PIRANHA INSTALLATION GUIDE

BEFORE YOU BEGIN

Two components need to be installed on the boat: the transducer and the control head. The control head displays sonar information; the transducer sends and receives sonar signals into the water. There are three basic installation tasks that you must perform for the Piranha:

- Installing the control head
- Installing the transducer - the transducer can either be installed inside the hull, on the transom of the boat, or onto a trolling motor, depending on your transducer type.
- Testing the complete installation and locking the transducer position.

NOTE: If the included transducer will not work for your application, you may exchange it, NEW and UNASSEMBLED, with mounting hardware included, for a transducer appropriate for your application - often at very little or no charge depending on the transducer. Call the Humminbird Customer Resource Center (1-800-633-1468) for details and pricing, or visit ***www.humminbird.com****.*

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.

NOTE: In addition to the parts supplied, you will need a hand drill and various bits, Phillips #2 & 3 screwdrivers, 7/16" wrench, pencil, marine-grade silicone sealant (for drilled holes), 2-part slow cure epoxy for inside the hull transducer mounting, 12v DC power supply, and a 1 Ampere fuse.

NOTE: Please read all instructions carefully and completely before beginning the installation process.

NOTE: When drilling holes in fiberglass hulls it is best to start with a smaller bit and use progressively larger drill bits to reduce the chance of chipping or flaking the outer coating.

CONTROL HEAD INSTALLATION

Step 1: Determining Control Head Mounting Location

Begin the installation by determining where to mount the control head, pre-routing the cables to make sure the mounting location selected will work once the installation is complete, then marking the proposed location of the control head. Consider the following to determine the best location:

- To check the location planned for the control head, test run the cables for power and transducer. See the installation section for your transducer type in order to plan the location of the transducer.
- The mounting surface should be stable enough to protect the control head from excessive wave shock and vibration, and should provide visibility while in operation.
- Your Piranha may have one of two different types of mounting bases, either a tilting mounting base or a tilt and swivel mounting base. The mounting area should allow sufficient room for the unit to pivot freely, and to swivel if capable, and for easy removal and installation.

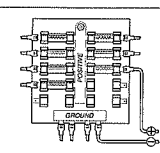

Figure 1

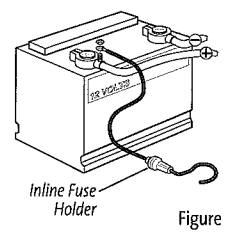

Figure 2

Step 2: Connecting the Power Cable to the Boat

A 6' (2 m) long power cable is included to supply power to the control head. You may shorten or lengthen the cable using 18 gauge multi-stranded copper wire.

CAUTION: Some boats have 24 or 36 Volt electric systems, but the control head MUST be connected to a 12 VDC power supply. Humminbird is not responsible for over current or over voltage failures.

The control head power cable can be connected to the electrical system of the boat at two places: a fuse panel (usually located near the console,) or directly to the battery.

NOTE: Make sure that the power cable is not connected to the control head at the beginning of this procedure.

1a. If a fuse terminal is available, use crimp-on type electrical connectors (not included) that match the terminal on the fuse panel. Attach the black wire to ground (-), and the red wire to positive (+) 12 VDC power (Figure 1). Use a 1 Amp fuse in the connection (not included).

1b. If you need to wire the control head directly to a battery, obtain and install an inline fuse holder and a 1 Amp fuse (not included) for the protection of the unit (Figure 2).

NOTE: In order to minimize the potential for interference with other marine electronics, a separate power source (such as a second battery) may be necessary.

Step 3: Assembling the Control Head Base

Your control head base will either have a tilt mount or a tilt and swivel mount. Refer to either procedures A or B below to perform initial assembly, and then use procedure C to complete the base assembly.

A. If you have a **tilt mount**, follow these steps:

1. Insert the mount arms through the base (Figure 3).
2. Secure the mount arms with the 4 #6 screws provided. Hand tighten only.

B. If you have a **tilt and swivel mount**, follow these steps:

1. Insert swivel ring in base, then insert the mount arms through the base (Figure 4).
2. Secure the mount arms with the 4 #6 screws provided (Figure 4). Hand tighten only.

C. For **both types of mount**, once you have followed the procedure steps in either A. or B., follow these steps to complete assembly of the base:

1. Set the control head base in place on the mounting surface. Mark the four mounting screw locations with a pencil or punch.
2. Set the base aside, and drill the four mounting screw holes using a 9/64" (3.5 mm) bit.

