

KTD-480S Chirp and Side Scan Transducer Installation Manual



Packing List

- KTD-480S side scan Transducer X 1
- Screw (PM4 x 8 x 6.7) X 3
- Self-tapping screw X 4
- Self-locking nut X 1
- Screw (PM5 x 45) X 1
- Screw (TA4 x 14) X 5
- Template sticker X 1
- Silicone gasket X 1
- Screw flat washer (M5 x 10) X 3
- Screw flat washer (M4 x 9) X 1
- Wire clamp X 5
- Bracket fixing punching pattern X 1
- KTD-480S Transducer manual X 1

Product Overview

KTD-480S is a device that efficiently detects underwater environments through acoustic imaging technology. The high-frequency sonar technology can be widely applied in fields such as seabed topography mapping, underwater target detection, pipeline inspection, and shipwreck search. It features high resolution, wide coverage, and strong anti-interference capabilities.

Important Safety Information

Warning:

You are responsible for operating your vessel safely and cautiously. Sonar is a tool that can enhance your awareness of the underwater environment beneath your vessel. This does not relieve you of the responsibility to observe the surrounding waters while navigating.

Caution:

Failure to install and maintain this equipment according to these instructions may result in damage or injury. Always wear protective goggles, hearing protection, and a dust mask when drilling, cutting, or grinding.

Notice:

Always check the condition of both the surface and the underside of the boat when drilling or cutting.

To achieve optimal performance and avoid damage to the vessel, it is recommended to install the equipment according to the manual. If you encounter problems during installation, contact or visit www.onwamarine.com for more information.

Required Tools

- Hardware accessories included with the transducer
- Drilling machine, drill bit, ruler, level, marker
- Safety glasses, dust mask
- Sealant tape, marine silicone sealant

Installation Method Selection

Taking Stern Installation As An Example

Advantages:

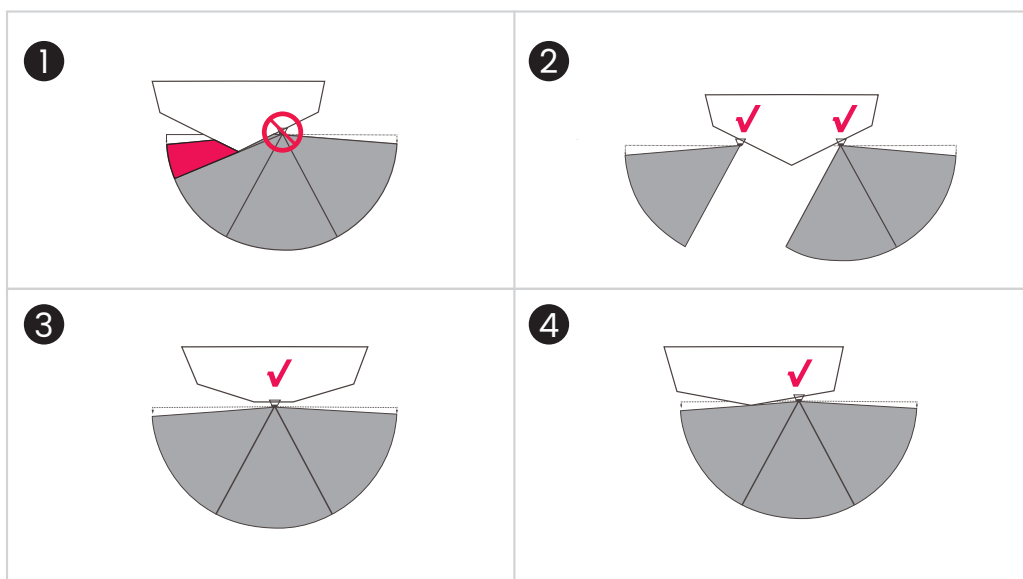
Low signal loss, adjustable operating angle and depth after installation, adjustment method via ratchet. It is recommended to make fine adjustments, one tooth at a time.

