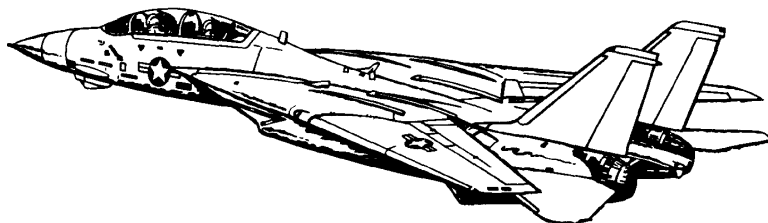


# Pocket Checklist

## F-14A/B AIRCRAFT

REV: 20210522



Procedures

Systems

AWG-9  
Radar

TCS  
ALQ-100

LANTIRN

A/G  
Weapons

A/A  
Weapons



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## 1 PROCEDURES

## 1.1 PILOT - PRE-START

1.	Parking Break	ENGAGED
2.	Ground Power	connected
3.	Compressed Air	connected
4.	ICS	HOT MIC
5.	TO RIO	"Begin Start-Up"
6.	ICS	Comm Check
7.	MASTER TEST Selector	(a) LTS <ul style="list-style-type: none"> <li>Warning Lights .....checked</li> <li>Caution Lights ..... checked</li> <li>Advisory Lights ..... checked</li> </ul> (b) FIRE DET/EXT <ul style="list-style-type: none"> <li>L FIRE GO ..... illuminated</li> <li>R FIRE GO ..... illuminated</li> </ul> (c) INST <ul style="list-style-type: none"> <li>RPM ..... 96%</li> <li>EGT ..... 960 C</li> <li>FF ..... 10500 pph</li> <li>AOA ..... <math>18 \pm 5</math></li> <li>Wing Sweep ..... <math>45 \pm 2.5</math></li> <li>FUEL QTY ..... <math>2000 \pm 200</math></li> <li>Oxygen QTY ..... 2 liters</li> <li>L&amp;R FF lights ..... illuminated</li> </ul> (d) OFF
8.	Ejection Seat	Armed
9.	RIO	Canopy Closed
10.	Oxygen	ON (FWD)
11.	Emergency Wing Sweep	OVERSWEEP

## 1.2 PILOT - ENGINE START

1.	<b>AIR SOURCE</b>	<b>OFF</b>
2.	<b>Hydraulics</b>	(a) <b>HYD TRANSFER PUMP ... SHUTOFF</b> (b) <b>Emerg. Hyd. .... AUTO (LOW)</b>
3.	<b>L&amp;R MASTER GEN</b>	<b>NORM</b>
4.	<b>RIO</b>	<i>"Ready to Start"</i>
5.	<b>Right Engine Start-Up</b>	(a) <b>Engine Crank .... R</b> (b) <b>R Eng N2 .... 20%</b> (c) <b>R Throttle .... IDLE</b> (d) <b>TIT .... &lt; 890 C during start</b> (e) <b>R GEN CAUTION .... extinguished</b>
6.	<b>Stabilized Parameters</b>	<ul style="list-style-type: none"> <li>• <b>RPM .... 62-78%</b></li> <li>• <b>TIT .... approx 500 C</b></li> <li>• <b>Fuel Flow .... 950-1400 pph</b></li> <li>• <b>NOZ .... 5 (100%)</b></li> <li>• <b>Oil Pressure .... 25-35 psi</b></li> <li>• <b>Hyd Pressure .... 3000 psi</b></li> </ul>
7.	<b>Left Engine Start-Up</b>	(a) <b>Engine Crank .... L</b> (b) <b>L Eng N2 .... 20%</b> (c) <b>L Throttle .... IDLE</b> (d) <b>TIT .... &lt; 890 C during start</b> (e) <b>L GEN Caution .... extinguished</b>
8.	<b>Stabilized Parameters</b>	<ul style="list-style-type: none"> <li>• <b>RPM .... 62-78%</b></li> <li>• <b>TIT .... approx 500 C</b></li> <li>• <b>Fuel Flow .... 950-1400 pph</b></li> <li>• <b>NOZ .... 5 (100%)</b></li> <li>• <b>Oil Pressure .... 25-35 psi</b></li> <li>• <b>Hyd Pressure .... 3000 psi</b></li> </ul>
9.	<b>HYD TRANSFER PUMP</b>	<b>NORM</b>
10.	<b>HYD PRESSURE</b>	3000 psi
11.	<b>AIR SOURCE</b>	<b>BOTH ENG</b>
12.	<b>Ground Power</b>	disconnected
13.	<b>Compressed Air</b>	disconnected

