Garmin 010-02093-51

Garmin GPSMAP 8616xsv Chartplotter/Sonar Combo User Manual

Model: 010-02093-51

1. Introduction

Welcome to your Garmin GPSMAP 8616xsv. This manual provides essential information for the installation, operation, and maintenance of your 16-inch marine chartplotter and sonar system. Designed for serious anglers, cruisers, sailors, and sail racers, this device offers advanced navigation and sonar capabilities to enhance your marine experience.

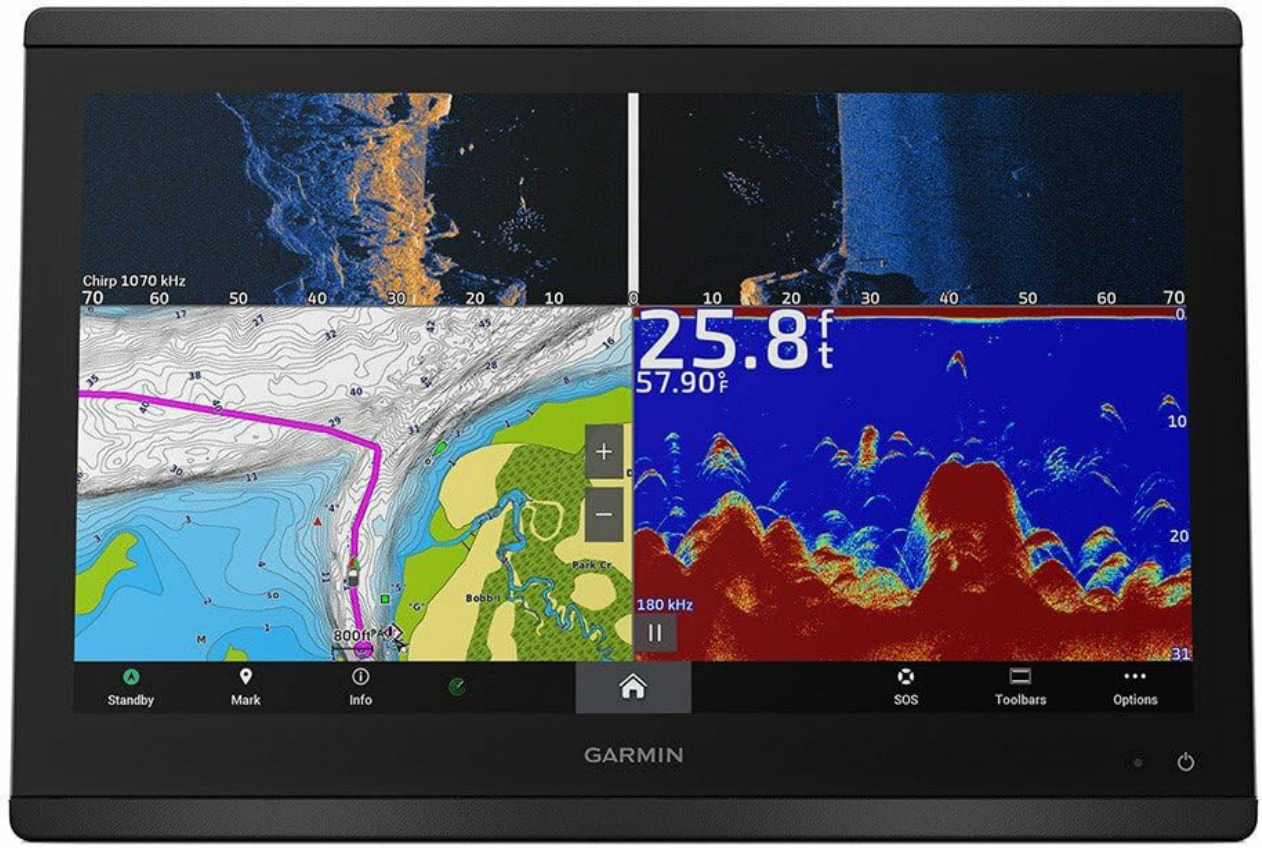


Figure 1.1: Garmin GPSMAP 8616xsv display unit showing navigation and sonar views.

2. Setup

2.1 Unpacking and Initial Inspection

Carefully unpack all components and inspect them for any signs of damage. If any items are missing or damaged, contact your Garmin dealer immediately.

What's in the Box:

- Garmin GPSMAP 8616xsv Chartplotter/Sonar Combo Unit
- Mounting hardware (for panel mount)
- Power cable
- Documentation

2.2 Mounting Options

The GPSMAP 8616xsv is designed for panel mounting, offering a simple and attractive integration into your vessel's helm. Ensure the mounting surface is flat and strong enough to support the unit's weight (approximately 15 pounds).

1. Choose a suitable location that provides optimal viewing angles and access to controls.
2. Use the provided template to cut the mounting hole in the panel.
3. Secure the unit using the supplied mounting hardware.

