

General, Schematics

AIRCRAFT DIMENSIONS





Aircraft General

General, Schematics





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ANTENNAS LOCATION



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MINIMUM TURNING RADIUS



A/C CG	EFFECTIVE TURN ANG	Х	Y	А	R3	R4	R5	R6
FWD 18%	60°2	50.89 15.51	28.77 8.77	105.42 32.13	58.63 17.87	103.25 31.47	77.37 23.58	97.77 29.80
AFT 35 %	55°8	50.89 15.51	34.16 10.41	113.69 34.65	61.52 18.75	108.17 32.97	79.53 24.24	100.92 30.76



Cockpit, Description

GENERAL

All aircraft and systems controls, required for the conduct of flight, are arranged in such a way that the crew positions are forward facing and all crew members can monitor instruments and systems.

The concentration of the systems controls on the overhead panel was achieved by extensive employment of pushbutton type switches, directly installed in the systems synoptic.

Status and failure indications are integrated into the pushbutton switches. Pushbutton switch positions and illuminated indications are based on a general concept with the « light out» condition for normal continuous operation as the basic rule.

Few exceptions excluded, the illumination of a light indicates a failure condition or an abnormal pushbutton switch selection. Whenever possible the failure warning is integrated into that pushbutton switch which has to be operated for corrective action.

If the failure warning is not integrated into the pushbutton switch, the warning is adjacent to the pushbutton switch for corrective action.

The installations on the lateral panel are intended for ground use and maintenance action only.

For the comfort, convenience and safety of the crew, various furnishings are fitted in the cockpit as shown in the figure EQUIPMENT AND STORAGES.

PRINCIPLES FOR PUSHBUTTON SWITCHES WITH INTEGRATED INDICATIONS

COLOR OF LIGHT	INDICATION
No light illuminated, except flow bars	Normal basic operation.
BLUE	Temporarily required system in normal operation.
GREEN	Back-up or alternate system selected.
WHITE	P/B Switch selection other than normal basic operation.
AMBER	Caution indication.
RED	Alert indication.

POSITION	BASIC FUNCTION
In (pressed)	ON, AUTO, NORM, OPEN
Out (released)	OFF, MAN, ALTN, SHUT

<u>Note</u>: Some pushbuttons or lights are provided with two dots which indicate there is no bulb in corresponding part.



Cockpit, Schematics

COCKPIT LAYOUT



(4) RH Lateral Console

- (8) Fourth Occupant Folding Seat
- (9) LH Lateral Console



GENERAL

For aircraft lighting different systems are installed. Controlled from the cockpit:

- Cockpit Lighting
- Annunciators lighting
- Cabin SIGNS Lighting
- Emergency Lighting
- EXTERIOR Lighting

Controlled from the pursers panel:

- Cabin Lighting
- Emergency Lighting

COCKPIT LIGHTING

The cockpit is provided with integral instrument lighting and instrument panel lightplates.

For illumination of instrument panels fluorescent tubes and incandescent spot lights are installed. Work surfaces and side consoles are illuminated by incandescent spot lights and flood lights.

The intensity of all panel lighting can be adjusted. A STORM switch is provided to override the intensity selection. For general cockpit illumination dimmable DOME lights are installed. When electrical power is supplied by batteries, only one DOME light will illuminate.

The avionics compartment is provided with an individual lighting system. If in automatic mode it illuminates on the ground and extinguishes during flight.

ANNUNCIATOR LIGHTING

All the annunciator lights in the cockpit can be adjusted depending on ANN LT « TEST/BRT/DIM » switch position on the overhead panel.

Lights dimming is ensured by an electronic box.

- On instruments panel dimming depends on cockpit luminosity measured by a photo cell.
- On overhead panel and pedestal the lights are dimmed to a fixed level.

An annunciator light test is provided to verify cockpit annunciator bulbes operating.

The test can be made by selecting TEST position on ANN LT « TEST/BRT/DIM » switch and by visually checking all lights illumination.

It also can be made automatically by depressing, AUTO TEST pb switch.

The test is ensured by an electronic box located in lateral panel which illuminates in a predetermined order the light to detect the faulty bulbes.

