

SECTION 15

LIGHTING

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SECTION 15

LIGHTING

1. GENERAL (Figures 1 to 3)

The lighting system includes interior lighting and exterior lighting. The interior lighting consists of flight compartment, passenger compartment and service compartment lights. The exterior lighting consists of recognition/taxi and landing, navigation, anti-collision, wing ice inspection and emergency lights.

2. FLIGHT COMPARTMENT LIGHTING (Figures 4 to 7)

A. Floodlighting

Twelve fluorescent lights, installed below and along the glareshield, provide floodlighting for the following panels:

<u>Panel</u>	<u>Control Location</u>
- Centre instrument panel	Centre pedestal lighting panel
- Pilot's side console	Pilot's facia panel
- Pilot's instrument panel and side panel	Pilot's side lighting panel
- Copilot's side console	Copilot's facia panel
- Copilot's instrument panel and side panel	Copilot's side lighting panel

Power for the centre instrument panel floodlighting is supplied from the battery bus - left via LIGHTS CENTER FLOOD circuit breaker to ensure availability of supply. Power for pilot's floodlighting is supplied from the 28-volt dc essential bus via LIGHTS CAPT FLOOD circuit breaker, and for the copilot's floodlighting from the battery bus - right via F/O FLOOD LIGHTS circuit breaker.

B. Integral Lighting

The integral lighting is controlled by four dimmer switches, one on each of the following panels:

- Pilot's side lighting panel (refer to Figure 4)
- Copilot's side lighting panel (refer to Figure 5)
- Overhead lighting panel (refer to Figure 6)
- Centre pedestal lighting panel (refer to Figure 7)

Power for the centre instrument panel and the centre pedestal integral lighting is supplied from the ac essential bus via INSTR PNL LTS CENTER circuit breaker. The pilot's integral lighting is supplied from the same source via INSTR PNL LTS CAPT circuit breaker. The copilot's integral lighting is supplied from the ac main bus No. 2 via LIGHTS F/O PNL circuit breaker. Under normal conditions, the integral lighting for the overhead panel and the left and right outboard circuit breaker panels is supplied from the ac main bus No. 2 via LIGHTS OVHD PNL circuit breaker. When main power is not available, power is supplied from the battery bus - right via LIGHTS OVHD PANEL circuit breaker, but not to the left and right outboard circuit breaker panels and the lighting control panel on the overhead panel. Internal lighting for the standby horizon indicator is supplied from the ac essential bus via the INST dimmer switch on the centre pedestal lighting panel. When this power is not available, lighting is supplied directly from the battery bus - right via the STBY CMPS/HOR LTS circuit breaker and remains at a fixed intensity. Internal lighting for the standby compass is supplied from the battery bus - right via the STBY CMPS/HOR LTS circuit breaker and is controlled by the STBY COMP switch on the overhead panel.

C. Incandescent Lighting

The incandescent lighting consists of two floor lights, one at each crew position adjacent to the rudder pedals, and two map reading lights, one on either side of the overhead panel. Both floor lights are supplied from the main dc bus No. 1 via LIGHTS CKPT FLOOR circuit breaker and are controlled by the FLOOR switches on the pilot's and copilot's side lighting panels. The left reading light is supplied from the battery bus - left via the CAPT MAP RDNG LIGHT circuit breaker and controlled by the LH MAP OFF BRT switch on the overhead panel. The right reading light is normally supplied from the main dc bus No. 2 via the F/O MAP RDNG LT circuit breaker and controlled by the RH MAP OFF BRT switch on the overhead panel. When main power is not available the light is supplied from the battery bus - right via LIGHTS F/O MAP circuit breaker.

3. PASSENGER COMPARTMENT LIGHTING**A. Dome and Boarding Lights (Figure 6)**

Lighting for the passenger compartment consists of dome and boarding lights, located at the passenger/crew entrance door. Control of the dome light is by a DOME switch on the lighting control panel on the overhead panel.

Control of the boarding light is by a BOARDING switch on the lighting control panel on the overhead panel, or by a switch beside the entrance door. Power to the dome light is supplied from the battery bus via the LIGHTS DOME circuit breaker. Power to the boarding light is supplied from the battery direct bus via the BOARD LTS circuit breaker.

B. Cabin Signs (Figure 7)

The NO SMOKING and FASTEN SEAT BELT cabin signs are controlled by separate NO SMKG and SEAT BLTS switches on the cabin signs control panel on the centre pedestal. The switches have three positions, ON/OFF/AUTO. In the AUTO position, both signs light up automatically if any of the following occurs:

- Cabin pressure is low
- Landing gear lever is set to DN
- TEST switch on the landing gear control panel is pressed

The FASTEN SEAT BELT sign also comes on if the flaps are moved from the 0-degree position.

4. SERVICE COMPARTMENT LIGHTING (Figure 6)

There can be one or two lights in the underfloor avionics bay, one in the rear fuselage equipment bay, and one in the nose landing gear well. The lights are controlled by a SERVICE light switch on the miscellaneous lighting panel on the overhead panel. The service lights in the underfloor avionics bay and the rear fuselage equipment bay can also be controlled by switches located in the respective bays. The service lights are supplied from the battery direct bus via SERVICE LTS circuit breakers.

