GARMIN®

GT17M-THF TRANSDUCER INSTALLATION INSTRUCTIONS

Important Safety Information

⚠ WARNING

See the *Important Safety and Product Information* guide in the chartplotter, fishfinder, or sonar module 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

For the best possible performance and to avoid potential injury, damage to the device, or damage to your vessel, installation by a qualified marine installer is recommended.

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

To avoid possible personal 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 avoid damaging the vessel.

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

To prevent interference and avoid possible overheating damage, do not install the transducer near the engine or in the engine room.

To prevent damage to the cable and the transducer, do not use the cable to pick up or pull the transducer.

Always operate the transducer when it is submerged. Operating the transducer when it is exposed to the air may result in damage due to overheating.

To prevent permanent damage to the surface of the transducer, do not use solvents such as mineral spirits, acetone, Methyl Ethyl Ketone (MEK), or similar products when cleaning. Do not use a power sander or pressure washer to clean the transducer.

Important Hull Material Considerations

When installing this transducer, it is critical that you install it according to the material of the boat hull.

The GT17M-THF transducer housing is made from stainless steel, and it can be installed in a fiberglass, wood, composite, aluminum, or steel-hulled vessels. When installing this model in an aluminum or steel hull, you must install the included galvanic isolation components as instructed.

NOTICE

Installing the GT17M-THF transducer in an aluminum or steel hull without the galvanic isolation components will create galvanic corrosion that may result in water entry around the transducer.

Software Update

You must update the Garmin chartplotter software when you install this device. For instructions on updating the software, see your chartplotter owner's manual at support.garmin.com.

Tools Needed

- Drill
- 3 mm ($^{1}/_{8}$ in.) drill bit
- Adjustable wrench suitable for nuts up to 108 mm (4 $^{1}/_{4}$ in.)
- 4.5 mm ($^{3}/_{16}$ in.) allen wrench
- Marine sealant (flexible, fast-cure type, for below the waterline)
- Mild household detergent or rubbing alcohol
- Sandpaper
- Masking tape
- Waterproof electrical tape
- Grommets (optional)
- Water-based anti-fouling paint (optional)

These additional items are needed depending on the installation.

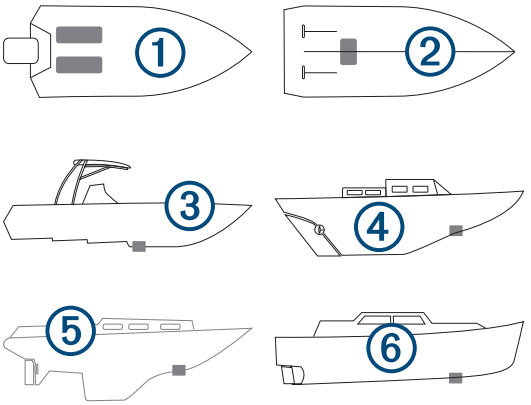
For mounting in a fiberglass hull:

- 98 mm (3 $^{7}/_{8}$ in.) hole saw
- Marine grade epoxy resin for fiberglass (cored fiberglass hulls)

For mounting in a metal hull:

- File
- 101 mm (4 in.) hole saw

Mounting Location Considerations

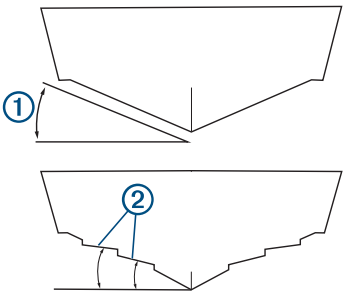


- On outboard and sterndrive vessels ①, the transducer should be mounted in front of and close to the engine or engines.
- On inboard vessels ②, the transducer should be mounted in front of and far away from the engine propeller and shaft.
- On step-hull vessels ③, the transducer should be mounted in front of the first step.
- On full-keel vessels ④, the transducer should be mounted at a slight angle that aims at the bow, parallel to the centerline.
- On fin-keel vessels ⑤, the transducer should be mounted from 25 cm 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 $^{1}/_{3}$ 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 be mounted parallel to the bow-stern axis of your vessel.
- 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.

Deadrise Angle



The deadrise angle ① is the measurement of the angle between a horizontal line and the outer hull at a single point.

These transducers are available in a selection of pre-configured angles from 0 to 20 degrees. For optimal performance, it is critical that the transducer angle you purchase is as close as possible to the deadrise angle at the installation location.

