

LIFEPAK® 1000 defibrillator



Built-in flexibility for first responders...

First Responder

Quick response by the first person on the scene









Simple to use at a cardiac arrest scene, the LIFEPAK 1000 defibrillator features:

- Loud voice prompts and lighted buttons to guide you.
- Large LCD screen displaying graphics and text for quick reference can be seen from any angle and in bright sunlight.
- Pre-connected electrodes that help speed your response when every second counts. Pediatric therapy can be easily provided using the Infant/Child Reduced Energy Defibrillation Electrodes.

Device management is easy with automated self-tests, viewable readiness display, and battery gauge on the device and on the battery itself.

BLS

There's nothing basic about BLS









Because there's no such thing as a typical day on your job, we build the LIFEPAK 1000 defibrillator to adapt to your protocols and your patients.

Designed for and tested by emergency professionals, BLS users like the 1000 for its:

- Built-in flexibility to program the unit to your CPR and resuscitation protocols.
- High capacity battery to provide the power for up to 440 shocks or approximately 17 hours of monitoring time.
- Digitally recorded ECG rhythm and delivered shocks, which can be wirelessly transferred via IrDA port to a PC for post-event quality review.*

*Using DT EXPRESS data transfer software and CODE-STAT data review software.

Our cprMAX technology gives you a resuscitation platform that can increase CPR hands-on time and minimize delays between CPR and the defibrillation shock.

...through advanced care professionals.



Advanced capabilities when you need them









Packed with powerful features, the LIFEPAK 1000 defibrillator helps you deliver advanced care when every second counts.

The 1000 makes it easy for BLS and ALS teams to work in sync:

- From the streets to the emergency room, the *1000* is compatible with the full suite of lifesaving tools from Physio-Control, including our line of manual defibrillator/monitors.
- With the touch of a button, the *1000* operates in manual override,** so you can decide when to analyze and shock.
- Lead II ECG patient monitoring** on large display via 3-wire cable provides flexibility for ECG-trained users and enables ALS teams to quickly assess patient rhythm.

** optional feature

DEFIBRILLATOR

All specifications are at 20° C unless otherwise specified.

Waveform: Biphasic truncated exponential with voltage and duration compensation for patient impedance*

Energy Sequence: User configurable, 150 joules–360 joules. Default energy output settings are 200, 300, 360 joules. 360 joules for every shock thereafter.

Charge Time: With new, nonrechargeable battery pack; 200 joules in less than 7 seconds (360 joules in less than 12 seconds)

3-wire (Lead II) monitoring capability: (if ECG display option purchased) Requires purchase of 3-wire (Lead II) monitoring cable and LIFE-PATCH[®] electrodes

Device Software: Field upgradeable

Infant/Child Reduced Energy Defibrillation Electrodes: Reduces selected energy by a factor of 4. Intended for use only with children up to 8 years of age or 25kg (55 lbs).

Safety Classification: Internally powered equipment IEC 60601-1

Electrical Protection: Input protected against high voltage defibrillator pulses per IEC 60601-1

*Voltage compensation is limited to the voltage that would result in delivery of 360 joules into 50 ohms.

DEVICE SETTINGS

Modes:

- · AED Provides operating capability for basic users
- · Manual Provides operating capability for advanced users
- ECG Provides ECG display capability with 3-wire ECG cable
- Setup Allows user to configure the device
- · Data Transfer Allows user to transfer patient data
- Auto Test Provides daily automatic tests of hardware and software

Controls: On/Off, Shock, Menu, Two (2) configurable soft keys

- User Defined Options:
- Device ID Assigns unique identifier to particular device
- Energy Sequence User configurable from 150 to 360 joules
- Flexible Energy Increases only after a lower energy was unsuccessful
- Auto Analyze User can configure device to auto analyze, auto analyze after first shock, or prompt user to push analyze key before each analysis period
- CPR Time (post shock or after no shock advised) User configurable 15, 30, 45, 60, 90, 120, 180 seconds
- Device Date/Time
- Voice Prompt Volume Allows user to change speaker volume
- ECG Display (if option purchased) Turns display on/off for AED mode
- Motion Detection User defined On/Off (default On)
- Service Alert Audio alarm if the device needs servicing. Configurable on/off

 Manual Access (if ECG display option purchased) – Devices configured with an ECG display may be set up to allow user to initiate a charge and shock without analysis

cprMAX Technology Settings:

- Initial CPR User defined time for CPR after first analysis regardless of analysis decision. Can be set to 0FF, 15, 30, 45, 60, 90, 120 and 180 seconds.
- Pre-shock CPR Allows for CPR while device is charging. Can be set to OFF, 15 or 30 seconds.
- Confirmation Analysis Confirms shockable rhythm after completion of Initial CPR or Pre-shock CPR periods and prior to Push to Shock prompt (default Off)
- Stacked Shocks (ON/OFF) When Off, allows for provision of CPR after each shock
- Pulse Check (Always, After Every NSA, Never) Allows device to prompt for a pulse check either after each shock, after every NSA, or never prompt for a pulse check (default Never)

DISPLAY

Backlit LCD displays number of shocks delivered, elapsed time, text and graphics of heart rhythm and optional ECG

Size: 120 mm (4.7 in) x 89 mm (3.5 in)

Frequency Response: 0.55 Hz to 21 Hz (-3 dB), nominal

ECG option:

- Waveform Sweep Speed 25 mm/sec for ECG, nominal
- · Waveform Viewing Time Minimum 4 seconds
- Waveform Amplitude 1 cm/mV, nominal
- Heart Rate 20 to 300 BPM digital display, Display "---" if heart rate is less than 20 bpm. Heart symbol flashes for each QRS detection.

ECG information is received from the adult and Infant/Child electrodes in anterior-lateral or anterior-posterior positions. A 3-wire cable can be used for ECG monitoring (Lead II).

ENVIRONMENTAL

One Hour Operating Temperature (from room temperature to temperature extreme, one hour duration): -20 to $60^{\circ}C$ (-4 to +140°F)

Operating Temperature: 0 to 50°C (32 to 122°F)

Storage Temperature: -30 to 60°C (-22 to +144°F) with battery and electrodes (maximum exposure limited to 7 days)

Atmospheric Pressure: 575 hPa to 1060 hPa (4572 to -382 meters; 15,000 to -1253 feet)

Relative Humidity: 5 to 95% (non-condensing)

Dust/Water Resistance: IP55 with battery and REDI-PAK™ electrodes installed (IEC 60529/EN 60529)

Bump: 15 g, 1000 bumps (IEC 600-68-2-29)

Shock: 40 g peak, 15 - 23 ms, 45 Hz cross over frequency

Drop: 1 meter drop on each corner, edge and surface (MIL-STD-810F, 516.5, Procedure IV)

Vibration: Random vibration test - MIL-STD-810F, Method 514.5, Category 20; Ground vehicle 3.15 g rms 1 hour per axis

- EMI:
- Radiated IEC 60601-2-4, IEC60601-1-2, CISPR 11 Class B Group 1
- Immunity IEC 60601-2-4, IEC 60601-1-2; IEC 61000-4-2 (Level 4), IEC 61000-4-3, IEC 61000-4-6, IEC 61000-4-8

EVENT DOCUMENTATION AND COMMUNICATION

Memory Capacity: Dual patient storage. Minimum 40 minutes ECG for current patient. Summarized data for previous patient.

Report Types: Continuous ECG, summary (critical resuscitation events and associated ECG waveforms), event log report (report of time stamped entries reflecting operator and device activity), test log report (self test activity report)

Capacity: Minimum 100 time stamped event log entries

Data Review: CODE-STAT™ Suite 6.1 Medical Informatics System, LIFENET[®] DT Express 2.1 Information Management System or higher

Communications: Infrared wireless transfer to personal computer

BATTERY AND READINESS DISPLAY

Note: See operating instructions for information on battery care

Primary Battery (nonrechargeable battery with status indicator):

- **Type** Lithium Manganese Dioxide (Li/MnO₂), 12.0V, 4.5 amp-hours
- Capacity Typically will provide 440 200 joule shocks or 1030 minutes of operating time with a new battery (370 200 joule shocks or 900 minutes of operating time at 0°C)
- Weight 0.45 Kg (1.0 lb)
- Shelf Life After the battery is stored for 5 years at 20°C to 30°C, the device will provide 48 months of standby life
- Standby life (assuming daily tests only) A new battery provides device power for 5 years
- Low battery indication At least 30 shocks or 75 minutes of operating time remain when low battery is first indicated

PHYSICAL CHARACTERISTICS

Height: 8.7 cm (3.4 in)

Width: 23.4 cm (9.2 in)

Depth: 27.7 cm (10.9 in)

Weight: 3.2 kg (7.1 lbs) with one set of REDI-PAK electrodes and one nonrechargeable battery

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