5. EXTERIOR LIGHTING (Figures 6 to 8)**A. Recognition/Taxi and Landing Lights**

The recognition/taxi and landing lights are mounted on the inboard leading edge of each wing. The lights are controlled by three ON/OFF switches on the LANDING LT RECOG TAXI LT panel on the centre pedestal. The RECOG TAXI LT switch controls both recognition/taxi lights. The L and R LANDING LT

switches control the associated landing and recognition/taxi lights. Power is supplied to the R LANDING LT switch from the main ac bus No. 2 via the LIGHTS R LAND circuit breaker, and to the L LANDING LT switch from the main ac bus No. 1 via the LIGHTS L LAND circuit breaker.

B. Navigation Lights

The navigation lights are controlled by the NAV switch on the external lighting panel on the overhead panel and are supplied from the main ac bus No. 1, via the LIGHTS/NAV circuit breaker.

C. Anti-Collision Lights

The anti-collision lights are located one with each navigation light assembly. The anti-collision lights are controlled by the ANTI COLLISION switch on the external lighting panel on the overhead panel.

The wing anti-collision lights are supplied from the main dc bus No. 2 via the WING ANTI COL circuit breaker, and the tail anti-collision light is supplied from the main dc bus No. 1 via the LIGHTS REAR ANTI COL circuit breaker.

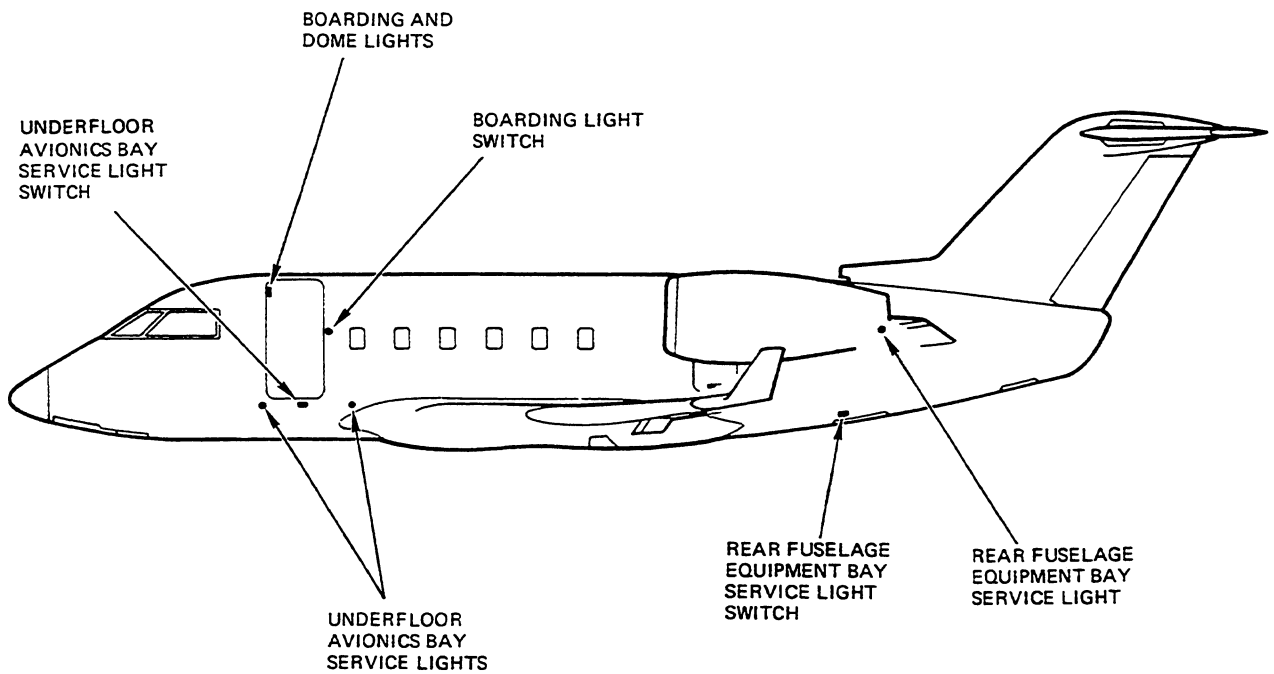
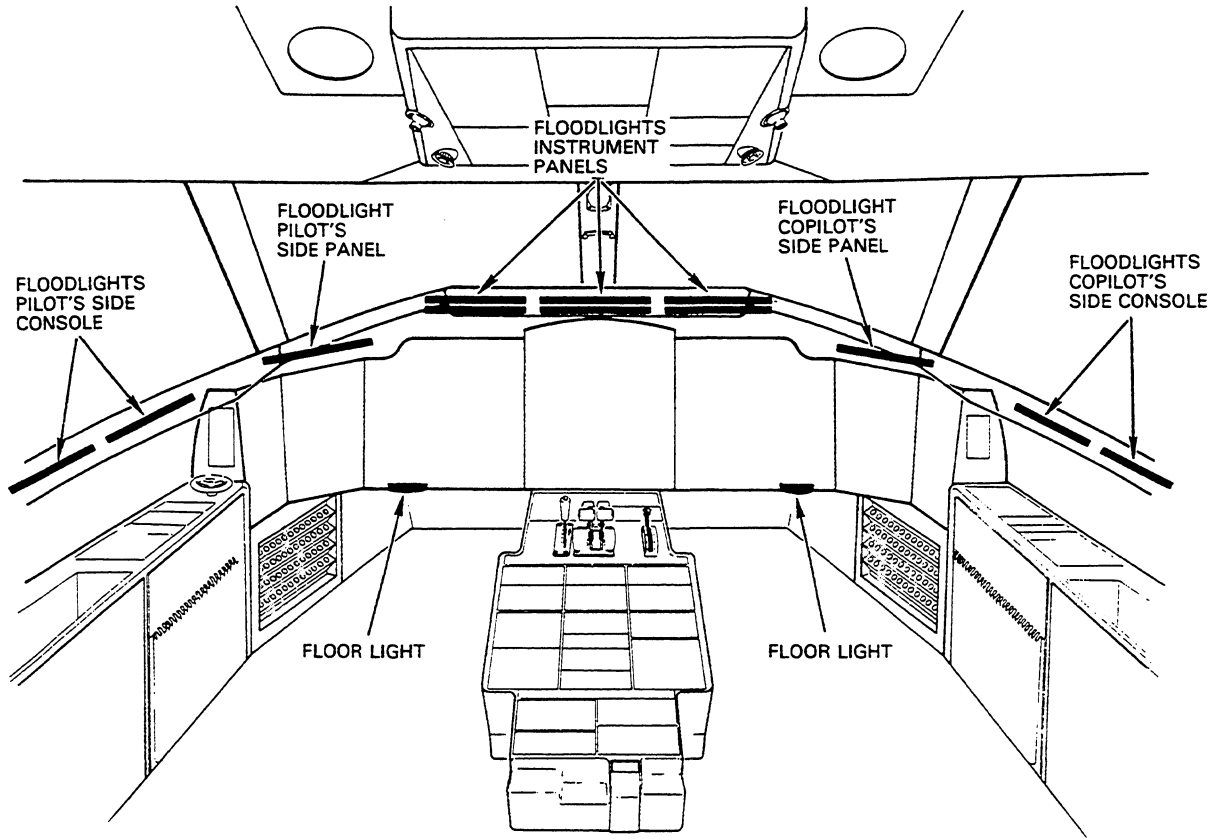
D. Wing Ice Inspection Lights