## 1.3 PILOT - POST-START

1.	<b>TO RIO</b>	<i>"Both Engines Running"</i>
2.	<b>Displays Control Panel</b>	<ul style="list-style-type: none"> <li>• <b>VDI</b> ..... <b>ON</b></li> <li>• <b>HUD</b> ..... <b>ON</b></li> <li>• <b>HSD</b> ..... <b>ON</b></li> <li>• <b>HDS MODE</b> ..... <b>TID</b> (monitor INS)</li> </ul>
3.	<b>RIO</b>	<b>Select Align Quality</b> <ul style="list-style-type: none"> <li>• <b>INS GO NOW:</b> shortest but least precise alignment</li> <li>• <b>INS GO COARSE:</b> does not meet Launch Criteria for AIM-7 / AIM-54</li> <li>• <b>INS GO MIN WPN LAUNCH:</b> allows AIM-7 / AIM-54 launch</li> <li>• <b>INS GO FINE</b> fine align (8 min)</li> </ul>
4.	<b>ACM Panel</b>	<ul style="list-style-type: none"> <li>• <b>GUN RATE</b> ..... as required</li> <li>• <b>SW COOL</b> ..... <b>OFF</b></li> <li>• <b>MSL PREP</b> ..... <b>OFF</b></li> <li>• <b>Missile MODE/STP</b> ..... <b>NORM</b></li> </ul>
5.	<b>Gun Rounds</b>	<b>Set</b>
6.	<b>ANTI-SKID SPOILER BK</b>	<b>OFF</b>
7.	<b>Emergency Wing Sweep</b>	(a) <b>Handle</b> ..... <b>AFT</b> (b) <b>Angle</b> ..... Verify 68 deg
8.	<b>AFCS Panel - SAS STAB AUG</b>	<ul style="list-style-type: none"> <li>• <b>PITCH</b> ..... <b>ON</b></li> <li>• <b>ROLL</b> ..... <b>ON</b></li> <li>• <b>YAW</b> ..... <b>ON</b></li> </ul>
9.	<b>WING/EXT TRANS</b>	<b>AUTO</b>
10.	<b>UHF 1 Function Selector</b>	<b>BOTH</b>
11.	<b>TACAN Function Selector</b>	<b>T/R</b>
12.	<b>ARA-63 ICLS RECEIVER</b>	<b>ON</b>

13. Radar Altimeter	(a) Control Knob one click CW to turn on (b) Display .....6000 ft (warm up) (c) Display ..... 0 ft (ready)
14. Standby ADI	erect at least 2 min before T/O
15. KY-28 Crypt. Key	Set (refer to GROUND SETTINGS kb)
16. RIO	set D/L frequency
17. Lights	As desired



## 1.4 RIO - PRE-START

1. <b>Oxygen</b>	ON (FWD)
2. <b>PILOT</b>	<ul style="list-style-type: none"> <li>• Ground Power ..... connected</li> <li>• Compressed Air ..... connected</li> </ul>
3. <b>ICS</b>	Comm Check
4. <b>Lights</b>	As required
5. <b>LTS Test</b>	Coordinate with Pilot
6. <b>Ejection Seats</b>	ARMED
7. <b>Canopy</b>	CLOSED
8. <b>TO PILOT</b>	<i>"Ready to Start"</i>

## 1.5 RIO - POST-START - SHORE

1. <b>PILOT</b>	<ul style="list-style-type: none"> <li>• Engines ..... started</li> <li>• AIR SOURCE ..... BOTH ENG</li> </ul>
2. <b>INS STARTUP</b>	(a) LIQUID COOLING ..... ON (FWD) (b) WCS Switch ..... STANDBY (c) IR/TV Power ..... STBY/IR/TV (d) TID/DDD ..... illuminated after 40 s
3. <b>Kneeboard</b>	Retrieve Coordinates, Elevation, Magnetic Variation from GROUND SETTINGS Page

**WARNING** Input Coords **BEFORE** selecting **GND ALIGN** if using ASH

4. <b>Start INS Align</b>	(a) Nav Mode ..... GND ALIGN (b) CAP <ul style="list-style-type: none"> <li>• Category ..... NAV</li> <li>• MESSAGE ..... OWN AC</li> </ul> (c) Keyboard <ul style="list-style-type: none"> <li>• CLEAR, LAT, latitude, ENTER</li> <li>• LONG, longitude, ENTER</li> <li>• ALT, altitude, ENTER</li> </ul> (d) CAP MESSAGE ..... MAG HDG VAR (e) Keyboard ..... HDG, mag var, ENTER (f) Align Progress ..... Monitor
5. <b>U/VHF Mode</b>	T/R G

