The iPAD SP1
Automatic External Defibrillator

OVERVIEW
SP1 - LAYOUT

**PATIENT MODE SWITCH:**
- Easily switch from Adult to Child mode without changing pads
- Safety cover prevents accidental switching

**SPEAKER:**
- Ambient noise detector measures level of background noise and adjusts the volume of the voice prompts accordingly.
- Ideal for noisy environments such as public places, factories, warehouses, schools etc.

**VISUAL INDICATOR:**
Visual Indicator shows at a glance:
- Battery Life
- Unit Status
- Pad Status

**POWER BUTTON**

**INDICATOR LIGHTS:**
Indicator Lights operate in time with the voice prompts to prompt the responder with:
- Pad placement
- Staying clear of casualty
- CPR compressions

**INFORMATION BUTTON:**
‘i’ button performs the following functions:
- Allows responder to select if CPR metronome is heard during CPR
- Checks for faults and errors
- Provides ‘handover’ information to Ambulance crew (usage time and shocks delivered)
- Allows the SP1 to be programmed with CPR protocols such as compression rate, number of compressions, breaths and cycles etc, ensuring that the SP1 is always up to date
- Downloads data for review
- Checks the units software version

**DATA RECORDING:**
- IrDA Port - Wireless Transmission of data to PC
- SD Card Port - Data can be transferred easily
- Internal Memory (Nand-Flash) - ECG, Event
- Storage Capacity - Multi recording 5 events / max 3 hours
- Data review program - CU-EX1 Software (for PC)
**PAD CONNECTOR:**
- Pre connected dual adult/child electrode pads

**SHOCK BUTTON:**
- The orange shock button will flash and need to be pressed if verbal prompt to so is given. If pressed by accident it will not deliver a shock
- The fully-automatic model does not have a shock button. If required a shock will be delivered automatically

**DISPOSABLE BATTERY PACK:**
- High Capacity - Type DC 12 Volt 4.2Ah, Lithium Manganese Dioxide
- Capacity - Minimum 200 shocks (150J)
- Lifespan - 5 years - assumes unit is kept within operable temperature range and after the initial check, the unit is left in standby mode

**SMART PADS STORAGE:**
- Electrode pads are stored, pre-connected, in a clear compartment on the under-side of the unit
The iPAD SP1 defibrillator is a nominated device of the British Heart Foundation and is placed nationwide in conjunction with the NHS Ambulance Service in to community projects and Community First Responder groups.

Designed to be used by minimally trained people, its user friendly responsiveness makes it suitable for use in any setting. Whether a workplace, school, shopping centre or hospital, the iPAD SP1 makes saving lives as simple as possible, saving seconds when every second counts.

**KEY FEATURES:** Trusted Technology. Proven Simplicity.

- **Patient Mode Switch**
  - Easily switch from Adult to Child mode without changing pads
  - Safety cover prevents accidental switching
  - Comes supplied with pre-connected dual adult/child electrode pads. Smaller child pads also available

- **Integrated Electrode Pad Storage**
  - Electrode pads are stored, pre-connected, in a clear compartment on the underside of the unit
  - Pads are easily removed by pulling on the exposed tab
  - The pads are always ready for use and easily checked

- **Ambient Noise Detector**
  - Measures level of background noise and adjusts the volume of the voice prompts accordingly
  - Volume increases up to 90 decibels

- **LCD Status Indicator Screen**
  - Operational status of the iPAD SP1 always visible
  - At a glance see the following:
    - Battery Life
    - Pad Status
    - Unit status

- **CPR Detection**
  - The iPAD SP1 detects if CPR is being performed when appropriate
  - If CPR is not being performed, voice prompts encourage the responder to ‘perform CPR’
  - If CPR is being performed, voice prompts encourage the responder to ‘continue CPR’

- **Clear Illuminated Illustrations and Calm Voice Prompts**
  - Indicator lights operate in time with the voice prompts to give guidance at every step
  - Pad placement
  - Standing clear of casualty
  - CPR compression rate
‘I’ BUTTON PERFORMS THE FOLLOWING FUNCTIONS

• Allows responder to select if CPR metronome is heard during CPR
• Checks for faults and errors
• Provides ‘handover’ information to Ambulance crew (usage time and shocks delivered)
• Allows the SP1 to be programmed with CPR protocols such as compression rate, number of compressions, breaths and cycles etc, ensuring that the SP1 is always up to date
• Downloads data for review
• Checks the units software version

DATA STORAGE AND MANAGEMENT

• Internal memory stores the last 5 events/3 hours of data
• Data can be transferred via the built in SD card and IrDA ports
• Data can be reviewed via the ‘CU-EX1’ software (for pc)
• Easy to export data to PDF file
• Data conversion service available

H ave you ever considered making your Defibrillator Publicly Accessible with a DefibSafe2?

