





GLUE IN TRANSDUCER INSTALLATION AND ADJUSTMENT INSTRUCTIONS

P/N: XDR-SCM-01-9150; 31.305-2-01; 800.31-305-2-01.23

To ensure safety and many years of trouble-free operation of your product, please read this manual carefully before using this product.

NOTES, NOTICES, AND CAUTIONS

-  **WARNING:** Indicates a potential for property damage, personal injury or death.
-  **IMPORTANT:** Indicates potential damage to the device and tells you how to avoid it.
-  **NOTICE:** Indicates important information that helps you make better use of the device and tells you how to correct a performance problem.
-  **INFORMATION:** Indicates resources to obtain the proper information to help you make the most of your device.

INFORMATION:



Read this manual completely before attempting to use or install your device. Visit our Customer Service Center on our website for advanced troubleshooting and technical support.

NOTICE:



Glue-in mounting of the transducer is **NOT** suitable for all vessels. You **MUST** test the glue-in location on the water prior to using epoxy to permanently affix it to the hull. If you cannot obtain satisfactory readings during on water testing you will need to transom mount the transducer, or switch to a custom transducer.

Vessel Hull Types Acceptable for In-Hull Installation

- High speed boats to increase the performance of the depth sounder.
- Trailer boats to prevent accidental damage to the transducer from trailering.
- Shallow draft boats to prevent accidental damage to the transducer from intentional or unintentional ground.
- **NON-CORED** hulls or aluminum hulls thinner than 1/8”.
- Inboard vessels that have a lot of running gear that creates significant turbulence.

If you think that the included transducer is not suitable for your installation, return to the place of purchase and exchange it for the correct transducer. You can also visit our Customer Service Center at www.hawkeyelectronics.com to contact us or to complete a transducer exchange request to exchange the transducer for one that is specialized for your vessel. You may also call 888-766-7276 to inquire about exchanging the transducer.

GLUING THE TRANSDUCER IN-HULL

IMPORTANT:



Glue-in mounting of the transducer is NOT suitable for all vessels. You MUST test the glue-in location on the water prior to using epoxy to permanently affix it to the hull. If you cannot obtain satisfactory readings during on water testing you will need to transom mount the transducer, or switch to a custom transducer.

NOTICE:



Please use extreme caution when selecting your adhesive as the overall performance and enjoyment of your depth sounder depends heavily on the type of adhesive you use. **USE ONLY A 2-PART, SLOW CURE EPOXY**

Tools and Supplies Required

- Plastic Bag
- Petroleum Jelly
- 30 Grit Sandpaper
- 2 Part Epoxy Adhesive
- Tie Wraps

STEP 1

Choosing a Mounting Location

NOTICE:

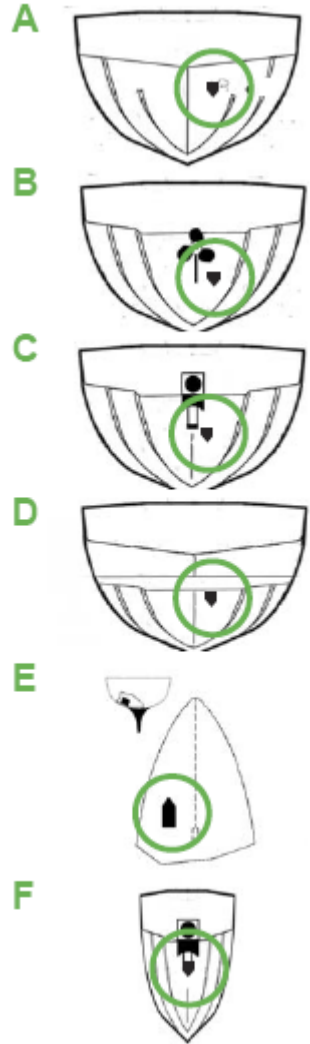


If your hull is not SOLID fiberglass or up to 1/8th" Aluminum, this transducer CAN NOT be mounted in-hull. Refer to the Transom Mounting Instructions, visit our Customer Service Center on our website, or call 888-766-7276 to inquire about exchanging the transducer.

Since the hull absorbs acoustic energy, transmitting through the hull reduces the transducers performance. Fiberglass hulls are often reinforced in places for added strength. These cored areas contain wood or structural foam which are poor sound conductors. To achieve optimal performance, find a location where the hull's laminate is solid (not cored).

