

# OWNER'S GUIDE & INSTALLATION INSTRUCTIONS

## Switchbox with Remote Switch

Models: SB260, SB264

12/14/10

17-498-01 rev.02

**WARNING:** Always wear safety goggles and a dust mask when installing to prevent personal injury.

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

**WARNING:** A safe installation requires a 0.5 amp fast-blow fuse or circuit breaker. Failure to do so may damage the product and/or result in fire, damage to the boat, and/or personal injury.

**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 1 m (3').

**CAUTION:** Be careful not to tear the cable jackets when passing them through bulkheads and other parts of the boat. Use grommets to prevent chaffing. Use deck glands to prevent water seepage into the boat.

**CAUTION:** Use a multimeter to check the polarity and the connections to the 10 - 32 VDC power supply before applying power to the transducer(s).

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



Figure 1. SB264 Switchbox and remote switch  
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## Tools & Materials

- Safety glasses
- Dust mask
- Grommets (some installations)
- Deck glands (some installations)
- Cutting pliers
- Phillips screwdrivers
- Pencil
- Electric drill
- Drill bits:
  - Switchbox 3mm or 1/8"
  - Remote switch 11 mm or 1/2" spade bit
- Sandpaper
- Weak solvent (such as alcohol)
- Wire strippers
- Heat shrink tubing
- Blade screwdriver
- Pliers
- Adjustable wrench
- Cable ties (some installations)

## Locating Switchbox, Remote Switch & Cables

**IMPORTANT:** Be sure to allow an extra 25 cm (10") of cable to make the connections within the switchbox.

**Switchbox**—Select a convenient *dry* mounting location for the water-resistant switchbox about 1–2m (3' – 5') from the echosounder(s).

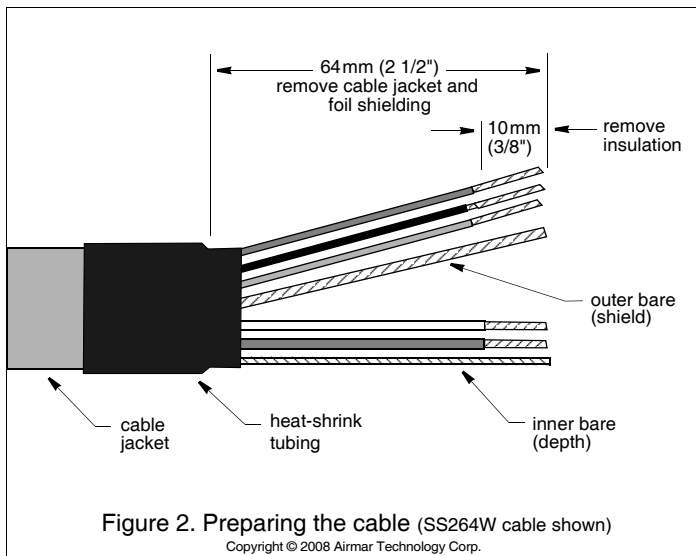
- Retrofit**—If the transducer(s) and echosounder(s) are already installed, select a location with easy access to the cable(s). Be sure the cable(s) will be long enough to make the necessary connections. *Allow an extra 25 cm (10") for wiring ease.*
- New installation**—Install the transducer(s) and echosounder(s) before connecting the switchbox. Plan the cable runs.

**Remote Switch**—Locate the remote switch on the dash panel or other convenient location near the echosounder. Check the backside for any obstructions such as cables and wires.

- Minimum clearance on backside 36mm (1-1/2")
- Maximum panel thickness 6mm (1/4")

## Applications

- Single transmission line** transducers and echosounders only
- 1kW echosounders only.** Do not use with 2 kW echosounders.
- SB260** switches between:
  - Two depth transducers connected to one echosounder. The transducers must use C32 or C332 cable.
  - Two echosounders connected to one depth transducer. The echosounder must be dual-frequency with a single transmission-line. The transducer must use C32 or C332 cable.
- SB264**  
Switches between a wide-beam and a narrow-beam depth transducer connected to one echosounder. Pair a wide-beam SS264W with one of the narrow-beam models such as: B258, B260, or M260. Both transducers must have C32 or C332 cable.



## Running the Cables

If new equipment is being installed, route the transducer cable(s), the echosounder cable(s), the power cable, and the remote switch cable to the proposed location of the switchbox before beginning the installation.

- 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 1 m (3').
- Use grommets when passing cables through bulkheads and other parts of the boat to prevent chafing.
- Use deck glands where necessary to prevent water seepage into the boat.
- Allow an extra 25 cm (10") of cable for wiring ease.
- *Do not fasten the cables in place at this time.*

## Hole Drilling

1. Remove the switchbox cover and set aside along with the four screws. Hold the switchbox at the selected location and mark the position of the screw holes.

