

HELIX® PORTABLE CONTROL HEAD INSTALLATION GUIDE

532503-1_C

Follow the instructions in this installation guide to install the control head in the portable case.

There may be some minor differences between the hardware described in this manual and the actual hardware included, depending on the configuration you purchased. We encourage you to read this guide completely so that you may understand the installation requirements.

SUPPLIES: In addition to the installation kit, you will need a Phillips-head screwdriver, flat-head screwdriver, awl, hammer, and pliers.

NOTE: The procedures and features described in this guide are subject to change without notice. This guide 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 illustrations in this guide may not look the same as your product, but your unit will function in the same way.

Portable Conversion Kit

If you have a Portable Conversion Kit, you must first un-install the control head and the transducer from their fixed mounting positions before performing the portable installation instructions described in this guide. Once you have converted the control head and the transducer to portable configurations, you will be ready to mount the portable case.

1. Converting the Control Head to Portable

1. Disconnect the cables from the control head installed on your boat.
2. Loosen the gimbal knobs and slide the control head out of the gimbal bracket.
3. Go to **Portable Case Assembly** and follow the instructions through the section **Installing the Base in the Portable Bag**.

2. Converting the Transducer to Portable

1. Unscrew the transducer from the fixed mounting bracket on your boat, saving the original screws for any future fixed mounting configuration (new portable mounting screws are provided in the Portable Conversion Kit).
2. Proceed to the portable transducer installation guide and follow the instructions to install the transducer.

Installation Preparation

1. Charging the Battery

You should fully charge your battery before using it for the first time to ensure peak performance. You should also re-charge your battery at least once every 6 months to maintain your battery's peak performance levels. This is especially important during periods of prolonged storage.

WARNING! Do NOT use the Humminbird charger with other manufacturers' batteries. The Humminbird charger is only compatible with Humminbird batteries.

NOTE: Some international models may not include a battery or battery charger.

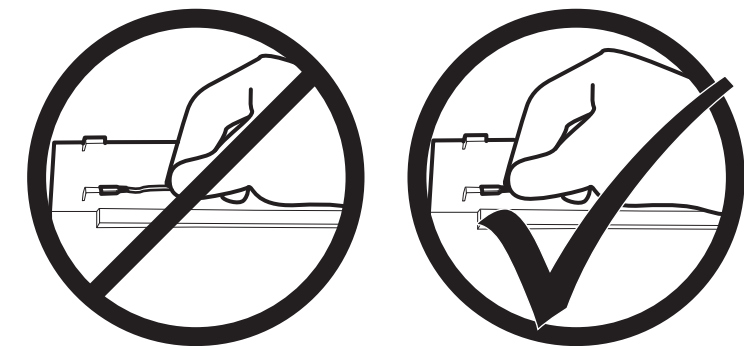
1. Charge the battery, using the included battery charger, until it is fully charged as indicated by the LED on the charger. Charging usually requires 8 continuous hours, but may vary depending on your configuration.

NOTE: The battery charger uses a yellow LED to indicate it is charging. On some models, this light might appear closer to orange than yellow. When this happens, the battery is still charging properly and should be left to charge until the LED becomes green.

2. Slide the battery terminal adapter over each spade terminal.

CAUTION! Do not pull on the battery or charger cables when you are trying to connect them or disconnect them from the battery terminals. Push or pull gently on the spade terminals instead. If the connector feels tight, use a slight wiggling motion to slide the spade connector into place on the terminal.

Handling the Spade Terminals



NOTE: The Battery Terminal Adapter allows you to power your control head and charge it at the same time.

Portable Case Assembly

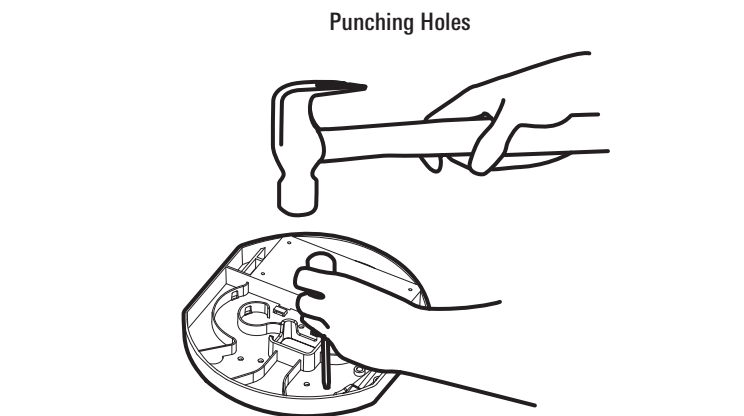
Perform the portable case assembly tasks in order, referring to the step-by-step procedures that represent the following main assembly tasks:

- Installing the riser blocks and gimbal bracket onto the portable base
- Routing the cables in the base
- Finalizing the portable base assembly
- Installing the battery
- Installing the base in the portable bag
- Stowing the portable transducer and battery charger in the portable bag

When you are finished, the control head and the transducer will be part of the portable case assembly. If you plan to use the portable case assembly for ice fishing, you will be ready to take your portable case on the ice for final setup.

