

F-16

Block 50 (GE129)

Checklists - Avionic Volume

Not suited for Real Operations
Made for FALCON BMS 4.35

CONTENTS

2. Contents
3. DTC Settings / UHF Backup radio ops / Emergency radio ops
4. UHF/VHF Normal radio operation
5. UHF/VHF Frequency List (Mission Specific)
6. EWS operation
7. EWS In-flight Programming (Mission specific)
8. Steerpoint assignation list / Air to Air TACAN
9. Markpoints
10. IDM (Improved data Modem)
11. Air to Air Datalink
12. Air to Ground Datalink
13. Receiving Data through the IDM
14. Advanced targeting Pod operation (Air to Air)
15. Advanced targeting Pod operation (Air to Ground)
16. AN/AAQ-13 TFR operation
17. AN/AAQ-13 TFR operation
18. AN/AAQ-14 FLIR operation
19. ALR-56 Air to Ground RWR symbols
20. ALR-56 Air to Air RWR symbols
21. Blank

FOREWORD

This volume is intended as an inflight quick reference aid relevant to avionics in BMS only.

DTC SETTING

Pilots are required to program their DTC during flight planning. DTC programming allows each pilot to set the following cockpit & system settings that are mission specific:

1. Target Waypoints
2. EWS programming
3. MFD Slot modes
4. Preset UHF & VHF radio frequencies
5. IFF (Identification Friend or Foe)
6. Pre-planned Threats
7. Lines steerpoints (for Feba – patrol area,...)

Refer to BMS Manual for instruction on how to set the DTC during planning. On system power-up load the DTE from OSB #7 of the main menu MFD.

UHF BACKUP Radio Operation

Note:

Prior to engine start, you only have access to Backup mode with the ELEC switch in BATT. If communication with your flight is needed, you will use the backup UHF preset channels or manual frequency. VHF is not available as there is no Backup VHF.

C&I switch	Backup
UHF Function knob	BOTH
COM1 Volume	Adjust
COM1 Mode	SQ (Squelch)
UHF Right mode knob	Set MNL for Manual freq, Set PRESET
Frequency	Use brief frequency or preset
Push To Talk	Depress Throttle COM Switch AFT (UHF)

Emergency Radio Operation

Note:

In case of emergencies, the quickest way to communicate is to flip any of the radio to GUARD. GUARD is constantly monitored by every flight member (as long as the UHF radio is set to BOTH)

1. On UHF 243.0 (**Recommended:** UHF has a dedicated Guard receiver)

COM1 Mode switch	GD (Guard)
Push To Talk	Depress Throttle COM Switch AFT (UHF)

2. On VHF 121.5 (**Not recommended** – VHF has no dedicated guard receiver and transmission on VHF guard will be heard only by those monitoring VHF Guard)

COM2 Mode switch	GD (Guard)
Push To Talk	Depress Throttle COM Switch FWD (VHF)

UHF/VHF Normal Radio Operation

Note:

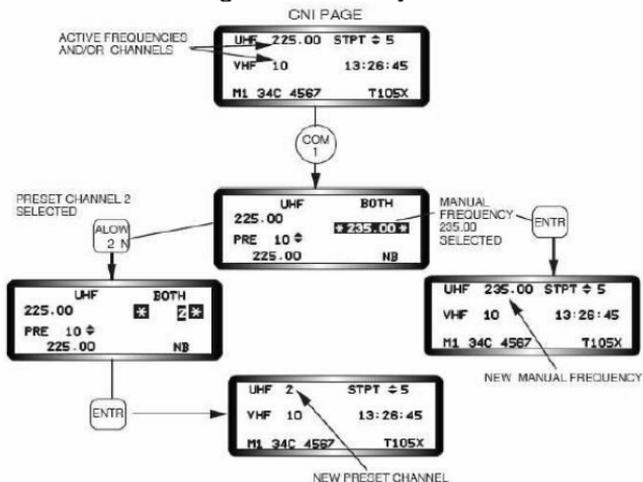
Standard procedure is to use preset channels as much as possible.
Presets are set in the DTC from the briefed radio plan and should not be changed.

