GARMIN

Panoptix™ PS21-TR

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.
>
> 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.

To obtain the best performance and to avoid damage to your boat, you must install the Garmin® device 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 www.garmin.com/support/software/marine.html.
3 Select **Download** next to the software bundle that corresponds with your chartplotter.

   NOTE: The software download includes updates for all devices connected to the chartplotter. Select the correct bundle that corresponds to the chartplotter to be updated. You can select See All Devices in this Bundle to confirm the devices included in your download.
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**.
8 Extract the files to the memory card.

   NOTE: The software update can take several minutes to load onto the memory card.

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.
5 When prompted, leave the memory card in place and restart the chartplotter manually.
6 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.
• Keep the original sales receipt, or a photocopy, in a safe place.

Contacting Garmin Product Support

• Go to 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

• #2 Phillips screwdriver
• 3 mm flat screwdriver

Mounting Considerations

• Placement of the transducer on a trolling motor depends on the type of trolling motor you have installed on your boat.
• You can mount the transducer on the motor of some electrically steered trolling motors, but you must make sure you can safely deploy and retract the trolling motor with the transducer attached.
• You must mount the transducer so it does not obstruct the motor from being placed in its storage cradle or prevent the motor from being stowed and deployed correctly.
• Mounting the transducer near strong magnetic fields interferes with the ability of the internal compass to measure the earth's magnetic field, and prevents calibration. Failure to properly calibrate causes some map features to be unavailable, and waypoints created in LiveVü Forward use the boat heading instead of the transducer orientation to calculate your position.
• You must mount the transducer as far from the motor as possible while keeping the transducer submerged. Placing the transducer on the barrel of the trolling motor or too close

to the motor on the shaft, can prevent proper compass calibration.
- To use the compass, you must mount the transducer on the shaft. The compass does not work when you mount the transducer on the motor.

Effective Forward Range
The transducer has an effective forward range of between five and eight times the depth of the water. For example, in 3 m (10 ft.) of water, the effective forward range is from 15 to 24 m (from 50 to 80 ft.). Water conditions and bottom conditions affect the actual range.

Installing the Transducer on a Trolling Motor Shaft

Assembling the Trolling Motor Shaft Mount Hardware
Use the M6 screws ① to attach the back of the trolling mount bracket ② to the front of the trolling mount bracket ③ around the trolling motor shaft.
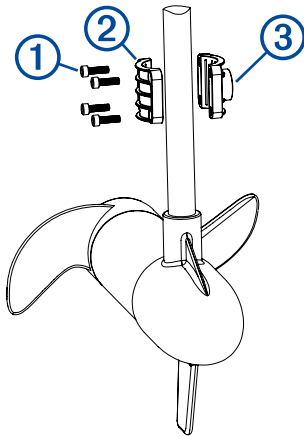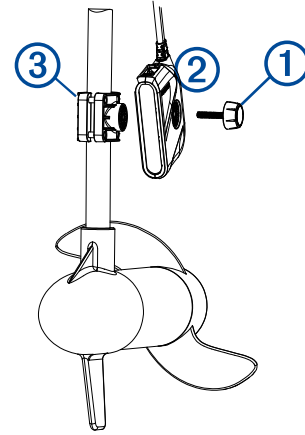

Installing the Transducer on the Trolling Motor Shaft Mount

NOTICE

You must secure the transducer cable to the shaft or other secure location during installation. Damage to the transducer cable wire or the cable jacket can cause transducer failure.

You should mount the transducer as far from the motor as possible. Placing the transducer too close to the motor can prevent proper compass calibration. Without successful compass calibration, the chartplotter does not display direction and coverage area indicators, but all other features function normally.

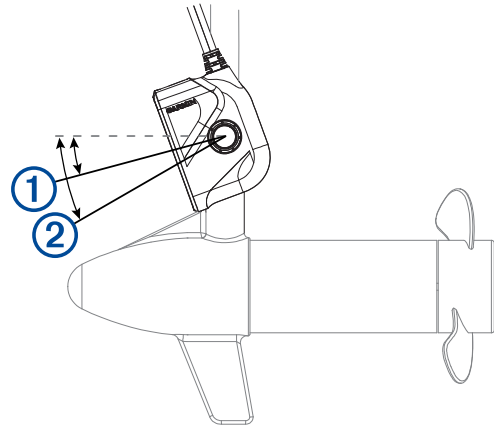1 Use the enclosed knob ① or mounting bolt to attach the transducer ② to the trolling motor mount bracket ③.