6. <b>Datalink</b>	(a) <b>Kneeboard</b> ..... TACTICAL DL (b) <b>DL Power</b> ..... ON (FWD) (c) <b>DL Mode</b> ..... TAC (AFT) (d) <b>DL Freq.</b> ..... Set
7. <b>TACAN</b>	T/R
8. <b>RWR Panel</b>	(a) <b>Display Type</b> ..... NORM (b) <b>PWR</b> ..... ON (c) <b>TEST</b> ..... SPL (d) <b>MODE</b> ..... LMT
9. <b>DECM</b>	STBY, then ACT
10. <b>IFF</b>	(a) <b>MASTER</b> ..... STBY (b) <b>CODE</b> ..... as required
11. <b>Altimeter</b>	Reset
12. <b>CAP</b>	Enter Data (WP, FP, etc.)
13. <b>Displays</b>	<ul style="list-style-type: none"> <li>• <b>DDD</b> ..... Set</li> <li>• <b>TID</b> ..... Set</li> <li>• <b>Multiple Display Indicator</b> ..... Set</li> </ul>
14. <b>Hand Control Panel</b>	Set
15. <b>AN/ALE-39</b>	Set (as required) <ul style="list-style-type: none"> <li>• <b>AUTO (CHAFF)/MAN</b></li> <li>• <b>MAN</b></li> </ul>
16. <b>Flare Mode</b>	PILOT
17. <b>Complete INS Align</b>	<ul style="list-style-type: none"> <li>• <b>Duration Full Fine</b> ..... 8 min</li> <li>• <b>Duration ASH</b> ..... much faster</li> </ul> (a) <b>Align Complete</b> .... Caret → Diamond (b) <b>NAV Mode</b> ..... INS NAV
18. <b>Standby ADI</b>	Erect at least 2 min before T/O
19. <b>TO PILOT</b>	"Ready to Taxi"
<b>Once Airborne</b>	
20. <b>IR/TV Power</b>	ON
21. <b>WCS Switch</b>	WCS XMT

## 1.6 RIO - POST-START - CARRIER

1. <b>PILOT</b>	<ul style="list-style-type: none"> <li>Engines ..... started</li> <li>AIR SOURCE ..... BOTH ENG</li> </ul>
2. <b>INS STARTUP</b>	(a) LIQUID COOLING ..... ON (FWD) (b) WCS Switch ..... STANDBY (c) IR/TV Power ..... STBY/IR/TV (d) TID/DDD ..... illuminated after 40 s
3. <b>Datalink</b>	(a) Kneeboard ..... TACTICAL DL (b) DL Power ..... ON (FWD)
4. <b>Start INS Align</b>	(a) DL FREQ ..... Set (b) DL Mode ..... CAINS/WAYPT (c) Nav Mode ..... CVA
5. <b>U/VHF Mode</b>	T/R G
6. <b>TACAN</b>	T/R
7. <b>RWR Panel</b>	(a) Display Type ..... NORM (b) PWR ..... ON (c) TEST ..... SPL (d) MODE ..... LMT
8. <b>DECM</b>	STBY, then ACT
9. <b>IFF</b>	(a) MASTER ..... STBY (b) CODE ..... as required
10. <b>Altimeter</b>	Reset
11. <b>CAP</b>	Enter Data (WP, FP, etc.)
12. <b>Displays</b>	<ul style="list-style-type: none"> <li>DDD ..... Set</li> <li>TID ..... Set</li> <li>Multiple Display Indicator ..... Set</li> </ul>
13. <b>Hand Control Panel</b>	Set
14. <b>AN/ALE-39</b>	Set (as required) <ul style="list-style-type: none"> <li>AUTO (CHAFF)/MAN</li> <li>MAN</li> </ul>
15. <b>Flare Mode</b>	PILOT
16. <b>Complete INS Align</b>	<ul style="list-style-type: none"> <li>Duration Full Fine ..... 9 min</li> <li>Duration ASH ..... much faster</li> </ul> (a) Align Complete .... Caret → Diamond (b) NAV Mode ..... INS NAV

17.	<b>Datalink</b>	(a) <b>DL Mode</b> ..... TAC (AFT) (b) <b>DL Freq.</b> ..... <b>Set</b>
18.	<b>Standby ADI</b>	Erect at least 2 min before T/O
19.	<b>TO PILOT</b>	<i>"Ready to Taxi"</i>
<b>Once Airborne</b>		
20.	<b>IR/TV Power</b>	<b>ON</b>
21.	<b>WCS Switch</b>	<b>WCS XMT</b>

## 1.7 PRE-TAXI

1. <b>ANTI-SKID SPOILER BK</b>	<b>OFF</b>
2. <b>HOOK BYPASS</b>	As Required
3. <b>Nose Strut</b>	<b>RETRACTED</b>
4. <b>HUD MODE</b>	<b>TO</b>
5. <b>Parking Brake</b>	<b>Released (IN)</b>
6. <b>NWS</b>	<b>ENGAGED</b>
7. <b>Path</b>	verify clear

