360 Imaging™
Installation Guide

532050-1_B

HUMMINBIRD®

Accessory Manual

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Thank you for choosing Humminbird®, the #1 name in Fishfinders. Humminbird® has built its reputation by designing and manufacturing top-quality, thoroughly reliable marine equipment. Your Humminbird® accessory is designed for trouble-free use in even the harshest marine environment. In the unlikely event that your Humminbird® accessory does require repairs, we offer an exclusive Service Policy - free of charge during the first year after purchase, and available at a reasonable rate after the one-year period. For complete details, see the separate warranty card included with your accessory. 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 our Customer Resource Center at **1-800-633-1468** or visit our Web site at **humminbird.com**.

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! *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 Waypoint Management Guide 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/or reproductive harm.*

ATTENTION INTERNATIONAL CUSTOMERS: Products sold in the U.S. are not intended for use in the international market. Humminbird® international units provide international features and are designed to meet country and regional regulations. Languages, maps, time zones, units of measurement, and warranty are examples of features that are customized for Humminbird® international units purchased through our authorized international distributors.

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

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.*

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 control head, but your product will function in the same way.*

NOTE: *To purchase accessories for your control head, visit our Web site at* ***humminbird.com*** *or contact our Customer Resource Center 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.*

NOTE: *The installation of this advanced accessory should be performed by a qualified marine technician.*

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Introduction

This manual will guide you through the following installation requirements for the 360 Imaging™ Transducer Deployment System:

Installing the GPS Receiver/Heading Sensor

Installing the Transducer Deployment System

Connecting to the Control Head and Power

Testing the Installation

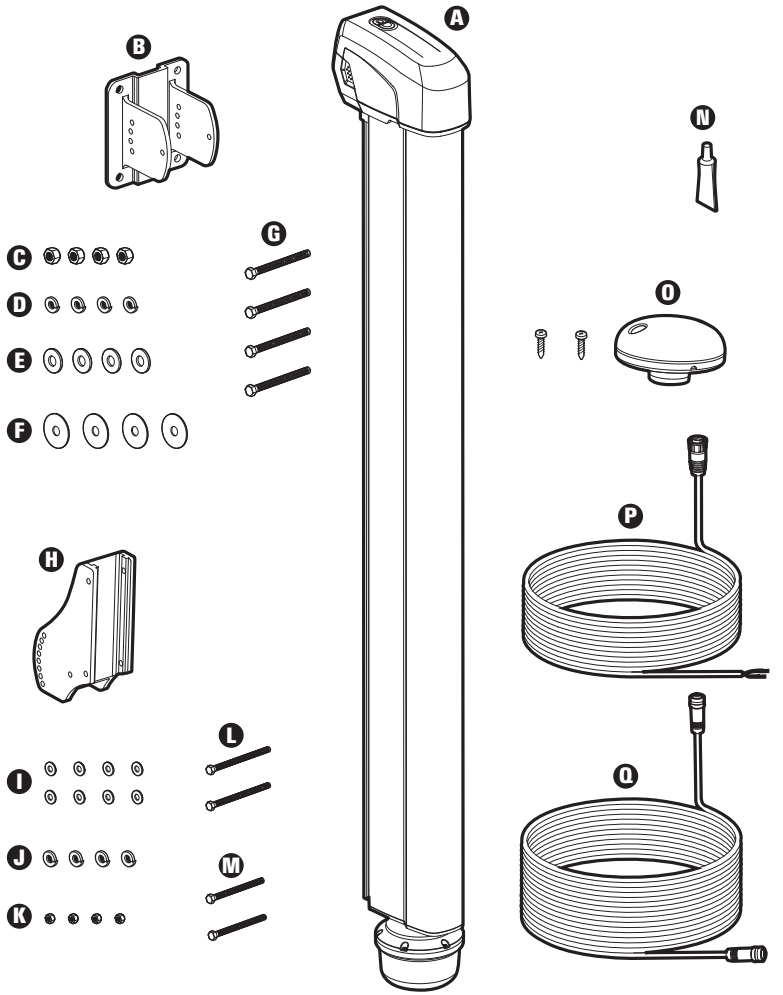
Powering Off

Before proceeding with this installation, the Humminbird® control head should be installed. See your Humminbird® control head installation guide for instructions. The 360 Imaging™ Transducer Deployment System can be connected directly to the control head or to a Humminbird® Ethernet Switch (optional) for networking. See the Ethernet Switch accessory guide to install the Ethernet Switch.

NOTE: *The installation of this advanced accessory should be performed by a qualified marine technician.*

1 | Installation Overview

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.



Parts

The 360 Imaging™ Transducer Deployment System includes the following items:

- **Ⓐ Transducer Deployment System**
- **Ⓑ Transom Bracket**
  - Ⓒ (4) 5/16" - 18 Hex Lock Nuts
  - Ⓓ (4) 5/16" Split Ring Lock Washers
  - Ⓔ (4) 5/16" Flat Washers
  - Ⓕ (4) 5/16" Fender Washers
  - Ⓖ (4) 5/16" - 18, 3 1/2" Bolts
- **Ⓗ Transducer Bracket**
  - Ⓘ (8) 1/4" - 20 Flat Washers
  - Ⓙ (4) 1/4" Split Ring Lock Washers
  - Ⓚ (4) 1/4" - 20 Hex Lock Nuts
  - Ⓛ (2) 1/4" - 20, 3 3/4" Bolts
  - Ⓜ (2) 1/4" - 20, 3 1/4" Bolts
- **Ⓝ Anti-Seize Tube**
- **Ⓞ GPS Receiver/Heading Sensor and screws for mounting**
- **Ⓟ Power Cable (6', 2 m)**
- **Ⓠ Ethernet Cable (20', 6 m)**
- **Pod Cover (not shown)**

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

Supplies

In addition to the hardware included with your Transducer Deployment System, you will need the following supplies:

Drill with various drill bits

Electrical tape

Awl or pencil

1/2" & 7/16" sizes in wrenches, ratchets, and sockets

Torque wrench with 5 - 7 FT/LB capacity

3M Marine Adhesive Sealant 5200 (recommended)
or Marine Grade Adhesive Sealant

Marine-grade silicone caulk or sealant

Cable ties for cable routing

4' straight edge or level

Tape measure

8 A fuse

Safety goggles

Dust mask

Cables: Depending on your Humminbird® model and system configuration, you may need to purchase additional cables, as shown below. Visit our Web site at **humminbird.com** or call our Customer Resource Center at **1-800-633-1468**.

- **700 Series™ with Ethernet:** To connect the Ethernet to the control head, you will need to purchase the Ethernet Adapter Cable (AS EC QDE).
- **Extention Cables** are available for Ethernet and the GPS Receiver/Heading Sensor.
- **Y-Cable:** If the COM port on the control head is already used by another installed accessory, you will need to purchase a Humminbird® Y-Cable to add the GPS Receiver/Heading Sensor to the installation.

Switch (optional): If you do not have a main switch or fuse panel available on your boat to connect power, you will need to purchase a battery switch. See ***Install the Transducer Deployment System, Section 6. Route the Cables and Connect Power*** for more information.

Lag Bolts (optional): If you are unable or choose not to drill completely through the transom as recommended, you will need to purchase (4) 5/16" lag bolts of the appropriate length.

Install the GPS Receiver/Heading Sensor

Use the following instructions to install the GPS Receiver/Heading Sensor ("Sensor") on your boat.

1. Choose the Mounting Location

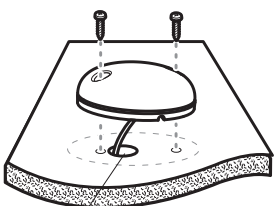
It is important to consider the following information when you choose a mounting location for the Sensor:

- **Interference:** Do NOT mount the Sensor close to a VHF antenna or within the active area of a radar. Do NOT install the Sensor near ferrous metals or near anything that can create a magnetic field. Hardware and cables that handle large currents, such as batteries and power cables, are also examples of equipment that may cause interference.
- **Reception:** Mount the Sensor in an area that has full exposure to the sky. The effective area of reception is 5˚ above the horizon.
- **Surface:** Whether the Sensor Cable will be routed down through the mounting surface or to the side, or if your're using a stem mount, the mounting surface will influence how you install the Sensor. For details, see *Section 2: Install the Sensor*.
- **Extension Cables:** Test run the Sensor Cable from the chosen mounting location to the control head. 10 ft (3m) extension cables may be purchased from Humminbird® if your planned cable route exceeds 20 ft (6 m). Maximum cable length, including extension cables, should not exceed 50 ft (16 m).
- **Y-Cable:** If the COM port on the control head is already used by another installed accessory, you will need to purchase a Humminbird® Y-Cable to add the Sensor to the installation.

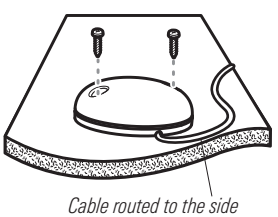
2. Install the Sensor

There are three different options to mount the sensor. Proceed to the section that matches the type of mounting location you will be using, as follows:

Stem Mount with 1" - 14 Thread
The Sensor will be mounted on a stem or antenna pole. ***Proceed to Section A.***



Access Under the Mounting Deck
The Sensor will be deck mounted and the cable can be routed down through the mounting surface. ***Proceed to Section B***.



