HIGHLIGHTS

REVISION NO. 01 Dec 01/12

Pages which have been revised are outlined below, together with the Highlights of the Revision

CH/SE/SU C PAGES	REASON FOR CHANGE	EFFECTIVITY

CHAPTER 33

L.E.P. 1- 1 Revised to Reflect this revision indicating new,revised, and/or deleted pages

CHAPTER 33

LIGHTS

LIST OF EFFECTIVE PAGES

N, R or D indicates pages which are New, Revised or Deleted respectively
Remove and insert the affected pages and complete the Record of Revisions and the Record of Temporary Revisions as necessary

CH/SE/SU	C	PAGE	DATE
L.E.P.	R	1- 1	Dec01/12
T. of C.		1	Sep01/12
T. of C.		2	Sep01/12
T. of C.		3	Sep01/12
33-00-00		1	Sep01/12
33-00-00		2	Sep01/12
33-00-00	F	1	Sep01/12
33-00-00	F	2	Sep01/12
33-00-00	F	3	Sep01/12
33-00-00	F	4	Sep01/12
33-00-00	F	5	Sep01/12
33-00-00	F	6	Sep01/12
33-10-00		1	Sep01/12
33-12-00		1	Sep01/12
33-12-00		2	Sep01/12
33-12-00		3	Sep01/12
33-12-00	F	1	Sep01/12
33-12-00	F	2	Sep01/12
33-12-00	F	3	Sep01/12
33-12-00	F	4	Sep01/12
33-12-00	F	5	Sep01/12
33-12-00	F	6	Sep01/12
33-12-00	F	7	Sep01/12
33-12-00	F	8	Sep01/12
33-13-00		1	Sep01/12
33-13-00		2	Sep01/12
33-13-00	F	1	Sep01/12
33-13-00	F	2	Sep01/12
33-13-00	F	3	Sep01/12
33-14-00		1	Sep01/12
33-14-00	F	1	Sep01/12
33-16-00		1	Sep01/12
33-16-00	F	1	Sep01/12
33-18-00		1	Sep01/12
33-20-00		1	Sep01/12
33-21-00		1	Sep01/12
33-21-00		2	Sep01/12
33-21-00	F	1	Sep01/12
33-21-00	F	2	Sep01/12
33-21-00	F	3	Sep01/12
33-22-00		1	Sep01/12
33-23-00		1	Sep01/12
33-23-00	F	1	Sep01/12
33-24-00		1	Sep01/12
33-24-00	F	1	Sep01/12
33-24-00	F	2	Sep01/12
33-25-00		1	Sep01/12
33-25-00	F	1	Sep01/12
33-25-00	F	2	Sep01/12
33-26-00		1	Sep01/12
33-26-00	F	1	Sep01/12
33-26-00	F	2	Sep01/12
33-30-00		1	Sep01/12
33-34-00		1	Sep01/12
33-34-00	F	1	Sep01/12
33-34-00	F	2	Sep01/12
33-36-00		1	Sep01/12
33-36-00	F	1	Sep01/12
33-36-00	F	2	Sep01/12
33-37-00		1	Sep01/12
33-37-00	F	1	Sep01/12
33-37-00	F	2	Sep01/12
33-37-00	F	3	Sep01/12
33-40-00		1	Sep01/12
33-40-00	F	1	Sep01/12
33-41-00		1	Sep01/12
33-41-00	F	1	Sep01/12
33-41-00	F	2	Sep01/12
33-42-00		1	Sep01/12
33-42-00	F	1	Sep01/12
33-42-00	F	2	Sep01/12
33-43-00		1	Sep01/12
33-43-00	F	1	Sep01/12
33-43-00	F	2	Sep01/12
33-46-00		1	Sep01/12
33-46-00	F	1	Sep01/12
33-46-00	F	2	Sep01/12
33-47-00		1	Sep01/12
33-47-00	F	1	Sep01/12
33-47-00	F	2	Sep01/12
33-48-00		1	Sep01/12
33-48-00	F	1	Sep01/12
33-48-00	F	2	Sep01/12
33-49-00		1	Sep01/12
33-49-00	F	1	Sep01/12
33-49-00	F	2	Sep01/12
33-50-00		1	Sep01/12
33-50-00		2	Sep01/12
33-50-00		3	Sep01/12
33-50-00	F	1	Sep01/12
33-50-00	F	2	Sep01/12
33-50-00	F	3	Sep01/12
33-50-00	F	4	Sep01/12
33-50-00	F	5	Sep01/12

Printed in France

CHAPTER 33

LIGHTS

TABLE OF CONTENTS

LIGHTS - GENERAL

1. Flight Compartment Lighting

A. General Lighting

The flight compartment lighting consists of :
- Dome lights.
- Reading lights and a utility light for working surfaces.
- Captain and first officer console lights (diffusers).
- Main instrument panel lights.
- A center pedestal flood light.
- Storm lighting fluorescent lights.
- An entrance door area light.
- A captain and first officer control wheel chart holder light.
- Service plugs for connection of lighting equipment, if necessary.

(Ref. Fig. 001)
(Ref. Fig. 002)

B. Integral Lighting of Panels and Instruments

Instruments and panels incorporate an adjustable brightness integral lighting system enabling the crew to read indications during night flights or flights in stormy conditions.

C. Annunciator Light Test

The annunciator light test checks for correct operation of the flight compartment annunciator lights.

D. Annunciator Light Dimming

Annunciator light dimming enables the crew to reduce annunciator light brightness on the main instrument panels, center pedestal and overhead panel 25VU.
On overhead panel, annunciator lights having a flowbar cannot be dimmed.

2. Maintenance Lighting

The compartment located between the radome and the main instrument panels is equipped with a lighting system to perform maintenance work. (Access is gained to this compartment through the landing gear door).

3. Passenger Compartment Lighting

A. General Illumination

The passenger compartment and entrance door area are lighted by fluorescent lights.

B. Call System

The cabin attendant call system enables lighting of passenger signs and transmission of aural messages from cabin attendant panel 70VU.
The lighted signs or aural messages can be transmitted to :
- the flight compartment
- the passengers
- the lavatory

C. Lavatory Lighting
The lavatory is lighted by a fluorescent light and a diffuser.

D. Passenger Signs
They are intended to give the passengers the instructions to be followed during the various flight phases (take-off, landing, etc...).
(Ref. Fig. 003)

4. Baggage Compartment Lighting

A. Forward and Aft Baggage Compartments
The forward baggage compartment is provided by a fluorescent light and the aft baggage compartment by a dome light.

B. REFUELING Panel Lighting
During ground operations the REFUELING panel, located in the aft part of the RH main landing gear fairing, is lighted by a lamp controlled by means the opening of access door.

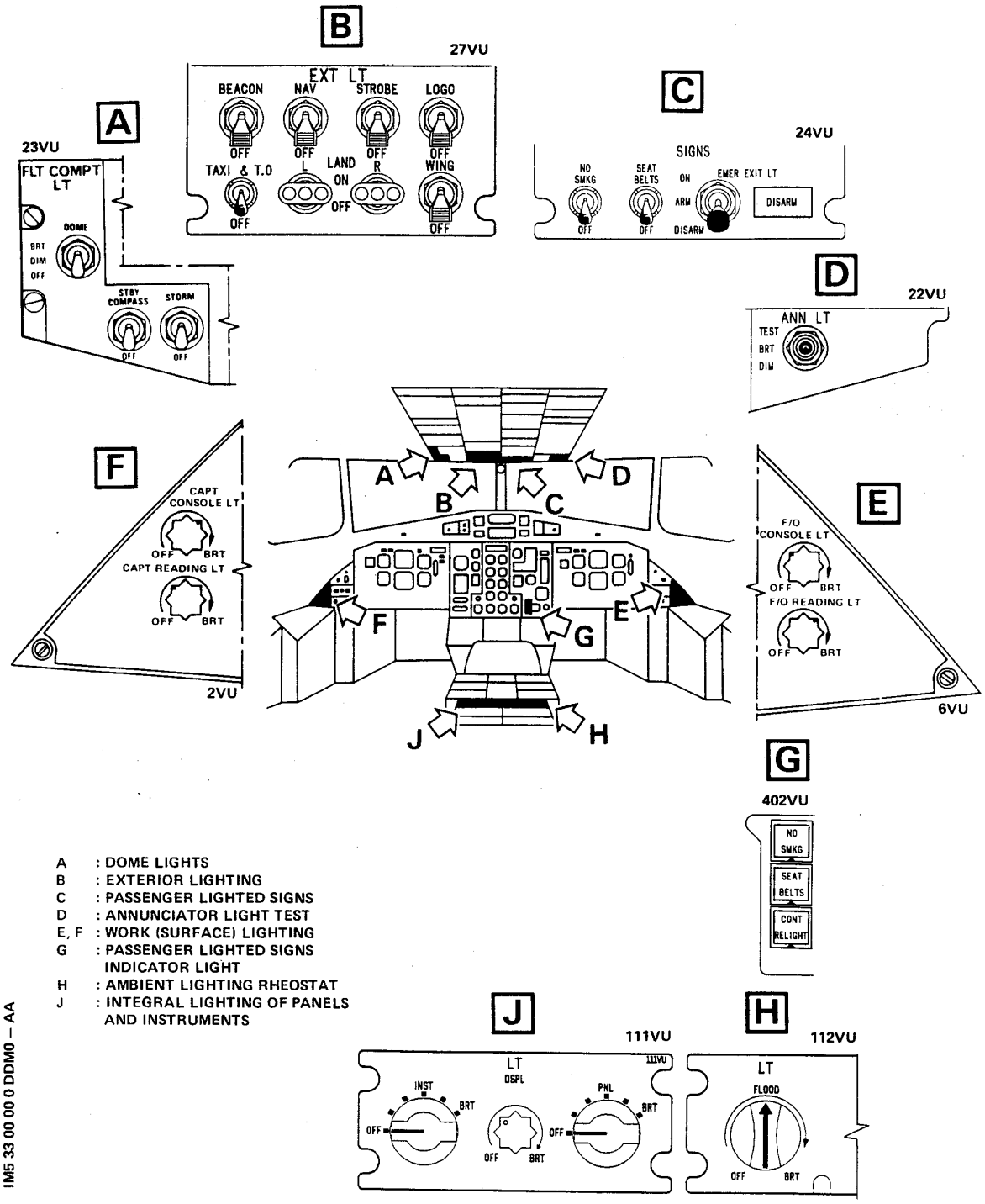
C. Avionics Compartment and Landing Gear Well Lighting
During ground operations avionics compartment and landing gear well are lighted by lamps.
(Ref. Fig. 004)

5. Exterior Lighting
The exterior lighting system consists of :
- navigation lights
- landing lights
- taxi lights
- anti-collision lights
- wing and engine scanning lights

(Ref. Fig. 005)

6. Emergency Lighting
The emergency lighting system is used for passenger evacuation in the event of an emergency.
It consists of :
- a lighted EXIT sign
- a lighted emergency exit location sign
- passenger compartment emergency lights
- exterior lighting of the area below the emergency exits.
- emergency exit locating marking at floor level composed of :
  (1)A lighting ramp (6 strips) on the lift side of the aisle along the floor.
  (2)4 EXIT signs located at the foot of the four emergency exits.

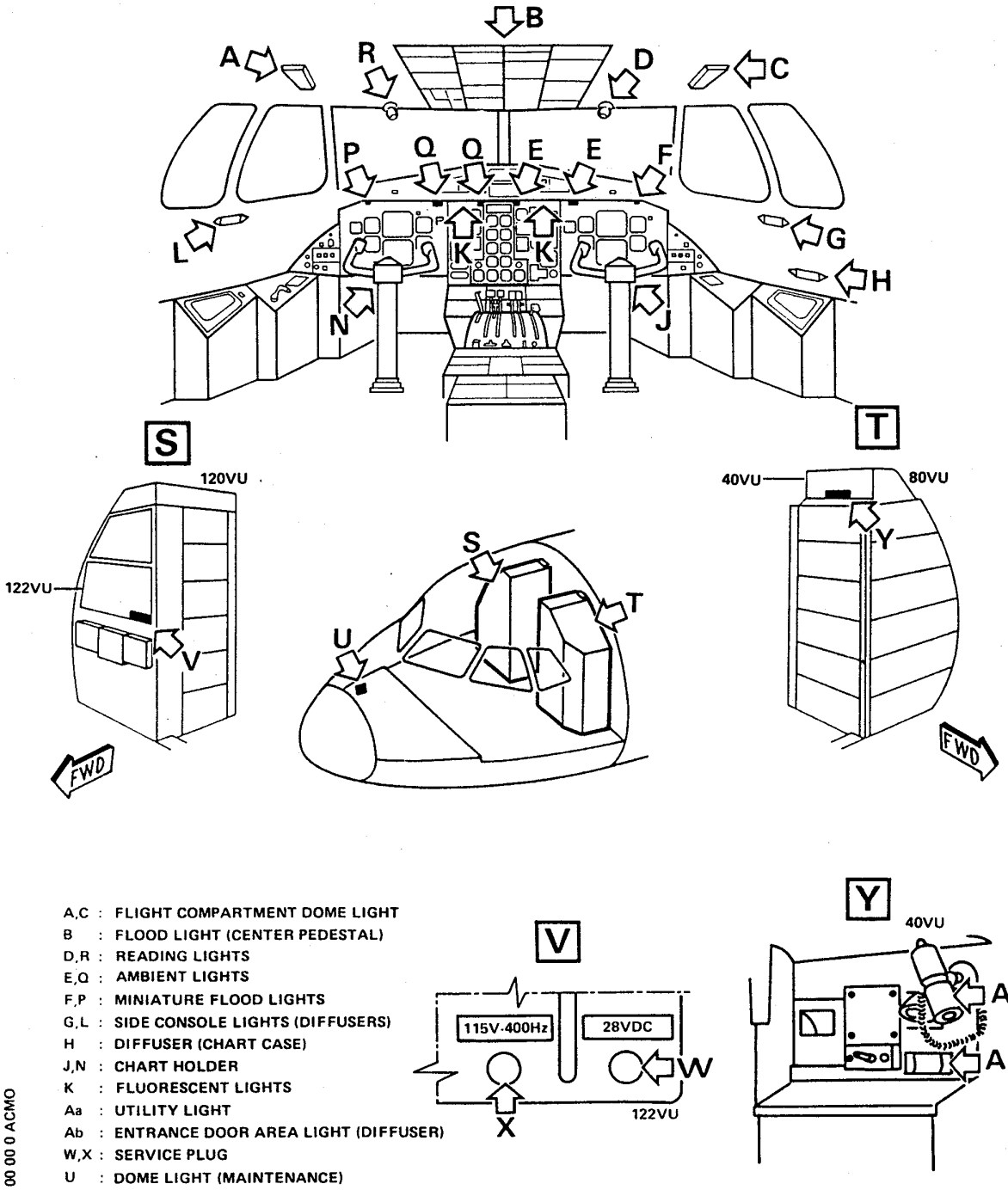
(Ref. Fig. 006)



A : DOME LIGHTS
B : EXTERIOR LIGHTING
C : PASSENGER LIGHTED SIGNS
D : ANNUNCIATOR LIGHT TEST
E, F : WORK (SURFACE) LIGHTING
G : PASSENGER LIGHTED SIGNS INDICATOR LIGHT
H : AMBIENT LIGHTING RHEOSTAT
J : INTEGRAL LIGHTING OF PANELS AND INSTRUMENTS

IM5 33 00 00 0 DDM0 – AA

Lighting Controls Location
Figure 001

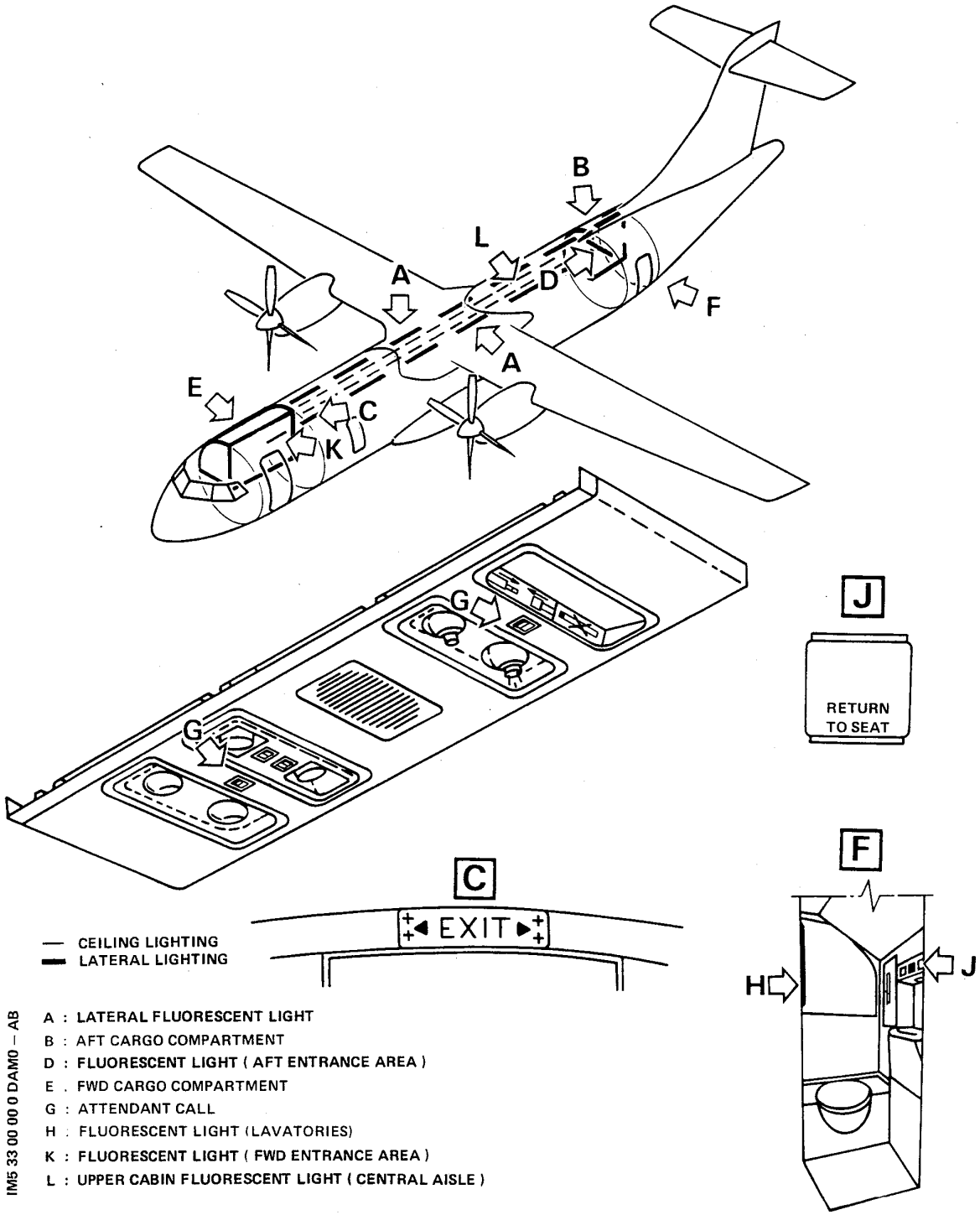


Lights - Location
Figure 002

33-00-00

EFFECTIVITY: ALL

Q0

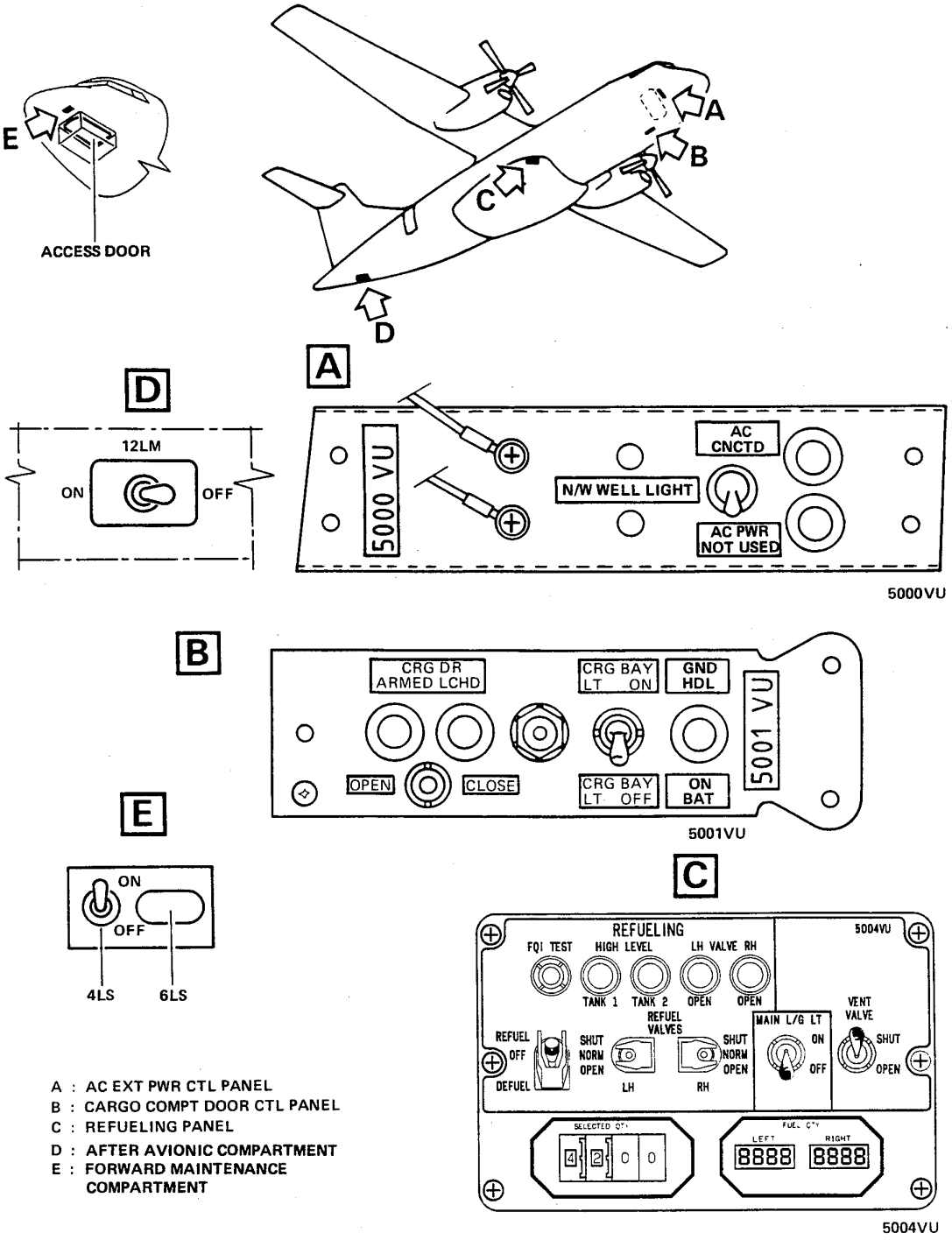


Passenger Compartment Lighting -
Lights Location
Figure 003

33-00-00

EFFECTIVITY: ALL

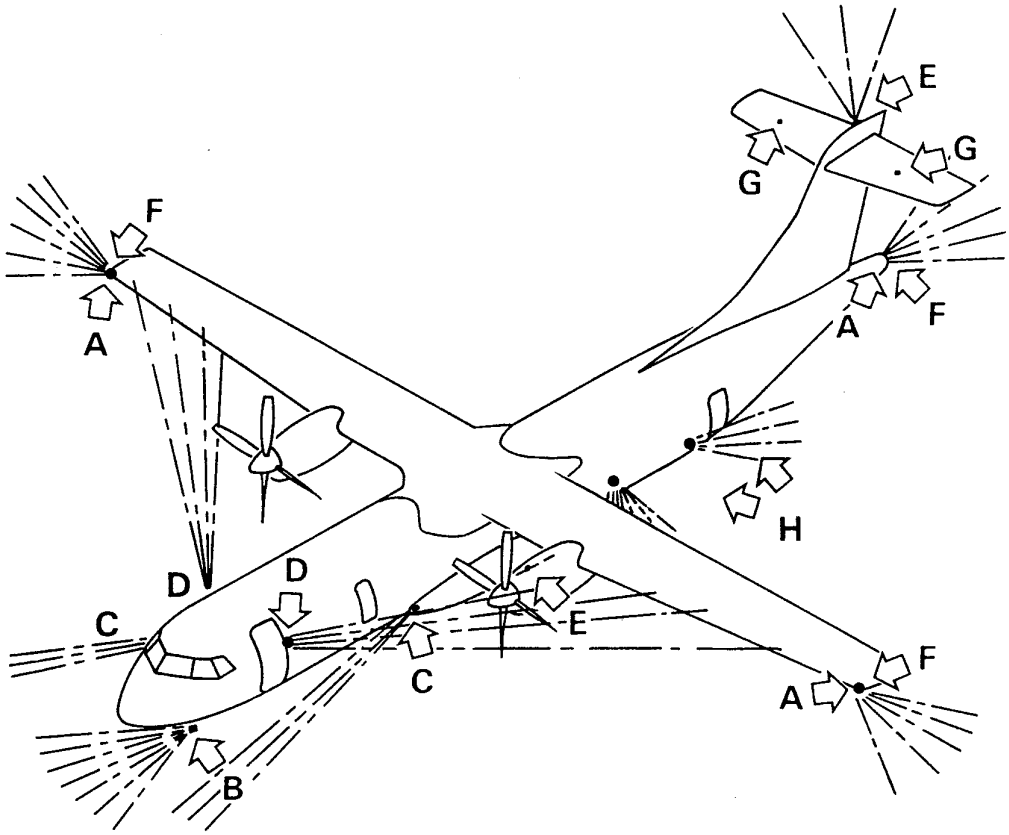
Q0



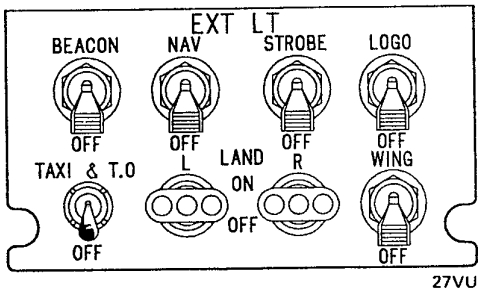
A : AC EXT PWR CTL PANEL
B : CARGO COMPT DOOR CTL PANEL
C : REFUELING PANEL
D : AFTER AVIONIC COMPARTMENT
E : FORWARD MAINTENANCE COMPARTMENT

