

Warnings, Cautions & Notes



WARNING: When installing the GPSMAP® 695/696, place the unit so it does not obstruct the field of view or interfere with operating controls.



WARNING: The indicators represented on the Panel are based on GPS-derived data and may differ from the instruments in the aircraft.



WARNING: The GPSMAP 695/696 is intended only as an aid for VFR navigation. Do not attempt to use this unit for any purpose requiring precise measurement of direction, distance, location, or topography.



WARNING: Navigation and terrain separation must NOT be predicated upon the use of the terrain function. The GPSMAP 695/696 Terrain Proximity feature is NOT intended to be used as a primary reference for terrain avoidance and does not relieve the pilot from the responsibility of being aware of surroundings during flight. The Terrain Proximity feature is only to be used as an aid for terrain avoidance and is not certified for use in applications requiring a certified terrain awareness system. Terrain data is obtained from third party sources. Garmin is not able to independently verify the accuracy of the terrain data.



WARNING: The displayed minimum safe altitudes (MSAs) are only advisory in nature and should not be relied upon as the sole source of obstacle and terrain avoidance information. Always refer to current aeronautical charts for appropriate minimum clearance altitudes.



WARNING: The altitude calculated by GPSMAP 695/696 GPS receiver is geometric height above Mean Sea Level and could vary significantly from the altitude displayed by pressure altimeters. GPS altitude should never be used for vertical navigation.



WARNING: Do not use outdated database information. Databases used in the GPSMAP 695/696 must be updated regularly in order to ensure that the information remains current. Pilots using any outdated database do so entirely at their own risk.



WARNING: Do not use basemap (land and water data) information for primary navigation. Basemap data is intended only to supplement other approved navigation data sources and should be considered as an aid to enhance situational awareness.



WARNING: Traffic information is provided as an aid in visually acquiring traffic. Pilots must maneuver the aircraft based only upon ATC guidance or positive visual acquisition of conflicting traffic.



WARNING: XM Weather should not be used for hazardous weather penetration. Weather information is approved only for weather avoidance, not penetration.



WARNING: NEXRAD weather data is to be used for long-range planning purposes only. Due to inherent delays in data transmission and the relative age of the data, NEXRAD weather data should not be used for short-range weather avoidance.



WARNING: The Garmin GPSMAP 695/696 has a very high degree of functional integrity. However, the pilot must recognize that providing monitoring and/or self-test capability for all conceivable system failures is not practical. Although unlikely, it may be possible for erroneous operation to occur without a fault indication shown by the GPSMAP 695/696. It is thus the responsibility of the pilot to detect such an occurrence by means of cross-checking with all redundant or correlated information available in the cockpit.



WARNING: For safety reasons, GPSMAP 695/696 operational procedures must be learned on the ground.



WARNING: The United States government operates the Global Positioning System and is solely responsible for its accuracy and maintenance. The GPS system is subject to changes which could affect the accuracy and performance of all GPS equipment. Portions of the Garmin GPSMAP 695/696 utilize GPS as a precision electronic NAVigation AID (NAVAID). Therefore, as with all NAVAIDs, information presented by the GPSMAP 695/696 can be misused or misinterpreted and, therefore, become unsafe.



WARNING: To reduce the risk of unsafe operation, carefully review and understand all aspects of the GPSMAP 695/696 User's Manual documentation and the Pilot's Operating Handbook for the aircraft. Thoroughly practice basic operation prior to actual use. During flight operations, carefully compare indications from the GPSMAP 695/696 to all available navigation sources, including the information from other NAVAIDs, visual sightings, charts, etc. For safety purposes, always resolve any discrepancies before continuing navigation.



WARNING: The illustrations in this guide are only examples. Never use the GPSMAP 695/696 to attempt to penetrate a thunderstorm. Both the FAA Advisory Circular, Subject: Thunderstorms, and the Aeronautical Information Manual (AIM) recommend avoiding "by at least 20 miles any thunderstorm identified as severe or giving an intense radar echo."



CAUTION: The display uses a lens coated with a special anti-reflective coating that is very sensitive to skin oils, waxes, and abrasive cleaners. **CLEANERS CONTAINING AMMONIA WILL HARM THE ANTI-REFLECTIVE COATING.** It is very important to clean the lens using a clean, lint-free cloth and an eyeglass lens cleaner that is specified as safe for anti-reflective coatings.



CAUTION: The Garmin GPSMAP 695/696 does not contain any user-serviceable parts. Repairs should only be made by an authorized Garmin service center. Unauthorized repairs or modifications could void both the warranty and the pilot's authority to operate this device under FAA/FCC regulations.