NO Access Under the Mounting Deck
The Sensor will be deck mounted and the cable must routed to the side because there is not space for a cable through or underneath the mounting location. ***Proceed to Section C.***

A. Stem Mount with 1"-14 Thread

Use the following instructions to stem mount the Sensor:

WARNING! *Do NOT mount the Sensor to a stem mount or antenna pole that contains ferrous metals.*

NOTE: *It is important to review the mounting considerations and test run the cable route as indicated in Section 1 before proceeding with the installation.*

1. **If you have a pre-existing stem mount**, skip to step 2.

   If you need to mount the antenna pole (stem), mark the chosen mounting location and drill a 3/4" (19 mm) hole for the cable and cable connector.

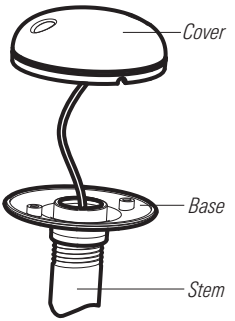
   If you have purchased hardware to stem mount your Sensor, follow the instructions included with that hardware to attach the stem to the boat.

2. Screw the Sensor base onto the stem first, making sure that the stem pipe does not protrude from the Sensor base. (This adds protection to the cable when it is pulled through the pipe stem.) Deburr the pipe edges to reduce cable abrasion.

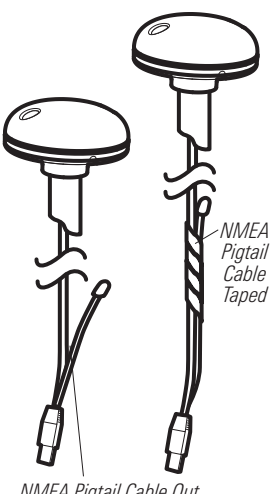
3. Use electrical tape to secure the NMEA pigtail to the cable.

   NOTE: *Unless it is needed, leave the NMEA pigtail secured to the cable. If you are connecting the pigtail to a NMEA 0183 device, see* ***Section 3: Connect to the Control Head*** *for connection information.*

Stem Mount, Attaching the Sensor Base to the Stem



Taping the NMEA Pigtail to the Cable



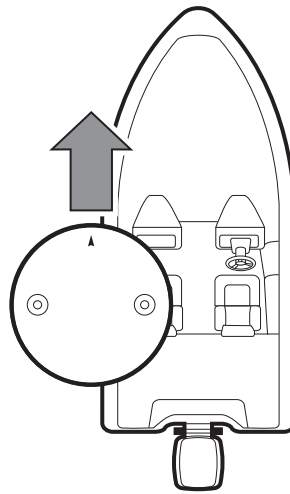
4. Route the Sensor cable through the stem and through the planned cable route. To use extension cables, see the details in ***Section 1: Choose the Mounting Location***.

5. Position the Sensor so the arrow on the cover is pointed straight toward the front of the boat in the direction of travel. The arrow should be parallel with the keel.

   NOTE: *Failure to align the Sensor correctly will result in incorrect compass readings.*

6. Attach the Sensor to its base using the included #6 -1/4" screws. **Hand tighten only.**

Positioning the Arrow on the Sensor



Attaching the Sensor to the Base

B. Access Under the Mounting Location

Use the following instructions to deck mount the Sensor and route the cable down through the mounting surface:

> ***NOTE:*** *It is important to review the mounting considerations and test run the cable route as indicated in Section 1 before proceeding with the installation.*

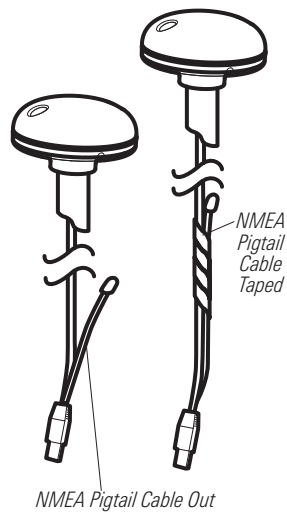
1. Mark the mounting location and drill a 3/4" (19 mm) hole for the cable and cable connector.
2. Secure the NMEA pigtail to the cable with electrical tape.

   NOTE: *Unless it is needed, leave the NMEA pigtail secured to the cable. If you are connecting the pigtail to a NMEA 0183 device, see* ***Section 3: Connect to the Control Head*** *for connection information.*
3. Route the Sensor cable through the planned cable route. To use extension cables, see the details in ***Section 1: Choose the Mounting Location***.
4. Cover the cable hole with the Sensor.

   Position the Sensor so the arrow on the cover is pointed straight toward the front of the boat in the direction of travel. The arrow should be parallel with the keel.

   NOTE: *Failure to align the Sensor correctly will result in incorrect compass readings.*

Taping the NMEA Pigtail to the Cable



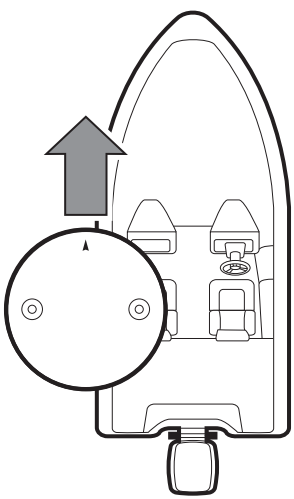
5. Make sure the Sensor is flush against the surface, and mark the two mounting holes with a pencil or awl.
6. Move the Sensor to the side and drill two pilot holes, using a 5/32" (4 mm) bit.

   NOTE: *Apply marine-grade silicone caulk or sealant to both screw and drilled holes as needed to protect your boat from water damage.*

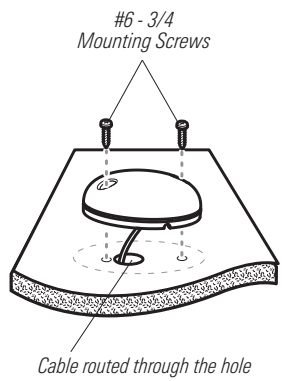
7. Align the Sensor's screw holes over the pilot screw holes and attach with the #6 - 3/4" Phillips head screws. **Hand tighten only.**

   NOTE: *If the mounting surface is thin or made of a light-weight material, you may need to add reinforcing material below the mounting surface in order to support the Sensor.*

Positioning the Arrow on the Sensor



Attaching the Sensor to the Mounting Surface



C. No Access Under the Mounting Location

Use the following instructions to deck mount the Sensor and route the cable to the side if there is not space for a cable underneath the mounting location:

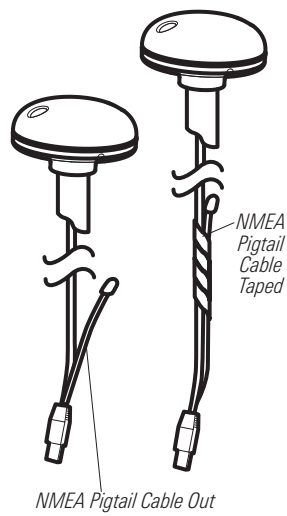
> ***NOTE:*** *It is important to review the mounting considerations and test run the cable route as indicated in Section 1 before proceeding with the installation.*

1. Secure the NMEA pigtail with electrical tape.

   NOTE: *Unless it is needed, leave the NMEA pigtail secured to the cable. If you are connecting the pigtail to a NMEA 0183 device, see* ***Section 3: Connect to the Control Head*** *for connection information.*

2. Route the cable from the Sensor to the Control head.
   - The Sensor has two wire routing notches. Use the cable notch closest to the intended cable route.
   - If holes are required to route the cable, they must be 3/4" (19 mm) to allow for the cable connector.
   - To use extension cables, see the details in ***Section 1: Choose the Mounting Location***.

Taping the NMEA Pigtail to the Cable



3. With the cable routed, position the Sensor so the arrow on the cover is pointed straight toward the front of the boat in the direction of travel. The arrow should be parallel with the keel.

   NOTE: *Failure to align the Sensor correctly will result in incorrect compass readings.*

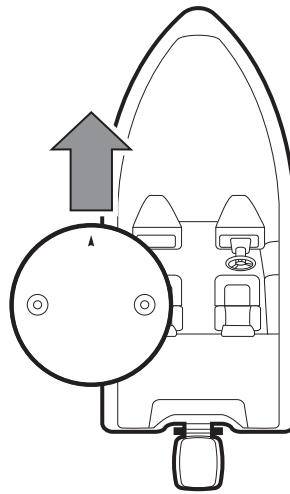
4. Make sure the Sensor is flush against the surface, and mark the two mounting holes with a pencil or awl.

5. Move the Sensor to the side and drill the two 5/32" (4 mm) pilot holes.

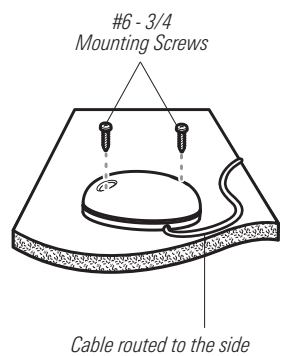
   NOTE: *Apply marine-grade silicone caulk or sealant to both screw and drilled holes as needed to protect your boat from water damage.*

6. Align the Sensor's screw holes over the pilot screw holes and attach with the #6 - 3/4" Phillips head screws. **Hand tighten only**.

