

## Thank You

Thank you for choosing Humminbird®, the #1 name in marine electronics. Humminbird has built its reputation by designing and manufacturing top-quality, thoroughly reliable marine equipment. Genuine Humminbird accessories offer the opportunity to upgrade and expand the capabilities of your Humminbird product.

**NOTE:** Your transducer may not look exactly like the transducer shown in the illustrations, but it will mount in exactly the same way.

Your Humminbird is designed for trouble-free use in even the harshest marine environment. In the unlikely event that your Humminbird does require repairs, we offer an exclusive Service Policy. For complete details, see the separate warranty card included with your unit.

Contact Humminbird Customer Service at [humminbird.com](http://humminbird.com) or call **1-800-633-1468**.

## Installation Overview

Following are instructions for the installation of this accessory. Before you start the installation, we encourage you to read these instructions carefully in order to get the full benefit from your Humminbird accessory.

**Customer Service:** If you find that any items are missing from your installation kit, visit our Web site at [humminbird.com](http://humminbird.com) or call Customer Service at **1-800-633-1468**.

**Supplies:** In addition to the hardware supplied with your transducer, you will need a powered hand drill and various drill bits, various hand tools, including a ruler or measuring tape, level, pen or pencil, safety glasses and dust mask, and marine-grade silicone sealant.

**NOTE:** Due to the wide variety of hulls, only general instructions are presented in this installation guide. Each boat hull represents a unique set of requirements that should be evaluated prior to installation. It is important to read the instructions completely and understand the mounting guidelines before beginning installation.

## Installation

There are a number of ways to install a transducer on your boat. The transom mount installation provides the following:

- Least loss of signal since the transducer is mounted outside the boat hull.
- Allows adjustment of both running angle and depth after the transducer is mounted, which enables you to tune the installation for best results.
- The mounting hardware is designed to pivot the transducer body out of the way should the boat strike debris in the water, or when trailering.

### 1. Test the Transducer Prior to Installation

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

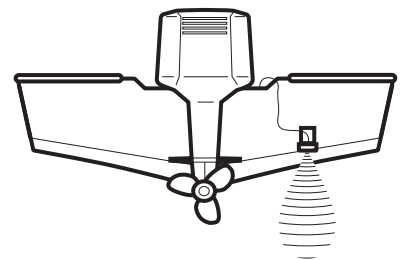
1. Connect the transducer cable connector to the control head or black box sonar (depending on your system configuration).

**NOTE:** If using a black box sonar, confirm it is connected to the control head.

2. Power on the control head. Select a sonar view to display on-screen.

**NOTE:** See your control head operations manual for more information.

Transom Mounted Transducer



## Side Imaging® Transducer

532118-1\_B

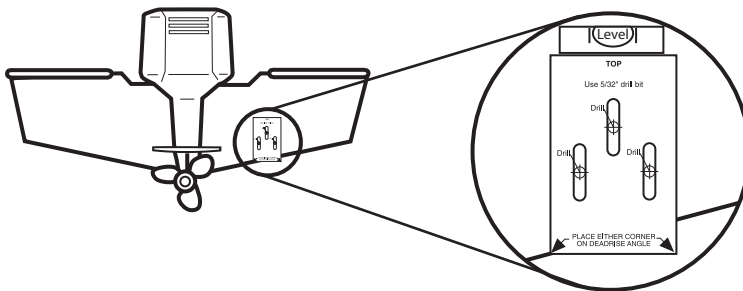
3. Hold the transducer in the water over the side of the boat to confirm proper operation. If the transducer is working properly, you should be able to see the bottom on the control head display. The bottom image should be relatively strong and there should be detailed structure on the display.
4. After confirming proper operation, unplug the transducer cable connector from the control head or black box sonar.

## 2. Locate the Transducer Mounting Position

You must first determine the best location on the transom to install the transducer.

