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RFN 01-FSX-P3D

NATOPS FLIGHT MANUAL

F-8E(FN) AIRCRAFT



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15 February 2020

AIRCRAFT 1

INDOCTRI-
NATION 2

NORMAL
PROCD 3

FLT PROCD
& CHARAC 4

EMER
PROCD 5

ALL-WTHR
OPERATION 6

COMMUNI-
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WEAPON
SYSTEMS 8

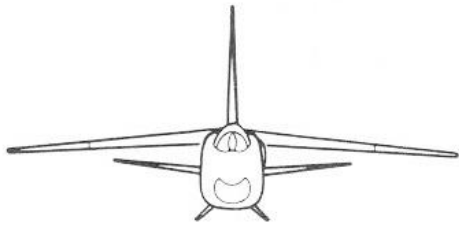
FLT CREW
COORD 9

STAND
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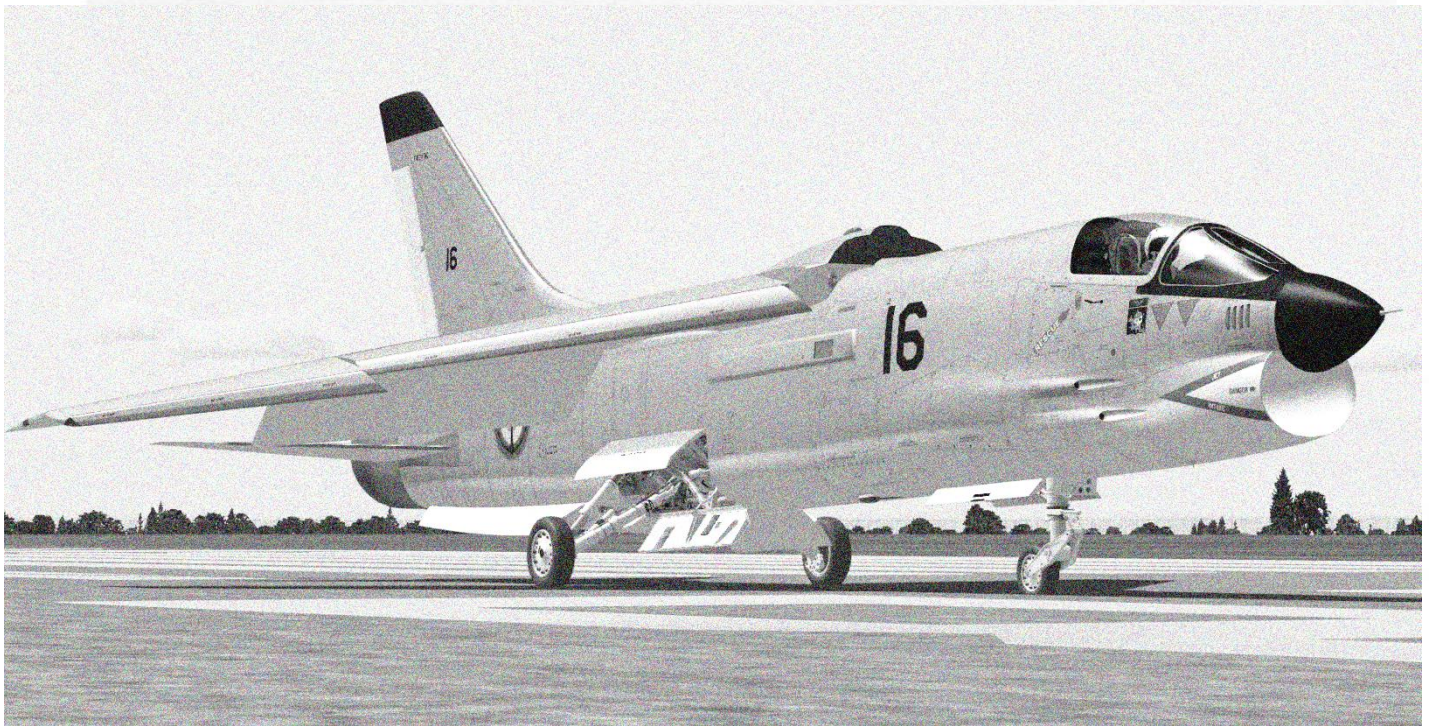
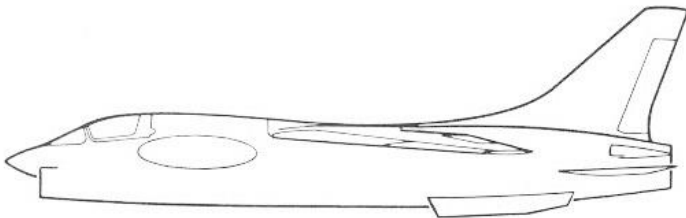
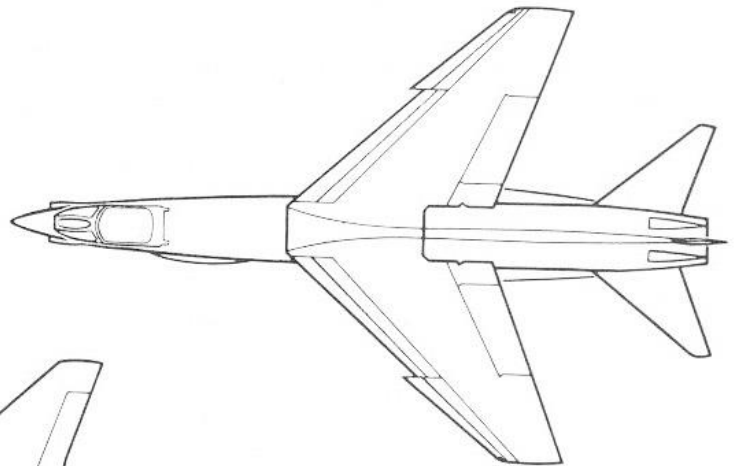
PERFORM
DATA 11

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F-8E (FN)



AIRCRAFT

WARNING

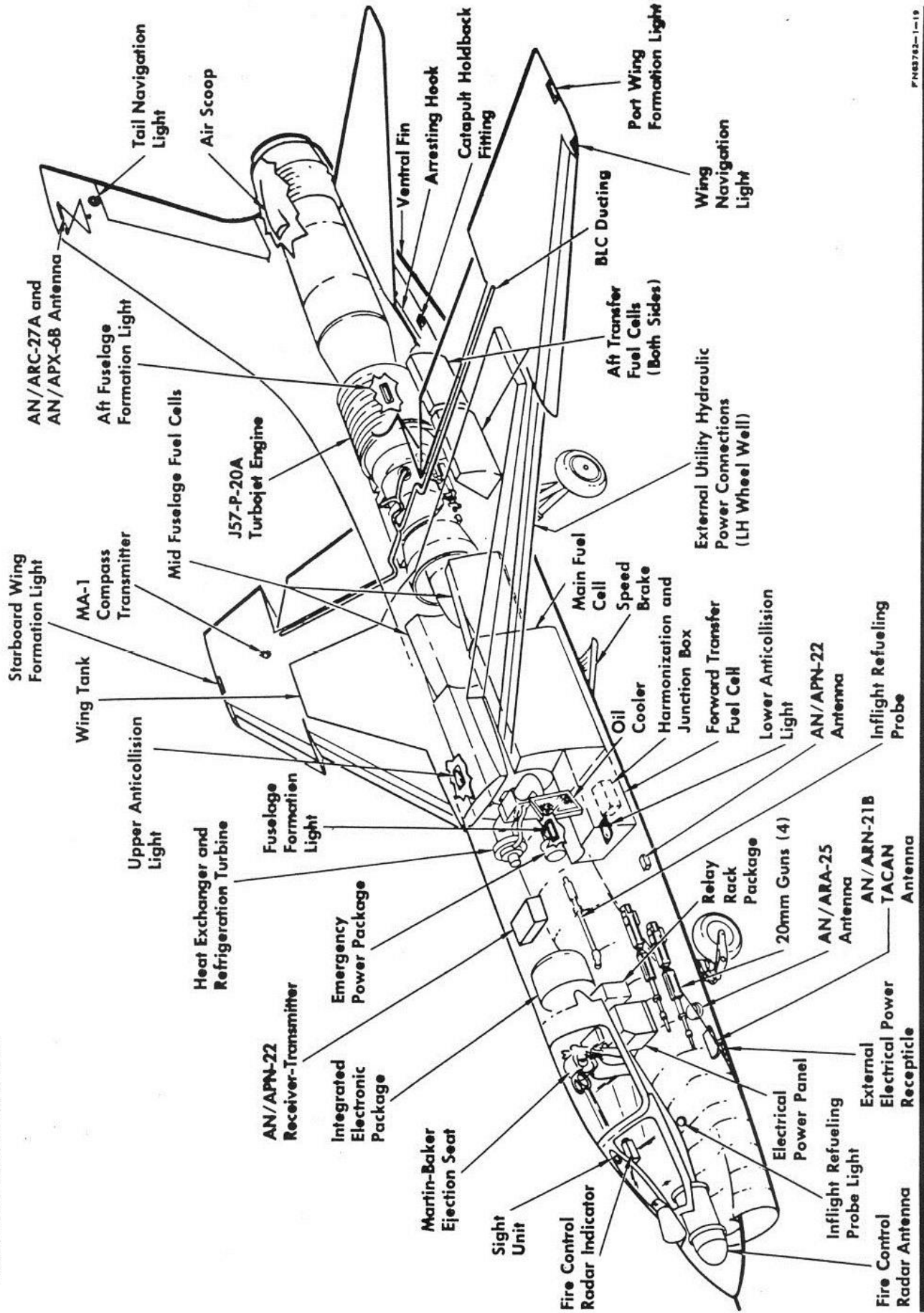
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PRINCIPAL DIMENSIONS AND WEIGHT

Wing	
Span, maximum.....	35 ft 8 in.
Span, wings folded.....	22 ft 6 in.
Chord (streamwise)	
At root.....	16 ft 10 in.
At construction tip (theoretical extended section at tip).....	4 ft 8 in.
Mean geometric.....	141.4 in.
Incidence at mean aerodynamic chord.....	-1°
Sweepback of ¼ chord line.....	42°
Dihedral.....	-5°
Aspect ratio.....	3.4
Tail	
Horizontal	
Span.....	19 ft 4 in.
Sweep of ¼ chord line.....	45°
Dihedral.....	5° 25'
Aspect ratio (including enclosed fuselage area).....	3.5
Vertical	
Sweep of ¼ chord line.....	45°
Aspect ratio.....	1.5
Height (overall, static ground position).....	15 ft 9.1 in.
This height will not be exceeded with the wings folded	
Length (overall, static ground position).....	55 ft 11.6 in.
Approximate basic weight (does not include weight of usable fuel, ammunition, fuselage stores, and pilot).....	19,550 lb*

*On aircraft with the 4,000-hour wing installed, add 200 lb. Refer to aircraft logbook.

