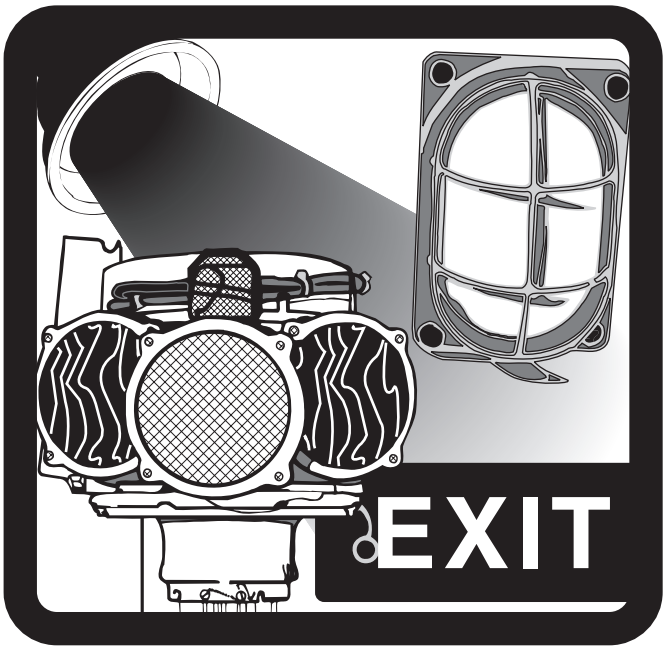
CHAPTER 3
LIGHTING



INTRODUCTION

This chapter provides information on lighting for the Citation Mustang. Interior lighting illuminates the flight compartment area, all flight instruments, and the passenger cabin. Exterior lighting provides necessary illumination for day or night operation.

GENERAL

Interior lighting is provided for the flight compartment, cabin, windshield ice detection, and passenger safety.

Most instruments are internally lighted. For general illumination, map lights, and a floodlight are above the pilot and copilot. There are standard passenger advisory lights in the cabin area, and emergency exit lights over the cabin door and emergency exit. Reading and table lights are also available in the cabin area.

The exterior lighting consists of wingtip lights (navigation/anticollision lights), landing/recognition lights, wing inspection light, and beacon light.

INTERIOR LIGHTING

The aircraft interior lights are DC powered. Interior light circuit breakers are on the right CB panel. The breakers are grouped within the LIGHTS category. Panel back lighting is provided by light emitting diodes (LEDs). Overhead lights are halogen and the displays are liquid crystal displays (LCDs).

FLIGHT COMPARTMENT LIGHTING

Flight compartment panel lighting is provided by LED panels (Table 3-1).

Light intensity is controlled by a PANEL dimmer knob (Figure 3-1).

The panel dimmer knob controls:

- Switchlights
- Oxygen gauge lighting
- Magnetic compass light
- Three standby instruments
- Landing gear position lights
- Audio panels and display bezels

A DISPLAYS dimmer knob controls the dimming of the Garmin avionics. The dimmer knob is on the LIGHTING panel (Figure 3-1).

Rotating the DISPLAYS dimmer knob clockwise increases the intensity of the Garmin displays. Rotating it counterclockwise dims the displays; rotating the knob fully counterclockwise (to the DAY position) causes the intensity to be set automatically in response to photocell sensors.

Figure 3-1. Flight Compartment Lighting Controls

Table 3-1. COCKPIT LIGHTING

	PANEL DIMMER KNOB POSITION				
LIGHT	**DAY**	**JUST OUT OF DAY**	**FULL CW**	**VARIABLE?**	**LOSS OF POWER PANEL LIGHT DIM CB–HF021**
LED PANELS X 19	OFF	VERY DIM	BRIGHT	YES	OFF
ICE DETECT LIGHTS	ON	ON	ON	NO	OFF
OXYGEN GAUGE	OFF	VERY DIM	BRIGHT	YES	OFF
STANDBY AIRSPEED	OFF	VERY DIM	BRIGHT	YES	OFF
STANDBY ATTITUDE	OFF	VERY DIM	BRIGHT	YES	OFF
STANDBY ALTITUDE	OFF	VERY DIM	BRIGHT	YES	OFF
WHISKEY COMPASS	OFF	VERY DIM	BRIGHT	YES	OFF
GEAR LIGHTS	BRIGHT	VERY DIM	VERY DIM	NO	VERY DIM
DUMP SWITCH	BRIGHT	VERY DIM	DIM	YES	OFF
MASTER WARNING/ CAUTION	BRIGHT	DIM	DIM	NO	DIM
R ENGINE FIRE/ L ENGINE FIRE	BRIGHT	DIM	DIM	NO	DIM
BOTTLE ARMED PUSH	BRIGHT	BRIGHT	BRIGHT	NO	NO EFFECT
STANDBY PLACARD LIGHT	ON	ON	ON	NO	ON

The DISPLAYS dimmer knob can only control a Garmin display if AUTO brightness mode is selected. This mode is the default lighting mode but can be changed. Refer to the *Garmin Mustang G-1000 Cockpit Reference Guide*.