**Turbulence:** It is very important to locate the transducer in an area that is relatively free of turbulent water. Consider the following to find the best location with the least amount of turbulence:

- As the boat moves through the water, turbulence is generated by the weight of the boat and the thrust of the propeller(s) - either clockwise or counter-clockwise. This turbulent water is normally confined to areas immediately aft of ribs, strakes or rows of rivets on the bottom of the boat, and in the immediate area of the propeller(s). Clockwise propellers create more turbulence on the port side. On outboard or inboard/outboard boats, it may be best to locate the transducer at least 15" to the side of the propeller(s). See *High-Speed Operation* for details.
- The best way to locate turbulence-free water is to view the transom while the boat is moving. This method is recommended if maximum high-speed operation (up to 65 mph) is a high priority. If this is not possible, select a location on the transom where the hull forward of this location is smooth, flat and free of protrusions or ribs.
- On boats with stepped hulls, it may be possible to mount the transducer on the step. Do not mount the transducer on the transom behind a step to avoid popping the transducer out of the water at higher speeds. The transducer must remain in the water for the control head to maintain the sonar signal.
- If the transom is behind the propeller(s), it may be impossible to find an area clear from turbulence, and a different mounting technique or transducer type should be considered.
- If you plan to trailer your boat, do not mount the transducer too close to trailer bunks or rollers to avoid moving or damaging the transducer during loading and unloading of the boat.

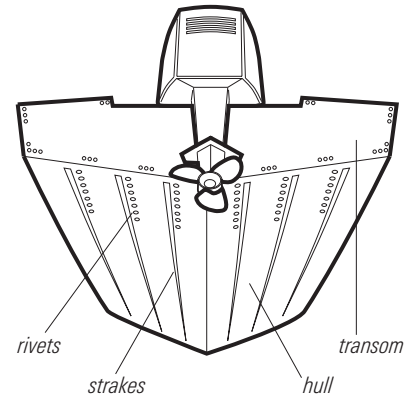


Find a turbulence-free location that is not in line with trailer bunks or rollers.

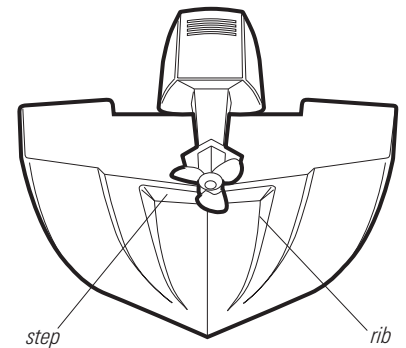
**High-Speed Operation (up to 65 mph):** Side Imaging sonar is best performed at boat speeds from .5 to 8 mph, and is not recommended for high-speed operation as gaps between strips of information can appear. However, the transducer can support traditional 2D sonar and Down Imaging™ sonar at higher speeds (up to 65 mph).

**NOTE:** Traveling over 65 mph with the transducer in the water is not recommended with the transom mount transducer, as damage might occur. If you require a high-speed application (above 65 mph) and cannot find a transom mount location that will work for your boat hull, a different mounting technique or transducer type should be considered. See the FAQ (Frequently Asked Questions) section of our Web site at [humminbird.com](http://humminbird.com) or call Customer Service at 1-800-633-1468.

### Areas of Possible Turbulence



### Stepped Hull



## Side Imaging® Transducer

532118-1\_B

If you have installed or are planning to install a second transducer in addition to this Side Imaging transducer, you must determine which transducer will be used as the primary source for traditional 2D sonar when operating the boat at high speeds (up to 65 mph). There are special mounting requirements for the Side Imaging transducer depending on if it will be in the water or out of the water during high-speed operation.

- If you plan to use the Side Imaging transducer as the primary source for traditional 2D sonar and Down Imaging sonar during high speed operation (up to 65 mph), mount the transducer at least 15" from the center of the engine with an unobstructed view on both sides of the transducer (see *Side Imaging* and the illustration *Transducer Mount Position*).
- If you plan to use a second transducer (such as the XNT 9 20 T) as the primary source for traditional 2D sonar only during high-speed operation (up to 65 mph), mount the Side Imaging transducer where it will not be in direct water flow. For this installation, you may install the transducer less than 15" from the center of the engine. Review the following mounting alternatives:

- The Side Imaging transducer can be mounted on or near the centerline of the boat and higher on the transom to prevent direct contact with water flow under the boat at high speeds. Confirm that the transducer is low enough on the transom to be submerged in the water at low speeds. It should not come into contact with the motor when it is raised or lowered.

**NOTE:** Mounting the Side Imaging transducer higher on the transom should not create turbulence that affects the engine's water intakes. Contact your dealer to verify your individual boat setup.

- The Side Imaging transducer can be mounted to the jack plate. Contact your dealer for more information about the brands of jack plates that will accommodate this type of installation.