CABIN SIGNS LIGHTING

Throughout the cabin FASTEN YOUR SEAT BELTS signs illuminate if the SEAT BELTS switch is selected to ON or in the event of an excessive depressurization. The RETURN TO YOUR SEAT signs in the lavatories illuminate with the FASTEN YOUR SEAT BELTS signs. The NO SMOKING and the EXIT signs throughout the cabin illuminate if the NO SMOKING switch is selected to ON or, if AUTO is selected when the landing gear is extended.

In the event of an excessive depressurization the NO SMOKING and the EXIT signs illuminate regardless of switch position.

Illumination of any cabin sign is accompanied by a low tone chime in the cabin.

CABIN LIGHTING

For normal cabin lighting fluorescent lights, lighting strips and passenger reading lights are installed.

Cabin lighting control is from the pursers panel. For the event of normal cabin lighting failure a minimum lighting system is provided for cabin and lavatories. (Refer to Emergency Lighting).

EXTERIOR LIGHTING

The exterior lighting includes the following systems : STROBE, BEACON, RWY TURN OFF, NAV and LOGO, NOSE, LAND, WING.

- Two (or three) STROBE lights are installed in each wing tip. Theyflash white and are used as supplemental recognition lights.
- BEACON lights are two red anticollision lights, one on the upper and one on the lower center fuselage.
- RWY TURN OFF lights are located on each side of the fuselage nose section. They are used during ground operation for lateral area illumination.
- NAV lights are located on each wing tip. The red (LH) and the green (RH) lights in the leading edge and the white lights in the trailing edge contain two bulbes each. LOGO lights are installed in the upper surface of each horizontal stabilizer to illuminate the company logo on the vertical stabilizer.
- NOSE lights are two reflectors attached to the nose gear strut. Dual filaments permit the selection of high intensity for takeoff and low intensity for taxiing.



Lighting, Description

Aircraft General

- LAND lights are located below each wing, installed in a flap fairing. They illuminate only when fully extended.
- WING lights are provided on both sides of the fuselage. On each side two reflectors are installed, one to illuminate the engine air intake, the other to illuminate the wing leading edge. They are used primarily to detect ice accretion.

EMERGENCY LIGHTING

The emergency lighting includes cabin ceiling, wall and seat lights, exit location and marking, overwing emergency lights and escape slide lighting. The electrical power supply is 28 VDC from the DC ESS BUS or, 6 VDC from integral batteries in emergency power supply units.

The batteries are charged from the 115 VAC NORM BUS.

The battery capacity provides approximately 12 minutes of light illumination.

EXIT signs and cabin ceiling lights automatically illuminate:

- when the NO SMOKING switch is selected ON or AUTO with the landing gear extended.
- or

- if the EMER EXIT LT selector is selected to ON or

- automatically if the EMER EXIT LT selector is at ARM and the 28 VDC, DC NORM BUS power supply fails,

or

- if the EMER pushbutton on the pursers panel is pressed.

or

- in case of excessive cabin decompression

Low intensity flood lights are installed in the immediate vicinity of the doors/emergency exits, approx. 500 mm from floor level. The lights serve the purpose of adequately illuminating the cross aisles/emergency exit areas and portions of the adjoining main aisles. The caption « EXIT » on the face (upper portion) of the light serves the purpose of marking the exits. The area of inscription (on the light) is translucent/self illuminating thus ensures that a marking of the exit(s) is always available even when the light has failed.

In addition low intensity flood lights are installed on the aisle seats (inboard side). The number of light units installed are adequate to provide a low level illumination of the main aisles.

The escape slide lights are equipped with an integral lighting system. The escape slide lights illuminate automatically when the slide is deployed.



Lighting, Schematics

EXTERIOR LIGHTING



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Aircraft General

Lighting, Controls







(1) DOME Switch

• DOME:

All dome lights are illuminated. Off: All dome lights are off.

(2) DIM Switch

• **BRT**:

Dome lights are on with maximum intensity.

• DIM:

Dome lights are dimmed.

(3) STORM Switch

• STORM:

Fluorescenttubesandflood lights are on with maximum intensity

• OFF:

Fluorescent tubes are off. Flood lights are on and intensity is controlled from flood rheostat.

B. OVERHEAD PANEL READING LT KNOB



The Knob selects activation and intensity of the overhead panel reading light.