Use VHF for intra flight comms (wingmen),
UHF for extra flight comms (Twr)

1. C&I switch
2. UHF Function knob
3. UHF Mode knob
4. COM1/2 Volume
5. COM1/2 Mode
6. COM1 override mode

- UFC
- BOTH
- PRESET
- Adjust
- SQ (Squelch)
- Enter the UHF Preset (2 digits) in the DED scratchpad followed by the ENTER
- Or enter the desired frequency (no preset) with 5 digits followed by enter
- Enter the VHF Preset (2 digits) in the DED scratchpad followed by the ENTER
- Or enter the desired frequency (no preset) with 5 digits followed by enter

7. COM2 override mode



8. To communicate on UHF
9. To communicate on VHF

- Depress Throttle COM Switch AFT (UHF)
- Depress Throttle COM Switch FWD (VHF)

DEFAULT PRESETS List

Refer to relevant AIP or BMS approach charts to check the airport OPS, Ground, Tower, Approach / Departure, Tacan and ILS frequencies...

CH	UHF	VHF
1	Departure Airbase OPS	-
2	Departure Airbase GROUND	Departure ATIS (Ni)
3	Departure Airbase TOWER	Departure TOWER
4	Departure Airbase DEPARTURE/APPROACH	-
5	TACTICAL Check-IN (not implemented)	-
6	TACTICAL frequency (AWACS)	-
7	Arrival airbase APPROACH / DEPARTURE	Arrival ATIS (Ni)
8	Arrival airbase TOWER	Arrival TOWER
9	Arrival airbase GROUND	
10	Alternate airbase APPROACH / DEPARTURE	Alternate ATIS (Ni)
11	Alternate airbase TOWER	Alternate TWR
12	Alternate airbase GROUND	
13	Air to Air REFUELLING	
14	ADVISORY 339.75 (also F1 frequency in UI)	Advisory (123.5)
15	-	First package flight
16	-	Second package flight
17	-	Third package flight
18	-	Fourth package flight
19	-	Fifth package flight
20	-	-

- Tactical check in is not yet implemented in 4.35
- ATIS may not be preset in VHF in 4.35
- Preset #13 for AAR will only be set if a tanker is available and if your flight has a refuel steerpoint.
- Failure to load to DTC will not set presets.
- To communicate with the UI (F1 PTT) set UHF preset #14.
- Departure and Arrival airbase presets might be the same.

EWS

Note:

The EWS can be set through the DTC programming at preflight and may be reprogrammed in flight through the UFC by LIST # 7.

EWS Program

6 programs are available for the countermeasure system:

Pgr 1 to 4 are released on **CMS up** according to which one is selected on the CMDS (PGRM knob)

Pgr 5 is on the **slap switch** (above throttle gate)

Pgr 6 is on **CMS left**.

Without flipping any knob you have then access at all times to three different programs to counter a threat.

EWS Mode

EWS has 5 distinct modes.

STBY: is set to allow manual prog through the UFC.

MAN: Manual launch of the selected sequence.

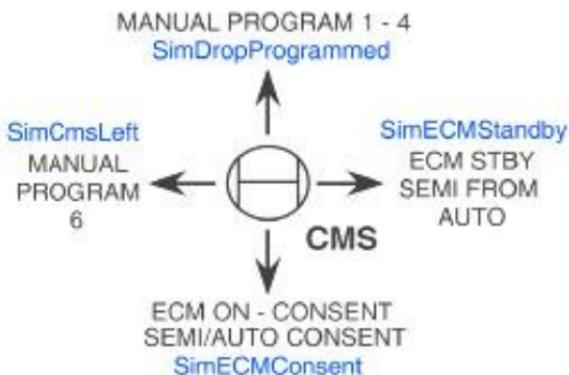
SEMI: Betty prompt pilot to release with COUNTER. Only one program released.

AUTO: Auto release selected program as long as threat remains active.

Once consent is given it is assumed valid till cancelled by CMS aft.

BYP: Bypass mode. Release only 1 chaff and 1 flare (useful when running low of bundles.)

