



# **SYSTEM DESCRIPTIONS**

## **AIRCRAFT GENERAL**

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# AIRCRAFT GENERAL AIRFRAME AND SYSTEMS DESCRIPTION

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## INTRODUCTION

The FOKKER 100 is a twin-engined aircraft designed for short and medium range operations. Principal dimensions are given in the illustrations. The aircraft has a Maximum Take-Off Weight (MTOW) of 44 450 kg (98 000 lb). The maximum operating altitude is 35 000 ft.

## FUSELAGE, WINGS, AND TAIL SECTION

### Pressurization

The fuselage is pressurized in all compartments between fore and aft pressure bulkheads with the exception of the nose-wheel bay. These compartments are: the flight deck, the cabin, the cargo compartments, and several equipment compartments. The air conditioning packs are located in the pressurized nose section of the aircraft. The pressurization system is programmed to follow a pressure curve as a function of aircraft altitude. The nominal differential pressure of 7.46 psi allows a cabin altitude of 8000 ft at a flight altitude of 35 000 ft.

### Doors and Windows

The aircraft is equipped with one passenger door, a forward service door, four escape hatches, three cargo doors, and several hatches and doors which allow access to equipment for maintenance and/or servicing purposes. For use and operation of the doors refer to subsection DOORS.

The flight deck windows are identified as front windows, sliding windows and side windows. The front and sliding windows can be electrically heated. Rain is removed by two wipers. The sliding windows can be opened when the aircraft is not pressurized. The side windows are demisted by a conditioned airflow. Sun visors are installed. The double pane construction of the passenger compartment windows allows a conditioned airflow for demisting. Each window is equipped with an adjustable sunblind.

### Probes, Antennas, and Lights

Three pitot heads, six static ports, and two angle-of-attack vanes are installed at the forward part of the fuselage. To prevent ice buildup, they are electrically heated. An ice detector is located below the forward fuselage.

Antennas are installed on the fuselage for VHF COM, ELT, DME, ADF, ATC transponder, TCAS, GPS, radio altimeter, and marker beacon. Weather radar, localizer and glide slope antennas are located in the non-pressurized fuselage nose. The VOR antennas are located at the vertical stabilizer.

Beacon lights, wing inspection lights, the taxi/landing light, and the evacuation lights are installed on the fuselage. The outer landing lights are located under the wings. Navigation and strobe lights are installed in the wing tips and in the vertical stabilizer fairing.

### Flight Controls

Ailerons, rudder, and elevators are hydraulically operated. Pitch trim is obtained by adjusting the horizontal stabilizer. The flaps comprise two trailing edge sections of each wing. The speed brake forms the tail cone of the aircraft. Five lift dumper doors are installed on the upper surface of each wing. Flaps, speed brake, and lift dumper doors are hydraulically operated.

### Fuel Tanks

Fuel is stored in three fuel tanks; two wing tanks and one center tank. Each wing tank consists of an outer tank and a collector tank. Engine supply is from the collector tank. Crossfeeding to supply fuel from either tank to either engine is possible. Fuel for APU operation is taken from the LH engine fuel supply line. A pressure fuelling connector is located on the underside of the RH wing. The fuel service panel is located in the RH wing root lower fairing.



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**POWER PLANT**

Engine

The aircraft is equipped with two fuselage-mounted Rolls Royce Tay Mk 650-15 turbo-fan engines. The engines are located one on each side of the rear fuselage. The Tay engine is a twin-spool, high bypass ratio engine. The low-pressure spool comprises a single-stage fan and a three-stage compressor driven by a three-stage turbine. The high-pressure spool consists of a twelve-stage compressor driven by a two-stage turbine. The engine is started by an air starter motor. The fan bypass airstream and the turbine exhaust are mixed before discharge through a nozzle which incorporates a two-door thrust reverser. The thrust reverser can be deployed after touchdown to de-celerate the aircraft. Fire detection and extinguishing systems are installed.

Electric, Hydraulic, and Pneumatic Power

Each engine drives an Integrated Drive Generator (IDG). The IDG's generate 115 V, 400 Hz, three-phase AC power. Auxiliary power on the ground or in the air can be supplied by an APU-driven generator. 28 V DC power is obtained through three Transformer Rectifier Units (TRU). Emergency power is supplied by two batteries. On the ground AC power can be supplied by an external source.

Four engine-driven pumps provide hydraulic power, through two independent systems, for the operation of flight controls, flaps, lift dumpers, landing gear, nose-wheel steering, brakes, thrust reversers, and speed brake.

Bleed-air, tapped from the compressors of both engines, is used for air conditioning and pressurization, engine starting, wing, tail, and engine anti-icing. Bleed-air is also used for the pressurization of the hydraulic fluid tanks, and the water tanks. On the ground bleed-air can be supplied by the APU or by an external source.

Auxiliary Power Unit (APU)

The APU, installed in a fireproof enclosure in the tail section, is a gas turbine engine providing electrical, and on the ground only, pneumatic power. A fire detection and extinguishing system is installed.

**LANDING GEAR**

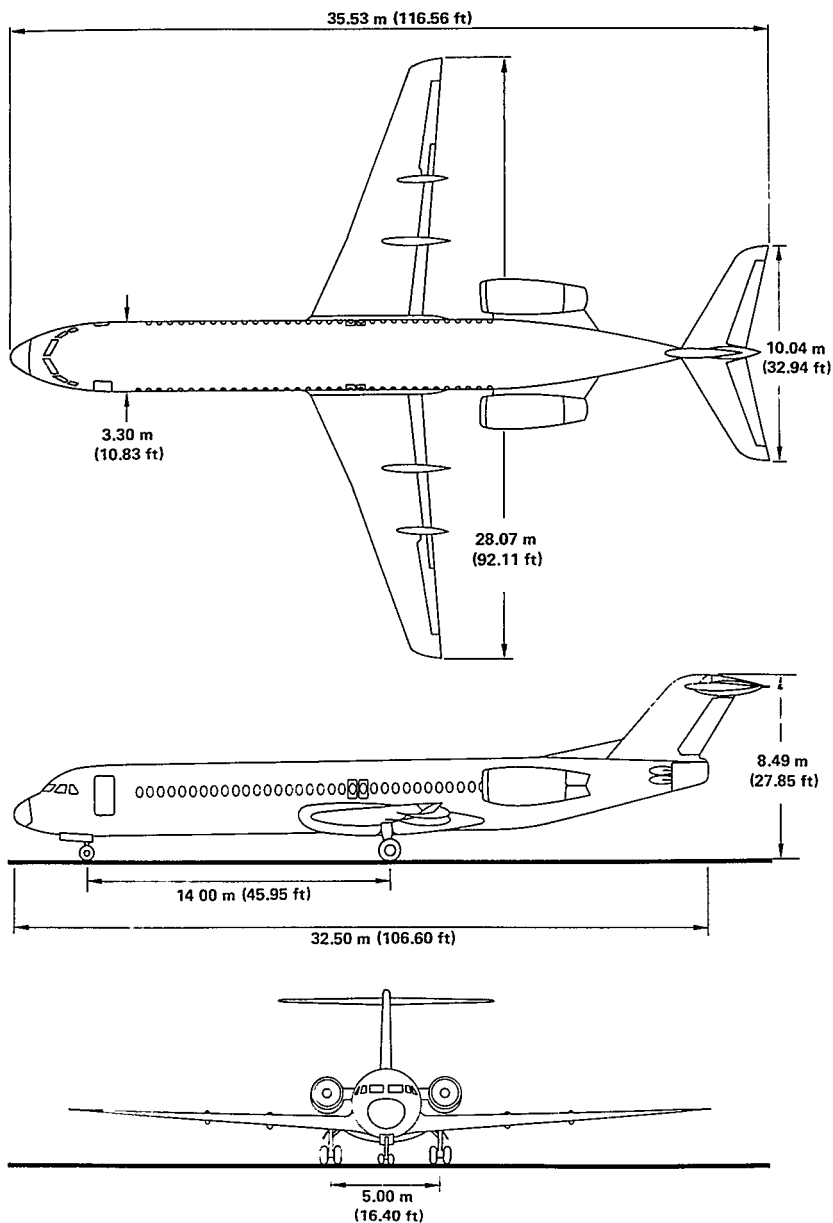
The landing gear consists of a forward retracting nose gear and two sideward retracting main gears. When the gear is retracted, the landing gear bays are enclosed by doors. Each gear is equipped with a shock absorber and two wheels. The main gear wheels are equipped with brake units. A skid-control system provides optimum braking efficiency for all runway conditions. The nose gear is equipped with a nose-wheel-steering-and-centering system. The minimum turning radius is shown in the illustrations. The nose gear is designed for pull-out and push-back operations with a tow bar.



**AIRCRAFT GENERAL  
AIRFRAME AND SYSTEMS  
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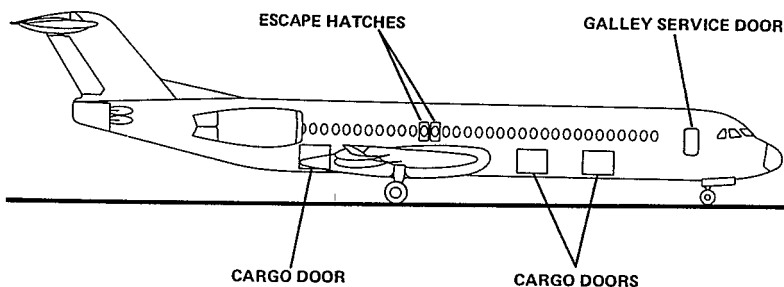
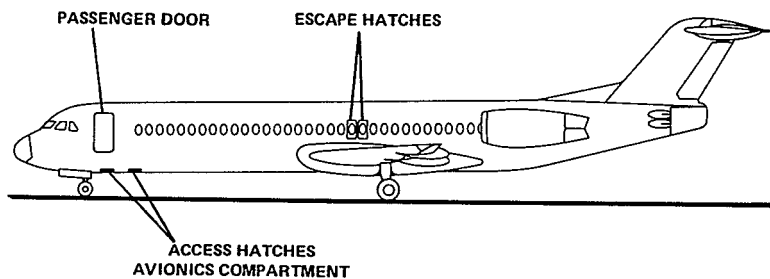
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**DIMENSIONS**

