ONIX8 and ONIX10

Installation Guide

532187-2_B

HUMMINBIRD®

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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. 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. We encourage you to read this manual carefully in order to get full benefit from all the features and applications of your Humminbird product.

Contact Humminbird Customer Service at **humminbird.com** or call **1-800-633-1468**.

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! The electronic chart in your Humminbird unit is an aid to navigation designed to facilitate the use of authorized government charts, not to replace them. Only official government charts and notices to mariners contain all of the current information needed for the safety of navigation, and the captain is responsible for their prudent use.

WARNING! Compass Safe Distance: The control head must be installed at least 4 feet (1.2 meters) from the compass or other magnetic equipment on the boat. Also, see your compass installation guide for details.

WARNING! Humminbird is not responsible for the loss of data files (waypoints, routes, tracks, groups, recordings, etc.) that may occur due to direct or indirect damage to the unit's hardware or software. It is important to back up your control head's data files periodically. Data files should also be saved to your PC before restoring the unit's defaults or updating the software. See your Humminbird online account at **humminbird.com** and the operations manual on your Humminbird Manual CD for details.

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.

WARNING! Do not travel at high speed with the unit cover installed. Remove the unit cover before traveling at speeds above 20 mph.

NOTE: Some features discussed in this manual require a separate purchase, and some features are only available on international models. Every effort has been made to clearly identify those features. Please read the manual carefully in order to understand the full capabilities of your model.

NOTE: The illustrations in this manual may not look the same as your product, but your unit will function in a similar way.

NOTE: To purchase accessories or any additional equipment for your control head configuration, go to **humminbird.com** or contact Customer Service at **1-800-633-1468**.

NOTE: The procedures and features described in this manual are subject to change without notice. This manual was written in English and may have been translated to another language. Humminbird is not responsible for incorrect translations or discrepancies between documents.

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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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ROHS Statement: Product designed and intended as a fixed installation or part of a system in a vessel may be considered beyond the scope of Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003 on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

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To obtain a list of authorized international distributors, please visit our Web site at **humminbird.com** or contact Customer Service at **(334) 687-6613**.

INTRODUCTION

This manual will guide you through the following installation requirements:

- Installing the Control Head
- Installing the Transducer
- Connecting Cables to the Control Head
- Connecting the Control Head to Power
- Powering On the Control Head
- Configuring the Control Head and Basic System Setup

PREPARATION

Before you start the installation, please take a moment to familiarize yourself with the parts list and supplies list. We also encourage you to read the instructions beforehand so that you may understand the installation requirements.

NOTE: Product supplies and features are subject to change without notice.

Parts

Your ONIX includes the following items:

- **A** ONIX control head with cover
- **B** gimbal mounting bracket with gimbal mounting hardware
    - **C** (2) gimbal knobs
    - **D** (2) urethane washers
    - **E** (4) flat washers
    - **F** (4) 1" - #10 wood screws
    - **G** (4) 1" - split ring cable grommets
- **H** (1) transducer with transducer mounting hardware
- **I** power cable

Supplies

In addition to the parts supplied with your installation kit, you will need the following items:

- powered drill with various drill bits
- various hand tools, including
    - a socket wrench or flat blade screwdriver
    - ruler, straightedge, or measuring tape
    - level
    - 12" plumb line (weighted string or monofilament line)
- marker or pencil
- safety glasses
- dust mask
- marine-grade silicone sealant
- dielectric grease (optional)

DualBeam PLUS transducers   Side Imaging transducer
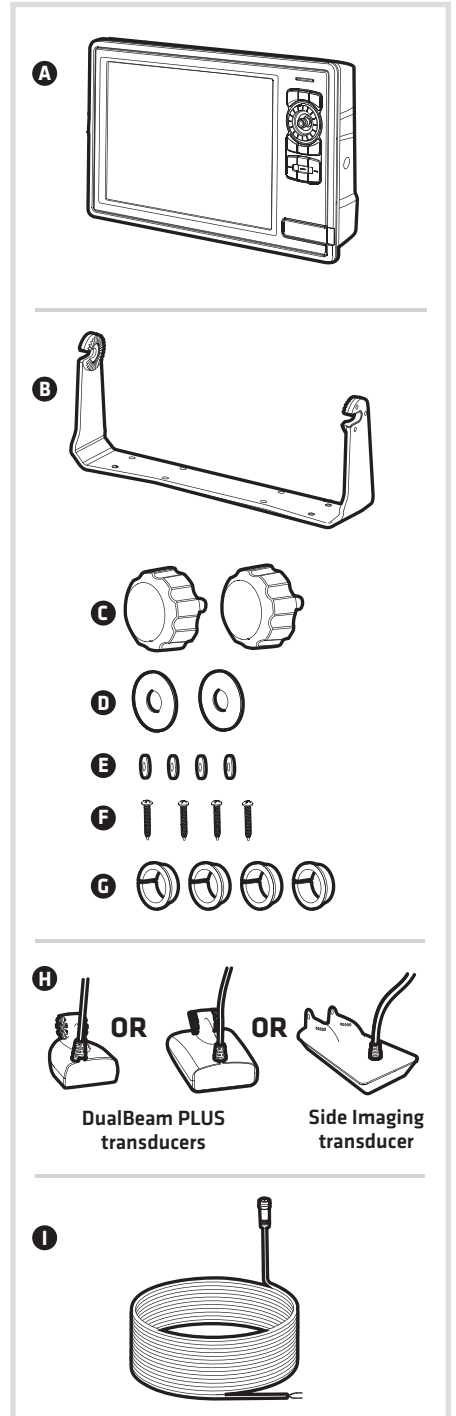
Traditional Gimbal Mount
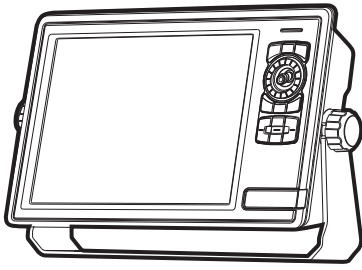
INSTALL THE CONTROL HEAD

Use the instructions in the following section to gimbal mount the control head on your boat.

> **NOTE:** If you prefer to mount the Humminbird control head overhead, follow the instructions in this section and install the gimbal bracket above the control head (see *Install the Gimbal Bracket: Overhead Mount*). Overhead and/or thin panels may require additional hardware (separate purchase required) to securely mount the control head.

1 | Determine the Mounting Location

Pre-assemble the control head to plan the best mounting location.

1. Place one urethane washer on one of the gimbal knobs. Thread the gimbal knob and washer into the control head housing and tighten using 2-3 rotations. This will allow the knob to stay in place while leaving adequate space to install the control head into the bracket in the proceeding steps. See the illustration *Assembling the Control Head*.

2. Repeat step 1 for the other side of the control head.

Assembling the Control Head

front of control head

opening on bracket arm

gimbal knob

urethane washer

gimbal knob

urethane washer
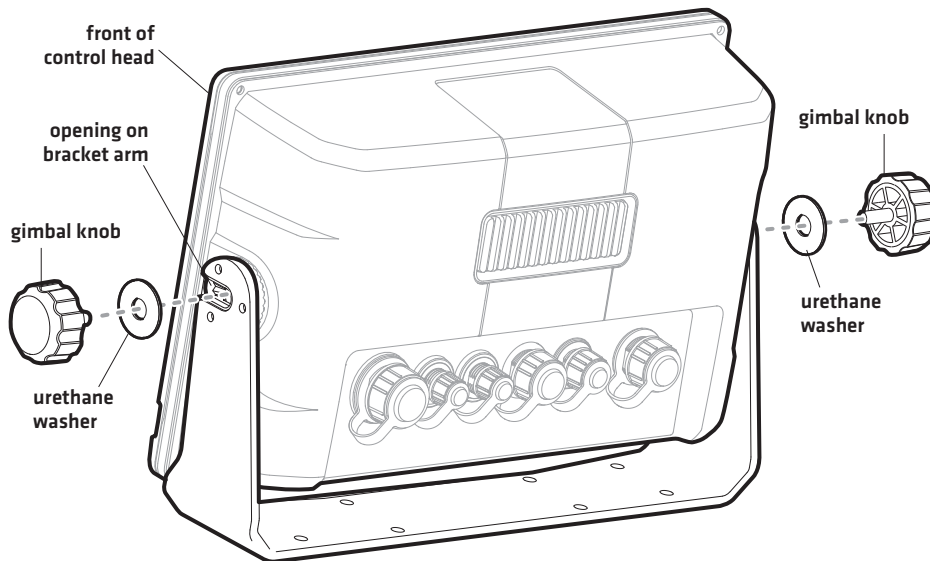
3. Install the control head into the arms of the bracket mount. Confirm the front of the gimbal bracket is aligned with the front of the control head (see the illustration *Gimbal Bracket*).

4. Hand-tighten the gimbal knobs to secure the control head to the gimbal bracket.

5. Place the assembled control head in various locations to determine the best mounting location.

   Consider the following when choosing a mounting location:

   - The mounting area should allow sufficient room (approximately 2 to 4 inches [50.8 to 101.6 mm]) behind the chosen location to drill up to four 1-inch (25.4 mm) holes for the cables to pass through.

   - The mounting surface should be stable enough to protect the control head from excessive wave shock and vibration.

   - The mounting area should allow sufficient room so the control head can pivot through its full tilt range.

Optional Gimbal Mount: Overhead

Flip bracket to the top of the control head.

front of control head

Gimbal Bracket
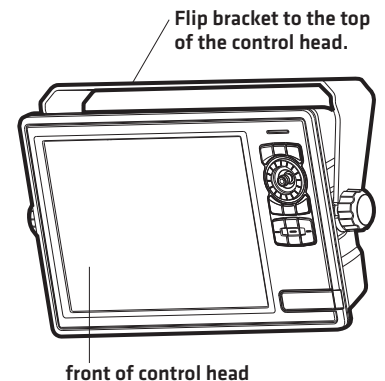
Angled corners indicate the front of the bracket.

Gimbal Bracket: Mounting Holes

outer screw holes (recommended)

front of bracket

- The mounting location should allow for visibility during operation, as well as easy installation and removal.

- You must have access, either above or below the mounting surface, to pass the cables through to the control head.

6. Test route the appropriate cables (power, accessory, etc.) to the control head mounting location. If the cables are too short for your application, extension cables are available. Contact Customer Service for information.

2 | Drill the Mounting Holes

1. Loosen the gimbal knobs and remove the control head from the gimbal bracket.

2. Place the gimbal bracket in the chosen position on the mounting surface and mark the four outer screw locations using a pencil or center punch (see the illustration *Gimbal Bracket: Mounting Holes*). Confirm the front of the bracket is facing forward.

   NOTE: The outer mounting holes are recommended. You may use the interior mounting holes if necessary.

3. Set the gimbal bracket aside. Select an appropriately sized drill bit for the #10 wood screws and drill four pilot screw holes.

   NOTE: When drilling holes in fiberglass, start with a smaller bit and use progressively larger drill bits to reduce the chance of chipping the outer coating.

4. Mark and drill a 1-inch (25.4 mm) diameter hole that will allow you to run the cables close to the mounting bracket. This hole should be centered approximately 2 to 4 inches (50.8 to 101.6 mm) from the back of the control head.
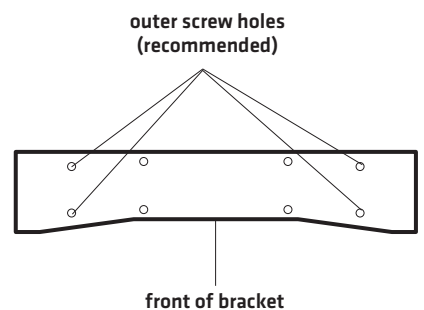
   NOTE: Your installation may require additional cable holes. Mark and drill up to four holes according to the instructions in step 4.

5. Insert the plastic cable grommets (included) to smooth the hole edges and prevent damage to the cables.

3 | Install the Gimbal Bracket

Refer to the section that applies to your installation and perform the procedures to install the gimbal bracket.

Installing the Gimbal Bracket
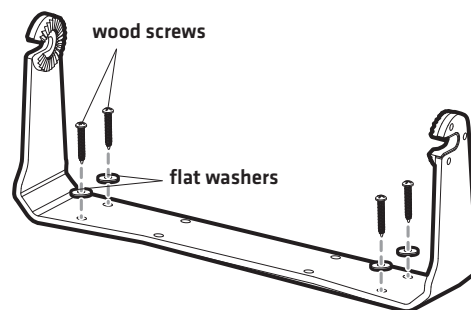
Traditional Mount

1. Place the bracket on the mounting surface aligned with the drilled holes and fill the holes with marine-grade silicone sealant.

2. Place one flat washer on each wood screw and install the wood screws into the four mounting holes (see the illustration *Installing the Gimbal Bracket*).

3. After all four screws are in place, tighten each screw until secure.

4. Place the control head back onto the gimbal bracket (see *Determine the Mounting Location* for details). Adjust the control head viewing angle as needed and tighten the gimbal knobs until the assembly is secured.

Overhead Mount

1. Place the bracket on the mounting surface aligned with the drilled holes. Fill one hole with marine-grade silicone sealant.

2. Place one flat washer on a wood screw and install the wood screw into the hole (see the illustration *Installing the Gimbal Bracket*). Repeat for the remaining three holes.

3. Tighten each screw until it is secure.

4. Place the control head back onto the gimbal bracket (see *Determine the Mounting Location* for details). Adjust the control head viewing angle as needed and tighten the gimbal knobs until the assembly is secured.

   NOTE: Overhead and/or thin panels may require additional hardware (separate purchase required) to securely mount the control head.

INSTALL THE TRANSDUCER

Review the transducer installation options and the transducer mounting requirements in the following sections. Then proceed to the installation section for your transducer type as follows:

- DualBeam PLUS Transducer

- Side Imaging Transducer

NOTE: If the included transducer will not work for your application, you can exchange it, NEW and UNASSEMBLED, with the transducer mounting hardware included, for a transducer appropriate for your application. This offer applies to the DualBeam PLUS transducer only. Visit **humminbird.com** for more information or call Customer Service at **1-800-633-1468**.

TRANSDUCER INSTALLATION OPTIONS

Your ONIX control head includes either a DualBeam PLUS transducer or a Side Imaging transducer. Depending on your transducer type, there are different options available for mounting the transducer on the boat. Review the transducer installation options below.

Transom Transducer Installation

Available for the DualBeam PLUS transducer and the Side Imaging transducer.

Your transducer includes the transom mounting hardware. See *Transom Transducer Installation* for additional information.

Transom Transducer Installation

In-Hull Transducer Installation

Available for the DualBeam PLUS transducer only.

In-hull mounting generally produces good results in single thickness, fiberglass-hulled boats. See *DualBeam PLUS Inside the Hull Installation* for installation instructions.

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.

In-Hull Transducer Installation

NOTE: 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: The integral temperature probe will not work with in-hull mounting, so you may want to consider purchasing a Temperature/Speed accessory, a Temp Sensor, or obtaining a different transducer.

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

Trolling Motor Transducer Installation

Trolling Motor Transducer Installation

Available for the DualBeam PLUS transducer and the Side Imaging transducer.