Installation Position Considerations

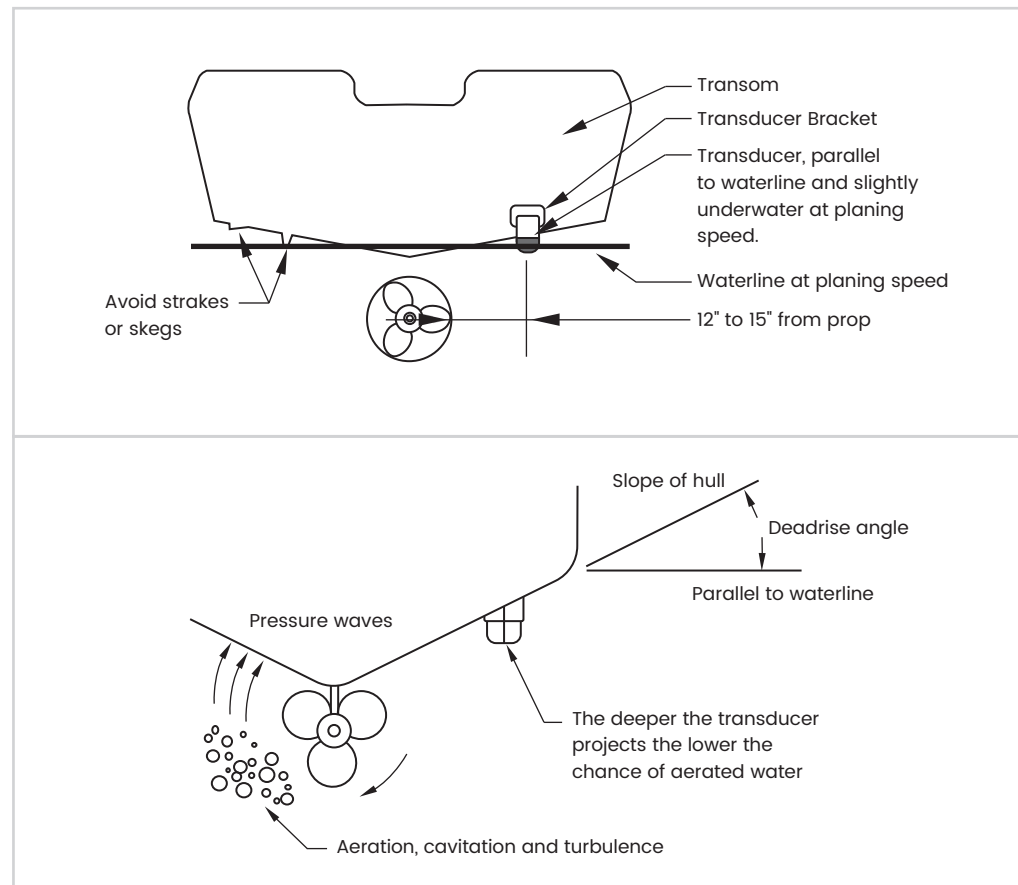
- The transducer can be mounted vertically downward without adjusting the stern angle; if the boat speed exceeds 65 mph and the stern installation position is poor, please consider other technologies or transducer types; the installation position must be at least 15 inches away from the propeller and not in line with the trailer support or rollers.
- Hold the installation support against the stern at the selected position, and align it with a level to ensure it is parallel to the bottom of the boat (waterline).
- If the propeller rotates clockwise when the boat is moving, the transducer should be installed on the starboard side.
- If the propeller rotates counterclockwise when the boat is moving, the transducer should be installed on the port side.
- For best performance, mount the transducer in an area with calm water flow, and avoid areas of high turbulence to prevent premature wear.

- Parts of the hull or equipment attached to the outer hull can block the sonar signal, for optimal results you should mount it at least 38 cm (15 in.) from the propeller and on the downside of the prop wash.

- 1 If your outer hull has a deadrise angle greater than 25 degrees and no flat center area, using a single transducer allows the keel to obstruct a side beam.
- 2 Instead, you should use a pair of transducers, mounting one on each side of the keel.
- 3 If your outer hull has a deadrise angle greater than 25 degrees with a flat center area near the transom, you can use a single transducer mounted in the flat area.
- 4 If your hull has a deadrise angle of less than 5 degrees, you can mount a single transducer on the keel.



