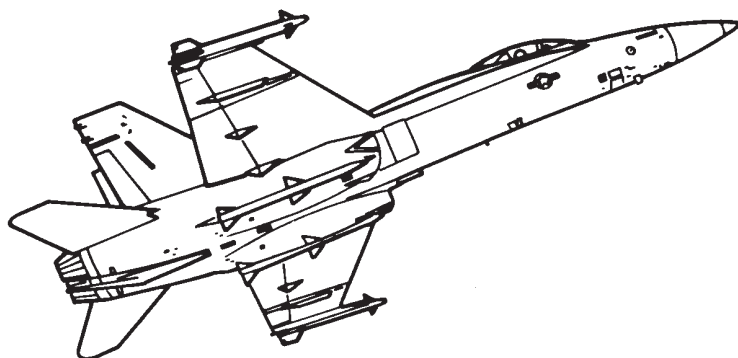


Pocket Checklist

F/A-18C AIRCRAFT

REV: 20220608



Procedures

Systems

APG-73
Radar

TGP
JHMCS

A/G
Weapons

A/A
Weapons



DISCLAIMER

This document represents a personal project and is intended for entertainment purposes only. Do not use for training purposes or in real life scenarios.

Contents

1	PROCEDURES	1-1
1.1	START-UP	1-3
1.1.1	PRE-START	1-3
1.1.2	ENGINE START	1-3
1.1.3	POST-START	1-4
1.2	TAKEOFF & LANDING	1-7
1.2.1	PRE-TAXI	1-7
1.2.2	TAKEOFF - SHORE	1-7
1.2.3	TAKEOFF - CARRIER	1-8
1.2.4	LANDING - SHORE	1-10
1.2.5	LANDING - CARRIER CASE I	1-12
1.2.6	LANDING - CARRIER CASE III	1-15
1.2.7	LANDING - ICLS CASE III	1-15
1.3	IN-FLIGHT	1-16
1.3.1	A/A REFUELING	1-16
2	SYSTEMS	2-1
2.1	SYSTEMS	2-3
2.1.1	ARC-210 RADIO	2-3
2.1.2	AFCS - MODES	2-3
2.1.3	AFCS - PROCEDURES	2-4
2.1.4	ATC - APPROACH MODE	2-4
2.1.5	ATC - CRUISE MODE	2-4
2.2	NAVIGATION	2-5
2.2.1	WAYPOINT	2-5
2.2.2	WAYPOINT - ADD	2-5
2.2.3	WAYPOINT - REMOVE	2-5
2.2.4	WAYPOINT - EDIT LAT/LONG	2-6
2.2.5	WAYPOINT - EDIT GRID COORDS	2-6
2.2.6	WAYPOINT - PRECISE COORDS	2-6
2.2.7	MARKPOINT	2-6
2.2.8	MARKPOINT - ADD	2-7
2.2.9	ADF	2-7
2.2.10	TACAN	2-7

2.2.11	AN/ALR-67 RWR	2-9
2.2.12	AN/ALE-47 ACMDS	2-10
2.2.13	AN/ALE-47 ACMDS - MODES	2-10
2.2.14	AN/ALQ-165 ASPJ	2-10
2.2.15	DATALINK	2-11
2.2.16	IFF	2-11
2.2.17	SA PAGE	2-11

3 AN/APG-73 RADAR 3-1

3.1	RWS - RANGE WHILE SEARCH	3-3
3.1.1	RWS	3-3
3.1.2	RWS - LTWS	3-3
3.2	TWS - TRACK WHILE SCAN	3-4
3.2.1	TWS - DESIGNATION	3-4
3.2.2	TWS - SCAN CENTERING METHODS	3-4
3.2.3	TWS - SCAN RAID	3-4
3.2.4	TWS - EXP	3-5
3.3	ACM - AIR COMBAT MANEUVERING	3-6
3.3.1	ACM - BST	3-6
3.3.2	ACM - VACQ	3-6
3.3.3	ACM - WACQ	3-6
3.3.4	ACM - GACQ	3-7
3.4	LOCK ACQUISITION	3-8
3.4.1	STT	3-8
3.4.2	AACQ	3-8
3.4.3	JHMCS	3-8
3.5	MAP	3-9
3.5.1	MAP	3-9
3.5.2	MAP - DESIGNATION	3-9
3.5.3	MAP - EXP1	3-9
3.5.4	MAP - EXP2	3-10
3.5.5	MAP - EXP3	3-10
3.5.6	MAP - EXP DESIGNATION	3-11
3.5.7	GMT	3-11
3.5.8	GMT - GMTT	3-12
3.5.9	SEA	3-12
3.5.10	SEA - TARGET TRACKING	3-13

4 TGP & JHMCS 4-1

4.1	AAQ-28 LITENING II	4-3
4.1.1	CONTROLS	4-3
4.1.2	POINTING METHODS	4-3
4.1.3	POINTING METHODS - VVSLV	4-3
4.1.4	POINTING METHODS - SNOWPLOW	4-4
4.1.5	POINTING METHODS - STABILIZED POINTING	4-4

4.1.6	POINTING METHODS - WAYPOINT SLAVED	4-4
4.1.7	POINTING METHODS - AREA TRACK	4-5
4.1.8	POINTING METHODS - POINT TRACK	4-5
4.1.9	POINTING METHODS - TGP OFFSET	4-5
4.1.10	START-UP & LASING	4-5
4.1.11	LASER SPOT TRACKER (LST)	4-6
4.1.12	LASER MARKING	4-7
4.1.13	A/A POINT TRACK	4-7
4.1.14	A/A RADAR SLAVING	4-8
4.2	ASQ-228 ATFLIR	4-9
4.2.1	CONTROLS	4-9
4.2.2	POINTING METHODS	4-9
4.2.3	POINTING METHODS - VVSLV	4-9
4.2.4	POINTING METHODS - SNOWPLOW	4-10
4.2.5	POINTING METHODS - WAYPOINT SLAVED	4-10
4.2.6	POINTING METHODS - SCENE TRACK	4-10
4.2.7	POINTING METHODS - AUTO TRACK	4-11
4.2.8	POINTING METHODS - TGP OFFSET	4-11
4.2.9	LASER SPOT TRACKER (LST)	4-11
4.2.10	A/A OPERATION MODES	4-12
4.2.11	A/A AUTO TRACK	4-12
4.2.12	A/A L+S SLAVE	4-12
4.3	JHMCS	4-13
4.3.1	CONTROLS	4-13
4.3.2	SYMBOLGY	4-13
4.3.3	SETUP - FORMAT	4-13
4.3.4	SETUP - BLANKING	4-13
4.3.5	SETUP - REJECT	4-13
4.3.6	SETUP - MIDS	4-13
4.3.7	TARGET DESIGNATION - A/G	4-13
4.3.8	TARGET DESIGNATION - A/A Radar	4-14
4.3.9	AIM-9X - UP-LOOK	4-14

5 A/G WEAPONS

5-1

5.1	A/G OVERVIEW	5-3
5.2	SELECTIVE ORDNANCE JETTISON	5-4
5.3	FORWARD FIRING	5-4
5.3.1	M61A2 GUN - A/G	5-4
5.3.2	ROCKETS	5-4
5.4	UNGUIDED FREE-FALL MUNITIONS	5-5
5.4.1	UNGUIDED BOMB - CCIP	5-5
5.4.2	UNGUIDED BOMB - CCRP	5-5
5.4.3	MK-20 CLUSTER BOMB - CCIP	5-6
5.5	GPS GUIDED MUNITIONS	5-7
5.5.1	JDAM/JSOW - PP	5-7

5.5.2	JDAM/JSOW - TOO WYPT	5-8
5.5.3	JDAM/JSOW - TOO TPOD	5-9
5.6	LASER GUIDED MUNITIONS	5-11
5.6.1	GBU-12 PAVEWAY II	5-11
5.6.2	GBU-24 PAVEWAY III	5-11
5.7	AGM-65 MAVERICK	5-12
5.7.1	AGM-65F/G IR-MAV	5-12
5.7.2	AGM-65E LASER-MAV	5-12
5.8	AGM-88C HARM	5-14
5.8.1	HARM - TOO	5-14
5.8.2	HARM - SP	5-14
5.8.3	HARM - PULLBACK	5-14
5.8.4	HARM - PB Intro	5-14
5.8.5	HARM - PB Setup	5-15
5.8.6	HARM - A/C LOFT	5-15
5.8.7	HARM - HRM LOFT	5-15
5.9	AGM-84D HARPOON	5-16
5.9.1	HARPOON - BOL	5-16
5.9.2	HARPOON - R/BL	5-17
5.10	AGM-84E/H SLAM & SLAM/ER	5-18
5.10.1	SLAM - SETUP	5-18
5.10.2	SLAM - TOO WYPT	5-19
5.10.3	SLAM - TOO TPOD	5-20
5.10.4	SLAM - TOO A/G RDR	5-21
5.10.5	SLAM - PP	5-22
5.10.6	SLAM-ER - STEERPOINTS	5-23
5.10.7	SLAM - LAUNCH	5-24
5.11	AGM-84E/H SLAM & SLAM/ER - ALTERNATE FORMAT	5-25
5.11.1	SLAM - SETUP	5-25
5.11.2	SLAM - TOO WYPT	5-26
5.11.3	SLAM - TOO TPOD	5-27
5.11.4	SLAM - TOO A/G RDR	5-28
5.11.5	SLAM - PP	5-29
5.11.6	SLAM-ER - STEERPOINTS	5-30
5.11.7	SLAM - LAUNCH	5-31
5.12	AGM-62 WALLEYE II	5-32
5.12.1	AGM-62 WALLEYE II	5-32
5.12.2	AGM-62 WALLEYE II - D/L	5-32

6	A/A WEAPONS	6-1
6.1	M61A2 GUN	6-3
6.1.1	M61 - NO RADAR	6-3
6.1.2	M61 - RADAR	6-3
6.2	AIM-9 SIDEWINDER	6-4
6.2.1	AIM-9 - NO RADAR	6-4

6.2.2	AIM-9 - RADAR	6-4
6.2.3	AIM-9X - JHMCS	6-4
6.3	AIM-7 SPARROW	6-6
6.3.1	AIM-7F - RADAR	6-6
6.4	AIM-120 AMRAAM	6-7
6.4.1	AIM-120 - STT	6-7
6.4.2	AIM-120 - TWS	6-7



Chapter 1

PROCEDURES

Contents

1.1	START-UP	1-3
1.1.1	PRE-START	1-3
1.1.2	ENGINE START	1-3
1.1.3	POST-START	1-4
1.2	TAKEOFF & LANDING	1-7
1.2.1	PRE-TAXI	1-7
1.2.2	TAKEOFF - SHORE	1-7
1.2.3	TAKEOFF - CARRIER	1-8
1.2.4	LANDING - SHORE	1-10
1.2.5	LANDING - CARRIER CASE I	1-12
1.2.6	LANDING - CARRIER CASE III	1-15
1.2.7	LANDING - ICLS CASE III	1-15
1.3	IN-FLIGHT	1-16
1.3.1	A/A REFUELING	1-16

1.1 START-UP

1.1.1 PRE-START

1. Ejection Seat test	DOWN & ARMED
2. Harness Lever	FWD
3. Parking Brake	ENGAGED
4. Master Arm	SAFE

1.1.2 ENGINE START

1. Battery	ON
2. Hyd. Brake	> 3000psi
3. Fire Test	(a) FIRE TEST TEST A (b) BATT cycle OFF then ON (c) FIRE TEST TEST B
4. APU Start	(a) APU Caution Light verify OFF (b) APU Switch ON (c) READY Light illuminated (30s)
5. Right Engine Start	(a) ENG CRANK R (b) R Eng RPM 15-25% (c) R Throttle IDLE
6. Stabilized Parameters	<ul style="list-style-type: none"> • IFEI Check <ul style="list-style-type: none"> - RPM - 60-65% - EGT - < 750C until stable • Cautions none for ENG 2 • GPWS Voice Alerts Check
7. Master Caution	RESET
8. Displays	(a) Left DDI ON (b) Right DDI ON (c) AMPCD ON

9. UFC	(a) HUD ON (b) ALT Switch RDR (c) ATT Switch AUTO
10. BLEED AIR Knob	Cycle thru OFF to NORM (shutoff valves closed during fire test)
11. Left Engine Start	(a) ENG CRANK L (b) L Eng RPM 15-25% (c) L Throttle IDLE
12. Stabilized Parameters	<ul style="list-style-type: none"> • IFEI Check <ul style="list-style-type: none"> – RPM – 60-65% – EGT – < 750C until stable • Cautions none for ENG 1 • L GEN Caution Extinguished

1.1.3 POST-START

1. Canopy	CLOSED
2. Start INS Align	(a) INS Selector GND or CV (as required) (b) HSI select STD HDG (if available) <i>(significantly reduces align time to approx. 90s)</i>
3. RADAR	OPR
4. FCS Reset	(a) WING FOLD SPREAD ONLY IF ON GROUND (b) Left DDI FCS page (c) MASTER CAUTION PRESS twice <i>(restacks cautions)</i> (d) FCS RESET PRESS
5. Lights Test	Check
6. Hook Bypass	As Required
7. Flaps	HALF
8. FCS BIT	(a) BIT Failures press FCS-MC (b) MC1 & MC2 GO (c) FCSA & FCSB PBIT GO (d) FCS BIT Switch press & hold (e) FCS-MC press FCS OSB (f) FCSA & FCSB GO

9. ANTI SKID	OFF if CV, else ON
10. Trim	PRESS T/O Trim
11. PITOT	AUTO
12. Displays	(a) Left DDI HUD Repeater (b) Right DDI FCS Page
13. RADALT Warning	• GND 200 ft • CV 80 ft
14. Standby Attitude Indicator	UNCAGED
15. Bingo Fuel	As desired (8000lbs)
16. Altimeter	Set
17. Mission Data	ENTER
18. Weapons/Sensors	As Required
19. STORES Page	Verify proper inventory installed
20. HMD Alignment	(a) SUPT/HMD/ALIGN Page SELECT (b) Superimpose HMD alignment cross on HUD/BRU alignment cross (c) CAGE/UNCAGE PRESS & HOLD until ALIGN OK Fine Align (a) With FA DXDY displayed, use TDC to align azimuth and elevation HMD alignment crosses with HUD/BRU alignment cross (b) CAGE/UNCAGE PRESS & RELEASE (c) With FA DROLL displayed, use TDC to align roll axis HMD alignment crosses with HUD/BRU alignment cross (d) CAGE/UNCAGE PRESS & RELEASE
21. OBOGS	ON
22. Complete INS Align	INS Selector to NAV or IFA (if available)
23. Defensive Systems	(a) ALR-67 RWR ON (b) ECM Selector STBY (c) Dispenser ON (middle)