The wing ice inspection lights are located above the wing, on the left and right sides of the fuselage. The lights are controlled by a WING switch on the external lighting panel on the overhead panel and supplied from the main dc bus No. 1 via the LIGHTS WING INSP circuit breaker.

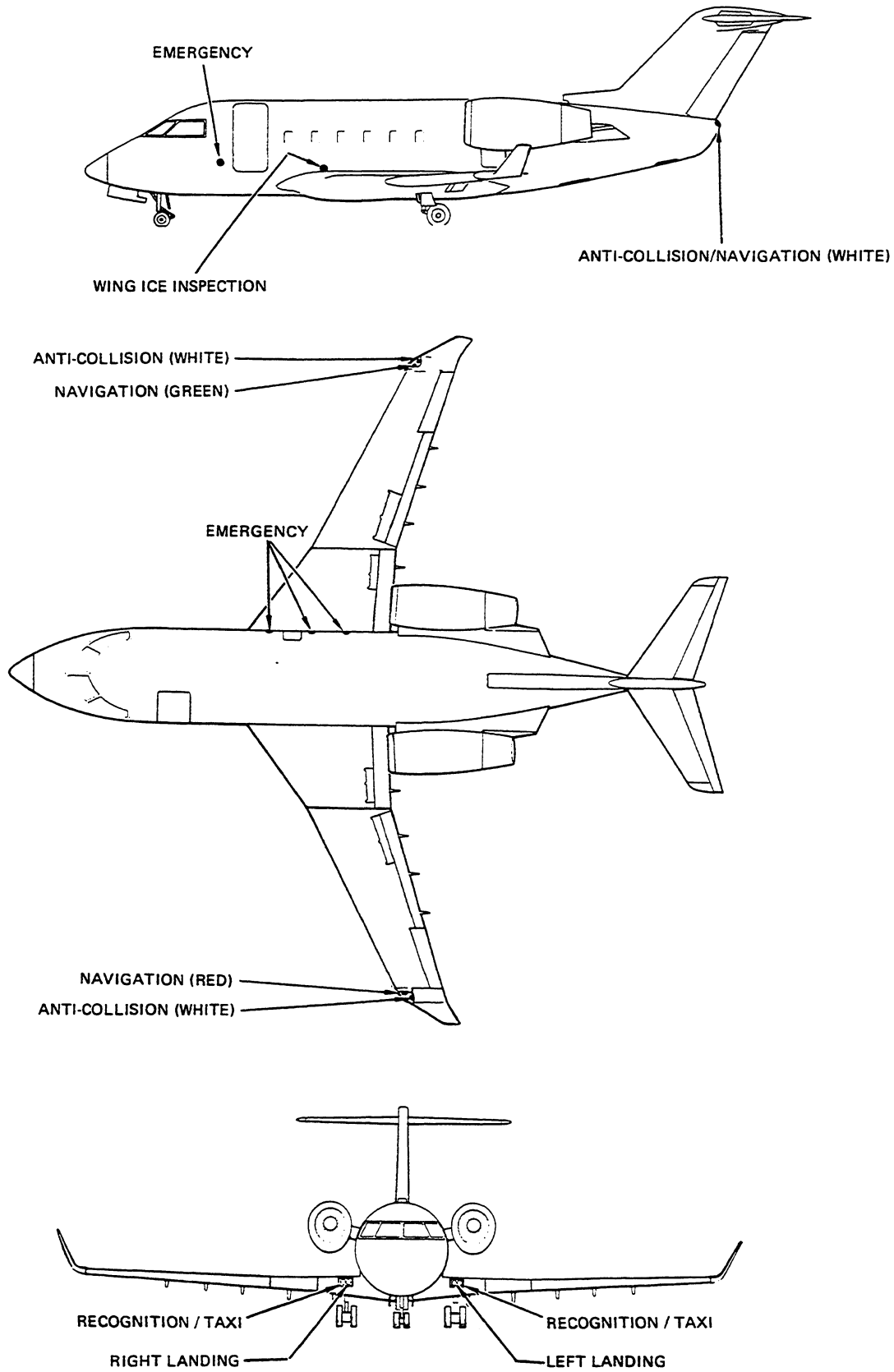
E. Emergency Lights

Four emergency lights are provided for use during emergency evacuation of the aircraft. Three overwing floodlights are located on the right side of the fuselage and a ground floodlight is located forward of the passenger/crew entrance door. Power for the lights is supplied by two emergency batteries.


The lights are controlled from the emergency lighting panel by a three-position switch, ON/OFF/ARM, which is supplied from the dc essential bus via the EMERG LT circuit breaker. Two lights, EMER LTS ON and EMER LTS OFF, on the emergency lighting panel, show the status of the emergency lights (refer to Figure 8).



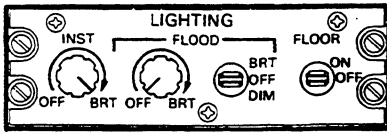
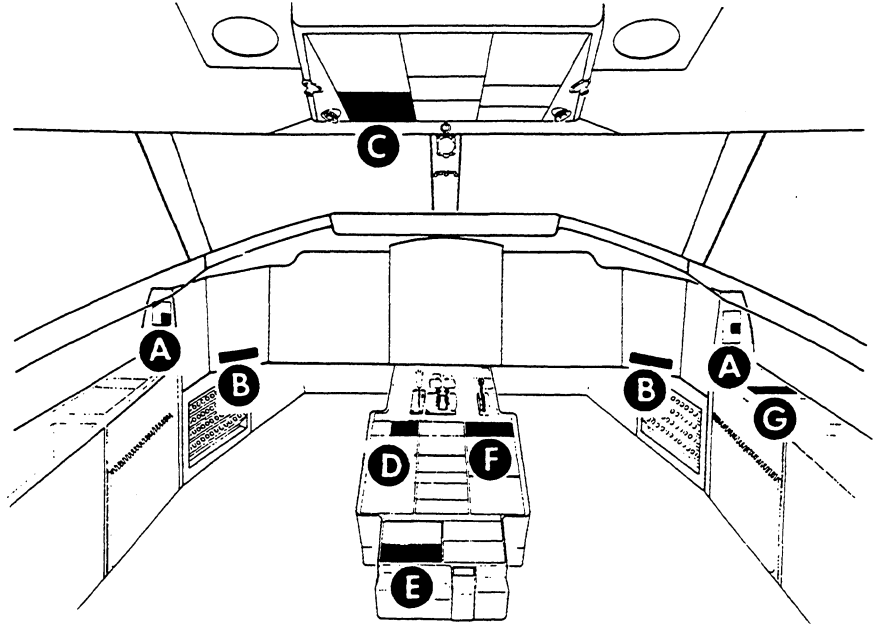
Interior Lights Location
Figure 1



Exterior Lights Location
Figure 2

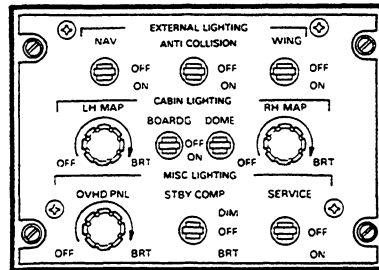
FLOOD
LTS
BRIGHT
OFF 
DIM

A



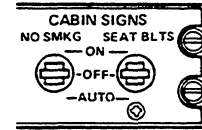
PILOT'S AND COPILOT'S SIDE LIGHTING PANEL