**NOTE:** If the switchbox will be mounted on a vertical surface, face the compression fittings downward to avoid any possibility of water seeping into the box.

2. At the marked locations, drill 3 mm or 1/8" holes to a depth of 10 mm (3/8"). *Do not fasten the switchbox in place at this time.*
3. At the planned location for the switch, use the label as a template to mark the hole (see Figure 1).
4. Drill a 3 mm or 1/8" pilot hole. Using a 11 mm or 1/2" drill bit, drill the hole for the switch.
5. Sand the area around the hole, inside and out. Clean the surface with a weak solvent such as alcohol to ensure the label will adhere properly.
6. Apply the switch label by removing the backing from the adhesive and pressing the label firmly into place.

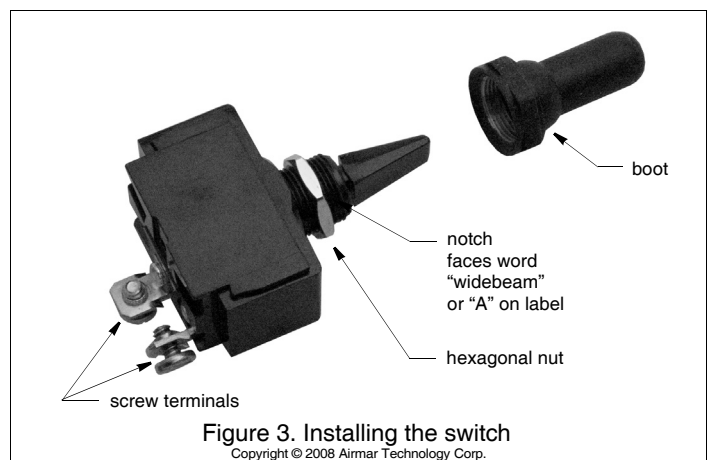
## Installing the Remote Switch

**IMPORTANT:** It may be easier to wire the remote switch before installing it in the mounting surface.

1. Strip 60 mm (2-1/2") of the cable jacket and foil shielding from one end of the C2 cable (see Figure 2).
  2. Strip 10 mm (3/8") of conductor insulation from the end of each insulated wire in each cable.
  3. Protect the cable's foil shielding from causing a short by using heat shrink tubing around the jacket where the wires emerge from the cable. The tubing must overlap the wires a minimum of 6 mm (1/4").
  4. On the switch, unscrew the plastic ring and discard. It will not be used. Unscrew the hexagonal nut and set aside.
  5. Connect the blue wire to one of the screw terminals on the back of the remote switch and the black wire to the other terminal (see Figure 3). Either wire can be connected to either screw terminal. It will not affect the performance of the switch.
- Connect each wire by loosening a screw. Wrap the striped end of the wire around the threads of the screw and tighten it again.
6. From the backside of the mounting surface, push the toggle through the mounting hole. With the *notch* on the threaded stem facing the word "Wide-Beam" or "A" on the label, screw the nut against the surface. Tighten it with an adjustable wrench.
  7. Screw the water-resistant boot onto the toggle switch.

## Preparing the Cables

1. Allowing an extra 25 cm (10") for wiring ease, cut each cable to length. *Do not fasten the cables in place at this time.*
2. Push approximately 200 mm (8") of each cable through the appropriate compression fitting. Follow the diagram on the switchbox cover (see Figure 1). *Be careful not to damage the circuit board.*
3. Strip 60 mm (2-1/2") of the cable jacket and foil shielding from the cut end of each cable (see Figure 2).
4. Strip 10 mm (3/8") of conductor insulation from the end of each colored wire in each cable.
5. Protect each cable's foil shielding from causing a short inside the switchbox by using heat shrink tubing around the jacket where the wires emerge from the cable. The tubing must overlap the wires a minimum of 6 mm (1/4").