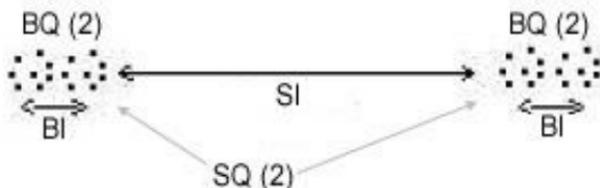
HOTAS CMS Switch Program



EWS IN FLIGHT PROGRAMMING

In case you need to reprogram the EWS in flight, it's done through the UFC: LIST - #7. The programming is possible only when the Mode knob is in STBY.

BQ: Burst Quantity; **BI:** Burst Interval; **SQ:** Salvo Quantity; **SI:** Salvo Interval.



- | | | |
|-----------------|------------------------------------|---------------------|
| 1. EWS mode | STBY | |
| 2. ICP page | Select LIST - #7 | |
| 3. PGR Select | Select PGR 1 – 4 | |
| 4. Chaff rule | Enter PGR mode | SEQ |
| | SET BQ | ICP Num + ICP ENTER |
| | SET BI | |
| | SET SQ | |
| | SET SI | |
| 5. Flare rule | Enter PGR mode | SEQ |
| | SET BQ | ICP Num + ICP ENTER |
| | SET BI | |
| | SET SQ | |
| | SET SI | |
| 6. Next Program | Redo the same for the next program | |
| 7. ICP | Return to master page | RTN |
| 8. EWS mode | Return to MAN or SEMI or AUTO | |

FILL IN YOUR CURRENT EWS SETTINGS:

Note:

BINGO: set the Bingo level for chaff & flares

FDBK: Enable/Disable the CHAFF-FLARES VMU message upon release.

REQCTR: Enable/Disable the COUNTER VMU message

STEERPOINTS ASSIGNATION LIST

The F-16 navigation computer is able to store 100 steerpoints (1 to 99)
Each steerpoint can be manually edited through the STPT or DEST (LIST #1) pages.

STPT	Assignment
1 – 24	Target Steerpoints (Preplanned Flight route)
25	Default Bullseye
26 – 30	Available for 5 Ownship mark points (Small x)
31 – 54	LINES steerpoints (4 groups of 6 Stpt)
55	Open
56 – 70	Preplanned threats
71 – 80	Available for Data Linked steerpoints (Large X)
81 – 99	Available for Weapon steerpoints (JDAM – Harpoons)

AIR TO AIR TACAN

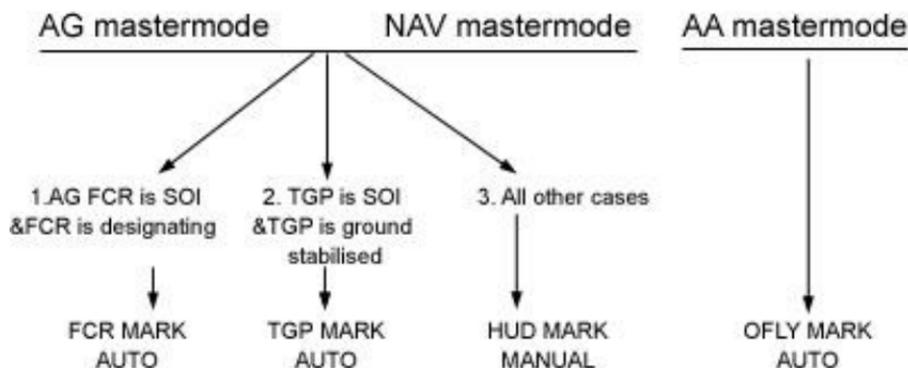
Aircraft set on AA tacan 63 channels apart are getting DME range from each others. Only KC-10 AA tacan is able to provide bearing information plus DME range. Usually Y band is used for AA tacan, but any band will do.

- | | |
|------------------|--|
| 1. UFC | Select T-ILS #1 page |
| 2. TACAN Mode | Set T/R AA (dobber right (SEQ)) |
| 3. Tacan Band | Set required band (input 0 in scratchpad to toggle band) |
| 4. Tacan channel | Set 63 apart: (at or above 64, add 63 – below 64, subtract 63) |
| 5. DED | Check DME reading in lower right corner |
| 6. HSI | Select Tacan mode & Check DME reading (bearing pointer rotating at 30°/sec unless KC-10) |

Ai always use SET AA tacan channels:
First flight in a package always use: 12, 22, 75, 85 (lead to #4)
Second flight uses the same sequence, but incremented by 1: 13, 23, 76, 86
Up to 5 flights can be supported.
Humans can set any patterns they want – to brief in flight planning

MARKPOINTS

Depending on Master modes and the conditions when the MARK page is entered, markpoints may be automatically made in STPT #26:



Own ship markpoints are stored in STPT 26-30. 5 markpoints can be saved before the 6th overrides the 1st. Ownship markpoints are displayed on the MFDs with large X cross.