## 1.8 TAKEOFF - SHORE

After Lining Up On Runway	
1. <b>Wing Sweep</b>	(a) <b>EM WING SWEEP</b> ..... <b>FWD</b> , then <b>IN</b> (b) <b>MASTER RESET</b> ..... <b>PRESS</b> (c) <b>Wings</b> ..... Verify thumb controller (d) <b>WING SWEEP</b> ..... <b>AUTO</b> (e) <b>Wings</b> ..... Verify at 20 deg
2. <b>ANTI SKID SPOILER BK</b>	<b>BOTH (UP)</b>
3. <b>FLAPS</b>	<b>UP</b>
4. <b>Trim</b>	0 deg
5. <b>NWS</b>	<b>DISENGAGED</b>
6. <b>Takeoff</b>	(a) <b>Throttle</b> ..... <b>MIL</b> (90% RPM) (b) <b>Stick</b> ..... <b>Back</b> at 130 KIAS (c) <b>Rotation</b> ..... approx 140 KIAS (d) <b>GEAR</b> ..... <b>UP</b> < 250 KIAS

## 1.9 TAKEOFF - CARRIER

Lineup	<ul style="list-style-type: none"> <li>• Wait behind JBD until Catapult is clear</li> <li>• Follow Taxi Directors Instructions to line up on Catapult</li> </ul>
1. Wing Sweep	(a) <b>EM WING SWEEP</b> ..... <b>FWD</b> , then <b>IN</b> (b) <b>MASTER RESET</b> ..... <b>PRESS</b> (c) <b>Wings</b> ..... Verify thumb controller (d) <b>WING SWEEP</b> ..... <b>AUTO</b> (e) <b>Wings</b> ..... Verify at 20 deg
2. FLAPS	<b>DOWN</b>
3. Launch Bar Preparation	(a) <b>Nose Strut</b> .... <b>KNEEL</b> when directed (b) <b>Throttle</b> ..... <b>UP</b> when directed (c) <b>Taxi</b> ..... launch bar into shuttle (d) <b>Throttle</b> ..... <b>IDLE</b> when directed
4. Trim	2-3 deg nose up
5. Speed Brakes	<b>IN</b>
6. Final Checks	(a) <b>Throttle</b> ..... <b>MIL</b> when directed (b) <b>Control Wipeout</b> <ul style="list-style-type: none"> <li>• Stick Full Forward</li> <li>• Stick Full Aft</li> <li>• Stick Full Left</li> <li>• Stick Full Right</li> <li>• Rudder Full Left</li> <li>• Rudder Full Right</li> </ul> (c) <b>Eng. Inst.</b> ..... <b>Checked</b> (d) <b>Caution/Warnings</b> ..... <b>None</b>
7. Catapult Shot	(a) <b>Salute</b> ..... <b>CAT SHOT</b> (b) <b>Gear</b> ..... <b>UP</b> < 250 KIAS (c) <b>Flaps</b> ..... <b>UP</b> < 225 KIAS
8. Clearing Turn	

## 1.10



- **DLC** ..... **Selected** once flaps out
- **AOA** ..... **ON-SPEED**
- **LANDING CHECKLIST**
- **Altitude** ..... descend to **600 ft**

5. <b>Final Turn</b>	<b>180 Deg Position</b> <ul style="list-style-type: none"> <li>• Abeam Pos. .... 1-1.2 nmi</li> </ul> <b>90 Deg Position</b> <ul style="list-style-type: none"> <li>• AOA ..... DONUT</li> <li>• Altitude ..... 400-500 ft</li> </ul>
6. <b>Intercept Glideslope</b>	<ul style="list-style-type: none"> <li>• Distance ..... 3/4 Mile</li> <li>• Altitude ..... 360 ft</li> <li>• AOA ..... ON-SPEED</li> </ul>

### 1.11 LANDING - CHECKLIST

1. <b>Wing Sweep</b>	20 deg AUTO
2. <b>Wheels</b>	<ul style="list-style-type: none"> <li>• Lights ..... 3 DOWN</li> <li>• Transition Light ..... OUT</li> </ul>
3. <b>SAS</b>	ON
4. <b>FLAPS</b>	DOWN
5. <b>DLC</b>	Checked
6. <b>Hook</b>	<ul style="list-style-type: none"> <li>• HOOK ..... DOWN</li> <li>• Transition Light ..... OUT</li> </ul>
7. <b>Harness</b>	Locked
8. <b>Speedbrakes</b>	EXT
9. <b>Brakes</b>	Check
10. <b>Fuel</b>	Check