2 Use cable ties to secure the transducer cable to the shaft or other secure location.
3 Route the Ethernet cable to the network switch or to the back of the chartplotter.
4 Route the power cable to a switched or unswitched 10-35 Vdc power source.

Adjusting the Transducer Angle on the Trolling Motor Shaft
The transducer should be tilted downward for optimal imagery.
1 With the transducer mounted on the trolling motor shaft, tilt the transducer downward between 15 ① and 30 degrees ② from the horizontal center of the trolling motor.
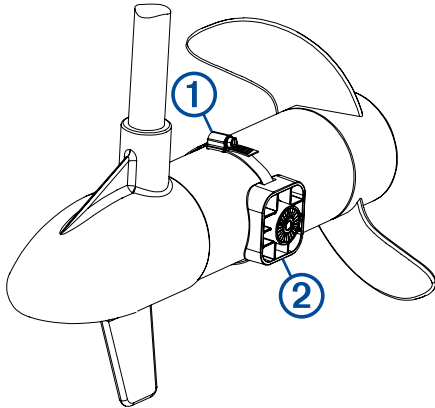

2 Tighten the knob or mounting bolt so the device does not move during use.
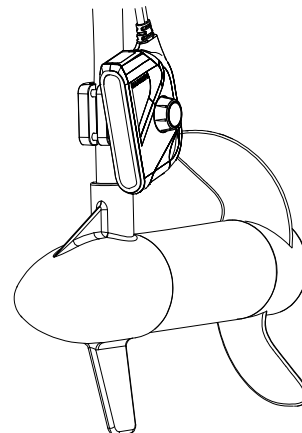
Installing the Transducer on a Trolling Motor

Assembling the Trolling Motor Mount Hardware

1   Insert the hose clamp ① through the slot on the trolling motor mount ②.


2   Slide the hose clamp around the trolling motor.
3   Tighten the hose clamp.

Installing the Transducer on a Trolling Motor

NOTICE

You must secure the transducer cable to the shaft or other secure location during installation. Transducer cable wire damage or damage to the cable jacket can cause transducer failure.

1   Use the enclosed knob ① or mounting bolt to attach the transducer ② to the trolling motor mount bracket ③.
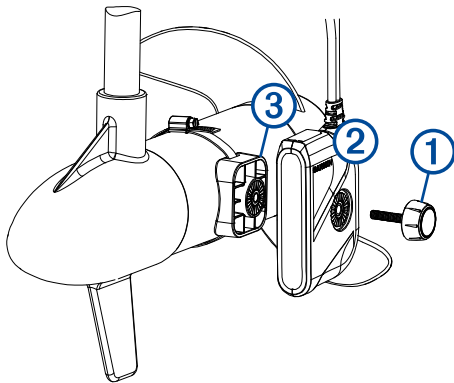
2   Secure the transducer cable to the shaft or other secure location.
3   Route the Ethernet cable to the network switch or to the back of the chartplotter.
4   Route the power cable through a switched or unswitched 10 to 35 Vdc power source.

Adjusting the Transducer Angle on the Trolling Motor

The transducer should be tilted downward for optimal imagery.

1   With the transducer mounted on the trolling motor, tilt the transducer downward between 15 ① and 30 degrees ② from the horizontal center of the trolling motor.
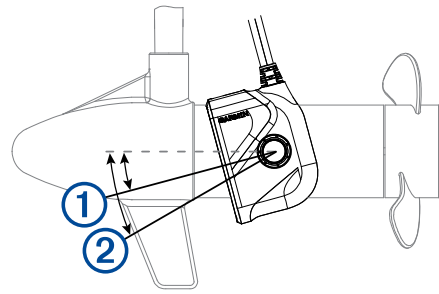
2   Tighten the knob or mounting bolt so the device does not move during use.
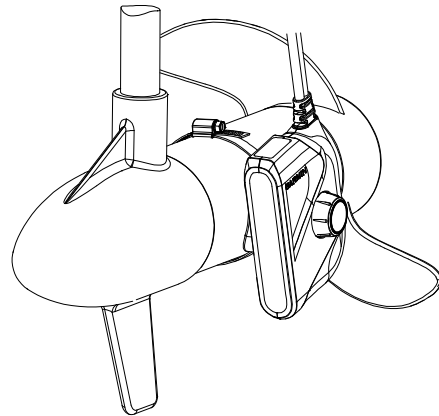
Connecting the Transducer to Power and the Garmin Marine Network

Before you can connect the device to the Garmin Marine Network and power, you must mount the device on the trolling motor.

