Patient Simulator

MiniSim 2000

The **MiniSim 2000**, Arrhythmia Simulator is a powerful, comprehensive patient simulator in a compact case. It is designed for testing the performance of patient monitoring instrumentation quickly and easily.

The microprocessor based instrument is menu driven via its tactile feel keypad and easy to follow LCD display. The **MiniSim 2000** provides full 12 lead ECG simulation with 14 user selectable rates from 30 to 350 BPM and 14 user selectable amplitudes from 0.15 to 5 mV. Sine, Square, and Triangle performance waveforms are simulated with 14 user selectable rates from 0.1 to 100 Hz.

The MiniSim also simulates 45 different arrhythmias including Atrial, ventricular, tall T wave, ST elevation, ST depression, myocardial infraction, blocks, pulse, and pacer waveforms.

In addition, two invasive blood pressures are simulated with choice of 12 static pressures and 6 dynamic waveforms. Respiration is simulated with 4 rates. 4 base line impedance, and 4 delta impedance selections. Apnea may be off, continuous, and with either 12 or 32 second apnea bradycardia. Finally, temperature is available at either 25 or 37 degrees Centigrade. A 9-volt alkaline battery with a typical life of 40 continuous hours powers the MiniSim 1000 multi-parameter patient simulator. The instrument provides unmatched choices of parameter simulation in a truly compact instrument.

Features:

Testing Features:

- 12 Lead ECG
- 45 Arrhythmias
- ECG Performance waveforms
- 2 Blood Pressure
- Respiration / Apnea
- Temperature

Operating Features:

- Easy to Use
- Small, Compact Size
- Menu driven operation
- Large LCD Display
- Tactile Keypad

Specifications:

- ECG Normal Sinus
  - Rate: 30, 60, 70, 80, 90, 100,120, 150, 180, 210, 240, 270, 300, 350 BPM
  - Amplitude: 0.15 to 5mV, High Level Output: 0.5 Volt/mV of Low Level (Lead II)
- Test Waveforms
  - Sine, Triangle, Square Rate: 0.1 to 100 Hz
  - 0.1 to 1 Hz in 0.1 Hz increments
  - 1 to 10 Hz in 1 Hz increments, 10 to 100 Hz in 10 Hz increments

NETECH
110 Toledo Street, Farmingdale, NY 11735, Phone: 631-531-0100, Fax: 631-531-0101
www.Netech.org 1-800-547-6557 (US)

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Specifications:

- **Tall T Wave**
  Test Waveform@ 70 BPM, Atrial Pacer, Ventricular Pacer*, Paced Rhythms - Variable from 0.1to 2mS, R Wave detection - Variable form 10 to 120 ms
  Pulse: 2mS Pulse of 1mV amp @ 4 sec intervals
- **Arrhythmias**
  ST Segment Analysis, ST Elevation and Depression, ST Depression Positive and Negative Slope, Myocardial Infarction, Atrial, Ventricular, Blocks
- **Respiration**
  Normal Physiological Simulation: Base Line Impedance: 250, 500, 750, 100 Ohms
  Delta Impedance: 0.1, 0.5, 1.0, 1.5 Ohms, Rates: 15, 30, 60, 120 BPM
  Apnea: Off, Continuous, 12 Seconds and 32 SecondsApnea-Bradycardia
  Accuracy: Delta Impedance 5% of selection, Rate: 1% of selection
- **Blood Pressure**: Impedance: 350 Ohms, Excitation: 2 to 16 Volts
  Sensitivity: 5uV/V/mmHg
  Static: 0, 5, 10, 20, 25, 30, 40, 50, 100, 150, 200, 300 mmHg.
  Dynamic: 50/10, 60/20, 70/30, 80/40, 100/60, 120/80 mmHg.
  Accuracy: (±2% FS. ±1 mmHg
  Synchronized with all normal sinus rates
  Physiologically track all arrhythmia selections.
- **Temperature**
  Compatibility: YSI 400/700, 25/37 Degree Centigrade
  Accuracy: ±1% of reading
- **General**
  Display: 16 Character 2 Line LCD, Key Pad: 8 tactile keys Ð F1, F2, F3, F4, >, <, ON/OFF, Menu, Output Connectors ECG: 10 Banana Jacks
  High Level: 3.5mm Phono Jack, Pressure: 5 contact circular Din
  Temperature: 3.5mm Stereo Jack
  Size: 5½ x 3½ x 1 ½ inches (13.97 x 8.9 x 3.8 cm)
  Case: High Impact Plastic
  Weight: 10 Oz (0.28 kg)
  Power Requirements: 9V Alkaline Battery. Optional AC Adapter
- **Environmental:**
  Operating Temperature: 59° to 95° F (15° to 35° C)
  Storage Temperature: 32° to 131° F (0° to 55° C)

Ordering Information

Part #	Description
300	------- **MiniSim 1000, Arrhythmia Simulator**
302	------- **AC Adapter**
303	------- **Pressure Cable (Unterminated)**
304	------- **Temperature Cable**

For all other Accessories Please call 1-800-547-6557 or E-mail sales@netech.org

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