You can purchase a Trolling Motor Adapter kit that will allow you to mount the transducer on the trolling motor. If you already have a trolling motor bracket, refer to the separate installation instructions that are included with the bracket.

NOTE: Visit our Web site at **humminbird.com** for more information, or call Customer Service at **1-800-633-1468** for details and pricing.
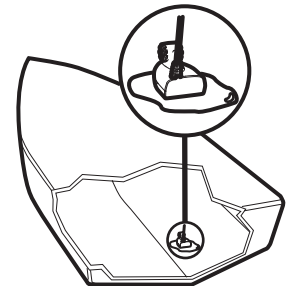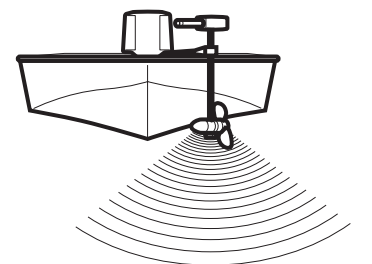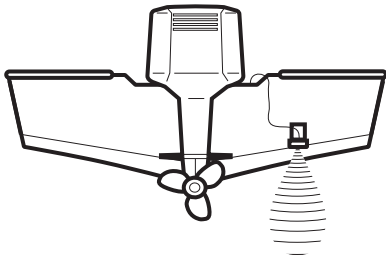
TRANSOM TRANSDUCER INSTALLATION

Your ONIX control head includes transom mounting hardware for your DualBeam PLUS or Side Imaging transducer. Review the mounting requirements in this section, and then proceed to the section for your transducer type to begin the installation.

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 OVERVIEW

The transom mount installation provides the following:

- Least loss of signal since the transducer is mounted outside the 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.

TRANSOM TRANSDUCER MOUNTING REQUIREMENTS

You must first determine the best location on the transom to install the DualBeam PLUS or Side Imaging transducer. Review the following information to help you identify the best mounting location.

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:

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).

Propellers: 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). The Side Imaging transducer has additional mounting requirements. See the section *Side Imaging Transducer Mounting Requirements*.

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.

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

Areas of Possible Turbulence

rivets

strakes

transom

hull

Stepped Hull

step

rib
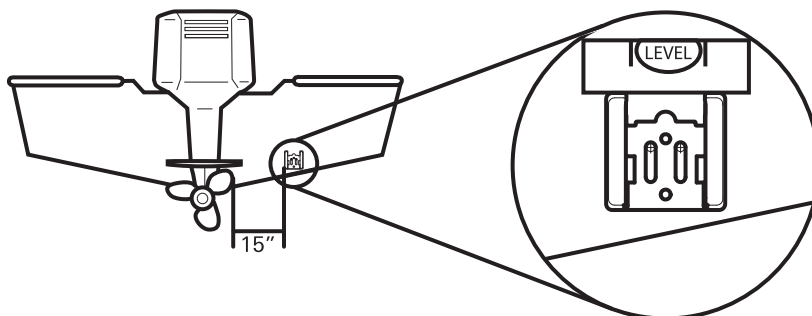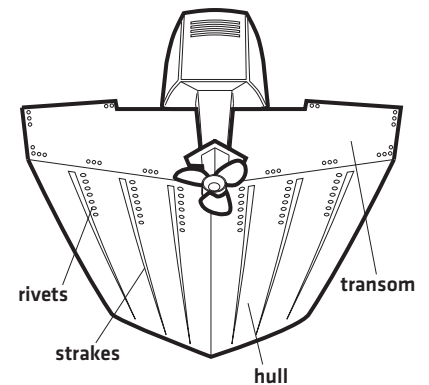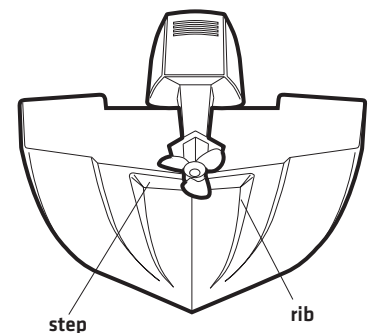
Observation: The best way to locate turbulence-free water is to view the transom while the boat is moving. This method is recommended if maximum high-speed operation is a high priority. If this is not possible, select a location on the transom where the hull forward of this location is smooth, flat, and free of protrusions or ribs.

Boat Characteristics

Stepped Hulls: 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.

Trailering: 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.

High-Speed Operation

DualBeam PLUS Transducer

Traveling over 65 mph with the transducer in the water is not recommended for the 200/50 kHz DualBeam PLUS transom mount transducer (**XNT 14 74 T**), as damage might occur. If high-speed operation is critical, you may want to consider using an inside the hull transducer instead of this transom mount transducer (see *DualBeam PLUS Inside the Hull Installation*).

Side Imaging Transducer

Side Imaging sonar is best performed at boat speeds from 2 to 6 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:** The Side Imaging transducer has additional mounting requirements. See the section *Side Imaging Transducer Mounting Requirements*.

> **NOTE:** 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** or call Customer Service at **1-800-633-1468**.

Deadrise

DualBeam PLUS Transducer

The hydrodynamic shape of your transducer allows the beam elements to point straight down without deadrise adjustment.

Deadrise

Side Imaging Transducer

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.

deadrise angle
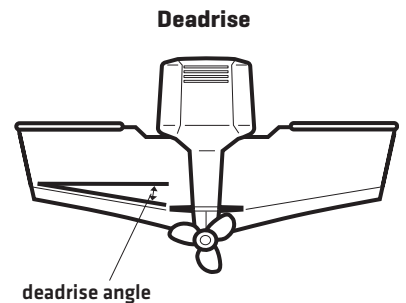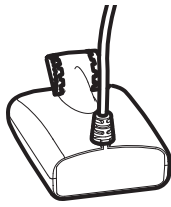
INSTALL THE DUALBEAM PLUS TRANSDUCER

Use the procedures in the following sections to install the DualBeam PLUS transducer on your boat. Your installation choices are as follows:

- Transom Mount
- Inside the Hull Mount

NOTE: Your transducer might not look exactly like the illustrations in this guide, but it will mount in the same way.

DUALBEAM PLUS TRANSOM MOUNT INSTALLATION

1 | Prepare the Mounting Location

In this procedure, you will determine the mounting location and drill two mounting holes, using the transducer mounting bracket as a guide.

1. Confirm you have read the transducer mounting requirements under *Transom Transducer Mounting Requirements*.

2. Make sure that the boat is level on the trailer, both from port to starboard and from bow to stern, by placing your level on the deck of the boat, first in one direction, then in the other.

3. Hold the mounting bracket against the transom of the boat in the location you have selected. Align the bracket horizontally using the level. Make sure that the lower corner of the bracket does not protrude past the bottom of the hull, and there is at least 1/4" clearance between the bottom of the bracket and the bottom of the transom for fiberglass boats, and 1/8" clearance for aluminum boats.

   NOTE: If you have a flat-bottomed aluminum boat, some additional adjustment may be needed to accommodate the rivets on the bottom of the boat (in other words, the gap may need to be a little smaller than 1/8"). This will help you to avoid excessive turbulence at high speeds.

   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 align the bottom right corner of the mounting bracket with the bottom of the boat. If your propeller moves counterclockwise as the boat moves forward (as you're facing the stern of the boat from behind), mount the transducer on the port side, and align the bottom left corner of the mounting bracket with the bottom of the boat.

4. Continue to hold the bracket on the transom of the boat, and use a pencil or marker to mark where to drill the two mounting holes. Mark the drill holes near the top of each slot, making sure that your mark is centered in the slot, as shown in the illustration.

   NOTE: The third hole should not be drilled until the angle and height of the transducer is finalized, which you will not do until a later procedure.

5. Make sure that the drill bit is perpendicular to the actual surface of the transom, NOT parallel to the ground, before you drill. Using a 5/32" bit, drill the two 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.

Positioning the Mounting Bracket

Boat Hull Types Require Different Mounting Positions

1/8" for aluminum
1/4" for fiberglass

Using the Mounting Bracket to Mark the Initial Drill Holes

mark initial drill holes

In this procedure, you will assemble the transducer using the hardware provided, then mount it and make adjustments to its position without locking it in place.

> **NOTE:** You will initially assemble the transducer and the pivot arm by matching the two ratchets to a numbered position on the transducer knuckle. Further adjustments may be necessary.

Determine Your Transom Angle

1a. **If you already know your transom angle**, refer to the chart below for the initial position to use to set the ratchets. If your transom is angled at 14 degrees (a common transom angle for many boats) use position 1 for the ratchets. In either case, go to step 2.

Bead Alignment Number	1	4	2	5	3	1	4	2	5	3	1
Transom Angle (°)	-2 -1 0	1 2 3	4 5 6	7 8 9	10 11 12	13 14 15	16 17 18	19 20 21	22 23 24	25 26 27	28 29 30
Measured Distance (x)	0.0 cm 0"	1.1cm 1/2"	2.5 cm 1"	4.3 cm 1 5/8"	5.9 cm 2 3/8"	7.6 cm 3"	9.3cm 3 5/8"	11.1cm 4 3/8"	12.9cm 5"	14.9cm 5 7/8"	16.9cm 6 5/8"

or...

1b. **If you do not know your transom angle**, measure it using a plumb line (weighted nylon string or monofilament line) exactly 12 inches long. Hold the top of the plumb line against the top of the transom with your finger, and wait until the line hangs straight down. Using a ruler, measure the distance from the **bottom** of the plumb line to the back of the transom, then use the chart. Refer to the illustration, *Measuring the Transom Angle*, for more information.

> **NOTE:** It is important to take your measurement in the location shown in the *Measuring the Transom Angle* illustration, from exactly 12 inches down from the top of the transom.

Measuring the Transom Angle

Assemble the Transducer

2. Place the two ratchets, one on either side of the transducer knuckle, so that the beads on each ratchet line up with the desired position number on the knuckle. If you are setting the ratchets at position 1, the beads on each ratchet will line up with the rib on the transducer knuckle to form one continuous line on the assembly.

> **NOTE:** The ratchets are keyed. Make sure that the square teeth on each ratchet face the square teeth on the transducer knuckle, and the triangular teeth face outward.

3. Hold the ratchets on the transducer knuckle with one hand and fit the pivot arm over them until it snaps into place with the other hand. Refer to the illustrations below.

Transducer Knuckle Positions

Ratchets Placed in Position 1

Ratchets Placed in Position 2

Fitting the Mounting Bracket Over the Ratchet

4. Put the pivot bolt through the assembly to hold it in position and loosely install the nut, but do NOT tighten the nut at this time.

⚠️ **CAUTION!** Do not use a high speed driver on this combination of fasteners. Hand-tighten only.

5. Insert the pivot arm assembly into the mounting bracket as shown in the illustration. Do NOT snap the assembly closed, as you will need to access the mounting bracket in the next step.

📝 **NOTE:** If the pivot assembly is snapped closed over the mounting bracket, use a flathead screwdriver or similar tool to gently pry the assembly away from the mounting bracket.

Mount the Transducer

6. Align the mounting bracket transducer assembly with the drilled holes in the transom. With a 5/16" socket driver, mount the assembly to the transom using the two #10 - 1" long screws (provided). **Hand-tighten only!**

📝 **NOTE**: Make sure that the mounting screws are snug, but do not fully tighten the mounting screws at this time to allow the transducer assembly to slide for adjustment purposes.

7. Snap the pivot arm down into place.

Make Adjustments to the Transducer Mounting Position

8. Adjust the initial angle of the transducer from back to front by rotating the transducer until the side seam on the transducer is almost parallel with the bottom of the boat, one click at a time in either direction. See the illustration *Adjusting the Initial Transducer Angle*.

Adjusting the Initial Transducer Angle - 200/83 kHz Transducer

one click too high

correctly aligned (transducer side seam is aligned with boat bottom)

trailing edge

leading edge

one click too low
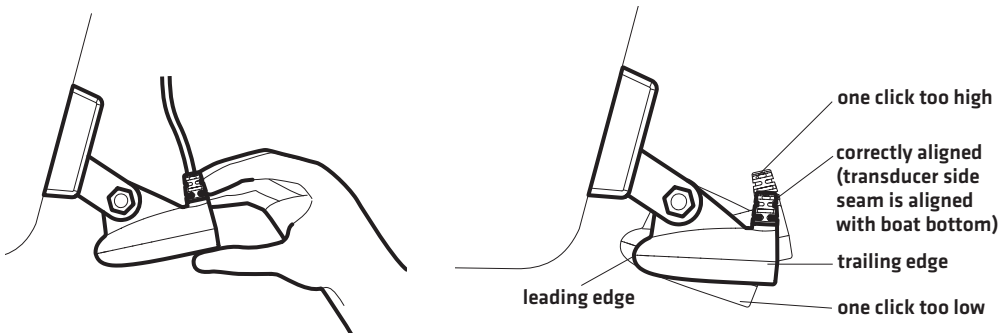
Adjusting the Initial Transducer Angle - 200/50 kHz Transducer

one click too high

correctly aligned (transducer side seam is aligned with boat bottom)

trailing edge

leading edge

one click too low
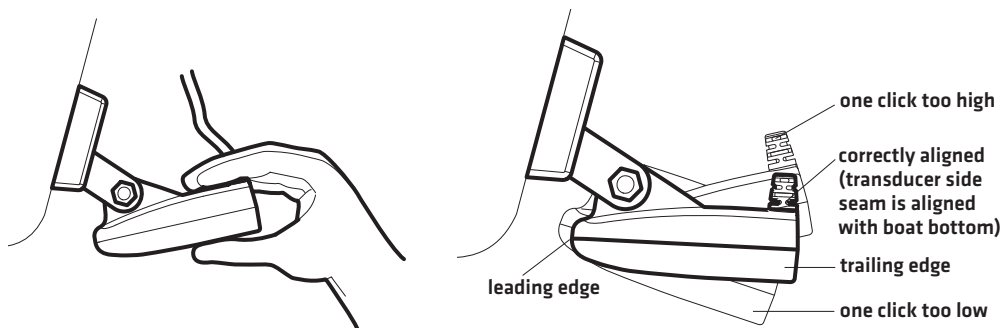
Inserting the Pivot Bolt - 200/83 kHz Transducer
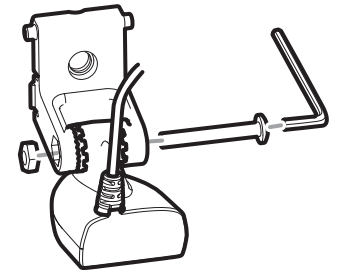
Inserting the Pivot Bolt - 200/50 kHz Transducer
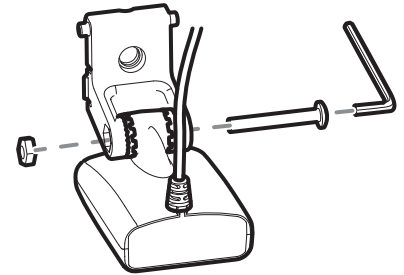
Inserting the Pivot Arm Assembly into the Mounting Bracket
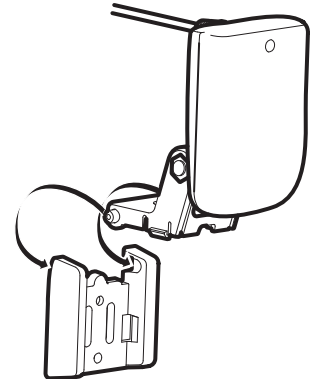
Prying the Assembly Away from the Mounting Bracket
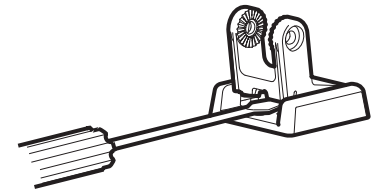
Mounting the Assembly to the Transom
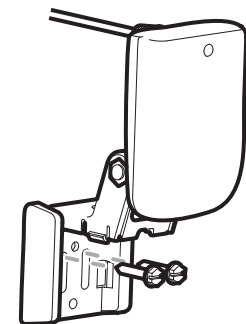
9. Adjust the transducer assembly vertically, until the seam on the leading edge of the transducer (the edge closest to the transom of the boat) is level and just slightly below the hull.