B



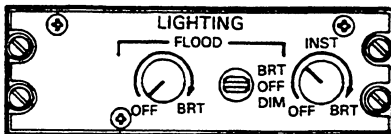
OVERHEAD LIGHTING PANEL

C



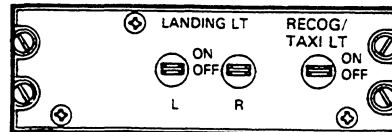
CABIN SIGNS CONTROL PANEL

D



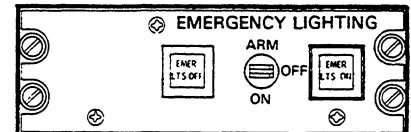
CENTRE PEDESTAL LIGHTING PANEL

E



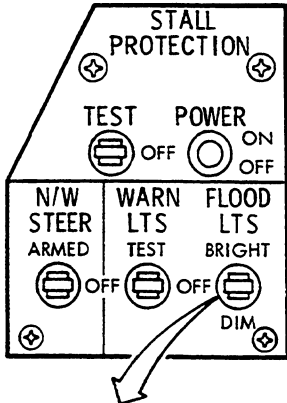
LANDING/RECOG/TAXI LIGHTING PANEL

F



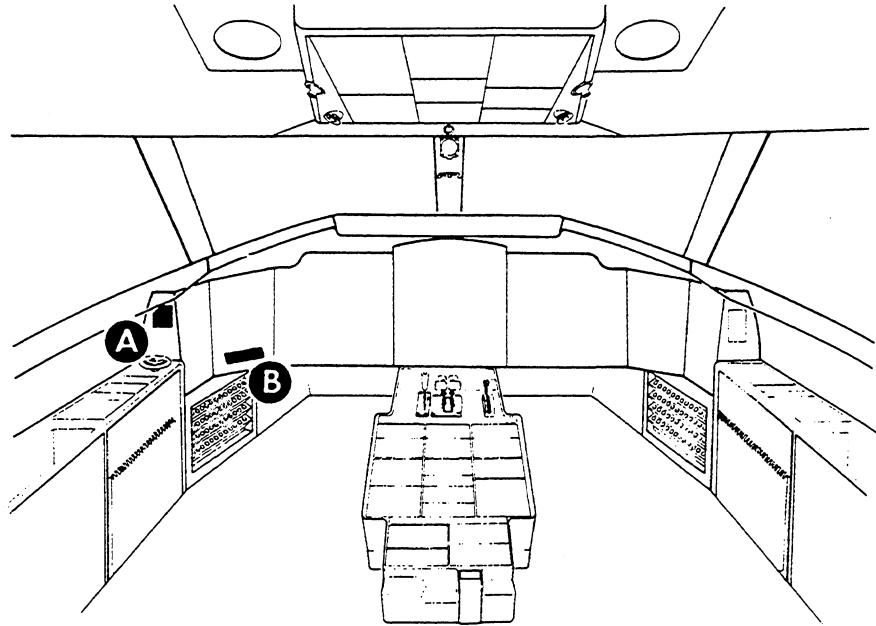
EMERGENCY LIGHTING PANEL

G



FLOOD LTS SWITCH

Three-position switch controls fluorescent lights for the pilot's side console panel.

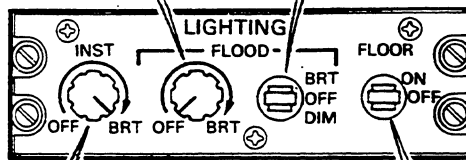


FLOOD DIMMER SWITCH

Controls one of two fluorescent lights for the pilot's instrument panel.

FLOOD SWITCH

Three-position switch controls one of two fluorescent lights for the pilot's instrument panel and the single light for the pilot's side panel.



INST DIMMER SWITCH

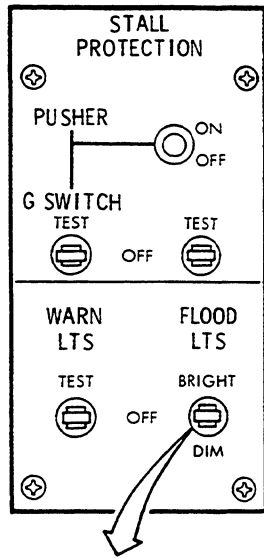
Controls panel and instrument integral lighting on the ac essential bus circuit breaker panel and the pilot's facia panel, side instrument panel, instrument panel, side console panel and glareshield.

FLOOR SWITCH

Controls pilot's floor light.

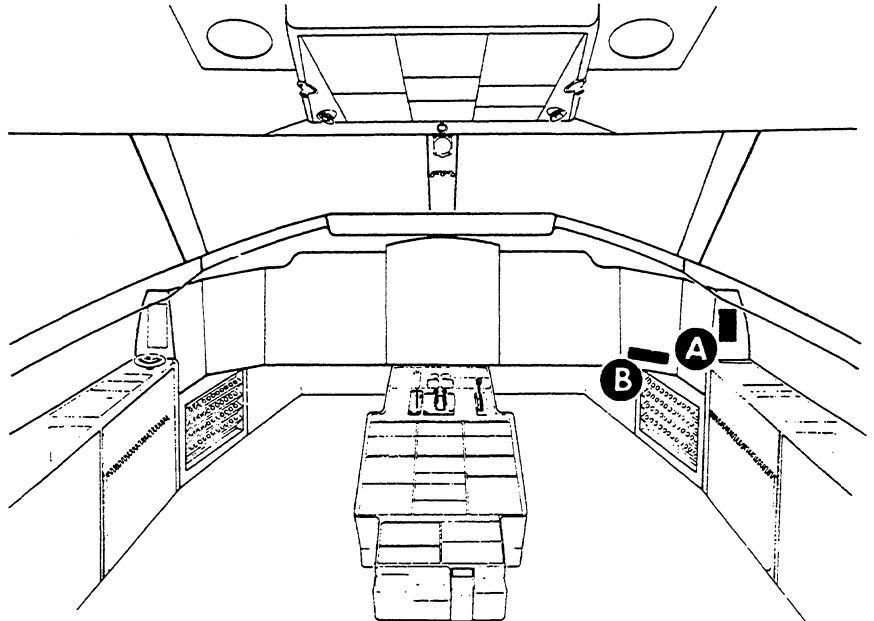


**Pilot's Lighting Controls
Figure 4**



FLOOD LTS SWITCH

Three-position switch controls fluorescent lights for the copilot's side console panel.