IM5 33 00 00 0 FCM0 – AB

Location of Panels 5000, 5001, 5004VU and Baggage Compartment Lighting
Figure 004

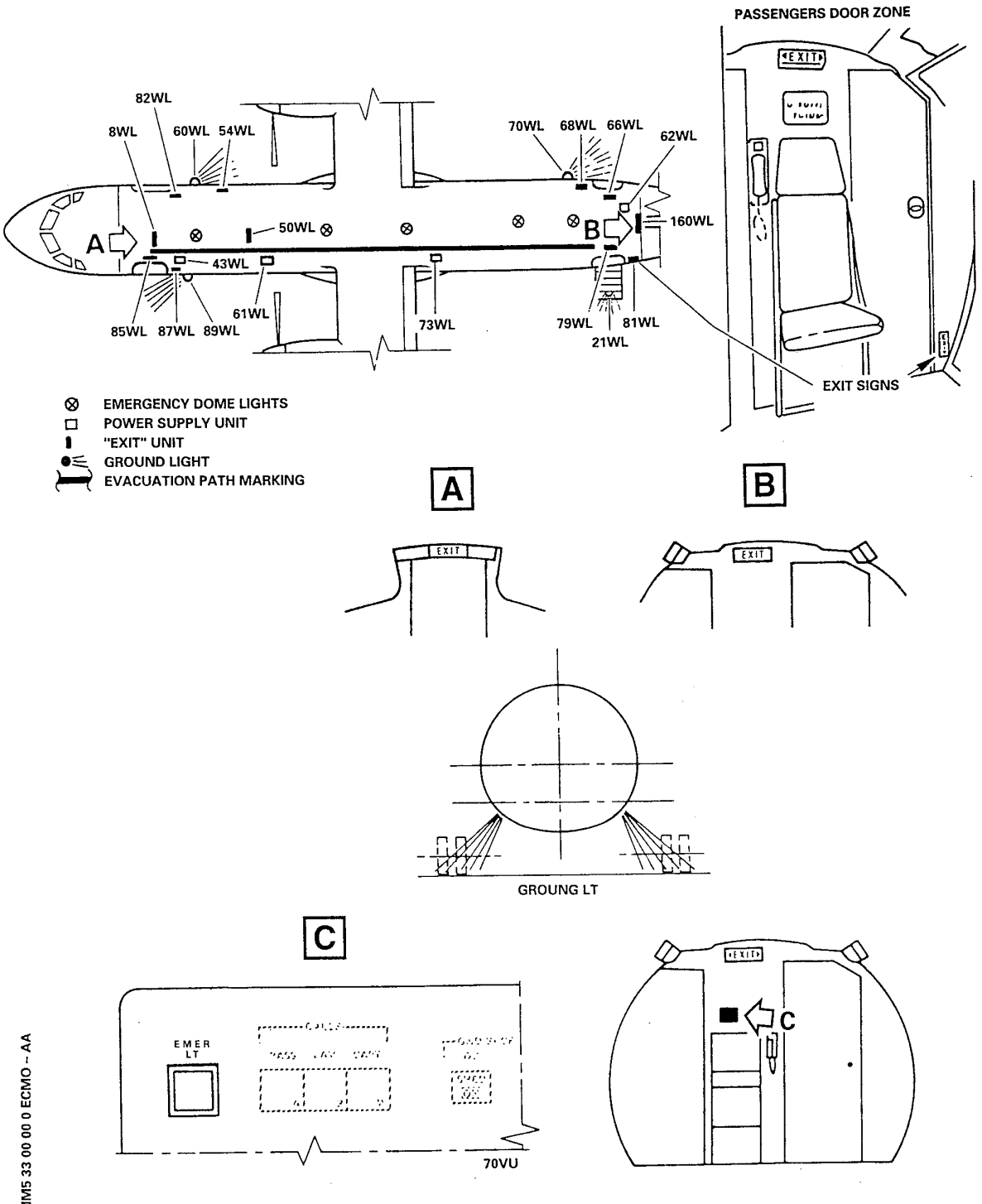


A : NAVIGUATION LIGHTS
B : TAXI AND TAKE OFF LIGHTS
C : LANDING LIGHTS
D : WING AND ENGINE SCANNING LIGHTS
E : ANTI-COLLISION LIGHT
F : STROBE LIGHTS
G : LOGO LIGHTS
H : GROUND EMERGENCY LIGHTING



IM5 33 00 00 0 GDMO – AB

Exterior Lighting – Component Location
Figure 005



Emergency Lighting – Component Location
Figure 006

FLIGHT COMPARTMENT

1. General

A. Flight Compartment Lighting

The flight compartment lighting include :

(1)General lighting
(2)Integral lighting of panels and instruments
(3)Annunciator light test
(4)Annunciator light dimming

Printed in France

GENERAL ILLUMINATION

1. Flight Compartment Lighting

A. Dome lights
Component location : Ref. 33-00-00.
The two flight compartment dome lights are controlled by DOME switch 3LE having three positions : BRT/DIM/OFF and located on FLT COMPT LT overhead panel 23VU.

(1)Normal operation
In normal operation, the two dome lights : 11LE in zone 211 and 18LE in zone 212 are supplied by 28VDC BUS1 SECT2 busbar through circuit breaker 2LE located on panel 122VU.
The two dome lights can be dimmed by means of switch 3LE in DIM position.

(2)Operation in emergency procedure
In the event of loss of 28VDC BUS1 busbar, only dome light 18LE (located on the right in the flight compartment forward section) remains on. It is supplied with 28VDC EMER BUS SECT2 busbar through circuit breaker 4LE and relay 14LE in de-energized position.
(Ref. Fig. 001)

B. Service Plugs

Component location: (Ref. 33-00-00).

Two service plugs are located on circuit breaker panel 122VU.

(1) A 115VAC variable frequency service plug 52LE which delivers 1150 watts. It is supplied by the 115VAC SVCE BUS phase B busbar through circuit breaker 8LE.

(2) A 28VDC service plug 54LE which delivers 280 watts. It is supplied with 28VDC SVCE BUS busbar through circuit breaker 10LE.

C. Captain's and First Officer's Control Wheel Chartholder Lighting
Component location : Ref. 33-00-00.
Each chartholder is provided with two 4.8 W lamps and controlled by a built-in 125/12.5 W rheostat.
The captain's control wheel chartholder light 35LE is supplied with 28VDC BUS1 SECT2 busbar through circuit breaker 2LE.
The first Officer's control wheel chartholder light 46LE is supplied with 28VDC BUS2 SECT1 busbar through circuit breaker 20LE.

D. Console Lighting
Component location : Ref. 33-00-00.

(1)Captain's Console
This console is lighted by light 33LE equipped with an utility light and supplied with 28VDC BUS1 SECT2 busbar through circuit breaker 2LE.
Lighting is controlled by CAPT CONSOLE LT located on panel 2VU.

(2)First Officer's Console
This area is lighted by two lights (light 44LE for the console and light 42LE for the chart case) ; each of them is provided with an utility light. These lights are supplied with 28VDC BUS2 SECT1 busbar through circuit breaker 20LE.
They are controlled by F/O CONSOLE LT located on panel 6VU.

E. Work surface lighting
Component location : Ref. 33-00-00.
The work surface lighting consists of two swivel reading lights and a utility light
(1)Captain's reading light
Captain's reading light is located in the overhead panel lining in zone 211.
It is supplied with 28VDC BUS1 SECT2 busbar through circuit breaker 2LE.
This reading light is equipped with a 4.8 W lamp.
It is controlled by a CAPT READING LT rheostat 37LE located on panel 2VU.
(2)First Officer's reading light
The first Officer's reading light 50LE is located in the overhead panel lining in zone 212.
It is supplied with 28VDC BUS2 SECT1 busbar through circuit breaker 20LE.
This reading light is equipped with a 4.8 W lamp. It is controlled by F/O READING LT rheostat 48LE located on panel 6VU.
(3)Utility light
Utility light 41LE is located on panel 40VU in zone 213. It is supplied with 28VDC BUS2 SECT busbar through circuit breaker 20LE. This utility light is equipped with a 4.8 W lamp. Lighting is controlled by a utility light built-in rheostat.
This utility light can be detached from its support and can be used for checking of panels 80VU and 90VU.
(Ref. Fig. 002)

F. Instrument Panels ambient lighting
Component location : Ref. 33-00-00.
Captain's, center and First Officer's instrument panels ambient lighting is of the incandescent type and of variable intensity.
(1)Normal Operation
Instrument panel ambient lighting consists of :
- 4 lights located under the glareshield, on the dividing line between center instrument panel and Captain's and First Officer's instrument panel, 23LE, 25LE, 34LE.
- Two miniature lights with dimmer caps (17 and 30LE) are located near panels 2VU and 6VU.

The center pedestal is lighted by a flood light I5LE located on panel 21VU. A special cut-out mask delimits the area to be lighted.
This flood light is equipped with a 4.5 V lamp.
These lights are controlled by LT FLOOD dual rheostat 21LE with single control and located on panel 112VU.
The first officer lights are supplied with 28VDC BUS1 SECT2 busbar through circuit breaker 2LE.
The captain lights and the pedestal light are supplied with 28VDC EMER

BUS busbar through circuit breaker 4LE

(2)Ultimate Emergency Operation

In case of loss of 28VDC BUS1 SECT2 busbar power supply, relay 22LE is no longer supplied. The two First Officer's lights and the dimmer cap miniature light are shed. The two Captain's lights, the dimmer cap miniature light and pedestal lighting are supplied with reduced power intensity by 28VDC EMER BUS busbar through circuit breaker 4LE.

(Ref. Fig. 003)

G. Storm lighting

Component location : Ref. 33-00-00

In case of bad weather conditions (storms), this lighting provides an intense brightness to instrument panels.

It comprises two 6 W fluorescent lights 27LE, 36LE supplied, via two ballast units 29LE and 38LE, by 28VDC BUS1 SECT2 busbar through circuit breaker 2LE.

These two fluorescent lights are located under the glareshield on the dividing line of center instrument panel and Captain's and First Officer's main instrument panels.

On the overhead panel, on panel 23VU, STORM switch 19LE controls illumination of both fluorescent lights and of ambient lighting of main instrument panels and center pedestal. This lighting is intense, without possibility of adjustment.

H. Passenger Compartment Entrance Door lighting

Component location : Ref. 33-00-00

(1)Description

The passenger compartment entrance door area lighting is provided by :

- light 13LE located on panel 40VU.
- 8WL and 12WL lighting of both forward and aft emergency exit location signs located at both ends of passenger compartment aisle.

This lighting is supplied with 28VDC C/HDL XFR BUS busbar through circuit breaker 6LE.

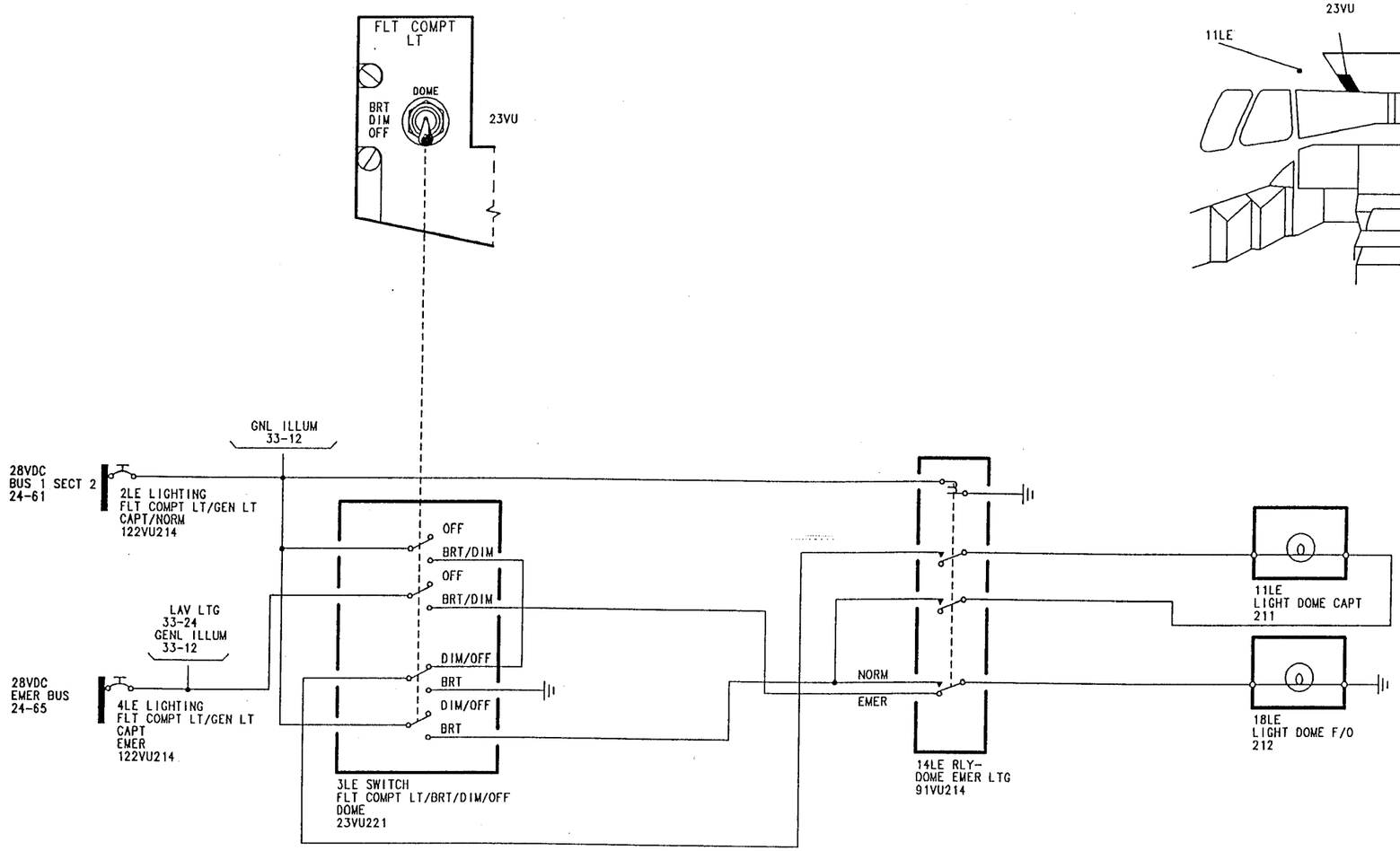
It is controlled by in series with two pulse pushbutton switches located, one 9LE at the passenger compartment entrance door and the other one 43LE on panel 40VU.

(2)Operation

When passenger compartment entrance door is opened, closes the circuit and resulting action on pushbutton switch 9LE or 453LE enables power supply of the three lighting sources 8WL, 12WL and 13LE through opening time-delay relay 12LE.

During relay time-delay (2 minutes approximately) this lighting remains on.

(Ref. Fig. 004)



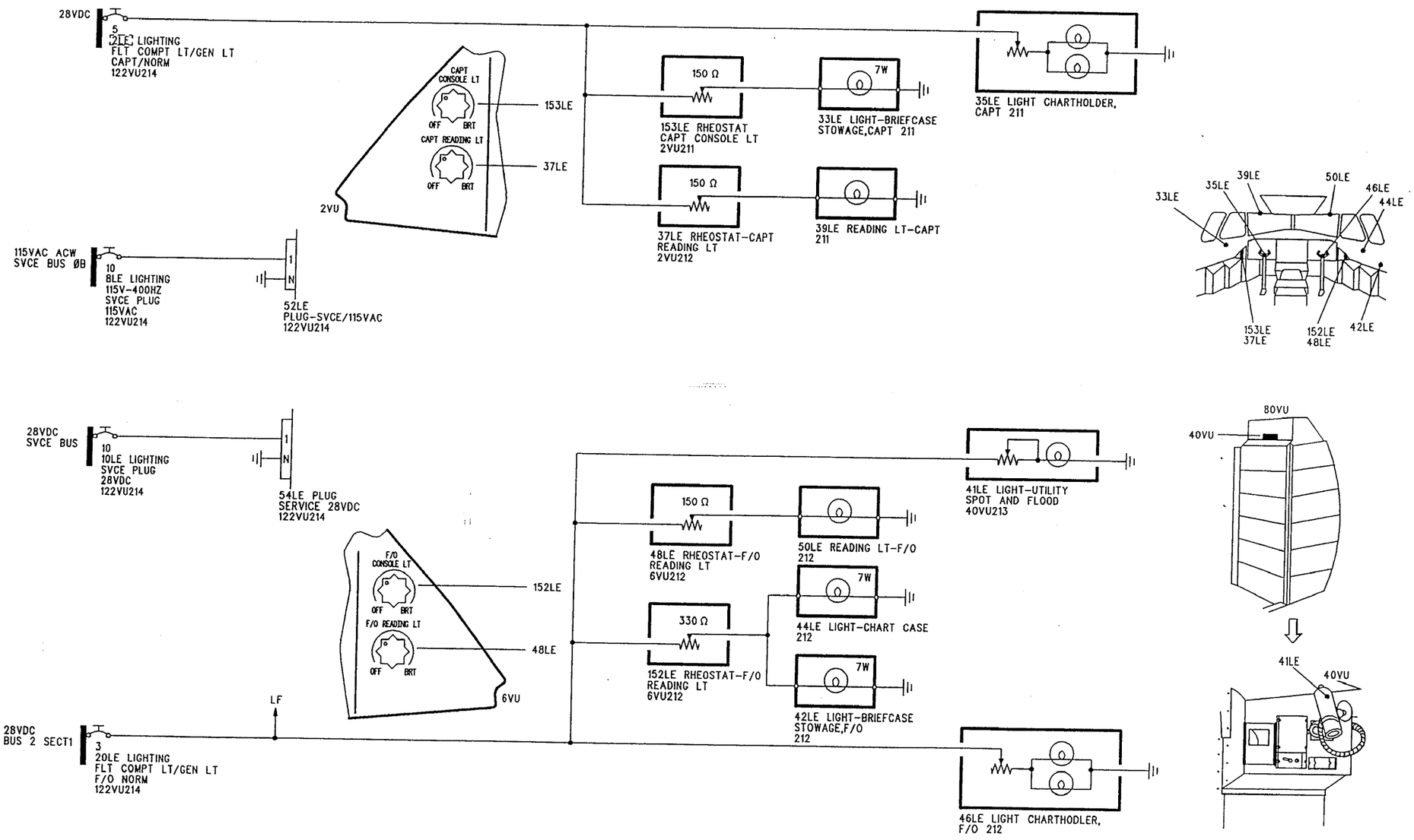
IM5 33 12 00 0 ABM0 AD

Dome Switch
Figure 001

EFFECTIVITY: ALL

Q0

Printed in France

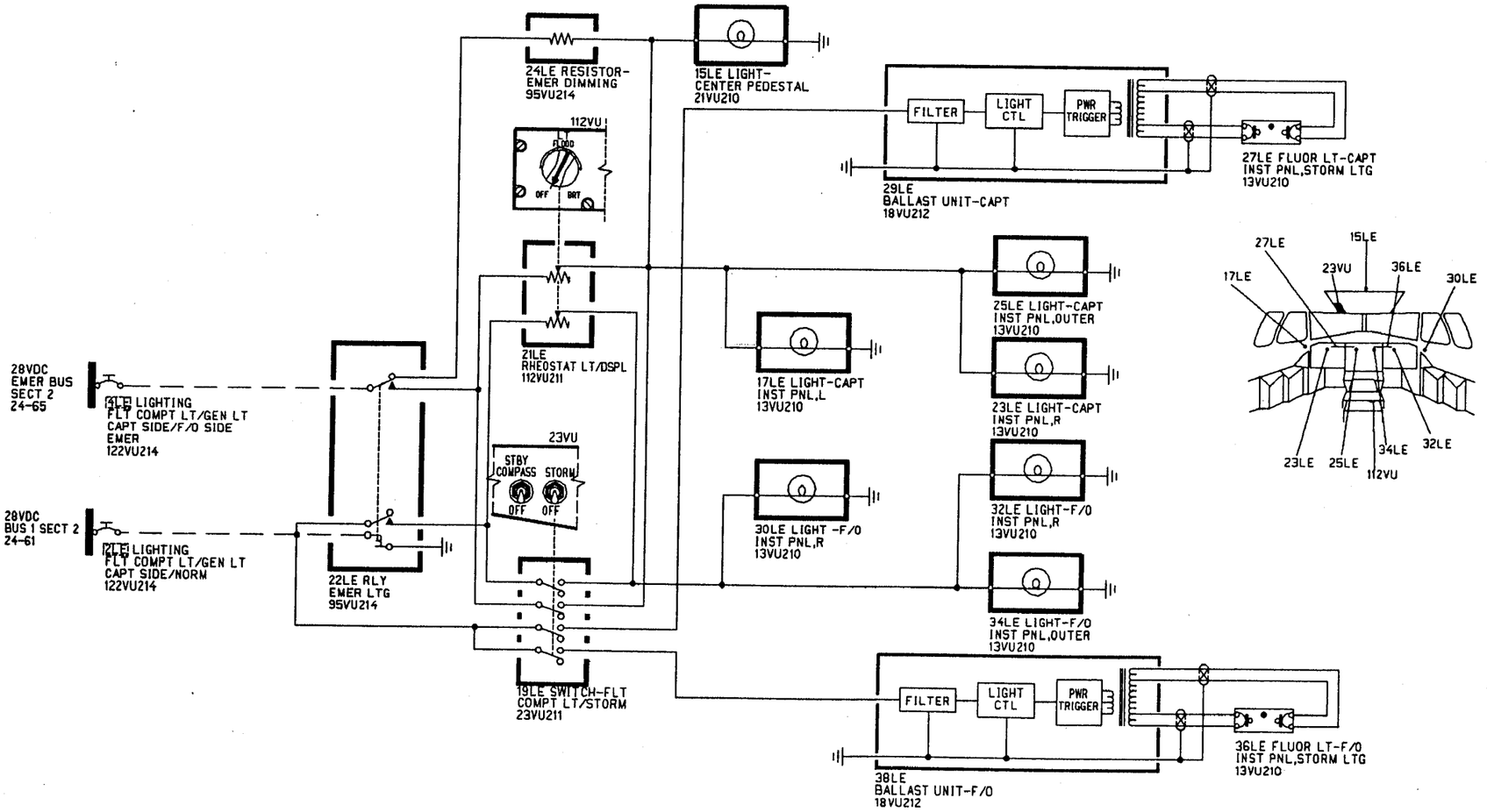


IM5 33 12 00 0 DAMO AF

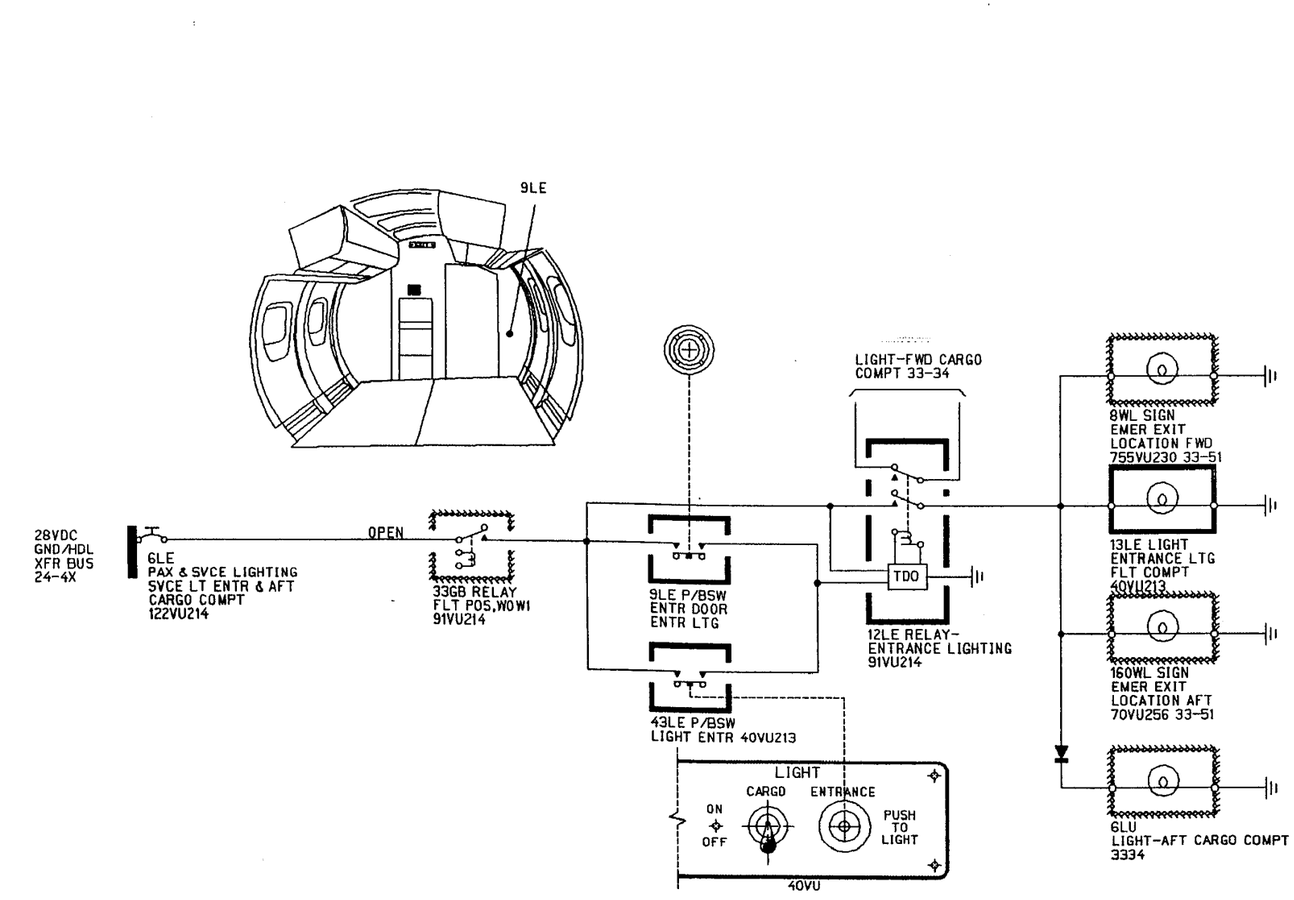
Chartholder - Console and Flight Compartment Work
Surface Lighting
Figure 002

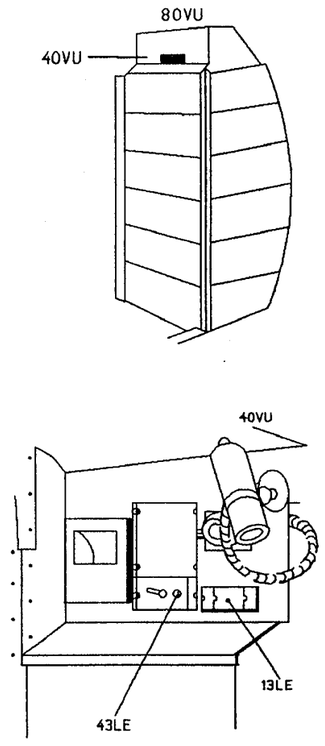
EFFECTIVITY: ALL

QO



Instrument Panels Ambient Lighting Schematic
Figure 003





Passenger Compartment Entrance Door Area Lighting
Figure 004

EFFECTIVITY: ALL

Q0

INSTRUMENT AND PANEL INTEGRAL LIGHTING

1. Description

For component location, refer to section 33-00-00.
The integral lighting installed on panels and instruments is composed of miniature lamps supplied by an AC voltage comprised between 1.7 V and 5 V.
This AC voltage is provided by means of transformers supplied with variable frequency 115 V current.