1. Assembling the Portable Base

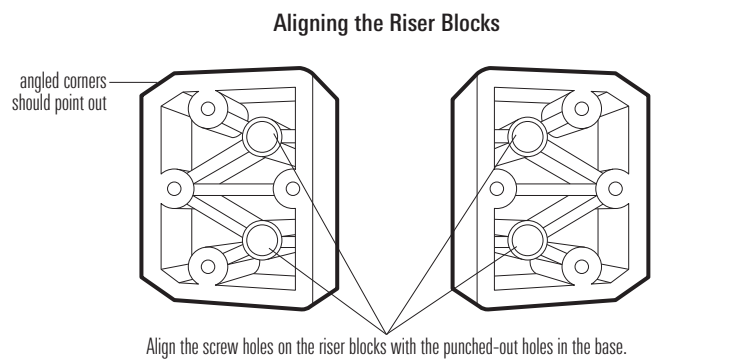
1. Turn over the base, and locate the **4 holes labeled D**.
2. Use a screwdriver (or an awl) with a hammer to punch out the selected mounting holes.



3. Turn the base right side up.

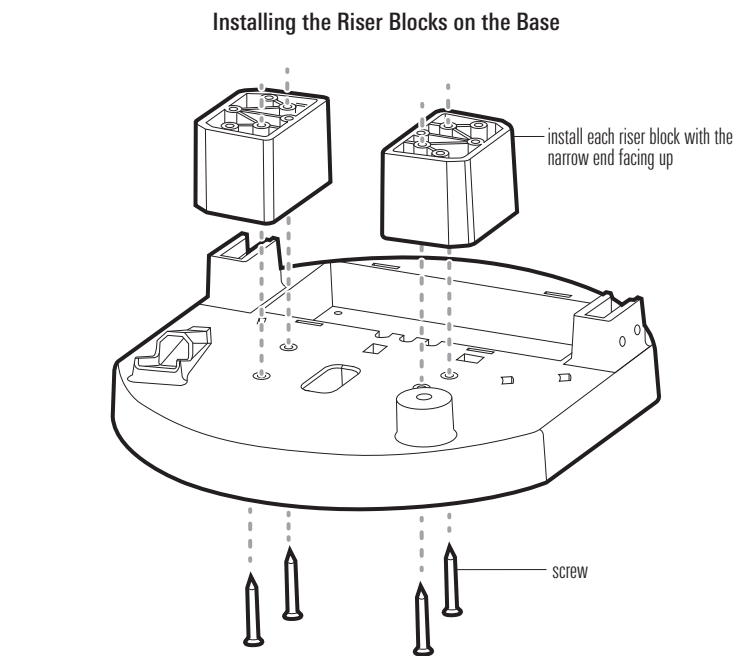
4. Install the riser blocks on the portable base using the following guidelines:

- Line up the holes on the riser blocks with the holes you punched out of the base in step 2.
- Align the riser blocks so that the wider end of each block is on the base. The narrow end of each riser block should be facing up. The angled corners on the riser blocks should be facing out.
- See the illustrations **Aligning the Riser Blocks** and **Installing the Riser Blocks on the Base**.

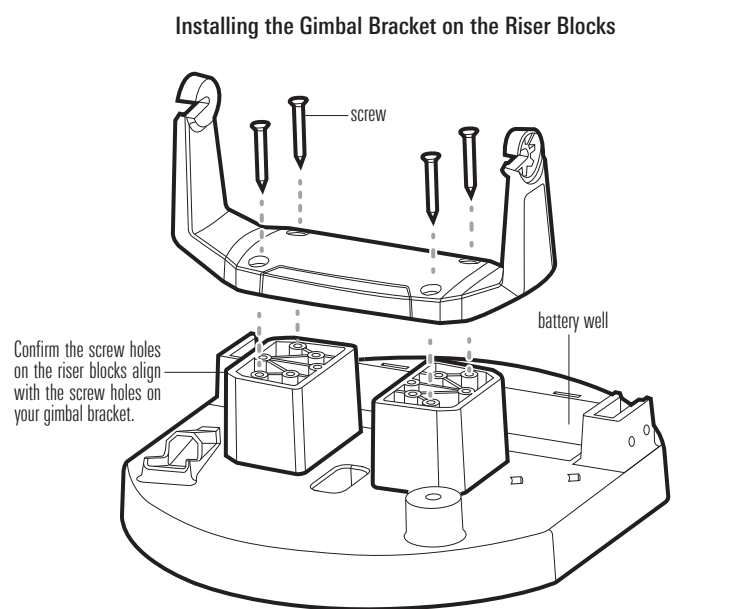


5. Secure the riser blocks to the base with the four included #8-15 x 3/4" screws. See the illustration **Installing the Riser Blocks on the Base**. **Hand tighten only!**

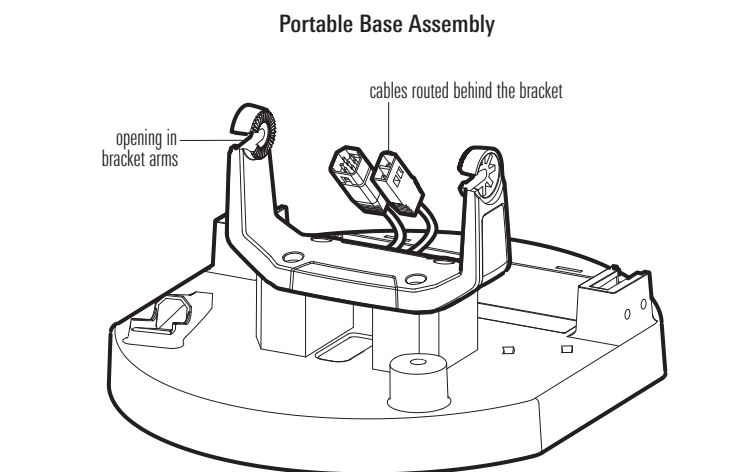
CAUTION! Do not use a high speed driver on this combination of fasteners. Hand tighten only.