- On a stepped-hull vessel, you should mount the transducer at the lowest point before the first step and away from other hull features that generate turbulence.
- The transducer should not be mounted behind the boat's floor, struts, pipes, inlets or drains, or anything that would form bubbles or cause turbulence in the water.
- If the stern is behind the propeller and a turbulence-free area is difficult to find, consider an alternative mounting method.
- If you are using a transom-mounted transducer at high speeds, mount the transducer close to the keel (centerline of the boat).



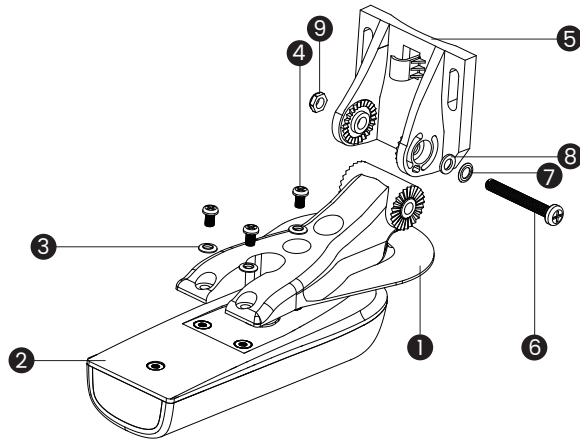
Notice:

- For vessels with stepped hulls, you should consider an in-hull or thru-hull transducer instead of a transom-mount transducer.
- You should select a mounting location that allows space for servicing the transducer after installation.

Install The Mounting Bracket And Transducer Components

Install The Transducer Using The Transom Mounting Support

- Use the included flat washers ③ and screw ④ to secure the support ① to the transducer ②.
- Use bolts ⑥, rubber washers ⑧, flat washers ⑦, and lock nuts ⑨ to install the bracket ⑤ onto the mounting base.



Notice:

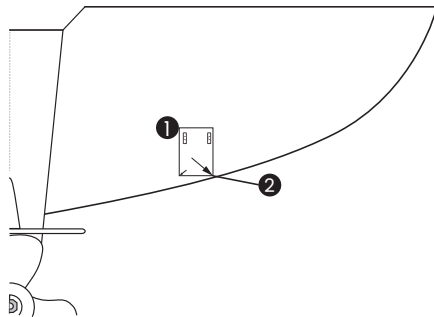
Bolt ⑥ should be tightened appropriately, allowing the transducer to remain secure during high-speed movement of the boat, while also enabling the transducer to bypass obstacles when it encounters them.

Install the Transom Bracket

Notice:

If using screws to install the support onto fiberglass, it is recommended to use a tapered drill bit to drill a countersink hole in the top gel layer. This can prevent the gel layer from cracking when tightening the screws.

- 1 Take out the template sticker.
- 2 Align sticker ① vertically with the installation position on the transom, placing the bottom corner of the sticker ② at the edge of the transom side panel.



- 3 Mark the center positions of the two holes on the sticker.
- 4 Remove the sticker.

