Reference to Figure 69 Wing & Engine Scan Lights

ATA 33 LIGHTS

33–40 EXTERIOR

OVERHEAD PANEL

1 NOSE SW

This switch turns the taxi and takeoff lights on and off.

T.O.: Turns on both taxi and takeoff lights.

TAXI: Turns on only taxi light.

OFF: Taxi and takeoff lights off.

NOTE: These two lights, attached to the nose gear strut, go off automatically when landing gear is retracted.

2 L and R LAND SELECTOR

These selectors control the landing light.

ON: Extends the (left or right) landing light which comes on automatically when fully extended.

OFF: Shut off the landing light but leaves it extended.

RETRACT: Retracts the landing light and shuts it off.

3 RWY TURN OFF SW

This switch turns the runway turn–off lights on and off.

NOTE: These lights go off automatically when landing gear is retracted.

4 STROBE SW

This switch turns on and off the three synchronized strobe lights, one on each wing tip and one below the tail cone.

ON : The strobe lights flash white.

AUTO : The strobe lights come on automatically when the main gear strut is not compressed.

OFF : The strobe light are off.

5 BEACON SW

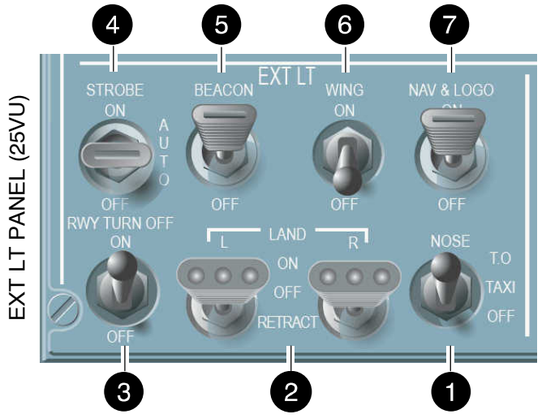
Operation of the two flashing red lights, one on top and one on bottom of the fuselage.