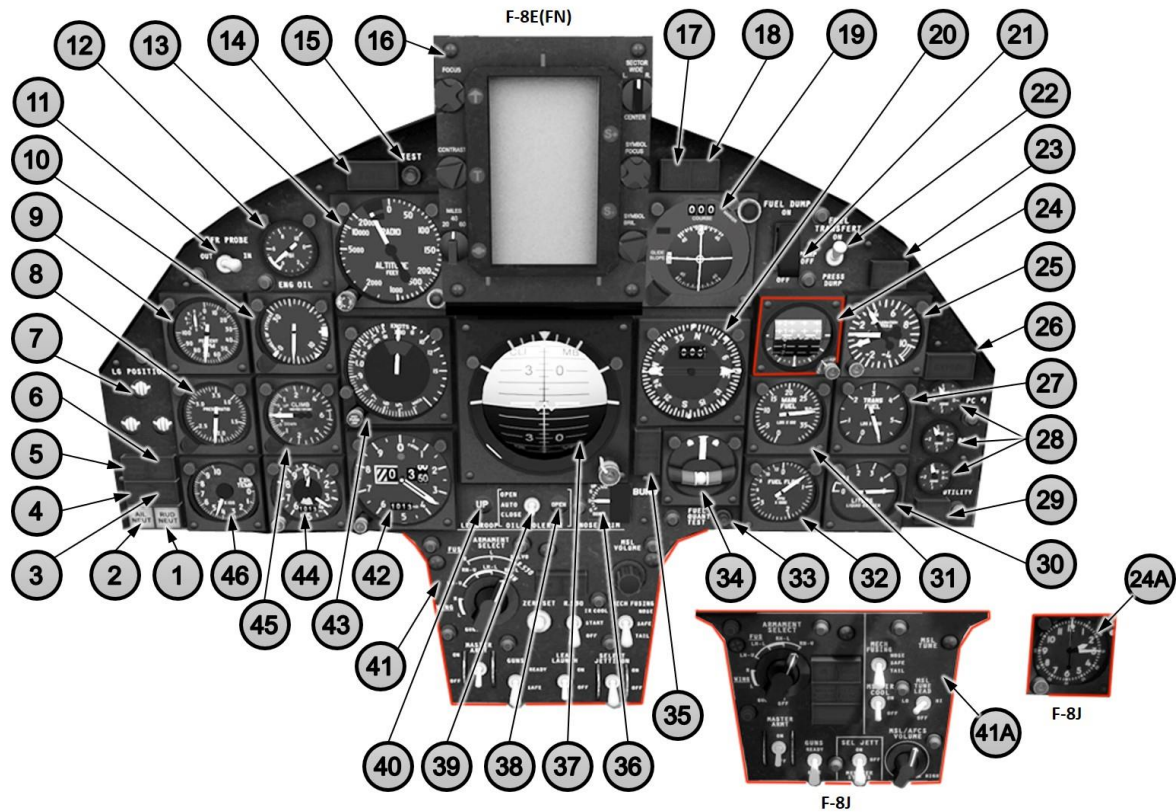
GENERAL ARRANGEMENT



PNEB742-1-19

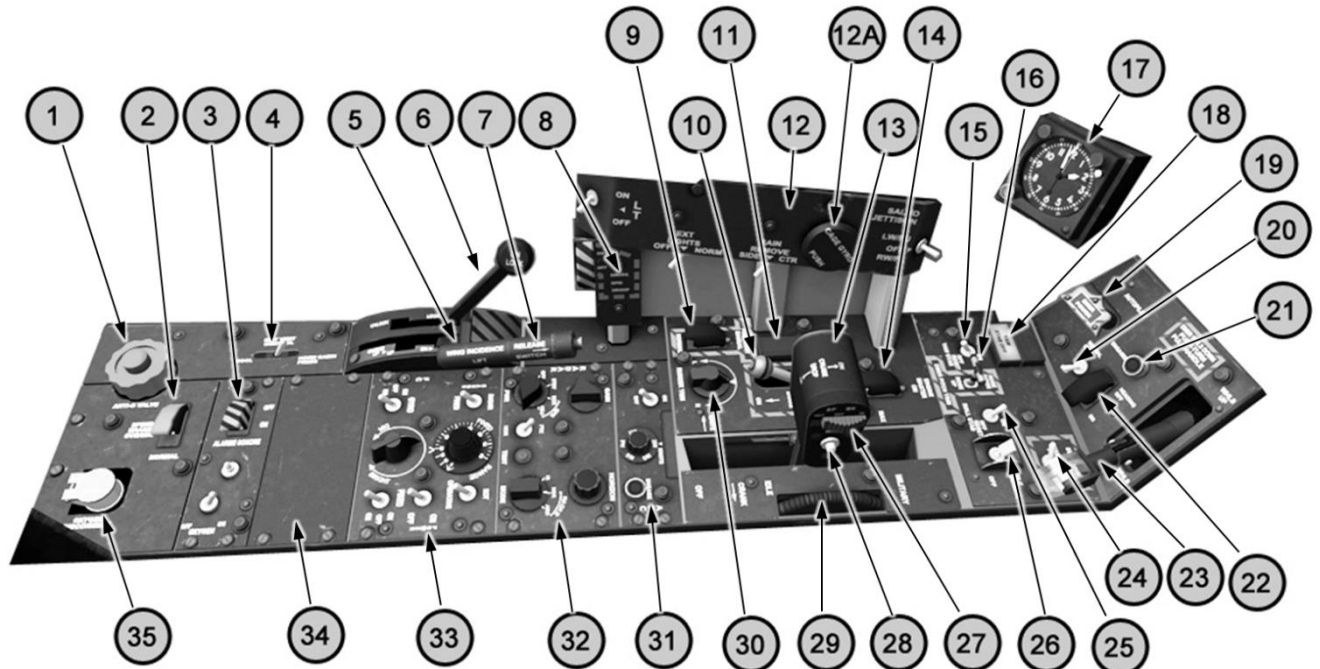
INDOCTRINATION

INSTRUMENT PANEL



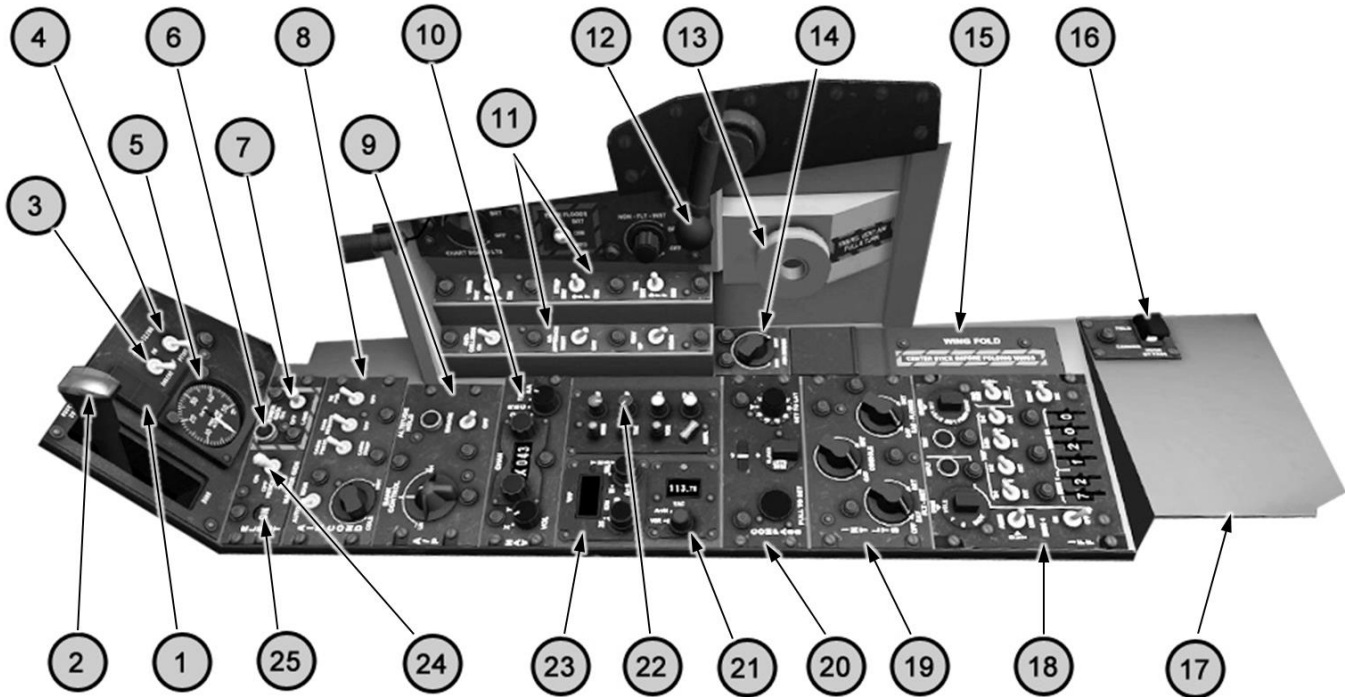
- | | | |
|-------------------------------------|--|-------------------------------------|
| 1. Rudder neutral trim light | 17. Fuel low-level warning light | 32. Fuel flow indicator |
| 2. Aileron neutral trim light | 18. Engine fuel pump warning light | 33. Fuel quantity test button |
| 3. Speed brake light | 19. Course indicator | 34. Turn & bank indicator |
| 4. Inflight refueling probe light. | 20. Navigation indicator | 35. Fuel boost pumps warning light |
| 5. Wing-wheel-droop warning light | 21. Fuel dump switch | 36. Nose trim indicator |
| 6. Boundary layer control light | 22. Fuel transfer switch | 37. Attitude indicator |
| 7. Landing gear position indicators | 23. Fuel transfer pump caution light | 38. Oil cooler door indicator |
| 8. Engine pressure ratio indicator | 24. Back-up attitude indicator | 39. Oil cooler door switch |
| 9. Tachometer | 24A. Clock (F-8J only) | 40. Leading edge droop indicator |
| 10. Angle of attack indicator | 25. Accelerator indicator | 41. F-8E(FN) Armament panel |
| 11. Inflight refuel probe switch | 26. Oxygen warning light | 41A. F-8J Armament panel |
| 12. Engine oil pressure indicator | 27. Transfer fuel quantity indicator | 42. Altimeter |
| 13. Radio altitude indicator | 28. Hydraulic pressure indicators | 43. Airspeed- Mach number indicator |
| 14. Fire warning light | 29. Engine oil hydraulic warning light | 44. Back-up altimeter |
| 15. Fire warning test button | 30. Oxygen quantity indicator | 45. Rate-to-climb indicator |
| 16. Fire control radar scope | 31. Main fuel quantity indicator | 46. Exhaust temperature indicator |