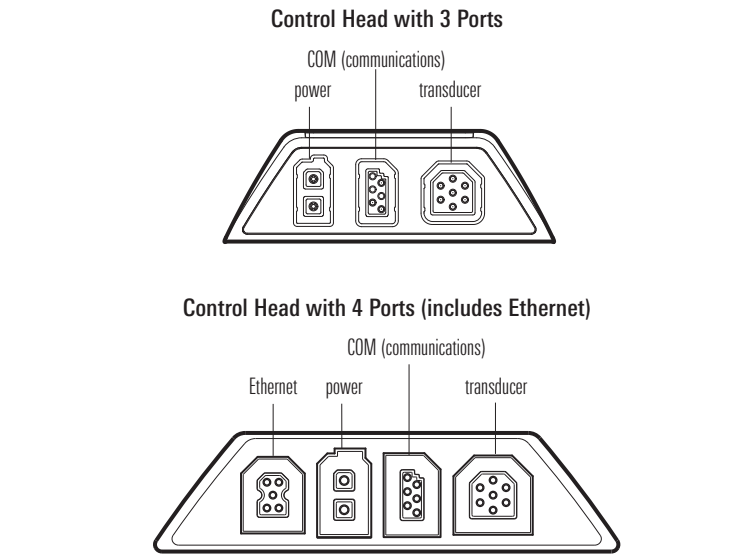
6. Select the gimbal bracket for your control head model.
7. Line up the mounting holes on the gimbal bracket with the screw holes on the top of the riser blocks. Make sure the opening in the gimbal bracket arms faces away from the battery well on the base.



8. Using a Phillips-head screwdriver, secure the gimbal bracket with the four included #8 x 1 1/4" screws. **Hand tighten only!**
9. Route the power cable and the transducer jumper cable from under the base and up through the hole in the base.



10. Install the gimbal knobs into each side of the control head. Tighten the knobs just enough so you can slide the control head into the gimbal bracket arms.
11. Insert the power and the transducer jumper cable connectors into the correct ports on your control head. Refer to the illustration that matches the number of ports on your control head.



NOTE: The control head ports are keyed to prevent reversed installation, so be careful not to force the connectors into the wrong ports.

12. Confirm there is enough cable slack to allow the control head to pivot through its full tilt range and for connecting or disconnecting the cables. Carefully pull the excess cable from beneath the portable base.
13. Disconnect the cables from the control head. Slide the control head out of the gimbal bracket and set it aside.

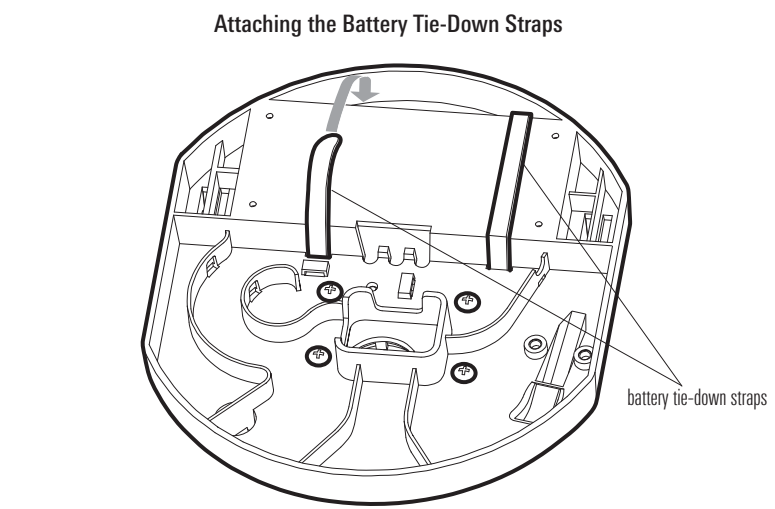
It is important to note the amount of cable you will need to reconnect to the control head when you install it on the portable base later in the installation.

2. Routing the Cables in the Base

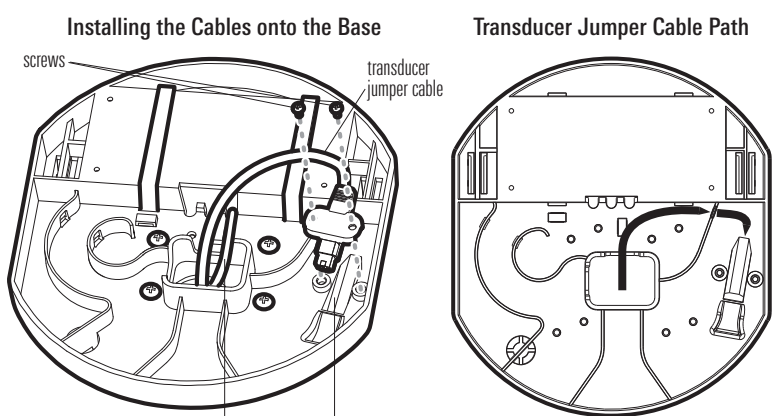
In this procedure, you will route the power and transducer jumper cables on the underside of the base and attach the tie-down straps that will be used to secure the battery to the base in a later procedure.