**NOTE:** A Y-cable or transducer switch may be required to connect the Side Imaging transducer to the second transducer. The Y-cable and transducer switch require separate purchases. To purchase accessories or any additional equipment, go to [humminbird.com](http://humminbird.com) or contact Customer Service at 1-800-633-1468.

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

- The Side Imaging transducer must NOT have anything obstructing the 'view' of the side looking beams. For example, nothing can be in the line of sight of these beams (not a hull, motor, additional transducer, etc.). See the illustration *Transducer Mount Position*.

**NOTE:** You may need to tilt the motor up and out of the way when using the side looking beams.

- In order for the side beams to be displayed accurately, the transducer must be mounted parallel with the waterline. This positioning allows the beam elements to point straight down without deadrise adjustment.

**NOTE:** Rough seas, high speed, and air bubbles can also affect the reading of the Side Imaging transducer.

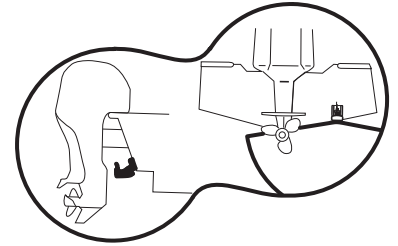
### 3. Mount the Bracket

In this procedure you will mount the bracket, using the mounting template provided as a guide. This template allows you to mark where the mounting holes should be drilled.

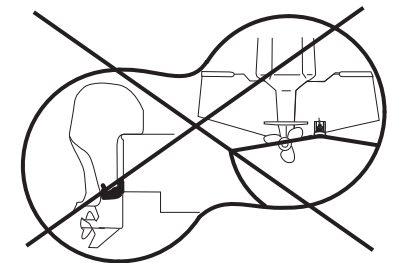
1. Cut out the transducer mounting template from this sheet. Match the mounting bracket screw slots to the template screw slots.

#### Transducer Mount Position

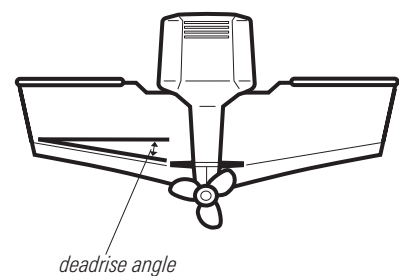
**Unobstructed View:** The jack plate gives the transducer safe distance from the motor and turbulence. The Side Imaging has a clear view side-to-side.



**Obstructed View:** The transducer is too close to motor turbulence, and the Side Imaging view is blocked by the motor. The view cannot extend from side-to-side.



#### Deadrise



## Side Imaging® Transducer

532118-1\_B

- Hold the template on the transom of the boat in the location you have selected. Align the template vertically, matching the lower edge of the transom with the bottom corner of the template.

**NOTE:** If your propeller moves clockwise as the boat moves forward (as you're facing the stern of the boat from behind), mount the transducer on the starboard side, and use the bottom left corner of the template. If your propeller moves counter-clockwise as the boat moves forward (as you're facing the stern of the boat from behind), mount the transducer on the port side, and use the bottom right corner of the template.

- Continue to hold the template on the transom of the boat, and use a pencil or punch to mark where to drill the three mounting holes shown on the template.
- Using a 5/32" bit, drill the three holes only to a depth of approximately 1".

**NOTE:** On fiberglass hulls, it is best to use progressively larger drill bits to reduce the chance of chipping or flaking the outer coating.

- Use a marine-grade silicone sealant to fill the drilled holes, especially if the holes penetrated the transom wall.
- Align the metal mounting bracket with the mounting holes. The center slot of your mounting bracket should be above the two outer slots. Insert the three 1" flat head wood screws into the drilled holes, but do not completely tighten.

**NOTE:** The mounting bracket and all other hardware supplied is top quality stainless steel for maximum strength and corrosion protection.

## 4. Assemble the Transducer

In this procedure you will attach the pivot to the transducer using the hardware provided.

- Attach the pivot to the transducer body as shown in the illustrations using the square nuts, toothed washers, and two 1/4–20 x 5/8" machine screws. The square nuts will be prevented from rotating by the pocket in the back of the pivot. The toothed washers must fit on the inside of the transducer ears, between the pivot and the ears.

**NOTE:** An Allen wrench is provided which fits all of the 1/4–20 screws, but do not fully tighten the screws at this time.