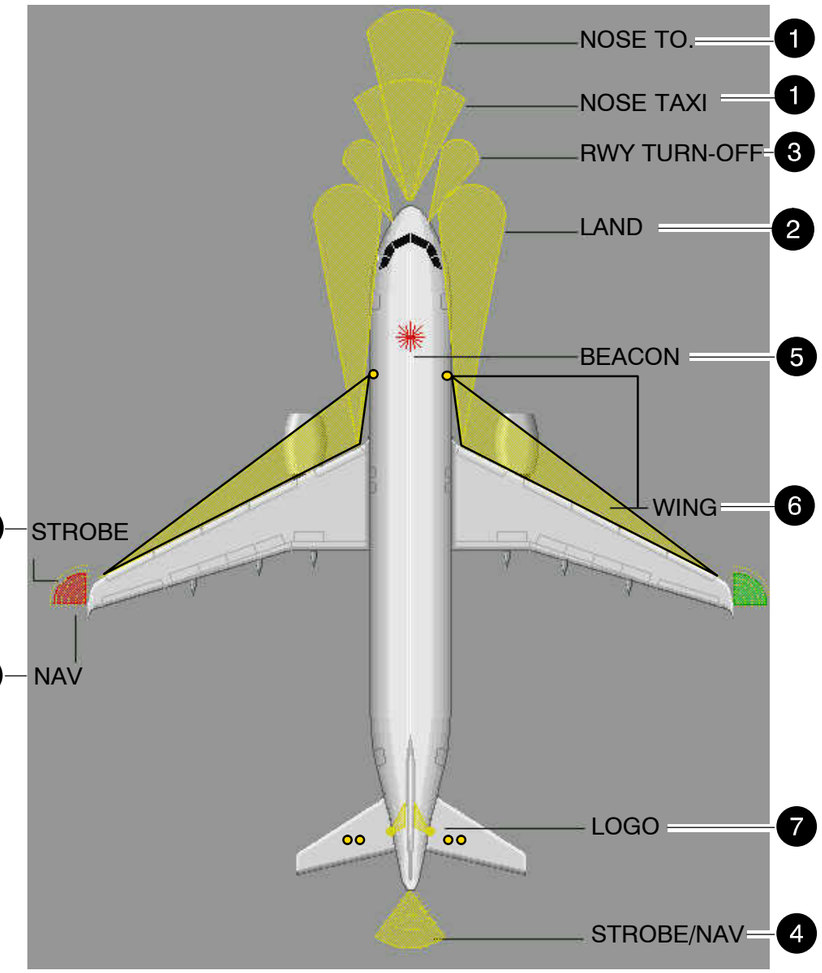
6 WING SW

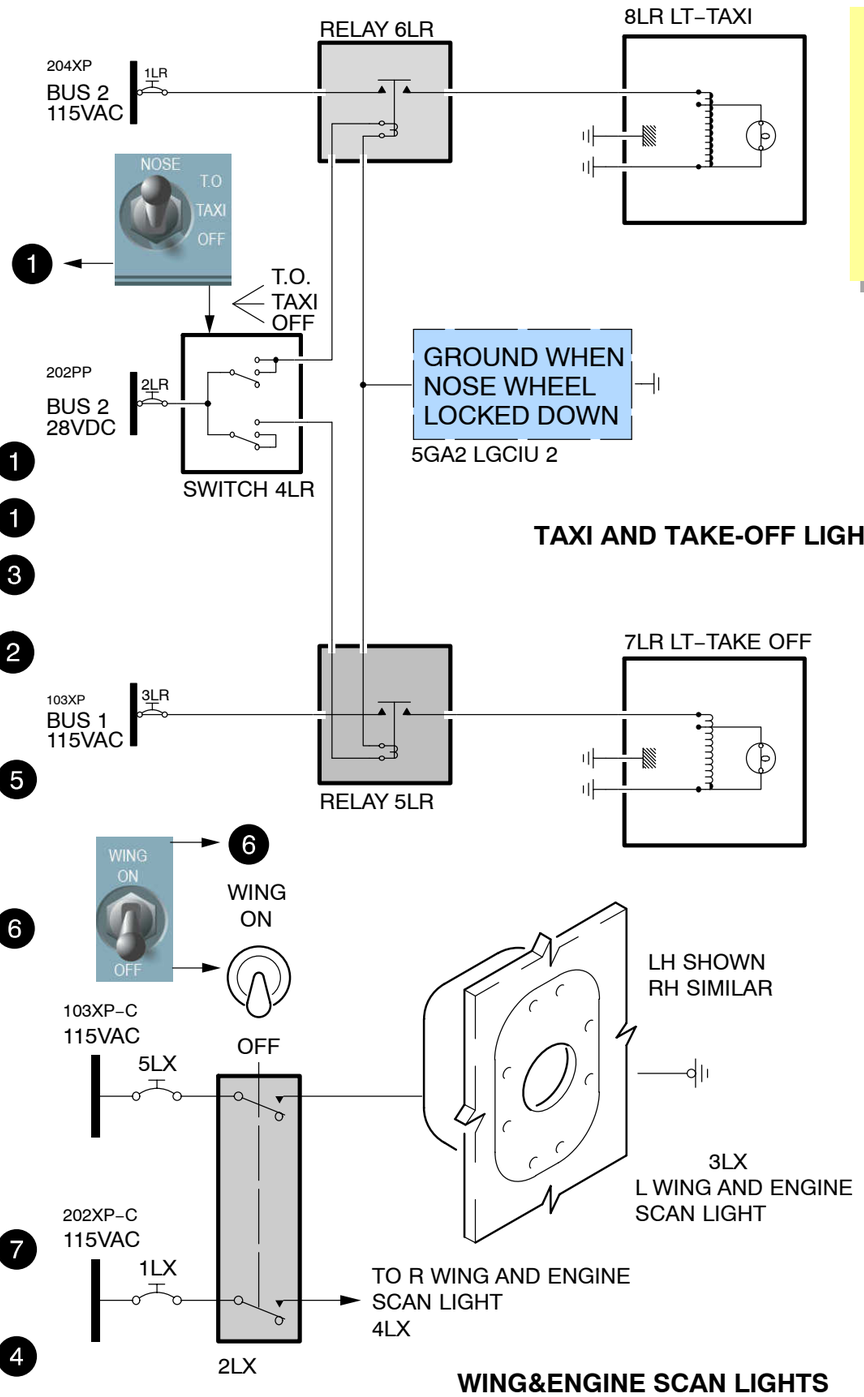
Operation of two single beam lights on each side of the fuselage, to illuminate wing leading edge and engine air intake to detect ice accretion.