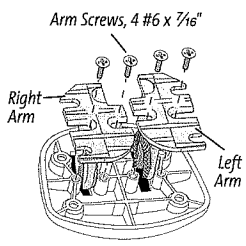

Figure 3

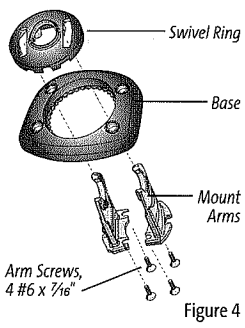

Figure 4

Step 4: Routing the Control Head Cables Under the Deck

NOTE: Under the deck cable routing is not always possible. If this is not an option, the cables should be routed and secured above deck.

Tilt Mounts:

1a. Mark and drill a 5/8" hole centered between the two rear mounting holes as shown in Figure 5A. Route the cables through the hole. The cables will exit through the notch on the base of the Tilt Mount.

1b. If the cables cannot be routed directly beneath the mounting bracket, mark and drill a 5/8" hole that will allow you to run the cables close to the bracket.

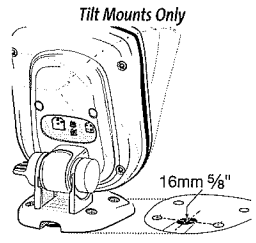

Figure 5A

Tilt and Swivel Mounts:

1a. Mark and drill a 5/8" hole centered between the four mounting holes as shown in Figure 5B. Route the cables through the hole. The cables will exit through the center hole on the base of the Tilt and Swivel Mount.

1b. If the cables cannot be routed directly beneath the mounting bracket, mark and drill a 5/8" hole that will allow you to run the cables close to the bracket.

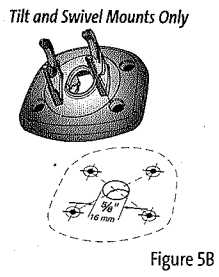

Figure 5B

Step 5: Attaching the Control Head to the Base

Follow these steps to attach the control head to the already-assembled base:

NOTE: Transducer cable should be routed prior to securing the mounting bracket to the deck.

1. Apply marine grade silicone sealant to the drilled holes for the mounting bracket.
2. Place the mounting bracket on the mounting surface, aligning with the drilled holes.
3. Insert the four #8 Phillips countersink wood screws into the mounting holes and hand tighten only.
4. Insert the thumbknob bolt through the pivot knuckle on the control head (Figure 6).
5. Thread the gimbal knob onto the pivot bolt using only 2-3 turns.
6. Align the pivot knuckle with the mount base arms and slide into place, twisting slightly if necessary, until the unit is firmly seated.
7. Rotate the control head to the desired angle and hand tighten the thumbknob bolt.

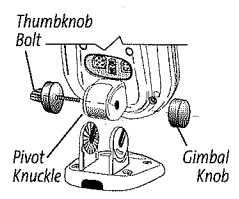

Figure 6

Step 6: Attaching the Cables to the Control Head

Follow these steps to attach the power and transducer cables to the control head:

1. Matching the cable plugs to the shape and orientation of the sockets, insert the transducer and power cables into the correct sockets on the control head (Figure 7).
2. With the control head in place, tilt and/or swivel the unit through its full range to make sure there is enough cable slack for the unit to move freely. Hand tighten the thumbknob bolt when you achieve the desired position for the control head.

You are now ready to install the transducer. Find the section that refers to your transducer type.

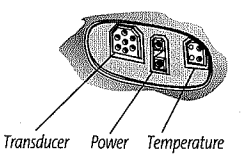

Figure 7

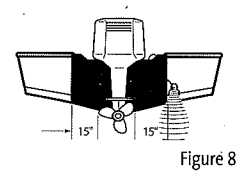

Figure 8

TRANSOM TRANSDUCER INSTALLATION

Step 1: Determining Transducer Mounting Location

NOTE: If transom mounting is not possible because of a stepped hull or cavitation noise, and you have a single layer fiberglass hull, In-hull installation is an option. See Inside the Hull Transducer Installation for more information.

First, determine the best location on the transom to install the transducer.

