HUMMINBIRD® MEGA IMAGING™ PLASTIC THRU-HULL TRANSDUCER INSTALLATION GUIDE

532551-1_A

Overview

Read the instructions in this transducer guide completely to understand the mounting guidelines before starting the installation.

NOTE: This type of transducer installation is not recommended for trailerable boats.

NOTE: This transducer requires drilling a hole in the hull of the boat; therefore, installation should be performed by a qualified marine technician.

Supplies: In addition to the hardware supplied with your transducer, you will need a drill, a small drill bit for the pilot hole, a 1 1/8" (2.8 cm) hole saw, a level, a Phillips-head screwdriver, and marine-grade silicone sealant. You may also need extension cables and hardware for routing the cable to the control head.

Installation

Perform the procedures in the following sections to install the transducer on your boat.

1. Testing the Transducer Prior to Installation

Prior to installation, test the transducer to make sure that no damage occurred during shipping.

1. Confirm the control head is connected to power. See your control head installation guide for instructions.
2. Connect the transducer cable connector to the transducer (or sonar) port on the control head, or to an available port on a black box sonar (depending on your system configuration).
3. **Power On:** Press the POWER key to turn on the control head.

   If the transducer is detected, the control head will start Normal mode.
4. Select a 2D Sonar View to display on-screen.

   NOTE: See your control head operations manual for more information.
5. Lower the transducer into the water.

   If the bottom is visible on-screen with a digital depth readout, the transducer is working properly.
6. After confirming proper operation, power off the control head, and unplug the transducer cable connector from the control head or black box sonar.

2. Determining the Transducer Mounting Position

The MEGA Side Imaging™ transducer has specific mounting requirements. Use the information in the following section to find the best mounting location for the transducer.

Outside the Boat: The best location for the transducer will be aft midship, as close to the centerline of the boat as possible. The transducer should be mounted forward of the propellers on inboard boats, and separated adequately from other transducers, strakes, rivet lines, or other protrusions. Make sure there is nothing in front, behind, or to the side of the transducer that is closer than 12" (30.5 cm).

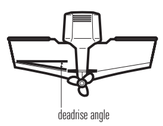
WARNING! Do NOT install the transducer in line with the engine intake.

Inside the Boat: There must be room to access the mounting location for installation and cable routing.

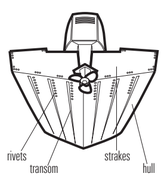
Deadrise: Another consideration is the angle of deadrise.

- The transducer, when mounted, should point straight down. If the selected mounting location has a hull deadrise of 2 degrees or greater, the included leveling block should be used to level the transducer housing and direct the sonar signal straight down.
- If you need to use the leveling block, make sure that the inside surface of the hull is smooth enough to seat the leveling block securely.

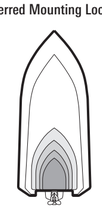
Thru-Hull Installation



Areas of Possible Turbulence



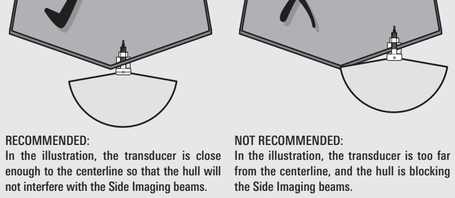
Preferred Mounting Location



MEGA Side Imaging: The MEGA Side Imaging transducer has some special requirements because of its side viewing capabilities.

- The MEGA Side Imaging transducer must not have anything obstructing the "view" of the side looking beams. For example, nothing can be in the sight line of these beams (not a hull, motor, or other transducer, etc). See the illustration below.
- In order for the side beams to be displayed accurately, the transducer must be mounted so that it is looking straight down in the water when the boat is in the water.

MEGA Side Imaging - Install the transducer so the beams are not obstructed.



RECOMMENDED:
In the illustration, the transducer is close enough to the centerline so that the hull will not interfere with the Side Imaging beams.

NOT RECOMMENDED:
In the illustration, the transducer is too far from the centerline, and the hull is blocking the Side Imaging beams.

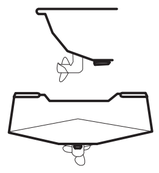
NOTE: Side Imaging® sonar is best performed at boat speeds from 2 to 6 mph, and it is not recommended for high-speed operation as gaps between strips of information can appear. However, the transducer can support traditional 2D sonar and Down Imaging® sonar at higher speeds. Rough seas and air bubbles can also affect the reading of the Side Imaging transducer.