7 NAV and LOGO SW

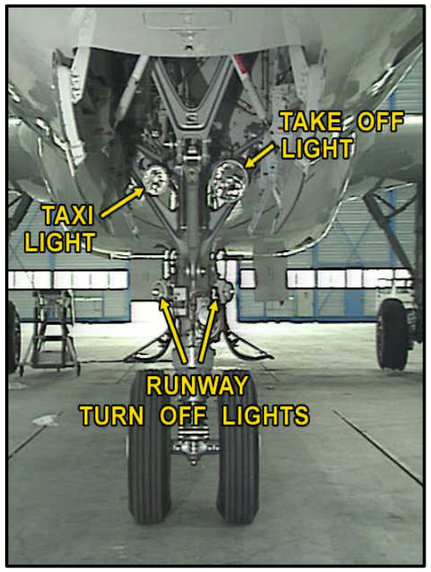
This switch turns the navigation lights on and off. There are navigation lights on each wing tip and in the APU tail cone.
Logo lights are installed in the upper surface of each horizontal stabilizer to illuminate the company logo on the vertical stabilizer provided the main gear struts are compressed or the flaps are extended.

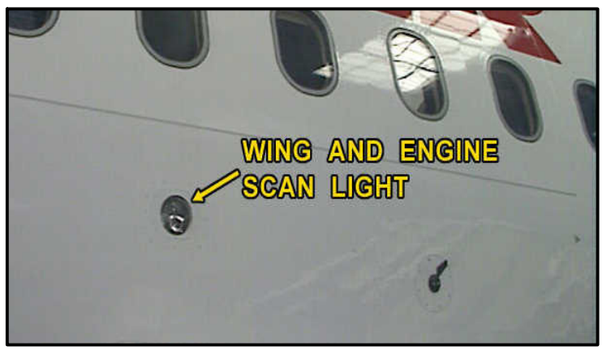






TAXI AND TAKE-OFF LIGHTS





WING&ENGINE SCAN LIGHTS

TAXI AND TAKE-OFF LIGHTS

The taxi and take-off lights illuminate the runway during the take-off phase.

There is one taxi and one take-off light installed on the nose landing gear in a fixed position.

NOTE: The power supply of the lights is only provided when the nose landing gear is downlocked

WING&ENGINE SCAN LIGHTS 6

The wing and engine scan lights illuminate the wing leading edge and the engine nacelle on each side of the aircraft fuselage. These areas can be examined in flight or on the ground.

There is one light installed on each side in the forward fuselage.

RUNWAY TURN OFF LIGHTS 3

The runway turn off lights illuminate the lateral areas of the runway.

Two turn off lights are installed on the nose landing gear in a fixed position.

NOTE: The power supply of the lights is only provided when the nose landing gear is downlocked

Reference to Figure 70 Landing Lights Schematic

1 Strobe Sw

This switch turns on and off the three synchronized strobe lights, one on each wing tip and one below the tail cone.

ON: The strobe lights flash white.
AUTO: The strobe lights come on automatically when the main gear strut is not compressed.
OFF: The strobe light are off.

2 L and R Land Sel

These selectors control the landing light.

ON: Extends the (left or right) landing light which comes on automatically when fully extended.
OFF: Shut off the landing light but leaves it extended.
RETRACT: Retracts the landing light and shuts it off.

3 Beacon Sw

This switch turns on and off the two flashing red lights, one on top and one on the bottom of the fuselage.

Strobe and Beacon Light System Operation

The anti–collision/beacon light system operates, when the ”BEACON ON–OFF” control switch, is in the ”ON” position. This causes the power supply units (3LV) and (4LV) to energize and supply the upper and lower anti–collision lights/beacon lights (6LV) and (7LV) with power.

The strobe light system operates, when the ”STROBE ON–AUTO–OFF” control switch, is in the ”ON/AUTO” position. This causes the power supply units (14LV), (15LV) and (18LV) to energize and supply the two strobe lights (16LV) and (17LV) on each wing tip and the strobe light (19LV) on the tailcone with power. If a malfunction should occur at the high–intensity strobe lights (white) or their power supply units, this does not have an affect of the function of the fuselage anti–collision light (red).