**1.12 CROSS-BLEED RESTART**

With one engine running if spooldown fails

1. **Non-Running Throttle** ..... OFF
2. **FUEL SHUT OFF** ..... check
3. **Running throttle** ..... 80%+
4. **BACK UP IGNITION** ..... ON
5. **ENG CRANK** .... non-running eng
6. **Non-Running Throttle** ..... IDLE

**If no start occurs**

7. **Non-Running Throttle** ..... OFF  
then IDLE

**If still no start**

8. **ENG MODE** ..... SEC
9. **Non-Running Throttle** ..... OFF  
then IDLE

**After successfull airstart**

10. **BACK UP IGNITION** ..... OFF
11. **ENG MODE** ..... PRI if possible

**1.13 WINDMILL RESTART**

1. **Airspeed** ..... >450 kts
2. **Throttle** ..... IDLE or above
3. **BACK UP IGNITION** ..... ON

**If no relight occurs**

4. **Throttle** ..... OFF then IDLE

**If still no relight**

5. **ENG MODE** ..... SEC
6. **Throttle** ..... OFF then IDLE

**After successful airstart**

7. **BACK UP IGNITION** ..... OFF
8. **ENG MODE** ..... PRI

1.14 **AIRSTART - SPOOLDOWN**

Immediately after engine loss before significant spooldown

1. <b>Throttle</b>	<b>IDLE</b> or above
2. <b>Throttle</b>	If no relight occurs <b>OFF</b> then <b>IDLE</b>
3. <b>ENG Mode Select</b>	If still no relight occurs, <b>SEC</b>
4. <b>Throttle</b>	If no start after mode switch <b>OFF</b> then <b>IDLE</b>
5. <b>ENG MODE SELECT</b>	After successful airstart in SEC <b>PRI</b> if possible

1.15 **AIRSTART**

- Cross-Bleed Restart**

With one ENG running, if Spooldown fails

- (a) **Non-Running Throttle** ..... **OFF**
- (b) **FUEL SHUT OFF** ..... check
- (c) **Running throttle** ..... 80%+
- (d) **BACK UP IGNITION** ..... **ON**
- (e) **ENG CRANK** ..... non-running eng
- (f) **Non-Running Throttle** ..... **IDLE**

If no start occurs

- (g) **Non-Running Throttle** ..... **OFF**  
then **IDLE**

If still no start

- (h) **ENG MODE** ..... **SEC**
- (i) **Non-Running Throttle** ..... **OFF**  
then **IDLE**

After successfull airstart

- (j) **BACK UP IGNITION** ..... **OFF**
- (k) **ENG MODE** ..... **PRI** if possible

## 2 SYSTEMS

2.1 AFCS

2.2 WING SWEEP

2.3 NAVIGATION

2.4 COMMUNICATION

2.5 DATALINK / IFF

## 2.6 RWR THREAT SYMBOLOGY

## SHIPS

AB | Arleigh Burke

AK | Admiral Kuznetsov

GR | Grisha 5 (Albatros)

HP | Oliver Hazard Perry

J2 | Type 054A Frigate,  
"Jiangkai II class"

KK | Krivak 3 (Rezky)

KV | Kirov (Pyotr Velikiy)

L1 | Type 052B Destroyer,  
"Luyang I class"L2 | Type 052C Destroyer,  
"Luyang II class"N | *Ship with Nav Radar*

NE | Neustrashimy

NZ | Nimitz (Vinson, Stennis)

SV | Slava (Moscow)

TC | Ticonderoga

TT | Tarantul 3 (Molniya)

TW | Tarawa

YU | Type 071 Amphibious  
Transport Dock, "Yuzhao  
class"

## AIRCRAFT

14 | F-14A/B

15 | F-15C/E

16 | F-16C

17 | JF-17

18 | F/A-18C

19 | MiG-19

<b>21</b>	MiG-21bis
<b>23</b>	MiG-23MLD
<b>24</b>	Su-24M/MR
<b>25</b>	MiG-25PD
<b>29</b>	MiG-29A/G/S Su-27 Su-33 J-11A
<b>30</b>	Su-30
<b>31</b>	MiG-31
<b>34</b>	Su-34
<b>37</b>	AJS-37
<b>39</b>	Su-25TM
<b>50</b>	A-50
<b>52</b>	B-52
<b>AN</b>	AN-26B AN-30M
<b>AP</b>	AH-64D
<b>B1</b>	B-1B
<b>BE</b>	Tu-95 Tu-142M
<b>BF</b>	Tu-22M3
<b>BJ</b>	Tu-160
<b>E2</b>	E-2D
<b>E3</b>	E-3C
<b>F4</b>	F-4E
<b>F5</b>	F-5E
<b>HX</b>	Ka-27
<b>IL</b>	IL-76MD IL-78M
<b>KC</b>	KC-135

