



# Panoptix™ PS60



## Installation Instructions

### Important Safety Information

#### ⚠ WARNING

See the *Important Safety and Product Information* guide in the chartplotter or fishfinder product box for product warnings and other important information.

The device must be installed with at least one of the included anti-rotation bolts. Failure to do so could result in the device rotating while the boat is moving and could cause damage to your vessel.

You are responsible for the safe and prudent operation of your vessel. Sonar is a tool that enhances your awareness of the water beneath your boat. It does not relieve you of the responsibility of observing the water around your boat as you navigate.

#### ⚠ CAUTION

Failure to install and maintain this equipment in accordance with these instructions could result in damage or injury.

Always wear safety goggles, ear protection, and a dust mask when drilling, cutting, or sanding.

#### NOTICE

When drilling or cutting, always check what is on the opposite side of the surface.

This equipment should be installed by a qualified marine installer.

To obtain the best performance and to avoid damage to your boat, you must install the Garmin® transducer according to these instructions.

Read all installation instructions before proceeding with the installation. If you experience difficulty during the installation, contact Garmin Product Support.

### Software Update

You may need to update the device software when you install the device or add an accessory to the device.

#### Loading the New Software on a Memory Card

You must copy the software update to a memory card using a computer that is running Windows® software.

**NOTE:** You can contact Garmin customer support to order a preloaded software update card if you do not have a computer with Windows software.

- 1 Insert a memory card into the card slot on the computer.
- 2 Go to [garmin.com/support/software/marine.html](http://garmin.com/support/software/marine.html).
- 3 Select **Download** next to the software bundle that corresponds with your device.
- 4 Read and agree to the terms.
- 5 Select **Download**.

- 6 If necessary, select **Run**.
- 7 If necessary, select the drive associated with the memory card, and select **Next > Finish**.

#### Updating the Device Software

Before you can update the software, you must obtain a software-update memory card or load the latest software onto a memory card.

- 1 Turn on the chartplotter.
- 2 After the home screen appears, insert the memory card into the card slot.

**NOTE:** In order for the software update instructions to appear, the device must be fully booted before the card is inserted.

- 3 Follow the on-screen instructions.
- 4 Wait several minutes while the software update process completes.

The device returns to normal operation after the software update process is complete.

- 5 Remove the memory card.
- NOTE:** If the memory card is removed before the device restarts fully, the software update is not complete.

### Registering Your Device

Help us better support you by completing our online registration today.

- Go to [my.garmin.com](http://my.garmin.com).
- Keep the original sales receipt, or a photocopy, in a safe place.

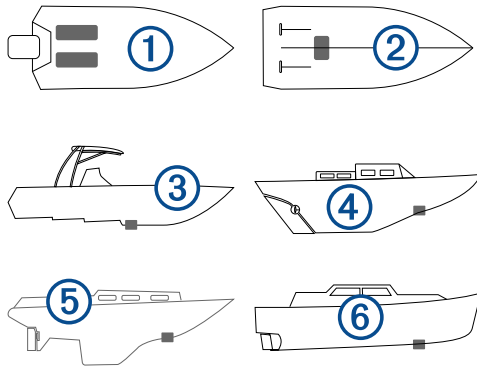
#### Contacting Garmin Product Support

- Go to [www.garmin.com/support](http://www.garmin.com/support) for in-country support information.
- In the USA, call 913-397-8200 or 1-800-800-1020.
- In the UK, call 0808 238 0000.
- In Europe, call +44 (0) 870 850 1241.

#### Tools Needed

- Drill
- 3 mm bit ( $1/8$  in.)
- 14 mm bit ( $9/16$  in.) (fiberglass hull)
- 19 mm bit ( $3/4$  in.) (metal hull)
- 32 mm spade bit ( $1 1/4$  in.) (fiberglass hull)
- 38 mm hole saw ( $1 1/2$  in.) (metal hull)
- Bandsaw
- Crescent wrench
- Masking tape
- Marine sealant
- Epoxy or exposed core sealant (cored fiberglass hull)

