

Features - NIBP-1040-BE

- ❖ NIBP, IBP, ECG, Temp, Arrhythmias, Respiration, Leak Detect & Much More
- ❖ Small, Hand-Held, Lightweight
- ❖ Cardiac Output
- ❖ Fetal Maternal
- ❖ Simple One Key Operation
- ❖ ± 500 mmHg Manometer
- ❖ Digital Pressure Envelope Offset
- ❖ Total Pressure & BP Waveform Displays
- ❖ Adult, Neonatal, Hypertensive & Hypotensive Modes
- ❖ SpO₂ Ready—Compatible with MSP-2100 Module & FingerSims™
- ❖ Multiple Display Screens & Digit Sizes
- ❖ Flash Programmable, Field Upgradeable
- ❖ Peak Pressure Detection with Easy Reset
- ❖ ECG Output with Full NSR Waveform
- ❖ Sinusoidal Respiration Simulation
- ❖ ECG Performance Test Waveforms
- ❖ Pace Waveform
- ❖ ECG Alarm Test
- ❖ Synchronized Invasive Blood Pressure Output
- ❖ Selectable IBP Sensitivity - 5 or 40 μ V/V/mmHg
- ❖ Leak Rate Test
- ❖ ECG Arrhythmia Waveforms
- ❖ ECG Arrhythmia Sequence
- ❖ YSI 400 & 700 Simulation Temperature

NIBP Simulator Series

BC Biomedical NIBP Series



Shown with
NIBP-1040-BE
Cardiac Output

NIBP-1040-BE

The NIBP-1040-BE is the newest member of the NIBP-1000 family of high quality, low cost, high function microprocessor-based NIBP simulators. The NIBP-1040-BE comes with the Cardiac Output and Fetal Maternal feature built-in. It is designed to meet the demand for a small, easy to use unit with multiple features to fit your exact needs. Though small, this complete Multiparameter Simulator makes no compromise on providing true outputs. There is no other NIBP Simulator on the market that offers all the features of the NIBP-1040-BE in this price range. The ability to provide offsets for various manufacturers NIBP'S can only be found in units costing twice as much.

The graphic display not only allows you to see what is going on digitally, it also allows you to view a plot of the overall pressure or a close-up of the BP waveform.

The Flash Memory allows for field upgrades with downloads from our website.

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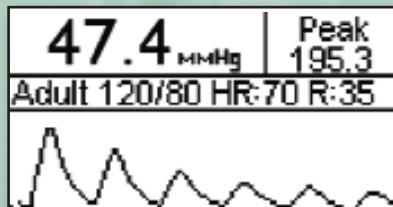
BC Biomedical NIBP Series

Screen Views

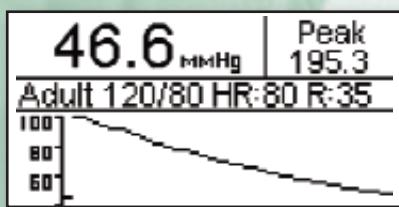
Main Display



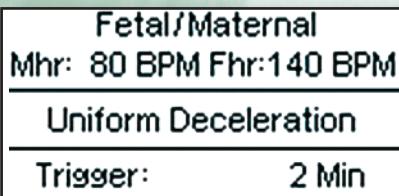
Output Waveform Screen
(NOTE: The output Waveform is NOT Physiologically Correct)



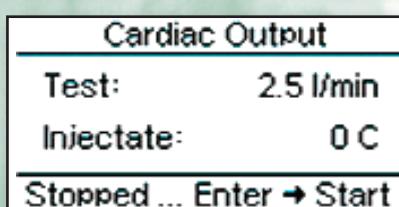
Pressure Graph Screen



FETAL/MATERNAL



CARDIAC OUTPUT



MODEL SUMMARY

NIBP-1040Kit-E

- Includes MCO-2100, built-in rechargeable battery and Universal Patient Lead Connectors

Main Test Modes:

Adult 120/80
Adult 120/80 w/Pace
Adult High 190/120
Adult Low 80/40
Neonatal 70/40
Alarm Test
Arrhythmia Sequence
Leak Test
Manometer
Cardiac Output
Fetal Maternal

Other Modes/Features:

Peak Detect
ECG Performance Waves
Individual Arrhythmias
Synchronized Dynamic
IBP
Static IBP
RS232

SPECIFICATIONS

Blood Pressure

Pressure Range: ± 500 mmHg @ 20 °C
Accuracy: ± (1% of Reading + 0.5 mmHg)
Simulation Rate: 80, 94 BPM (synchronized to ECG)
Accuracy: ±1%

Invasive Blood Pressure

Static Pressure: -10, -5, 0, 20, 40, 50, 60, 80, 100, 120, 150, 160, 200, 240, 250, 300, 320, 400 mmHg
Accuracy: ± (1% Full Range + 1 mmHg) or ± (2% Setting + 2 mmHg)
Impedance: 300 Ω (± 10% Accuracy)
Excitation Range: 2 to 16 Vrms
Excitation Frequency: DC to 5 kHz
Sensitivity: 5 or 40 µV/V/mmHg

ECG NSR

Rate: 30, 60, 120, 240 BPM
(± 1% Accuracy)
Amplitude: 2.75 mV (± 2% @ Lead II Accuracy)

ECG Performance

Sine Wave: 10, 60, 100 Hz
Square Wave: 0.125, 2.000 Hz
Triangle Wave: 2.000 Hz
Rate Accuracy: ± 1%
Amplitude: 2.75 mV (± 2% @ Lead II Accuracy)

Pacemaker Waveforms

Amplitude: 3 mV (± 10% Accuracy)
Width: 6 ms (± 5% Accuracy)

Respiration

Rate Accuracy: ± 1%
Impedance: Delta 3.0 Ω (± 10% Accuracy)
Baseline: 1000 Ω (± 5% Accuracy)

Temperature

Settings: 0, 24, 30, 37, 40, 42 °C (± 0.1 °C Accuracy)
Type: YSI Series 400 and 700

Fetal/Maternal

Fetal heart rate: 60, 90, 120, 140, 150, 210, 240 BPM
IUP Period: Single Contraction (Manual) 2, 3, 5, Min (AUTO)

FHR

(During Contraction): Uniform Deceleration
Early Deceleration
Late Deceleration
Uniform Acceleration

Cardiac Output

Injectate
Temperature:
Injectate Flow:
Other Outputs:
0, 24 °C
2.5, 5.0, 10.0 L/MIN
Faulty – Injectate
Left-to-Right Shunt
Calibrated Temperature Pulse

BC Biomedical NIBP Series

NIBP-1030-BE

Overview - NIBP-1030-BE

The NIBP-1000 Series is a Family of high quality, low cost, high function Microprocessor based NIBP Simulators. They are designed to meet the demand for a small, easy to use unit with multiple features to fit your exact needs.

You have the option of operating by power cord or you can add the optional internal rechargeable NiMH Battery. You can perform hundreds of test on a fully charged battery.

Though small, this Family makes no compromise on providing true outputs. The optional ECG waveforms are full QRS and the respiration waveforms look real.

The graphic display not only allows you to see what is going on digitally, it also allows you to view a plot of the overall pressure or a close-up of the BP waveform.

All models have the ability to adjust the output depending on the manufacturer's algorithm. (operators choice)

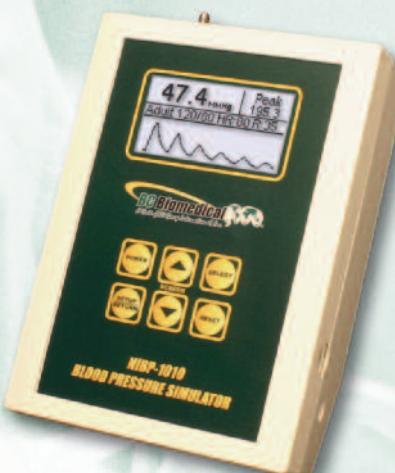
The Flash Memory allows for field upgrades with downloads from our website.