1. FCR markpoints:

To record a FCR markpoint automatically on entering mark page, you have to set AG mastermode, AG FCR SOI and AG FCR designating prior to entering MARK page. In that case, MARK is done automatically.

To make a manual FCR mark, DCS right to FCR mark in the MARK page, designate with AG FCR and hit TMS up to record the mark.

2. TGP markpoints:

To record a TGP markpoint automatically on entering mark page, you have to set AG mastermode, TGP SOI and ground stabilized prior to entering MARK page. In that case, MARK is done automatically.

To make a manual TGP mark, DCS right to TGP mark in the MARK page, ground stabilize the TGP and hit TMS up to record the mark.

3. OFLY markpoints:

OFLY markpoints are automatically stored when entering the mark page if the master mode is AA. To make a manual OFLY mark, DCS right to OFLY in the MARK page and hit TMS up to record the mark.

4. HUD markpoints:

HUD markpoints are never automatic. When HUD mark is selected, the HUD is made SOI and a mark Piper appears alongside the FPM. Piper can be moved with cursors to the desired mark position. Piper is then ground stabilized with TMS up. A further TMS up records the mark.

IDM (IMPROVED DATA MODEM)

Datalink is independent of aircraft master mode – in Falcon; it will be mostly used in a multi-player environment.

Please note Default datalink use UHF (AA) and VHF (AG) frequency. Ensure common use of frequency for proper IDM operation (AI only uses Tactical UHF #6 for AA datalink)

Air to Air datalink is implemented in three different modes of operation: Demand (DMD), Assign (ASGN) and Continuous (CONT):

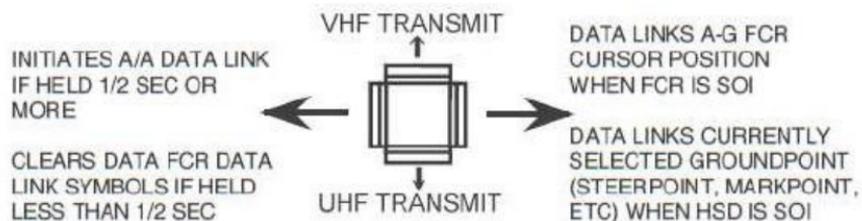
1. **DMD** : Ask a one shot Situational Awareness (wingmen position, altitude, speed and heading and TOI if present) update
2. **ASGN**: Assign a TOI to another flight member.
3. **CONT**: Establish a Continuous Situational Awareness update (wingmen position, altitude, speed and heading and TOI if present). Update received in DMD or ASGN are displayed for 8 seconds and refreshed every 8 seconds in CONT mode.

Air to Air datalink is possible with 7 other aircraft #2 to #8 addresses inputted in the Air to Air Dlink page (LIST ENTER SEQ) of the DED. Your flight members are inputted by default. If you need to add other aircraft in your **package**, use the remaining empty slot address (ie. #21, #31 to communicate with the leader of flight #2 and #3.

Air to Ground datalink allows sending Air to Ground radar cursor position, currently selected steerpoint (markpoint, steerpoint of interest) to other aircraft in your package. Dlink steerpoints are stored in waypoints #71 to 80 if FILL option is set to ALL.

Addresses receiving the Dlink information are set in the Air to Ground Dlink page (LIST ENTER) XMIT. To send data to all members of a flight, input the general flight address (#20, #30, ...) To send data to a specific aircraft, input its own address in XMIT (#21, #22, #13,...)

Datalink requests are done with the Radio switch left and Right as illustrated below: Air to Air datalink is on the LEFT side, Air to Ground datalink is on the RIGHT side:



AIR TO AIR DATALINK

AA Datalink sends and receives ownership position, flight member position, altitude, airspeed and heading as well as the target of interest if there is a bugged contact on the AA FCR and the AA FCR is displayed.