2. Operation

A. Integral Lighting System of Panels and Instruments

- Integral lighting power supply is provided by 1 150VA transformer 10 LF installed in zone 212 behind first officer instrument panel.
  Relay 12LF, supplied with 28VDC by 28VDC BUS2 SEC1 busbar enables power supply of transformer with 115VAC W BUS 1 phase A busbar.
  The transformer supplies variable voltage current varying from 17 to 5VAC and enables :
  . integral lighting of placards and instruments located on overhead panels glareshield and center pedestal.
- A second 150VA transformer 16LF supplied with 115VAC W BUS1 phase A busbar delivers variable current varying from 1.7 and 5VAC and enables power supply of the :
  . integral lighting of instrument panels.
  In ultimate emergency configuration, relay 12LF coil is de-energized and transformer 16LF only is supplied.
  In the event of non power supply of variable frequency alternative current (starting phase and engine operation in Hotel mode), transformer 16LF willbe supplied by 115VAC STBY busbar (static inverter 1) and will enable integral lighting of emergency instruments on instrument panels via circuit breaker 222LF.
  Transformers are controlled by means of two selector switches 1LF and 3LF located on center pedestal or on panel 111VU.

(Ref. Fig. 001)

Electrical Schematic

B. Maintenance Panels

Maintenance panels 101VU and 702VU have no integral lighting.
Inscriptions are engraved on these panels.

C. Circuit Breaker Panels

For component location (Ref. 33-00-00).
The overhead circuit breaker panel is lighted by lighting strips on which adhesive plates are affixed with the function of each circuit breaker written.
Panel 120VU located forward of R electronics rack 90VU is not lighted.
The function of each circuit breaker and the identification of their location are written on engraved plates.

D. Standby Compass

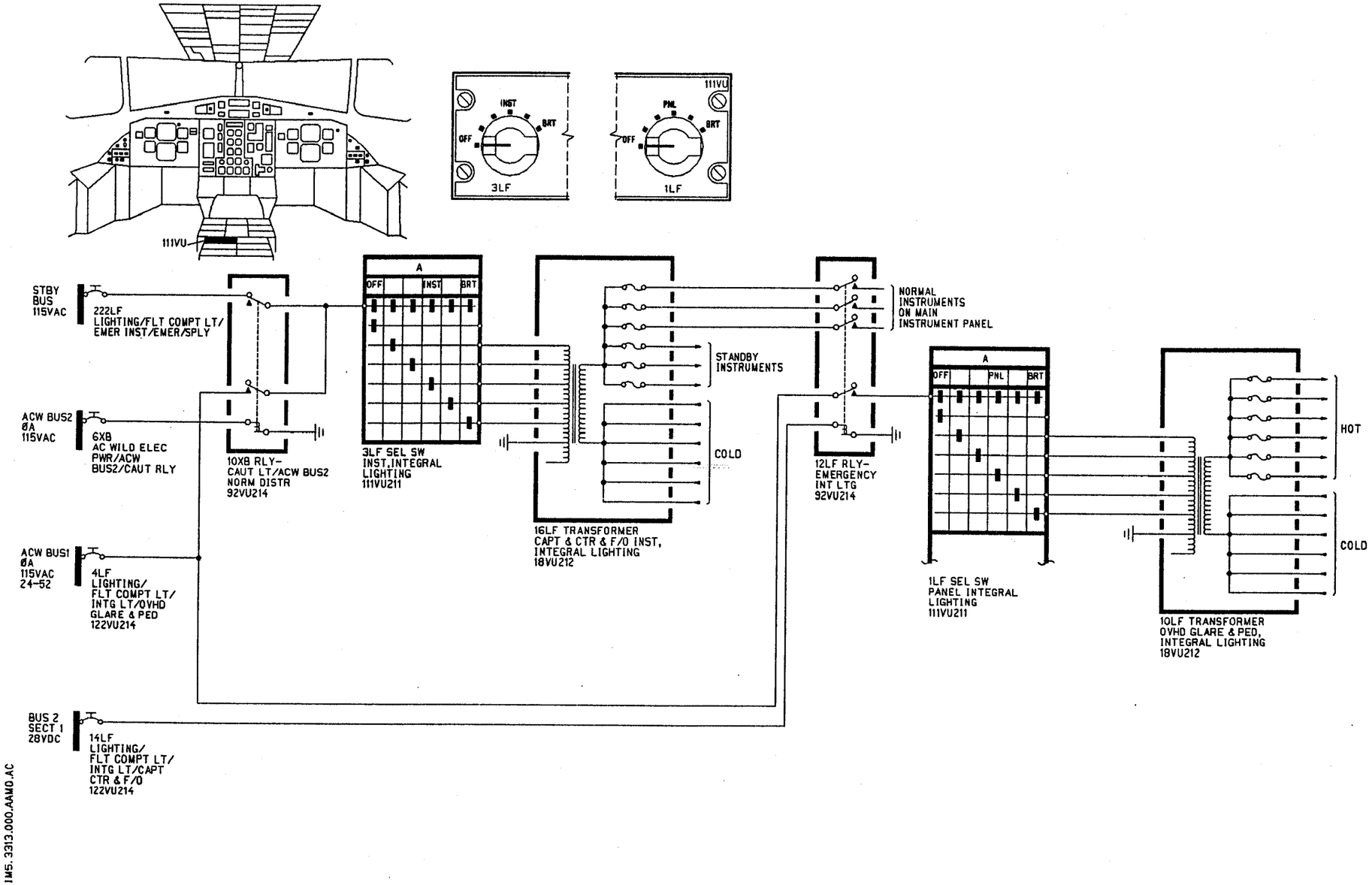
For component location refer to section 33-00-00.

The standby compass integral lighting comprises :
(1)Circuit breaker 4LE supplied with 28VDC EMER BUS busbar.
(2)On panel 23VU, STBY COMPASS switch 5LF controls standby compass 8FN integral lighting.

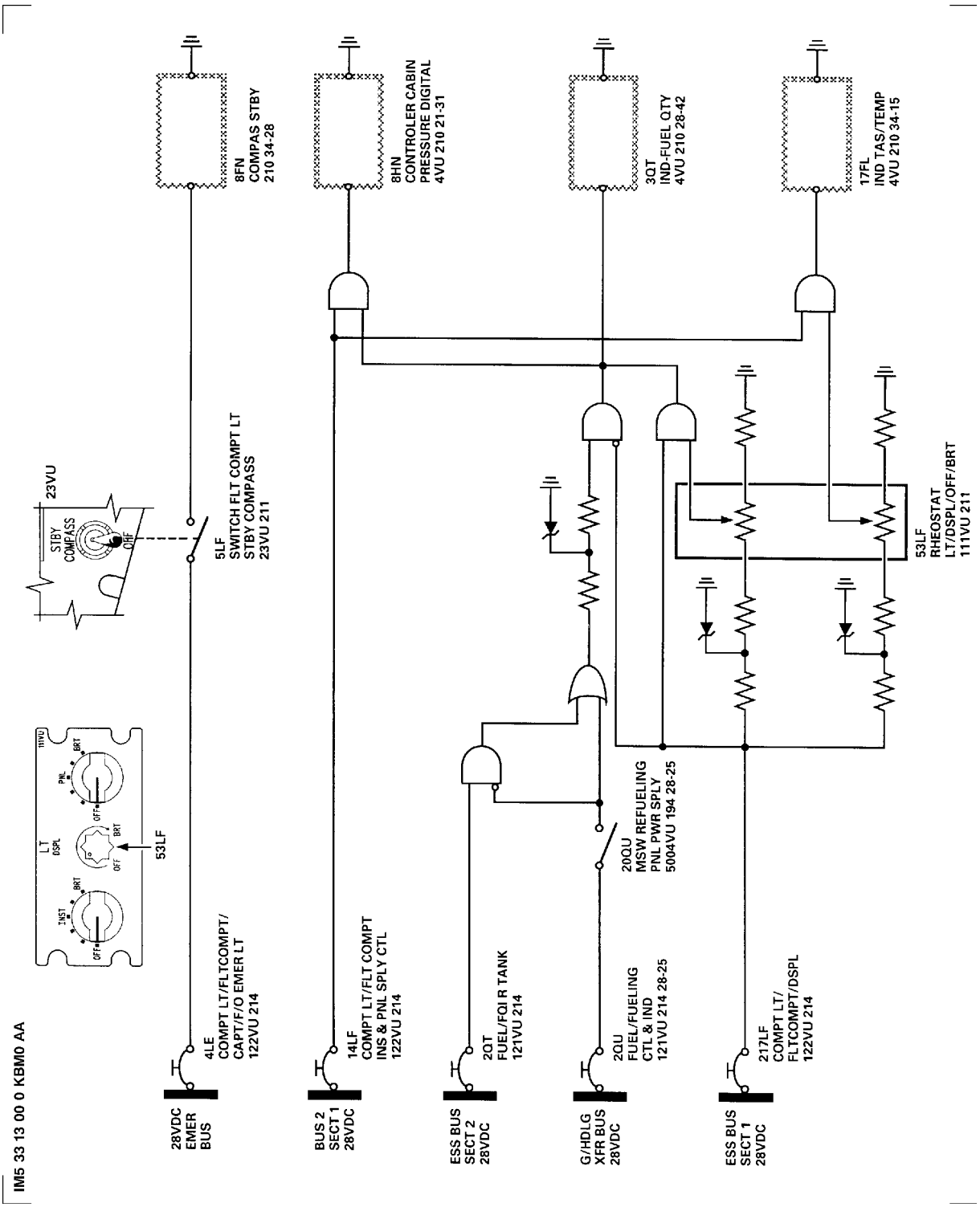
E. Alphanumerical Display Instrument Integral Lighting
For component location refer to section 33-00-00.
Several indicators are provided with alphanumerical display.
Brightness adjustment is provided by :
- a direct current power supply from 28VDC ESS BUS SECT 2 busbar which provides variable voltage from 0.8 to 5 Volts
- a direct current power supply from 28VDC ESS BUS SECT 2 busbar which provides variable voltage from 0.8V to 15V.
53LF DSPL potentiometer located on panel 111VU enables light brightness to be adjusted.

F. Liquid Crystal Display Components
For this kind of display brightness adjustment is performed through 5VAC power supply of plate integral lighting.

G. Flowbars
Several panel on the overhead panel are provided with flowbars between lights for better comprehension of systems.
These flowbars are supplied by 5VAC of plate integral lighting.
(Ref. Fig. 002)



Instrument and Panel Integral Lighting
Figure 001



Standby Compass and Indicators Lighting
Figure 002

ANNUNCIATOR LIGHT TEST

1. Description

For component location (Ref. 33-00-00).

The new system enables the crew to perform an automatic test of the flight compartment annunciator lights.

The annunciator lights have a common test output ; they will be constantly on throughout the automatic test and checked visually.

During testing, "eights" will be displayed in all display windows.

NOTE : The test of annunciator lights and display windows associated with the pressurization sytem does not comply with the philosophy described above.To perform test of display window "LANDING ELEV", "DUMP/ON" and "DESCENT RATE/FAST" annunciator lights of AUTO PRESS control box (4VU), CAB PRESS/MOD SEL pushbutton switch (402VU), must be pressed in.

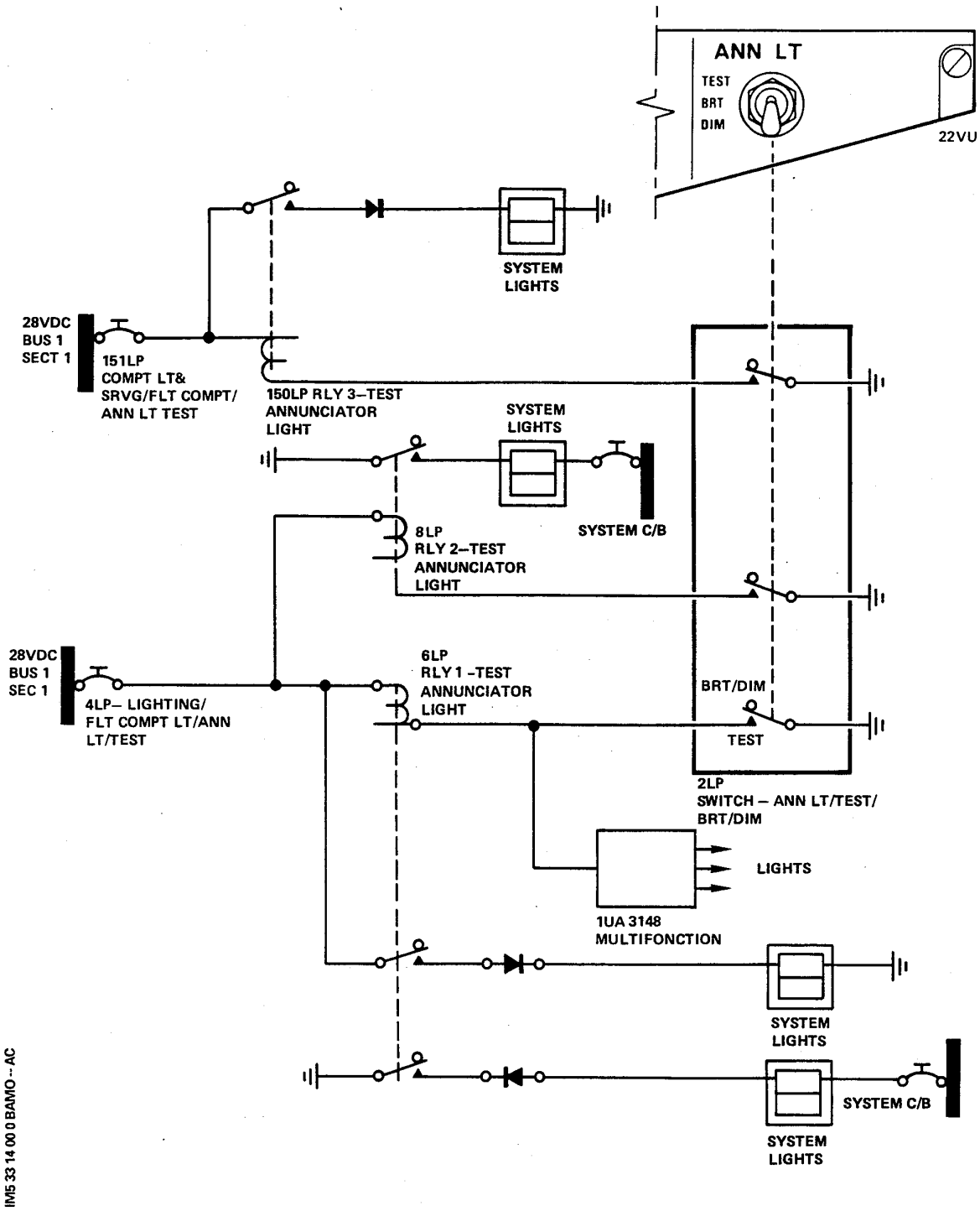
The digits displayed are not all 8's but

- or1	8	8	0	0

On panel 22VU, an ANN LT switch 2LP placed in TEST position enables :

- power supply of three relays 6LP, 8LP and 150LP located on shelf 93VU
- power supply of coils of relays 6LP, 8LP and 150LP by 28VDC BUS1 SEC1 and through circuit breakers 4LP and 151LP allows the annunciator lights to come on.
- validation of the test for some annunciator lights by means of multi-function computer.

(Ref. Fig. 001)



Annunciator Light Test Schematic.
Figure 001

ANNUNCIATOR LIGHT DIMMING

1. Description

For component location refer to section 33-00-00.

The annunciator lights comprises 2 or 4 0.67W 28V bulbs installed in parallel.

The bright and dim modes are controlled by **ANN LT** switch 2LP located on overhead panel 22VU.

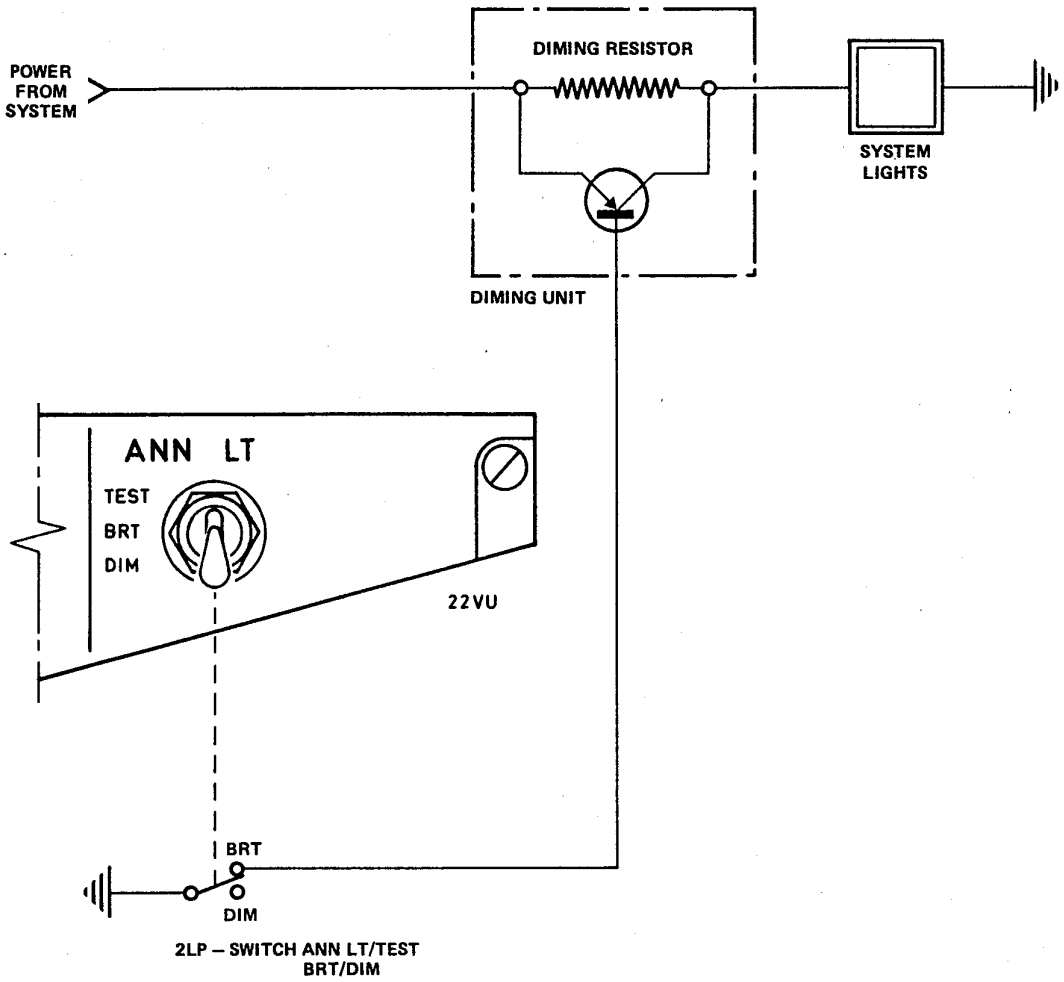
This switch controls the transistors which ensure annunciator light dimming. (Ref. Fig. 001)

2. Operation

When the switch is in **BRIGHT** position, the dimming units located in zone 212 are supplied. The transistors are in the passing state and the resistances are short-circuited.

Annunciator light dimming is achieved by placing **ANN LT** switch 2LP in **DIM** position : The transistor is not in the passing state and the resistance is in series with the annunciator light.

When the switch is in **TEST** or **BRT** position, the dimming units are supplied. (The transitors are in the passing status).



Annunciator Light Dimming Schematic
Figure 001

ELECTRICAL EQUIPMENT MAINTENANCE LIGHTING

1. Location
   Component location : Ref. 33-00-00.
   The control switch and the dome light are located in the avionics compartment in the aircraft nose section behind instrument panels. (access through nose landing gear access door).

2. Description
   28VDC SVCE BUS busbar provides power supply of dome light 6LS through circuit breaker 2LU when switch 4LS is in ON position and inspection door is open (microswitch 24WS released).

PASSENGER COMPARTMENTS

1. General

A. General Illumination and Passenger Lighted Signs

Passenger compartment lighting and passenger signs include :

(1)Passenger compartment general lighting (lateral, upper)
(2)Galley lighting
(3)Call system
(4)Lavatory lighting
(5)Pax reading lighting
(6)Passenger lighted signs
(7)Forward and aft baggage compartments
(8)Emergency lighting.

GENERAL ILLUMINATION

1. Passenger Compartment Lighting

A. Description

Component location : Ref. 33-00-00.

Illumination of the passenger compartment is provided by two lateral strips of fluorescent lights (7 on the R side and 8 on the L side) each of them is supplied by a ballast unit. Lighting is controlled from attendant panel 70VU by means of pushbutton switch 10LG. The 28VDC SVCE BUS busbar supplies every other light in a zigzag pattern. 28VDC BUS1 SECT1 and 28VDC BUS2 SECT1 busbars supply the other lights.

Part of the right lateral passenger compartment lighting, controlled by means of switch 163LG on panel 23VU is supplied by the 28VDC ESS BUS SECT1 busbar in the event of aircraft network power supply by battery.

The entrance area lighting is provided by fluorescent light 48LG controlled by pushbutton switch 12LG located on attendant panel 70VU. This switch is supplied by 28VDC SVCE BUS busbar.

B. Operation

(1)- On ground, the DC SVCE BUS busbar is supplied by the electrical ground power unit via the ground connector ; the busbar is energized as soon as GND SVCE BUS pushbutton switch on panel 70VU or SVCE & UTLY BUS pushbutton switch on panel 29VU is pressed.

Action on pushbutton switch 10LG results in power supply of every other fluorescent light in a zigzag pattern : lights are supplied through circuit breakers 2LG, 249LG and 251LG.