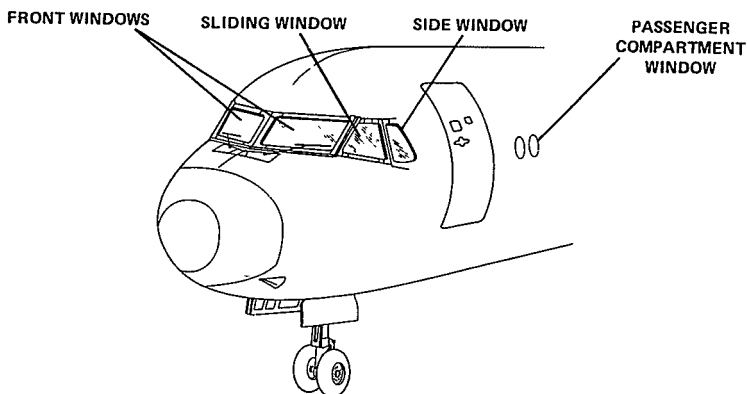


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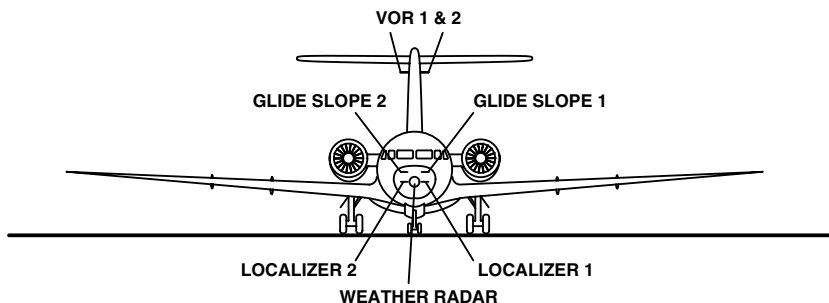
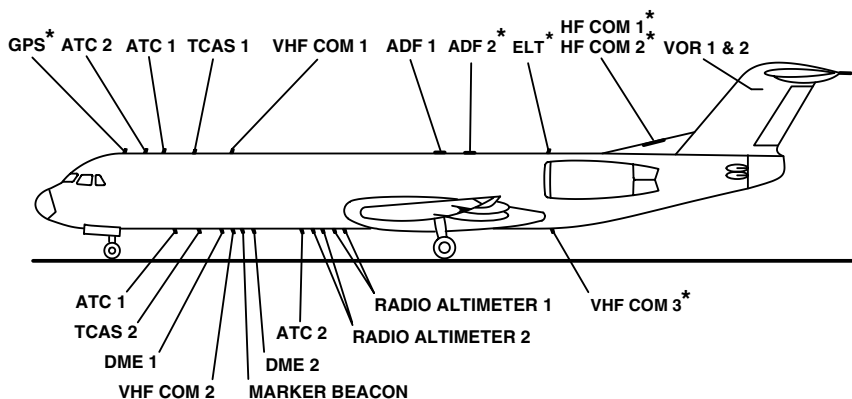
**DOORS**



**WINDOWS**

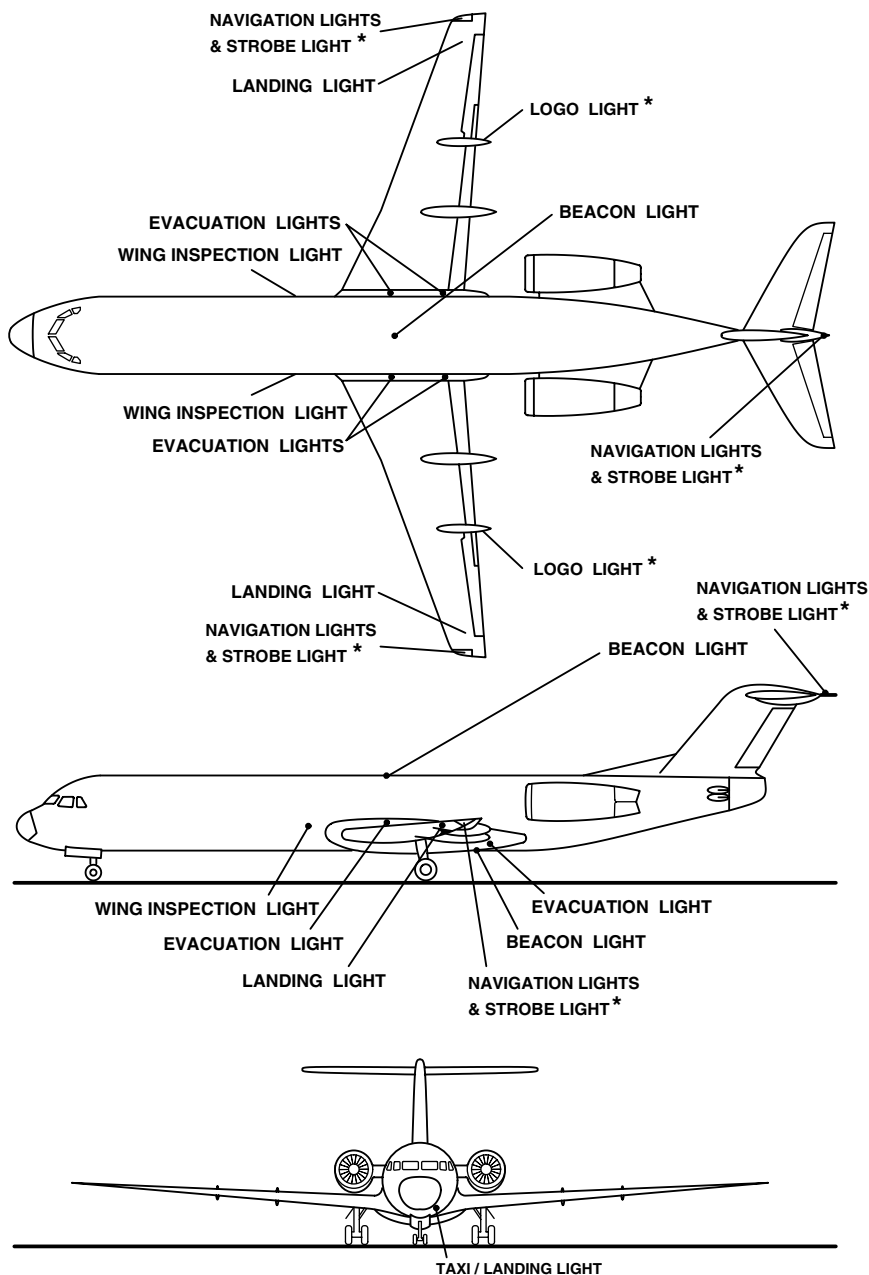


## ANTENNAS



\* IF INSTALLED

**EXTERIOR LIGHTS**



\* IF INSTALLED

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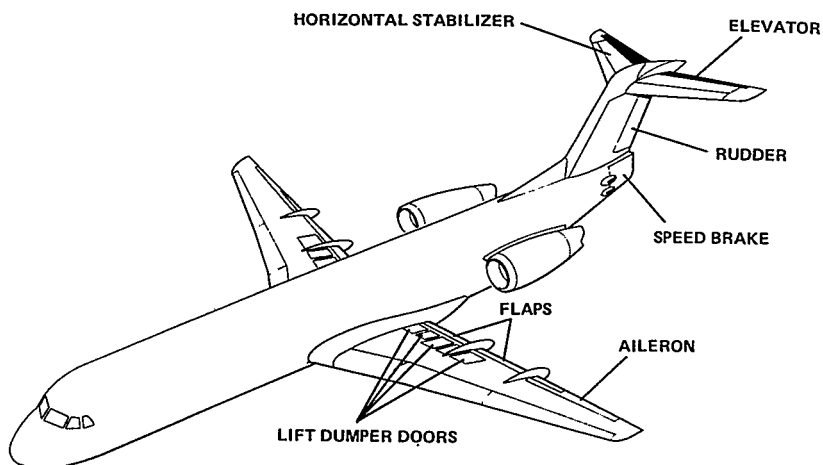




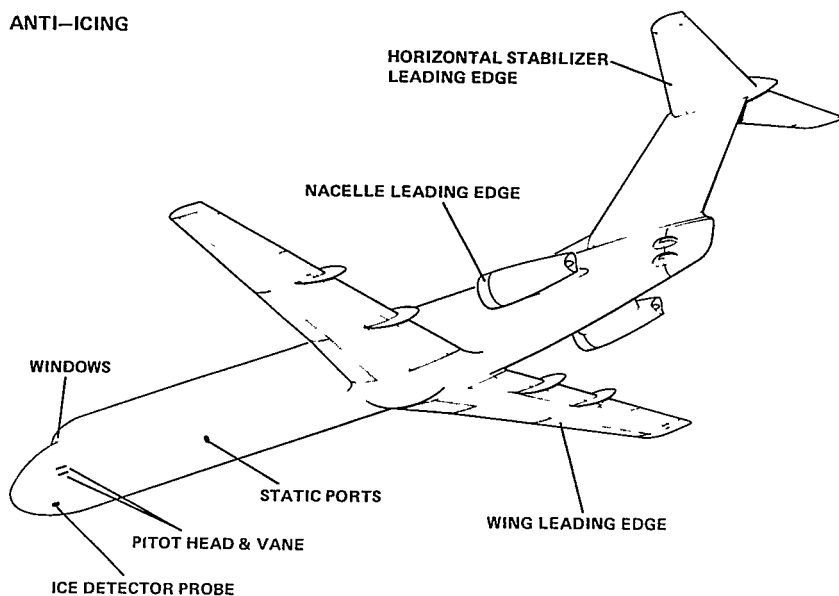
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## FLIGHT CONTROLS



## ANTI-ICING



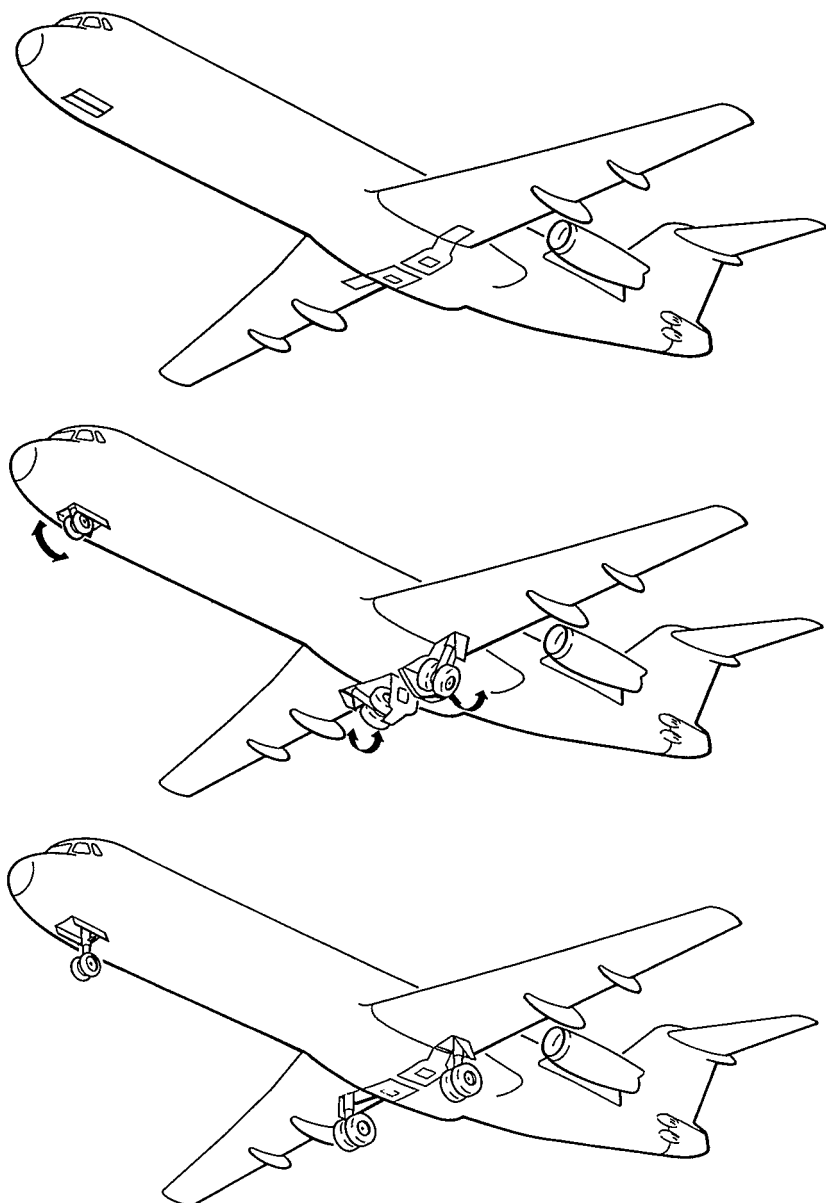
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**LANDING GEAR**