COMM switch LEFT for less than 0.5sec declutters the FCR of DLINK symbols.

- | | |
|---------------------|--|
| 1. DL Switch | Check ON |
| 2. DL addresses | Check own ship and intraflight address in DED AA page (LIST ENTER SEQ) |
| 3. MFD Control page | Check ADLINK selected |

DMD mode:

4. Verify DL Mode Check A-A FCR OSB #6 for DMD mode
5. Depress COMM switch LEFT for >0.5sec
6. Verify DMD mnemonic highlighted for 2 seconds
7. Verify data received in HSD or AA FCR

DMD mode request current positions, altitude and heading to all datalink addresses (usually your flight)

ASGN mode:

You can assign a target regardless of the datalink mode (DMD, CONT) You have to select a specific datalink address to ASSIGN the TOI.

4. Select radar contact to assign (TOI) in AA FCR radar
5. Select recipient with AA FCR OSB #7 to #10
6. Check Assigned Slot (AA FCR OSB #7 to #10) XMIT status
7. Check ASSIGN in HUD for 8 seconds
8. Check recipient radar cursor position on HSD and/or FCR
9. Repeat steps to assign another TOI to another flight member

No need to depress COMM switch left to assign. Selecting the recipient through the MFD FCR OSB is sufficient. The recipient MFD OSB will show XMIT

Note that you can assign a target to yourself (#1) the same way.

CONT mode:

4. Verify DL Mode Check A-A FCR OSB #6 for CONT mode
5. Depress COMM switch LEFT for >0.5sec to initiate the CONT loop.
6. Unselect CONT mode with OSB #6 to stop the loop

CONT mode initiates continuous datalink for all flight members. During CONT mode, ASGN remains of course possible to any specific datalink addresses.

Only 1 member use CONT mode (flight lead)...Refer to prebriefed procedures.

AIR TO GROUND DATALINK

- | | |
|-----------------|--|
| 1. DL Switch | Check ON |
| 2. DL addresses | Input recipient address (general or specific) in DED AG Dlink page (LIST ENTER) in the XMIT field. |

Input "20" for all members of flight #2 for instance. Specific address can also be input if you want to send AG data to only one aircraft

- | | |
|--|--------------------------|
| 3. FILL | Check ALL in UFC DL page |
| <i>When FILL is set to ALL, the DLINK steerpoints are stored in STPT #71-80.</i> | |
| 4. MFD Control page | Check GDLINK selected |

Sending the selected steerpoint (markpoints are steerpoints)

5. Set the HSD as SOI with DMS aft
6. Select the steerpoint on the HSD with TMS forward or select the steerpoint of interest through the UFC
7. Depress COMM switch RIGHT to send data.
8. Verify HSD OSB #6 highlighted XMIT and call Steerpoint on Victor (VHF)
Data link steerpoints and markpoint appear as a small x on the HSD. Ownship markpoints as a larger X.

Sending the AG cursor position:

5. Set the FCR in GM/GMT or SEA
6. Set FCR as SOI
7. Position the radar cursor at desired location
8. Depress COMM switch RIGHT to send data.
9. Verify HSD OSB #6 highlighted XMIT and call Radar cursor on Victor (VHF)
Data link AG radar cursors appear as a yellow asterisk.

RECEIVING DATA THROUGH THE IDM

Pilots receiving data through the IDM are warned visually by a HUD warning message and aurally by the VMS DATA message.

Receiving Data in AA CONT mode

No specific steps required as the CONT mode is automatic as long as the host sends data

Receiving position updates from flight (ASGN/DMD) and/or AA target:

Check ASSIGN in HUD and VMS DATA sound

Check flight member positions and data on HSD and FCR if applicable

Data remains displayed for 8 seconds

4 AA targets can be displayed.

Receiving a Steerpoint/Markpoint

Check MKRT DATA in HUD and VMS DATA sound

Check data linked steerpoint (small X) in HSD

Data linked points are stored in steerpoints # 71 to 80 on an incremental basis

Select Steerpoint (71-80) through the UFC to set as active waypoint.