Consider the following to find the best location:

- It is very important to locate the transducer in an area which is relatively free of turbulent water. 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 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. As a 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) (Figure 9). Clockwise propellers create more turbulence on the port side. On outboard or inboard/outboard boats, it is best to locate the transducer at least 15" (380 mm) to the side of the propeller(s) (Figure 8).
- The hydrodynamic shape of your transducer allows it to point straight down without deadrise adjustment (Figure 10).
- 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 (Figure 11).
- 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 (see Inside the Hull Transducer Installation).

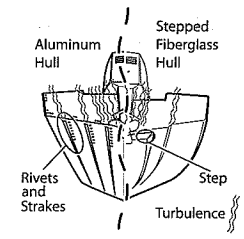

Figure 9

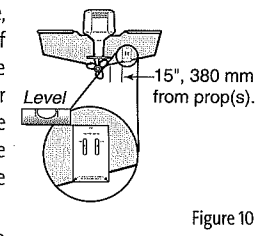

Figure 10

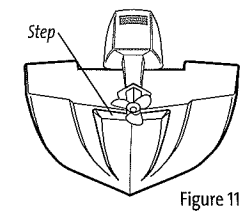

Figure 11

Step 2: Mounting the Bracket

NOTE: Use the mounting template provided, and make sure that you use the correct drill holes for the hull composition of your boat when performing this procedure.

1. Hold the template on the transom of the boat in the location where the transducer will be installed (Figure 10). Align the template vertically, matching the lower edge of the transom with the bottom corner of the template. If your propeller moves clockwise as the boat moves forward, 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, mount the transducer on the port side, and use the bottom right corner of the template.
2. Using a pencil or punch, mark the two mounting holes (shown on the template for your type of hull) on the transom. Do not mark or drill any other holes at this time.
3. Using a 9/64" (3.5 mm) bit, drill the two holes to a depth of approximately 1" (25 mm).

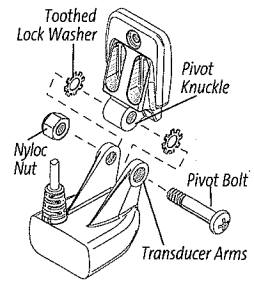

Figure 12

Step 3: Assembling the Transducer

1. Attach the Single Piece mounting bracket (Figure 12) to the transducer body, using the 1/4"- 20 x 1 1/4" Phillips head pivot bolt, the nyloc nut, and the two toothed lock washers.

NOTE: The toothed lock washers must be positioned between the transducer arms and the pivot knuckle (Figure 13).

2. Using a Phillips screwdriver and a 7/16" wrench, loosely tighten the pivot bolt (Figure 12). Do not completely tighten the assembly at this time, so the pivot angle can be adjusted later.

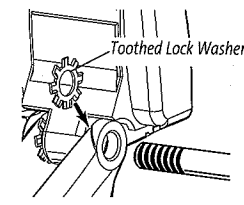

Figure 13

Step 4: Mounting the Transducer Assembly to the Transom

1. Apply marine-grade silicone sealant to the mounting holes drilled into the transom.
2. Align the transducer assembly with the drilled holes in the transom (Figure 14).
3. Using the appropriate tool for your mounting hardware, attach the transducer assembly to the boat transom as shown using #8 x 5/8" (16 mm) wood screws. Do not fully tighten the mounting screws in order to vertically adjust the transducer.

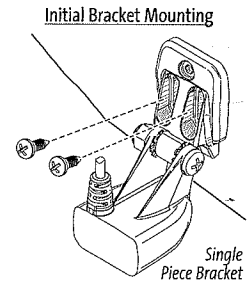

Figure 14

Step 5: Adjusting the Running Position of the Transducer

The transducer mounting bracket allows height and tilt adjustment, while the pivot bolt allows angular adjustment. These adjustments will help reduce cavitation (Figures 15 and 16). Initially, adjust the transducer as described in the following paragraphs. Further adjustment may be necessary to refine the installation after high-speed testing.