LEFT CONSOLE



- | | |
|---|--------------------------------------|
| 1. G valve | 18. Yaw stabilization light |
| 2. Speed brake override switch | 19. Emergency power handle |
| 3. Pressure suit panel | 20. Autopilot master switch |
| 4. Pressure suit ventilation switch | 21. Autopilot engaged light |
| 5. Emergency droop and wing incidence guard | 22. Autopilot heading hold switch |
| 6. Wing downlock handle | 23. Landing gear handle |
| 7. Wing incidence handle | 24. Emergency pitch trim channel |
| 8. Emergency spin droop switch | 25. Roll stabilization switch |
| 9. Fuel control switch | 26. Boundary layer control switch |
| 10. Parking brake handle | 27. Speed brake switch |
| 11. Manual fuel control light | 28. Microphone switch |
| 12. Left hand switch panel | 29. Throttle friction wheel |
| 12A Gyro caging button | 30. Rudder trim knob |
| 13. Throttle | 31. Approach power compensator panel |
| 14. Engine master switch | 32. Radar set control panel |
| 15. Yaw stabilization switch | 33. Fire control panel |
| 16. Emergency pitch trim handle | 34. Blank panel |
| 17. Clock (F-8E (FN) only) | 35. Oxygen disconnect |

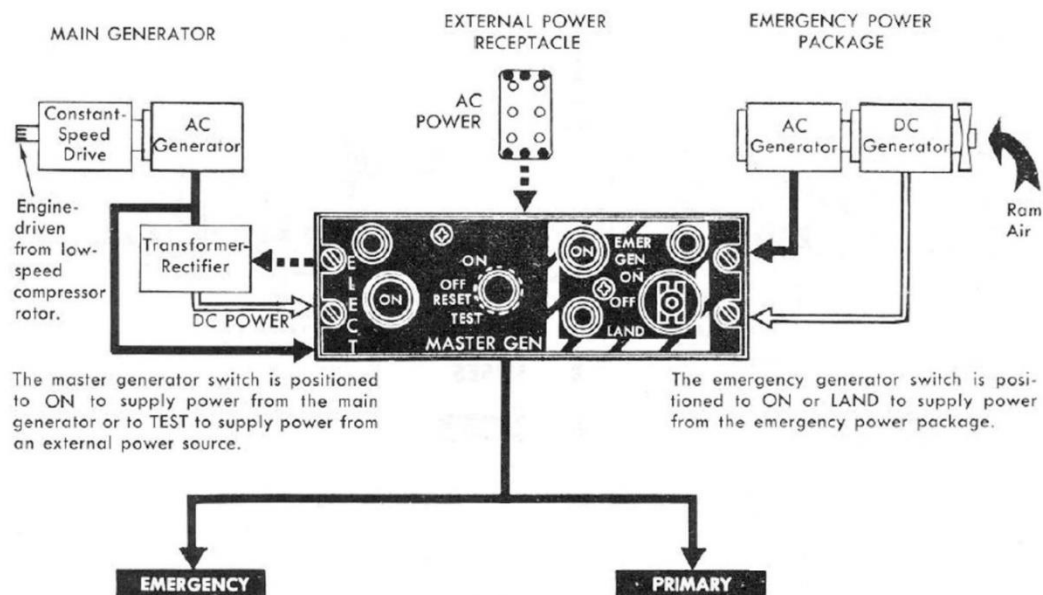
RIGHT CONSOLE



- | | |
|--|---------------------------------------|
| 1. Engine anti-icing indicator light | 14. AOA indexer dimming knob |
| 2. Arresting hook handle | 15. Wing fold controls |
| 3. Engine anti-icing switch | 16. Approach light hook bypass switch |
| 4. Pitot heat switch | 17. Blank panel |
| 5. Cockpit pressure altimeter | 18. IFF panel |
| 6. Emergency power indicator light | 19. Interior lights control panel |
| 7. Emergency generator switch | 20. Compass panel |
| 8. Air-conditioning panel | 21. VOR-TACAN panel |
| 9. Autopilot control panel | 22. Radio control panel |
| 10. TACAN panel | 23. VHF panel |
| 11. Exterior lights control panel | 24. Master generator switch |
| 12. Canopy handle | 25. Master generator indicator |
| 13. Cockpit emergency air ventilation knob | |

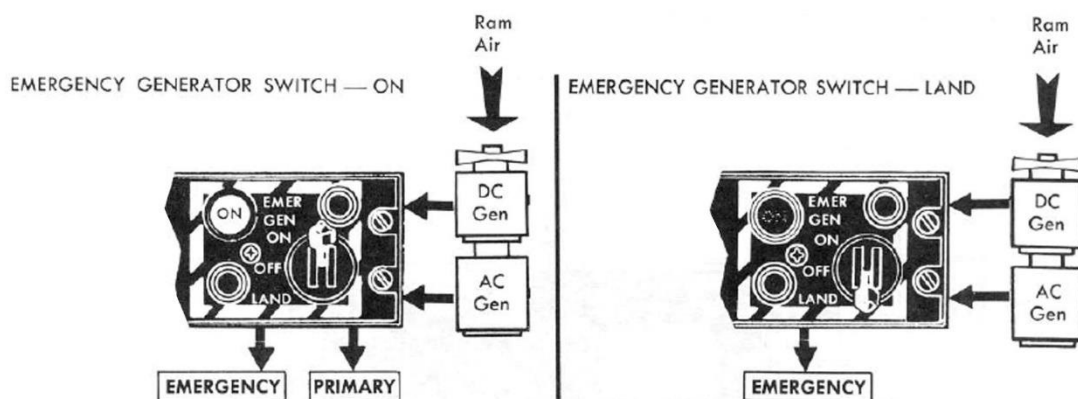
INSTRUMENT SYSTEM

ELECTRICAL SUPPLY AND DISTRIBUTION



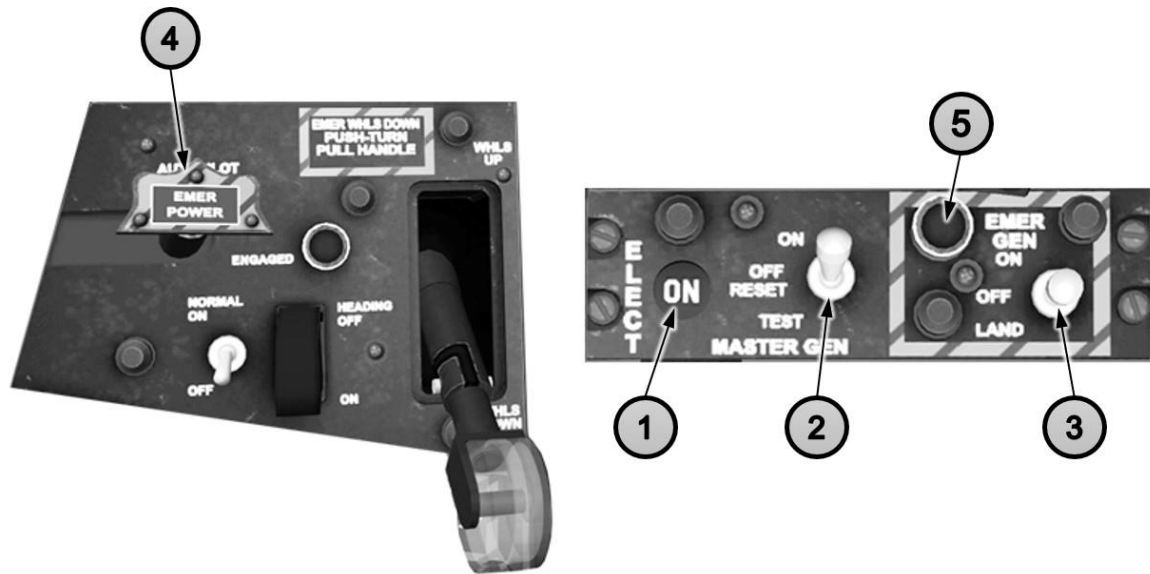
When Master Gen switch is "On" and the engine is running, both Emergency and Primary power circuits are activated.

When the engine is Off, engage Parking brakes before setting Master Gen to "Test" to active external power supply. Then both Emergency and Primary power circuits are activated.