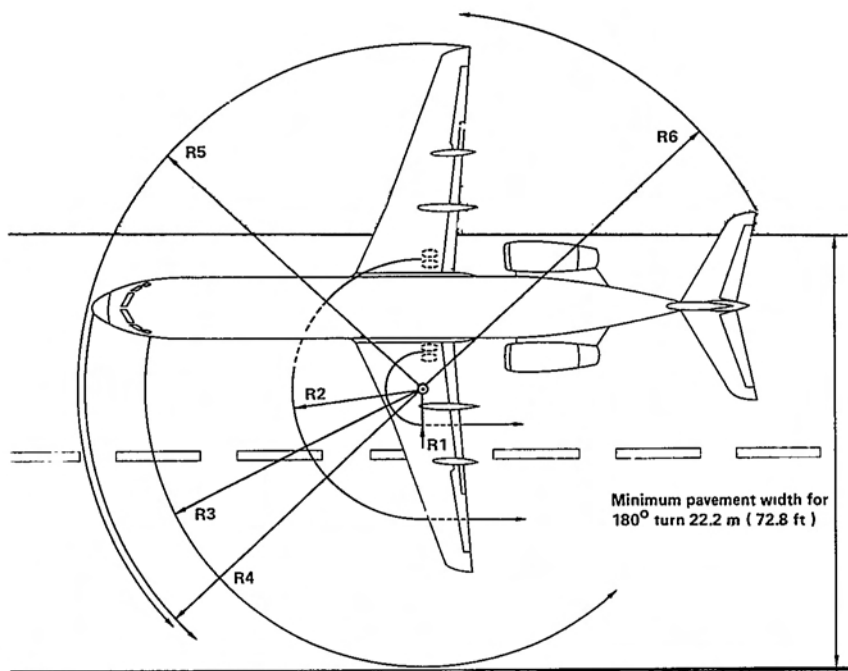
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**TURNING RADIUS  
STEERING ANGLE : 76°**



Minimum pavement width for  
180° turn 22.2 m ( 72.8 ft )

- R1 – 1.76 m ( 5.8 ft )
- R2 – 6.80 m ( 22.3 ft )
- R3 – 14.64 m ( 48.0 ft )
- R4 – 18.27 m ( 59.9 ft )
- R5 – 18.32 m ( 60.1 ft )
- R6 – 20.06 m ( 65.8 ft )

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## **SEATS**

The flight deck is arranged for two-pilot operation. The pilots' seats are adjustable horizontally and vertically. Thigh support, lumbar support, recline position and armrests are individually adjustable. To facilitate entry, it is possible to fold the armrests upwards, and when the seats are in the fully aft position, to move them in an outboard direction. Each seat is provided with a five-point harness. An observer's seat, equipped with a shoulder harness and a lap belt, is stowed against the aft wall behind the captain's seat.

### Reference Eye Position

A horizontal line at each pilot's instrument panel is an aid for the adjustment of the pilots' seats. For an optimum combination of outside visibility and instrument scan, the line should be seen just below the glare shield.

### Control Column and Pedals

Each control wheel incorporates a microphone switch (RT/IC), an AP disconnect button, a chronometer button, and a stabilizer trim switch. A chart holder is installed on each control wheel. Stick shakers and a stick pusher are coupled to the control columns. Adjustable pedals provide for brake, rudder, and limited nose-wheel-steering operation. Footrests, springloaded to the up position, are folded away below the main instrument panel.

### Control and Instrument Panels

Controls that are part of operational procedures are within easy reach of either pilot; instruments and annunciators are within the field of vision of both pilots. Controls and indicators for use by the pilot can be found on the following panels.

- The main instrument panel, tilted for better readability, is divided into a captain's, a first officer's, and a center panel. A Primary Flight Display (PFD) and a Navigation Display (ND) are installed, one above the other, at each pilot's panel. Each panel incorporates a radio magnetic indicator, source select push-buttons, a clock, a GPW light, a SPEED BRAKE light, a TAWS INHIBIT p/b, a DISPLAY TERRAIN p/b and a F-DK DOOR light.

- The captain's panel contains the standby flight instruments; the first officer's panel has an alternate brake system pressure indicator, brake temperature indicators, and a fuel quantity indicator. The center panel is equipped with two Multifunction Display Units (MFDU) next to each other, the landing gear selector and indicator, the Standby Engine Indicator (SEI), and the Standby Annunciator Panel (SAP).
- The glare shield, located directly above the main instrument panel, contains EFIS and AFCAS control panels, the master warning and caution lights, and the auto-land caution lights.
- The overhead panel consists of control and monitoring panels for aircraft systems. A standby compass is installed at the lower end. Loudspeakers and jack panels are installed in the flight deck ceiling next to the overhead panel.
- The pedestal contains the take-off configuration test button, anti-skid switch, a F-DK DOOR LOCK p/b, video surveillance system controls and controls for engine thrust, flap position, trim setting, speed brake, parking brake, stick pusher, lift dumpers, flight control lock, and alternate LG operation. Control panels are installed for the Flight Management System (FMS), the Multifunction Display System (MFDS), the audio and communication systems, the navigation systems, the thrust rating and the flight deck lights.
- The side panels have levers for floor ventilation, side panel light selectors and hand-mic jacks. Each side console houses an audio panel and a crew oxygen mask. A nose-wheel steering tiller is installed at the captain's side console.

Panels located at the flight deck but mainly for use by the maintenance crew are:

- Two maintenance test panels, located at the LH side of the flight deck entrance.
- The AFCAS maintenance panel, located next to the maintenance test panels.
- The circuit breaker panels, located behind the first officer's seat.



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Display Units

Six display units are installed at the main instrument panel. Four units, two in front of each pilot, display flight and navigation information in colour. As part of EFIS they are described under FLIGHT/NAVIGATION INSTRUMENTS. The other two units, which are installed at the center panel, present engine parameters, alerts, procedures, and messages in colour. As part of the MFDS they are described under FLIGHT WARNING SYSTEM and POWER PLANT. The brightness level of each screen can be controlled from the relevant control panel. Test switches are located at the maintenance test panel.

Annunciator Lights

Annunciator lights are located at the overhead panel, the glare shield, the main instrument panel, and the pedestal. They can be dimmed. The general concept is that during routine operation all annunciator lights are out (blank). Red and amber coloured lights are used for alerts only. Correct operation of annunciator lights can be checked by the pilots. See section FLIGHT WARNING SYSTEM and subsection LIGHTS.

Switches

Lighted push buttons are installed primarily at the overhead panel. In addition to the switch function, most push buttons announce system status in accordance with the general annunciator concept. If an amber light comes on (FAULT), the push button must be depressed for corrective action. If a push button is not correctly set or is operated due to a normal or abnormal procedure, a white (OFF, MAN, ALTN, ON), or blue (ON) light illuminates. Exceptions are described in the relevant sections. Some push buttons are equipped with a transparent guard to prevent inadvertent operation. Some guards are sealed.

Toggle switches are selected ON when swept to the bottom of the relevant panel. Some toggle switches are equipped with a guard or lock to prevent inadvertent operation.

Rotary selectors are used when three or more detented positions are required. The selector knob serves as a pointer on a scale. Normally the knob is in the upright position. Some selectors are of the pull-and-rotate type.

Flight Deck Lighting

All flight deck lights are described under subsection LIGHTS.

Ventilation and Heating

Conditioned air is routed to adjustable outlets on the side panels and on the floor. Fixed outlets are provided at the rear of the pedestal.

Windows

Two adjustable sunvisors are provided. Both front and sliding windows can be electrically heated. When the aircraft is not pressurized, the sliding windows can be opened by pulling the handles rearwards. The sliding windows serve as emergency exits for the pilots.

Flight Deck Door

The flight deck door is described under subsection DOORS.

Stowage

Each side console has space for a flight kit, crew baggage, quick reference handbooks, and operating manuals. A cup holder, ashtray, waste bin, and pencil holder, are installed. Spare bulbs are stored at the rear of the captain's side panel.

Emergency Equipment

For location and use of emergency equipment in the flight deck, see section EMERGENCY EQUIPMENT.



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## CABIN

For the location of pax seats, attendant seats, toilet compartments, galleys, stowage units and/or wardrobes see the illustration of the cabin layout in this subsection.

### Passenger Compartment

The cabin provides passenger accommodation in a single aisle, five abreast configuration. Stowage bins for hand baggage are installed above the seats. Service panels and loudspeakers are located at the lower side of the stowage bins. The service panels comprise reading lights, adjustable air outlets, an attendant call button, and no-smoking and fasten-seat-belts signs.

### Toilet Compartments and Galleys

Each toilet compartment is equipped with an electrically operated flush-type toilet, a wash basin, a mirror, an electric razor power socket, a service unit, a return-to-cabin sign and a loudspeaker. A smoke detection system and a fireproof waste bin, equipped with a built-in heat-activated fire extinguisher, are also installed. The toilet equipment consists of a bowl, a collector tank, flushing liquid, and a flush switch. The toilet flushing liquid is recirculated.

The galleys are supplied with electrical power and potable water.

The water system provides potable water for the galleys and the toilet compartments. The water tank is pressurized with bleed-air. Water from the galleys and the wash basins in the toilet compartments is drained overboard.

For service panels see section MISCELLANEOUS.

### Attendant's Provisions

Accommodation is provided for four attendants. All attendant's seats are provided with shoulder harnesses. For the attendant's facilities regarding lights control and communication see section MISCELLANEOUS.

### Emergency Equipment

For location and use of emergency equipment in the cabin, including the exits, see section EMERGENCY EQUIPMENT.



