

LIFEPAK® 500 Automated External Defibrillator



The LIFEPAK 500 automated external defibrillator is designed to be used by first responders to cardiac emergencies. This affordable, rugged device is extremely portable at about seven pounds. Low maintenance requirements and intuitive operation make it the ideal product for all AED users.

The 500 offers ADAPTIV™ biphasic technology with the capability to deliver shocks at energy levels which meet current AHA and international guidelines. Our new cprMAX™ technology allows resuscitation protocols that increase the amount of CPR administered consistent with AHA and ERC protocols.

Features include pre-connected QUIK-COMBO™ electrodes that save valuable time on-scene and are compatible with other LIFEPAK defibrillators; clear, concise voice prompting for defibrillation and CPR; LCD for text messages, shock count, CPR time, and real-time clock. Choice of

simple 2- or 3-button operation allows the 500 to meet the needs of responders with a variety of training and experience levels. Automatic self-testing saves time and improves testing consistency. Always visible readiness display provides SERVICE REQUIRED or LOW BATTERY alert. Battery options include a rechargeable sealed lead-acid battery and high capacity extended shelf-life lithium batteries that require no recharging and no maintenance.

ECG data and on-scene audio (optional) are stored digitally within the device for maximum durability and simplicity. Incident data can be conveniently transmitted from the 500 to medical control via modem. User-friendly PC-based LIFENET® software allows complete, efficient review of both ECG and audio data.

- AHA/ERC Guidelines 2005 consistent
- ADAPTIV biphasic technology
- cprMAX technology
- Always visible readiness display feature
- Simple 2- or 3-button operation
- Low maintenance
- Portable, lightweight, rugged and durable
- Powerful, user-friendly data management
- Compatible with Medtronic electrodes and LIFENET data management software

DEFIBRILLATOR

Input: ECG via QUIK-COMBO or FAST-PATCH® disposable electrodes. Standard placement (anterior-lateral).

Electrical Protection: Input protected against high voltage defibrillator pulses per IEC 60601/EN 60601.

Safety Classification: Internally powered equipment IEC 60601-1/EN 60601-1.

Biphasic truncated exponential waveform, with voltage and duration compensation for patient impedance.*

Output Energy Sequence: Three levels, user configurable from 150 to 360 joules delivered (<200J not available in all countries).

Charge Time: With a new, nonrechargeable battery pak, or a new, fully charged rechargeable battery pak:
 200 joules in less than 9 seconds
 360 joules in less than 15 seconds

Controls:

ON/OFF	Turns device power on or off.
ANALYZE (optional)	Starts ECG analysis.
SHOCK	Delivers defibrillation energy. Active only when Shock Advisory System advises defibrillation.

Clock Set: Two switches ▲ and ► are provided to set the clock.

Display: Two-line, 20-character per line dot matrix Liquid Crystal Display.

Low Battery Indicator: Low battery icon:
 At least 11 discharges remaining with nonrechargeable battery pak. At least 6 discharges remaining with rechargeable battery pak.

Service Indicator: Service icon.

Displayed Messages: Messages prompt user through complete operating sequence.

Audible Tones: Coded tones assist user through device operation and alert operator of display messages.

Voice Prompts: Prompt user through complete operation sequence.

Infant/Child Reduced Energy Defibrillation Electrodes: Intended for use on children up to 8 years of age or 25kg (55 lbs) with biphasic LIFEPAK 500 AEDs with a pink connector.

*Note: Specifications apply from 25 to 200 ohms. Voltage compensation is limited to the voltage that would result in delivery of 360 joules into 50 ohms.

EVENT DOCUMENTATION

Type: Internal digital memory.

Memory Capacity: 20 minutes audio recording (optional). ECG and event log of operator/device actions:
 At least 20 minutes if unit is configured with audio recording and audio recording setup option is ON.
 At least 80 minutes if configured with audio recording and audio recording setup option is OFF.
 At least 60 minutes if not configured with audio recording.

Report Types: CODE SUMMARY report, Event log report, Test log report.

Capacity: 300 Event log events. 30 Test log device tests (assuming no fault codes).

Communications: Options:

- Direct connection to personal computer.
- Modem connection to personal computer using Hayes AT-Compatible modem.

Data Review: LIFENET system compatible. Options:

- LIFENET DT Express 2.1 data transfer software.
- CODE-STAT Suite 5.0 and CODE-STAT 6.1 data review software.

ENVIRONMENTAL

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

Storage Temperature: -30° to +65°C (-22° to +149°F) without battery and electrodes.
 -30° to +65°C (-22° to +149°F) with battery and electrodes, maximum exposure time limited to one week.

Atmospheric Pressure: 760 to 429mmHg (0 to +15,000 ft above sea level).

Relative Humidity: 10 to 95% (non-condensing).

Water Resistance: IEC 60529/EN 60529 IPX4 *Splash-proof* with electrodes or connector cover installed.

Shock: MIL-STD-810E, Method 516.4, Procedure 1 (40g, 6–9ms pulse, 1/2 sine each axis).

Vibration: MIL-STD-810E, Method 514.4, Helicopter—Category 6 (3.75 g rms) and Ground Mobile—Category 8 (3.15 g rms). RTCA/DO-160C, Table 8–2 Fixed Wing—Turbojet Engine Classification C* (Fuselage). Test level per Figure 8–5 C*. One hour in each of three axes.

Aircraft: RTCA/DO-160D, "Environmental Conditions and Test Procedures for Airborne Equipment," Section 21, Category M, (Radiated Emissions).

BATTERIES

Rechargeable SLA Battery Pak

Type: Sealed lead-acid, 8V, 2.5 amp hours.

Capacity: Typical: 59 full discharges or 3 hours of "ON" time with a new, fully charged battery. Minimum: 43 full discharges with a new, fully charged battery.