<b>KJ</b>	KJ-2000
<b>M2</b>	Mirage 2000-C Mirage 2000-5
<b>S3</b>	S-3B
<b>SH</b>	SH-60B
<b>TO</b>	Tornado
<b>TR</b>	C-130 C-17A

## AIR DEFENSE

<b>2</b>	S-75 TR SNR (SA-2) “Fan Song”
<b>3</b>	S-125 TR SNR-125 (SA-3) “Low Blow”
<b>6</b>	Kub SA-6
<b>7</b>	HQ-7 TR
<b>8</b>	OSA (SA-8)
<b>10</b>	S-300PS 30N6 TR (SA-10)
<b>11</b>	Buk (SA-11)
<b>12</b>	S-300V
<b>15</b>	Tor 9A331 (SA-15)
<b>19</b>	Tunguska 2C6M (SA-19)
<b>A</b>	Gepard M-163 Vulcan ZSU-23-4 Shilka
<b>BB</b>	S-300PS 64H6E SR (SA-10/Big Bird)
<b>BF</b>	Rapier Blindfire TR
<b>CS</b>	S-300PS 5N66M SR (SA-10/Clam Shell)
<b>DE</b>	Sborka (Dog Ear)
<b>FF</b>	S-125 P-19 SR (SA-3/Flat Face)
<b>GR</b>	Roland SR

<b>HA</b>	Hawk SR
<b>HK</b>	Hawk TR
<b>HQ</b>	HQ-7 SR
<b>PT</b>	Patriot
<b>RO</b>	Roland
<b>RP</b>	Rapier SR
<b>S</b>	1L13 55G6 EWR
<b>SD</b>	Buk TR (SA-11/Snow Drift)
<b>SN</b>	PRW-11 (Side Net)

**MISSILES**

<b>M</b>	AIM-54 AIM-120 MICA-EM R-37 R-77 SD-10
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**ATC**

<b>T</b>	Airport ATC Radar
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### 3 AWG-9 RADAR

#### 3.1 MAIN MODES - OVERVIEW

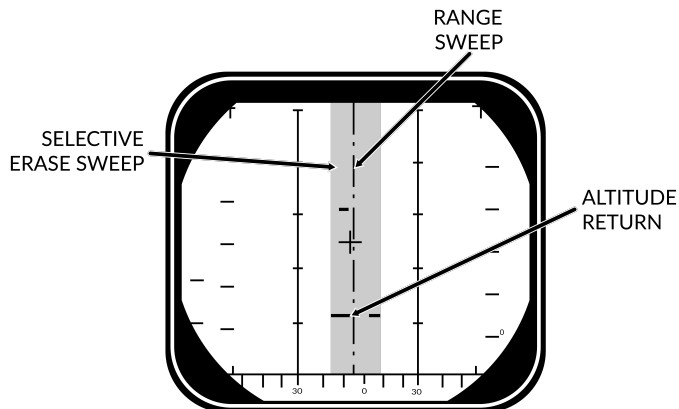
	Pulse		Pulse Doppler			
	Pulse Search	P-STT	PD Search	RWS	TWS	PD-STT
<b>Range</b>	60 nm	50 nm	110 nm	90 nm	90 nm	90 nm
<b>AIM-7</b>	BRSIT	CW	BRSIT		-	PD
<b>AIM-54</b>	BRSIT	ACT	BRSIT		Multi TGT	PD/ACT

AWG-9

#### 3.2 MAIN MODES

<ul style="list-style-type: none"> <li><b>Pulse</b></li> </ul>	<ul style="list-style-type: none"> <li><b>Basic Pulse w/o doppler filtering</b> <ul style="list-style-type: none"> <li>– Cannot be notched</li> <li>– Ground Clutter</li> <li>– Rudimentary Ground mapping</li> </ul> </li> <li><b>Pulse Sub-Modes</b> <ul style="list-style-type: none"> <li>– <b>Pulse Search</b></li> <li>– <b>Pulse-STT</b></li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li><b>Pulse Doppler</b></li> </ul>	<ul style="list-style-type: none"> <li><b>Doppler filter -&gt; no ground returns</b> <ul style="list-style-type: none"> <li>– Susceptible to notching</li> <li>– No ground clutter</li> <li>– Greater range</li> <li>– Advanced sub modes</li> <li>– AIM-54 Guidance</li> </ul> </li> <li><b>Pulse Doppler Sub-Modes</b> <ul style="list-style-type: none"> <li>– <b>PD Search</b></li> <li>– <b>RWS</b></li> <li>– <b>TWS</b></li> <li>– <b>PD-STT</b></li> </ul> </li> </ul>