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EQUIPMENT  
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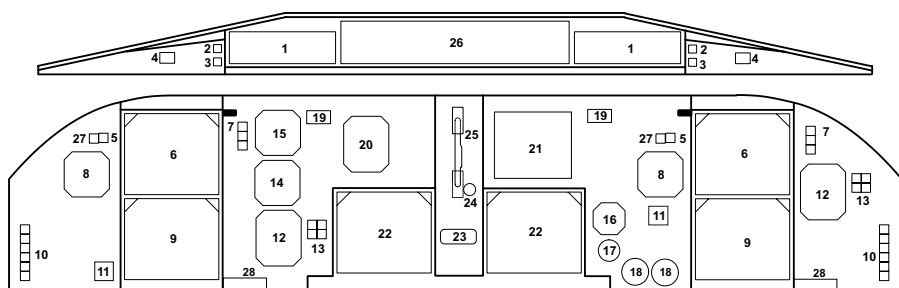
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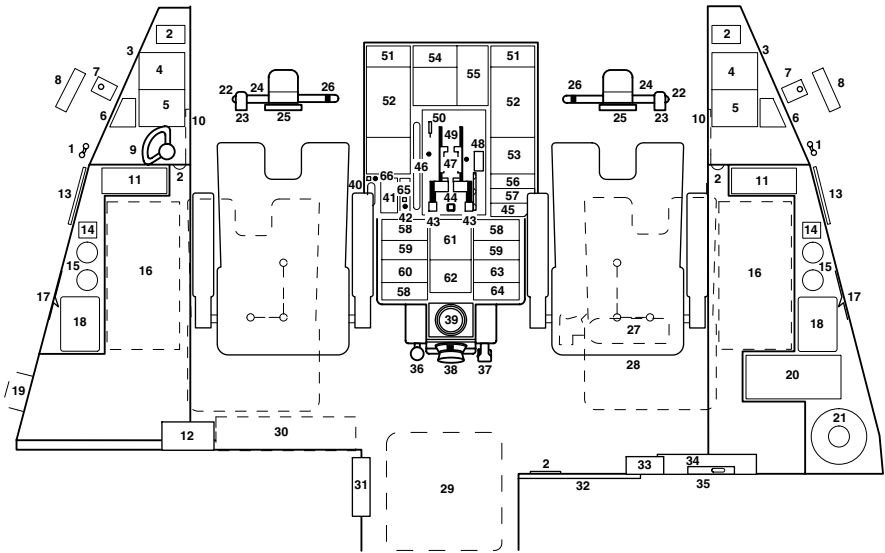


**GLARESHIELD, MAIN INSTRUMENT PANEL**



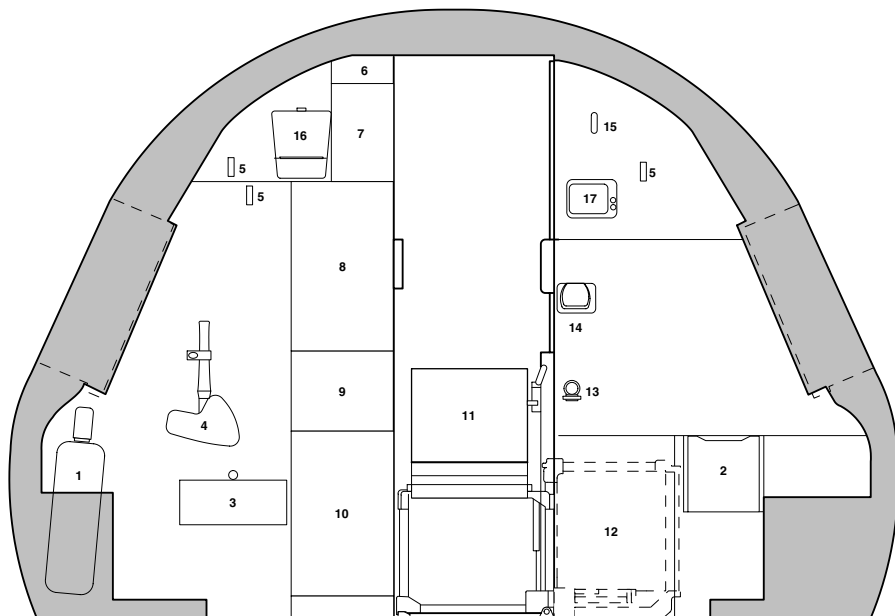
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|----|---|----|--|
| 1  | EFIS control panel                                | 15 | Standby horizon                            |
| 2  | Master Warning Light (MWL)                        | 16 | Fuel quantity totalizer                    |
| 3  | Master Caution Light (MCL)                        | 17 | Alternate brake system pressure indicator  |
| 4  | Autoland caution light                            | 18 | Brake temperature indicator                |
| 5  | Speed brake light                                 | 19 | Aircraft registration placard              |
| 6  | Primary Flight Display (PFD)                      | 20 | Standby Engine Indicator (SEI)             |
| 7  | GPWS / TAWS controls                              | 21 | Standby Annunciator Panel (SAP)            |
| 8  | Clock   | 22 | Multi Function Display Unit (MFDU)         |
| 9  | Navigation Display (ND)                           | 23 | Landing gear position lights               |
| 10 | Source select panel                               | 24 | Landing gear selector lock override button |
| 11 | Speed limitations placard                         | 25 | Landing gear selector                      |
| 12 | Radio Magnetic Indicator (RMI)                    | 26 | Flight Mode Panel (FMP)                    |
| 13 | Pointer source select buttons                     | 27 | F-DK door light                            |
| 14 | Combined standby altimeter and airspeed indicator | 28 | TAWS placard                               |

**PEDESTAL, SIDE PANELS, CONTROL COLUMNS**



- |                              |   |   |
|------------------------------|---|---|
| 1 Pencilholder               | 27 Fire extinguisher                                    | 48 Flap controls                                    |
| 2 Air outlet                 | 28 F/O life vest, observer life vest and smoke goggles  | 49 Reverse thrust levers                            |
| 3 Hand mike                  | 29 Observer seat  | 50 Speed brake lever                                |
| 4 Audio panel                | 30 Observer seat in stowed position                     | 51 Altimeter set panel                              |
| 5 Oxygen mask                | 31 Observer station (audio, oxygen, maintenance panels) | 52 FMS Control Display Unit (CDU)                   |
| 6 Side panel lights panel    | 32 Circuit breaker panels                               | 53 IRS Control Display Unit (CDU)                   |
| 7 Jackpanel                  | 33 Ear pad holder                                       | 54 ILS panel  |
| 8 Smoke goggles              | 34 Locking pins, gloves, and pitot covers               | 55 Flight deck lights panel                         |
| 9 Steering tiller            | 35 Axe  | 56 Mode Select Unit (MSU)                           |
| 10 Stowage for checklist     | 36 Flight control lock lever                            | 57 General switching panel                          |
| 11 Stowage for checklists    | 37 Alternate landing gear selector                      | 58 VHF COM panel                                    |
| 12 Smoke hood                | 38 Aileron trim wheel                                   | 59 VOR/DME panel                                    |
| 13 Writing table             | 39 Rudder trim wheel                                    | 60 Weather radar panel                              |
| 14 Ashtray                   | 40 Parking brake handle                                 | 61 Thrust Rating Panel (TRP) and MFDS control panel |
| 15 Cup holders               | 41 Stabilizer position indicator                        | 62 Interactive Display Unit (ACARS)                 |
| 16 Stowage for flight kit    | 42 Take-off configuration test button                   | 63 ADF panel  |
| 17 Floor ventilation lever   | 43 Fuel lever   | 64 Air traffic control panel                        |
| 18 Waste bin                 | 44 Lift dumper arming p/b                               | 65 F-DK door lock p/b                               |
| 19 Spare bulbs               | 45 Stickpusher disconnect handle                        | 66 Video surveillance system controls               |
| 20 Library                   | 46 Stabilizer trim controls                             |   |
| 21 Flight deck oxygen bottle | 47 TOGA triggers  |   |
| 22 AP disconnect button      |   |   |
| 23 Stabilizer trim switch    |   |   |
| 24 IC/RT selector            |   |   |
| 25 Chart holder              |   |   |
| 26 Chronometer button        |   |   |

## FLIGHT DECK BACK WALL



- |                                   |                                      |
|-----------------------------------|--------------------------------------|
| 1 Flight deck oxygen bottle       | 9 Circuit breaker panel 2            |
| 2 Smoke hood                      | 10 Circuit breaker panel 3           |
| 3 Locking pins and pitot covers   | 11 Observer seat                     |
| 4 Axe                             | 12 Observer seat in stowed position  |
| 5 Coat hanger                     | 13 Cup holder                        |
| 6 Air outlet                      | 14 Ashtray                           |
| 7 Emergency circuit breaker panel | 15 Observer headset clip             |
| 8 Circuit breaker panel 1         | 16 Ear pad holder                    |
|                                   | 17 Video surveillance system display |