In case of in-flight electrical failure, a Ram Air Turbine can be deployed. According to the Emergency generator switch position, only Emergency power circuit is supplied ("Land" position) or both Emergency and Primary power circuits are supplied ("On" position). A minimum air speed is mandatory to have the turbine supplying power:

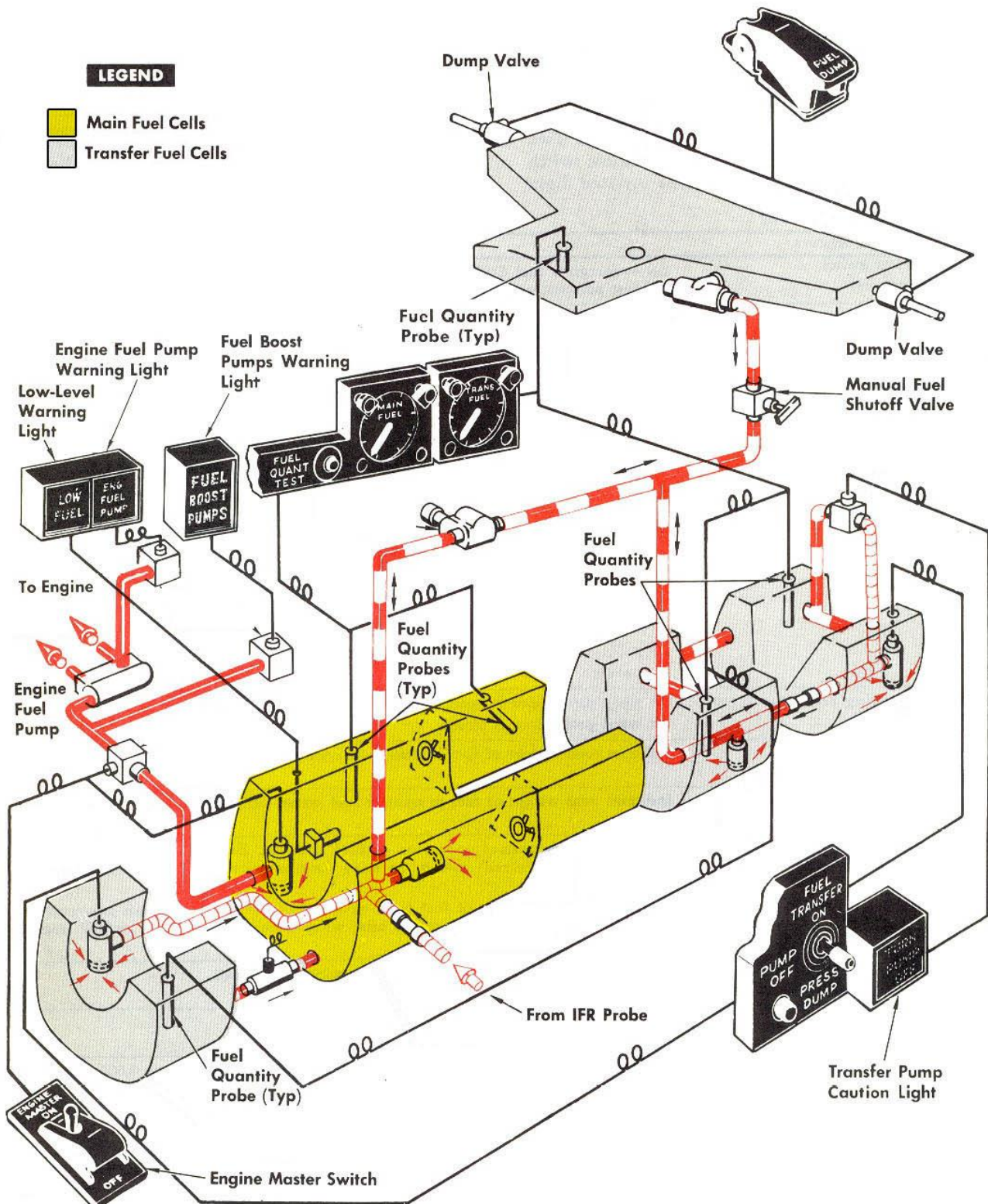
- "On" position Minimum of 175knt
- "Land" position Minimum of 145knts



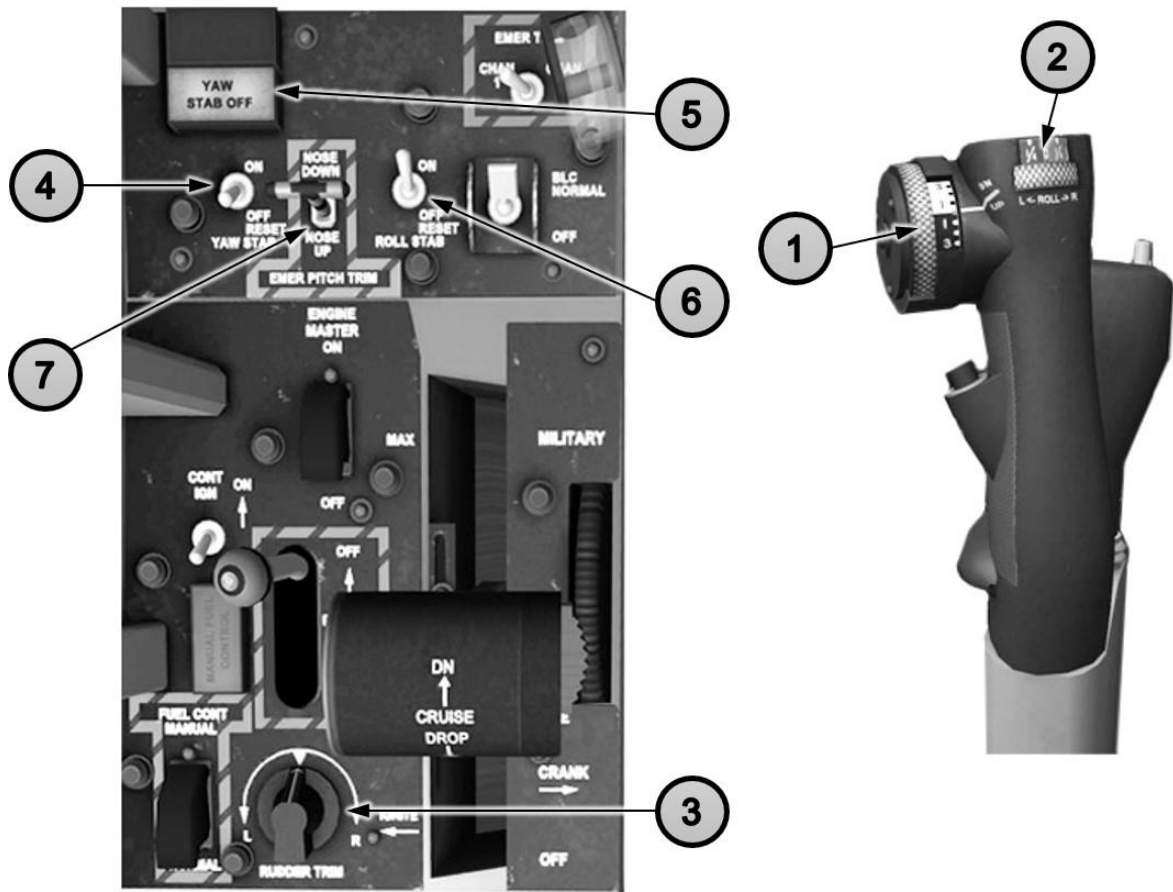
1. Main Generator indicator (On/barber pole)
2. Master Gen switch (On/Off/Test-external power)
3. Emergency Gen switch (on/off/land)
4. Ram Air Turbine handle to extend Ram Air Turbine
5. Emergency power indicator light

EMERGENCY	PRIMARY
Altimeter (counter pointer) vibrator Attitude indicator Emergency pitch trim Instrument transformer: Engine fuel flow Engine oil pressure Hydraulic pressure Navigation indicator Pitch trim Primary interior lights Roll trim and stabilization Wing position lights Angle of attack indicator and indexer Approach lights BLC control BLC warning light Emergency spin droop valve Engine fuel pump warning light Engine fuel shutoff valve Engine ignition Engine oil/hydraulic pressure warning light Exterior light control Fire detector Flood lights Fuel control unit changeover Ignition timer Jettison (salvo) Jettison (selective) Landing gear position indicators Landing gear warning light Leading edge droop Manual fuel control light Roll trim and stabilization Stabilization warning lights Stall warning pedal shaker Transfer fuel pump warning light Wing fuel dump valves Wing pressurization Wing-wheels-droop warning light	Cockpit temperature control Forward main fuel pump (Boost) Integrated electronics package ADF radio IFF radar identification UHF Command radio MA-1 compass Main fuel quantity Oxygen quantity Pitot heat TACAN radio Tail position light Transfer fuel quantity Yaw trim and stabilization Aft main fuel pump (Boost) Aft transfer fuel pump Air bottle heaters Anti-collision lights Approach power compensator system Autopilot Center main fuel pump (Boost) Engine pressure ratio indicator Fire control system Formation lights Forward transfer fuel pump Gun interlock IFR probe light Inverted flight fuel pumps IR detector Lead launch Main cell forward wall fuel pump MATRA ac power Missile power Oil cooler door actuator Radar Radar altimeter Radar recorder Seat adjustment Secondary interior lights Approach lights flasher Approach power compensator system Armament bus Arresting hook Autopilot Boost pumps Continuous engine ignition Electronics package fan Engine anti-icing Engine cranking air valve Fire control system Fuel boost pumps warning light Fuel low level warning light Fueling valves Gun camera Gun vent doors Inflight refueling system IR detector Landing and taxi light Landing gear down lock solenoid Lead launch MATRA missile switching MATRA start and IR cool MATRA sync lockin Missile firing Missile power Missile unlatch Neutral trim indicators Nose gear steering Oil cooler door control and indicator Oxygen warning light Radar Radar altimeter Radar recorder Rain removal Warning lights dimming control relay Wing selector valve lock Wingfold sequencing