## Mounting Location Considerations



- On outboard and sterndrive vessels ①, the transducer should be mounted in front of and close to the engine or engines.
- On inboard vessels ②, the transducer should be mounted in front of and far away from the engine propeller and shaft.
- On step-hull vessels ③, the transducer should be mounted in front of the first step.
- On full-keel vessels ④, the transducer should be mounted at a slight angle that aims at the bow, not parallel to the centerline.
- On fin-keel vessels ⑤, the transducer should be mounted from 25 to 75 cm (from 10 to 30 in.) in front of the keel and a maximum of 10 cm (4 in.) to the side of the centerline.
- On vessels with displacement hulls ⑥, the transducer should be mounted approximately  $\frac{1}{3}$  aft of the waterline length of the vessel from the bow, and from 150 to 300 mm (from 6 to 12 in.) to the side of the centerline.
- The transducer should not be mounted behind strakes, struts, fittings, water intake or discharge ports, or anything that creates air bubbles or causes the water to become turbulent. The transducer must be in clean (non-turbulent) water for optimal performance.
- The transducer should not be mounted in a location where it might be jarred when launching, hauling, or storing.
- On single-drive boats, the transducer must not be mounted in the path of the propeller. The transducer can cause cavitation that can degrade the performance of the boat and damage the propeller.
- On twin-drive boats, the transducer should be mounted between the drives, if possible.
- The potting window of the transducer must face the starboard side of the vessel to display default left and right views on a chartplotter. When the potting window faces the port side of the vessel, you must change the chartplotter software settings to display a flipped image.

### Fairing Block

The fairing block positions your transducer parallel to the water line for increased sonar accuracy. You must measure the deadrise angle of your boat hull to mount the transducer at the correct angle.

#### Deadrise Angle

Deadrise is the angle formed between a horizontal line and a boat hull at a single point. You can measure the deadrise angle with an angle finder, a protractor, or a digital level. You can also ask your boat manufacturer for the deadrise angle of the specific point on your boat hull.

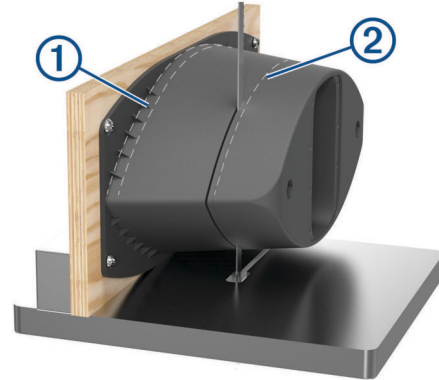
**NOTE:** A boat may have several deadrise angles depending on the shape of the hull. Measure the deadrise angle only at the location where you plan to install the transducer.

## Cutting the Fairing Block

### ⚠ CAUTION

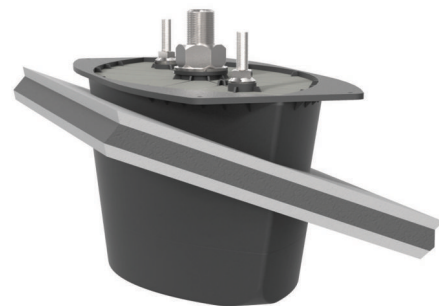
Always wear safety goggles, ear protection, and a dust mask when drilling, cutting, or sanding.

- 1 Using wood screws, attach the fairing block to a piece of wood. The wood becomes a cutting guide for the fairing block.
- 2 Measure the deadrise angle of the hull at the mounting location.
- 3 Tilt your band saw table to match the deadrise angle and secure the cutting fence.



- 4 Position the fairing block on the table so the cutting guide rests against the fence and the angle matches the angle of the mounting location.
  - 5 Adjust the cutting fence to ensure the fairing block has a minimum thickness of 13 mm ( $\frac{1}{2}$  in.) from the top edge ①, and 61 mm (2.4 in.) from the bottom edge ②.
- NOTE:** The maximum cutting angle of the fairing block is 25 degrees.
- 6 Cut the fairing block.
  - 7 Using a rasp or power tool, shape the fairing block to the hull as precisely as possible.
  - 8 Use the remaining section of the fairing block as the backing block inside the hull.