2.3 Power Connection

Connect the power cable to a 10-32 Vdc power source. Ensure proper polarity and use appropriate circuit protection (e.g., a 15 A fuse or circuit breaker) to prevent damage to the device and your vessel's electrical system.

2.4 Transducer Connection (Sold Separately)

The GPSMAP 8616xsv features built-in sonar capabilities. To utilize these functions, a compatible transducer (sold separately) must be connected. Refer to your transducer's installation instructions for specific details on mounting and wiring.

2.5 Initial Power-On and Configuration

After installation, power on the device. Follow the on-screen prompts to complete the initial setup, which may include language selection, time zone settings, and basic chart preferences.

3. Operating

3.1 Touchscreen Interface

The GPSMAP 8616xsv features an HD IPS touchscreen display for intuitive operation. Use touch gestures such as tap, swipe, pinch-to-zoom, and drag to navigate menus, charts, and sonar views.

3.2 Navigation and Chartplotting

The unit comes with built-in Garmin Navionics+ inland and coastal mapping, providing detailed charts for confident navigation.

- **Viewing Charts:** Tap the Chart icon from the home screen to access navigation charts.
- **Zooming:** Use pinch-to-zoom gestures or the on-screen zoom buttons.
- **Creating Waypoints:** Tap and hold on the chart to mark a waypoint, then follow the prompts to save or edit.
- **Creating Routes:** Access the Routes menu to plan and manage your navigation paths.

3.3 Sonar Functions

The GPSMAP 8616xsv supports various sonar technologies, providing a clear view of what's below and around your boat.

- **Traditional Sonar:** Provides a classic view of fish arches and bottom structure.
- **Scanning Sonar:** Offers high-resolution images of structure and fish to the sides and directly below your boat.
- **Live Sonar:** For real-time, live-action views of fish and structure.

Access sonar views by tapping the Sonar icon on the home screen. Different sonar views can be selected and customized from the sonar menu.

3.4 Network Connectivity

The device supports various networking options for integrating with other marine electronics.

- **ANT Technology:** Allows wireless connection to compatible Garmin devices and accessories.
- **Wi-Fi Networking:** Enables wireless connection for software updates, data transfer, and mobile app integration.

3.5 SmartMode Station Controls

SmartMode controls provide quick, one-touch access to information and functions relevant to specific activities, such as fishing, cruising, or docking. Customize SmartMode layouts to suit your preferences.

3.6 Grid 20 Remote Control (Optional)

The GPSMAP 8616xsv is compatible with the Garmin Grid 20 remote control (sold separately) for enhanced control and navigation from a distance.

4. Maintenance

4.1 Cleaning the Display

To clean the touchscreen, use a clean, soft, lint-free cloth dampened with fresh water. Avoid chemical cleaners, solvents, or abrasive materials, as these can damage the display and seals.

4.2 Software Updates

Garmin regularly releases software updates to improve performance and add new features. Connect your device to a Wi-Fi network or use a compatible Garmin application to check for and install updates.

4.3 Data Backup

Regularly back up your waypoints, routes, and other important data to an SD card or compatible Garmin cloud service to prevent data loss.

5. Troubleshooting

5.1 Common Issues and Solutions

- **Device will not power on:**
  - Check power cable connections.
  - Verify power source voltage and fuse/breaker status.
- **No GPS signal:**
  - Ensure the device has a clear view of the sky.
  - Check for any obstructions or interference.
- **Sonar not displaying data:**
  - Verify transducer connection.
  - Ensure the transducer is properly submerged and free of marine growth.
  - Check sonar settings for correct frequency and range.
- **Touchscreen unresponsive:**
  - Perform a soft reset (refer to the device's on-screen help for instructions).
  - Ensure the screen is clean and dry.

6. Specifications

Feature	Specification
Brand	Garmin
Model Name	010-02093-51
Screen Size	16 Inches
Display Type	LCD (Full HD In-Plane Switching - IPS)
Item Weight	15 Pounds
Product Dimensions	15.1"L x 3"W x 10.3"H
Mounting Type	Panel Mount
UPC	753759285449
Special Features	Motion Sensor, HD IPS Touchscreen, Traditional and Scanning Sonar Support, Live Sonar Support, ANT Technology, Wi-Fi Networking, SmartMode Station Controls
Mapping	Built-in Garmin Navionics+ (inland and coastal)
First Available	December 29, 2022

7. Warranty and Support

7.1 Warranty Information

This Garmin product is backed by a limited warranty. For detailed information regarding warranty coverage, terms, and conditions, please refer to the warranty card included with your product or visit the official Garmin website.

7.2 Customer Support

For technical assistance, troubleshooting, or service inquiries, please contact Garmin Customer Support. You can find contact information and additional resources on the official Garmin website (www.garmin.com/support).

© 2025 Garmin Ltd. or its subsidiaries. All rights reserved.

Ask a question about this manual

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. Privacy details.

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question