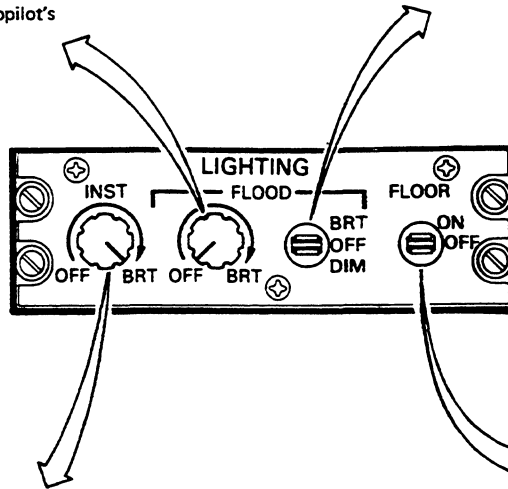


FLOOD DIMMER SWITCH

Controls one of two fluorescent lights for the copilot's instrument panel.

FLOOD SWITCH

Three-position switch controls one of two fluorescent lights for the copilot's instrument panel and the single light for the copilot's side panel.



INST DIMMER SWITCH

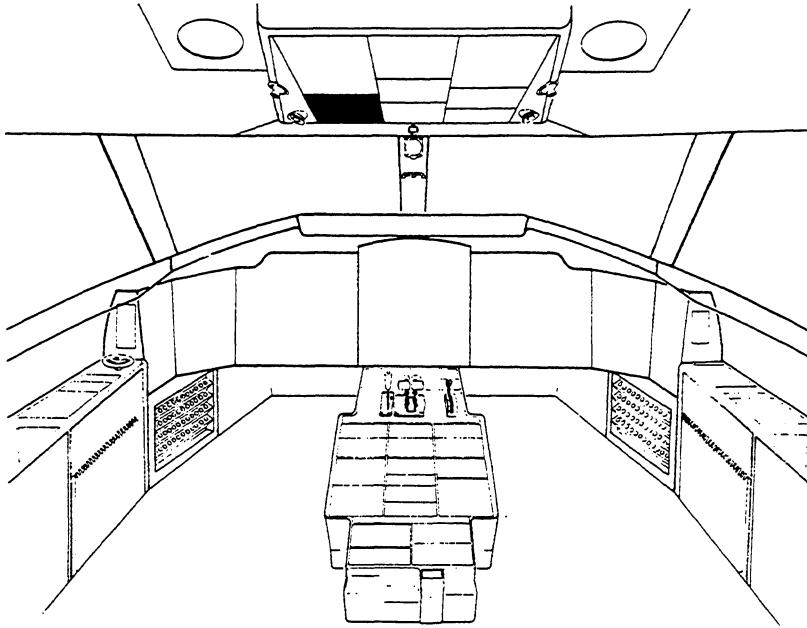
Controls panel and instrument integral lighting on the dc essential bus circuit breaker panel and the copilot's facia panel, side instrument panel, instrument panel, side console panel and glareshield.

FLOOR SWITCH

Controls copilot's floor light.