## Cored Fiberglass Boat Hull Installation Instructions



### Drilling the Transducer Stem Hole and the Anti-Rotation Bolt Holes in a Cored Fiberglass Hull

### ⚠ WARNING

The device must be installed with at least one of the included anti-rotation bolts. Failure to do so could result in the device rotating while the boat is moving and could cause damage to your vessel.

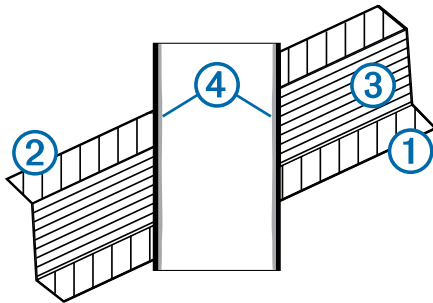
Before you can drill holes for the anti-rotation bolts, you must cut the fairing block ([Cutting the Fairing Block, page 2](#)).

The core must be cut and sealed carefully to protect against water seepage.

- 1 Select a mounting location without surface irregularities or obstructions.
- 2 Using the template, mark the location of the stem hole and anti-rotation bolts.
- 3 Drill a 3 mm ( $1/8$  in.) pilot hole through the template and hull at the stem hole location.

The hole must be perpendicular to the water surface.

- 4 Place masking tape over the pilot hole and surrounding area outside the hull to prevent damage to the fiberglass.
- 5 Using a 32 mm ( $1\ 1/4$  in.) bit at the stem hole location, drill from outside the hull through the outer skin ①, inner skin ②, and core ③.



The hole must be perpendicular to the water surface.

- 6 Sand and clean the inner skin, core, and outer skin around the hole.
- 7 Seal the exposed inner core with epoxy ④, and allow the epoxy to set thoroughly.
- 8 While holding a drill with a 14 mm ( $9/16$  in.) bit plumb, drill the anti-rotation bolt holes through the hull from outside the hull. The holes must be perpendicular to the water surface.
- 9 Sand and clean the area around the holes.
- 10 Seal the anti-rotation bolt holes with epoxy and allow the epoxy to set thoroughly.

### Applying Marine Sealant to a Thru-Hull Transducer

You must apply marine sealant to the water path to ensure a tight, waterproof seal between the fairing block, transducer, and hull.

Apply marine sealant between these components.

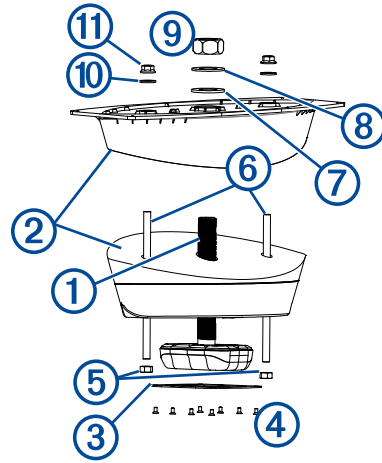
- Fairing block and hull
- Fairing block and transducer
- Stem and hull nut
- Anti-rotation bolts and holes
- Bushings, stem, and hull (if necessary)

### Installing the Transducer in a Fiberglass Hull

It is recommended that two installers complete these instructions, with one positioned outside the boat and one inside the boat.

**NOTE:** When installing the transducer in a cored fiberglass hull, avoid over-tightening the nuts to prevent damage to the hull.

- 1 From outside the hull, insert the transducer cable stem ① through the bottom half of the cut fairing block ②.



- 2 Secure the cover plate ③ to the bottom of the fairing block with the screws ④.
- 3 Secure the M12 nuts ⑤ to the bottom of the anti-rotation bolts ⑥ until no more than two threads are exposed between the M12 nut and the bottom of the fairing block.
- 4 Insert the anti-rotation bolts into the bottom half of the cut fairing block.
- 5 Apply marine sealant to the surface of the bottom half of the fairing block that must contact the hull.
- 6 Pull the transducer cable, transducer stem, and anti-rotation bolts through the mounting hole.
- 7 Place the bottom half of the fairing block firmly against the outside hull. The fairing block and transducer must be parallel to the keel.
- 8 From inside the hull, apply marine sealant to the surface of the top half of the fairing block that must contact the hull.
- 9 Apply the included anti-seize compound to the exposed transducer stem and anti-rotation bolts.
- 10 Pull the transducer cable, transducer stem, and anti-rotation bolts through the top half of the fairing block.
- 11 Place the top half of the fairing block firmly against the inside hull.
- 12 Use a crescent wrench to secure the transducer stem with the included rubber 31 mm washer ⑦, nylon 31 mm washer ⑧, and 40 mm hull nut ⑨.