Ensure you get hands on with Brayden CPR Manikin

www.braydenmanikin.co.uk

www.defibsafe.co.uk
<table>
<thead>
<tr>
<th>INDICATOR</th>
<th>DESCRIPTION</th>
<th>NOTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Status LCD Device Operation</td>
<td>The device is functioning normally.</td>
<td></td>
</tr>
<tr>
<td>Status LCD Device Operation</td>
<td>The device has an error.</td>
<td>X</td>
</tr>
<tr>
<td>Status LCD Battery Level Indicator</td>
<td>The battery is fully charged.</td>
<td>🍃</td>
</tr>
<tr>
<td>Status LCD Battery Level Indicator</td>
<td>Less than half battery power remains.</td>
<td>🍃</td>
</tr>
<tr>
<td>Status LCD Battery Level Indicator</td>
<td>Less than a quarter battery power remains.</td>
<td>🍃</td>
</tr>
<tr>
<td>Status LCD Battery Level Indicator</td>
<td>Battery is low.</td>
<td>🍃</td>
</tr>
<tr>
<td>Status LCD Pad Status</td>
<td>The expiration date of the pad is more than 3 months.</td>
<td>🍃</td>
</tr>
<tr>
<td>Status LCD Pad Status</td>
<td>The pad will expire within 3 months.</td>
<td>🍃</td>
</tr>
<tr>
<td>Status LCD Pad Status</td>
<td>The pad is used or expired.</td>
<td>🍃</td>
</tr>
<tr>
<td>Do Not Touch Patient Indicator: Off</td>
<td>You may touch the patient.</td>
<td>🍃</td>
</tr>
<tr>
<td>Do Not Touch Patient Indicator: Light</td>
<td>You may not touch the patient.</td>
<td>🍃</td>
</tr>
<tr>
<td>CPR Detection Indicator: Light</td>
<td>Indicates that CPR is being performed.</td>
<td>🍃</td>
</tr>
<tr>
<td>CPR Detection Indicator: Flashing</td>
<td>Indicates that CPR is not performed or not properly performed.</td>
<td>🍃</td>
</tr>
<tr>
<td>i-Button: Flashing in Red</td>
<td>The device detected an error. Press the i-Button for more information.</td>
<td>🍃</td>
</tr>
<tr>
<td>Shock Button: Flashing in Orange</td>
<td>The device is ready to deliver a defibrillating shock. Press the Shock Button to deliver a shock. NOTE the iPAD SP1 fully automated model does not have a shock button. A shock is delivered automatically</td>
<td>🍃</td>
</tr>
</tbody>
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## TECHNICAL SPECIFICATIONS

### PHYSICAL

<table>
<thead>
<tr>
<th>Category</th>
<th>Nominal Specifications</th>
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</thead>
<tbody>
<tr>
<td><strong>Dimensions</strong></td>
<td>260mm x 256mm x 69.5mm (Width x Length x Height)</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>2.4kg (Including the battery pack and pads)</td>
</tr>
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### ENVIRONMENTAL

<table>
<thead>
<tr>
<th>Category</th>
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</tr>
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</table>
| **Operational Status** (The device is in emergency use) | **Temperature**: 0°C ~ 43°C (32°F ~ 109°F)  
**Humidity**: 5% ~ 95% (non condensing) |
| **Altitude**        | 0 to 15,000 feet (operational and storage) |
| **Drop**            | Withstands 1.2-meter drop to any edge, corner, or surface |
| **Vibration**       | **Operating**: Meets MIL-STD-810G Fig.514.6E-1, random  
**Standby**: Meets MIL-STD-810G Fig.514.6E-2, swept sine (helicopter) |
| **Sealing**         | IEC 60529: IP55 |
| **ESD**             | Meets IEC 61000-4-2:2001 |
| **EMI (Radiated)**  | Meets IEC 60601-1-2 limits, method EN 55011:2007 +A2:2007, Group 1, Class B |
| **EMI (Immunity)**  | Meets IEC 60601-1-2 limits, method EN 61000-4-3:2006 +A1:2008 Level 3 (10V/m 80MHz to 2500MHz) |

### DEFIBRILLATOR

<table>
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<tbody>
<tr>
<td><strong>Operating Mode</strong></td>
<td>Semi-automated or Fully-automated</td>
</tr>
<tr>
<td><strong>Waveform</strong></td>
<td>e-cube biphasic (Truncated exponential type)</td>
</tr>
</tbody>
</table>
| **Output Energy**   | 150 J at 50 Ω load for adults  
50 J at 50 Ω load for children |
| **Charge Control**  | Controlled by an automated patient analysis system |
| **Charging Time**   | Within 6 seconds of the voice prompt “Shock Advised”. |
SP1 ACCESSORIES

**SP1 Disposable Adult/Child Smart Electrode Pads**
SP1 Adult/Child "Smart" Pads, capable of 'talking' to the device to share expiry notice and previous usage.
These pads are useable with paediatric patients thanks to the intuitive adult/ paediatric switch on the device.

**SP1 Disposable Battery Pack**
This Lithium-Manganese Oxide (LiMnO2) disposable battery.
With up to five years life or in excess of 200 shocks it is high performing while cost effective.

**SP1 Orange Carry Case**
This highly visible carry case is the perfect companion for your SP1 device. Currently available at no additional cost.
The bag has space for an additional set of pads, a spare battery and an AED Start Kit. There is also a detachable shoulder strap.
The case offers protection while still being able to use the device.

ADDITIONAL OPTIONS

**Electrode Pad Adapters**
These pad adapters will allow the electrode pads from Zoll, Phillips and PhysioControl to be used with the iPAD SP1.
This means the same pads can be unplugged from iPAD and plugged straight in to the defibrillator on the front line vehicle. This reduces risk, saves time, reduces trauma and is cost-effective.

**SP1 Wall Bracket**
This sturdy metal wall bracket is the perfect means for keeping the i-PAD at hand, ready to use.
The SP1 is securely cradled and held in place, with a Velcro strap for quick release.

**SP1 Wall Cabinet**
This rigid, high quality metal cabinet is ideal for holding your i-PAD within an indoor environment. The device is held firmly in place until required. There is also a battery operated alarm, which is triggered when the door is opened.