    NOTE: The transducer has a natural downward slant of 4 to 5 degrees from leading edge (closest to the boat transom) to trailing edge (farthest away from the boat). Looking at the back of the transducer, the seam should be slightly below the bottom of the hull.

10. Continue to adjust the transducer assembly until the bracket is also level from port to starboard (horizontally level as you look at the transducer from behind the boat).

11. Mark the correct position on the transom by tracing the silhouette of the transducer mounting bracket with a pencil or marker.

12. Tighten the pivot bolt, using the pivot screw and nut to lock the assembly. **Hand-tighten only!**

    ⚠ **CAUTION!** Do not use a high speed driver on this combination of fasteners. Hand-tighten only.

13. Snap open the assembly and hand-tighten the two mounting screws, then snap the assembly closed.

    NOTE: You will drill the third mounting hole and finalize the installation after you route the cable and test and finish the installation in the following procedures.

Proceed to the section *Route the Cables*.

Adjusting the Transducer Mounting Position

seam aligned with boat hull

Leveling the Mounting Assembly Horizontally
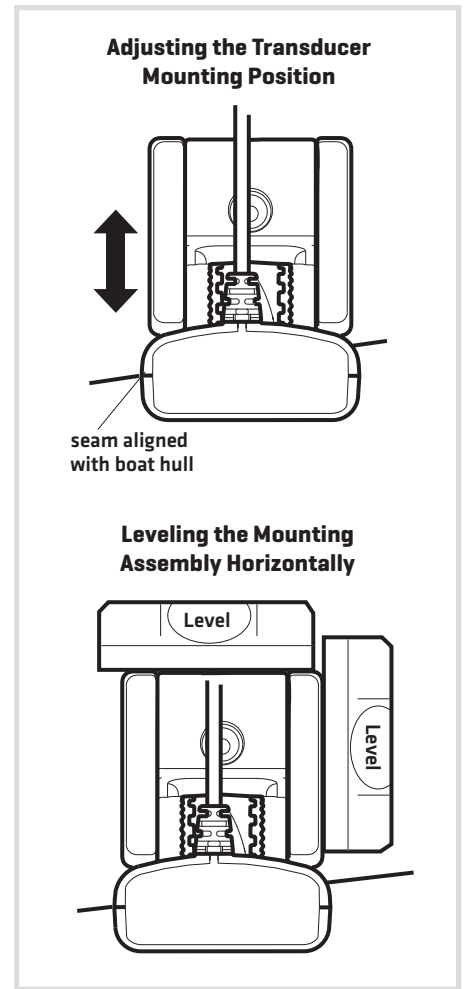
DUALBEAM PLUS INSIDE THE HULL INSTALLATION

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.

> 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: The integral temperature probe will not work with in-hull mounting, so you may want to consider purchasing a Temperature/Speed accessory, a Temp Sensor, or obtaining a different transducer.

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

1 | Determine 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 (see *Areas of Possible Turbulence*).

- 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 (see *Preferred Mounting Area*).

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. If the unit does not power-up, confirm that the cable connectors are properly connected and that power is available.

2. **Setup Guide:** See the section *Setup Guide* for initial start up instructions. You must complete the steps indicated in the Setup Guide before starting normal operation.

   NOTE: After completing the Setup Guide, the control head will automatically enter normal operation.

3. Press the **HOME** key 🏠.

4. Select a sonar view from the Favorites bar to display on-screen.

   NOTE: See your control head operations manual for more information about selecting views.

5. 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.

6. Place the transducer body face down at the identified mounting location inside the hull, with the pointed end towards the bow (see *In-Hull Transducer Installation*).

7. 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.

8. View the sonar signal on the display and compare against what was observed in Step 5, making sure that the boat is in the same location as it was during your observations in Step 5. If the results are comparable, move on to Step 9. Otherwise, locate a new position in the hull and repeat Steps 6 through 8.

9. 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 10. If the performance is not acceptable, repeat Steps 6 through 9.

10. Once you have determined the best mounting location using the above steps, mark the position of the transducer.

Areas of Possible Turbulence

rivets

strakes

transom
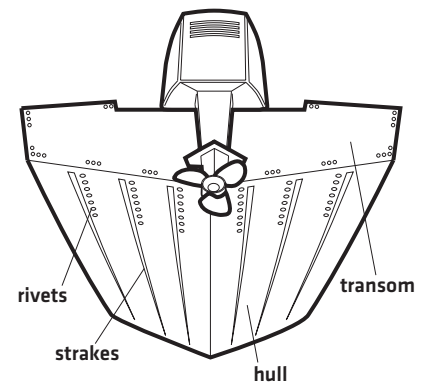
hull

Preferred Mounting Area
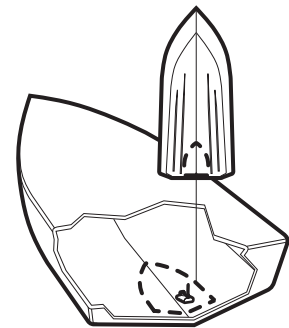
In-Hull Transducer Installation - 200/83 kHz Transducer
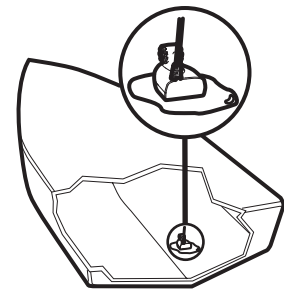
In-Hull Transducer Installation - 200/50 kHz Transducer
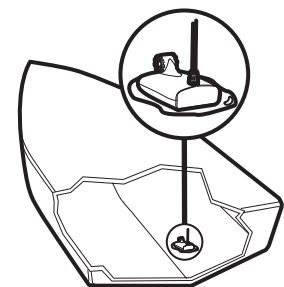
3 | Route the Cable

1. Once the mounting location is determined and you have marked the position of the transducer, route the cable from the transducer to the control head.

4 | Permanently Mount the Transducer

1. Make sure the position of the transducer is marked.

2. You may have to disconnect the cable to the control head and reconnect it at the end of this procedure.

3. 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.

4. Mix an ample quantity of two-part slow cure epoxy slowly and thoroughly. Avoid trapping air bubbles.

5. Coat the face of the transducer and the inside of the hull with epoxy (see *In-Hull Transducer Installation* and *Applying Epoxy to the Transducer*).

6. 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 (see *Installing the Transducer*).

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

7. 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.

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

Proceed to the section *Connect the Transducer Cable*.

Applying Epoxy to the 200/83 kHz Transducer

Applying Epoxy to the 200/50 kHz Transducer
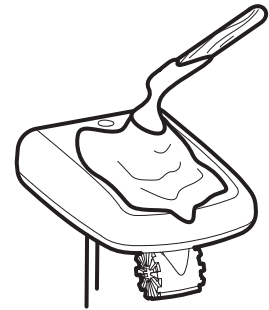
Installing the 200/83 kHz Transducer
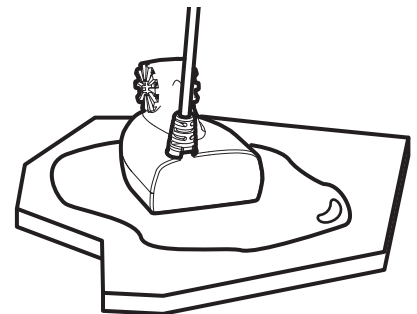
Installing the 200/50 kHz Transducer
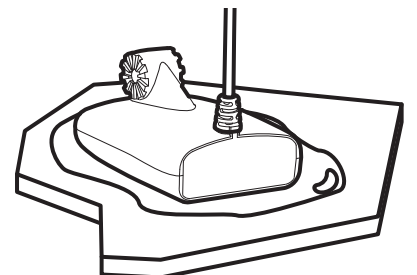
Side Imaging Transducer
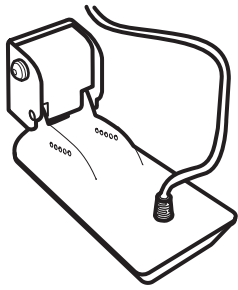
INSTALL THE SIDE IMAGING TRANSDUCER

Use the procedures in this section to install the Side Imaging transducer on your boat. The transducer mounting template is provided at the end of this manual (see *Side Imaging Transducer Mounting Template*).

> **NOTE:** See the *Transom Transducer Mounting Requirements* before beginning the installation.

SIDE IMAGING TRANSDUCER MOUNTING REQUIREMENTS

Side Imaging Requirements

In addition to the requirements shown in the *Transom Transducer Mounting Requirements* section, 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 illustrations below.

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

Transducer Mount Position: Unobstructed View

The jack plate gives the transducer safe distance from the motor and turbulence. The Side Imaging beams have a clear view side-to-side.
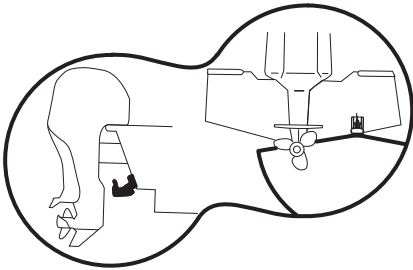
Transducer Mount Position: Obstructed View

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.
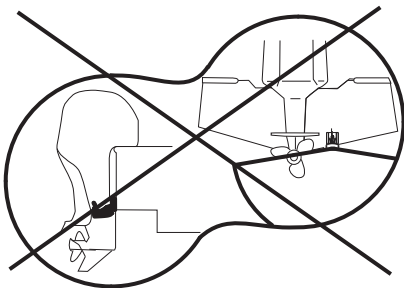
Multiple Transducer Installation (optional)

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.

Primary Source - Side Imaging Transducer

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 Requirements* and the illustration *Transducer Mount Position: Unobstructed View*).

Primary Source - Secondary Transducer

If you plan to use a second transducer 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.

Deadrise

- 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 (see the illustration *Deadrise*).

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

1 | Mount the Transducer 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. See *Side Imaging Transducer Mounting Template* at the end of this manual*.*

1. Confirm you have read the transducer mounting requirements under *Transom Transducer Mounting Requirements* and *Side Imaging Transducer Mounting Requirements*.

2. Cut out the transducer mounting template from the back of this manual (see *Side Imaging Transducer Mounting Template*). Match the mounting bracket screw slots to the template screw slots.

3. 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.

4. 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.

5. 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.

6. Use a marine-grade silicone sealant to fill the drilled holes, especially if the holes penetrated the transom wall.

7. 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.

2 | Assemble the Transducer

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

1. 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.

Deadrise

deadrise angle

Attaching the Bracket

Inserting the Square Nuts

square nuts

Attaching the Pivot

pivot

toothed washer

machine screw

transducer ear

Install the Side Imaging Transducer
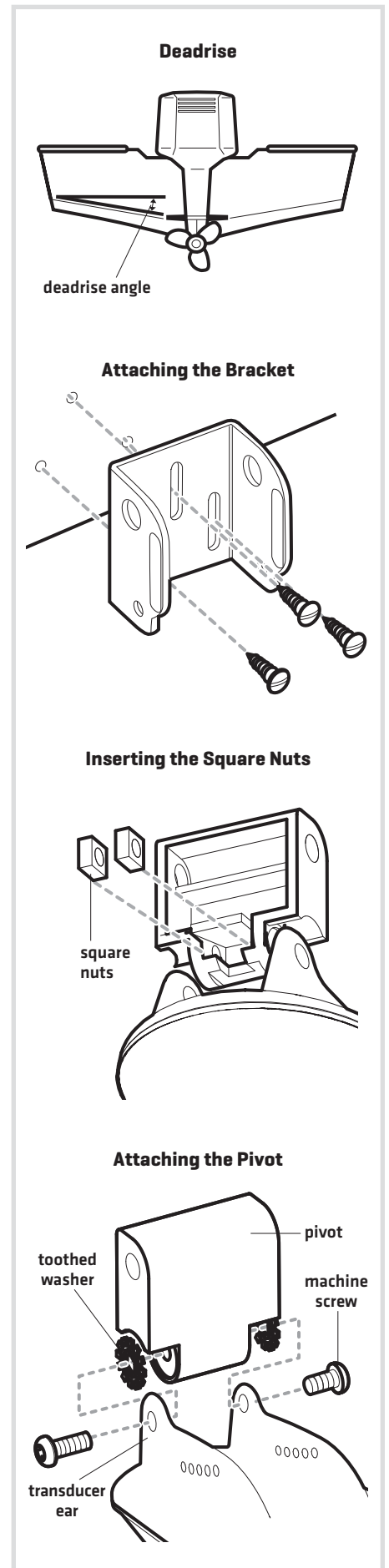
3 | Attach the Transducer to the Bracket

1. 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.

2. 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.

3. 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.

4 | Adjust the Running Position

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.

> 📝 **NOTE**: Side Imaging is best performed at boat speeds from 2 to 6 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.

Proceed to the section *Route the Cables*.

Attaching the Transducer to the Bracket

allen wrench • metal bracket • nylon washer (fits over headed pin) • headed pin • pivot • screw • stainless washer (fits over screw threads)

Tightening the Machine Screws

allen wrench • machine screw holes

Tightening the Mounting Screws
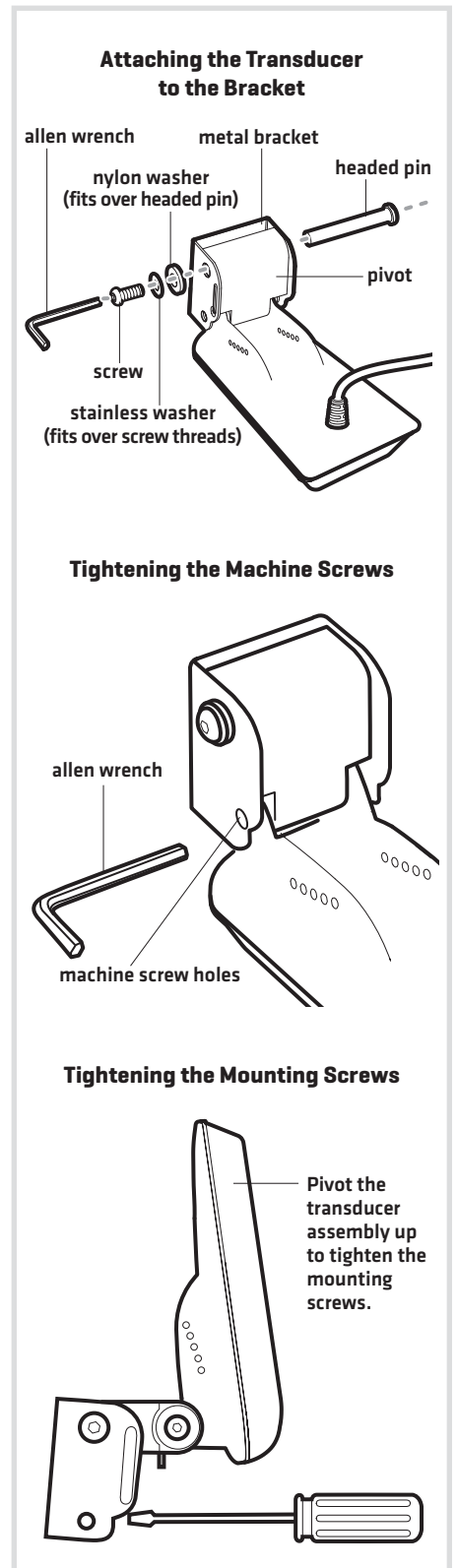
Pivot the transducer assembly up to tighten the mounting screws.
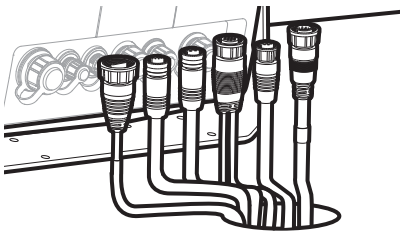
ROUTE THE CABLES

Use the procedures in the following section to route and connect all cables to the control head.