- If the 28VDC SVCE BUS busbar is not supplied by the electrical ground power unit via the ground connector, action on switch 163LG on panel 23VU provides power supply of :
  . lateral lighting fluorescent lights (minimum lighting) 202LG, 210LG, 218LG, 226LG and 234LG
  . aft entrance fluorescent light 248LG
  . fwd entrance fluorescent light 271LG

  These lights are supplied through 28VDC ESS BUS SEC 1 via circuit breaker 164LG.
- As soon as engines are started up, the 28VDC BUS1 SECT1 and 28VDC BUS2 SECT1 busbars are supplied. The lights which were not supplied are serviceable.

  All fluorescent lights are supplied through circuit breakers 6LG, 2LG, 249LG, 251LG, 164LG, 242LG, 255LG and 257LG.

  Power of the fluorescent lights is 36W.

  Power of fluorescent lights 202LG and 247LG is 18W.

(2)Entrance Area Lighting

Component location : Ref. 33-00-00.

- The aft entrance area is illuminated by fluorescent light 248LG located in zone 255.

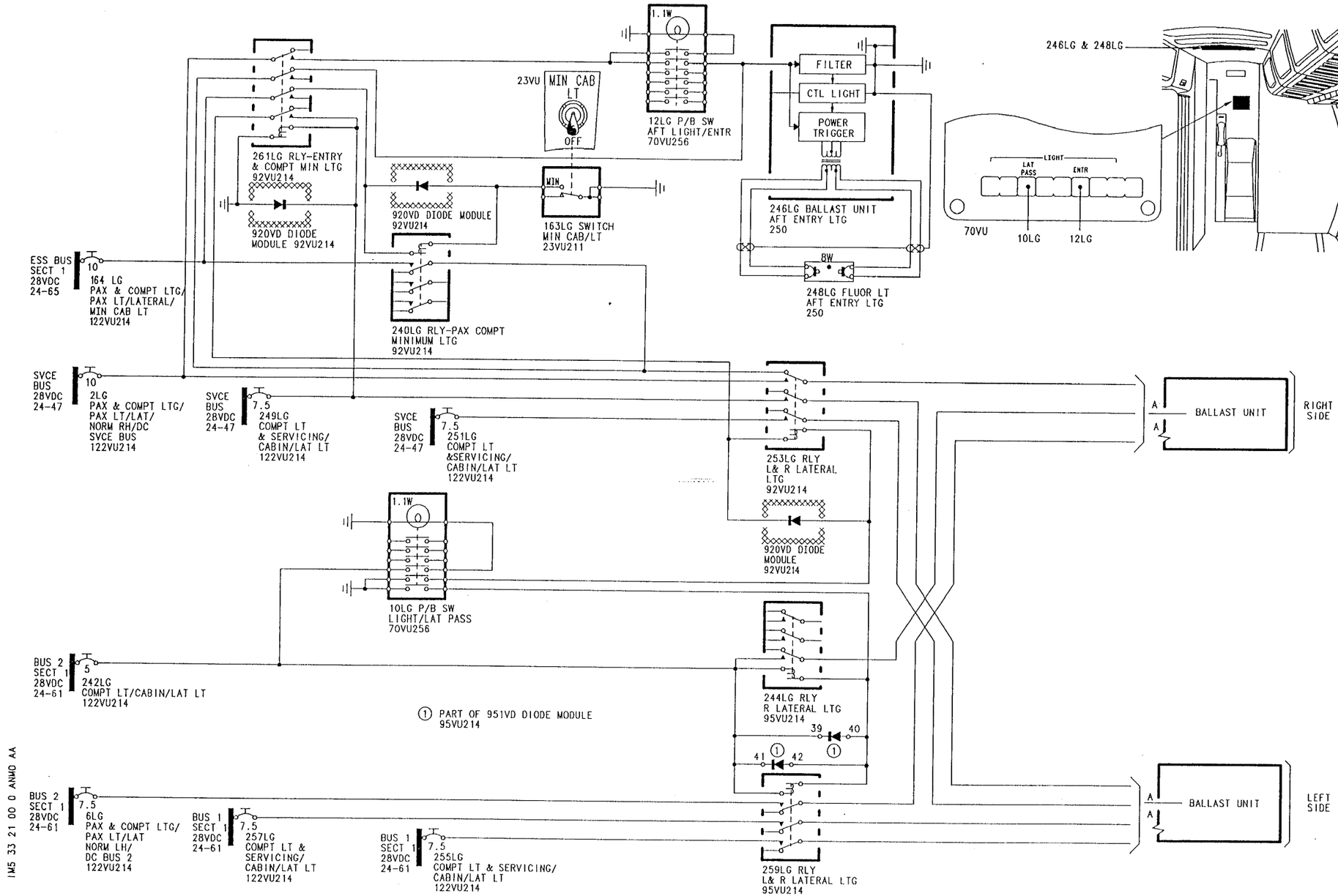
  This light, supplied by a ballast unit through circuit breaker 2LG is controlled by pushbutton switch 12LG located on attendant panel 70VU.
- The fwd entrance area is illuminated by fluorescent light 271LG

(zone 233). This light, supplied by a ballast unit through circuit breaker 251LG, is controlled by switch 334LG (zone 224).
(Ref. Fig. 001)

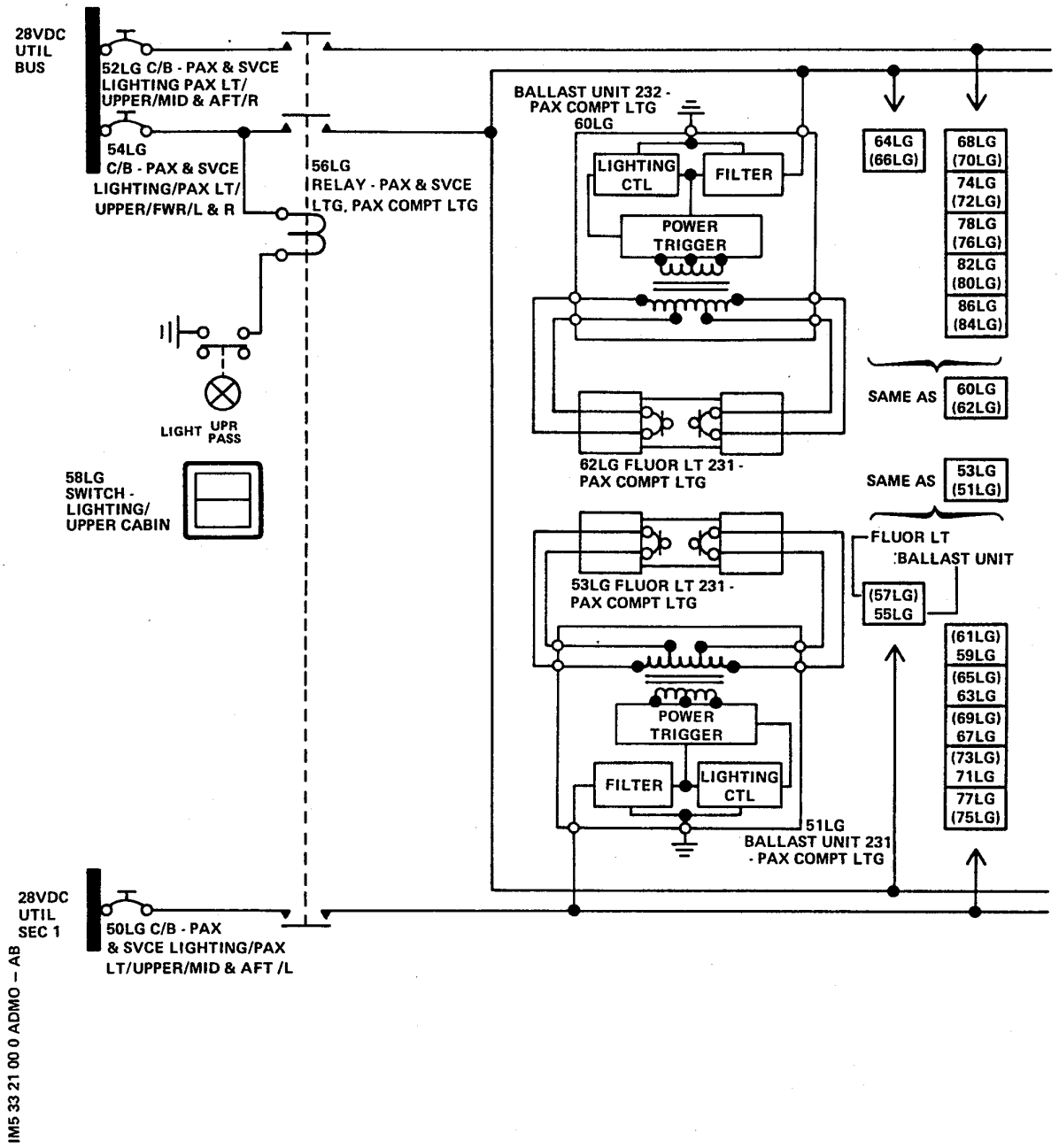
2. Passenger Compartment Upper Lighting

A. Description
Component location : Ref. 33-00-00.
The passenger compartment upper lighting consists of two rows of fluorescent lights (7 on the right side, 7 on the left side), each of them being supplied by a ballast unit.
This lighting system is controlled from cabin attendant panel 70VU by means of pushbutton switch 58LG.
28VDC UTIL BUS2 busbar supplies nine fluorescent lights and 28VDC UTIL BUS1 busbar supplies the five remaining ones.

B. Operation
Activation of pushbutton switch 58LG enables power supply of all the upper fluorescent lights through circuit breakers 50LG, 52LG and 54LG.
The power of each fluorescent light is 36W.
(Ref. Fig. 002)



Passenger Compartment Lateral Lighting
Figure 001



Passenger Compartment Upper Lighting – Schematic
Figure 002

GALLEY AREA LIGHTING

1. Description

For component location, refer to section 33.00.00. The galley area lighting is provided by a fluorescent light 156LH located in zone 250. This light is supplied by ballast unit 154LH through circuit breaker 150LH and controlled by pushbutton switch 152LH located on attendant panel 70VU.

CALL SYSTEM

1. Description

Component location : Ref. 33-00-00.

The call system is supplied from the 28VDC UTIL BUS1 busbar through circuit breaker 1LN.

Attendant call is achieved by pressing call pushbutton switch located on the PSU (Passenger Service Unit) ;

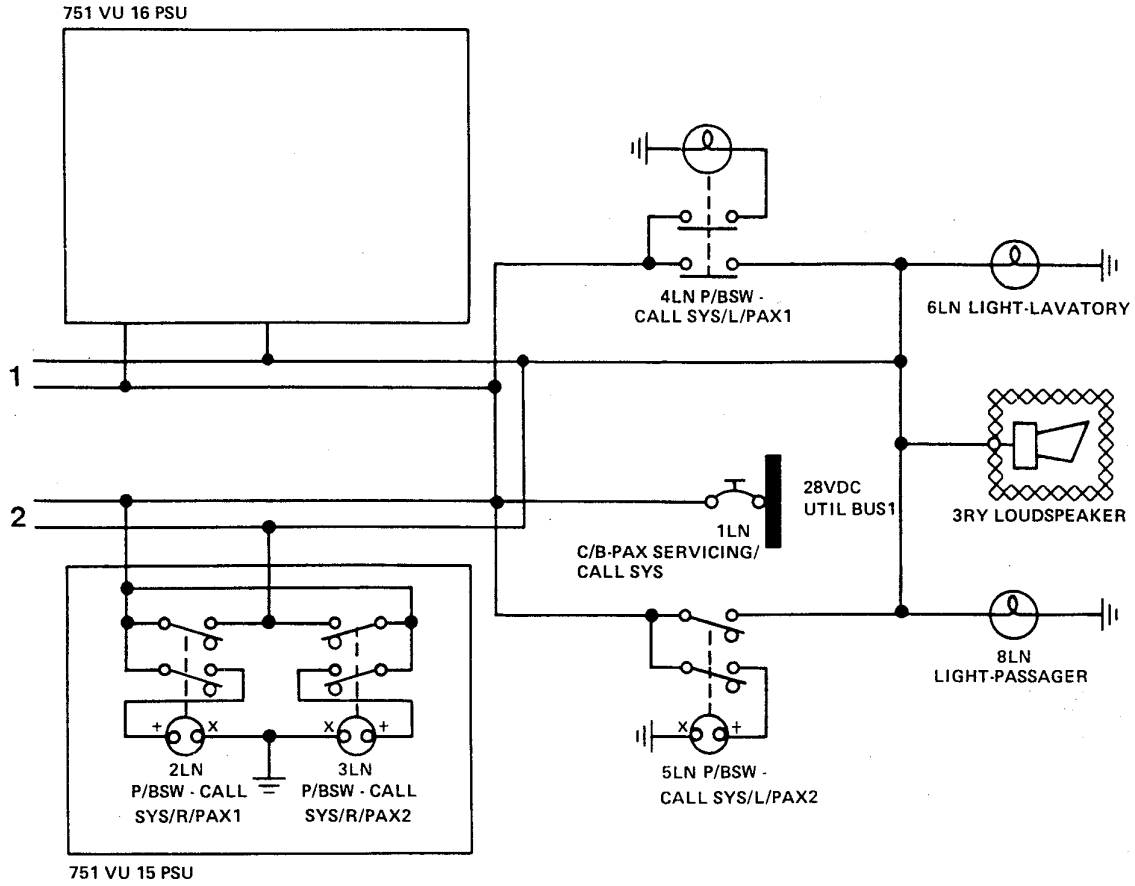
A light integral with the call pushbutton switch comes on to show the area from which the call is made.

A brief aural signal is heard.

A light 8LN or 6LN located on attendant panel comes on to indicate that a passenger call has been made from the passenger compartment or the lavatory.

The light can be extinguished by pressing again the pushbutton switch.

(Ref. Fig. 001)



1 - 751 VU 4, 751 VU 6, 751 VU 8, 751 VU 10, 751 VU 12 ET 751 VU 14.

2 - 751 VU 3, 751 VU 5, 751 VU 7, 751 VU 9, 751 VU 11 ET 751 VU 13.

IM5 33 23 00 0 AAMO

Call System Schematic
Figure 001

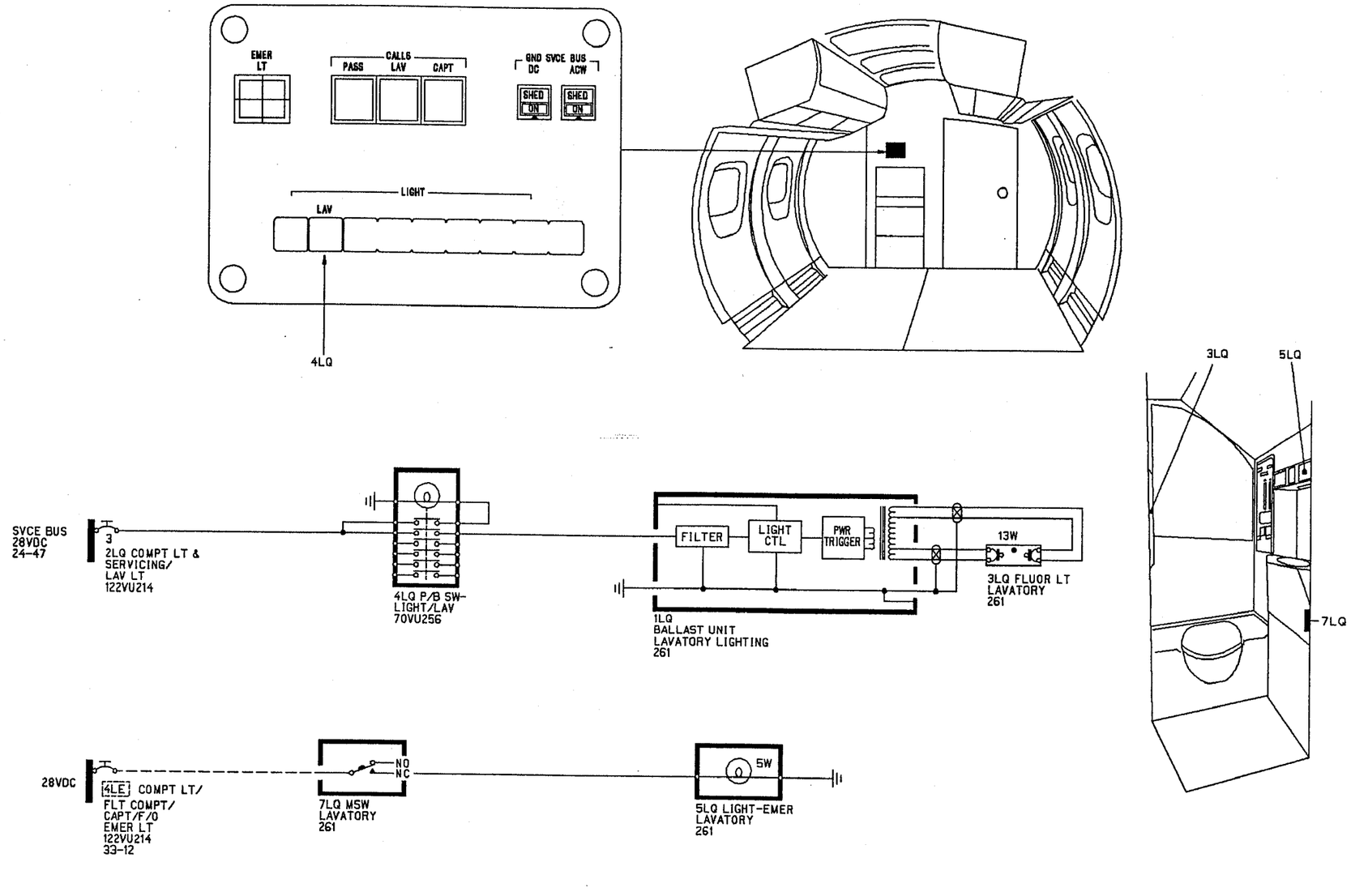
LAVATORY LIGHTING

1. Description

For component location refer to section 33-00-00.
Lavatory lighting consists of two systems :

A. The normal lighting system :
supplied by the 28VDC SVCE BUS busbar through circuit breaker 2 LQ. When LIGHT/LAV pushbutton switch 4LQ is pressed (in) (ON legend on), fluorescent light 3 LQ comes on.

B. The emergency lighting system :
supplied by the 28VDC EMER BUS busbar through circuit breaker 4 LE, lavatory emergency light 5 LQ is lighted when the lavatory door is locked closed (as microswitch 7 LQ provides electrical circuit continuity).
(Ref. Fig. 001)



Lavatory Lighting - Electrical Schematic
Figure 001

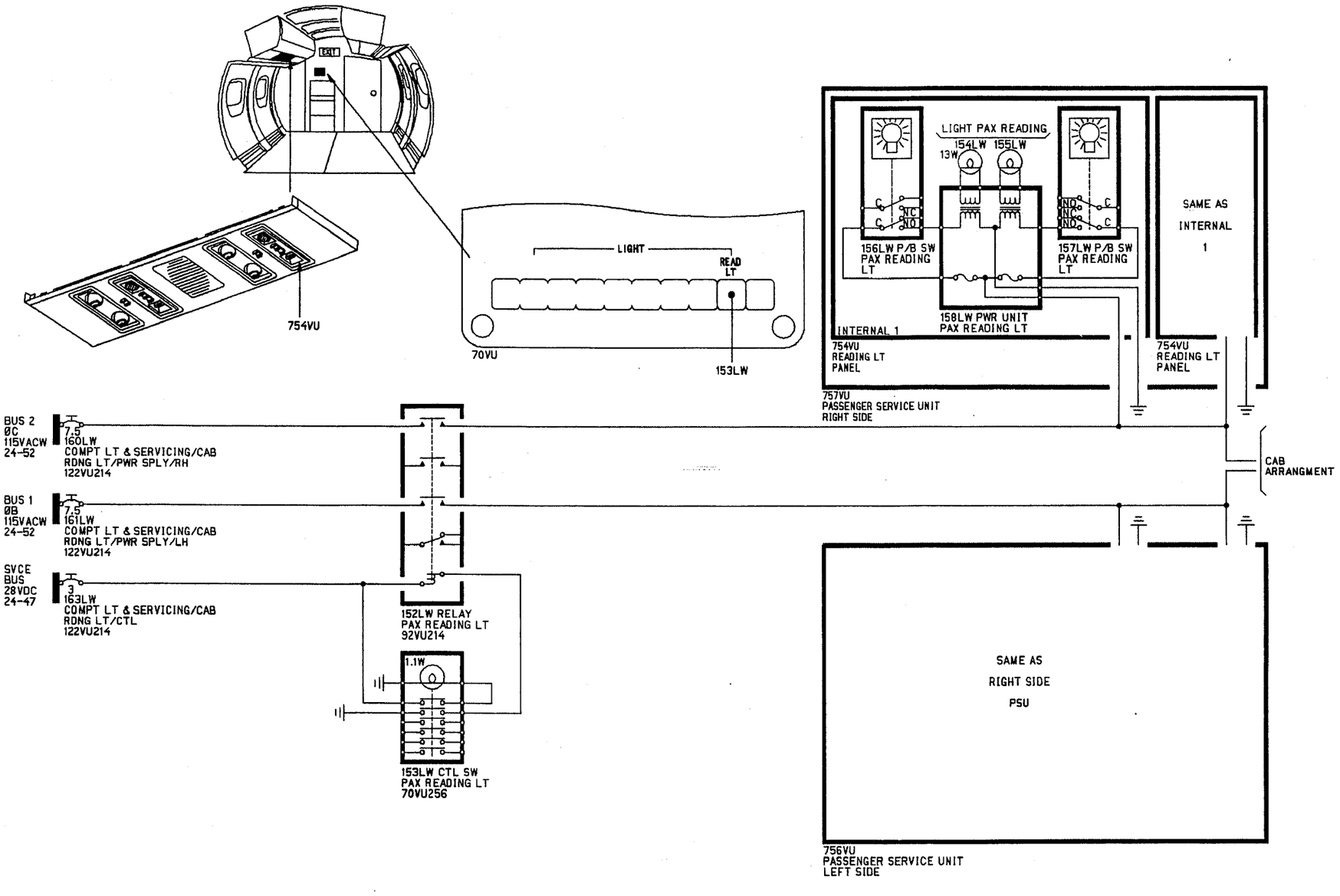
EFFECTIVITY: ALL

Q0

PAX READING LIGHTS

1. Description
   Each PSU (Passenger Service Unit) includes 1 or 2 reading light(s).
   Each passenger can switch on or off the reading light via a pushbutton switch located adjacent to the reading light.

2. Operation
   The pax reading light system is controlled by pushbutton switch 153 LW located on cabin attendant panel 70VU (READ LT).
   The circuit breakers 160 LW and 161 LW respectively supply the Left and Right ramps via relay 152 LW controlled by pushbutton switch 153 LW and supplied by circuit breaker 163 LW (28 VDC).
   (Ref. Fig. 001)



Pax Reading Light circuit - Electrical Schematic
Figure 001

PASSENGER LIGHTED SIGNS

1. Description

Component location : Ref. 33-00-00.

A. Passenger Compartment Lighted Signs

The double passenger signs (Fasten seat belts - No smoking) are given under the form of pictographs.
They are supplied by the 28VDC BUS2 SECT1 busbar through circuit breaker 2WJ.
They are controlled from overhead panel 24VU located in flight compartment.