**NOTE:** Do not over-tighten the hull nut.

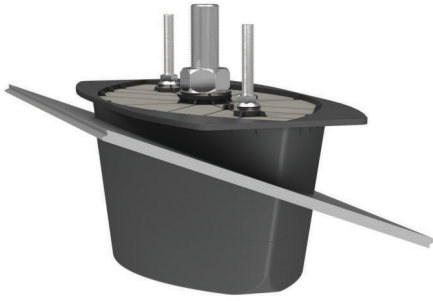
- 13 Use a crescent wrench to secure the top half of the fairing block to the anti-rotation bolts with the included 13.4 mm washers ⑩ and M12 nuts ⑪.
- NOTE:** Do not over-tighten the M12 nuts.
- 14 Apply sealant between the transducer sensor and the cover plate, and in the holes around the stem and anti-rotation bolts.
- 15 Before the sealant hardens, remove all excess sealant on the outside of the fairing block and exterior hull to ensure smooth water flow over the transducer.

### Installing Ferrite Beads on the Cables

You must install all three included ferrite beads around the power and network cables to comply with EMC standards. If you do not install the ferrite beads, you may be in violation of national EMC standards and other laws.

Securely snap each of the three ferrite beads around both the power and Garmin Marine Network cables, as close to the transducer stem as possible.

## Non-cored Fiberglass Boat Hull Installation Instructions



### Drilling the Transducer Stem Hole and the Anti-Rotation Bolt Holes in a Fiberglass or Non-Cored Hull

#### ⚠ WARNING

The device must be installed with at least one of the included anti-rotation bolts. Failure to do so could result in the device rotating while the boat is moving and could cause damage to your vessel.

Before you can drill holes for the anti-rotation bolts, you must cut the fairing block ([Cutting the Fairing Block, page 2](#)).

- 1 Select a mounting location without surface irregularities or obstructions.
- 2 Using the template, mark the location of the stem hole and anti-rotation bolts.
- 3 From outside the hull, drill a 3 mm ( $1/8$  in.) pilot hole at the stem hole location.  
The hole must be perpendicular to the water surface.
- 4 If the vessel has a fiberglass hull, place masking tape over the pilot hole and surrounding area outside the hull to reduce cracking of the gel coat.
- 5 If you taped over the pilot hole, use a utility knife to cut out the hole in the tape.
- 6 While holding a drill with a 32 mm ( $1\frac{1}{4}$  in.) spade bit plumb, cut a hole at the stem hole location, from outside the hull.  
The hole must be perpendicular to the water surface.
- 7 Sand and clean the area around the hole.
- 8 While holding a drill with a 14 mm ( $9/16$  in.) bit plumb, drill the anti-rotation bolt holes through the hull.  
The holes must be perpendicular to the water surface.
- 9 Sand and clean the area around the holes.

### Applying Marine Sealant to a Thru-Hull Transducer

You must apply marine sealant to the water path to ensure a tight, waterproof seal between the fairing block, transducer, and hull.

Apply marine sealant between these components.

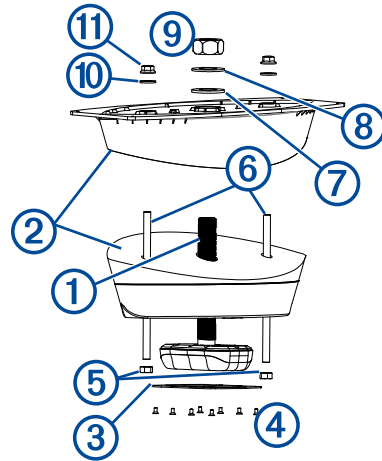
- Fairing block and hull
- Fairing block and transducer
- Stem and hull nut
- Anti-rotation bolts and holes
- Bushings, stem, and hull (if necessary)

### Installing the Transducer in a Fiberglass Hull

It is recommended that two installers complete these instructions, with one positioned outside the boat and one inside the boat.