Landing Light Operation

These operations are as follows:

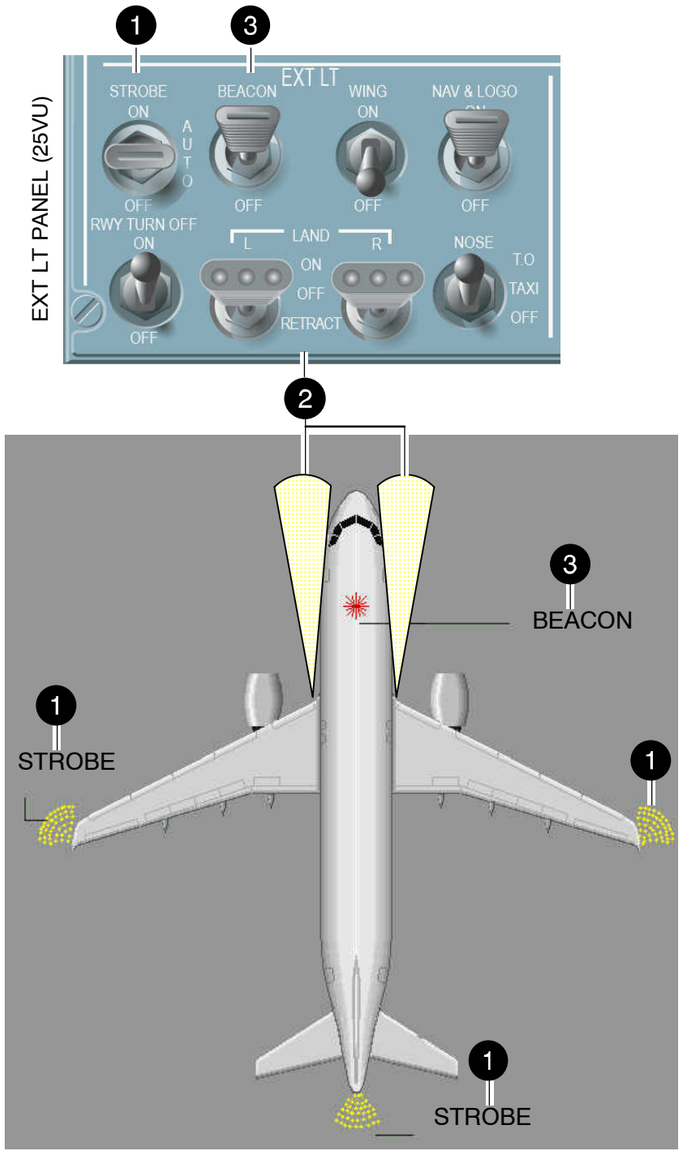
- RETRACT to OFF

  Power is supplied to the extend coil of the related motor, through a microswitch, to extend the related landing light.
- OFF to ON