Data linked steerpoints remain memorized unless a 11th data linked steerpoint overwrite position # 71

Receiving AG radar cursor

Check CURSOR DATA in HUD and VMS DATA sound

Check data linked cursor (yellow asterisk with member id) in HSD and AG FCR.

Check FCR in GM/GMT or SEA mode

Data remains displayed for 13 seconds with the sender ID

ADVANCED TARGETING POD OPERATION

Note:

- The TGP needs cooling before use. Cooling starts when the TGP is powered with the RIGHT HDPT switch. TGP will display NOT TIMED OUT while cooling. It requires a few minutes before being operational.
- Recommended MFD slots are **FCR/WPN/-** (LEFT) and **HSD/TGP/SMS** (RIGHT)– See DTC settings
- There are three track modes available for the TGP:
 - Point track:** Suitable for automatic tracking of vehicle or aircraft
 - Area track :** Suitable for large structure targeting (building, bridge,...)
 - Computed Rate:** Degraded automatic tracking when a mask condition exists.
- The Laser will be operable only past Wow and below 50.000feet
- Only the COMBAT mode of the laser can guide weapons for AG. The Training laser (eye safe) is the only mode available to AA.
- Laser cannot go through clouds

Air to Air mode:

TGP can be used in A-A to identify and track target with or without the radar. AA TGP is slaved to FCR if a target is tracked or if a cursor position exists – if not the AA TGP is boresighted at 0° azimuth and -3° elevation.

Once TGP is POINT tracking a target it becomes independent of FCR. The A-A TGP is perfectly suited to identify target at medium range

1. Hardpoint power Check RIGHT HDPT ON
2. Master ARM ARM (or SIM)
3. TGP Ops mode Select A-A (TGP OSB #1)
4. Bug target on A-A FCR
5. Switch SOI to TGP with DMS down
6. Commands a POINT track with TMS forward
 - Change FOV with pinky and Display polarity (WHOT – BHOT – TV) with TMS left as required*
7. If POINT track is lost, TMS aft to re-slave the TGP to the FCR.

Note: Area track, Combat laser, LST, IR pointer and coordinates are not available in AA mode.

ADVANCED TARGETING POD OPERATION (Cont)

Air to Ground mode:

TGP is used in Air to Ground mode to identify and track target for guided bombing, ranging, IR pointer, buddy lasing, Laser spot tracking (LST) & Air to Ground missile operations.

1. Hardpoint power Check RIGHT HDPT ON
2. Master ARM ARM (or SIM)
3. LASER ARM switch ARM (if required)
4. TGP Laser code Match WPN codes in DED (Laser page)
5. LST code Match wingman WPN code (if required)
6. LASER mode Set Combat (L) or Training (T) (Lsr page)
7. TGP mode Select A-G (TGP OSB #1)
8. Designate target on GM FCR if required
9. Switch SOI to TGP with DMS down
10. Ground stabilize the TGP in AREA TRACK with TMS forward
11. Refine the TGP cursor on the desired target.
Change FOV and Display polarity as required
12. Command POINT track with TMS forward if required
POINT track works only for objects with well defined edges.
13. Check laser ranging (L before slant range)
(L= Laser; T= computed; blank= SPI range)
14. Follow bombing cues for LGB basket.

Post release:

15. Command a gentle LEFT turn away from the target if possible.
16. Monitor TIME to IMPACT countdown
17. Stay out of the clouds (Clouds will Mask the laser beam)
18. Check Laser firing (flashing L) prior to impact according to UFC
Laser page setting.

After impact

19. Break AREA track with TMS AFT
20. Cursor Zero (CZ)
21. Set FOV to Wide
22. LASER switch OFF (if required)

Note

To be able to guide a weapon the TGP laser needs to match the weapon laser code displayed at the UI arming screen. Make sure you write down the assigned laser code in your flight planning. Weapon code should be different for each flight member.

After any cursor slew, ALWAYS perform TMS AFT, CZ, Wide FOV to reset SPI. A good practise is to do it again at each IP

AN/AAQ-13 TFR OPERATION

Note

The TFR system is only available to F-16 carrying the AN/AAQ-13 LANTIRN navigation pod (NVP) and the AN/AAQ-14 targeting pod (TGP). Both loaded on chin pylons.