Positioning the Arrow on the Sensor



Attaching the Sensor to the Mounting Surface



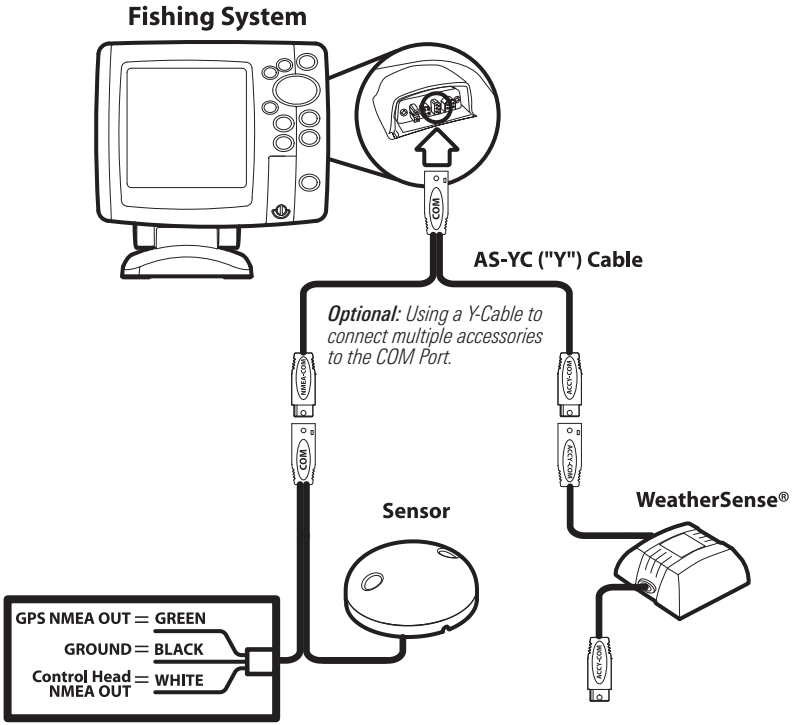
3. Connect to the Control Head

Use the following instructions to connect the Sensor cable to the control head.

1. Insert the Sensor's NMEA-COM connector into the control head's COM port. The connectors are keyed to prevent reversed installation, so be careful not to force the connector into the port.
    - If there is another accessory plugged into the COM port, install the AS YC ("Y") cable (optional-purchase required).
    - Attach the COM connector of the Y-cable directly to the control head COM port. Connect the Sensor to the NMEA-COM connector of the Y-cable. Reconnect your other Fishfinder accessories to the ACCY-COM connector of the Y-cable. See the illustration ***Optional Configuration(s) for the Sensor Installation***.
2. **Optional:** The control head outputs NMEA signals through the Sensor's pigtail cable for connection to a device such as an autopilot. Connect the NMEA Out (White Wire) of the cable to the NMEA In of the device you are connecting to your Fishfinder. The pinouts of this cable are as follows:
    - Green Wire, GPS NMEA Out
    - Black Wire, Ground
    - White Wire, Control Head NMEA Out

NOTE: *See the illustration* ***Optional Configuration(s) for the Sensor Installation****.*

WARNING! *It is important to finish all installation connections before powering on the control head.*



Optional: *Using the Sensor wires to connect to a separately-purchased device. Also, see* ***Confirm the Baud Rate*** *for more information.*

Install the Transducer Deployment System

Use the following instructions to install the Transducer Deployment System.

> ***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 you start the installation.*

1 | Installation Overview

There are two mounting options available for installing the Transducer Deployment System.

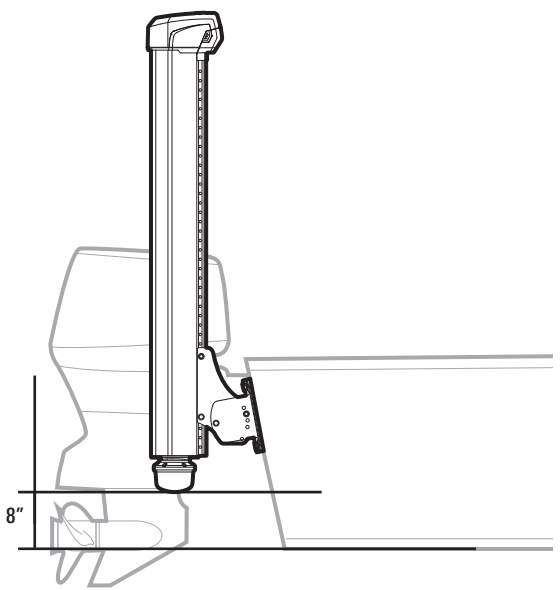
- **Direct Transom Mount:** Included
- **Optional Mounting Brackets:** If you do not want to mount the Transducer Deployment System directly to the transom, you'll need a mounting bracket to offset the unit from the back of the boat. For more information, visit **humminbird.com**.

2 | Choose the Mounting Location

It is important to review the following mounting location requirements, as follows:

- **Port (left) or Starboard (right):** The Transducer Deployment System can be mounted on either side of the transom. If there is heavy equipment on one side, install the Transducer Deployment System on the opposite side. Do not install it behind the propeller.
- **Height:** Install the mounting bracket in the highest possible location. This will provide the most stable support and the greatest amount of vertical and angular adjustability. The bottom edge of the pod should be no less than 8 inches (20.3 cm) above the bottom line of the hull to prevent spray and drag conditions. The pod should sit at or above the waterline when the boat is at rest.

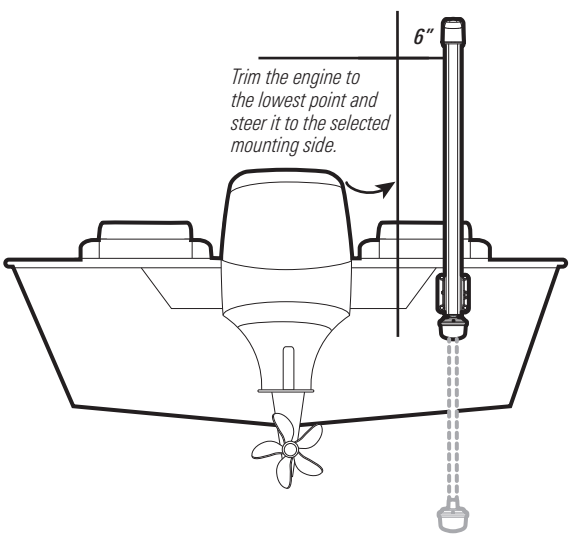
Installation Height, at least 8" (20.3 cm) above the bottom line of the hull



Continued...

- **Engine Obstruction:** Trim the engine to its lowest position and steer the engine fully to the selected mounting side. Confirm that there is at least 6 inches (15.3 cm) of clearance from any point on the Transducer Deployment System, especially from the deployed pod to the propeller.
- **Clear Path Below:** The transducer pod must have a clear, unobstructed path to deploy without hitting trim tabs, poling platforms, ladders, engine, or other obstructions.
- **Unobstructed View:** Once deployed, the transducer pod must NOT have anything obstructing the 'view' of the rotating beams. Nothing should be in the line of sight of these beams (not a hull, motor, trolling motor, etc). The transducer pod descends 29 inches (73.7 cm) when it is deployed.

Distance from Engine and Open Path for Deployment



- **Transom Obstructions:** Review the transom to confirm that you will not drill into any obstructions (lines, hoses, gas tank, etc.) and that there is enough space for the hardware to be installed.
- **Space Above:** Confirm that the boat's platform will not interfere with the operation of the Transducer Deployment System.
- **Power:** The Transducer Deployment System is powered separately from the control head. It must be connected to a switch where it can be powered on when the boat is underway and powered off when it is docked. See ***Section 6. Route the Cables and Connect Power*** for more information.
- **Cables:** Test run the Ethernet cable from the chosen mounting location to the control head (or optional Ethernet Switch). Test run the power cable from the chosen mounting position to the main switch or fuse panel. The cable ports are located at the top of the Transducer Deployment System, so it is important to consider the distance and height required to route from the ports.

  The cables should be routed through an established routing system on the boat, in an area with minimal interference, without sharp edges, obstacles, or obstructions that may damage the cables.

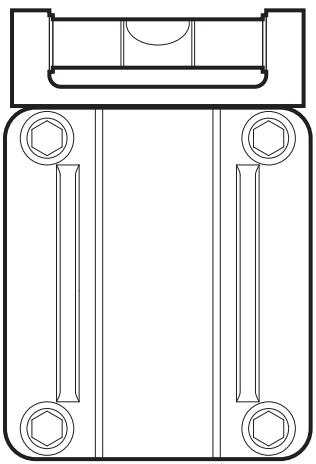
  NOTE: *To purchase Ethernet extension cables or an adapter cable, visit our Web site at* ***humminbird.com*** *or call our Customer Resource Center for details at* ***1-800-633-1468****.*

3 | Install the Transom Bracket

1. Confirm 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.

2. Position the transom bracket in your selected location. Use a level to confirm the bracket is level horizontally.

Leveling the Transom Bracket in the Selected Mounting Location



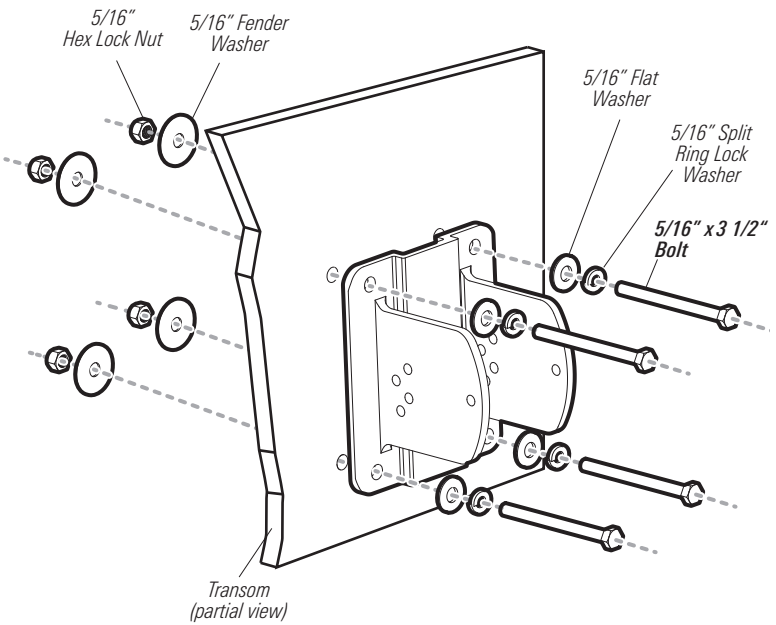
3. Mark the bracket mounting holes.