**Copilot's Lighting Controls
Figure 5**



ANTICOLLISION SWITCH

Controls wing and tail cone anti-collision lights.

NAV SWITCH

Controls wing and tail cone navigation lights.

BOARDING SWITCH

Controls cabin boarding light.

DOMESWITCH

Controls cabin dome light.

LH MAP DIMMER SWITCH

Controls brightness of LH MAP read light.

RH MAP DIMMER SWITCH

Controls brightness of RH MAP read light.

OVHD PNL DIMMER SWITCH

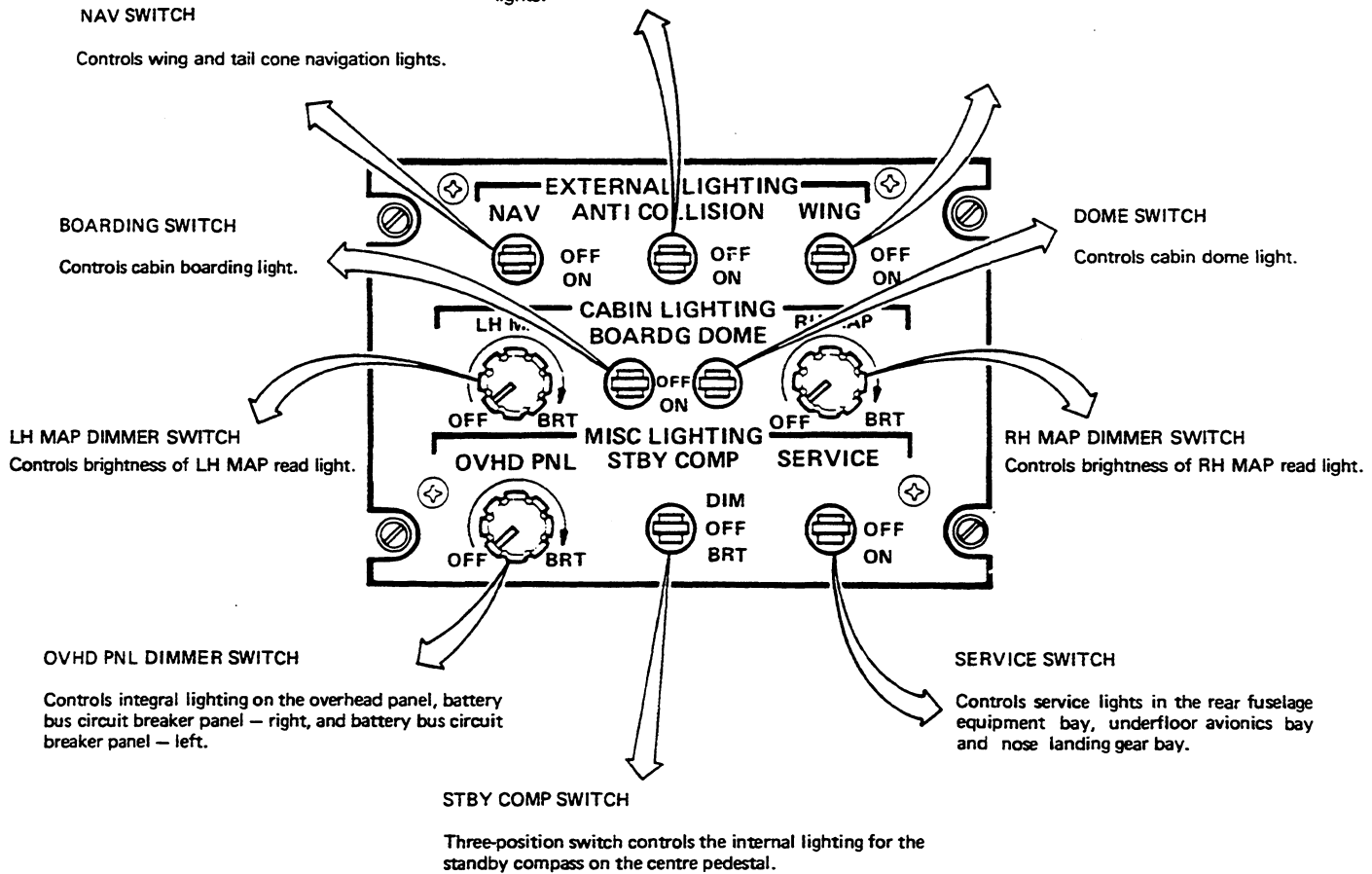
Controls integral lighting on the overhead panel, battery bus circuit breaker panel – right, and battery bus circuit breaker panel – left.