Battery Charge Time: 10±1 hours. Battery charging limited to +15° to +35°C (+59° to +95°F).

Recommended Replacement Interval: 2 years or 200 battery charge/discharge cycles, whichever comes first using recommended battery maintenance procedures.

Weight: 0.9kg (1.9 lb).

Nonrechargeable Lithium Sulfur Dioxide (LiSO₂) Battery Pak

Type: Sealed lithium, 12V, 7.5 amp-hours.

Certification: Aircraft versions available. FAA: TSO-C97 or CAA: BS2G239.

Capacity: Typical: 312 full discharges or 14 hours of "ON" time. Minimum: 230 full discharges with a new battery.

Shelf-Life (not installed): 5 years** (4 years for aircraft use).

Weight: 0.5kg (1.2 lb).

Nonrechargeable Lithium Manganese Dioxide (LiMnO₂) Battery Pak

Type: Sealed lithium, 12V, 10.0 amp-hours.

Capacity: Typical: 416 full discharges or 18 hours of "ON" time. Minimum: 306 full discharges with a new battery.

Shelf-Life (not-installed): 5 years**.

Weight: 0.5kg (1.2 lb).

Certification: Aircraft versions available. FAA: TSO-C142.

**Note: See Operating Instructions for information on caring for batteries.

GENERAL


Physical Characteristics

Height: 10.2cm (4.0 in).

Width: 26.7cm (10.5 in).

Depth: 29.5cm (11.6 in) including handle.

Weight: 2.41kg (5.3 lbs) without battery or electrodes.

 Defibrillation protected, type BF patient connection.

SETUP OPTIONS

AHA/ERC 2005 Guidelines Consistent: Setup options support the latest guidelines released by the American Heart Association and European Resuscitation Council.

Energy Sequence: 150J to 360J.

Energy Protocol: Increase energy after every shock or only after lower energy shock was unsuccessful.

Stack Shocks: Allows a single shock or three consecutive shocks protocol.

Initial CPR: User defined time for CPR before first shock. OFF, 15-180 seconds.

Preshock CPR: Allows for CPR while device is charging.

CPR Time: 15-180 seconds; can be set to match local protocol.

Pulse Check: Can be set to Never, after every no shock decision, after second no shock or Always.

Pulse Prompt: Per customer order; Check Pulse, Check Breathing or Check Circulation.

Time/Date: The time and date can be changed.

Voice Prompt Volume: Medium or high volume options.

Device ID: A unique identifier for each defibrillator.

All specifications are at 20°C (68°F) unless otherwise specified. All performance specifications assume the device has been stored (two hours minimum) at the operating temperature prior to operation.

AED users should be trained in CPR and use of the AED. Please consult a physician. A prescription is required.

For further information please call Medtronic at 1.800.442.1142 or visit www.medtronic-ers.com

Medtronic Emergency Response Systems
 11811 Willows Road NE
 P. O. Box 97006
 Redmond, WA 98073-9706 USA
 Tel: 425.867.4000
 Fax: 425.867.4121
www.medtronic-ers.com

Europe
 Tolochenaz, Switzerland
 Tel: 41.21.802.7000
 Fax: 41.21.802.7900

Switzerland
 Tolochenaz, Switzerland
 Tel: 41.21.803.8000
 Fax: 41.21.803.8099

Canada
 Mississauga, Ontario
 Tel: 905.826.6020
 Fax: 905.826.6620

United Kingdom, Ireland
 Watford, Great Britain
 Tel: 44.1923.212.213
 Fax: 44.1923.241.004

France
 Boulogne-Billancourt, France
 Tel: 33.1.55.38.1700
 Fax: 33.1.55.38.1800

Germany
 Dusseldorf, Germany
 Tel: 49.211.529.310
 Fax: 49.211.529.3100

Austria
 Vienna, Austria
 Tel: 43.1.240.44.160
 Fax: 43.1.240.44.600

Italy
 Milan, Italy
 Tel: 39.02.24137.1
 Fax: 39.02.24138.1

Netherlands
 Heerlen, The Netherlands
 Tel: 31.45.566.8000
 Fax: 31.45.566.8668

Spain
 Madrid, Spain
 Tel: 34.91.625.04.00
 Fax: 34.91.625.04.10

Scandinavia
 Järfälla, Sweden
 Tel: 46.8.52.22.00.00
 Fax: 46.8.52.22.00.50

Asia Pacific
 Hong Kong, S.A.R., PRC
 Tel: 852.2891.4456
 Fax: 842.2891.6830

Latin America & Caribbean
 Miami, Florida USA
 Tel: 305.500.9328
 Fax: 786.709.4244

Middle East
 Beirut, Lebanon
 Tel: 961.1370.670
 Fax: 961.1364.164

Hungary
 Budapest, Hungary
 Tel: 36.1.214.2228
 Fax: 36.1.214.2230

Poland
 Warsaw, Poland
 Tel: 48.22.465.69.00
 Fax: 48.22.465.69.17

Czech Republic
 Prague, Czech Republic
 Tel: 420.2.2017.2277
 Fax: 420.2.2056.1617

People's Republic of China
 Shanghai, China
 Tel: 86.21.50800998
 Fax: 86.21.50800978

South Africa
 Bedfordview, South Africa
 Tel: 27.11.677.4800
 Fax: 27.11.616.1104

Japan
 Kawasaki, Kanagawa, Japan
 Tel: 81.44.540.6502
 Fax: 81.44.540.6170

Australia
 Sydney, Australia
 Tel: 61.2.9879.5999
 Fax: 61.2.9879.5100

Israel
 Even-Yehuda, Israel
 Tel: 972.9.891.2223
 Fax: 972.9.891.9330