

## ULT-2010 Basic Features

- ◆ LARGE GRAPHICS DISPLAY WITH CURSOR SELECTION OF OPTIONS AND SETUP OF PARAMETERS
- ◆ USER-SELECTABLE CHALLENGE (TEST) VOLTAGE (90 TO 275 VAC)
- ◆ USER SELECTABLE CHALLENGE (TEST) FREQUENCY (50 OR 60 HZ)
- ◆ USER-SELECTABLE TEST LIMITS BY ULTRASOUND TRANSDUCER MANUFACTURER AND MODEL
- ◆ 1% FS MEASUREMENT ACCURACY
- ◆ AUTO RANGING WITH 10, 250, OR 500  $\approx$ A FS
- ◆ AUTOMATIC INTERNAL SELF TEST
- ◆ SINGLE BUTTON PRESS FOR FULL SYSTEM TEST
- ◆ SIMPLE GO-NOGO MODE – FOR NON-TECHNICAL USERS
- ◆ ANALYTICAL MODE – FOR TECHNICAL USERS
- ◆ DIGITAL CALIBRATION – NO POTS TO TURN
- ◆ USER-SELECTABLE DISPLAY OPTIONS
- ◆ BATTERY LIFE DISPLAY (0 to 100%)
- ◆ PROGRAMMABLE BACKLIGHT TIMER
- ◆ CONTRAST IS SOFTWARE ADJUSTABLE
- ◆ FLASH UPGRADEABLE FIRMWARE
- ◆ RS232 & PC SOFTWARE
- ◆ SERIAL PRINTER OUTPUT WITH PROGRAMMABLE USER HEADER
- ◆ REAL TIME CLOCK
- ◆ COMPATIBLE WITH DALE® TECHNOLOGY DALE800® AND FLUKE® BIOMEDICAL ULT-800® ULTRASOUND TRANSDUCER ADAPTERS AND DUAL CONDUCTIVITY PROBES

## ULT-2020 Basic Features

(METER, DATALOG)

**HAS ALL THE BASIC MODEL FEATURES PLUS:**

- ◆ METER MODE FOR EXTENDED MEASUREMENT PERIODS
- ◆ PROGRAMMABLE METER CHALLENGE VOLTAGE AND FREQUENCY
- ◆ PROGRAMMABLE METER TIMER
- ◆ DATALOG WITH STORAGE OF 99 TEST RECORDS

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# ULTRASOUND LEAKAGE TESTERS

*BC Biomedical ULT-2000 Series*

ULT-2020



Optional  
ULT-2000  
Printer



The ULT-2000 Series is specifically designed to test the electrical safety of all types of diagnostic ultrasound transducers, totally independent of the ultrasound machines on which they are typically used. Although the ULT-2000 can be used on virtually any type of ultrasound transducer, it is especially recommended in the testing of TEE (Transesophageal Echocardiography) transducers prior to each use; as recommended by many TEE ultrasound device manufacturers. The ULT-2000 tests the integrity of the outer insulation barrier of the transducer as well as the capacitive leakage currents that exist.

The ULT-2000 Series is the most advanced instrument of its kind on the market today and adds a totally new dimension to diagnostic ultrasound transducer electrical safety testing. With features and functionality that far surpasses competitive products from other manufacturers, the ULT-2000 is easy to set up and use. Operating modes include a simple PASS/FAIL mode as well as a QUANTITATIVE mode that offers actual readings. You can print test results to an optional printer.

Compatibility with Dale Technology® DALE800, Fluke Biomedical® ULT800 adapters and Dual Conductivity Probes allow you to upgrade to the very latest technology platform, while safeguarding your prior investment in adapters and probes. A wide variety of BC Biomedical adapters and accessories are available.



# BC BIOMEDICAL ULT-2000 SERIES

## SCREEN SHOTS

Typical Display During Testing

**Test Procedure:**  
SOURCE TEST to verify voltage used during test.  
CIRCUIT TEST to verify measurement circuitry.  
BATH CONDUCTIVITY TEST to validate cleaning solution.  
PROBE LEAKAGE TEST to measure the leakage current of the DUT.

