



## SERVICE ADVISORY

NO.: 0503

**TO:** All Garmin Aviation Service Centers

**DATE:** January 26, 2005

**SUBJECT:** MX20 and i-Linc Multi-Function Display (MFD) Unit Drawing of Obstructions

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### PURPOSE

This Service Advisory identifies a problem with the order of the drawing of obstructions on the display.

### DESCRIPTION

Obstructions are drawn in the order they are encountered in the database search. When they appear very close on the display, one type may overwrite another. When there are multiple obstructions with different heights located near each other and depending on the aircraft's altitude relative to those obstructions and the selected display zoom range, it is possible for a red (closest to your elevation) obstruction symbol to be hidden from view by a yellow or green obstruction.

Obstructions may be drawn in red, yellow, or green. The color convention for obstructions is the same as the one for the terrain function, where the item (terrain or obstruction) is drawn in red if it is within 500 feet of, at, or above the aircraft's altitude, yellow if the item is within 1000 feet of the aircraft's altitude, green if the item is within 2000 feet of the aircraft's altitude, or not at all if it is more than 2000 feet below the aircraft's altitude. Only obstructions that are taller than 250 feet are considered for rendering. It is the altitude of the top of the obstruction that determines which color is used (not the base of the obstruction). All obstructions, regardless of their actual height, are drawn with the same symbol (i.e., tall and short towers are represented with the same symbol, not symbols with different heights). Color provides information on the altitude difference of the aircraft's altitude to the top of the obstruction, not the height of the obstruction from the ground. The obstruction color changes as the aircraft climbs or descends and the criteria for each color are met or no longer met.

In all cases, red obstacles appear on the thumbnail in the upper left corner of the display. The thumbnail was introduced with V4.0. Only items that are considered potentially threatening to the aircraft are shown on the thumbnail. Regarding obstructions, only those colored red are shown in the thumbnail, not those colored yellow or green.

There is no misleading information presented to the crew. The thumbnail is designed to attract the crew's attention to events or circumstances that may pose a threat to their aircraft and the red colored obstructions are always drawn on the thumbnail.

In future software, the order will be changed to draw obstacles in the proper order so that red obstacles are drawn over yellow and green obstacles and yellow obstacles are drawn over green obstacles.

## **APPROVAL**

Information provided in this advisory does not affect the airworthiness or operational approval of the MX20 or i-linc MFDs.

## **AFMS AND PILOT'S GUIDE CONSIDERATIONS**

AFMS and Pilot's Guide procedures for these products are unaffected.

## **PRODUCTS AFFECTED**

The MX20 and i-linc Multi-Function Displays (p/n 430-0270-xxx).

## **COMPLIANCE**

N/A

## **REFERENCES**

User's Guide for MX20 (p/n 560-1026-07 or later)  
Pilots' Guide for i-linc (p/n 0040-19001-01)

## **MANPOWER**

N/A

## **WARRANTY INFORMATION**

N/A

## **MATERIAL INFORMATION**

N/A

## **ADDITIONAL INFORMATION**

N/A