPS requalification check.

Requirement. The navigator will be tested on all previous instruction, knowledge of emergency procedures, and proper operation of all navigation equipment to include over-water celestial navigation techniques.

Prerequisite. OL-200.

Performance Standard. NFM, FLIP, TACMAN, MAWTS-1 ASP, FCG, and AIRNAVMAN.

760. EXPENDABLE ORDNANCE REQUIREMENTS

ORDNANCE	100 Series	200 Series	300 Series	400 Series	Refresher	ANNUAL
DECOY FLARES				40		40
CHAFF				24		24
LUU-2			32			32
MK-6 JATO Units						16

AIRCRAFT: KC-130 MOS: 7372/7380 CREW POSITION: NAVIGATOR

STAGE	TRAINING CODE	HRS	REFLY INTERVAL	CRP	T	C	R	E	REMARKS
COMBAT CAPABLE TRAINING									
FAM	100	2.0	*	1.0					
	101	2.0	*	1.0					
	102	2.0	*	1.0					
	103	2.0	*	1.0					
	104	2.0	*	1.0			X		
	105	2.0	*	1.0			X	X	
AR	110	2.0	*	1.0					
	111	2.0	*	1.0					
	112	2.0	*	1.0					
LL	120	1.0	*	1.0					
	121	1.0	*	1.0					
	122	1.0	*	1.0					
AD	140	1.0	*	1.0					
EON	150	8.0	*	1.0					
	151	8.0	*	1.0					
	152	8.0	*	1.0					
EON	153	8.0	*	2.0					(N)
	154	8.0	*	2.0					(N)
	155	8.0	*	2.0					(N)
	156	8.0	*	2.0					(N)
	157	8.0	*	2.0			X		(N)
	158	8.0	*	2.0			X		(N)
NAVCK	190	8.0	*	7.0			X	X	(N)
COMBAT READY TRAINING									
OL	200	4.0	12	1.0					(N)
AR	210	3.0[1.5]	12	1.0					(N)
	211	3.0[1.5]	12	1.0					
	212	3.0[1.5]	12	1.0					N
LL	220	2.0	12	1.0					
	221	2.0	12	1.0					N
AD	240	1.0	12	1.0					
	241	1.0	12	1.0					
	242	1.0	12	1.0					
EON	250	8.0	6	1.0					(N)
	251	8.0	6	1.0					(N)
	252	8.0	6	1.0					(N)
	253	8.0	6	2.0				X	(N)

Figure 7-2.--MOS 7372-7380 Refly Interval, Combat Readiness Percentage.

AIRCRAFT: KC-130 MOS: 7372/7380 CREW POSITION: NAVIGATOR

STAGE	TRAINING CODE	HRS	REFLY INTERVAL	CRP	T	C	R	E	REMARKS
TLZ	270	2.0	12	0.5					(N)
RGR	271	1.0[0.0]	12	0.5					(N)
COMBAT QUALIFICATION TRAINING									
AR	310	2.0[1.5]	12	1.5					
	311	2.0[1.5]	12	1.5					N
	312	2.0[1.5]	12	1.5					(N)
RADLL	320	2.0	12	1.5					(N)
AD	340	1.0	6	1.0					N
	341	1.0	6	1.0					N
	342	1.0	6	1.0					(N)
	343	1.0	6	1.0					(N)
	344	2.0	6	1.0					(N)
EON	350	8.0	6	1.5					(N)
	351	8.0	6	1.5					(N)
	352	8.0	6	2.0					(N)
	353	8.0	6	2.0				X	(N)
TLZ	370	2.0	6	1.0					(N)
	371	2.0	12	1.0					(N)
FULL-COMBAT QUALIFICATION TRAINING									
AR	410	4.0[2.0]	12	0.6					(N)
LAT	430	1.0[0.5]	12	0.6					
	431	1.0[0.5]	6	0.6					
DEFTAC	432	1.5	12	0.7					
	433	1.5	12	0.7					
ASE	460	1.5	12	0.6					(N)
	461	1.5	12	0.6					(N)
	462	1.5	12	0.6					(N)
INSTRUCTOR TRAINING									
NAVI	590	3.0	12	0.0				X	(N)
NSI	591	PER MAWTS-1 Course of Instruction							N
WTI	592	PER MAWTS-1 Course of Instruction							
WTACI	593	PER MAWTS-1 Course of Instruction							
NTPSI	594	3.0	12	0.0				X	(N)

Figure 7-2.--MOS 7372/7380 Refly Interval, Combat Readiness Percentage-Continued.

AIRCRAFT: KC-130 MOS: 7372/7380 CREW POSITION: NAVIGATOR

STAGE	TRAINING CODE	HRS	REFLY INTERVAL	CRP	T	C	R	E	REMARKS
SPECIAL TRAINING									
NVG	601	1.5	12	0.0					N
	602	1.5	12	0.0			X		N
	603	1.5	12	0.0			X		N
	604	1.5	6	0.0			X		N
	605	1.5	12	0.0			X		N
	606	1.5	12	0.0			X	X	N
	610	1.5	12	0.0			X		N
	630	1.5	12	0.0			X		N
	640	1.5	6	0.0			X		N
	660	1.5	12	0.0			X		N
	670	1.5	12	0.0			X		N
JATO	680	0.5	12	0.0					
SAR	681	3.0	12	0.0					
NAVCK	690	8.0[3.0]	12	0.0				X	(N)

Figure 7-2.--MOS 7372-7380 Refly Interval, Combat Readiness Percentage--Continued.

MOS 7372/7380 FLIGHT UPDATE CHAINING

FLIGHT	FLIGHTS UPDATED
200	
210	200
211	200
212	211,200
220	200
221	220,200
240	200
241	200
242	200
250	200
251	250,200
252	251,250,200
253	252,251,250,200
270	200
271	200
310	220,200
311	310,221,220,200
312	200
320	221,220,200
340	240,200
341	242,241,200
342	240,200
343	200
344	200
350	253,252,251,250,200
351	350,253,252,251,250,200
352	351,350,253,252,251,250,200
353	352,351,350,253,252,251,250,200
370	270,200
371	270,220,200
410	312,200
430	220,200
431	430,220,200
432	200
433	432,200
460	200
461	460,200
462	461,460,200
590	200
591	200
592	200
593	200
594	200

Figure 7-3.--MOS 7372/7380 Flight Update Chaining.

MOS 7372/7380 FLIGHT UPDATE CHAINING

FLIGHT	FLIGHTS UPDATED
601	200
602	601,200
603	601,320,200
604	601,200
605	601,200
606	605,604,603,602,601,200
610	603,602,200
630	601,430,200
640	604,603,200
660	601,462,200
670	605,603,371,200
680	200
681	200
690	200

Figure 7-3.--MOS 7372/7380 Flight Update Chaining--Continued

CHAPTER 8

KC-130 FLIGHT ENGINEER

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*** * NOTE * ***

Aircrew coordination shall be briefed on all flights and/or events.

MARINE AERIAL REFUELING SQUADRON - KC-130
UNIT TEMPLATE

NOTE

The capabilties defined and described in the core capability and unit template sections are provided to ensure each like squadron maintains a common base of training and depth of capabilities. When resources permit, and when in the judgement of the commander additional training would significantly increase the unit's warfighting capability, training to a level above these base capabilities is permitted. It is incumbent upon, and expected of, the commander to balance any increase in the depth of core capabilities against the long term health and readiness of his unit while staying within his resource constraints.

1. **TABLE OF ORGANIZATION**

PAA-12 A/C: 26 TPC/16 T2P or T3P/23 NAV/25 F ENG/24 LOADM/24 F MECH

2. **SQUADRON CORE CAPABILITY**

a. A core capable squadron is able to sustain the following minimum performance on a daily basis during sustained contingency/combat operations, assuming 100% PAA, 90% in reporting status and 90% T/O on hand in all MOS's. If < 90%, core capability will be degraded by a like percentage. The extent to which a core capable squadron is able to surge beyond its core capability is situation dependent.

b. A core capable squadron is able to sortie two divisions (-) of mission capable aerial refueling aircraft and within four hours of landing, sortie two more sections or sortie three sections of mission capable assault support aircraft and within four hours of landing, sortie two more sections. Perform the above from either a main base location or appropriate sized expeditionary airfield. All aircraft are capable of aerial and rapid ground refueling, assault support and two platforms being DE/IRCM equipped.

3. **BASIC AIRCREW QUALIFICATIONS**. As a minimum, in order to be considered Core Competent, a squadron must possess the following numbers of aircrew who are at least 75% complete in each listed core skill.

CORE SKILLS	CREWS	REMARKS
RW/FW AR	12	
RGR	8	
TLZ/EAF	8	
AD	6	
FORM	12	
LONG RANGE NAV	12	
LOW LEVEL	6	

4. **REQUIRED CORE SKILLS AND SORTIES**

	RW/FW AR	RGR	TLZ/EAF	AD	FORM	LR NAV	LOW LEVEL
1st TOUR	4	1	1	1	2	1	2
T&R CODES	210,211 212,213	273	270	240	230, 231	250	220, 221

5. **SORTIES REQUIRED TO MAINTAIN CORE SKILLS**. For each twelve month period after achieving competency, a Flight Engineer would be required to fly the following number of sorties in each skill area to maintain that competency.

	RW/FW AR	RGR	TLZ/EAF	AD	FORM	LR NAV	LOW LEVEL
AIRCREW	4	1	1	1	2	1	2

KC-130 FLIGHT ENGINEER CORE PROGRESSION MODEL

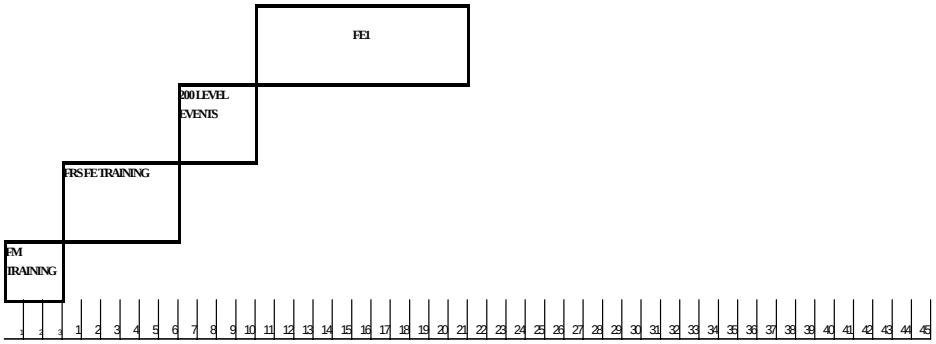

Fig.--Flight Engineer Notional training Progression Model

800. PROGRAMS OF INSTRUCTION (POI) FOR BASIC FLIGHT ENGINEER

WEEKS	COURSE/PHASE	ACTIVITY
1-11	KC-130 Flight Engineer Ground	FREST
12-15	KC-130 Flight Simulator	Training Squadron
16-35	Combat Capable Training	Training Squadron
36-40	Combat Ready Training	Tactical Squadron
41-46	Combat Qualification Training	Tactical Squadron
47-53	Full-Combat Qualification	Tactical Squadron

801. POI FOR REFRESHER FLIGHT ENGINEER

WEEKS	COURSE/PHASE	ACTIVITY
1-3	KC-130 Flight Simulator	Training Squadron
4-12	Combat Capable Training	Training Squadron

802. POI FOR CONVERSION FLIGHT ENGINEER (KC-130 F-R-T)

WEEKS	COURSES/PHASE	ACTIVITY
1	Combat Capable Training	Tactical Squadron

803. POI FOR FLEET READINESS SQUADRON (FRS) INSTRUCTOR UNDER TRAINING (IUT)

WEEKS	COURSE/PHASE	ACTIVITY
1	Standardization Training	Training Squadron
2	Flight Training	Training Squadron

804. POI FOR FLIGHT ENGINEER INSTRUCTOR

WEEKS	COURSE/PHASE	ACTIVITY
1	Standardization Training	Tactical Squadron

805. POI FOR NATOPS EVALUATOR/ASSISTANT NATOPS INSTRUCTOR

WEEKS	COURSE/PHASE	ACTIVITY
1	Standardization Training	Trng/Tact Squadron

806. POI FOR NIGHT SYSTEMS INSTRUCTOR

WEEKS	COURSE/PHASE	ACTIVITY
1	Standardization Training	Tactical Squadron

807. POI FOR WEAPONS AND TACTICS AIRCREW INSTRUCTOR (WTACI)

WEEKS	COURSE/PHASE	ACTIVITY
1-7	Advanced Tactics Training	MAWTS-1

810. GROUND TRAINING. Follow-on maintenance training will be conducted at the squadron level, and other schools that are skill related per MCO 1200.7.

811. COURSES OF INSTRUCTION

COURSE/PHASE	ACTIVITY
Naval Aircrew Candidate Course	NAS Pensacola, FL
KC-130 Flight Engineer Ground Maintenance Course	FREST
KC-130 Flight Engineer Ground Simulator Course	Training Squadron
KC-130 Flight Simulator Course	Training Squadron
Weapons and Tactics Course	MAWTS-1 Yuma, AZ
Advanced Airlift Tactics Training Course (AATTC)	St. Joseph, MO
Survival, Evasion, Resistance and Escape (SERE)	NAS Brunswick, ME or NAS North Island, CA

812. SQUADRON LEVEL TRAINING

Aerial Refueling
Low Levels
Formation
Aerial Delivery
Overwater ICAO
Aircraft Survivability Equipment (ASE)
Temporary Landing Zones
Rapid Ground Refueling
Functional Checkflights
Low Level Refueling
Formation Refueling
Low Altitude Tactics
Aerial Delivery
Defensive Tactics (DEFTAC)
Temporary Landing Zones Unimproved
Rapid Ground Refueling
Aerial Delivery (Flares)
Assisted Take-off (ATO)
Instructor Training
Nuclear Weapons Transportation Training
Night Systems Training

820. FLIGHT TRAINING FOR BASIC FLIGHT ENGINEER

1. Combat Capable Training

STAGE	FLIGHTS	HOURS	PERCENT
Familiarization	8	40.0	8.0
System Review	13	50.0	15.5
Intermediate Progress Evaluation	1	4.0	5.0
Functional Check Flight/Maint Gnd Run	8	25.0	16.0
Mission Familiarization	7	28.0	10.5
Flight Engineer Evaluation (FE-2)	1	8.0	5.0
	38	**155.0**	**60.0**

2. Combat Ready Training

STAGE	FLIGHTS	HOURS	PERCENT
Flight Engineer Proficiency	2	4.0	2.0
Air Refueling	4	16.0	4.0
Low Level	2	5.0	2.0
Formation	2	6.0	2.0
Air Delivery	1	3.0	1.0
Over Water ICAO	1	8.0	1.0
Temporary Landing Zone	1	3.0	1.0
Rapid Ground Refueling	1	2.0	1.0
Functional Check Flight	1	2.0	1.0
Combat Ready Evaluation	1	8.0	0.0
	16	**57.0**	**15.0**

3. Combat Qualification Training

STAGE	FLIGHTS	HOURS	PERCENT
Low Level Aerial Refueling	4	12.0	4.0
Overland/Water Form Aerial Refueling	2	16.0	4.0
Aerial Delivery	2	6.0	3.0
ASE	1	2.0	1.0
Temporary Landing Zone	2	4.0	4.0
Rapid Ground Refueling	1	2.0	2.0
NATOPS Check	1	8.0	2.0
	13	**50.0**	**20.0**

4. Full Combat Qualification Training

STAGE	FLIGHTS	HOURS	PERCENT
Low Altitude Tactics/Formation	3	7.0	3.0
DEFTAC	3	6.0	2.0
	6	**13.0**	**5.0**
TOTAL	**73**	**275**	**100.0**

821. REFRESHER FLIGHT ENGINEER

1. Combat Capable Training

STAGE	FLIGHTS	HOURS
Familiarization	6	32.0
Review	3	10.0
Ground Run/Functional Check Flight (FCF)	2	5.0
Mission Familiarization	6	24.0
NATOPS Evaluation	1	8.0
	18	**79.0**

822. CONVERSION FLIGHT ENGINEER

1. Combat Capable Training

STAGE	FLIGHTS	HOURS
Systems Review	6	12.0

823. FRS INSTRUCTOR UNDER TRAINING (IUT)

STAGE	FLIGHTS	HOURS
Familiarization	5	20.0
Standardization	1	8.0
	6	**28.0**

824. SPECIAL DESIGNATIONS

STAGE	FLIGHTS	HOURS
Systems and Syllabus Instructor	1	3.0
NATOPS evaluator/assistant NATOPS Instructor	1	3.0
Night Systems Instructor	1	3.0
Weapons and Tactics Aircrew Instructor	1	3.0

830. SIMULATOR TRAINING

STAGE	PERIODS	HOURS
Familiarization	15	60.0
Intermediate Progress Evaluation	1	4.0
Ground Maintenance Run/FCF	4	14.0
Flight Engineer Evaluation	1	4.0
Aerial Refueling	1	2.0
Low Level	1	2.0
Temporary Landing Zones	1	2.0
Temporary Landing Zones Unimproved	1	4.0
Instructor Under Training	5	20.0
	30	**112.0**

840. FLIGHT/SIMULATOR PERFORMANCE REQUIREMENTS

1. Purpose. Familiarize the student flight engineer with his responsibilities and duties in the correct use of aircraft checklists, crew coordination, normal & emergency procedures, remedial actions for system malfunctions, aircraft limitations, and performance data.

2. General

a. One hour of formal classroom training is required for 1 hour of flight simulator training. Refresher flight engineers need only complete syllabus periods annotated with an "R". Aircraft utilization authorized if the OFT is not available.

b. Upon completion of simulator training, the student flight engineer will be proficient and have demonstrated a thorough working knowledge of all aircraft systems, aircraft checklists, crew coordination, diagnosis of airborne malfunctions, and remedial actions that can be accomplished while airborne.

c. The flight syllabus training will familiarize the student flight engineer with:

(1) Correct preflight/postflight turnaround and daily inspections per current instructions.

(2) Responsibilities/duties in the operation of all aircraft systems applicable by NATOPS.

d. This portion of training deals with actual flight operations. The student flight engineer must possess and display a thorough working knowledge of all aircraft systems prior to the start of flight training.

e. Refresher flight engineer need only complete codes marked with an "R."

f. All events require the student flight engineer to compile and complete an aircraft "takeoff and landing data" card (TOLD) using the applicable NATOPS manual.

g. The student flight engineer will occupy the flight engineer's seat in all stages of the flight syllabus under the direct supervision of the instructor flight engineer.

h. Conversion will be conducted only by those squadrons that have significant changes or new model type. Conversion flight engineers need only complete codes marked with a "C."

3. Prerequisites

a. Qualified as a Flight Mechanic per chapter 10 of this Manual.

b. Completed KC-130 Flight Engineer ground course.

4. Aircrew Coordination. Aircrew coordination shall be briefed for all flights and/or events.

5. Simulator Training (15 Periods, 30.0 Hours)

SFAM-100 2.0 R IPT/CPT/OFT/WST S

Goal. Introduce the flight engineers responsibilities/ duties, crew coordination, aircraft limitations, and use of expanded checklists.

Requirement. Introduce the student flight engineer to his responsibilities/duties, crew coordination, and aircraft limitations which are associated in the use of the expanded checklist from the cockpit checklist through the engine run-up checklist.

Performance Standard. Upon completion, the student flight engineer will be able to perform the expanded checklist from the cockpit checklist through engine run-up checklist - observing all aircraft limitations, his responsibilities/duties, and crew coordination with assistance as necessary from the instructor flight engineer.

SFAM-101 2.0 R IPT/CPT/OFT/WST S

Goal. Introduce the flight engineer's responsibilities/duties, crew coordination, aircraft limitations, and use of expanded checklists.

Requirement. Review previous instruction as necessary. Introduce the student flight engineer to his responsibilities/duties, crew coordination, and aircraft limitations associated in the use of the expanded checklist from the before takeoff checklist through the secure checklist.

Performance Standard. Upon completion, the student flight engineer will be able to perform the expanded checklist from the cockpit checklist through the secure checklist observing all aircraft limitations, his responsibilities/duties, and crew coordination with assistance from the instructor flight engineer.

SFAM-102 2.0 R IPT/CPT/OFT/WST S

Goal. Introduce start malfunctions.

Requirement. Review previous instructions as necessary. Introduce the student flight engineer to start malfunctions.

Performance Standard. Upon completion, the student flight engineer will be able to identify start malfunctions and perform remedial actions with assistance as necessary from the instructor flight engineer.

SFAM-103 2.0 R IPT/CPT/OFT/WST S

Goal. Review ground emergency malfunctions.

Requirement. Review previous instruction as necessary. Introduce the student flight engineer to ground emergency malfunctions.

Performance Standard. Upon completion, the student flight engineer will be able to demonstrate responsibilities/duties, crew coordination, and perform all checklists observing applicable aircraft limitations with minor errors.

SFAM-104 2.0 E IPT/CPT/OFT/WST S

Goal. Evaluate the student flight engineer progress in cockpit procedures, start malfunctions, and ground emergency per current instructions.

Requirement. Evaluate the student flight engineer on responsibilities/duties, start malfunctions, ground emergency, crew coordination, and performance of all checklists per applicable NATOPS manuals while observing aircraft limitations.

Performance Standard. The student flight engineer will satisfactorily complete the flight engineer progress evaluation prior to progressing to the OFT stage of simulator training.

SFAM-105 2.0 R IPT/CPT/OFT/WST S

Goal. Introduce engine systems.

Requirement. Introduce the student flight engineer to the aircraft engine systems, malfunction, and emergency procedures.

Performance Standard. Upon completion, the student flight engineer will be able to perform remedial actions and emergency procedures related to aircraft engine systems.

SFAM-106 2.0 R IPT/CPT/OFT/WST S

Goal. Introduce aircraft propeller systems, malfunctions, and emergency procedures.

Requirement. Student flight engineer will demonstrate knowledge of aircraft propeller systems. Introduce remedial actions and emergency procedures related to aircraft propeller systems.

Performance Standard. Upon completion, the student flight engineer will be able to perform remedial actions and emergency procedures related to aircraft propeller systems.

SFAM-107 2.0 R IPT/CPT/OFT/WST S

Goal. Introduce aircraft electrical systems, malfunctions, and emergency procedures.

Requirement. Student flight engineer will demonstrate knowledge of aircraft electrical systems. Introduce remedial actions, emergency procedures related to aircraft electrical systems, and review previous instruction as necessary.

Performance Standard. Upon completion, the student flight engineer will be able to perform remedial actions and emergency procedures related to aircraft electrical systems.

SFAM-108 2.0 R IPT/CPT/OFT/WST S

Goal. Introduce aircraft bleed air, anti-ice, and deicing systems, malfunctions, and emergency procedures.

Requirement. Student flight engineer will demonstrate knowledge of aircraft bleed air, anti-ice, and deicing systems. Introduce remedial actions and emergency procedures related to aircraft bleed air, anti-ice, and deicing systems. Review previous instructions as necessary.

Performance Standard. Upon completion, the student flight engineer will be able to perform remedial actions and emergency procedures related to aircraft bleed air, anti-icing, and deicing systems.

SFAM-109 2.0 R IPT/CPT/OFT/WST S

Goal. Introduce aircraft fuel systems, malfunctions, and emergency procedures.

Requirement. Student flight engineer will demonstrate knowledge of aircraft fuel systems. Introduce remedial actions and emergency procedures related to aircraft fuel systems. Review previous instruction as necessary.

Performance Standard. Upon completion, the student flight engineer will be able to perform remedial actions and emergency procedures related to aircraft fuel systems.

SFAM-110 2.0 R IPT/CPT/OFT/WST S

Goal. Introduce aircraft hydraulic systems, malfunctions, and emergency procedures.

Requirement. Student flight engineer will demonstrate knowledge of aircraft hydraulic systems. Introduce remedial actions and emergency procedures related to aircraft hydraulic systems. Review previous instruction as necessary.

Performance Standard. Upon completion, the student flight engineer will be able to perform remedial actions and emergency procedures related to aircraft hydraulic systems.

SFAM-111 2.0 R IPT/CPT/OFT/WST S

Goal. Introduce aircraft air conditioning/ pressurization systems, malfunctions, and emergency procedures.

Requirement. Student flight engineer will demonstrate knowledge of aircraft air conditioning and pressurization systems. Introduce remedial actions, emergency procedures related to aircraft air conditioning/pressurization systems, and review previous instruction as necessary.

Performance Standard. Upon completion, the student flight engineer will be able to perform remedial actions, emergency procedures related to aircraft air conditioning/pressurization systems.