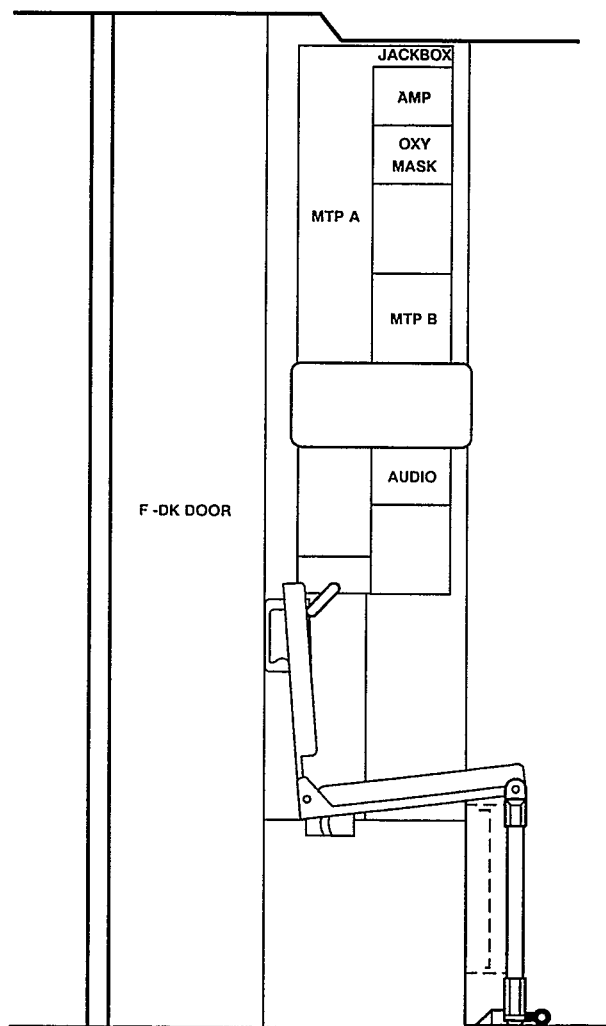


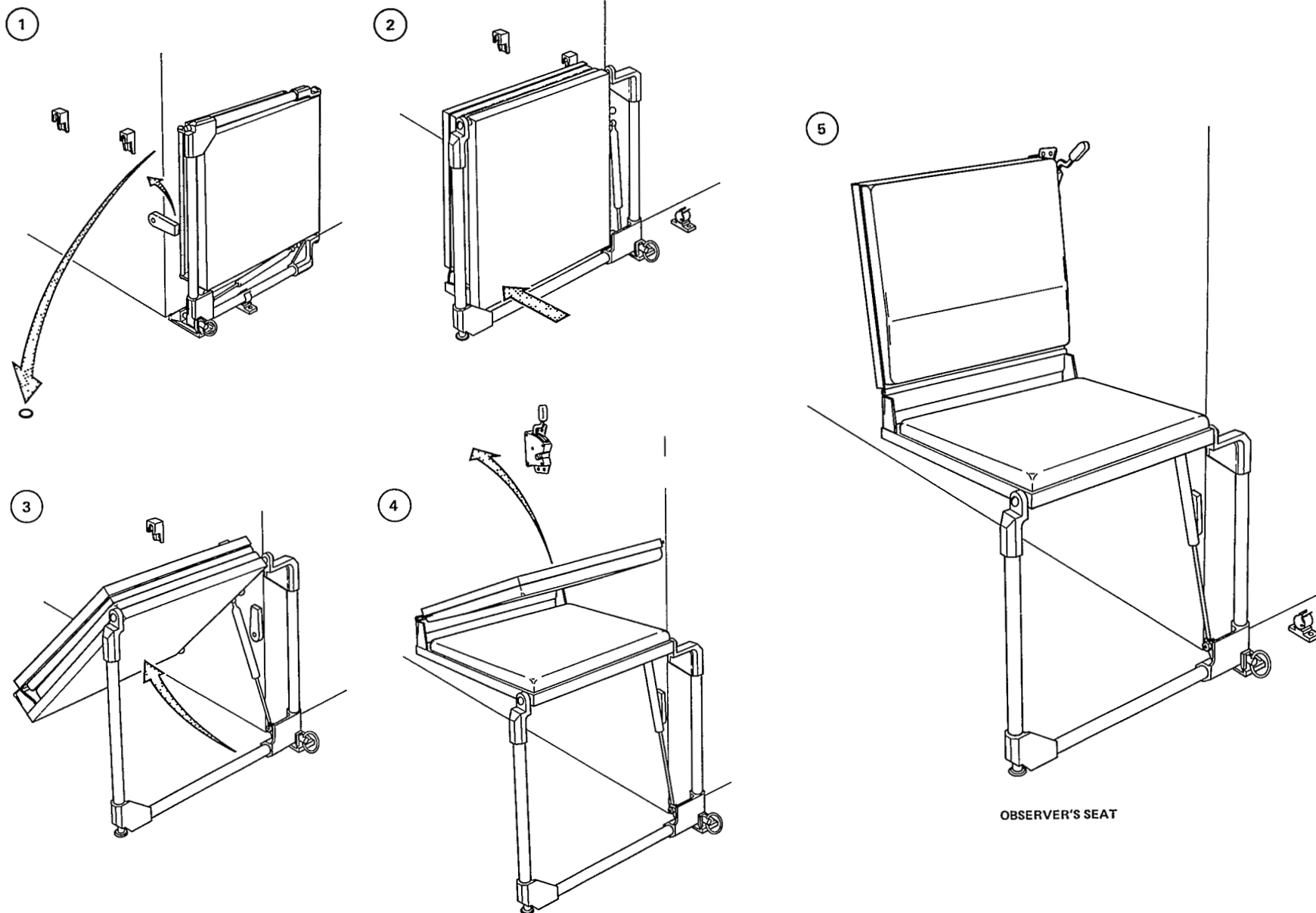
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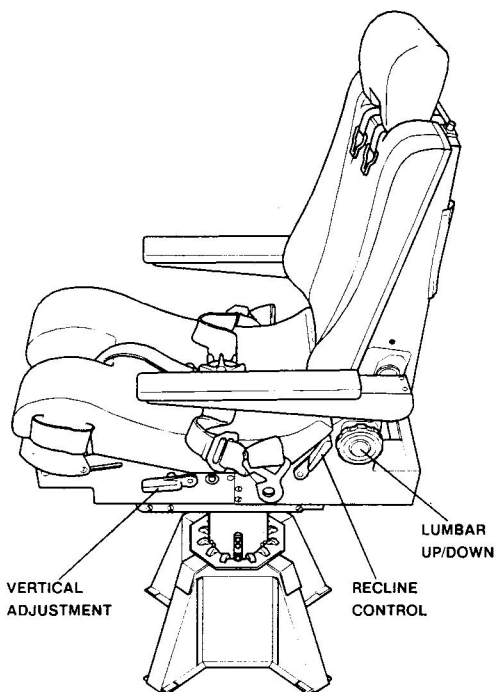
OBSERVER 'S STATION



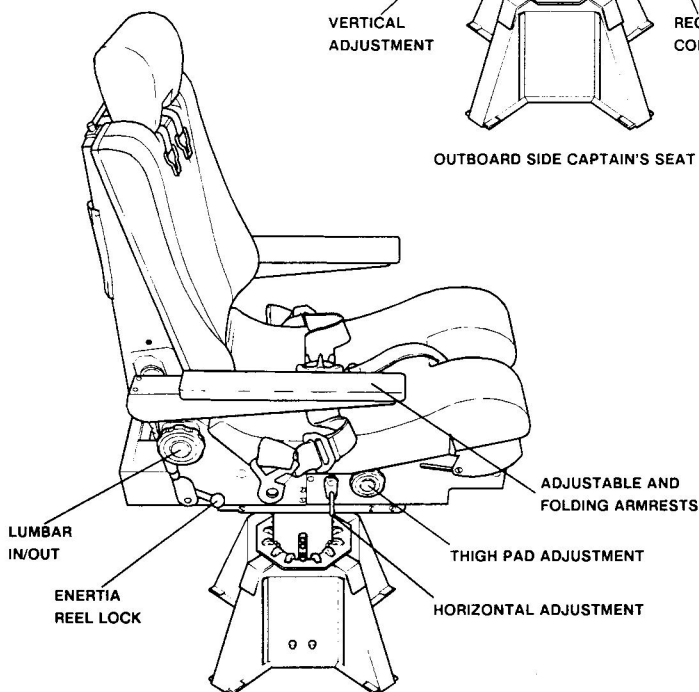


OBSERVER'S SEAT

**PILOT'S SEAT**



**OUTBOARD SIDE CAPTAIN'S SEAT**



**INBOARD SIDE CAPTAIN'S SEAT**

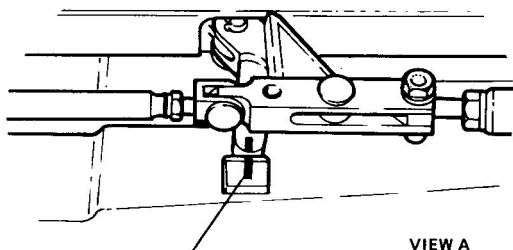
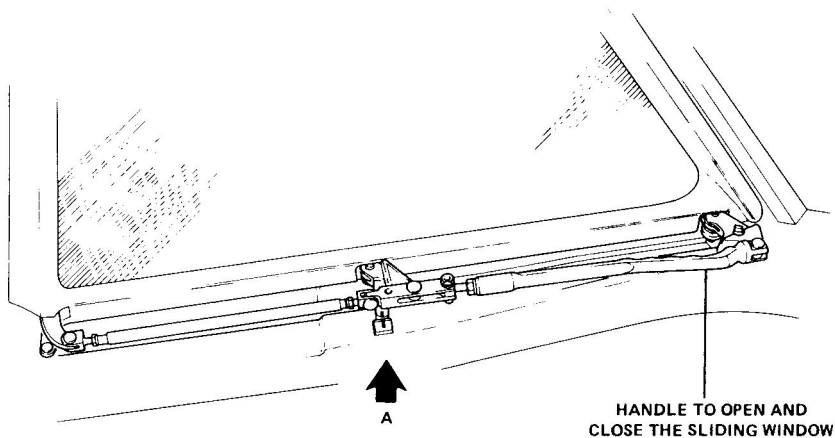
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**SLIDING WINDOW**



MARKINGS IN LINE WHEN SLIDING  
WINDOW IS CLOSED AND LOCKED



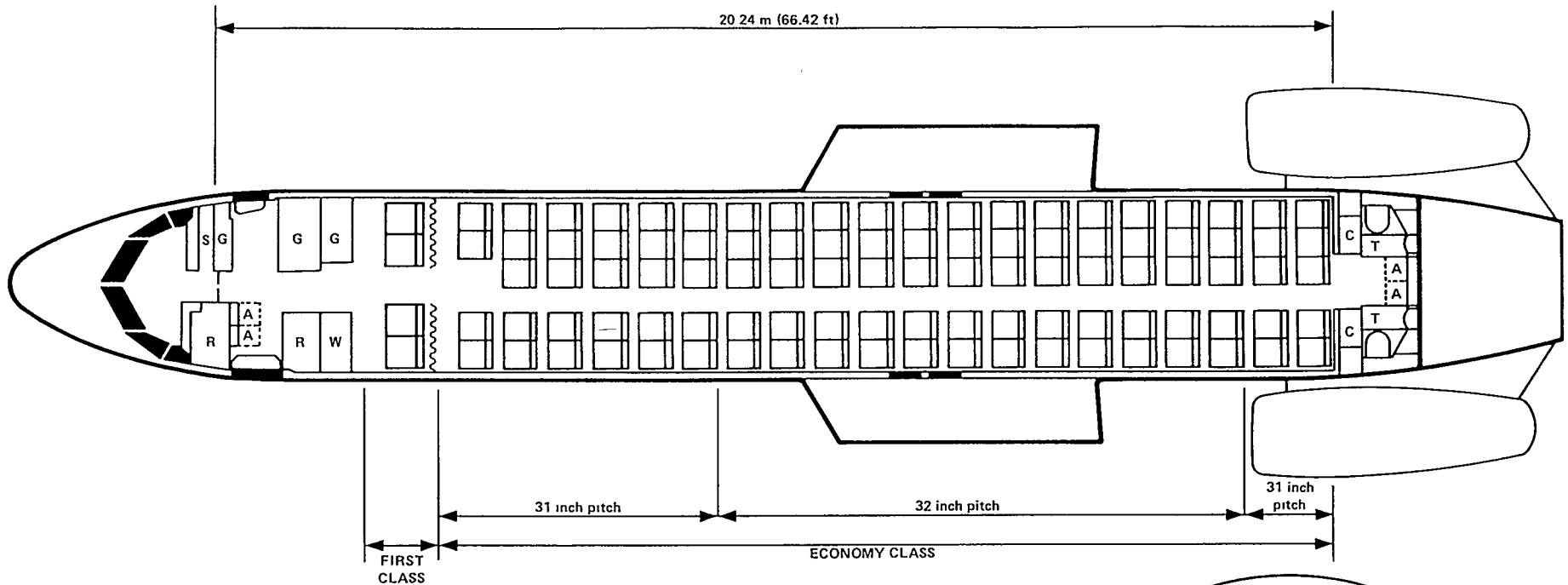


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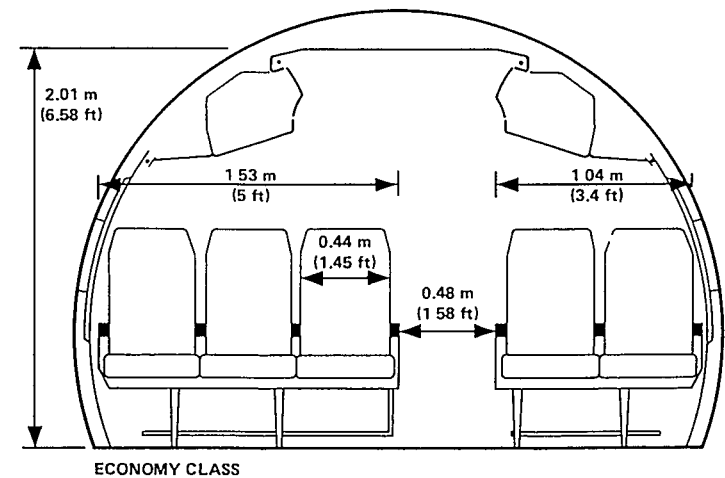
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CABIN LAYOUT



PASSENGER CONFIGURATION.  
103 PASSENGER SEATS  
— FIRST CLASS 4 SEATS  
— ECONOMY CLASS 99 SEATS

A ATTENDANT SEAT  
G GALLEY  
S STOWAGE  
W WARDROBE  
C CLOAKROOM  
T TOILET COMPARTMENT  
R AVIONICS RACK





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# AIRCRAFT GENERAL DOORS DESCRIPTION

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The entries to, and exits from the passenger compartment comprise one passenger door, one galley service door, and four escape hatches. The passenger door and the service door also serve as emergency exits. Three cargo doors give access to the cargo compartments. Access to pressurized maintenance compartments below the forward fuselage is via hatches.