4. Make sure the drill bit is perpendicular to the transom, NOT parallel to the ground, before you drill. Use a 5/16" (8 mm) drill bit to drill the four marked holes.

5. Apply a 1/8" (3 mm) bead of 3M 5200 Marine Adhesive Sealant around each of the four drilled holes and to the the perimeter of the transom bracket, staying approximately ½" (1.3 cm) from the outside edge.

6. Use the illustration ***Attaching the Bracket to the Transom*** to install the 3 1/2" (8.9 cm) bolts and hardware in each of the four bracket holes. Apply Anti-Seize to the end of each bolt as you are installing the hardware. Hand tighten the nuts with a socket wrench. DO NOT OVERTIGHTEN.

Attaching the Bracket to the Transom



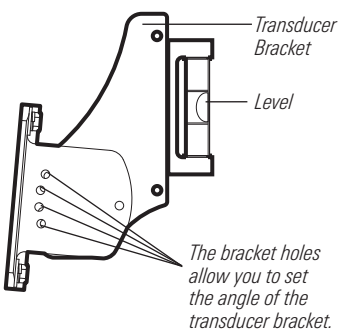
4 | Install the Transducer Bracket

Use the following instructions to install the transducer bracket onto the transom bracket.

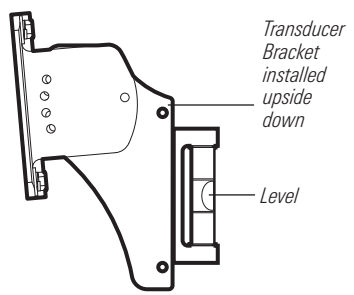
1. Insert the transducer bracket into the arms of the transom bracket so that the holes are aligned and the transducer bracket is level vertically. You will finalize the angle and installation in the following steps.

   NOTE: *To lower the pod height by 3" (7.6 cm), the transducer bracket can be mounted upside down. This type of installation can be used if the boat's transom is very tall or if the boat has a reversed transom.*

Adjusting the Angle of the Transducer Bracket



Alternative Installation (may be needed for reversed transoms or to lower the height of the pod)



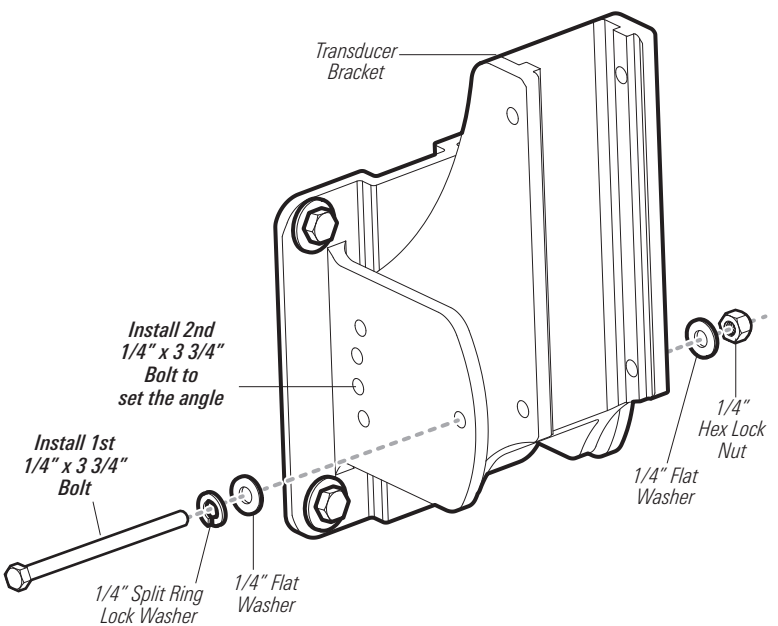
2. Install the first 3 3/4" (9.5 cm) bolt and hardware as shown in the illustration ***Installing the Transducer Bracket Hardware***. Apply Anti-Seize to the end of each bolt as you are installing the hardware.

3. Adjust the bracket so that the bracket holes are aligned and the transducer bracket is level vertically. See the illustration ***Installing the Transducer Bracket Hardware*** to install the second set of hardware, using the same installation order as the first set of hardware.

4. Hand-tighten both bolts on the transducer bracket so it is secured.

5. Place a level on the transducer bracket. Confirm it is level vertically (see the illustration ***Adjusting the Angle of the Transducer Bracket***).

Installing the Transducer Bracket Hardware



5 | Install the Transducer Deployment System

Use the instructions in this section to secure the Transducer Deployment System to the transducer bracket.

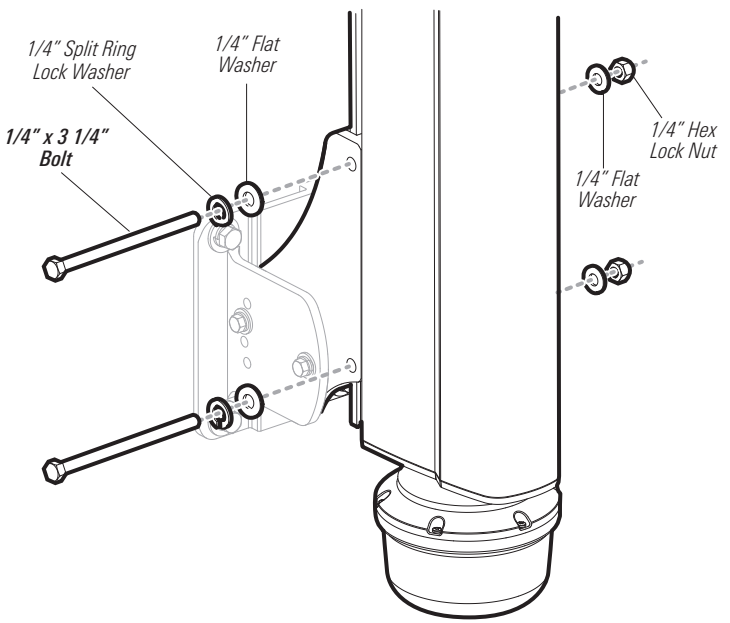
1. Carefully lift the Transducer Deployment System and align its track with the track on the transducer bracket.

2. Slide the Transducer Deployment System down the track until the pod is approximately 8" (20 cm) above the bottom line of the hull.

3. Align the bracket holes and install the two 3 1/4" (8.3 cm) bolts and hardware as shown in the illustration ***Installing the Transducer Deployment System***.

   NOTE: *Apply Anti-Seize to the end of each bolt as you are installing the hardware.*

Installing the Transducer Deployment System

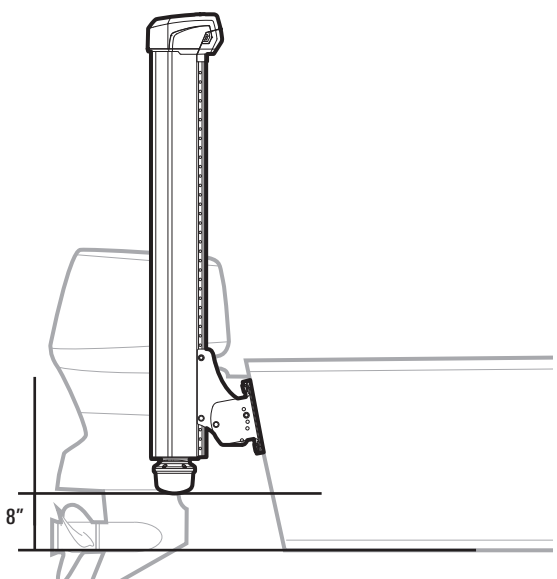


4. Place a straight edge along the bottom of the hull and measure the distance to the bottom of the transducer pod. Confirm that the the pod is 8" (20.3 cm) above the bottom line of the hull. If you need to make adjustments to the pod height, consider the following:

    - To adjust the height of the Transducer Deployment System, re-install the hardware in step three on a higher or lower set of holes.
    - If you cannot lower the Transducer Deployment System any further based on the installation location of the transom bracket, you can lower the height by 3" (7.6 cm) by mounting the transducer bracket upside down. Uninstall the Transducer Deployment System, and return to the ***Install the Transducer Bracket*** section.

