

Medical Measurements  
800-706-9270  
www.medicalmeasurements.com

12 ch ECG and Spirometer

# Cardio7-S

7" Color TFT LCD 12 Channel Interpretive Resting ECG and Spirometer with Touch Screen

- \* Print out ECGs in multiple formats, including 12, 6 and 3 channel reports
- \* Supports USB bar code scanner & USB flash drive
- \* 12 channel interpretive ECG
- \* One-touch operation (monitoring, recording mode)
- \* Real-time preview monitor
- \* 12Ch simultaneous display
- \* Hi- resolution color TFT LCD (800 x 480)
- \* Touch screen for easy operation
- \* Portrait & landscape mode
- \* Rotary key access to all menus
- \* No cleaning  
Using disposable mouthpiece patented sensing method
- \* Pre- post bronchodilator comparison
- Over 130 kinds of interpretation results based on advanced Minnesota code
- Memory for up to 120 patients
- PC compatible through LAN
- Pacemaker detection
- Automatic arrhythmia detection
- HRV (Heart Rate Variability) analysis
- 5 minute long term recording
- Pulmonary test with specialized theory
- Breathing Protocol
  - FVC (Forced Vital Capacity)
  - SVC (Slow Vital Capacity)
  - MVV (Maximum Voluntary Ventilation)
- Multi-language (English, Russian, French, German, Italian, Chinese, Spanish, Turkish, Polish, Romanian, Portuguese) available



# SPECIFICATIONS

## ECG >>>

<b>ECG leads</b>	12 lead, 12 channel simultaneous ECG and acquisition
<b>Dimension</b>	296 (W) × 305.5 (H) × 92.5 (D)mm, approx. 3.5 kg
<b>Recording channel</b>	3 channels + 1 rhythm, 3 channels + 3 rhythm, 6 channels + 1 rhythm, 12 channels, 60 seconds 1 channel, 5 minutes 1 channel and beat report
<b>Sensitivity</b>	2.5, 5, 10, 20, auto (I~aVF: 10, V1~V6: 5) mm/mV
<b>Printing speed</b>	12.5, 25, 50 mm/s
<b>Sampling rate</b>	500 samples/sec
<b>Filters</b>	AC (50/60 Hz, -20 dB or better) Muscle (25~35 Hz, -3 dB or better) Base line drift (0.1 Hz, -3 dB or better) Low pass filter: off, 40 Hz, 100 Hz, 150 Hz
<b>Display</b>	7" color TFT LCD display (800 x 480), 12 channels preview ECG wave
<b>Monitor display</b>	HR, ID, date, AC or battery state, sensitivity, speed, number of saved data, printing form, rhythm lead
<b>User interface</b>	Touch screen (alphanumeric and symbol available), keyboard, rotary push-knob (pop-up menu)
<b>Patient data</b>	ID, name, age, sex, height, weight, smoke, race
<b>Basic measurement</b>	Heart rate, PR int, QRS dur, QT/QTc, P-R-T axis
<b>Recorder</b>	Thermal print head, roll paper Report papers: (width x length) - A4: 215mm (8.5") x 297mm (11.7") - Letter: 215mm (8.5") x 28 mm (11") Resolution - vertical: 8 dot/mm - horizontal: 16 dot/mm
<b>Electrical</b>	Resolution: 500 sample/sec. Internal noise: 20µV (p-p)max Input circuit: floating input Input impedance: ≥ 10M Ω Input voltage range: ≥ ±5mV Common mode rejection: > 100 dB DC offset voltage: ≥ ±300mV Time constant: 3.2 sec Patient leakage current: < 10µA Frequency response: 0.05 ~ 150 Hz Isolated and defibrillation protected
<b>Signal quality control</b>	Disconnected lead detection, pacemaker pulse detection
<b>ECG data storage</b>	Storage for 120 ECGs (internal on flash memory), USB flash drive
<b>Power</b>	Power supply: AC or built-in battery (option) 95 ~ 240 VAC, 50/60 Hz, 1.0 ~ 0.5A, 60W max
<b>Battery (Ni - MH)</b>	1 hour of normal use (approx. 100 ECG printouts)
<b>Communication</b>	PC connection with RS232 interface and LAN, USB memory, USB barcode scanner
<b>Safety conformity</b>	Class I, type BF, CE, FDA, KFDA, SFDA
<b>Environment</b>	Operating humidity: 30 ~ 85% Operating temperature: 10 ~ 40°C Atmospheric pressure: 70 ~ 106KPa
<b>Standard accessories</b>	Power cord 1ea., patient cable 1ea., chart paper 1ea., operation manual 1ea.
<b>Options</b>	Rechargeable battery, cart, PC S/W

## SPIROMETER >>>

<b>Dimension</b>	47 (W) × 200 (H) × 34 (D)mm, approx. 250g
<b>Measuring Values</b>	FVC: FVC, FEV 1.0, FEV 1/FVC, FEF 0.2 - 1.2L, FEF 25 - 75%, FEF 75 - 85%, PEF, FEF 25%, FEF 50%, FEF 75% SVC: SVC, ERV, IRV, TV, EC MVV: MVV, FB, TV
<b>Presentation</b>	Flow volume loop Flow time plot Measurement values table
<b>Measuring range</b>	Flow: 0 to ± 14 L/s Volume: 0 to ± 11L
<b>Measuring method</b>	Differential pressure method
<b>Prediction equation</b>	Morris-Polgar, ECCS-Quanjer, Knudson-ITS
<b>Sample rate</b>	200 samples/sec
<b>Flow impedance</b>	<0.2 mbar s/l at 12 l/s
<b>Measuring accuracy</b>	Complies with ATS (American Thoracic Society)
<b>Environment</b>	Ambient temperature: 15 to 40°C (59 to 104°F) Relative humidity: 10 to 90% (non-condensing) Atmospheric pressure: 700 to 1060hPa
<b>Standard accessories</b>	Nose clip 1ea., Adapter 2 ea., Operation manual 1ea., Disposable mouthpiece 1 box (100ea.)

\* Specifications can be changed without prior notification.

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