## FEATURES

### Passenger Door

The passenger door, the main entry to the aircraft, is located at the forward left-hand side of the fuselage and opens outwards in the direction of flight. The door has to be opened and closed manually. A retract handle is installed to release the door when it is locked in the open position. The door is locked and unlocked by means of either the inboard or the outboard door lock handle. The door is properly locked when the inboard door lock handle is pointing in the direction of flight. An indicator at the top left side of the door shows the door status as either 'locked' in green or 'open' in red. Mechanically connected to the locking mechanism is a vent flap; when the door is locked, the flap is closed.

The door is equipped with an escape slide and a door selector for automatic or manual slide operation; see section EMERGENCY EQUIPMENT.

### Service Door

The service door, for the galley, is located at the forward right-hand side of the fuselage, opens outwards in the direction of flight. The door is locked and unlocked by means of either the inboard or the outboard door handle and has to be opened and closed manually. The door is properly closed with the inboard door handle pointing in the direction of flight.

An indicator at the inboard side of the door verifies the locked position. A retract handle is installed to release the door when locked in the open position.

The door is equipped with an emergency slide and a selector for automatic or manual slide operation; see section EMERGENCY EQUIPMENT.

### Escape Hatches

Two escape hatches are installed on each side of the passenger compartment above the wings. The hatches open inward and can be released from the inside or from the outside of the aircraft; see section EMERGENCY EQUIPMENT.

### Cargo Doors

Three cargo doors, at the right-hand side of the fuselage belly, provide access to the forward and rear cargo compartments. All doors open outwards and upwards. The doors can be locked and unlocked only from outside the aircraft by means of an integrated handle, which is covered by a flap.

### Maintenance Access Hatches

Plug-type hatches, located at the bottom of the forward fuselage, give access to pressurized compartments. The hatches can only be opened and closed from outside the aircraft. Two hatches give access to the avionics compartment. Three hatches, designated forward equipment hatches, give access to air conditioning equipment and to a space under the flight-deck floor

## FLIGHT DECK INDICATIONS

When the aircraft is on the ground with the parking brake set or both engines out, and either the passenger door, the service door, a cargo door, an avionics compartment hatch, or a forward equipment hatch is not closed, a status message will be displayed on the secondary page at the MFDU. If any of these doors is not properly closed and the parking brake is released, an alert will be presented.



**AIRCRAFT GENERAL  
DOORS**  
DESCRIPTION

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**FLIGHT DECK DOOR**

General

The access to the flight deck can be closed off with a flight deck door. To make the door bullet proof and intrusion resistant, the door lock mechanism, door frame and door post are reinforced.

The door is built-up out of two equal parts. At the flight deck side the lower part of the door can be kicked out after the use of a turnknob. The turnknob located directly under the door-knob should be unscrewed by rotating to the left until the turnknob can be removed. The spring plate will drop and the panel can be removed.

In case of a decompression, a small panel in the lower part of the door will open to equalise the cabin pressure with the flight deck pressure.

The door is hinged at the left side and opens into the cabin. It is held in the closed position by magnetic snaps positioned in the door post.

A door lock is installed in the door. By rotating a doorknob at either the flight deck or the cabin side a bolt is extended outward into the doorpost.

To simplify opening and closing of the door from the flight deck a handgrip (optional) is installed at the flight deck side just above the doorknob.

A F-DK DOOR LOCK p/b, located at the LH side of the pedestal, is provided to lock or unlock the door. By depressing the p/b the door is locked by a solenoid in the door lock mechanism, which fixates the bolt in the extended position. The door can be unlocked by depressing the p/b and be opened by rotating the door knob at either side of the door and pushing or pulling the door knob.

At the flight deck side of the door a lock pin is provided to lock the door manually, which fixates the bolt in the extended position, in case of an electric lock failure or a DC bus 1 failure.

The door can only be locked (electrically or with the lock pin) if the door is fully closed.

In the case of a ground emergency evacuation (battery power only), the electrical lock is removed and the door can be opened from both sides.

Before entrance to the flight deck, persons can be identified by the flight crew through a viewport in the door or by a video surveillance system.

Indications

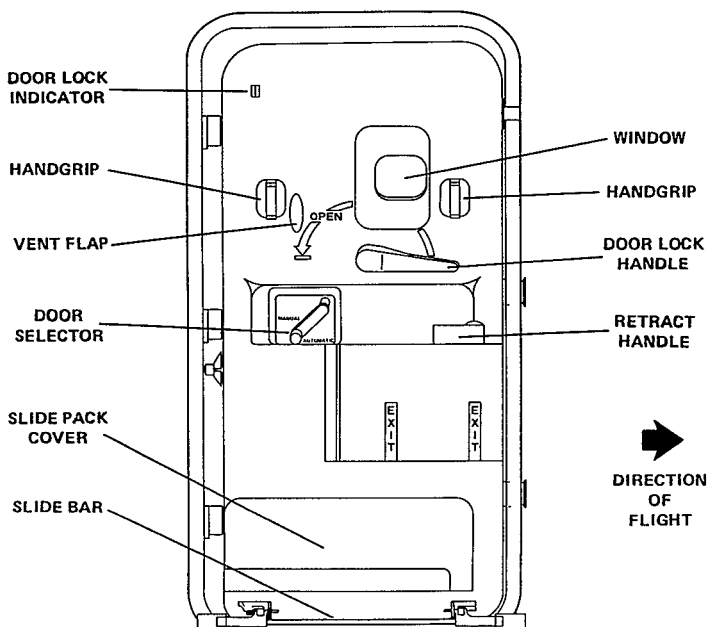
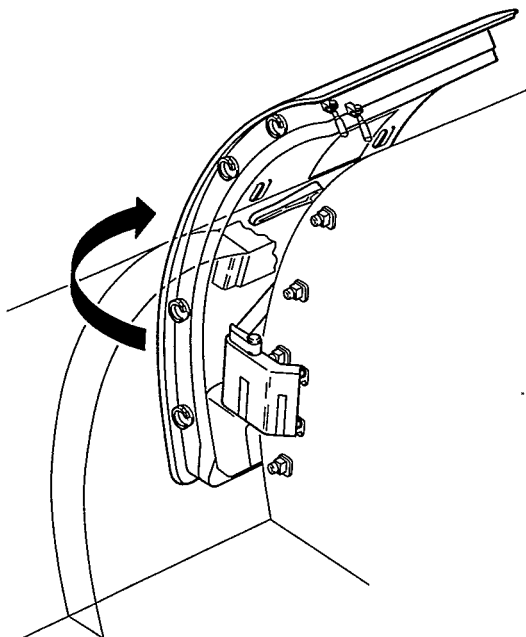
The door is closed if the door is in position and with the bolt fully extended. At the flight deck side this can be visually verified by the door knob in the CLOSED position.

If the door is locked the F-DK DOOR LOCK p/b is blank.

If the door is not closed and locked the F-DK DOOR "NOT LKD" light (white) comes on.

If the door is not locked for two minutes and at least one engine is running the F-DK DOOR "NOT LKD" light (white) extinguishes and the F-DK DOOR "NOT LKD" light (amber) and the F-DK DOOR lights (amber) at the main instrument panels come on.

**PASSENGER DOOR  
(INSIDE VIEW)**





**AIRCRAFT GENERAL  
DOORS  
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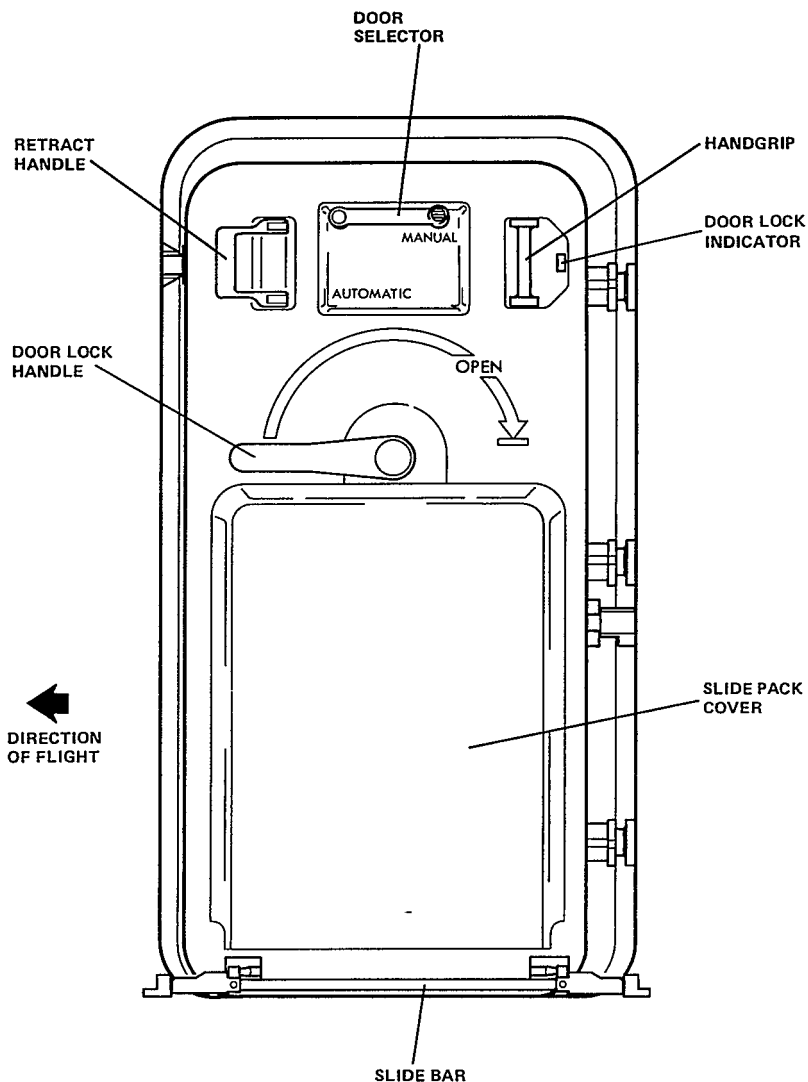
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**AIRCRAFT GENERAL  
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**FWD SERVICE DOOR  
(INSIDE VIEW)**



