

# HR-MaxTemp MB7955, MB7956, MB7957, MB7958, MB7959

## Purpose:

The HR-MaxTemp allows any HR-MaxSonar to have automatic external temperature compensation for changes in the speed of sound due to temperature. Users may select from the MB7957, MB7958, or MB7959 to suit their needs. Additionally, users desiring a different cable length may purchase the MB7955 (PCB and Shrink Wrap) with the MB7956 (Cable purchased per foot).

## Connection Step for HR-MaxTemp:

**Fig 1.** Attach the MB7958, MB7959, or any assembled HR-MaxTemp to any HR-MaxSonar with the red wire to pin 1, and the white wire and shield to GND for automatic external temperature compensation.

\*Shield wire best tied to system chassis ground, but in absence of chassis ground connect to sensor ground

## Assembling Process for MB7955, MB7956, MB7957:

**Parts Required:** PCB, wire, heat shrink tube

**Tools Required:** Wire Stripper, Solder Iron/solder, Heat Gun, Side Cutting Pliers, Gloves

**Fig 2.** Strip 6 mm (1/4 inch) of wire jacket off. Cut off the white fiber. Then twist and bend copper shield wire down with the red wire and the white wire placed on the pads as shown.

**Fig 3. & Fig 4.** Strip 1.5 mm to 3 mm (1/16 inch to 1/8 inch) of wire coating off red and white wires. Insert copper wire into the largest hole on the PCB. Put red wire on left pad and the white wire onto right pad as shown.

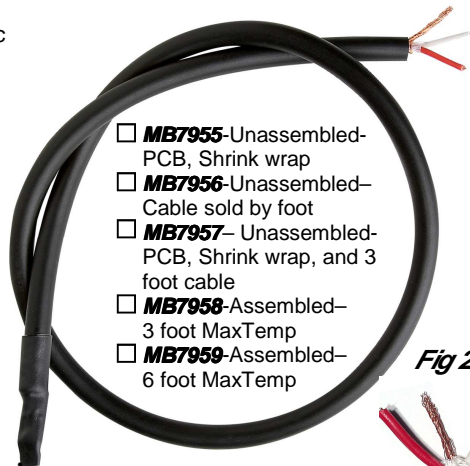
**Fig 5.** Make sure the PCB is tight to the black wire jacket.

**Fig 6.** Add flux and solder the wires to the pads. **Take care not to short the wires.**

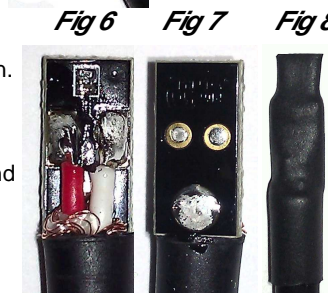
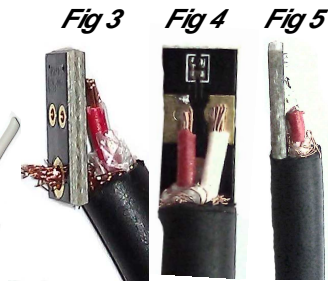
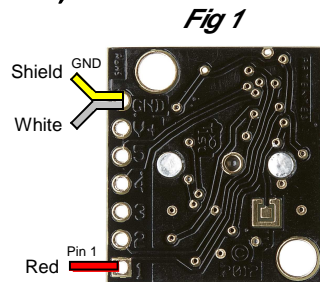
**Fig 7.** Turn PCB over, cut the shield wire flush with the back of the PCB and then solder shield wire in place.

**Fig 8.** With gloves on, insert PCB into heat shrink tube until heat shrink extends ~6 mm (1/4 inch) beyond the end of the PCB and ~12 mm (1/2 inch) of the tubing is on the black wire jacket. Heat the tubing until it shrinks completely onto the PCB and wire. While the tubing is hot, pinch the end to seal the ends together. Be sure to use gloves because hot tubing could cause burns. Once assembled, follow the connection step (Fig 1.).

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- MB7955**-Unassembled-PCB, Shrink wrap
- MB7956**-Unassembled-Cable sold by foot
- MB7957**- Unassembled-PCB, Shrink wrap, and 3 foot cable
- MB7958**-Assembled-3 foot MaxTemp
- MB7959**-Assembled-6 foot MaxTemp



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