

BeneHeart R3A

Electrocardiograph

Physical	
Height:	56 mm
Width:	260 mm
Depth:	194 mm
Weight:	1.2 Kg including battery, internal AC power supply
Processing	
ECG analysis sampling rate:	500 samples/ second (sps)
Digital sampling rate:	1000 samples/ second/ channel
Pacer detection sampling rate:	16,000 samples/second/channel
ECG amplifier:	DC-coupled
Acquisition mode:	Pre-acquisition or post-acquisition, provide 10 seconds of instantaneous ECG acquisition
Dynamic range:	AC Differential ±10 mV, DC offset ±600 mV
Resolution:	1 µV/LSB @ 500 sps
Frequency response:	–3 dB @ 0.05 Hz to 150 Hz
Baseline drift filter:	0.05 Hz, Baseline Drift Removal(BDR)
High cut-off frequency:	20 Hz, 35 Hz, 150 Hz
AC filter:	50/60 Hz ± 0.3 Hz
Common mode rejection:	≥110 dB (with AC filter switched off)
ADC:	24 bit
Input impedance:	≥50 MΩ @ 10 Hz, defibrillator protected
Patient leakage:	<10 µA
Heart rate meter:	30 to 300 BPM ±10% or ±5 BPM, whichever is greater
Startup time:	≤5 second
Sensitivity/gain:	5, 10, 20 mm/mV, Auto
Display	
Color:	24 bit Color display
Display type:	5 inch diagonal, 16: 9 aspect ratio, TFT LCD with LED graphics backlit
Display resolution:	800 * 480
Display data:	Patient ID, gender, age, heart rate, clock, battery power indicator, waveforms, lead labels, speed, gain, filter settings, warning messages, information messages, network status and USB
Power	
Power supply:	AC input (without external power adaptor) or battery operation
AC Power	
Input voltage:	100 to 240 VAC ± 10%
Input power:	60 VA
AC frequency:	50/60 Hz ± 3 Hz
Battery	
Battery type:	rechargeable Lithium ion battery
Battery capacity:	11.1 V typical, 2500 mAh
	6 hours of continuous operation without recording
	or 500 ECGs in 2.5 x 4 format at 25 mm/s and 10 mm/mV
Battery charge time:	3.5 hours with power off



Writer	
Writer technology:	Thermal dot array
Writer Width:	80 mm
Writer speed:	5, 12.5, 25, 50 mm/s
Number of traces:	3 leads + 1 rhythm or 3 leads; user selectable
Writer speed accuracy:	±5 %
Writer amplitude accuracy:	±5 %
Writer resolution:	Horizontal 32 dots/mm @ 25 mm/s, Vertical 8 dots/mm
Paper type:	Thermal roll paper (20 m) & Z- fold paper (80 mm width, 200 sheets/pack)
Software	
Measurement and interpretation:	Supports measurement and interpretation with the University of Glasgow ECG analysis algorithm
Resting ECG mode:	Records and prints 12-lead resting ECG with 10-second duration as a standard feature
Supported patient information:	Patient ID, secondary ID, age, date of birth, gender, race, medication, class and V3 electrode Placement
Internal storage:	800 ECGs in internal memory
ECG Storage format:	PDF format and Mindray storage format
Multi-language support:	Supports 13 languages
Report Formats	
Thermal printer report formats:	4 by 2.5 s (Sequential)
	4 by 2.5 s Compact
	4 by 2.5 s + 1 rhythm lead
	4 by 2.5/5/7.5/10 s (Simultaneous)
	Autorhythm (60 second ECG data for 1 rhythm lead)
	Continuous 1 or 3 channel manual rhythm
PDF report format:	4 by 2.5 s + 1 rhythm lead
(A4/letter format)	2 by 5 s
	2 by 5 s + 1 rhythm lead
	1 by 10 s
Accessories	
ECG patient cable with banana plugs, Limb Clamps, Chest Bulbs (IEC/AHA)	
ECG cable with Electrode clips (IEC/AHA)	
Country-specific power cords	
Z-fold and Roll paper	
Environmental Specification	
Temperature	
Operating:	0 °C to 40 °C
Transport/storage:	-20 °C to 60 °C
Humidity	
Operating:	15% to 95% RH non-condensing
Transport/storage:	10% to 95% RH non-condensing
Pressure	
Operating:	57.0 kPa to 107.4 kPa
Transport/storage:	16.0 kPa to 107.4 kPa