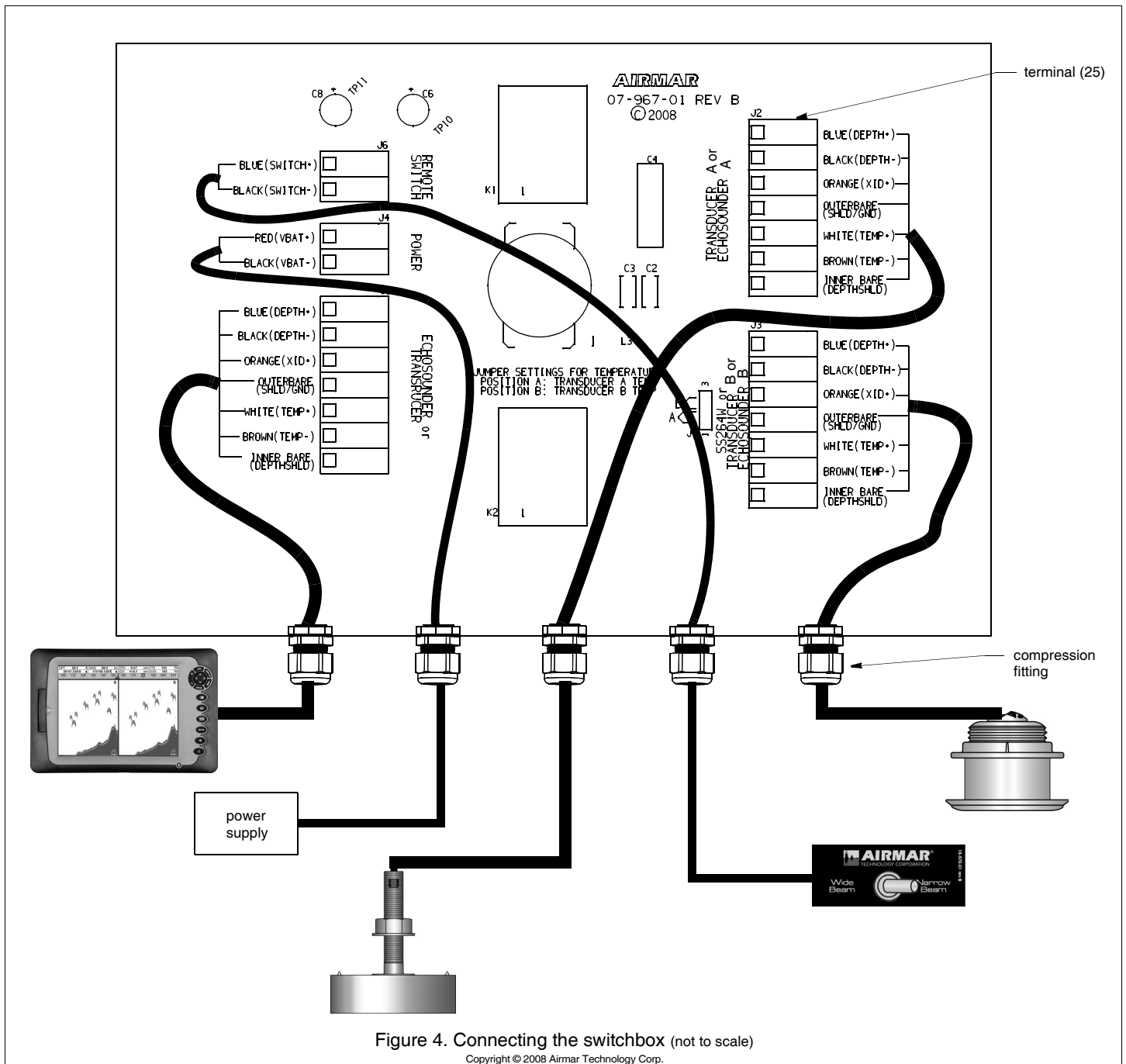


Figure 4. Connecting the switchbox (not to scale)

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## Connecting the Switchbox

**CAUTION:** Be sure to connect each wire to the correct terminal in the correct terminal block.

Wire each cable to its corresponding terminal block (see Figure 4). Follow the color code on the PC board. Insert the stripped end of each colored wire into the square hole in the correspondingly labeled terminal. Using a small Phillips screwdriver, tighten the terminal screw to lock the wire into place. Be sure the stripped end of the wire is inserted up to the insulation only. *Do not include any insulation inside the terminal.* Gently tug on the wire to ensure it is firmly held in place. Repeat this process until all the wires are connected.

**NOTE:** Some echosounder cables contain wire colors that differ from those listed on the PC board. And some cables do not contain all the wire colors listed on the PC board. If a wire color

differs, match the wire's function to the function listed on the PC board. Check the table on page 4.

**NOTE:** It may be easiest to connect the cables in the following order:

- **SB264**  
Echosounder  
Wide-beam transducer SS264W  
Narrow-beam transducer A: B256, B258, B260, or M260  
Power  
Remote switch
- **SB260**  
Echosounder or transducer  
Transducer B or Echosounder B  
Transducer A or Echosounder A  
Power  
Remote switch

Echosounder Brand	Wire Color	Terminal label	Wire Function
Furuno	brown	white	T-
	white	brown	T+
Lowrance	no orange wire	orange not used	
Navman/ Northstar	no orange wire	orange not used	
Raymarine	green	follow instructions below	rsense

### Raymarine Echosounder Only

If you are connecting a Raymarine echosounder(s), the cable contains a green wire. Since there is no terminal on the PC board labelled green, you will need to use the supplies in the plastic bag marked Raymarine to connect the green wire. If you are connecting two echosounders, follow the steps below with both cables.