FUEL SYSTEM

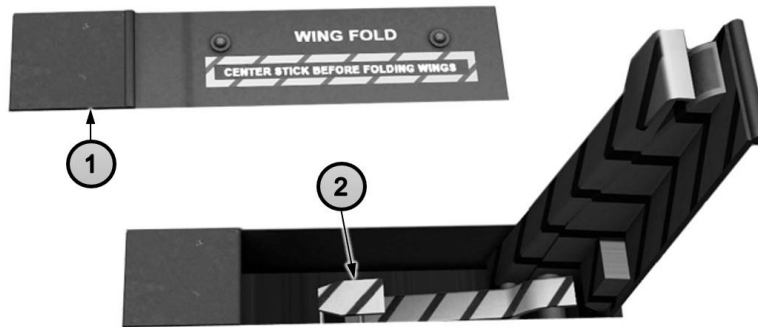


TRIM AND STABILIZATION



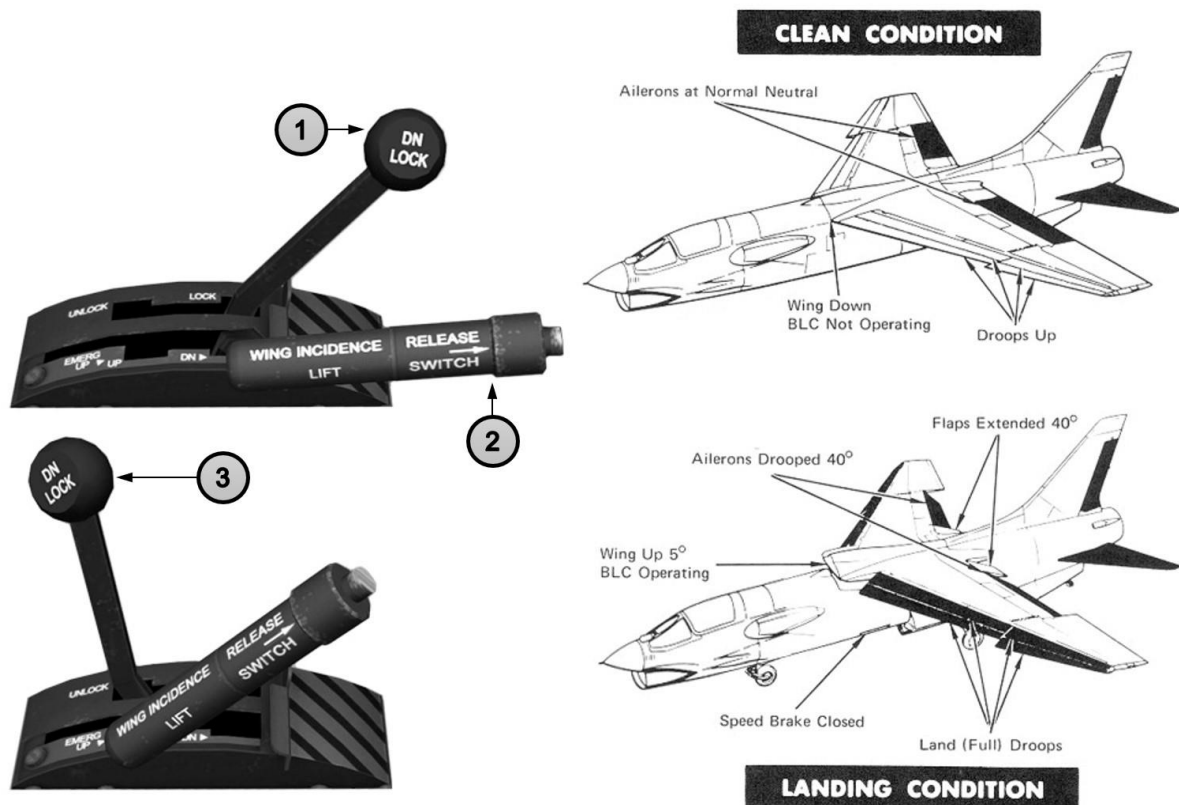
- | | |
|---------------------|-------------------------------|
| 1. Pitch trim knob | 4. Yaw stabilization switch |
| 2. Roll trim knob | 5. Yaw stab off warning light |
| 3. Rudder trim knob | 6. Roll Stab switch |

WINGFOLD



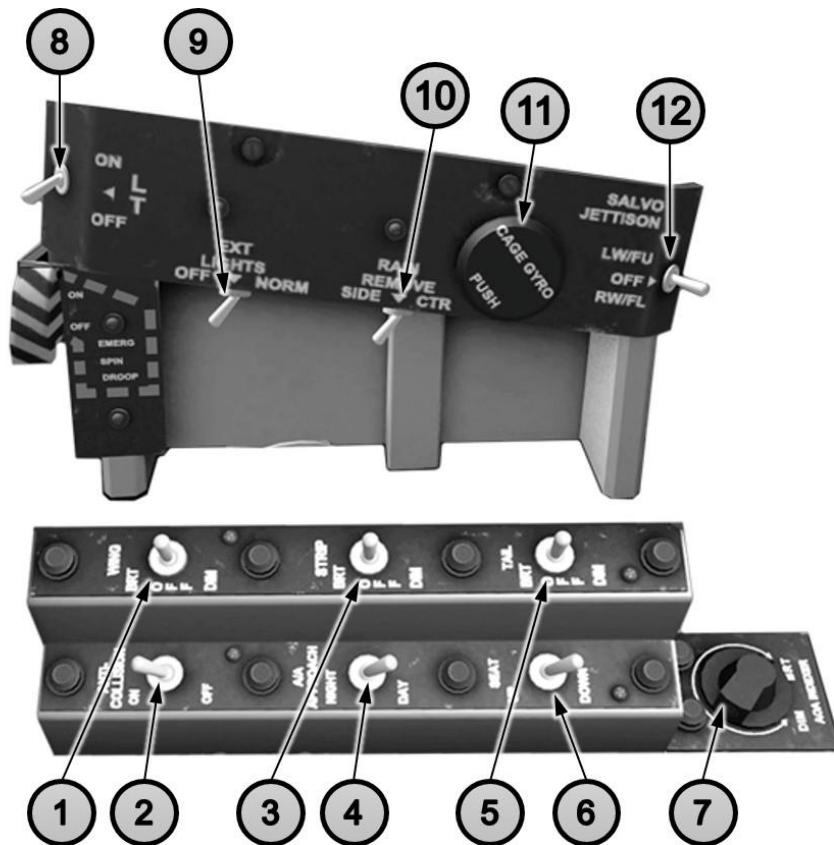
1. Push the cover to open/close
2. Push the lever to fold/unfold the wing tips

WING POSITION



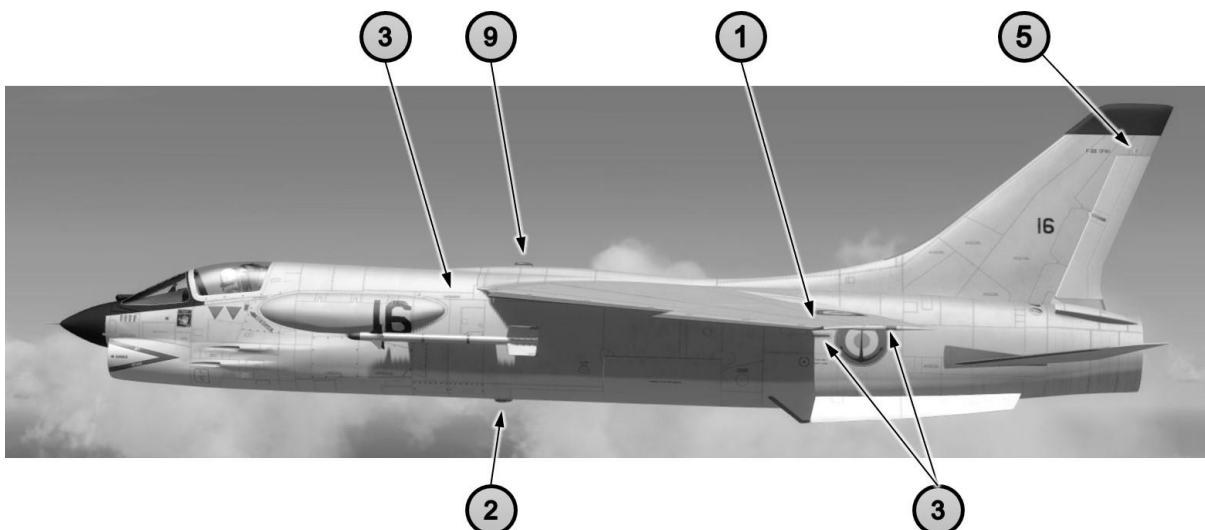
1. Pull the handle (1) backwards to unlock the wing
2. Lift the handle (2) up to raise the wing
3. Push the handle (3) forward to lock the wing
4. Repeat and lower the handle (2) to lower the wing

EXTERIOR LIGHTS

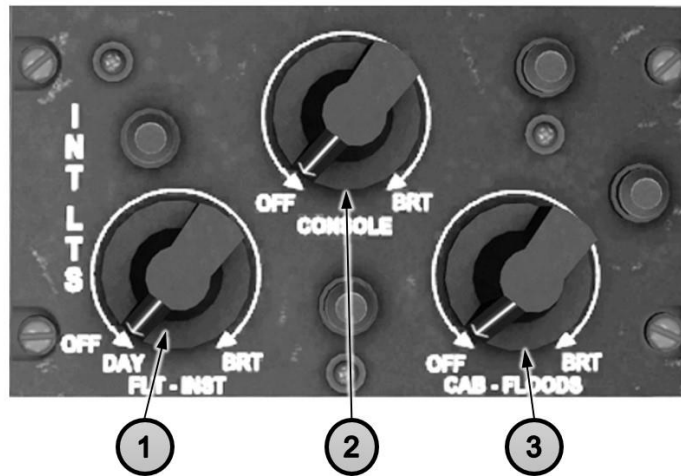


1. Navigation (bright/off/dim)
2. Anti-collision
3. Formation (bright/off/dim)
4. AOA (inactive)
5. Tail (bright/off/dim)
6. Seat position (normal/high)

