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Garmin 010-11417-10

Garmin SteadyCast Three-Axis Compass Heading Sensor User Manual

Model: 010-11417-10

1. Introduction

The Garmin SteadyCast Three-Axis Compass Heading Sensor is designed to provide fast calibration and premium heading accuracy for marine chartplotters. This sensor ensures your boat's bow aligns with its actual orientation on the chartplotter screen, enhancing navigation and fishing precision. It delivers accurate heading data even at low speeds and in rough water conditions, making it a reliable component for your marine electronics system.

2. Safety Information

Please read and understand all safety instructions before installing or operating the device. Failure to do so may result in injury or product damage.

- Always disconnect power before performing any installation or maintenance.
- Ensure all electrical connections are secure and properly insulated to prevent short circuits or corrosion.
- Mount the sensor in a location that is protected from extreme physical impact and excessive vibration.
- Avoid installing the sensor near strong magnetic fields, such as large speakers, electric motors, or significant metal objects, as this can affect heading accuracy.
- Do not expose the device to temperatures outside its specified operating range.
- Do not attempt to open, modify, or repair the device yourself. Refer all servicing to qualified Garmin service personnel.

3. What's in the Box

The package for your Garmin SteadyCast Three-Axis Compass Heading Sensor typically includes the following components:

- Garmin Three-Axis Compass Heading Sensor
- NMEA 2000 T-connector (for network integration)
- NMEA 2000 drop cable

- Mounting hardware
- Documentation (Quick Start Guide, etc.)



Figure 1: The Garmin SteadyCast Three-Axis Compass Heading Sensor, along with its NMEA 2000 T-connector and drop cable, ready for installation.

4. Installation

4.1 Mounting Considerations

Proper mounting is crucial for optimal performance. The SteadyCast sensor utilizes 9-axis MEMS technology, allowing for flexible installation. However, consider the following:

- **Location:** Install the sensor in a stable location, away from sources of magnetic interference. This includes large metal objects, speakers, electric motors, and power cables.
- **Orientation:** The sensor can be installed in any orientation. Ensure it is securely fastened to a flat surface using the provided mounting hardware.
- **Environment:** The device is built to withstand bilge environments, but protecting it from direct water spray and extreme heat is recommended for longevity.

4.2 NMEA 2000 Connection

The SteadyCast sensor connects to your marine network via a standard NMEA 2000 plug-and-play interface.

1. Connect the sensor's cable to the provided NMEA 2000 drop cable.
2. Attach the drop cable to an available port on your NMEA 2000 backbone using the T-connector.
3. Ensure your NMEA 2000 network is properly powered and terminated according to NMEA 2000 standards.

5. Calibration

After installation, the sensor requires calibration to ensure accurate heading data. The calibration process varies slightly

depending on your chartplotter model.

- **Compatible Garmin Chartplotters:** For compatible Garmin chartplotters, a simple 2-step precision calibration process is available. Refer to your chartplotter's manual for specific instructions on initiating and completing this calibration.
- **Garmin echoMAP™ Models and Other NMEA 2000 Displays:** Basic calibration is supported. Consult your display's user manual for details on how to calibrate an NMEA 2000 heading sensor.
- **General Calibration Tip:** Calibration typically involves performing one or more slow, steady 360-degree turns with your boat in calm waters, away from magnetic disturbances.

6. Operation

6.1 Heading Accuracy

The SteadyCast sensor provides highly accurate heading information:

- **Output Rate:** Delivers heading data at 10 Hz (10 times per second), ensuring real-time updates.
- **Precision:** Achieves an accuracy of plus or minus 3 degrees.
- **Performance:** Maintains accurate heading even at trolling speeds or when stationary, and remains effective in rough water conditions.

6.2 Chartplotter Integration

Once installed and calibrated, the sensor transmits heading data to your connected chartplotter, ensuring:

- Your chart orientation and boat heading line accurately match your boat's actual direction.
- Improved situational awareness, especially when navigating or fishing in precise locations.

7. Maintenance

Regular maintenance helps ensure the longevity and optimal performance of your SteadyCast sensor.

- **Cleaning:** Periodically wipe the exterior of the sensor with a soft, damp cloth. Avoid using abrasive cleaners, solvents, or harsh chemicals that could damage the casing.
- **Inspection:** Regularly check all cable connections for signs of corrosion, fraying, or damage. Ensure the sensor remains securely mounted and that no objects are obstructing its immediate vicinity.
- **Software Updates:** Visit the Garmin website (www.garmin.com/support) to check for and install any available software updates. Updates can improve performance, add features, or resolve issues.

8. Troubleshooting

If you encounter issues with your SteadyCast sensor, refer to the following troubleshooting tips:

- **No Heading Data on Chartplotter:**
  - Verify all NMEA 2000 connections are secure and properly terminated.
  - Ensure the NMEA 2000 network is powered on and functioning correctly.
  - Check your chartplotter's network settings to confirm the sensor is recognized and enabled.
- **Inaccurate or Erratic Heading Readings:**

- Perform the calibration procedure again, ensuring a slow, steady 360-degree turn in calm waters.
- Inspect the sensor's mounting location for new sources of magnetic interference (e.g., recently installed equipment, tools).
- Ensure the sensor is securely mounted and not vibrating excessively.

- **Intermittent Connection:**
  - Check the NMEA 2000 drop cable and T-connector for any physical damage or loose connections.
  - Confirm the NMEA 2000 backbone has proper termination resistors at both ends.

If these steps do not resolve the issue, contact Garmin Customer Support.

9. Specifications

Feature	Specification
Model Number	010-11417-10
Product Dimensions	5.91 x 3.94 x 5.91 inches (15.0 x 10.0 x 15.0 cm)
Item Weight	11.2 ounces (317.5 g)
Connectivity Technology	NMEA 2000
Heading Output Rate	10 Hz
Heading Accuracy	±3 degrees
Mounting Type	Dashboard Mount (or similar flat surface)
Color	Black
Manufacturer	Garmin

10. Warranty Information

This Garmin product is warranted to be free from defects in materials or workmanship for one year from the date of purchase. Within this period, Garmin will, at its sole option, repair or replace any components that fail in normal use. Such repairs or replacement will be made at no charge to the customer for parts or labor, provided that the customer shall be responsible for any transportation cost. This warranty does not cover failures due to abuse, misuse, accident, or unauthorized alteration or repairs. For full warranty terms and conditions, please refer to the official Garmin website or the documentation included with your product.

11. Customer Support

For technical assistance, product registration, or to purchase accessories, please visit the official Garmin support website:

www.garmin.com/support

You may also contact Garmin customer service directly for further assistance. Please have your product model number (010-11417-10) and serial number ready when contacting support.

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