⚠ WARNING

When connecting the power cable, do not remove the in-line fuse holder. To prevent the possibility of injury or product damage caused by fire or overheating, the appropriate fuse must be in place as indicated in the product specifications. In addition, connecting the power cable without the appropriate fuse in place voids the product warranty.

1   Route the cables using the appropriate tie wraps, fasteners, and sealant to secure the cables along the route, and through any bulkheads or the deck.
2   Install the o-ring and locking collar on the Garmin Marine Network connector.
3   Connect the bare-wire end of the power cable to a 10 to 35 Vdc power source and to the ground.
4   Select an option:
   •   To connect the network cable on a boat equipped with a GMS™ 10 network port expander, connect the network cable to a port on the GMS 10.
   •   To connect the network cable on a boat not equipped with a GMS 10 network port expander, connect the network cable to the network or the Panoptix port on your chartplotter.

Cable Routing Grommets

When routing cables through your boat, it may be necessary to drill holes to route the cables. Cable routing grommets can be used to cover cable installation holes. The grommets do not create a waterproof seal. If necessary, apply a marine sealant after installation to weatherproof around the grommet and the

cable. You can purchase grommets from your Garmin dealer or directly from Garmin at www.garmin.com.

Installing Locking Rings on the Cables

Before you install locking rings on the cables, you must route the cables.

To help make the cable-routing process easier, the locking rings are packaged separately from the cables. Each locking ring is packaged in a small bag with a number on the label for easy identification.

1 Separate the two halves of the locking ring ①.
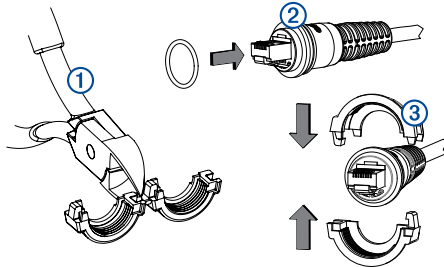
2 Insert the o-ring ② into the end of the connector.
3 Align the two halves ③ of the locking ring over the cable and snap them together.

Installation Diagram
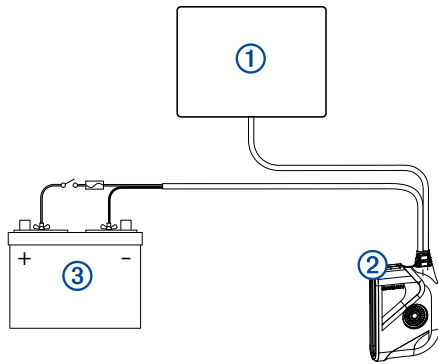
Item	Description
①	Chartplotter
②	Panoptix PS21-TR
③	Power source (switch is optional)

Calibrating the Compass

Before you can calibrate the compass, the transducer must be installed on the shaft far enough away from the trolling motor to avoid magnetic interference, and deployed in the water. Calibration must be of sufficient quality to enable the internal compass.

NOTE: To use the compass, you must mount the transducer on the shaft. The compass does not work when you mount the transducer on the motor.

You can begin turning your boat before calibrating, but you must fully rotate your boat 1.5 times during calibration.

1 From a ForwardVü or LiveVü Forward sonar page, select **MENU** > **Sonar Setup** > **Installation**.
2 If necessary, select **Use AHRS**.
3 Select **Calibrate Compass**.
4 Follow the on-screen instructions.

Maintenance

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.

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.

Specifications

Specification	Measurement
Dimensions (W x H x L)	32 x 118 x 84 mm (1.3 x 4.6 x 3.3 in.)
Weight	340 g (.75 lb.)
Max. power usage	8 W
Operating voltage	From 10 to 35 Vdc
Operating temperature range	From 0 to 40°C (from 32 to 104°F)
Storage temperature range	From -40 to 70°C (from -40 to 158°F)
Material	ASA plastic
Maximum range*	91.4 m (300 ft.)
Frequency	417 kHz
Fuse rating	4.0 A mini 32 Vdc

*Dependent upon transducer placement, water salinity, bottom type, and other water conditions.