7. AOA indexer (day/night)
8. Landing
9. Exterior light master
10. Rain remove (inactive)
11. Gyro cage button
12. Salvo jettison (inactive)

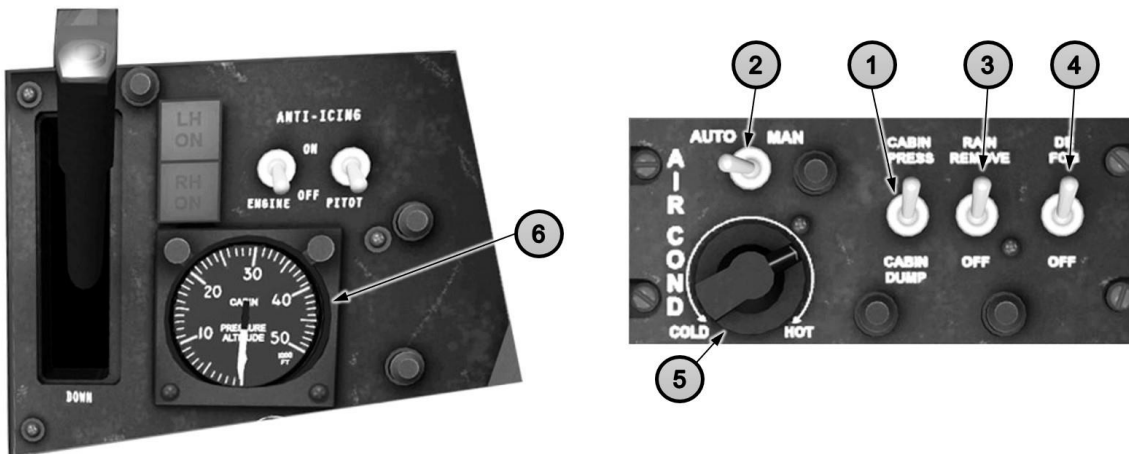


INTERIOR LIGHTS

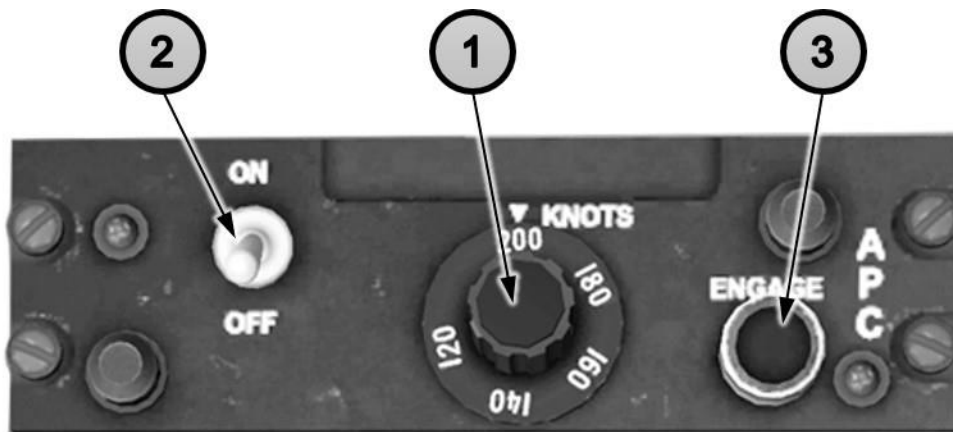


1. Main board
2. Console (off/dim/bright)
3. Cabin flood (off/dim/bright)

AIR CONDITIONNING CONTROLS

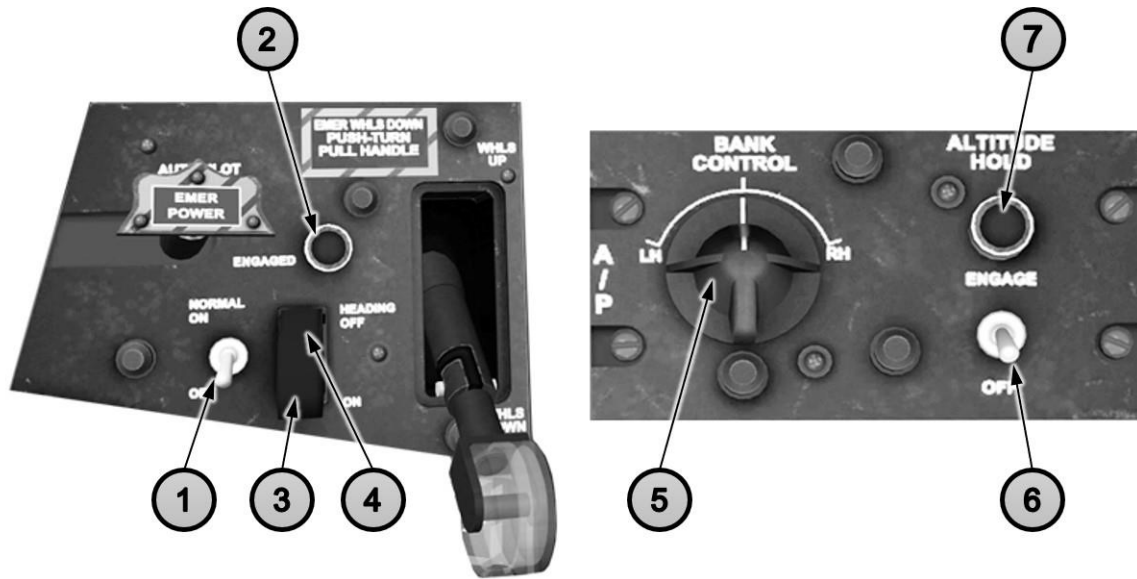


- | | |
|---------------------------------------|-----------------------------|
| 1. Cockpit Pressure switch (on /dump) | 4. De fog switch |
| 2. Inactive | 5. Inactive |
| 3. Inactive | 6. Cabin altitude indicator |

 APPROACH POWER COMPENSATOR


<input type="checkbox"/> Gear	DOWN
<input type="checkbox"/> Wing	Up
<input type="checkbox"/> Speed	140 kts
<input type="checkbox"/> Airspeed control knob (1)	150
<input type="checkbox"/> RPM	90%
<input type="checkbox"/> APC switch (2)	ON (engaged)
<input type="checkbox"/> Engaged indicator light (3)	ON
<input type="checkbox"/> Throttle	OBSERVE MOVEMENT
<input type="checkbox"/> Airspeed control knob	AS DESIRED
<input type="checkbox"/> After landing engaged indicator light	OFF AUTOMATICALLY
<input type="checkbox"/> APC switch	OFF AUTOMATICALLY
<input type="checkbox"/> APC is disengaged when	Button (2) OFF Throttle maneuvering by pilot Aircraft landing Gear up

AUTOMATIC PILOT



[] Autopilot master switch (1)

[] Brakes (apply/release)

[] Engaged light (2)

[] Heading ON (3)

[] Heading OFF (4)

[] Altitude Hold switch (6)

ON

ENGAGED / DISENGAGED

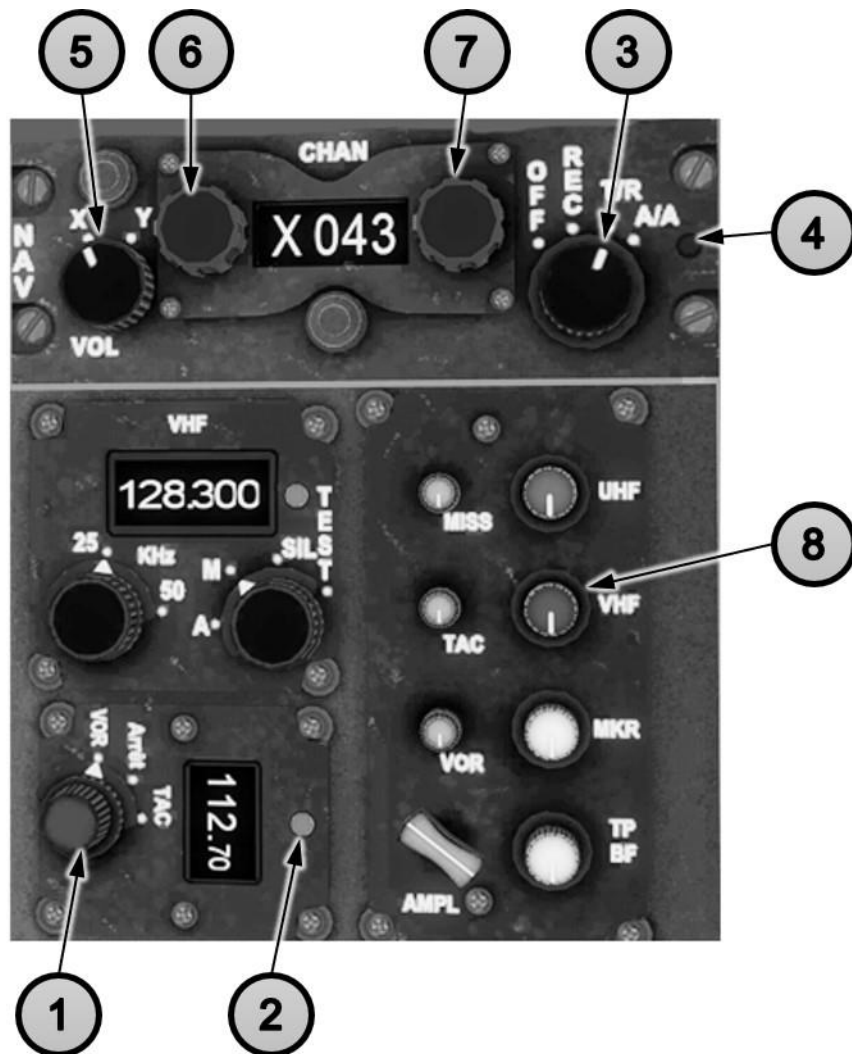
ON

BANK CONTROL ACTIVE (5)