⚠️ **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.

⚠️ **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** or call **1-800-633-1468** for more information.

Route the Transducer 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. 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.

📝 **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 *Connect the Transducer 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.

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" 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!

4. 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 hole with marine-grade silicone sealant, then 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 [as shown in the illustration], 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.
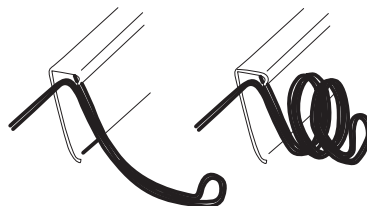
Routing the Cable: 200/50 kHz DualBeam PLUS Transducer
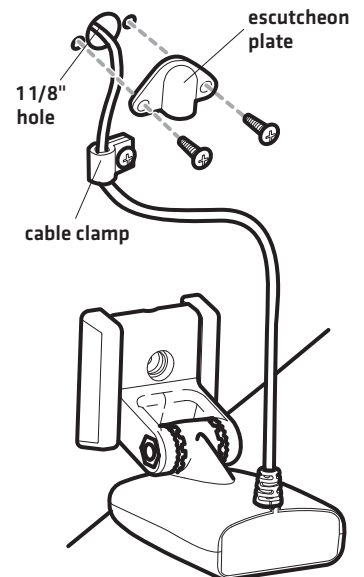
Routing the Cable: Side Imaging Transducer

Storing Excess Cable
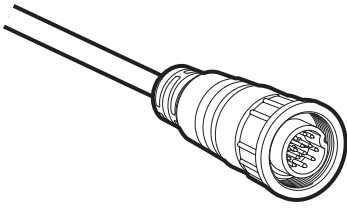
CONNECT THE TRANSDUCER CABLE

1. 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.

2. Hand-tighten the screw nut on the cable to secure the connection.

⚠ **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.
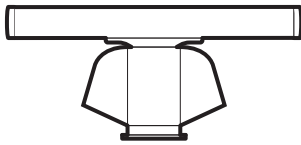
INSTALL ACCESSORIES

Radar, AIS, Compass/Heading Sensor, Black Box Sonar, Ethernet Switch, i-Pilot Link, etc. require a separate purchase. If you purchased additional accessories for your control head configuration, see the installation guide provided with each accessory, or download the guide from our Web site at **humminbird.com**, for installation instructions. See the *ONIX Network Configuration* illustration for an example of possible network connections.

Ethernet: Your unit has a built-in ethernet connector so that you can network advanced accessories and multiple Humminbird units. The Ethernet cable requires a separate purchase. See the Ethernet Installation Guide for details.

Adapter Cables: Your installation may require adapter cables to connect accessories to the control head.

📝 **NOTE:** To review the latest compatible accessories for your control head, and to purchase cables or other equipment, go to **humminbird.com** or contact Customer Service at **1-800-633-1468**.
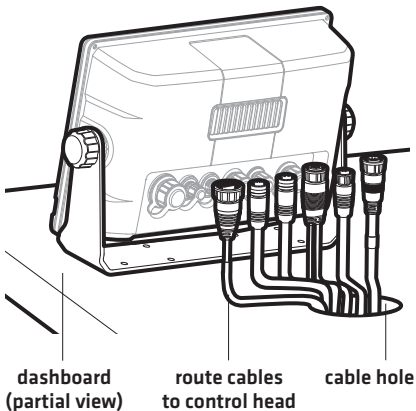
Route and Connect Accessory Cables

1. See the installation guides included with each accessory for installation instructions.

2. Route the cables to the control head.

3. Pass the cables through the drilled hole(s), and connect them to the appropriate ports on the control head. The ports are labeled, and the connectors are keyed to prevent incorrect installation.

📝 **NOTE:** When the cables connect to the control head through the hole, leave enough cable slack to allow for the control head to pivot through its full tilt range. Extra cable slack will also help when connecting or disconnecting the cables.

4. Hand-tighten the screw nut on each cable to secure the connection. Any unused ports should be covered with the port covers to prevent potential damage.

5. Apply labels to the cables (optional). Use nylon cable ties (not included) to secure the cables and create a clean assembly.

Proceed to the section *Test and Finish the Installation*.

dashboard (partial view)   **route cables to control head**   **cable hole**

Securing the Cables
(magnified view)

screw nut

cable label (optional)

port cover

Control Head Ports

Video · Ethernet · NMEA 2000 · NMEA 0183 (1-2) · Power - Speed - Temp · Sonar - Temp

ONIX Network Configuration

Radar · AS 360 · Autopilot Control Head · Fluxgate Compass

Gigabit Ethernet Switch · Autopilot Course Computer

Engine Monitor

Sonar with Temp

Power

Speed and Temp

Ethernet

Video Out (not for consumer use)

NMEA 2000

NMEA 0183 (1-2)

Power/Speed/Temp

Sonar/Temp
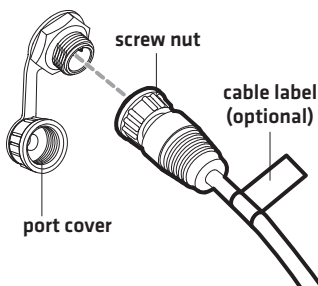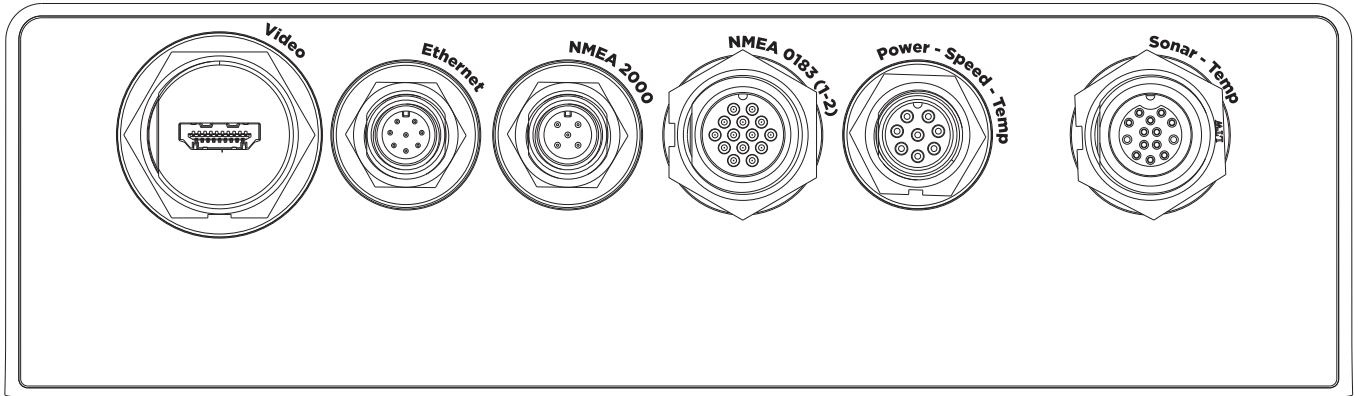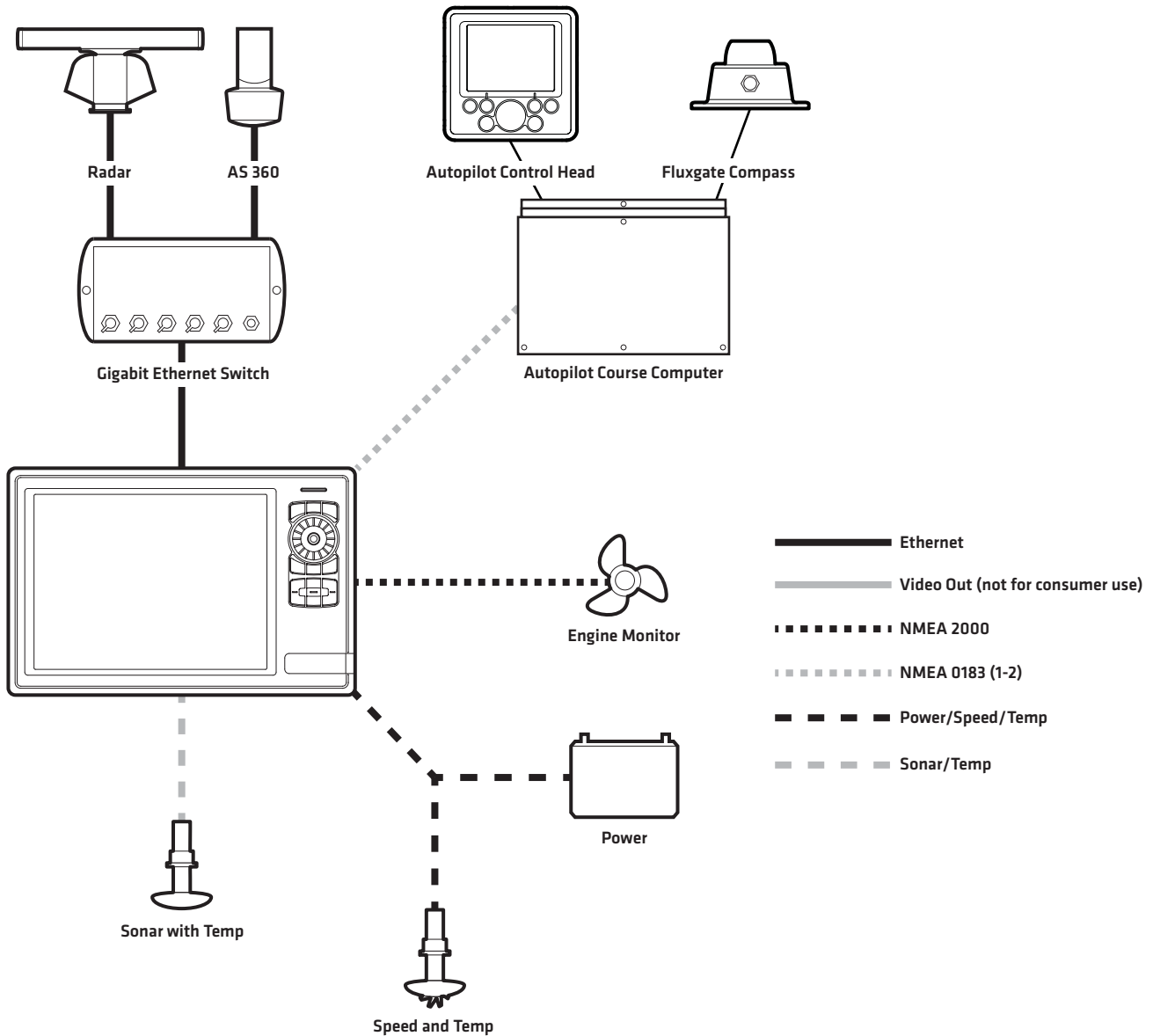
NOTE: To view more examples of network configurations, visit our Web site at **humminbird.com**.

NOTE: As you build your Humminbird network, it is important to register your products and keep your software up to date. Visit our Web site at **humminbird.com** to set up an account, update control head and accessory software, and purchase additional equipment. See your control head operations manual for additional information about updating software.

Install Accessories
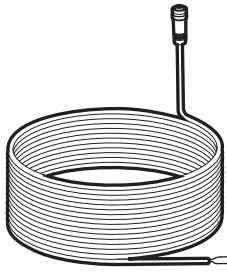
CONNECT THE CONTROL HEAD POWER CABLE

Connecting the Power Cable

A 6 ft (2 m) power cable is included to connect 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.

⚠ **WARNING!** Humminbird is not responsible for over-voltage or over-current failures. The control head must have adequate protection through the proper selection and installation of a 5 Amp fuse (recommended fuse type: slow-blow, time-delay, or time-lag).

Connect to Power
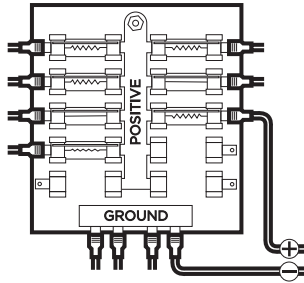
Fuse Terminal Connection

The power cable can be connected to a fuse panel (usually located near the console) or to a battery switch.

1. Make sure that the power cable is disconnected from the control head.

Fuse Terminal Connection

2a. 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. Install a 5 Amp fuse (not included) for protection of the unit.

OR

Battery Switch Connection

2b. Install the battery switch (not included) using the instructions provided with it. You will also need to install an inline fuse holder and a 5 Amp fuse (not included) for protection of the unit. Attach the black wire to (−) ground, and the red wire to (+)12 VDC power.

📝 **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.

3. Route the power cable to the Humminbird control head, and insert the connector into the POWER-SPEED-TEMP port. The ports are labeled, and the connectors are keyed to prevent incorrect installation. Hand-tighten the screw nut to secure the cable connection.

⚠ **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.

Proceed to the section *Test and Finish the Installation*.

Power Cable	Fuse Terminal or Battery Switch
Black Wire	(−) Ground
Red Wire	(+) 12 VDC

Battery Switch Connection
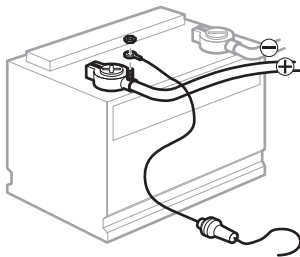
Connecting the Power Cable to the Power-Speed-Temp Port
(magnified view)

screw nut

cable label (optional)

port cover
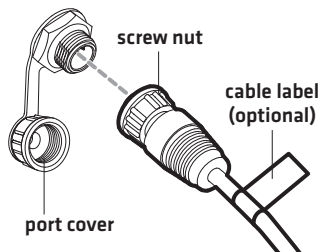
Test the Installation
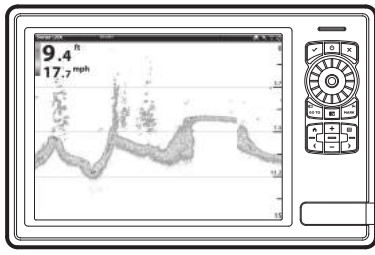
TEST AND FINISH THE INSTALLATION

Once you have installed both the control head and the 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.

