

GSD 20

sounder module



installation
guide

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Thank you for choosing the Garmin GSD 20. The GSD 20 is an intelligent, remote sounder module designed to include powerful features as found in other Garmin sounders, including Depth Control Gain (DCG®) and See-Thru® technology. When used with compatible Garmin chartplotters, it adds full featured depth sounder functions. It may interface to multiple head units, providing for complete sounder control from either station, including transmit frequency, range and gain adjustments. To get successful results from your GSD 20, take time to read through this installation guide.

This guide is organized into two sections:

The **Introduction** section provides package contents, system requirements and a description of the GSD 20.

The **Installation** section provides installation instructions and specifications for the GSD 20.

Standard Package Contents

- GSD 20 Sounder Module
- 30' (9.1 m) Power/Data Cable
- Installation Guide for the GSD 20

If any items are missing, please contact your Garmin dealer immediately.

Introduction

About This Manual & Package Contents

Optional Transducers

The transducer acts as the eyes and ears of your new sonar. Proper transducer selection and installation are critical to the operation of your unit. The transducer transmits sound waves toward the bottom in a cone shape. The larger the cone angle, the larger the coverage area at a given depth. Since many mounting locations vary, listed below are a variety of optional transducers and accessories which are available from your local dealer or Garmin:

- 200/50 kHz, 10/40°, bronze, thru-hull, depth, temp, speed
- 200/50 kHz, 10/40°, bronze, thru-hull/long stem, depth, temp, speed
- 200/50 kHz, 10/40°, bronze, thru-hull mount, depth only
- 200/50 kHz, 10/40°, plastic, transom mount, depth, temp, speed
- 200/50 kHz, 10/40°, plastic, thru-hull mount, depth only
- 200/50 kHz, 10/40°, plastic, transom mount, depth, temp
- 200/50 kHz, 10/40°, plastic, in-hull adjustable mount, depth, only
- Speed Sensor
- Temperature Probe
- Thru-hull fairing block
- 10 ft. Extension cable for transducers
- 20 ft. Extension cable for transducers

Introduction

Unit Overview



Installing the GSD 20

The GSD 20 must be properly installed according to the following instructions to get the best possible performance. To complete the installation, you'll need the appropriate fasteners. **When in doubt, seek professional assistance.**

The module should be mounted in an out of the way location that is preferably dry and well ventilated. Avoid mounting the module where it will be submerged in liquids or exposed to extreme temperatures. If you wish to view the blink codes (see page 7), be sure to mount the module so that the LED is visible.

To install the GSD 20 module:

1. Once the location is chosen, place the unit in the desired position. Be sure to allow enough clearance for attaching the cables. Using the module as a template, mark the location of the four mounting holes. If needed, additional mounting holes may be drilled in the side mounting flanges of the module.
2. Attach the GSD 20 to the mounting location using the appropriate fasteners.
3. Mount the transducer according to the instructions provided with the transducer.
4. Route the cables to the mounting location of the display unit. Use the appropriate tie-wraps, fasteners and sealant to secure the cable along the route and through any bulkhead or deck.
5. Once the GSD 20 module has been installed, connect the power/data and transducer cables to the appropriate receptacle on the module.
6. Refer to the following wiring diagrams for connecting the GSD 20 to a compatible Garmin display unit.

Installation

Features

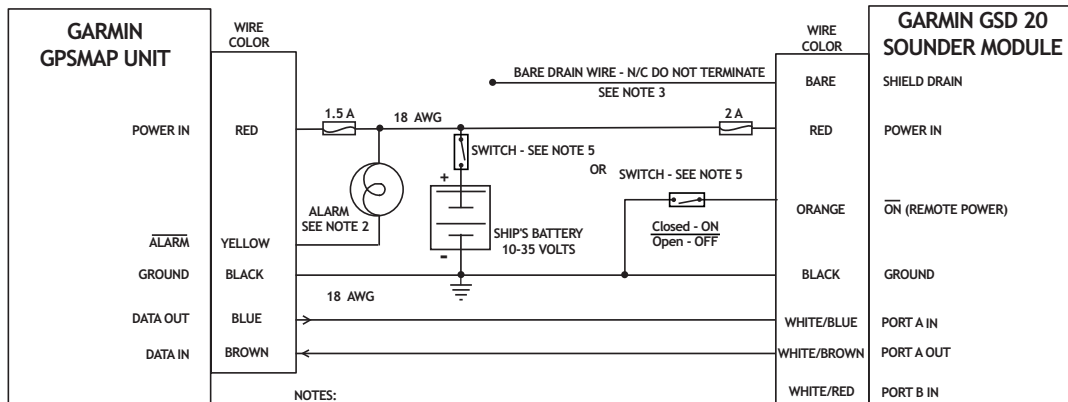


You may extend the wiring of the GSD 20 power/data cable up to 100' (30m) total length. Use 24 AWG, 4 conductor shielded cable for data cable and 18 AWG for power. For extending transducer the cable, extensions are available through your Garmin dealer.