SFAM-112 2.0 R IPT/CPT/OFT/WST S

Goal. Introduce aircraft comm/nav systems, voice procedures, malfunctions, and emergency procedures.

Requirement. Student flight engineer will demonstrate knowledge of aircraft comm/nav systems and voice procedures. Introduce remedial actions and emergency procedures related to aircraft comm/ nav systems. Review previous instruction as necessary.

Performance Standard. Upon completion, the student flight engineer will be able to perform remedial actions and emergency procedures related to aircraft comm/nav systems.

SFAM-113 4.0 R IPT/CPT/OFT/WST S

Goal. Introduce aircraft aerial refueling systems, malfunctions, and emergency procedures.

Requirement. Student flight engineer will demonstrate knowledge of aircraft aerial refueling systems. Introduce remedial actions and emergency procedures related to aircraft aerial refueling systems. Review previous instruction as necessary.

Performance Standard. Upon completion, the student flight engineer will be able to perform remedial actions and emergency procedures related to aircraft aerial refueling systems.

SFAM-114 4.0 E IPT/CPT/OFT/WST S

Goal. Evaluate simulator progress.

Requirement. The student will demonstrate the correct use of all aircraft checklists, crew coordination, normal & emergency procedures, remedial actions for aircraft systems malfunctions, limitations, and aircraft performance.

Performance Standard. The student flight engineer will successfully complete a standard evaluation in the correct use of aircraft checklists, crew coordination, normal & emergency procedures, remedial actions for system malfunctions, and aircraft performance data.

841. COMBAT CAPABLE TRAINING

1. Familiarization

a. Purpose. Familiarize the student flight engineer with normal flight operations under various flight conditions.

b. General. Simulated/induced malfunctions should be held to a minimum during this stage.

c. Ground Training. The familiarization stage requires a minimum of 2 hours of ground instruction prior to each flight.

d. Flight Training (8 Flights, 40.0 Hours)

FAM-115 4.0 R 1 KC-130 A

Goal. Familiarize the student flight engineer with correct turnaround inspection and normal flight operations per current instructions.

Requirement. The instructor flight engineer will instruct the student flight engineer on correct turnaround inspection procedures and normal flight operations per current instructions.

Performance Standard. Upon completion, the student flight engineer will be familiar with correct turnaround inspection, and normal flight operations per current instructions.

FAM-116 4.0 R 1 KC-130 A

Goal. Familiarize the student flight engineer with time management of turnaround inspection, computation of performance data, and normal flight operations.

Requirement. The instructor flight engineer will instruct the student flight engineer on time management of turnaround inspections, computation of performance data, and normal flight operations.

Performance Standard. Upon completion, the student flight engineer will be familiar with time management of turnaround inspections, computation of performance data, and normal flight operations.

FAM-117 4.0 R IPT/CPT/OFT/WST/KC-130 A N

Goal. Refine time management of turnaround inspection responsibilities and duties to include performance data computation, Weight and Balance Form 365-4 completion, and normal flight operations. During night time conditions.

Requirement. Instructor flight engineer will instruct the student flight engineer in time management of turnaround inspection responsibilities/duties to include performance data computations, Weight and Balance Form 365-4 completion, and normal flight operations. During night time conditions.

Performance Standard. Upon completion, the student flight engineer will be able to coordinate and perform aircraft turnaround inspection per current instructions utilizing proper time management to accomplish all required tasks, including correct performance data computation, accurate Weight and Balance Form 365-4 completion, and normal flight operations. During night time conditions.

FAM-118 4.0 R 1 KC-130 A

Goal. Familiarize the student flight engineer with hot and cold climate procedures per current instructions.

Requirement. Instructor flight engineer will instruct the student flight engineer on proper hot and cold climate procedures per current instructions.

Performance Standard. Upon completion, the student flight engineer will be able to perform his duties in hot or cold climates.

FAM-119 4.0 1 KC-130 A

Goal. Familiarize student flight engineer with simulated engine out procedures.

Requirement. Instructor pilot will demonstrate engine out procedures. Instructor flight engineer will supervise and evaluate the student flight engineer on normal procedures and touch & go procedures.

Performance Standard. Upon completion, student flight engineer will be familiar with engine out procedures.

FAM-120 4.0 1 KC-130 A

Goal. Familiarize student flight engineer with two engine out procedures.

Requirement. Instructor pilot will demonstrate two engine approaches and landings. Instructor flight engineer will supervise and evaluate the student flight engineer on normal procedures.

Performance Standard. Upon completion, the student flight engineer will be familiar with two engine out procedures.

FAM-121 8.0 R 1 KC-130 A

Goal. Familiarize the student flight engineer on extended overwater flight operations to include mission planning, range prediction, range control, endurance, and use of engine/fuel logs.

Requirement. The instructor flight engineer will instruct the student flight engineer on extended overwater flight to include normal procedures, mission planning, use of aircraft performance data (range prediction, range control, & endurance), and engine/fuel logs.

Performance Standard. Upon completion, the student flight engineer will be able to perform normal procedures and mission planning; and use aircraft performance data (range prediction, range control, & endurance), and engine/fuel logs associated with extended overwater flights.

FAM-122 8.0 R 1 KC-130 A N

Goal. Familiarize the student flight engineer on extended over water night flight operations to include mission planning, range prediction, range control, endurance, and use of engine/fuel logs.

Requirement. Instructor flight engineer will instruct the student flight engineer on extended overwater night flight to include normal procedures, mission planning, use of aircraft performance data (range prediction, range control, & endurance), and engine/fuel logs.

Performance Standard. Upon completion, the student flight engineer will be able to perform normal procedures, mission planning, use aircraft performance data (range prediction, range control, & endurance), and engine/fuel logs associated with extended over water night flights.

2. Systems Review

a. Purpose. Review aircraft systems, systems operation, system malfunctions, corrective actions, and troubleshooting per current instructions.

b. General. Instructor flight engineer may induce malfunctions and simulated emergencies as practical.

c. Ground Training

(1) All systems reviewed require ground instruction.

(2) Four hours of 3M documentation.

d. Flight Training (13 fights, 52.0 Hours)

REV-130 4.0 C 1 KC-130 A

Goal. Review aircraft engines and GTC/APU.

Requirement. Review the aircraft's engines including the power section, torque-meter assembly, reduction gear box assembly, and the oil system.

Performance Standard. Upon completion, the student flight engineer will be knowledgeable on aircraft engine operation, possible malfunctions, troubleshooting, and corrective actions per current instructions.

REV-131 4.0 1 KC-130 A

Goal. Review aircraft engine related systems.

Requirement. Review aircraft engine related systems to include the engine fuel system, starting system, ignition system, temperature datum control system, engine controls, fire & overheat detection systems, and fire extinguishing systems.

Performance Standard. Upon completion, the student flight engineer will be knowledgeable on aircraft engine related systems operation, possible malfunctions, troubleshooting, and corrective actions per current instructions.

REV-132 4.0 1 KC-130 A

Goal. Review aircraft propeller system.

Requirement. Review the aircraft propeller assemblies. Include the blade assemblies, barrel assembly, dome assembly, spinner assembly, anti- icing/deicing assemblies, control assembly, governing system, syncrophasing system, and propeller controls.

Performance Standard. Upon completion, the student flight engineer will be knowledgeable on aircraft propeller assemblies operation, possible malfunctions, troubleshooting, and corrective actions per current instructions.

REV-133 4.0 R, C 1 KC-130 A

Goal. Review the aircraft AC electrical systems.

Requirement. Review the aircraft AC electrical systems including the primary and secondary systems, indicators, and system warning lights.

Performance Standard. Upon completion, the student flight engineer will be knowledgeable on aircraft AC electrical systems, operation, possible malfunctions, troubleshooting, and corrective actions per current instructions.

REV-134 4.0 1 KC-130 A

Goal. Review the aircraft DC electrical system.

Requirement. Review the aircraft DC electrical systems including TR units, the battery system, indicators, and system warning lights.

Performance Standard. Upon completion, the student flight engineer will be knowledgeable in aircraft DC electrical systems, their operation, possible malfunctions, troubleshooting, and corrective actions per current instructions.

REV-135 4.0 1 KC-130 A

Goal. Review bleed air systems, anti-icing and deicing systems.

Requirement. Review the aircraft bleed air systems to include the air turbine motor, associated bleed air valves & ducting, nacelle preheat, bleed air system controls, and isolation valves, wing and empennage anti-icing, propeller anti-icing/de-icing, and NESA system.

Performance Standard. Upon completion, the student flight engineer will be knowledgeable on the aircraft bleed air systems operation, possible malfunctions, troubleshooting, and corrective actions per current instructions.

REV-136 4.0 1 KC-130 A

Goal. Review air conditioning, pressurization, and oxygen systems.

Requirement. Review the aircraft air conditioning systems including the flight station and cargo compartment air conditioning systems, outflow valve, safety valve, cabin pressure controls, and oxygen systems.

Performance Standard. Upon completion, the student flight engineer will be knowledgeable on the aircraft air conditioning systems operation, possible malfunctions, troubleshooting, and corrective actions per current instructions.

REV-137 4.0 1 KC-130 A

Goal. Review the aircraft fuel systems.

Requirement. Review the aircraft fuel systems. Include the refueling/defueling system & procedures, tank construction, the water removal, crossfeed, fuel transfer & jettison, IFR, single- point refueling systems, fuel system controls, and the fuel indicating system.

Performance Standard. Upon completion, the student flight engineer will be knowledgeable on aircraft fuel systems operation, possible malfunctions, troubleshooting, and corrective actions per current instructions.

REV-138 4.0 1 KC-130 A

Goal. Review the aircraft utility hydraulic and forward cargo door systems.

Requirement. Review the utility hydraulic and forward cargo door hydraulic systems to include the basic hydraulic system and sub systems (portion of flight controls, landing gear, IFR, flaps, wheel brakes, and nose wheel steering systems).

Performance Standard. Upon completion, the student flight engineer will be knowledgeable on aircraft utility and forward cargo door hydraulic systems operation, possible malfunctions, troubleshooting, and corrective actions per current instructions.

REV-139 4.0 1 KC-130 A

Goal. Review the aircraft booster and auxiliary hydraulic systems.

Requirement. Review the aircraft booster & auxiliary hydraulic systems to include basic hydraulic systems & subsystems portion of the flight controls, ramp & aft cargo door, emergency brakes, and the emergency nose landing gear extension (some aircraft).

Performance Standard. Upon completion, the student flight engineer will be knowledgeable on aircraft booster & auxiliary systems operation, possible malfunctions, troubleshooting, and corrective actions per current instructions.

REV-140 4.0 R, C 1 KC-130 A

Goal. Review the aircraft communications systems.

Requirement. Review aircraft communication systems.

Performance Standard. Upon completion, the student flight engineer will be knowledgeable on communication systems operation, voice procedures, possible malfunctions, troubleshooting, and corrective actions per current instructions.

REV-141 4.0 R, C 1 KC-130 A

Goal. Review navigation and flight instrument systems.

Requirement. Review navigation systems.

Performance Standard. Upon completion, the student flight engineer will be knowledgeable on aircraft navigation system operation, troubleshooting, and corrective actions per current instructions.

REV-142 4.0 1 KC-130 A

Goal. Review aircraft aerial refueling systems.

Requirement. Review aircraft aerial refueling systems to include hydraulic system, fuel system, and inflight refueling system controls.

Performance Standard. Upon completion, the student flight engineer will be knowledgeable on aircraft aerial refueling systems operation, possible malfunctions, troubleshooting, and corrective actions per current instructions.

3. Intermediate Progress Evaluation

a. Purpose. Evaluate the student flight engineer's overall progress.

b. General. Flight portion of the progress evaluation will be conducted on an extended over water flight or an extended overland flight to include a remain overnight (RON).

c. Flight Training (1 Flight, 4.0 Hours)

CK-150 4.0 E OFT/WST/1KC-130 A

Goal. Evaluate the student flight engineer's overall progress.

Requirement. The instructor flight engineer will evaluate the student flight engineer's progress.

Performance Standard. Upon completion, the student flight engineer will have demonstrated his knowledge of normal and emergency procedures per current instructions.

4. Maintenance Ground Runs and Functional Check Flights (FCF)

a. Purpose. Familiarize the student flight engineer on post maintenance run-up procedures and FCF procedures.

b. General. All required FCF's will be conducted upon completion of post maintenance run-ups.

c. Simulator Training (4 Periods, 14.0 Hours)

SMGR-160 3.0 IPT/CPT/OOFT/WST S

Goal. Introduce ground maintenance run-up procedures.

Requirement. The instructor flight engineer will instruct the student flight engineer on ground maintenance run-up procedure per current instructions. The student flight engineer will occupy the left seat during this phase.

Performance Standard. Upon completion, the student flight engineer will be familiar with ground maintenance run-up procedures per current instructions.

SMGR-161 3.0 IPT/CPT/OFT/WST S

Goal. Refine ground maintenance run-up procedures.

Requirement. The student flight engineer will perform the ground maintenance run-up per current instructions from the left seat.

Performance Standard. Upon completion, the student flight engineer will be proficient on ground maintenance run-up procedures per current instructions.

SFCF-162 4.0 IPT/CPT/OFT/WST S

Goal. Introduce FCF procedures to student flight engineer per current instructions.

Requirement. The instructor flight engineer will introduce the FCF procedures to the student flight engineer per current instructions.

Performance Standard. Upon completion, the student flight engineer will be familiar with the FCF procedures per current instructions.

SFCF-163 4.0 IPT/CPT/OFT/WST S

Goal. Refine FCF procedures per current instructions.

Requirement. The student flight engineer will perform an "A" profile FCF per current instructions.

Performance Standard. Upon completion, the student flight engineer will be familiar with FCF procedures per current instructions.

d. Ground Training (3 Period, 9.0 Hours)

MGR-164 3.0 1 KC-130 S

Goal. Refine ground maintenance run-up procedures.

Requirement. The student flight engineer will perform a phase ground maintenance run-up from the left seat per current instructions.

Performance Standard. Upon completion, the student flight engineer will be familiar with phase ground maintenance run-up procedures per current instructions.

MGR-165 3.0 1 KC-130 S

Goal. Refine ground maintenance run-up procedures and introduce taxi procedures.

Requirement. The student flight engineer will perform a phase ground maintenance run-up from the left seat per current instructions. The instructor flight engineer will instruct the student flight engineer on proper taxi procedures per current instructions.

Performance Standard. Upon completion, the student flight engineer will be familiar with phase ground maintenance run-up and taxi procedures per current instructions.

MGRCK-166 3.0 R 1 KC-130 S

Goal. Maintenance ground run-up check.

Requirement. The instructor flight engineer will evaluate the student flight engineer while performing a phase maintenance ground run-up from the left seat per current instructions.

Performance Standard. Upon completion, the student flight engineer will be proficient on phase maintenance ground run-up procedures per current instructions.

e. Flight Training (1 Period, 2.0 Hours)

FCF-167 2.0 R 1 KC-130 A

Goal. Review FCF procedures.

Requirement. Review FCF procedures per current instructions.

Performance Standard. Upon completion, the will be knowledgeable on FCF procedures per current instructions.

5. Mission Familiarizations

a. Purpose. Familiarize the student flight engineer with aircraft missions.

b. General. Instructor flight engineer will induce emergencies and malfunctions as practical.

c. Flight Training (7 Flights, 28.0 Hours)

MFAM-170 4.0 R 1 KC-130 A

Goal. Fixed-wing aerial refueling procedures familiarization.

Requirement. Conduct fixed-wing aerial refueling with multiple receivers.

Performance Standard. Upon completion, student flight engineer will be familiar with fixed-wing aerial refueling missions.

MFAM-171 4.0 R 1 KC-130 A

Goal. Refine fixed-wing aerial refueling missions.

Requirement. Conduct aerial refueling mission with multiple receivers.

Performance Standard. Upon completion, student flight engineer will be knowledgeable on fixed-wing aerial refueling missions.

MFAM-172 4.0 R 1 KC-130 A

Goal. Introduce helicopter refueling missions.

Requirement. Familiarize student flight engineer on helicopter refueling missions per current instructions.

Performance Standard. Upon completion, the student flight engineer will be familiar with helicopter refueling missions per current instructions.

MFAM-173 4.0 R 1 KC-130 A

Goal. Introduce EMCON refueling missions.

Requirement. Familiarize student flight engineer with EMCON refueling missions.

Performance Standard. Upon completion, student flight engineer will be familiar with EMCON refueling missions per current instructions.

MFAM-174 4.0 R 1 KC-130 A

Goal. Low level missions familiarization.

Requirement. Familiarize student flight engineer on low level missions per current instructions.

Performance Standard. Upon completion, the student flight engineer will be familiar with low level missions per current instructions.

MFAM-175 4.0 1 KC-130 A

Goal. Cargo loading mission familiarization.

Requirement. Familiarize the student flight engineer on cargo loading missions per current instructions.

Performance Standard. Upon completion, the student flight engineer will be familiar with cargo loading missions per current instructions.

MFAM-176 4.0 2 KC-130 A

Goal. Introduce formation procedures.

Requirement. Familiarize the student flight engineer in formation procedures per current instructions.

Performance Standard. Upon completion, the student flight engineer will be familiar with formation procedures per current instructions.

6. Flight Engineer Initial Evaluation (FE-2 Check)

a. Purpose. Evaluate the student flight engineer per NATOPS procedures.

b. General. Initial flight engineer evaluation will be conducted during this phase. Upon successful completion of this stage, the student flight engineer shall be designated FE-2. This qualification and subsequent completion of the Combat Ready Check (CK-290) is prerequisite to designation as a FE-1. The FE-2 is considered systems qualified but requires supervision by a Flight Engineer Instructor until successful completion of CK-290.

d. Flight Training (1 Flight, 8.0 Hours)

CK-190 8.0 R E 1 KC-130/OFT/WST A/S

Goal. NATOPS evaluation.

Requirement. NATOPS instructor/evaluator will evaluate student flight engineer per NATOPS procedures. Remain overnight (RON) flight is preferred.

Performance Standard. Qualified per NATOPS.

842. COMBAT READY TRAINING

1. Administrative Flight

a. Purpose. Maintain flight engineer proficiency on administrative flights.

b. Flight Training (2 flights, 4 Hours)

FE-200 2.0 1 KC-130/OFT/WST A/S

Goal. Maintain proficiency in normal and emergency procedures during day flight operations.

Requirement. Review normal and emergency procedures during day flight operations per current instructions.

FE-201 2.0 1 KC-130/OFT/WST A/S N

Goal. Maintain proficiency in normal and emergency procedures during night flight operations.

Requirement. Review normal and emergency procedures during night flight operations per current instructions.

2. Aerial Refueling

a. Purpose. Refine flight engineer in aerial refueling missions per current instructions.

b. Flight Training (4 Flights, 16.0 Hours)

AR-210 4.0 1 KC-130/OFT/WST A/S

Goal. Refine fixed wing aerial refueling procedures.

Requirement. Review normal and emergency aerial refueling procedures PER KC-130 TACMAN and AR Manual. Use of EMCON procedures is optional.

AR-211 4.0 1 KC-130/OFT/WST A/S N

Goal. Introduce and refine night fixed wing aerial refueling procedures.

Requirement. Review normal and emergency aerial refueling procedures at night PER KC-130 TACMAN and AR Manual. Use of EMCON procedures is optional.

Prerequisite. AR-210.

AR-212 4.0 1 KC-130/OFT/WST A/S

Goal. Refine helicopter aerial refueling procedures.

Requirement. Review normal and emergency helicopter refueling procedures PER KC-130 TACMAN and AR Manual. Use of EMCON procedures is optional.

AR-213 4.0 1 KC-130/OFT/WST A/S N

Goal. Introduce night helicopter aerial refueling procedures.

Requirement. Review normal and emergency helicopter refueling procedures at night PER KC-130 TACMAN and AR Manual. Use of EMCON procedures is optional.

Prerequisite. AR-212.

3. Low Level

a. Purpose. Train the flight engineer in low level procedures.

b. Flight Training (2 Flights, 5.0 Hours)

LL-220 2.0 1 KC-130/OFT/WST A/S

Goal. Refine low level procedures.

Requirement. Fly a low level route PER KC-130 TACMAN procedures.

LL-221 3.0 1 KC-130/OFT/WST A/S N

Goal. Introduce night low level procedures.

Requirement. Fly a night low level route PER KC-130 TACMAN procedures.

Prerequisite. LL-220.

4. Formation

a. Purpose. Train the flight engineer in formation procedures.

b. Flight Training (2 Flights, 6.0 Hours)

FORM-230 3.0 2 KC-130/OFT/WST A/S

Goal. Proficiency training in formation procedures.

Requirement. Fly a two plane formation flight PER NATOPS and TACMAN.

FORM-231 3.0 2 KC-130/OFT/WST A/S N

Goal. Introduce night section formation.

Requirement. Fly a two plane night formation flight PER NATOPS and TACMAN.

Prerequisite. FORM-230.

5. Aerial Delivery

a. Purpose. Refine the flight engineer in aerial delivery procedures per current instructions.

b. Flight Training (1 Flight, 3.0 Hours)

AD-240	3.0	1 KC-130/OFT/WST A/S

Goal. Refine aerial delivery procedures.

Requirement. Fly and review aerial delivery mission of cargo or troops PER TACMAN.

6. Overwater ICAO Environments

a. Purpose. Refine the flight engineer in extended over water procedures.

b. Flight Training (1 Flight, 8.0 Hours)

OWICAO-250	16.0	1 KC-130 A

Goal. Refine extended overwater procedures.

Requirement. Fly an extended overwater flight and review over-water procedures placing emphasis on mission planning, use of aircraft performance data, and engine/fuel logs.

7. Temporary Landing Zones

a. Purpose. Train the flight engineer on temporary landing zones.

b. Flight Training (1 Flight, 3.0 Hours)

TLZ-270	3.0	1 KC-130/OFT/WST A/S

Goal. Introduce TLZ procedures at improved fields.

Requirement. Introduce maximum effort takeoffs and landings at improved field PER TACMAN. Review all appropriate performance data.

8. Rapid Ground Refueling

a. Purpose. Train the flight engineer in rapid ground refueling.

b. Flight Training (1 Flights, 2.0 Hours)

RGR-273	2.0	1 KC-130 S

Goal. Train the FE in rapid ground refueling.

Requirement. Conduct rapid ground refueling with actual aircraft engines running PER NATOPS and TACMAN.

9. Functional Check Flight

a. Purpose. Maintain proficiency in functional check flight procedures.

b. Flight Training (1 Flight, 2.0 Hours)

FCF-280	2.0	1 KC-130/OFT/WST A/S

Goal. Maintain proficiency in functional check flight procedures.

Requirement. Review normal and emergency procedures during a functional check flight profile A, B, C, or D.

10. Flight Engineer Combat Ready Evaluation

a. Purpose. Evaluate the FE-2 per NATOPS and TACMAN procedures for designation as Flight Engineer 1 (FE-1) and Combat Ready. This check is only required for initial training. There is no annual refly requirement.

b. General. Combat Ready flight engineer evaluation will be conducted upon completion of the Combat Ready Training Syllabus (all 200 codes).

c. Flight Training (1 Flight, 8.0 Hours)

CK-290	8.0	R, E 1 KC-130 A

Goal. NATOPS evaluation.

Requirement. NATOPS instructor/evaluator will evaluate FE-2 per NATOPS and TACMAN procedures. Should be either AR, AD, LL, TLZ, RGR, or combination mission. Remain overnight (RON) flight is preferred.

Performance Standard. Qualified per NATOPS, Combat Ready.

843. COMBAT QUALIFICATION TRAINING

1. Low Level Aerial Refueling

a. Purpose. Train flight engineer in low level refueling procedures.

b. Flight Training (4 Flights, 12.0 Hours)

LLAR-310	3.0	1 KC-130/OFT/WST A/S

Goal. Introduce fixed wing low level aerial refueling procedures.

Requirement. Fly low level aerial refueling mission PER TACMAN and AR Manual. EMCON procedures are optional.

Prerequisite. AR-210, LL-220.

LLAR-311 3.0 1 KC-130/OFT/WST A/S N

Goal. Introduce fixed wing low level aerial refueling procedures at night.

Requirement. Fly night low level aerial refueling mission PER TACMAN and AR Manual. EMCON procedures are optional.

Prerequisite. AR-211, LL-221.

LLAR-312 3.0 1 KC-130/OFT/WST A/S

Goal. Introduce low level helicopter refueling procedures.

Requirement. Fly a low level helicopter refueling mission PER TACMAN and AR Manual.

