

BAL-550 Instruction and Specification Sheet

1.0 DESCRIPTION

The BAL-550 is a wide-band transformer designed to connect the balanced output from a depth sounder to an unbalanced load, such as the DSTS-4A depth sounder test set. The BAL-550 transformer is wound to provide a 1:1 turn ratio, and the primary is isolated from the shield ground. The schematic is on the label for reference.

2.0 BALANCED AND UNBALANCED OUTPUTS

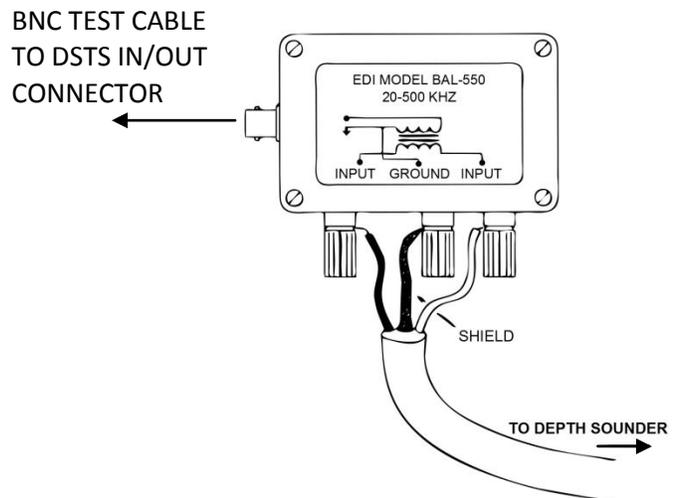
AN ideal balanced output (or load) is one that has equal and opposite voltages on the feed and return conductors in relation to the system ground. This helps reject noise and also allows use of higher impedance, lower loss transducer cables. Large, high- power depth sounders always use a balanced output for the above reasons. A balanced output will have three conductors, the feed and return conductors, and the shield wire. Smaller, inexpensive depth sounders such as digital units use an unbalanced output with standard coax cable to connect to the transducer.

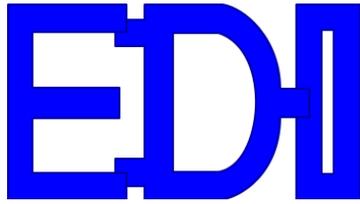
3.0 HOOKING UP THE BAL-550

Turn the depth sounder's power off. Connect the balanced line pair from the depth sounder's transducer connector to the two red (outermost) binding posts.

Connect the shield wire to the black (center) binding post. Use a coax test cable with male BNC connectors at each end to connect the BNC connector on the BAL-550 to the DSTS-4A IN/OUT connector. Make sure the DSTS-4A LOAD switch is set to the correct position. A reasonable load must be present on the BNC side of the BAL-550 during operation to prevent the peak-to- peak voltage from exceeding the 2500 volt rating. Double check the connections to the depth sounder before applying power. A short or open may damage the depth sounder power amplifier stages.

NOTE: Operating the BAL-550 with no load may result in voltages exceeding the maximum rating. This could cause internal arcing, insulation breakdown, and damage to the BAL-550 as well as the depth sounder.





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4.0 SPECIFICATIONS

Input connectors:	Universal binding posts for shield and balanced line.
Output connector:	Standard BNC connector.
Maximum input voltage:	2500 volts peak-to-peak maximum.
Turns ratio:	1:1
Frequency Range ¹ :	20-700KHZ \pm 1dB. Usable from 10 kHz to 1 MHz.
Inductance:	Nominally 10mH at 1kHz. Test limits 7-15mH.
DC resistance:	.3 \pm 10% for primary or secondary.
DC isolation:	< 1nS (>1000 Megohms) from primary to ground.
Construction:	Cast aluminum case with light gray baked epoxy finish.
Size:	4.5 x 3.5 x 1.5 inches (11 x 9 x 3.5 cm).
Shipping weight	1 pound (.45 Kg).

5.0 WARRANTY INFORMATION

Unit will be repaired or replaced free of charge for one year from date of purchase providing there is no water damage or other evidence of improper use or handling. Purchaser must ship unit prepaid to address below; EDI will pay the return freight for locations within the USA. Please call or email to obtain an RMA Number prior to shipment.

For repair, ship to:

BBG Incorporated
Attn: EDI RMA#:
1708 South Park Court
Chesapeake, VA 23320

Please include a note describing the problem.

Phone: 1-(757) 366-9211
FAX: 1-(757) 366-9170
Email: edisales@bbginc.com
www.dsts.com

¹Measured using 600 Ω load and source impedance. Flatness over 10 kHz-1 MHz range is \pm 2 dB. Lower load/ source impedances permit a wider operating range.