



GDL™ 30A XM WEATHER DATA RECEIVER INSTALLATION INSTRUCTIONS

To obtain the best possible performance, install the GDL 30A Weather Data Receiver according to the following instructions. If you experience difficulty during the installation, contact Garmin Product Support or seek the advice of a professional installer.

Product Registration

Help us better support you by completing our online registration today! Connect to our Web site at <http://my.garmin.com>. Keep the original sales receipt, or a photocopy, in a safe place.

Contact Garmin

Contact Garmin if you have any questions while using your GDL 30A. In the USA contact Garmin Product Support by phone: (913) 397-8200 or (800) 800-1020, or go to www.garmin.com/support/.

In Europe, contact Garmin (Europe) Ltd. at +44 (0) 870.8501241 (outside the UK) or 0808 2380000 (within the UK).

WARNING: See the *Important Safety and Product Information* guide in the product box for product warnings and other important information.

Important Numbers

For future reference, write down the important numbers associated with your GDL 30A. The serial number is located on the bottom of the unit.

Serial number

Unique ID numbers are associated with your GDL 30A. XM Satellite Radio™ uses these ID numbers to activate and deactivate your XM weather and XM audio. To locate the ID numbers on a GPSMAP® 3000 Series chartplotter, refer to the Main Menu section of the GDL 30A Owner's Manual. To locate the ID numbers on a GPSMAP 4000 or 5000 Series chartplotter, select **Configure > System > System Information**.

XM WX Weather™ ID

XM Radio ID

Packing List, Accessories, and Tools Needed

Before installing your unit, check that your package includes the following items. If any parts are missing, contact your Garmin dealer immediately.

Standard Package

- GDL 30A unit
- 7-pin power cable
- Garmin Marine Network cable—6 ft. (1.8 m)
- Documentation
- Audio cable
- Grommet
- GA 32 Antenna
 - Surface-mount bracket
 - Pole-mount bracket
 - Under-deck mount bracket
 - Mounting hardware (screws and adhesive pads)

Optional Accessories

- GMS 10 network port expander
- Garmin Marine Network cables (20 ft. and 40 ft.)

Tools Needed (Not Included)

- Drill and drill bits
- Fasteners (to mount the GDL 30A)
- Hole saw, 1 in. (surface-mount cable hole)
- Screwdriver (surface-mount screws)
- Center punch and hammer (to mark surface-mount pilot holes)
- Countersink bit (when mounting on fiberglass)
- Marine sealant (for certain mounting options)

Unit Overview



CAUTION: Always wear safety goggles, ear protection, and a dust mask when drilling, cutting, or sanding. When drilling or cutting, always check what is on the opposite side of the surface.

Mounting the GDL 30A

Mount the GDL 30A in a location that is dry and well ventilated. Avoid mounting the unit where it may become submerged or exposed to extreme temperatures above 158°F or below 5°F (above 70°C or below -15°C). Verify there is enough clearance to attach the cables to the unit. Make sure the Status LED is visible to view the blink codes.

To mount the GDL 30A:

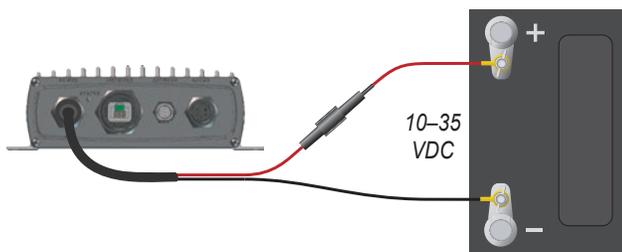
1. Using the unit as a template, mark the location of the mounting holes. If needed, additional holes can be drilled in the side mounting flanges.
2. Secure the GDL 30A using fasteners appropriate for the mounting surface.

Connecting the Power Cable

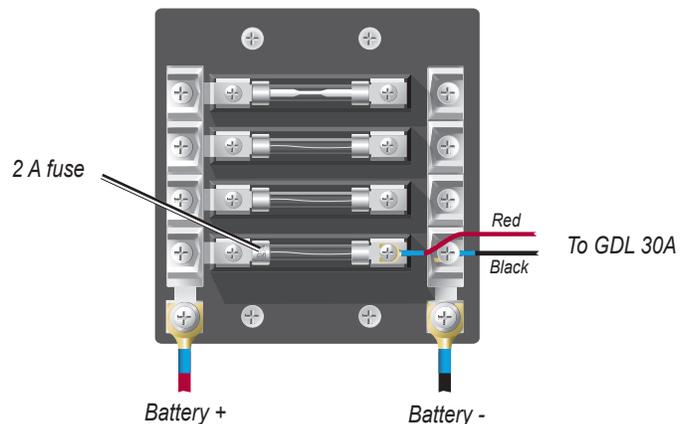
The power cable can be connected directly to the boat battery or through an open connector on the fuse block.

