

INSTALLATION INSTRUCTIONS

Connect Airmar Chirp Transducer to
Chirp/Broadband Echosounder

Chirp Transducer Junction Box

08/15/12
17-576-01 rev.01

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

WARNING: Always wear safety goggles and a dust mask when installing.

CAUTION: Do not cut off the echosounder's connector.

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

CAUTION: Be careful not to tear the cable jackets when passing them through compartments, bulkheads, or walls. Use grommets to prevent chaffing.

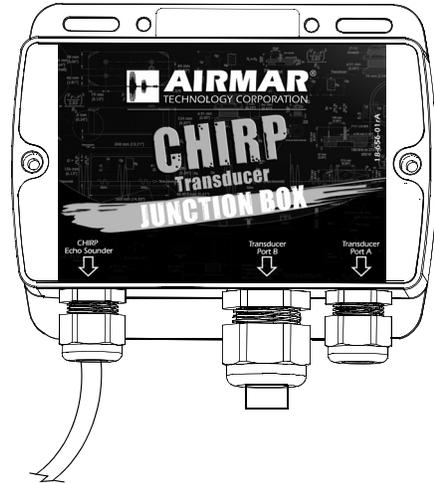
CAUTION: If there is an unused compression nut, insert the plug so the Junction Box will be water resistant.

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.

Tools & Materials

Safety goggles
Dust mask
Pencil
Electric drill
Drill bit: 3mm or 1/8"
Grommets (some installations)
Cutting pliers
Phillips screwdrivers
Wire strippers
Heat gun
Slip-joint pliers



Applications

The Chirp Transducer Junction Box allows an Airmar Chirp Transducer to be connected to a chirp/broadband enabled echosounder.

Installation

Remove the cover of the Chirp Transducer Junction Box. Set it aside along with the two screws, packet of silicone lubricant, and bag of hardware containing heat-shrink tubing, four 6 x 1/2" screws, two terminal blocks, and a **TINY** Rsense connector. Be careful not to lose the connector.

Mounting Location & Hole Drilling

1. Select a convenient dry mounting location for the water-resistant Junction Box, 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.

NOTE: If the Junction Box will be mounted on a vertical surface, face the compression nuts downward to avoid any possibility of 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.

Cable Routing

1. Route the echosounder cable from the Junction Box to the echosounder. Do not connect the cable to the echosounder or fasten it in place at this time.
2. Route the transducer cable from the transducer to the Junction Box. (Note that some transducer models have two cables, so route both cables.) If you have installed a pair of transducers, route the second transducer cable to the Junction Box. Do not fasten the cable(s) in place at this time.
3. Allowing an extra 25cm (10") for wiring ease, cut the transducer cable(s) to length. Discard any transducer connector(s), as it will not be needed.