24. Lights	(a) Strobe ON (b) POS Lights BRT (c) LDG/TAXI Lights ON
25. Network	(a) IFF ON (b) D/L ON , set desired frequency
26. Parking Brake	DISENGAGE
27. Chocks	REMOVED
28. Audio	Volume as required

1.2 TAKEOFF & LANDING

1.2.1 PRE-TAXI

1. ANTI SKID	As required <ul style="list-style-type: none"> • Field – ON • Carrier – OFF
2. FLAPS	HALF
3. CHOCKS	REMOVED
4. LAUNCH BAR	RETRACTED
5. HOOK BYPASS	As required
6. PARKING BRAKE	DISENGAGED

1.2.2 TAKEOFF - SHORE

	After Lining Up On Runway
1. ANTI SKID SPOILER BK	BOTH (UP)
2. FLAPS	UP
3. TRIM	T/O
4. NWS	LOW GAIN
5. Takeoff	(a) BRAKES hold (b) THROTTLE MIL (c) BRAKES release (d) THROTTLE MAX if desired (e) Rotation approx 150 KIAS hold 7 deg AOA (f) GEAR UP < 240 KIAS (g) FLAPS AUTO once airborne (h) ALT BARO at 3000 agl

1.2.3 TAKEOFF - CARRIER

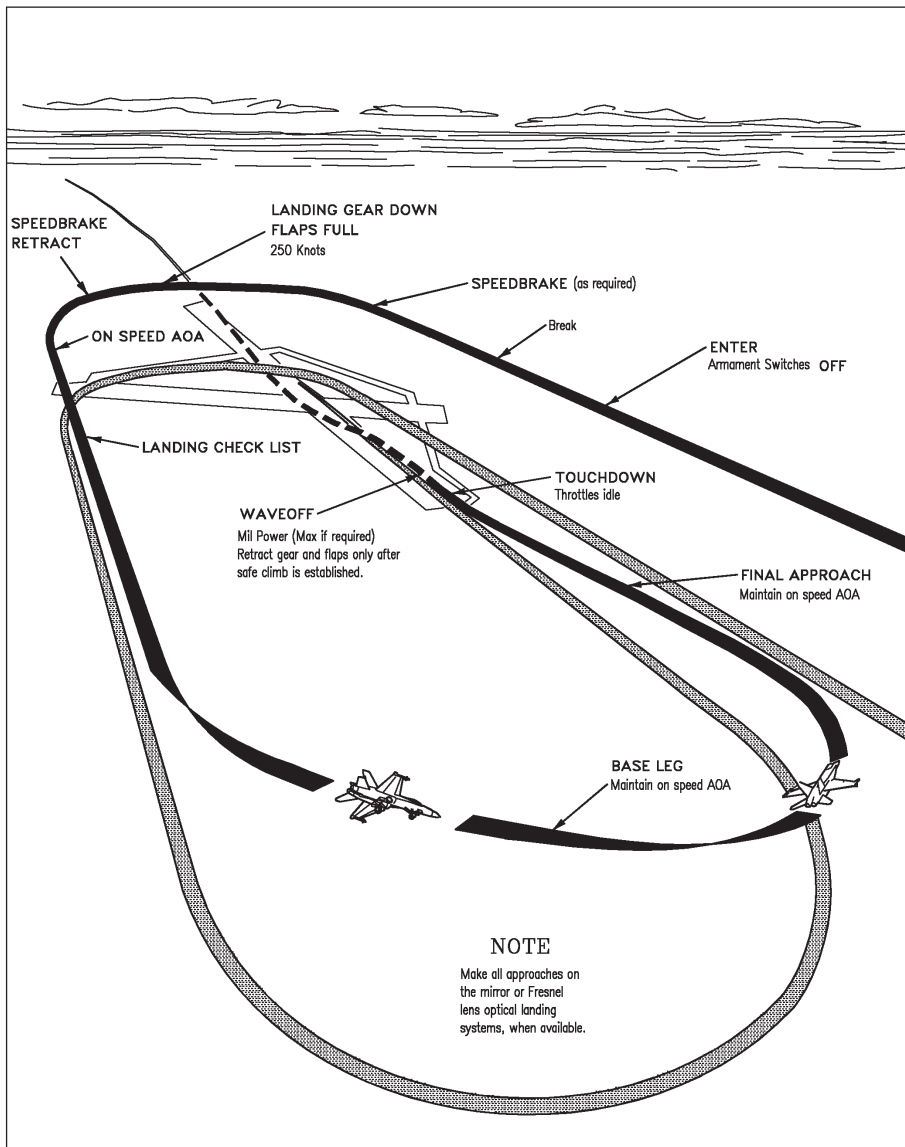
Lineup	<ul style="list-style-type: none"> • Wait behind JBD until Catapult is clear • Follow Taxi Directors Instructions to line up on Catapult
1. WING FOLD	(a) WING FOLD SPREAD when directed wait until fully spread (b) WING FOLD LOCK (c) HUD Repeater no WING UNLK caution
2. FLAPS	HALF
3. Launch Bar Preparation	(a) LAUNCH BAR EXTEND when directed (b) Throttle UP when directed (c) Taxi launch bar into shuttle (d) Throttle IDLE when directed (e) Wait for holdback installation & checks (f) LAUNCH BAR RETRACT
4. Trim	Refer to NOTE below
5. Speed Brakes	IN
6. Final Checks	(a) Throttle MIL when directed (b) Control Wipeout <ul style="list-style-type: none"> • Stick Full Forward • Stick Full Aft • Stick Full Left • Stick Full Right • Rudder Full Left • Rudder Full Right (c) Eng. Inst. Checked (d) Caution/Warnings None
7. Catapult Shot	(a) Salute CAT SHOT (b) Gear UP < 240 KIAS (c) Flaps AUTO (d) ALT BARO at 3000 agl
8. Clearing Turn	

NOTE

- Refer to **CHKLST** page for weight

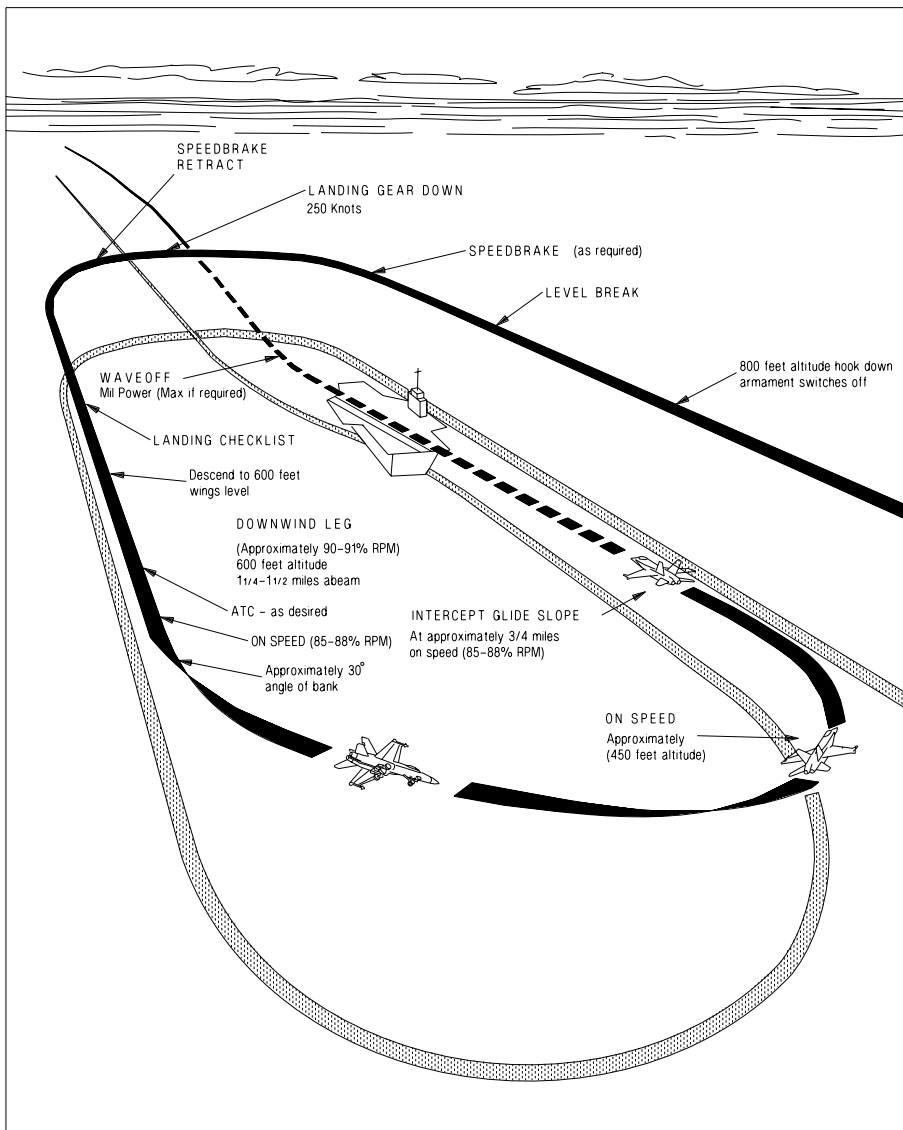
Weight [lbs]	< 44000	44000-48000	> 48000
Trim [deg]	16	17	18
MAX WEIGHT: 51900 lbs			

1.2.4 LANDING - SHORE



• Initial Approach	<ul style="list-style-type: none"> • HOOK UP • ANTI-SKID ON • ALT RDR • Airspeed 300-350 KIAS • Altitude 800 ft • ARM OFF
• Initial Break	<ul style="list-style-type: none"> • Break Interval 15-17 s • SPEED BRAKE EXTEND • Throttle IDLE • G 1% of Airspeed • Altitude 800 ft
• Break Turn	<ul style="list-style-type: none"> • Landing Gear DOWN at 250 KIAS • FLAPS FULL at 250 KIAS • SPEED BRAKE RETRACT at 250 KIAS
• Downwind	<ul style="list-style-type: none"> • Altitude descend to 600 ft • AOA ON-SPEED • LANDING CHECKLIST
• Final Turn	<ul style="list-style-type: none"> • Abeam Pos. 1-1.2 nmi <p>90 Deg Position</p> <ul style="list-style-type: none"> • AOA ON-SPEED • Altitude 400-500 ft
• Intercept Glideslope	<ul style="list-style-type: none"> • Distance 3/4 Mile • Altitude 360 ft • AOA ON-SPEED
• Touchdown	<ul style="list-style-type: none"> • No more than 750 ft/min • DO NOT FLARE

1.2.5 LANDING - CARRIER CASE I



1. Navigation	<ul style="list-style-type: none"> • TACAN ON and tuned • HSI <ul style="list-style-type: none"> – TCN – BOXED – CRS – BRC
2. Pattern Entry	<ul style="list-style-type: none"> • Distance – approx 5 nm • Heading – BRC • Line Up – Right of CV • Airspeed – 300-350 KIAS • Altitude – 800 ft
3. Pre-Break	<ul style="list-style-type: none"> • HOOK DOWN • ALT RDR • RADALT 370 ft • ANTI-SKID OFF • HOOK BYPASS CARRIER • ARM OFF • HSI Zoom 10 nm • Airspeed 300-350 KIAS • Altitude 800 ft
4. Initial Break	<ul style="list-style-type: none"> • Break Interval 15-17 s • SPEED BRAKE EXTEND • Throttle IDLE • G 1% of Airspeed • Altitude 800 ft
5. Break Turn	<ul style="list-style-type: none"> • Landing Gear DOWN at 250 KIAS • FLAPS FULL at 250 KIAS • SPEED BRAKE RETRACT at 250 KIAS
6. Downwind	<ul style="list-style-type: none"> • Altitude descend to 600 ft • AOA ON-SPEED • LANDING CHECKLIST
7. Final Turn	<ul style="list-style-type: none"> • Abeam Pos. 1-1.2 nmi <p>90 Deg Position</p> <ul style="list-style-type: none"> • AOA ON-SPEED • Altitude 400-500 ft
8. Intercept Glides-lope	<ul style="list-style-type: none"> • Distance 3/4 Mile • Altitude 360 ft • AOA ON-SPEED

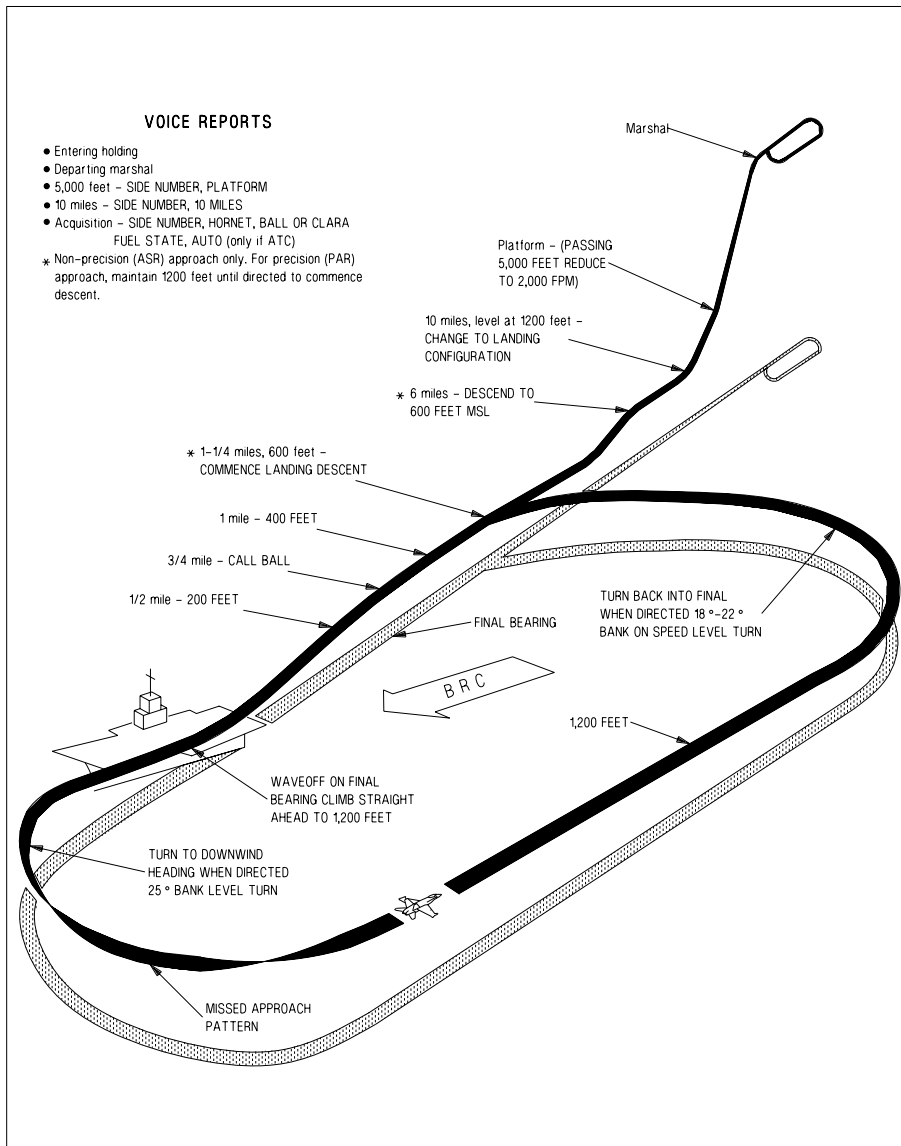
9. Touchdown

- No more than 750 ft/min
- **DO NOT FLARE**

NOTE

- **HSI** L wingtip will touch BRC line when 1.2nm abeam
- **HSI** heading to boat is 5 deg behind abeam heading when rounddown visible
- **Tip** during approach turn, do not peak before the 90