- Strip an additional 10mm (3/8") of insulation from the brown wire.
- Connect the green wire and one resistor by inserting the end of each into separate holes in the butt connector (see Figure 5). With the wires pushed tightly against the far inside wall of the connector, lightly squeeze the button with pliers until it depresses. Gently tug on the wire and the resistor to ensure that they are securely connected.
- Cover the resistor with a sleeve. While holding the sleeve tightly against the butt connector, twist the free end of the resistor together with the brown wire. *Be sure the resistor is completely covered by the sleeve to prevent a short circuit inside the switch.*
- The twisted pair will be connected to the terminal labeled "brown". Follow the instructions "Connecting the Switchbox" on page 3.

## Completing the Installation

- From outside the switchbox, carefully pull each of the cables in turn until 100 - 150mm (4 - 6") of the *cable jacket* remains inside the box (see Figure 4).
- Use a wrench to tighten the nut on each compression fitting to make a water-resistant seal.
- Arrange the wires neatly inside the switchbox. *Be sure that no bare wires are touching.*
- Using the screws supplied, attach the switchbox to the selected mounting surface at the holes previously drilled.
- Attach the switchbox cover with the screws provided for a water-resistant seal.
- If they are not connected already, connect the power cable to the power source and the echosounder(s) cable(s) to the instrument(s).
- Fasten all the cables in place. Coil any excess cable and secure with cable ties to prevent damage.

## Parts

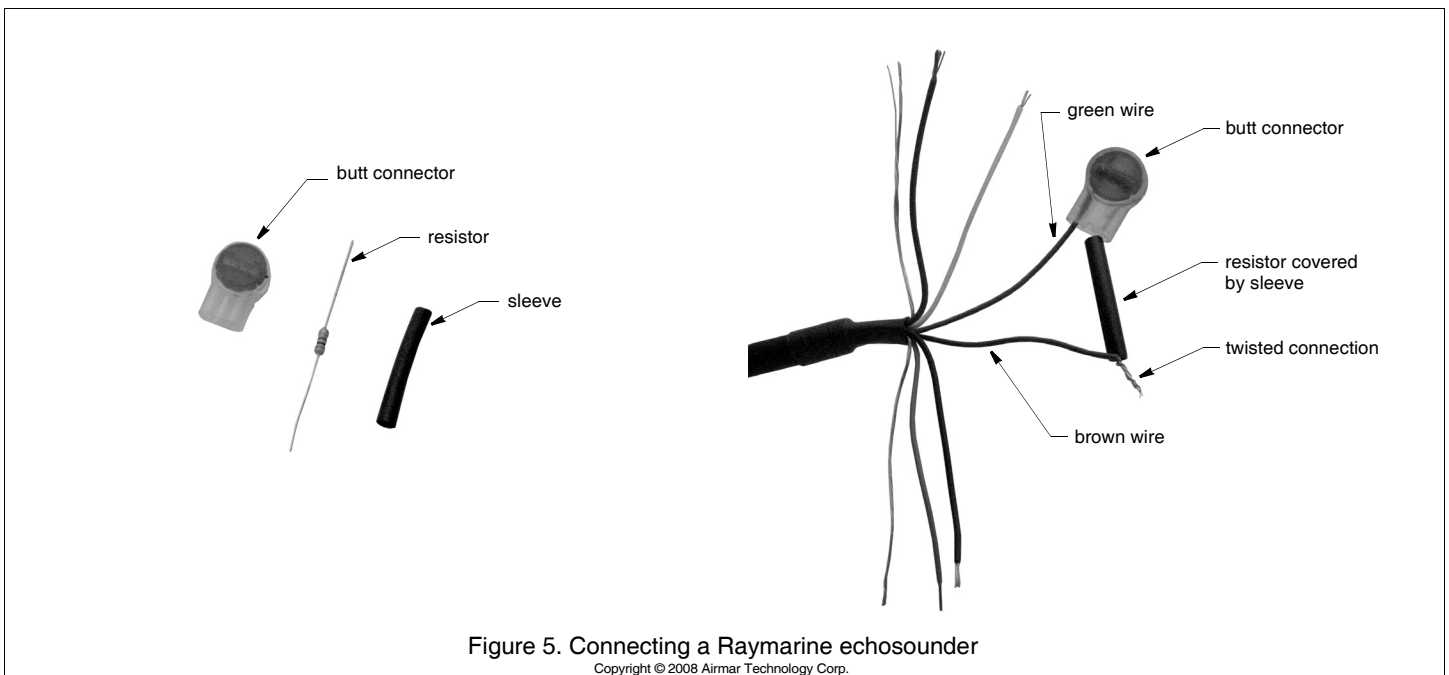
Lost, broken, or worn parts should be replaced immediately. Obtain parts from your instrument manufacturer or marine dealer.

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