BANK CONTROL INACTIVE (5)

Engaged Light ON (7)

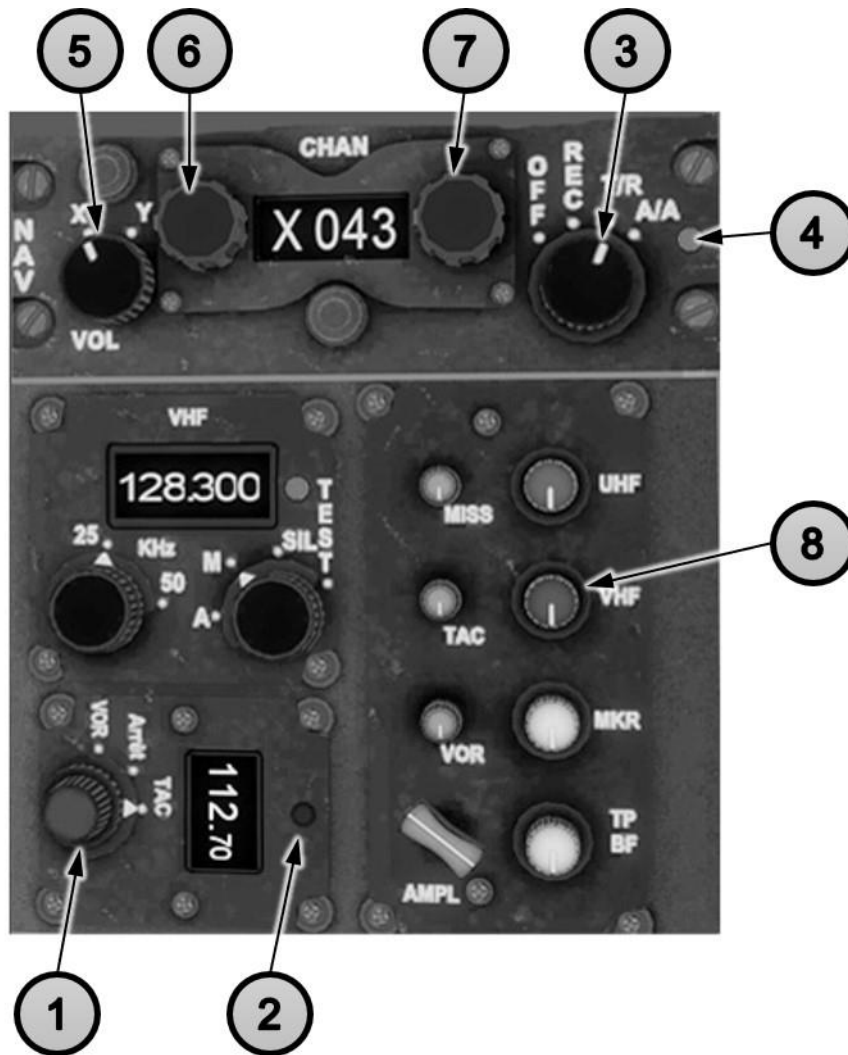
VORTAC - VOR – LSO



- [] Lower button (1)
- [] VOR light (2)
- [] TAC light (4)
- [] Change frequencies
- [] LSO ON / OFF

- VOR
- ON
- OFF
- Upper button (1)
- Button (8)

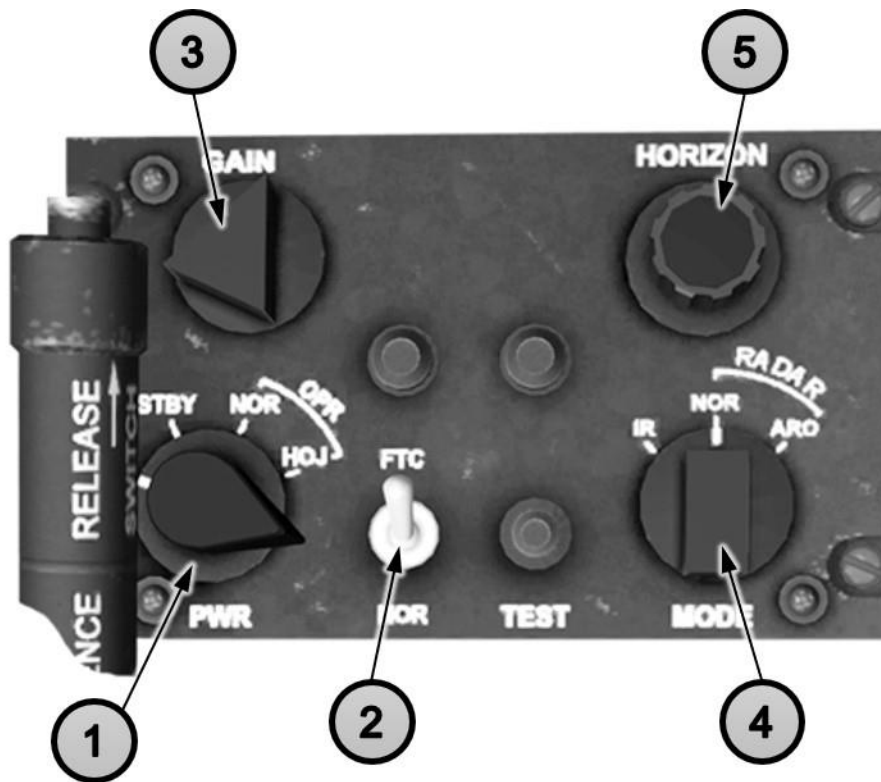
VORTAC – TAC



- [] Lower button (1)
- [] VOR light (2)
- [] Button (3)
- [] TAC light (4)
- [] Change frequencies X/Y
- [] Change frequencies

- TAC
- OFF
- T/R
- ON
- Button (5)
- Button (6) and (7)

RADAR SET CONTROL PANEL



[] PWR (1)

[] FTC / NOR (2)

[] GAIN (3)

[] RADAR - NOR / ARO (4)

[] HORIZON (5)