    NOTE: *Additional adjustments may need to be made after a trial run on the water.*

Installation Height, at least 8" (20.3 cm) above the bottom line of the hull

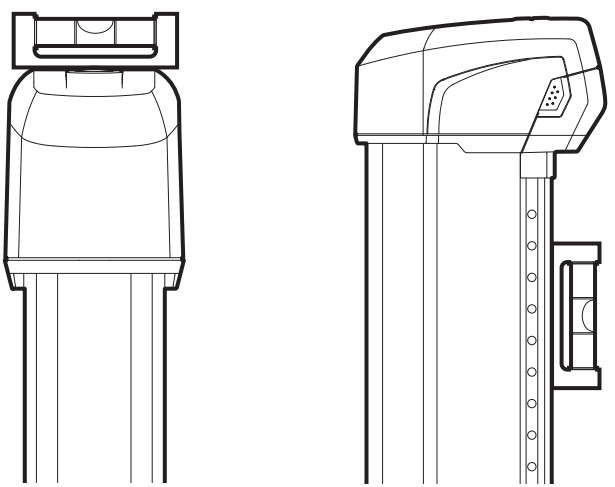


5. Place a level on the Transducer Deployment System. Confirm it is level horizontally and vertically. The pod should be parallel with the water. If the angle needs to be adjusted, return to the section ***Install the Transducer Bracket***.

6. Fully hand-tighten the nuts and then turn them 1/4 more. Tighten the transducer bracket hardware securely so that the assembly is stable and secure. **Hand tighten only**.

NOTE: *It is important to check the tension of the four vertical nuts on the transducer bracket hardware after initial use and periodically thereafter to ensure that the Transducer Deployment System remains stable. It is also important to confirm that the Transducer Deployment System stays level when the boat is on the water.*

Confirming that the Transducer Deployment System is Level



6 | Route the Cables and Connect Power

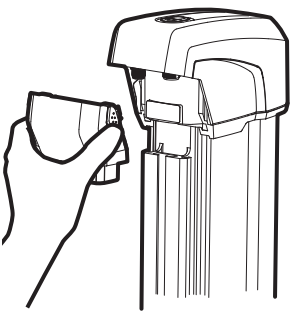
The cables should be routed through an established routing system on the boat, in an area with minimal interference. Inspect the selected route carefully to ensure that there are no sharp edges, obstacles, or obstructions that may damage the cables. See ***Section 2. Choose the Mounting Location*** for details.

WARNING! *The power source must be turned off before you proceed with this installation.*

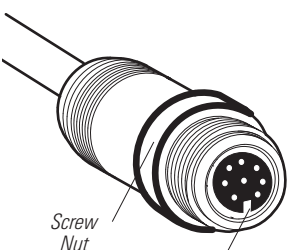
1. Remove the Port Cover.
2. **Ethernet:** Insert the Ethernet Cable Connector into the Ethernet port on the Transducer Deployment System. The connectors are keyed to prevent reversed installation, so be careful not to force the connector into the port.
3. Hand-tighten the screw nut.
4. Route the Ethernet Cable down through the cable channel on the Transducer Deployment System, tucking the cable into the channel as you go. Route the cable to the control head (or the optional Ethernet Switch).
5. Insert the other end of the Ethernet Cable into the Ethernet port on the control head. Hand-tighten the screw nut.

NOTE: *If you have a 700 Series™ unit with Ethernet, connect the Ethernet Cable to the Ethernet Adapter Cable (AS EC QDE). Insert the connector into the Ethernet port on the cable collector. See your control head installation guide for details about installing the quick disconnect mount.*

Removing the Port Cover

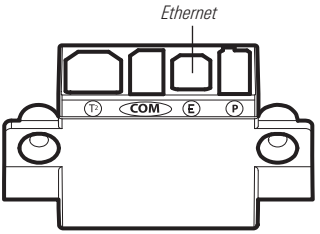


Hand-tightening the Screw Nut

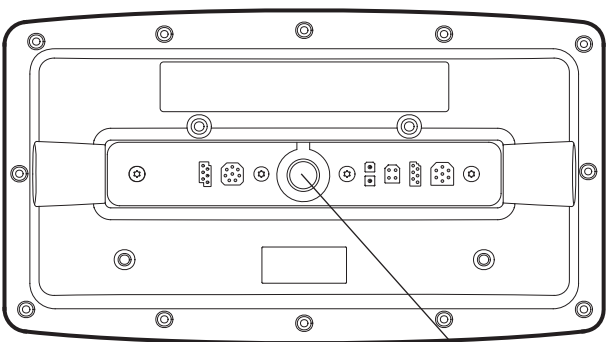


The connectors are keyed to prevent reversed installation.

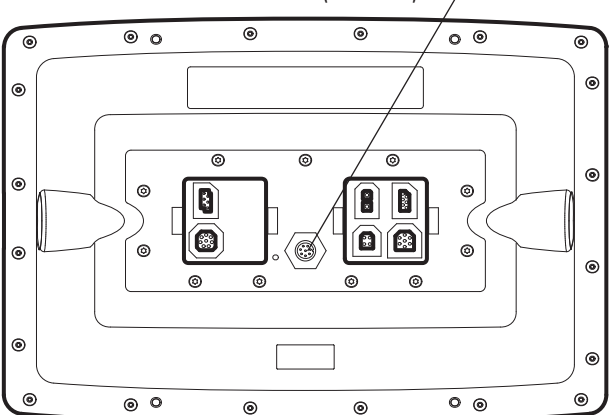
700 Series™ Cable Collector with Ethernet



800/900 Series™ (rear view)



1100 Series™ (rear view)



WARNING! The Transducer Deployment System should be connected to a main switch, fuse panel, or battery switch. Humminbird® does not recommend connecting to a battery without a fuse and a switch.

NOTE: *Humminbird® is not responsible for over-voltage or over-current failures. The Transducer Deployment System must have adequate protection through the proper selection and installation of an 8 Amp fuse.*

NOTE: *A 6' (2 m) long power cable is included to supply power to the Transducer Deployment System. You may shorten or lengthen the cable using 18 gauge multi-stranded copper wire.*

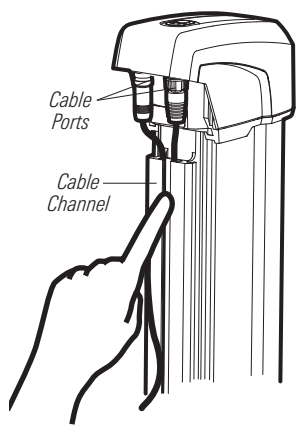
CAUTION! *Some boats have 24 or 36 Volt electric systems, but the Transducer Deployment System MUST be connected to a 12 VDC power supply.*

6. **Power:** Insert the Power Cable Connector into the Power port on the Transducer Deployment System. The connectors are keyed to prevent reversed installation, so be careful not to force the connector into the port. Hand-tighten the screw nut.

7. Route the Power Cable down through the cable channel on the Transducer Deployment System, tucking the cable into the channel as you go.

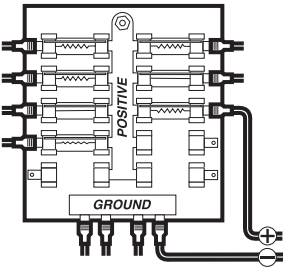
8. Route the power cable to the main switch or fuse panel (usually located near the console). If you must connect to a battery, connect to a battery switch (not included).

Routing the Cables through the Cable Channel



9a. **Main Switch/Fuse Panel:** If a fuse terminal is available, use crimp-on type electrical connectors (not included) that match the terminal on the fuse panel. Attach the black wire to ground (—), and the red wire to positive (+) 12 VDC power. Install an 8 Amp fuse (not included) for protection of the unit.

Connecting to the Fuse Panel



OR

9b. **Battery Switch:** Install the battery switch (not included) using the instructions provided with it. You will also need to obtain and install an inline fuse holder and an 8 Amp fuse (not included) for the protection of the unit. Attach the black wire to ground (—), and the red wire to positive (+) 12 VDC power.

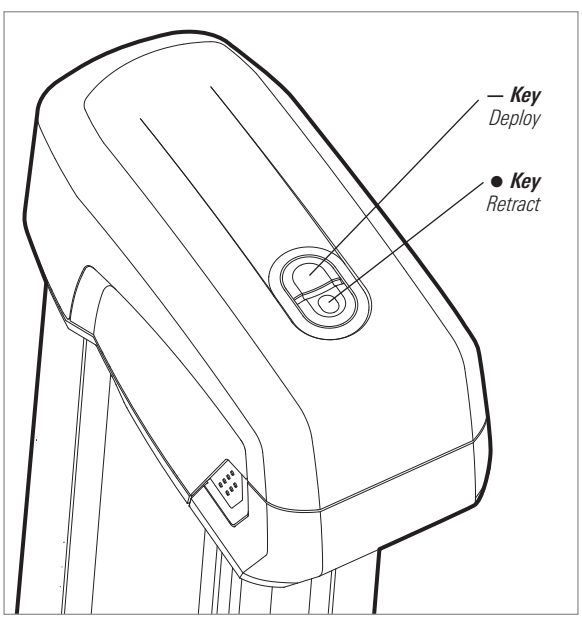
WARNING! *If you are unable to obtain a battery switch and are forced to connect the power cable directly to the battery, be aware that this will drain the battery. Humminbird® does not recommend connecting to a battery without the appropriate fuse and a switch.*

10. Secure the cables with cable ties along the route as needed for a clean assembly.
11. Re-install the Port Cover.

7 | Test the Installation

1. Carefully inspect the area around the Transducer Deployment System for any obstructions that may interfere with deployment.
2. Turn on the power source from the switch.
3. Standing clear of the Transducer Deployment System, press and hold the – key to deploy the transducer pod.
4. The transducer pod will begin to deploy. Release the – key when the transducer pod has been deployed sufficiently to determine it is working.
5. Press and hold the ● key. Release the key when the transducer pod is fully stowed.

