

IT'S NOT **HEART** TO BE SAFE

Updated January 2020



Professional Defibrillator



CARDIA
INTERNATIONAL

THE NEW BIPHASIC DEFIBRILLATOR FOR EMERGENCY SERVICES AND HOSPITALS

CardiAid introduces two new biphasic defibrillators for emergency services and hospitals;

CardiAid Pro+ 2APENS & CardiAid Pro+ 3APENS

» Operating modes: Manual defibrillation, AED, Pacing or Monitoring.



» Uses CardiAid AED's disposable, self-adhesive, single-use adult and paediatric electrodes (for Cardia Pro+)



Defibrillation

CardiAid Pro+ employs current controlled, time limited biphasic defibrillation with patient impedance compensation to give accurate results. Capable of delivering up to 300J, CardiAid Pro+ is a powerful and reliable device available for reviving victims of SCA.



Efficiency

Thanks to the intelligently designed power module, CardiAid Pro+ can charge to 300J in under 8 seconds (300J option) or 200J in under 6 seconds (200J option) when running from battery or AC mains. With a high capacity internal power source, CardiAid Pro+ can deliver more than 100 full energy shocks from a new fully charged battery.



Patient monitoring

CardiAid Pro+ is equipped with a 3 lead / 5 lead ECG, NiBP and SpO2 for monitoring the patient after defibrillation therapy. With a host of monitoring features, CardiAid Pro+ simplifies the task of post shock monitoring.

Pacing

Transcutaneous pacing is identified as an integral step in ACLS bradycardia treatment protocol. CardiAid Pro+ features constant-current transcutaneous pacing via disposable adhesive pads to support patients with bradycardia showing symptoms of shock.



Quick and Easy

The ergonomically designed energy selector and the simple to use 1 2 3 operation helps to keep the focus where it is needed. With the rotary energy selector and illuminated energy indicator ring, setting the right energy gets quick, easy and accurate. AED mode with voice prompts makes the device suitable for use by personnel with only basic life support training.



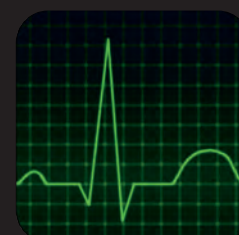
Intuitive User Interface

The large clutter free colour LED display on CardiAid Pro+ helps users to quickly identify information provided on screen. The ergonomically placed keys with back-illumination makes operating CardiAid Pro+ still simpler.



TECHNICAL SPECIFICATIONS

CardiAid PRO+ 2APENS/CardiAid PRO+ 3APENS



Defibrillator - Manual Defibrillation

Waveform: Current controlled, time limited biphasic. Waveform parameters compensated for patient impedance.

Output Energy (2APENS Variant): 1J-10J, 20J, 30J, 50J, 70J, 100J, 150J, 200J (17 steps). Limited to 50J for paediatric mode,

Output Energy (3APENS Variant): 1J-10J, 20J, 30J, 50J, 70J, 100J, 150J, 200J, 250J, 300J (19 steps). Limited to 50J for paediatric mode,

Charge Control: Charge and shock controls on base unit as well as paddles.

Patient Impedance Range: 25Ω to 1000Ω

Type: CF

Defibrillator - AED

Output Energy: 150J for adult, 50J for paediatric (factory default) nominal into a 50Ω test load through disposable pads.

AED Control: On/Off, Pause analysis, Analyse, Shock

Prompts: Text and voice prompts

ECG Analysis: Evaluates patient ECG and signal quality for identifying shockable rhythms, proper contact and motion artefact.

Shockable rhythm identification for ventricular fibrillation and ventricular tachycardia with sensitivity better than 90% and specificity for nonshockable rhythms better than 95%.

Defibrillator - Charging Time

- Less than 8 seconds to 300 Joules with a new, fully charged Battery at 25°C. **(3APENS Variant)**
- Less than 7 seconds to 300 Joules with AC power at 90% - 110% rated AC mains voltage. **(3APENS Variant)**
- Less than 6 seconds to 200 Joules with a new, fully charged Battery at 25°C. **(2APENS Variant)**

Defibrillator - Controls & Indicators

Controls: Energy selector knob, **SYNC** enable/disable key, **CHARGE** key, **SHOCK** key, **DISARM** key, **MODE** selection key, **Adult/ Paediatric mode** selection key, context sensitive Soft keys, **Print ECG** key, **Print Summary** key, **Alarm Acknowledge** Key.