Installation

Wiring

BASIC WIRING FOR GARMIN GSD 20 TO SINGLE GPSMAP 182/182C/232



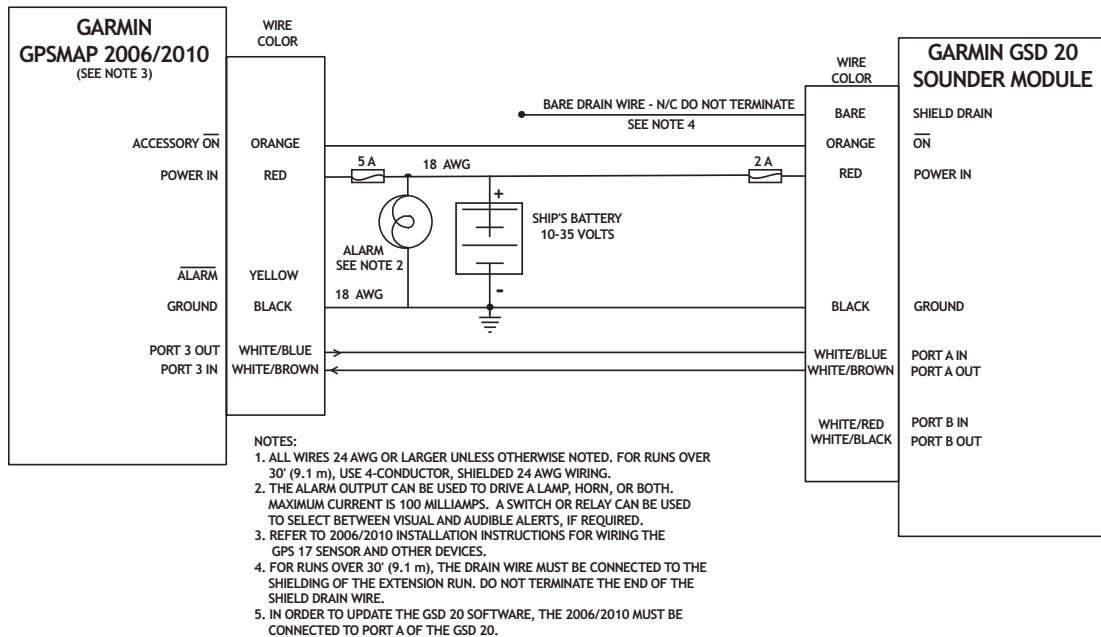
NOTES:

1. ALL WIRES 24 AWG OR LARGER UNLESS OTHERWISE NOTED. FOR RUNS OVER 30' (9.1 m), USE 4-CONDUCTOR, SHIELDED 24 AWG WIRING.
2. THE ALARM OUTPUT CAN BE USED TO DRIVE A LAMP, HORN, OR BOTH. MAXIMUM CURRENT IS 100 MILLIAMPS. A SWITCH OR RELAY CAN BE USED TO SELECT BETWEEN VISUAL AND AUDIBLE ALERTS, IF REQUIRED.
3. FOR RUNS OVER 30' (9.1 m), THE DRAIN WIRE MUST BE CONNECTED TO THE SHIELDING OF THE EXTENSION RUN. DO NOT TERMINATE THE END OF THE SHIELD DRAIN WIRE.
4. IN ORDER TO UPDATE THE GSD 20 SOFTWARE, THE GPSMAP UNIT MUST BE CONNECTED TO PORT A OF THE GSD 20.
5. THE ORANGE WIRE MUST BE PULLED LOW (-) IN ORDER FOR THE GSD 20 TO POWER ON. IF THE GSD 20 IS BEING WIRED TO A CIRCUIT THAT IS ALREADY SWITCHED ON THE POSITIVE (+) WIRE, CONNECT THE ORANGE AND BLACK WIRES TO THE SAME GROUND AND DO NOT INSTALL A SWITCH. THE GSD 20 WILL TURN ON/OFF WHEN POWER IS APPLIED/REMOVED TO THE RED (+) WIRE. TWO SWITCH LOCATIONS ARE SHOWN, BUT ONLY ONE SWITCH IS NEEDED.