GROUND TFR CHECKS:

- | | |
|-------------------------------|---|
| 1. LEFT HDPT (SNSR panel) | POWER ON |
| 2. MFD | Select TFR - Check NOT TIMED OUT approx 3 minutes |
| | NOT TIMED OUT needs |
| 3. RF Switch (MISC panel) | Check NORM |
| 4. RALT switch (SNSR panel) | Check ON (at line up) |
| 5. MANUAL FLY UP (FLCS panel) | Check ENABLE |
| 6. MFD | Select TFR page, Confirm TFR STBY |
| 7. SCP (Set clearance plane) | Set as required (1000ft) <small>OSB 6 to 10</small> |
| 8. RIDE type | Set as required (HARD) <small>OSB 2</small> |
| 9. ALLOW (DED) | Set SCP-10% (900ft) |
| 10. CARA | VERIFY ON |

IN-FLIGHT TFR TEST (MAN TF): AIRSPEED & OUT OF LIMIT TURN

- | | |
|----------------------|--|
| TFR mode | SET NORM & MANUAL TF |
| 1000 ft – 350 Kcas: | VERIFY HUD: flashing LIMIT & Speed scale
VERIFY MFD: flashing TFR LIMIT
VERIFY TF command box displayed. |
| Accelerate 400 Kcas: | VERIFY flashing airspeed LIMITs disappear past 360Kcas. |
| Bank past 60°: | VERIFY flashing LIMIT in HUD & MFD
VERIFY cmd box disappears if turn held more than 2sec. |
| Wings level: | VERIFY flashing turn LIMITs disappear. |

IN-FLIGHT TFR TEST (AUTO TF):

- | | |
|--------------|--|
| TFR mode | NORM & ACTIVATE AUTO TF |
| ADV switch : | VERIFY ACTIVE light and AUTO TF LINE displayed |
| MFD & HUD: | VERIFY ground return and NOTER not displayed in HUD |
| Attitude: | VERIFY aircraft level off at 1000ft SCP. |
| Push STICK: | . VERIFY AURAL ALTITUDE @ 900ft AGL (ALLOW)
. VERIFY FLYUP at 750ft AGL
. VERIFY LO TF (HUD) – LIMITS (MFD) – aural PULLUP |
| Attitude: | Allow Fly up to level/climbing attitude |
| PADDLE sw: | PRESS and HOLD & VERIFY STBY light ON |
| ADV switch: | DEPRESS |
| PADDLE sw: | RELEASE & VERIFY BOTH AMS lights OFF & MAN TF box |

AN/AAQ-13 TFR OPERATION (CONT)

IN-FLIGHT TFR LET DOWN CHECK :

- Attitude: Push over – descent to 500ft AGL
 VERIFY: . G-LIMIT / OBSTACLE WARNING fly up occurs
 . PULL UP displayed on HUD
 . Flashing Break X displayed on MFDs
 . Aural PULL UP
 Attitude: Allow Fly up to level/climbing attitude
 PADDLE sw: PRESS and HOLD
 SCP: Select Mission/Briefed SCP
 PADDLE sw: RELEASE
 Attitude: Follow Manual TF box to mission SCP and check for correct level flight programming

IN-FLIGHT TFR SWIM CHECKS (RALT):

- Attitude: Establish 15-30° bank attitude
 RALT BIT: Initiate (MFD TEST page BIT1)
 VERIFY: . MAN TF box disappear
 . SWIM failure roll to wings level, Fly up occurs
 . Aural PULL UP
 . WARN displayed on HUD
 . TF FAIL warning light ON
 . SWIM PFL if lower than 4500ft AGL
 PADDLE sw: PRESS and HOLD
 PADDLE sw: RELEASE when RALT complete

MISSION TFR SET :

- ALLOW : As required
 Ride : As required
 SCP: As required
 TFR MODE: As required

TFR CHECKS

RTFAM

- R** – Radar Altimeter ON
T – TFR – appropriate operating mode
F – FLIR on HUD
A – AMS auto-engage (ADV switch)
M – Monitor