To obtain the best performance, the transducer should be mounted in a location where the water flow beneath the hull is aeration and turbulence-free. Try to mount the transducer as close to the centerline of the boat as possible. Consult the boat manufacturer for the best in-hull transducer placement. If this information is unavailable, follow the guidelines below.

- A. Outboard, Inboard/Outboard Powerboats - Install as close to the stern and centerline as possible.
- B. Inboard Powerboats - Install forward of the propeller(s), shaft(s), and running gear, as close to the centerline as possible. Keep in mind that many Ski Boats have fins that you need to avoid mounting near.
- C. Jet Boats - Install forward of the intake grate, as close to the centerline as possible.
- D. Stepped Hulls - Install forward of the step, as close to the centerline as possible.
- E. Sailboats - Install near the centerline of the hull and forward of the leading edge of the keel.
- F. Personal Watercraft (PWC) - Install forward of the intake grate, as close to the centerline as possible (*under the engine*).



Mounting Location “DONT’s”

NOTICE:



To deliver consistent, accurate readings, the transducer must have a continuous supply of non-turbulent water. Do not mount the transducer in an area of turbulence or bubbles.

Never install the transducer where the boat may be supported during trailering, launching, hauling, or storage. Hull flexing may cause air pockets to form in the 2 Part Epoxy used to bond the transducer to the hull which over time will reduce the performance of the depth sounder.

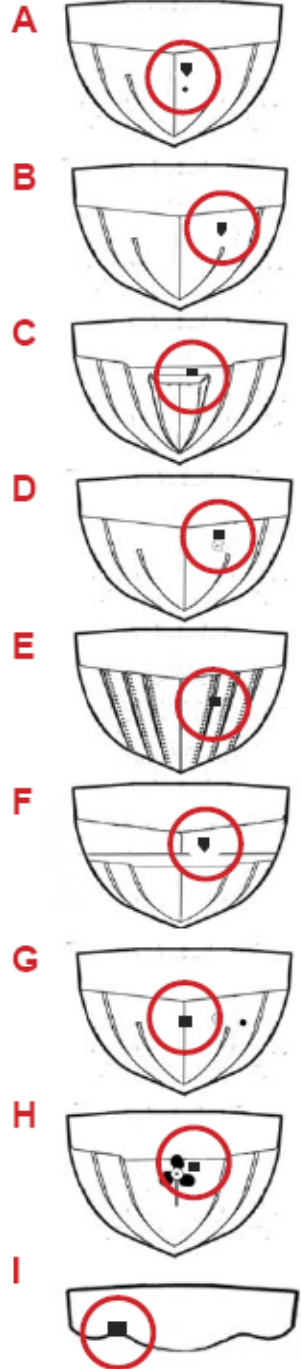
WARNING:



Never install the transducer without testing the installation as per Step 2 below.

NEVER MOUNT:

- A. Behind water intakes, discharge openings or thru hull fittings.
- B. Behind strakes, struts, or hull irregularities.
- C. Behind transom steps or pockets.
- D. Behind eroding paint, hull deformities, or marine growth.
- E. Behind rivets or strakes on aluminum boats.
- F. Behind the step on stepped hulls.
- G. Directly on the “V” in the hull.
- H. Behind propellers or anywhere propeller turbulence will interrupt the flow of “clean” water to the transducer.
- I. In areas where the hull has a reverse angle.



NOTICE:



To get a good “view” of the mounting location, while the vessel is out of the water, position yourself at the transom and look at the bottom of the hull towards the bow. Using illustrations A thru I, note anything that could interrupt the clean flow of water to the transducer mounting location.

STEP 2

Test the Selected Location

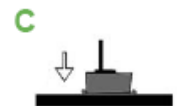
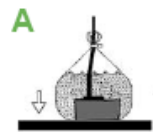
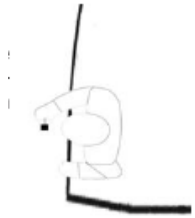
1. Anchor/Moor the vessel in a body of water away from other boat traffic.

NOTICE:



Turn OFF all other sonar devices on your boat and locate the vessel at least 50 feet from the nearest vessel.