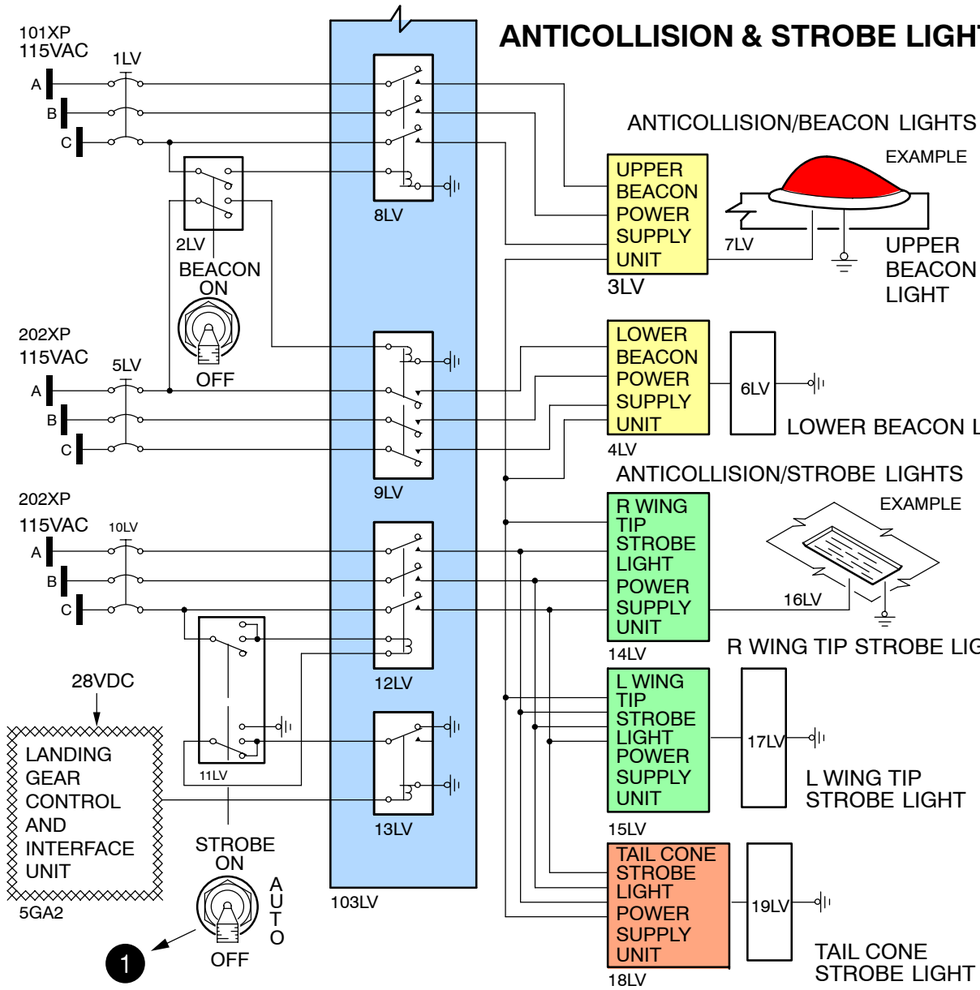
  Power is supplied to the related power relay, through the full–wave rectifier and the closed contacts of a microswitch. This connects 115V AC, 400Hz, to the step–down transformer which decreases the voltage to 28V AC. The related landing light comes on.
- ON to OFF

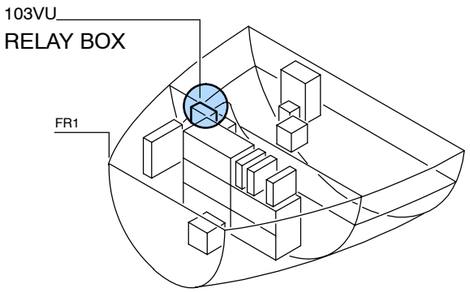
  This removes power from the related power relay and opens the contacts of the microswitch. This removes 115V AC, 400 Hz, from the step–down transformer and the related landing light goes off.
- OFF to RETRACT

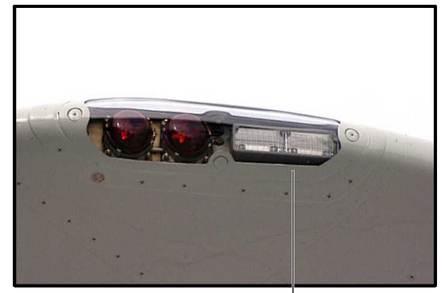
  Power is supplied to the retract coil of the related motor, which retracts the related landing light. The landing light stays off.