1 | Confirm Sonar Signal on the Control Head

1. Power on the control head (see the section *Power On the Control Head*). If the unit does not power-up, confirm that the cable connectors are properly connected and that power is available.

2. **Setup Guide:** See the section *Setup Guide* for initial start up instructions.

> **NOTE**: After completing the Setup Guide, the control head will automatically enter normal operation.

3. Press the **HOME** key 🏠.

4. Select a sonar view from the Favorites bar to display on-screen.

> **NOTE**: See your control head operations manual for more information about selecting views.

5. 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.

6. 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.

2 | Make Adjustments

> **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.

DualBeam PLUS Transducer

1. If you have the correct angle set on the transducer, yet lose a bottom reading at high speed, adjust the height and the running angle in small increments to give you the ideal transducer position for your boat. First, adjust the height in small increments (see *DualBeam PLUS Transom Mount Installation: Assemble the Transducer and Initial Mounting*).

   If you are still not getting good high-speed readings, you may need to disassemble the transducer mounting assembly and re-position the ratchets, using the illustrations showing the transducer knuckle positions in the section *DualBeam PLUS Transom Mount Installation: Assemble the Transducer and Initial Mounting*. If you do change the transducer position, re-trace the position of the mounting bracket before proceeding.

Side Imaging Transducer

1. 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".

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

DualBeam PLUS Transducer

1. Force the pivot to the Up position to gain access to the mounting screws, then re-align the mounting bracket against the transom of the boat to match the traced silhouette. Check the bracket position with the level again to make sure it is still level, then mark the third mounting hole using a pencil or marker. Unscrew and remove the mounting screws and the transducer assembly and set aside.

2. Drill the third mounting hole, using a 5/32" drill bit. Use a marine-grade silicone sealant to fill all three drilled mounting holes, especially if the holes penetrated the transom wall.

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

3. Re-position the transducer assembly against the transom of the boat, then hand-install all three screws. Make sure that the transducer location and the pivot angle have not changed, then fully tighten all three mounting screws. **Hand-tighten only!**

4. Snap the pivot back down. If you have performed the preceding procedures correctly, the transducer should be level and at the right height for optimal operation.

Lock Down the DualBeam PLUS Transducer (optional)

The following procedures are for the DualBeam PLUS transom mount transducer only.

    NOTE: You have the option to lock down the Two Piece Kick-Up bracket if you do not want the transducer to kick up. Be aware, however, that the transducer can be damaged if it is locked down and it strikes debris in the water.

1. To lock down the transducer, trace the position of the mounting bracket. Force the pivot to the Up position to gain access to the mounting screws, then re-align the mounting bracket against the transom of the boat to match the traced silhouette. Check the bracket position with the level again to make sure it is still level, then mark the fourth mounting hole using a pencil or marker. Unscrew and remove the mounting screws and the transducer assembly and set aside.

2. Drill the fourth mounting hole, using a 9/64" drill bit. Use a marine-grade silicone sealant to fill all four drilled mounting holes, especially if the holes penetrate the transom wall.

3. Re-position the transducer assembly against the transom of the boat, then hand install the first three screws (two on the outside edges and one in the 3rd mounting hole). Make sure that the transducer location and the pivot angle have not changed, then fully tighten all three mounting screws. **Hand-tighten only!**

4. Snap the pivot back down. Install the #8 x 1" wood screw into the 4th hole to lock down the pivot arm. **Hand-tighten only!**

Side Imaging Transducer

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

Drilling the Third Mounting Hole

4th mounting hole

3rd mounting hole
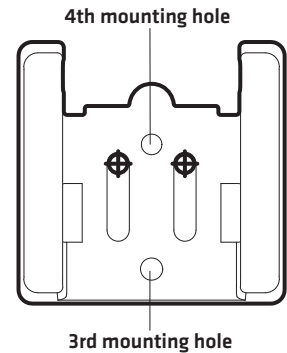
Fully Tightening All Three Mounting Screws
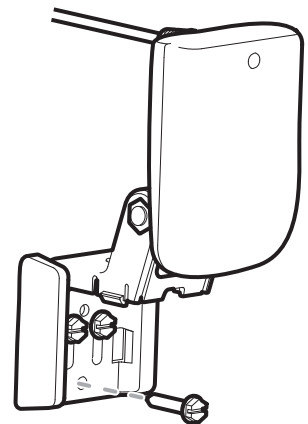
Locking Down the 200/83 kHz Transducer (optional)
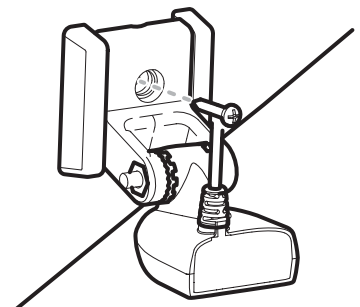
Locking Down the 200/50 kHz Transducer (optional)
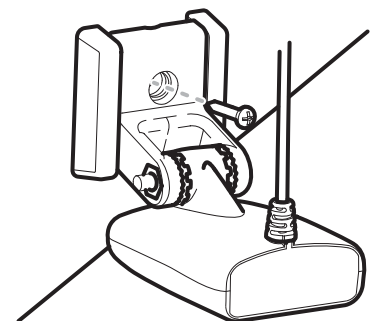
POWER ON THE CONTROL HEAD

Use the procedures in this section to power on and power off the control head.

Power On

1. Press and hold the POWER key ⏻.

   First Power On: On the first power on after installation, the Welcome Menu displays on the screen.

2a. Select **Start Normal Mode**.

2b. **International Units only:** Select Language to select the language displayed on the control head.

3. Selecting Start Normal Mode launches the Setup Guide. Proceed to the section *Setup Guide* for instructions.
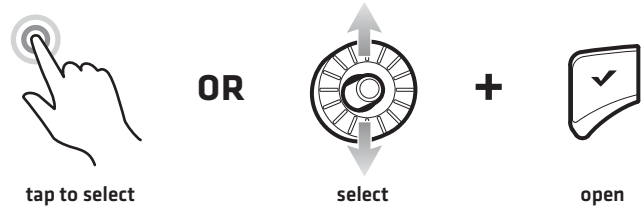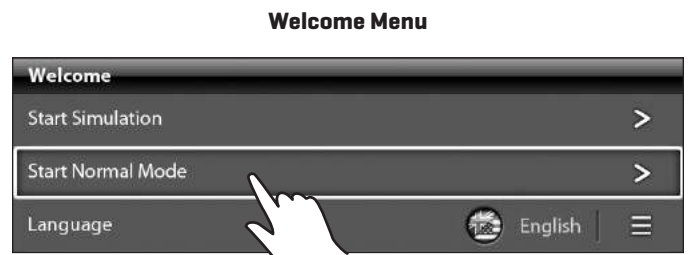
CT (Cross Touch) models provide multi-gesture touch screen and keypad capability to adjust menu settings or start actions on the control head. **NT (Non-Tactile) keypad control only models** use the keypad exclusively for all control head functions. Touch screen and keypad instructions are described for each section throughout this manual. Also, for an overview of functions, see the Quick Start Guide included with your product.

Welcome Menu

Welcome	
Start Simulation	>
Start Normal Mode	>
Language	🌐 English ☰

tap to select   **OR**   **select**   **+**   **open**

Power Off

1. Press and hold the POWER key ⏻.

SETUP GUIDE

The Setup Guide is a first time setup tool to help you configure basic system preferences, such as units of measurement and the map source. When equipment (transducer, radar, etc.) is connected to the control head, the equipment and its data will be detected automatically. The Setup Guide displays the data sources and system settings automatically selected for your network based on the detected equipment. **Use the information in the following sections to confirm the selected sources and settings.**

The settings shown in the Setup Guide can be changed at any time during normal operation. To change the system settings, such as the backlight, key sounds, units of measurement, and the time and date format, select Settings from the Home screen. See your control head operations manual for more information.

📝 **NOTE:** All settings are automatically saved.

📝 **NOTE:** See the Quick Start Guide and your control head operations manual for more information about the menu system.

First-Time Setup | Begin Manual Setup

1. Select **Begin Manual Setup**. Tap, or press the ENTER key ✓, to select.

   Selecting **Begin Manual Setup** will automatically open the first menu dialog box.

menu name   **currently selected menu option**

First-Time Setup	✕
Begin Manual Setup	>
Import Menu Settings	>
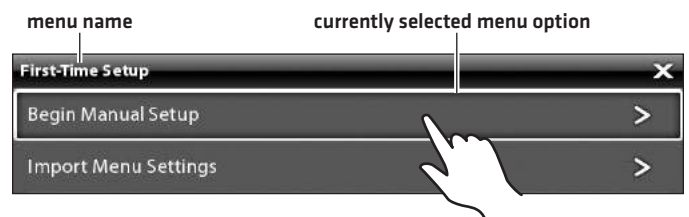
Select Units of Measurement

1. Select **Units** and open the submenu.

2. Select a menu option and open the submenu.

3. Select a setting. Tap, or press the ENTER key ✔, to confirm the selection.

4. Tap the back arrow on-screen or press the EXIT key ✖ to return to the submenu.

5. Repeat steps 2 through 4 to change another setting.

6. Tap the back arrow on-screen or press the EXIT key ✖ to return to the main menu.

7. Select additional settings as needed. Tap the right arrow on-screen or press the RIGHT ARROW key ❭ on the keypad to proceed to the next menu dialog box.

current menu option setting submenu

General Settings	
Time Format	12 Hour ≡
Local Time (UTC Offset)	UTC-05:00 Eastern Time, Lima ≡
Date Format	MM/DD/YYYY ≡
Units	≡

current menu option setting submenu

Units	
Distance (Long)	Miles (mi) ≡
Distance (Short)	Feet (ft) ≡
Temperature	Fahrenheit (°F) ≡
Depth	Feet (ft) ≡

menu options

current menu option setting back

Distance (Long)	
Miles (mi)	●
Nautical Miles (nm)	◉
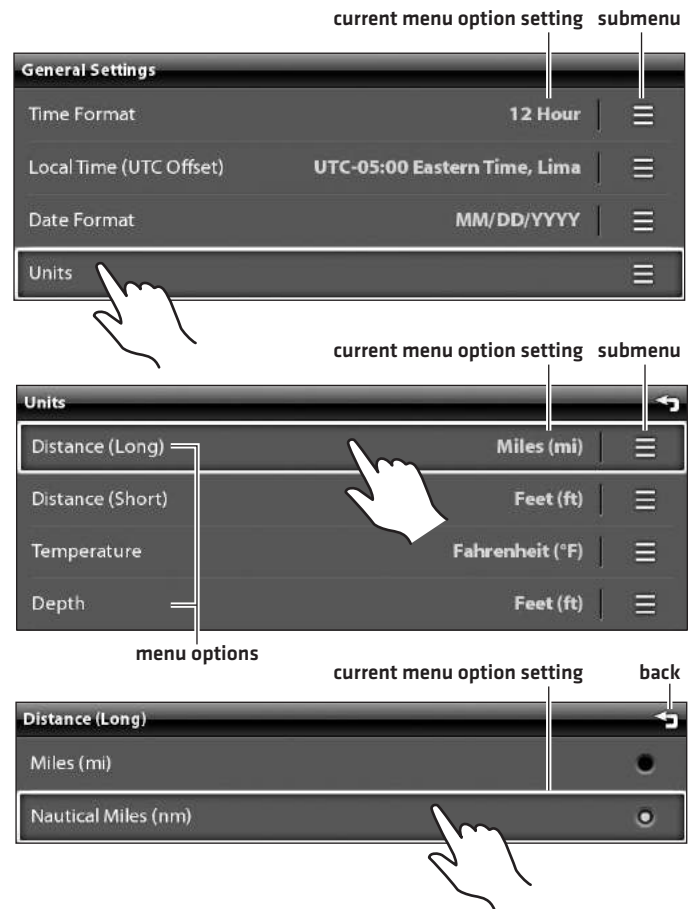
Sonar | Confirm Transducer Setup

The control head will default to the transducer that was included with your unit and automatically select sonar settings based on the transducer's capabilities. Use the following instructions to confirm transducer setup.

If your control head is compatible with an accessory transducer, and it is connected to the control head, use Transducer Setup to select the accessory transducer.

Confirm Transducer Setup

1. Select **Transducer Setup** and open the submenu.

2. Confirm the current menu settings.

   To make changes: Select a setting. Tap, or press the ENTER key ✔, to confirm the selection. If your transducer supports multiple sonar beams [Side Imaging, Down Imaging, and 2D Sonar], select each one you plan to use.

3. Tap the back arrow on-screen or press the EXIT key ✖ to return to the main menu.

4. Select additional settings as needed. Tap the right arrow on-screen or press the RIGHT ARROW key ❭ on the keypad to proceed to the next menu dialog box.

   NOTE: For more information about sonar setup, see your control head operations manual.

Sonar	
Transducer Setup	2D + SI + DI ≡
2D Frequency	83/200 kHz ≡
SI Frequency	455/800 kHz ≡
Temp Sonar	✓
Depth Offset	0.0 ft ≡
Water Type	Fresh Water ≡
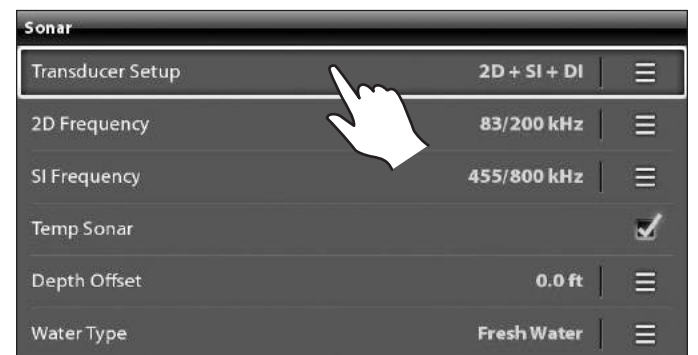
Chart | Select the Map Source and Water Level Offset

Humminbird is the built-in map source for your control head. You can also select Navionics or C-MAP by Jeppesen as your map source. If you install an SD card with additional maps, set the map source to match the SD card type.

From this menu, you can also set the Water Level Offset [Humminbird charts only]. Water Level Offset allows you to change the level of the water being read from the control head. For example, if the lake is down 5 feet, set the Water Level Offset setting to -5. The displayed numbers on the Contour Lines will adjust from the Water Level Offset setting. See your control head operations manual for more information.

> **NOTE:** Set the Water Level Offset setting at the beginning of every trip.