2. Plug the transducer cable into the back of the depth sounder display and turn the display ON. Once the display is turned ON, it will display the test sequence and then display the current depth. Make sure the Keel Offset feature is turned OFF.
3. Place the transducer close to your ear (do not press up against your ear). If the transducer is properly connected it will be emitting a ticking sound (*similar to a wrist watch*). If you do not hear this ticking sound, recheck your connections or visit our Customer Service Center for advanced troubleshooting.
4. Hold the transducer over the side of the vessel so that it is the same distance below the water surface as it would be at the in-hull mounting location. Note the depth that is being displayed on the Depth Sounder.

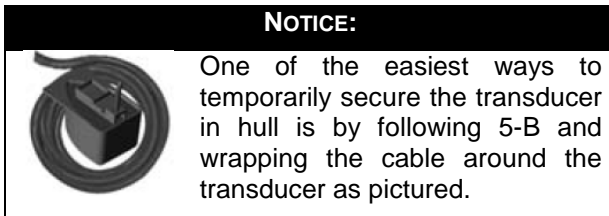


NOTICE:



Certain environmental conditions may restrict the performance of the depth sounder. Extremely dirty water, very soft bottom, high speeds, deep water, or a combination of the above will result in incomplete or inaccurate readings. If “-- -” appears on the display, relocate the vessel to cleaner water.

5. Remove the transducer from the water. Use one of the methods below to test the depth readings with the transducer at the desired in-hull location selected in Step 1.
 - A. If the hull surface is not smooth, sand it with 30 grit sandpaper until a smooth surface is obtained. Partially fill a thin plastic bag with water, place the transducer inside and close it tightly with a tie wrap. Wet the surface of the hull and press the transducer face against the hull through the bag. Proceed to # 6.
 - B. If the transducer will be located in an area in the hull that holds water, place the transducer against the hull and allow bilge water to cover the surface where the transducer touches the hull. Proceed to # 6.
 - C. If the hull surface is not smooth, sand it with 30 grit sandpaper until a smooth surface is obtained. Coat the face of the transducer with petroleum jelly and press it against the hull with a twisting motion. Use duct tape to hold it in place. Proceed to # 6.



6. If “---” readings appear or the readings are noticeably different from the depth displayed when the transducer was hung over the side of the boat, you will need to find another location. If the readings are similar mark the spot in the hull and proceed to # 7.
7. Temporarily anchor the transducer on the marked spot using duct tape.
8. Remove the vessel from its mooring and operate it at idle speeds while getting to know the functions and performance of the depth sounder.
9. Gradually increase the boat speed and observe the depth readings (*make sure you stay in water between 2.5 and 200 feet deep*).
10. If “---” readings appear:
 - Put the vessel in a slow turn. If “---” disappears when turning, the transducer’s position probably needs adjustment because it is in aerated water.
 - If “---” does not disappear while turning, relocate the transducer using any one of the methods in # 5 and repeat #5 thru #10.
 - If following 5-B, make sure that your “---” readings are not caused by the bilge water flowing away from the transducer face while turning, accelerating or decelerating.

11. **DO NOT** proceed to the next step until you are satisfied with the readings. If you have difficulties please visit our Customer Service Center on our website or call 888- 667-2767 for technical assistance.

STEP 3

Gluing the Transducer In Place

APPROVED EPOXY	I N C O R R E C T
 <p data-bbox="86 662 298 716">2 Part, Slow Cure, Clear Epoxy</p>	 <p data-bbox="338 578 976 727">ANY ADHESIVE OR GLUE THAT IS NOT 2 PART, SLOW CURE EPOXY (<i>Silicon Sealant, Weather Sealants, "Rubbery" Caulks, Construction Adhesives, 5 Minute or Quick Cure Epoxies, Rubber Cements, Colored Epoxies, etc</i>)</p>

1. All surfaces to be bonded must be smooth, clean and dry. If the hull surface is not smooth, sand it with 30 grit sandpaper until a smooth surface is obtained in an area a little larger in diameter than the length of the transducer.
2. Clean and dry both the selected area and the face of the transducer with a weak solvent to remove any dust, grease or oil.
3. Prepare the adhesive as per the directions supplied with the adhesive (*DO NOT mix the epoxy on the transducer*).
4. Apply a generous amount of adhesive to the entire face of the transducer (side opposite from the cable) and the inside of the hull.
5. Press the transducer face onto the hull with a twisting motion to expel all air bubbles. (If the hull is slanted, temporarily secure the transducer in place with duct tape.)



Allow the adhesive to cure as per the manufacturer's instructions.

NOTICE:



Try to align the transducer so that the point is aimed at the bow of the vessel.

