G650 Door System

[Diagram of an airplane showing the door and exit]
G650 Door System

1. Electric Main Entrance Door (EMED) =
   - Primary means of access to the aircraft
   - Electrically operated
   - Open
   - Latched & locked
   - Unlatched & unlocked
   - Door is closed by hydraulic system pressure

   AUX
   OR
   L Hyd Sys
   OR
   PTU

   AUX

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

- The EMED, when fully opened, does not touch the ground regardless of tire or strut failure.

- Ensure cabin is **unpressurized** before opening EMED.

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

- The viewing port is also used to check for **fire** in the event of an emergency.
- There are two (2) DOOR CLOSED switches

Inside Aircraft

Close

Open

Unlocked when illuminated

Outs ide Aircraft

Close

Open

- There are four (4) DOOR OPEN switches

Inside Aircraft

Close

Open

Unlocked when illuminated

Door Open

Door Open

Outs ide Aircraft

Close

Open

Push Up
- Door safety ON removes power from EMED. It can also be used to interrupt door closing operation.

- EMED CAS messages:
  - MAIN DOOR: Door open and parking brake engaged, or door maintenance required.
  - MAIN DOOR: Door open and parking brake not engaged.
  - AIRCRAFT CONFIGURATION: Door open and power levers advanced.

- EMED closed/locked indications (bayonets):

  ![Diagram of door with bayonets](image)

  - \( \_ \_ \_ \_ \) = Locked
  - \( \_ \_ \) + \( \_ \_ \_ \_ \) = Latched
When the EMED 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 EMED is open (latches and locks not engaged), cabin pressurization is limited to a maximum 0.5 PSI.

An EMED Pressure Relief Valve is mechanically linked to the lock actuator which will vent remaining cabin pressure when the locks are released.
EMED Switches - Outside Aircraft

- Located in the security/ground service panel
- Unlocked for flight
- Only switch outside the cabin that can open/close
- Red guarded two-position external battery switch: on and off
- Three-position switch spring loaded to the center position: close - off - open
- Light below switch illuminates when EMED is unlocked
- Uses L MAIN BATT R MAIN BATT
- Reversible switch. You can change your mind and stop the door as it moves up
- When closing the EMED from the Security/Ground Service Panel:

1. Ensure EMED storage box is fully closed and secured before closing EMED.

2. Select External Battery switch to ON.

3. Wait for ten (10) or more seconds after the rotating beacon comes ON.*

4. Select Main Door switch to Close.

* The above allows electrical power system to boot up and provide sufficient power to the AUX hydraulic pump.
EMED Switches - Outside Aircraft

- Located outside EMED
- Used to OPEN EMED by rescue personnel
- Panel must remain unlocked and closed for flight
- Uses FWD E-BATT only

The EMED is opened with this switch on the first flight of the day. This confirms:

1. FWD E-BATT has sufficient battery charge capacity
2. Operation of the switch Push Up
3. That the panel is unlocked for flight
EMED Switches - Inside Aircraft

Main Cabin Door Switch
- Located next to EMED
- Only switch inside the cabin that can open/close EMED
- Three-position switch spring loaded to the center position
- Light below switch illuminates when EMED is unlocked
- Reversible switch

Door Open Switchlight
- Located in Pilot Overhead Panel
- Can be used to open door from the cockpit
- Guarded switchlight
- Used if main door switch is inoperative or in an emergency
- Requires ESS DC power
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 39.

- The procedure requires access to two (2) 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.
Emergency Exits =

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.
4) **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](image)

- **Exterior Baggage Door CAS Message** =
  
  ![External Baggage Door](image)  **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 feet**
    - This CAS message is accompanied by a one-chime aural tone.

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

- **No Entry**
Questions, comments or errors?

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Thank you!