Prerequisite. AR-212, LL-220.

LLAR-313 3.0 1 KC-130/OFT/WST A/S N

Goal. Introduce low level helicopter refueling procedures at night.

Requirement. Fly a low level helicopter refueling mission for proficiency at night PER TACMAN and AR Manual.

Prerequisite. AR-213, LL-221.

2. Formation Aerial Refueling

a. Purpose. Train the flight engineer in overland and overwater multiplane aerial refueling procedures.

b. Flight Training (2 Flights, 16.0 Hours)

OLAR-314 8.0 2 or more KC-130'S A

Goal. Train overland multiplane aerial refueling procedures.

Requirement. Conduct overland multiplane aerial refueling PER NATOPS, TACMAN and AR Manual.

Prerequisite. AR-220, FORM-230.

OWAR-315 8.0 2 or more KC-130's A

Goal. Train overwater multiplane aerial refueling.

Requirement. Conduct overwater multiplane aerial refueling PER NATOPS, TACMAN and AR Manual.

Prerequisite. AR-220, FORM-230, OWICAO-250.

3. Aerial Delivery

a. Purpose. Train the flight engineer in aerial delivery procedures.

b. Flight Training (2 Flights, 6.0 Hours)

AD-340 3.0 1 KC-130 A

Goal. Train short look procedures.

Requirement. Fly day or night low level to aerial delivery PER TACMAN. Introduce low-high-low profile with modified slowdown aerial delivery procedures.

Prerequisite. LL-220, AD-240.

AD-343 3.0 KC-130 A N

Goal. Introduce aerial delivery of illumination flare procedures.

Requirement. Conduct aerial delivery of illumination flares PER TACMAN.

4. Aircraft Survivability Equipment (ASE)

a. Purpose. Train the flight engineer in Aircraft Survivability Equipment/Defensive Tactics.

b. Flight Training (2 Flights, 4.0 Hours)

ASE-360 2.0 1 KC-130 A

Goal. Train the flight engineer duties in the ASE environment.

Requirement. Conduct and train in ASE procedures. Train ground loading procedures, system setup and operation, and operate ASE systems in flight to actually fire flares or chaff, emphasis on evasive flight techniques in coordination with ASE employment. Flight on ASE range preferred.

5. Temporary Landing Zones

a. Purpose. Train the flight engineer in short field operations.

b. Flight Training (2 Flights, 4.0 Hours)

TLZ-370 2.0 1 KC-130 A

Goal. Introduce short field operations.

Requirement. Introduce takeoffs and landings at unimproved airfields PER NATOPS and TACMAN.

Prerequisite. TLZ-270.

TLZ-371 2.0 KC-130 A N

Goal. Introduce night short field operations.

Requirement. Review takeoffs and landings at improved or unimproved airfields at night PER NATOPS and TACMAN.

Prerequisite. TLZ-370.

6. Rapid Ground Refueling

a. Purpose. Train the flight engineer in rapid ground refueling.

b. Flight Training (1 Flight, 2.0 Hours)

RGR-373 2.0 KC-130 S N

Goal. Train night rapid ground refueling.

Requirement. Conduct night rapid ground refueling with actual aircraft engines running PER NATOPS and TACMAN.

Prerequisite. RGR-273.

7. Annual Requalification Check

a. Purpose. Conduct an annual requalification and standardization check.

b. Flight Training (1 Flight, 8.0 Hours)

CK-390 8.0 E 1 KC-130/OFT/WST A/S

Goal. NATOPS annual requalification.

Requirement. NATOPS evaluator/assistant NATOPS instructor shall evaluate the flight engineer for NATOPS procedures. RON is preferred.

Performance Standard. Flight engineer shall meet the standards as set forth in the current KC-130 NATOPS manual for qualification.

844. FULL COMBAT QUALIFICATION TRAINING

1. Low Altitude Tactics (LAT)

a. Introduction. All flight engineers shall be trained and qualified in LAT procedures. Initial training and certification shall be conducted by a flight engineer WTACI. Once designated LAT qualified, flight engineers need only maintain proficiency to fly LAT missions. Low altitude flight currency restrictions contained within T&R Volume 1 do not apply to this crew position.

b. Purpose. Train the flight engineer in low altitude tactics.

c. Flight Training (3 Flights, 7.0 Hours)

LAT-432 2.0 1 KC-130 A

Goal. Introduce low altitude tactics.

Requirement. Introduce terrain masking, ridgeline crossings, and lookout doctrine PER TACMAN.

Prerequisite. LL-220.

LAT-433 2.0 1 KC-130 A

Goal. Refine low altitude tactics.

Requirement. Review terrain masking, ridgeline crossings, and lookout doctrine PER TACMAN. Introduce section LAT.

Prerequisite. LAT-432.

LAT-434 3.0 R 1 KC-130 A

Goal. Qualify the flight engineer in low altitude tactics.

Requirement. Review terrain masking, ridgeline crossings, and lookout doctrine PER TACMAN.

Performance Standard. Performs all required duties during LAT PER NATOPS and KC-130 Tactics Manual.

Prerequisite. LAT-433.

2. Defensive Tactics (DEFTAC)

a. Purpose. Refine the flight engineer duties in Defensive Tactics procedures.

b. Instructor Requirement. DEFTAC shall be instructed by a WTACI.

c. Flight Training (3 Flights, 6.0 Hours)

DEFTAC-460 2.0 1 KC-130 & 1 Adversary A

Goal. Train aircrews in defensive tactics.

Requirement. Introduce defensive maneuvers with emphasis on hard turns, break turns, maneuvering velocity, and lookout doctrine.

Prerequisite. LAT-434.

DEFTAC-461 2.0 1 KC-130 & 1 Adversary A

Goal. Train aircrews in defensive tactics.

Requirement. Refine procedures covered in DEFTAC-460.

Prerequisite. DEFTAC-460.

DEFTAC-462 2.0 1 KC-130, 2 Adversaries A

Goal. Train aircrews in defensive tactics.

Requirement. Refine defensive maneuvering with two adversaries. Emphasis shall be placed on briefing, conduct of flight, and lookout doctrine.

Prerequisite. DEFTAC-461.

850. FLEET READINESS SQUADRON FLIGHT/SIMULATOR INSTRUCTOR

1. FRS INSTRUCTOR UNDER TRAINING

a. Purpose. Standardize the instructor flight engineer procedures for CPT/OFT/WST device operation.

b. General

(1) Emphasis will be placed on standardization and the ability of the flight engineer to instruct normal & emergency procedures per the NATOPS Flight Manual.

(2) Fifteen hundred (1500) flight hours as a qualified flight engineer and FEI designation are required to begin this stage of qualification.

c. Simulator Training (5 Periods, 20.0 Hours)

FAM-500 4.0 E CPT/OFT S

Goal. Familiarize the instructor under training in the proper operation of the device trainers.

Requirement. Instruct IUT on proper set-up and safe operation of device trainer.

FAM-501 4.0 E CPT/OFT S

Goal. Refine device operation.

Requirement. Review FAM-500; IUT will demonstrate proper device operation per current instruction.

FAM-502 4.0 E CPT/OFT S

Goal. Refine device operation.

Requirement. Review FAM-501; combine device operations with instructional techniques.

FAM-503 4.0 E CPT/OFT S

Goal. Refine device operation and instructional techniques.

Requirement. Review FAM-502.

FAM-504 4.0 E CPT/OFT S

Goal. Qualification to operate the device trainer effectively.

Requirement. IUT must demonstrate proper device operation combining instructional technique.

d. Flight Training (1 Flight, 8.0 Hours)

FAM-505 8.0 E 1 KC-130 A

Goal. Standardize instructional techniques.

Requirement. Fly any extended flight. Review current maintenance and normal & emergency procedures per current instructions.

Performance Standard. Upon completion, the IUT will be able to instruct FRS students per current instructions on the device trainer and the KC-130.

Prerequisite. FEI-590

851. INSTRUCTOR QUALIFICATIONS

1. STANDARDIZED INSTRUCTOR QUALIFICATIONS

a. Purpose. Qualify the flight engineer as a Flight Engineer Instructor/NATOPS Evaluator/Assistant NATOPS Instructor/Night Systems Instructor/Weapons and Tactics Aircrew Instructor and standardize the grading criteria for those items to be evaluated.

b. General. Emphasis will be placed on standardization of the grading worksheet, grading criteria and instructor techniques.

c. Prerequisite

(1) A minimum of one thousand (1000) flight hours as a qualified F/R/T flight engineer to become a Flight Engineer Instructor (FEI).

(2) A minimum of fifteen hundred (1500) flight hours as a qualified F/R/T flight engineer and designated FEI to become NATOPS Evaluator/Assistant NATOPS Instructor.

(3) Night Systems Instructor: FEI with additional requirements outlined in the MAWTS-1 Course Catalog.

(4) WTACI: FEI with additional requirements outlined in the MAWTS-1 Course Catalog.

d. Ground Training. FEI-590 requires completion of MAWTS-1 Instructor Training Series ASP.

e. Flight Training (4 Flights, 12.0 Hours)

FEI-590 4.0 E 1 KC-130 A

Goal. Evaluate the flight engineer as a Flight Engineer Instructor.

Requirement. Conduct a Flight Engineer Instructor evaluation.

Performance Standard. The flight engineer shall be able to instruct student flight engineers and flight mechanics on aircraft systems, operations, normal and emergency procedures, and T&R events PER NATOPS and MIMS.

NATOPS-591 4.0 E 1 KC-130 A

Goal. Evaluate the flight engineer as a NATOPS Evaluator or Assistant NATOPS Instructor.

Requirement. Conduct a comprehensive NATOPS Evaluator or Assistant NATOPS Instructor evaluation with emphasis on standardization and grading criteria.

Performance Standard. The flight engineer shall be able to evaluate flight engineers and flight mechanics for standardization with NATOPS procedures and appropriate knowledge of aircraft systems and maintenance procedures.

NSI-593 2.0 E 1 KC-130 A

T&R volume 1 and MAWTS-1 Course catalog are germane.

WTI-594 2.0 E 1 KC-130 A

T&R volume 1 and MAWTS-1 Course catalog are germane.

852. SPECIAL MISSIONS

1. Transportation of Nuclear Weapons

a. Purpose. Qualify aircrews in procedures to properly transport nuclear weapons.

b. General. Must be assigned to the PRP.

c. Flight Training (1 Flight, 4.0 Hours)

CPL-600 4.0 1 KC-130 A

Goal. Train aircrews in the transportation of nuclear weapons.

Requirement. Introduce nuclear weapons loading procedures, restrictions, special safety, and emergency procedures.

2. Night Systems Operations

a. Purpose. Introduce and qualify the flight engineer in Night Systems (NS) operations, or to maintain proficiency for NSQ flight engineers, and to review concepts associated with night visual phenomena.

b. General. The NSQ syllabus consists of (NVG-601, 610, 620, 621, 640, 670). NSQ flight engineers shall be designated by the squadron Commanding Officer.

(1) Prior to receiving initial NSQ in the KC-130, flight engineers shall be CK-290 complete. All ground training shall be completed prior to flight training and NVG-601 shall be completed prior to all other NSQ codes.

(2) Upon completion of the NSQ syllabus the flight engineer need only meet prerequisites and proficiency required of each sortie. If the refly interval is exceeded, the sortie may be reflown with either a current NSQ or NSI flight engineer.

(3) Light level requirements for each sortie are identified in the "requirement" description of each sortie. These light level requirements pertain only to the first time this sortie is flown.

c. Instructor Requirements. Shall be in accordance with T&R Vol 1. Any NSI may instruct the ground portion but a flight engineer NSI is required for all flight training.

d. Ground Training.

(1) NITE lab.

(2) Night Systems Class (developed by MAWTS-1).

3. Night Systems Familiarization

a. Purpose. To familiarize the flight engineer with Night Systems operations.

b. Flight Training (1 Flight, 1.5 Hours)

NVG-601	1.5	1 KC-130	A	N

Goal. Introduce the flight engineer to KC-130 Night Systems and the use of NVG's in the KC-130.

Requirement. High light level conditions. Emphasis will be on donning of the NVG's, taxi procedures, aborts, take-offs, cockpit orientation, landings, aircraft ground reversing operations, aircraft lighting, aircraft night systems, and NVG aircrew coordination.

4. Night Systems Air Refueling

a. Purpose. Provide flight training and qualify the flight engineer in basic night systems air refueling operations and to review concepts associated with night visual phenomena.

c. Flight Training (1 Flight, 1.5 Hours)

NVG-610 1.5 1 KC-130 A N

Goal. Introduce the flight engineer to fixed wing or rotary wing aerial refueling operations utilizing NVG's.

Requirement. Low or high light level conditions. With the student in the seat, conduct a rendezvous with fixed wing or rotary wing receivers and perform refueling emphasizing aircrew coordination, rendezvous and refueling procedures. Rendezvous and refueling altitudes shall be in accordance with T&R Manual, Volume 1, and the NATOPS Air Refueling Manual. Use of EMCON procedures is optional.

Prerequisite. AR-211, NVG-601.

5. Night Systems Low Level Navigation

a. Purpose. Provide flight training and qualify the flight engineer in basic night systems low level navigation operations and to review concepts associated with night visual phenomena.

b. Flight Training (2 Flights, 3.0 Hours)

NVG-620 1.5 1 KC-130 N A

Goal. Conduct a low level navigation route while utilizing the NVG's.

Requirement. High light level conditions. Fly a night low level navigation route of at least 6 checkpoints utilizing NVG's. Altitudes shall be in accordance with T&R volume 1 for NVG accommodation and establishment of comfort level. The student shall be in the flight engineer's seat. Emphasis will be on point to point navigation, crew coordination, and cockpit voice procedures.

Prerequisite. LL-221, NVG-601.

NVG-621 1.5 1 KC-130 A N

Goal. Conduct a low level navigation route in low light level conditions while utilizing the NVG's.

Requirement. Low light level conditions. Fly and debrief a night low level navigation route of at least 6 checkpoints utilizing NVG's. Altitudes shall be in accordance with T&R volume 1 for NVG accommodation and establishment of comfort level. The student shall be in the flight engineer's seat. Emphasis will be on crew coordination and contrast between high and low light level conditions.

Prerequisite. NVG-620

6. Night Systems Low Altitude Tactics

a. Purpose. Introduce, qualify, and train the flight engineer in LAT in the night systems environment.

b. Flight Training (1 Flight, 1.5 Hours)

NVG-622	1.5	1 KC-130 A N

Goal. Conduct LAT while utilizing the NVG's.

Requirement. The flight is to be conducted in two phases. First phase introduces flying at comfort level, terrain masking, ridge line crossings, lookout doctrine, break turns, hard turns, and climb to cope. Second phase to be conducted at comfort level. Practice flying at comfort level, terrain masking, lookout doctrine, and climb to cope. Hard and break turns shall not be flown in this phase of flight.

Prerequisite. Must be NSQ, NSI on board and LAT-434.

7. Night Systems Formation

a. Purpose. Provide flight training and qualify aircrew in basic night systems formation operations and to review concepts associated with night visual phenomena.

b. General. Prerequisite: Must be NSQ, NSI on board and FORM-231.

c. Flight Training (1 Flight, 1.5 Hours)

NVG-630	1.5	1 KC-130 A N

Goal. Introduce the flight engineer to formation flight utilizing NVG's.

Requirement. High or low light level. Fly a formation flight, practicing lead and trail position flying utilizing NVG's.

8. Night Systems Aerial Delivery

a. Purpose. Provide flight training and qualify aircrew in basic night systems aerial delivery operations and to review concepts associated with night visual phenomena.

b. Flight Training (1 Flight, 1.5 Hours)

NVG-640	1.5	1 KC-130 A N

Goal. Train the flight engineer in aerial delivery mission procedures in the NS environment.

Requirement. High or low light level. Conduct an aerial delivery mission using Night Vision Devices NVG's. Utilize a low-high-low profile when possible. Emphasis shall be on checklist employment and crew coordination.

Prerequisite. AD-240, NVG-601; NVG-620 for low-high-low profile.

9. Night Systems Aircraft Survivability Equipment

a. Purpose. Provide flight training and qualify aircrew in basic night systems aircraft systems equipment operations and to review concepts associated with night visual phenomena.

b. Flight Training (1 Flight, 1.5 Hours)

NVG-660	1.5	1 KC-130 A N

Goal. Conduct ASE operations while utilizing NVG's.

Requirement. High or low light level. Flight shall be conducted on a suitable range and either flares, chaff, or both shall be expended in response to a simulated threat. Emphasis shall be on aircrew coordination during the defensive/evasive maneuver phases of flight.

Prerequisite. ASE-360, NVG-601.

10. Night Systems Temporary Landing Zone Operations

a. Purpose. Provide flight training and qualify aircrew in basic night systems temporary landing zone operations and to review concepts associated with night visual phenomena.

b. Flight Training (2 Flights, 3.0 Hours)

NVG-670	1.5	1 KC-130 A N

Goal. Conduct touch and go landings and full stops at a TLZ while utilizing NVG's.

Requirement. High light level. Takeoffs and landings shall be performed with the student in the flight engineer's seat. Emphasis shall be on aircrew coordination during the takeoff and landing phases of flight. A minimum of four touch and goes and one full stop should be performed. The TLZ may be improved or unimproved.

Prerequisite. TLZ-270, NVG-601.

NVG-671	1.5	1 KC-130 A N

Goal. Conduct TLZ landings in low light conditions while utilizing NVG's.

Requirement. Low light level conditions. A minimum of four touch and goes and one full stop should be accomplished. Emphasis shall be on differences in TLZ operations in low light conditions and TLZ operations in high light level conditions.

Prerequisite. NVG-670.

11. Night Systems Qualification Check

a. Purpose. Conduct Night Systems Qualification check.

b. Flight Training (1 Flight, 1.5 Hours)

NSQ-690	1.5	R 1 KC-130 A N

Goal. Qualify the flight engineer as NSQ.

Requirement. Low or high light level conditions. Demonstrate the required skills to conduct KC-130 night operations using NVG's. The flight engineer shall have completed the NSQ syllabus and have flown a minimum of 5 NVG hours in low light level conditions with a NSI prior to flying NSQ-690. The flight engineer to be qualified shall fly a Night Systems sortie. This sortie may be any one of, or a combination of the following: NVG-610, 620, 621, 640, 670.

12. Assisted Take Off

a. Purpose. Train the flight engineer in assisted takeoffs.

c. Flight Training (1 Flight, 0.5 Hour)

ATO-695	0.5	1 KC-130 A

Goal. Introduce assisted takeoffs using JATO.

Requirement. Conduct assisted takeoffs using JATO. Plan for either burnout at liftoff or burnout at 50 feet.

860. EXPENDABLE ORDNANCE REQUIREMENTS. Not applicable.

AIRCRAFT: KC-130 MOS: 6032 CREW POSITION: FLIGHT ENGINEER

STAGE	TRAINING CODE	HRS	REFLY INTERVAL	CRP	T	C	R	E	REMARKS
COMBAT CAPABLE TRAINING									
FAM	115	4.0	*	1.0			X		
	116	4.0	*	1.0			X		
	117	4.0	*	1.0			X		
	118	4.0	*	1.0			X		N
	119	4.0	*	1.0					
	120	4.0	*	1.0					
	121	8.0	*	1.0			X		
	122	8.0	*	1.0			X		
REV	130	4.0	*	1.1		X			
	131	4.0	*	1.2					
	132	4.0	*	1.2					
	133	2.0	*	1.2		X	X		
	134	4.0	*	1.2					
	135	4.0	*	1.2					
	136	4.0	*	1.2					
	137	4.0	*	1.2					
	138	4.0	*	1.2					
	139	4.0	*	1.2					
	140	4.0	*	1.2		X	X		
	141	4.0	*	1.2		X	X		
	142	4.0	*	1.2					
CK	150	4.0	*	5.0				X	
SMGR	160	3.0	*	2.0					
	161	3.0	*	2.0					
SFCF	162	4.0	*	2.0					
	163	4.0	*	2.0					
MGR	164	3.0	*	2.0					
	165	3.0	*	2.0					
MGRCK	166	3.0	*	2.0			X		
FCF	167	2.0	*	2.0			X		
MFAM	170	4.0	*	1.5			X		
	171	4.0	*	1.5			X		
	172	4.0	*	1.5			X		
	173	4.0	*	1.5			X		
	174	4.0	*	1.5			X		
	175	4.0	*	1.5					
	176	4.0	*	1.5			X		
CK	190	8.0	*	5.0			X	X	
COMBAT READY TRAINING									
FE	200	2.0	3	1.0					
	201	2.0	3	1.0					N
AR	210	4.0	6	1.0					
	211	4.0	12	1.0					N
	212	4.0	6	1.0					
	213	4.0	12	1.0					N
LL	220	2.0	12	1.0					
	221	3.0	12	1.0					N
FORM	230	3.0	12	1.0					2 A/C
	231	3.0	12	1.0					2 A/C N

Figure 8-2 MOS 6032 Refly Interval, Combat Readiness Percentage.

AIRCRAFT: KC-130 MOS: 6032 CREW POSITION: FLIGHT ENGINEER

STAGE	TRAINING CODE	HRS	REFLY INTERVAL	CRP	T	C	R	E	REMARKS
AD	240	3.0	12	1.0					
OWICAO	250	8.0	12	1.0					
TLZ	270	3.0	12	1.0					
RGR	273	2.0	12	1.0					
FCF	280	2.0	12	1.0					
CK	290	8.0	*	0.0			X	X	
COMBAT QUALIFICATION TRAINING									
LLAR	310	3.0	6	1.0					
	311	3.0	12	1.0					N
	312	3.0	6	1.0					
	313	3.0	12	1.0					N
OLAR	314	8.0	12	2.0					2+ A/C
	315	8.0	12	2.0					2+ A/C
AD	340	3.0	12	2.0					
	343	3.0	12	1.0					N
ASE	360	2.0	12	1.0					
TLZ	370	2.0	12	2.0					
	371	2.0	12	2.0					N
RGR	373	2.0	12	2.0					
CK	390	8.0	12	2.0			X	X	
FULL-COMBAT QUALIFICATION TRAINING									
LAT	432	2.0	12	1.0					
	433	2.0	12	1.0					2 A/C
	434	3.0	12	1.0					
DEFTAC	460	2.0	12	0.5					
	461	2.0	12	0.5					
	462	2.0	12	1.0					2 A/C
INSTRUCTOR QUALIFICATION TRAINING									
FAM	505	8.0	*	0.0				X	
FEI	590	4.0	*	0.0				X	
NATOPS	591	4.0	*	0.0				X	
NSI	593	4.0	*	0.0				X	N
WTI	594	2.0	*	0.0				X	
SPECIAL TRACKING SORTIES									
CPL	600	4.0	*	0.0					
NVG	601	1.5	12	0.0					N
	610	1.5	12	0.0					N
	620	1.5	12	0.0					N
	621	1.5	12	0.0					N
	622	1.5	12	0.0					N
	630	1.5	12	0.0					N
	640	1.5	12	0.0					N
	660	1.5	12	0.0					N
	670	1.5	12	0.0					N

Figure 8-2.--MOS 6032 Refly Interval, Combat Readiness Percentage.

AIRCRAFT: KC-130 MOS: 6032 CREW POSITION: FLIGHT ENGINEER

STAGE	TRAINING CODE	REFLY HRS	INTERVAL	CRP	T	C	R	E	REMARKS
NVG	671	1.5	12	0.0					N
NSI	690	1.5	12	0.0			X	X	N
ATO	695	0.5	12	0.0					

Figure 8-2.--MOS 6032 Refly Interval, Combat Readiness Percentage.

MOS 6032 FLIGHT UPDATE CHAINING

FLIGHT	FLIGHTS UPDATED
200	
201	200
210	200
211	200,201,210
212	200
213	200,201,212
220	200
221	200,201,220
230	200
231	200,201,230
240	200
250	200
270	200
273	200
280	200
290	200
310	200,210,220
311	200,201,210,211,220,221,310
312	200,212,220
313	200,201,212,213,220,221,312
314	200,210,230
315	200,201,230,250,314
340	200,201,220,240
343	200,201,240,340
360	200
370	200,270
371	200,201,270,370
373	200,201,273
390	200,290
432	200,220
433	200,220,432
434	200,220,432,433
460	200
461	200,460
462	200,460,461
505	
590	
591	
593	
594	

Figure 8-3.--MOS 6032 FLIGHT CHAINING

MOS 6032 FLIGHT UPDATE CHAINING

FLIGHT	FLIGHTS UPDATED
600	200
601	200,201
610	601,200,201,210,211,212,213
620	601,200,201,220,221
621	601,620,200,201,220,221
622	601,620,200,201,220,221,432,433,434
630	601,200,201,230,231
640	601,200,201,240,340
660	601,200,201,360
670	601,200,201,270,370,371
671	601,670,200,201,270,370,371
690	
695	200

Figure 8-3.--MOS 6032 FLIGHT CHAINING (continued)

CHAPTER 9

KC-130 AIRBORNE RADIO OPERATOR (ARO) LOADMASTER (LM)

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9-2 MOS 7300/7382 FLIGHT UPDATE CHAINING 9-44

*** * NOTE * ***

Aircrew coordination shall be briefed for all flights and events.