1.2.6 LANDING - CARRIER CASE III



Work In Progress

1.2.7 LANDING - ICLS CASE III

Work In Progress

1.3 IN-FLIGHT

1.3.1 A/A REFUELING

Work In Progress

Chapter 2

SYSTEMS

Contents

2.1	SYSTEMS	2-3
2.1.1	ARC-210 RADIO	2-3
2.1.2	AFCS - MODES	2-3
2.1.3	AFCS - PROCEDURES	2-4
2.1.4	ATC - APPROACH MODE	2-4
2.1.5	ATC - CRUISE MODE	2-4
2.2	NAVIGATION	2-5
2.2.1	WAYPOINT	2-5
2.2.2	WAYPOINT - ADD	2-5
2.2.3	WAYPOINT - REMOVE	2-5
2.2.4	WAYPOINT - EDIT LAT/LONG	2-6
2.2.5	WAYPOINT - EDIT GRID COORDS	2-6
2.2.6	WAYPOINT - PRECISE COORDS	2-6
2.2.7	MARKPOINT	2-6
2.2.8	MARKPOINT - ADD	2-7
2.2.9	ADF	2-7
2.2.10	TACAN	2-7
2.2.11	AN/ALR-67 RWR	2-9
2.2.12	AN/ALE-47 ACMDs	2-10
2.2.13	AN/ALE-47 ACMDs - MODES	2-10
2.2.14	AN/ALQ-165 ASPJ	2-10
2.2.15	DATALINK	2-11
2.2.16	IFF	2-11
2.2.17	SA PAGE	2-11

2.1 SYSTEMS

2.1.1 ARC-210 RADIO

• ARC-210	<ul style="list-style-type: none"> Provides T/R of AM/FM in 30-399.975MHz Contains 2 radios: COMM1 & COMM2 Controlled from UFC
• Power On	Rotate Vol knobs of COMM1 & COMM2
• Preset Channels	<ul style="list-style-type: none"> M: Manual 1-20: Preset Channels G: Guard (243.000) C: Cue Channel for SINCGARS S: Maritime (Sea)
• OSB 1: GRCV	Toggles Guard Receive
• OSB 2: SQCH	Toggles Squelch
• OSB 3: CPHR	Toggles Cipher modes (plain, cipher, delay) (not implemented)
• OSB 4: AM / FM	Selects Frequency Band (only visible when in AM/FM overlap)
• OSB 5: MENU	Menu Button
• Manually Set Freq	(a) Set desired channel with channel knob (b) Enter desired Frequency on UFC, ENT (c) Confirm all options as desired

2.1.2 AFCS - MODES

• ATTH	Attitude Hold: Aircraft will maintain existing pitch attitude and +/- 70 deg roll attitude
• BALT	Barometric Altitude Hold: Aircraft will maintain current heading and barometric altitude 0-70000 ft
• HSEL	Heading Select: Aircraft will turn and maintain heading selected on HSD
• RALT	Radar Altitude Hold: Aircraft will maintain current heading and radar altitude 0-5000 ft

2.1.3 AFCS - PROCEDURES

• Conditions	<ul style="list-style-type: none"> • Stick: Centered • HSD: heading selected (if required)
• Activation	(a) Press A/P OSB (b) Select Submode OSB
• Deactivation	press Paddle Switch

2.1.4 ATC - APPROACH MODE

• Conditions	<ul style="list-style-type: none"> • Flaps: HALF/FULL • TE Flaps: >27 deg
• Activation	ATC button
• Effect	Computer modulates thrust to maintain on speed AOA, pilot controls flightpath with pitch command
• Deactivation	Any of the following: <ul style="list-style-type: none"> • ATC button • Flaps: AUTO • Weight On Wheels • Bank Angle > 70deg • Sensor Failure

2.1.5 ATC - CRUISE MODE

• Conditions	<ul style="list-style-type: none"> • Flaps: AUTO
• Activation	ATC button
• Effect	Computer modulates thrust to maintain existing airspeed
• Deactivation	<ul style="list-style-type: none"> • ATC button • Flaps: HALF/FULL • Sensor Failure

2.2 NAVIGATION

2.2.1 WAYPOINT

• Waypoints	Pre-planned navigational points of reference to follow on route to area of operation Maximum: 60
• Activate WAY-POINT Nav	Press WYPT OSB on HSI
• Select Sequence	press SEQ# OSB
• Display Lines	box SEQ on HSI
• HSI Info (Top Right)	Bearing (deg) / Distance (Nm) Time-to-Go to Waypoint (min:sec)
• Automatic Sequencing	box AUTO on HSI Waypoint will automatically advance

2.2.2 WAYPOINT - ADD

1. DATA Page	Press DATA OSB on HSI verify correct sequence is selected
2. Activate UFC	press SEQUFC OSB
3. Insert Waypoint	(a) press INS OSB on UFC (b) input desired number, ENT
4. Edit Coordinates	As described in Section 2.2.4 or 2.2.5

2.2.3 WAYPOINT - REMOVE

1. DATA Page	Press DATA OSB on HSI verify correct sequence is selected
2. Activate UFC	press SEQUFC OSB
3. Delete Waypoint	(a) press DEL OSB on UFC (b) input desired number, ENT

2.2.4 WAYPOINT - EDIT LAT/LONG

1. DATA Page	Press DATA OSB on HSI
2. Select Waypoint	using Increment/Decrement OSBs
3. Activate UFC	(a) press UFC OSB (b) press POSN OSB
4. Edit Coordinates	(a) Input Latitude, ENT (b) Input Longitude, ENT

2.2.5 WAYPOINT - EDIT GRID COORDS

1. DATA Page	Press DATA OSB on HSI
2. Select Waypoint	using Increment/Decrement OSBs
3. Activate UFC	(a) press UFC OSB (b) press GRID OSB (c) HSI now displays Grid Menu
4. Edit Coordinates	(a) Verify TDC slaved to HSI (b) Press & Hold TDC DEPRESS to slew (c) Release TDC when over desired square (d) Input remaining coords on UFC

2.2.6 WAYPOINT - PRECISE COORDS

• Normal Coordinates	<ul style="list-style-type: none"> • LAT/LONG: deg/min/sec • GRID: 6 digits
• Precise Coordinates	<ul style="list-style-type: none"> • LAT/LONG: deg/min/sec.xx • GRID: 10 digits
• Activation	(a) press DATA OSB on HSI (b) box PRECISE

2.2.7 MARKPOINT

• Markpoint	Used to mark a point of interest Maximum: 9
--------------------	--

- | | |
|--|--|
| <ul style="list-style-type: none"> • Activate Navigation | <ul style="list-style-type: none"> • WYPT boxed on HSI • M# selected with Increment/Decrement OSBs |
| <ul style="list-style-type: none"> • Examine MKPT Data | press DATA OSB on HSI and select Markpoint as required |
| <ul style="list-style-type: none"> • Employment | (a) Select desired markpoint with Increment / Decrement OSBs
(b) Box WPDSG OSB to designate markpoint as the target point |

2.2.8 MARKPOINT - ADD

- | | |
|--|--|
| <ul style="list-style-type: none"> • Overfly Method | (a) Verify no target designated
(b) press MK# OSB on HSI/SA to create Markpoint on current location |
| <ul style="list-style-type: none"> • Target Designate Method | (a) Designate Target with sensor as required
(b) Press MK# OSB on HSI/SA to create Markpoint on current designation |
| <ul style="list-style-type: none"> • Note | After MK9 has been created the next Markpoint will overwrite MK1 |

2.2.9 ADF

- | | |
|-------------------------|---|
| 1. ADF Switch | To desired COMM |
| 2. Matching COMM | Set ADF frequency as required (FM) |
| 3. HSI | Circle will appear indicating direction of ADF beacon on compass rose |

2.2.10 TACAN

- | | |
|--|---|
| <ul style="list-style-type: none"> • TACAN | Tactical Air Navigation
Provide direction & distance to beacon |
|--|---|

<ul style="list-style-type: none">• UFC Activation	<ul style="list-style-type: none">(a) Press TCN OSB and cycle to ON(b) Verify T/R mode active(c) Input channel ## , EN(d) Set X/Y as required(e) Set A/A mode if required
<ul style="list-style-type: none">• HSI Activation	<ul style="list-style-type: none">(a) Box TCN OSB(b) Set CRS as required
<ul style="list-style-type: none">• TACAN Data	press DATA OSB on HSI while TCN boxed to view TACAN Database of all stations and their coordinates

2.2.11 AN/ALR-67 RWR

SURFACE

U S T		Unknown Search Radar ATC
3	SA-3	"Goa"
6	SA-6	"Gainful"
8	SA-8	"Gecko"
10	SA-10	"Grumble"
11	SA-11	"Gadfly"
12	SA-12	"Gladiator"
13	SA-13	"Gopher"
40		Spruance Class
48		Nimitz Class
49		Perry Class
HK PT	MIM-23 MIM-104	Hawk Patriot

AIRBORNE

U M		Unknown Active missile
11	F-111	Aardvark
13	C-130	Hercules
14	F-14	Tomcat
15	F-15	Eagle
16	F-16	Fighting Fal- con
17	C-17	Globemaster III
18	F/A-18	Hornet
19	MiG-19	"Farmer"
21	MiG-21	"Fishbed"
22	Tu-22	"Blinder"
23	MiG-23	"Flogger"
24	Su-24	"Fencer"
25	MiG-25	"Foxbat"
29	MiG-29 Su-27 Su-30 Su-33	"Fulcrum" "Flanker" "Flanker-C" "Flanker-D"

31	MiG-31	"Foxhound"
34	Su-34	"Fullback"
39	Su-25M	"Frogfoot"
52	B-52	Stratofortress
76	IL-76	"Candid"
78	IL-78	"Midas"
AN	AN-26B AN-30M	"Curl" "Clank"
B1	B-1	Lancer
BE	Tu-95	"Bear"
BF	Tu-22	"Backfire"
BJ	Tu-160	"Blackjack"
E2	E-2	Hawkeye
E3	E-3	Sentry
F4	F-4	Phantom
F-5	F-5	Tiger
HX	Ka-27	"Helix"
KC	KC-135	Stratotanker
KJ	KJ-2000	"Mainring"
M2	Mirage 2k	
S3	S-3	Viking
SH	SH-60	Seahawk

2.2.12 AN/ALE-47 ACMDS

• ACMDS	Airborne Countermeasures Dispenser System
• Conditions	<ul style="list-style-type: none"> • Master Arm: ON • DISPENSER Switch: ON (MIDDLE) • ALE-47 Mode: not STBY
• Self-Test	Once airborne ALE-47 enters SF TEST before cycling to STBY
• Set Mode	MODE OSB with ALE-47 Boxed
• Program Creation	<ul style="list-style-type: none"> (a) Box ALE-47 OSB (b) Press ARM OSB (c) Press CHAFF/FLAR OSBs, set # (d) press RPT OSB, set # repetitions (e) press INT OSB, set interval (f) press SAVE OSB to save program • Note: Use INCREMENT / DECREMENT OSBs to change values
• Activation	<ul style="list-style-type: none"> • Dispense Switch: AFT activates selected program • Dispense Switch: FWD activates program 5 by default, can be cycled with STEP OSB

2.2.13 AN/ALE-47 ACMDS - MODES

• MAN	Manual: Program can be stored and edited, Chosen by pilot
• AUTO	Automatic: ALE-47 chooses when and what countermeasures to deploy Very Wasteful
• S/A	Semi-Automatic: ALE-47 chooses program. Pilot controls release
• STBY	Standby Mode

2.2.14 AN/ALQ-165 ASPJ

• OFF	Turns off ECM Pod
• STBY	Standby Mode
• BIT	ECM jammer pod Build-In-Test
• REC	Receive Mode: Jammer is passive <ul style="list-style-type: none">• Collects information on detected radars• Does NOT transmit jamming signal
• X-MIT	Transmit Mode: Jammer is active <ul style="list-style-type: none">• ECM pod will automatically transmit jamming signal when radar lock detected on own aircraft• When ASPJ is actively jamming own radar will be unavailable

2.2.15 DATALINK

Work In Progress

2.2.16 IFF

Work In Progress

2.2.17 SA PAGE

Work In Progress

Chapter 3

AN/APG-73 RADAR

Contents

3.1	RWS - RANGE WHILE SEARCH	3-3
3.1.1	RWS	3-3
3.1.2	RWS - LTWS	3-3
3.2	TWS - TRACK WHILE SCAN	3-4
3.2.1	TWS - DESIGNATION	3-4
3.2.2	TWS - SCAN CENTERING METHODS	3-4
3.2.3	TWS - SCAN RAID	3-4
3.2.4	TWS - EXP	3-5
3.3	ACM - AIR COMBAT MANEUVERING	3-6
3.3.1	ACM - BST	3-6
3.3.2	ACM - VACQ	3-6
3.3.3	ACM - WACQ	3-6
3.3.4	ACM - GACQ	3-7
3.4	LOCK ACQUISITION	3-8
3.4.1	STT	3-8
3.4.2	AACQ	3-8
3.4.3	JHMCS	3-8
3.5	MAP	3-9
3.5.1	MAP	3-9
3.5.2	MAP - DESIGNATION	3-9
3.5.3	MAP - EXP1	3-9
3.5.4	MAP - EXP2	3-10
3.5.5	MAP - EXP3	3-10
3.5.6	MAP - EXP DESIGNATION	3-11

