



MFD-85



NOT INTENDED FOR REAL FLIGHTS.

NOTE: This guide is for familiarization only and does not replace approved manuals or procedures.

MFD-85

The MFD-85 is a multifunction display used to present navigation, weather radar, TCAS traffic, and other operational information, depending on the aircraft installation.

General Overview



1. TFC Button – Selects the **TCAS** traffic display mode. Surrounding aircraft are displayed according to the active TCAS mode and system configuration.

2. RDR / NAV Button – Select or deselects the weather radar and navigation map presentations. These modes may be displayed individually or as a combined overlay.

- Press **RDR** to enable or disable the weather radar presentation. When active, radar information may be displayed alone or overlaid on the navigation map.
- Press **NAV** to enable or disable the navigation map presentation. When active, the **NAV** annunciation appears in green in the upper left corner of the display.
- **NAV** and **RDR** may be displayed independently or simultaneously. When both are active, weather radar information is overlaid on the navigation map.

3. Range Increase Button – Increases the selected display range, allowing a larger surrounding area to be viewed.

4. **Range Decrease Button** – Decreases the selected display range, providing a more detailed view of the nearby area.
5. **Aircraft Heading** – Indicates the current aircraft heading on the display.
6. **Selected Heading Indicator** – Shows the heading selected with the heading bug.
7. **Heading Bug** – Provides a graphical reference for the selected heading on the compass arc or map display.
8. **NAV Menu** – Provides access to navigation display settings and map configuration options.

NAV Menu Display

The **NAV Menu** allows the pilot to select the navigation map format and configure map overlays. Green text indicates the selected or active option.



Left-Side Options – Display Modes

The left-side softkeys allow the pilot to select the desired map format. The selected option is shown in green.

- **ENTER** – Confirms the selected menu option.
- **HEADING UP** – Selects the heading-up map format.
- **NORTH UP** – Selects the north-up map format.
- **DTK UP** – Selects the desired-track-up map format.

Right-Side Options – Sensors and Map Overlays

The right-side softkeys enable, disable, or select navigation sensors and map overlays. Active selections are shown in green.

- **VOR1 / VOR2** – Selects VOR 1, VOR 2, or neither. When selected, an RMI pointer displays bearing information to or from the selected VOR station. A dashed line indicates a FROM condition; a solid line indicates a TO condition.
- **LRN1 / LRN2** – Selects the long-range navigation sensor. Labels may vary depending on aircraft installation, such as GPS1/GPS2 or RNAV1/RNAV2.
- **NAVAIDS** – Enables or disables navigation aid symbols on the map.
- **AIRPORTS** – Enables or disables nearby airport symbols on the map.
- **HDG** – Allows the heading bug and its digital readout to be shown or hidden using the **CLR** button.

TCAS Traffic Display

The **TFC** mode provides a pictorial presentation of TCAS traffic around the aircraft. It assists the pilot in visually acquiring nearby traffic by displaying relative position, relative altitude information, and vertical trend when available.

The traffic display may be shown as a dedicated **TFC** display or as part of a composite display with **RDR** and/or **NAV**. However, TCAS display options can be changed only in the dedicated **TFC** mode.



Airplane Symbol – The “own aircraft” airplane symbol shows in white in the lower center of the display. The symbol represents own aircraft position relative to surrounding traffic and the selected display range.

Traffic Symbols – TCAS traffic symbols show for nearby traffic, within the selected range and altitude mode. Traffic symbols include relative altitude, vertical trend, shape, and color coding.

Relative altitude

Relative altitude is displayed as two digits preceded by a + or – sign. The value is shown in hundreds of feet relative to the own aircraft.

Example: +22 indicates traffic 2,200 ft above the aircraft. –02 indicates traffic 200 ft below the aircraft.

Vertical speed of the traffic

A vertical trend arrow is displayed when the traffic aircraft is climbing or descending at 500 ft/min or greater. An upward arrow (↑) indicates climbing traffic; a downward arrow (↓) indicates descending traffic. No arrow is displayed when the vertical rate is less than 500 ft/min or unavailable.

Shape and color

Each of the four types of TCAS traffic shows a unique symbol on the traffic display as described in the following:

Traffic Type	Symbol	Color	Meaning
RA	Solid square	Red	Resolution Advisory traffic
TA	Solid circle	Orange	Traffic Advisory traffic
PT	Solid diamond	White	Proximate Traffic
OT	Open diamond	White	Other traffic

TCAS Modes

The active TCAS mode is displayed in the upper left corner of the traffic display.

TA-ONLY – Indicates that the TCAS system is configured to provide Traffic Advisories only. The annunciation is normally white and changes to flashing yellow when a TA is detected. In this mode, RA traffic is not displayed as a Resolution Advisory.

TA/RA – Indicates that the TCAS system is configured to provide both Traffic Advisories and Resolution Advisories. The annunciation is normally white, changes to flashing yellow during a TA, and changes to flashing red during an RA.



Quick Reference Summary

- Use NAV to display navigation information.
- Use RDR to display weather radar information.
- Use TFC to display TCAS traffic information.
- Use the range buttons to increase or decrease the displayed scale.
- Green text normally indicates an active or selected option.