BeneHeart R3A

Electrocardiograph

Your Faithful Consultant for Resting ECG Diagnosis

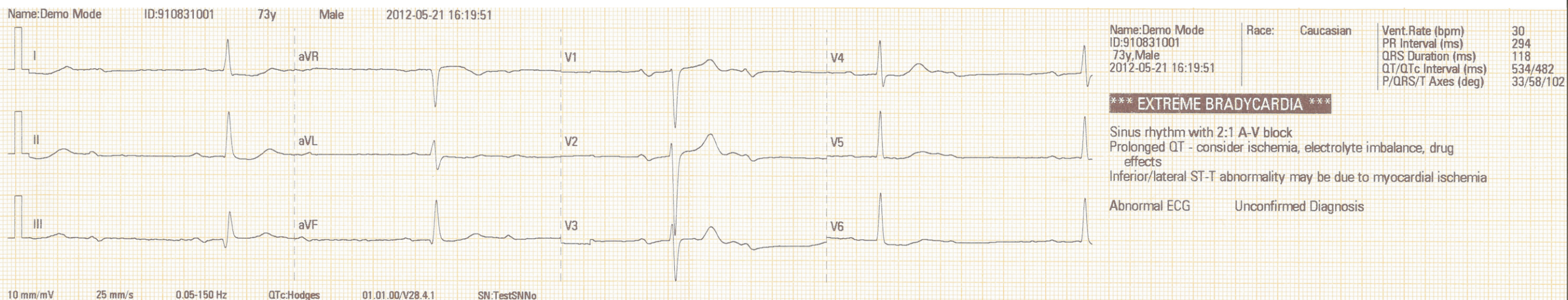
Mindray Building, Keji 12th Road South, High-tech Industrial Park, Nanshan, Shenzhen 518057, P.R. China Tel: +86 755 8188 8998 Fax: +86 755 26582680 E-mail: intl-market@mindray.com www.mindray.com Mindray is listed on the NYSE under the symbol"MR"		mindray is a trademark of Shenzhen Mindray Bio-Medical Electronics Co., Ltd. ©2013 Shenzhen Mindray Bio-Medical Electronics Co., Ltd. All rights reserved. Specifications subject to changes without prior notice. P/N:BeneHeart R3A-210285x4P-20130523	
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# BeneHeart R3A

## Electrocardiograph



**The Glasgow algorithm** is the first to be based on specific variables, including age, gender, race, medication, and class in order to maximize the accuracy of the ECG interpretation.

On the report, a headline may highlight one of several "critical value warnings" to alert medical attendants of findings that need immediate attention.

### Reliable Analysis

BeneHeart R3A utilizes the University of Glasgow ECG analysis algorithm, one of the world-leading resting ECG interpretations with 50 years of history.