All others reading lights in the flight compartment are controlled and regulated by rotation of the spot light.

C. ANN LT and STBY COMPASS PANEL



Lighting, Controls

(1) ANN LT Selector

- TEST:
 - All cockpit annunciator lights will come on bright. The windshear warning (if installed) is triggered.
- **BRT**:
 - Annunciator lights are illuminate bright.
- DIM:
 - Annunciator lights brightness:
 - on Captain, F/O and center instrument panel is controlled by photo cells,
 - on overhead panel, center pedestal and glareshield is dimmed,

(2) STBY COMPASS Switch

- STBY COMPASS:
- Integral lighting of standby compass comes on.
- OFF:

Lighting is off

D. GLARESHIELD LIGHTING CONTROL

(1) Glareshield Lighting knob

Knob rotation controls the windows and pb switches integrated lighting of the glareshield panel.



(1) F/O INSTLTKnob

Instrument integral lighting intensity on F/O instrument panel is controlled from OFF to BRT.

(2) MAP LT Knob

- **OFF:** Map table light is off.
- BRT: Map table light is on and regulated in intensity.

(3) CONSOLE FLOOD LT Switch

- BRT: F/O console lights illuminate with maximum intensity.
- DIM: Console lights are dimmed.
- OFF: Console lights are off.

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Lighting, Controls

F. PED and OVHD PANEL LT CONTROL:

I. AUTO TEST PANEL



(1) PED & OVHD PANEL LT knob

Center panel and overhead panel integral instrument lighting intensity is controlled from OFF to BRT.

G. CHART HOLDER

CAPT and F/O chart holder lights are controlled by knob located on the chart holder.





(1) CAPT and CTR INST LT knob

Instrument integral lighting intensity on CAPT and CTR instrument panels is controlled from OFF to BRT.

(2) MAP LT Knob

- OFF: Map table light is off.

- **BRT:** Map table light is on and regulated in intensity.

(3) CONSOLE FLOOD LT switch

- **BRT:** Captain console lights illuminate with maximum intensity.
- DIM: Console lights are dimmed.
- OFF: Console lights are off.

(4) MAIN INST PNL FLOOD LT knob

- **OFF:** Main instrument panel lights are extinguished.

- **BRT:** Main instrument panel lights are illuminated and regulated in intensity.



The annunciator light test is used to verify cockpit annunciator bulbes operating.

(1) AUTO TEST pushbutton switch

- **Normal** (Released-out): Automatic test is not operating.
- **ON** (Pressed in and magnetically held): The ON light illuminates white.

The automatic test sequence is in progress. All lights are illuminated and extinguished in a predeterminated order.

The ON light extinguishes and the switch pops out at the end of the sequence if there is no faulty bulb.

- FAULT (Pressed in): During the test sequence, if there is a faulty bulb, the FAULT light illuminates amber, the test sequence stops and all the lights around the faulty one flash.
- Note: During the test sequence all digital displays indicate «888... » (Except FQI digital displays during refueling). Following light bulbs cannot be automatically tested. During the test sequence these lights illumination have to be visually checked:
 - OVERHEAD PANEL: Mode selector units fire handles inertial system display unit Fuel quantity indicator LO LVL lights ENG TRIM
 - MAIN INSTRUMENT PANEL: Altimeters L/G control lever TRP mode selector keys. Slats/Flaps position indicator
 - GLARESHIELD: Flight control unit EFIS control panel AUTO LAND Lights



Lighting, Controls

- PEDESTAL: FMC - Control display units ECAM CTL panel ATC control unit VHF control unit ADF1 control unit

<u>Note</u>: This test triggers the windshear warning if installed.

(2) RESET Pushbutton

When pressed after a sequence interruption due to a faulty bulb detection, the automatic sequence re-starts.



Aircraft General

Lighting, Controls

LOCATION OF CONTROLS II EXTERIOR AND CABIN SIGN LIGHTING





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A. EXT LT PANEL:



(1) STROBE Selector

- **ON**: Strobe lights, one on the leading and one on the trailing edge of each wingtip, flash white.
- **AUTO:** Strobe lights are automatically switched on when the shock absorber is not compressed.
- OFF: All lights are off.

