LIFEPAK 12 DEFIBRILLATOR/MONITOR
Everyday, you make a difference.
Your job demands more.

Use a tool that can tackle today’s patient care needs and adapt to tomorrow’s challenges.

The gold standard for more than 30 years, LIFEPAK products are continually evolving to keep pace with the changing nature of patient care. The LIFEPAK 12 defibrillator/monitor packs multi-parameter therapeutic and diagnostic functions into a single, portable device.

Over 80,000 LIFEPAK 12 defibrillator/monitors are in use today—on rescue rigs and in hospitals worldwide. Feedback from this global community keeps us innovating—adding features to help you in your lifesaving work.
Here are highlights of advances since its first release:

1998
The LIFEPAK 12 defibrillator/monitor revolutionizes acute cardiac care, with expanded diagnostic and monitoring capabilities.

1999
LIFEPAK 12 defibrillator/monitor is enhanced with ADAPTIV™ biphasic technology up to 360J, NIBP and CO₂ monitoring capabilities.

2001
Among many features added to the 12 are ST Monitoring up to 8 hours and invasive pressure monitoring.

2004
Bluetooth® capabilities enable wireless transmission of 12-lead ECGs.

2007
cprMAX™ technology provides increased flexibility for protocols to maximize CPR.
STEMI Management technology enables secure and flexible flow of ECG data, linking EMS and hospitals for improved STEMI treatment.

Technical Field Service
We offer one of the largest and best-trained networks of technical service representatives in the industry. On call 24 hours a day, 7 days a week (North America), our goal is to return your phone call within two hours, to work with you to quickly assess the problem and find the best solution. An integral part of your team, our field service reps have an average tenure of more than 12 years and log an average of 2,400 field hours each year. We work with you to design a customized service offering that meets your needs. Options include a comprehensive plan covering repair, preventative maintenance and inspection; or plans limited to repair-only or inspection-only.

Training
Whether you are taking delivery of your first LIFEPAK 12 defibrillator/monitor, or adding new options, your sales rep will provide inservice training to help you get the most from your Physio-Control products. Specialized training—ranging from self-paced CDs to live webcasts to on-site classes—is also available for features such as End-tidal CO₂ monitoring and 12-lead ECG. Continuing education credits are available for some offerings.

Grant Consultation
This complimentary program helps Physio-Control customers streamline the grant research and writing process. Free assistance is provided to communities, hospitals, law enforcement, fire and EMS agencies in applying for grants to upgrade equipment, implement new programs, and provide training. Customers receive guidance on identifying funding sources, timing grant applications, and crafting a grant proposal to improve the likelihood of success.

Accessories
We offer a full catalog of more than 150 accessories to suit your needs, including options for batteries, paddles, electrodes and cables.
The pioneer in prehospital 12-lead ECG acquisition and transmission, Physio-Control continues to advance the state of the art, with ST Monitoring to quickly identify changes in a patient’s 12-lead ECG.

- The 12 is the only defibrillator/monitor on the market today* with an ST Monitoring feature. Because ECGs (and the diagnosis) can change so significantly so quickly, the device takes a series of ECGs at frequent intervals and alerts you to changes in a patient’s ST measurement.

- The 12 helps track patient status breath by breath with patented Microstream® capnography technology and FilterLine® accessories that operate smoothly even in high humidity. EtCO₂ monitoring is effective for both intubated and nonintubated patients.

- Graphic display of vital signs allows for evaluation of changes in patient condition and patient response to therapy over time.

- MASIMO SET® pulse oximetry offers accurate and stable oxygen saturation monitoring.

Meeting the demands of your changing job.

Easy to use when every second counts

The 12 is designed to work like you work—in the most demanding conditions and environments.

- Generously sized screen lets you quickly scan clutter-free waveforms and monitoring data.

- Stands up to rugged use—drop test/impact test of 18 inches; IPX4 rating.

Escalating dose to 360J to maximize defibrillation success

Get the option to escalate to the highest energy available in a defibrillator/monitor today.* LIFEPAK defibrillators with ADAPTIV biphasic technology offer the maximum range of energy settings, up to 360 joules.

For patients who need additional shocks, increasing the dose of subsequent shocks above the first shock has shown to be a better strategy for terminating VF than simply repeating a failed dose.¹ ² ³

* As of October 2007.
Improving treatment with secure flow of ECG data

Mortality for Acute Coronary Syndrome (ACS) has been shown to increase 40% if door-to-balloon time stretches from 90 minutes to 120 minutes.4 Transmitting 12-lead ECGs from the field so hospitals can confirm STEMI diagnosis and activate the cardiac cath lab before the patient arrives can help you meet the ACC/AHA 90-minute door-to-balloon guideline for STEMI patients.5 The LIFENET STEMI Management Solution links EMS response with hospitals via the internet to improve treatment and management of patients with ACS. Using cutting edge technology, 12-lead ECG data is sent from the 12 to a network of receiving targets in the ED, cath lab, or anywhere the LIFENET Client software is installed, so patient data can be shared quickly. This technology enables hospitals to make patient care decisions such as referral to a PCI capable hospital, or cath lab activation, all while you are still en route.