## 3.3 PULSE MODE - PULSE SEARCH

SEARCH ( $\pm 10^\circ$  SCAN)

- Pulse Search**

Basic Mode, AWG-9 does not use pulse doppler filtering

- Advantages**

- All aspect target detection
- Cannot be notched
- Rudimentary ground mapping

- Disadvantages**

- Cannot discern ground returns and targets
- Lower range

- DDD**

- Range/Azimuth**

- Visual representation of radar and erase sweeps

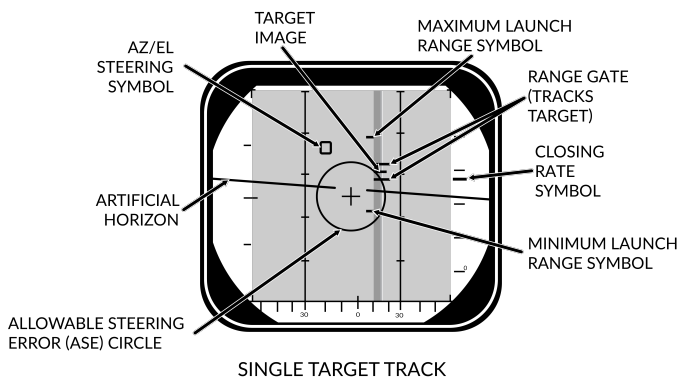
- TID**

- No Information from Pulse**

- Cannot guide AIM-54

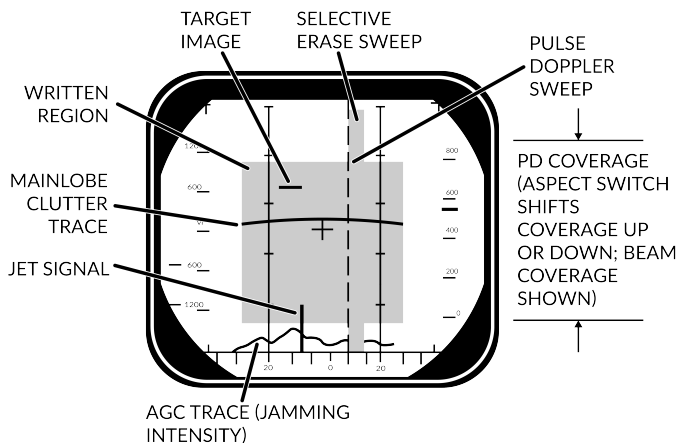


### 3.4 PULSE MODE - PSTT



<ul style="list-style-type: none"> <li>Pulse STT</li> </ul>	<p>Lock Target w/o doppler filtering</p> <ul style="list-style-type: none"> <li><b>Advantages</b> <ul style="list-style-type: none"> <li>– Cannot be notched</li> </ul> </li> <li><b>Disadvantages</b> <ul style="list-style-type: none"> <li>– Susceptible to ground clutter</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>Lock Target</li> </ul>	<ul style="list-style-type: none"> <li><b>Conditions</b> <ul style="list-style-type: none"> <li>– Pulse Search Mode selected</li> <li>– RDR HCU Mode selected</li> </ul> </li> <li><b>Lock Target</b> <ul style="list-style-type: none"> <li>(a) Hold HCU Half-action</li> <li>(b) Slew to desired Target</li> <li>(c) HCU Full-Action to lock</li> </ul> </li> <li><b>Unlock Target</b> <ul style="list-style-type: none"> <li>(d) HCU Half-action</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>DDD</li> </ul>	<ul style="list-style-type: none"> <li><b>Track Indications</b> <ul style="list-style-type: none"> <li>– ANT TRK light</li> <li>– RDROT light</li> <li>– Tracking gates</li> <li>– Closure rate</li> <li>– Attack Symbology</li> </ul> </li> </ul>

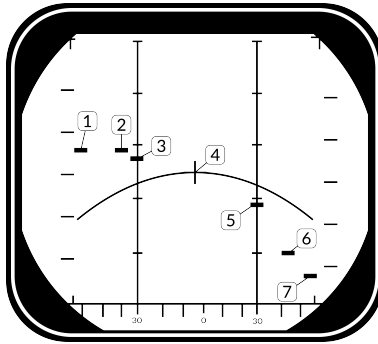
### 3.5 PULSE DOPPLER MODE - PULSE DOPPLER SEARCH



SEARCH ( $\pm 40^\circ$  SCAN)

