Garmin 010-11051-20

Garmin Airmar DST810 Smart Transducer User Manual

Model: 010-11051-20

Introduction

This manual provides essential information for the installation, operation, and maintenance of your Garmin Airmar DST810 Smart Transducer. The DST810 is a plastic thru-hull NMEA 2000 smart transducer designed to provide precise depth, speed, and temperature data, along with attitude sensing for heel/trim and pitch/roll information. It features wireless Bluetooth connectivity for easy calibration management via the AIRMAR Cast™ app.

Safety Information

Please read all safety information and instructions carefully before installing and operating the device to avoid personal injury or product damage.

- Always disconnect power before performing any installation or maintenance.
- Ensure proper sealing of the thru-hull installation to prevent water intrusion.
- Do not paint the paddlewheel or the channel with bottom paint, as this can impair performance.
- Consult a qualified marine technician if you are unsure about any installation steps.
- Keep the device away from strong magnetic fields.

What's in the Box

- Garmin Airmar DST810 Smart Transducer

Note: Additional mounting hardware or cables may be sold separately or included in specific kits. Refer to your product packaging for exact contents.

Setup

Installation

The DST810 is a thru-hull transducer requiring a suitable mounting location on your vessel's hull. Proper placement is crucial for accurate readings and to minimize turbulence.

Figure 1: The Garmin Airmar DST810 Smart Transducer, a black, cylindrical device with threaded sections for thru-hull mounting. It features a paddlewheel sensor at the bottom for speed measurement and integrated depth and temperature sensors.

1. **Select Location:** Choose a flat area on the hull, away from propellers, keels, and other transducers, to ensure smooth water flow.
2. **Drill Hole:** Carefully drill a hole of the appropriate diameter (typically 2 inches) as specified in the detailed installation guide provided with the product.

3. **Apply Sealant:** Apply marine-grade sealant around the transducer body and the hull opening to ensure a watertight seal.
4. **Insert Transducer:** Insert the transducer from the outside of the hull.
5. **Secure:** From the inside, secure the transducer with the provided nut and washer, tightening it firmly but without over-torquing.
6. **Connect to NMEA 2000:** Connect the transducer's NMEA 2000 cable to your vessel's NMEA 2000 network.

For detailed installation diagrams and specific torque requirements, refer to the full installation manual available on the Garmin support website.

Connectivity

The DST810 connects to your marine electronics system via NMEA 2000 for data output and features Bluetooth for configuration and calibration.

- **NMEA 2000:** The transducer provides depth, speed, temperature, heel/trim, and pitch/roll data directly to your NMEA 2000 network, making it accessible to compatible chartplotters and displays.
- **Bluetooth:** Use the AIRMAR Cast™ app on your smartphone or tablet to connect wirelessly to the DST810. This app allows for sensor calibration, firmware updates, and viewing real-time data.

Operating

Basic Operation

Once installed and connected to your NMEA 2000 network, the DST810 will automatically begin transmitting data. Ensure your compatible chartplotter or display is configured to receive data from the transducer.

- **Depth:** Reads depths up to 330 feet (100 meters).
- **Speed:** Provides fast 5 Hz water speed signal output for smooth visualization.
- **Temperature:** Measures water temperature.
- **Attitude Sensing:** Delivers heel/trim and pitch/roll data for enhanced navigation and sailing performance.

Using the AIRMAR Cast™ App

The AIRMAR Cast™ app (available for iOS and Android) is essential for advanced configuration and calibration of the DST810.

1. **Download App:** Search for "AIRMAR Cast" in your device's app store.
2. **Connect:** Enable Bluetooth on your mobile device and open the AIRMAR Cast app. The app will guide you through connecting to your DST810.
3. **Calibrate:** Use the app to perform speed calibration (e.g., speed through water offset), depth offset, and other sensor adjustments to optimize accuracy.
4. **View Data:** The app can also display real-time sensor data, useful for diagnostics and monitoring.

Maintenance

Cleaning

Regular cleaning of the transducer face and paddlewheel is vital for accurate readings, especially in waters prone to marine growth.

- **Paddlewheel:** Periodically inspect the paddlewheel for marine growth, debris, or fishing line. Gently clean with a soft

brush and mild soap. Do not use harsh abrasives or solvents.

- **Transducer Face:** Wipe the transducer face with a soft cloth to remove any slime or fouling.
- **Anti-fouling:** *Important:* Do not apply anti-fouling paint to the paddlewheel or its channel. If the boat is to be left in water for extended periods, consider removing the transducer and installing a blanking plug to prevent marine growth on the paddlewheel.

Storage

When storing the vessel out of water, ensure the transducer is clean and dry. Protect the transducer face from physical damage.

Troubleshooting

This section addresses common issues you might encounter with your DST810 transducer.

Problem	Possible Cause	Solution
No Depth Reading	Fouling on transducer face, loose connection, NMEA 2000 network issue, transducer failure.	Clean transducer face. Check NMEA 2000 connections. Verify NMEA 2000 network power. Consult a technician if issue persists.
Inaccurate Speed Reading	Paddlewheel fouled with marine growth or debris, paddlewheel damaged, incorrect calibration.	Clean paddlewheel. Inspect paddlewheel for damage. Calibrate speed using the AIRMAR Cast app.
Incorrect Temperature Reading	Sensor fouling, sensor damage.	Clean transducer face. If temperature reads an extreme constant value (e.g., 139.6°F), the sensor may be faulty and require replacement.
Bluetooth Connectivity Issues	Transducer not powered, Bluetooth disabled on device, app issues.	Ensure NMEA 2000 network is powered. Enable Bluetooth on your mobile device. Restart the AIRMAR Cast app or your mobile device.
Intermittent Data	Loose NMEA 2000 connection, power fluctuations, interference.	Check all NMEA 2000 cable connections. Ensure stable power supply to the network. Check for sources of electrical interference.

Specifications

Feature	Detail
Model Name	010-11051-20
Product Dimensions	9.3 x 7.7 x 3.5 inches (23.6 x 19.6 x 8.9 cm)
Item Weight	1.76 pounds (0.8 kg)
Connectivity Technology	NMEA 2000, Bluetooth
Operating Frequency	235 kHz
Max Depth Reading	330 feet (100 meters)
Speed Output Rate	5 Hz

Feature	Detail
Beamwidth	10x44 degrees
Mounting Type	Thru-hull
Color	Black
Manufacturer	Garmin
Country of Origin	USA
First Available Date	April 3, 2021

Warranty and Support

Garmin products are built to high standards and are backed by a limited warranty. For specific warranty terms and conditions, please refer to the warranty information included with your product or visit the official Garmin website.
For technical support, troubleshooting assistance, or to inquire about repairs, please contact Garmin Customer Support through their official website or by phone. Have your product model number (010-11051-20) and serial number ready when contacting support.
Online Resources:

- Garmin Support Website
- Garmin Manuals and Documentation