

CONNECTBOX CONNECTION REQUIREMENTS



PRODUCT: ALL MODELS WITH CONNECTBOX INTERFACE

OVERVIEW

The following Technical Bulletin provides a detailed overview of the connection requirements of the Seakeeper ConnectBox to provide guidance for when a NMEA 2000 compatible GPS is not installed onboard a vessel. This applies to OEM boats delivered without electronics and retrofit vessels without NMEA 2000 compatible electronics. Seakeeper units outfitted with a ConnectBox require a NMEA 2000 GPS signal for operation and this bulletin outlines the options for required Display and GPS connections.

NMEA 2000 GPS SIGNAL REQUIREMENTS

The Seakeeper ConnectBox requires a connection to the vessel's NMEA 2000 network backbone, including access to GPS signal. The Seakeeper will monitor information on the NMEA network to support and optimize performance. If no GPS signal is detected, a warning will appear on the Seakeeper display. The Seakeeper will not spool-down, but the operation of the unit will be limited until GPS signal returns.

New boats that are shipped to dealers without electronics installed, or existing vessels without a NMEA 2000 compatible GPS signal will need to have a compatible GPS added to operate the Seakeeper unit. There are two basic solutions to support Seakeeper functionality:

1. A Seakeeper compatible MFD Display with integrated GPS, recommended.
2. A standalone NMEA 2000 compatible GPS antenna

Note: If there is no NMEA backbone available one can be established as shown in Figure 1, where the GPS signal can be provided by a compatible MFD or a standalone GPS antenna.

COMPATIBLE MFDs

Seakeeper compatible MFD's are recommended because they serve to both provide a GPS signal and required display interface. The following MFD systems are currently compatible with the Seakeeper ConnectBox and can be connected as shown in the [ConnectBox Generic Wiring Diagram \(90663\)](#):

1. Compatible Garmin MFDs, refer to [Technical Bulletin 90478](#):
 - a. GPSMAP Series 84XX, 86XX, 7X2 Plus, 7X2xs Plus, 9X2 Plus, 9X2xs Plus, 12X2 Plus, and 12X2xsv Plus series units.
 - b. Garmin Ethernet Wire Harness Cable Assembly, Seakeeper P/N 20373, required.
2. Compatible Raymarine MFDs, refer to [Technical Bulletin 90479](#):
 - a. Axiom, Axiom Pro, and Axiom XL series units.
 - b. Raymarine Ethernet Cable Assembly, Seakeeper P/N 20380, required.
3. Compatible Navico MFDs (includes Simrad, Lowrance and B&G) refer to [Technical Bulletin 90480](#):
 - a. Simrad: NSO Evo2, NSO Evo3, NSO Evo3S MFD, NSO Evo3S MPU, NSS Evo3, NSS Evo3S, GO7 XSR, GO9 XSE, and the GO12 XSE series units.
 - b. Lowrance: Elite FS, HDS Carbon, and HDS Live series units.
 - c. B&G: Vulcan 7, Vulcan 9, Vulcan 12, Zues3, Zues3S, Zues3 Glass Helm, Zues3 Glass Helm MFD, and the Zues3 Glass Helm MPU series units.
 - d. Navico Ethernet Wire Harness Cable Assembly, Seakeeper P/N 20346, required.

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STANDALONE GPS ANTENNA

A simple solution to provide a NMEA 2000 GPS Signal is shown in Figure 1, which illustrates a NMEA 2000 backbone with a compatible GPS antenna, power supply, and Seakeeper ConnectBox connection. This configuration can be temporarily mounted anywhere on the boat for demo purposes or installed permanently in addition to existing hardware. The NMEA backbone should be connected in accordance with NMEA 2000 standards. This proposed GPS setup is transferable and could be utilized repeatedly for commissioning or demonstration purposes.

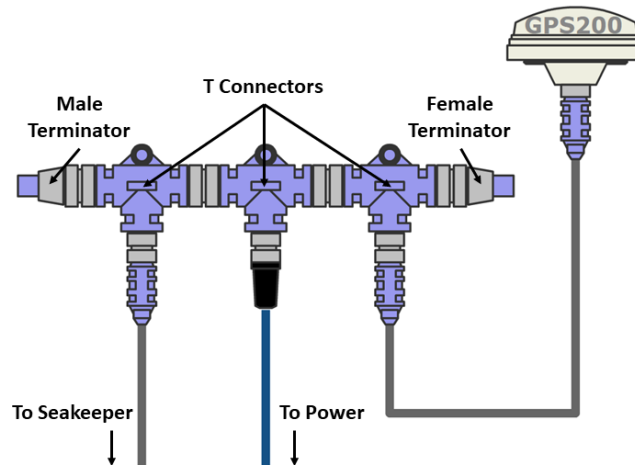


Figure 1: NMEA Backbone with GPS Antenna

The components of the arrangement shown in Figure 1 can be purchased off-the-shelf from various vendors including: West Marine, Maretron, and Amazon. A NMEA 2000 starter kit can be found on [Amazon](#) which includes: 1 x meter long power cable with power tee, 1 x Male and 1x Female terminators, 1 x Dual tee connector, and 2 x 2 m drop cables.

Compatible GPS antennas can be found from a variety of sources, with options ranging from \$249.99:

- [Maretron](#)
- [RAYMARINE](#)
- [SIMRAD](#)
- [GARMIN](#)
- [LOWRANCE](#)

If installed permanently, then a Seakeeper 5" Touch Display must also be installed:

1. For Seakeeper 1, 2, 3, 5/6 models (12 VDC units), use the following display kit:
 - a. 5" Touch Screen Display Kit P/N 90467-2SP-10M, includes a 10m (33 ft) connection cable.
2. For Seakeeper 9, 16/18 models (24 VDC units), use the following display kit:
 - a. 5" Touch Screen Display Kit P/N 90467-1SP-25M, includes a 25m (82 ft) connection cable.