<ul style="list-style-type: none"> <li><b>Pulse Doppler Search</b></li> </ul>	<p><b>“Early Warning” Mode</b>, Longest Range, cannot display range</p> <ul style="list-style-type: none"> <li><b>Advantages</b> <ul style="list-style-type: none"> <li>– Long Range</li> <li>– Doppler Filtering</li> <li>– <b>“Look Down Shoot Down”</b></li> </ul> </li> <li><b>Disadvantages</b> <ul style="list-style-type: none"> <li>– Can be notched</li> <li>– No range information</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li><b>DDD</b></li> </ul>	<ul style="list-style-type: none"> <li><b>Closure Rate/Azimuth</b></li> <li>Visual representation of radar and erase sweeps</li> </ul>
<ul style="list-style-type: none"> <li><b>Doppler Filters</b></li> </ul>	<ul style="list-style-type: none"> <li><b>Main Lobe Clutter (MLC) Filter</b> <ul style="list-style-type: none"> <li>– Own GS <math>\pm 133</math> knots</li> <li>– Removes main ground return</li> <li>– Source of notching</li> </ul> </li> <li><b>Zero Doppler Filter</b> <ul style="list-style-type: none"> <li>– <b>Negative own GS <math>\pm 100</math> knots</b></li> <li>– Removes Radar reflection from ground directly beneath own AC</li> </ul> </li> </ul>

<ul style="list-style-type: none"> <li>• <b>MLC Switch</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>IN:</b> Enables MLC filter</li> <li>• <b>AUTO:</b> Enables MLC filter if look-up angle less than 3 deg</li> <li>• <b>OUT:</b> Disables MLC filter</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Vc Switch</b></li> </ul>	Changes closure rate DDD scale <ul style="list-style-type: none"> <li>• <b>X-4:</b> -800 to 4000 knots</li> <li>• <b>NORM:</b> -200 to 1000 knots</li> <li>• <b>VID:</b> -50 to 250 knots</li> </ul>
<ul style="list-style-type: none"> <li>• <b>ASPECT Switch</b></li> </ul>	Changes closure rate processing scale <ul style="list-style-type: none"> <li>• <b>NOSE:</b> -600 to 1800 knots</li> <li>• <b>BEAM:</b> -1200 to 1200 knots</li> <li>• <b>TAIL:</b> -1800 to 600 knots</li> </ul>



3.6 **PULSE DOPPLER MODE - RWS**

3.7 **PULSE DOPPLER MODE - TWS - MANUAL**

3.8 **PULSE DOPPLER MODE - TWS - AUTO**

3.9 **PULSE DOPPLER MODE - PDSTT**



## 3.10 TID SYMBOLOGY

GENERAL	
Center Dot	•
Own AC	
TID Cursor	
TWS Steering Centroid	
ONBOARD SENSORS	
Unknown	
Hostile	
Friend	
Angle-Tracked Radar Target	
Angle-Tracked Radar Target with Altitude Difference Ranging	
TCS-Angle Tracked Target	
TCS-Angle Tracked Target with Altitude Difference Ranging	
D/L TARGETS	
Unknown	
Hostile	
Friendly	

## MANUAL REF POINTS

Home base	
Waypoint	
Defended Point	
Fixed Point	
Hostile Area	
Surface Target	
IP	

## D/L REF POINTS

Home Base	
Waypoint	
Data Link Fixed Point	
Surface Target	

## POS SYMB MODIFIERS

Mandatory Attack	
Data Link Destroy	
Do Not Attack	
Multiple Targets	
Data Link Challenge	
Track Extrapolated	

Altitude Numerics	
Firing Order Numerics	
Time-to-Impact (TTI)	
Velocity Vector	
Launch Zone Vectors	
Jamming Strobe	
Radar Antenna Scan Pattern Azimuth Limits	
Data Link Jamming Strobe	
Data Link Pointer	
Data Link Priority Kill	
<b>ATTACK DISPLAY SYMB</b>	
Artificial Horizon	
Steering Guidance Symbol	
Allowable Steering Error Circle	
Breakaway Indication	

**4 TCS/ALQ-100**

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TCS

TCS



**5 LANTIRN**

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**LANTIRN**



**6 A/G WEAPONS**

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6.1 **UNGUIDED BOMB - CCIP**

6.2 **UNGUIDED BOMB - CCRP**

6.3 **ZUNI ROCKETS**

6.4 **M61 GUN**

6.5 **TCS**

6.6 **GBU-12 PAVEWAY II**

6.7 **TALD DECOYS**

A/G

**7 A/A WEAPONS**

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- 7.1 **M61 GUN (MANUAL)**
- 7.2 **M61 GUN (RTGS/NO RADAR)**
- 7.3 **M61 GUN (RADAR)**
- 7.4 **AIM-9 SIDEWINDER (SIL)**
- 7.5 **AIM-9 SIDEWINDER (RADAR)**
- 7.6 **AIM-7 SPARROW**
- 7.7 **AIM-54 PHOENIX (SINGLE)**
- 7.8 **AIM-54 PHOENIX (MULTI)**



