Miltech Simulations-Microsoft C-17 Globemaster III

Flight Control System

Cockpit Controls

The aircraft is equipped with two control stick assemblies that are interconnected and move in unison. The stick features various buttons for Autopilot and Microphone switches, however, for ease of operation these buttons are inoperative.

Both sets of rudder pedals are interconnected. The top of the rudder pedals tilt forward to apply brakes.

A flaps lever is located just under the throttle levers. A spoiler deploy/retract rocket switch is located on the sides of the handles of the Throttle levers.

Electronic Flight Control System Panel

In 1993, the C17 Globemaster III became the first military aircraft to feature a complete Electronic Flight Control System, also known as Flight by Wire system. The FBW system utilizes force sensors on pitch, roll and yaw axes to provide pilot commands to four separate Flight Control Computers. These FCCs combine the commands and apply the output commands to the control surfaces (Elevators, Rudder and Ailerons). The fly-by-wire computers act to stabilize the aircraft and adjust the flying characteristics without the pilot's involvement (eg. aircraft holds the attitude), and to prevent the pilot from operating outside of the aircraft's safe performance envelope.

The EFCS System can be disabled by switching the corresponding axis from EFCS to "MECH". This engages the backup Mechanical linkages.



Electronic Flight Control System Panel

1. ◇ **Pitch Trim EFCS Selector:** INOP
2. ◇ **Pitch EFCS Selector:** Three-way switch that determines the behavior of the Electronic Flight Control System (Fly-By-Wire). “EFCS” is the regular mode, and it provides normal operation of the system. MECH (Mechanical, PART or FULL) Disables all EFCS and reverts to the mechanical backup system. The aircraft will no longer hold attitude as expected on a FBW system.
3. ◇ **Flaps EFCS Selector:** INOP
4. ◇ **Roll EFCS Selector:** Three-way switch that determines the behavior of the Electronic Flight Control System (Fly-By-Wire). “EFCS” is the regular mode, and it provides normal operation of the system. MECH (Mechanical, PART or FULL) Disables all EFCS and reverts to the mechanical backup system. The aircraft will no longer hold attitude as expected on a FBW system.
5. **EFCS Reset Pushbutton:** INOP
6. ◇ **Yaw EFCS Selector:** INOP, the Yaw EFCS mode is always engaged by the Flight Model configuration.
7. ↔ **SCEFC Switch:** INOP

8. ↔ **FCC Switch:** INOP

Flaps and Slats

Extension and Retraction of Flaps, Slats and Spoilers are controlled by two FCC Computers. The Flaps slide has Five detent positions. First position is SLATS + FLAPS 0deg. Second position is 0/EXT (Slats Extended, Flaps Zero). Third position is 1/2 Flaps, slats extended. Fourth position is 3/4 Flaps. Final position is full Flaps. Granular Flap Index control is unavailable on this rendition of the C17

The Speedbrake is controlled by a single rocker switch. Only two positions (deployed and retracted) are selectable, however, the aircraft will automatically manage all the individual spoielr surfaces.



Flaps and Slats Indicators