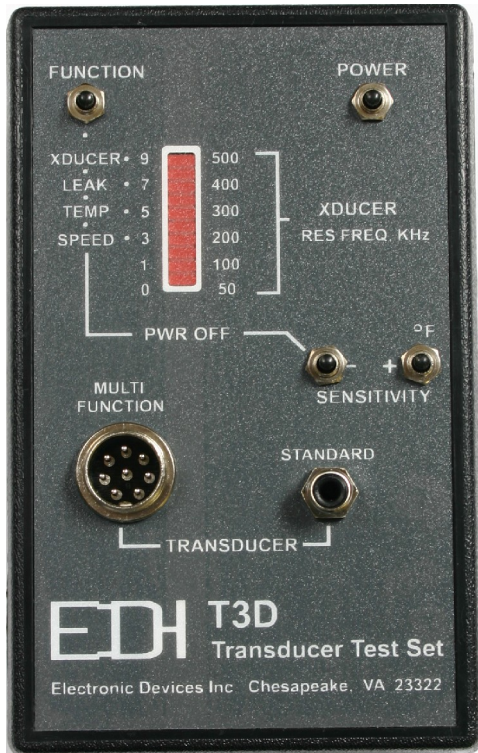




T3D User's Manual



Front panel controls and connectors

- Power:** Turns the T3D on.
- Function:** Selects various modes of operation when held down. Also used to initiate calibration sequence.
- Sensitivity -:** Reduces the sensitivity to the transducer's resonant points. Also used with Function button to turn unit off.
- Sensitivity +:** Increases the sensitivity to the transducer's resonant points. Additionally used to display temperature in degrees Fahrenheit when in the temperature test mode.
- Multi-function:** Used to test transducers with combined depth-temperature-speed functions.
- Standard:** Use to connect to piezoelectric transducers in the 50 to 500 kHz range.

Quick start

Connect the T3D to a piezoelectric transducer and turn it on by pressing the *power* button. The bar graph will show one or more illuminated sections corresponding to the resonant points of the transducer. If no lights come on, the transducer element is bad. The T3D will turn off after two minutes of operation. It can also be turned off by pressing both the *function* and *-sensitivity* buttons.

Other tests

Multifunction transducers may be tested for correct operation of the thermistor and the speed paddle wheel by connecting them to the 8-pin *multi-function* connector. The 8-pin connector wiring is configured for the most popular multi-function transducers and is detailed at the end of this manual.

Leakage

The leakage test is activated by holding the *function* button down until the segment next to *leak* flashes. An open circuit (> 10 meg ohms) will cause all segments to light. A short (<10 ohms) will light only the segment next to 0.

Temperature

Again press and hold the *function* button until the segment next to *temp* blinks. The first digit of the temperature is indicated by the flashing segment and the second digit by a steady segment. The readout is in degrees centigrade unless the *°F* button is held down for a Fahrenheit reading.

Speed

Press and hold the *function* switch until the segment next to *speed* lights. Rotate the speed paddle wheel and the 0 and 1 segments will light indicating the state of the output signal. Spin the paddle wheel rapidly and the bar graph lights progressively.

Battery test

When the T3D is first turned on, all bar graph segments flash briefly to test the segments, followed by one segment. The position of this segment displays the battery voltage. If it illuminates at 6 or lower, change the battery. Replace with an alkaline 9 volt battery similar to EVER READY #522 or equivalent.

Calibration

To insure the best accuracy the T3D should be re-calibrated if the ambient temperature has changed by 30 degrees Fahrenheit or more relative to the last calibration. To calibrate the unit the power must be off and no transducer connected. With the unit in the power off condition, press and hold the *function* button then press the *power* button. Do not release the *function* button for three seconds. Successful calibration is indicated when all segments go out.

Multi-function connector wiring:

<u>pin</u>	<u>function</u>
1	Speed sensor signal.
2	Speed sensor +5 VDC power.
3	Transducer element.
4-5, 7-8	Ground connections.
6	Temperature sensor.



Pin 1 is at the five o'clock position as viewed from the front panel and the pins are counted in a counterclockwise direction.

Optional Accessories

Test Cable (RCA to Clip Leads) P/N 004-TESTC
8 pin Jack (for making Transducer Adapters) P/N 520-001

Warranty Information

Unit will be repaired 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 repair ship to:

Electronic Devices, Inc.
3140 Bunch Walnuts Road
Chesapeake, VA. 23322
ATTN: Service Department

Please enclose a note describing the problem.