NOTE: As you route the cables, make sure you leave enough cable length on the surface of the portable base to reconnect the cables to the control head later in the installation.

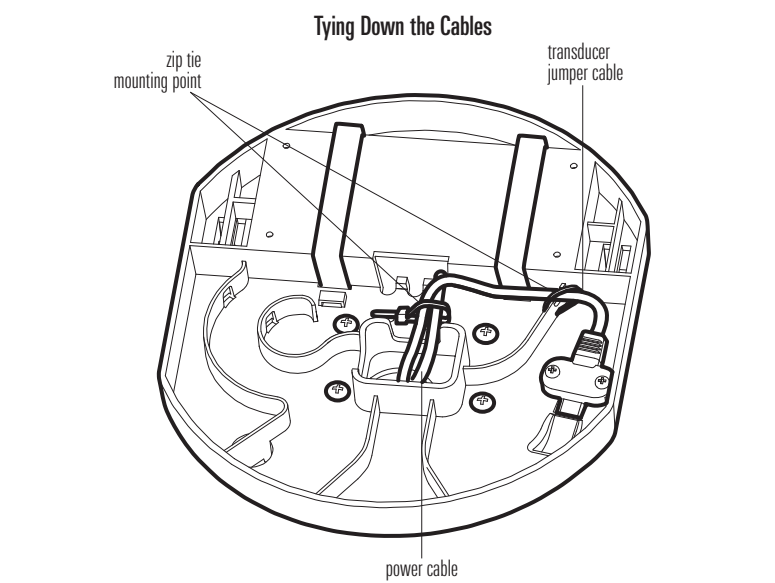
1. Turn the base upside down.
2. Thread the two included battery tie-down straps from the bottom of the base up through each side of the battery well, using the strap holes in the base. Make sure the soft side of the strap faces down.



3. Insert the power cable into the **center slot** of the battery well. (If you need to adjust the cable route, you can select a different slot.)
4. Route the transducer jumper cable as shown in the illustrations **Installing the Cables onto the Base** and **Transducer Jumper Cable Path**.



5. Fit the transducer jumper cable connector down into the jumper cable well and snap it into place. Insert the two #6-32 x 1/4" screws included to secure the transducer jumper connector and tighten them using a Phillips-head screwdriver. **Hand tighten only!**
6. Adjust the cables as needed. Secure all cables to the base using the included zip ties at the points shown in the illustration **Tying Down the Cables**.

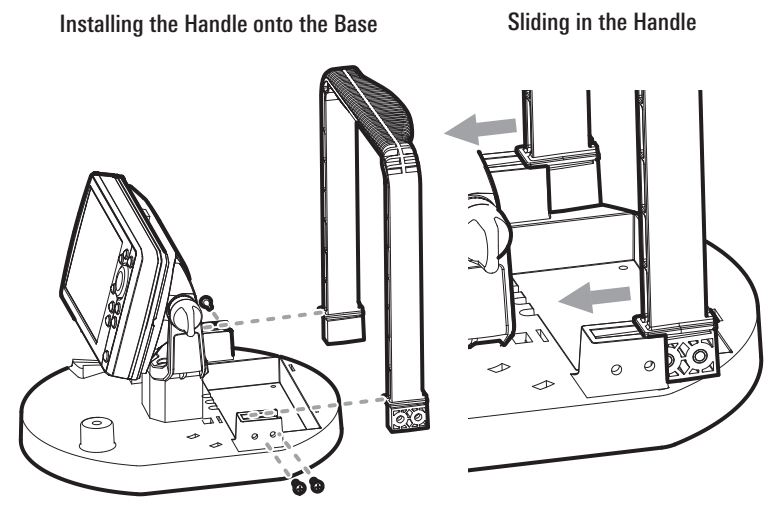


7. Turn the base right side up and pull up gently on the battery tie-down straps to remove the slack.

NOTE: Before you install the battery into the portable case, finish the assembly procedures and charge the battery for 8 hours. See **Charging the Battery** and **Installing the Battery** for more information.

3. Finalizing the Portable Base Assembly

1. Slide the control head (with gimbal knobs installed) into the gimbal bracket arms.
2. Insert the power and the transducer jumper cable connectors into the control head ports. See the illustrations **Control Head with 3 Ports** and **Control Head with 4 Ports (includes Ethernet)** for details.
3. Adjust the control head viewing angle, and tighten the gimbal knobs so the control head is secured on the gimbal bracket. **Hand tighten only!**
4. Install the handle onto the base, so that the curved part of the handle faces towards the back of the base, towards the battery well.
5. Install the four included #8-32 x 7/16" screws, two on each side of the handle, to attach the handle to the base. **Hand tighten only!**



NOTE: The handle is keyed so that it only fits onto the base in one way.