NOTE: All visual depictions contained within this document, including screen images of the GPSMAP 695/696 display, are subject to change and may not reflect the most current GPSMAP 695/696 and aviation databases. Depictions of equipment may differ slightly from the actual equipment.



NOTE: This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.



NOTE: The data contained in the terrain and obstacle databases comes from government agencies. Garmin accurately processes and cross-validates the data, but does not guarantee the accuracy and completeness of the data.



NOTE: This product, its packaging, and its components contain chemicals known to the State of California to cause cancer, birth defects, or reproductive harm. This notice is being provided in accordance with California's Proposition 65. If you have any questions or would like additional information, please refer to our web site at www.garmin.com/prop65.

SECTION 4 HAZARD AVOIDANCE

4.1 XM WEATHER (GPSMAP 696)



NOTE: XM Satellite Weather is only available with the GPSMAP 696.

ACTIVATING SERVICES

Before XM Satellite Weather can be used, the service must be activated. Service is activated by providing XM Satellite Radio with a Radio ID unique to the GXM 40 antenna.

XM Satellite Radio uses the Radio ID to send an activation signal that allows the GPSMAP 696 to display weather data and/or entertainment programming provided through the GXM 40 antenna.

Refer to the GXM 40 Owner's Manual for more information on activating XM Satellite Radio.

XM WEATHER INFORMATION

- Radio ID—Eight-digit ID number used for activation.
- Service Level—XM Weather subscription plan purchased.
- Weather Products—List of weather features and age of weather data in minutes.

Accessing XM Weather information:

From the XM Audio Page press the **INFO** Softkey.

Or:

- 1) From the WX Page press the **MENU** Key to display the WX Page Menu.
- 2) Turn or move the **FMS** Joystick to highlight 'WEATHER PRODUCTS' and press the **ENT** Key.

XM SATELLITE WEATHER PRODUCTS

NEXRAD

NEXRAD (NEXt-generation RADar), is a network of 158 high-resolution Doppler radar systems that are operated by the National Weather Service (NWS). NEXRAD data provides centralized meteorological information for the continental United States and selected overseas locations. The maximum range of a single NEXRAD radar site is 250 nm. In addition to a wide array of services, the NEXRAD network provides important information about severe weather and air traffic safety.

NEXRAD data is not real-time. The lapsed time between collection, processing, and dissemination of NEXRAD images can be significant and may not reflect the current radar synopsis. Due to the inherent delays and the relative age of the data, it should be used for long-range planning purposes only. Never use NEXRAD data or any radar data to penetrate hazardous weather. Rather, use it in an early-warning capacity of pre-departure and enroute evaluation.

Composite data from all the NEXRAD radar sites in the United States is shown. This data is composed of the maximum reflectivity from the individual radar sweeps. The display of the information is color-coded to indicate the weather severity level.

The display of radar coverage is always active when NEXRAD is selected. Areas where NEXRAD radar coverage is not currently available or is not being collected are indicated in grayish-purple (Weather (WX) Page Only). Radar capability exists in these areas, but it is not active or is off-line.

NEXRAD ABNORMALITIES

There are possible abnormalities regarding displayed NEXRAD images. Some, but not all, of those include:

- Ground clutter
- Strokes and spurious radar data
- Sun strokes, when the radar antenna points directly at the sun
- Military aircraft deploy metallic dust (chaff) which can cause alterations in radar scans
- Interference from buildings or mountains, which may cause shadows

NEXRAD LIMITATIONS

Certain limitations exist regarding the NEXRAD radar displays. Some, but not all, are listed for the user's awareness:

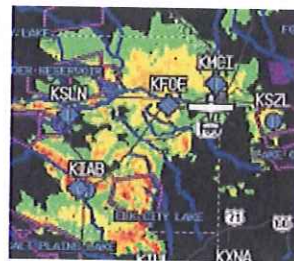
- NEXRAD base reflectivity does not provide sufficient information to determine cloud layers or precipitation characteristics (hail vs. rain). For example, it is not possible to distinguish between wet snow, wet hail, and rain.
- NEXRAD base reflectivity is sampled at the minimum antenna elevation angle. An individual NEXRAD site cannot depict high altitude storms at close ranges, and has no information about storms directly over the site.
- Radar coverage only extends to 55°N.
- Any precipitation displayed between 52°N and 55°N is unknown.

NEXRAD INTENSITY

Colors are used to identify the different NEXRAD echo intensities (reflectivity) measured in dBZ. (decibels of Z). "Reflectivity" (designated by the letter Z) is the amount of transmitted power returned to the radar receiver. The dBZ values increase as returned signal strength increases. Precipitation intensity is displayed using colors corresponding to the dBZ values.



RADAR Legend



NEXRAD Data

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