TFR CHECKS

RATSIMPL

- R** – Radar Altimeter ON
A – ALLOW : SET SCP-10%
T- TACAN SET as briefed
S – SCP – SET as briefed
I – IFF (not implemented)
M – Missile : Cool
P – Pod Unstow TGP
L – Laser arm – As required

AN/AAQ-14 FLIR OPERATION (LANTIRN)

Note

The FLIR system is only available to F-16 carrying the AN/AAQ-14 LANTIRN navigation pod (NVP) loaded on chin pylons.
THE FLIR needs between 8 and 15 minutes to time in. Ensure to place the FLIR in STBY as soon as the LEFT hardpoint is powered up.

GROUND FLIR SETUP :

- | | |
|-------------------------------------|--|
| 1. LEFT HDPT (SNSR panel) | POWER ON |
| 2. MFD | SELECT FLIR page |
| 3. FLIR MFD | SELECT STDBY (OSB #18) |
| NOT TIMED OUT needs 8 to 15 minutes | |
| 4. ICP FLIR LvL | As desired (100L) |
| 5. FLIR TIMED IN | SET OPER (OSB#20) |
| 6. HUD FLIR | SET ON with ICP BRT WHEEL |
| 7. BORESIGHT | Depress OSB#10 BSGT (highlights)
Zoom in on HUD
Align FLIR image with HUD image (Cursors)
Depress OSB#10 BSGT when complete |
| 8. HUD FLIR | Disable for ground ops (OPER #OSB20) |

Note

Airborne boresight is better than ground boresight to minimize parallax error. If you boresight on the ground ensure you pick large objects more than 3000ft away (mountains)

LOOK INTO TURN : (When bank angle is 5° or more)

1. DMS UP Depress and hold
2. FLIR will offset the camera LOS into the turn
3. DMS UP Release and the FLIR will revert to forward LOS

SNAPSHOT:

1. DMS UP Depress and hold
2. CURSORS Slew the FLIR LOS
3. DMS UP Release and the FLIR will revert to forward LOS

ALR-56 RWR Symbol List (Air to Ground)

Note

BMS updated SAMs system with a dedicated SEARCH (EWR) and FIRE CONTROL RADAR (FCR). Each radar has its own symbol.

Usually a letter is assigned to SEARCH radar whereas a number is assigned to the FCR

Symbol	Radar	System:	EWR/FCR
F	Flat Face (EWR)	SA-2	-/2
L	Long Track (EWR)	SA-3	F/3
B	Bar Lock B (EWR)	SA-4	L/4
D	Snow Drift (EWR)	SA-5	B/5
O	Dog Ear (EWR)	SA-6	L/6
X	Big Bird (EWR)	SA-8	8/8
2	Fan Song (FCR)	SA-10	X/10
3	Low Blow (FCR)	SA-11	D/11
4	Pat Hand (FCR)	SA-15	-/15
5	Square Pair (FCR)	SA-17	D/17
6	Straight Flush (FCR)	SA-19	19/19
8	Land Roll (FCR)	Patriot	P/P
10	Flap Lid (FCR)	Nike	N/N
11	Fire Dome (FCR)	Hawk	H/H
17	Chair Back (FCR)	Skyguard	P (1dot under)
19	Hot Shot (EWR+FCR)	Unknown	U
		Search	S
		KSAM	C
		AAA	A
		HB AAA	Ȧ (2 dots under)
		LB AAA	Ȧ (1 dot under)

ALR-56 RWR Symbol List (Air to Air)

Symbol	Aircraft (allied)	Symbol	Aircraft (Enemy)
^A	Attack	^A	Attack
^B	Bomber	^B	Bomber
^S	Early Warning	^S	Early Warning
^E	Typhoon	^21	Mig-21 / J-7 / J-8
^T	Tornado	^23	Mig-23
^4	F-4 Phantom	^25	Mig-25
^5	F-5 Tiger	^29	Mig-29
^14	F-14 Tomcat	^29	Su-27/30/33/35/ J-11
^15	F-15 Eagle	^31	Mig-31
^16	F-16 Falcon		
^18	F-18 Hornet		
^20	Mirage 2000		
^29	F-16 aggressor		

INTENTIONALLY

LEFT

BLANK