



## **RIGEL 333**

### **Multi - Parameter Patient Simulator**

The **Rigel 333** is a powerful, comprehensive patient simulator with a number of unique features. It provides a full 12 lead ECG signal with more than 40 arrhythmias, dual blood pressure, respiration, and temperature. It also delivers square, sine, and a triangle performance waveforms.

**Rigel 333** arrhythmia selections include pacemaker waveforms, ST segment changes, and both atrial and ventricular waveforms. The dual blood pressure and respiration waveforms are synchronized to the ECG and track with all arrhythmia selections. Multiple static and dynamic pressure readings are selectable as per apnea events

Operation of the hand - held **Rigel 333** is simple via menu driven tactile keys utilizing a large LCD Display. The instrument may be either AC or Battery operated.

#### **Testing Features:**

- 12 Lead ECG
- Over 40 Arrhythmias
- ECG Performance Waveforms
- Dual Blood Pressure
- Respiration
- Temperature

#### **Operating Features:**

- Easy to Use
- Small, Compact Size
- Menu Driven Operation
- Large LCD Display
- Tactile Keypad
- Battery or AC Operation

## 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)

### Performance 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

## Tall T Wave

### Test Waveform@ 70 BPM

Atrial Pacer

Ventricular Pacer\*

Paced Rhythms - Variable from 0.1 to 2mS

R Wave detection - Variable form 10 to 120mS.

### Pulse:

2mS Pulse of 1mV amp @ 4 sec intervals

## Pacers

### ST Segment Analysis:

ST Elevation and Depression

ST Depression Positive and Negative Slope

Myocardial Infarction

### Arrhythmias:

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 Seconds Apnea-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: ( $\pm 2\%$  FS.  $\pm 1$  mmHg)  
Synchronized with all normal sinus rates  
Physiologically track all arrhythmia selections.

**Temperature:**

Compatibility: YSI 400/700  
25/37 Degree Centigrade  
Accuracy:  $\pm 1\%$  of reading

**General:**

Display: 16 Character 2 Line LCD  
Key Pad: 8 tactile keys  $\text{\textcircled{D}}$  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  
Physical Size: 140 x 90 x 38 mm  
Case: High Impact Plastic  
Weight: 285 gram

**Power:**

9 Volt Alkaline/AC adapter (Optional).  
Battery Life 40 Hours Continuous.  
Display Indicates Low Battery.

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