Before drilling any holes in the hull, you should verify the deadrise angle at the installation location by measuring with a smartphone application, an angle finder, a protractor, or a digital level. You can also ask your boat manufacturer for the deadrise of a specific point on your boat hull. You should confirm that you have purchased the correct transducer for the mounting location by referring to this table.

Deadrise Angle Measurement	Appropriate Transducer Model
From 0 to 5 degrees	0 degree
From 6 to 16 degrees	12 degree
From 17 to 24 degrees	20 degree

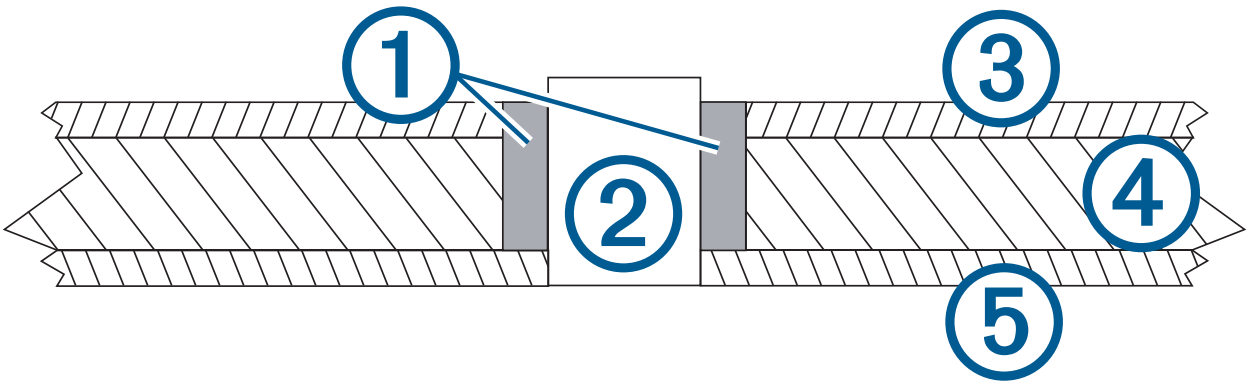
NOTE: Your vessel's hull may have several deadrise angles ② depending on the hull shape. Be sure to measure the deadrise angle at the selected installation location.

Preparing the Hull

Preparing a Cored-Fiberglass Hull

NOTICE

If the core of a cored-fiberglass hull is not sealed properly, water may seep into the core and severely damage the boat.



1	Fiberglass or casting epoxy (not included)
2	Cylinder spacer
3	Inner fiberglass skin
4	Core
5	Outer fiberglass skin

1. From outside the hull, drill a 3 mm ($^{1}/_{8}$ in.) pilot hole at the transducer location.
2. Place masking tape over the pilot hole and surrounding area outside the hull to reduce cracking of the gel coat.
3. Use a utility knife to cut a hole in the tape over the pilot hole.
4. From outside the hull, use a 98 mm (3 $^{7}/_{8}$ in.) hole saw to cut the transducer hole completely through the hull.
5. From inside of the hull, use a slightly larger hole saw to cut only the inner fiberglass skin and core.

NOTICE

You must take care not to cut the outer fiberglass skin with the larger hole saw, so that you can seal the core properly.

6. Seal the core inside the hull using either fiberglass (*Sealing the Core with Fiberglass*, page 5) or casting epoxy (*Sealing the Core with Casting Epoxy*, page 6).

Sealing the Core with Fiberglass

1. From inside the boat, coat a layer of fiberglass cloth with fiberglass resin, and place it inside the hole to seal the core.
2. Add layers of fiberglass cloth and resin until the hole is the correct diameter of 98 mm (3 $^{7}/_{8}$ in.).
3. After the fiberglass has hardened, sand and clean inside and around the hole.

The cored-fiberglass hull is now prepared, and you can complete the transducer installation.

Sealing the Core with Casting Epoxy

To properly seal the core with casting epoxy, you must create a cylinder with an outer diameter of 98 mm (3 $^{7}/_{8}$ in.) to act as a spacer as the epoxy sets.

1. Coat a 98 mm (3 $^{7}/_{8}$ in.) cylinder with wax.
2. Insert the cylinder in the hole through the outer skin, and tape it in place on the outside of the boat.
3. Fill the space between the cylinder the core with casting epoxy.
4. After the epoxy has hardened, remove the cylinder, and sand and clean inside and around the hole.

The cored-fiberglass hull is now prepared, and you can complete the transducer installation.

