Miltech Simulations-Microsoft C-17 Globemaster III

Navigation and Communication Systems

NAVCOM Control Panel

The NAVCOM Control panel are the primary radio controls for all tunable communications and navigation equipment.

- Tunes all the communication radios.
- Tuves the VOR/ILS, TACAN and ADF Navigation Radios.
- Tunes IFF and Transponder
- Activates the IFF IDENT Feature



Navigation and Communications Display

1. **Left Side Pushbuttons:** Cycle through the communication options:
2. COM1/COM2: Selects COMM1/2 Frequencies by using the FREQ knobs. Press once for COMM1, a second time for COMM2.

3. UHF: Unsupported by the simulator.
4. VHF: Unsupported by the simulator.
5. HF: Unsupported by the simulator.
6. **Right Side Pushbuttons:** Cycle through the navigation options:
7. NAV1/NAV2: Selects NAV1/2 Frequencies by using the FREQ Knob. Select Course with the CRS Knob. Press once for NAV1, a second time for NAV2. NAV supports VORs and ILS Frequencies.
8. TAC1/TAC2: Same as above. TACAN frequencies can be used on the BDHI Bearing Distance and Heading Indicator.
9. ADF: Same as above. ADF can be used on the BDHI.
10. IFF: Transponder
11. ▣ **OFF/BRT Button**
12. **Lower Side Pushbuttons:** Their functionality changes from page to page. Particularly important to change IFF mode from GRD to T/A
13. **Upper Side Pushbuttons:** Generally INOP
14. ▣ **IDENT Button**
15. ▣ **XFER Button:** Transfers frequency from STBY to ACTIVE
16. ◉ **CRS Knob:** Selects course. Outer knob selects by 10s, inner knob selects by units.
17. ◉ **FREQ Knob:** Selects frequency. Outer knob selects integer parts, inner knob selects decimal parts.

Standby Radio

The standby radio located in the overhead panel is not simulated and INOP.

ICS/Radio Volume/Mic Select Modules

The various ICS/Radio Volume/Mic Select modules located around the cockpit are fully animated, but do not have any real functionality in the simulation. You may find them across the entire aircraft - in the centre console, on the pilot/copilot sidepanels, in the loadmaster station, etc.



ICS/Radio Volume/Mic Select Modules

Multi-Function Controls Unit

Located on the Centre Console (two of them, for the pilot and first officer respectively), the MFC Unit provides control over the Primary Flight Display and Navigation Displays of the aircraft.



MFC Unit

1. ◇ **Altitude Reference Selector:** Selects the altitude reference to be used with the Central Aural Warnings System (CAWS) and the alert displayed on PFD. Options are:
2. MDA: Minimum Descent Altitude - If the aircraft goes below the selected altitude, MDA message will be displayed on PFD
3. MKR: Marker - If the aircraft goes below the selected altitude, TOO LOW message will be displayed on the PFD.
4. DH: Decision Height - When the aircraft crosses Decision Height, DH Message displays on the PFD, followed by the respective aural alarm.
5. **Altitude Selected Display:** Displays selected altitude as per ALT REF Mode (1) and MIN SELECT (3)
6. ◇ **Minimum Altitude Selector Knobs:** The outer knob selects the reference source for generation of PFD Altitude Alerts (BARO for Barometric, and RA for radar altitude). The inner knob selects the altitude on the display window.
7. ▣ **MFC Buttons:** Enable/Disable various of the MFCs Functions:

8. CDI: Course Deviation Indicator
9. 1CRS: INOP
10. 2CRS: INOP
11. PFP: INOP
12. TAC CRS: INOP
13. FLT PLN: Display MSN Flight Plan
14. PPI PLN: INOP
15. DATA: INOP
16. NVAD: Display Navigation Aids on Navigation Display - VORs, NDBs and TACANs
17. ARPT: Display Airports on Navigation Display
18. GRP: INOP
19. TACT: INOP
20. SEC PLN: Secondary Plan, INOP
21. DCLT: INOP
22. RDR: Cycle through Radar Modes - OFF/Terrain Radar (TAWS)/Weather Radar (WX)
23. BCN: INOP
24. RZ TAC: INOP
25. ◇ **Aircraft Reference Symbol Position Selector, move Backward:** Enables the aircraft reference symbol to be moved Backward. This will affect both MFDs on the corresponding MFC Side.
26. **Display Test Mode:** Pressing the TEST Pushbutton enables a HUD and MFD Test Format.
27. ◇ **Aircraft Reference Symbol Position Selector, move Forward:** Enables the aircraft reference symbol to be moved Forward. This will affect both MFDs on the corresponding MFC Side.
28. **SKE/TCAS Ring Interval:** INOP
29. ◇ **Heading Reference Selector Switch:** INOP. All headings on the aircraft are set to Magnetic
30. ◇ **Map/Radar Range Selectors:** Increases/Decreases range for the MAP, ND Compass and PPI

Bearing, Heading, Direction Indicator (BDHI)

The BDHIs. located outboard of the outside MFDs at each pilot station, provide magnetic heading, and magnetic bearing and/or digital readouts of distance to VOR, DMEs or TACANs, and relative bearing to radio stations supplied to ADF.



BDHI Imdicator

Note
TACAN Stations may display correct distance to station but incorrect bearing. We are investigating the issue. VORTAC Stations will function correctly with DIST and BEA.

1. ◇ **Mode 1 Selector:** Select between VOR1, TACAN1 and ADF1. The instrument will use the frequencies as selected on the COMNAV display. Assuming the frequency is valid, and aircraft is within range of the radio station, the bearing to the station will display on Needle #4 and the distance on #6.
2. ◇ **Mode 2 Selector:** Select between VOR2, TACAN2 and ADF2. The instrument will use the frequencies as selected on the COMNAV display. Assuming the frequency is valid, and aircraft is within range of the radio station, the bearing to the station will display on Needle #5 and the distance on #7.
3. **Magnetic Heading Indicator:** The rotating plate will function as a backup compass, displaying the current magnetic heading of the aircraft.
4. **FREQ1 Bearing Indicator:** Displays the bearing to the station as selected on Mode 1 Selector. Eg. assuming Mode 1 selector is set to VOR1, and a valid VOR Frequency has been entered on the COMNAV display, the needle will point towards the bearing of the selected VOR station.
5. **FREQ2 Bearing Indicator:** Displays the bearing to the station as selected on Mode 2 Selector. Eg. assuming Mode 2 selector is set to ADF1, and a valid ADF Frequency has been entered on the COMNAV display, the needle will point towards the bearing of the selected ADF station.
6. **FREQ1 Distance Indicator:** Displays the distance, in Nautical Miles, to the station as selected on Mode 1 Selector, assuming the station can provide distance information.
7. **FREQ2 Distance Indicator:** Displays the distance, in Nautical Miles, to the station as selected on Mode 2 Selector, assuming the station can provide distance information.