Select a Map Source

1. Select a map source. Tap, or press the ENTER key ✔, to confirm the selection.

Set the Water Level Offset

1. Drag the slider, or press and hold the ENTER key ✔, to adjust the setting.

2. Tap the right arrow on-screen or press the RIGHT ARROW key ▶ on the keypad to proceed to the next menu dialog box.

current menu option setting

slider
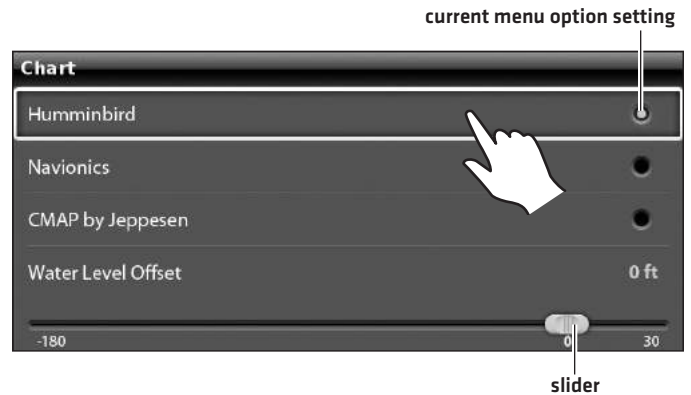
My Vessel | Select NMEA 2000 Engines/Tanks and Vessel Dimensions

Use the following instructions to select the NMEA 2000 engines and/or tanks and the vessel dimensions of your boat.

Select Engines and Tanks with NMEA 2000 Sensors

If you have a NMEA 2000 network on your boat that is connected to the engines and/or fuel tanks, select your current configuration to receive NMEA 2000 data on your control head.

> **NOTE:** See *NMEA Input/Output* for a complete list of compatible NMEA sentences.

1. Select **Engines/Tanks** and open the submenu.

2. Select a setting. Tap, or press the ENTER key ✔, to confirm the selection.

3. Tap the back arrow on-screen or press the EXIT key ✖ to return to the main menu.

4. Select additional settings as needed.

Set Vessel Dimensions

It is important to set the height, width, and depth allowances required for your vessel.

1. Select **Vessel Dimensions** and open the submenu.

2. Select a setting. Drag the slider, or press and hold the ENTER key ✔, to adjust the setting.

3. Select additional settings as needed.

4. Tap the back arrow on-screen or press the EXIT key ✖ to return to the main menu.

5. Select **Confirm** to confirm the selected settings.

The unit will automatically enter normal operation.

CONFIGURE A NEW NETWORK

Use the instructions in this section if you have **more than one Humminbird control head** connected to the network. Configuring the network synchronizes the control head settings.

If there is only one control head on the network, skip this section.

1 | Preparation

1. Confirm all control heads and network equipment are powered on.

2. **Main Control Head:** Designate one control head as the main control head. Ideally, you've used the main control head, and it has been set up with your favorite view settings, menu preferences, and more. **The other control heads in the network will synchronize to the main control head.**

   If this is a first-time configuration for all control heads, no additional actions are required. Proceed to *Configure the Network*.

3. **Global:** If there are any settings you'd like to keep on a control head, and not share globally, make sure the Global menu on that setting is turned off.

4. **Navigation data (waypoints, routes, tracks):** navigation data will be synchronized. To export navigation data from a control head and save it, export the data to an SD card (Home > Files > Export > Nav Data).

5. **Export Menu Settings:** When control heads are synchronized to a main unit, their menu settings are changed to match the main unit. To save menu settings from a selected remote control head, export the menu settings to an SD card (see *Manage Your Control Head: Save System Settings to an SD Card*).

2 | Configure the Network

1. On the main control head, press the HOME key.

   📝 **NOTE:** Use the main control head designated in the previous section, *Preparation*.

2. Select Settings.

3. Select Network.

4. Select Configure New Network.

5. Select **Sync Network**.

SET UP THE CONTROL HEAD

After completing the Setup Guide, use the following sections to configure basic system settings and confirm operation.

> **NOTE:** See the Quick Start Guide and the control head operations manual that was provided with your unit for additional information.

Start Radar Transmission

If you have a radar connected to the control head system, use the following instructions to start radar transmission.

> ⚠ **WARNING!** The radar must be configured before it can be used for on-the-water operations. See the operations manual for configuration instructions.

Favorites Bar

Start Radar Transmission

1. Confirm the radar power source is turned on (breaker or switch).

2. Press the **HOME** key 🏠.

3. Tap the **Radar View** on the Favorites Bar, or use the Joystick to select it and press the ENTER key ✔ to open.

4. With the Radar View open on-screen, press the MENU key ☰.

5. Select **Transmit.** Tap the ON/OFF button, or press the ENTER key ✔, to turn Transmit ON.

   A radar icon will appear in the system status bar confirming the radar is transmitting (see *Confirm Sensor Connection*).

Use the same instructions to turn Radar Transmit off.
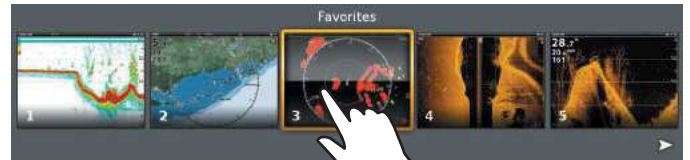
Confirm Radar Transmission

Radar icon is displayed in the system status bar.
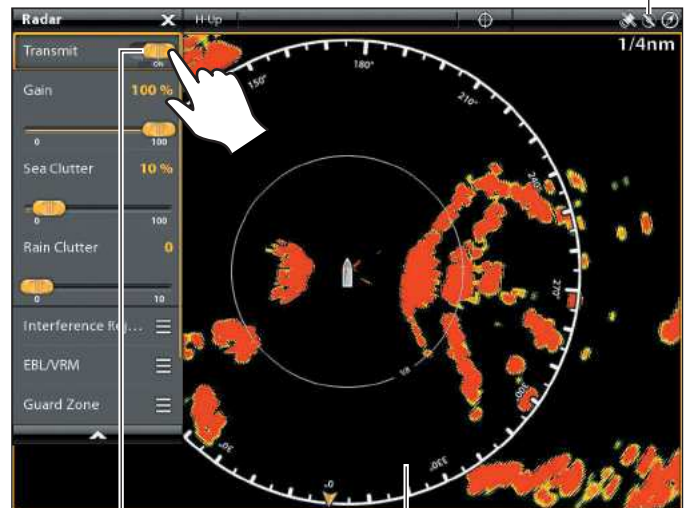
Transmit is ON.   Radar data is displayed on-screen.

Confirm Sensor Connection

This section provides information on how to confirm sensor connection and status.

System Status Bar

The system status bar is located at the top right of the display. Each accessory connected to the control head is represented by an icon in the system status bar. Each icon will display variations depending on the current sensor status.

Active: If a sensor is detected on the network and is active (transmitting or receiving data), the icon will be white. See the table below.

Inactive: If a sensor is connected, but not detected on the network or active (transmitting or receiving data), the icon will be gray.

NOTE: If you have connected an accessory to the control head and the icon is not displaying in the system status bar, check the installation of the accessory and the cable connection to the control head (see *Troubleshooting*).

system status bar

Active Status Icon	Sensor	Icon Description
	AIS	AIS is on and receiving targets.
	Compass	The selected accessory compass is on and heading data is being received.
	GPS	The internal GPS is detected and a GPS fix has been obtained.
	iPilot	iPilot is connected, enabled, and actively navigating.
	Radar	The selected radar source is detected and transmitting data.
	2D Sonar	The selected 2D sonar source is detected and pinging data.
	360 Imaging Sonar	The 360 Imaging transducer is pinging data.
	Wi-Fi	Wi-Fi is on and connected to a hotspot with a strong signal strength.

Set Alarms

Your control head provides a wide variety of alarms that are organized under categories such as System, Navigation, Sonar, and Engine. Before you start navigating with your control head, set up the appropriate alarms so that you will be alerted if the alarm condition is detected.

Set an Alarm

1. From the Home screen, select **Alarms** 🔔.

2. Under Settings, select **Alarms**.

   If the control head is connected to the Humminbird network, select **Local Alarms** [control head only] or **Networked Alarms** [alarms shared across control heads]. See your control head operations manual for more information.

3. Select an alarm category and open the submenu.

4. Select an alarm name.

5. Tap the ON/OFF button, or press the ENTER key ✔, to turn the alarm ON.

6. Drag the slider, or press and hold the ENTER key, to adjust the setting.

   > 📝 **NOTE:** Menu options that include range menus may have an OFF default setting and may not automatically turn on when you adjust the menu setting. Confirm the menu option is turned ON before adjusting the range setting. The current setting will change from black [OFF] to yellow [ON].

7. Tap the back arrow on-screen, or press the EXIT key ✖, to close the submenu and return to the Alarms menu.

8. Repeat steps 3 through 7 to set additional alarms.

9. Press the EXIT key ✖ to return to the Home screen.

Selecting an Alarm Category

alarm categories

Setting an Alarm

selected category — return to Home screen — back — close — status bar

scroll through all available menu options

mute alarms — adjust the range menu setting — range menu
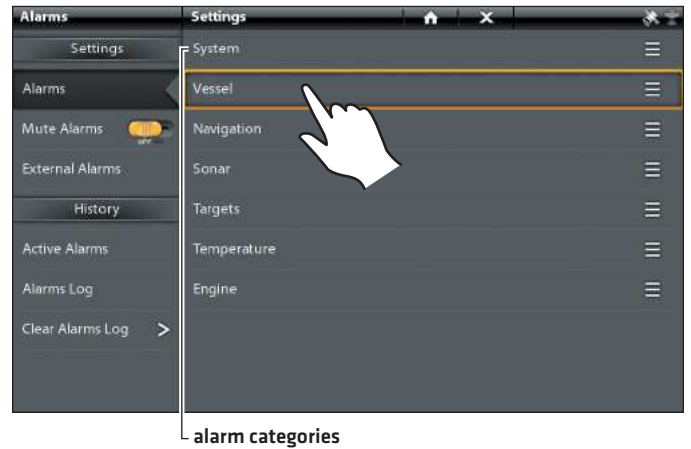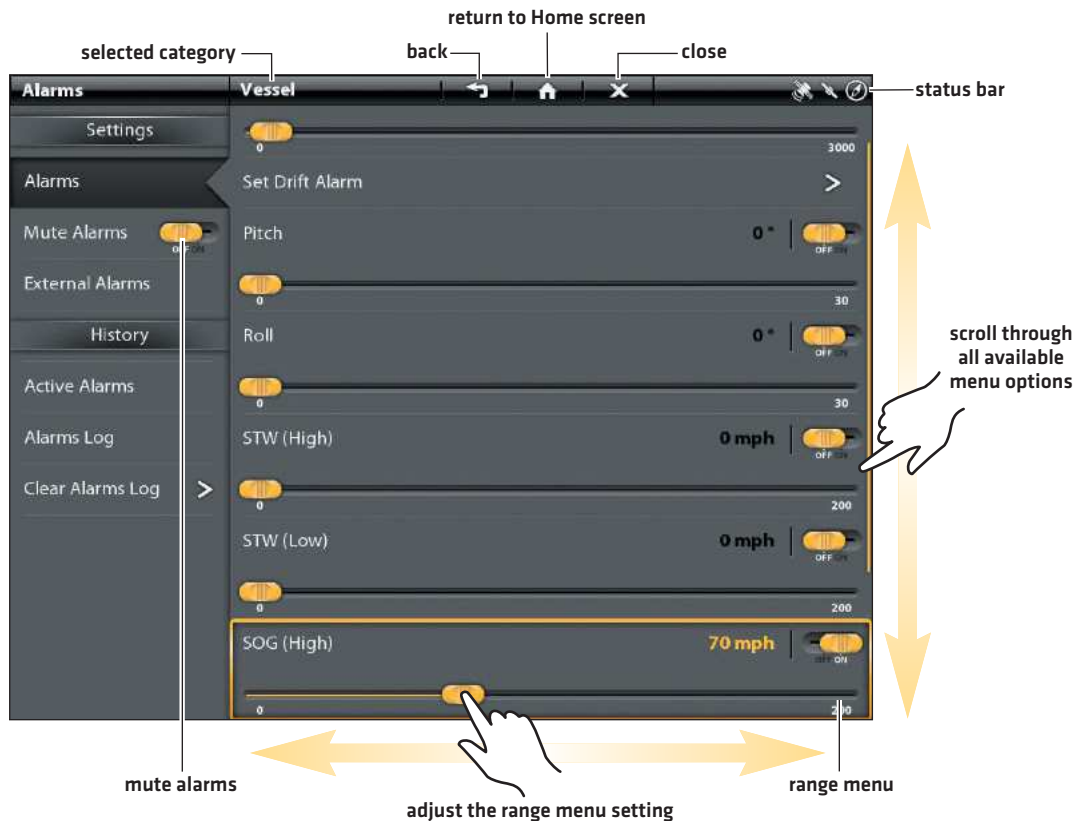
Display a Data Bar

Your control head allows you to choose a standard data bar or a navigation data bar with preset data boxes. If you attach additional accessories to the control head or network, additional data bar options may also be displayed. The data boxes in the data bar can also be changed.

Select the Data Bar Type

1. With a view displayed on-screen, press the **PANE** key ▮⊟ once. In a multi-pane view, press the PANE key repeatedly until the status bar turns yellow.

2. Select **Data Bar** from the View Options menu.

3. Select the type of data bar to display. To hide the data bar, select Off.

Customize the Data Bar

Your control head provides a wide variety of data types (categories), including Vessel, Navigation, Speed, Wind, Fuel, and Engine, with multiple data box options. The data bars can be customized with the data boxes you select. See your control head operations manual for more information.

Down Imaging View with Data Bar Displayed

standard data bar

Set the Trip Log

The Trip Log provides current navigation data, such as Speed Over Ground (SOG), timer for elapsed time, distance traveled since last reset, average speed, and trip fuel.

Turn On the Trip Log

1. From the Home screen, select the **Trip Log** tool 🔘.

2. Under Trip Log, select **Trip**.

3. Select **Trip Log**. Tap the ON/OFF button, or press the ENTER key ✔, to turn Trip Log ON.

Use the same instructions to turn the Trip Log off.

Starting the Trip Log

return to Home screen   close

Trip Log data boxes

Manage Your Control Head

⚠️ **WARNING!** Humminbird is not responsible for the loss of data files (waypoints, routes, tracks, groups, snapshots, recordings, etc.) that may occur due to direct or indirect damage to the unit's hardware or software. It is important to back up your control head's data files periodically. Data files should also be saved to your PC before restoring the unit's defaults or updating the software. See your Humminbird online account at **humminbird.com** and the operations manual on your Humminbird Manual CD for details.

Rename Your Control Head

Use the following instructions to rename your control head.

1. From the Home screen, select **Settings** ☰ .

2. Select **Network**.

3. Select **System Info**.

4. Select **Rename Unit**. Using the on-screen keyboard or keypad, enter the name you would like to use for your control head. Select **Save**.

You can use the same instructions to rename the Network, under Network Info.

Register Your Humminbird Unit

Set up an online account so that you will receive the latest Humminbird news, including accessory compatibility and software update information.

1. Go to our Web site at **humminbird.com**, and click My Account.

2. Follow the on-screen instructions to create a new account. Then, click Register a Product.

Save System Settings to an SD Card

You can save your customized system settings to an SD Card. This allows you to import your favorite settings to another control head or to a control head that has been restored to its factory settings.

1. Insert an SD Card into one of the SD Card slots on the control head.

2. From the Home screen, select the **Files** tool 🗋 .

3. Under Export, select **Menu Settings**.

4. Follow the on-screen prompts to export the menu settings to the SD Card.

You can use the same instructions to import saved settings to the control head. Select **Import > Menu Settings**.