ANTICOLLISION & STROBE LIGHTS SCHEMATIC

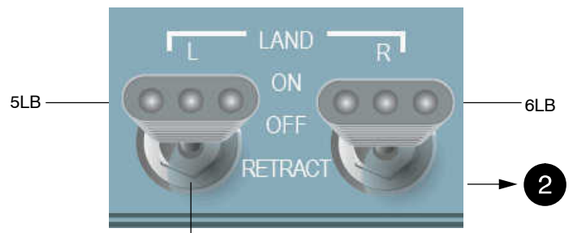




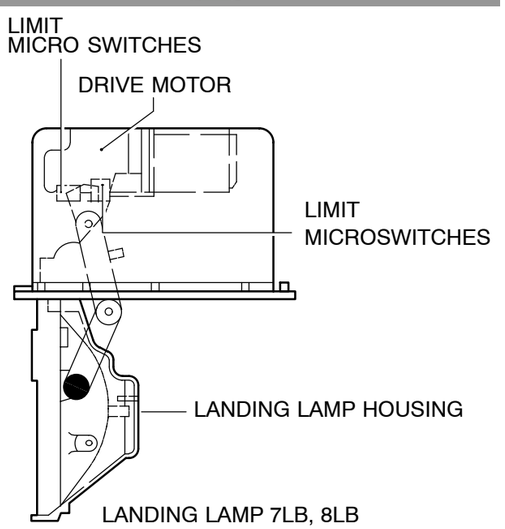


STROBE LIGHT

LANDING LIGHTS SCHEMATIC



SELECTOR SW



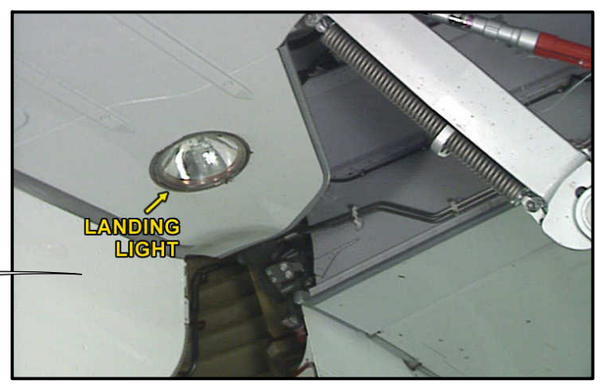


Figure 70 Landing Lights Schematic

Reference to Figure 71 Emergency Lighting Schematic

33–50 EMERGENCY LIGHTING

SYSTEM OPERATION

The emergency lighting system has:

- Proximity emergency escape path marking system (escape path and exit markers),
- Overhead emergency lights,
- EXIT signs,
- Lavatory auxiliary lights,
- Overwing escape route lighting, and
- Escape slide lighting.
  - EXIT signs come on, if the cabin altitude gets too high, or (depending on the CIDS/CAM programming) if the NO SMOKING signs come on.
  - The floor proximity emergency escape path marking is a self–luminescent system.
  - Exit marker, overhead emergency lighting and EXIT sign come on if the EMER EXIT LT selector is ON, or if the EMER pushbutton on the Purser panel is pressed.
  - With the EMER EXIT LT selector at ARM:
    - The proximity emergency escape path marking system comes on, if:
      – Normal aircraft electrical power fails, or
      – DC SHED ESS BUS is lost.
    - The overhead emergency lights come on,if: – Normal aircraft electrical power system fails, or
      – DC SHED ESS BUS fails, or
      – AC BUS 1 fails.
    - Exit signs automatically come on, if:
      – Normal aircraft electrical power system fails, or
      – DC SHED ESS BUS fails.
  - When lighted:
    - DC SHED ESS BUS supply the overhead emergency lights and the EXIT signs.
      If DC SHED ESS BUS fails, batteries inside the light fixtures power all the lights.
    - DC SHED ESS BUS charge the internal batteries, if:
      – EMER LT selector is not at ON, and
      – The EMER pushbutton on the Purser‘s panel is not pressed, and
      – DC SHED ESS BUS is supplied.

Lavatory auxiliary lights are always on. They are supplied by 28V DC ESS BUS. The escape slides have an integral lighting system. The escape slide lights and overwing route lights come on automatically when the slide is armed and the door or emergency exit is open. They are supplied by the internal batteries.

1 Emergency Exit Light Selector

The selector has three detent positions.

ON: Overhead emergency lights, EXIT signs and proximity marking system come on.

OFF: Above lights are off.

ARM: The proximity emergency escape path marking system comes on when the normal aircraft electrical power or DC SHED ESS BUS is lost. The overhead emergency lights come on if:

– Normal aircraft electrical power system fails or
– DC SHED ESS BUS fails or
– AC BUS 1 fails.

Exit signs come on if:
– Normal aircraft electrical power system fails or
– DC SHED ESS BUS fails or

NOTE:
– With EMER EXIT LT selector set to ON or ARM, the Passenger Address system is supplied by the HOT BUS.
– The LIGHT EMER pushbutton on the purser‘s panel can turn on the emergency lighting independently of the positions of this selector switch.