3.5.7	GMT	3-11
3.5.8	GMT - GMTT	3-12
3.5.9	SEA	3-12
3.5.10	SEA - TARGET TRACKING	3-13

3.1 RWS - RANGE WHILE SEARCH**3.1.1 RWS**

<ul style="list-style-type: none">• Range While Scan	Default A/A Radar Mode <ul style="list-style-type: none">• Long range BVR mode.• Antenna follows designated search pattern and displays all tracks discovered in each sweep
<ul style="list-style-type: none">• Sensor Select Switch	<ul style="list-style-type: none">• FWD: Switch to ACM Boresight• AFT: Assign TDC to AMPCD• LEFT: Assign TDC to left DDI• RIGHT: Assign TDC to right DDI

3.1.2 RWS - LTWS

<ul style="list-style-type: none">• Latent Track While Scan	RWS Submode <ul style="list-style-type: none">• Allows HAFU symbology for contacts and integration of offboard trackfiles
<ul style="list-style-type: none">• Activation	DATA subpage on Radar Page
<ul style="list-style-type: none">• HAFU Symbology	<ul style="list-style-type: none">• Only displayed if TDC cursor is over trackfile or trackfile is L&S or DT2• Offboard only tracks always displayed as HAFU• Launch acceptable ranges displayed for L&S and DT2
<ul style="list-style-type: none">• IFF Interrogation	Automatically when target under cursor

3.2 TWS - TRACK WHILE SCAN

3.2.1 TWS - DESIGNATION

• Conditions	<ul style="list-style-type: none"> • TWS selected • TDC slaved to current radar screen
• L&S (Primary Target)	TDC DEPRESS while over trackfile
• Cycle L&S	UNDESIGNATE Button (no DT2 designated)
• DT2 (Secondary Target)	TDC DEPRESS while over second trackfile
• Swap L&S DT2	UNDESIGNATE Button
• STT Lock	TDC DEPRESS again over L&S trackfile

3.2.2 TWS - SCAN CENTERING METHODS

• MAN	Manual: Azimuth centered on TDC cursor. Elevation can also be manually manipulated
• AUTO	Automatic: Azimuth, Elevation centered on L&S trackfile. If L&S trackfile lost returns to MAN
• BIAS	TDC DEPRESS on empty area to center azimuth there. Elevation controlled manually. Allows TDC to move separately from scan azimuth

3.2.3 TWS - SCAN RAID

• SCAN RAID Mode	<ul style="list-style-type: none"> • 22 deg, 3 bar scan centered on L&S • Radar will attempt to find multiple targets out of single target
• Conditions	<ul style="list-style-type: none"> • L&S trackfile selected
• Activation	<ul style="list-style-type: none"> • RAID button • RAID OSB

AN/APG-73 RADAR F/A-18C

- | | |
|---|--|
| <ul style="list-style-type: none">• Deactivation | <ul style="list-style-type: none">• RAID deselect• RSET OSB• UNDESIGNATE button• L&S lost |
|---|--|

3.2.4 TWS - EXP

- | | |
|---|---|
| <ul style="list-style-type: none">• EXP Mode | 10nm x 20 deg centered around L&S |
| <ul style="list-style-type: none">• Conditions | <ul style="list-style-type: none">• L&S trackfile selected |
| <ul style="list-style-type: none">• Activation | EXP OSB |
| <ul style="list-style-type: none">• Deactivation | <ul style="list-style-type: none">• EXP OSB• RSET OSB• L&S lost |

3.3 ACM - AIR COMBAT MANEUVERING

3.3.1 ACM - BST

• Boresight	<ul style="list-style-type: none"> • ± 1.7 deg vertical • ± 3.3 deg azimuth • Range: 10nm
• Conditions	<ul style="list-style-type: none"> • Master Mode: A/A • HMD: OFF
• Activation	SCS: FWD (enters BST)
• Deactivation	UNDESIGNATE button

3.3.2 ACM - VACQ

• Vertical Acquis.	<ul style="list-style-type: none"> • -13 deg to 46 deg vertical • 6 deg azimuth • Range: 5nm
• Conditions	<ul style="list-style-type: none"> • Master Mode: A/A • HMD: OFF
• Activation	(a) SCS: FWD (enters BST) (b) then AFT (enters VACQ)
• Deactivation	UNDESIGNATE button

3.3.3 ACM - WACQ

• Caged Wide Acquis.	<ul style="list-style-type: none"> • -9 deg to +6 deg vertical • 60 deg azimuth
• Uncaged Wide Acquis.	NOT IMPLEMENTED
• Conditions	<ul style="list-style-type: none"> • Master Mode: A/A • HMD: OFF
• Activation	(a) SCS: FWD (enters BST) (b) then LEFT (enters WACQ)
• Toggle Mode	CAGE/UNCAGE
• Deactivation	UNDESIGNATE button

3.3.4 ACM - GACQ

- | | |
|--------------------------|---|
| • Gun Acquisition | <ul style="list-style-type: none">• -14 deg to +6 deg vertical• 20 deg azimuth |
| • Conditions | <ul style="list-style-type: none">• Master Mode: A/A• HMD: OFF |
| • Activation | Automatically enabled upon guns selection |
| • Deactivation | UNDESIGNATE button |

3.4 LOCK ACQUISITION

3.4.1 STT

• Conditions	<ul style="list-style-type: none"> Master Mode: A/A TDC slaved to current radar screen
• RWS Designation	TDC DEPRESS to STT
• LTWS Designation	TDC DEPRESS to designate L&S second TDC DEPRESS to STT
• TWS Designation	TDC DEPRESS to designate L&S second TDC DEPRESS to STT
• Undesignate	UNDESIGNATE button

3.4.2 AACQ

• Automatic Acquisition	Fast method to acquire lock from BVR mode
• Conditions	<ul style="list-style-type: none"> Master Mode: A/A TDC slaved to current radar screen Radar not in an ACM mode
• Designation	SCS towards radar screen
• Deactivate	SCS AFT

3.4.3 JHMCS

• LHACQ	Long Range Helmet Acquisition: 40nm
• HACQ	Helmet Acquisition: 10nm
• Conditions	<ul style="list-style-type: none"> Master Mode: A/A HMD: BRT
• LHACQ Activation	SCS: FWD long (>0.8s)
• HACQ Activation	SCS: FWD short (<0.8s)
• Deactivate	SCS AFT

3.5 MAP

3.5.1 MAP

• Conditions	• Radar: OPR
• Activation	• Master Mode: A/G • or SURF OSB on RDR ATTK page
• PEN	Scans small area on ground
• FAN	Broader/quicker scan, less defined image • narrow in azimuth, broad in elevation

3.5.2 MAP - DESIGNATION

• Conditions	• Master Mode: A/G • TDC slaved to current radar screen
• Designation	TDC DEPRESS while over desired location • Range will auto adjust • Cross marks designated point on Radar • Diamond marks designated point on HUD
• Zoom	using EXP1, EXP2, EXP3 modes
• Undesignation	UNDESIGNATE button

3.5.3 MAP - EXP1

• EXP1	• Lowest resolution expanded mode • Range: 40nm • Azimuth: 45deg • Not ground stabilized unless designation exists (snowplow)
• Conditions	• Radar Mode: MAP • TDC slaved to current radar screen

• Activation	<ul style="list-style-type: none"> (a) EXP1 OSB (b) Press & hold TDC DEPRESS (c) Slew to desired region (d) Release TDC DEPRESS <ul style="list-style-type: none"> • Range will auto adjust
• FAST Option	Boxing FAST scan option doubles radar's rate of scan for approximately half the scan quality
• Doppler Shift	Area directly in front and at extreme edges of radar not visible
• Deactivation	UNDESIGNATE button

3.5.4 MAP - EXP2

• EXP2	<ul style="list-style-type: none"> • Next higher resolution from EXP1 • Range: 40nm • Ground stabilized regardless if designation exists unless outside of radar gimbal limits
• Conditions	<ul style="list-style-type: none"> • Radar Mode: MAP • or Radar Mode: EXP1 • TDC slaved to current radar screen
• Activation	<ul style="list-style-type: none"> (a) EXP2 OSB (b) Press & hold TDC DEPRESS (c) Slew to desired region (d) Release TDC DEPRESS <ul style="list-style-type: none"> • Range will auto adjust
• FAST Option	Boxing FAST scan option doubles radar's rate of scan for approximately half the scan quality
• Doppler Shift	Area directly in front and at extreme edges of radar not visible
• Deactivation	UNDESIGNATE button

3.5.5 MAP - EXP3

AN/APG-73 RADAR F/A-18C

<ul style="list-style-type: none">• EXP3	<ul style="list-style-type: none">• Synthetic-Aperture Radar (SAR) Map• Range: 30nm• Ground stabilized even w/o designation.• 1.2×1.2nm, constant area and resolution regardless of range
<ul style="list-style-type: none">• Conditions	<ul style="list-style-type: none">• Radar Mode: MAP• or Radar Mode: EXP1/EXP2• TDC slaved to current radar screen
<ul style="list-style-type: none">• Activation	<ul style="list-style-type: none">(a) EXP3 OSB(b) Press & hold TDC DEPRESS(c) Slew to desired region(d) Release TDC DEPRESS• Range will auto adjust
<ul style="list-style-type: none">• FAST Option	Boxing FAST scan option doubles radar's rate of scan for approximately half the scan quality
<ul style="list-style-type: none">• Doppler Shift	Area directly in front and at extreme edges of radar not visible
<ul style="list-style-type: none">• Deactivation	UNDESIGNATE button

3.5.6 MAP - EXP DESIGNATION

<ul style="list-style-type: none">• Conditions	<ul style="list-style-type: none">• Radar Mode: EXP (EXP3 recommended)• TDC slaved to current radar screen
<ul style="list-style-type: none">• Activation	<ul style="list-style-type: none">(a) Press & hold TDC DEPRESS(b) Slew to desired spot(c) Release TDC DEPRESS to designate
<ul style="list-style-type: none">• Symbology	<ul style="list-style-type: none">• Range will auto adjust• Cross marks designated point on Radar• Diamond marks designated point on HUD
<ul style="list-style-type: none">• TGP	Targeting pod will automatically slave to designated point if FLIR ON and TGP unstowed
<ul style="list-style-type: none">• Deactivation	UNDESIGNATE button

3.5.7 GMT

• GMT Mode	Ground Moving Target radar mode scans for highlights & moving targets through doppler shift. Trackfiles displayed as bricks
• Conditions	<ul style="list-style-type: none"> • RDR: OPR • Master Mode: A/G
• Activation	press MAP OSB from A/G MAP pag
• Interleaved Option	Press INTL OSB GMT & MAP modes interleaved, mode is GMT/MAP

3.5.8 GMT - GMTT

• GMTT	Ground Moving Target Track Range: 10nm
• Conditions	<ul style="list-style-type: none"> • Master Mode: A/G • TDC slaved to current radar screen • Radar Mode: GMT
• Activation	1. Slew TDC over desired target 2. SCS: Towards current radar screen to command acquisition
• Symbology	<ul style="list-style-type: none"> • Radar page: brick with motion vector, speed, & heading • HUD: diamond • point can be used/slaved to by other sensors
• Deactivation	UNDESIGNATE Button

3.5.9 SEA

• SEA Mode	SEA radar mode scans for highlights & moving naval targets through doppler shift. Trackfiles displayed as bricks. Additional filtering applied & scan rates reduced
• Conditions	<ul style="list-style-type: none"> • RDR: OPR • Master Mode: A/G
• Activation	press MAP OSB from A/G MAP pag

- **Interleaved Option**

Press INTL OSB

GMT & MAP modes interleaved, mode is SEA/MAP

3.5.10 SEA - TARGET TRACKING

- **Conditions**

- Master Mode: A/G
- TDC slaved to current radar screen
- Radar Mode: SEA

- **Activation**

- (a) Slew TDC over desired target
- (b) SCS: Towards current radar screen to command acquisition

- **Symbology**

- Radar page: brick with motion vector, speed, & heading
- HUD: diamond
- point can be used/slaved to by other sensors

- **Harpoon Conditions**

- Master Mode: A/G
- Target Locked
- HPD Mode: R/BL

- **Deactivation**

UNDESIGNATE Button

Chapter 4

TGP & JHMCS

Contents

4.1	AAQ-28 LITENING II	4-3
4.1.1	CONTROLS	4-3
4.1.2	POINTING METHODS	4-3
4.1.3	POINTING METHODS - VVSLV	4-3
4.1.4	POINTING METHODS - SNOWPLOW	4-4
4.1.5	POINTING METHODS - STABILIZED POINTING	4-4
4.1.6	POINTING METHODS - WAYPOINT SLAVED	4-4
4.1.7	POINTING METHODS - AREA TRACK	4-5
4.1.8	POINTING METHODS - POINT TRACK	4-5
4.1.9	POINTING METHODS - TGP OFFSET	4-5
4.1.10	START-UP & LASING	4-5
4.1.11	LASER SPOT TRACKER (LST)	4-6
4.1.12	LASER MARKING	4-7
4.1.13	A/A POINT TRACK	4-7
4.1.14	A/A RADAR SLAVING	4-8
4.2	ASQ-228 ATFLIR	4-9
4.2.1	CONTROLS	4-9
4.2.2	POINTING METHODS	4-9
4.2.3	POINTING METHODS - VVSLV	4-9
4.2.4	POINTING METHODS - SNOWPLOW	4-10
4.2.5	POINTING METHODS - WAYPOINT SLAVED	4-10
4.2.6	POINTING METHODS - SCENE TRACK	4-10
4.2.7	POINTING METHODS - AUTO TRACK	4-11
4.2.8	POINTING METHODS - TGP OFFSET	4-11

4.2.9	LASER SPOT TRACKER (LST)	4-11
4.2.10	A/A OPERATION MODES	4-12
4.2.11	A/A AUTO TRACK	4-12
4.2.12	A/A L+S SLAVE	4-12
4.3	JHMCS	4-13
4.3.1	CONTROLS	4-13
4.3.2	SYMBOLGY	4-13
4.3.3	SETUP - FORMAT	4-13
4.3.4	SETUP - BLANKING	4-13
4.3.5	SETUP - REJECT	4-13
4.3.6	SETUP - MIDS	4-13
4.3.7	TARGET DESIGNATION - A/G	4-13
4.3.8	TARGET DESIGNATION - A/A Radar	4-14
4.3.9	AIM-9X - UP-LOOK	4-14

