

MPS-2

Multiparameter Dual IBP Channel Patient Simulator

The MPS-2 Multiparameter Simulator just may be the best value you can find in a dual-channel invasive blood pressure simulator on today's market. This "little brother" to our unique AMPS-1 modular multiparameter simulator comes in an even smaller package than the AMPS-1, and offers many similar features and capabilities in a fixed function, non-modular platform.

The MPS-2 Multiparameter Simulator features and capabilities include:

- Full 12-lead ECG with 9 independent outputs for each lead referenced
- ECG performance waveforms
- Respiration simulation
- Pacemaker waveforms
- Temperature simulation
- Arrhythmia simulation
- Automated protocols (user-programmable)
- Remote Control via RS232
- Large easy-to-read display
- Extremely easy to operate
- Single 9-volt battery operation or use with an external AC power adapter for continuous simulation

At just 5.5" x 3.6" x 1.3" and weighing in at only 11.5 ounces, the MPS-2 is a featured-packed multiparameter simulator in one of the smallest and lightest weight physical packages available. It's smaller, lighter, and more cost effective than any other similarly-featured multiparameter simulator on today's market.



MPS-2

*Simply the best value
available in a
multiparameter
simulator*

Innovation by design

MPS-2 – Performance Specifications

ECG General:

Full 12-Lead ECG with 9 independent outputs for each signal lead referenced to RL.
Output Impedances: 500, 1000, 1500, & 2000 ohms to RL
High Level Output: 0.5 V/mV of low level selection
Amplitude Accuracy: $\pm 2\%$ 2 Hz Square Wave (Lead II)

Normal Sinus Rhythm:

Rates: 30, 40, 60, 80, 100, 120, 140, 160, 180, 200, 220, 240, 260, 280, 300 BPM.
Accuracy $\pm 1\%$
Amplitudes (Lead II): 5mV, 4mV, 3mV, 2mV, 1mV, .5mV, .25mV
ST Segments: 16 total – 8 elevated & 8 depressed
ST Segment Levels (Lead II): -0.8 mV to +0.8 mV in 0.1 mV steps on Lead II,
Neonatal Mode: ECG R wave width is reduced to 40ms

ECG Performance Testing:

Square Wave: 2 Hz
Square Wave: 0.125 Hz
Pulse: 80 ms @ 1 Hz
Sine Waves: 0.5, 1, 10, 40, 50, 60, and 100 Hz.
Triangle Wave: 2 Hz

ECG Artifacts:

50/60 Hz
Muscle
Respiration

Pacemaker:

Asynchronous @ 75 BPM
Demand with frequent sinus beat
Demand with occasional sinus beat
A-V sequential
Non-capture non-function
Pulse: -100 mV to +100 mV (2, 4, 8, 10, 20, 50, 100).
Accuracy 5%
Width: 0.1, 0.2, 0.5, 1.0, 2.0 ms. Accuracy 5%.
Pulse Polarity: Positive or negative.

RS-232 Interface:

RS-232 interface to PC / Datrend ES601 Plus.

Temperature:

2 Temperature Channels (YSI 400 or YSI 700)
Electronically Switched Temperature of 30, 35, 37, 38, 40°C.

Respiration:

Baseline Impedance: 500, 1000, 1500, 2000 ohms,
LEADS I, II, III
Impedance Variations: 3, 2, 1, 0.5, 0.2, 0 Ω
Rates: 15, 20, 30, 40, 60, 80, 100, 120 and 0 rpm for APNEA
Apnea Selections: 12, 22, 32 seconds, and continuous
Lead selection LA or LL

Arrhythmia Selections:

Premature Atrial Contraction (PAC)
Nodal Premature Nodal Contraction (PNC)
Premature Ventricular Contraction (PVC)
PVC1 Left Ventricular Focus
PVC1 Early, Left Ventricular Focus
PVC1 R-on-T, Left Ventricular Focus
PVC2 Right Ventricular Focus
PVC2 Early, Right Ventricular Focus
PVC2 R-on-T, Right Ventricular Focus
Multifocal PVCs

Conduction Defects:

First Degree Heart Block	Second Degree Heart Block
Third Degree Heart Block	Right Bundle Branch Block
Left Bundle Branch Block	Trigeminy
Atrial Fibrillation (Coarse)	Atrial Fibrillation (Fine)
PVCs 6/Minute	PVCs 12/Minute
PVCs 24/Minute	Supraventricular Tachycardia
Frequent Multifocal	Asystole
Bigeminy	Ventricular Tachycardia
Pair PVCs (1 time event)	Run 5 PVCs (1 time event)
Run 11 PVCs (1 time event)	Ventricular Fibrillation (Fine)
Ventricular Fibrillation (Coarse)	
Paroxysmal Atrial Tachycardia	

2 Blood Pressure Channels:

Electrically Isolated Channels
Impedance: 300 Ω
Excitation: DC to 4000 Hz +/- 15V
Dynamic BP waveforms are synchronized with normal sinus rhythm rates and track arrhythmia selections.
Respiration artifact can be selected on blood pressure channels
Transducer Sensitivity: 5 or 40 $\mu\text{V}/\text{V}/\text{mmHg}$
Calibrated Rate: 80 BPM normal sinus rhythm
Static Levels: -10, -5, 0, 20, 40, 60, 80, 100, 120, 140, 160, 180, 200, 240, 320, 400 mmHg
Automatic Swan-Ganz (every 15 seconds)
Manual Swan-Ganz, changes each time Enter is selected
Static Level Stepping
Dynamic Waveforms: 120/80, 120/0, 25/0, 25/10, 14/4, 15/10, 10/2

Automated Protocols:

10 protocols, programmable

All specifications subject to change without notice.



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