Installation

Wiring

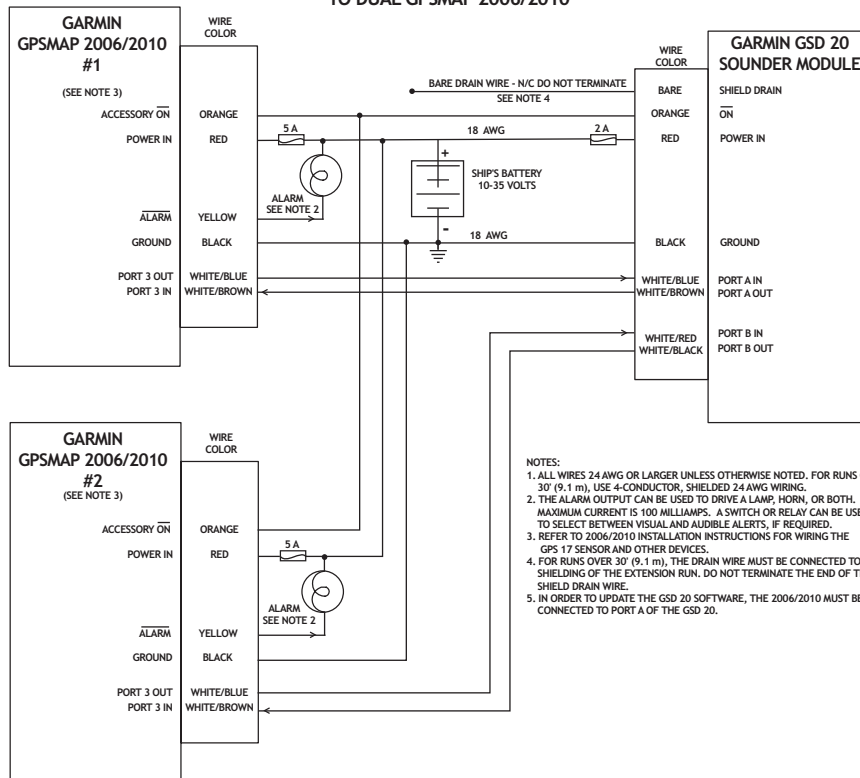
BASIC WIRING FOR GARMIN GSD 20 TO SINGLE GPSMAP 2006/2010



Installation

Wiring

BASIC WIRING FOR GARMIN GSD 20 TO DUAL GPSMAP 2006/2010



Blink Codes

Once the unit is installed, it switches on when the display unit is powered on (or the GSD remote power line is pulled low, with power applied). The two-color (Green/Red) LED on the GSD 20 indicates the current operational status of the module. Codes are:

Code: Green blinking, on for 1 second, off for 1/2 second (slow blink)

Status: GSD 20 is connected to one display device and is operating properly. User should see sonar data on the display unit.

Code: Green blinking, on for 1/2 second, off for 1/4 second (fast blink)

Status: GSD 20 is connected to two display devices and is operating properly. User should see sonar data on both display units.

Code: Red blinking, on for 1 second, off for 1/2 second (slow blink)

Status: GSD 20 is powered on but is waiting to connect to a display device. In this state, the GSD 20 does not transmit any sonar signals and is not sending out any sonar information to display units. If a display unit is connected, check the wiring if this code persists.

Code: Solid Red (no blink)

Status: Software failure - Call Garmin Customer Support. If the cause is a software error, the display unit can show the error. Power must be cycled to clear the error.

Code: Red blinking, on for 1/10 second, off for 1/10 second (very fast blink)

Status: System alarm. The display device gives a message indicating the type of failure. After the alarm condition is fixed, power must be cycled on the GSD 20 to clear the alarm.

Installation

Blink Codes

Installation

Specifications



Note: When using the GPS Chartplotter and GSD 20 on battery power only (engines off) for extended periods of time, be sure there are enough available amperage to run the units for the time period. Running other onboard devices at the same time may lower the available amperage causing the GPS Chartplotter and/or GSD to shut off. Check with your local marine dealer/installer if problems persist.



Warning: 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.

Physical Specifications

Size:	6.75" L x 4.75" W x 2.00" H (17.2cm x 12.1cm x 5.1cm)
Weight:	1.5 lbs. (.680Kg)
Case:	Fully gasketed, high-impact plastic and aluminum alloy, waterproof to IEC 529-IPX-7
Temp Range:	5°F to 158°F (-15°C to 70°C)

Power

Source:	10-35 Vdc
Usage:	18 watts max.
Fuse:	AGC/3AG - 2.0 Amp

Sonar

Sounder Power:	500 watts (RMS) 4000 watts (peak to peak)
Frequency:	50/200 kHz
Depth:	1500 foot max depth*

* Depth capacity is dependent on water salinity, bottom type and other water conditions.

Data Output

Source:	Proprietary Garmin data format.
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LIMITED WARRANTY

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.

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To obtain warranty service, contact your local Garmin authorized dealer. Or call Garmin Customer Service at one of the numbers shown below, for shipping instructions and an RMA tracking number. The unit should be securely packed with the tracking number clearly written on the outside of the package. The unit should then be sent, freight charges prepaid, to any Garmin warranty service station. A copy of the original sales receipt is required as the proof of purchase for warranty repairs.

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