MARINE AERIAL REFUELING SQUADRON - KC-130
UNIT TEMPLATE

The capabilities defined and described in the core capability and unit template sections are provided to ensure each like squadron maintains a common base of training and depth of capabilities. When resources permit, and when in the judgment of the commander additional training would significantly increase the unit's Warfighting capability, training to a level above these base Capabilities is permitted. It is incumbent upon, and expected of, the Commander to balance any increase in the depth of core capabilities Against the long term health and readiness of his unit while staying Within his resource constraints.

1. TABLE OF ORGANIZATION

PAA-12 A/C: 26 TPC/16 T2P or T3P/23 NAV/25 F ENG/24 LOADM/24 F MECH

2. SQUADRON CORE CAPABILITY

a. A core capable squadron is able to sustain the following minimum performance on a daily basis during sustained contingency/combat operations, assuming 100% PAA, 90% in reporting status and 90% T/O on hand in all MOS's. If < 90%, core capability will be degraded by a like percentage. The extent to which a core capable squadron is able to surge beyond its core capability is situation dependent.

b. A core capable squadron is able to sortie two divisions (-) of mission capable aerial refueling aircraft and within four hours of landing, sortie two more sections or sortie three sections of mission capable assault support aircraft and within four hours of landing, sortie two more sections. Perform the above from either a main base location or appropriate sized expeditionary airfield. All aircraft are capable of aerial and rapid ground refueling, assault support and two platforms being DE/IRCM equipped.

3. **BASIC AIRCREW QUALIFICATIONS**. As a minimum, in order to be considered Core Competent, a squadron must possess the following numbers of aircrew who are at least 75% complete in each listed core skill.

CORE SKILL	CREWS	REMARKS
RW/FW AR	12	
RGR	8	
ERO/COL	8	
AD	6	
CPL	12	
OVERWATER	12	
LOW LEVEL	6	

4. **REQUIRED CORE SKILLS AND SORTIES**

	RW/FW AR	RGR	ERO/COL	AD	CPL	OVERWTR	LL NAV
1st TOUR	8	3	2	2	9	6	1
2nd TOUR	3	2	2	1	4	1	1
T&R CODES *=2nd TOUR	110,111, 112,113, 114,210* 211*212*	170,272* 273*	270*271*	140,240*	100,101, 102,103, 104,200* 201*202* 203*	150,151, 152,153, 154,250*	220*

5. **SORTIES REQUIRED TO MAINTAIN CORE SKILLS**. For each twelve month period after achieving competency, a Aro/iro/lm would be required to fly the following number of sorties in each skill area to maintain that competency.

	RW/FW AR	RGR	ERO/COL	AD	CPL	OVERWATER	LOW LEVEL
AIRCREW	1	1	2	1	1	1	1

6. **INSTRUCTOR QUALIFICATIONS**. As a minimum, in order for a squadron to be considered Core Competent, it must possess the following numbers of aircrew in the listed flight leadership/ instructor categories. (Note: If the squadron is < T/O, required numbers are reduced by a like %).

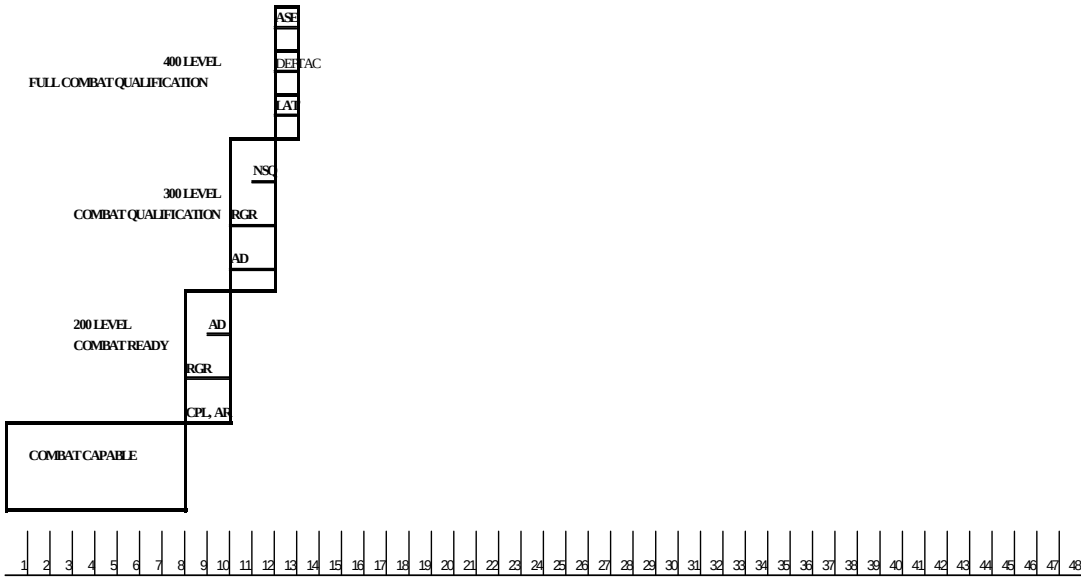
DESCRIPTION	CORE MINIMUM	REMARKS
TPC	16	
SEC LDR	8	
DIV LDR	6	
LATI	4	
ANI/INSTI	4	PER CREW POSITION
WTI/WTACI	2	PER CREW POSITION
RAC		
DEFTAC I		
NSI	2	PER CREW POSITION
FCF	12	

7. **SORTIES REQUIRED TO QUALIFY FOR DESIGNATION AS FLIGHT LD/IP**

	MSN CDR	DIV LDR	SEC LDR	LATI	DEFTACI
SORTIES					
T&R CODES					

	NSI	WTACI
SORTIES	10	1
T&R CODES	380,381, 382,383, 384,385, 386,390, 480,481	594

KC-130 LOADMASTER/ARO CORE PROGRESSION MODEL



900. PROGRAMS OF INSTRUCTION (POI) FOR BASIC ARO/IRO/LM

WEEKS	COURSE/PHASE	ACTIVITY
1-4	Basic Aircraft Loadmaster	189th Airlift Grp/LRAFB
5-11	Loadmaster Initial Qualification	34th TATG LRAFB
12-18	Loadmaster Mission Qualification	34th TATG LRAFB
19-33	Combat Capable Training	Training Squadron
	(Weeks 19-22 ARO/IRO/LM Ground Training)	
	(Weeks 23-33 ARO/IRO/LM Flight Training)	
34-39	Combat Ready Training	Tactical Squadron
40-49	Combat Qualification Training	Tactical Squadron
50-54	Full-Combat Qualification Training	Tactical Squadron

901. POI FOR TRANSITION ARO/IRO/LM. Not applicable for this syllabus.

902. POI FOR CONVERSION ARO/IRO/LM

WEEKS	COURSE/PHASE	ACTIVITY
1-7	Loadmaster Mission Qualification	34th TATG LRAFB
8-21	Combat Capable Training	Training Squadron
	(Weeks 8-11 ARO/IRO/LM Ground Training)	
	(Weeks 12-21 ARO/IRO/LM Flight Training)	
22-27	Combat Ready Training	Tactical Squadron
28-35	Combat Qualification Training	Tactical Squadron
36-39	Full-Combat Qualification Training	Tactical Squadron

903. POI FOR REFRESHER ARO/IRO/LM

WEEKS	COURSE/PHASE	ACTIVITY
1	Ground Training	Tactical Squadron
2-9	Combat Capable Training	Tactical Squadron
10-17	Combat Ready Training	Tactical Squadron
18-21	Combat Qualification Training	Tactical Squadron
21-23	Full-Combat Qualification Training	Tactical Squadron

904. POI FOR INSTRUCTOR UNDER TRAINING (IUT)

WEEKS	COURSE/PHASE	ACTIVITY
1	Standardization Briefings/ Instructor Check Flight	Tactical Squadron
1	Standardization Briefings/ NATOPS Instructor Check Flight	Tactical Squadron

WEEKS	COURSE/PHASE	ACTIVITY
2	Night Systems Instructor/ NSI Certification Flight	MAWTS-1/Tactical Squadron
5	Weapons and Tactics Aircrew/ WATCI Certification Flight	MAWTS-1

910. GROUND TRAINING COURSES OF INSTRUCTION

COURSE/PHASE	ACTIVITY
Air Crewmember Candidate School	NAS Pensacola
SERE School	NAS Brnswck/NAS No Is
Air Transportation of Hazardous Cargo School	Regional Activity
A/A32H-4A Dual Rail Maintenance School	Regional Activity
Special Weapons Loading School	AWTU
AATTC	St Joseph, MO
Record of Weight and Balance (1B-40)	Regional Activity

912. LOAD SIMULATOR TRAINING (LST)

Aircraft Loading Equipment
Aircraft Limitations and Dimensions
Aircraft Configurations
Aircraft On-Load/Off-Load Procedures
Load Tiedown Procedures
A/A32H-4A Cargo Handling System and Pallet Loading Procedures
Aeromedical Evacuation Configuration and Procedures
DASC System Configuration and Loading
Rapid Ground Refueling Systems, Procedures, and Safety
Load Staging and Weight and Balance Planning

913. SQUADRON LEVEL TRAINING

Orientation
Emergency Procedures and Equipment
Survival Equipment and Techniques
Communication Equipment, Procedures, and Duties
Loadmaster Equipment, Procedures, and Duties
Air Transportation of Hazardous Cargo
Limitations, Weight and Balance Planning
Aerial Refueling Observer Duties
Aerial Delivery Systems, Procedures, Duties and Safety
Flare Delivery System, Procedures, and Safety
Rapid Ground Refueling Systems, Procedures, and Safety
Embarking Unit Coordinator, Load Staging and Movement Control
DASC System Configuration
Maintenance of Weight and Balance Publications and Records
NATOPS Open and Closed Book Examinations

920. FLIGHT TRAINING: BASIC LOADMASTER

1. Combat Capable Training

STAGE	FLIGHTS	HOURS	PERCENT
Basic Qualification	11	55.0	30.0
Cargo Passenger Loading	0	0	7.0
Aerial Refueling	5	10.0	5.0
Familiarization	3	12.0	4.0
Overwater	5	30.0	5.5
Rapid Ground Refueling Familiarization	0	0.0	0.5
Aerial Delivery	1	1.0	0.5
Basic Qualification Check Flight	1	4.0	7.5
	26	112.0	60.0

2. Combat Ready Training

STAGE	FLIGHTS	HOURS	PERCENT
Cargo and PAX Loading	4	8.0	4.0
Aerial Refueling	3	6.0	2.0
Low Level Navigation	1	1.0	1.0
Aerial Delivery	1	1.0	1.0
Over Water	1	6.0	1.0
Engine Running Off-Load	0	0.0	1.0
Combat Offload	0	0.0	1.0
Rapid Ground Refueling	0	0.0	2.0
Combat Ready Check Flight	1	4.0	2.0
	11	26.0	15.0

3. Combat Qualification Training

STAGE	FLIGHTS	HOURS	PERCENT
Aerial Delivery	4	4.0	5.5
Flare Delivery	1	3.0	2.0
Rapid Ground Refueling	0	0.0	2.0
Night Systems	4	17.0	10.5
	9	24.0	20.0

4. Full-Combat Qualification Training

STAGE	FLIGHTS	HOURS	PERCENT
Low Altitude Tactics	1	1.0	1.0
Aircraft Survivability Equipment	1	1.0	1.0
Defensive Tactics	1	1.0	1.0
Night Systems Qualification	2	4.0	2.0
	5	7.0	5.0
TOTAL	**51**	**169.0**	**100.0**

921. CONVERSION LOADMASTER

1. Combat Capable Training

STAGE	FLIGHTS	HOURS	PERCENT
Basic Qualification	11	55.0	30.0
Cargo Passenger Loading	0	0	7.0
Aerial Refueling	5	10.0	5.0
Familiarization	3	12.0	4.0
Over Water	5	30.0	5.5
Rapid Ground Refueling Familiarization	0	0.0	0.5
Aerial Delivery	1	1.0	0.5
Basic Qualification Check Flight	1	4.0	7.5
	26	112.0	60.0

2. Combat Ready Training

STAGE	FLIGHTS	HOURS	PERCENT
Cargo and PAX Loading	4	8.0	4.0
Aerial Refueling	3	6.0	2.0

STAGE	FLIGHTS	HOURS	PERCENT
Low Level Navigation	1	1.0	1.0
Aerial Delivery	1	1.0	1.0
Over Water	1	6.0	1.0
Engine Running Off-Load	0	0.0	1.0
Combat Offload	0	0.0	1.0
Rapid Ground Refueling	0	0.0	2.0
Combat Ready Check Flight	1	4.0	2.0
	11	26.0	15.0

3. Combat Qualification Training

STAGE	FLIGHTS	HOURS	PERCENT
Aerial Delivery	4	4.0	5.5
Flare Delivery	1	3.0	2.0
Rapid Ground Refueling	0	0.0	2.0
Night Systems	4	17.0	10.5
	9	24.0	20.0

4. Full-Combat Qualification Training

STAGE	FLIGHTS	HOURS	PERCENT
Low Altitude Tactics	1	1.0	1.0
Aircraft Survivability Equipment	1	1.0	1.0
Defensive Tactics	1	1.0	1.0
Night Systems Qualification	2	4.0	2.0
	5	7.0	5.0
TOTAL	**51**	**169.0**	**100.0**

922. REFRESHER LOADMASTER

1. Combat Ready Training

STAGE	FLIGHTS	HOURS
Cargo and PAX Loading	4	8.0
Aerial Refueling	3	6.0
Aerial Delivery	1	1.0
Over Water	1	6.0
Engine Running Off-Load	1	0.0
Combat Offload	1	0.0
Rapid Ground Refueling	2	0.0
Low Level Navigation	1	1.0
Check	1	4.0
Total	15	26.0

2. Combat Qualification Training

STAGE	FLIGHTS	HOURS
Aerial Delivery	4	4.0
Flare Delivery	1	3.0
Rapid Ground Refueling	0	0.0
Night Systems	4	17.0
	9	24.0

3. Full-Combat Qualification Training

STAGE	FLIGHTS	HOURS
Low Altitude Tactics	1	1.0
Aircraft Survivability Equipment	1	1.0
Defensive Tactics	1	1.0
Night Systems Qualification	2	4.0
	5	7.0
TOTAL	**29**	**57.0**

NOTE: * Indicates estimated flight hours required to completion.

923. IUT

STAGE	FLIGHTS	HOURS
ARO/ARO/IRO/LM Instructor Check Flight	1	4.0
NATOPS Instructor Check Flight	1	4.0
WTACI Build-up and Certification Flights	1	2.0
NSI Build-up and Certification Flights	1	2.0
TOTAL	**4**	**12.0**

930. LOAD SIMULATOR TRAINING (LST)

1. Cargo and Passenger Loading

a. Purpose. Introduce the ARO/IRO/LM student to all duties as a Marine ARO/IRO/LM on KC-130 cargo and passenger flights. At the end of this phase of instruction the student will demonstrate the ability to:

(1) Preflight and configure an aircraft per mission requirements for flights involving passengers and/or cargo.

(2) Determine available seating and/or cargo space for load planning purposes.

(3) Plan cargo and/or passenger loading to conform with all aircraft and safety limitations PER NAVAIR GAA-9 and NAVAIR 01-75GAA and GAG-1.

(4) Utilize all KC-130 loading aids conforming to the limitations, installations, and usage of each PER NAVAIR 01-75GAA-9.

(5) Safely load and off-load cargo per NAVAIR 01-75GAA-9.

(6) Compute weight and balance for a simulated flight transporting a passenger/cargo payload.

(7) Safely inspect, handle, and transport cargo certified as hazardous material per MCO P4030.19.

(8) Post flight aircraft and perform minor repairs as necessary to return cargo compartment to full operational readiness.

b. General. All qualified instructors may instruct during this phase of training.

c. Ground Training (5 Events, 1.0 Hours)

CPL-100 0.0 LST/1 KC-130 S

Goal. Evaluate the ARO/IRO/LM student's ability to load passengers and baggage on a tanker configured aircraft.

Requirement. The student, under the direct supervision of a qualified instructor, will configure a tanker aircraft for a flight transporting the maximum permitted number of passengers and baggage. The student will demonstrate the installation of centerline & sidewall seats and seat spacing configurations. Special emphasis will be placed on maximum loads for overland & over water flights, maximum ramp loads, baggage staging & handling, loading & tie down procedures, and accurate passenger manifesting. A DD Form 365-4 will be prepared by the student with the emphasis placed on accuracy in the take-off & landing conditions, limitations, zero fuel weight, and center of gravity sections. Inflight cargo jettison procedures will be thoroughly explained by the student.

CPL-101 0.0 LST/1 KC-130 S

Goal. Evaluate the ARO/IRO/LM student's ability to load passengers and baggage on a tanker configured aircraft.

Requirement. The student, under the direct supervision of a qualified instructor, will configure an aircraft for a flight transporting passengers and cargo on a tanker configured aircraft with fuselage tank fuel. Emphasis will be placed on preflight inspection and utilization of loading equipment. A DD Form 365-4 will be prepared by the student with the emphasis placed on accuracy in the take-off & landing conditions, limitations, and center of gravity sections. Inflight cargo jettison procedures and the use of the zero fuel weight limitations chart will be thoroughly explained by the student.

CPL-102 0.0 LST/1 KC-130 S

Goal. Evaluate the ARO/IRO/LM student's ability to load palletized cargo and rolling stock on a dual rail equipped aircraft.

Requirement. The student, under the direct supervision of a qualified instructor, will configure an aircraft equipped with dual rails for a flight transporting palletized cargo and rolling stock. Special emphasis will be placed on preflight inspection & operation of the dual rail system, installation & removal of the roller conveyer sections, winch operation, and utilization of a forklift as the primary loading vehicle. A DD Form 365-4 will be prepared by the student with the emphasis placed on accuracy in the take-off & landing conditions, limitations, zero fuel weight, and center of gravity sections. Inflight cargo jettison procedures will be thoroughly explained by the student.

CPL-103 0.0 LST/1 KC-130 S

Goal. Evaluate the ARO/IRO/LM student's ability to load hazardous cargo on a dual rail equipped aircraft.

Requirement. The student, under the direct supervision of a qualified instructor, will conduct an aircraft preflight and configure an aircraft equipped with dual rails for a flight transporting hazardous and general palletized cargo and rolling stock. The student will inspect the load for acceptability for air transportation, including: condition of load, certification of hazardous cargo, compatibility of hazardous cargo and compliance with MCO P4030.19. After inspection, the student will prepare and present a load plan demonstrating consideration for separation of noncompatible hazardous cargo, accessibility of tie down points, and ease of loading and off-loading. This load will include mixed cargo to ensure maximum utilization of all loading aids and include cargo that will encourage the student to consider varying dimensions/ limitations. A DD Form 365-4 will be prepared by the student with the emphasis placed on accuracy in the take-off & landing conditions, limitations, zero fuel weight, and center of gravity sections. Inflight cargo jettison procedures will be thoroughly explained by the student.

CPL-104 0.0 E LST/1 KC-130 S

Goal. Phase check.

Requirement. The student, under the direct supervision of a qualified instructor, will plan, stage and load a cargo frame configured aircraft within a 90 minute time limit. The utilization of a load planning sheet is not authorized. The load will consist of passengers and cargo requiring 80 percent of the cargo area to be used. Special emphasis will be placed on preflight inspection and removal of the roller conveyer sections, winch operation, and utilization of loading equipment. A DD Form 365-4 will be prepared by the student with emphasis placed on accuracy in the take-off & landing condition, limitations, zero fuel weight, and center of gravity sections. Inflight cargo jettison procedures will be thoroughly explained by the student.

Prerequisite. All codes in this phase of instruction must be successfully completed prior to this event.

940. FLIGHT/SIMULATOR PERFORMANCE REQUIREMENTS

1. General

a. A combat ready ARO/IRO/LM shall be defined as a graduate of the ARO/IRO/LM School. The combat ready ARO/IRO/LM will be qualified to perform the basic ARO/IRO/LM duties for the following missions: fixed-wing aerial refueling, HF communication procedures, cargo or passenger loading, and aerial delivery.

b. A Conversion ARO/IRO/LM shall be defined as a loadmaster who has served in another model of aircraft within type and is being assigned to a tactical KC-130 squadron for duty for the first time.

All Conversion ARO/IRO/LM must successfully complete the ARO/IRO/LM school and subsequently designated as a 7382.

c. A Refresher ARO/IRO/LM shall be defined as a graduate of the ARO/IRO/LM school, having previously served as an ARO/IRO/LM with a tactical KC-130 squadron and has been assigned to other duty preventing tactical currency.

d. Basic ARO/IRO/LM's will complete all stages of training. Conversion ARO/IRO/LM's will complete the basic ARO/IRO/LM course of instruction and all flights indicated with a "C". Refresher ARO/IRO/LM's will complete flights indicated with an "R".

2. Aircrew Coordination. Aircrew coordination shall be briefed for all flights and/or events.

941. COMBAT CAPABLE TRAINING

1. Aerial Refueling

a. Purpose. Train the ARO/IRO/LM student to perform the duties of an inflight refueling observer. At the end of this phase of training the student will be able to:

(1) Preflight the aircraft PER specific mission requirements.

(2) Compute and file an accurate weight and balance form for a tanker configured aircraft.

(3) Perform duties as an inflight refueling observer during hose checks, correctly identifying the status of the system's operation, and coordinating this status with the Flight Engineer.

(4) Perform duties as an inflight refueling observer during refueling operations, correctly informing the Plane Commander and Flight Engineer of the status of the refueling system & receiver aircraft.

(5)Keep accurate records of the refueling evolution for turn-in to the operations department.

(6) Correctly perform all related emergency procedures as necessary.

b. General. All qualified ARO/IRO/LM school instructors may instruct this phase of training.

c. Ground Training. The student will have successfully completed the academic training conducted at the ARO/IRO/LM school.

d. Flight Training (5 Flights, 10.0 Hours)

AR-110	2.0	C 1 KC-130 A

Goal. Introduce the ARO/IRO/LM student to the duties of an inflight refueling observer during a day aerial refueling mission.

Requirement. The student, under the direct supervision of a qualified instructor, will complete and file a DD Form 365-4, conduct an aircraft preflight for a Aerial Refueling mission. The student will observe a qualified inflight refueling observer during a day Aerial Refueling mission. The student will keep separate records for comparison at the end of the flight. This flight should involve refueling multiple aircraft. The student should observe from both sides of the aircraft and monitor the ICS and all radio transmissions during the entire evolution. The student will demonstrate a thorough understanding of all aerial refueling terminology.

AR-111 2.0 C 1 KC-130 A

Goal. Continue instruction in the duties of an inflight refueling observer during a day fixed-wing aerial refueling mission.

Requirement. The student, under the supervision of a qualified instructor, will complete and file a DD Form 365-4, conduct an aircraft preflight for a fixed-wing aerial refueling mission, and perform the duties of an inflight refueling observer during a day fixed-wing aerial refueling mission. The student will keep separate records for comparison at the end of the flight. This flight should involve refueling multiple aircraft. The student should observe from both sides of the aircraft and monitor the ICS & all radio transmissions during the entire evolution. The student will demonstrate a thorough understanding of all tactical fixed-wing aerial refueling terminology.

Prerequisite. AR-110 must be completed prior to this flight.

HAR-112 2.0 C 1 KC-130 A

Goal. Introduce the ARO/IRO/LM student to the duties of an inflight refueling observer during a day Helo aerial refueling mission.

Requirement. The student will complete and file a DD Form 365-4, conduct an aircraft preflight for a Helo Aerial Refueling mission, and observe a qualified inflight refueling observer during a day helicopter aerial refueling mission. The student will keep separate records for comparison at the end of the flight. This flight should involve refueling multiple aircraft. The student should observe from both sides of the aircraft and monitor the ICS & all radio transmissions during the entire evolution. The student will demonstrate a thorough understanding of all Helo Aerial Refueling terminology.