4. Installing the Battery

Before proceeding with this procedure, confirm the battery is fully charged (see **Charging the Battery**).

NOTE: Some international models may not include a battery or battery charger.

1. Move the tie-down straps out of the way so that the battery well is fully accessible.

NOTE: For ease of access to the battery well, move the tie-down straps to the side and secure them around the handle.

2. Center the foam pad on the battery well.
3. Place the battery on the foam pad and push the battery into the battery well. Make sure the power cable is fitted snugly into the slot in the well so that the battery does not rest on it, and that the foam pad fits evenly around the battery well edges.
4. Pull the two battery tie-down straps over the top of the battery and connect both ends of each strap over the top. Make sure that the straps are pulled tight around the battery and that the battery is seated securely in the battery well.

NOTE: Do NOT connect the power cable to the battery at this time. You should wait until just before fishing to connect the power cable to the battery.

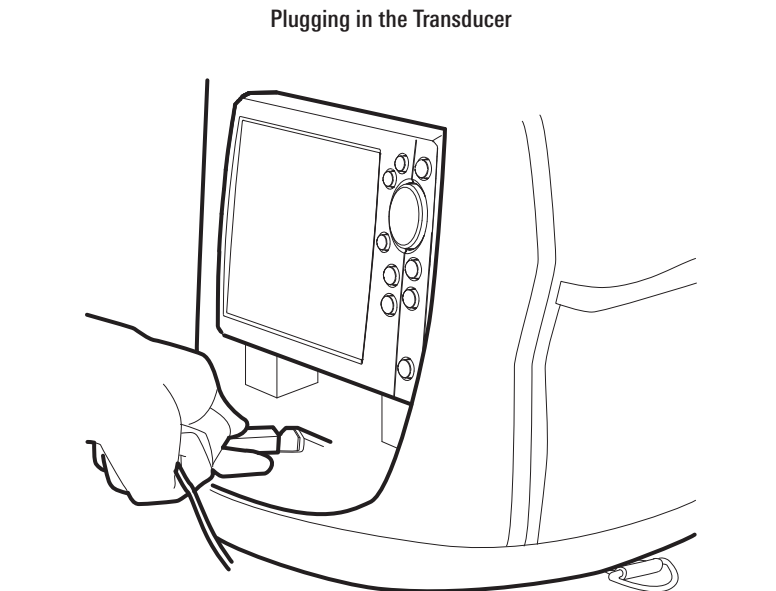
5. Installing the Base in the Portable Bag

1. Unzip the front opening on the portable bag.
2. Insert the base into the portable bag, so the control head faces out of the bag. Pull the bag over one shoulder of the handle at a time. Make sure you can grab the handle through the fabric handhold inset from the outside top of the portable bag.

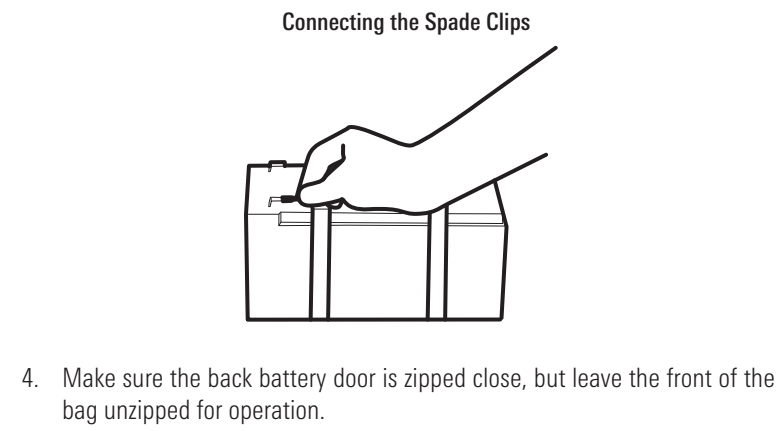


6. Connecting Power and the Transducer Cable to the Portable Case

1. Make sure the large opening in the front of the portable bag is unzipped. You may want to roll up the flap and secure it while you're working.
2. Plug the transducer cable into the jumper port in the portable case to the left of the control head, as you face the front of the bag (see the illustration **Plugging in the Transducer**).



3. Turn the portable case around so that you can access the back, and open the back zippers. Connect the spade clip on the red wire of the power cable to the red terminal on the battery, and the spade clip on the black wire of the power cable to the black terminal on the battery. Make sure the spade clips are snugly attached to the terminals (see the illustration **Connecting the Spade Clips**).



4. Make sure the back battery door is zipped close, but leave the front of the bag unzipped for operation.

Stowing the Portable Transducer and Battery Charger in the Portable Bag

When you're finished using your portable fishfinder, it is important to store the transducer and battery charger, and disconnect power.

1. Remove the transducer from the water, wipe it dry, and stow it in the front of the portable case, under the control head.
2. Stow the battery charger in the portable case.
3. **Disconnect Power:** Unplug the power cable when not in use.
4. Make sure all the zippers are closed.