To connect the power cable to a battery:

1. Connect the red wire to the positive (+) terminal of the battery. Do not remove the AGC/3AG 2.0 amp fuse holder from the red wire.
2. Connect the black wire to the negative (-) terminal of the battery.
3. Connect the power cable to the GDL 30A 7-pin connector labeled **POWER**.



Connecting to a Battery



Connecting to a Fuse Block

To connect the power cable to a fuse block:

1. Remove the AGC/3AG 2.0 A fuse holder from the red wire.
2. Connect the red wire to an open fuse holder in the fuse block. Make sure that the red wire is connected to the positive side of the fuse block.
3. Connect the black wire to the negative side of the fuse block.
4. Install a 2.0 A fuse in the fuse holder.
5. Connect the power cable to the GDL 30A 7-pin connector labeled **POWER**.

Connecting the GDL 30A to a Chartplotter

Connect the GDL 30A to a chartplotter by using the Garmin Marine Network Cable (included). See the installation instructions for your chartplotter for more detailed information on setting up a Garmin Marine Network.

Connecting to a GPSMAP 4000/5000 series chartplotter:

- A GPSMAP 4000/5000 series chartplotter has three network connectors available. Connect the GDL 30A to any of these connectors.
- If you have multiple chartplotters, connect the GDL 30A to an open connector on any one of the chartplotters.

Connecting to a GPSMAP 3000 series chartplotter:

- A GPSMAP 3000 series chartplotter has one network connector available. If you do not have any other Garmin Marine Network devices, connect the GDL 30A directly to the GPSMAP 3000 series chartplotter.
- If you need to connect the GDL 30A to multiple GPSMAP 3000 series chartplotters, a GMS 10 Network Port Expander is required.

Garmin does not recommend cutting the Marine Network cable, though cutting the cable may be necessary in certain circumstances. Refer to the installation instructions for your chartplotter if you need to cut the Marine Network cable.

If you need to drill a hole in your boat, use the included grommet that is specifically designed to cover holes drilled for the Garmin Marine Network Cable. If a longer cable is needed, contact Garmin or your Garmin dealer. To ensure safety, use tie-wraps, fasteners, and sealant to secure the cable along a route and through any bulkhead or deck.

Connecting the Audio Cable

Connect the audio cable (included) to the GDL 30A **AUDIO** connector and to the audio inputs on your stereo receiver.

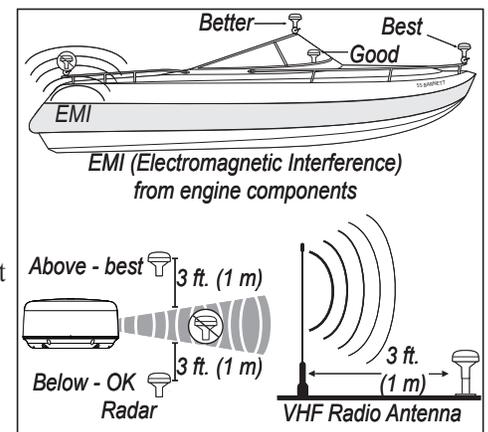
Mounting the GA 32 Antenna

You can surface mount the GA 32 antenna, attach it to a standard 1 in. OD pipe-threaded-pole marine mount (14 threads-per-inch—not included), or install the antenna under fiberglass.

Select a suitable location for the GA 32 antenna on your boat. To ensure the best reception, mount the GA 32 antenna in a location that has a clear, unobstructed view of the sky in all directions.

- Avoid mounting the GA 32 antenna where it is shaded by the superstructure of the boat, a radome antenna, or mast.
- **Mount the GA 32 antenna at least 3 ft. (1 m) away from (preferably above) the path of any radar beam or a VHF radio antenna.**
- **Do not cut or shorten the antenna cable.** The length of the antenna cable is set to provide optimal performance. Shortening the cable adversely effects the performance of the GA 32.
- If additional antenna cable is needed, Garmin recommends a 50-foot cable from Delphi, part number SA10006. The following adapters are required: BNC plug to SMB jack – available from Newark, part number 92C7329 and BNC jack to SMB plug – available from Newark, part number 92C7330.