STBY (5 seconds) - NORMAL

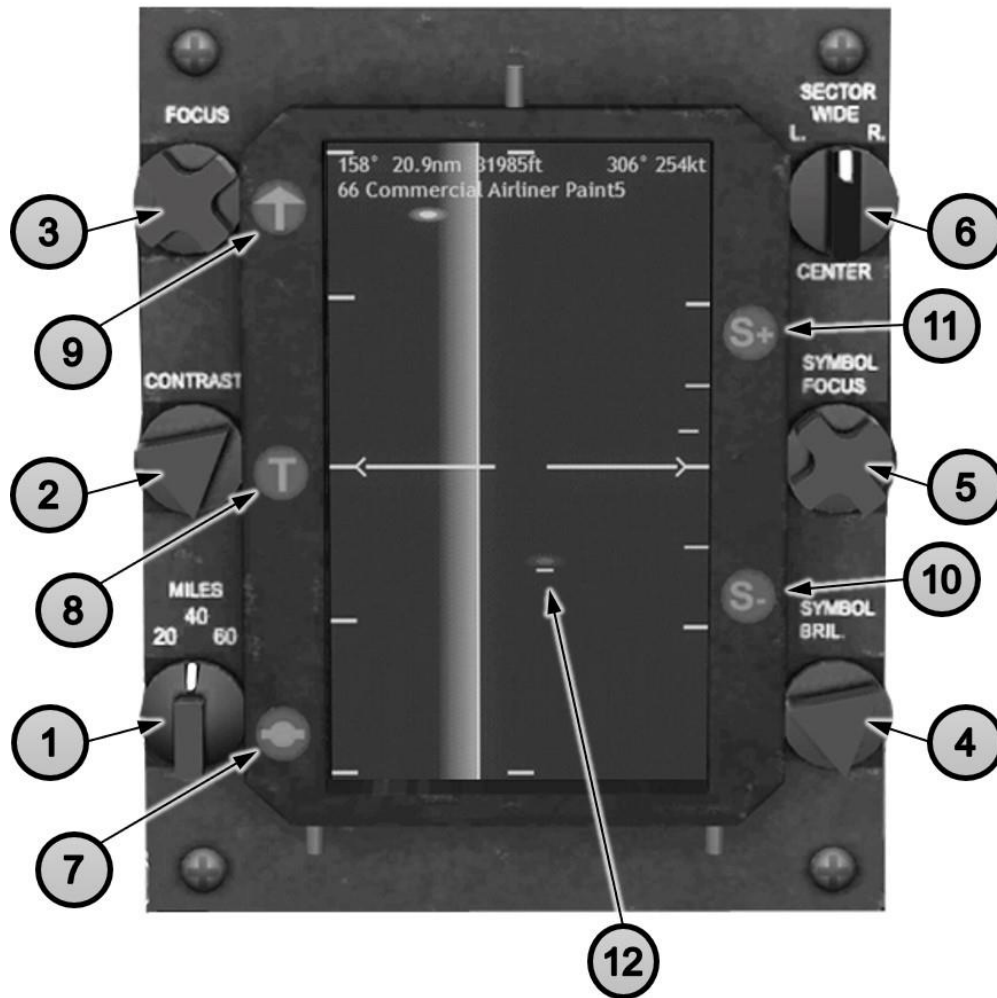
BOATS / AIRCRAFTS

AS DESIRED

SCANNING - SECTOR / AXIAL

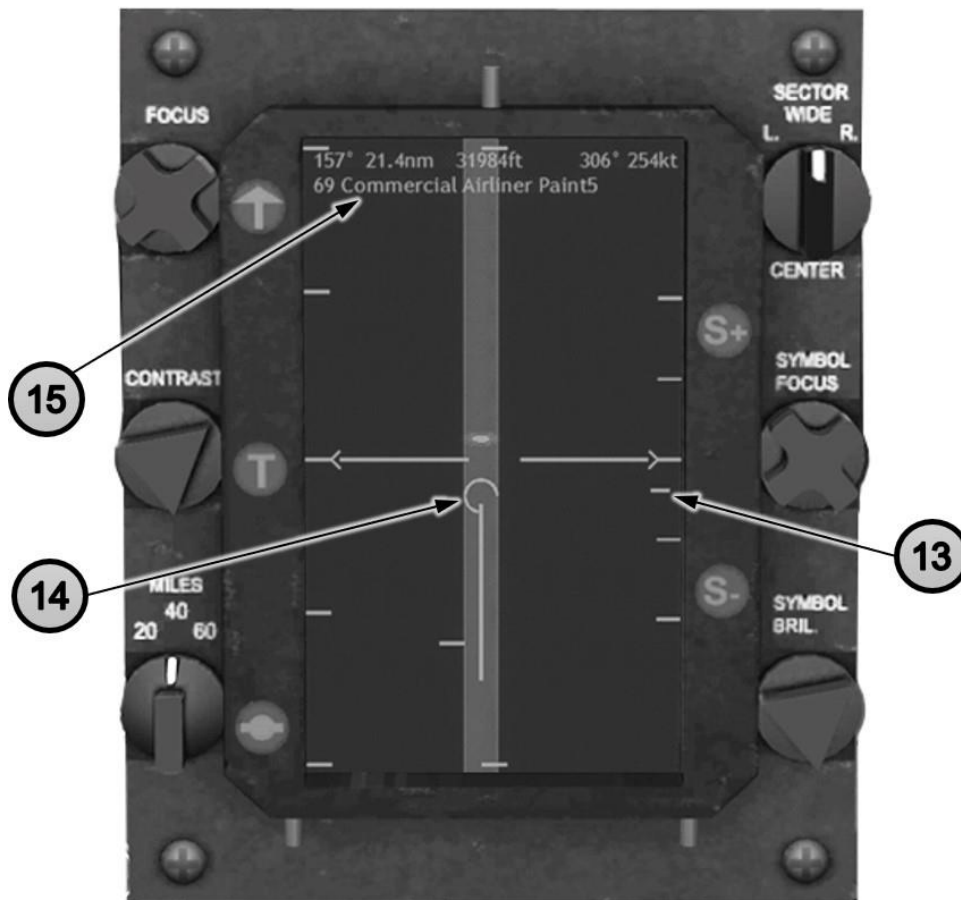
AS DESIRED

FIRE CONTROL RADAR SCOPE



- | | |
|--|--|
| 1. Radar scanning distances | 9. Lighted if 1. is 40 or 60 Miles |
| 2 & 3. Contact symbol | 10. Left click previous contact
right click unselect |
| 6. Sectors scanning | 11. Left click next contact
right click unselect |
| 7. Lit = within shooting range | 12. Marker selected contact |
| 8. Click on T to active Tracking if
selected contact is under 25NM | |

FIRE CONTROL RADAR SCOPE



13. Target site

14. The left border of the open circle indicates:

- Right : target approaching
- Middle : constant distance
- Left : target distance increasing

15. Target information:

- Heading to the target
- Distance altitude of the target
- Heading and speed of the target
- Name of the target

NORMAL PROCEDURES

COCKPIT CHECKS

[] Engine master switch	OFF
[] Landing gear handle	WHLS DOWN
[] Master generator switch	OFF-RESET
[] Fuel dump switch	OFF
[] Radar power switch	OFF
[] Radar GYRO switch	OFF
[] Land/Taxi light switch	OFF
[] Exterior light switch	OFF
[] Wing incidence handle	MATCH WING POSITION
[] Approach power compensator switch	OFF
[] Rudder trim knob	NEUTRAL
[] Speed brake switch	IN
[] Throttle	OFF
[] Parking brake	ON
[] Yaw stabilization switch	OFF RESET
[] Roll stabilization switch	OFF RESET
[] Autopilot master switch	OFF
[] In-flight refueling probe switch	IN
[] Fuel transfer switch	PUMP OFF
[] Oil cooler door switch	AUTO
[] Radio altimeter	OFF
[] Horizon gage	LOCKED
[] Arresting gear handle	HOOK UP
[] Engine anti-icing switch	OFF
[] Pitot heat switch	OFF
[] Emergency generator switch	OFF
[] Cockpit pressure switch	CABIN PRESS
[] Defog switch	OFF
[] Autopilot altitude hold switch	OFF
[] Instrument lights and console lights	AS DESIRED
[] NAV TACAN master switch	OFF
[] VHF switch	OFF
[] VOR-TAC switch	OFF
[] IFF master switch	OFF
[] Pitch trim knob	NEUTRAL
[] Roll trim knob	NEUTRAL

PRESTART CHECK

<input type="checkbox"/> Master generator switch	TEST
<input type="checkbox"/> Engine master switch	ON
<input type="checkbox"/> Fuel pump warning light	ON
<input type="checkbox"/> Hydraulic pressure warning lights	ON
<input type="checkbox"/> Fuel low level warning light	OFF (press to test)
<input type="checkbox"/> Fire warning light	OFF (press to test)
<input type="checkbox"/> BLC switch (wing down and locked)	NORMAL
<input type="checkbox"/> BLC switch (wing unlocked)	OFF
<input type="checkbox"/> Canopy	CLOSE, LOCK, STOW HANDLE
<input type="checkbox"/> Wing	DOWN

STARTING ENGINE

<input type="checkbox"/> Throttle	CRANK - 20%mini IGNITE - IDLE
<input type="checkbox"/> Engine instruments	CHECK
<input type="checkbox"/> Master generator switch	OFF-RESET and ON
<input type="checkbox"/> Standby horizon	UNLOCKED
<input type="checkbox"/> Attitude indicator	OFF not showing
<input type="checkbox"/> Engine, fuel and hydraulic warning lights	OFF
<input type="checkbox"/> Fuel pump warning light	OFF
<input type="checkbox"/> Fuel boost pumps warning light	OFF
<input type="checkbox"/> Engine oil hydraulic pressure warning light	OFF
<input type="checkbox"/> Com and Nav equipment	ON

BEFORE SHUTDOWN

<input type="checkbox"/> Wing	DOWN AND LOCKED
<input type="checkbox"/> Wing fold	AS DESIRED
<input type="checkbox"/> Communications / navigation switches	OFF

ENGINE SHUTDOWN

<input type="checkbox"/> Parking brake	ON
<input type="checkbox"/> Throttle	OFF
<input type="checkbox"/> Master generator switch	OFF
<input type="checkbox"/> Engine master switch	OFF
<input type="checkbox"/> All electrical switches	OFF

PACKAGE CONTENTS



F-8E (FN) #16 of 14F flottille circa 1970



F-8E (FN) #14 of 12F flottille circa 1980



F-8E (FN) #29 of 12F flottille circa 1990



F-8J #105 of VF211 squadron circa 1970 (USS Hancock)

Note that extra liveries will be released in RFN website to complete this 1st package



French F-8E cockpit layout



US Navy F-8J cockpit layout

INSTALLATION

- 1) Unzip «Crusader_F-8E_RFN---XXX_v1.0.zip» file into the folder of your choice.
- 2) Copy the folder « Crusader_F-8E_RFN---XXX » into your [SimObjects/Airplanes](#) folder or [Prepar3D v4 Add-ons/Airplanes](#) folder (in case of P3D extra installation folder).
- 3) Copy all .fx files which are in [_FSX_Effects](#) or [_P3D_Effects](#) folder into your sim root [Effects](#) folder or [Prepar3D v4 Add-ons/Effects](#) folder (in case of P3D extra installation folder).
- 4) Copy all .bmp files which are in [_FSX_Effects/texture](#) or [_P3D_Effects/texture](#) folder into your sim root [Effects/texture](#) folder or [Prepar3D v4 Add-ons/Effects/texture](#) folder (in case of P3D extra installation folder).
- 5) If you didn't already install the RFN Gauge v5.0, please follow the installation procedure which is described into the RFN documentation: [RFN_CarrierGauge_V5_EN.pdf](#) available in the [_FSX_RFN_Gauges](#) or [_P3D_RFN_Gauges](#) folder.

Note1 : you can also find the last RFN Gauge version in the RFN website:

<http://royalefrenchnavy.restauravia.fr/RFN-Creations.htm#Gau>

Note2 : if textures such as main panel are rendered blurry, please check your graphic settings to be sure that large textures are well managed by your sim.

Look at your fsx.cfg or Prepare3D.cfg file and search into the [GRAPHICS] part for TEXTURE_MAX_LOAD parameter: it must be set to 2048 or higher.

Fsx.cfg file is located here:

[C:\Users\\[username\]\AppData\Roaming\Microsoft\FSX\](#)

Prepare3D.cfg file is located here:

[C:\Users\\[username\]\AppData\Roaming\ Lockheed Martin\Prepar3D v4\](#)

CREDITS

The project team:

- **Designer:** Sylvain Parouty, Bernard Juniot, Pierre Marchadier
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- **Textures:** Sylvain Parouty, Bernard Juniot
- **Sound:** Jean-Michel Renaux
- **Translators:** Frank Safranek
- **Testers:**
Michel Panattoni, Frank Safranek, Martial Feron, Jean Lacante, Robert Lerat, François Petitdemange, Michel Raemy, Patrick Renaudin, André Richalet
- **Special advisers "aéronavale":** Michel Panattoni, Joël Lubin, Jean-Marie Gall
- **Pilot manual and kneeboard:** Sylvain Parouty, Michel Panattoni

Web sites:

<http://royalefrenchnavy.restauravia.fr/>

<http://restauravia.fr/index.html>

<http://www.pilote-virtuel.com/>

<http://www.sim-outhouse.com/>

ACKNOWLEDGEMENT

This model is dedicated to the memory of our team mates who passed away during this project, we really miss Benoit and Remy "Sonny"...