1. First, adjust the pivot angle of the transducer body, so its length is parallel with the length of the hull of the boat. Then, using the angle portion of the mounting template, pivot the transducer down so that it matches the template angle as shown on the template itself (Figure 17).
2. Fully tighten the pivot bolt, using a Phillips head screwdriver and a wrench. It may be necessary to re-tighten the pivot bolt after initial use as the plastic may still be conforming to the pressure from the lock washers.
3. Before removing the template, adjust the height of the assembly so the face of the transducer touches the face of the template (Figure 17). Mark the position of the mounting bracket on the transom with a pencil.
4. Make sure that the transducer location has not changed, then hand tighten the two mounting screws (Figure 14).
5. **Confirm that the pivot angle has not changed.**

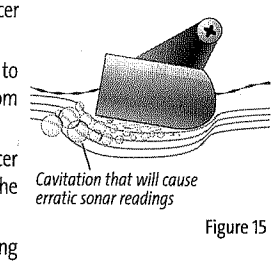

Figure 15

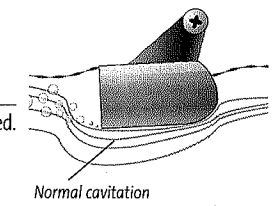

Figure 16

Step 6: Routing the Transducer Cable

There are several ways to route the transducer cable to the area where the control head will be 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. Unplug the other end of the transducer cable from the control head. Make sure that 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' (15 m). For assistance, contact the Customer Resource Center at ***www.humminbird.com*** *or call 1-800-633-1468 for more information.*

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"dia. holes for #8 x 5/8" (16 mm) screw(s), then skip directly to step 5.

2b. If you will be routing the cable through a hole in the transom, drill a 5/8" diameter (16 mm) hole above the waterline (Figure 18). Route the cable through this hole, then fill the hole with marine-grade silicone sealant and proceed to the next step immediately.

3. 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" dia. (3.5 mm) x 5/8" deep (16 mm) holes, 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" (16 mm) screws.
4. Route and secure the cable by attaching the cable clamp to the transom; drill one 9/64" dia. (3.5 mm) x 5/8" deep (16 mm) hole, then fill hole with marine-grade silicone sealant, then attach the cable clamp using a #8 x 5/8" (16 mm) screw.
5. Plug the other end of the transducer cable back into the control head connection holder.

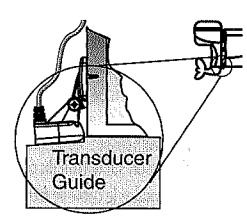

Figure 17

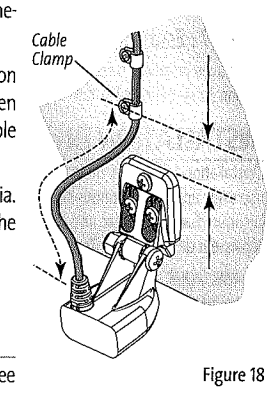

Figure 18

Step 7: Final Testing

After transom transducer installation, please perform the final testing and then finalize the installation (see Test and Finish the Installation).

TRANSOM TRANSDUCER INSTALLATION

Step 1: Determining Transducer Mounting Location

NOTE: If transom mounting is not possible because of a stepped hull or cavitation noise, and you have a single layer fiberglass hull, In-hull installation is an option. See Inside the Hull Transducer Installation for more information.

First, determine the best location on the transom to install the transducer.

Consider the following to find the best location:

- It is very important to locate the transducer in an area which is relatively free of turbulent water. 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 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. As a 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) (Figure 9). Clockwise propellers create more turbulence on the port side. On outboard or inboard/outboard boats, it is best to locate the transducer at least 15" (380 mm) to the side of the propeller(s) (Figure 8).
- The hydrodynamic shape of your transducer allows it to point straight down without deadrise adjustment (Figure 10).
- 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 (Figure 11).
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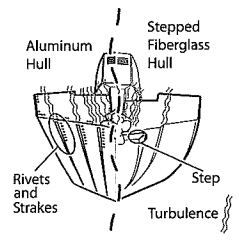

Figure 9

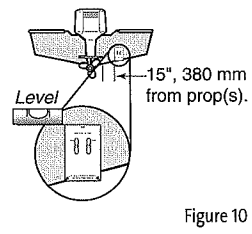

Figure 10

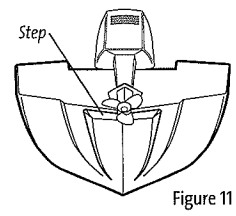

Figure 11

Step 2: Mounting the Bracket

NOTE: Use the mounting template provided, and make sure that you use the correct drill holes for the hull composition of your boat when performing this procedure.