4.1 AAQ-28 LITENING II

4.1.1 CONTROLS

• Display Selection	SCS: towards Targeting pod display
• Toggle PTRK/ATRK	SCS: towards Selected Display
• Zoom	<ul style="list-style-type: none"> • Radar Elevation Control • Zoom OSBs
• Toggle Wide/Nar FOV	<ul style="list-style-type: none"> • RAID/FLIR Button short • NAR/WIDE OSB
• Toggle CCD/FLIR	<ul style="list-style-type: none"> • RAID/FLIR Button long • FLIR/CCD OS
• Slew Reticle	TDC Slew
• Designate	TDC DEPRESS
• Undesignate	NWS/UNDESIGNATE Button
• Toggle LST	CAGE/UNCAGE Button
• Lase	TRIGGER if TRIG mode boxed

4.1.2 POINTING METHODS

• VVSLV	FLIR slaved to line of sight of velocity vector
• Snowplow	Default mode when no Target designated
• Stabilized Pointing	Entered when target designated from Snowplow or cycled from ATRK/PTRK
• Waypoint Slaving	Available using HSI (TGP snaps to WYPT)
• ATRK	Tracks specific area. Best for fixed targets
• PTRK	Tracks specific Point. Best for moving targets

4.1.3 POINTING METHODS - VVSLV

• VVSLV	FLIR slaved to line of sight of velocity vector
• Conditions	<ul style="list-style-type: none"> • TDC slaved to current FLIR page

• Activation	<ul style="list-style-type: none"> • Press UNDESIGNATE twice • or press VVSLV OSB on FLIR page
• RTCL	Box RTCL OSB to display TGP reticle
• Designation	TDC DEPRESS

4.1.4 POINTING METHODS - SNOWFLOW

• Snowflow	Default mode when no Target designated <ul style="list-style-type: none"> • 0 deg left/right • -8 deg down
• Conditions	<ul style="list-style-type: none"> • TDC slaved to current FLIR page
• Activation	1. Press UNDESIGNATE twice to select VVSLV & unstow TGP 2. Press UNDESIGNATE twice to deselect VVSLV
• Designation	TDC DEPRESS

4.1.5 POINTING METHODS - STABILIZED POINTING

• Stabilized Pointing	FLIR can be slewed freely. Designated target is constantly updated to current location. Ground stabilized
• Activation	Entered automatically when <ul style="list-style-type: none"> • Target designated from Snowflow • Cycled to from Auto Track or Point Track
• Designation	Constantly updated

4.1.6 POINTING METHODS - WAYPOINT SLAVED

• Conditions	<ul style="list-style-type: none"> • TDC slaved to current FLIR page • HSI: Desired waypoint selected • HSI: WYPT boxed on
• Activation	HSI: press WPSDG to designate waypoint as target and slave TGP
• Slew	TDC slew to adjust TGP

4.1.7 POINTING METHODS - AREA TRACK

• Conditions	• TDC slaved to current FLIR page
• Activation	1. Unstow TGP with VVSLV 2. SCS towards FLIR page to toggle ATRK/PTRK
• Slew	Not possible in Area Track
• Designation	TDC DEPRESS
• Deactivation	Press UNDESIGNATE to revert to Snowplow

4.1.8 POINTING METHODS - POINT TRACK

• Conditions	• TDC slaved to current FLIR page
• Activation	1. Unstow TGP with VVSLV 2. SCS towards FLIR page to toggle ATRK/PTRK
• Slew	Not possible in Point Track
• Designation	TDC DEPRESS
• Deactivation	Press UNDESIGNATE to revert to Snowplow

4.1.9 POINTING METHODS - TGP OFFSET

• Conditions	• In ATRK/PTRK
• OFFSET	TDC DEPRESS to activate OFFSET <ul style="list-style-type: none"> • + cross (Offset Cursor) appears • Slew with TDC
• Designation	TDC DEPRESS again to designate Offset Cursor as new Target
• FLIR to Cursor	SCS in direction of FLIR page to snap TGP to location of Offset Cursor (while in PTRK)

4.1.10 START-UP & LASING

1. Start-Up	(a) FLIR Switch: STBY (b) Open FLIR page, monitor warm-up (c) FLIR Switch: ON when STBY displayed (d) Confirm mode displays OPR
2. Unstow	(a) Select VVSLV (b) Unselect VVSLV to enter Snowplow
3. DDI	Contrast & Brightness as required
4. LTD/R	(a) ARM (b) Confirm L ARM indication
5. TDC	Slew to Target
6. Zoom	as required (WIDE/NAR)
7. Camera Mode	as required (CCD/FLIR)
8. Pointing Method	as required
9. Laser Code	(a) Press UFC OSB (b) Press LTDC, enter desired code (c) Press ENT
10. Designate Target	TDC DEPRESS (will slave A/G weapons to TGP)
11. Lasing	<ul style="list-style-type: none"> • TRIG boxed: press & hold trigger to lase • TRIG unboxed: AUTO lasing

4.1.11 LASER SPOT TRACKER (LST)

• Conditions	<ul style="list-style-type: none"> • Master Mode: A/G • TGP: ON • LST/NFLR: ON
• Set Laser Code	1. UFC OSB on FLIR page 2. Press LSTC, enter Code on Keypad, ENT
• Begin Search	1. Set TGP to Snowplow, slew to vicinity of laser 2. Press LST OSB on FLIR page, or press CAGE/UNCAGE
• Searching	<ul style="list-style-type: none"> • FLIR image blank • LST flashes on FLIR page

4.1.12 LASER MARKING

Note CANNOT be used for weapons guidance, only visible in NVG

1. **TPOD** on and ready
2. **LTD/R** ARM
3. **SCS** press in direction of FLIR to focus
4. **VVSLV** press UNDESIGNATE twice rapidly to select vel vector slave mode (or press VVSLV OSB)
5. **Snowplow** press UNDESIGNATE twice rapidly to select snowplow mode(or press VVSLV OSB to deselect)
6. **TDC** slew to target
7. **TDC** depress to designate target
8. **TRIG** boxed
9. **MARK** boxed, activates M-Arm
10. **Laser** press TRIGGER to mark again to cease marking

4.1.13 A/A POINT TRACK

1. **TPOD**on & ready
2. **Master Mode** A/A
3. **SCS**in direction of FLIR display
4. **VVSLV** press UNDESIGNATE twice rapidly to select vel vector slave mode (or press VVSLV OSB)
5. **RTCL OSB** press to display reticle
6. **Maneuver**to place vel. vector near target aircraft
7. **Zoom**as desired
8. **FLIR/CCD Mode**as desired
9. **SCS** towards FLIR display to attempt Point Track
10. **Designation Box**good track
11. **Dump Target**SCS towards FLIR display

To slave radar to TPOD

1. **Radar** OPR
2. **Point Track**acquired
3. **FLIR Page**press SLAVE OSB

4.1.14 A/A RADAR SLAVING

1. **TPOD**on & ready
2. **Radar** OPR
3. **Master Mode**A/A
4. **R DDI**RDR ATTK page
5. **L DDI** FLIR page
6. **SCS**towards RDR ATTK page
7. **Radar Lock**acquired
8. **RRSLV OSB**press, slaves TPOD to radar
9. **SCS**towards FLIR page
10. **Zoom**as desired
11. **FLIR/CCD Mode**as desired
12. **SCS**towards FLIR page to attempt Point Track

4.2 ASQ-228 ATFLIR

4.2.1 CONTROLS

•	Display Selection	SCS: towards Targeting pod display
•	Toggle SCENE/AUTO	SCS: towards Selected Display
•	Zoom	<ul style="list-style-type: none"> • Radar Elevation Control • Zoom OSBs
•	Toggle WFOV/MFOV/NAR	<ul style="list-style-type: none"> • RAID/FLIR Button short • FOV OSB
•	Toggle CCD/FLIR	<ul style="list-style-type: none"> • RAID/FLIR Button long • FLIR/CCD OS
•	Slew Reticle	TDC Slew
•	Designate	TDC DEPRESS
•	Undesignate	NWS/UNDESIGNATE Button
•	Lase	TRIGGER if TRIG mode boxed

4.2.2 POINTING METHODS

•	VVSLV	FLIR slaved to line of sight of velocity vector
•	Snowplow	Default mode when no Target designated
•	Stabilized Pointing	Entered when target designated from Snowplow or cycled from Auto Track / Point Track
•	Waypoint Slaving	Available using HSI (TGP snaps to WYPT)
•	Scene Track	Tracks specific area. Best for fixed targets
•	Auto Track	Tracks specific Point. Best for moving targets
•	INR / Stabilized Pointing	Active when TGP is slewed, maintains orientation to AC using inertial data

4.2.3 POINTING METHODS - VVSLV

•	VVSLV	FLIR slaved to line of sight of velocity vector
---	--------------	---

• Conditions	• TDC slaved to current FLIR page
• Activation	<ul style="list-style-type: none"> • Press UNDESIGNATE twice • or press VVSLV OSB on FLIR page
• RTCL	Box RTCL OSB to display TGP reticle
• Designation	TDC DEPRESS

4.2.4 POINTING METHODS - SNOWPLOW

• Snowplow	Default mode when no Target designated <ul style="list-style-type: none"> • 0 deg left/right • -8 deg down
• Conditions	• TDC slaved to current FLIR page
• Activation	1. Press UNDESIGNATE twice to select VVSLV & unstow TGP 2. Press UNDESIGNATE twice to deselect VVSLV
• Designation	TDC DEPRESS

4.2.5 POINTING METHODS - WAYPOINT SLAVED

• Conditions	<ul style="list-style-type: none"> • TDC slaved to current FLIR page • HSI: Desired waypoint selected • HSI: WYPT boxed on
• Activation	HSI: press WPSDG to designate waypoint as target and slave TGP
• Slew	TDC slew to adjust TGP

4.2.6 POINTING METHODS - SCENE TRACK

• Conditions	• TDC slaved to current FLIR page
• Activation	1. Unstow TGP with VVSLV 2. SCS towards FLIR page to toggle SCENE/AUTO
• Slew	Scene Track reticle still slewable with TDC

- | | |
|-----------------------|---|
| • Designation | Automatic in SCENE Track |
| • Deactivation | Press UNDESIGNATE to revert to Snowplow |

4.2.7 POINTING METHODS - AUTO TRACK

- | | |
|-----------------------|---|
| • Conditions | <ul style="list-style-type: none"> • TDC slaved to current FLIR page |
| • Activation | <ol style="list-style-type: none"> 1. Unstow TGP with VVSLV 2. SCS towards FLIR page to toggle SCENE/AUTO |
| • Slew | Not possible in Auto Track |
| • Designation | Automatic in AUTO Track |
| • Deactivation | Press UNDESIGNATE to revert to Snowplow |

4.2.8 POINTING METHODS - TGP OFFSET

- | | |
|-------------------------|---|
| • Conditions | <ul style="list-style-type: none"> • AUTO Track |
| • OFFSET | TDC DEPRESS to activate OFFSET <ul style="list-style-type: none"> • + cross (Offset Cursor) appears • Slew with TDC |
| • Designation | SCS towards FLIR to designate Offset Cursor |
| • FLIR to Cursor | SCS in direction of FLIR page to snap TGP to location of Offset Cursor (while in PTRK) |

4.2.9 LASER SPOT TRACKER (LST)

- | | |
|-------------------------|--|
| • Conditions | <ul style="list-style-type: none"> • Master Mode: A/G • TGP: ON • LST/NFLR: ON |
| • Set Laser Code | <ol style="list-style-type: none"> 1. UFC OSB on FLIR page 2. Press LSTC, enter Code on Keypad, ENT |
| • Begin Search | <ol style="list-style-type: none"> 1. Set TGP to Snowplow, slew to vicinity of laser 2. Press LST OSB on FLIR page |

- | | |
|--|---|
| <ul style="list-style-type: none">• Searching | <ul style="list-style-type: none">• FLIR image blank• LST flashes on FLIR page |
| <ul style="list-style-type: none">• Designation | TDC DEPRESS |

4.2.10 A/A OPERATION MODES

4.2.11 A/A AUTO TRACK

4.2.12 A/A L+S SLAVE

4.3 JHMCS

4.3.1 CONTROLS

• HMD Brightness	BRT Powers on JHMCS
• Master Mode	A/A & A/G Master Mode buttons symbology changes depending on selected mode
• HMD Blanking Toggle	Even Marker "Recce" Button Toggles manual blanking
• LHACQ Activation	<ul style="list-style-type: none"> • Master Mode: A/A • SCS: FWD long (>0.8s)
• HACQ Activation	<ul style="list-style-type: none"> • Master Mode: A/A • SCS: FWD short (<0.8s)
• Toggle Selected Sensor	<ul style="list-style-type: none"> • Master Mode: A/G • SCS: FWD • Toggles between HUD and HMD
• Undesignate	UNDESIGNATE

4.3.2 SYMBOLOGY

4.3.3 SETUP - FORMAT

4.3.4 SETUP - BLANKING

4.3.5 SETUP - REJECT

4.3.6 SETUP - MIDS

4.3.7 TARGET DESIGNATION - A/G

• Conditions	<ul style="list-style-type: none"> • Master Mode: A/G • JHMCS: ON • TDC slaved to HUD or HMD
• Symbology	<ul style="list-style-type: none"> • HUD: dot in VV indicates HUD slaved • HMD: Aiming Reticle indicates HMD slaved
• Designation	TDC DEPRESS
• Slew Diamond	TDC slew

- **Undesignate** | UNDESIGNATE

4.3.8 TARGET DESIGNATION - A/A Radar

• LHACQ	Long Range Helmet Acquisition: 40nm
• HACQ	Helmet Acquisition: 10nm
• Conditions	<ul style="list-style-type: none"> • Master Mode: A/A • HMD: BRT
• LHACQ Activation	SCS: FWD long (>0.8s)
• HACQ Activation	SCS: FWD short (<0.8s)
• Deactivate	SCS AFT

4.3.9 AIM-9X - UP-LOOK

• Up-Look	Slaves AIM-9X to Up-Look reticle (significantly above HMD Line of Sight)
• Conditions	<ul style="list-style-type: none"> • Master Mode: A/A • HMD: BRT • AIM-9X: Selected
• Activation	SCS: FWD (slave TDC to HMD)
• Uncage	CAGE/UNCAGE button