AR-113 2.0 C 1 KC-130 A

Goal. Continue instruction of the duties of an inflight refueling observer during a day aerial refueling mission.

Requirement. The student, under the limited supervision of a qualified instructor, will complete and file a DD Form 365-4, conduct an aircraft preflight for a Aerial Refueling mission. The student will observe a qualified inflight refueling observer during a day Aerial Refueling mission. The student will keep separate records for comparison at the end of the flight. This flight should involve refueling multiple aircraft. The student should observe from both sides of the aircraft and monitor the ICS and all radio transmissions during the entire evolution. The student will demonstrate a thorough understanding of all aerial refueling terminology.

Prerequisite. AR-112 must be completed prior to this flight.

AR-114 2.0 C E 1 KC-130 A

Goal. Phase check.

Requirement. The ARO/IRO/LM student will perform the duties of an inflight refueling observer during a day aerial refueling mission. Emphasis will be placed on correct terminology, safety, emergency procedures, ICS, discipline, and crew coordination during all phases of the flight.

Prerequisite. All flights in this phase of instruction must be accomplished prior to this flight.

Performance Standard. This flight evaluation will be conducted PER NATOPS and the NAVAIR 00-80T-110.

2. Familiarization

a. Purpose. Train the ARO/IRO/LM student to perform the basic NATOPS flight crew requirements, aircraft preflight preparation, cargo loading equipment use and storage, aircraft limitations and dimensions, location and use of emergency equipment, ground and inflight emergency procedures, and aircraft postflight procedures. Instructions will be provided to the student demonstrating the location/conduct of the aircrew mission brief, the proper filing of the weight and balance form, DD Form 365-4, and galley preparations for a flight. At the end of this stage of training the student will be able to:

(1) Participate in an aircrew mission brief, determine the special needs for the flight, and plan an aircraft configuration accordingly.

(2) Coordinate with other crewmembers to ensure safe and timely conduct of the flight.

(3) Conduct a proper preflight inspection of the aircraft, identifying and correcting any discrepancies, and noting location/weights of equipment for the completion of DD Form 365-4.

(4) Properly configure the aircraft PER aircrew mission brief and mission requirements.

(5) Properly compute a DD Form 365-4 with special emphasis placed on accuracy of fuel distribution and amount, aircrew position within the aircraft, computation for emergency and extra equipment, and cargo/passenger load.

(6) Demonstrate a thorough knowledge of the ICS system, ICS operation, and circuit discipline.

(7) Demonstrate the proper responses and perform all duties required during an inflight emergency PER section V of NATOPS.

(8) Conduct a proper aircraft post flight.

(9) Properly complete and file all related paperwork.

b. General. All qualified ARO/IRO/LM school instructors may instruct during this phase of training.

c. Ground Training. Prior to FAM-117 (phase check) the student will have completed academic training at the ARO/IRO/LM school.

d. Flight Training (3 Flights, 12.0 Hours)

FAM-115 4.0 C 1 KC-130 A

Goal. Introduce the ARO/IRO/LM student to standard NATOPS procedures, duties and responsibilities during normal operations, to include inflight and ground emergencies.

Requirement. The student will demonstrate a thorough knowledge of all cargo compartment limitations to include; treadway limitations, deck limitations, tie down restraint criteria & formulas, pallet position limits, ramp limitations, maximum seating configurations, PSI limits, shoring requirements, cargo compartment height & width limitations, and the use of all applicable loading charts. The student will demonstrate the NATOPS procedures for ground evacuation, bailout, and inflight door open warning. Additionally, under the direct supervision of a qualified instructor, the student will observe and perform the following:

(1) Attend the pilot/aircrew brief.

(2) Check the aircraft maintenance log for pertinent entries.

(3) Conduct a standard aircraft preflight.

(4) Complete and file a DD Form 365-4.

(5) Demonstrate the use of all emergency equipment.

(6) Handle simulated emergency procedures per NATOPS.

(7) Locate and operate the applicable ICS system.

(8) Demonstrate takeoff/landing procedures and responsibilities.

(9) Conduct a standard aircraft post flight.

(10) Demonstrate emergency and manual extension of the main and nose landing gear.

(11) Demonstrate main landing gear tie down procedures for tanker and cargo configured aircraft.

FAM-116 4.0 C 1 KC-130 A

Goal. Continue instructions on standard NATOPS procedures, duties, and responsibilities during normal operations to include inflight and ground emergencies.

Requirement. The student, under the direct supervision of a qualified instructor, will brief and prepare for a standard flight. A thorough knowledge for the use of all cargo loading aids will be demonstrated by the student. Additionally, the student will demonstrate the NATOPS procedures for fuselage fire, smoke and fume elimination, rapid decompression, and flap system failure. The student will prepare the aircraft for (simulated) cargo jettison.

Prerequisite. FAM-115 must be completed prior to this flight.

FAM-117 4.0 C E 1 KC-130 A

Goal. Phase check.

Requirement. The student, under the direct supervision of a qualified instructor, will perform the immediate action steps (* indicated items) for the following emergencies:

(1) Ground evacuation.

(2) Bailout.

(3) Inflight door open warning.

(4) Fuselage fire.

(5) Smoke and fume elimination.

(6) Rapid decompression.

Prerequisite. FAM-116 must be completed prior to this flight.

Performance Standard. This flight evaluation will be conducted PER NATOPS.

3. Aerial Delivery

a. Purpose. Introduce the ARO/IRO/LM to airdrop checklist procedures, rigging and crew responsibilities for an aerial delivery mission.

b. General. This training will be conducted by an ARO/IRO/LM school instructor.

c. Ground Training. Prior to flight training, instruction and a demonstration of rigging PER NAVAIR 01-75GAA-9 shall be conducted. In addition the General Aerial Delivery Preparation lesson from the MAWTS-1 ASP shall be presented.

d. Flight Training (1 Flight, 1.0 Hour)

AD-140 1.0 C 1 KC-130 A

Goal. Introduce the student to the procedures for an aerial delivery mission.

Requirement. The student will perform the brief, aircraft rigging and load deployment. In addition, all emergency procedures for this mission will be discussed in detail. Personnel static line AD is required to complete this code.

4. Over Water HF Communication

a. Purpose. Train the ARO/IRO/LM student in HF communication equipment operation, procedures, relaying agencies, frequency selection, and ARO/IRO/LM responsibilities during over water flights. Specifically at the completion of this phase of instruction the student will be able to:

(1) Conduct an operational check of aircraft HF communication equipment.

(2) Troubleshoot and perform minor maintenance on HF equipment.

(3) Prepare an aircraft for an over water flight in respect to emergency equipment requirements.

(4) Correctly operate all HF communication equipment.

(5) Select a frequency based on time of day and distance to the controlling agency.

(6) Conduct over water HF communications including initial contact reports, compulsory enroute position reports, position report revisions, phone patches through USAF GCCS stations, be able to relay traffic to or from other aircraft, obtain and/or request inflight clearances, and prepare an enroute distress message for transmission.

(7) Identify and monitor published guard channels on applicable radios.

(8) Correctly react to a ditching situation.

b. General. All qualified ARO/IRO/LM school instructors may instruct during this phase of training.

c. Ground Training. Prior to this phase of instruction the student will have completed the academic training at the ARO/IRO/LM school.

d. Flight Training (5 Flights 30.0 Hours)

OW-150 6.0 C 1 KC-130 A

Goal. Introduce the student to HF equipment and procedures, troubleshooting and repairs, initial contact and compulsory position reports, phone patches, distress messages, guard monitoring, and over water crew coordination.

Requirement. The student, under the direct supervision of a qualified instructor, will compute/file a DD Form 365-4, conduct an appropriate aircraft preflight, and conduct an operational check of all HF communication equipment. The student will observe and monitor the HF transmission of an initial contact report, enroute position reports, position report revisions, clearance copying, preparation of a distress message, and the preparation of all flight related documentation. Additionally the student will receive instructions on the proper response to a simulated ditching and a simulated over water bailout drill.

OW-151 6.0 C 1 KC-130 A

Goal. Continue instructions on over water HF communication procedures and equipment.

Requirement. The student, under the direct supervision of a qualified instructor, will compute/file a DD Form 365-4, conduct an appropriate aircraft preflight, conduct an operational check of all HF communication equipment, perform the HF transmission of an initial contact report, enroute position reports, position report revisions, clearance copying, preparation of a distress message, and the preparation of all flight related documentation. The student will properly respond to a simulated ditching and a simulated over water bailout drill. Additionally, the student will receive instruction on lost HF communication procedures and ditching duties on flights involving passengers.

Prerequisite. OW-150 must be completed prior to this flight.

OW-152 6.0 C 1 KC-130 A

Goal. Continue instructions on over water HF communication procedures and equipment.

Requirement. The student, under the supervision of a qualified instructor, will compute/file a DD Form 365-4, conduct an appropriate aircraft preflight, conduct an operational check of all HF communication equipment, perform the HF transmission of an initial contact report, enroute position reports, position report revisions, clearance copying, preparation of a distress message, and the preparation of all flight related documentation. The student will perform these duties without any pre-guidance from the instructor. The student will employ the concepts of crew coordination in the accomplishment of his assigned tasks. The student will properly respond to simulated lost HF communication procedures and ditching duties on flights involving passengers. Additionally, the student will receive instruction on ditching duties on flights involving cargo (cargo jettison).

Prerequisite. OW-151 must be completed prior to this flight.

OW-153 6.0 C 1 KC-130 A

Goal. Review all instructions on over water HF communication procedures and equipment.

Requirement. The student will conduct the entire sortie with minimum instructor assistance and/or supervision. The student will employ the concepts of crew coordination in the accomplishment of his assigned tasks. The student will properly respond to simulated lost HF communication procedures, ditching duties on flights involving passengers and cargo, and a simulated over water bailout drill.

Prerequisite. OW-152 must be completed prior to this flight.

OW-154 6.0 C E 1 KC-130 A

Goal. Phase check.

Requirement. The student will perform all duties required of an ARO/IRO/LM on an over water flight.

Prerequisite. OW-153 must be completed prior to this flight.

Performance Standard. This flight evaluation will be conducted PER NATOPS.

5. Rapid Ground Refueling

a. Purpose. Introduce the ARO/IRO/LM to plan, identify the required equipment, set up, and break down the rapid ground refueling system for rotary and fixed-wing aircraft.

b. General. This phase of training will be conducted by an ARO/IRO/LM school instructor.

c. Ground Training. Prior to this phase of instruction the student will have completed the academic training at the ARO/IRO/LM school.

d. Ground Training (1 Event, 0.0 Hours)

RGR-170 0.0 C LST/1 KC-130 S

Goal. Introduce the student to the procedures for a 2 point RGR set up.

Requirement. The student will observe: a preflight, set up, and simulate a 2 point RGR operation. Instruction will include the inspection of all RGR equipment, breakdown of refueling points, and related post flight duties.

6. Basic Qualification Check Flight

a. Purpose. Determine that the student has achieved the minimum NATOPS requirements for an ARO/IRO/LM.

b. General

(1) The flight portion of this evaluation shall be accomplished on a multi-leg flight.

(2) A VMGRT-253 designated KC-130 NATOPS instructor shall evaluate this flight.

c. Ground Training. The student will complete all previous Combat Capable training codes prior to this flight. The student must successfully complete the NATOPS open and closed book examinations prior to this flight.

d. Flight Training (1 Flight, 4.0 Hours)

CK-190	4.0	C E 1 KC-130 A	

Goal. Qualify the student as a Combat Capable ARO/IRO/LM in the KC-130 aircraft.

Requirement. The student will demonstrate the ability to meet NATOPS requirements for designation as a Combat Capable ARO/IRO/LM in the KC-130 aircraft. This sortie will be conducted on a multi-leg flight.

Performance Standard. This flight evaluation will be conducted PER NATOPS.

942. COMBAT READY TRAINING

1. Cargo and Passenger Loading

a. Purpose. Qualify the Conversion/Refresher loadmaster, or to maintain proficiency for the CPL qualified loadmaster, to perform all duties of a loadmaster on KC-130 cargo and passenger flights. The loadmaster will perform the below listed requirements for each flight in this series.

(1) Preflight and configure an aircraft PER mission requirements on flights involving passengers and/or cargo.

(2) Determine available seating and/or cargo space for load planning purposes.

(3) Plan cargo and/or passenger loading to conform with all aircraft/ safety limitations PER NAVAIR GAA-9 and NAVAIR 01-75GAA and GAG-1.

(4) Utilize all KC-130 loading aids conforming to the limitations, installations, and usage of each PER NAVAIR 01-75GAA-9.

(5) Brief passengers as required PER NAVAIR 01-75GXX and GAG-1.

(6) Load passengers and/or cargo PER NAVAIR 01-75GAA-9.

(7) Compute and file weight and balance for a flight involving passengers.

(8) Provide passenger comfort/safety provisions during flight.

(9) Safely off-load passengers and/or cargo PER NAVAIR 01-75GAA-9.

(10) Maintain, file and disseminate as required, flight documentation, including passenger/cargo manifests and TCMD's.

(11) Postflight aircraft and perform minor repairs as necessary to return cargo compartment to full operational readiness.

b. General. Conversion/Refresher loadmasters shall be accompanied by a qualified loadmaster instructor.

c. Flight Training (4 Flights, 8.0 Hours)

CPL-200 2.0 C,R 1 KC-130 A/S

Goal. Qualify the ARO/IRO/LM, or to maintain the proficiency of the CPL qualified ARO/IRO/LM, for logistics flights.

Requirement. The ARO/IRO/LM, with limited instruction, will configure an aircraft PER mission requirements. Emphasis will be placed on weight and balance, accurate passenger manifesting, and baggage staging and loading safety. Review maximum passenger load configurations, seating arrangements and litter arrangements. This sortie may be conducted on a tanker configured aircraft. This sortie will be used for the maintenance of proficiency for CPL qualified loadmasters for logistics flights.

CPL-201 2.0 C,R 1 KC-130 A/S

Goal. To qualify the ARO/IRO/LM, or to maintain the proficiency of the CPL qualified ARO/IRO/LM, for flights carrying hazardous materials.

Requirement. Qualify the ARO/IRO/LM, with limited instruction, will load-plan, stage, load, tie down, and offload a mixed cargo load consisting of both rolling stock and general cargo. At least 80% of the available cargo space should be used. Review inflight cargo jettison, hazardous material handling procedures. This sortie will be used for the maintenance of proficiency for CPL qualified loadmasters for logistic flights.

CPL-202 2.0 C,R 1 KC-130 A/S

Goal. Qualify the ARO/IRO/LM, or to maintain the proficiency of the CPL qualified ARO/IRO/LM, for flights carrying mixed cargo/passengers.

Requirement. The ARO/IRO/LM, with limited instruction, will perform the duties of a loadmaster on a flight carrying a mixed cargo/passenger load. Emphasis will be placed on loading safety, load planning to ensure adequate seating, safety aisles, access to emergency exits, and accurate passenger/cargo manifesting. This sortie will be used for the maintenance of proficiency for CPL qualified loadmasters for mixed cargo or hazardous material/passenger flights.

CPL-203 2.0 C,R 1 KC-130 A/S

Goal. To maintain currency and proficiency for the CPL qualified ARO/IRO/LM, for logistics flights.

Requirement. This sortie will be used for the maintenance of proficiency and currency for CPL qualified loadmasters for logistic flights.

2. Aerial Refueling

a. Purpose. Continue instruction on the duties of an inflight refueling observer, or to maintain proficiency for the A/R qualified ARO/IRO/LM, specifically during tactical refueling mission.

b. General. All initial qualification loadmasters shall be accompanied by a qualified loadmaster instructor.

c. Ground Training. Prior to flying each sortie in this phase, instruction will be given from the applicable section in the NATOPS Air to Air Refueling Manual.

d. Flight Training (3 Flights, 6.0 Hours)

AR-210 2.0 C,R 1 KC-130 A

Goal. Continue instruction in aerial refueling, or to maintain proficiency in day fixed-wing or rotary-wing AR for AR qualified IRO's.

Requirement. The loadmaster will perform duties of an inflight refueling observer during a day AR, refueling fixed-wing or rotary wing tactical aircraft. Emphasis will be on correct terminology, safety, emergency procedures, ICS discipline, and crew coordination during all phases of the operation. This sortie will be used for the maintenance of proficiency in day fixed-wing or rotary-wing AR for AR qualified IRO's.

AR-211 2.0 C,R 1 KC-130 A N

Goal. Qualify the ARO/IRO/LM in fixed-wing or rotary-wing aerial refueling procedures, or to maintain proficiency in night fixed-wing or rotary-wing AR for AR qualified IRO's.

Requirement. This sortie will be a night aerial refueling operation. The loadmaster will attend a pilot/aircrew brief covering visual problems and emergency procedures. Emphasis will be placed on crew coordination, ICS/radio discipline, and emergency procedures. This sortie will be used for the maintenance of proficiency in night fixed-wing or rotary-wing AR for AR qualified IRO's.

Prerequisite. AR-210.

AR-212 2.0 C,R 1 KC-130 A (N)

Goal. Introduce the loadmaster to EMCON aerial refueling, or maintain proficiency in EMCON AR for AR qualified IRO's.

Requirement. This sortie will utilize EMCOM refueling procedures. The loadmaster will attend a pilot/aircrew brief and coordinate with all other aircrew positions prior to the flight. EMCOM procedures and standard signals will be PER AR manual/TAC Manual. This sortie will be used for the maintenance of proficiency in EMCON AR for AR qualified IRO's.

Prerequisite. AR-210 or AR-211.

3. Low Level (LL)

a. Purpose. Qualify the loadmaster, or to maintain proficiency for the LL qualified loadmaster, in the unique tasks and requirements associated with low level flights.

b. General. This phase of instruction may be taught by a LL qualified Loadmaster instructor.

c. Flight Training (1 Flight, 1.0 Hour)

LLNAV-220	1.0	C,R	E	1 KC-130	A

Goal. Introduce and qualify the loadmaster, or to maintain proficiency for the LL qualified loadmaster, in the duties of an aft lookout during a Low Level mission.
Requirement. The loadmaster will perform the duties of an aft lookout during a low level mission. Emphasis will be placed on cargo compartment preparation, crew briefing, lookout doctrine, scan for threats and terrain clearance, crew coordination and combat entry/exit checklists. This event may include air-to-air refueling, aerial delivery or any type of air/land delivery.

3. Aerial Delivery

a. Purpose. Introduce the loadmaster to airdrop checklist procedures, rigging, and combination aerial delivery of personnel plus CDS, CRRC, or HE, or to maintain proficiency for the AD qualified loadmaster.

b. General. Initial training shall be conducted by an AD qualified loadmaster instructor.

c. Ground instruction. Prior to flight training, instruction and a demonstration in the rigging of combo AD PER NAVAIR 01-75GAA-9 will be given, and the appropriate lessons from the MAWTS-1 ASP shall be presented.

d. Flight Training (1 Flight, 1.0 Hour)

AD-240	1.0	C	R	1 KC-130	A

Goal. Introduce and qualify the loadmaster, or to maintain proficiency for the Combo AD qualified loadmaster, in the duties of a primary LM in combination airdrop.

Requirement. Under the supervision of an aerial delivery qualified ARO/IRO/LM Instructor, the loadmaster under training will act as the primary loadmaster during a combination airdrop of CDS, HE, or CRRC and personnel. The loadmaster will preflight, rigg, brief, load, execute and coordinate emergency procedures. Emphasis shall be placed on execution checklists, CDS emergency procedures and towed parachutist procedures. Use of the BSA and CVR for CDS Combo is encouraged when available.

Prerequisite. Academic training PER the MAWTS-1 loadmaster ASP for General A/C Prep and Combination/CRRC Airdrop shall be completed prior to this event.

External Syllabus Support. Aerial Delivery Platoon, Landing Support Battalion, FSSG, or similar sister service support, will be required to support this event with A-22 containers or A/D platforms, parachutists, JI and DZ control during this event.

4. Overwater HF Communication

a. Purpose. Qualify the Conversion/Refresher loadmaster, or to maintain proficiency for the OW qualified loadmaster, in the operation of HF communication equipment, procedures, relaying agencies, frequency selection, and loadmaster responsibilities during over water flights.

b. Flight Training (1 Flight, 6.0 Hours)

OW-250	6.0	C,R 1 KC-130 A

Goal. Qualify the Conversion/Refresher ARO/IRO/LM in over water flights, or to maintain proficiency in OW flights for OW qualified loadmasters.

Requirement. The Conversion/Refresher ARO/IRO/LM, with limited instruction, will demonstrate all HF communications procedures required during over water flights. This sortie will be used for the maintenance of proficiency in OW communications for OW qualified loadmasters.

5. Engine Running Offload

a. Purpose. Qualify the loadmaster, or to maintain proficiency for the ERO qualified ARO/IRO/LM, in Engine Running Offload/Onload procedures for personnel/cargo.

b. General

(1) This stage of training shall be instructed by an ERO qualified ARO/IRO/LM Instructor.

(2) The sortie may be flown as part of the curriculum at the Loadmaster Initial Qualification Course and successful completion of the LIQ course will be considered as qualification in this stage.

c. Ground Training. The TLZ Operations lesson from the MAWTS-1 ASP shall be presented prior to flight training for non LIQ graduates.

d. Flight Training (1 Flight, 1.0 Hour)

ERO-270	0.0	C,R 1 KC-130 A/S (N)

Goal. Qualify the ARO/IRO/LM in Engine Running Offload/Onload procedures, or to maintain proficiency in ERO for ERO qualified ARO/IRO/LM.

Requirement. The ARO/IRO/LM will demonstrate the ability to prepare the cargo compartment for TLZ operations and safely and expeditiously conduct an Engine Running Offload/Onload, and direct the pilot in an aircraft reverse taxi maneuver.

Performance Standard. PER TACMAN.

6. Combat Offload.

a. Purpose. Introduce and qualify the ARO/IRO/LM, or to maintain proficiency for the current qualified ARO/IRO/LM, in combat offload methods and procedures.

b. General

(1) This stage of training may be accomplished either as squadron training or as part of the curriculum at the Loadmaster Mission Qualification Course.

(2) Successful completion of the Loadmaster Mission Qualification Course will be considered as qualification for this phase of training.

c. Ground Training. Instruction in combat off-load shall be conducted PER the MAWTS-1 ASP prior to this sortie for non-LMQ graduates.

d. Flight Training (1 Flight, 1.0 Hour)

COL-271	0.0	C,R	1 KC-130 A/S (N)

Goal. Introduce and qualify the ARO/IRO/LM, or to maintain proficiency for the COL qualified ARO/IRO/LM, in procedures and methods of combat offload.

Requirement. The ARO/IRO/LM will demonstrate procedures for preparation of the cargo compartment for TLZ operations and offloading either a single or multiple single pallets. The offload of both a ramp and cargo floor pallets is encouraged.

6. Rapid Ground Refueling

a. Purpose. Introduce the ARO/IRO/LM to plan, load the required equipment, set up, and conduct a rapid ground refueling for either rotary or fixed-wing aircraft.

b. General. This phase of training shall be conducted by an RGR qualified ARO/IRO/LM Instructor.

c. Ground Training. Prior to flight training, instruction shall be conducted PER the MAWTS-1 ASP for RGR.

d. Flight Training (2 Flights, 2.0 Hours)

RGR-272	0.0	C R	1 KC-130 A/S

Goal. Continue instruction on RGR procedures during a day evolution refueling either rotary or fixed-wing aircraft.

Requirement. The ARO/IRO/LM will assist the instructor in the conduct of a daytime RGR, minimum 2 point setup, including an actual transfer of fuel to either rotary-wing or fixed- wing aircraft. Instruction will be given on inspection and configuration of all associated gear, normal procedures, safety, and breakdown of the system. The ARO/IRO/LM will man, and perform all duties associated with manning, a refueling point during the fuel transfer portion(s) of the RGR evolution.

RGR-273	0.0	C R	1 KC-130 A/S N

Goal. Continue instruction on RGR procedures during a night evolution refueling either fixed or rotary-wing aircraft.

Requirement. The ARO/IRO/LM will assist the instructor in the conduct of a night RGR, minimum 2 point setup, including an actual transfer of fuel to either rotary-wing or fixed-wing aircraft. Instruction will be given on inspection and configuration of all associated gear, normal procedures, safety, and breakdown of the system. The ARO/IRO/LM will man, and perform all duties associated with manning, a refueling point during the fuel transfer portion(s) of the RGR evolution.

7. NATOPS Progress Check

a. Purpose. Determine that the minimum NATOPS requirements for a Combat Ready ARO/IRO/LM have been met.

b. General

(1) Flight shall be accomplished on a multi-leg, mixed cargo/passenger flight.