1. Hold the template on the transom of the boat in the location where the transducer will be installed (Figure 10). Align the template vertically, matching the lower edge of the transom with the bottom corner of the template. If your propeller moves clockwise as the boat moves forward, 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, mount the transducer on the port side, and use the bottom right corner of the template.
2. Using a pencil or punch, mark the two mounting holes (shown on the template for your type of hull) on the transom. Do not mark or drill any other holes at this time.
3. Using a 9/64" (3.5 mm) bit, drill the two holes to a depth of approximately 1" (25 mm).

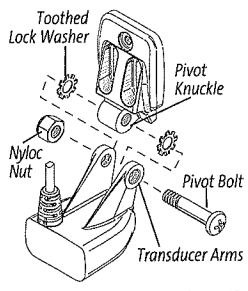

Figure 12

Step 3: Assembling the Transducer

1. Attach the Single Piece mounting bracket (Figure 12) to the transducer body, using the 1/4"- 20 x 1¼" Phillips head pivot bolt, the nyloc nut, and the two toothed lock washers.

NOTE: The toothed lock washers must be positioned between the transducer arms and the pivot knuckle (Figure 13).

2. Using a Phillips screwdriver and a 7/16" wrench, loosely tighten the pivot bolt (Figure 12). Do not completely tighten the assembly at this time, so the pivot angle can be adjusted later.

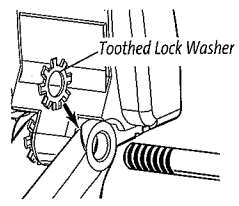

Figure 13

Step 4: Mounting the Transducer Assembly to the Transom

1. Apply marine-grade silicone sealant to the mounting holes drilled into the transom.
2. Align the transducer assembly with the drilled holes in the transom (Figure 14).
3. Using the appropriate tool for your mounting hardware, attach the transducer assembly to the boat transom as shown using #8 x 5/8" (16 mm) wood screws. Do not fully tighten the mounting screws in order to vertically adjust the transducer.

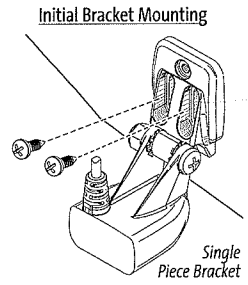

Figure 14

Step 5: Adjusting the Running Position of the Transducer

The transducer mounting bracket allows height and tilt adjustment, while the pivot bolt allows angular adjustment. These adjustments will help reduce cavitation (Figures 15 and 16). Initially, adjust the transducer as described in the following paragraphs. Further adjustment may be necessary to refine the installation after high-speed testing.

1. First, adjust the pivot angle of the transducer body, so its length is parallel with the length of the hull of the boat. Then, using the angle portion of the mounting template, pivot the transducer down so that it matches the template angle as shown on the template itself (Figure 17).
2. Fully tighten the pivot bolt, using a Phillips head screwdriver and a wrench. It may be necessary to re-tighten the pivot bolt after initial use as the plastic may still be conforming to the pressure from the lock washers.
3. Before removing the template, adjust the height of the assembly so the face of the transducer touches the face of the template (Figure 17). Mark the position of the mounting bracket on the transom with a pencil.
4. Make sure that the transducer location has not changed, then hand tighten the two mounting screws (Figure 14).
5. **Confirm that the pivot angle has not changed.**

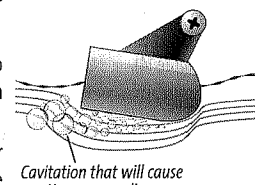

Figure 15

Step 6: Routing the Transducer Cable

There are several ways to route the transducer cable to the area where the control head will be 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. Unplug the other end of the transducer cable from the control head. Make sure that 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' (15 m). For assistance, contact the Customer Resource Center at **www.humminbird.com** or call 1-800-633-1468 for more information.*

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"dia. holes for #8 x 5/8" (16 mm) screw(s), then skip directly to step 5.

2b. If you will be routing the cable through a hole in the transom, drill a 5/8" diameter (16 mm) hole above the waterline (Figure 18). Route the cable through this hole, then fill the hole with marine-grade silicone sealant and proceed to the next step immediately.

3. 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" dia. (3.5 mm) x 5/8" deep (16 mm) holes, 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" (16 mm) screws.
4. Route and secure the cable by attaching the cable clamp to the transom; drill one 9/64" dia. (3.5 mm) x 5/8" deep (16 mm) hole, then fill hole with marine-grade silicone sealant, then attach the cable clamp using a #8 x 5/8" (16 mm) screw.
5. Plug the other end of the transducer cable back into the control head connection holder.