Preparing a Solid Fiberglass or Metal Hull

1. From outside the hull, drill a 3 mm ($^{1}/_{8}$ in.) pilot hole at the transducer location.
2. On a fiberglass hull, place masking tape over the pilot hole and surrounding area outside the hull to reduce cracking of the gel coat.
3. Use a utility knife to cut a hole in the tape over the pilot hole.
4. From outside the hull, cut the transducer hole using a hole saw of the appropriate size for your hull material:
   - For a metal hull, use a 101 mm (4 in.) hole saw.
   - For a solid fiberglass hull, use a 98 mm (3 $^{7}/_{8}$ in.) hole saw.
5. Sand and clean the inside of the hole and the area around the hole.

Installing the Transducer

When installing the transducer, you must apply marine sealant to the water path to ensure a tight, waterproof seal between the transducer and hull.

NOTE: We recommend that two installers complete these instructions, with one positioned outside the vessel and another inside it.

1. Select an option according to your hull material:
   - *Preparing the Transducer for a Fiberglass Hull*, page 6.
   - *Preparing the Transducer for a Metal Hull*, page 7.
2. Complete the installation (*Completing the Installation*, page 8).

Preparing the Transducer for a Fiberglass Hull

1. Apply a 4 mm ($^{1}/_{8}$ in.) layer of marine sealant to the inside of the flange on the transducer where it will contact the outside of the hull.
2. Apply a layer of marine sealant around the transducer housing where it will contact the sides of the hole through the hull.

Preparing the Transducer for a Metal Hull

1 Place the flange isolator ① and the housing isolator ② on the transducer.

2 From outside the hull, insert the transducer through the mounting hole and hold it in place.

3 Using a knife or scissors, trim the housing isolator so it is flush with the surface of the inner hull.

NOTE: The housing isolator must be flush with the inner surface of the hull so that it will not interfere with the spacer when you tighten the jam nut.

4 Remove the transducer from the mounting hole.

5 Remove the isolators from the transducer.

6 Apply a layer of marine sealant to the inside of the flange and up the transducer housing, to seal against the isolators.

7 Place the flange isolator and the housing isolator back on the transducer.

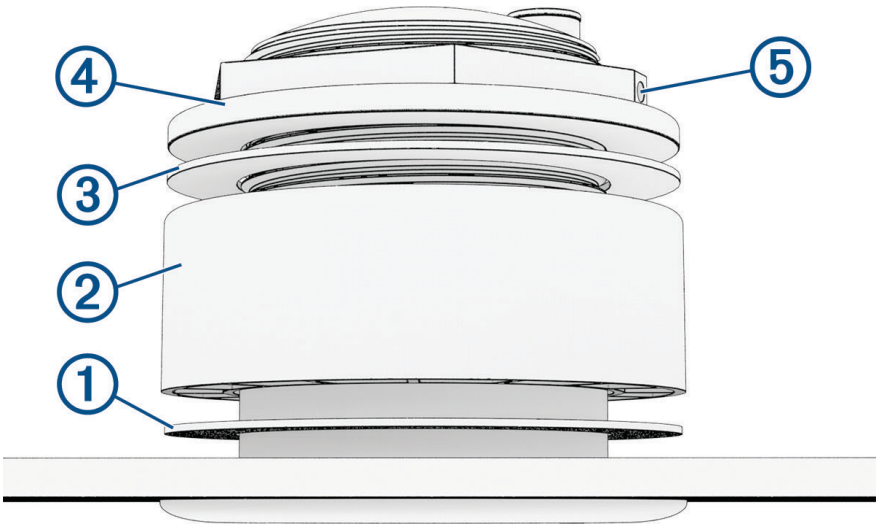
8 Apply a 4 mm ($^{1}/_{8}$ in.) layer of marine sealant to the flange isolator where it will contact the hull.

9 Apply a layer of marine sealant around the housing isolator where it will contact the hull.

Completing the Installation

1. Insert the transducer through the mounting hole, using a twisting motion to squeeze out excess sealant.

   If your transducer has an internal angle of 12 or 20 degrees, you must make sure the arrow on the top cap points to the keel of the boat, so that the internal angle of the transducer element will offset the deadrise angle of the hull.
2. Apply additional marine sealant to the transducer housing and threads, up to about 50 mm (2 in.) above the inside surface of the hull, to create a seal between the transducer and the spacer.
3. From inside the hull, place one nylon washer ①; the spacer ②, with the beveled end up; another nylon washer ③; and the jam nut ④ onto the housing.



4. Using a 108 mm (4 $^{1}/_{4}$ in.) wrench or an adjustable wrench, tighten the jam nut to secure the transducer in the hull.