Maintenance

Your Humminbird Portable fishfinder is designed to provide years of trouble-free operation with virtually no maintenance. Follow the simple procedures below to ensure that your Humminbird Portable continues to deliver top performance.

Control Head Maintenance

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

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

- 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 your Humminbird Portable unit 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:** When cleaning the LCD protective screen, use a chamois and non-abrasive, mild cleaner. Be careful to avoid scratching the lens.
- **NOTE:** Do not wipe the screen while dirt or grease is on the screen.
- **Control Head:** If the unit comes into contact with salt spray, wipe the affected surfaces with a cloth dampened in fresh water.

Portable Case Maintenance

- If the Portable case comes into contact with salt spray, wipe the affected surfaces with a lint-free cloth, then apply a commercially available anti-corrosive treatment to all exposed electrical contacts.
- If the portable case bag becomes dirty, clean the bag with mild soap, water, and a soft rag or brush and then hang it up to dry.

How to Remove Water from the Portable Case

Open the front zipper and pull the case down to allow water to exit the case. If needed, remove the case from the plastic base and air-dry it. Follow recommended maintenance procedures for salt spray exposure, if needed.

Specifications

Power Requirement: 12 Volt sealed lead acid battery; up to 16 hours continuous operation

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! Do NOT use the Humminbird charger with other manufacturers' batteries. The Humminbird charger is only compatible with Humminbird batteries.

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

NOTE: For operations information, see the Operations Summary Guide and control head operations manual.

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.

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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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PORTABLE TRANSDUCER INSTALLATION GUIDE

532505-2_B

Use the instructions in this guide to install the portable transducer.

NOTE: The procedures and features described in this guide are subject to change without notice. This guide 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 illustrations in this guide may not look the same as your product, but your unit will function in the same way.

INSTALLATION PREPARATION

Install the control head before you start the transducer installation. See the control head installation guide.

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

Supplies: In addition to the hardware supplied with your accessory, you will need a Phillips-head screwdriver. If you are installing the Speed Sensor Accessory, you will need the Sonar/Speed Y-Cable. Contact Humminbird Technical Support for details.

Confirm your boat is level for the installation.

Preparation

1. Test the Transducer Prior to Installation

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

1. Confirm the control head is connected to power. See your control head installation guide for instructions.
2. Connect the transducer cable to the control head. See **Connect the Transducer Cable**.
3. Lower the transducer into the water.

WARNING! The transducer must be fully submerged in water during operation because the sonar signal cannot pass through air. Air pinging can damage the transducer.

4. **Power On:** Press the POWER key to turn on the control head.

If the transducer is detected, the control head will start Normal mode.

5. Select a 2D Sonar View to display on-screen.

If the bottom is visible on-screen with a digital depth readout, the transducer is working properly.

6. **Power Off:** Press and hold the POWER key.

7. Remove the transducer from the water.

8. Disconnect the transducer cable from the control head.

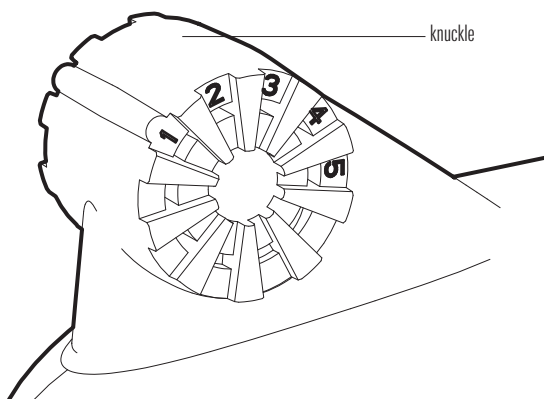
2. Assemble the Transducer Mounting Bracket

NOTE: Please be aware that the transducer design has changed. If you are replacing or adding mounting hardware to your current transducer, make sure that you have selected the appropriate hardware. If you are replacing a transducer, you will need to replace the mounting bracket and hardware. Contact Humminbird Technical Support for details.

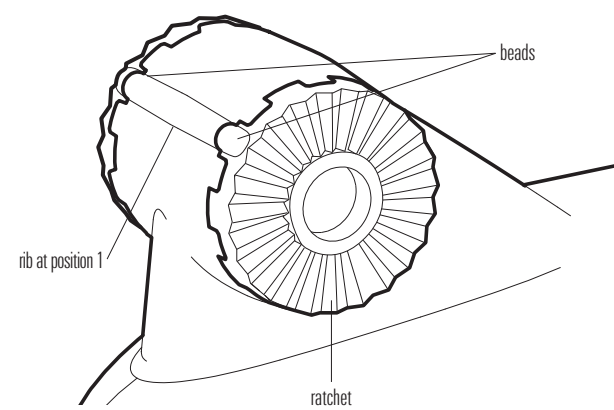
Use the illustrations in the section below to find your mounting bracket and assemble the portable transducer bracket.

1. If your transducer mounting bracket looks like one of the following illustrations, line up the two ratchet pieces at position 1 so that the beads are aligned with the rib on the transducer. See the illustrations.