**NOTE:** When installing the transducer in a cored fiberglass hull, avoid over-tightening the nuts to prevent damage to the hull.

- 1 From outside the hull, insert the transducer cable stem ① through the bottom half of the cut fairing block ②.



- 2 Secure the cover plate ③ to the bottom of the fairing block with the screws ④.
- 3 Secure the M12 nuts ⑤ to the bottom of the anti-rotation bolts ⑥ until no more than two threads are exposed between the M12 nut and the bottom of the fairing block.
- 4 Insert the anti-rotation bolts into the bottom half of the cut fairing block.
- 5 Apply marine sealant to the surface of the bottom half of the fairing block that must contact the hull.
- 6 Pull the transducer cable, transducer stem, and anti-rotation bolts through the mounting hole.
- 7 Place the bottom half of the fairing block firmly against the outside hull.  
The fairing block and transducer must be parallel to the keel.
- 8 From inside the hull, apply marine sealant to the surface of the top half of the fairing block that must contact the hull.
- 9 Apply the included anti-seize compound to the exposed transducer stem and anti-rotation bolts.
- 10 Pull the transducer cable, transducer stem, and anti-rotation bolts through the top half of the fairing block.
- 11 Place the top half of the fairing block firmly against the inside hull.
- 12 Use a crescent wrench to secure the transducer stem with the included rubber 31 mm washer ⑦, nylon 31 mm washer ⑧, and 40 mm hull nut ⑨.  
**NOTE:** Do not over-tighten the hull nut.
- 13 Use a crescent wrench to secure the top half of the fairing block to the anti-rotation bolts with the included 13.4 mm washers ⑩ and M12 nuts ⑪.  
**NOTE:** Do not over-tighten the M12 nuts.
- 14 Apply sealant between the transducer sensor and the cover plate, and in the holes around the stem and anti-rotation bolts.
- 15 Before the sealant hardens, remove all excess sealant on the outside of the fairing block and exterior hull to ensure smooth water flow over the transducer.

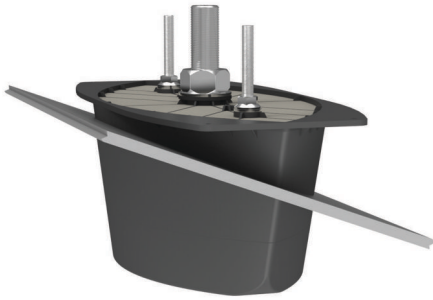
### Installing Ferrite Beads on the Cables

You must install all three included ferrite beads around the power and network cables to comply with EMC standards. If you do not install the ferrite beads, you may be in violation of national EMC standards and other laws.

Securely snap each of the three ferrite beads around both the power and Garmin Marine Network cables, as close to the transducer stem as possible.



## Metal Boat Hull Installation Instructions



### Drilling the Transducer Stem Hole and the Anti-Rotation Bolt Holes in a Metal Hull

Before you can drill holes for the anti-rotation bolts, you must cut the fairing block ([Cutting the Fairing Block, page 2](#)).

You should follow these instructions when you are mounting the transducer on a boat that has a metal hull.

- 1 Select a mounting location without surface irregularities or obstructions.
- 2 Using the template, mark the location of the stem hole and anti-rotation bolts.
- 3 From outside the hull, drill a 3 mm ( $1/8$  in.) pilot hole through the hull at the stem hole location.  
The hole must be perpendicular to the water surface.
- 4 Using a 38 mm ( $1\frac{1}{2}$  in.) hole saw, cut the stem hole from outside the hull.  
The hole must be perpendicular to the water surface.
- 5 While holding a drill with a 19 mm ( $3/4$  in.) bit plumb, drill the anti-rotation bolt holes through the hull from outside the hull.
- 6 Sand and clean the area around the holes.

### Applying Marine Sealant to a Thru-Hull Transducer

You must apply marine sealant to the water path to ensure a tight, waterproof seal between the fairing block, transducer, and hull.