SERVICE SWITCH

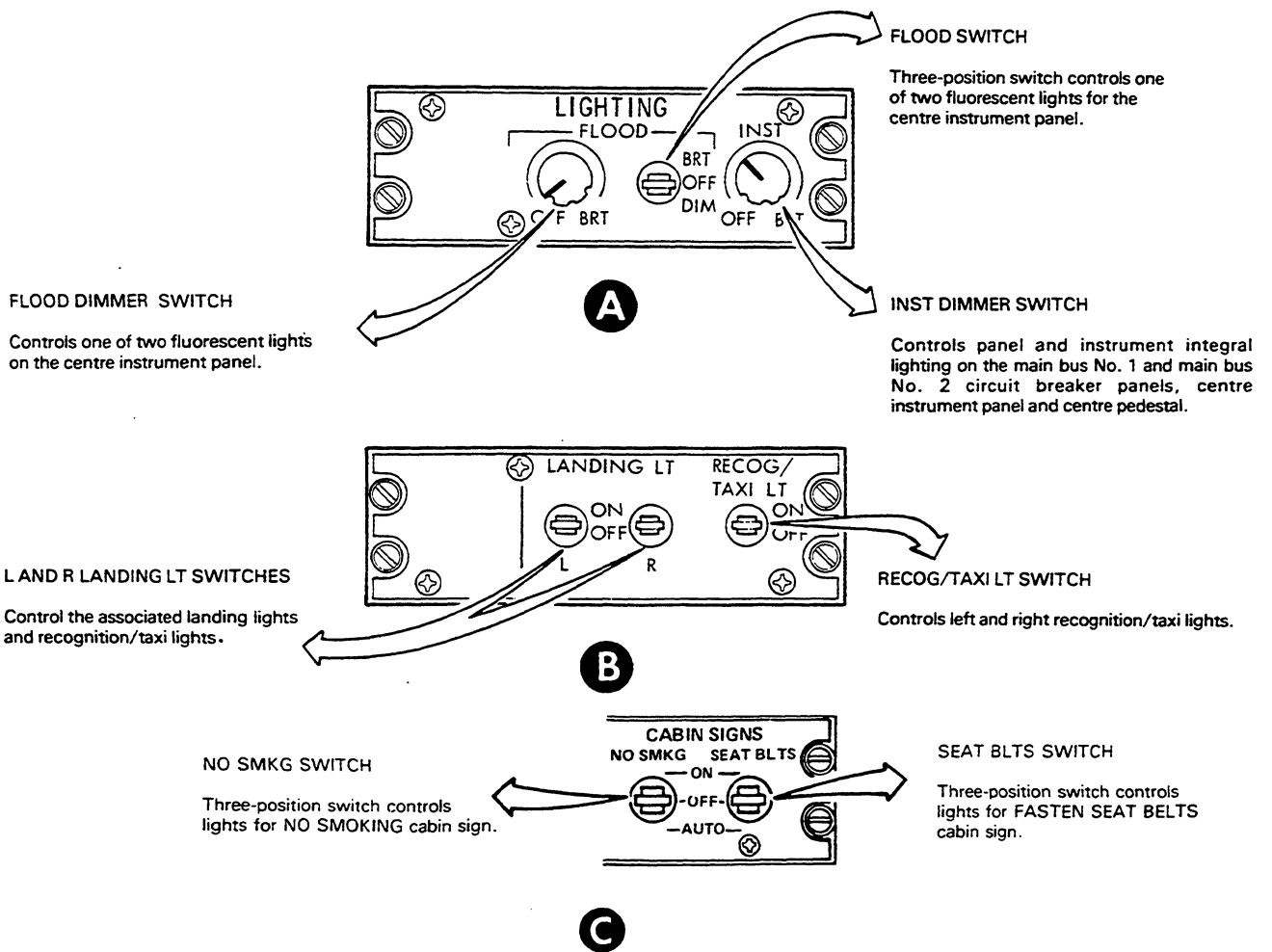
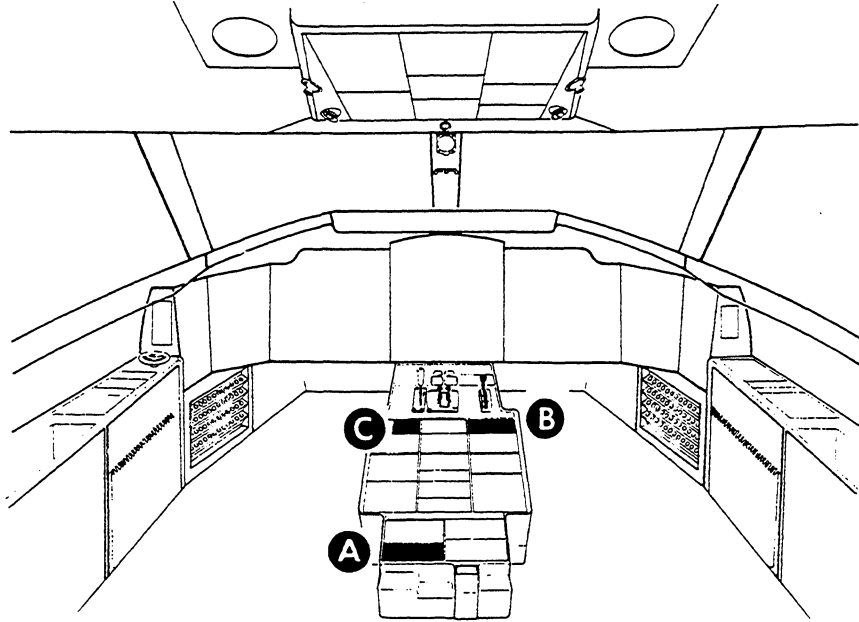
Controls service lights in the rear fuselage equipment bay, underfloor avionics bay and nose landing gear bay.