Studies have reported a significant association between prehospital 12-lead ECGs and shorter door-to-balloon times. Two recent studies found the effect was strongest when the cath lab was activated while the patient was still en route to the hospital.6,7

Medical Informatics

LIFENET® STEMI Management Solution. Our cutting-edge technology facilitates a seamless, secure and flexible flow of ECG data between prehospital, emergency room, and PCI treatment centers, enabling you to improve door-to-balloon times and reduce false-positive cath lab activations. A virtual STEMI care network linking EMS response with hospitals is created using our web application and secure datacenter and your gateway devices like SmartPhone PDAs. While paramedics in the field focus on patient care, a gateway device sends diagnostic quality ECGs wirelessly from the LIFEPAK defibrillator to the proper destination, helping you meet the ACC/AHA 90-minute door-to-balloon guideline for STEMI patients. The system works on a variety of wireless carrier networks and requires no dedicated hardware. Application services—including a state-of-the-art datacenter that maximizes security and system availability—are provided on a subscription basis. Several levels of support are available to meet your needs.

CODE-STAT™ 7.0 Data Review Software with Advanced CPR Analytics. This post-event review tool annotates chest compressions onto the patient’s continuous ECG report and calculates CPR statistics, helping you meet 2005 AHA Guidelines. The software simplifies data collection and reporting by consolidating all dispatch, treatment and outcome data into a single e-file. With this single tool, you can download, review, manage and analyze emergency medical data from multiple LIFEPAK defibrillators. The application also facilitates quality analysis and business decisions, allowing creation of benchmarking and trending reports to review your system’s performance.

DT EXPRESS™ Data Transfer Software. The simple Windows-based software application manages data from LIFEPAK devices. The software makes it easy to download critical event and waveform data to your PC, add supplemental patient data, print out a hardcopy report, and store records on a disk. For storage and on-screen viewing of reports, export files to CODE-STAT 7.0 data review software.
### PHYSICAL CHARACTERISTICS

**Weight:** 3.8 kg (8.4 lbs) with QUIK-COMBO cable only, or 5.9 kg (13 lbs) with additional QUIK-COMBO pacing/defibrillation electrodes. AED weighing 4.9 kg (10.8 lbs) with QUIK-COMBO cable and defibrillation electrodes.

**Exterior dimensions:** 140.8 mm (5.5 in) wide x 105.6 mm (4.2 in) high x 155.4 mm (6.1 in) deep.

**Display:** 640 x 480 black and white LCD screen.

**Input:** 2.4 m (8 ft) long QUIK-COMBO cable.

**Output:** Options include the following prior to shutdown:

- Two new fully charged batteries will be required (LIFEPAK battery, FASTPAK battery, LIFEPAK NiCd battery) or replacement batteries.
- With inadvertent loss of power (<30 minutes at 100 ma, 60 ppm).
- Warmstart: Using a fully charged battery at ambient temperature.

**Specifications**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pulse Rate Range</td>
<td>25 to 240 pulses per minute</td>
</tr>
<tr>
<td>SpO2</td>
<td>95% to 100% during no motion conditions or 91% to 100% during motion conditions</td>
</tr>
<tr>
<td>Temperature, Non-operating</td>
<td>SpO2: 5˚ to 45˚C (41˚ to 113˚F)</td>
</tr>
<tr>
<td>Altitude, Operating</td>
<td>To 4545 m (15,000 ft)</td>
</tr>
<tr>
<td>Altitude, Non-operating</td>
<td>To 429 mmHg (31 in Hg)</td>
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<tr>
<td>Output Waveform</td>
<td>Biphasic truncated exponential (user configurable)</td>
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<tr>
<td>BIPAP</td>
<td>20 to 35 cmH2O</td>
</tr>
<tr>
<td>Frequency Response</td>
<td>Diagonal: 0.05 to 150 Hz or 0.5 to 400 Hz (user configurable)</td>
</tr>
<tr>
<td>Pacemaker</td>
<td>2.5 to 350 Hz</td>
</tr>
</tbody>
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**Environmental**

- **Temperature:** Operating: 0˚C to 50˚C (32˚F to 122˚F), Non-operating: -20˚C to +60˚C (-4˚F to +140˚F) |
- **Water Resistance:** IPX4 (splash proof) |
- **Shock Rating:** Category 4, Helicopter – category 6 (3.75g), Ground Mobile – category 8 (1.0g) |
- **AC Power Adapter**
  - **Function:** Range: 200 to 260mV ±1% (function of rate) |
  - **PACER**

**Performance**

- **Alarm:** Includes the following alarms and warnings: **VF/VT Alarm:** Activates continuous CPSS monitoring in non-shock mode while Shock Advisory System™ is not active, Continuous Patient Surveillance System (CPSS): Heart Rate Display: 20 to 300 BPM digital display.
- **Alarm Rotation:** Includes AMI statement.
- **CO2 Accuracy:** (>20 minutes): 0 to 38 mmHg: ± 5 mmHg, kPa |
- **CO2 Measurement Range:** 0 to 38 cmH2O |
- **SpO2 Accuracy:** 95% to 100% during no motion conditions or 91% to 100% during motion conditions |
- **SpO2 Update Averaging Rate:** User selectable 4, 8, 12, 16, 24 |
- **SpO2 waveform with autogain control |
- **SVT Alarm:** Close to the onset of the ECG waveform |
- **Trend:** After initial 12-lead ECG analysis, automatically selects and trends lead with the greatest voltage.
- **VF/VT Alarm:** Specific for each device upon activation.
- **Wavefront:** Includes the following wavefronts: **12-lead ECG:** Includes AMI statement.
Experience the legendary quality that has made LIFEPAK products the clear favorite around the world—for every level of responder.

The most field-proven defibrillator/monitor in the world.
For more than 50 years, Physio-Control, maker of the renowned LIFEPAK defibrillators, has been developing technologies and designing devices that are legendary among first response professionals, clinical care providers and citizens everywhere.

REFERENCES