B. Lavatory Signs

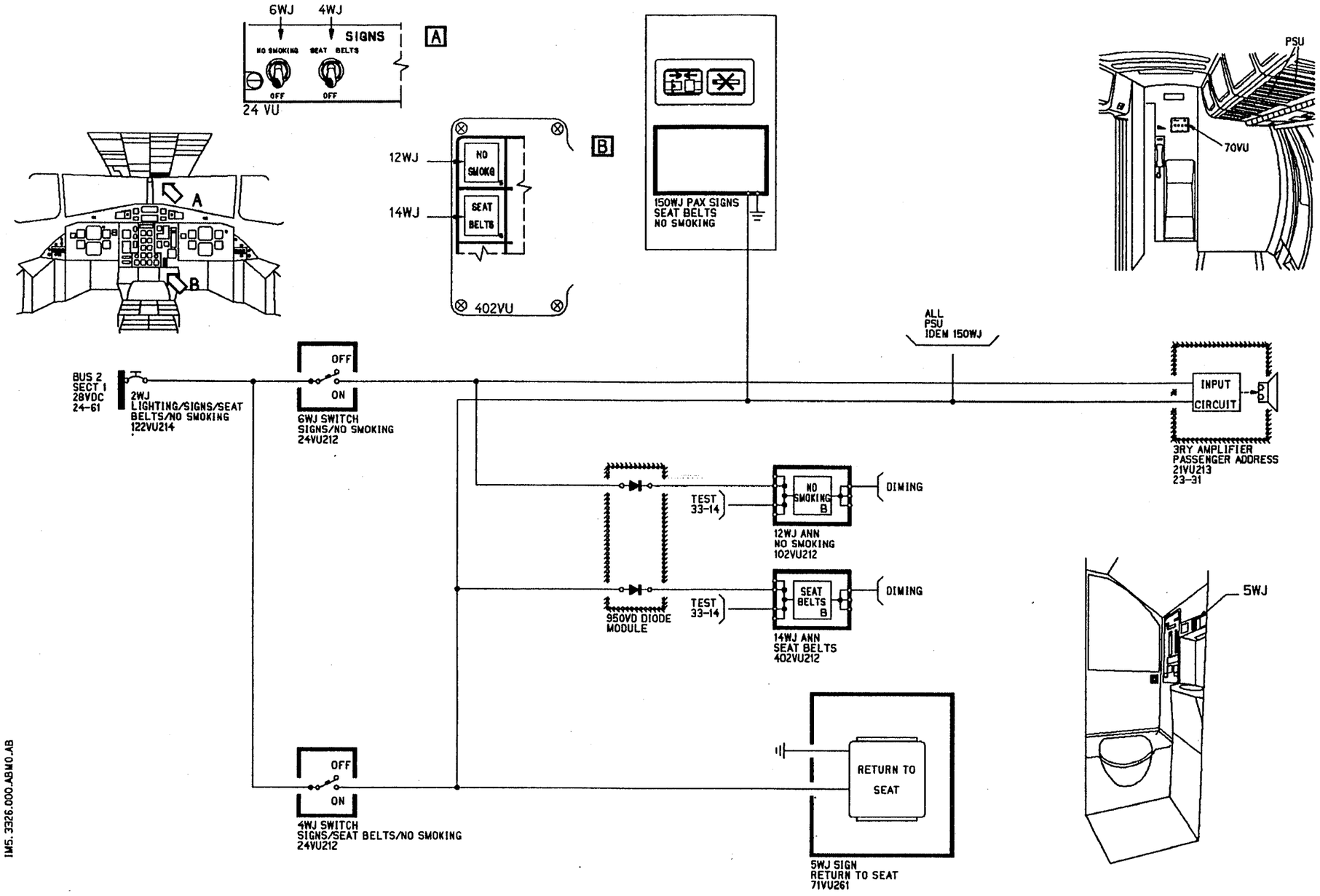
This sign says : RETURN TO SEAT
It is located in the lavatory above the wash basin.
Control is the same as that of the passenger compartment signs.
As soon as the signs are energized :
- an aural signal is heard,
- 2 annunciators come on on center instrument panel, on panel 402VU.

2. Operation

Activation of NO SMOKING switch 6 WJ enables :
- power supply of the 8 corresponding pictographs located in the PSU
- emission of an aural signal.
- illumination of the corresponding annunciator on panel 402VU on flight compartment center instrument panel.

Activation of SEAT BELTS switch 4 WJ enables :
- power supply of the 8 corresponding pictographs located in the PSU and the toilet sign "RETURN TO SEAT" 5 WJ.
- emission of an aural signal.
- illumination of the corresponding annunciator on panel 402VU, on center instrument panel.

(Ref. Fig. 001)



Passenger Signs - Schematic
Figure 001

CARGO AND SERVICE COMPARTMENTS

1. General

The cargo and service compartment lights provide illumination of the compartments used for stowage of cargo and the housing of various components or accessories. The above functions are accomplished respectively by :

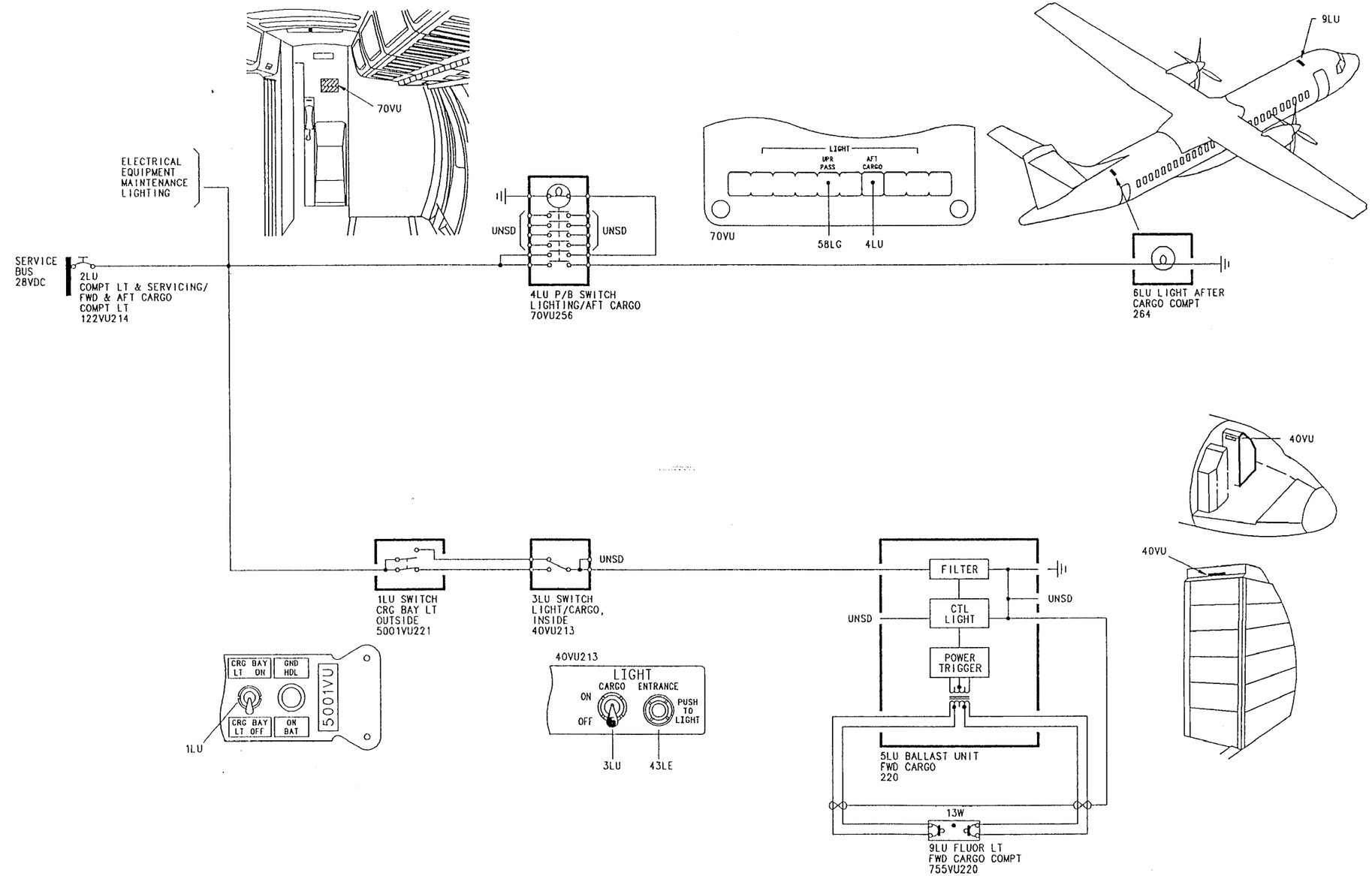
- Forward aft cargo compartment lighting.
- Refuel/Defuel panel lighting.
- Avionics compartments and wheel well lighting.

CARGO COMPARTMENT LIGHTING

1. Description
   Component location : Ref. 33-00-00

   A. Forward Baggage Compartment
      Forward baggage compartment lighting is achieved by means of a fluorescent light 9LU supplied by ballast unit 5LU.
      Power is supplied from 28VDC SVCE BUS busbar and control is achieved by means of 2 two-way switches, one located on electronics rack 80VU (panel 40VU), the other one outside the aircraft on the fuselage (panel 5001VU).

   B. Aft Baggage Compartment
      The aft baggage compartment is lighted by dome light 6LU controlled by a pushbutton switch located on cabin attendant panel 70VU.
      (Ref. Fig. 001)



IM5 33 34 00 0 BBM0 AC

Baggage Compartment Lighting System
Figure 001

33-34-00

EFFECTIVITY: ALL

Q0

REFUELING PANEL LIGHTING

1. General

Refueling panel illumination during ground operations is provided by a light installed in the aft part of the right main landing gear fairing and controlled by a microswitch.

2. Description

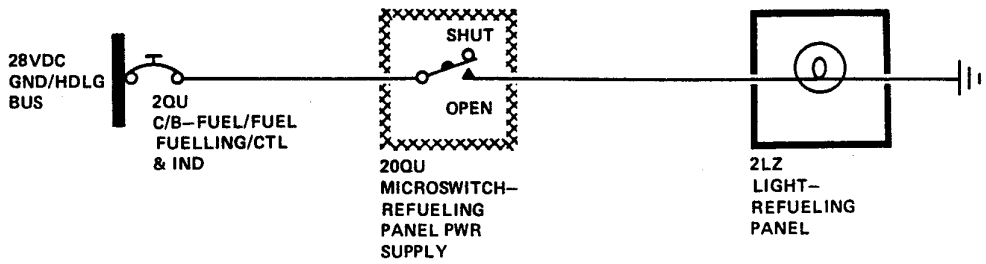
A. The system consists of :
- a refueling panel light 2LZ with a lamp (5VU) of white colour, installed near panel 5004VU
- a refueling panel power supply microswitch 20QU ;

B. The light is supplied by 28VDC ground handling transfer bus through circuit breaker 2QU.

(Ref. Fig. 001)
(Ref. Fig. 002)

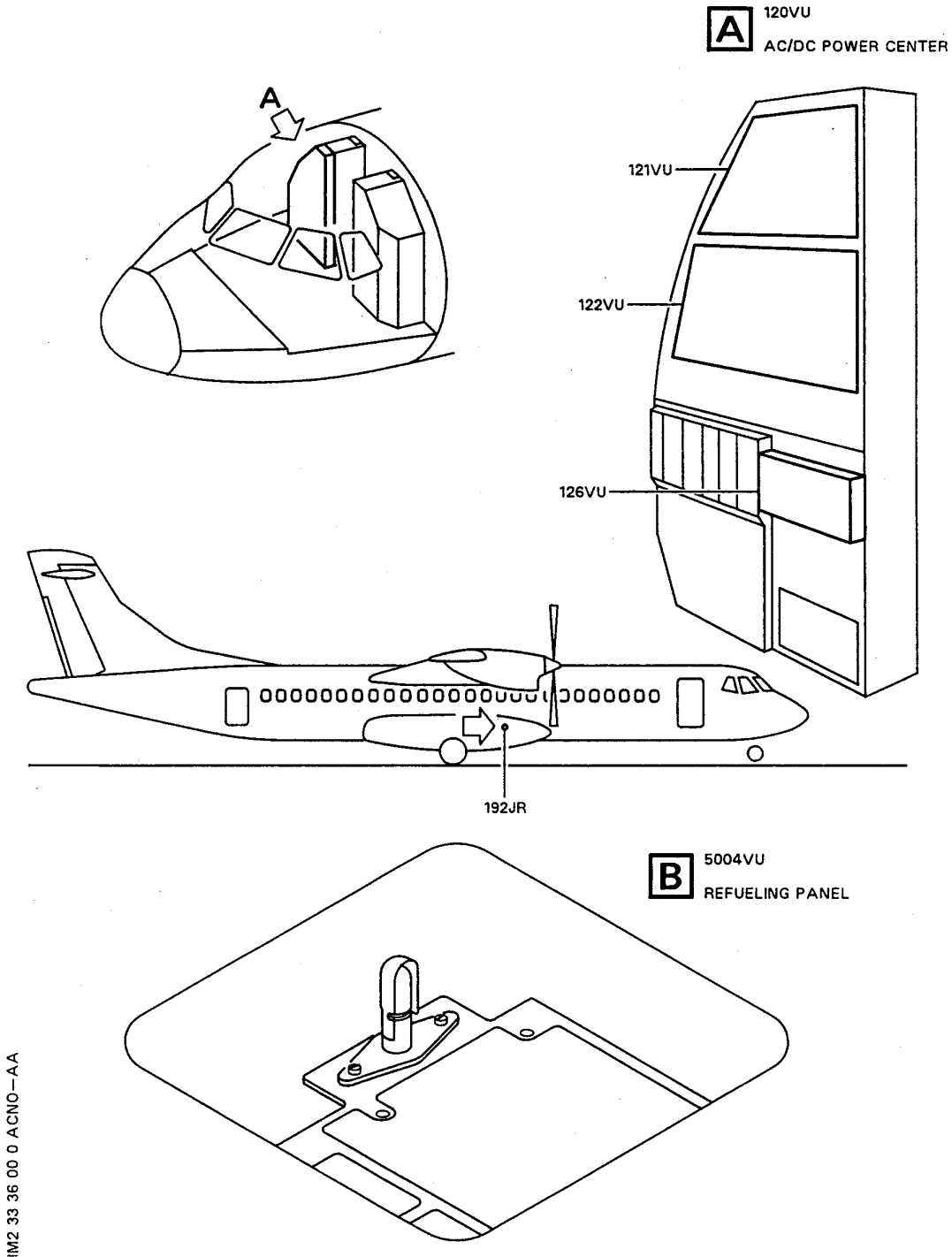
3. Operation

The light comes on by opening the refuel/defuel door.This action causes the closing of the microswitch 20QU which allows the light to be supplied by ground handling transfer bus with 28VDC, through the circuit breaker 2QU.



IM2 33 36 00 0 AAMO

Refuel/Defuel Panel Lighting Electrical Diagram
Figure 001



Component location and access panel
Figure 002

AVIONICS COMPARTMENT AND WHEEL WELL LIGHTING

1. General

Avionics compartment and wheel well lighting during ground operation is provided by lights, installed in each one of the interested areas and controlled by switches.

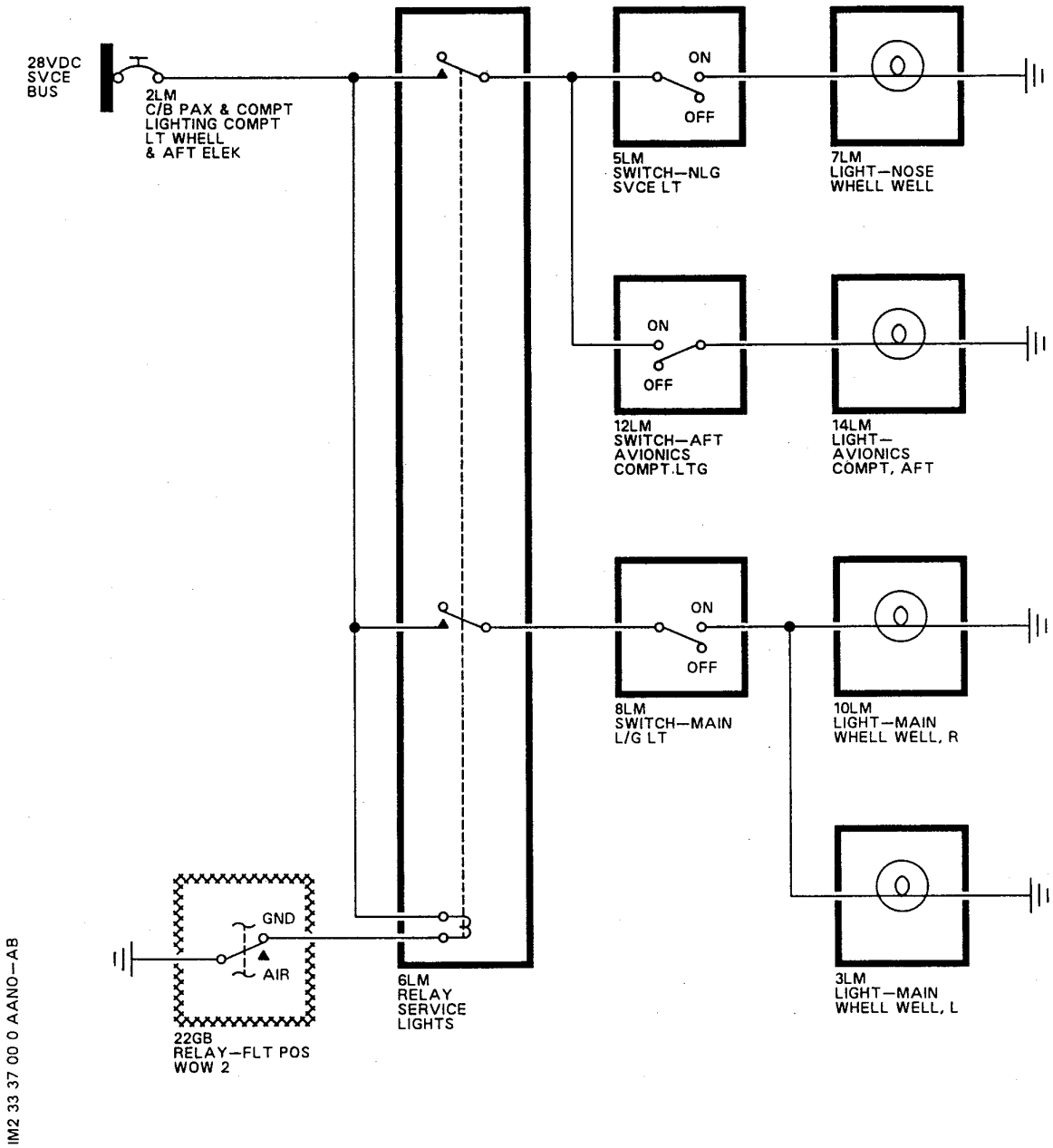
2. Description

A. The system consists of :

- two (L and R) main wheel well lights 3LM and 10LM with a lamp (30W) of white colour installed respective bay of main landing gear
- one nose wheel well light 7LM with a lamp (30W) of white colour, installed in the bay nose landing gear.
- one aft avionics compt light 14LM with a lamp (30W) of white colour installed in aft avionics compartment.
- one NLG SVCE LT switch 5LM located on the 5000VU panel.
- one main L/G LT switch 8LM located on the refueling panel 5004VU.
- one avionics compt switch 12LM located inside the tail cone.
- a service light relay 6LM.

B. The lights are supplied by 28VDC service bus through the circuit breaker 2LM.

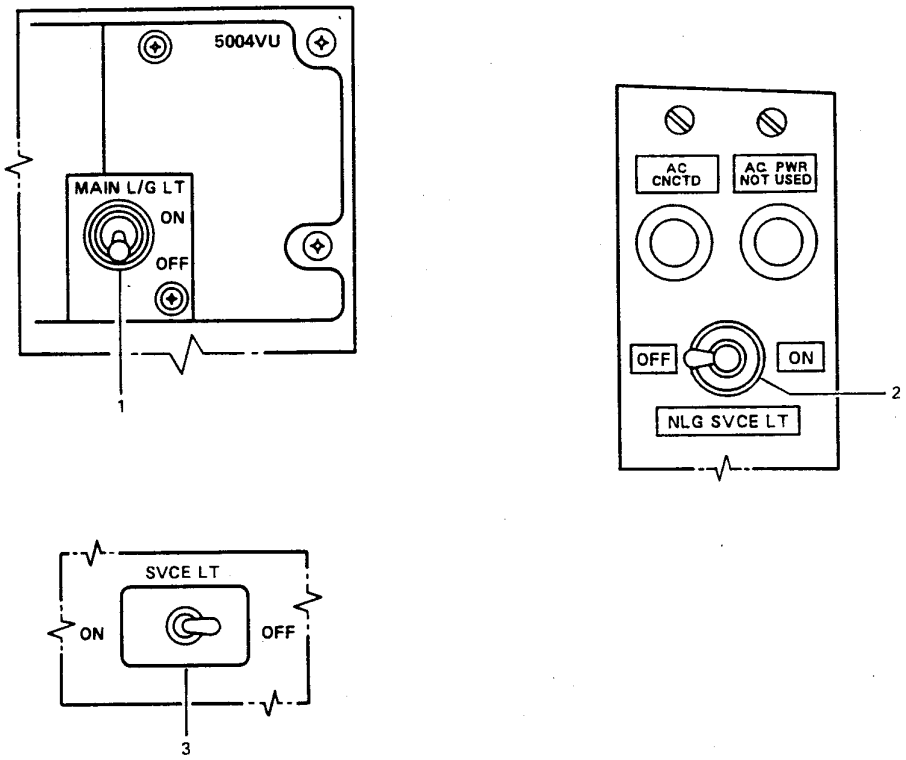
(Ref. Fig. 001)
(Ref. Fig. 002)
(Ref. Fig. 003)



Electrical Diagram
Figure 001

EFFECTIVITY: ALL

Q0



1- MAIN L/G LIGHTING SWITCH

THIS SWITCH ALLOWS THE MAIN WHEEL WELL LIGHTS TO COME ON THUS ILLUMINATING THE MAIN LANDING GEAR BAY

2- NLG SERVICE LIGHT SWITCH

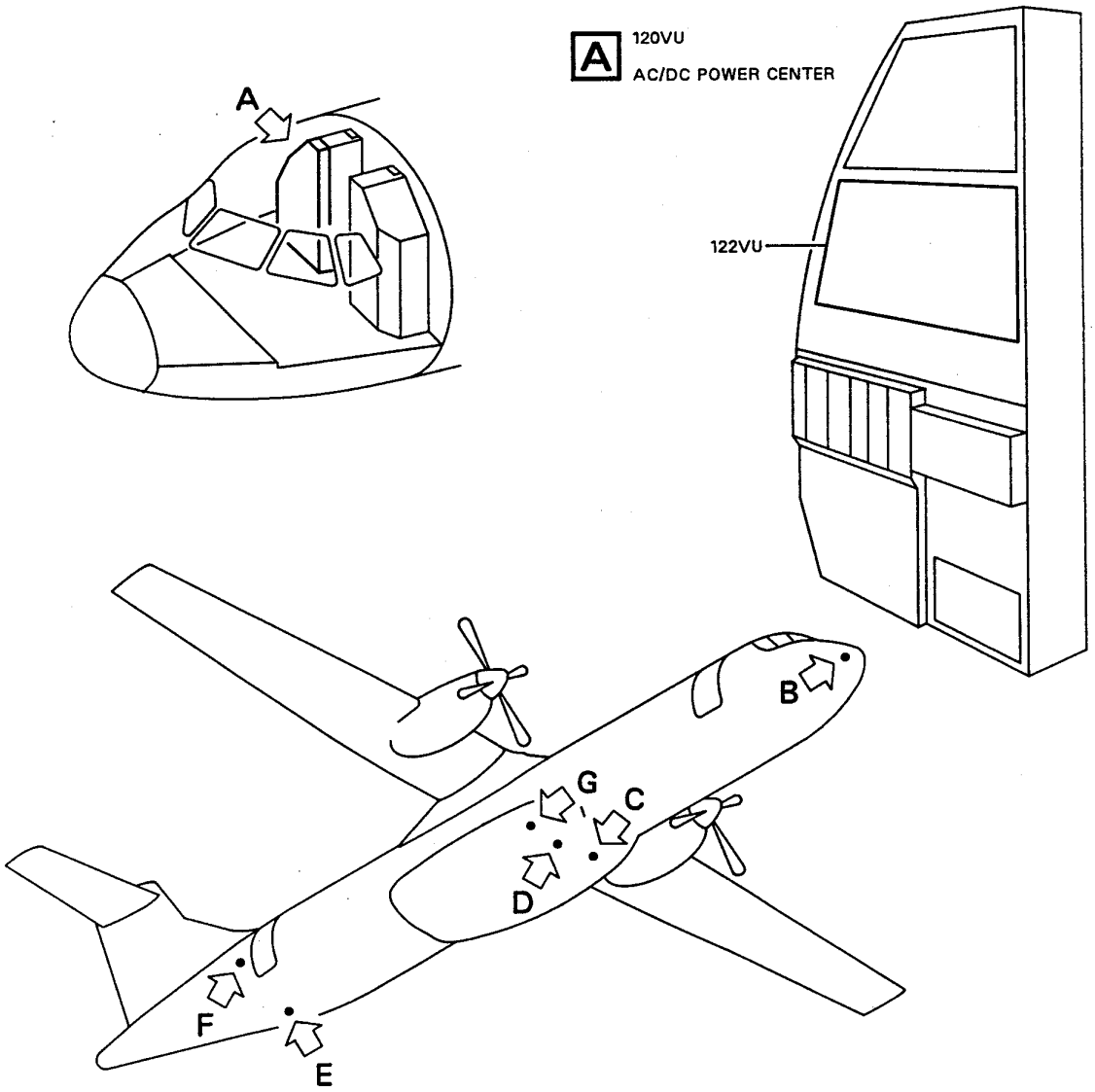
THIS SWITCH ALLOWS THE NOSE WHEEL WELL LIGHT TO COME ON THUS ILLUMINATING THE NOSE LANDING GEAR BAY

3- AFT AVIONICS COMPT LTG SWITCH

THIS SWITCH ALLOWS THE AFT AVIONICS COMPT LIGHT TO COME ON THUS ILLUMINATING THE AFT AVIONICS COMPARTMENT

IM2 33 37 00 0 ACMO-AC

Controls and Indicating
Figure 002



Component Location
Figure 003

EFFECTIVITY: ALL

Q0

EXTERIOR LIGHTS

1. General

For the exterior lights provide, through separate controls, a high-intensity light pattern that can be modified selectively to meet requirements of lighting in adverse weather conditions. The system isdesigned to perform the following functions :

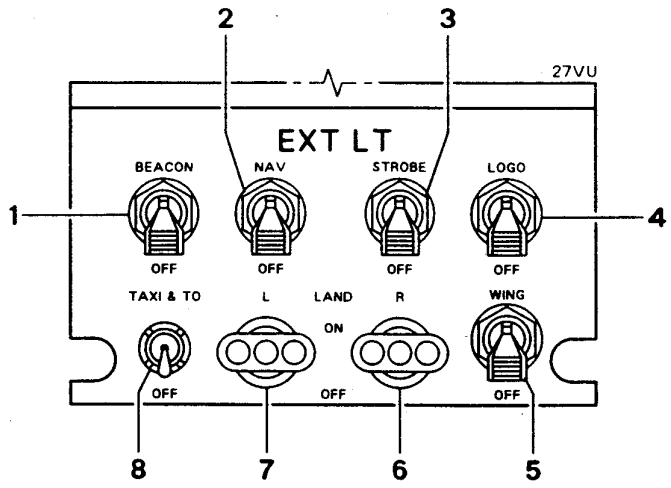
A. Illumination of particular aircraft external areas:
- wing and engine scan lights
- logo lighting
- strobe lighting

B. Indication of In-Flight Aircraft Position:
- navigation lights
- anticollision lights

C. Illumination of Runway and Taxiway:
- taxi and take off lights
- landing lights

2. Controls and Indicating

(Ref. Fig. 001)



1 – BEACON SWITCH

IN BEACON POSITION THE TWO ANTICOLLISION LIGHTS START TO FLASH

2 – NAV SWITCH

IN NAV POSITION THE THREE (GREEN RED AND WHITE) NAVIGATION LIGHTS GO ON

3 – STROBE SWITCH

IN STROBE POSITION STROBE LIGHTS GO ON

4 – LOGO SWITCH

IN LOGO POSITION TWO LIGHTS ILLUMINATE THE COMPANY INSIGNE ON THE VERTICAL STABILIZER

5 – WING SWITCH

IN WING POSITION TWO LIGHTS ILLUMINATE THE LEADING EDGES AND THE ENGINE AIR INTAKES

6 – LAND R SWITCH

IN LAND POSITION THE RH LANDING LIGHT GOES ON

7 – LAND L SWITCH

IN LAND POSITION THE LH LANDING LIGHT GOES ON

8 – TAXI & T.O. SWITCH

IN TAXI & T.O. POSITION THE TAXI LIGHTS GO ON

IM2 33 40 00 0 AGMO–AB

External Lights Panel.
Figure 001

NAVIGATION LIGHTS

1. General

The position of the aircraft is indicated by navigation lightsinstalled on wing tips and tail cone and controlled by a switch.