Transducer Knuckle Positions

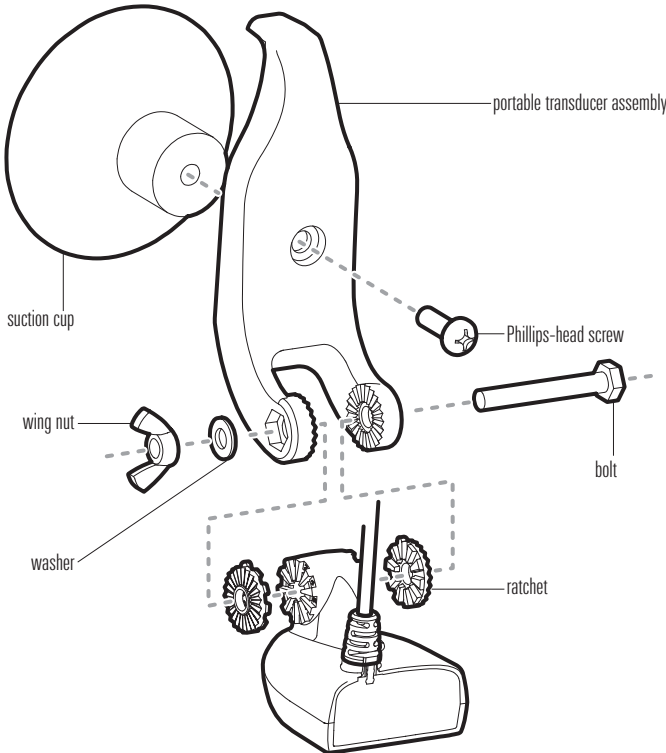


Ratchets Placed in Position 1

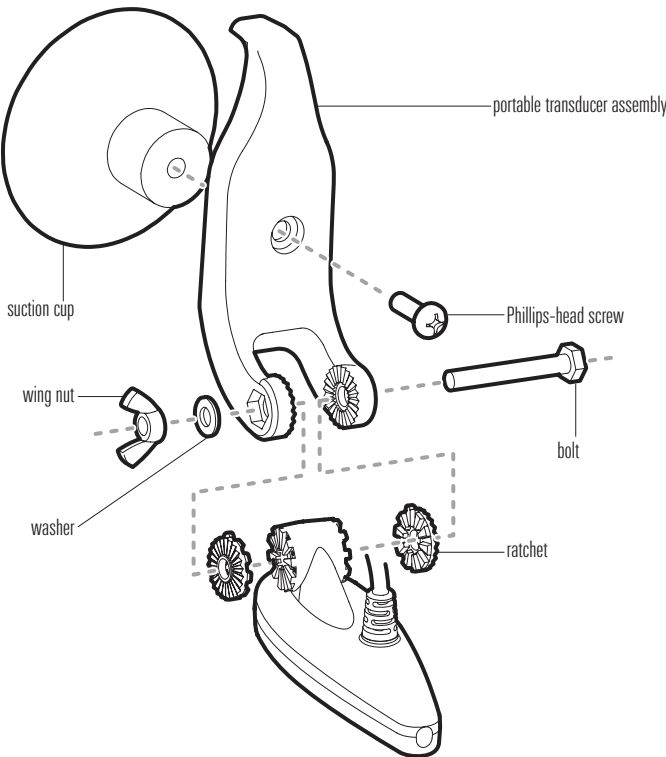


2. Assemble the other transducer parts as shown (see the illustrations **Assembling the Plastic Bracket**). Hand tighten only!

Assembling the Plastic Bracket

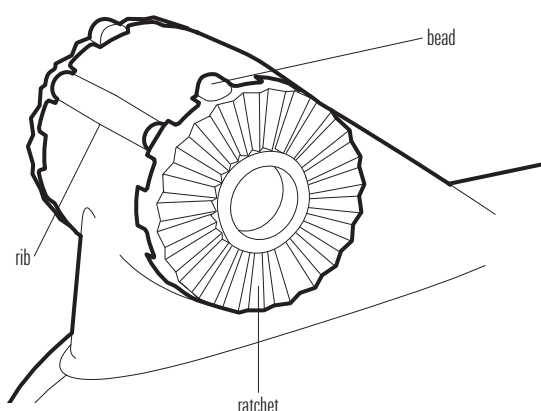


Assembling the Plastic Bracket



NOTE: If you are unable to ratchet the transducer so that it rests below the water, you can disassemble it and align the beads with a different number until you reach a position that allows the proper alignment.

Ratchets Placed in Position 2



3. Connect the Transducer Cable

Locate the instructions for your control head configuration below.

Connect the Transducer Cable to the Control Head (Direct Connection):

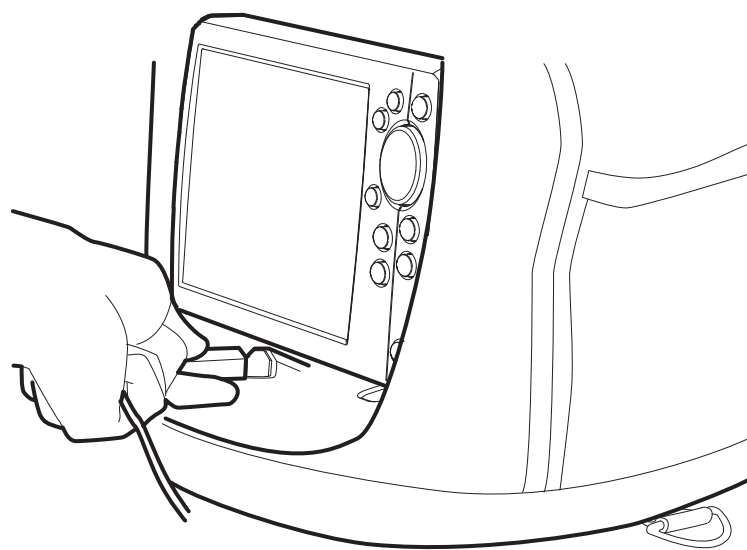
1. Connect the transducer cable connector to the transducer port on the control head. See your control head installation guide for details.