Temporarily secure the antenna in the preferred mounting location and test it for correct operation. If you experience interference from other electronics, try a different location. When you verify correct operation, permanently mount the antenna.



GA 32 Antenna Placement Considerations

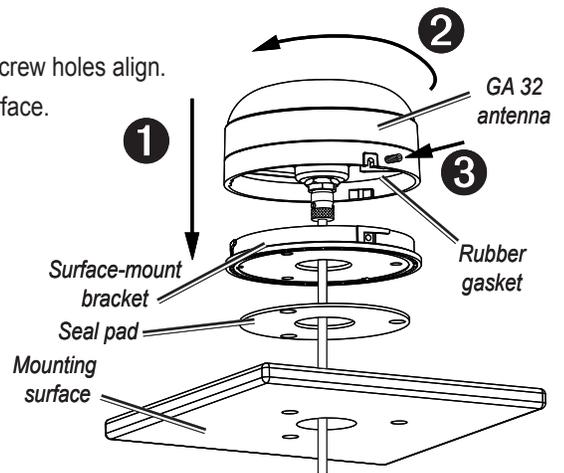
Surface mounting the GA 32 Antenna

1. Use the surface-mount bracket as your mounting template.
 - Use a center punch to mark the three screw locations on the surface.
 - Use a pencil to trace the cable hole in the center of the bracket.
 - Set the surface-mount bracket aside. Do not drill through the surface-mount bracket.

2. Drill $\frac{1}{8}$ in. (3 mm) pilot holes at the three marked locations.

NOTE: If you are mounting the GA 32 on fiberglass, it is recommended to use a countersink bit to drill a clearance counterbore through the top gelcoat layer (but no deeper). This will help to avoid cracking in the gelcoat layer when the screws are tightened.

3. Use a 1 in. (25 mm) hole saw to cut the cable hole in the center.
4. Place the seal pad on the bottom of the surface-mount bracket. Make sure that the screw holes align.
5. Use the included M4 screws to attach the surface-mount bracket to the mounting surface.
6. Route the cable through the 1 in. cable hole and connect it to the GA 32.
7. Make sure the large gasket is in place on the bottom of the GA 32 antenna, place the antenna on the surface-mount bracket **1**, and twist it clockwise to lock it in place **2**.
8. Secure the antenna to the mounting bracket with the included M3 set screw **3**.
9. Route the cable away from sources of electronic interference, and connect it to your GDL 30A.

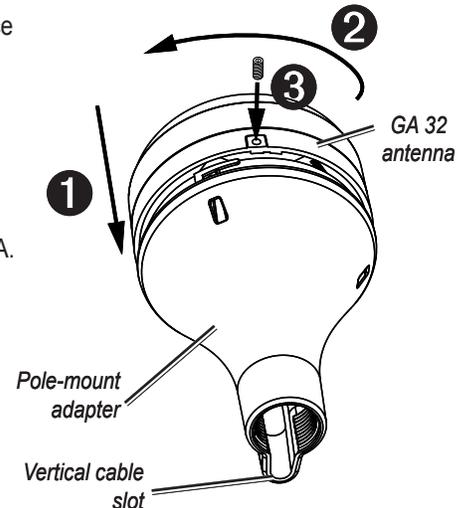


Pole Mounting the GA 32 Antenna

With the pole-mount adapter attached to the GA 32 antenna, you can install the antenna on a standard 1 in. OD pipe-threaded-pole marine mount (14 threads per inch—not included). You can run the cable through the pole or outside the pole.

To mount the GA 32 with the cable run outside the pole:

1. Route the cable through the pole-mount adapter, and place the cable in the vertical slot along the base of the pole-mount adapter.
2. Thread the pole-mount adapter onto a standard 1 in. OD pipe-threaded-pole marine mount (14 threads per inch—not included). Do not overtighten the adapter.
3. Connect the cable to the GA 32 antenna.
4. Place the GA 32 antenna on the pole-mount adapter **1** and twist it clockwise to lock it in place **2**.
5. Secure the antenna to the adapter with the included M3 set screw **3**.
6. (Optional) With the GA 32 installed on the pole mount, fill the remaining gap in the vertical cable slot with a marine sealant.
7. Attach the marine mount to the boat if it is not already attached.
8. Route the cable away from sources of electronic interference, and connect it to your GDL 30A.



