

APOLLO

Model MX20
Multi-Function Display
User's Guide Supplement

Software Version 4



UPS Aviation Technologies



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Data Flags

Table 1:

Data Flag	Description
POS	No valid position information is available from the source. Do not expect a valid position representation on the maps. The Ownship symbol will have an “X” through it.
RTE	No valid route (flight plan) is available from the external navigation source. Route (flight plan) information will not be shown on the maps.
ALT	No valid altitude information is available from the external source. Altitude related functions will not operate, such as terrain awareness.
TRAF	No traffic information is received from the external source. Traffic will not be displayed. Your position information will not be broadcast in ADS-B capable systems.
LT	No valid lightning detection information is being received from the external source. Strike and cell information will not be displayed.
TER	Terrain coverage is not available for some part of the terrain advisory coverage area. Terrain advisories may not be provided.
NAV	When connected to the SL30, indicates the SL30 is not available or valid. ILS, OBS, and VORs will not be highlighted.
SKYW	No valid traffic information is being received from the Skywatch sensor. Traffic information will not be displayed.
TCAD	No valid traffic information is being received from the Ryan TCAD sensor. Traffic information will not be displayed.
RDR	(Amber)Indicates that radar status information is not available from the external radar transmitter head. Radar related functionality may not be available.
RDR (Green)	Indicates that the radar is ON and transmitting RF energy. Appropriate precautions should be taken.

Table 1:

Data Flag	Description
RDR (Green - Flashing)	Indicates that the radar is in Hold and is transmitting RF energy. Appropriate precautions should be taken.
TAWS (amber)	No valid terrain information is available from the external source.

Confirm Current Baro Correction

A window may appear at startup, and then every 30 minutes, that displays the current barometric value. You must verify the current value or enter a new value. Press Baro + to increase the value. Press Baro - to decrease the value. Press OK to confirm the existing values or to accept changes you have just entered. Baro correction is not available in TAWS installations.

Thumbnail Feature

The Thumbnail feature provides a small map depiction that is overlaid in the upper left corner of the MX20 display. It provides for enhanced traffic and terrain situational awareness when not specifically viewing traffic or terrain related functions. For example, both traffic and terrain situational awareness can be maintained while viewing the Flight Plan Function.

The Thumbnail is shown in both a small and large format, depending on the function currently being viewed. The Thumbnail is typically presented in the larger format when overlaid on a map. However, on some functions where the Thumbnail would overlay critical information, the smaller format is utilized.

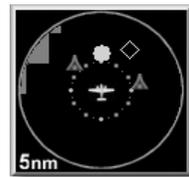
The Thumbnail provides a fixed 5nm range view of conflicting traffic and terrain. The range depicted by the Thumbnail is not affected by the current zoom scale set on the main map functions.

Traffic on Thumbnail

Both TAS and TCAS traffic is shown on the Thumbnail in the same symbology used within the Traffic Function. ADS-B traffic is not shown on the Thumbnail. Any traffic within sensor range and 5nm is shown, in addition to traffic causing an amber Traffic Alert (TA) traffic.

Terrain on the Thumbnail

Only “Red” terrain within the 5nm range is presented on the Thumbnail. This correlates directly to terrain that is rendered in red on the normal Terrain Function. External TAWS-based terrain from the Goodrich Landmark is not shown on the Thumbnail.



Thumbnail Activation

The Thumbnail incorporates logic that will either show or hide the thumbnail from view. It will only be shown when there is data to be presented and will be removed if not. For example, if there is no “Red” terrain or traffic within 5nm, the Thumbnail will be hidden from view.

The Thumbnail will not appear on the Traffic Function page if only traffic is presented in the Thumbnail. Correspondingly, it is not shown on the Terrain page if only terrain is presented in the Thumbnail. This logic eliminates redundant views that would be created by the Thumbnail and normal views of traffic and terrain.

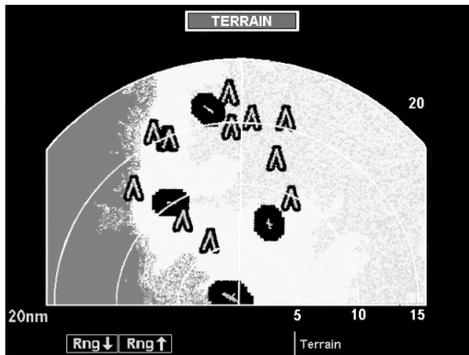
Additionally, the Thumbnail is disabled while operating on the ground. This state is determined by the ‘En Route/Ground Transition Speed’ set in the System Function page and is based on GPS ground speed.

Traffic Depiction

Your position (ownship symbol) is located at the tip of the aircraft icon at center of the screen. The traffic function is always shown in heading mode, meaning that track based flight plan information is not overlaid. Traffic can also be shown on the Custom Map and in a small thumbnail view presented in the upper left corner of the screen.

External TAWS-Based Terrain Display

The external TAWS-based Terrain feature shows terrain as provided by an external TAWS sensor when connected to and configured to receive that data input.



When displaying external TAWS-based terrain, the external sensor determines the color coding and graphical presentation of terrain in the proximity of the aircraft. See the Pilots Guide for the Goodrich Landmark for additional information on how to interpret this information.

When the MX20 is configured for an external Terrain Awareness and Warning System (TAWS), the “Alt” and “Baro” fields normally present on the Navigational Bar will not be displayed.

TAWS Pop-Up Modes

The MX20 will detect TAWS based terrain alerts and will force a pop-up of the Terrain Function when required. Terrain based Pop-Ups have higher priority over traffic based pop-up functionality.



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