NOTE: *If the transducer did not deploy successfully, check the power connections at the switch and on the Transducer Deployment System. See* ***Section 6. Route the Cables and Connect Power*** *and* ***Troubleshooting*** *for more information.*



Set up the Control Head

Use the following instructions to power on the control head and confirm the 360 Imaging™ transducer and the GPS Receiver/Heading Sensor are detected by the unit.

CAUTION! It is important to finish all installation connections before powering on the control head. It may take up to a minute for the 360 Imaging™ transducer and other attached equipment to be detected by the control head.

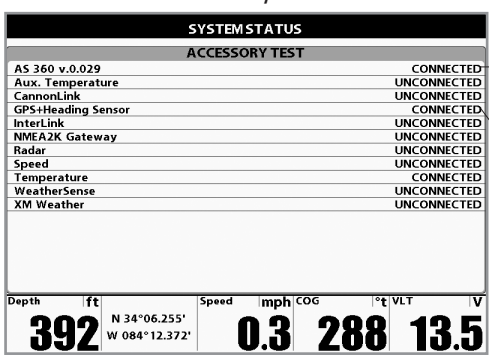
1. Power on and Confirm Connections

1. Turn on the power source from the main switch.
2. On the control head, press the ⏻ POWER/LIGHT key. **If you are powering on a control head in a multiple-control head Ethernet network,** power on the control head that is connected to the 360 Imaging™ Transducer Deployment System first.
3. When the Title screen is displayed, press the MENU key to access the Start-Up Options Menu.
4. Use the 4-WAY Cursor Control key to choose Normal, and press the RIGHT Cursor key to select it.
5. Press and hold the VIEW key. Select System > Accessory Test. Confirm that **AS 360** and **GPS + Heading Sensor** are listed as Connected. It will take a minute for the equipment to be detected.
6. Press and hold the VIEW key. Select System > GPS Diagnostic View. Confirm that External GPS is displayed and the Fix Type indicates Enhanced or 3D.

NOTE: *If the GPS Diagnostic View or Accessory Test is not displayed in the View Rotation, press the MENU key twice to open the Main Menu. Select the Views tab > GPS Diagnostic View or Accessory Test. Change the setting for each view to Visible.*

Title Screen

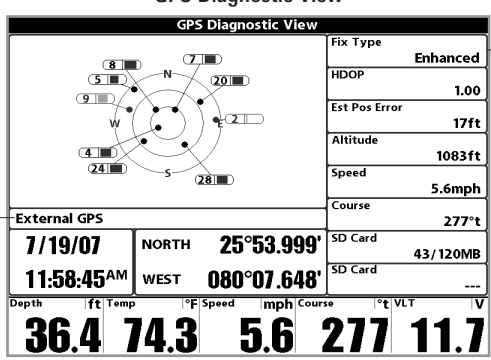
Accessory Test



AS 360 listed as Connected

GPS & Heading Sensor listed as Connected

GPS Diagnostic View



Fix Type should be 3D or Enhanced

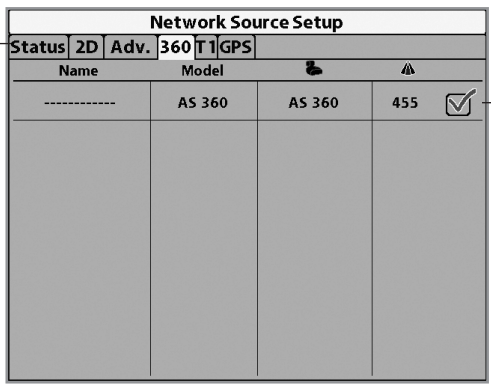
External GPS Detected

2. Set up 360 Imaging™ on the Control Head

To deploy the transducer from the control head, the transducer must be selected from the network, and the deployment depth should be set in advance. When you select the 360 Imaging™ transducer from the network, the related views and menus will be added to the system.

Selecting the 360 Imaging™ Transducer

Press the RIGHT or LEFT Cursor keys to select a tab.



Use the 4-WAY Cursor Control key to choose the transducer, and press the RIGHT Cursor key or the CHECK/INFO key to select it.

1. Select 360 Imaging™ on the Network

Confirm that AS 360 is selected in the Network Source Setup dialog box. It might take up to a minute for the equipment to be detected.

NOTE: *If AS 360 is already selected (indicated by a check mark), you can skip this step. Proceed to* ***Set the Deployment Depth****.*

1. **Main Menu:** Press the MENU key once.
2. Select the Network tab > Network Source Setup. Press the RIGHT Cursor key.
3. Select the 360 tab from the Network Source Setup dialog box.
4. Select AS 360 from the transducer list. Press the RIGHT Cursor key. A checkmark will display in the box to show it is selected.
5. Press the EXIT key until the dialog box is closed.

WARNING! The pod should NOT be in the water during high speed travel. The pod should only be deployed when the boat is traveling between 0 to 7 mph.

2. Set the Deployment Depth

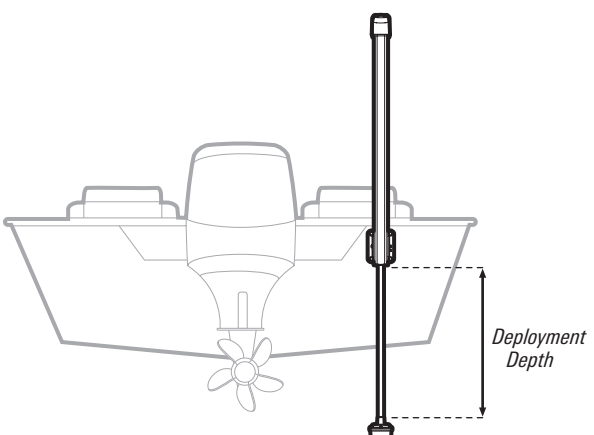
The 360 Imaging™ transducer pod should be set to deploy past the hull, propeller, and anything else that will block the beams.

1. From the Main Menu, select the Accessories tab > 360 Sonar Settings > 360 Depth.
2. Press the RIGHT or LEFT Cursor keys to adjust the setting. (1 to 100; Default = 8)

   NOTE: *The 360 Depth setting deploys the transducer in increments of 1% to 100%, where 100% = 29 inches (73.7 cm).*

3. Press the EXIT key until the menu system is closed.

Deploying the Transducer Past All Beam Obstructions



3. Test 360 Imaging™ on the Control Head

It is important to confirm that you can deploy and retract the 360 Imaging™ transducer from the control head. You should also confirm that the Transducer Deployment System is providing sonar returns to the display.

NOTE: *Before you deploy the transducer, the steps in the previous section* ***Set up 360 Imaging™ on the Control Head*** *must be completed.*

NOTE: *The instructions in this section should be performed at slow speeds (0 to 7 mph), in calm, open water, in a large area that is far from shallow water, boats, or other obstacles.*

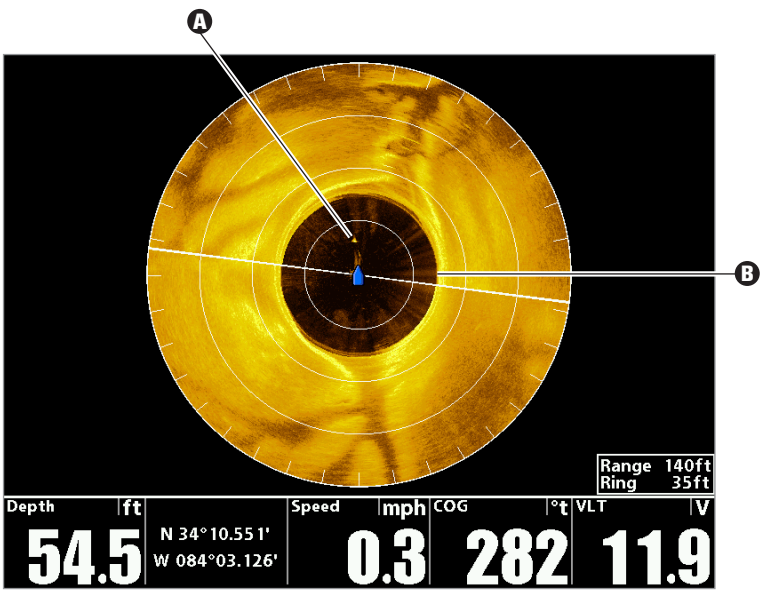
Confirm the 360 Imaging™ Sonar Operation

1. Press the VIEW key until the 360 Imaging™ View is displayed on the screen. The Deploy 360 Sonar dialog box will display on the screen.

Deploying from the 360 View

2. **Deploy:** Press the RIGHT Cursor key to deploy the transducer.

3. The sonar returns from the 360 scan will begin to display on the 360 View. Review the display for the following information:
   - **Bottom:** Confirm that the bottom is visible on-screen.
   - **Blocked Beams:** If the beams hit a hard surface, it will appear as bright white on the display. If the beams are blocked by the hull, scag, trolling motor, etc, you will need to deploy the transducer deeper (Main Menu > Accessories tab > 360 Sonar Settings > 360 Depth).
4. **Retract:** When you are finished reviewing the operation, press the MENU key once. Select Retract, and press the RIGHT Cursor key.



A **Trolling Motor** *is obstructing the beams (the sonar returns are lighter because they hit a hard surface)*

B **Bottom Return**

4. Confirm the Heading Sensor Operation

It is important to confirm that the Heading Sensor is installed correctly by reviewing the heading digital readout.