(2) BEACON Switch

- **ON:** Two anticollision lights, one on top and one on the bottom of the center fuselage flash.
- OFF: All lights are off.

(3) L and R RWY TURN OFF Switches

Each RWY TURN OFF light, left and right, is controlled by an individual switch.

- **ON:** Two lights, one on each side of the forward fuselage, are activated to illuminate sideways, especially taxiway intersections for turning off.
- OFF: Lights are off.

(4) NAV and LOGO Selector

- 1: Circuit for first set of navigation and logo lights is activated.

One colored navigation light in the leading edge of each wingtip and one white light in the trailing edge, are steadily illuminated.

On each horizontal stabilizer a light is activated to illuminate the logo on each side of the vertical stabilizer when the main landing gear struts are compressed or slats are extended.

Lighting, Controls

- 2: Circuit for second set of navigation and logo lights is activated.
- **OFF:** All lights are off.

(5) WING Switch

- **ON:** On each side of the fuselage two lights are activated to illuminate the wing leading edge and the engine air intake.
 - OFF: Lights are off.

(6) L and R LAND Selectors

Each landing light, left and right, is controlled by an individual selector.

- **ON:** The related landing light is extended and comes on automatically when fully extended.
- OFF: The related landing light is extended but off.
- **RETRACT:** The related light is retracted and off.

(7) NOSE Selector

- **TO:** Two lights attached to the nose gear strut come on at high intensity.
- TAXI: Lights come on at low intensity.
- OFF: Lights are off.
- <u>Note</u>: Lights automatically go off, when the landing gear is retracted.



Note: RETURN TO YOUR SEAT, NO SMOKING and EXIT signs throughout the cabin and lavatories illuminate automatically regardless of switch positions when cabin altitude exceeds 11,300 ± 500 Ft and MAN PRESS is not selected on the CABIN PRESS PANEL.



SIGNS SEAT BELTS OFF NO SMOKING ON U T O DFF OFF (1)

(1) SEAT BELTS Switch

• **ON**

FASTEN YOUR SEAT BELTS signs in cabin and RETURN TO YOUR SEAT signs in lavatories illuminate associated with low tone gong upon illumination.

• OFF

Signs are off. Low tone gong sounds upon extinction.

(2) NO SMOKING Selector

• **ON**

NO SMOKING and EXIT signs in cabin illuminate associated with low tone gong upon illumination.

• AUTO

NO SMOKING and EXIT signs in cabin illuminate when landing gear is extended and extinguish when landing gear is retracted. Low tone gong sounds upon illumination and extinction of the lights.

• OFF

Signs are off. Low gong sounds upon extinction.





(1) DISARM Light

• DISARM

Light illuminates amber, when the EMER EXIT LT selector is selected DISARM. If EMERG pushbutton switch on pursers panel is pressed to activate the 6 VDC bulbs, the light extinguishes.

Lighting, Controls

(2) EMER EXIT LT Selector

The selector is locked in each position. Before moving it must be slightly pulled.

• ON

6 VDC bulbs in ceiling lights and EXIT signs illuminate.

The DISARM light is off.

• ARM

28 VDC bulbs in ceiling lights will automatically illuminate (supplied by DC ESS BUS) if 115 VAC NORM power fails. (28 VDC bulbs in EXIT signs will also illuminate when LAND RECOVERY will be pressed). 6 VDC bulbs will automatically illuminate, if 28 VDC ESS power supply fails. The DISARM light is off.

• DISARM

6 VDC system automatic switchover is deactivated. DISARM light illuminates.

<u>Note</u>: The 6 VDC bulbs can be activated independently of the position of this selector from the purser panel.



Aircraft General

Maintenance Panel, Controls

A. ANN LT PANEL:



C. AVNCS COMPT LT SWITCH

AVNCS COMPT LT



The switch is situated near the avionics compartment access patch. It controls the avionics compartment lighting.

(1) ANN LT Selector

- **TEST:** All annunciator lights come on on lateral panel.
- READ: When activated, annunciator lights come on.
- OFF: All annunciator lights are off.

B. MFA's RESET P/B SWITCH



When the MFA's RESET pb switch are pressed, all Memorized Fault Annunciators for each system included in the corresponding section of the lateral panel go off.