Humminbird Manuals on CD

The CD included with your control head contains the operations manuals (and other related manuals) for your Humminbird product. To open, read, and print the Adobe PDF files, you will need Adobe Reader software installed on your computer.

To download the free Adobe Reader Software to your computer, visit *http://get.adobe.com/reader*.

1. Insert the CD into your computer's CD drive.

2. From the on-screen window, click **Open Folder to View Files**.

   📝 **NOTE:** If the window does not automatically open, locate the CD drive from your desktop and double-click the CD title to open the folder.

3. Under **Files Currently on the Disc**, select a manual folder and double-click to open.

4. **Select a language folder.** Double-click the folder to view the included PDF files. (EN = English, FR = French)

5. Double-click the PDF file to open the manual.

PDF File Tips (also see Adobe Reader Help):

- In the Bookmarks Panel, click a section name to jump to a specific section of the manual. Bookmarks can be expanded and collapsed by clicking on the plus (+) or minus (-) icons.

- To search words or phrases throughout the manual, press Ctrl F and type the word(s) into the text box.

*The included CD is not a DVD.

Update the Control Head Software

It is important to keep your control head and accessories software up to date. See the Software Update Guide in your control head operations manual, or download it from our Web site at **humminbird.com**.

It is important to review the following tips:

- The software update files for each registered product are posted to your account at **humminbird.com**.

- Before the control head software is updated, export your menu settings, radar settings, navigation data, and screen snapshots to an SD card.

- Update the control head and accessories software in the order they appear on the software update list in the Files tool.

NMEA Input/Output

Your control head is compatible with the NMEA 0183 and NMEA 2000 sentences shown in the following sections.

NMEA 0183

Message	Description	Input	Output
AAM	Waypoint Arrival Alarm		·
APB	Heading/Track Controller (Autopilot) Sentence "B"		·
BOD	Bearing-Origin to Destination		·
BWC	Bearing & Distance to Waypoint - Great Circle		·
BWR	Bearing & Distance to Waypoint - Rhumb Line		·
DBT	Depth Below Transducer	·	·
DPT	Depth	·	·
GGA	Global Positioning System Fix Data	·	·
GLL	Geographical Position - Latitude/Longitude	·	·
GNS	GNSS Fix Data	·	·
GSA	GNSS DOP and Active Satellites	·	·
GSV	GNSS Satellites In View	·	·
HDG	Heading, Deviation & Variation	·	·
HDM	Heading, Magnetic	·	·
HDT	Heading, True	·	
MTW	Water Temperature	·	·
MWD	Wind Direction & Speed	·	
MWV	Wind Speed & Angle	·	
RMB	Recommended Minimum Navigation Information		·
RMC	Recommended Minimum Specification GNSS Data	·	·
ROT	Rate of Turn	·	·
VBW	Dual Ground/Water Speed	·	
VDM	AIS VHD Data Link (Other Vessels)	·	
VDO	AIS VHD Data Link (Own Vessel)	·	
VHW	Water Speed and Heading	·	·
VTG	Track Made Good & Ground Speed		·
XDR	Transducer Measurements	·	
XTE	Cross-Track Error, Measured		·
ZDA	Time & Date	·	·

NMEA 2000

NMEA 2000 Port
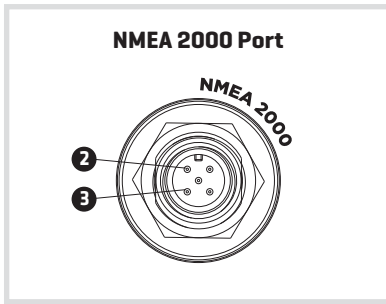
Connector Pin	Cable	Fuse Terminal
❷	Net S	[+] Power
❸	Net C	[-] Ground

Message (PGN)	Description	Input	Output
059392	ISO Acknowledgement	·	·
059904	ISO Request	·	·
060928	ISO Address Claim	·	·
126208	NMEA - Command/Request/Acknowledge Function	·	·
126464	Receive/Transmit PGN List Group Function	·	·
126992	System Time	·	
126996	Product Information	·	·
127245	Rudder	·	
127250	Vessel Heading	·	
127251	Rate of Turn	·	
127488	Engine Parameters, Rapid Update	·	
127489	Engine Parameters - Dynamic	·	
127497	Trip Parameters, Engine	·	
127505	Fluid Level	·	
128267	Water Depth	·	
129026	COG & SOG, Rapid Update	·	
129029	GNSS Position Data	·	
129033	Time & Date	·	
129283	Cross Track Error	·	
129284	Navigation Data	·	
129285	Navigation - Route/WP Information	·	
129539	GNSS DOPs	·	
129540	GNSS Sats in View	·	
130052	Loran C TD Data	·	
130306	Wind Data	·	
130310	Environmental Parameters	·	
130311	Environmental Parameters	·	
130312	Temperature	·	
130313	Humidity	·	
130314	Actual Pressure	·	
130576	Small Craft Status	·	

NMEA 2000 AIS Messages

Message (PGN)	Description	Input	Output
129038	Class A Position Report	•	
129039	Class B Position Report	•	
129809	AIS Class B Static Data, Part A	•	
129810	AIS Class B Static Data, Part B	•	

Select NMEA 0183 Sentences for Output

Use the following instructions to select NMEA 0183 output sentences.

1. From the Home screen, select **Settings** [≣].

2. Select **Network**.

3. Select NMEA 0183 [1] or NMEA 0183 [2].

4. Select **NMEA Output**.

5. **ON/OFF:** To turn NMEA Output on or off, tap the ON/OFF button or press the ENTER key.

6. Select NMEA sentences for output.

7. Tap the back arrow on-screen or press the EXIT key ✖ to return to the previous menu.

Select the Baud Rates

Use the following instructions to set the baud rate for the NMEA 0183 [1] and NMEA 0183 [2] ports.

1. From the Home screen, select **Settings** [≣].

2. Select **Network**.

3. Select NMEA 0183 [1] or NMEA 0183 [2].

4. Select **Baud Rate**.

5. Select a Baud Rate [Auto, 4800, 9600, or 38400; Default = Auto]. Tap, or press the ENTER key ✔, to confirm the selection.

6. Tap the back arrow on-screen or press the EXIT key ✖ to return to the previous menu.

> **NOTE:** For additional Humminbird network configuration instructions and NMEA 2000 configuration instructions, see your control head operations manual.

ONIX 8 Specifications

Gimbal Mount

12.58 in (319.53 mm)

11.09 in (281.69 mm)

6.92 in
(175.77 mm)

8.15 in
(207.01 mm)

3.73 in (94.74 mm)

3.43 in (87.12 mm)
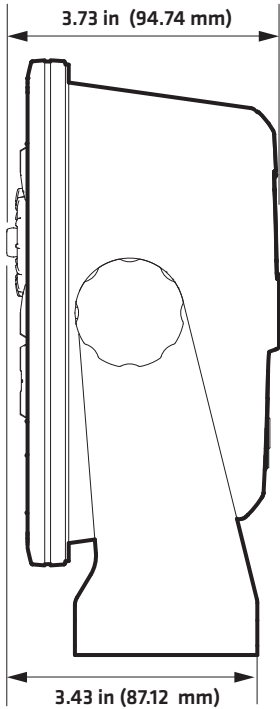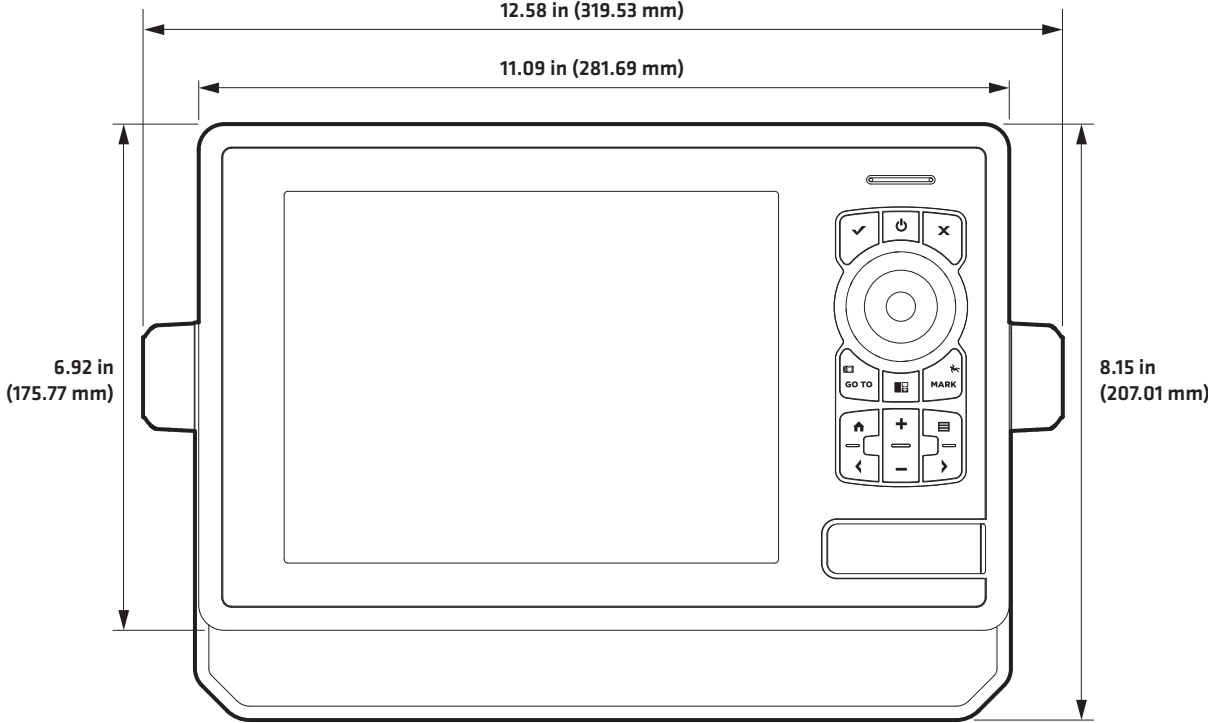
ONIX 8 SPECIFICATIONS

ONIX8ci Combo

Control Head

Display Size (diagonal) . . . . 8.4 inches (213.4 mm)

Pixel Matrix . . . . XGA 1024 x 768

Display Type . . . . TFT Color

Backlight . . . . LED

Communication . . . . NMEA 0183 Bus, NMEA 2000 Bus (LEN = 2), Ethernet

Power Requirement . . . . 10 to 20 VDC

Current Draw . . . . 2.5 Amps

IPX Rating . . . . IP67 Waterproof/Submersible @ 1 m for 30 minutes and dust tight

DualBeam PLUS Transducer

XNT 14 20 T (includes built-in temperature probe)

Operating Frequency . . . . 200 kHz and 83 kHz

Depth Capability . . . . 1500 ft (457 m)

Area of Coverage . . . . 60°@-10 dB in 83 kHz, 20°@-10 dB in 200 kHz

Power Output (MAX) . . . . 600 Watts (RMS), 4800 Watts (Peak to Peak)

Target Separation . . . . 2.5 inches (63.5 mm)

XNT 14 74 T (includes built-in temperature probe)

Operating Frequency . . . . 200 kHz and 50 kHz

Depth Capability . . . . 5000 ft (1524 m)

Area of Coverage . . . . 74° @ -10 dB in 50 kHz, 20° @ -10 dB in 200 kHz

Power Output (MAX) . . . . 1000 Watts (RMS), 8000 Watts (Peak to Peak)

Target Separation . . . . 2.5 inches (63.5 mm)

NOTE: Humminbird verifies maximum stated depth in saltwater conditions, but actual depth performance may vary due to transducer installation, water type, thermal layers, bottom composition, and slope.

NOTE: Product specifications and features are subject to change without notice.

ONIX 8 SPECIFICATIONS

ONIX8ci SI Combo

Control Head

Display Size [diagonal] . . . . 8.4 inches [213.4 mm]

Pixel Matrix . . . . XGA 1024 x 768

Display Type . . . . TFT Color

Backlight . . . . LED

Communication . . . . NMEA 0183 Bus, NMEA 2000 Bus [LEN = 2], Ethernet

Power Requirement . . . . 10 to 20 VDC

Current Draw . . . . 2.5 Amps

IPX Rating . . . . IP67 Waterproof/Submersible @ 1 m for 30 minutes and dust tight

Side Imaging Transducer

XT 14 20 HDSI T [includes built-in temperature probe]

Operating Frequency . . . . 200 kHz and 83 kHz, 455 kHz, 800 kHz

Depth Capability . . . . **DualBeam PLUS:** 1500 ft [457 m]
Side Imaging: 150 ft [50 m]
Down Imaging: 350 ft [107 m]

Area of Coverage . . . . **Side Imaging:** [2] 86° @ -10 dB in 455 kHz [180° Total Coverage],
[2] 55° @ -10 dB in 800 kHz [130° Total Coverage]
Down Imaging: 75° @ -10 dB in 455 kHz, 45° @ -10 dB in 800 kHz
DualBeam PLUS: 60° @ -10 dB in 83 kHz, 20° @ -10 dB in 200 kHz

Power Output [MAX] . . . . 600 Watts [RMS], 4800 Watts [Peak to Peak]

Target Separation . . . . 2.5 inches [63.5 mm]

XT 14 74 HDSI T [includes built-in temperature probe]

Operating Frequency . . . . 200 kHz and 50 kHz, 455 kHz, 800 kHz

Depth Capability . . . . **DualBeam PLUS:** 5000 ft [1524 m]
Side Imaging: 150 ft [50 m]
Down Imaging: 350 ft [107 m]

Area of Coverage . . . . **Side Imaging:** [2] 86° @ -10 dB in 455 kHz [180° Total Coverage],
[2] 55° @ -10 dB in 800 kHz [130° Total Coverage]
Down Imaging: 75° @ -10 dB in 455 kHz, 45° @ -10 dB in 800 kHz
DualBeam PLUS: 74° @ -10 dB in 50 kHz, 20° @ -10 dB in 200 kHz

Power Output [MAX] . . . . 1000 Watts [RMS], 8000 Watts [Peak to Peak]

Target Separation . . . . 2.5 inches [63.5 mm]

NOTE: Humminbird verifies maximum stated depth in saltwater conditions, but actual depth performance may vary due to transducer installation, water type, thermal layers, bottom composition, and slope.

NOTE: Product specifications and features are subject to change without notice.