Chapter 5

A/G WEAPONS

Contents

5.1	A/G OVERVIEW	5-3
5.2	SELECTIVE ORDNANCE JETTISON	5-4
5.3	FORWARD FIRING	5-4
5.3.1	M61A2 GUN - A/G	5-4
5.3.2	ROCKETS	5-4
5.4	UNGUIDED FREE-FALL MUNITIONS	5-5
5.4.1	UNGUIDED BOMB - CCIP	5-5
5.4.2	UNGUIDED BOMB - CCRP	5-5
5.4.3	MK-20 CLUSTER BOMB - CCIP	5-6
5.5	GPS GUIDED MUNITIONS	5-7
5.5.1	JDAM/JSOW - PP	5-7
5.5.2	JDAM/JSOW - TOO WYPT	5-8
5.5.3	JDAM/JSOW - TOO TPOD	5-9
5.6	LASER GUIDED MUNITIONS	5-11
5.6.1	GBU-12 PAVEWAY II	5-11
5.6.2	GBU-24 PAVEWAY III	5-11
5.7	AGM-65 MAVERICK	5-12
5.7.1	AGM-65F/G IR-MAV	5-12
5.7.2	AGM-65E LASER-MAV	5-12
5.8	AGM-88C HARM	5-14
5.8.1	HARM - TOO	5-14
5.8.2	HARM - SP	5-14
5.8.3	HARM - PULLBACK	5-14
5.8.4	HARM - PB Intro	5-14

A/G

5.8.5	HARM - PB Setup	5-15
5.8.6	HARM - A/C LOFT	5-15
5.8.7	HARM - HRM LOFT	5-15
5.9	AGM-84D HARPOON	5-16
5.9.1	HARPOON - BOL	5-16
5.9.2	HARPOON - R/BL	5-17
5.10	AGM-84E/H SLAM & SLAM/ER	5-18
5.10.1	SLAM - SETUP	5-18
5.10.2	SLAM - TOO WYPT	5-19
5.10.3	SLAM - TOO TPOD	5-20
5.10.4	SLAM - TOO A/G RDR	5-21
5.10.5	SLAM - PP	5-22
5.10.6	SLAM-ER - STEERPOINTS	5-23
5.10.7	SLAM - LAUNCH	5-24
5.11	AGM-84E/H SLAM & SLAM/ER – ALTERNATE FORMAT	5-25
5.11.1	SLAM - SETUP	5-25
5.11.2	SLAM - TOO WYPT	5-26
5.11.3	SLAM - TOO TPOD	5-27
5.11.4	SLAM - TOO A/G RDR	5-28
5.11.5	SLAM - PP	5-29
5.11.6	SLAM-ER - STEERPOINTS	5-30
5.11.7	SLAM - LAUNCH	5-31
5.12	AGM-62 WALLEYE II	5-32
5.12.1	AGM-62 WALLEYE II	5-32
5.12.2	AGM-62 WALLEYE II - D/L	5-32

5.1 A/G OVERVIEW

Weapon	SMS	Type
Unguided		
LAU-61	61S/R	2.75-in Hydra rockets (19x)
LAU-68	68S/R	2.75-in Hydra rockets (7x)
LAU-10	10S/R	5-in Zuni rockets (4x)
MK-82	82B	500 lbs low-drag unguided bomb
MK-82 SE	82XT	500 lbs retarded unguided bomb
MK-82 Bal	82YT	500 lbs retarded unguided bomb
MK-83	83B	1000 lbs low-drag unguided bomb
MK-84	84	2000lbs low-drag unguided bomb
BDU-33		25 lbs unguided training bomb
MK-20 RE	RE	500 lbs Unguided cluster bomb
CBU-99	RET	500 lbs anti-tank cluster bomb
Laser-Guided Bombs		
GBU-12	82LG	500 lbs PAVEWAY II LGB
GBU-16	83LG	1000 lbs PAVEWAY II LGB
GBU-10	84LG	2000 lbs PAVEWAY II LGB
GBU-24	GB24	2000 lbs PAVEWAY III LGB Penetra- tor
GPS Munitions		
GBU-38	J-82	500 lbs JDAM
GBU-32	J-83	1000 lbs JDAM
GBU-31	J-84	2000 lbs JDAM
GBU-31(V)	J-109	2000 lbs JDAM Penetrator
AGM-154A	JSA	JSOW Cluster
AGM-154C	JSC	JSOW Penetrator
A/G Missiles		
AGM-65E	MAV	Laser Guided A/G missile
AGM-65F	MAVF	IR Guided A/G missile
AGM-88C	HARM	High-Speed Anti-Radiation Missile
AGM-84D	HPD	Harpoon anti-ship missile
AGM-84E	SLMR	SLAM-ER
AGM-62	WEDL	2000 lbs TV-guided bomb

5.2 SELECTIVE ORDNANCE JETTISON

1. **Master Arm** ARM
2. **SMS** check stores
3. **Jettison Stores** select desired
jettison stations on pushbuttons
4. **Selective Jett. Knob** rotate to
desired stations
5. **Jett. Button** press & hold
6. **Selective Jett. Knob** SAFE

5.3 FORWARD FIRING

5.3.1 M61A2 GUN - A/G

1. **Master Arm** ARM
2. **Master Mode** A/G
3. **SMS** select GUN
 - **Rounds** MK-50 or PGU-28
 - **Firing Rate** HI or LO
 - **Mode** CCIP
4. **Reticle** on target
5. **Fire** once IN RNG cue
6. **Break Away** before X cue

5.3.2 ROCKETS

1. **Master Arm** ARM
2. **Master Mode** A/G
3. **SMS** select pod (68R)
 - **Firing Mode** SGL or SAL
 - **MTR** M4 or M66
 - **Mode** CCIP
4. **Reticle** on target
5. **Fire** once IN RNG cue appears
6. **Break Away** before X cue

5.4 UNGUIDED FREE-FALL MUNITIONS

5.4.1 UNGUIDED BOMB - CCIP

1. **Master Arm** ARM
2. **Master Mode** A/G
3. **SMS** select desired bomb (82B)
 - (a) Create delivery PROG 1
 - (b) **Mode** CCIP
 - (c) **MFUZ** NOSE
 - (d) **EFUZ** DLY1 or INST
 - (e) **DRAG** FF or RET based on bomb type
4. **UFC** press UFC OSB on SMS page
 - **QTY** bombs per release
 - **MULT** bombs per salvo in release
 - **INT** interval between salvo in feet
5. **Dive** 30-45 deg
6. **DIL** Displayed Impact Line over target
7. **CCIP Cross** appears once computed
8. **Maneuver** keep CCIP CROSS & DIL on target
9. **Release** when CCIP CROSS on target
10. **Pull Up** before vel vector reaches PULL UP cue

5.4.2 UNGUIDED BOMB - CCRP

1. **Master Arm** ARM
2. **Master Mode** A/G
3. **SMS** select desired bomb (82B)
 - (a) Create delivery PROG 1
 - (b) **Mode** CCRP
 - (c) **MFUZ** NOSE
 - (d) **EFUZ** DLY1 or INST
 - (e) **DRAG** FF or RET based on bomb type
4. **UFC** press OSB for UFC on SMS page
 - **QTY** bombs per release
 - **MULT** bombs per salvo in release
 - **INT** interval between salvo in feet
5. **SCS** FWD to slave TDC to HUD

6. **Symbology** "Ball & Chain"
7. **Dive** 25 deg to place vel vector on target
8. **TDC** DEPRESS to designate target
9. **TDC** SLEW target designator
10. **Level Flight** keep vel vector aligned with ASL (azimuth steering line)
11. **Release** .. when weapon cue appears, hold until all ordnance released
12. **Pull Up** before vel vector reaches PULL UP cue

5.4.3 MK-20 CLUSTER BOMB - CCIP

1. **Master Arm** ARM
2. **Master Mode** A/G
3. **SMS** select desired bomb (RE)
 - (a) Create delivery PROG 1
 - (b) **Mode** CCIP
 - (c) **MFUZ** VT
 - (d) **HT OSB** press to cycle
4. **UFC** press UFC OSB on SMS page
 - **QTY** bombs per release
 - **MULT** bombs per salvo in release
 - **INT** interval between salvo in feet
5. **Dive** 30-45 deg
6. **DIL** Displayed Impact Line over target
7. **CCIP Cross** appears once computed
8. **Maneuver** keep CCIP CROSS & DIL on target
9. **Release** when CCIP CROSS on target
10. **Pull Up** before vel vector reaches PULL UP cue

5.5 GPS GUIDED MUNITIONS

5.5.1 JDAM/JSOW - PP

Weapon Setup

1. **Coord.** prepare in format
DEG MIN SEC : DEC-SEC
2. **SMS** while on ground
 - (a) Select desired JDAM (J-82) or JSOW (JSA/JSC)
 - (b) **Wait** for GOOD align (3 min)
 - (c) **Mode** PP
 - (d) **Fuzing** INST
3. **JDAM Display** press JDAM DSPLY OSB
4. **Release Type** MANUAL
5. **QTY** ... press QTY OSB select desired stations (recommend:
all) press RTN OSB, now STEP OSB cycles between stations
6. **MSN Page** crossed out PP mean no coordinates
7. **Select PP1** press PP1 OSB
8. **Data Entry** press TGT UFC OSB
 - (a) **HT** enter height for cluster
dispersal (only for JSA)
 - (b) **Return** press TGT UFC twice
to return to main UFC page
 - (c) **ELEV** select ELEV on UFC
 - (d) **Return** press TGT UFC twice
to return to main UFC page
 - (e) **POSN** select POSN on UFC
 - (f) **LAT** input DEG MIN SEC, ENT
input DEC-SEC, ENT
 - (g) **LON** input DEG MIN SEC, ENT
input DEC-SEC, ENT
 - (h) **Return** press TGT UFC twice
to return to main UFC page
9. **Verify** PP1 no longer crossed
10. **Repeat** for remaining stations

Weapon Launch

1. **Master Arm** ARM

2. **Master Mode** A/G
3. **SMS** verify J-82 boxed
4. **R DDI** HSI page
5. **L DDI** JDAM page
6. **Verify** MANUAL release, PP, desired station
7. **Maneuver** with steering cues
8. **TMR** Time to Minimum Range
9. **IN RNG** In Range
10. **Fire** hold weapon release
11. **Next** system will auto cycle to next JDAM
12. **Verify** MANUAL release, PP, desired station
13. **Repeat** for remaining bombs

Note each JDAM can have 4 PP targets

5.5.2 JDAM/JSOW - TOO WYPT

Weapon Setup

1. **Waypoints** verify
 - (a) **SUPT HSI**
 - (b) **DATA** cycle through waypoints
 - (c) **Precise** push PRECISE OSB to add DEC-SEC
2. **SMS** while on ground
 - (a) Select desired JDAM (J-82) or JSOW (JSA/JSC)
 - (b) **Wait** for GOOD align (3 min)
 - (c) **Mode** TOO
 - (d) **Fuzing** INST
3. **JDAM Display** press JDAM DSPLY OSB
4. **Release Type** MANUAL
5. **QTY** ... press QTY OSB select desired stations (recommend: all), press RTN OSB, now STEP OSB cycles between stations
6. **MSN Page** press TOO1
7. **Data Entry**
 - (a) **TOO UFC**
 - (b) **HT** enter height for cluster dispersal (only for JSA)
 - (c) **Return** press TGT UFC twice to return to main UFC

8. **Repeat** for remaining stations

Weapon Launch

1. **Master Arm** ARM
2. **Master Mode** A/G
3. **SMS** verify J-82 boxed
4. **R DDI** HSI page
5. **L DDI** JDAM page
6. **Verify** MANUAL release, TOO, desired station
7. **HSI** select waypoint 1
8. **Designate** press WPDSG
9. **Maneuver** with steering cues
10. **TMR** Time to Minimum Range
11. **IN RNG** In Range
12. **Fire** hold weapon release
13. **Next** system will auto cycle to next JDAM
14. **Verify** MANUAL release, TOO, desired station
15. **Repeat** for remaining bombs & waypoints

5.5.3 JDAM/JSOW - TOO TPOD

Weapon Setup

1. **SMS** while on ground
 - (a) Select desired JDAM (J-82) or JSOW (JSA/JSC)
 - (b) **Wait** for GOOD align (3 min)
 - (c) **Mode** TOO
 - (d) **Fuzing** INST
2. **JDAM Display** press JDAM DSPLY OSB
3. **Release Type** MANUAL
4. **QTY** ... press QTY OSB select desired stations (recommend: all), press RTN OSB, now STEP OSB cycles between stations
5. **MSN Page** press TOO1
6. **Data Entry**
 - (a) **TOO UFC**
 - (b) **HT** enter height for cluster dispersal (only for JSA)

- (c) **Return** press TGT UFC twice
to return to main UFC
7. **FLIR** STBY
8. **DDI/AMPCD** select FLIR, monitor warm up
9. **FLIR** ON, once ready
10. **Master Mode** A/G
11. **LTD/R** ARM
12. **SCS** in direction of FLIR DDI/AMPCD
13. **TDC** slew TPOD reticle over target
14. **SCS** towards FLIR display to toggle
- **PTRK** tracks moving target (vehicle)
 - **ATRK** track static target
15. **Designate** depress TDC to designate target, coordinates will
auto transfer to JDAM/JSOW
16. **Verify** updated coordinates
in JDAM MSN page

NOTE CAN ONLY GIVE COORD TO 1 JDAM, CANNOT TRANSFER COORD
FROM TOO TO PP

WEAPON LAUNCH

1. **Master Arm** ARM
2. **Master Mode** A/G
3. **SMS** verify J-82 boxed
4. **AMPCD** HSI
5. **R DDI** FLIR page
6. **L DDI** JDAM page
7. **Verify** MANUAL release, TOO, desired station
8. **Maneuver** with steering cues
9. **TMR** Time to Minimum Range
10. **IN RNG** In Range
11. **Fire** hold weapon release

5.6 LASER GUIDED MUNITIONS

5.6.1 GBU-12 PAVEWAY II

1. **Master Arm** ARM
2. **Master Mode** A/G
3. **SMS**select desired bomb (82LG)
 - (a) Create delivery PROG 1
 - (b) **Mode** CCRP (preferred) / CCIP
 - (c) **MFUZ** OFF
 - (d) **EFUZ** DLY1 or INST
4. **FLIR**STBY
5. **DDI/AMPCD**select FLIR, monitor warm up
6. **FLIR** ON, once ready
7. **LTD/R** ARM
8. **SCS** in direction of FLIR DDI/AMPCD
9. **TDC** slew TPOD reticle over target
10. **SCS** towards FLIR display to toggle
 - **PTRK** tracks moving target (vehicle)
 - **ATRK** track static target
11. **UFC OSB** press to set code on UFC
12. **LTDC**select on UFC, set code , press ENT
13. **SMS**select 82LG
14. **CODE OSB**
15. **UFC** enter CODE
16. **82LG** should display RDY
17. **FLIR**press TRIG OSB
18. **Laser**press gun trigger to fire
19. **TDC** depress to designate laser as target (will slave A/G weapons to laser)
20. **Level Flight** keep vel vector aligned with ASL (azimuth steering line)
21. **Release** when weapon cue appears, hold until ordnance released