2. Description

The system consists of :
- a red L navigation light 3LA on the LH wing tip;
- a green R navigation light 8LA on the RH wing tip;
- a white rear navigation 5LA on the tail cone;
- one NAV/EXT/LT switch 1LA installed on the overhead panel EXT LT section 27VU in the flight compartment;
- three L, R and rear lighting protection inductances 17LA 14LA and 15LA;
- one navigation lights relay 6LA;
- a bus feed relay 6LV;
- three L, R and rear NAV/LT varistors 150LA, 151LA and 19LA installed respectively two on center wing and one on fin tip.

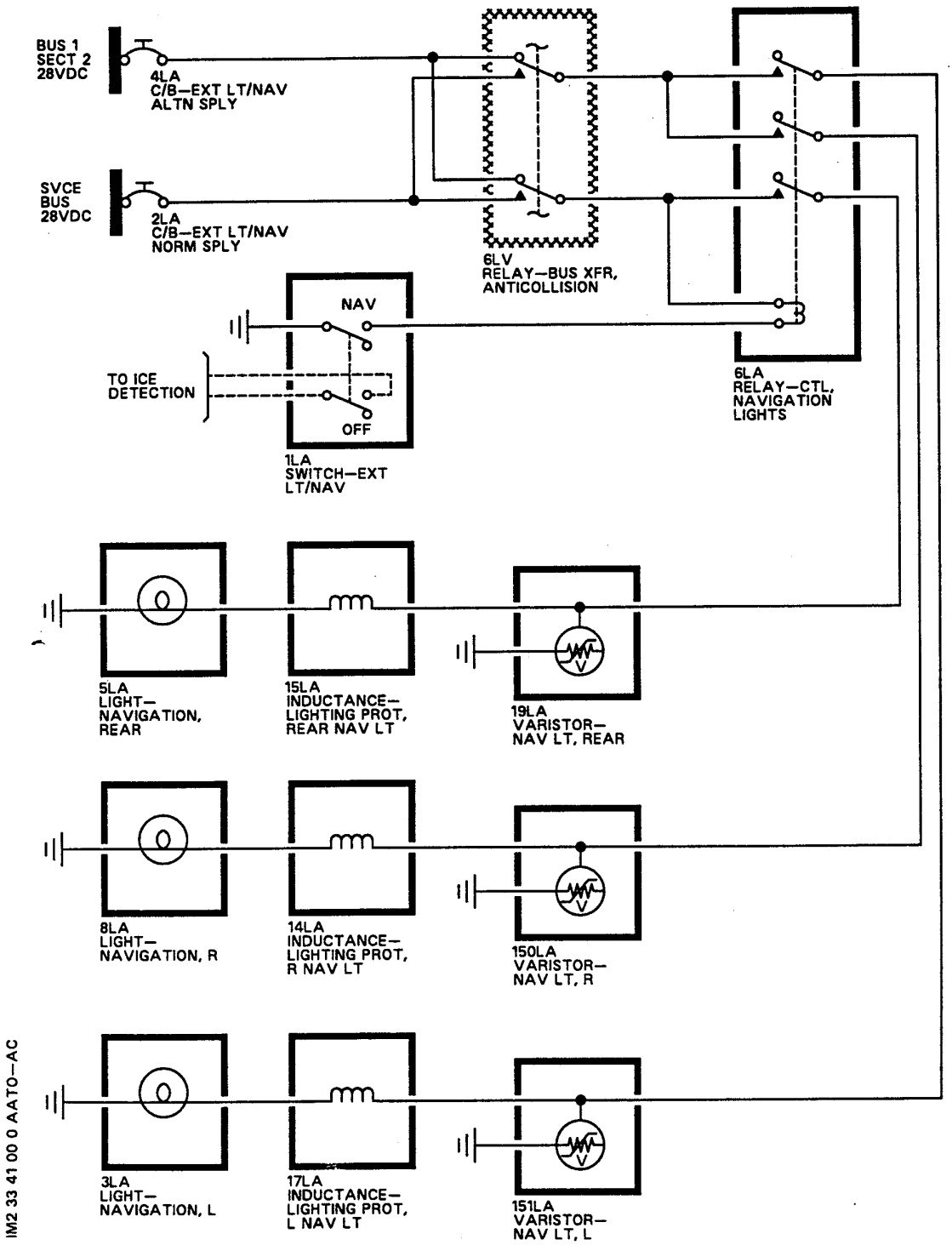
Each navigation light is equipped with one 28VDC 50W lamp.
The lights are supplied by 28VDC SVCE bus through circuit breaker 2LA or in case of service bus failure by 28VDC bus 1 sect 2 through circuit breaker 4LA.

(Ref. Fig. 001)

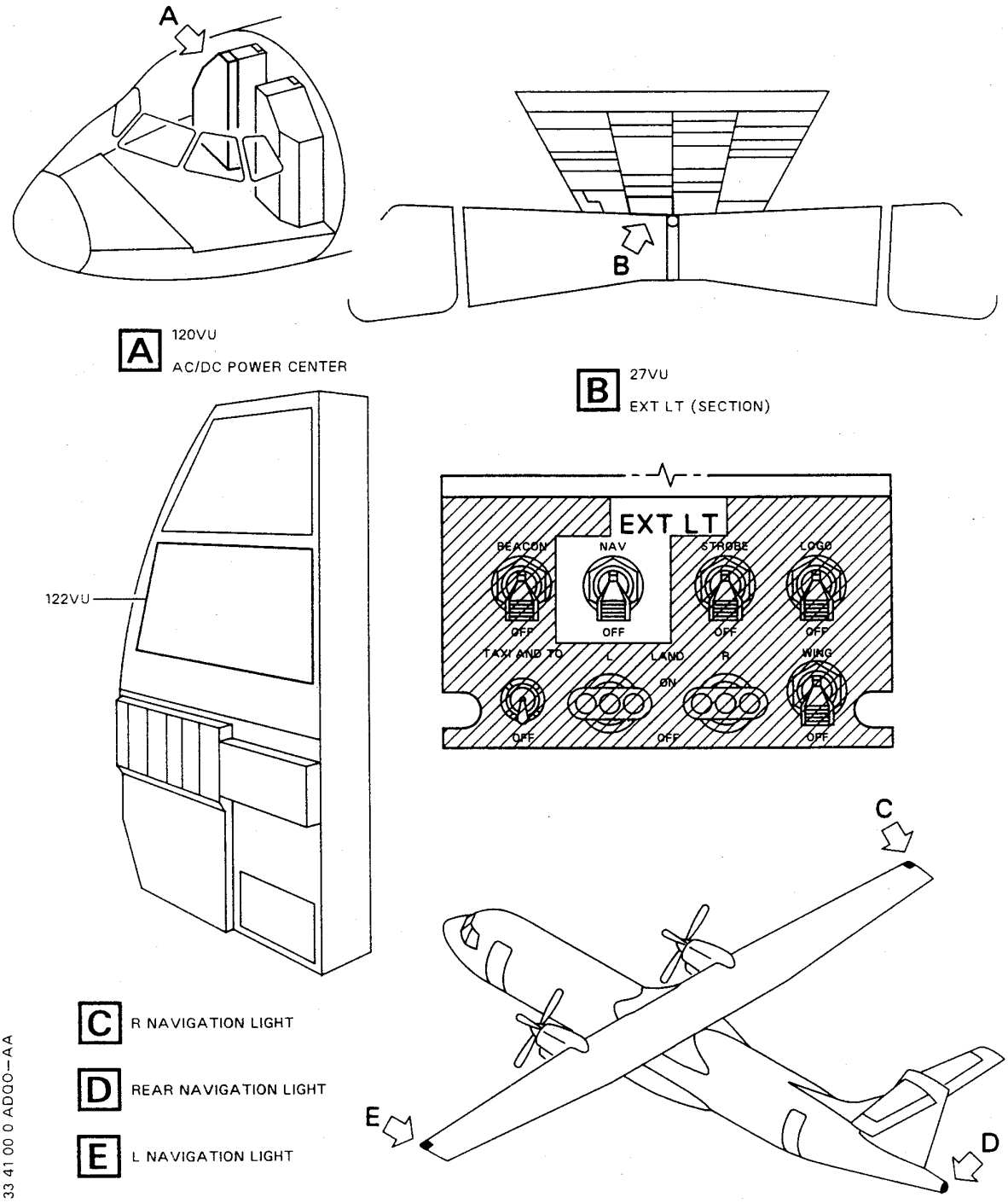
(Ref. Fig. 002)

3. Operation

The navigation lights come on by selecting the NAV position of the corresponding control switch.
This action, under normal condition, causes the excitation of power relay 6LA, allowing the lights to be supplied by 28VDC service bus.
In case of service bus failure, the feed relay 6LV connects automatically the supply line to the main bus 1.



Electrical Diagram.
Figure 001



Component location
Figure 002

LANDING LIGHTS

1. General

An adequate illumination, during landing, is provided by two fixed landing lights installed in the forward part of main landing gear fairing bay and each one controlled by a switch.

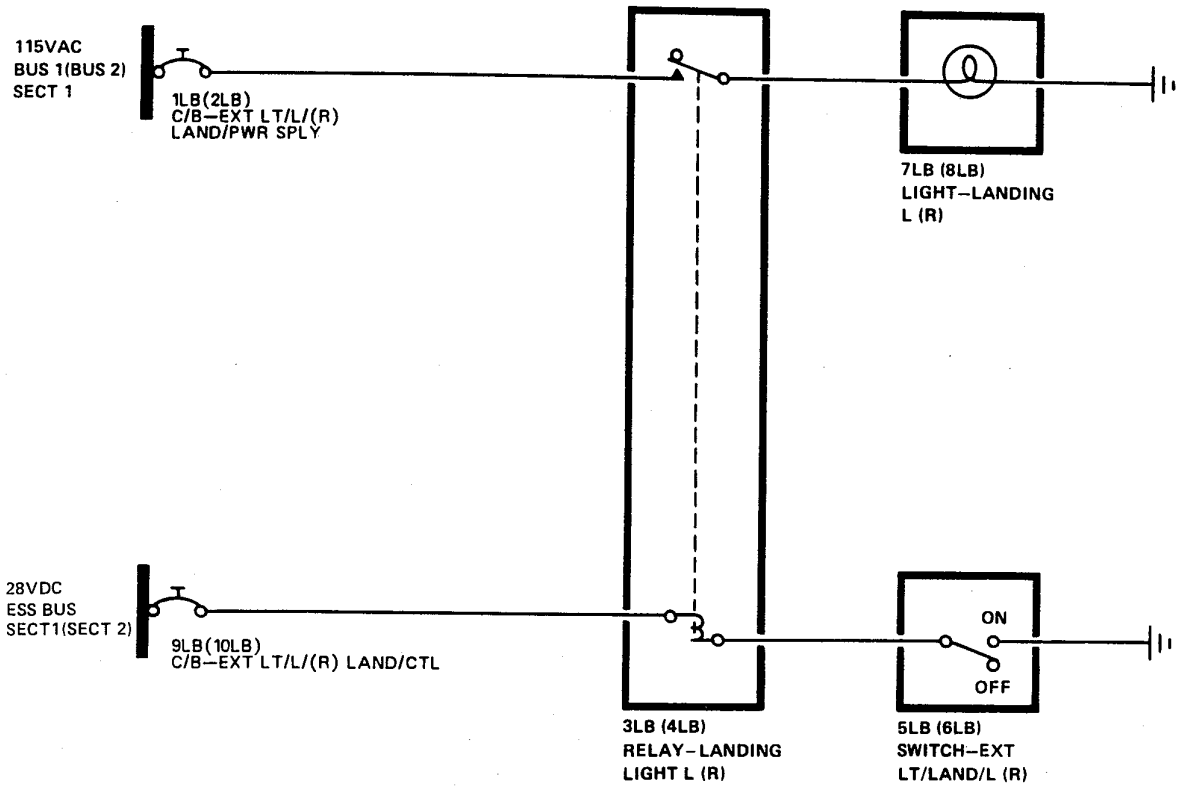
2. Description

The system consists of :
- two L and R landing lights 7LB and 8LB installed on the forward part of the main landing gear fairing bays;
- two L and R land/EXT/LT switches 5LB and 6LB installed on overhead panel EXT LT 27VU in the flight deck;
- two L and R landing lights relay 3LB and 4LB.

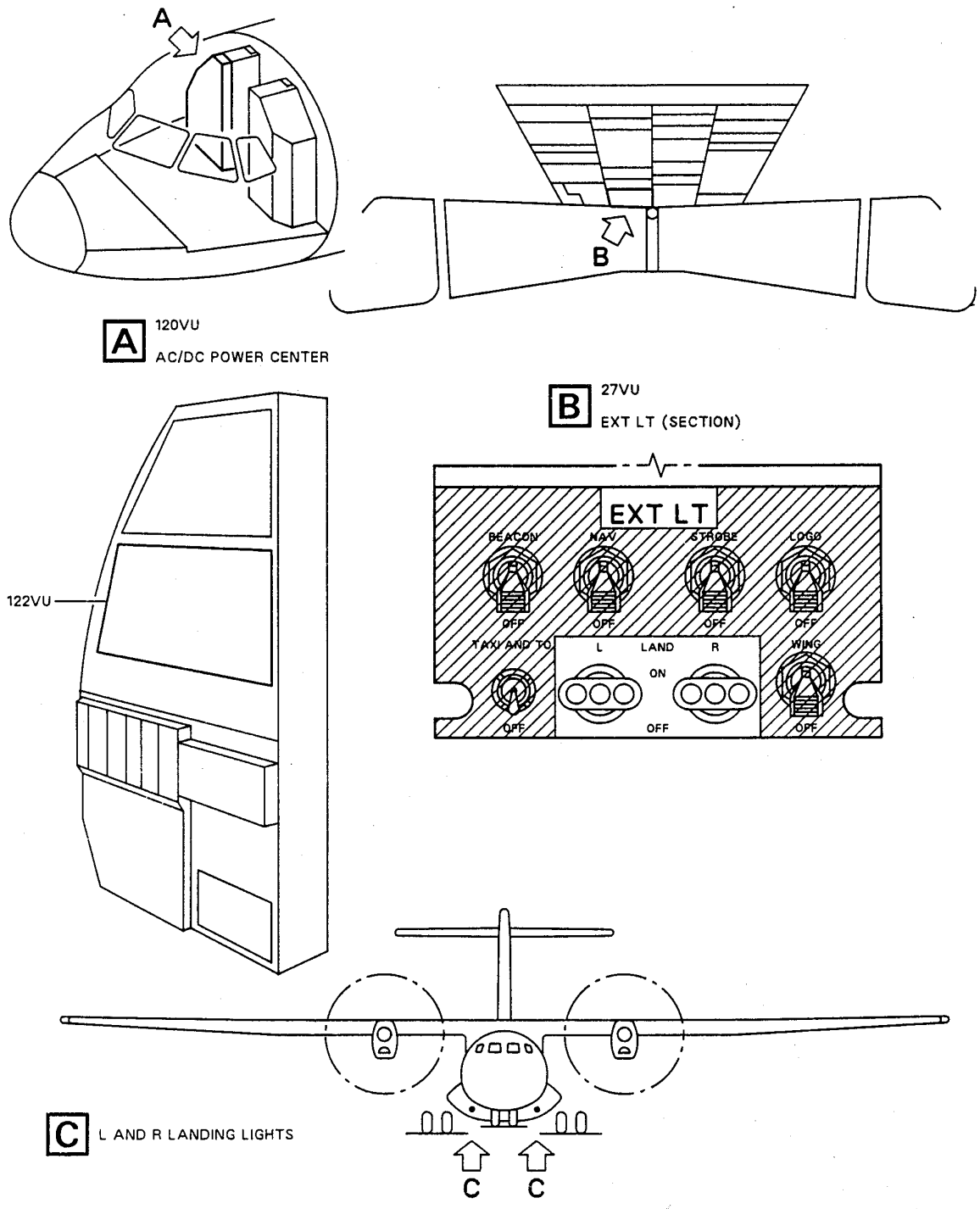
Each landing light is equipped with a 28VAC, 450W, lamp of the sealed beam quartz halogen type and an autotransformer.
The lights are supplied by 115VAC BUS 1 through circuit breaker 1LB (L light) and by 115VAC BUS 2 through circuit breaker 2LB (R light).
The electrical control circuits are supplied by 28VDC BUS 1 through circuit breaker 9LB (L circuit) and by 28VDC BUS 2 thruogh circuit breaker 10LB (R circuit).
(Ref. Fig. 001)
(Ref. Fig. 002)

3. Operation

The landing lights come on by selecting the ON position of the corresponding control switches.
This action causes the excitation of the power relays 3LB and 4LB, supplied by 28VDC bus 1 and bus 2 respectively, allowing the lights to be supplied by main bus 1 and main bus 2 respectively, with 115VAC which are converted to 28VAC by the autotransformers.



Electrical Diagram
Figure 001



Component location
Figure 002

STROBE LIGHTS

1. General

An additional illumination to improve the aircraft visibility in adverse athmospherie conditions is provided by three flashing lights installed on the wing tips and tail cone, and controlled by a switch.

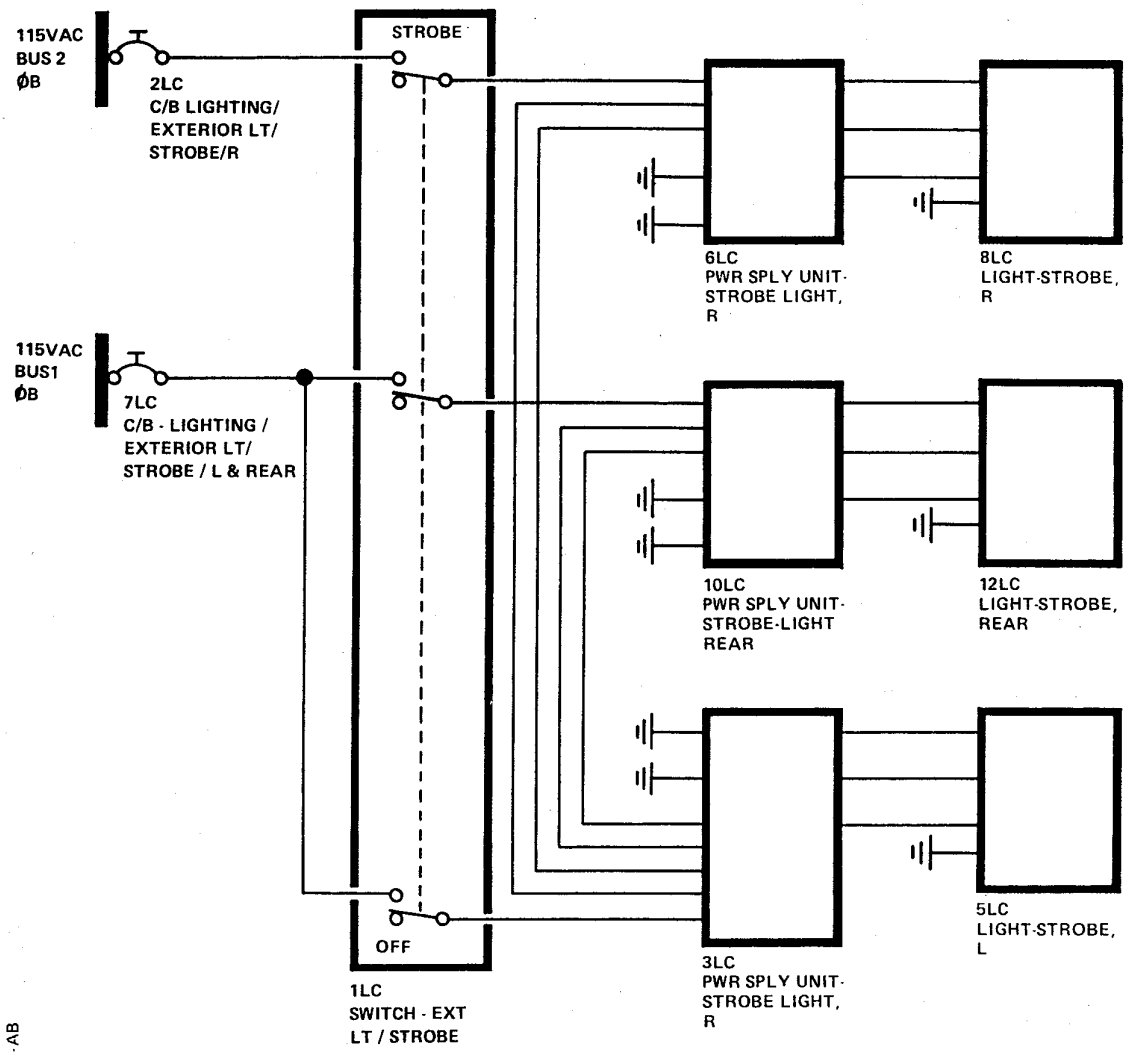
2. Description

The system consists of :
- three white L, R and rear strobe lights 5LC, 8LC and 12LC installed respectively on wing tips and tail cone, close to the navigation lights ;
- three L, R and rear strobe light power supply units 3LC, 6LC and 10LC;
- one strobe EXT/LT switch 1LC located on EXT LT panel 27VU in flight. compartment.