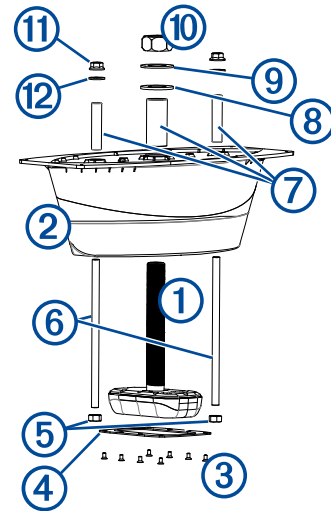
Apply marine sealant between these components.

- Fairing block and hull
- Fairing block and transducer
- Stem and hull nut
- Anti-rotation bolts and holes
- Bushings, stem, and hull (if necessary)

### Installing the Transducer on a Metal Hull

It is recommended that two installers complete these instructions, with one positioned outside the boat and one inside the boat.

- 1 Insert the transducer cable stem ① through the bottom half of the cut fairing block ②.



- 2 Secure the cover plate ③ to the bottom of the fairing block with the screws ④.
- 3 Secure the M12 nuts ⑤ to the bottom of the anti-rotation bolts ⑥ until no more than two threads are exposed between the M12 nut and the bottom of the fairing block.
- 4 Insert the anti-rotation bolts into the bottom half of the cut fairing block.
- 5 Place the bushings ⑦ on the anti-rotation bolts and transducer stem.
- 6 Apply marine sealant to the surface of the bottom half of the fairing block that must contact the hull.
- 7 From outside the hull, place the bottom half of the fairing block firmly against the outside hull.  
The fairing block and transducer must be parallel to the keel.
- 8 Pull the transducer cable, transducer stem, and anti-rotation bolts through the mounting hole.
- 9 Apply marine sealant to the surface of the top half of the fairing block that must contact the hull.
- 10 Pull the transducer cable, transducer stem, and anti-rotation bolts through the top half of the fairing block.
- 11 Place the top half of the fairing block firmly against the inside hull.
- 12 Apply the included anti-seize compound to the exposed transducer stem, bushings, and anti-rotation bolts.
- 13 Use a crescent wrench to secure the transducer stem with the included rubber 31 mm washer ⑧, nylon 31 mm washer ⑨, and 40 mm hull nut ⑩.  
**NOTE:** Do not over-tighten the hull nut.
- 14 Use a crescent wrench to secure the top half of the fairing block to the anti-rotation bolts with the included 13.4 mm washers ⑪ and M12 nuts ⑫.  
**NOTE:** Do not over-tighten the M12 nuts.
- 15 Apply sealant between the transducer sensor and the cover plate, and in the holes around the stem and anti-rotation bolts.
- 16 Before the sealant hardens, remove all excess sealant on the outside of the fairing block and exterior hull to ensure smooth water flow over the transducer.

### Installing Ferrite Beads on the Cables

You must install all three included ferrite beads around the power and network cables to comply with EMC standards. If you do not install the ferrite beads, you may be in violation of national EMC standards and other laws.

Securely snap each of the three ferrite beads around both the power and Garmin Marine Network cables, as close to the transducer stem as possible.

## Maintenance

### Testing the Installation

#### NOTICE

You should check your boat for leaks before you leave it in the water for an extended period of time.

Because water is necessary to carry the sonar signal, the transducer must be in the water to work properly. You cannot get a depth or distance reading when out of the water. When you place your boat in the water, check for leaks around any screw holes that were added below the water line.

#### Anti-Fouling Paint

To prevent corrosion on metal hulls and to slow the growth of organisms that can affect a vessel's performance and durability, you should apply a water-based anti-fouling paint to the hull of your vessel every six months.

**NOTE:** Never apply ketone-based anti-fouling paint to your vessel, because ketones attack many types of plastic and could damage or destroy your transducer.

#### Cleaning the Transducer

Aquatic fouling accumulates quickly and can reduce your device's performance.

- 1 Remove the fouling with a soft cloth and mild detergent.
- 2 If the fouling is severe, use a scouring pad or putty knife to remove growth.
- 3 Wipe the device dry.

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