Note To drop other GBUs, must re-enter CODE for each bomb

5.6.2 GBU-24 PAVEWAY III

5.7 AGM-65 MAVERICK

5.7.1 AGM-65F/G IR-MAV

COOLING begins upon first selection in SMS, weight on wheels inhibits cooling. Cooldown takes about 3 minutes

1. **Master Mode** A/G
2. **SMS** select MAVF
3. **Wait** for cooldown
4. **Master Arm** ARM
5. **TAC Page** select IMAV DSPLY
OR
SMS select MAVF twice
6. **Fuzing** as desired
7. **SCS** towards MAV feed (usually L DDI)
8. **FOV** as desired
9. **Cage/Uncaged**
 - **Caged** seeker points at boresight
 - **Uncaged** missile attempts to lock on to contrast
10. **TDC** slew WHILE depressing
11. **Release TDC** MAV will attempt to lock on, good range 7.5 miles
12. **LOCK ON** cross will disappear
13. **Fire** hold weapon release

5.7.2 AGM-65E LASER-MAV

1. **Master Mode** A/G
2. **Master Arm** ARM
3. **SMS** select MAV
 - (a) **Self Test**30s, monitor in MAV DSPLY
 - (b) **Fuzing** INST
4. **MAV DSPLY** press UFC OSB (edits ALL laser codes at once)
5. **CODE** enter on UFC
6. **FLIR** STBY
7. **DDI/AMPCD** select FLIR, monitor warm up
8. **FLIR** ON, once ready
9. **LTD/R** ARM

10. **SCS** in direction of FLIR DDI/AMPCD
11. **TDC** slew TPOD reticle over target
12. **SCS** towards FLIR display to toggle
 - **PTRK** tracks moving target (vehicle)
 - **ATRK** track static target
13. **UFC OSB** press to set code on UFC
14. **LTDC** select on UFC, set code , press ENT
15. **FLIR** press TRIG OSB
16. **Laser** press gun trigger to fire
17. **SCS** to MAV DSPLY DDI
18. **MAV DSPLY** select desired station using STEP OSB
19. **Uncage** missile

NOTE MAV DSPLY must be selected, else will boresight TPOD

1. **RDY** indication & MAV LKD in HUD indicates ready to fire
2. **Fire** hold weapon release

5.8 AGM-88C HARM

5.8.1 HARM - TOO

1. **Master Arm** ARM
2. **Master Mode** A/G
3. **R DDI** TAC EW page
4. **L DDI** SMS page, select HARM
5. **Mode** TOO (Target Of Opportunity)
6. **SCS** towards HARM DDI
7. **Cycle Emitter** depress RAID/FLIR to cycle, consult HUD, RWR or EW page
8. **Maneuver** align target icon with cross of seeker
9. **Handoff** press CAGE/UNCAGE to lock seeker to target
10. **Fire** hold weapon release

5.8.2 HARM - SP

1. **Master Arm** ARM
2. **Master Mode** A/G
3. **R DDI** TAC EW page
4. **L DDI** SMS page, select HARM
5. **Mode** SP (Self Protect)
6. **Cycle Emitter** depress RAID/FLIR to cycle, consult HUD, RWR or EW page
7. **Fire** hold weapon release

5.8.3 HARM - PULLBACK

If RWR detects critical threat, SP Pullback will automatically select and prepare harm for launch.

NOTE HARM OVRD on SMS must be unboxed

1. **Master Arm** ARM
2. **Master Mode** A/G
3. **HRM OVRD** unboxed
4. **RWR** Critical threat
5. **HUD** HARM displayed
6. **Fire** hold weapon release

5.8.4 HARM - PB Intro

5.8.5 HARM - PB Setup

5.8.6 HARM - A/C LOFT

5.8.7 HARM - HRM LOFT

5.9 AGM-84D HARPOON

5.9.1 HARPOON - BOL

Launch Parameters

- **Search Point Distance** 0-105 nm, from launch until start search, or from HPTP to search
- **Self Destruct Distance**
- **Bearing To Target** deg, bearing missile will follow either from launch or after HPTP (Turnpoint)
- **FLT** HIGH 35k, MED 15k, LOW 5k
- **Term.** SKIM/POP

1. **Master Arm** ARM

2. **Master Mode** A/G

3. **SMS** select HPD OSB

4. **Align** monitor from SMS (25 s)

5. **Program Parameters**

(a) **UFC**press UFC OSB

(b) **SRCH** input Search Point, ENT

(c) **DSTR** input Self Destruct, ENT

(d) **BRG** input Bearing, ENT

SMS

(a) **Mode** BOL

(b) **FLT** LO/MED/HI

(c) **Term.**SKIM/POP

6. **R DDI** HSI

7. **FXP/HPTP**

- **FXP** Fixpoint, located 1/2 dis between SRCH and DSTR point, harpoon will fly to FXP and hold that bearing
- **HPTP** Harpoon Turnpoint
select waypoint, press HPTP OSB, harpoon will fly to HPTP, then BRG

8. **IN ZONE** follow steering cues until IN ZONE cue appears

9. **Alt** 2500 ft or higher

10. **g** positive

11. **Fire** hold weapon release

12. **RADALT** warning normal

5.9.2 HARPOON - R/BL

Launch Parameters

- **TGT** Target must be designated with WPDSG from HSI, TPOD by depressing TDC, or RDR
- **FLT** HIGH 35k, MED 15k, LOW 5k
- **TERM** SKIM/POP
- **SEEK** search area, SML/MED/LRG

1. **Master Arm** ARM
2. **Master Mode** A/G
3. **SMS** select HPD OSB
 - (a) **Align** monitor (25 s)
 - (b) **HPTP** Harpoon Turnpoint
select waypoint, press HPTP OSB, harpoon will fly to
HPTP, then TGT Point
 - (c) **Mode** R/BL
with valid TGT
 - (d) **FLT** LO/MED/HI
 - (e) **Term.** SKIM/POP
 - (f) **Seek** SML (5.4 nm)
MED (10.8 nm)
LRG (16.2 nm)
4. **R DDI** HSI
5. **IN ZONE** follow steering cues until IN ZONE cue appears
6. **Alt** 2500 ft or higher
7. **g** positive
8. **Fire** hold weapon release
9. **RADALT** warning normal

5.10 AGM-84E/H SLAM & SLAM/ER

5.10.1 SLAM - SETUP

• Master Mode	(a) Master Arm ARM (b) Master Mode A/G
• SLAM Power	(a) SLAM OSB Boxed <ul style="list-style-type: none"> • Select desired station with STEP OSB • Alignment – approx. 3 min (b) ALN QUAL 01 GOOD
• Datalink	(a) DL13 Boxed (b) WEP OSB Press <ul style="list-style-type: none"> • Select desired SLAM for datalink (c) Verify SLAM indication under boxed DL13
• Weapon Parameters	(a) FLT As Desired <ul style="list-style-type: none"> • HIGH – 35000 ft • MED – 15000 ft • LOW – 5000 ft (b) EFUZ INST
• SLAM DISPLAY Page	(a) REL TYPE MAN (b) UFC OSB Boxed (c) DIST As Required <ul style="list-style-type: none"> • DIST – Distance from target in NM when seeker head goes active • Typical Value – 15 (d) UFC OSB Unbox
• Target Designation	<ul style="list-style-type: none"> • TOO WYPT / TOO TPOD / TOO A/G RDR • PP

5.10.2 SLAM - TOO WYPT

1. Generic Setup	Refer to Setup Section
2. SLAM DSPLY TOO Setup	<p>(a) MODE TOO</p> <p>(b) MSN Page Enter</p> <ul style="list-style-type: none"> • Select between TOO1 & TOO2 • Verify ORP (Offset Release Point) blank <p>(c) TERM (Optional) As Desired</p> <ul style="list-style-type: none"> • Can enter terminal heading, angle and velocity via UFC <p>(d) O/S (Optional) As Desired</p> <ul style="list-style-type: none"> • Can input Offset parameters via UFC
3. HSI Waypoint Designation	<p>(a) WYPT Boxed</p> <p>(b) Target Waypoint Selected</p> <p>(c) WPDSG Press</p> <ul style="list-style-type: none"> • TGT will replace WYPT as boxed • Min/Max Launch Range circles appear on HSI
4. Cueing	<ul style="list-style-type: none"> • MSN Page – ORP shows coordinates of designated waypoint • HUD – designation diamond, steering cues, range to target, SLAM, TMR, and TOO indications appear
5. Weapon Launch	Refer to Launch Section

5.10.3 SLAM - TOO TPOD

1. Generic Setup	Refer to Setup Section
2. SLAM DSPLY TOO Setup	(a) MODE TOO (b) MSN Page Enter <ul style="list-style-type: none"> • Select between TOO1 & TOO2 • Verify ORP (Offset Release Point) blank (c) TERM (Optional) As Desired <ul style="list-style-type: none"> • Can enter terminal heading, angle and velocity via UFC (d) O/S (Optional) As Desired <ul style="list-style-type: none"> • Can input Offset parameters via UFC
3. TPOD Designation	(a) Slew TPOD over target (b) TDC Depress
4. Cueing	<ul style="list-style-type: none"> • MSN Page – ORP shows coordinates of designated waypoint • HSI Page – Min/Max launch circles • HUD – designation diamond, steering cues, range to target, SLAM, TMR, and TOO indications appear
5. Weapon Launch	Refer to Launch Section

NOTE

- TPOD range < SLAM range – IN RNG cue on designation likely

5.10.4 SLAM - TOO A/G RDR

1. Generic Setup	Refer to Setup Section
2. SLAM DSPLY TOO Setup	(a) MODE TOO (b) MSN Page Enter <ul style="list-style-type: none"> Select between TOO1 & TOO2 Verify ORP (Offset Release Point) blank (c) TERM (Optional) As Desired <ul style="list-style-type: none"> Can enter terminal heading, angle and velocity via UFC (d) O/S (Optional) As Desired <ul style="list-style-type: none"> Can input Offset parameters via UFC
3. RDR Designation	(a) EXP Mode As Required (b) TDC Depress & Hold slew, release to designate target
4. Cueing	<ul style="list-style-type: none"> MSN Page – ORP shows coordinates of designated waypoint HSI Page – Min/Max launch circles HUD – designation diamond, steering cues, range to target, SLAM, TMR, and TOO indications appear
5. Weapon Launch	Refer to Launch Section

NOTE

- A/G RDR range < SLAM range** – **IN RNG** cue on designation likely
- Radar significantly less precise** – if visibility allows FLIR is preferred TOO designation method

5.10.5 SLAM - PP

1. Generic Setup	Refer to Setup Section
2. SLAM DSPLY TOO Setup	<p>(a) MODE PP</p> <p>(b) MSN Page Enter</p> <ul style="list-style-type: none"> • Select between PP1-PP5 • Verify TGT blank <p>(c) TERM (Optional) As Desired</p> <ul style="list-style-type: none"> • Can enter terminal heading, angle and velocity via UFC <p>(d) O/S (Optional) As Desired</p> <ul style="list-style-type: none"> • Can input Offset parameters via UFC
3. Target Designation	<p>(a) Prepare Coordinates</p> <ul style="list-style-type: none"> • LAT/LONG – DEG MIN SEC : DEC-SEC • ELEV – FT <p>(b) Desired PP Boxed</p> <p>(c) TGT UFC Boxed</p> <p>(d) UFC Select POSN</p> <ul style="list-style-type: none"> • Input LAT, LONG respectively • DEG MIN SEC, ENTER, then DEC-SEC <p>(e) TGT UFC Press 2x (returns to main UFC Menu)</p> <p>(f) UFC Select ELEV</p> <ul style="list-style-type: none"> • Select desired unit (FEET / MTRS) • Enter elevation data <p>(g) TGT UFC Press 2x (returns to main UFC Menu)</p> <p>(h) MSN Page</p> <ul style="list-style-type: none"> • PP – Selected PP no longer crossed out • TGT – Shows desired coords / elev data
4. Cueing	<ul style="list-style-type: none"> • HSI Page – Min/Max launch circles • HUD – designation diamond, steering cues, range to target, SLAM, TMR, and TOO indications appear
5. Weapon Launch	Refer to Launch Section

5.10.6 SLAM-ER - STEERPOINTS

1. Generic Setup	Refer to Setup Section
2. Target Designation	Refer to Designation Sections <ul style="list-style-type: none"> • TOO WYPT / TOO TPOD / TOO A/G RDR • PP
3. SMS Page Steerpoint Designation	(Optional) <p>(a) STP OSB Boxed</p> <p>(b) UFC STP1</p> <ul style="list-style-type: none"> • Input desired waypoint number, ENTER <p>(c) Repeat up to STP5</p>
4. Weapon Launch	Refer to Launch Section

NOTE

- SLAM-ER is labeled as **SLMR** on **SMS / MSN Page**, adjust procedures accordingly
- SLAM-ER has significantly higher range as compared to SLAM

5.10.7 SLAM - LAUNCH

1. Generic Setup	Refer to Setup Section
2. Target Designation	<ul style="list-style-type: none"> • TOO WYPT / TOO TPOD / TOO A/G RDR • PP
3. Cockpit Setup	<ul style="list-style-type: none"> • R DDI – HSI Page • L DDI – SMS Page
4. SMS Page Datalink Setup	(a) SLAM OSB Unboxed (b) DL13 OSB Boxed (c) Datalink Channel Set <ul style="list-style-type: none"> • Must set to match weapon station • Set via UFC OSB & UFC input
5. Launch Conditions	<ul style="list-style-type: none"> • Weapon Station RDY • Range Cue IN RNG • Release Profile Set • Master Mode A/G • Master Arm ARM
6. Weapon Launch	Hold WEAPON RELEASE until separation
7. TTS = 0	<ul style="list-style-type: none"> • Datalink feed activates • Seeker becomes uncaged • FOV OSB toggles field-of-view
8. Manual Correction	<ul style="list-style-type: none"> • Press & Hold TDC while slewing • Not recommended unless necessary
9. Impact	Datalink feed cuts out

NOTE

• Cueing

- **TTS** – (Time-To-Seeker) time until seeker goes active and pilot can take control
- **TMR** – Time until maximum launch range
- **IN RNG** – Within maximum launch range
- **Diamond** – Shows Target location on HUD/HMD