NOTE: The ports are labeled, and the connector is keyed to prevent incorrect installation. Do not force the connector into the port.

Connect the Transducer Cable to the Portable Case (Portable Assembly):

1. Make sure the large opening in the front of the portable bag is unzipped. You may want to roll up the flap and secure it while you're working.
2. Plug the transducer cable into the jumper port in the portable case to the left of the control head, as you face the front of the bag (see the illustration **Plugging in the Transducer**).

Plugging the Transducer Cable into the Portable Case



Speed Accessory (Optional): If you are installing the optional Speed Sensor accessory, insert the Sonar/Speed Y-Cable connector into the jumper port in the portable case. Then, connect the transducer connector and speed sensor connector to the corresponding connectors on the Y-Cable. The Y-Cable requires a separate purchase. Contact Humminbird Technical Support for details.

Mounting the Portable Transducer

Once your portable transducer is fully assembled, it takes just a few easy steps before you are ready to fish.

1. Mount the Portable Transducer on the Boat

Perform the procedures in this section to install the transducer on your boat. Also, keep in mind the following:

- You can mount the transducer anywhere on the side of the boat if your boat remains stationary. If you are trolling, it is best to mount the transducer on the transom of the boat.
- It is important that the mounting position allows the transducer to rest beneath the surface of the water.
- The transducer must be mounted parallel with the waterline. This positioning allows the beam elements to point straight down.
- Your portable transducer is designed to be installed and adjusted without the use of tools. Mounting the transducer to the boat is a simple, yet important operation. A poor mounting location will affect the overall performance of the Humminbird unit, so follow the mounting instructions carefully.

NOTE: The suction cup mount is designed for quick, easy installation and removal, NOT for high speed operation. If you intend to operate your boat at any speed faster than trolling speeds, remove the suction cup transducer from the water.

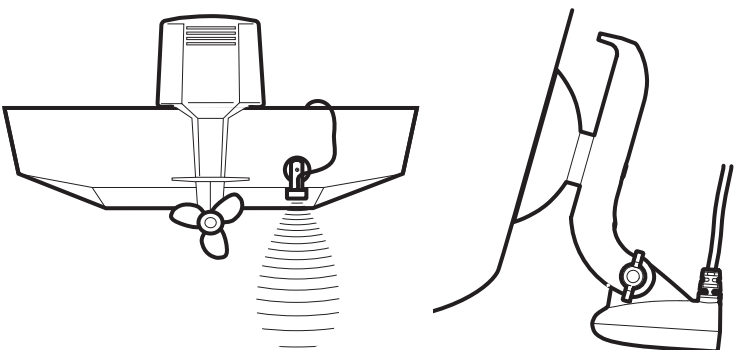
CAUTION! Do not cut or shorten the transducer cable, and try not to damage the cable insulation. Route the cable as far as possible from any VHF radio antenna cables or tachometer cables to reduce the possibility of interference. If the cable is too short, extension cables are available to extend the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

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.

1. Mount the transducer in the chosen mounting location.
2. Adjust the running angle so that the transducer is parallel to and below the surface of the water (see the illustration **Transducer Running Angle**).

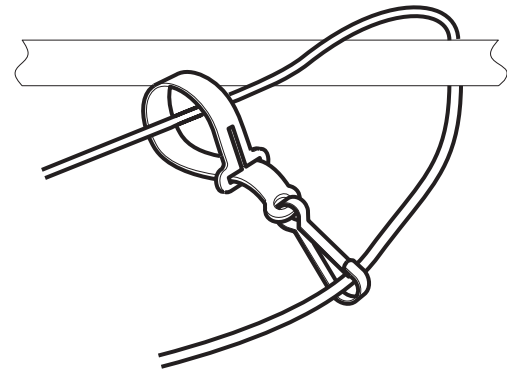
Portable Transducer Mount

Transducer Running Angle



Attach the tie-down strap to the transducer cable around an immovable object such as a rail or fitting, as shown in the illustration **Transducer Tie-Down Strap**.

Transducer Tie-Down Strap



5. When you have finished using the transducer, unplug the transducer cable from the transducer jumper port on the base, then coil the cable around the assembly.

Stowing the Portable Transducer in the Portable Bag

1. Remove the transducer assembly from the water, wipe it dry, and stow it in the front pocket of the portable bag, under the control head.
2. Unplug the power cable when not in use.
3. Make sure all the zippers are closed.

MAINTENANCE

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

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

Important Notices

WARNING! 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! The transducer must be fully submerged in water during operation because the sonar signal cannot pass through air. Air pinging can damage the transducer.

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