Indicators: LCD display for indicating energy, ECG, heart rate, battery status, clock and other text prompts, audio alerts for charging status, QRS beep, context sensitive back-lit keys for displaying status / availability of SYNC, CHARGE and SHOCK.

Charge Control: CHARGE button on base unit or button on APEX paddle.

'Armed' Indicators: Charge done tone, available energy indication on screen and active backlight on SHOCK button.

Shock Control: SHOCK button on base unit or buttons on external paddles.

Synchroniser: When enabled the SYNC key is back-lit with green colour and 'SYNC' message displayed on screen.

ECG

Lead Configurations: Paddle, 3L, 5L (optional2)

Leads: Paddle, I, II, III

V, aVR, aVL, aVF (only with 5L cable)

Gain: 5mm/mV, 10mm/mV (default), 20mm/mV

Display Trace Speed: 12.5mm/S, 25mm/S (default), 50mm/S

Lead Fault: Lead off message displayed on screen.

ECG Cable Fault: Cable fault message displayed on screen.

Paddle Fault: Pad poor contact message displayed on screen.

Heart Rate Display: 30 - 300 bpm with an accuracy of ±10% or ±5 bpm which ever is greater.

NiBP

Method Of Measurement: Oscillometric

Blood Pressure Range:

Adult: Systolic: 40mmHg to 260mmHg
Diastolic: 20mmHg to 200mmHg

Paediatric: 20mmHg to 160mmHg

Heart Rate Range: 40bpm to 250bpm

Initial Inflation Pressure:

Adult: 160mmHg (default). Variable from 120 - 280mmHg

Paediatric: 120mmHg (default). Variable from 80-190mmHg

After the first BP reading has been performed, the next initial inflation pressure will be at 30mmHg above the mean of previous three Systolic reading or lower limit of initial inflation pressure which ever greater.

Accuracy:

±5mmHg mean deviation with standard deviation less than 8mmHg, as per AAMI SP10 guidelines. HR: ±3BPM or 5%, which ever is greater.

Patient Safety:

- Maximum cuff inflation time is limited to 50 seconds in all modes.
- Duration of blood pressure reading is limited to:
 - 130 seconds in adult mode
 - 90 seconds in paediatric mode.
- Measurement abort if:
 - Cuff pressure exceeds 300mmHg in adult mode or 150mmHg in paediatric mode.
 - Cuff stays inflated above 10mmHg for longer than 180 seconds in adult or paediatric mode.

SpO2

Range: Pulse rate : 20 - 300BPM
Saturation : 1 - 100%

Accuracy: Pulse rate: (±1 STD. DEV.)
20 - 220BPM : ±3BPM
220 - 250BPM : ±3BPM
Saturation
100 - 70% : ±3 digits
69 - 0% : unspecified

Patient Isolation: Type CF

Display

Dimensions (active): 6.5" (132mm x 99mm)

Type: TFT Colour LCD with LED Backlight

Resolution: 640 x 480 pixels (VGA)

Environmental

Operating Temperature: 0°C to 40°C

Storage Temperature: -20°C to 60°C

Humidity: 95% RH non-condensing (max)

Operating Altitude: Up to 4500m

Transportation: Up to 4500m

Ingress Protection: IPX1

Pacing

Type: External transcutaneous pacing.

Mode: Demand / Asynchronous.

Pulse Characteristics:

Pulse form: Monopolar / Pulse duration: 20mS

Current range: 0mA-200mA / Current steps: 5mA

Rate: 30bpm - 180bpm

Battery

Type: 12V, 5Ah, Rechargeable, SLA (Sealed Lead Acid)

Dimensions: 90 x 70 x 107 mm

Weight: 1.8 Kg

Charging Time: Approximately 4Hrs to 90%

Shock Cycles: Approximately 100 full energy (300 Joule) shocks from a new fully charged battery

Printer

Printing Method: Direct thermal line printing

Print Width: 48mm

Paper Width: 50mm

Printing Speed: 25mm/S

Paper Usage: Approximately 41 Shock Reports from a new roll

General

Mode Of Operation: Continuous

AC Power Input: 100Vac to 240Vac, 50Hz - 60Hz

Dimensions: 33.5cm (H), 37.6cm (W), 22.7cm (D)

Weight: 7.9 Kg (including external paddle with cable and battery)

Compliance

IEC60601-1,
IEC60601-2-4,
IEC60601-2-27,
IEC60601-2-30,
IEC60601-2-61





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