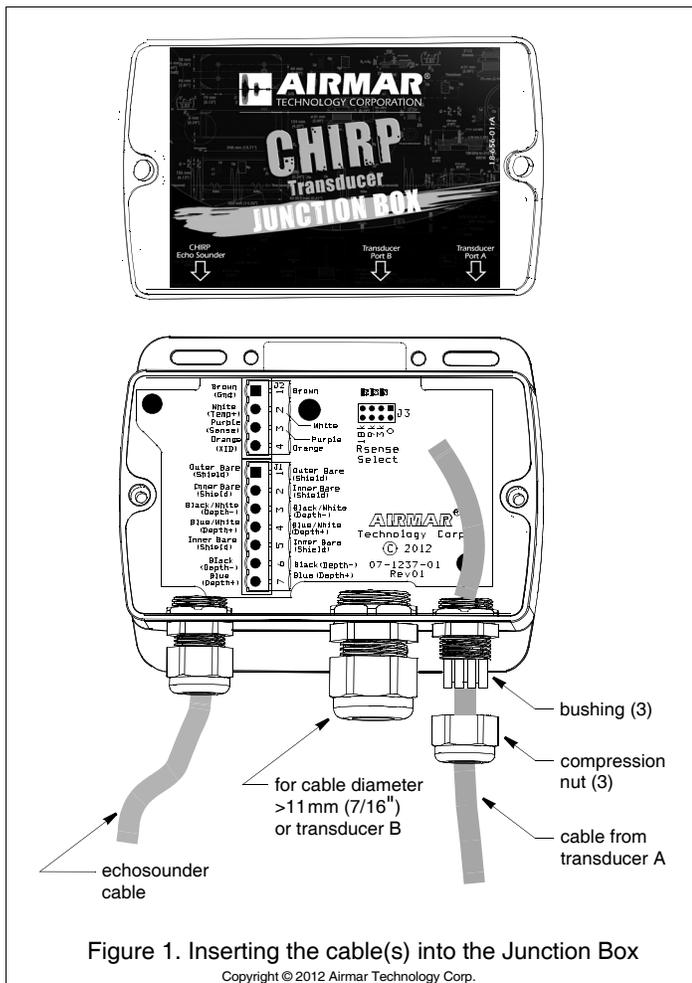


Figure 1. Inserting the cable(s) into the Junction Box

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Preparing the Cables

Single transducer with one cable—The diameter of the transducer cable will determine which port to use. Select the small compression nut at Port A if the cable's diameter is less than 11 mm (7/16"). Select the large compression nut at Port B if the cable's diameter is greater than 11 mm (7/16"). *NOTE: Be sure the plug is inserted into the unused compression nut so the Junction Box is water resistant.*

Single transducer with two cables—If you have a two cable transducer, you will need to use both Port A and Port B. Loosen the large compression nut at Port B and remove the plug. *Note that the large compression nut can accommodate small cables.*

Two transducers—If you are connecting a pair of transducers, you will need to use both Port A and Port B. Loosen the large compression nut at Port B and remove the plug. *Note that the large compression nut can accommodate small cables.*

1. Loosen the appropriate compression nut. Push approximately 200mm (8") of the cable through the compression nut and bushing into the Junction Box (see Figure 1). If there are two cables, repeat the process with the second compression nut.
2. Strip 105mm (5") of the outer jacket and foil shielding from the cut end of the cable (see Figure 2).
3. Separate the shielded pairs. Remove about 95mm (4-1/2") of the inner foil shielding from each pair. However be sure to stagger the cut ends of the foil. Do not cut all the foil shielding the same length.
4. **No temperature function**—The white wire(s) will *not* be used. Cut off the white wire(s) flush with the cable jacket.

Two transducers with temperature function—Only the white wire from one of the cables will be used. (It does not matter which one.) The other white wire will not be connected. (It can be used later if needed.) Cover the cut end of the other white wire with heat-shrink tubing; Use a heat gun to shrink the tubing.

5. Strip 7mm (1/4") of insulation from the end of each insulated wire to make stripped ends.
6. Protect bare wires and foil shielding from causing a short circuit inside the Junction Box. Cover each bare wire with clear heat-shrink tubing so that only 7mm (1/4") of the end is exposed for connecting. (Note that the larger diameter tubing is for the outer bare wire.) Cover the inner foil shielding with the black tubing, being sure it extends a minimum of 3mm (1/8") beyond the foil. Use the yellow 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.

Rsense Connector

An Rsense connector is required at J3 (see Figure 3) The placement of the connector depends on your model. Find the model name printed on the cable tag. Then identify the Rsense Select number on the table below. Mate the Rsense connector to the appropriate pins at J3.

Model	Rsense Select	Model	Rsense Select
B75H/L/M	18k	R109LH/LM	3k
B150M	NA	R111LH/LM	3k
B175H/L/M	18k	R509LH/LM	NA
B265LH/LM	3k	R599LH/LM	NA
B765LH/LM	0	SS150M	NA
CM599LH/LM	NA	SS175H/L/M	18k
M265LH/LM	3k	TM130M	NA
PM111LH/LM	3k	TM150M	NA
PM260LH/LM	NA	TM210M	NA
PM265LH/LM	3k	TM265LH/LM	3k

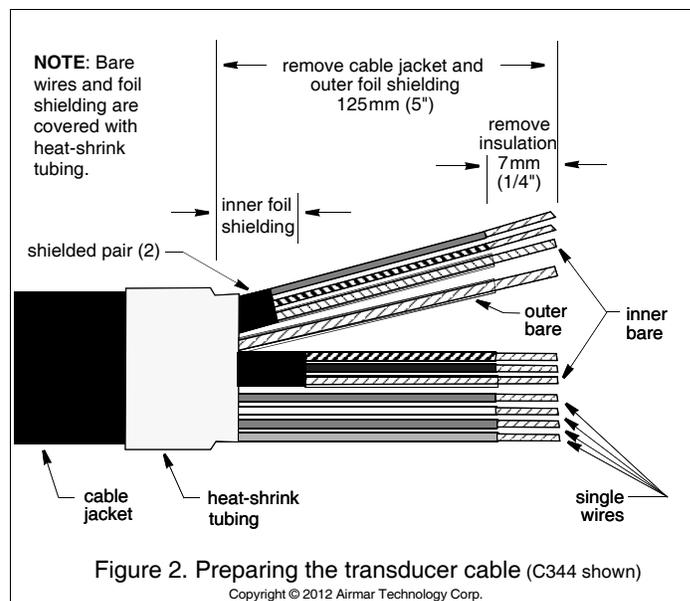


Figure 2. Preparing the transducer cable (C344 shown)

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