



# INSTALLATION INSTRUCTIONS

Junction Box: Humminbird

Connect transducer with NO connector to echo sounder requiring two 14-pin connectors

01/19/21

101802-rev.1

D-19811-rev.1

Follow the precautions below for optimal product performance and to reduce the risk of property damage, personal injury, and/or death.

**WARNING:** Always wear safety glasses, a dust mask, and ear protection when installing.

**WARNING:** The power supply must be OFF before proceeding with the installation.

**CAUTION:** To reduce electrical interference from other electrical wiring and any on-board equipment with strong magnetic fields such as radar equipment, radio transmitters, boat engines, generators, etc., separate the cables by at least 1m (3').

**CAUTION:** Be careful not to tear the cable jackets when passing them through the bulkhead(s) and other parts of the boat. Use grommets to prevent chafing.

**CAUTION:** Take care when matching like colored wires; there may be wires with stripped insulation. Be sure to connect blue stripe to blue stripe, solid blue to solid blue, black stripe to black stripe, and solid black to solid black.

**CAUTION:** Make certain there are no bare wires, frayed strands, or loose ends to cause a short circuit inside the Junction Box.

**IMPORTANT:** Please read the instructions completely before proceeding with the installation. These instructions supersede any other instructions in your instrument manual if they differ.



HUMMINBIRD Transducer Connections to Junction Box Terminals				
Transducer Cable	Terminal Position	Function	Source Cable	
Blue	1	M/HF Depth +	Blue	
Black	2	M/HF Depth -	Black	
Inner Bare	3	M/HF Chassis Shield	Bare	
N/C	4		N/C	
White	5	Temp	White	
Brown	6	Ground (XID/T/Temp)	Brown	
Orange	7	XID/T	Orange	
Inner Bare	8	Shield (XID/T/Temp)	Bare	
Outer Bare	9	Overall Shield	Bare	
Inner Bare	10	LF Chassis Shield	Bare	
Blue/White	11	LF Depth +	Blue	
Black/White	12	LF Depth -	Black	

## Applications

Use the junction box to connect an existing transducer without a connector to Humminbird's echo sounder requiring two 14-pin connectors.

## Installation

### Mounting Location & Hole Drilling

1. Select a convenient dry mounting location for the water-resistant junction box along the transducer cable's route, a minimum of 1 m (3') from other cables and electronic equipment.
2. Hold the junction box at the selected location and mark the position of the four screw holes (Figure 1).

**NOTE:** If the junction box will be mounted on a vertical surface, face the cordgrips sideways to avoid water seeping into the box.

3. At the marked locations, drill 3mm or 1/8" holes to a depth of 10mm (3/8"). Do not fasten the junction box in place at this time.

## Tools & Materials

- Safety glasses
- Dust mask
- Ear protection
- Pencil
- Electric drill
- Drill bit: 3mm or 1/8"
- Grommets (some installations)
- Cutting pliers
- Phillips screwdrivers
- Alcohol
- Heat gun
- Wire strippers
- Scissors
- Wrench
- Petroleum jelly
- Blade screwdriver (small)

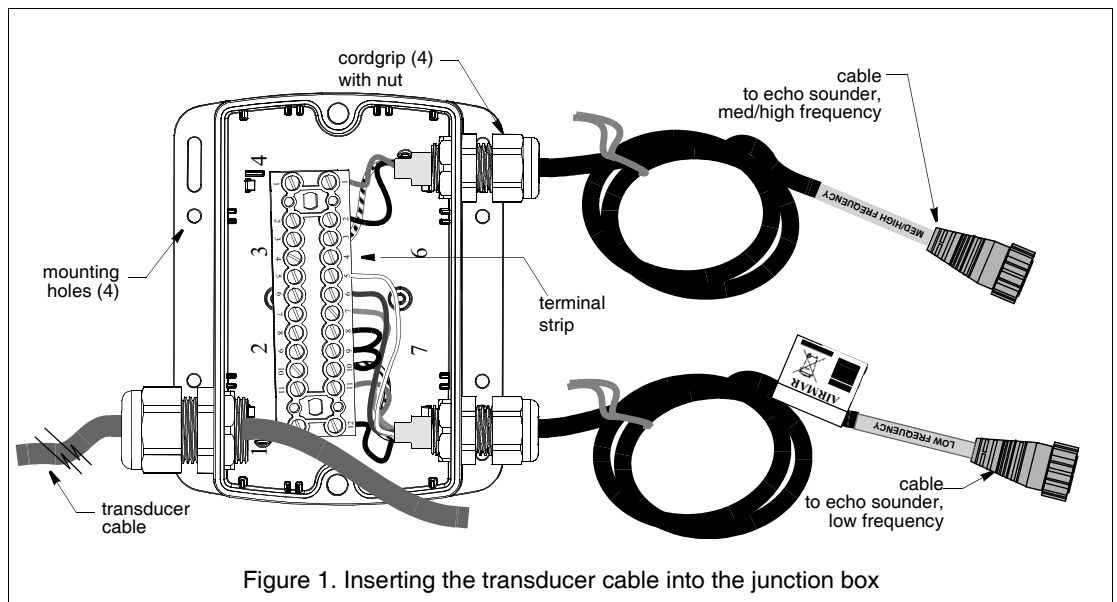
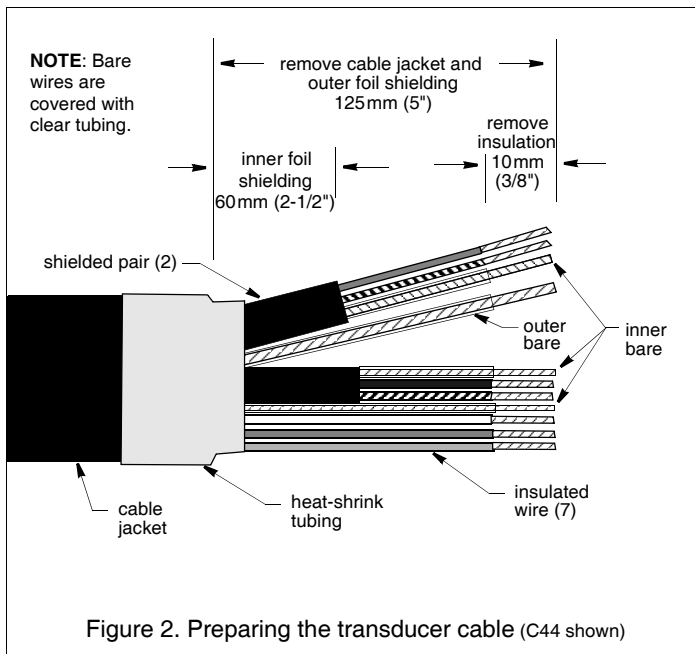