ONIX 10 Specifications

Gimbal Mount

13.89 in (352.81 mm)

12.41 in (315.21 mm)

8.10 in (205.74 mm)

8.75 in (222.25 mm)

3.73 in (94.74 mm)

3.43 in (87.12 mm)

ONIX 10 Specifications

ONIX10ci Combo

Control Head

Display Size (diagonal) . . . . 10.4 inches (264.2 mm)

Pixel Matrix . . . . XGA 1024 x 768

Display Type . . . . TFT Color

Backlight . . . . LED

Communication . . . . NMEA 0183 Bus, NMEA 2000 Bus (LEN = 2), Ethernet

Power Requirement . . . . 10 to 20 VDC

Current Draw . . . . 2.5 Amps

IPX Rating . . . . IP67 Waterproof/Submersible @ 1 m for 30 minutes and dust tight

DualBeam PLUS Transducer

XNT 14 20 T (includes built-in temperature probe)

Operating Frequency . . . . 200 kHz and 83 kHz

Depth Capability . . . . 1500 ft (457 m)

Area of Coverage . . . . 60°@-10 dB in 83 kHz, 20°@-10 dB in 200 kHz

Power Output (MAX) . . . . 600 Watts (RMS), 4800 Watts (Peak to Peak)

Target Separation . . . . 2.5 inches (63.5 mm)

XNT 14 74 T (includes built-in temperature probe)

Operating Frequency . . . . 200 kHz and 50 kHz

Depth Capability . . . . 5000 ft (1524 m)

Area of Coverage . . . . 74° @ -10 dB in 50 kHz, 20° @ -10 dB in 200 kHz

Power Output (MAX) . . . . 1000 Watts (RMS), 8000 Watts (Peak to Peak)

Target Separation . . . . 2.5 inches (63.5 mm)
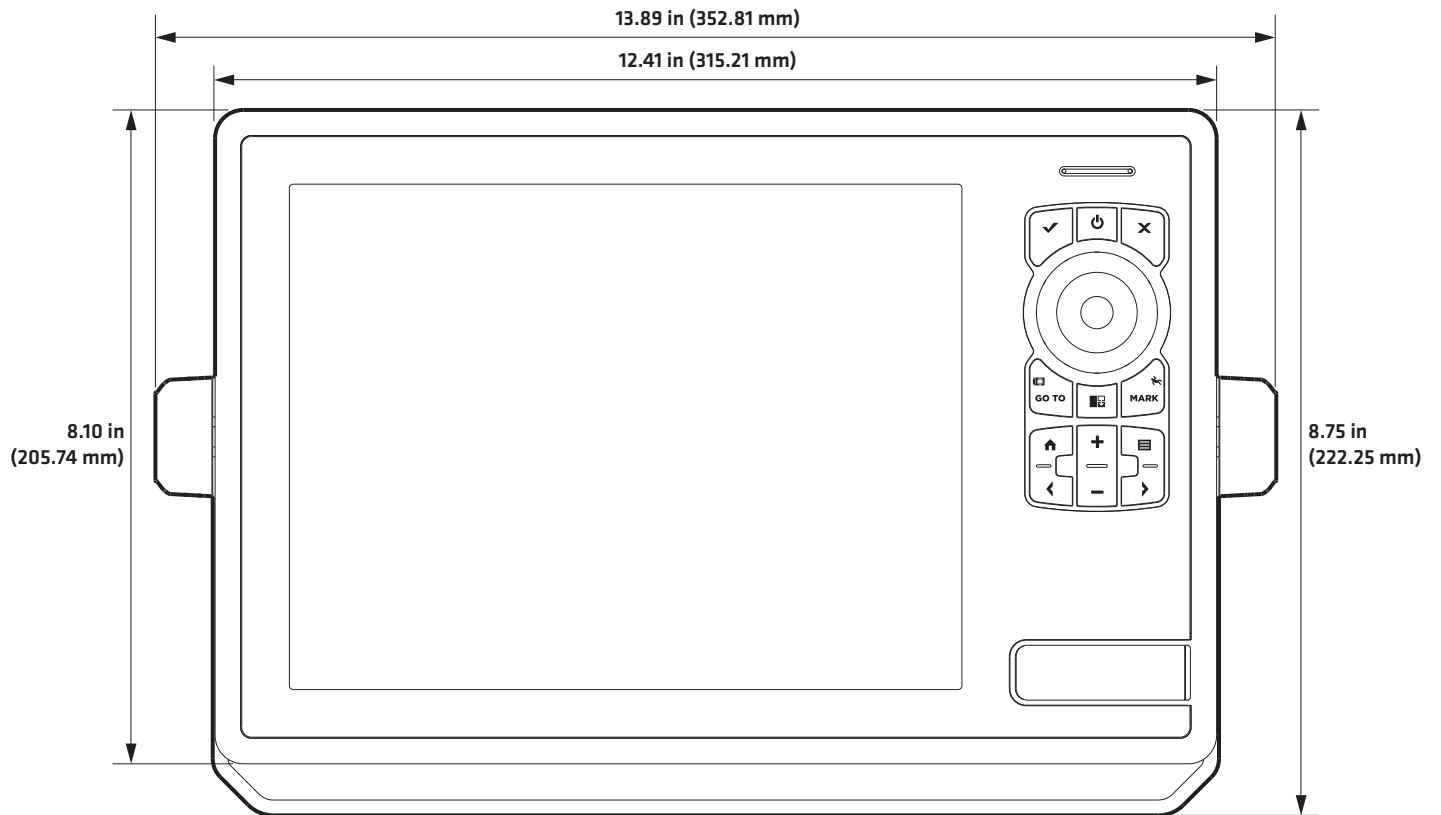
NOTE: Humminbird verifies maximum stated depth in saltwater conditions, but actual depth performance may vary due to transducer installation, water type, thermal layers, bottom composition, and slope.

NOTE: Product specifications and features are subject to change without notice.

ONIX 10 Specifications

ONIX10ci SI Combo

Control Head

Display Size (diagonal) . . . . 10.4 inches (264.2 mm)

Pixel Matrix . . . . XGA 1024 x 768

Display Type . . . . TFT Color

Backlight . . . . LED

Communication . . . . NMEA 0183 Bus, NMEA 2000 Bus (LEN = 2), Ethernet

Power Requirement . . . . 10 to 20 VDC

Current Draw . . . . 2.5 Amps

IPX Rating . . . . IP67 Waterproof/Submersible @ 1 m for 30 minutes and dust tight

Side Imaging Transducer

XT 14 20 HDSI T (includes built-in temperature probe)

Operating Frequency . . . . 200 kHz and 83 kHz, 455 kHz, 800 kHz

Depth Capability . . . . **DualBeam PLUS:** 1500 ft (457 m)
Side Imaging: 150 ft (50 m)
Down Imaging: 350 ft (107 m)

Area of Coverage . . . . **Side Imaging:** (2) 86° @ -10 dB in 455 kHz (180° Total Coverage),
(2) 55° @ -10 dB in 800 kHz (130° Total Coverage)
Down Imaging: 75° @ -10 dB in 455 kHz, 45° @ -10 dB in 800 kHz
DualBeam PLUS: 60° @ -10 dB in 83 kHz, 20° @ -10 dB in 200 kHz

Power Output (MAX) . . . . 600 Watts (RMS), 4800 Watts (Peak to Peak)

Target Separation . . . . 2.5 inches (63.5 mm)

XT 14 74 HDSI T (includes built-in temperature probe)

Operating Frequency . . . . 200 kHz and 50 kHz, 455 kHz, 800 kHz

Depth Capability . . . . **DualBeam PLUS:** 5000 ft (1524 m)
Side Imaging: 150 ft (50 m)
Down Imaging: 350 ft (107 m)

Area of Coverage . . . . **Side Imaging:** (2) 86° @ -10 dB in 455 kHz (180° Total Coverage),
(2) 55° @ -10 dB in 800 kHz (130° Total Coverage)
Down Imaging: 75° @ -10 dB in 455 kHz, 45° @ -10 dB in 800 kHz
DualBeam PLUS: 74° @ -10 dB in 50 kHz, 20° @ -10 dB in 200 kHz

Power Output (MAX) . . . . 1000 Watts (RMS), 8000 Watts (Peak to Peak)

Target Separation . . . . 2.5 inches (63.5 mm)

NOTE: Humminbird verifies maximum stated depth in saltwater conditions, but actual depth performance may vary due to transducer installation, water type, thermal layers, bottom composition, and slope.

NOTE: Product specifications and features are subject to change without notice.

MAINTENANCE

Your control head is designed to provide years of trouble-free use with very little maintenance. Use the following procedures to ensure your Humminbird continues to deliver top performance.

Control Head Maintenance

It is important to consider the following precautions when using your Humminbird control head:

- Chemicals, such as those found in bug spray and sunscreen, may cause permanent damage to the control head screen. Such damage is not covered by the warranty.

- NEVER leave the control head in a closed car or trunk. The high temperatures generated in hot weather can damage the electronics.

- When the control head is not in use, cover the unit with the control head cover.

- Repairs should be performed only by an authorized technician.

Use the following information to keep the control head and screen clean.

- **Screen:** To clean the control head screen, use a mild soap (such as a non-abrasive liquid hand soap) and warm water. Wipe the screen dry with a soft cloth. Be careful to avoid scratching the screen. If water spots remain, use a solution of water and vinegar.

  ⚠ **WARNING!** Do not use a chemical glass cleaner on the screen. Chemicals in the solution may cause cracking in the lens of the unit.

  📝 **NOTE:** Do not wipe the screen while dirt or grease is on the screen.

- **Control Head:** If the control head comes into contact with salt spray, wipe the affected surfaces with a cloth dampened with fresh water.

Transducer Maintenance

Use the following information to maintain the transducer operation.

- 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 when it is returned to the water. Small air bubbles can climb to the surface of the transducer and interfere with proper operation. These bubbles dissipate with time, or you can wipe the face of the transducer with your fingers after the transducer is in the water.

TROUBLESHOOTING

Before contacting Humminbird Customer Service, please read the following section. Taking the time to review these troubleshooting guidelines may allow you to solve a performance problem yourself, and therefore avoid sending your unit back for repair.

Control Head Doesn't Power Up

If your control head doesn't power up, use the Installation section of this manual for specific confirmation details, making sure that:

- the power cable is properly connected to the control head
- the power cable is wired correctly, with red to positive battery terminal and black to negative terminal or ground
- the fuse is operational
- the battery voltage of the power connector is at least 10 Volts

Correct any known problems, including removing corrosion from the battery terminals or wiring, or actually replacing the battery if necessary.

Control Head Doesn't Detect the Connected Transducer

A connected and functioning transducer will automatically be detected by the control head. The control head will default to the transducer that was included with your unit and automatically select sonar settings based on the transducer's capabilities. If, when you power up the control head, it does not automatically select sonar settings or display sonar data, even though a transducer is already connected, this means that the control head is not detecting the transducer. Perform the following troubleshooting tasks:

- Using the Installation section of this manual, check to make sure that the transducer cable is securely connected to the control head. Reconnect if necessary, and power up the unit again to see if this fixes the problem.
- Replace the non-functioning transducer with a known good transducer if available and power up the control head again.
- Check the transducer cable. Replace the transducer if the cable is damaged or corroded.

Control Head Doesn't Detect a Connected Accessory

A connected and functioning accessory will automatically be detected by the control head. If you connected an accessory to the control head and the accessory is not displaying in the system status bar (see **Set Up the Control Head: Confirm Sensor Connection**) or under System Info [Home > Settings > Network > System Info], this means that the control head is not detecting the accessory. Perform the following troubleshooting tasks:

- Check to make sure that the accessory cable is securely connected to the control head. Reconnect the cable, if necessary.
- Confirm the accessory is connected to a stable and reliable power source.
- **Entire System Restart:** Power off all control heads and connected equipment. Wait 10 seconds, and then power on all equipment.

Display Problems

There are several main conditions or sources of possible interference that may cause problems with the quality of the information displayed on the control head. Look in the following table for some symptoms of display problems and possible solutions:

Display Problems	Possible Solutions
The control head loses power at high speeds.	If the power output of your boat's engine is unregulated, the control head may be protecting itself using its over-voltage protection feature. Make sure the input voltage does not exceed 20 Volts.
When the boat moves at higher speeds, the bottom disappears or suddenly weakens, or the display contains gaps.	The transducer position may need to be adjusted. A mix of air and water flowing around the transducer (cavitation) may be interfering with the interpretation of sonar data. See the installation section for your transducer for instructions on adjusting the transducer position. Electrical noise from the boat's engine may be interfering with sonar reception. See *Finding the Cause of Noise* for more information.
There are no fish detected, even when you know they are in the water under the boat, or sonar readings seem weak or faulty.	Sonar readings may be affected if the transducer is not positioned correctly (i.e. mounted at an angle, not straight down), or there is some kind of mechanical interference, either because it is mounted inside a hull that is too thick for proper sonar transmission, the bond between the transducer and the hull is not airtight, or because the transducer is dirty. See the installation section for your transducer for instructions on adjusting the transducer position, and make sure the transducer is clean. Low battery voltage may be affecting the power of signal transmission. Electrical noise from the boats engine may be interfering with sonar reception. See *Finding the Cause of Noise* for more information.

Finding the Cause of Noise

Electrical noise usually affects the display with many black dots at high speeds, and high sensitivity readings. See the table below for possible sources that can cause noise or interference.

Possible Source of Noise	Isolation
Other electronic devices	Turn off any nearby electronic devices to see if the problem goes away, then turn them on one at a time to see if the noise re-appears.
The boat's engine	To determine whether the boat's engine is the source of the noise, increase the RPMs while the boat is in neutral and stationary to see if the noise increases proportionately; if the noise appears when you rev the engine, the problem could be the spark plugs, alternator, or tachometer wiring. Replace the spark plugs with resistor plugs, install an alternator filter, or route the control head power and transducer cables away from the engine wiring.
Cavitation from the boat's propeller	Turbulence created by the propeller can cause noise. Confirm the transducer has been properly installed according to its specific mounting requirements (see *Transom Transducer Mounting Requirements* and *Side Imaging Transducer Mounting Requirements*). Also, make sure that the water flows smoothly over the face of the transducer at all times.

Side Imaging Transducer Mounting Template

If you are reproducing or printing this template from an electronic file, start with the following print settings:

- Scale = None

- Paper = 8.5 x 11 inches

- Layout = Portrait

Confirm the template matches the transducer bracket slots and adjust the print as needed.

**Remove and use for
transducer installation**

TOP

**Use 5/32"
drill bit.**

Drill

Drill

Drill

PLACE EITHER CORNER
ON DEADRISE ANGLE
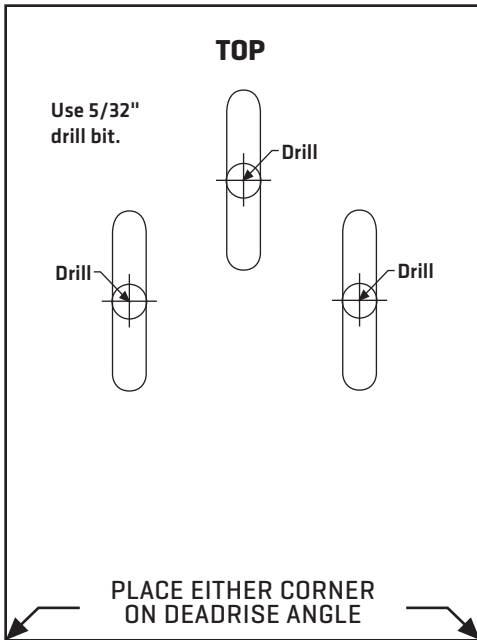
CONTACT HUMMINBIRD

Contact Humminbird Customer Service in any of the following ways:

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

Hours of Operation:

Monday - Friday

8:00 a.m. to 4:30 p.m. (Central Standard Time)

Social Media Resources:

 Facebook.com/HumminbirdElectronics

 Twitter.com (@humminbirdfish)

 YouTube.com/humminbirdtv