(2) A designated KC-130 F/R/T NATOPS instructor will evaluate this flight.

c. Ground Training. The ARO/IRO/LM must successfully complete NATOPS open and closed-book examinations prior to this flight.

d. Flight Training (1 Flight, 4.0 Hours)

CK-290 4.0 C,R E 1 KC-130 A (N)

Goal. Qualify the ARO/IRO/LM as a Combat Ready ARO/IRO/LM in the KC-130 aircraft.

Requirement. The ARO/IRO/LM will demonstrate the ability to meet NATOPS requirements for designation as Combat Capable ARO/IRO/LM in the KC-130 F/R/T aircraft. This sortie will be a multi-leg, mixed cargo/passenger flight.

Performance Standard. PER NFM Section X.

943. COMBAT QUALIFICATION TRAINING

1. Aerial Delivery

a. Purpose. Introduce the ARO/IRO/LM, or to maintain proficiency in his duties during an aerial delivery mission.

b. General

(1) This stage of training shall be instructed by an aerial delivery qualified ARO/IRO/LM Instructor.

(2) These sorties may be flown as part of the curriculum at the ARO/IRO/LM Mission Qualification Course and successful completion will be considered as qualification in those sorties within this stage which were completed at the LMQ course.

c. Ground Training. The sorties shall be preceded by the successful completion of the Loadmaster Mission Qualification course or local squadron training PER the MAWTS-1 ASP.

d. Flight Training (4 Flights, 4.0 Hours)

AD-340 1.0 C, R 1 KC-130 A

Goal. Introduce and qualify, or to maintain proficiency for the ARO/IRO/LM in personnel static line airdrop.

Requirement. Under the supervision of an aerial delivery qualified ARO/IRO/LM Instructor, the ARO/IRO/LM will act as the primary ARO/IRO/LM during a static line personnel airdrop from the ramp or paratroops door. The ARO/IRO/LM will assist in preflight, rigging, briefing, loading, execution and emergency procedures. Emphasis shall be placed on execution checklists and towed parachutists emergency procedures.

Prerequisite. Academic training PER the MAWTS-1 ASP for General A/C Prep and Personnel Airdrop shall be completed prior to this event.

External Syllabus Support. Parachutists from AD Platoon, ANGLICO or another external unit will be required for completion of this event.

AD-341 1.0 C, R 1 KC-130 A

Goal. Introduce and qualify, or to maintain proficiency for the ARO/IRO/LM in container delivery system airdrop.

Requirement. Under the supervision of an aerial delivery qualified ARO/IRO/LM Instructor, the ARO/IRO/LM will act as the primary loadmaster during a container delivery system airdrop. The ARO/IRO/LM will assist in preflight, rigging, briefing, loading, execution and emergency procedures. Emphasis shall be placed on execution checklists and CDS emergency procedures. Use of the BSA and CVR is encouraged if available.

Prerequisite. Academic training PER the MAWTS-1 ASP for General A/C Prep and CDS Airdrop shall be completed prior to this event.

External Syllabus Support. Aerial Delivery Platoon, Support Battalion, FSSG, or similar sister service support, will be required to support this event with A-22 containers, JI and DZ control.

AD-342 1.0 C, R 1 KC-130 A

Goal. Introduce and qualify, or maintain proficiency for the ARO/IRO/LM in heavy equipment extraction airdrops.

Requirement. Under the supervision of an aerial delivery qualified ARO/IRO/LM Instructor, the ARO/IRO/LM will perform the duties as loadmaster during a heavy equipment extraction airdrop. The ARO/IRO/LM will assist in preflight, rigging, briefing, loading, execution and emergency procedures. Emphasis shall be placed on execution checklists and HE emergency procedures. This event may utilize single or sequential platforms.

Prerequisite. Academic training PER the MAWTS-1 loadmaster ASP for General A/C Prep and HE Airdrop shall be completed prior to this event.

External Syllabus Support. Aerial Delivery Platoon, Support Battalion, FSSG, or similar sister service support, will be required to support this event with equipment platforms, JI and DZ control.

AD-343 1.0 C,R 1 KC-130 A (N)

Goal. Qualify the ARO/IRO/LM in high altitude airdrop of personnel or equipment, or to maintain proficiency for the high altitude A/D qualified loadmaster.

Requirement. Under the supervision of an aerial delivery qualified ARO/IRO/LM Instructor, the ARO/IRO/LM under training will demonstrate mastery of all aspects of high altitude military freefall airdrop from the ramp or paratroop door, or high altitude equipment airdrop, while acting as the primary loadmaster. The ARO/IRO/LM under training will preflight, rig, brief, load, and execute a high altitude aerial delivery PER the TACMAN. This mission must be conducted above 10,000 ft MSL.

External Syllabus Support. Aerial Delivery Platoon, Support Battalion, FSSG, or similar sister service support, will be required to support this event with A-22 containers, A/D platforms, and/or parachutists, JI and DZ control during this event.

2. Flare Delivery

a. Purpose. Introduce the ARO/IRO/LM to flare delivery procedures and the battlefield illumination mission.

b. General. This phase will be instructed by a Flare Delivery and A/D qualified ARO/IRO/LM Instructor.

c. Ground Training. Flight training shall be preceded by instruction PER the MAWTS-1 ASP.

d. Flight Training (2 Flight, 3.0 Hours)

FD-344 3.0 C R 1 KC-130 A (N)

Goal. Introduce aircraft preflight, configuration, rigging, loading and mission execution procedures for the battlefield illumination mission and qualify the LM as a team member/team leader.

Requirement. Under the direct supervision of a qualified ARO/IRO/LM Instructor, the ARO/IRO/LM will load, secure and rig for emergency jettison the flare delivery system PER current TACMAN procedures. The instructor will first demonstrate the loading and operation of the flare dispenser, and then supervise the ARO/IRO/LM under instruction as he fulfills the duties as a flare team member. Emphasis will be placed on crew coordination, safety precautions and emergency procedures.

FD-345 0.0 C,R 1 KC-130 A (N)

Goal. Qualify the ARO/IRO/LM, or to maintain proficiency for the flare delivery qualified ARO/IRO/LM, in aircraft preflight, configuration, rigging, loading and mission execution procedures for the battlefield illumination mission.

Requirement. Under the direct supervision of a qualified Aro/iro/lm Instructor, the ARO/IRO/LM will load, secure and rig for emergency jettison the flare delivery system PER current TACMAN procedures. The ARO/IRO/LM will fulfill the duties of the senior ARO/IRO/LM (QA/SO) for the entire flight. Emphasis will be placed on mission planning, flare team tasking and briefing, crew coordination, safety precautions and emergency procedures.

Prerequisite. FD-344, Ordnance Certification as QA/SO.

3. Rapid Ground Refueling

a. Purpose. Qualify the ARO/IRO/LM, or to maintain proficiency for the RGR qualified ARO/IRO/LM, to plan, load the required equipment, set up, and conduct a rapid ground refueling for either rotary or fixed-wing aircraft.

b. General. This phase of training shall be conducted by an RGR qualified Aro/iro/lm Instructor.

c. Ground Training. Prior to flight training, instruction shall be conducted PER the MAWTS-1 ASP for RGR.

d. Flight Training (2 Flights, 2.0 Hours)

RGR-370 1.0 C,R 1 KC-130 A

Goal. Qualify the ARO/IRO/LM, or to maintain proficiency for the RGR qualified ARO/IRO/LM, in RGR procedures during a day evolution refueling either rotary or fixed-wing aircraft.

Requirement. The ARO/IRO/LM, under the supervision of a qualified ARO/IRO/LM Instructor, will plan and execute a daytime RGR, minimum 2 point setup, including an actual transfer of fuel to either rotary-wing or fixed-wing aircraft. The ARO/IRO/LM will demonstrate thorough knowledge of the inspection and configuration of all associated gear, normal procedures, safety, and breakdown of the system. The ARO/IRO/LM will perform all duties associated with those of the Senior ARO/IRO/LM/Refueling Supervisor (RS).

RGR-371 1.0 C,R 1 KC-130 A N

Goal. Qualify the ARO/IRO/LM, or to maintain proficiency for the RGR qualified ARO/IRO/LM, in RGR procedures during a night evolution refueling either fixed or rotary-wing aircraft.

Requirement. The ARO/IRO/LM, under the supervision of a qualified ARO/IRO/LM Instructor, will plan and execute a night RGR, minimum 2 point setup, including an actual transfer of fuel to either rotary-wing or fixed-wing aircraft. The ARO/IRO/LM will demonstrate thorough knowledge of the inspection and configuration of all associated gear, normal procedures, safety, and breakdown of the system. The ARO/IRO/LM will perform all duties associated with those of the Senior ARO/IRO/LM/Refueling Supervisor (RS).

4. Initial Night Systems Qualification (NSQ)

a. Purpose. Introduce and qualify the ARO/IRO/LM, or to maintain proficiency for the initial NSQ qualified ARO/IRO/LM, in night systems employment.

b. General

(1) This phase of instruction shall be conducted at light levels .0022 lux or above.

(2) This phase of instruction shall be conducted by an NSI ARO/IRO/LM.

(3) NVG time logged as part of NITE Lab will count toward NSQ qualification.

c. Ground Training. Ground training will be successfully completed PER the following.

(1) NITE Lab.

(2) NVD use ASP.

(3) Aro/iro/lm NVG Operations.

d. Static Training (3 Periods, 9.0 Hours)

SNSQ-380	3.0	C,R	1 KC-130 A/S N

Goal. Introduce the ARO/IRO/LM to the special tasks and difficulties associated with the conduct of TLZ operations utilizing NVDS.

Requirement. Under the direction of a qualified NSI ARO/IRO/LM, the ARO/IRO/LM under training while utilizing night vision goggles, will conduct aircraft preflight and prepare the cargo compartment for blackout conditions. Additionally, while utilizing NVG's, the ARO/IRO/LM under training will conduct all preflights, loading and rigging required to prepare the aircraft for night operations of transporting cargo. Emphasis will be placed on NVG compatible lighting for aided and unaided troops, and the additional time required when utilizing NVG's. It is preferred to conduct this event on a darkened flight line or a dark portion of the airfield.

Prerequisite. Ground training PER the MAWTS-1 NVD use and ARO/IRO/LM ASPs.

SNSQ-381 3.0 C R 1 KC-130 A/S N

Goal. Introduce the ARO/IRO/LM to the special tasks and difficulties associated with the conduct of RGR procedures during a night evolution refueling, either fixed or rotary-wing aircraft.

Requirement. Under the direction of a rapid ground refueling qualified NSI ARO/IRO/LM the ARO/IRO/LM while utilizing night vision goggles, will conduct a night RGR, minimum 2 point setup. Instruction will be given on inspection and configuration of all associated gear, normal procedures, safety, and breakdown of the system. The ARO/IRO/LM will man, and perform all duties associated with manning, a refueling point.

Prerequisite. Ground training PER the MAWTS-1 ARO/IRO/LM ASP for night systems and qualification in RGR-371 is required to this event.

SNSQ-382 3.0 C,R 1 KC-130 S N

Goal. Introduce the ARO/IRO/LM to the special tasks and difficulties associated with the conduct of an aerial delivery mission utilizing night systems.

Requirement. Under the direction of an aerial delivery qualified NSI ARO/IRO/LM, the ARO/IRO/LM under training while utilizing night vision goggles, will conduct aircraft preflight and prepare the cargo compartment for blackout conditions. Additionally, while utilizing NVG's, the ARO/IRO/LM under training will conduct all preflights, loading and rigging required to prepare the aircraft for any type airdrop. This training evolution will be conducted only with the use of infrared lighting. Emphasis will be placed on NVG compatible lighting and the additional time required when utilizing NVD's. It is preferred to conduct this event on a darkened flight line or a dark portion of the airfield.

Prerequisite. Academic training PER the MAWTS-1 NVG use and Aro/iro/lm Operations ASP's and qualification in AD-340, AD-341, AD-342, and AD-343.

External Syllabus Support. Aerial Delivery Platoon, Support Battalion, FSSG, may be required to support this event with A-22 containers or platforms, or temp loan containers or platforms for use during this event.

e. Flight Training (7 Flights, 13.0 Hours)

NSQ-383 2.0 C,R 1 KC-130 A N

Goal. Introduce the ARO/IRO/LM, or to maintain proficiency for the initial NSQ A/R qualified ARO/IRO/LM, to the duties of a inflight refueling observer utilizing NVD's.

Requirement. The ARO/IRO/LM will prepare the cargo compartment for night systems operations and perform duties as an inflight refueling observer utilizing night vision goggles. An NSI ARO/IRO/LM will evaluate the initial qualification flight.

Prerequisite. AR-211, and SNSQ-380, SNSQ-381, SNSQ-382.

NSQ-384 3.0 C R 1 KC-130 A/S

Goal. Introduce the ARO/IRO/LM to the special tasks and difficulties associated with the conduct of RGR procedures utilizing NVD's.

Requirement. Under the direction of a rapid ground refueling qualified NSI ARO/IRO/LM, the ARO/IRO/LM while utilizing NVD's, will conduct a night RGR, minimum 2 point setup, including an actual transfer of fuel. Instruction will be given on inspection and configuration of all associated gear, normal procedures, safety, and breakdown of the system. The ARO/IRO/LM will man, and perform all duties associated with manning, a refueling point during the fuel transfer portion(s) of the RGR evolution.

Prerequisite. Ground training PER the MAWTS-1 NVG Use and Aro/iro/lm NVG Operations ASP's and qualification in SNSQ-382 is required prior to this event.

NSQ-385 2.0 C,R 1 KC-130 A N

Goal. Introduce the ARO/IRO/LM in temporary landing zone operations utilizing night systems.

Requirement. The ARO/IRO/LM will prepare the cargo compartment for night systems operations and perform duties as an aft lookout during the ingress and egress to a temporary landing zone. During the TLZ evolution, the ARO/IRO/LM will perform the duties of primary aro/iro/lm for an ERO, or COL. Emphasis will be placed on proper aircraft lighting and safety. An NSI ARO/IRO/LM will evaluate the initial qualification flight.

Prerequisite. ERO-270, COL-271, SNSQ-380.

NSQ-386 2.0 C,R 1 KC-130 A N

Goal. Maintain proficiency for the ARO/IRO/LM in flights involving the utilization of NVD's.

Requirement. The ARO/IRO/LM will demonstrate his ability to perform primary ARO/IRO/LM duties utilizing NVD's.

NSQ-390 2.0 C,R E 1 KC-130 A N

Goal. Qualify the ARO/IRO/LM in flights involving the utilization of night systems.

Requirement. The ARO/IRO/LM will demonstrate his ability to perform primary ARO/IRO/LM duties utilizing night systems by repeating NSQ-385 or NSQ-386.

Prerequisite. Minimum of 5 hours of total NVD time must be under low light conditions. SNSQ-380, SNSQ-381, SNSQ-382, NSQ-383, NSQ-384, NSQ-385, and NSQ-386.

Performance Standard. PER TACMAN and MAWTS-1 ASP.

944. FULL COMBAT QUALIFICATION TRAINING

1. Low Altitude Tactics (LAT)

a. Purpose. Qualify the ARO/IRO/LM, or to maintain proficiency for the LAT qualified ARO/IRO/LM, in the unique tasks and requirements associated with low altitude tactics flights in a low to medium ground threat environment.

b. General

(1) This phase of instruction may be taught locally PER the MAWTS-1 ASP, or in conjunction with AATTC by, a LAT qualified ARO/IRO/LM Instructor.

(2) Low altitude flight currency restrictions contained within T&R Vol 1, do not apply to this crew position.

c. Ground Training. Ground training will be conducted PER the MAWTS-1 ASP, or as part of the academic portion of AATTC.

d. Flight Training (1 Flight, 1.0 Hour)

LAT-420	1.0	C,R	1 KC-130	A

Goal. Introduce and qualify the ARO/IRO/LM, or to maintain proficiency for the LAT qualified ARO/IRO/LM, in the duties of an aft lookout or rear vision device lookout during a low altitude tactics mission.

Requirement. The ARO/IRO/LM will perform the duties of an aft lookout or rear vision device lookout during a low altitude tactics mission. Emphasis will be placed on cargo compartment preparation, crew briefing, lookout doctrine, scan for threats and terrain clearance, crew coordination and combat entry/exit checklists. This event may include air-to-air refueling, aerial delivery or any type of air/land delivery.

2. Aircraft Survivability Equipment (ASE)

a. Purpose. Introduce and qualify the ARO/IRO/LM, or to maintain proficiency for the ASE qualified ARO/IRO/LM, in the unique tasks and requirements associated with flights utilizing aircraft survivability equipment in conjunction with low altitude tactics and/or defensive tactics sorties in a high ground/air threat environment.

b. General. This phase will be instructed by an ASE qualified ARO/IRO/LM Instructor.

c. Ground Training. Ground training will be conducted PER the MAWTS-1 ASP.

d. Flight Training (1 Flight, 1.0 Hour)

ASE-460 1.0 C,R 1 KC-130 A

Goal. Introduce and qualify the ARO/IRO/LM, or to maintain proficiency for the ASE qualified ARO/IRO/LM, in the duties of an aft lookout during a flight utilizing aircraft survivability equipment.

Requirement. The ARO/IRO/LM will perform the duties of an aft lookout during a flight involving the use of ASE. Emphasis will be placed on cargo compartment preparation, crew briefing, lookout doctrine, scanning for ground/air threats and terrain clearance, crew coordination, combat entry/exit checklists, and systems familiarity. This event may include air-to-air refueling, aerial delivery or any type of air/land delivery in addition to ASE tactics training. This event may include escorts.

Prerequisites. LAT-460.

Performance Standard. PER the TACMAN.

3. DEFENSIVE TACTICS (DEFTAC)

a. Purpose. Qualify the ARO/IRO/LM, or to maintain proficiency for the DEFTAC qualified ARO/IRO/LM, in the unique tasks and requirements associated with defensive tactics flights in a low to medium air threat environment.

b. General. This phase of instruction may be taught locally utilizing the MAWTS-1 ASP, or in conjunction with AATTC, by a DEFTAC qualified Aro/iro/lm Instructor.

c. Ground Training. Ground training shall be conducted PER the MAWTS-1 ASP, or as part of the academic portion of AATTC.

d. Flight Training (1 Flight, 1.0 Hour)

DEFTAC-461 1.0 C,R 1 KC-130 A

Goal. Introduce and qualify the ARO/IRO/LM, or to maintain proficiency for the DEFTAC qualified ARO/IRO/LM, in the duties of an aft lookout or rear vision device lookout during a defensive tactics mission.

Requirement. The ARO/IRO/LM will perform the duties of an aft lookout or rear vision device lookout during a flight involving the use of defensive tactics. Emphasis will be placed on cargo compartment preparation, crew briefing, lookout doctrine, scan for air threats and terrain clearance, crew coordination and combat entry/exit checklists. This event may include air-to-air refueling, aerial delivery or any type of air/land delivery in addition to defensive tactics training. This event may include escorts.

4. Night Systems Qualification (NSQ)

a. Purpose. Introduce and qualify the ARO/IRO/LM, or to maintain proficiency for the NSQ qualified ARO/IRO/LM, in NVD employment.

b. General. This phase of instruction shall be conducted by an NSI ARO/IRO/LM.

c. Ground Training. Ground training will be successfully completed PER the MAWTS-1 NVG use and ARO/IRO/LM NVG operations ASP's prior to the conduct of the flight syllabus sortie.

d. Flight Training (2 Flights, 4.0 Hours)

NSQ-480 2.0 C,R 1 KC-130 A N

Goal. Introduce the ARO/IRO/LM, or to maintain proficiency for the initial NSQ LLNAV qualified ARO/IRO/LM, to the duties of aft lookout in the low level environment utilizing NVD's.

Requirement. The ARO/IRO/LM will prepare the cargo compartment for night systems operations and perform duties as an aft lookout during a night low level utilizing night vision goggles. Emphasis will be on preflight briefing, route study, light level issues, terrain clearance, terrain feature identification, and crew coordination. An NSI ARO/IRO/LM will evaluate the initial qualification flight.

Prerequisite. LL-220, SNSQ-380, SNSQ-381, and SNSQ-382.

NSQ-481 2.0 C,R 1 KC-130 A N

Goal. Introduce the ARO/IRO/LM, or to maintain proficiency for the NSQ A/D qualified ARO/IRO/LM, to perform aerial delivery procedures utilizing NVD's.

Requirement. The ARO/IRO/LM will prepare the cargo compartment for night systems operations and perform duties as a primary ARO/IRO/LM during a static personnel, CDS or HALO/HAHO airdrop utilizing night vision goggles. An NSI ARO/IRO/LM will evaluate the initial qualification flight.

Prerequisite. SNSQ-380, SNSQ-381, and SNSQ-382.

External Syllabus Support. AD Platoon, ANGLICO, RECON or other external support will be required dependent on the type of airdrop to be conducted.

950. INSTRUCTOR FLIGHT/SIMULATOR PERFORMANCE REQUIREMENTS

1. ARO/IRO/LM Instructor

a. Purpose. Qualify an ARO/IRO/LM to instruct ARO/IRO/LM trainees in all assigned areas of responsibility.

b. General. This sortie will be evaluated by the Squadron NATOPS Instructor.

c. Ground Training. The IUT academic syllabus PER the MAWTS-1 ARO/IRO/LM ASP will be successfully completed prior to the check flight.

d. Flight Training (1 Flight, 4.0 Hours)

CK-590 4.0 E 1 KC-130 A

Goal. IUT check flight.

Requirement. ARO/IRO/LM will demonstrate the ability to instruct a ARO/IRO/LM in all responsibilities and duties for specific level of training in the KC-130 F/R/T aircraft.

Prerequisite. The ARO/IRO/LM IUT candidate will be a CK-490 NATOPS qualified 7382 ARO/IRO/LM with a minimum of 1,000 total flight hours in the KC-130 F/R/T aircraft.

2. NATOPS Instructor

a. Purpose. Qualify a ARO/IRO/LM as a NATOPS/Assistant NATOPS Instructor.

b. General. This sortie will be evaluated by the NATOPS Evaluator.

c. Ground Training. Prior to this sortie the evaluee will successfully complete both the Open and Closed-book NATOPS tests.

d. Flight Training (1 Flight, 4.0 hours)

CK-591 4.0 E 1KC-130 A

Goal. NATOPS Instructor Evaluation Flight.

Requirement. The ARO/IRO/LM will demonstrate the ability to evaluate a student, refresher or conversion ARO/IRO/LM in all facets of the duties of an ARO/IRO/LM on the KC-130F/R/T.

Prerequisite. CK-590.

3. Night Systems Instructor

a. Purpose. Certify the ARO/IRO/LM Instructor as a Night Systems Instructor (NSI) capable of safely conducting ground and airborne ARO/IRO/LM night systems training leading to night systems qualification as outlined in MCO 3500.15.

b. General

(1) The KC-130 NSI ARO/IRO/LM Certification Course is developed by MAWTS-1 and administered by a MAWTS-1 Instructor or squadron NSI ARO/IRO/LM.

(2) A MAWTS-1 Instructor will conduct the certification flight.

(3) Upon NSI certification by MAWTS-1, the NSI designation can be made by the squadron commanding officer.

c. Ground Training. As published in the MAWTS-1 Course Catalog and Aro/iro/lm Academic Support Package.

d. Prerequisites

(1) Designated KC-130 Aro/iro/lm Instructor.

(2) Night Systems Qualified and current PER MCO P3500.15.

(3) Minimum 25 hours total NVG hours of which at least 10 hours should be low light level NVG time.

e. Flight Training (1 Flight, 2.0 Hours)

NSI-592 2.0 E 1 KC-130 A N

Goal. Demonstrate proficiency in the instructional skills required to conduct ARO/IRO/LM Night Systems Qualification Training.

Requirement. The NSI candidate will plan, brief, instruct, critique and document an ARO/IRO/LM initial or low light level NSQ training event in conjunction with a WTI Major Evolution or Final Exercise (FINEX) sortie, or squadron night T&R syllabus sortie event.

Prerequisite. The NSI ARO/IRO/LM candidate will have successfully completed the NSI ARO/IRO/LM academic syllabus and have completed a minimum of two IUT build-up flights from the low light level ARO/IRO/LM NSQ syllabus as listed in the MAWTS-1 Course Catalog prior to certification flight.