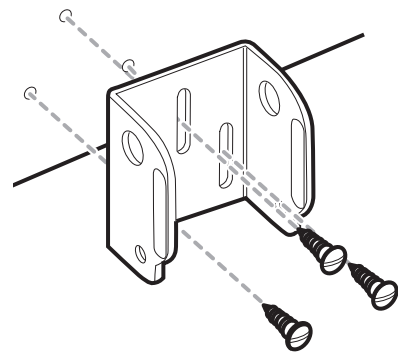
## 5. Attach the Transducer to the Bracket

- Slide the assembled transducer into the metal bracket from the bottom, aligning the large hole at the top of the bracket with the hole in the pivot.
- Insert the headed pin through the pivot holes in the bracket and pivot. The headed pin can be inserted from either side of the bracket.
- Place the nylon washer over the opposite end of the headed pin. Place the stainless washer over the 1/4–20 x 5/8" screw threads, then insert into the opposite end of the headed pin and finger tighten only. The screw has a thread locking compound on the threads to prevent loosening, and should NOT be fully tightened until all adjustments are made.

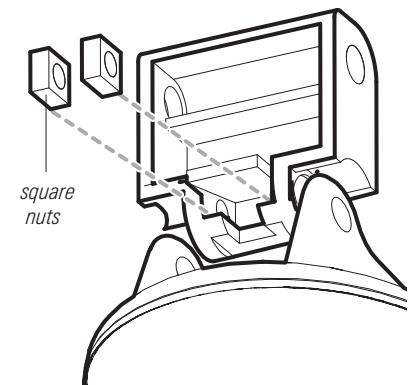
## 6. Running Position Adjustment

The running position of the transducer is now completely adjustable. Subsequent adjustment may be necessary to tweak the installation after high speed testing. The mounting bracket allows height and tilt adjustment; the machine screws allow angle adjustment.

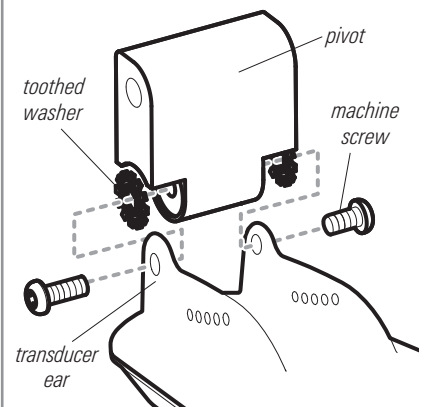
Attaching the Bracket



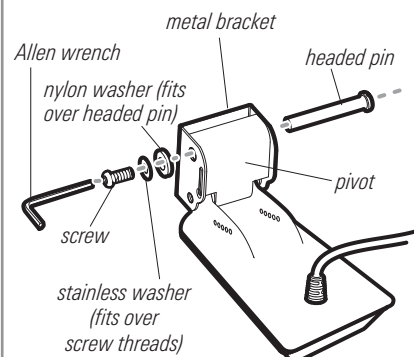
Inserting the Square Nuts



Attaching the Pivot



Attaching the Transducer to the Bracket



## Side Imaging® Transducer

532118-1\_B

**NOTE:** Side Imaging is best performed at boat speeds from .5 to 8 mph. If the boat is stationary, the same information is displayed over and over. If the boat is moving too quickly, there will be gaps between the strips of information. The best boat speed to use will depend on the side range selected. Slower speeds are good for longer ranges, while faster speeds can be used at shorter ranges.

1. Adjust the angle of the transducer body first, so it is parallel with the hull of the boat. Fully tighten the two machine screws using the supplied Allen wrench. Access the machine screws through the lower holes in the side of the mounting bracket.
2. Next, adjust the height of the assembly so the face of the transducer is 1/8" to 1/4" beneath the bottom of the transom, and fully tighten the three mounting screws. To access the mounting screws, pivot the transducer assembly up into the bracket as shown in the illustration **Tightening the Mounting Screws**.

**CAUTION!** Be careful not to alter the running angle, as some force is necessary to pivot the assembly.

3. If access to the top mounting hole is not possible due to the selected height of the transducer, fully tighten the two lower screws. Remove the headed pivot pin and the transducer assembly, tighten the top screw, and then reassemble.
4. Confirm that the pivot angle has not changed and that all mounting screws are fully tightened.