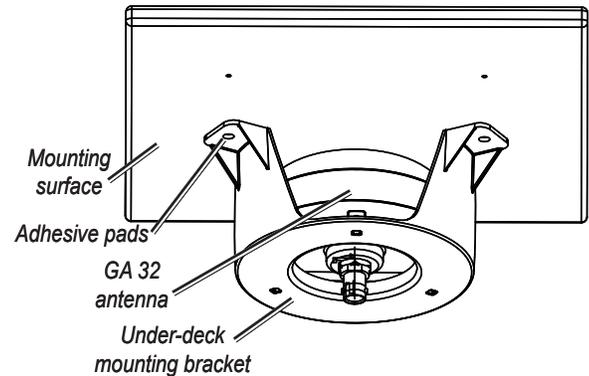
To mount the GA 32 with the cable run through the pole:

1. Position a standard 1 in. OD pipe-threaded-pole marine mount (14 threads per inch—not included) in the preferred location, and mark the approximate center of the pole.
2. Drill a $\frac{3}{4}$ in. (19 mm) pilot hole for the cable to pass through.
3. Fasten the marine mount to the boat.
4. Thread the pole-mount adapter onto the pole. Do not overtighten the adapter.
5. Route the cable through the pole and connect it to the GA 32 antenna.
6. Place the GA 32 antenna on the pole-mount adapter **1** and twist it clockwise to lock it in place **2**.
7. Secure the antenna to the adapter with the included M3 set screw **3**.
8. (Optional) With the GA 32 installed on the pole mount, fill the vertical cable slot with a marine sealant.
9. Route the cable away from sources of electronic interference, and connect it to your GDL 30A.

Under-deck-mounting the GA 32 Antenna

The GA 32 antenna can be mounted under a fiberglass surface with the included adhesive pads. The antenna will not acquire XM satellite signals through metal—you can only use the under-deck mount under a fiberglass surface.

1. Determine the location on the fiberglass surface where you want to mount the GA 32 antenna.
2. Place the adhesive pads on the under-deck mounting bracket.
There are holes in the under-deck mounting bracket that can be used to secure the under-deck mount to the mounting surface with screws. **Garmin does not recommend attaching the under-deck mounting bracket to the surface with screws, because of the likelihood that screws will protrude through the top of the mounting surface.** If you choose to use screws, do so with extreme care.
3. Place the GA 32 antenna in the under-deck mounting bracket.
4. Adhere the under-deck mounting bracket to the mounting surface.
5. Connect the cable to the GA 32 antenna.
6. Route the cable away from sources of electronic interference, and connect it to your GDL 30A.



Connecting the GA 32 to the GDL 30A

Place the GA 32 connector onto the GDL 30A **ANTENNA** connector and twist clockwise to secure.

Check the antenna's performance with potentially interfering equipment turned on and off before permanently mounting the antenna. Perform this test after the XM WX Weather service is activated.

Other electronic equipment, fan motors, the engine ignition system, alternators, generators, radar, and VHF radio transmissions could potentially cause interference. After proper operation is verified, permanently install the antenna.

Using the GDL 30A

The GDL 30A turns on and off automatically with the Garmin Marine Network to which it is connected. To verify proper operation, turn on the chartplotter and verify that the Status LED on the front of the GDL 30A is blinking green. For more detail on the blink codes, see [page 6](#).

Subscribing to XM WX Weather and XM Radio

With the GDL 30A installed, contact XM Satellite Radio to activate your XM WX weather and audio subscription service. Follow the instructions. Complete steps 1–3 **BEFORE** calling XM Satellite Radio:

Step 1: Check the system setup

Make certain the GDL 30A is fully wired and is connected to a chartplotter. Verify that the GA 32 antenna has been properly installed. If you own a GDL 30A, verify that the audio cable is connected to your GDL 30A and to your stereo receiver.

Step 2: Turn on your system

Turn on your chartplotter. This automatically turns on the GDL 30A.

Step 3: Identify radio ID(s)

- On a GPSMAP 4000/5000 series chartplotter, from the Home screen, select **Configure > System > System Information**.
- On a GPSMAP 3000 series chartplotter, press and hold down the **ADJ/MENU** key. The Main Menu page appears. A list of tabs appears down the left side of the Menu page. Using the **ROCKER** key, highlight the XM tab and select the Information subtab.

Record the XM Weather Radio ID and the XM Audio Radio ID. Write these numbers on the front page of these instructions.

Have the ID numbers, your billing address, and other billing information ready when you contact XM Satellite Radio.

 **NOTE:** To verify that the audio portion functions correctly, on a GPSMAP 4000/5000 series chartplotter, from the Home screen select **Configure > XM Audio**. On a GPSMAP 3000 series chartplotter, select the Audio subtab (next to the Information subtab). Verify that XM Preview appears in the Radio Tuning box.