A cockpit floodlight and two map lights are overhead near the center of the aircraft (Figure 3-2). A center rheostat controls the floodlight, and separate outer rheostats control each of the two map lights.

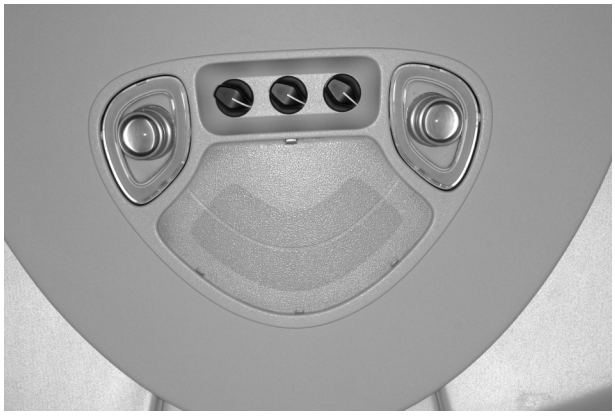


Figure 3-2. Cockpit Overhead Lights and Controls

MAGNETIC COMPASS LIGHT

The magnetic compass is on the windshield center post (Figure 3-3). LED backlighting is

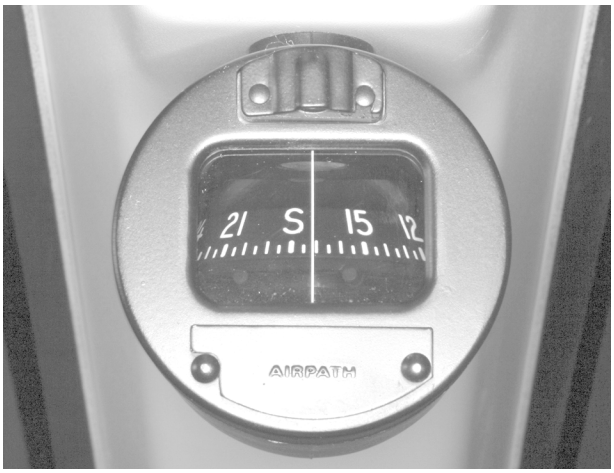


Figure 3-3. Compass Light

provided for night operation when the PANEL dimmer knob is in any position other than DAY.

ENTRY/EXIT LIGHTING AND ENTRY LIGHT SWITCH

To activate the entry/exit lighting, use the entry light pushbutton switch on the aft side of the left divider cabinet (Figure 3-4).

When the entry door is opened, a green backlight illuminates a symbol on the entry light switch. After a 10-minute delay, the entry lights (if turned on) and the switch backlighting extinguish.

The entry light switch turns on the fixed light above the entry door and the fixed light above the toilet.

Figure 3-4. Entry Lights Switch

CABIN LIGHTING

Cabin lighting consists of (Figure 3-5):

- Two table lights
- Four reading lights
- Two entry lights
- Passenger safety light

There are oval-shaped light assemblies above the passenger seats on the cabin headliner. Each assembly consists of (Figure 3-6):

- Controllable air duct outlet
- Inboard button that controls the respective table light
- Outboard button that controls the respective cabin light
- Light assembly

Figure 3-5. Cabin Lighting

Figure 3-6. Cabin Lighting Controls

PASSENGER SAFETY LIGHT SYSTEM

The Mustang is equipped with a passenger safety light system. The pilot can activate the light above the entry door and the right table light over the emergency exit (Figure 3-7) with the PAX SAFETY light switch on the light switch grouping below the multi-function display (MFD) (see Figure 3-1). These same two lights can also be activated by a 5-G switch. Anytime 5-G is exceeded (such as in an emergency landing), the exit lights illuminate.

NOTE

The passenger safety lights illuminate for emergency lighting when the G-switch is tripped or when the passenger safety switch on the cockpit LIGHTS switch panel is in the PAX SAFETY position.

If activated by the G-switch, these lights remain on until deactivated by maintenance, regardless of battery switch or cabin door status.

The cabin lights are powered through the CABIN LIGHTS circuit breaker on the aft J-box.

Figure 3-7. Emergency Exit Light

No Smoking/Fasten Seat Belt Sign and Switches

A no smoking/fasten seat belt sign is above the table on the left side of the cabin (Figure 3-8). The no smoking placard is always visible.

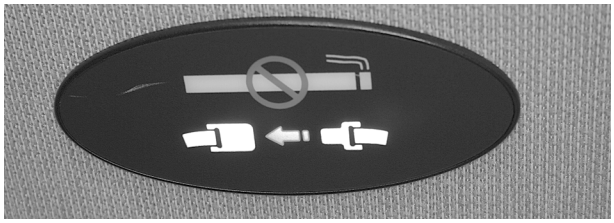


Figure 3-8. No Smoking/Fasten Seat Belt Sign

The PAX SAFETY–SEAT BELT switch (on the LIGHTING panel under the MFD) controls the fasten-seat-belt light. The light illuminates when the switch is set to SEAT BELT or PAX SAFETY.

