G650 Door System
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1. **Main Entrance Door (MED)**
   - Primary means of access to the aircraft
   - Electrically operated
   - The MED is electrically latched and locked, unlatched and unlocked
   - Door is closed with Hydraulic System pressure

   - If pump is used to close the MED it will turn on and off automatically
- If MED is closed with hydraulic fluid pressure, **trapped** fluid allows the MED to gently free fall outward until the door and stairwell are fully extended.

- The MED, when fully opened, does not touch the ground regardless of **fire** or strut failure.

- Ensure cabin is unpressurized before opening MED.

- A viewing port is used to ensure the area outside is clear before opening of the MED.

- The viewing port is also used to check for **fire** in the event of an emergency.
- A Door Safety switchlight removes electrical power from the MED. It can also be used to interrupt a door closing operation.

- MED CAS messages:

  **AIRCRAFT CONFIGURATION**

  MED is not completely closed and the power levers have been advanced for Takeoff.

  **Main Door**

  Door open and parking brake engaged, or door maintenance required.

  **Main Door**

  Door open and parking brake not engaged.
- MED latched and locked indications (Bayonets)

- When the MED is closed with latches and locks engaged, the pressurization system prevents the door from opening when cabin pressure is above two (2) PSI.

- When the MED is open (latches and locks not engaged), cabin pressurization is limited to a maximum 0.5 PSI.

- An MED vent flap is mechanically linked to the lock actuator which will vent remaining cabin pressure when the locks are released.
MED SWITCHES - **Outside Aircraft**

- Located in the Security/Ground Service Panel
- Must be unlocked **not** for flight
- Only switch outside the aircraft that can OPEN/CLOSE
- Red guarded External Battery switch connects both main batteries for door opening and closing

- Three-position switch spring-loaded to the center position

**External Battery**

**L. MAIN BATT**  **R. MAIN BATT**

**CLOSE**

**OPEN**

**CLOSE**

**OPEN**

**Main Door**
- Door Close

Reversible switch. You can change your mind and stop the door as it moves up

- Door Open

Switchlight below switch illuminates when MED is unlocked
- Located outside the MED
- Used to open MED by rescue personnel
- Must be unlocked for flight
- Uses the **FWD E-BATT** only

The MED is opened with this **EMERGENCY ENTRY** push switch on the first flight of the day to confirm:

1. **FWD E-BATT** has sufficient battery charge capacity
2. Operation of the push switch
3. It is unlocked for flight
MED Switches - Inside Aircraft

- Guarded Switch
- Located in the cockpit overhead DOORS PANEL
- Can be used to OPEN the MED from the cockpit
- Used if main door switch is inoperative or in an emergency
- Requires ESS DC power
- AT LEAST one (1) main battery must be ON if aircraft is unpowered

- When pressed, door electrically unlatches and free-falls open
MED SWITCHES - INSIDE AIRCRAFT

- THE MAIN CABIN DOOR SWITCH is located next to MED
- GUARDED SWITCH
- ONLY SWITCH INSIDE THE CABIN THAT CAN OPEN/CLOSE THE MED
- THREE-POSITION REVERSIBLE SWITCH spring-loaded to the center position
- **Door Close**

  AT LEAST ONE MAIN BATTERY MUST BE ON if AIRCRAFT is unpowered

  - Aux pump, powered by the main batteries, auto activates if left hydraulic system pressure is < \(1,500\) Psi
  - Door closes and electrically latches
  - Aux pump auto shuts off

- **Door Open**

  - Door electrically unlatches and free-falls open
  - Light above switch illuminates when MED is unlocked
  - Without other source of power it uses the E-BATT to OPEN the MED
Main Entrance Door - ECS Packs

MED Switch Selected closed

L Pack OFF  R Pack OFF

MED closed and locked

L Pack ON

R Pack ON

> Ten (10) seconds
Main Entrance Door
Manual Opening (ASC 065)

- For aircraft with ASC 065, the EMED can be opened manually from inside the aircraft.
- Procedure for opening the door manually can be found in QRH, Alternate Normals, NG 43.
- The procedure requires access to two handles located behind one of the door steps.

1. Turn T-handle clockwise to unlock the door.

2. Turn handle clockwise in one continuous motion to open the door. This requires a lot of strength.
② Acoustic Door:

- The acoustic door reduces noise level inside the cabin during flight.

- It must be open for taxi, takeoff and landing so as to not impede evacuation via the EMED.

- It is normally secured/confirmed open by the flight attendant prior/while taxiing out for departure and again before landing.

- It is normally closed in flight to block/reduce noise in the EMED area.

- It will automatically open when:
  
  A) Flaps selected from 0° to 10°, or
  
  B) Gear selected down during a flaps 0° landing.

- Cabin doors, between galley and passenger cabin, will also open automatically if not already latched/secured open by the flight attendant.
There are two types of emergency exits.

These are:

A) Main Entrance Door

- Opened via the main cabin door switch which is located next to EMED.

- Quickest and safest way to evacuate the aircraft.
- In the event of a water landing (ditching) or gear up landing the EMED will not be able to open all the way due to reduced ground clearance.
b) Four (4) over wing exit windows called Emergency Exit Doors (EED)

The EEDs weigh about 59 lbs and are opened from inside the cabin by pulling on a T-handle. They can also be opened from the outside.

To facilitate rescue, and differentiate them from other windows, the EEDs have a gray ring around them.
Baggage Doors:

- The exterior baggage door is a plug type door which moves inward and upward.
- It can be opened from inside or outside the aircraft.
- The exterior baggage door uses a passive door seal (differential pressure).

- Exterior Baggage Door CAS Message:

  - EXTERNAL BAGGAGE DOOR
  - Exterior baggage door open
  - This CAS message is accompanied by a two-chime aural tone.
- The **interior** baggage door allows access to the baggage compartment while in flight.

- The **interior** baggage door serves as a secondary (aux) pressure bulkhead.

- Access to the baggage compartment is restricted to **40,000 feet or below**.

- **Interior Baggage Door CAS Messages**

  - **Internal Baggage Door**
    - Interior baggage door open < **40,000'**
    - This CAS message is accompanied by a one-chime aural tone.

  - **Internal Baggage Door**
    - Interior baggage door open > **40,000'**
    - This CAS message is accompanied by a two-chime aural tone.

- **No Entry**
Questions, comments or errors...please send me an email: ivan.luciani@gmail.com

Thank you!