VD/OP-01-136/C

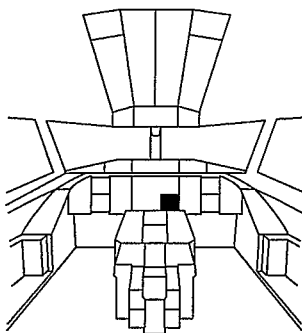


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**AIRCRAFT GENERAL  
DOORS  
CONTROLS AND INDICATORS**

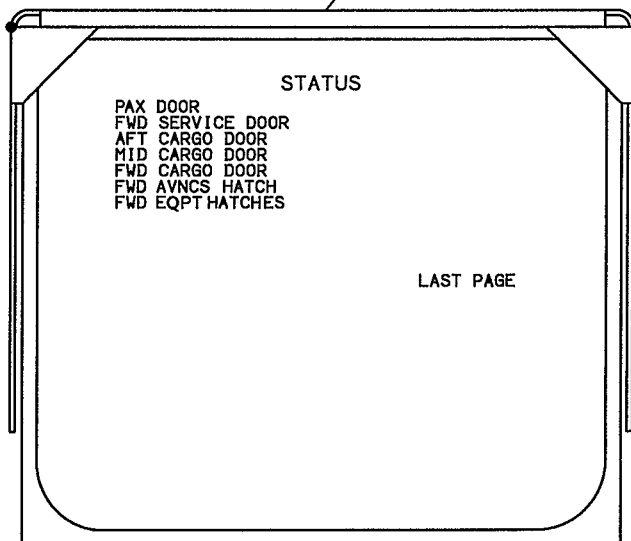
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**DOOR STATUS PAGE**

PAX DOOR (white)  
FWD SERVICE DOOR (white)  
AFT/MID/FWD CARGO DOOR (white)  
FWD AVNCS HATCH (white)  
FWD EQPT HATCHES (white)  
— Respective door or hatch not closed.

**NOTE:** Displayed automatically on the ground with parking brake set or both engines out.



**RH MFDU (SECONDARY PAGE)**

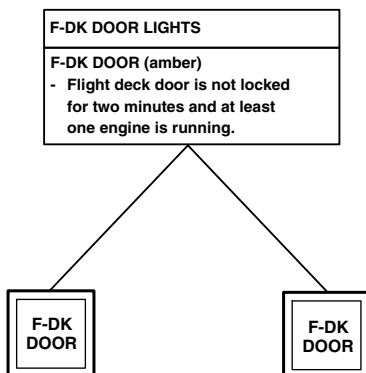


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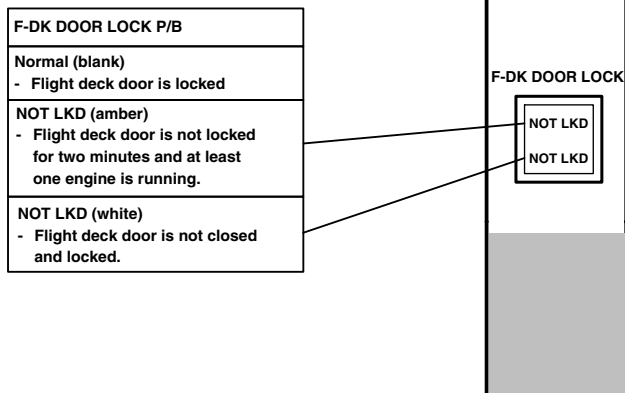
**F-DK DOOR LIGHTS**

LOCATION: CAPTAIN'S AND FIRST OFFICERS'S  
MAIN INSTRUMENT PANEL

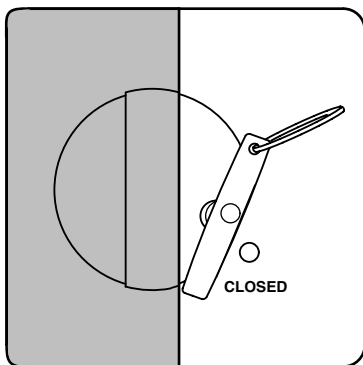
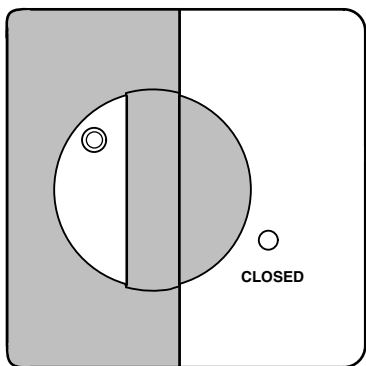
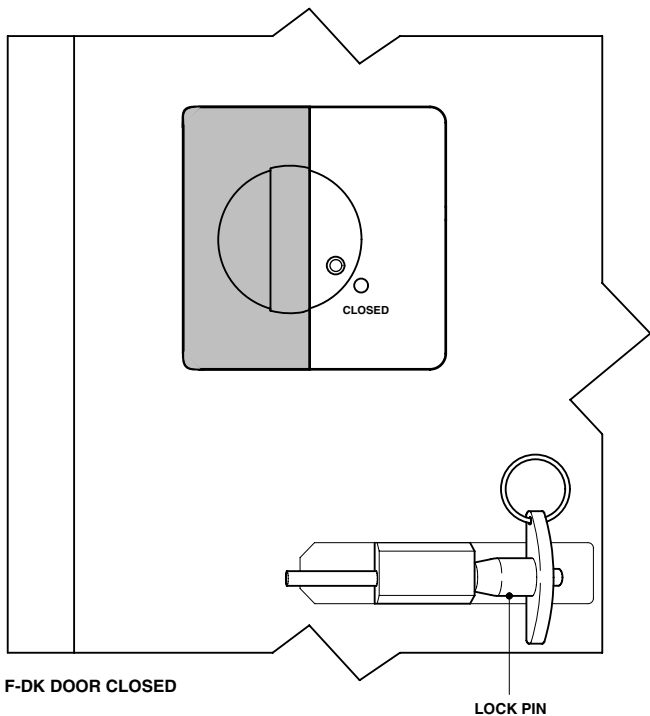


**F-DK DOOR LOCK P/B**

LOCATION: PEDESTAL



**F-DK DOOR KNOB**  
LOCATION: FLIGHT DECK SIDE





# AIRCRAFT GENERAL DOORS ALERTS

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## FWS CONTROLLED SYSTEM ALERTS

CONDITION(S) / ALERT LEVEL

ANNUNCIATIONS

AURAL

MWL / MCL

MFDU

LOCAL

|   |  |   |  |  |                               |
|---|--|---|--|--|-------------------------------|
| A | PASSENGER / SERVICE<br>DOOR(S) NOT<br>LOCKED + PARKING<br>BRAKE RELEASED | 2 |  |  | PAX / FWD<br>SERVICE DOOR     |
|   |  |   |  |  |                               |
|   |  |   |  |  |                               |
|   |  |   |  |  |                               |
| B | CARGO DOOR(S) NOT<br>LOCKED + PARKING<br>BRAKE RELEASED                  | 2 |  |  | OEL + MID + FWD<br>HATCH DOOR |
|   |  |   |  |  |                               |
|   |  |   |  |  |                               |
|   |  |   |  |  |                               |
| C | AVIONICS COMPT<br>HATCH NOT<br>LOCKED + PARKING<br>BRAKE RELEASED        | 2 |  |  | FWD<br>AVIONICS HATCH         |
|   |  |   |  |  |                               |
|   |  |   |  |  |                               |
|   |  |   |  |  |                               |
| D | FORWARD EQUIPMENT<br>HATCH(ES) NOT<br>LOCKED + PARKING<br>BRAKE RELEASED | 2 |  |  | FWD EQUIP<br>HATCHES          |
|   |  |   |  |  |                               |
|   |  |   |  |  |                               |
|   |  |   |  |  |                               |

ALERT INHIBITION

|   | ELEC PWR ON | FIRST ENG ON | TO PWR  | 80 KT | LIFT OFF | 400 FT | 1000 FT | 1000 FT | 400 FT | TOUCHDOWN | 80 KT | LAST ENG OFF | 5 MIN LATER |
|---|-------------|--------------|---------|-------|----------|--------|---------|---------|--------|-----------|-------|--------------|-------------|
|   | ENG OUT     | TAXI         | INIT TO | TO    | TO       | CLB    | CRZ     | DES     | APPR   | LAND      | TAXI  | ENG OUT      |             |
| A |             |              |         |       |          |        |         |         |        |           |       |              |             |
| B |             |              |         |       |          |        |         |         |        |           |       |              |             |
| C |             |              |         |       |          |        |         |         |        |           |       |              |             |
| D |             |              |         |       |          |        |         |         |        |           |       |              |             |

JDRS-010



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# AIRCRAFT GENERAL LIGHTS DESCRIPTION

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## GENERAL

Aircraft lighting systems controlled from the flight deck are:

- Exterior lighting.
- Flight deck lighting.
- Emergency lighting.

## EXTERIOR LIGHTING

Exterior lighting systems are controlled from the EXT LIGHTS panel, located at the overhead panel. They comprise landing, taxi, wing inspection, beacon, strobe, and navigation lights.

In each wing tip a retractable landing light is installed. A retractable landing light which also serves as taxi light, is mounted underneath the aircraft nose. If a landing and/or taxi/landing light is not retracted, a memo message is presented on the MFDU at the primary page. In the event of an engine failure, all extended lights will retract automatically except when the landing gear is down.

Two wing inspection lights are installed at the fuselage. They illuminate the wing leading edges.

Two beacon lights are installed, one at the bottom and one at the top of the fuselage.

Three navigation light units are installed; one at each wing tip and one at the tail cone. Each unit contains three lamps: two navigation lights, one of which is used as a towing light, and a strobe light. The strobe lights can be controlled manually or automatically. When controlled automatically, the strobe lights are on only when the aircraft is airborne.

## FLIGHT DECK LIGHTING

Flight deck lighting systems are controlled from the F-DK LIGHT panel at the pedestal. They include panel lights, annunciator lights, the flight-deck floodlight, and the dome light. Reading lights, chart holder lights, writing table lights, and side panel lights have near-located controls. The lights for the observer's panels can be controlled from the dome light panel.

Dome lights for general flight deck illumination are located left and right at the top of the overhead panel. In addition to the button at the F-DK LIGHT panel, dome lights can be switched on or off from the dome light panel. Flight deck floodlights, which can be controlled from off to fully bright, are provided to illuminate all flight deck panels. The floodlights are integrated in the dome light armature, but control is independent of dome light switching.

Overhead panel, glare shield, pedestal, and the instruments at the main instrument panel are provided with integral lighting. The main instrument panel and the glare shield can be illuminated with dimmable floodlights. All panels can be illuminated by one dim/bright selector. Those lights which are normally blank have two brightness levels: dim and bright. See also FLIGHT WARNING SYSTEM. All other lights have six brightness levels: three dim and three bright levels. The maximum bright level is the reset position (RST). When electrical power is applied to the aircraft, the lights come on fully bright independent of selector position; selecting the RST position engages the selector for brightness control. Annunciator lights can be tested from the TEST panel. See also section FLIGHT WARNING SYSTEM.