## 7. Route the Cable

The transducer cable has a low profile connector which must be routed to the point where the control head is mounted. There are several ways to route the transducer cable to the area where the control head is installed. The most common procedure routes the cable through the transom into the boat.

**NOTE:** Your boat may have a pre-existing wiring channel or conduit that you can use for the transducer cable.

1. Confirm the cable is long enough to accommodate the planned route by running the cable over the transom.

**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'. For assistance, contact Customer Service at [humminbird.com](http://humminbird.com) or call 1-800-633-1468 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.

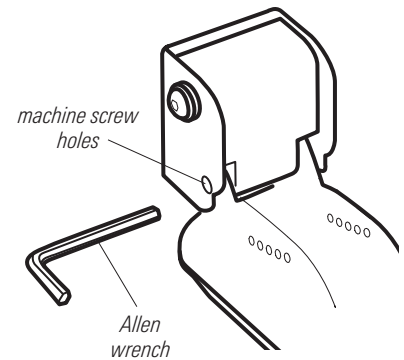
**NOTE:** The transducer can pivot up to 90 degrees in the bracket. Allow enough slack in the cable for this movement. It is best to route the cable to the side of the transducer so the transducer will not damage the cable during movement.

- 2a. **If you are routing the cable over the transom of the boat**, secure the cable by attaching the cable clamp to the transom, drilling 9/64" diameter holes for the #8 x 5/8" wood screw(s), then skip directly to procedure 8, **Connect the Cable**.

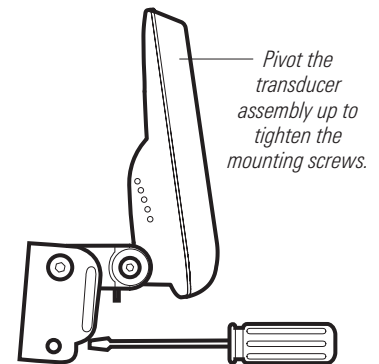
or...

- 2b. **If you are routing the cable through a hole in the transom**, drill a 1 1/8" diameter hole above the waterline. Route the cable through this hole, then fill the hole with marine-grade silicone sealant and proceed to the next step immediately.

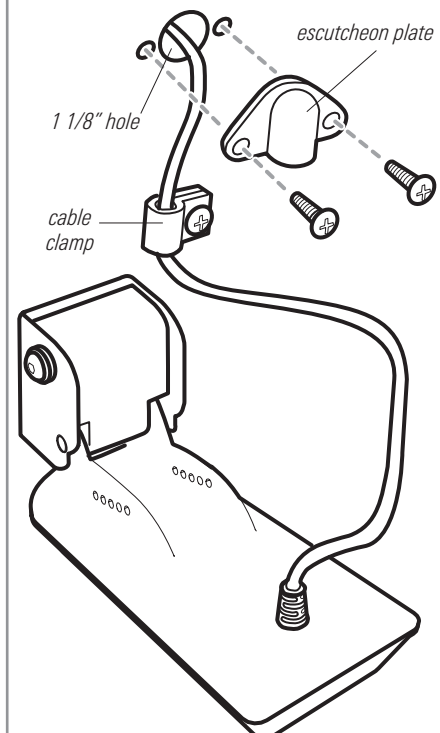
### Tightening the Machine Screws



### Tightening the Mounting Screws



### Routing the Cable



- Place the escutcheon plate over the cable hole and use it as a guide to mark the two escutcheon plate mounting holes. Remove the plate, drill two 9/64" diameter x 5/8" deep holes, and then fill both holes with marine-grade silicone sealant. Place the escutcheon plate over the cable hole and attach with two #8 x 5/8" wood screws. **Hand tighten only!**
- Route and secure the cable by attaching the cable clamp to the transom. Drill one 9/64" diameter x 5/8" deep hole, then fill the hole with marine-grade silicone sealant. Attach the cable clamp using a #8 x 5/8" screw. **Hand tighten only!**

**NOTE:** If there is excess cable that needs to be gathered at one location, dress the cable routed from both directions so that a single loop is left extending from the storage location. Doubling the cable up from this point, form the cable into a coil. Storing excess cable using this method can reduce electronic interference.

## 8. Connect the Cable

- Connect the transducer cable connector to the proper port on the control head or black box sonar (depending on your system configuration). The ports are labeled and the cable connectors are keyed to prevent incorrect installation, so be careful not to force the connector into the wrong port.
- Hand tighten the screw nut on the cable to secure the connection.