BAGGAGE COMPARTMENT LIGHTING

Baggage compartment lighting includes the nose baggage compartment light and the tail cone compartment light. They are wired directly to the hot battery bus and do not require the battery switch to be in the BATT or EMER position for operation.

Nose Baggage Compartment

The manual switch assembly of the baggage light system is an illuminated two-position rocker switch. The switch is in the baggage compartment overhead and adjacent to the light assembly (Figure 3-9). The manual switch applies DC power to the light. During daylight hours or when the light is not desired, turn the manual switch OFF, which disconnects power from the light. When the switch is OFF, it illuminates so it is easy to locate at night.

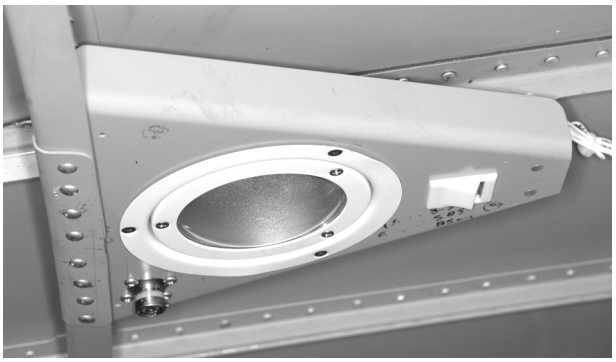


Figure 3-9. Nose Baggage Light and Switch

When both nose baggage doors are closed, a microswitch on each nose baggage door hinge turns the light off regardless of rocker switch position.

Aft Baggage Compartment

The toggle switch for the aft baggage light system is on the right side door opening. The baggage light is aft of the baggage door on the upper right side. When the switch is in the ON position, DC power is applied to the light.

When the aft baggage door is closed, a microswitch on the door turns the light off regardless of the manual toggle switch position (Figure 3-10).

Figure 3-10. Aft Baggage Light Switch and Microswitch

EXTERIOR LIGHTING

LANDING/RECOGNITION/TAXI LIGHTS

The aircraft is equipped with two lamps that illuminate for landing and taxi purposes.

The landing lights consist of two 50-watt sealed high intensity discharge (HID) lamps in the belly fairing, forward of the forward wing spar. These lamps are protected behind tempered glass covers. They are situated so the flight compartment is shielded from glare (Figure 3-11).

Figure 3-11. Landing Lights

A LANDING–RECOG TAXI switch on the LIGHTING panel controls the landing lights. The LANDING position provides the brightest illumination for landing. The RECOG TAXI position dims the lights to a lower intensity.

The landing lights receive power through the respective LAND/REC LIGHTS circuit breakers on the aft J-box.

BEACON

The aircraft is equipped with a beacon. The beacon assembly is on the top of the vertical stabilizer for optimum line of sight visibility (Figure 3-12).

Figure 3-12. Beacon

The beacon consists of a red LED assembly with a strobe rate of 50 flashes per minute. The beacon is controlled by the BEACON switch on the LIGHTING panel.

ANTICOLLISION LIGHTS

In addition to the navigation lights, each wingtip assembly contains an anticollision strobe light. The anticollision lights flash at a rate of 50 flashes per minute. The lights are controlled by the ANTI COLL switch on the LIGHTING panel. The anticollision lights are powered through the L and R ANTI-COLLISION LT circuit breakers on the aft J-box.

NAVIGATION LIGHTS

Navigation lights are in assemblies behind clear tempered glass covers. The lights are located as follows (Figure 3-13):

- Red forward light—Left wingtip
- Green forward light—Right wingtip
- White rear light—Both wingtips

The navigation lights are controlled by a NAV switch on the LIGHTING panel. The lights are powered by the circuit breakers in the aft J-box.

WING INSPECTION LIGHT

A wing inspection light is on the left side of the fuselage, above and forward of the wing leading edge. The inspection light assembly includes a halogen bulb that illuminates the outboard leading edge of the left wing. Aircraft crew utilize the light to detect wing ice accumulation during nighttime flight in icing conditions. A WING INSP switch on the LIGHTING panel supplies power to the lamp. The WING INSP light circuit breaker is on the left CB panel.

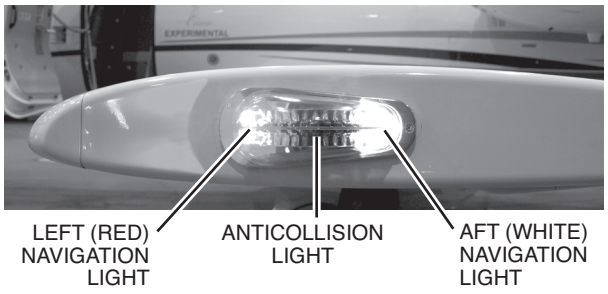


Figure 3-13. Position Lights