NOTE: *This procedure should be performed at slow speeds, in calm, open water, in a large area that is far from shallow water, boats, or other obstacles.*

1. **Main Menu:** Press the MENU key twice.
2. Select the Navigation tab > North Reference > Magnetic.
3. Press the EXIT key.
4. Select the Setup tab > Select Readouts.

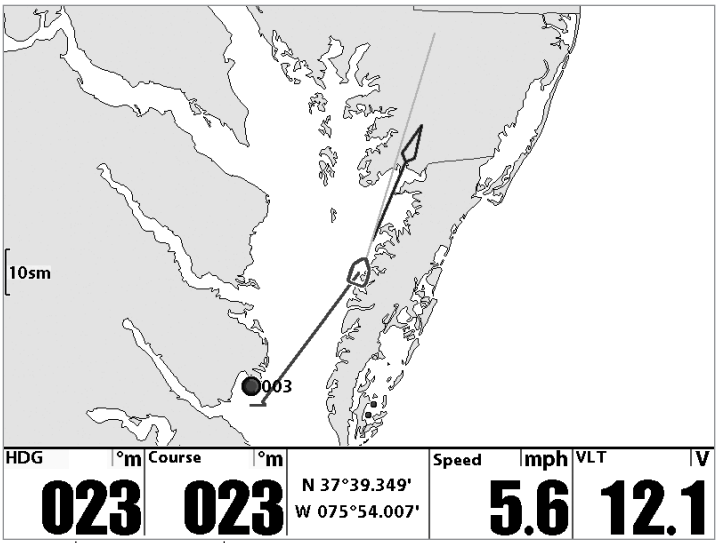
   NOTE: *If the Select Readouts menu option does not appear under the Setup tab, change the User Mode to Advanced. Select Main Menu > Setup tab > User Mode > Advanced.*

5. Select a Readout position and use the RIGHT or LEFT Cursor keys to select Heading. Select another Readout position and select Course.
6. Press the EXIT key until the Main Menu is closed.
7. Press and hold the VIEW key. Select Sonar > Sonar View.
8. Navigate the boat in a straight line, in calm, open water at 4.5 mph. Compare the Heading digital readout on the screen with the Course (COG) digital readout. The readouts should be within approximately 5° of each other.

   Adjust: To adjust the zero point of the Heading Sensor, select Main Menu > Navigation tab > Heading Offset. Press the RIGHT or LEFT Cursor keys to adjust the setting.

   If the procedure failed: If the Heading digital readout is significantly different than the COG, the Heading Sensor might be installed in a location with too much magnetic interference. Check the installation location and possible magnetic disturbances in the area.

Confirming the Heading Digital Readout (1198c SI, Chart View)



Heading (Heading Sensor Required)

Course (GPS Required)

5. Confirm the Baud Rate *(for devices connected to the Sensor pigtail only)*

If there is an accessory, such as an autopilot, connected to the Sensor pigtail cable wires, you will need to confirm that the devices are communicating at the same baud rate. The baud rate details are as follows:

- **If the GPS Receiver/Heading Sensor is connected to the control head, and NMEA Output is turned on,** the control head will operate exclusively at a baud rate of 38400. If there is an accessory attached to the Sensor's pigtail, it also needs to operate at 38400. See your accessory installation guide to set the baud rate to 38400.
- **If NMEA Output is turned off,** then baud rates 4800, 9600, and 38400 are available on the control head and no further action is required.

Turn On/Off NMEA Output

1. **Main Menu:** Press the MENU key twice.
2. Select the Setup tab > NMEA Output.
3. Press the RIGHT or LEFT Cursor keys to select On or Off. (Default = Off)

NOTE: *The menu option in your Fishing System will be called NMEA 0183 Output or NMEA Output. If the menu option is not shown under the Setup tab, make sure the User Mode is set to Advanced (Setup tab > User Mode > Advanced).*

6. Set up the Network and Alarms

After you have confirmed all connections, the 360 Imaging™ transducer is ready to use on the water. Proceed to your 360 Operations Manual to set up the depth source, temperature source, and the 360 Imaging™ Alarms.

WARNING! *If you will not be using the 360 Imaging™ Transducer on the water at this time, continue to keep it powered while the boat is underway. This is critical to keep the pod retracted. See* ***Power Off*** *for details.*

Power Off

The Transducer Deployment System is designed with software that keeps the pod fully retracted and stowed while the boat is in use.

WARNING! To keep the pod retracted, the Transducer Deployment System must stay powered ON while the boat is underway.

When the boat is stored or at dock, the Transducer Deployment System must be turned off to prevent draining the battery. The pod cover must be installed for trailering and storage.

1. Power off the Control Head

Press and hold the POWER/LIGHT key.

CAUTION! *Turning off the control head will NOT power off the Transducer Deployment System.*

2. Power off the Transducer Deployment System

Turn off power on the main switch, breaker, or battery switch.

NOTE: *Powering off the Transducer Deployment System will be determined by the installation and power connection on your boat.*

3. Install the Pod Cover

The pod cover must be installed for trailering and storage.

Install the cover over the pod. Insert the T-clips into the tracks on each side of the Transducer Deployment System. Turn each T-clip so it stays in the track. Tighten the straps.

Maintenance

Your Humminbird® fishfinder is designed to provide years of trouble free operation 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.

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 cloth dampened with fresh water.
- 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.

Transducer Deployment System Maintenance

Use the following information to maintain the installation of the Transducer Deployment System.

- Check the tension of the 4 vertical adjustment nuts after initial use and periodically thereafter to ensure that the installation remains stable.
- If your boat will be in long-term storage, remove the Transducer Deployment System from the bracket and store it in –40°F to 158°F (–40°C to 70°C), dry conditions.
- To keep the Transducer Deployment System clean, wipe the surfaces with a cloth dampened with fresh water.
- **"360 is Due for Maintenance"** The 360 Imaging™ Transducer Deployment System requires routine maintenance after 5000 deployments to ensure continued problem-free operation and to prevent damage to the unit. A message will display on the control head screen when 5000 deployments have been reached.

  If you receive this message on your control head, contact our Customer Resource Center at 1-800-633-1468 to schedule maintenance.

Troubleshooting

Before contacting the Humminbird® Customer Resource Center, 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.

Fishing System Doesn't Power Up

If your Fishing System doesn't power up, use the installation guide that is included with your Fishing System to confirm specific details, making sure that:

- the power cable is properly connected to the Fishing System 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, and
- 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.

Fishing System Defaults to Simulator with a Transducer Attached

In addition to the 360 Imaging™ accessory transducer, you will have a standard Humminbird® transducer connected to the control head. A connected and functioning transducer will cause the newly-started Fishing System to go into Normal operating mode automatically. If, when you power up the Fishing System, it goes into Simulator mode automatically, even though a transducer is already connected, this means that the control head is not detecting the transducer. Perform the following troubleshooting tasks:

- Check the connections of all transducers that are connected to the control head or Ethernet network. See the transducer installation guide that was included with your Fishing System for connection information.
- Review this 360 Imaging™ installation guide to confirm that the transducer cable is connected correctly to the Fishing System. Reconnect if necessary, and power on the Fishing System again to see if this fixes the problem.
- Because the 360 Imaging™ transducer is on the network, it might take up to a minute to be detected on the network. Use the 4-WAY Cursor Control key to select Normal from the Start-Up Options Menu. In this guide, see ***Set up the Control Head, Section 1. Power on and Confirm Connections.***
- 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.

The Pod Doesn't Deploy or Retract

If the pod won't retract through the control head or through the Transducer Deployment System keys, it can be retracted manually. You can also reboot the system if the pod is not deploying or retracting from the control head commands.

CAUTION! *Check for obstructions around the unit that might be blocking the pod from deploying or retracting.*

- If the pod won't retract through the control head or through the Transducer Deployment System —key, it can be retracted manually. Place your hand under the base of the pod and carefully push it up, into the Transducer Deployment System.
- If the pod will not remain retracted, remove the Transducer Deployment System from the transducer bracket and store it on the boat.
- If the pod will not deploy or retract, power off the control head. Then, unplug the power cable from the power port on the Transducer Deployment System. Wait 10 seconds, and then reconnect the power cable and restart the control head.

Finding the Cause of Noise

Electrical noise usually affects the display with streaks or repetitive patterns on the view. One or more of the following sources 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 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; make sure the transducer is mounted at least 6" (15.24 cm) from the propeller, and that the water flows smoothly over the face of the transducer at all times.

Removing the Pod *(for authorized repair only)*

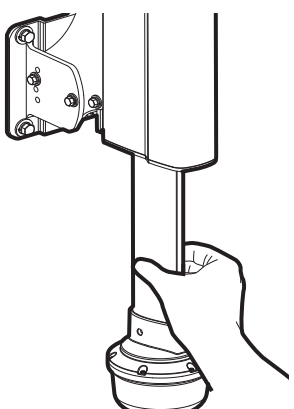
Use the following instructions to remove the pod and send it to Humminbird® for service.