5.11 AGM-84E/H SLAM & SLAM/ER – ALTERNATE FORMAT

5.11.1 SLAM - SETUP

1. Master Mode

- (a) Master Arm ARM
- (b) Master Mode A/G

2. SLAM Power

- (a) SLAM OSB Boxed
 - Select desired station with **STEP OSB**
 - Alignment – approx. 3 min
- (b) ALN QUAL 01 GOOD

3. Datalink

- (a) DL13 Boxed
- (b) WEP OSB Press
 - Select desired SLAM for datalink
- (c) Verify **SLAM** indication under boxed DL13

4. Weapon Parameters

- (a) FLT As Desired
 - HIGH – 35000 ft
 - MED – 15000 ft
 - LOW – 5000 ft
- (b) EFUZ INST

5. SLAM DSPLAY Page

- (a) REL TYPE MAN
- (b) UFC OSB Boxed
- (c) DIST As Required
 - **DIST** – Distance from target in NM when seeker head goes active
 - **Typical Value** – 15
- (d) UFC OSB Unbox

6. Target Designation – Refer to Designation Sections

- TOO WYPT / TOO TPOD / TOO A/G RDR
- PP

5.11.2 SLAM - TOO WYPT

1. **Generic Setup** – Refer to Setup Section2. **SLAM DSPLY – TOO Setup**(a) **MODE** **TOO**(b) **MSN Page** **Enter**

- Select between TOO1 & TOO2
- Verify **ORP** (**O**ffset **R**elease **P**oint) blank

(c) **TERM (Optional)** **As Desired**

- Can enter terminal heading, angle and velocity via UFC

(d) **O/S (Optional)** **As Desired**

- Can input Offset parameters via UFC

3. **HSI Waypoint Designation**(a) **WYPT** **Boxed**(b) **Target Waypoint** **Selected**(c) **WPDSG** **Press**

- **TGT** will replace **WYPT** as boxed
- Min/Max Launch Range circles appear on HSI

4. **Cueing**

- **MSN Page** – **ORP** shows coords of designated waypoint
- **HUD** – designation diamond, steering cues, range to target, SLAM, TMR, and TOO indications appear

5. **Weapon Launch** – Refer to Launch Section

5.11.3 SLAM - TOO TPOD

1. **Generic Setup** – Refer to Setup Section
2. **SLAM DSPLY TOO Setup**
 - (a) **MODE** **TOO**
 - (b) **MSN Page** **Enter**
 - Select between TOO1 & TOO2
 - Verify **ORP** (**O**ffset **R**elease **P**oint) blank
 - (c) **TERM (Optional)** **As Desired**
 - Can enter terminal heading, angle and velocity via UFC
 - (d) **O/S (Optional)** **As Desired**
 - Can input Offset parameters via UFC
3. **TPOD Designation**
 - (a) **TPOD** **Slewed to Target**
 - (b) **TDC** **Depress**
4. **Cueing**
 - **MSN Page** – **ORP** shows coords of designated waypoint
 - **HSI Page** – Min/Max launch circles
 - **HUD** – designation diamond, steering cues, range to target, SLAM, TMR, and TOO indications appear
5. **Weapon Launch** – Refer to Launch Section

NOTE

- TPOD range < SLAM range – IN RNG cue on designation likely

5.11.4 SLAM - TOO A/G RDR

1. **Generic Setup** – Refer to Setup Section
2. **SLAM DSPLY TOO Setup**
 - (a) **MODE** **TOO**
 - (b) **MSN Page** **Enter**
 - Select between TOO1 & TOO2
 - Verify **ORP** (**Offset Release Point**) blank
 - (c) **TERM (Optional)** **As Desired**
 - Can enter terminal heading, angle and velocity via UFC
 - (d) **O/S (Optional)** **As Desired**
 - Can input Offset parameters via UFC
3. **RDR Designation**
 - (a) **EXP Mode** **As Required**
 - (b) **TDC** **Depress & Hold**
slew, release to designate target
4. **Cueing**
 - **MSN Page** – **ORP** shows coordinates of designated way-point
 - **HSI Page** – Min/Max launch circles
 - **HUD** – designation diamond, steering cues, range to target, SLAM, TMR, and TOO indications appear
5. **Weapon Launch** – Refer to Launch Section

NOTE

- **A/G RDR range < SLAM range** – **IN RNG** cue on designation likely
- **Radar significantly less precise** – if visibility allows FLIR is preferred TOO designation method

5.11.5 SLAM - PP

1. **Generic Setup** – Refer to Setup Section
2. **SLAM DSPLY TOO Setup**
 - (a) **MODE** **PP**
 - (b) **MSN Page** **Enter**
 - Select between PP1-PP5
 - Verify **TGT** blank
 - (c) **TERM (Optional)** **As Desired**
 - Can enter terminal heading, angle and velocity via UFC
 - (d) **O/S (Optional)** **As Desired**
 - Can input Offset parameters via UFC
3. **Target Designation**
 - (a) **Prepare Coordinates**
 - **LAT/LONG** – DEG MIN SEC : DEC-SEC
 - **ELEV** – FT
 - (b) **Desired PP** **Boxed**
 - (c) **TGT UFC** **Boxed**
 - (d) **UFC** **Select POSN**
 - Input LAT, LONG respectively
 - DEG MIN SEC, **ENTER**, then DEC-SEC
 - (e) **TGT UFC** **Press 2x**
(returns to main UFC Menu)
 - (f) **UFC** **Select ELEV**
 - Select desired unit (FEET / MTRS)
 - Enter elevation data
 - (g) **TGT UFC** **Press 2x**
(returns to main UFC Menu)
 - (h) **MSN Page**
 - **PP** – Selected PP no longer crossed out
 - **TGT** – Shows desired coords / elev data
4. **Cueing**
 - **HSI Page** – Min/Max launch circles
 - **HUD** – designation diamond, steering cues, range to target, SLAM, TMR, and TOO indications appear
5. **Weapon Launch** – Refer to Launch Section

5.11.6 SLAM-ER - STEERPOINTS

1. **Generic Setup** – Refer to Setup Section
2. **Target Designation** – Refer to Designation Sections
 - TOO WYPT / TOO TPOD / TOO A/G RDR
 - PP
3. **SMS Page – Steerpoint Designation** – (Optional)
 - (a) STP OSB **Boxed**
 - (b) UFC **STP1**
 - Input desired waypoint number, **ENTER**
 - (c) **Repeat** up to **STP5**
4. **Weapon Launch** – Refer to Launch Section

NOTE

- SLAM-ER is labeled as **SLMR** on **SMS / MSN Page**, adjust procedures accordingly
- SLAM-ER has significantly higher range as compared to SLAM

5.11.7 SLAM - LAUNCH

1. **Generic Setup** – Refer to Setup Section
2. **Target Designation** – Refer to Designation Sections
 - TOO WYPT / TOO TPOD / TOO A/G RDR
 - PP
3. **Cockpit Setup**
 - R DDI – HSI Page
 - L DDI – SMS Page
4. **SMS Page Datalink Setup**
 - (a) **SLAM OSB** **Unboxed**
 - (b) **DL13 OSB** **Boxed**
 - (c) **Datalink Channel** **Set**
 - Must set to match weapon station
 - Set via UFC OSB & UFC input
5. **Launch Conditions**
 - **Weapon Station** **RDY**
 - **Range Cue** **IN RNG**
 - **Release Profile** **Set**
 - **Master Mode** **A/G**
 - **Master Arm** **ARM**
6. **Weapon Launch** – Hold **WEAPON RELEASE** until separation
7. **TTS = 0**
 - Datalink feed activates
 - Seeker becomes uncaged
 - **FOV OSB** toggles field-of-view
8. **Manual Correction**
 - Press & Hold TDC while slewing
 - Not recommended unless necessary
9. **Impact** – Datalink feed cuts out

NOTE

- **Cueing**
 - **TTS** – (Time-To-Seeker) time until seeker goes active and pilot can take control
 - **TMR** – Time until maximum launch range
 - **IN RNG** – Within maximum launch range
 - **Diamond** – Shows Target location on HUD/HMD

5.12 AGM-62 WALLEYE II

5.12.1 AGM-62 WALLEYE II

1. **Master Arm** ARM
2. **Master Mode** A/G
3. **SMS** select WEDL
 - (a) **TV Feed**select WEDL OSB again
 - (b) **Fuzing**as desired
4. **SCS** towards walleye feed DDI
5. **Cage/Uncage** when uncaged the bomb will attempt to lock on to contrast
6. **TDC** DEPRESS & **hold** while slewing
7. **LOCK ON** RDY indication next to station, WE no longer crossed out in HUD, WEDL no longer crossed out in SMS
8. **Fire** hold weapon release

5.12.2 AGM-62 WALLEYE II - D/L

1. **Master Arm** ARM
2. **Master Mode** A/G
3. **SMS** select WEDL
 - (a) **D/L**select DL13 OSB
(turns on D/L & TV feed)
 - (b) **CHNL** press UFC OSB and set channel equal to selected station of walleye, then deselect UFC OSB
 - (c) **Fuzing**as desired
4. **SCS** towards DL feed
5. **Cage/Uncage** when uncaged the bomb will attempt to lock on to contrast
6. **TDC** DEPRESS & **hold** while slewing
7. **LOCK ON** RDY indication next to station, WE no longer crossed out in HUD, WEDL no longer crossed out in SMS
8. **Fire** hold weapon release
9. **Steer** DEPRESS & **hold** TDC
10. **Impact** D/L Feed will cut out

Range theoretical max 20 nm, practical max 10 nm, altitude of 20k and high airspeed recommended

Lock On not required for D/L launch but recommended

Oversteering significantly reduces range

Chapter 6

A/A WEAPONS

Contents

6.1	M61A2 GUN	6-3
6.1.1	M61 - NO RADAR	6-3
6.1.2	M61 - RADAR	6-3
6.2	AIM-9 SIDEWINDER	6-4
6.2.1	AIM-9 - NO RADAR	6-4
6.2.2	AIM-9 - RADAR	6-4
6.2.3	AIM-9X - JHMCS	6-4
6.3	AIM-7 SPARROW	6-6
6.3.1	AIM-7F - RADAR	6-6
6.4	AIM-120 AMRAAM	6-7
6.4.1	AIM-120 - STT	6-7
6.4.2	AIM-120 - TWS	6-7

A/A

A/A

6.1 M61A2 GUN

6.1.1 M61 - NO RADAR

1. **Master Arm** ARM
2. **Radar** OFF
3. **Weapon Select** A/A GUNS (aft)
4. **SMS**
 - **Rounds** MK-50 or PGU-28
 - **Firing Rate** HI or LO
5. **Fire** TRIGGER

6.1.2 M61 - RADAR

1. **Master Arm** ARM
2. **Radar** OPERATE
3. **Weapon Select** A/A GUNS (aft)
4. **SMS**
 - **Rounds** MK-50 or PGU-28
 - **Firing Rate** HI or LO
5. **Radar ACM** GACQ (occurs automatically)
6. **Maneuver** place pipper over target
7. **Fire** TRIGGER

6.2 AIM-9 SIDEWINDER

6.2.1 AIM-9 - NO RADAR

1. **IR Cool** NORM
2. **Master Arm** ARM
3. **Radar** OFF
4. **Weapon Select** SIDEWINDER (fwd)
5. **Cage/Uncage** DEPRESS
6. **Maneuver** place target in seeker (good tone)
7. **Fire** TRIGGER

6.2.2 AIM-9 - RADAR

1. **IR Cool** NORM
2. **Master Arm** ARM
3. **Radar** OPERATE
4. **Weapon Select** SIDEWINDER (fwd)
5. **SCS** ACM (forward)
6. **Select Sub Mode** with further depresses
 - **BST** Boresight
 - **VACQ** Vertical Acquisition
 - **WACQ** Wide Acquisition
7. **Maneuver** place target in lock on zone
8. **Cage/Uncage** depress
9. **Maneuver** place steering dot inside ASE/NIRD circle
10. **Fire** TRIGGER

6.2.3 AIM-9X - JHMCS

1. **IR Cool** NORM
2. **HMD** BRT
3. **Master Arm** ARM
4. **Weapon Select** SIDEWINDER (fwd)
5. **Move Head** place DAC on target
6. **Cage/Uncage** DEPRESS
7. **Fire** on good tone

NOTE

• AIM-9X TONES

- **Static** – Searching
- **Double Beep** – Past 27.5 deg off boresight
- **Repeating beep** – Sees I/R contrast (not enough for track)
- **Steady Tone** – Sees I/R contrasting target
- **High Pitched Tone** – Uncaged
- **Higher Pitch Tone** – Uncaged and past 27.5 deg off boresight

6.3 AIM-7 SPARROW

6.3.1 AIM-7F - RADAR

1. **Radar** OPERATE
2. **R DDI** RDR ATTK page
3. **Master Arm** ARM
4. **Weapon Select** SPARROW (left)
5. **SMS**
 - **Size** SML/MED/LRG
 - **HELO** as desired
 - Desired sparrow type
6. **Sensor Select Switch** ..RIGHT to select BVR/RWR mode and slave TDC to R DDI
7. **Radar Range Scale**as desired
8. **Radar Azimuth Range** as desired
9. **Radar Bar Mode**as desired
10. **Aantenna Elev.**choose optimum
11. **Lock Target** TDC DEPRESS over target
12. **Maneuver**place target in ASE circle (will cause STT lock)
13. **Maneuver** place steering dot inside ASE/NIRD circle
14. **Fire** once in range and SHOOT cue appears

Undesignate by pressing UNDESIGNATE button

ACM modes can also be used with sparrow (see SIDEWINDER - RADAR)

6.4 AIM-120 AMRAAM

6.4.1 AIM-120 - STT

1. **Radar** OPERATE
2. **R DDI** RDR ATTK page
3. **Master Arm** ARM
4. **Weapon Select** AMRAAM (right)
5. **SMS**
 - **Size** SML / MED / LRG
 - Select desired AMRAAM station
6. **Sensor Select Switch** ..RIGHT to select BVR/RWR mode and slave TDC to R DDI
7. **Radar Range Scale**as desired
8. **Radar Azimuth Range** as desired
9. **Radar Bar Mode**as desired
10. **Antenna Elev.**choose optimum
11. **Lock Target**place TDC over target and depress
12. **Maneuver**place target in ASE circle (will cause STT lock)
13. **Maneuver** place steering dot inside ASE/NIRD circle
14. **Fire** once SHOOT cue appears

6.4.2 AIM-120 - TWS