Figure 1. Inserting the transducer cable into the junction box



### Preparing the Transducer Cable

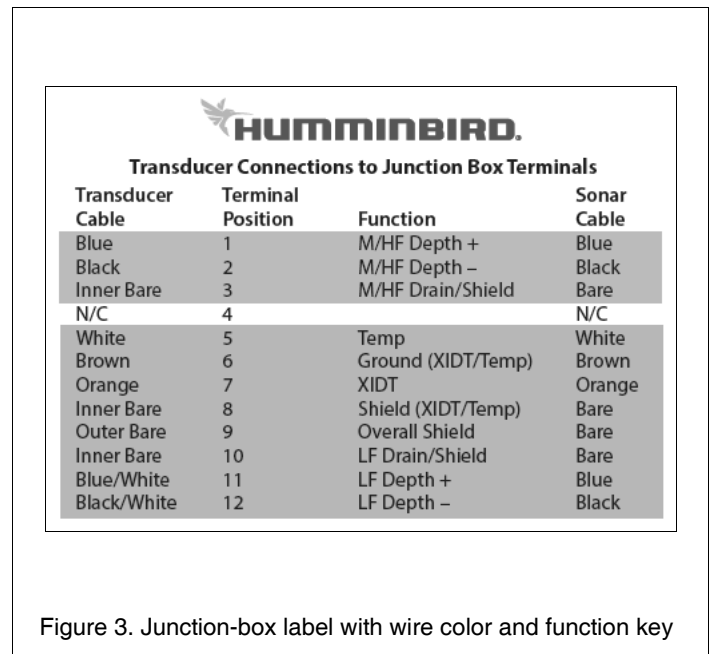
Remove the junction box cover and set it aside along with the two screws and the bag of hardware containing clear tubing and four 6 x 1/2" screws.

**IMPORTANT:** Do not cut the transducer cable too short.

1. Be sure the power to the echo sounder is OFF.
2. Cut the transducer cable 30cm (1') beyond the location of the junction box to allow for wiring ease.
3. Loosen the nut on the cordgrip (Figure 1). Carefully push approximately 200mm (8") of the transducer cable through the appropriate cordgrip. Apply alcohol to the cable jacket to ease sliding.
4. Strip 125mm (5") of the outer jacket from the cut end of the transducer cable (Figure 2).
5. Strip 60mm (2-1/2") of foil shielding from the shielded pairs.
6. Cut off the purple wire at the cable. *It is not used.*
7. Strip 10mm (3/8") of conductor insulation from the end of each insulated wire.
8. Protect each cable's foil shielding from causing a short inside the switchbox by using heat shrink tubing around the cable jacket where the wires emerge from the cable. The tubing must overlap the wires a minimum of 6mm (1/4"). Use a heat gun to shrink the tubing.
9. Cover the bare wires. Cut the clear sleeving supplied to fit over the bare wires from the cable jacket/foil shielding to within 10mm (3/8") of the end. Slide the clear sleeve over bare wire(s) until it touches the cable jacket/foil shielding.

### Connecting

1. Take care when choosing each wire because the colors may look similar. *Note, there are wires with striped insulation.* Follow the color key on the junction-box label (Figure 3).
2. Connect each colored wire to the terminal opposite the matching colored wire from the sonar. *Note that the terminals are numbered.* Insert the stripped end in the square opening in the side. Tighten the terminal screw until the wire is held firmly in place. *Be sure the stripped end of the wire is inserted up to the insulation only.* Do not include any insulation inside the terminal.



3. Gently tug on the wire to ensure it is locked in place. If any bare wire is visible, shorten the stripped end and reconnect it to the terminal.

### Completing the Installation

1. From outside the junction box, carefully pull the transducer cable until only about 13mm (1/2") of the cable jacket remains inside the box.
2. Hand-tighten the nut on each cordgrip. Then use a wrench to make an additional 1/4 to 1/2 turn to make a water-resistant seal (Figure 1).
3. Remove the tape from the foam on the back of the terminal strip. Push the terminal strip into the junction box until it is attached firmly to the bottom.
4. Arrange the wires neatly inside the box. *Be sure there are no bare wires touching.*
5. Check to be sure the gasket is firmly installed in the channel on the back side of the cover. Lubricate the gasket with petroleum jelly as this will help to make a water tight seal. Screw the cover in place with the 2 long screws supplied.
6. Fasten the junction box to the selected mounting surface at the previously-drilled holes with the four 6 x 1/2" screws supplied.
7. Follow the instructions that came with your echo sounder to plug both of the 9-pin connectors into the sounder. *Note that one of the cables is low frequency and the other is high frequency.*
8. Fasten all loose cables in place.

### Parts

Obtain parts from your instrument manufacturer or marine dealer.

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