Step 4: Contact XM

Call XM Satellite Radio to activate your weather radio and audio radio subscriptions at (800) 985-9200.

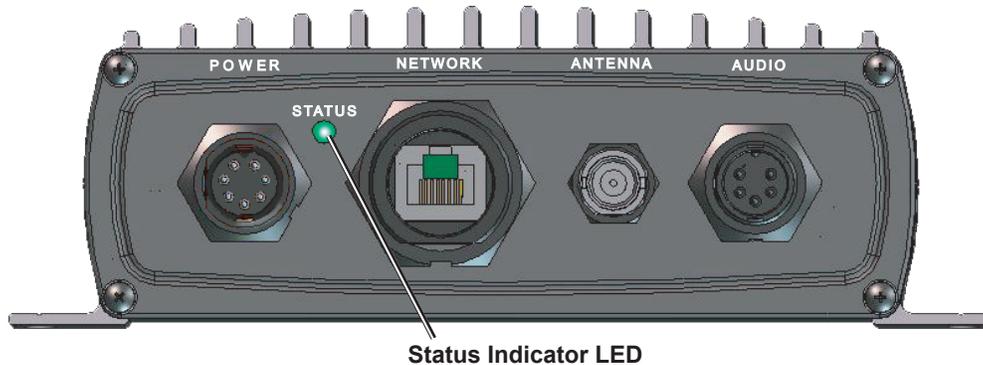
Weather-Related Broadcast Rates

| Feature | Broadcast Rate (minutes) |
|-------------------------|-----------------------------|
| NEXRAD | 5 |
| Cloud Tops | 15 |
| Storm Cells | 1.25 |
| Lightning | 5 |
| Wind | 12 |
| Pressure | 12 |
| Hurricanes | 12 |
| Visibility | 12 |
| Fronts | 12 |
| Sea Surface Temperature | 12 |
| Wave Height | 12 |
| Wave Period | 12 |
| Wave Direction | 12 |
| Current Conditions | 12 |
| Forecasts | 12 |
| Sea Surface Conditions | 12 |

Blink Codes

The GDL 30A turns on and off when the chartplotter to which it is connected is turned on or off. The two-color (Green/Red) Status LED on the GDL 30A indicates the current operational status of the module. Codes are:

-  Green blinking, on for 1 second, off for 1/2 second (slow blink)
Status: GDL 30A is on and is receiving an XM signal.
-  Red blinking, on for 1/10 second, off for 1/10 second (very fast blink)
Status: System alarm. The chartplotter gives a message indicating the type of failure.
-  Solid Red (no blink)
Status: Software failure - Call Garmin Product Support at 800-800-1020.



GDL 30A Specifications

Physical

| | |
|--------------------|--|
| Size: | 4 3/4 in. W × 2 in. H × 6 3/4 in. D (121 mm W × 51 mm H × 172 mm D) |
| Weight: | 1.5 lb. (.680 kg) |
| Case: | Fully gasketed, high-impact plastic and aluminum alloy, waterproof to IEC 60529 IPX7 |
| Temp Range: | From 5°F to 158°F (from -15°C to 70°C) |

Power

| | |
|----------------|-----------------|
| Source: | 10–35 Vdc |
| Usage: | 18 watts max |
| Fuse: | AGC/3AG - 2.0 A |

Data Output

| | |
|----------------|---------------------------------|
| Source: | Proprietary Garmin data format. |
|----------------|---------------------------------|

Audio

| | |
|-----------------------------|-------------------------|
| Output Level: | 300 mV rms into 47 kohm |
| Frequency Response: | 10–20,000 Hz, ± 1 dB |
| Harmonic Distortion: | <0.5% |

GA 32 Antenna Specifications

| | |
|-------------------------|---|
| Dimensions: | 3 19/32 in. (91.6 mm) Diameter × 1 15/16 in. (49.5 mm) High |
| Weight: | 7.1 oz. (201 g) |
| Case Material: | Fully gasketed, high-impact plastic alloy, waterproof to IEC 529 IPX7 standards |
| Operating Range: | From -40°F to 176°F (from -40°C to 80°C) |
| Cable: | Foil-shielded, center conductor 18 AWG |
| Dynamics: | 999 knots, 40g |

 **NOTE:** When using the chartplotter and GDL 30A on battery power only (engines off) for extended periods of time, be sure there is 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 chartplotter and/or GDL 30A to shut off. Check with your local marine dealer/installer if problems persist.

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