**NOTE:** See your control head installation guide for more information.

**NOTE:** If using a black box sonar, confirm it is connected to the control head.

## 9. Test and Finish the Installation

Once you have installed both the control head and the transom transducer, and have routed all the cables, you must perform a final test before locking the transducer in place. Testing should be performed with the boat in the water.

- Press **POWER** once to turn the control head on. If the unit does not power-up, make sure that the connector holder is fully seated in the receptacle and that power is available.
- If all connections are correct and power is available, the Humminbird control head will start normal operation.
- Select a sonar view to display on-screen.

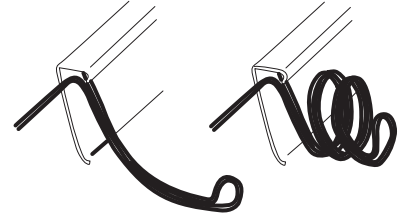
**NOTE:** Your control head should automatically detect the connected transducer and configure the sonar source settings. See your control head operations manual for more information.

- If the bottom is visible on-screen with a digital depth readout, the unit is working properly. Make sure that the boat is in water greater than 2' but less than the depth capability of the unit, and that the transducer is fully submerged, since the sonar signal cannot pass through air.

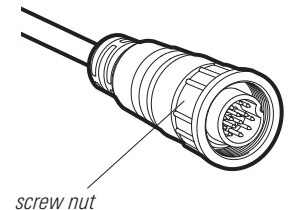
**NOTE:** The transducer must be submerged in water for reliable transducer detection.

- If the unit is working properly, gradually increase the boat speed to test high-speed performance. If the unit functions well at low speeds, but begins to skip or miss the bottom at higher speeds, the transducer requires adjustment.
- If you have the correct angle set on the transducer, yet lose a bottom reading at high speed, adjust the transducer to a lower depth in the water. If you reach the top of the screw slots and continue to lack high speed performance, increase the angle of the transducer by lowering the back of the transducer in increments of 1/8".

Storing Excess Cable



Connecting the Cable



## Side Imaging® Transducer

532118-1\_B

**NOTE:** It is often necessary to make several incremental transducer adjustments before optimum high speed performance is achieved. Due to the wide variety of boat hulls, however, it is not always possible to obtain high speed depth readings.

**NOTE:** The deeper the transducer is in the water, the more likely that a rooster tail of spray will be generated at high speeds, so make sure that the transducer is as high as it can be and still be submerged in the water.

7. Once you have reached a consistently good sonar signal at the desired speeds, fully tighten your assembly to lock it into place.

## Maintenance

If your boat remains in the water for long periods of time, 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.

**NOTE:** To clean the transducer, you may need to pivot the transducer up in the bracket.

If your boat 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 climb 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.

## Contact Humminbird

Web site	humminbird.com
E-mail	service@humminbird.com
Telephone	1-800-633-1468
Direct Shipping	Humminbird Service Department 678 Humminbird Lane Eufaula, AL 36027 USA

**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.

**ENVIRONMENTAL COMPLIANCE STATEMENT:** It is the intention of Johnson Outdoors Marine Electronics, Inc. to be a responsible corporate citizen, operating in compliance with known and applicable environmental regulations, and a good neighbor in the communities where we make or sell our products.

**WEEE DIRECTIVE:** EU Directive 2002/96/EC "Waste of Electrical and Electronic Equipment Directive (WEEE)" impacts most distributors, sellers, and manufacturers of consumer electronics in the European Union. The WEEE Directive requires the producer of consumer electronics to take responsibility for the management of waste from their products to achieve environmentally responsible disposal during the product life cycle.

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.



This symbol (WEEE wheelie bin) on product indicates the product must not be disposed of with other household refuse. It must be disposed of and collected for recycling and recovery of waste EEE. Johnson Outdoors Marine Electronics, Inc. will mark all EEE products in accordance with the WEEE Directive. It is our goal to comply in the collection, treatment, recovery, and environmentally sound disposal of those products; however, these requirements do vary within European Union member states. For more information about where you should dispose of your waste equipment for recycling and recovery and/or your European Union member state requirements, please contact your dealer or distributor from which your product was purchased.

**Mounting Template**

Remove and use for  
Transducer Installation