**Progress Indicator**

**Test Measurements**

**DUT Information**  
Manufacturer: Model

```

Full Test  Sonosite: TEE
Source Voltage 119V [x]
Circuit Test 96 µA [x]
Bath Cond µA [ ]
Probe Leakage µA [ ]
    
```

Typical Passing Results Display Choices

**Quantitative Mode**

```

Full Test  Sonosite: TEE
Source Voltage 119V [x]
Circuit Test 97 µA [x]
Bath Cond 252 µA [x]
Probe Leakage 51 µA [x]
TEST PASSED
    
```

**Pass/Fail Mode**

```

Full Test  Sonosite: HST
Source Voltage Test [x]
Circuit Test [x]
Bath Conductivity Test [x]
Probe Leakage Test [x]
TEST PASSED
    
```

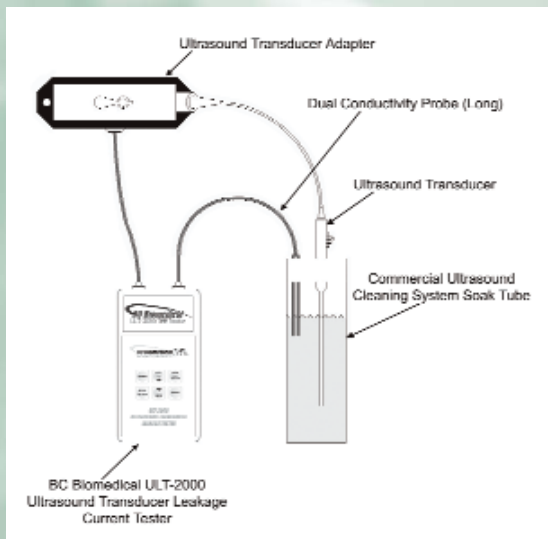
Typical Failed Results Display

**Quantitative Mode & Pass/Fail Mode**

```

Full Test  Sonosite: TEE
TEST FAILED [x]
Leakage too High [x]
Limit: 100 µA [x]
Reading: 107 µA [x]
    
```

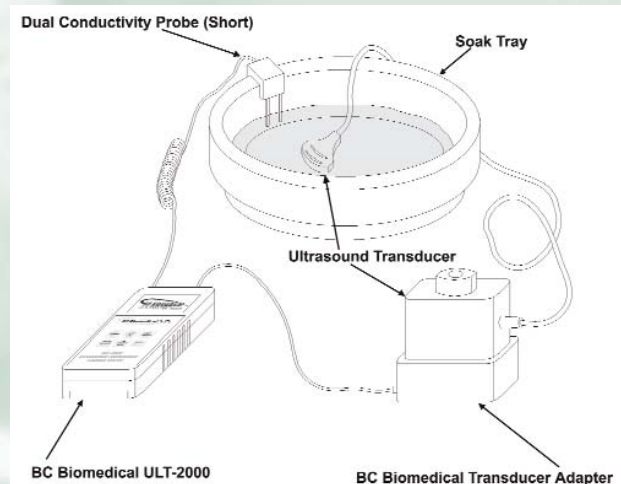
Test Your TEE Transducers While They Are Being Disinfected in a Commercial Cleaner



## SPECIFICATIONS

<b>Source Voltage</b>	90 to 275 VAC, ± 1% FS
<b>Leakage Current</b>	.5 to 10 µA, ± 1% FS Range 10 to 250 µA, ± 1% FS Range 250 to 500 µA, ± 1% FS Range
<b>Conductivity Current</b>	.5 to 10 µA, ± 1% FS Range 10 to 250 µA, ± 1% FS Range 250 to 500 µA, ± 1% FS Range
<b>Display</b>	LCD Graphical w/Backlighting 128 x 64 Pixels
<b>Setup Memory</b>	EEPROM, All Parameters
<b>Memory Retention</b>	10 years w/o Power
<b>Operating Range</b>	15 to 30° C
<b>Storage Range</b>	-40 to 60° C
<b>Construction</b>	Enclosure - ABS Plastic Face - Lexan, Back Printed
<b>Size</b>	7.09" x 3.94" x 1.56"
<b>Weight</b>	≤ 1.5 lbs
<b>Connections</b>	Power - 2.1 mm Center Negative
<b>Power</b>	Line - 9V DC, Center Negative Battery - 9V Lithium
<b>Power Consumption</b>	On - Less than 150 mA Off - Less than 40 µA
<b>Battery Life</b>	Continuous - 20 hours Off - 12 months
<b>Battery Eliminator (Optional)</b>	US - BC20-21100 Euro - BC20-21101 9V, 200 mA DC

Typical Test Setup for Testing Your Ultrasound Transducers with a Transducer-Specific Adapter & a Soak Tray



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