NIBP-1020



NIBP-1010



NIBP-1030-BE NIBP, Peak Detect, Full Range Manometer, IBP, ECG, Pace, Temperature, Arrhythmias, Respiration, Leak Detect and Performance waveforms. (Extended ECG post optional)

NIBP-1020 NIBP, Peak Detect, Full Range Manometer, ECG, Pace Respiration and Performance waveforms.

NIBP-1010 NIBP, Peak Detect and Full Range Manometer

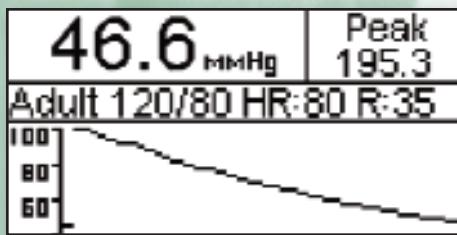
BC Biomedical NIBP Series

Screen Views

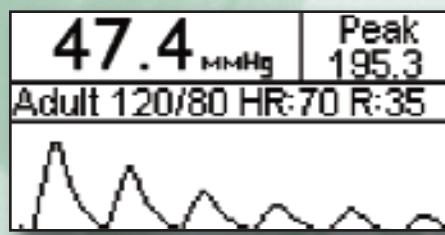
Main Display



Composite Pressure Display



Output Pressure Display
(NOTE: The output Waveform is NOT
Physiologically Correct.)



NIBP-1010 with (optional)
MSP-2100 & FingerSim™

SPECIFICATIONS

Blood Pressure

Pressure Range: ± 500 mmHg @ 20 °C
Accuracy: $\pm (1\% \text{ of Reading} + 0.5 \text{ mmHg})$
Simulation Rate: 80, 94 BPM (synchronized to ECG)
Accuracy: $\pm 1\%$

ECG NSR

Rate: 30, 60, 120, 240 BPM; $\pm 1\%$
Amplitude: 2.75 mV; $\pm 2\% @ \text{Lead II}$

ECG Performance

Sine Wave: 10, 60, 100 Hz; $\pm 1\%$
Square Wave: 0.125, 2.000 Hz; $\pm 1\%$
Triangle Wave: 2.000 Hz; $\pm 1\%$

Pacemaker Waveforms

Amplitude: 3 mV; ($\pm 10\%$ Accuracy)
Width: 6 ms; ($\pm 5\%$ Accuracy)

Respiration

Impedance: Delta 3.0 Ω ($\pm 10\%$ Accuracy) Base-
line: 1000 Ω ($\pm 5\%$ Accuracy)

MODEL SUMMARY

AVAILABLE MODELS:

NIBP-1010	Basic unit
NIBP-1010-P	+ Peak
NIBP-1010-BP	+ Battery & peak
NIBP-1010-KIT	NIBP-1010-BP, 5 adapters & soft carrying case
NIBP-1020	Basic unit with ECG
NIBP-1020-PA	+ Peak & alarm
NIBP-1020-BPA	+ Battery, peak & alarm
NIBP-1020-KIT	NIBP-1020-BPA, 5 adapters & soft carrying case
NIBP-1030	Base unit
NIBP-1030-B	+ built-in rechargeable battery
NIBP-1030-BE	+ Universal Patient Lead Connectors
NIBP-1030Kit	NIBP-1030-B, soft carrying case and 5 adapters
NIBP-1030Kit-E	Same as above with Universal Patient Lead Connectors
NIBP-1040Kit-E	NIBP-1040-BE with Cardiac Output & Fetal Maternal, Universal Patient Lead Connectors soft carrying case and 5 adapters

Optional Accessories

Soft Carrying Case
Bulb Adapter
DINAMAP/Critikon Adapter
Quick Disconnect Adapter

Luer Adapter
Marquette Adapter
Pulse Oximetry Module
FingerSim™ Replacement Set