

POWERHEART[®] CRM[™]

cardiac rhythm module

THERAPEUTIC CARDIAC MONITORING AT THE BEDSIDE



THE HOSPITAL SUDDEN CARDIAC ARREST PROBLEM

Survival from sudden cardiac arrest in the hospital remains a dismal 0 - 29%. The standard of care for treating in-hospital cardiac arrest originated in the 1970's and is fraught with delays, offering marginal chance for survival. This worldwide crisis in care exposes hospitals to increased liability risk and is responsible for longer and more expensive patient stays for those who do survive.

THE POWERHEART CRM SOLUTION

Therapeutic monitoring with the Powerheart CRM offers all cardiac patients the best chance for immediate defibrillation and survival from a cardiac arrest. The prophylactic attachment of the Powerheart CRM is like having an armed and ready code team at every bedside. Help your medical facility achieve a new standard of patient care with the Powerheart CRM.



CARDIAC SCIENCE

INNOVATIVE TECHNOLOGY PROVIDES THE LATEST IN THERAPEUTIC CARDIAC MONITORING

- Powered by RHYTHMx technology providing reliable, continuous monitoring, detection and treatment of ventricular arrhythmias
- STAR Biphasic defibrillation waveform technology customizes defibrillation energy to deliver optimal therapy for each patient.
- Non-invasive pacer provides temporary external cardiac pacing for patients with symptomatic bradycardia or asystole

COMPACT MODULAR DESIGN PROVIDES LOCATION AND SPACE EFFICIENCY AT THE BEDSIDE

- Optional wall-mount system allows side-by-side mounting next to your existing patient monitor
- Optional IV pole-mount design offers convenient bedside access and portability
- Functional on DC power or back-up rechargeable battery, providing uninterrupted operation throughout the hospital

USER FRIENDLY PROGRAMMABLE INTERFACE DISPLAY AND CONTROLS ALLOWS EASY NAVIGATION AND PROGRAMMING

- Programmable interface software and control buttons permits simple encoding and operation
- 16-color 240 x 320 pixel (1/4 VGA) Liquid Crystal Display (LCD) provides exceptional viewability and resolution of the screen display

PROPRIETARY POWERHEART CRM THERAPY ELECTRODES PROVIDE SUPERIOR ECG MONITORING AND THERAPY DELIVERY

- Integrated reference electrode offers improved discrimination between motion artifact and tachyarrhythmias, reducing the potential for false alarms during patient movement
- Superior hydrogel adhesive reduces potential for skin irritation and allows for easier electrode removal
- Smaller design and enhanced radiotranslucence material allows clearer views of chest under X-ray and fluoroscopy

SPECIFICATIONS

DIMENSIONS:

Length/Width/Height: 27.9 cm (11 in)/10.2 cm (4 in)/20.96 cm (8.25 in)
Weight: 5.2 kg (11.5 lbs)

POWER:

Input to AC Adapter: 100-240 VAC, 50/60 Hz, Automatic switchover, 330 VA maximum
Output to Device: 14.5 VDC, 6.5 Amps
Battery Back-up: With new and fully charged battery, the Powerheart CRM will monitor for up to 3 hours, provide pacing for up to 2 hours, and deliver 6 shocks while running in battery mode.
Recharge Time - 10 hours (maximum)

ECG MONITORING & DISPLAY:

Detectable Heart Rate: 25 to 300 bpm digital display
Detection Leads: Primary ECG signal acquired through therapy electrodes used with patient therapy cable (Detection Lead: PADS). Leads I, II, and III are available when standard ECG monitoring electrodes are used with the ECG cable (3-lead)

DEFIBRILLATOR:

Waveform: Biphasic truncated exponential
Energy: 5 to 270 Joules delivered into a 50 Ω load
Device Charge Time: 10 seconds (nominal)
Non-committed device: Device will not deliver shock if arrhythmia is spontaneously converted to normal; device will disarm and abort therapy

NON-INVASIVE PACING:

Output Waveform: Rectilinear, constant current, 40 milliseconds
Pacing Modes: DEMAND or ASYNC (fixed-rate)
Pacing Rate: 30 to 180 ppm (increments of 5 ppm)
Output Current: 5 to 140 mA (increments of 5 mA)

MODES OF OPERATION:

Power Up Program/Learn Self-test on power up
Allows operator to program parameters for each patient
After programming, device must obtain 10 consecutive seconds of normal rhythm with amplitude of 0.5 mV before entering AUTO or ADVISORY mode
AUTO Device continuously monitors patient's ECG rhythm, detects shockable ventricular tachyarrhythmias and automatically provides defibrillation therapy per operator-programmed detection parameters
ADVISORY Device continuously monitors patient's ECG rhythm, detects shockable ventricular tachyarrhythmias and advises the operator to press the SHOCK button to deliver defibrillation therapy
MANUAL May be used as standard manual defibrillator; operator manually selects energy setting, presses CHARGE button, determines if patient has a shockable ventricular tachyarrhythmia and decides when to manually deliver defibrillation therapy
PACING Device includes a non-invasive external pacer to provide temporary external cardiac pacing in ASYNC or DEMAND mode at operator-programmed rate and output

EVENT RECORDER:

Capacity Stores 8 minutes of data surrounding each shockable event for up to 6 events (2 minutes prior, 6 minutes post)
Data Recorded ECG data, programmed parameters, therapy delivered, mode (AUTO, ADVISORY, MANUAL) initial rhythm and rhythm following each shock
Data Download and Service Port 9-pin serial connector allows stored events to be transferred to a remote PC for review using the Event Review Software

AUDIBLE INDICATORS:

Charge Sounds when device is charged in any mode.
Voice Prompts Voice prompts for operator safety and assistance.
Audible alarms Shockable Rhythm, Warning, High and Low Heart Rate alarms sounds comply with current standards

POWERHEART CRM ORDERING INFORMATION

ORDER P/N 180-2000, EACH POWERHEART CRM DEVICE INCLUDES:

- Powerheart CRM device
- Patient Therapy Cable
- ECG Cable (3-lead)
- Operating instructions manual
- AC power adapter and cord
- Set of disposable Powerheart CRM Therapy Electrode
- ECG monitoring electrodes (3 per package)
- Quick reference guide