NOTICE

When installing a transducer in a fiberglass hull, avoid over-tightening the nut to prevent damaging the hull.

TIP: You can hold the transducer housing steady while tightening the jam nut using slip-joint pliers, a 90 mm (3 $^{9}/_{16}$ in.) wrench, or an adjustable wrench on the flat areas without threads near the top of the housing.

5. Using a 4.5 mm ($^{3}/_{16}$ in.) allen wrench, tighten the two set screws ⑤ around the jam nut.
6. Before the sealant hardens, remove all excess sealant on the outside of the hull to ensure smooth water flow over the transducer.

Routing and Connecting the Transducer Cable

NOTICE

To prevent damage to the cable and the transducer, do not use the cable to pick up or pull the transducer.

If the transducer cable is not long enough to reach the chartplotter or sonar black box, you can purchase an extension cable from your Garmin dealer or buy.garmin.com.

1. Route and connect the transducer cable to the chartplotter or sonar black box while taking these precautions.
   - Route the cable away from other wiring and the engine(s) to prevent possible interference with the sonar signal.
   - Route the cable so it is not pinched by other equipment.
   - Use grommets to protect the cable if it passes through the bulkhead or other parts of the boat.
   - Use zip ties or other suitable fastening equipment to secure the cable where necessary to protect it from damage. You should avoid over-tightening zip ties and compressing the cable.
2. Connect the transducer cable to the appropriate port on the chartplotter or sonar black box.
3. Tighten the locking ring on the cable connector to secure it.

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 on both metal and fiberglass hulls, you should apply a water-based anti-fouling paint to the hull of your vessel every six months.

NOTICE

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

⚠ CAUTION

To avoid possible transducer damage or personal injury, use care when cleaning the transducer, particularly when attempting to remove severe fouling.

NOTICE

To prevent permanent damage to the surface of the transducer, do not use solvents such as mineral spirits, acetone, Methyl Ethyl Ketone (MEK), or similar products when cleaning. Do not use a power sander or pressure washer to clean 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 non-metallic scouring pad or putty knife to remove growth.
3. Wipe the transducer dry.

Specifications

Frequencies[1]	From 80 to 165 kHz
Beamwidth	From 18 to 9 degrees
Operating temperature range	From 0° to 50°C (from 32° to 122°F)
Storage temperature range	From -40° to 70°C (from -40° to 158°F)
Dimensions	Diameter (housing): 95 mm (3.74 in.) Diameter (flange): 135 mm (5.31 in.) Height: 132 mm (5.20 in.)
Cable length	15 m (50 ft.)
Housing material	Stainless steel
Weight	3.83 kg (8.44 lbs)[2]
Maximum depth[3]	Freshwater: 730 m (2,400 ft.) Saltwater: 545 m (1,800 ft.)
Transmit power	1 kW
Garmin RapidReturn™	Compatible[4]

Limited Warranty

The Garmin standard limited warranty applies to this accessory. For more information, go to garmin.com/support/warranty.

Australian Purchases: Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure. The benefits under our Limited Warranty are in addition to other rights and remedies under applicable law in relation to the products. Garmin Australasia, 30 Clay Place, Eastern Creek, NSW 2766, Australia. Phone: 1800 235 822.

連絡地址

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聯絡地址:新北市汐止區樟樹二路 68 號

電　　話:(02)2642-8999

客服專線:(02)2642-9199

[1] Dependent upon the chartplotter, fishfinder, or sounder model.
[2] If you are installing the transducer in a metal/ hull, the isolating components weigh an additional 198 g (7 oz).
[3] Dependent upon water conditions.
[4] Garmin RapidReturn functionality depends on sonar module and chartplotter compatibility.

物質宣言

部件名称	有毒有害物质或元素									
	铅	汞	镉	六价铬	多溴联苯	多溴二苯醚	邻苯二甲酸二(2-乙基己)酯	邻苯二甲酸丁苄酯	邻苯二甲酸二丁酯	邻苯二甲酸二异丁酯
塑料和橡胶零件	X	O	O	O	O	O	O	O	O	O
塑料和橡胶零件	O	O	O	O	O	O	O	O	O	O

本表格依据 SJ/T11364 的规定编制。

O: 代表此种部件的所有均质材料中所含的该种有害物质均低于(GB/T26572) 规定的限量

X: 代表此种部件所用的均质材料中, 至少有一类材料其所含的有害物质高于(GB/T26572) 规定的限量

* 该产品说明书应提供在环保使用期限和特殊标记的部分详细讲解产品的担保使用条件。

产品

声纳探头