STBY COMP SWITCH

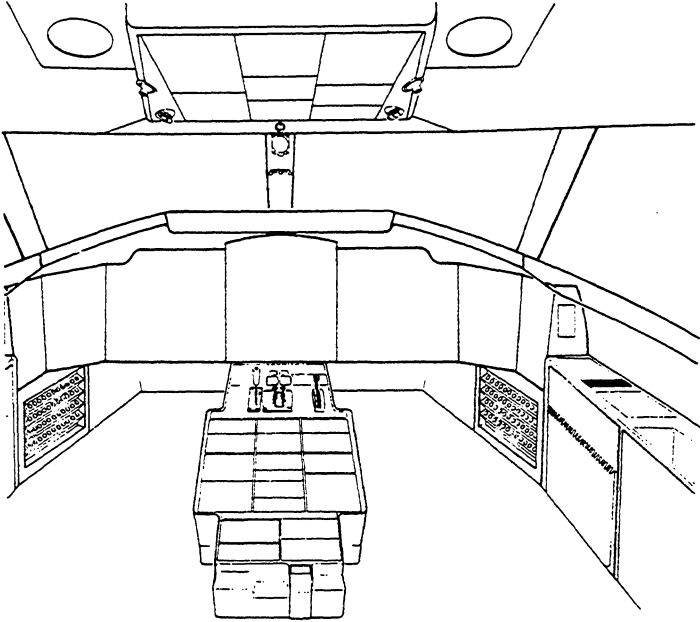
Three-position switch controls the internal lighting for the standby compass on the centre pedestal.



Overhead Panel Lighting Controls
Figure 6



Centre Pedestal Lighting Controls
Figure 7

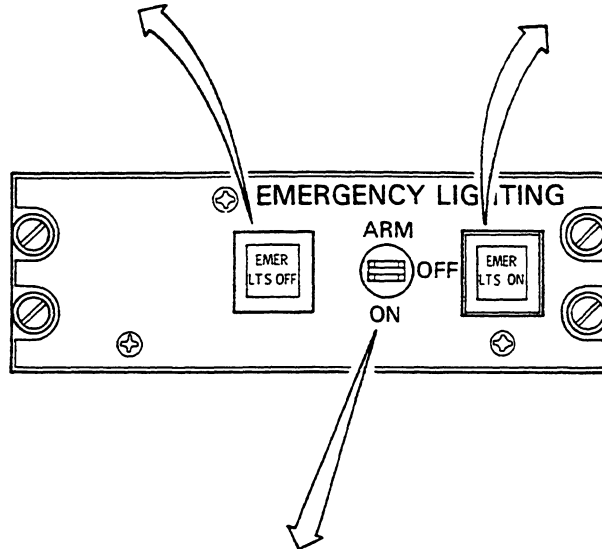


EMER LTS OFF LIGHT

EMER LTS OFF light comes on whenever emergency lights are out. (Emergency batteries are on charge whenever this light is out.)

EMER LTS ON LIGHT

EMER LTS ON light comes on whenever emergency lights are on.



EMERGENCY LIGHTING SWITCH

Three-position switch, supplied from the dc essential bus, controls the three overwing floodlights and the ground floodlight.

ARM—While power is available from the dc essential bus, the emergency lights remain out and the batteries are on charge. If power to the switch is lost, the emergency lights come on automatically and are powered by the emergency batteries.