### Clear Display

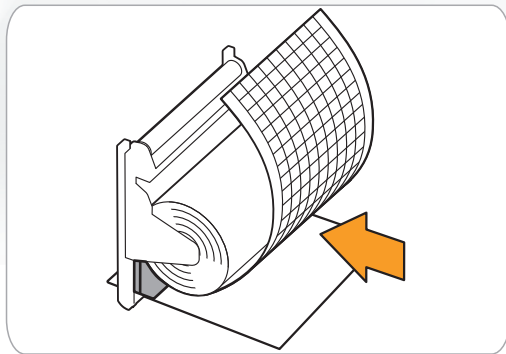
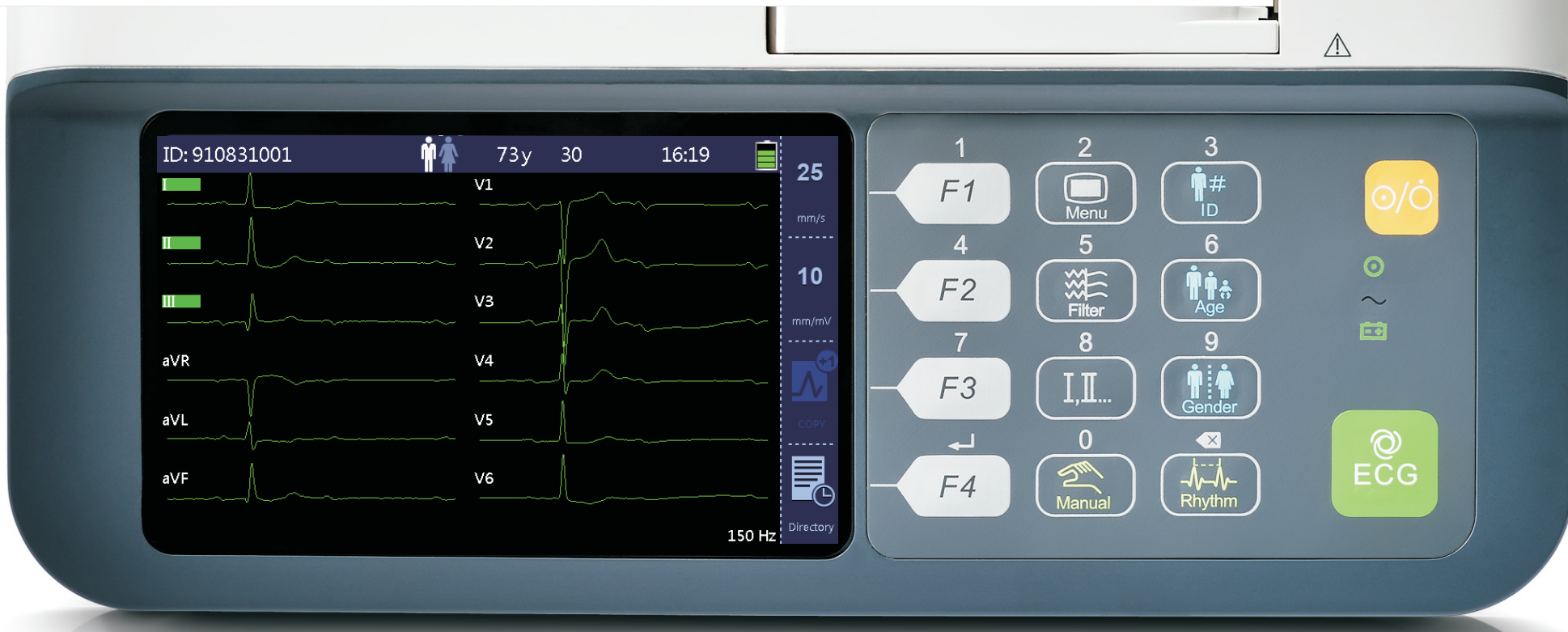
5-inch color screen offers the highest resolution in industry, enabling clinicians to observe real-time waveforms accurately.

### Great Portability

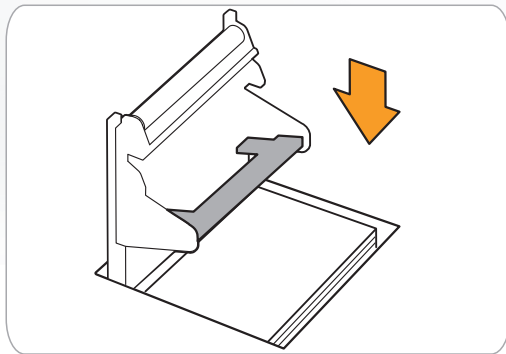
The BeneHeart R3 weighs only 1.2kg with battery, easy to carry.

### Convenient Operation

ECG recording is automatically unfolded on the writing pad on top of the machine for notes or signature.



With rolling paper



With Z-fold paper

### Unique Recorder

Compatible with both rolling paper and Z-fold paper, you can easily switch between these two styles of papers without dismantling the pressure lever.