Cable Route: Test route the transducer cable connector to the control head (or black box sonar) to confirm that the cable is long enough for the planned route. Your boat may have a pre-existing wiring channel or conduit that you can use for the transducer cable. See section ***6: Routing the Cable*** for requirements. Extension cables are also available. Contact Customer Service for more information.

Installation Scenarios for Consideration:

- **Flat Hull, One Transducer:** Locate a flat area on the bottom of the hull, forward of where the propeller shaft comes out of the hull. Make sure there is nothing lower than this location to the right or left.
- **V-shaped Hull, Two Transducers:** Install two thru-hull transducers, one on each side of the V. Connect the transducers with a Y-Cable.
- **Two Back Engines, Two Transducers:** Install two thru-hull transducers outboard from the dual engines. Connect the transducers with an Y-Cable.

Flat Hull, One Transducer



V-shaped Hull, Two Transducers
OR
Two Back In-Board Engines, Two Transducers

NOTE: Installations with two transducers require a Y-Cable, which vary based on the control head model. SOLIX™ models use the SM SILRY cable. HELIX® models use the MSILR Y cable.

NOTE: The Y-Cable, extension cables, and additional MEGA Side Imaging Thru-Hull Transducers must be purchased separately. Contact Customer Service for details.

3. Drilling the Hole and Preparing the Leveling Block

Follow the instructions below for the installation type that matches your hull and deadrise.

CAUTION! Use only the leveling block included with this transducer. Do NOT use a wooden leveling block, as any swelling of the wood might cause the plastic on the transducer to shatter. Replacement leveling blocks are available from Customer Service.

NOTE: A separately-purchased fairing block can also be used to create a hydrodynamic waterflow around the transducer body. The design and fabrication of this block varies greatly with different hull shapes; therefore, it should be customized by a qualified marine technician.

Standard Installation (Flat Hull, Deadrise less than 2°):

For an installation that needs to minimize the impact of a small obstruction, but where the deadrise is less than 1 to 2 degrees, use the included leveling block (uncut), and mount it outside the hull.

1. From the outside of the hull, drill a small pilot hole (smaller than the centering bit of your drill bit or hole saw), at the mounting location you selected in section 2. **Drill the hole perpendicular to the hull.**
2. Use the pilot hole (from the outside of the hull) to drill a 1 1/8" (2.8 cm) hole that is sized to fit the threaded stem of the transducer. **Drill the hole perpendicular to the hull.**
3. Thoroughly clean and deburr the drilled hole and clean the outside of the hull.
4. The leveling block will be installed (uncut) on the outside of the hull. Proceed to ***Section 4: Attaching the Transducer.***

Alternate Installation (Deadrise more than 2°):

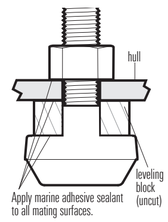
For an installation where the deadrise is more than 2 degrees, use the included leveling block, cut at the appropriate angle, to compensate for the deadrise.

1. From the outside of the hull, drill a small pilot hole (smaller than the centering bit of your drill bit or hole saw), at the mounting location you selected in section 2. **Drill the hole perpendicular to the waterline.**
2. Use the pilot hole (from the outside of the hull) to drill a 1 1/8" (2.8 cm) hole that is sized to fit the threaded stem of the transducer. **Drill the hole perpendicular to the waterline.**
3. Thoroughly clean and deburr the drilled hole and clean the outside of the hull.
4. **If the hull angle is greater than 2 degrees,** cut the included leveling block and use both pieces to level the transducer. The block should be cut to match the angle of the deadrise of the hull.
   - Cut the leveling block into two equal pieces: one which mounts outside the hull and is shaped to match the profile of the transducer, and one which mounts inside the hull and provides a level surface for the fasteners.
   - The thinnest wall of the outside leveling block must be at least 1/8" (3 mm).
   - The leveling block included with your transducer can accommodate a maximum deadrise angle of 25 degrees.
5. The leveling block will be installed (cut) on the inside and outside of the hull. Proceed to ***Section 4: Attaching the Transducer.***

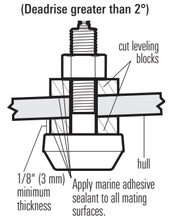
4. Attaching the Transducer

1. Feed the transducer cable through the drilled hole, then temporarily install the transducer to check the fit.
2. Apply a generous amount of marine-grade silicone sealant or slow-curing epoxy inside the drilled hole and along the mating surfaces of the transducer housing and leveling block.
3. Proceed to the instructions that correspond with your installation type (control head model) and transducer orientation.

