

# LIGHTING

## INTERIOR LIGHTING

Interior lighting is provided for the cockpit, cabin, baggage and tailcone maintenance compartments, and the refuel/defuel adapter on the right side of the fuselage.

### Cockpit

Electroluminescent panels, internal instrument lighting, and floodlights illuminate all instruments in the cockpit instrument panel, side consoles, and center pedestal and are considered primary cockpit lighting. Electroluminescent panels are used to illuminate position functions of switches and controls. Primary lighting is designed to be dimmed during night operation.

Secondary lighting includes rheostat controlled floodlights, optional supplemental glareshield lighting, and overhead map lights. The cockpit and standby instruments will operate off the emergency battery when the normal system does not have power.

Ice detection lights mounted in the glareshield illuminate the windshields, enabling the pilots to detect ice buildup on the windshield during night flight. These lights are controlled by the DAY/NIGHT DIM ON/OFF switch on the lighting panel. When the switch is ON, the anti-ice lights will be on.

### Cabin

The passenger compartment lighting includes five overhead service lights, indirect fluorescent lighting, individual passenger reading lights, dropped aisle lights, cabin door lights, cabin door threshold lights, and passenger information signs. The overhead service lights, reading lights, footwell lights, main entry door and cabin escape hatch lights, exit signs and exterior ground illumination lights serve as emergency evacuation path lighting and are powered by two emergency battery packs. Each pack is maintained at full charge through the airplane's main power bus. A two-position ON-OFF switch by the entry door operates the overhead lights for normal entry and exit. The pilot has the same control with a three-position (EMERG LT) ARM-ON-OFF switch on his switch panel. In ARM, a 5 "G" inertia switch is armed, which when actuated, illuminates all the emergency evacuation path lights.

Two sets of passenger advisory lights are controlled by a three-position switch in the cockpit. In the SEAT BELT position, the FASTEN SEAT BELT signs in the cabin are illuminated. In the PASS SAFE position, the NO SMOKING, FASTEN SEAT BELT and EXIT signs are illuminated, as well as a RETURN TO SEAT sign visible in the aft area. When the switch is off, all the signs are extinguished. Safety chimes, when installed, operate in conjunction with the NO SMOKING and FASTEN SEAT BELT signs.

A guarded cabin master switch (INTERIOR MASTER OFF/NORMAL) is located on the right cockpit side panel. It controls power to the interior master bus. Selecting this switch to OFF will remove all cabin interior power except emergency and exit lighting. This switch can be used to reduce electrical load if needed for generator inoperative conditions, or to shut off cabin electrical power in the event of a cabin electrical fire.

The Citation X is equipped with a master control box and an executive switch module which allow the upper and lower indirect lighting, the divider lights, the aisle (footwell) lights, and the cabin temperature control to be controlled from a position usually located at one of the right aft cabin seats. Other items of cabin equipment may also optionally be added to this switch panel, such as cabin speaker volume, and audio selection between compact disc player (CD) and VCR. An illuminated cabin entry switch panel, located near the cabin door, allows control of certain overhead and aisle lights to facilitate entry into the airplane. A panel located at the refreshment center allows control of the overhead lights, cabin entry light, aisle light and cabin divider light, the shades for the work surface of the refreshment center, and serves to control all window shades as well as the cabin galley and water system. The reading and table lights are controlled by touch switches which are similar to those on the executive switch module and the refreshment center switch panel. These individual reading light switches are mounted on the seat sidewall armrests.

A set/reset module in the cabin electrical system will automatically cause all of the cabin switches (lights, refreshment center equipment, etc.) to be turned off at power down of the airplane electrical system, regardless of the switch positions. When the airplane system is powered up again those items of equipment will remain off, until the switches of the individual units which were left on are recycled.

### **Aft Baggage Compartment**

Three lights, located on the forward left side and forward and aft ceiling of the aft baggage compartment, provide interior lighting for baggage loading or unloading. An OFF/ON toggle switch, located on the door frame, is wired through a door actuated microswitch. With the switch in the ON position, opening the door will allow power to the toggle switch, allowing the light to be turned on. Closing the access door will extinguish the light regardless of toggle switch position.

### **Tailcone Maintenance Compartment**

The tailcone is lighted by a fixed light, mounted below the fire bottle bracket, and a portable light assembly mounted on a quick disconnect swivel base. The OFF/ON switch is mounted near the access door frame and is wired through the door-closed microswitch. Closing the tailcone compartment door will extinguish the lights regardless of OFF/ON switch position.

## EXTERIOR LIGHTING

Exterior lighting consists of navigation lights, anti-collision (strobe) lights, wing inspection lights, ground recognition lights (fuselage and tail mounted strobe lights), optional tail (identification) floodlights, wing and ground emergency evacuation route lights, wingtip down wash lights, landing lights, and taxi lights. The landing and taxi lights are controlled by switches located near the throttles on the center pedestal. All other exterior lights are controlled by switches located on the light panels (LIGHTS) located low on the right and left instrument panels. The wingtip down wash lights are controlled by the taxi light switch; they improve taxi operation at night by providing the pilots wingtip visibility. The ground recognition lights are controlled by the GND REC/ANTI-COLL light switch which has three positions: OFF, GND and GND REC/ANTI-COLL. GND position controls the tail anti-collision lights mounted on the under side of the tailcone and on top of the bullet fairing, and GND REC/ANTI-COLL controls both the wing and tail anti-collision lights. The landing lights also operate as recognition lights in flight. The switch RECOG/OFF on the LIGHTS panel controls the landing lights through resistors to produce a less intense light, allowing the landing lights to be used as recognition lights and to extend the bulb life

The navigation lights consist of a colored light on each wing tip (left-red, right-green) and a white light on the tip of the bullet fairing between the horizontal stabilizers. The wing tip mounted anti-collision lights are controlled separately from the navigation lights. These lights are of very high intensity and can be disturbing to other airplanes and ground personnel if they are used during ground operation. They should be turned on just prior to takeoff roll and secured shortly after landing. Wing inspection lights illuminate the forward portion of the wings, enabling the pilots to detect ice buildup during night flight. The ground recognition lights are mounted on the bottom aft portion of the fuselage and on top of the bullet fairing for use in high density areas on the ground. The tail floodlights illuminate surface areas of the airplane and are used for visual identification during night operations. Exterior emergency evacuation route lights illuminate the wing and ground area around the escape hatch. Landing lights, one on each inboard wing, are illuminated by separate switches. Twin taxi lights are attached to the nose gear strut and are controlled by a single ON/OFF switch during ground operation only. The landing gear weight-on-wheels (squat) switches preclude taxi light illumination in flight. The taxi lights steer with the nose gear strut.