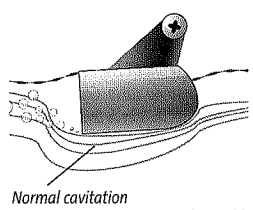

Figure 16

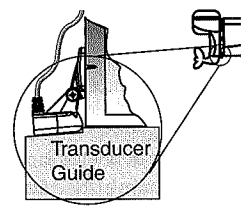

Figure 17

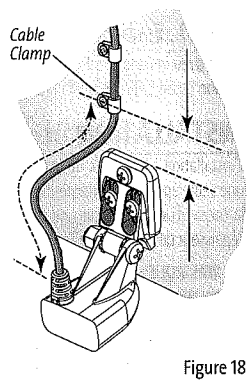

Figure 18

Step 7: Final Testing

After transom transducer installation, please perform the final testing and then finalize the installation (see Test and Finish the Installation).

INSIDE THE HULL TRANSDUCER INSTALLATION

In-hull mounting generally produces good results in single thickness fiberglass-hulled boats. Humminbird cannot guarantee depth performance when transmitting and receiving through the hull of the boat, since some signal loss occurs. The amount of loss depends on hull construction and thickness, as well as the installation position and process.

*NOTE: The integral tempeature probe will not work with in hull mounting, so you may either purchase a separate Temp Sensor or obtain a different transducer. Humminbird offers a transducer exchange program to swap the NEW and UNASSEMBLED transducer, accompanied by mounting hardware, for one without an integral temperature probe. Call the Humminbird Customer Resource Center at 1-800-633-1468 for details, or visit **www.humminbird.com** for more information.*

This installation requires slow-cure two-part epoxy. Do not use silicone or any other soft adhesive to install the transducer, as this material reduces the sensitivity of the unit. Do not use five-minute epoxy, as it has a tendency to cure before all the air bubbles can be purged, thus reducing signal strength.

NOTE: In-hull mounting requires an installed and operational control head.

Step 1: Determining the Transducer Mounting Location

Decide where to install the transducer on the inside of the hull. Consider the following to find the best location:

- Observe the outside of the boat hull to find the areas that are mostly free from turbulent water. Avoid ribs, strakes and other protrusions, as these create turbulence (Figure 9).
- As a general rule, the faster the boat can travel, the further aft and closer to the centerline of the hull the transducer has to be located in order to remain in contact with the water at high speeds (Figure 20).

Step 2: Trial Installation

You will not be able to adjust the mounting after an inside the hull transducer is installed. It is best, therefore, to perform a trial installation first that includes running the boat at various speeds, in order to determine the best mounting area before permanently mounting the transducer.

1. Plug the transducer into the control head, then power up the control head. When the control head detects a functioning transducer, it will automatically enter Normal operating mode.
2. View the sonar signal at its best by holding the transducer over the side, immersed in the water, so that it is pointing straight down over a known flat bottom. Use the display to benchmark against the sonar signal that will be detected once the transducer is placed in the hull.
3. Place the transducer body face down at the identified mounting location inside the hull, with the pointed end towards the bow (Figure 19).
4. Fill the hull with enough water to submerge the transducer body. Use a sand-filled bag or other heavy object to hold the transducer in position. The transducer cannot transmit through air, and the water purges any air from between the transducer and the hull, and fills any voids in the coarse fiberglass surface.
5. View the sonar signal on the display and compare against what was observed in Step 2, making sure that the boat is in the same location as it was during your observations in Step 2. If the results are comparable, move on to Step 6. Otherwise, locate a new position in the hull and repeat Steps 3 through 5.
6. Run the boat at various speeds and water depths while observing the screen on the control head. If depth performance is required, test the transducer in water at the desired depth. If the performance is acceptable, move on to Step 7. If the performance is not acceptable, repeat Steps 3 through 6.
7. Once you have determined the best mounting location using the above steps, mark the position of the transducer.

Step 3: Routing the Cable

Before you permanently mount the transducer, you should route the cable to make sure that your determined mounting position is accurate.