4. Weapons and Tactics Aircrew Instructor

a. Purpose. certify the KC-130 ARO/IRO/LM Instructor as a Weapons and Tactics Aircrew Instructor capable of safely conducting ground and airborne instruction in the KC-130 ARO/IRO/LM Combat Qualification and Full Combat Qualification flight syllabus as outlined in MCO P3500.15.

b. General. The KC-130 WTACI Course is developed by MAWTS-1 and is conducted in conjunction with the WTI Course. Upon graduation, the candidate will be certified by MAWTS-1 as a WTACI ARO/IRO/LM. WTACI designation can be made by the squadron commanding officer.

c. Ground Training. As published in the MAWTS-1 Course Catalog.

d. Flight Training (1 Flight, 2.0 Hours)

WTI-593 2.0 E 1 KC-130 A

Goal. Demonstrate proficiency of the instructional skills required to conduct ARO/IRO/LM tactical training in the Combat Qualification and Full Combat Qualification stages of training.

Requirement. The WTACI candidate will plan, brief, instruct, critique and document a ARO/IRO/LM tactical training event in conjunction with a WTI Major Evolution or Final Exercise (FINEX) sortie.

Prerequisite. The WTACI candidate will complete a minimum of three IUT build-up flights in conjunction with specific and common phases of WTI flight phase prior to the certification flight as listed in the MAWTS-1 Course Catalog.

951. SPECIAL FLIGHT REQUIREMENTS

1. Movement Control

a. Purpose. Qualify the ARO/IRO/LM to plan, stage, and execute a multi-aircraft lift of a squadron size unit.

b. General. Qualified ARO/IRO/LM Instructors will instruct this phase of training.

c. Ground Training (1 Event)

MC-600	0.0	C,R S

Goal. The ARO/IRO/LM will assist embarkation personnel of a deploying squadron-size unit in arranging suitable aircraft loads.

Requirement. The loads will be properly prepared for air shipment and staged for sequential pick-up. The ARO/IRO/LM will act as liaison between aircraft crews and embarkation personnel. Emphasis will be placed on overall planning to allow for advance party, enroute maintenance capability, and pickup of rear echelon and maintenance gear. The ARO/IRO/LM shall be the ARO/IRO/LM on the last aircraft departing the embarkation point.

Prerequisites. CK-490.

2. Search and Rescue (SAR)

a. Purpose. Qualify the ARO/IRO/LM on search and rescue missions.

b. Flight Training (1 Flight, 2.0 Hours)

SAR-650	2.0	C,R 1 KC-130 A

Goal. Introduce the ARO/IRO/LM to search and rescue missions.

Requirement. The ARO/IRO/LM will perform all duties on a search and rescue mission. Emphasis will be placed on search and rescue techniques, inflight deployment of the URU-13 liferaft, radio duties (i.e., liaison between ship/aircraft) as on scene commander, and other duties as may be directed by plane commander.

Prerequisites. OW-250, AD-340 and AD-341.

Standards. PER the TACMAN.

3. Jet Assisted Take-Off

a. Purpose. Introduce the duties of a ARO/IRO/LM during a JATO take-off.

b. General. This sortie will be instructed by JATO qualified instructors.

c. Flight Training (1 Flight, 0.5 Hour)

JAT-670	0.5	C,R 1 KC-130 A

Goal. Introduce the ARO/IRO/LM to the duties required during a jet assisted take-off.

Requirement. The ARO/IRO/LM will complete a weight and balance form DD 365-4 utilizing the appropriate section of the load adjuster with attention to the type bottles and the expended ordnance section for computation of landing weight. The ARO/IRO/LM will be appropriately stationed during the firing of the bottles to determine safe light-off of all bottles. The ARO/IRO/LM will be responsible for jettisoning of the expended bottles at the plane commander's direction.

960. EXPENDABLE ORDNANCE REQUIREMENTS

BASIC/CONVERSION

ORDNANCE	100 SERIES	200 SERIES	300 SERIES	400 SERIES	REFRESHER	ANNUAL
MK-45 Flares or LUU-2 Flares	---	---	36	---	---	NOTE

NOTE: Annual requalification may be accomplished through ground simulation.

AIRCRAFT: KC-130 MOS: 7300/7382 CREW POSITION: ARO/IRO/LM

STAGE	TRAINING CODE	HRS	REFLY INTERVAL	CRP	T	C	R	E	REMARKS
LOAD SIMULATOR TRAINING (LST)									
CPL	100	0.0	*	1.0		X			S
	101	0.0	*	1.5		X			S
	102	0.0	*	1.5		X			S
	103	0.0	*	1.5		X			S
	104	0.0	*	1.5		X			S
COMBAT CAPABLE TRAINING									
AR	110	2.0	*	0.5		X			
FWAR	111	2.0	*	1.0		X			
HAR	112	2.0	*	1.0		X			
AR	113	2.0	*	0.5		X			
AR	114	2.0	*	2.0		X		X	
FAM	115	4.0	*	1.0		X			
	116	4.0	*	1.0		X			
	117	4.0	*	2.0		X		X	
OW	150	6.0	*	0.5		X			
	151	6.0	*	1.0		X			
	152	6.0	*	1.0		X			
	153	6.0	*	1.0		X			
	154	6.0	*	2.0		X		X	
AD	140	1.0	*	0.5		X			
RGR	170	0.0	*	0.5		X			S
CK	190	4.0	*	7.5		X		X	
COMBAT READY TRAINING									
CPL	200	2.0	6	1.0		X	X		A S
	201	2.0	6	1.0		X	X	A S	
	202	2.0	6	1.0		X	X		
	203	2.0	6	1.0		X	X		
AR	210	2.0	12	0.5		X	X		
	211	2.0	12	0.5		X	X		N
	212	2.0	12	1.0		X	X		(N)
LLNAV	220	1.0	12	1.0		X	X		
AD	240	1.0	6	1.0		X	X		
OW	250	6.0	12	1.0		X	X		
ERO	270	0.0	6	1.0		X	X		S/A (N)
COL	271	0.0	6	1.0		X	X		S/A (N)

Figure 9-1.--MOS 7381/7382 Refly Interval, Combat Readiness Percent

AIRCRAFT: KC-130 MOS: 7300/7382 CREW POSITION: ARO/IRO/LM

STAGE	TRAINING CODE	HRS	REFLY INTERVAL	CRP	T	C	R	E	REMARKS
RGR	272	0.0	12	1.0		X	X		S/A
	273	0.0	12	1.0		X	X		S/A N
CK	290	4.0	12	2.0		X	X	X	
COMBAT QUALIFICATION TRAINING									
AD	340	1.0	6	1.5		X	X		
	341	1.0	6	1.5		X	X		
	342	1.0	6	1.5		X	X		
	343	1.0	6	1.0		X	X		
FD	344	3.0	12	1.0		X	X		(N)
	345	0.0	12	1.0		X	X		S/A(N)
RGR	370	0.0	12	1.0		X	X		S/A
	371	0.0	12	1.0		X	X		S/A N
SNSQ	380	3.0	12	1.0		X	X		N
	381	3.0	12	1.0		X	X		N
	382	3.0	12	1.0		X	X		N
NSQ	383	2.0	12	1.0		X	X		N
SNSQ	384	2.0	12	1.5		X	X		S N
NSQ	385	2.0	12	1.5		X	X		S/A N
	386	0.0	12	1.5		X	X		S/A N
NSQ CK	390	2.0	12	2.0		X	X	X	N
FULL-COMBAT QUALIFICATION TRAINING									
LAT	420	1.0	12	1.0		X	X		
ASE	460	1.0	12	1.0		X	X		
DEFTAC	461	1.0	12	1.0		X	X		
NSQ	480	2.0	12	1.0		X	X		N
	481	2.0	12	1.0		X	X		N
INSTRUCTOR AND SPECIAL FLIGHT/SIMULATOR PERFORMANCE REQUIREMENTS									
CK	590	4.0						X	
CK	591	4.0						X	
NSI	593	2.0						X	N
WTI	594	2.0						X	
SPECIAL FLIGHT REQUIREMENTS									
MC	600	0.0				X	X		

Figure 9-1.--MOS 7300/7382 Refly Interval, Combat Readiness Percentage.

AIRCRAFT: KC-130 MOS: 7300/7382 CREW POSITION: ARO/IRO/LM

STAGE	TRAINING CODE	HRS	REFLY INTERVAL	CRP	T	C	R	E	REMARKS
SAR	650	2.0				X	X		
JAT	670	0.5				X	X	X	
CK	690	4.0	12	0.0		X	X	X	(N)

Figure 9-1.--MOS 7381/7382 Refly Interval, Combat Readiness Percentage.

ARO/IRO/LM FLIGHT UPDATE CHAINING

FLIGHT	FLIGHTS UPDATED
200	
201	
202	201,200
203	202,201,200
210	
211	210
212	
220	
240	
250	
270	
271	
272	
273	272
290	203,202,201,200
340	
341	
342	
343	
344	
345	344
370	272
371	370,273,272
380	
381	273,272
382	
383	211,210
384	273,272
385	
386	
390	
420	220
460	
461	
480	220
481	
590	
591	590,290
593	
594	
600	
650	
670	
690	

Figure 9-2.--MOS 7381/7382 Flight Update Chaining.

CHAPTER 10

KC-130 FLIGHT MECHANIC

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10-1 FLIGHT MECHANIC REFLY INTERVAL, COMBAT READINESS PERCENTAGE 10-25

10-2 FLIGHT MECHANIC FLIGHT CHAINING 10-27

*** * NOTE * ***

Aircrew coordination shall be briefed before all flights and/or events.

MARINE AERIAL REFUELING SQUADRON - KC-130
UNIT TEMPLATE

NOTE

The capabilties defined and described in the core capability and unit template sections are provided to ensure each like squadron maintains a common base of training and depth of capabilities. When resources permit, and when in the judgement of the commander additional training would significantly increase the unit's warfighting capability, training to a level above these base capabilities is permitted. It is incumbent upon, and expected of, the commander to balance any increase in the depth of core capabilities against the long term health and readiness of his unit while staying within his resource constraints.

1. **TABLE OF ORGANIZATION**

PAA-12 A/C: 26 TPC/16 T2P or T3P/23 NAV/25 F ENG/24 LOADM/24 F MECH

2. **SQUADRON CORE CAPABILITY**

a. A core capable squadron is able to sustain the following minimum performance on a daily basis during sustained contingency/combat operations, assuming 100% PAA, 90% in reporting status and 90% T/O on hand in all MOS's. If < 90%, core capability will be degraded by a like percentage. The extent to which a core capable squadron is able to surge beyond its core capability is situation dependent.

b. A core capable squadron is able to sortie two divisions (-) of mission capable aerial refueling aircraft and within four hours of landing, sortie two more sections or sortie three sections of mission capable assault support aircraft and within four hours of landing, sortie two more sections. Perform the above from either a main base location or appropriate sized expeditionary airfield. All aircraft are capable of aerial and rapid ground refueling, assault support and two platforms being DE/IRCM equipped.

3. **BASIC AIRCREW QUALIFICATIONS**. As a minimum, in order to be considered Core Competent, a squadron must possess the following numbers of aircrew who are at least 75% complete in each listed core skill.

CORE SKILLS	CREWS	REMARKS
RW/FW AR	12	
RGR	8	
TLZ/EAF	8	
AD	6	
FORM	12	
LONG RANG NAV	12	
LOW LEVEL	6	

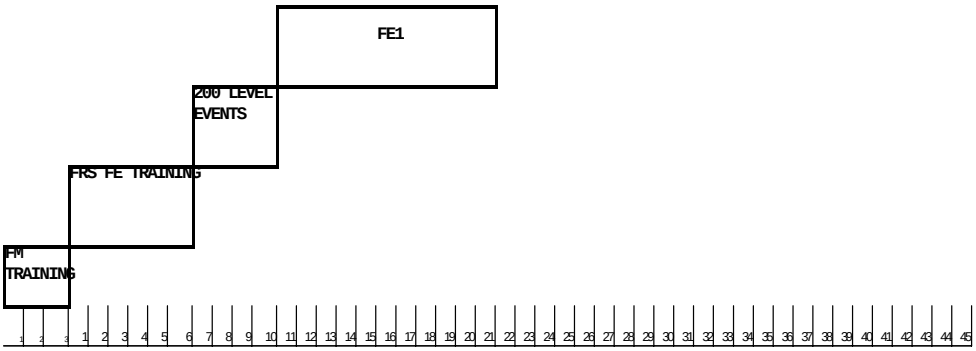
4. **REQUIRED CORE SKILLS AND SORTIES**

	RW/FW AR	RGR	TLZ/EAF	AD	FORM	LR NAV	LOW LEVEL
1st TOUR	4	1	1	1	2	1	2
T&R CODES	210,211 212,213	273	270	240	230,231	250	220,221

5. **SORTIES REQUIRED TO MAINTAIN CORE SKILLS**. For each twelve month period after achieving competency, a Flight Mechanic would be required to fly the following number of sorties in each skill area to maintain that competency.

	RW/FW AR	RGR	TLZ/EAF	AD	FORM	LR NAV	LOW LEVEL
AIRCREW	4	1	1	1	2	1	2

KC-130 FLIGHT MECH CORE PROGRESSION MODEL



10-1.--Flight Mechanic Notional Training Progression Model

1000. PROGRAMS OF INSTRUCTION (POI) FOR BASIC FLIGHT MECHANIC

WEEKS	COURSE/PHASE	ACTIVITY
1-5	NACCS	NAS Pensacola, FL
6-10	KC-130 Flight Mechanic Ground	FREST
18-24	FRS Flight Phase	Training Squadron
25-31	Full Combat Qualification	Tactical Squadron

1001. POI FOR REFRESHER FLIGHT MECHANIC

WEEKS	COURSE/PHASE	ACTIVITY
1-6	Combat Capable Training	Training Squadron

1002. POI FOR CONVERSION FLIGHT MECHANIC (KC-130 F-R-T)

WEEKS	COURSES/PHASE	ACTIVITY
1	Combat Capable Training	Tactical Squadron

1010. GROUND TRAINING

Electrical Systems
Proper Application of External Power
Proper Operation of GTC/ATM
Electrical Systems Component Removal/Reinstallation
Fuel Systems
Bleed Air/Anti-icing Systems
Bleed Air Systems Component Removal/Reinstallation
Air Conditioning/Pressurization Systems
Air Conditioning System Component Removal/Reinstallation
Hydraulic Systems
Hydraulic System Component Removal/Reinstallation
Air Refueling System
Air Refueling System Component Removal/Reinstallation
Landing Gear/Tires/Brake Systems
Landing Gear/Tires/Brake System Component Removal/Reinstallation
Propulsion Systems
Propulsion System Component Removal/Reinstallation
Propulsion System Rigging
Quality Assurance and Maintenance Practices
Scheduled Inspections and Maintenance Practices

1011. COURSES OF INSTRUCTION

COURSE/PHASE	ACTIVITY
Naval Aircrew Candidate Course	NAS Pensacola, FL
Fleet Replacement Enlisted Skills Training	MCAS Cherry Pt, NC
KC-130 Flight Mechanic Maintenance Course	MCAS Cherry Point, NC
Weapons and Tactics Course (WTI)	MAWTS-1 Yuma, AZ
Advanced Airlift Tactics Training Course	St. Joseph, MO.
Survival, Evasion, Resistance and Escape	NAS Brunswick, ME NAS North Island, CA

1012. SQUADRON LEVEL TRAINING

Aerial Refueling
Low Levels
Formation
Aerial Delivery
Formation Low Level
Temporary Landing Zones
Low Level Refueling
Overwater ICAO
Division Formations
Division Refueling
Low Altitude Tactics/Formation
Rapid Ground Refueling
Aerial Delivery
Temporary Landing Zones Unimproved
Aerial Delivery (Flares)
Aircraft Survivability Equipment (ASE)/Defensive Tactics (DEFTAC)
Assisted Take-off (ATO))
Nuclear Weapons Transportation Training
NVG Training

1020. FLIGHT TRAINING BASIC FLIGHT MECHANIC

1. Combat Capable Training

STAGE	FLIGHTS	HOURS	PERCENT
Familiarization	13	52.0	55.0
Flight Mechanic Evaluation	1	4.0	5.0
	14	**56.0**	**60.0**

2. Combat Ready Training

STAGE	FLIGHTS	HOURS	PERCENT
Administrative Flights	2	4.0	2.0
Air Refueling	4	12.0	4.0
Low Level	2	5.0	2.0
Formation	2	6.0	2.0
Air Delivery	1	3.0	1.0
Over Water ICAO	1	8.0	1.0
Temporary Landing Zone	1	3.0	1.0
Rapid Ground Refueling	1	2.0	1.0
Functional Check Flight	1	2.0	1.0
	15	**45.0**	**15.0**

3. Combat Qualification Training

STAGE	FLIGHTS	HOURS	PERCENT
Low Level Aerial Refueling	4	12.0	4.0
Division Air Refueling	2	16.0	4.0
Aerial Delivery	2	6.0	3.0
ASE	1	2.0	1.0
Temporary Landing Zone	2	4.0	4.0
Rapid Ground Refueling	1	2.0	2.0
NATOPS Check	1	8.0	2.0
	13	**50.0**	**20.0**

4. Full-Combat Qualification

STAGE	FLIGHTS	HOURS	PERCENT
Low Altitude Tactics	3	7.0	3.0
DEFTAC	3	6.0	2.0
	6	**13.0**	**5.0**
TOTAL	**48**	**164.0**	**100.0**

1021. REFRESHER FLIGHT MECHANIC

1. Combat Capable Training

STAGE	FLIGHTS	HOURS
Familiarization	13	52.0
NATOPS Evaluation	1	4.0
	14	**56.0**

1022. CONVERSION FLIGHT MECHANIC

1. Combat Capable Training

STAGE	FLIGHTS	HOURS
Systems Review	4.0	16.0

1030. SIMULATOR TRAINING. Not applicable.

1040. FLIGHT PERFORMANCE REQUIREMENTS

1. Purpose. Familiarize the student flight mechanic in correct procedures for: turnaround inspections (preflight/postflight), servicing, engine start, taxi, runup, takeoff, cruise, descent, landing and securing, and normal and emergency procedures.

2. Ground Training. Each aircraft system introduced in the combat capable stage requires a minimum of 4.0 hours ground instruction, unless otherwise noted.

3. Aircrew Coordination. Aircrew coordination shall be briefed for all flights and/or events.

1041. COMBAT CAPABLE TRAINING

1. Familiarization

a. Purpose. Familiarize the student with the duties and procedures of the flight mechanic per current instructions.

b. General. Flight engineer instructor will instruct student on all flights in this stage.

c. Ground Training. Prior to each flight, 4.0 hours of ground instruction are required.

GFAM-100 8.0 R 1 KC-130 S

Goal. Introduce the student to turnaround inspections (preflight/postflight), squadron SOP, normal and emergency procedures.

Requirement. Flight engineer instructor will instruct student flight mechanic on correct turnaround inspections (preflight/postflight), squadron SOP, normal and emergency procedures per current instructions.

Performance Standard. The student flight mechanic will be familiar with turnaround inspections (preflight/postflight), squadron SOP, normal and emergency procedures per current instructions.

d. Flight Training (13 Flights, 52.0 Hours)

FAM-100 4.0 R 1 KC-130 A

Goal. Refine the student to turnaround inspections (preflight/postflight).

Requirement. Flight engineer instructor will instruct student flight mechanic on correct turnaround inspections (preflight/postflight) per current instructions.

Performance Standard. Upon completion, the student flight mechanic will be familiar with turnaround inspections (preflight/postflight) per current instructions.

Prerequisite. GFAM-100.

FAM-101 4.0 R, C 1 KC-130 A

Goal. Familiarize the student flight mechanic on aircraft engine and GTC/APU systems.

Requirement. Flight engineer instructor will instruct the student flight mechanic on aircraft engines.

Performance Standard. Upon completion, the student flight mechanic will be familiar with aircraft engines, operation, possible malfunctions, and component locations.

FAM-102 4.0 R 1 KC-130 A

Goal. Familiarize the student flight mechanic on aircraft propeller systems.

Requirement. Flight engineer instructor will instruct the student flight mechanic on aircraft propeller systems.

Performance Standard. Upon completion, the student flight mechanic will be familiar with aircraft propellers, operation, possible malfunctions, and component locations.

FAM-103 4.0 R, C 1 KC-130 A

Goal. Familiarize the student flight mechanic on aircraft electrical systems.

Requirement. Flight engineer instructor will instruct the student flight mechanic on aircraft electrical systems.

Performance Standard. Upon completion, the student flight mechanic will be familiar with aircraft electrical systems operation, possible malfunctions, and component locations.

FAM-104 4.0 R, C 1 KC-130 A

Goal. Familiarize the student flight mechanic on aircraft bleed air and anti-icing/de-icing systems.

Requirement. Instructor flight engineer will instruct the student flight mechanic on aircraft bleed air and anti-icing/de-icing systems.

Performance Standard. Upon completion, the student flight mechanic will be familiar with aircraft bleed air and anti-icing/de-icing systems operation, possible malfunctions, and component locations.

FAM-105 4.0 R, C 1 KC-130 A

Goal. Familiarize the student flight mechanic on aircraft fuel system.

Requirement. Instructor flight engineer will instruct the student flight mechanic on aircraft fuel systems.

Performance Standard. Upon completion, the student flight mechanic will be familiar with aircraft fuel systems, operation, possible malfunctions and component locations.

FAM-106 4.0 R 1 KC-130 A

Goal. Familiarize the student flight mechanic on aircraft hydraulic systems.

Requirement. Instructor flight engineer will instruct the student flight mechanic on hydraulic systems.

Performance Standard. Upon completion, the student flight mechanic will be familiar with aircraft hydraulic systems, their operation, possible malfunctions, and component locations.

FAM-107 4.0 R, C 1 KC-130 A

Goal. Familiarize the student flight mechanic on aircraft air conditioning and pressurization and oxygen systems.

Requirement. Instructor flight engineer will instruct student flight mechanic on aircraft air conditioning/pressurization systems.

Performance Standard. Upon completion, the student flight mechanic will be familiar with aircraft air conditioning/pressurization systems, operation, possible malfunctions, and component locations.

FAM-108 4.0 R, C 1 KC-130 A

Goal. Familiarize the student flight mechanic on aircraft communication and navigation systems.

Requirement. Instructor flight engineer will instruct student flight mechanic on aircraft communication and navigation systems.

Performance Standard. Upon completion, the student flight mechanic will be familiar with aircraft communication/navigation systems, operation, possible malfunctions, and component locations.

FAM-109 4.0 R 1 KC-130 A

Goal. Familiarize the student flight mechanic on aerial refueling systems, procedures, and observer duties.

Requirement. Instructor flight engineer will instruct student flight mechanic on aircraft aerial refueling systems and observer duties.

Performance Standard. Upon completion, the student flight mechanic will be familiar with aerial refueling systems, operation, possible malfunctions, component locations and observer duties.

CK-110 4.0 R 1 KC-130 A

Goal. Evaluate the student flight mechanic on aerial refueling procedures and observer duties.

Requirement. Instructor flight engineer will evaluate the student flight mechanic on aerial refueling procedures and observer duties.

Performance Standard. Upon completion, the student flight mechanic will be familiar with aerial refueling procedures and qualified as an aerial refueling observer.

FAM-111 4.0 R 1 KC-130 A

Goal. Familiarize the student flight mechanic on low level operations per current instructions.

Requirement. Instructor flight engineer will instruct the student flight mechanic on low level operations per current instructions.

Performance Standard. Upon completion, the student flight mechanic will be familiar with low level procedures per current instructions.

FAM-112 4.0 R 1 KC-130 A

Goal. Review previous instructions as necessary.

Requirement. Instructor flight engineer will review all previous instructions as necessary.

2. Flight Mechanic Evaluation

a. Purpose. Evaluate the student flight mechanic per NATOPS procedures.

b. General. Flight mechanic evaluation will be conducted during this stage.

c. Flight Training (1 Flight, 4.0 Hours)

CK-190 4.0 R E 1 KC-130 A

Goal. NATOPS evaluation.

Requirement. NATOPS instructor/evaluator will evaluate student flight mechanic per NATOPS procedures. Remain overnight (RON) flight is preferred.

Performance Standard. Qualified per NATOPS.

1042. COMBAT READY TRAINING

1. Administrative Flight

a. Purpose. Maintain flight mechanic proficiency on administrative flights.

b. Flight Training (2 flights, 4 Hours)

FM-200 2.0 1 KC-130 A

Goal. Maintain proficiency in normal and emergency procedures during day flight operations.

Requirement. Review normal and emergency procedures during day flight operations per current instructions.

FM-201 2.0 1 KC-130 A N

Goal. Maintain proficiency in normal and emergency procedures during night flight operations.