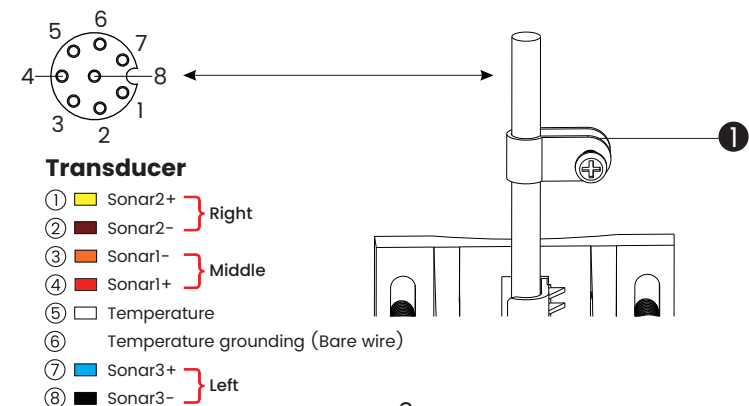
- 5 Stick a circle of transparent tape at a position 18 mm (7/10 inch) away from the tip of the drill bit on the drill bit with a diameter of 4.5 mm (5/32 inch), so as to prevent the drill hole from being too deep.
- 6 If you want to install the support on a fiberglass hull, please apply tape at the location of the hole to reduce the risk of the gel coat cracking.
- 7 Using a 4.5 mm (5/32 inch) drill bit, drill a positioning hole at the marked location to a depth of approximately 18 mm (7/10 inch).
- 8 Apply marine sealant to the included 25 mm screws, and then secure the transducer assembly to the transom.
- 9 After hooking the cable into the lower position, route the cable.

Wiring

- 1 The low-profile connector of the transducer cable needs to be wired to the control head installation position, which can be accessed from the stern of the boat.

- Prioritize using existing wiring channels or conduits within the boat.
- It is strictly prohibited to cut or shorten the cable to avoid damaging the insulation.
- When wiring, keep away from VHF radio antenna cables and tachometer cables to reduce interference.
- The transducer can rotate 90 degrees on the support, and the cable should have some slack.
- Consolidating excess cables in one place and organizing them into a single loop can reduce interference.

- 2 Drill a hole with a diameter of 3.57 mm (9/64 inches) at the stern. Fix Cable Clip ① with a 3.97 mm (1/6.4 inches) self-tapping screw, and then proceed to the next step.



- 3 Drill a 20.32 mm (4/5 inch) diameter hole above the waterline, then fill with silicone sealant after threading the cable.
- 4 Drill a 3.57 mm (9/64 inch) diameter by 15.8 mm (5/8 inch) deep hole at the stern, fill with sealant, then secure the cable clamp with a #8 x 5/8 inch screw (tighten by hand only).

Test Installation

Notice: Before launching the vessel, check for any signs of leakage.

Since seawater is an essential medium for transmitting sonar signals, the sensor must be underwater to function properly. After the vessel is launched, you will not be able to receive depth or distance readings. When launching the vessel, please check for any signs of leakage around the drilled screw holes below the waterline.

Notice2: After adjusting the transducer depth, make fine adjustments in small increments. If the sensor is placed at a position that is too deep, it will seriously affect the performance of the boat and put the sensor at risk of colliding with underwater objects. Please test the transducer installation on the transom in an unobstructed open sea area. When testing the sensor, please pay attention to the surrounding environment.

Testing The Installation Of The Transducer On The Stern Side Panel

- 1 Turn on the fishfinder after the boat is launched.
- 2 Drive the boat at a slow speed. If the fishfinder appears to be working properly, gradually increase the speed while observing the fishfinder.
- 3 If the sonar signal abruptly interrupts or the seabed echo significantly decreases, please note the speed at which this occurs.
- 4 Bring the vessel back to the speed at which the signal was interrupted, make a moderate turn in both directions, while observing the fishfinder.
- 5 If the signal strength increases when turning, adjust the sensor to make it extend another 3 mm (1/8 inch) downward below the vessel's transom plate.
- 6 Repeat steps 2-4 until the issue of weak signal is resolved.
- 7 If the signal strength has not been improved, move the transducer to another position on the transom plate and then repeat the test.

Specifications

Dimensions (L × W × H)	156 (L) × 52 (W) × 30 (H) mm
Operating Temperature Range	0~50 °C (32° ~ 122° F)
Storage Temperature Range	-40~70 °C (-40° ~ 158° F)
Power	600W
Frequency	83/200KHz 445/800KHz
Maximum Depth/Range	83/200KHz: 200m 445/800KHz: 76m
Beam Angle	83/200KHz: 45°/15° 445KHz: 1.5° x 52° 800KHz: 0.7° x 27°

All specifications are subject to change without further notice!



Please consider the environment before printing the manual