1. Route the cable from the transducer to the control head.

Step 4: Permanently Mounting the Transducer

1. Make sure the position of the transducer is marked.
2. Remove the water from inside the hull and thoroughly dry the mounting surface. If the surface is excessively rough, it may be necessary to sand the area to provide a smooth mounting surface.
3. Mix an ample quantity of two-part slow cure epoxy slowly and thoroughly. Avoid trapping air bubbles.
4. Coat the face of the transducer and the inside of the hull with epoxy (Figure 21).
5. Press the transducer into place with a slight twisting motion to purge any trapped air from underneath, keeping the pointed end of the transducer body pointed forward, towards the bow (Figures 19 and 20).

NOTE: Proper operation requires the pointed end of the transducer body to face towards the bow.

6. Weight the transducer so that it will not move while the epoxy is curing.

NOTE: When the epoxy cures, no water is necessary inside the hull.

7. If you unplugged the transducer cable at the beginning of this procedure, plug it back into the control head.

NOTE: Neither water, spilled gasoline, nor oil will affect the performance of the transducer.

Transducer Mounted Inside the Hull

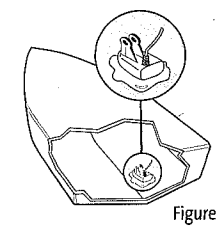
Figure 19

Preferred Mounting Area

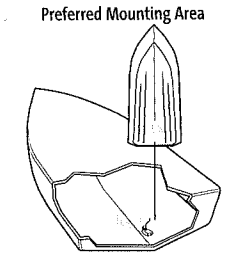
Figure 20

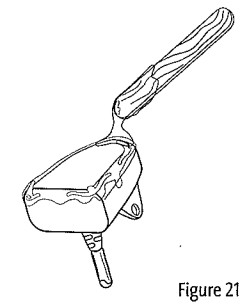
Figure 21

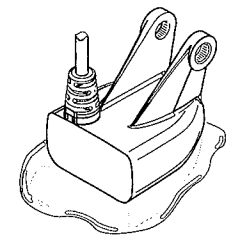
Figure 22

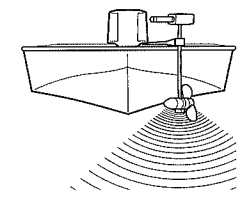
Figure 23

TROLLING MOTOR TRANSDUCER INSTALLATION

Several styles of the transducer are compatible with trolling motor mounting. (Figure 23). If you have a trolling motor bracket, refer to the separate installation instructions that are included with the bracket.

NOTE: After trolling motor transducer installation, please perform the final testing and then finalize the installation (see Test and Finish the Installation).

TROLLING MOTOR TRANSDUCER OPTIONS

If you don't have a trolling motor transducer, there are several options:

- You may purchase a Trolling Motor Adapter kit that will allow you to mount the transducer on the trolling motor.
- You may also exchange your NEW and UNASSEMBLED transducer (with mounting hardware included) for a trolling motor transducer.

There are also several transducer switches available that support the following configurations:

- Two control heads with one transducer or two transducers with one Control Head.
  *NOTE: Call the Humminbird Customer Resource Center (1-800-633-1468) for details and pricing, or visit **www.humminbird.com** for more information.*

TEST AND FINISH THE INSTALLATION

When you have installed both the control head and either the transom or the trolling motor 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, although you can initially confirm basic operation with the boat out of the water.

NOTE: If you have installed an in-hull mount transducer, this procedure does not apply, as the transducer is already locked in place.

1. Press POWER once to turn the control head on. There will be an audible chirp when the button is pressed correctly. If the unit does not power up, make sure the power cable is fully seated in the control head and that power is available.
2. If all connections are correct and power is available, the control head will enter Normal operation. If no transducer is detected (or one is not connected), the unit will go into Simulator mode and will indicate this by displaying the word Simulator on the control head display.

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

3. 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.
4. 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. Angling the rear of the transducer downward and/or lowering the transducer farther into the water will help achieve depth readings at high speeds. .

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.

Once you have reached a consistently good sonar signal at the desired speeds, you are ready to lock down the transducer settings.

5. Use the bracket as a guide and drill the third hole to a depth of approximately 1" using a 9/64" (3.5 mm) drill bit, apply marine-grade silicone sealant to the hole, and lock down the transducer settings by screwing in the third #8 x 5/8" (16 mm) screw. ***Hand-tighten only!***

***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. Handling and/or opening this unit may result in exposure to lead, in the form of solder.*

***WARNING:** This product contains lead, a chemical known to the State of California to cause cancer and birth defects and other reproductive harm.*