Requirement. Review normal and emergency procedures during night flight operations per current instructions.

2. Aerial Refueling

a. Purpose. Refine flight mechanic in aerial refueling missions per current instructions.

b. Flight Training (4 Flights, 12.0 Hours)

AR-210 3.0 1 KC-130 A

Goal. Refine fixed wing aerial refueling procedures.

Requirement. Review normal and emergency aerial refueling procedures and observer duties PER KC-130 TACMAN and AR Manual. Use of EMCON procedures is optional.

AR-211 3.0 1 KC-130 A N

Goal. Introduce and refine night fixed wing aerial refueling procedures.

Requirement. Review normal and emergency aerial refueling procedures and observer duties at night PER KC-130 TACMAN and AR Manual. Use of EMCON procedures is optional.

Prerequisite. AR-210.

AR-212 3.0 1 KC-130 A

Goal. Refine helicopter aerial refueling procedures.

Requirement. Review normal and emergency helicopter refueling procedures and observer duties PER KC-130 TACMAN and AR Manual. Use of EMCON procedures is optional.

AR-213 3.0 1 KC-130 A N

Goal. Introduce night helicopter aerial refueling procedures.

Requirement. Review normal and emergency helicopter refueling procedures and observer duties at night PER KC-130 TACMAN and AR Manual. Use of EMCON procedures is optional.

Prerequisite. AR-212.

3. Low Level

a. Purpose. Train the flight mechanic in low level procedures.

b. Flight Training (2 Flights, 5.0 Hours)

LL-220 2.0 1 KC-130 A

Goal. Refine low level procedures.

Requirement. Fly a low level route PER KC-130 TACMAN procedures.

LL-221 3.0 1 KC-130 A N

Goal. Introduce night low level procedures.

Requirement. Fly a night low level route PER KC-130 TACMAN procedures.

Prerequisite. LL-220.

4. Formation

a. Purpose. Train the flight mechanic in formation procedures.

b. Flight Training (2 Flights, 6.0 Hours)

FORM-230 3.0 2 KC-130 A

Goal. Proficiency training in formation procedures.

Requirement. Fly a two plane formation flight PER NATOPS and TACMAN.

FORM-231 3.0 2 KC-130 A N

Goal. Introduce night section formation.

Requirement. Fly a two plane night formation flight PER NATOPS and TACMAN.

Prerequisite. FORM-230.

5. Aerial Delivery

a. Purpose. Refine the flight mechanic in aerial delivery procedures per current instructions.

b. Flight Training (1 Flight, 3.0 Hours)

AD-240 3.0 1 KC-130 A

Goal. Refine aerial delivery procedures.

Requirement. Fly and review aerial delivery mission of cargo or troops PER TACMAN.

6. Overwater ICAO Environments

a. Purpose. Refine the flight mechanic in extended overwater procedures.

b. Flight Training (1 Flight, 8.0 Hours)

OWICAO-250 8.0 1 KC-130 A

Goal. Refine extended overwater procedures.

Requirement. Fly an extended overwater flight and review over-water procedures placing emphasis on mission planning and aircraft preparation.

7. Temporary Landing Zones

a. Purpose. Train the flight mechanic on temporary landing zones.

b. Flight Training (1 Flight, 3.0 Hours)

TLZ-270	3.0	1 KC-130 A

Goal. Introduce TLZ procedures at improved fields.

Requirement. Introduce maximum effort takeoffs and landings at improved field PER TACMAN.

8. Rapid Ground Refueling

a. Purpose. Train the flight mechanic in rapid ground refueling.

b. Flight Training (1 Flight, 2.0 Hours)

RGR-273	2.0	1 KC-130 A

Goal. Train the FM in rapid ground refueling.

Requirement. Conduct rapid ground refueling with actual aircraft engines running PER NATOPS and TACMAN.

9. Functional Check Flight

a. Purpose. Maintain proficiency in functional check flight procedures.

b. Flight Training (1 Flight, 2.0 Hours)

FCF-280	2.0	1 KC-130 A

Goal. Maintain proficiency in functional check flight procedures.

Requirement. Review normal and emergency procedures during a functional check flight profile A, B, C, or D with emphasis on all in-flight FCF duties.

1043. COMBAT QUALIFICATION TRAINING

1. Low Level Aerial Refueling

a. Purpose. Train flight mechanic in low level refueling procedures.

b. Flight Training (4 Flights, 12.0 Hours)

LLAR-310	3.0	1-2 KC-130 A

Goal. Introduce fixed wing low level aerial refueling procedures.

Requirement. Fly low level aerial refueling mission PER TACMAN and AR Manual. EMCON procedures are optional.

Prerequisite. AR-210, LL-220.

LLAR-311 3.0 1-2 KC-130 A N

Goal. Introduce fixed wing low level aerial refueling procedures at night.

Requirement. Fly night low level aerial refueling mission PER TACMAN and AR Manual. EMCON procedures are optional.

Prerequisite. AR-211, LL-221.

LLAR-312 3.0 1-2 KC-130 A

Goal. Introduce low level helicopter refueling procedures.

Requirement. Fly a low level helicopter refueling mission PER TACMAN and AR Manual.

Prerequisite. AR-212, LL-220.

LLAR-313 3.0 1-2 KC-130 A N

Goal. Introduce low level helicopter refueling procedures at night.

Requirement. Fly a low level helicopter refueling mission for proficiency at night PER TACMAN and AR Manual.

Prerequisite. AR-213, LL-221.

2. Formation Aerial Refueling

a. Purpose. Train the flight mechanic in overland and overwater multiplane aerial refueling procedures.

b. Flight Training (2 Flights, 16.0 Hours)

OLAR-314 8.0 2 or more KC-130's A

Goal. Train overland multi-plane aerial refueling procedures.

Requirement. Conduct overland multi-plane aerial refueling PER NATOPS, TACMAN and AR Manual.

Prerequisite. AR-220, FORM-230.

OWAR-315 8.0 2 or more KC-130's A

Goal. Train overwater multiplane aerial refueling.

Requirement. Conduct overwater multiplane aerial refueling PER NATOPS, TACMAN and AR Manual.

Prerequisite. AR-220, FORM-230, OWICAO-250.

3. Aerial Delivery (Illumination Flares)

a. Purpose. Train the flight mechanic in aerial delivery (illumination flare) procedures.

b. Flight Training (1 Flight, 3.0 Hours)

AD-343	3.0	KC-130 A N

Goal. Introduce aerial delivery of illumination flare procedures.

Requirement. Conduct aerial delivery of illumination flares PER TACMAN.

4. Aerial Delivery

a. Purpose. Train the flight mechanic in aerial delivery procedures.

b. Flight Training (1 Flights, 3.0 Hours)

AD-340	3.0	1 KC-130 A

Goal. Train short look procedures.

Requirement. Fly day or night low level to aerial delivery PER TACMAN. Introduce low-high-low profile with modified slowdown aerial delivery procedures.

Prerequisite. LL-220, AD-240.

5. Aircraft Survivability Equipment (ASE)

a. Purpose. Train the flight mechanic in Aircraft Survivability Equipment.

b. Flight Training (1 Flights, 2.0 Hours)

ASE-360	2.0	1 KC-130 A

Goal. Train the flight mechanic duties in the ASE environment.

Requirement. Conduct and train in ASE procedures. Train ground loading procedures, system setup and operation, and operate ASE systems in flight to actually fire flares or chaff. Emphasis on evasive flight techniques and lookout doctrine in coordination with ASE employment. Flight on ASE range preferred.

Prerequisite. ASE-260.

6. Temporary Landing Zones

a. Purpose. Train the flight mechanic in short field operations.

b. Flight Training (2 Flights, 4.0 Hours)

TLZ-370 2.0 1 KC-130 A

Goal. Introduce short field operations.

Requirement. Introduce takeoffs and landings at unimproved airfields PER NATOPS and TACMAN.

Prerequisite. TLZ-270.

TLZ-371 2.0 KC-130 A N

Goal. Introduce night short field operations.

Requirement. Review takeoffs and landings at improved or unimproved airfields at night PER NATOPS and TACMAN.

Prerequisite. TLZ-370.

7. Rapid Ground Refueling

a. Purpose. Train the flight mechanic in rapid ground refueling.

b. Flight Training (2 Flights, 4.0 Hours)

RGR-373 2.0 1 KC-130 A N

Goal. Train the flight mechanic in rapid ground refueling.

Requirement. Conduct rapid ground refueling with actual aircraft engines running PER NATOPS and TACMAN.

8. Annual Requalification Check

a. Purpose. Conduct an annual requalification and standardization check.

b. Flight Training (1 Flight, 8.0 Hours)

CK-390 8.0 R E 1 KC-130 A

Goal. NATOPS annual requalification.

Requirement. NATOPS evaluator/assistant NATOPS instructor shall evaluate the flight mechanic for NATOPS procedures. RON is preferred.

Performance Standard. Flight Mechanic shall meet the standards as set forth in the current KC-130 NATOPS manual for qualification.

1044. FULL COMBAT QUALIFICATION TRAINING

1. Low Altitude Tactics (LAT)

a. Introduction. All flight mechanics shall be trained and qualified in LAT procedures. Initial training and certification shall be conducted by a flight engineer WTACI. Once designated LAT qualified, flight mechanics need only maintain proficiency to fly LAT missions.

b. Purpose. Train the flight mechanic in low altitude tactics.

c. Flight Training (3 Flights, 7.0 Hours)

LAT-432 2.0 1 KC-130 A

Goal. Introduce low altitude tactics.

Requirement. Introduce terrain masking, ridgeline crossings, and lookout doctrine PER TACMAN.

Prerequisite. LL-220.

LAT-433 2.0 2 KC-130 A

Goal. Refine low altitude tactics.

Requirement. Review terrain masking, ridgeline crossings, and lookout doctrine PER TACMAN. Introduce section LAT.

Prerequisite. LAT-432.

LAT-434 3.0 R 1 KC-130 A

Goal. Qualify the flight mechanic in low altitude tactics.

Requirement. Review terrain masking, ridgeline crossings, and lookout doctrine PER TACMAN.

Performance Standard. Performs all required duties during LAT PER NATOPS and KC-130 Tactics Manual

Prerequisite. LAT-433.

2. Defensive Tactics (DEFTAC)

a. Purpose. Refine the flight mechanic duties in Defensive Tactics procedures.

b. Instructor Requirements. DEFTAC shall be instructed by an WTACI.

c. Flight Training (3 Flights, 6.0 Hours)

DEFTAC-460 2.0 1 KC-130 & 1 Adversary A

Goal. Train aircrews in defensive tactics.

Requirement. Introduce defensive maneuvers with emphasis on hard turns, break turns, maneuvering velocity, and lookout doctrine.

Prerequisite. LAT-434.

DEFTAC-461 2.0 1 KC-130 & 1 Adversary A

Goal. Train aircrews in defensive tactics.

Requirement. Refine procedures covered in DEFTAC-361.

Prerequisite. DEFTAC-460.

DEFTAC-462 2.0 1 KC-130, 2 Adversaries A

Goal. Train aircrews in defensive tactics.

Requirement. Refine defensive maneuvering with two adversaries. Emphasis shall be placed on briefing, conduct of flight, and lookout doctrine.

Prerequisite. DEFTAC-461.

1050. SPECIAL MISSIONS

1. Transportation of Nuclear Weapons

a. Purpose. Qualify aircrews in procedures to properly transport nuclear weapons.

b. General. Must be assigned to the PRP.

c. Flight Training (1 Flight, 4.0 Hours)

CPL-600 4.0 1 KC-130 A

Goal. Train aircrews in the transportation of nuclear weapons.

Requirement. Introduce nuclear weapons loading procedures, restrictions, special safety, and emergency procedures.

2. Night Systems Operations

a. Purpose. Introduce and qualify the flight mechanic in Night Systems (NS) operations, or to maintain proficiency for NSQ flight mechanics, and to review concepts associated with night visual phenomena.

b. General. The NSQ syllabus consists of (NVG-601, 610, 620, 621, 640, 670). NSQ flight mechanics shall be designated by the squadron Commanding Officer.

(1) Prior to starting the NSQ syllabus flight mechanics must be proficient in the respective 200 series code. All ground training shall be completed prior to flight training and NVG-601 shall be completed prior to all other NSQ codes.

(2) Upon completion of the NSQ syllabus the flight mechanic need only meet prerequisites and proficiency required of each sortie. If this refly interval is exceeded, the sortie may be reflown with a current NSQ or NSI flight engineer, loadmaster, or flight mechanic.

(3) Light level requirements for each sortie are identified in the "requirement" description of each sortie. These light level requirements pertain to the first time this sortie is flown.

c. Instructor Requirements. Shall be in accordance with MCO P3500.14. Any NSI may instruct the ground portion. A flight engineer or loadmaster NSI may instruct the flight portion up to NVG-690. Final NSQ evaluation (NVG-690) shall be conducted by a flight engineer NSI.

d. Ground Training

(1) NITE lab.

(2) Night Systems ASP (developed by MAWTS-1).

3. Night Systems Familiarization

a. Purpose. To familiarize the flight mechanic with Night Systems operations.

b. Flight Training (1 Flight, 1.5 Hours)

NVG-601 1.5 1 KC-130 A N

Goal Introduce the flight mechanic to KC-130 Night Systems and the use of NVG's in the KC-130.

Requirement High light level conditions. Emphasis will be on donning of the NVG's, taxi procedures, aborts, take-offs, cargo compartment orientation, landings, aircraft ground reversing operations, aircraft lighting, aircraft night systems, and NVG aircrew coordination.

4. Night Systems Air Refueling

a. Purpose. Provide flight training and qualify the flight mechanic in basic night systems air refueling operations and to review concepts associated with night visual phenomena.

b. Flight Training (1 Flight, 1.5 Hours)

NVG-610 1.5 1 KC-130 A N

Goal. Introduce the flight mechanic to fixed wing or rotary wing aerial refueling operations utilizing NVG's.

Requirement. Low or high light level conditions. Conduct a rendezvous with fixed wing or rotary wing receivers and perform refueling emphasizing aircrew coordination, rendezvous and refueling procedures. Rendezvous and refueling altitudes shall be in accordance with T&R Manual, Volume 1, and the NATOPS Air Refueling Manual. Use of EMCON procedures is optional.

Prerequisite: AR-211, NVG-601

5. Night Systems Low Level Navigation

a. Purpose. Provide flight training and qualify the flight mechanic in basic night systems low level navigation operations and to review concepts associated with night visual phenomena.

b. Flight Training (2 Flights, 3.0 Hours).

NVG-620 1.5 1 KC-130 A N

Goal. Conduct a low level navigation route while utilizing the NVG's.

Requirement. High light level conditions. Fly a night low level navigation route of at least 6 checkpoints utilizing NVG's. Altitudes shall be in accordance with T&R volume 1 for NVG accommodation and establishment of comfort level. The student shall be in the flight mechanic's seat. Emphasis will be on point to point navigation, crew coordination, lookout doctrine and voice procedures.

Prerequisite LL-221, NVG-601

NVG-621 1.5 1 KC-130 A N

Goal. Conduct a low level navigation route in low light level conditions while utilizing the NVG's.

Requirement. Low light level conditions. Fly and debrief a night low level navigation route of at least 6 checkpoints utilizing NVG's. Altitudes shall be in accordance with T&R volume 1 for NVG accommodation and establishment of comfort level. The student shall be in the flight mechanic's seat. Emphasis will be on crew coordination and contrast between high and low light level conditions.

Prerequisite. NVG-620.

6. Night Systems Low Altitude Tactics

a. Purpose. Introduce, qualify, and train the flight mechanic in LAT in the night systems environment.

b. Flight Training (1 Flight, 1.5 Hours)

NVG-622 1.5 1 KC-130 A N

Goal. Conduct LAT while utilizing the NVG's.

Requirement. The flight is to be conducted in two phases. First phase introduces flying at comfort level, terrain masking, ridge line crossings, lookout doctrine, break turns, hard turns, and climb to cope. Second phase to be conducted at comfort level. Practice flying at comfort level, terrain masking, lookout doctrine, and climb to cope. Hard and break turns shall not be flown in this phase of flight.

Prerequisite. NVG-690, NSI on board and LAT-334.

7. Night Systems Formation

a. Purpose. Provide flight training and qualify aircrew in basic night systems formation operations and to review concepts associated with night visual phenomena.

b. Flight Training (1 Flight, 1.5 Hours)

NVG-630 1.5 1 KC-130 A N

Goal. Introduce the flight mechanic to formation flight utilizing NVG's.

Requirement. High or low light level. Fly a formation flight, practicing lead and trail position flying utilizing NVG's.

Prerequisite. NVG-690, NSI on board and FORM-231.

8. Night Systems Aerial Delivery

a. Purpose. Provide flight training and qualify aircrew in basic night systems aerial delivery operations and to review concepts associated with night visual phenomena.

b. Flight Training (1 Flight, 1.5 Hours)

NVG-640 1.5 1 KC-130 A N

Goal. Train the flight mechanic in aerial delivery mission procedures in the NS environment.

Requirement. High or low light level. Conduct an aerial delivery mission using NVG's. Utilize a low-high-low profile when possible. Emphasis shall be on checklist employment and crew coordination. This sortie has a 12 month refly factor and updates NVG-601. NVG-620 is also updated when using a low-high-low profile.

Prerequisite: AD-240, NVG-601; NVG-620 for low-high-low profile.

9. Night Systems Aircraft Survivability Equipment

a. Purpose. Provide flight training and qualify aircrew in basic night systems aircraft ASE operations and to review concepts associated with night visual phenomena.

b. Flight Training (1 Flight, 1.5 Hours)

NVG-660 1.5 1 KC-130 A N

Goal. Conduct ASE operations while utilizing NVG's.

Requirement. High or low light level. Flight shall be conducted on a suitable range and either flares, chaff, or both shall be expended in response to a real or simulated threat. Emphasis shall be on aircrew coordination during the defensive/evasive maneuver phases of flight.

Prerequisite: ASE-360, NVG-601

10. Night Systems Temporary Landing Zone Operations

a. Purpose. Provide flight training and qualify aircrew in basic night systems temporary landing zone operations and to review concepts associated with night visual phenomena.

b. Flight Training (2 Flights, 3.0 Hours)

NVG-670 1.5 1 KC-130 A N

Goal. Conduct touch and go landings and full stops at a TLZ while utilizing NVG's.

Requirement. High light level. Takeoffs and landings shall be performed with the student in the flight mechanic's seat. Emphasis shall be on aircrew coordination during the takeoff and landing phases of flight. A minimum of four touch and goes and one full stop should be performed. The TLZ may be improved or unimproved.

Prerequisite: TLZ-270, NVG-601

NVG-671 1.5 1 KC-130 A N

Goal. Conduct TLZ landings in low light conditions while utilizing NVG's.

Requirement. Low light level conditions. A minimum of four touch and goes and one full stop should be accomplished. Emphasis shall be on differences in TLZ operations in low light conditions and TLZ operations in high light level conditions.

Prerequisite. NVG-670.

11. Night Systems Qualification Check

a. Purpose. Conduct Night Systems Qualification check.

b. Flight Training (1 Flight, 1.5 Hours)

NSQ-690 1.5 R 1 KC-130 A N

Goal. Qualify the flight mechanic as NSQ.

Requirement. Low or high light level conditions. Demonstrate the required skills to conduct KC-130 night operations using NVG's. The flight mechanic shall have completed the NSQ syllabus and have flown a minimum of 5 NVG hours in low light level conditions with a NSI prior to flying NSQ-690. The flight mechanic to be qualified shall fly a Night Systems sortie. This sortie may be any one of, or a combination of the following: NVG-610, 620, 621, 640, 670.

12. Assisted Take Off

a. Purpose. Train the flight mechanic in assisted takeoffs.

b. Flight Training (1 Flight, 0.5 Hour)

ATO-695	0.5	1 KC-130 A (N)

Goal. Introduce assisted takeoffs using JATO.

Requirement. Conduct assisted takeoffs using JATO. Plan for either burnout at liftoff or burnout at 50 feet.

1060. EXPENDABLE ORDNANCE REQUIREMENTS. Not applicable.

AIRCRAFT: KC-130 MOS: 6030 CREW POSITION: FLIGHT MECHANIC

STAGE	TRAINING CODE	HRS	REFLY INTERVAL	CRP	T	C	R	E	REMARKS
COMBAT CAPABLE TRAINING									
FAM	100	4.0	*	4.2			X		
	101	4.0	*	4.2		X	X		
	102	4.0	*	4.2			X		
	103	4.0	*	4.2		X	X		
	104	4.0	*	4.2		X	X		
	105	4.0	*	4.2		X	X		
	106	4.0	*	4.2			X		
	107	4.0	*	4.2		X	X		
	108	4.0	*	4.2		X	X		
	109	4.0	*	4.6			X		N
CK	110	4.0	*	4.2			X		
FAM	111	4.0	*	4.2			X		
	112	4.0	*	4.2			X		
CK	190	4.0	*	5.0			X	X	
COMBAT READY TRAINING									
FM	200	2.0	3	1.0					
	201	2.0	3	1.0					N
AR	210	3.0	6	1.0					
	211	3.0	12	1.0					N
	212	3.0	6	1.0					
	213	3.0	12	1.0					N
LL	220	2.0	12	1.0					
	221	3.0	12	1.0					N
FORM	230	3.0	12	1.0					2 A/C
	231	3.0	12	1.0					2 A/C N
AD	240	3.0	12	1.0					
OWICAO	250	8.0	12	1.0					
TLZ	270	3.0	12	1.0					
RGR	273	2.0	12	1.0					
FCF	280	2.0	12	1.0					
COMBAT QUALIFICATION TRAINING									
LLAR	310	3.0	6	1.0					
	311	3.0	12	1.0					N
	312	3.0	6	1.0					
	313	3.0	12	1.0					N
OLAR	314	8.0	12	2.0					2+ A/C
	315	8.0	12	2.0					2+ A/C
AD	340	3.0	12	2.0					
	343	3.0	12	1.0					N
ASE	360	2.0	12	1.0					
TLZ	370	2.0	12	2.0					
	371	2.0	12	2.0					N
RGR	373	2.0	12	2.0					N
CK	390	8.0	12	2.0				X	

Figure 10-1.--MOS 6030 Refly Interval, Combat Readiness Percentage.

AIRCRAFT: KC-130 MOS: 6030 CREW POSITION: FLIGHT MECHANIC

STAGE	TRAINING CODE	HRS	REFLY INTERVAL	CRP	T	C	R	E	REMARKS
FULL-COMBAT QUALIFICATION TRAINING									
LAT	432	2.0	12	1.0					
	433	2.0	12	1.0					2 A/C
	434	3.0	12	1.0			X		
DEFTAC	460	2.0	12	0.5					
	461	2.0	12	0.5					
	462	2.0	12	1.0					
SPECIAL SORTIES									
CPL	600	4.0	*	0.0					
NVG	601	1.5	12	0.0					N
	610	1.5	12	0.0					N
	620	1.5	12	0.0					N
	621	1.5	12	0.0					N
	622	1.5	12	0.0					N
	630	1.5	12	0.0					N
	640	1.5	12	0.0					N
	660	1.5	12	0.0					N
	670	1.5	12	0.0					N
	671	1.5	12	0.0					N
NSQ	690	1.5	*	0.0			X	X	N
ATO	695	0.5	*	0.0					(N)

Figure 10-1.--MOS 6030 Refly Interval, Combat Readiness Percentage (cont'd).

MOS 6030 FLIGHT UPDATE CHAINING

FLIGHT	FLIGHTS UPDATED
200	
201	200
210	200
211	200,201,210
212	200
213	200,201,212
220	200
221	200,201,220
230	200
231	200,201,230
240	200
250	200
270	200
273	200
280	200
310	200,210,220
311	200,201,210,211,220,221,310
312	200,212,220
313	200,201,212,213,220,221,312
314	200,210,230
315	200,201,230,250,314
340	200,201,220,240,340
343	200,201,240,340
360	200
370	200,270
371	200,201,270,370
373	200,201,273
390	200
432	200,220
433	200,220,432
434	200,220,230,432,433
460	200
461	200,460
462	200,460,461
600	200
601	200,201
610	601,200,201,210,211,212,213
620	601,200,201,220,221
621	601,620,200,201,220,221
622	601,620,200,201,220,221,432,433,434
630	601,200,201,230,231
640	601,200,201,240,340
660	601,200,201,360,460
670	601,200,201,270,370,371
671	601,670,200,201,270,370,371
690	
695	200

Fig 10-2--MOS 6030 Flight Update Chaining