Standard Installation (Flat Hull)



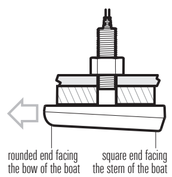
Alternate Installation (Deadrise greater than 2°)



SOLIX Series

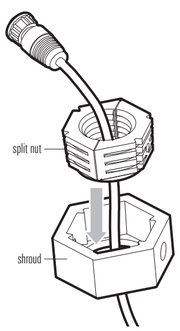
1. Make sure the rounded end of the transducer is facing the bow, pointing forward, and parallel to the centerline.
2. Insert the transducer into the drilled hole from outside the boat with the leveling block(s) installed according to your installation type.
3. Hold the shroud horizontally with the inside teeth facing up. Thread the cable connector through the shroud. See the illustrations below.
4. Fit the split nut pieces to each other with the cable in the center. The ridged side of the split nut should face down.
5. Slide the split nut into the shroud so that the assembly is flat. Install the two screws into the shroud holes to secure the assembly. Hand tighten only.

Correct Orientation of Transducer

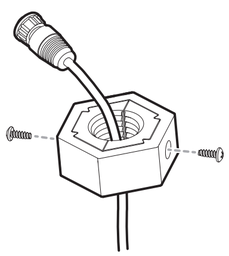


SOLIX Series

Inserting the Split Nut into the Shroud



Installing the Screws



HELIX Series

1. Make sure the rounded end of the transducer is facing the bow, pointing forward, and parallel to the centerline.
2. Insert the transducer into the drilled hole from outside the boat with the leveling block(s) installed according to your installation type, then install the nut onto the threaded stem from inside the boat.

5. Finishing the Installation

1. Hand tighten the split nut onto the threaded transducer stem ONLY until the assembly is firmly seated, then tighten NO MORE than 1/8 of a turn extra.

   WARNING! To avoid damage, do not overtighten the nut.

   NOTE: This type of transducer is directional in nature and must be aligned with the front of the boat (the direction of travel) and parallel to the centerline. Failure to align the transducer properly will result in incorrect bottom readings and incorrect fish locations. (See the illustrations for orientation).
2. Remove the excess adhesive sealant from the outside of the hull to ensure smooth water flow over the transducer.

6. Routing the Cable

The transducer cable must be routed to the point where the control head (or black box sonar) is mounted. Your boat may have a pre-existing wiring channel or conduit that you can use for the routing.

1. Route and secure the transducer cable connector to the control head or black box sonar (depending on your system configuration), avoiding areas where it may be damaged or interfere with normal boating operations.

   CAUTION! Do not cut or shorten the transducer cable, and try not to damage the cable insulation. Route the cable as far as possible from any VHF radio antenna cables or tachometer cables to reduce the possibility of interference. If the cable is too short, extension cables are available to extend the transducer cable up to a total of 50' (15 m). For assistance, contact Customer Service for more information.

   CAUTION! Do NOT mount the cables where the connectors could be submerged in water or flooded. If cables are installed in a splash-prone area, it may be helpful to apply dielectric grease to the inside of the connectors to prevent corrosion. Dielectric grease can be purchased separately from a general hardware or automotive store.
2. Connect the transducer cable to the transducer port on the control head. See your control head installation guide for details.

   The ports are labeled and the connectors are keyed to prevent incorrect installation, so do not force the connector into the wrong port.
3. The control head will automatically detect the transducer and configure it with the control head. For additional configuration information, see your control head operations manual.

Maintenance

If your transducer remains in the water for long periods of time, slush, algae and other marine growth can reduce the effectiveness of the transducer. Periodically clean the face of the transducer with a mild, marine-safe and plastic-safe soap or solution.

If your transducer remains out of the water for a long period of time, it may take some time to wet the transducer after it is returned to the water. Small air bubbles can cling to the surface of the transducer and interfere with proper operation. These bubbles will dissipate with time, or you may wipe the face of the transducer with your fingers after the transducer is in the water.

Important Notices

WARNING! This device should not be used as a navigational aid to prevent collision, grounding, boat damage, or personal injury. When the boat is moving, water depth may change too quickly to allow time for you to react. Always operate the boat at very slow speeds if you suspect shallow water or submerged objects.

WARNING! Disassembly and repair of this electronic unit should only be performed by authorized service personnel. Any modification of the serial number or attempt to repair the original equipment or accessories by unauthorized individuals will void the warranty.

WARNING! This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

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WEEE compliance may not be required in your location for electrical & electronic equipment (EEE), nor may it be required for EEE designed and intended as fixed or temporary installation in transportation vehicles such as automobiles, aircraft, and boats. In some European Union member states, these vehicles are considered outside of the scope of the Directive, and EEE for those applications can be considered excluded from the WEEE Directive requirement.

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