The lights are synchronized at 60 flashes at minute. The synchronizing function is provided by the power supply unit.
The lights are supplied by 115VAC BUS 2 phase B through circuit breaker 2LC (R strobe light) and by 115VAC BUS 1 phase B through circuit breaker 7LC;
(Ref. Fig. 001)
(Ref. Fig. 002)

3. Operation

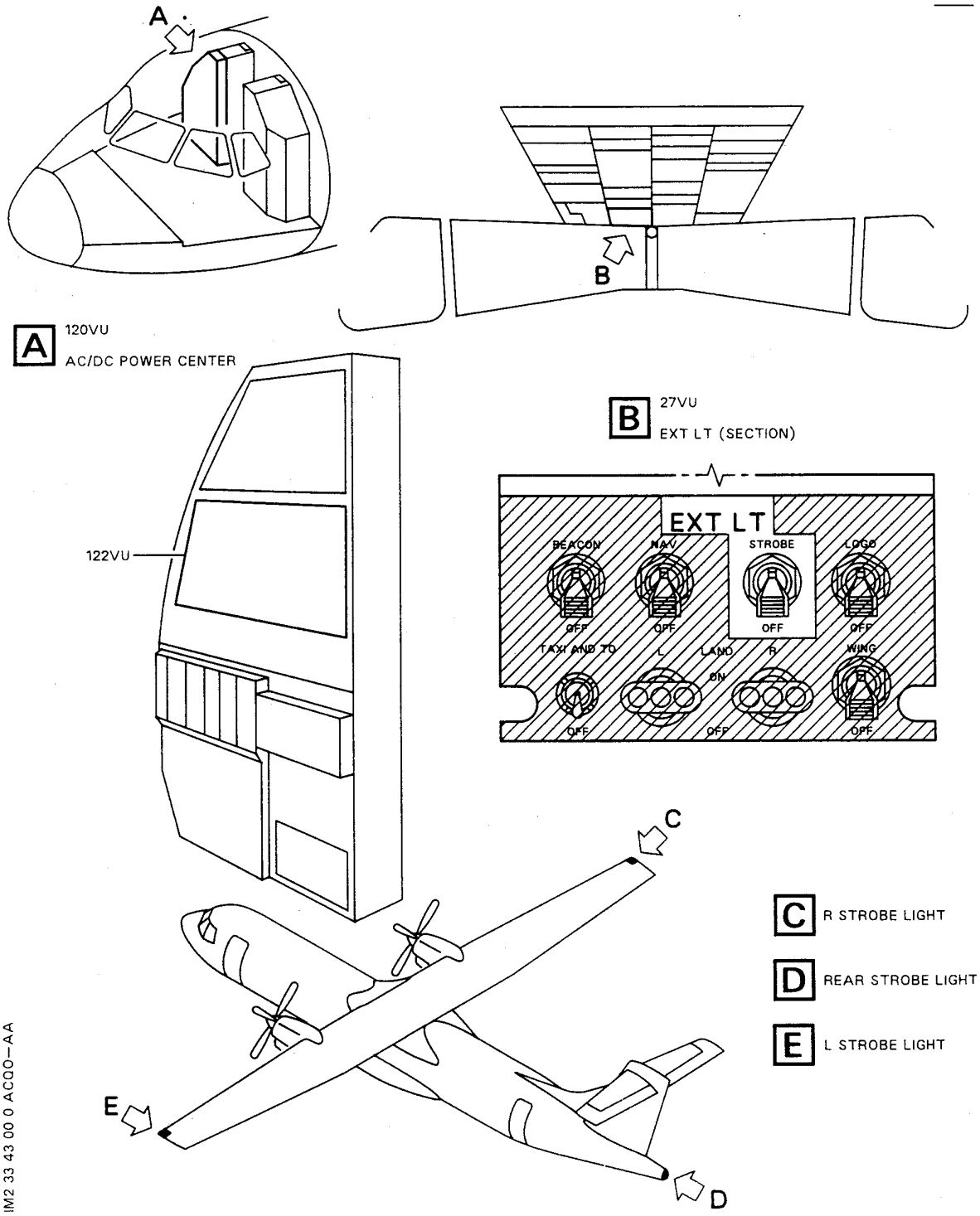
The lights come on by selecting the STROBE position of the corresponding control switch. This action allows the lights to be supplied with 115VAC as follows :
- the R strobe light power supply unit by 115VAC bus 2 phase B ;
- the L and rear strobe light power supply unit by 115VAC bus 1 phase B :



Strobe Lights
Figure 001

EFFECTIVITY: ALL

Q0



Component location
Figure 002

TAXI/TAKE OFF LIGHTS

1. General

An adequate illumination of pilots field of vision during taxi maneuvers is provided by taxi/take off light installed on the nose landing gear and controlled by a switch.

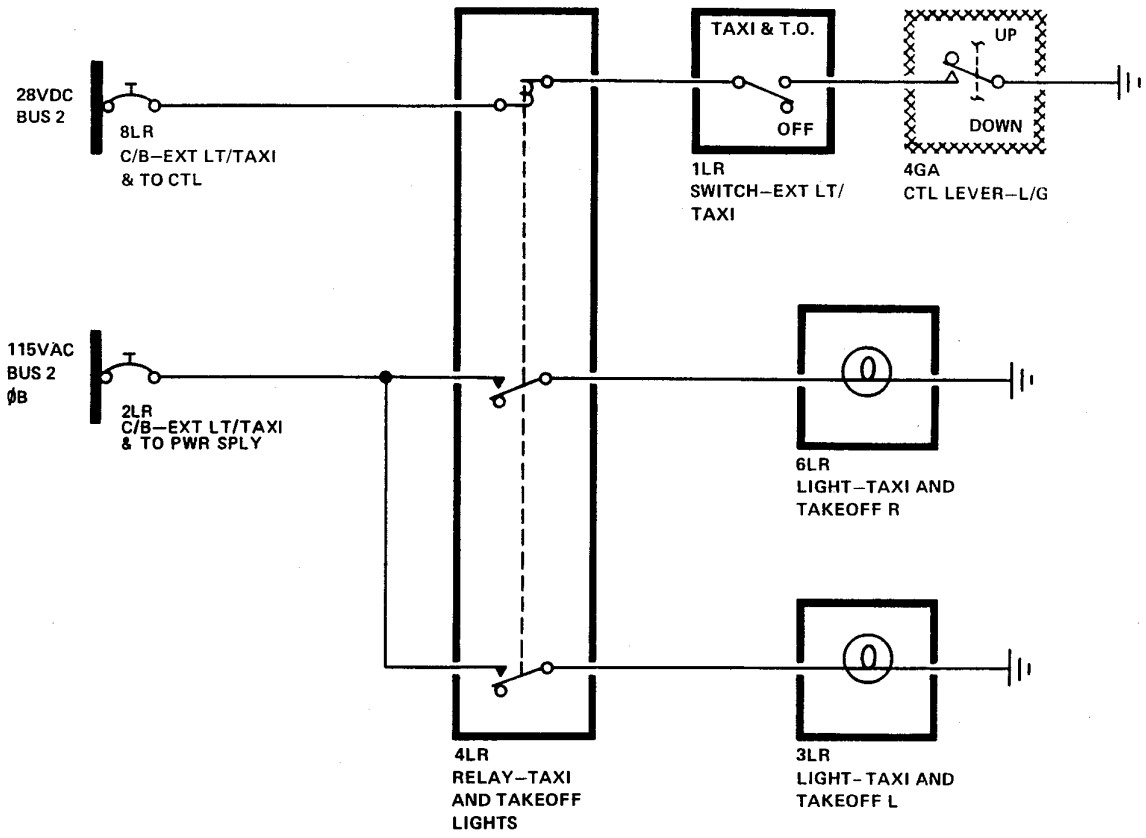
2. Description

The system consists of:
- two L and R taxi and takeoff lights, 3LR and 6LR installed side by side on the nose landing gear leg;
- one taxi EXT/LT switch 1LR located on the overhead panel EXT/LT section 27VU in the flight compartment;
- one taxi and takeoff lights relay 4LR;

The lights are supplied by 115VACW BUS 2 phase B, through the circuit breaker 2LR and each is equipped with a 150W lamp of sealed beam type and an autotransformer.
The power supply of lights is obtained through relay 4LR energized by 28VDC BUS 1 via c/b 2LR.
(Ref. Fig. 001)
(Ref. Fig. 002)

3. Operation

The lights come on by selecting the TAXI position of the corresponding control switch.
If the switch 4GA (landing gear selector lever) is in "DOWN" position, this action causes the excitation of the power relay 4LR, supplied by the 28VDC bus 1, allowing the lights to be supplied by main bus 2 with 115VAC, which are converted in 28VAC by the autotransformer.

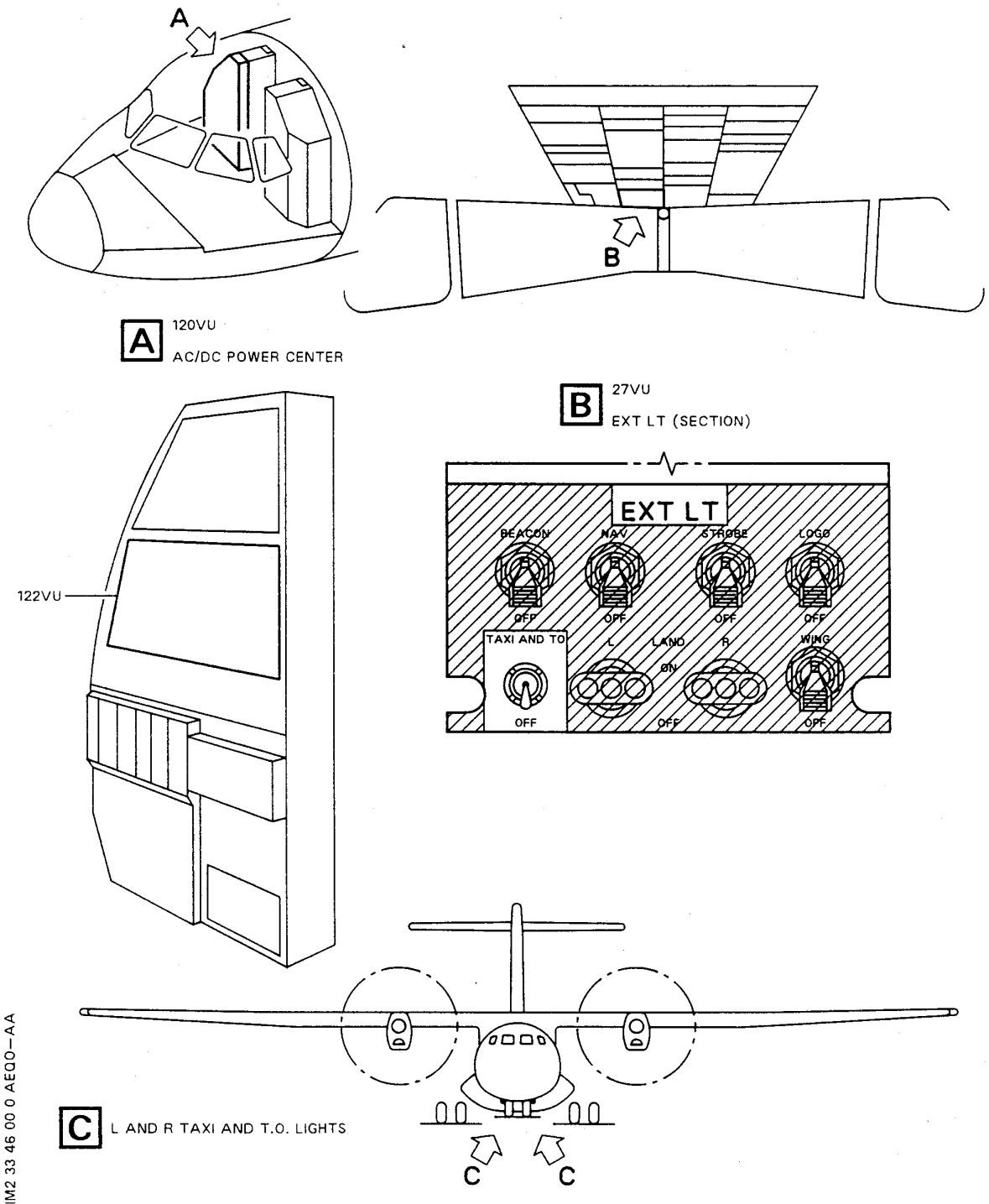


IM2 33 46 00 0 AAR0–AA

Electrical Diagram
Figure 001

EFFECTIVITY: ALL

Q0



Component location
Figure 002

LOGO LIGHTING

1. General

The Illumination of the company insigna, located on the vertical fin, is provided by two lights installed on the horizontal stabilizer lower surface and controlled by a switch.

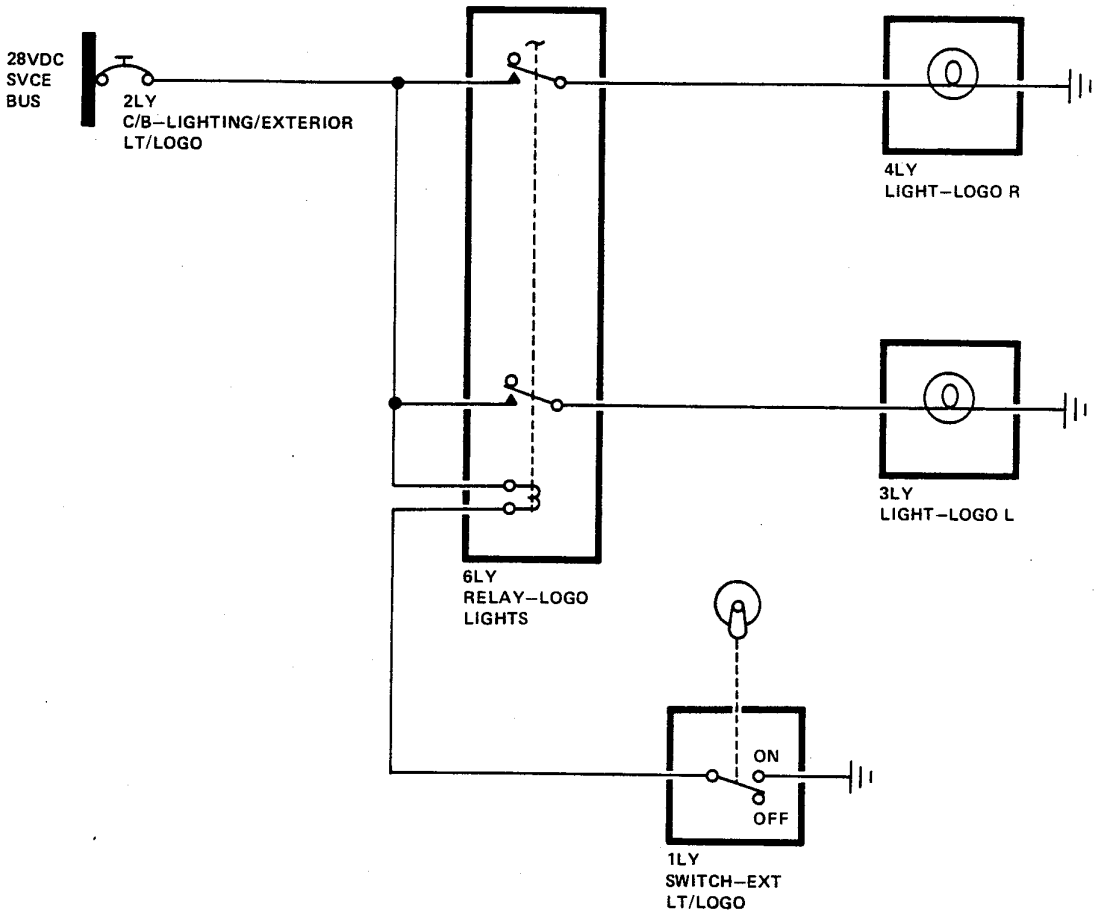
2. Description

The system consist of :
- two L and R lights 3LY (4LY) installed on both sides of the horizontal stabilizer lower surface, close to the leading edge;
- one logo/EXT LT switch 1LY installed on the overhead panel EXT LT section 27VU in the flight compartment;
- one logo lights relay 6LY.

Each light is equipped with a 90W lamp and a lens deflector which gives the deviation necessary to direct the beam towards the vertical fin surface.
The lights are supplied by 28VDC service bus through circuit breaker 2LY.
(Ref. Fig. 001)
(Ref. Fig. 002)

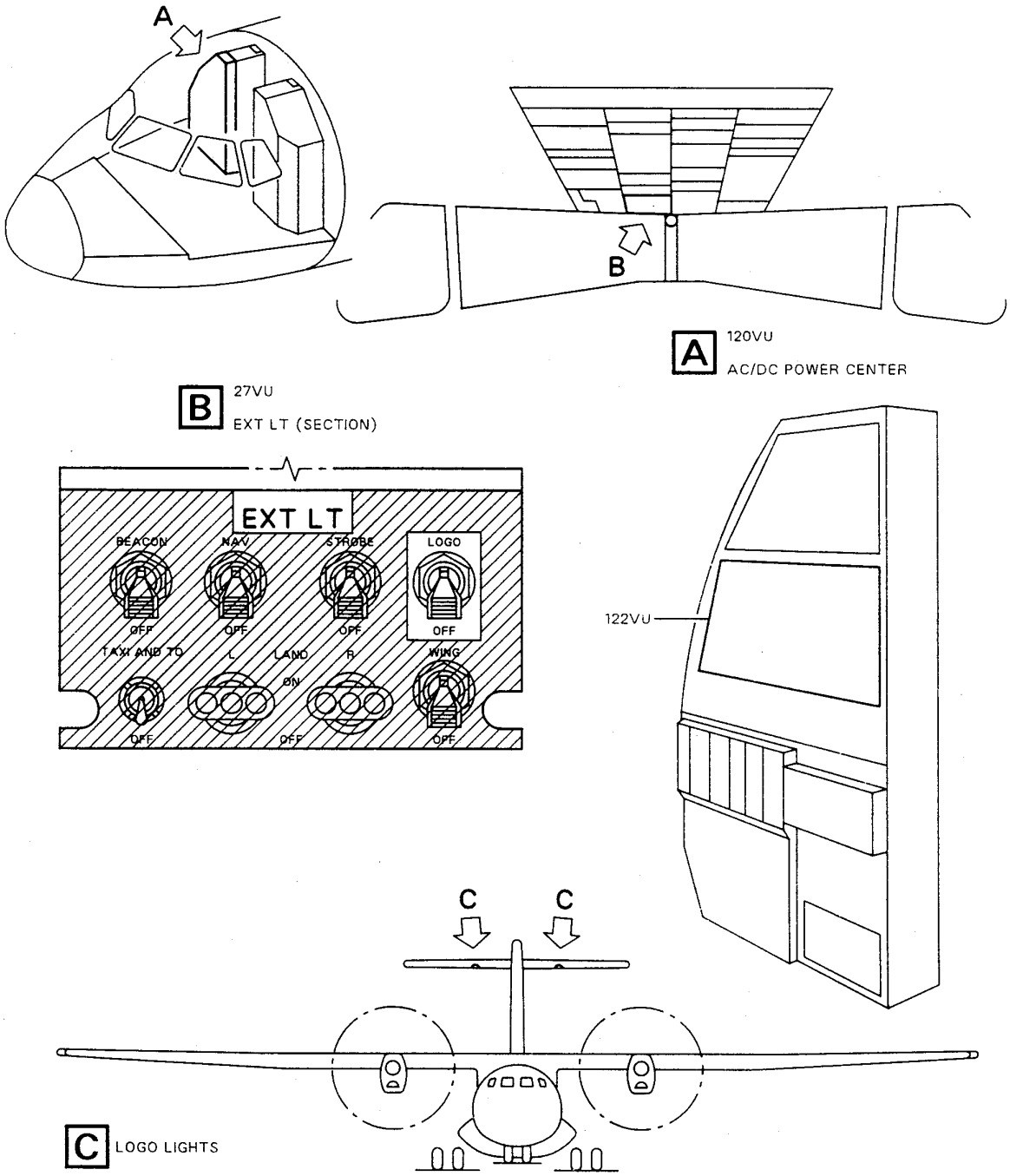
3. Operation

The lights come on by selecting the LOGO position of the corresponding control switch. This action causes the excitation of the power relay 6LY allowing the lights to be supplied by the service bus with 28VDC.



IM2 33 47 00 0 AAMO

Logo Lighting.
Figure 001



IM2 33 47 00 0 ACQO—AA

Component location
Figure 002

ANTICOLLISION LIGHTING

1. General

Collision in flight are prevented by two white (red on CS25 requirement) flashing lights installed respectively on the uppermost and lowest points of the aircraft and controlled by a switch.

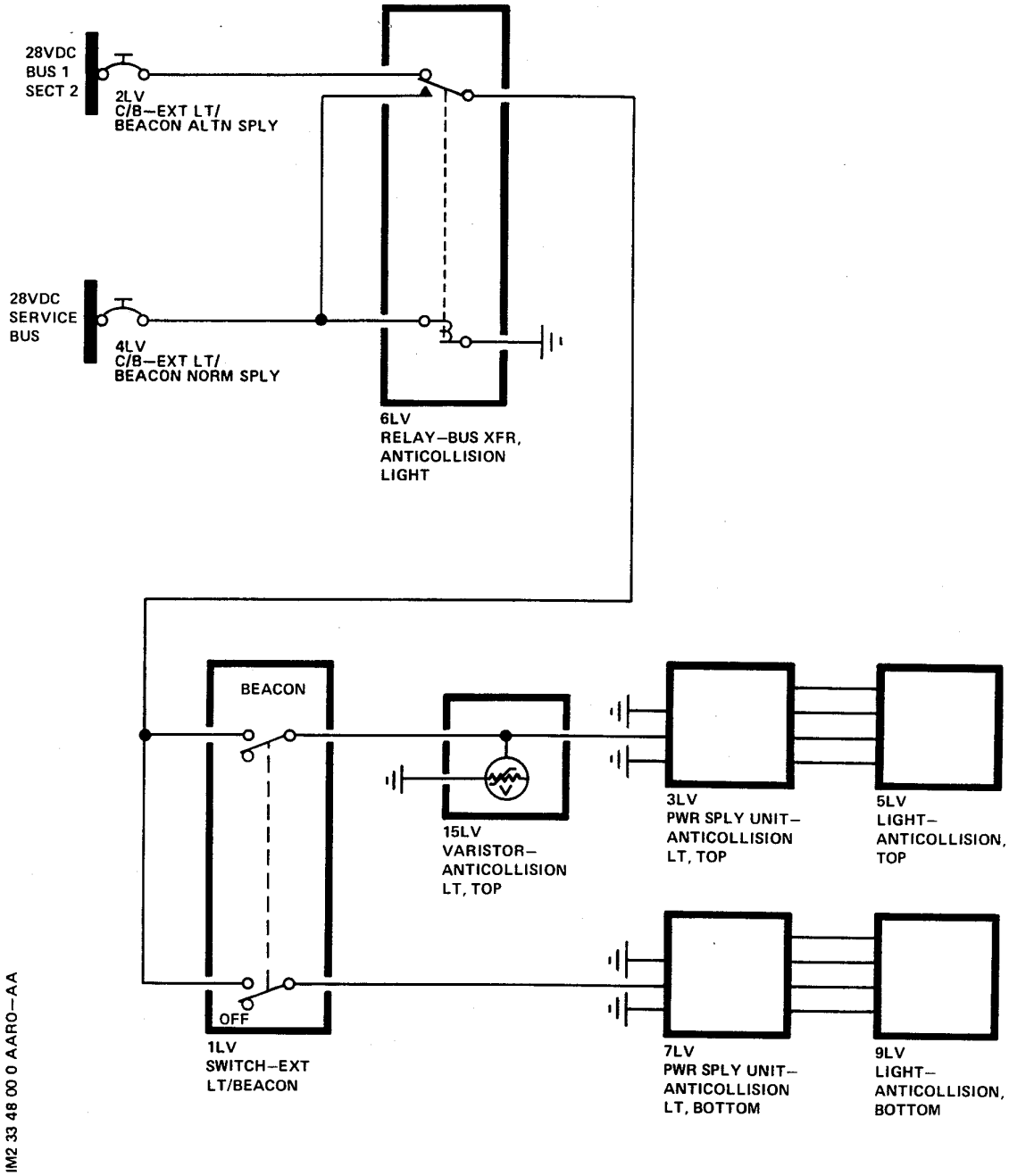
2. Description

The system consists of :
- one top anticollision light 5LV, installed on the vertical fin tip;
- one bottom anticollision light 9LV, installed on the bottom of the main landing gear fairing;
- a top anticollision light power supply unit 3LV;
- a bottom anticollision light power supply unit 7LV;
- one beacon EXT LT switch 1LV, installed on the EXT LT section 27VU, in the flight compartment;
- one beacon bus transfer navigation relay 6LV;
- one top LT anticollision varistor 15LV installed on the fin tip.