STEP 4

Routing the Cable

1. After the adhesive has cured, route the cable the mounting location of the depth sounder transducer plug. To reduce electrical interference, separate the transducer cable from other electrical wiring. Coil any excess cable and secure it in place using tie-wraps.
2. Plug the cable into the corresponding cable on the Digital Depth Sounder display.



STEP 5

Testing and Troubleshooting the Glue-In Installation

NOTICE:



High Speed performance of the depth sounder may require extensive adjustment and testing to find the best transducer mounting location. This transducer has been tested to perform up to 70 MPH in an In-Hull application. Not all boat hull configurations will allow for this type of performance. If you are not satisfied with the performance of the depth sounder, it is recommended that you seek the advice of a professional marine electronics installer.

To Test Your Transducer Installation:

1. Make sure that the display is functioning properly by following the display testing procedures in the Display Installation and Operation Manual.
2. Place the vessel in the water. Once the display is turned ON, it will display the test sequence and then display the current depth.

NOTICE:



If "---" appears on the display, make sure that there is at least 2.5 feet of water between the bottom of the transducer and the bottom of the water body. Also make sure that the Keel Offset feature is turned OFF.

3. Become familiar with the depth sounders function and performance at idle speeds.
4. Gradually increase the boat speed and observe the depth readings (*pay attention to minimum and maximum depth capabilities*).
5. If you are not happy with the readings there are very little adjustments that you can do at this time. You will need to remove the transducer and return to Step 1 of the Glue-In Instructions.

NOTICE:



Certain environmental conditions may restrict the performance of the depth sounder. Extremely dirty water, very soft bottom, high speeds, deep water, or a combination of the above will result in incomplete or inaccurate readings. Please refer to Steps 1 & 2 of this section to minimize the effects of these conditions. If you are not happy with the performance of your depth sounder, please visit our website or call 888-766-7276 for technical support. Rest assured that this depth sounder is engineered to the highest standards and is part of the best selling family of depth sounders in the world. It is highly likely that your dissatisfaction is due to improper installation and/or setup, and our technical support resources can get your system working properly.

To Remove the Transducer:

1. Place a piece of wood against the base of the transducer.
2. Gently "TAP" the piece of wood with a hammer. DO NOT strike the transducer directly.
3. Once the transducer is removed from the hull, sand the excess epoxy adhesive off with sandpaper (*minor sandpaper scratches will not harm the transducer*). DO NOT use chemicals to remove the excess epoxy



TROUBLESHOOTING AND FREQUENTLY ASKED QUESTIONS

24-Hour Technical Support is available online at hawkeyelectronics.com. Search our online Knowledgebase for the latest troubleshooting and FAQ's, or post your own question for our support staff. For one-on-one support please email customerservice@norcrossmarine.com.

Sonar Cross Talk:

If you experience incorrect depth readings on your Digital Depth Sounder display, but nothing on another fish finder screen on the same boat (or vice versa) then you are experiencing sonar cross-talk interference. The only real solution is to move the transducers further away from each other. This can help keep the transducer cones from intersecting, but because cones get wider as the depth increases, the problem can not usually be completely solved by position only. Changing one of the sounders to another model that runs on a different frequency will solve the problem.

Using A Non-Standard Transducer:

You may be able to use a transducer that is currently installed in your watercraft or a specialized transducer. You need to be sure that the transducer runs on 200Khz and is able to put out 250 watts of transmitting power. If you are unsure of the specifications please contact the manufacturer. If you need to attach a non-standard transducer to the Digital Depth Sounder display, order part # 8000-90 from our website or toll free at 888-766-7276. Strip back the rubber cable cover 1" (28 mm) exposing the three internal wires (blue, white, and bare) on your transducer. Using a soldering iron, solder the blue, white and bare wires from the 8000-90 extension cable to the corresponding wires on your transducer. Using electrical tape, or heat shrink tubing make certain that the soldered connections are completely sealed and protected against accidental electrical interference and corrosion. Cutting the plug off the Digital Depth Sounder display will void the warranty.

Poor Performance:

If you are not happy with the performance of your depth sounder, please visit our website or call 888-766-7276 for technical support. Rest assured that this depth sounder is engineered to the highest standards and is part of the best selling family of depth sounders in the world. It is highly likely that your dissatisfaction is due to improper installation and/or setup and our technical support resources can get your system working properly.

WARNING:



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