2 Emergency Exit Light-Off Light

This light comes on amber when the EMER EXIT LT selector is selected OFF.

3 Emergency Light Pushbutton

When pressed, this button performs the same function as the EMER EXIT LT switch when it is ON.

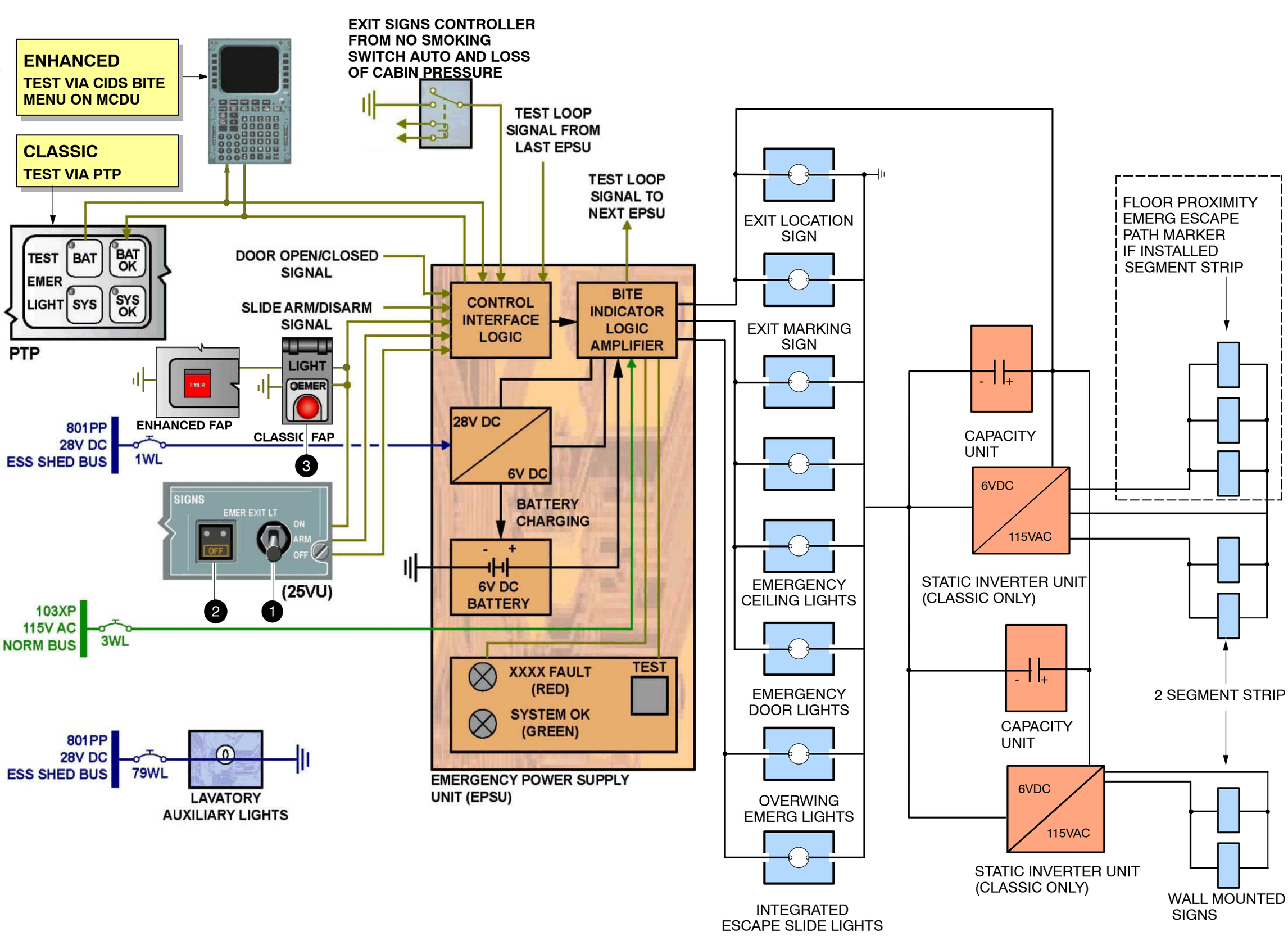


Figure 71 Emergency Lighting Schematic