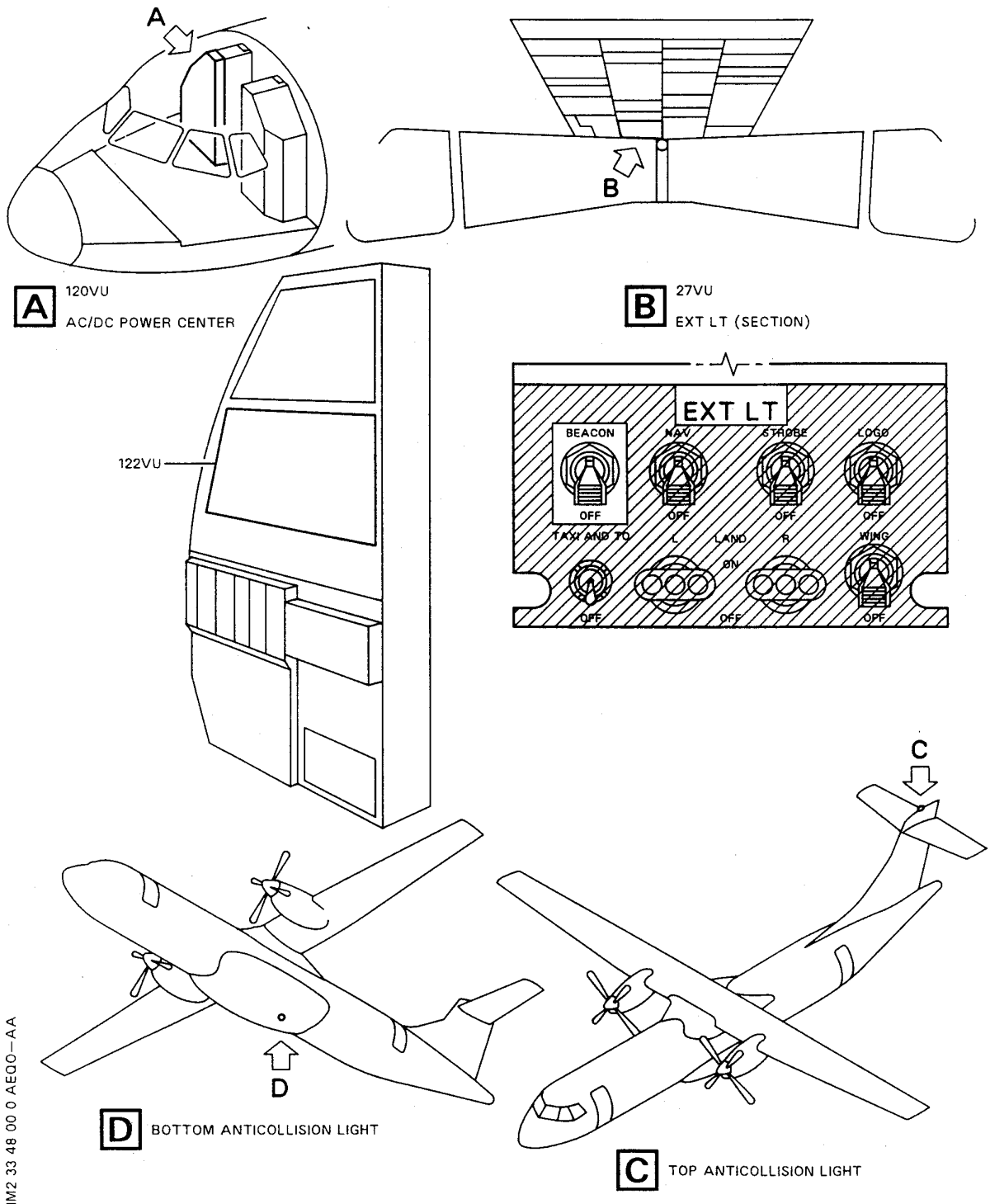
The relay 6LV contains two series of contacts by which it can connect the control switch to the 28VDC service bus or to the 28VDC BUS 1, section 2.
Each light is equipped with a 45W lamp and a transformer which has the purpose to convert the input voltage from low to high value.
The lights are supplied by 28VDC service bus through the circuit breaker 4LV or by the 28VDC BUS 1 section 2, through the circuit breaker 2LV.
(Ref. Fig. 001)
(Ref. Fig. 002)

3. Operation

The lights come on by selecting the BEACON position of the control switch 1LV. Under normal condition, the feed relay 6LV is excited, allowing the power supply units feeding by 28VDC service bus. The power supply units provide for converting the 28VDC in 400V impulse current necessary for lights functioning. In case of service bus failure, the feed relay, no more energized provides automatically to transfer the feeding line to main bus 1 section 2.



Anticollision Lights
Figure 001



Component location
Figure 002

33-48-00

EFFECTIVITY: ALL

Q0

WING AND ENGINE SCAN LIGHTING

1. General

Monitoring of critical areas, such as wings and engines during flight under ice conditions, is allowed by two lights installed on the fuselage and controlled by a switch.

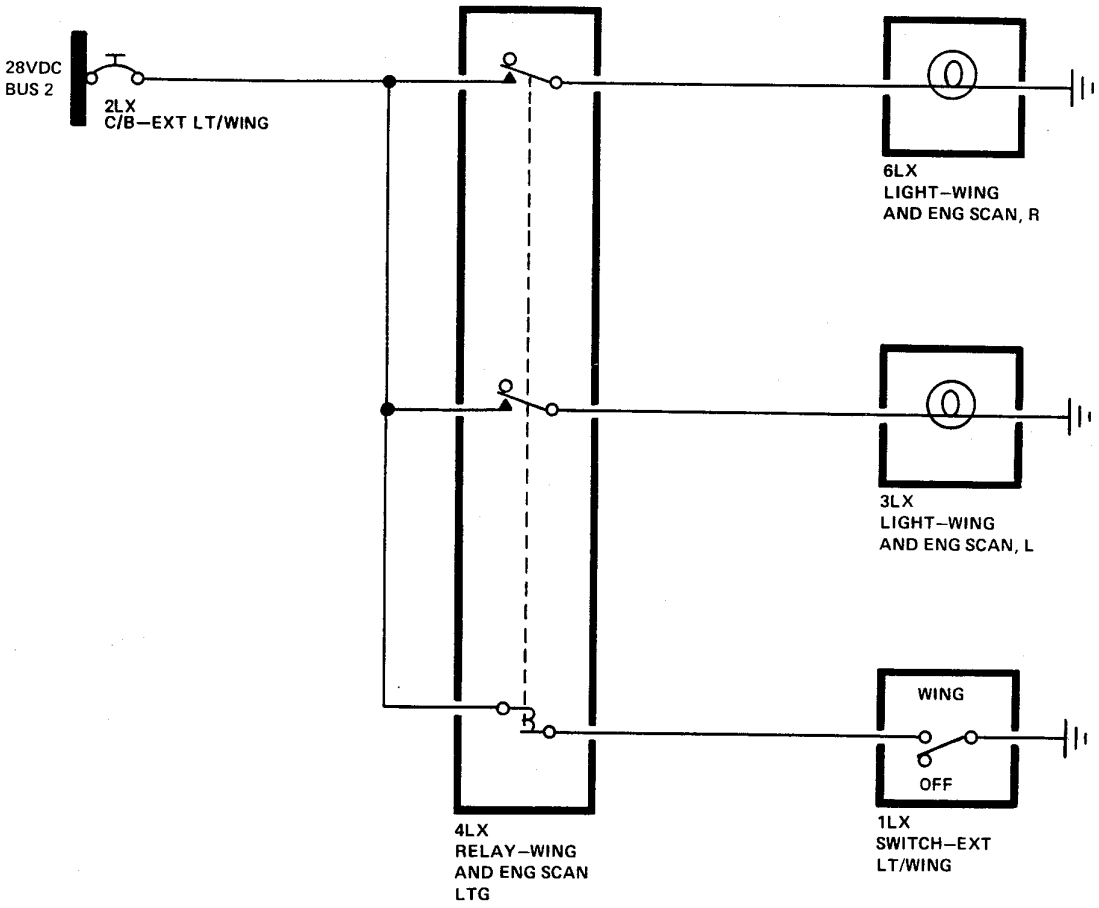
2. Description

The system consists of :
- one L wing and ENG/SCAN light 3LX installed on the cargo door;
- one R wing and ENG/SCAN light 6LX installed on the side of the fuselage forward section;
- one wing EXT/LT switch 1LX installed on the overhead panel EXT LT sect. in the flight compartment.
- one wing and ENG/SCAN LTG relay 4LX.

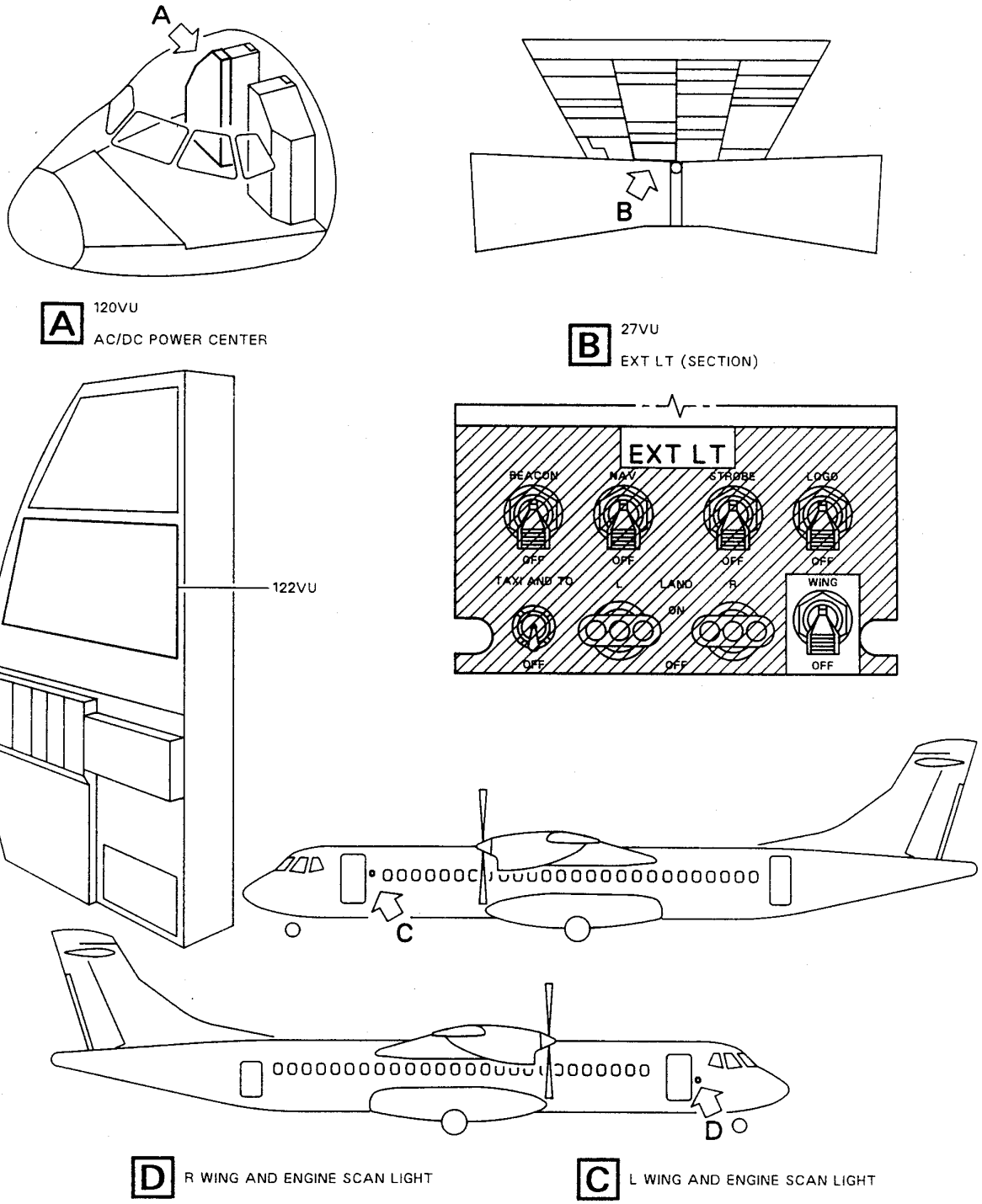
Each light consists of a 28VDC, 100W lamp of the sealed deviation type necessary to direct the beam towards the wing leading edge and the engine air intake.
The lights are supplied by the 28VDC BUS 2 through circuit breaker 2LX.
(Ref. Fig. 001)
(Ref. Fig. 002)

3. Operation

The wing and engine scan lights come on by selecting the WING position of the corresponding control switch. This action causes the excitation of the power relay 4LX thus allowing the lights to be supplied by the main bus 2 with 28VDC.



Wing & Engine Scan Lighting
Figure 001



Component location
Figure 002

EMERGENCY LIGHTING

1. Description

The emergency lighting system is independent from the main lighting system. It consists of :

A. Interior lighting
- 4 power supply units
- 5 dome lights located in the ceiling in the passenger compartment axis
- 2 EXIT signs located at each end of the passenger compartment and showing the location of emergency exits
- 4 EXIT signs located above or next to the emergency exits
- 4 EXIT signs located next to the emergency exits, in the vicinity of the floor
- 1 lighting strip located at floor level, on the left side, below armrests enabling aisle lighting

B. Exterior lighting
- 3 flood lights located on the fuselage for lighting of the ground.
- 1 stair integrated ground flood light

2. Operation

The purpose of the emergency lighting system is to supply 6V current from the batteries in cases of failure of the main power supply (28V).
The emergency system operation is controlled by means of **ON/ARM/DISARM** three-position switch 2WL located on flight compartment overhead panel (24VU).
In order to prevent inadvertent operation, this switch can be locked in either of the three positions.

A. **ARM** Position
This is the normal switch position during flight.
The emergency lighting is automatically switched on as soon as the "ultimate emergency" phase is operational.
When the power supply voltage is 28V, the emergency lighting remains off and the 6V batteries are slowly charged when the power supply voltage is 28V.

B. **ON** Position
The emergency lighting comes whether or not the power supply voltage is 28V. (The 6V batteries will be discharged only when the onboard network voltage decreases below 18V).
Batteries are charged if power supply voltage is 28V.

C. **DISARM** Position
The emergency lighting is off whether or not the power supply voltage is 28V.
This is the normal position of the switch 2WL when the aircraft is on ground.
The batteries are charged as long as the aircraft network power supply

voltage is 28V.
The **DISARM** caution light 4WL located on overhead panel 24VU comes on if 28V power supply is available on aircraft network.

D. Cabin Lighting Control
Emergency lighting can also be controlled from attendant panel 70VU located in passenger compartment, by pressing pushbutton switch 1WL.
Action on this pushbutton switch, after removing safety guard, overrides all positions of switch 2WL.
When pushbutton switch 2WL (in flight compartment) is placed in **ARM** or **ON** position or when pushbutton switch 1WL (Attendant panel) is in **ON** position, the emergency lighting system is designed so that after any single tranverse vertical separation of the fuselage during crash landing, not more than 25 % of all electrically illuminated emergency lights required by this section are rendered inoperative, in addition to the lights that are directly damaged by the separation.

E. Power Supply Units
The power supply units consist of a 28/6V converter provided for power supply of bulbs belonging to the whole emergency lighting system.
They also include a battery charged and the logical circuits required for power supply of the various lights.
They are equipped with outputs in parallel to supply the various emergency lights. The internal electronics circuit is provided with a device which prevents discharge of emergency lighting batteries during storage.
On aircraft, the power supply units are also equipped with a device preventing emergency lighting battery discharge below the threshold affecting the system operation.
(Ref. Fig. 001)

3. Power Supply and Location

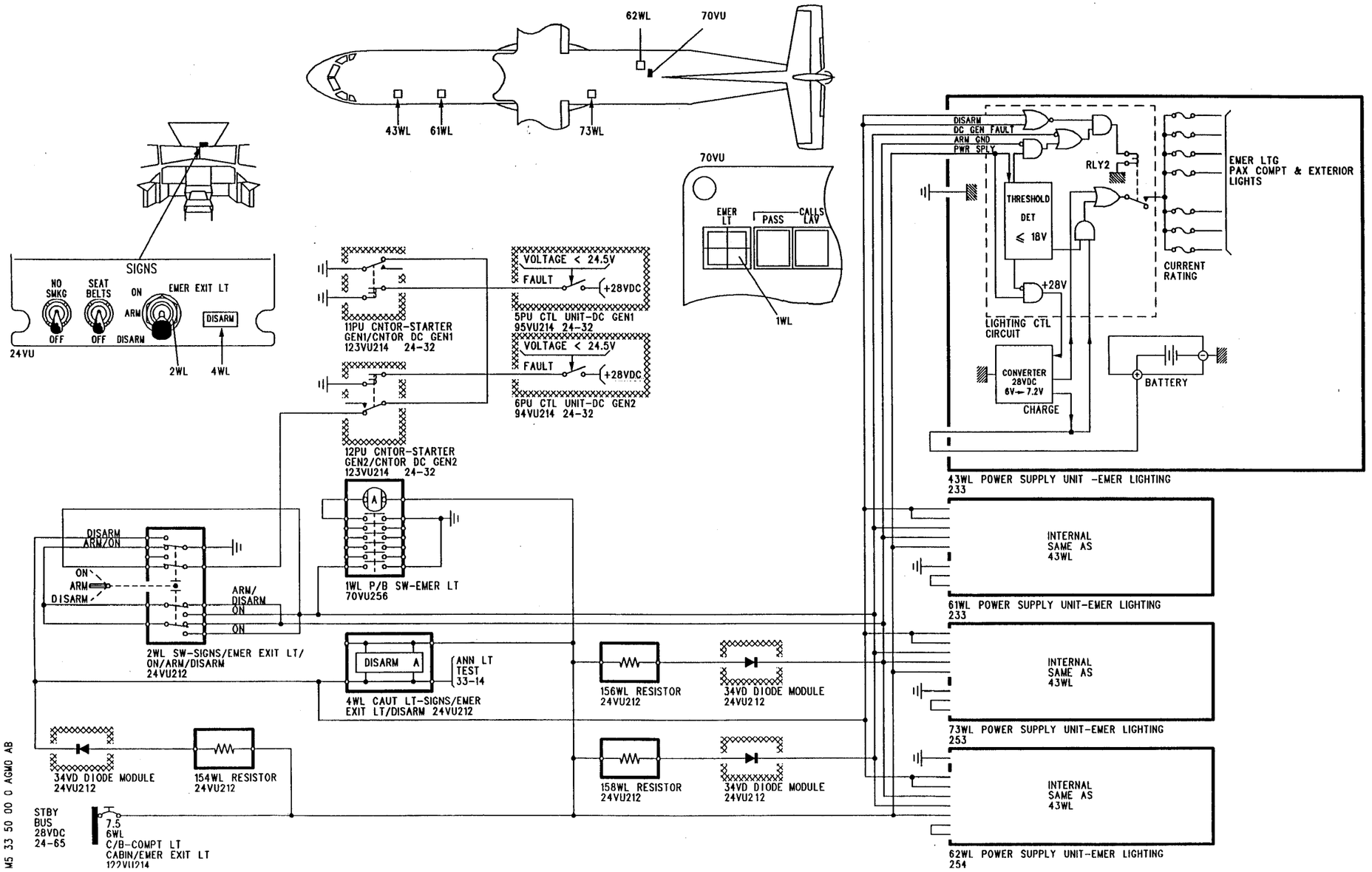
A. Ceiling and Exterior Lighting
Dome lights and flood lights are supplied by power supply units.

B. EXIT Signs at Emergency Exits and Aisle Ends
These EXIT signs are supplied by power supply units.

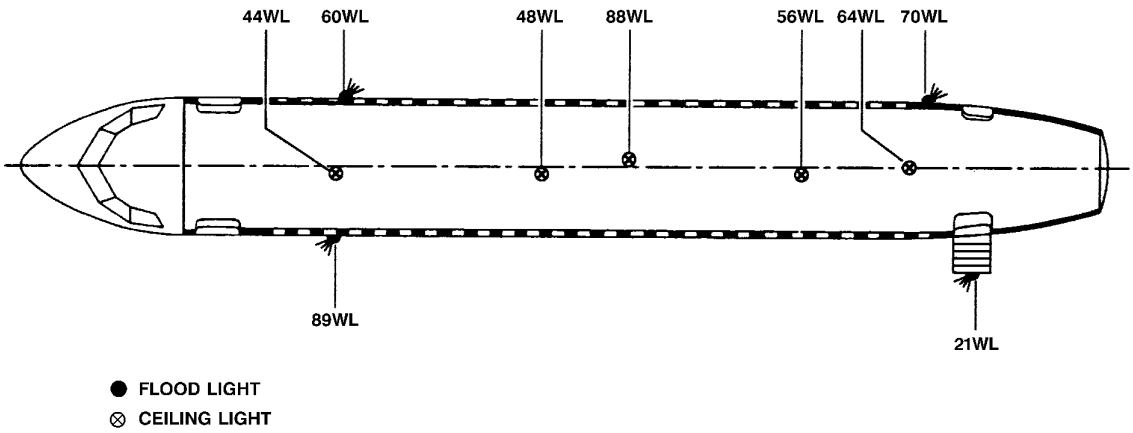
C. Floor Proximity Emergency Escape Path Marking
When all sources of illumination at more than 4 feet above the cabin aisle floor are totally obscured, the floor proximity emergency escape path marking enables non assisted passenger to :
(1)After leaving the passenger seat, visually identify the emergency escape path along the cabin aisle floor.
(2)Readily identify each exit from the emergency escape path.
- 1 lighting strip located at the aisle left side at floor level below the arm rests enabling identification of escape path along the aisle.

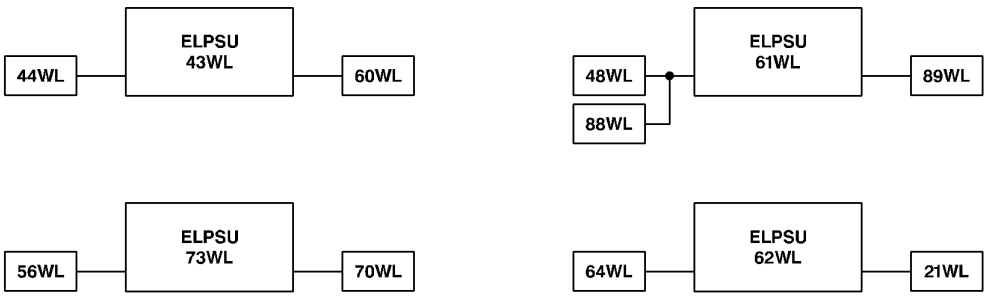
(Ref. Fig. 002)
(Ref. Fig. 003)

(Ref. Fig. 004)



Emergency Lighting Schematic
Figure 001



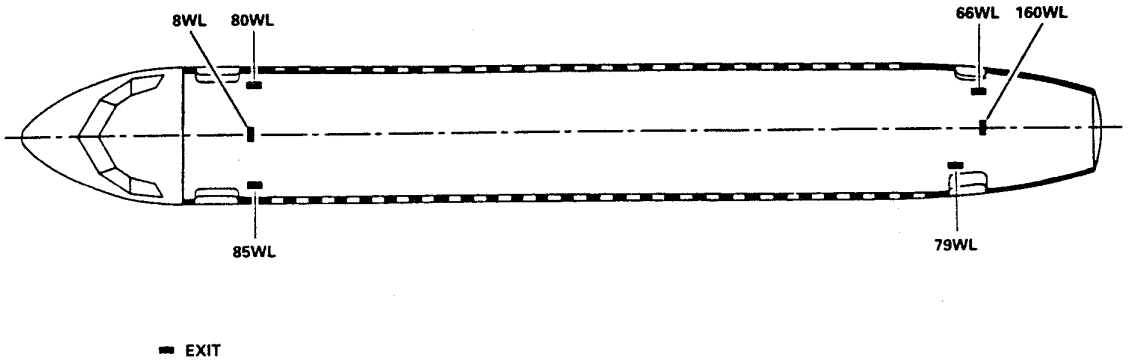


IM5 33 50 00 0 BAM0 AD

Ceiling and Exterior Lighting
Figure 002

EFFECTIVITY: ALL

Q0

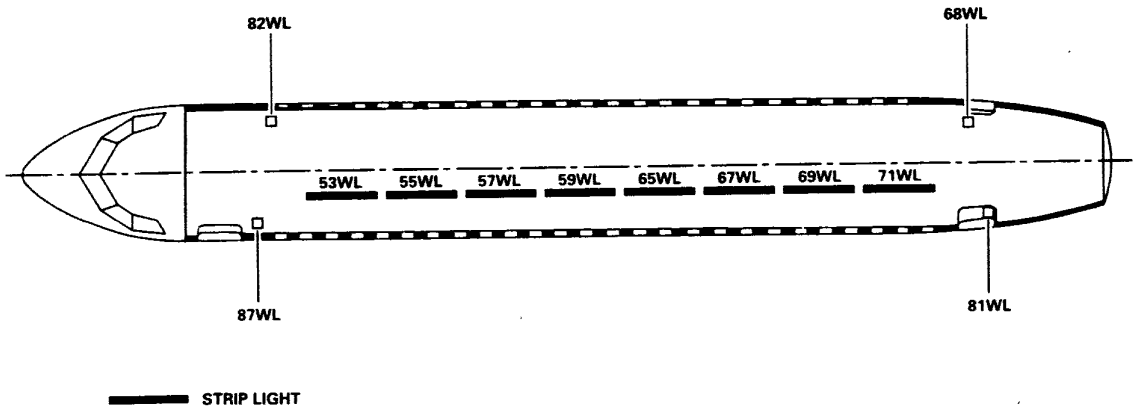


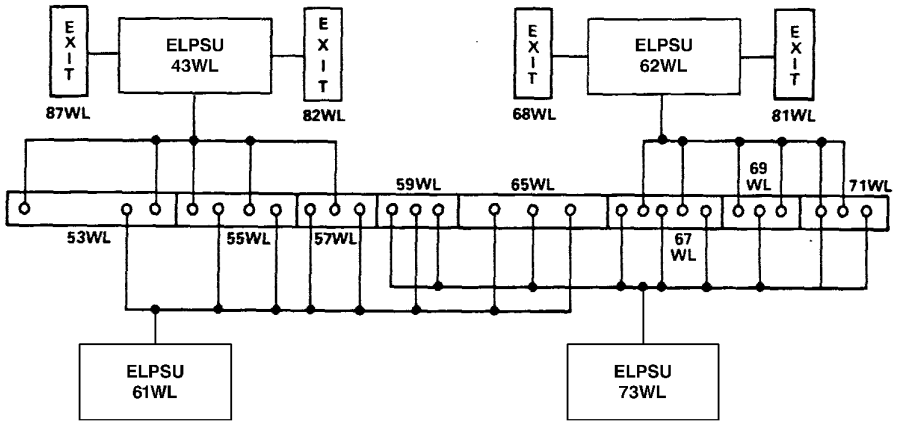
IM5 33 50 00 0 BPM0 AD

EXIT Signs at Emergency Exit and Aisle Ends
Figure 003

EFFECTIVITY: ALL

Q0





IM5 33 50 00 0 AUM0 AD

Floor Proximity Emergency Escape Path Marking
Figure 004

EFFECTIVITY: ALL

Q0