

# DELTA 3000

Defibrillator Tester / Pacemaker Analyzer / ECG Arrhythmia Simulator

## Three Instruments in One

### Overview:

The **Delta 3000** combines the complete testing functions of a defibrillator tester, a pacemaker analyzer, and an ECG arrhythmia simulator into one compact, lightweight, and easy to use instrument.

No other instrument delivers the performance testing power of the **Delta 3000**. It will test all defibrillators, all external pacemakers including transcutaneous and transvenous and all ECG equipment. The built-in user selectable test loads eliminate the need to carry extra modules to test the transcutaneous pacers.

The **Delta 3000** delivers unsurpassed biomedical testing capabilities in one instrument.



### Highlights:

- ◆ Compact, Lightweight, and Rugged.
- ◆ Simple, Menu Driven Operation.
- ◆ Large, Easy to Read Display.
- ◆ Simultaneous Display of All Test Measurements.
- ◆ Dedicated Print key for Immediate Documentation.
- ◆ RS 232 Interface.
- ◆ Battery or AC Operation.
- ◆ Two-Year Warranty.

### Test Functions:

**Defibrillator Tester:** Tests All Defibrillators - Semi -Automatic, Automatic, and those with Bi-Phasic Waveforms.

- ◆ Measures: Energy, Peak Voltage, Peak Current, and Cardio Sync. Time.
- ◆ Storage and Playback of Output Waveforms.

**Pacemaker Analyzer:** Tests All External Pacemakers – Transthoracic and Transvenous Pacers.

- ◆ Measures: Amplitude, Rate, Pulse Width, Pulse Energy, Sensed and Paced Refractory Periods.
- ◆ 50 and 60 Hz Immunity Tests.
- ◆ Transthoracic Test Load: Fixed 50 Ohm or 12 User Selectable Loads to 1000-Ohms.
- ◆ A / V Pacer Test Load: 500 Ohms.

**ECG Simulator:** Tests All ECG Equipment.

- ◆ 12 Lead ECG. User Selectable Rates and Amplitudes.
- ◆ Performance Waveforms: Sine, Square, Triangle, Pulse.
- ◆ 12 Arrhythmia Waveforms.



800-547-6557

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## Specifications:

### Defibrillator Tester:

#### Energy Measurement:

Load: 50 Ohms +/- 1%  
Range (High): 900 Joules, Res. 1 J.  
Resolution: 1 Joules  
Range (Low): 0 – 100  
Resolution: 0.1 Joules.  
Accuracy: +/- 2% of the Reading  
Plus 1J for Hi Range or  
Plus 0.5J for Low Range.  
Maximum voltage: 5200  
Maximum Current: 100 Amp (H)

**Sync. Time:** 0-250 ms.

#### Waveform Output:

Real Time: Output 1000: 1  
Stored:  
Discharge waveform expanded 200:1  
and is repeated 8 seconds. It can be  
viewed through the paddles and  
through the ECG High Level Output.

### Pacemaker Analyzer:

#### ◆ Transcutaneous:

Test Load: 50 Ohms (Fixed)  
and Variable 100 to 1000 Ohms  
user selectable.  
Current: 1 to 200 mA  
Accuracy: +/- 5% +. 5 mA  
Pulse Width: 0.5 to 80 ms.  
Accuracy: +/- 1% +.1 ms.  
Refractory: 20 – 500 ms  
Accuracy: +/- 2 % or +10ms

#### ◆ Atrial and Ventricular:

Test Load: 500 Ohms +/-1%  
Current: 1 to 25 mA  
Accuracy: +/- 5% +. 5 mA.  
Pulse Rate: 30 to 800 ppm.  
Pulse Width: 0.5 to 80 ms.  
Accuracy: +/- 1% +.1 ms.  
Refractory: 20 – 500 ms  
Accuracy: +/- 2 % or +10ms  
Immunity Test: 50/60 Hz

### ECG Arrhythmia Simulator:

**ECG: Normal Sinus Rhythm**  
Rate: 30, 60, 90, 120, 240 BPM

#### Performance:

Sine, Square, Triangle and Pulse  
Rate: 0.5 1, 2, 10, 15, 20, 25, 40 Hz.

#### Arrhythmias:

VFBC, VFBF, VTAC, AFIB  
PVC, PVC1, PVC2, BGY, RBB  
AFIB, ATRFT, NSR.

#### Waveform Output:

12 Lead ECG and Paddle and HI  
level Output Jacks.

#### Power Requirements:

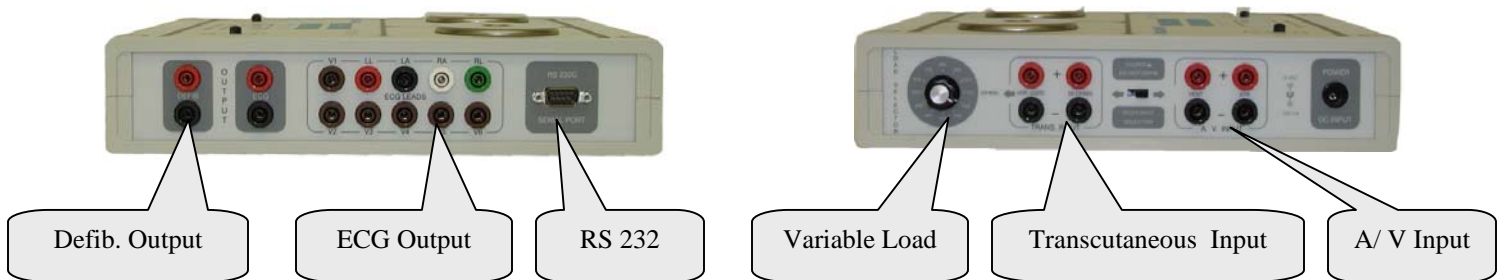
Two 9-Volt Alkaline Battery or  
AC adapter.

#### Dimensions:

10 x 11 x 2.25 inches (L x W x H)  
(25.4 x 27.9 x 5.7 cm)

#### Weight:

4 lbs (1.9 Kg)



## Accessories:

### Standard:

AC Adapter, Universal Paddle Adapter, User Manual,  
Shrouded Banana Plugs (set of 2), Certificate of  
Calibration.

### Optional:

Carrying Case, Paddle Adapters for various  
manufacturers. Please call Customer Service for part  
numbers.



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