WARNING! *Do NOT remove the pod unless you have a repair authorization number from our Customer Resource Center. Removing the pod without authorization will void the warranty. See the Warranty and Service Policy for details.*

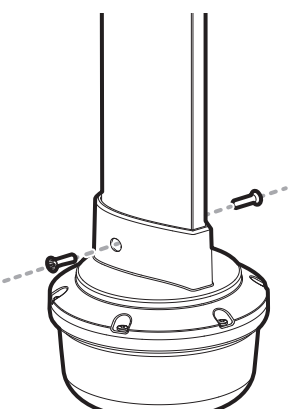
NOTE: *Place a table under the Transducer Deployment System so you have a surface to support the removal of hardware as you work, or you might prefer to remove the Transducer Deployment System from the transducer bracket and place it on a stable surface to work.*

1. Contact the Customer Resource Department at **service@humminbird.com** or **1-800-633-1468** to request a Repair Authorization Number.
2. Disconnect the power cable from the Transducer Deployment System.
3. Place your hands above the pod and pull down the deployment column, so the pod is deployed approximately 6" (15 cm).
4. Hold the pod from the bottom so it is supported, and remove the two screws from the top of the pod (see the illustration ***Removing the Screws***).

Pulling Down the Deployment Column



Removing the Screws



5. Place a small screwdriver through the Deployment System. See the illustration ***Removing the Fasteners from the Connector Case***.

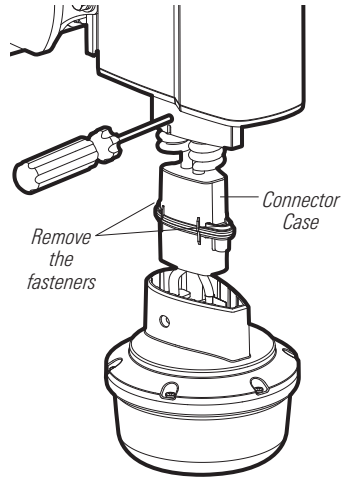
   CAUTION! *If the cables retract into the deployment system, pull the cables carefully back down. Do NOT pull the cables down by the connectors or wires.*

6. Remove the fasteners from the connector case. See the illustration ***Removing the Fasteners from the Connector Case***.

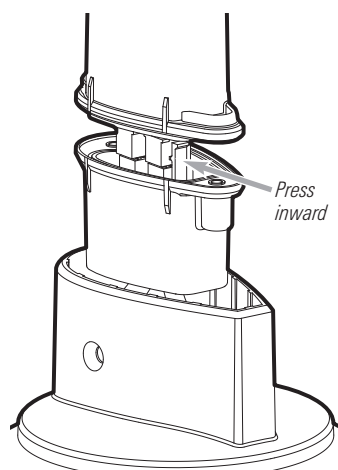
7. Use a flat-head screwdriver to press inward, on the top of each connector tab, to disengage the latch. You can also use the screwdriver to carefully pry the connectors out of the ports. See the illustration ***Disconnecting the Connectors.***

   CAUTION! *Be careful not to damage the tabs or pull on the wires while you are disconnecting the connectors.*

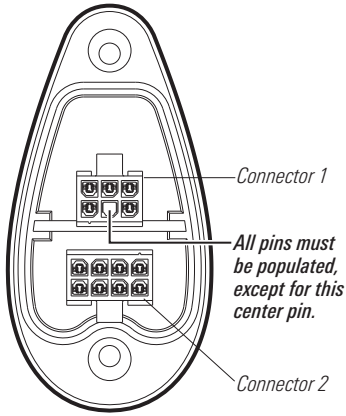
Removing the Fasteners from the Connector Case



Disconnecting the Connectors



Checking the Pins



8. Compare the pins in the connectors with the illustration ***Checking the Pins*** to confirm they've stayed in place.

   If the pins have remained installed, proceed to the next step.

   If the pins have been pulled out of the connectors, you will need to send the full Transducer Deployment System. If this is the case, call our Customer Resource Center at 1-800-633-1468.

9. Place the pod in a sealed plastic bag to prevent leaking. Pad the package as needed so the pod is secure and protected during shipment.

   Also, save any loose parts that were removed; you will need them to reconnect the pod.

10. Wrap the connectors on the Transducer Deployment System with plastic wrap (or a similar material) to protect them from potential environmental damage (water, dust, etc.).

Reconnecting the Pod *(for authorized repair only)*

If the transducer pod has been serviced by our Customer Resource Center, follow the steps in this section to reconnect the pod. See the illustration ***Reconnecting the Pod*** for more information.

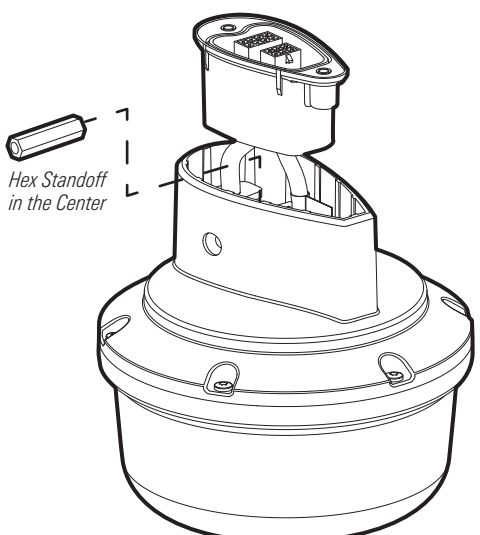
WARNING! *Make sure that power is disconnected from the Transducer Deployment System before you start the reconnection instructions.*

1. Place a small screwdriver into the deployment column holes so that the cables don't retract into the Transducer Deployment System. See the illustration ***Removing the Fasteners from the Connector Case*** in the previous section for more information.

   CAUTION! *If the cables retract into the deployment system, pull the cables carefully back down. Do NOT pull the cables down by the connectors or wires.*

2. Look inside the pod and confirm the hex standoff is in place. See the illustration, ***Confirming the Hex Standoff Installation***. If it has fallen out, insert a new hex standoff from the provided repair installation kit.

Confirming the Hex Standoff Installation



3. Place the gasket onto the Connector Case base.
4. Line up the connectors with the ports so that the tabs are on the outside of each connector.

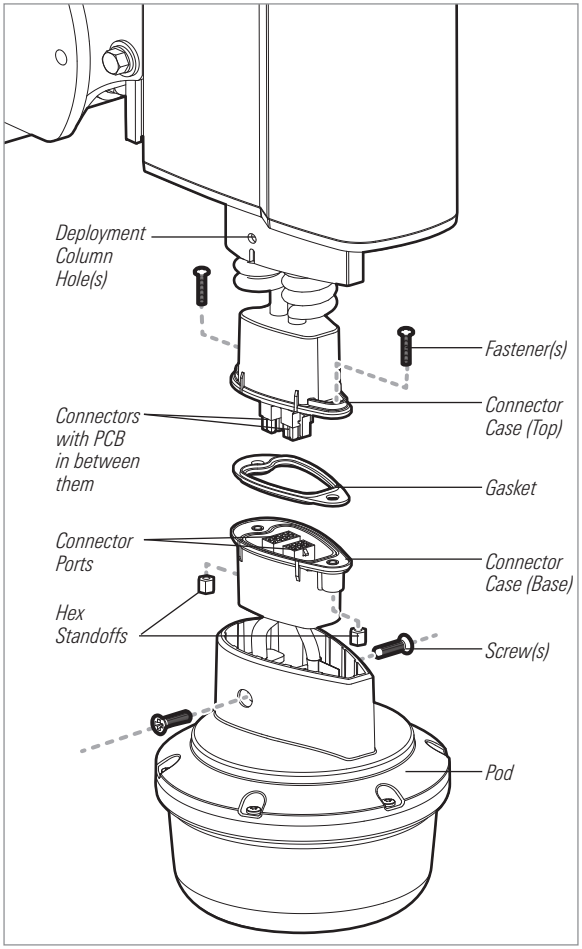
   WARNING! *Look up inside the Connector Case top. There is a Printed Circuit Board (PCB) between the connectors. Make sure that it stays lined up between the connectors, and that it doesn't get jammed, when the case is refastened in the proceeding steps.*

5. Insert the connectors into the ports. Push them in until the tabs click or the connectors are fully seated in the ports.

   CAUTION! *Be careful not to break the tabs or pull on the wires while you are inserting the connectors into the ports.*

6. Close the connector case and install the new fasteners and hex standoffs. Tighten them to the recommended torque of 5 in/lbs.
7. Carefully slide the pod onto the deployment column, inserting the cables and connector case into the deployment column, and supporting the pod from the base.
8. Align the holes of the transducer pod with the holes on the Deployment Column. You might have to apply pressure to align the holes.
9. Install the new screws at the top of the pod. **Hand-tighten only.**
10. Reconnect the power cable to the Transducer Deployment System port. When power is detected, the pod will retract automatically. The detection may take up to 2 minutes.

Reconnecting the Pod



Specifications

Deployment Depth . . . . . 29 inches

Operating Frequency . . . . . 455 kHz

Area of Coverage . . . . . 455 kHz: (2) 90° @ -10 dB

Target Separation . . . . . 2 1/2 inches (63.5 mm)

Power Output . . . . . 500 Watts (RMS), 4000 Watts (Peak to Peak)

Power Requirement . . . . . 10 to 20 VDC

Current Draw . . . . . 360 mA average (operating) 4 A maximum (deploying/retracting)

Operating Temperature . . . . . 32°F to 158°F (0°C to 70°C)

Storage Temperature . . . . . –40°F to 158°F (–40°C to 70°C)

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.*

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

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

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

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

Contact Humminbird®

Contact the Humminbird® Customer Resource Center
in any of the following ways:

By Telephone:
(Monday - Friday 8:00 a.m. to 4:30 p.m. Central Standard Time):

1-800-633-1468

By e-mail:
(typically we respond to your e-mail within three business days):

service@humminbird.com

For direct shipping, our address is:

Humminbird
Service Department
678 Humminbird Lane
Eufaula, AL 36027 USA