**NOTE:** A STORM light p/b is installed at the F-DK LIGHT panel to override the individual controls. When depressed, floodlights and the lighted annunciator lights come on fully bright.

Individual reading lights for the captain, the first officer, and the observer are installed in the flight deck ceiling. The lights have integrated on/off switches. Each side panel light is controlled by a selector which is located at the side panel. Two chart holder lights, one at each control wheel, can be controlled by a knob on top of the chart holder. Lights which illuminate the writing tables can be controlled by a knob located above the table, each controlled independently.



**AIRCRAFT GENERAL  
LIGHTS**  
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**EMERGENCY LIGHTING**

**EMERGENCY LIGHTING**

Emergency lighting comprise exit, standby, and emergency lights.

Exit lights are located above the doors, above the escape hatches, in the front of the cabin, and in the passenger compartment aisle. The exit lights are on when the landing gear is down

Standby lights are located in the passenger entrance, in the passenger compartment aisle, and in the aft cabin area. Standby lights in the toilet compartment are continuously on. All other standby lights come on automatically with battery power only available.

Emergency lights are located in the flight deck, in the standby and exit light armatures, and outside the aircraft near the escape hatches. Emergency lights also comprise the floor proximity lights near the exits and in the passenger compartment aisle. The emergency lights come on automatically when generator power is not available, provided the guarded emergency lights switch at the overhead panel is in the armed position. The emergency lights can be manually switched on with the emergency lights switch in the flight deck, or with a guarded emergency lights switch which is located adjacent to the attendant seat in the passenger entrance.

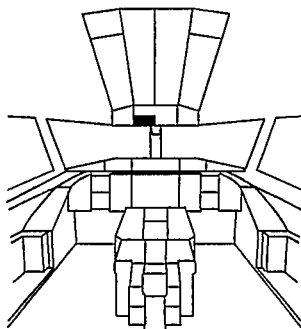
For description of the escape slide lights see EMERGENCY EQUIPMENT.





# AIRCRAFT GENERAL LIGHTS CONTROLS AND INDICATORS

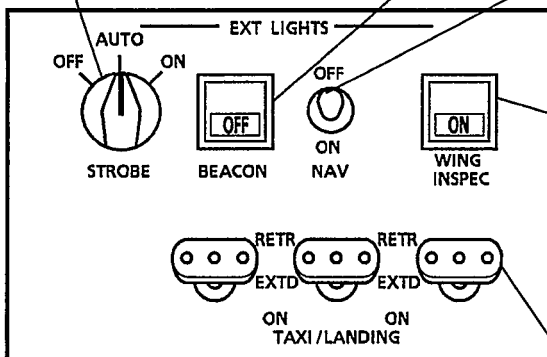
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| STROBE LIGHT SELECTOR             |
|-----------------------------------|
| OFF                               |
| – Strobe lights off.              |
| AUTO                              |
| – Strobe lights on during flight. |
| ON                                |
| – Strobe lights on.               |

| BEACON LIGHTS P/B                      |
|--|
| Normal (blank)                         |
| – Beacon lights on.                    |
| OFF (white)                            |
| – Beacon lights manually switched off. |

| NAVIGATION LIGHTS SWITCH |
|--------------------------|
|--------------------------|



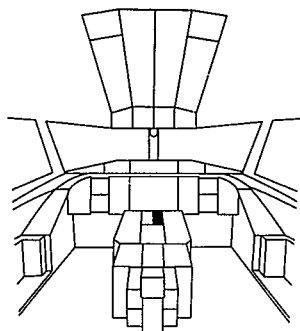
| WING INSPECTION LIGHTS P/B                     |
|--|
| Normal (blank)                                 |
| – Wing inspection lights off.                  |
| ON (blue)                                      |
| – Wing inspection lights manually switched on. |

| TAXI/LANDING LIGHT SWITCHES  |
|--|
| RETR   |
| – Landing lights off and retracted.  |
| EXTD   |
| – Landing lights extended and off.   |
| ON   |
| – Landing lights extended and on.  |
| NOTES: 1. The TAXI/LANDING LIGHT is controlled by the center switch.   |
| 2. When one or more lights are extended, a memo message TAXI/LDG LIGHT EXTD is displayed at the MFDU primary page. |



# AIRCRAFT GENERAL LIGHTS CONTROLS AND INDICATORS

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## MAIN INSTRUMENT PANEL BRIGHTNESS CONTROL KNOBS

### Rotate:

- Inner knob to adjust brightness of integral instrument lights.
- Outer knob to adjust brightness of floodlights.

## PEDESTAL BRIGHTNESS CONTROL KNOB

Rotate to adjust brightness of integral pedestal lights.

## ANNUNCIATOR BRIGHTNESS CONTROL KNOB

### DIM

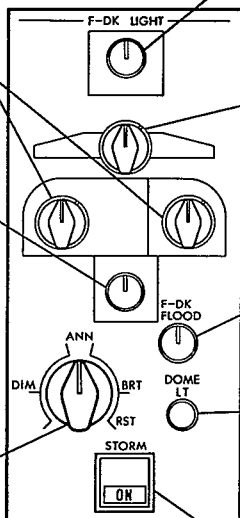
- One dim level for annunciators normally blank.
- Three dim levels for all other annunciators.

### BRT

- One bright level for annunciators normally blank.
- Three bright levels for all other annunciators.

### RST

- Maximum bright level.
- Reselects brightness level if not in accordance with selector position.



## OVERHEAD PANEL BRIGHT- NESS CONTROL KNOB

Rotate to adjust brightness of integral overhead panel lights.

## GLARE SHIELD BRIGHTNESS CONTROL KNOB

### Rotate:

- Inner knob to adjust brightness of integral lights.
- Outer knob to adjust brightness of floodlight.

## FLIGHT DECK FLOODLIGHT CONTROL KNOB

Rotate to adjust brightness of flight deck floodlight.

## DOME LIGHT BUTTON

Push to switch dome light on or off.

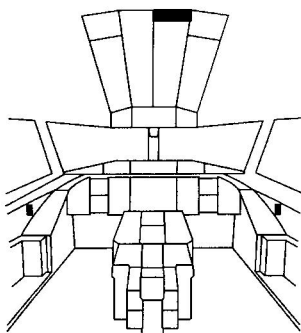
## STORM LIGHT P/B

### Normal (blank)

- Brightness of flight deck lights as set by the relevant controls.
- ON (blue)
- Floodlights and operative annunciators fully bright.

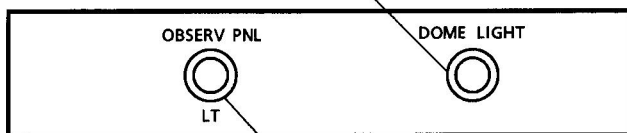
# AIRCRAFT GENERAL LIGHTS CONTROLS AND INDICATORS

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## DOME LIGHT BUTTON

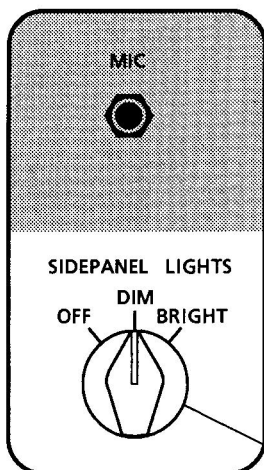
Push to switch dome light on or off.



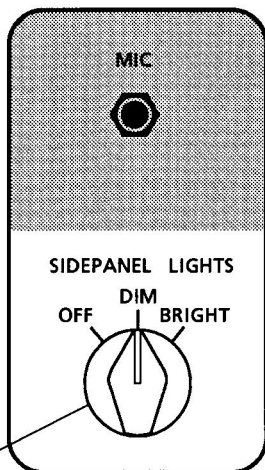
DOME LIGHT PANEL

## OBSERVER PANEL LIGHT BUTTON

Push to switch the observer panel light on or off.



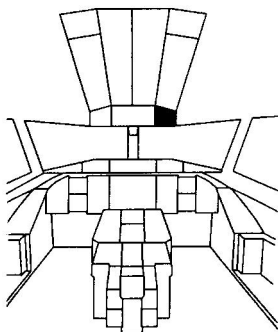
LH SIDE PANEL



RH SIDE PANEL

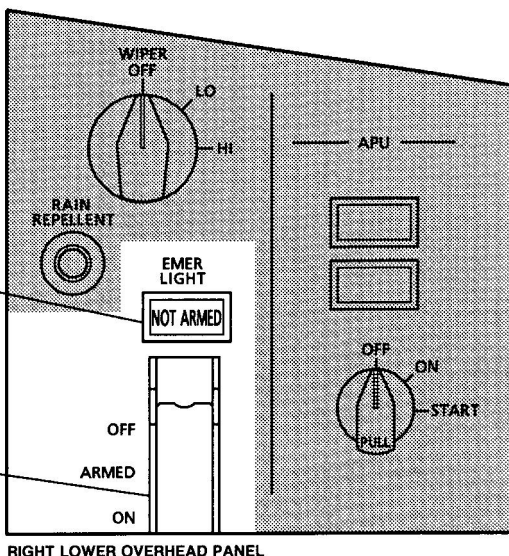
## SIDE PANEL LIGHTING SELECTOR

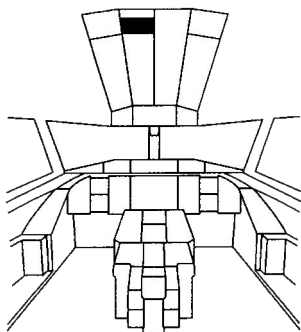
- OFF  
– Side panel light off.
- DIM  
– Side panel light on, dimmed.
- BRT  
– Side panel light on, bright.



|   |
|---|
| <b>EMERGENCY LIGHTS NOT ARMED LIGHT</b> |
| Normal (blank)                          |
| - Emergency lights armed.               |
| NOT ARMED (amber)                       |
| - Emergency lights selector ON or OFF.  |

|                                |
|--------------------------------|
| <b>EMERGENCY LIGHTS SWITCH</b> |
| OFF                            |
| - Emergency lights off.        |
| ARMED (quarred position)       |
| - Emergency lights armed.      |
| ON                             |
| - Emergency lights on.         |



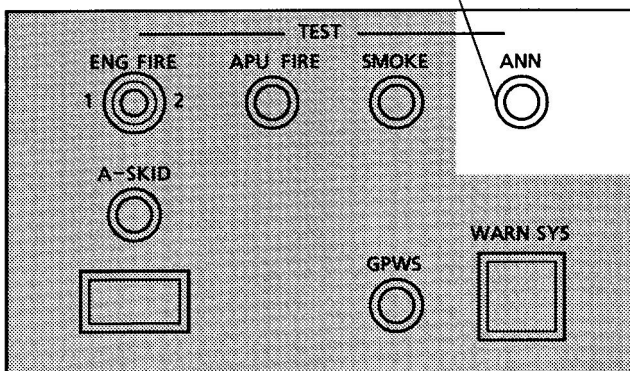


**ANNUNCIATOR TEST BUTTON**

Depress to test the :

- White, blue and green annunciator lights.
- Red and amber SAP alert lights, (see section Flight Warning System).

During test all these lights should come on.





**AIRCRAFT GENERAL  
LIGHTS  
CONTROLS AND INDICATORS**

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