i-PAD NF1200

(Intelligent Public Access Defibrillator)

Defibrillation capability for the general public

Key Features

- Simple Operation
- LED Status Indicators
- Patented *e~cube* Biphasic Truncated Exponential Shock Waveform
- Automatic Self-testing
- Especially designed for public usage
- Economic Standard Package
- CPR coaching

- Size : 220 × 281 × 82 (W × L × H, mm)
- Weight : 2.2kg

Technical Specifications

- **DEFIBRILLATOR**
  - **Model** : NF1200
  - **Operation** : Semi-Automatic
  - **Waveform** : Biphasic Truncated Exponential
  - **Energy** : 200J (Fixed)
  - **Shock-to-Shock Cycle Time** : Typically less than 20 seconds
  - **Protocol** : Voice prompts and indicators guide user through protocol. Follow preconfigured settings. Can be modified with software
  - **Voice Instructions** : Detailed voice messages guide responder through use of the defibrillator
  - **Controls** : Shock Button, i-Button, On/off Button
  - **Indicators** : 4 LEDs (different colors), i-Button

- **ENVIRONMENTAL / PHYSICAL REQUIREMENTS**
  - **Temperature** : Operating : 32° ~110° F (0° ~ 43℃) Standby : 32° ~ 110° F (0° ~ 43℃)
  - **Humidity** : Operating - 0% to 60% relative, non-condensing Standby - 0% to 95% relative, non-condensing
  - **Vibration** : Meets EN1789 random and swept sine, road ambulance specification in operating and standby states
  - **EMI** (Radiated/Immunity) : Meets EN55011 Group 1 Level B Class B and EN61000-4-3

- **Sealing**
  - Meets IEC60529 class IP43 with battery installed

- **BATTERY**
  - **Type** : 12 Volt DC, 4.2 Ah, lithium manganese dioxide, disposable long-life primary cell
  - **Capacity** : Minimum 200 shocks or 4 hours of operating time (25℃)

- **AUTOMATED AND USER-ACTIVATED SELF-TESTS**
  - **Daily Self-Tests** : Tests internal circuitry, waveform delivery system, battery capacity and software
  - **Battery Insertion Test** : Upon battery insertion, extensive automatic self-tests and user-interactive test check device readiness

- **DATA RECORDING AND TRANSMISSION**
  - **Infrared** : Wireless transmission of event data to personal computer using the IrDA protocol
  - **Data Stored** : First 40 minutes of ECG an the entire incident's events and analysis decisions

Parts & Accessories

Standard Package
- Device
- Multifunction Defib. Pads
- Disposable $LiMnO_2$ Battery Pack
- User's Guide
- Quick Reference Card

Opition
- Carrying case
- Rechargeable battery pack
- Adaptor for battery charging
- IrDA connector for data communication
- Software for data management with key file
- Wall bracket
- Wall cabinet

i-PAD NF1200 Trainer

- 8 standard Rescue Scenarios
- Infrared remote control operation
- Powered by an external disposable battery pack or rechargeable battery pack
- Simulates all the functions of the NF-1200

Pads Connector Guide & LEDs
- Indicates the position of the pads connector
- Guide the user during rescue operation

Shock Button
- Delivers the shock

Information Button
- When pressed, guides the user
- during CPR and system trouble shooting

State LED
- Indicates operational state of the device

Battery Pack
- Disposable $LiMnO_2$ Battery Pack

IrDA Port
- Used for data communication

Paramedic CU-ER1

(Automated External Defibrillator)

Someone goes down in cardiac arrest, resuscitation is just a hand away...

Patented *e~cube* Biphasic measure impedance and deliver efficient defibrillation shock.

Key Features

- **Intelligent Arrhythmia Detector**
- **Efficient and effective *e~cube* Biphasic Truncated Exponential shock waveform**
- **Lightweight and highly portable**
- **Versatile Power Supply**
  - Internal rechargeable battery pack
  - External disposable battery pack
  - AC/DC adapter
  - Car cigar lighter jack
- **Intelligent data management system**
  - ECG of the patient is recorded all throughout the rescue operation.
  - Relevant events (e.g. shock advised, charging, shock delivery) are recorded together with timestamp.
  - Recorded data may be transferred to a PC for archiving and review.
  - Recorded data may be reviewed in the device.
- **Automatic and operator initiated self-tests**
  - Power on test
  - Run-time test
  - Daily / weekly / monthly test

- Size : 305 × 250 × 94 (W × L × H, mm)
- Weight : 2.7kg

Paramedic CU-ERT (AED Trainer)

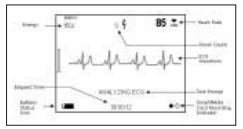
- **10 standard Rescue Scenarios**
- **Infrared remote control operation**
- **Powered by an internal rechargeable battery pack or AC/DC Adapter**
- **Simulates all the functions of the Paramedic CU-ER1**

The CU-ERT is a defibrillator simulator designed to mimic the operations of the Paramedic CU-ER1. It can simulate all the functions of the Paramedic CU-ER1 including charging and shock delivery.

• Parts & Accessories

Standard Package
- Device
- Defi pads
- Power cord
- AC adapter
- NI-MH battery
- User's guide
- Quick refernce card

Opition
- Carrying case
- SMC card
- Printer
- Cigar lighter jack car
- ECG cable
- Disposable battery pack
- Software for data managing
- Pediatric pads



LCD Screen

Displays
- The ECG of patient
- Energy of the shock to be delivered
- Shock count
- Heart rate
- Battery status
- Elapsed time

Indicator Lamps

Indicates
- Power sources
- Occurrence of system error

SmartMedica Card Port

Nonvolatile memory port for data storage

UART Port

Port for serial data transfer to a PC

IrDA Port

Port for infrared communication with a PC

AC/DC Adapter Port

Port for AC/DC adapter and Car cigar lighter jack

Paramedic CU-ER2

(Dual Mode Defibrillator)

Someone goes down in sudden cardiac arrest...
Build up more chances of saving lives with Paramedic Series.

Variable energy levels selection

Key Features

- AED and Manual Mode Defibrillation
- Synchronized Cardioversion
- ECG Monitoring (3 Lead ECG Cable)
- CPR Coaching in AED
- Lightweight (2.7kg) and highly portable
- Efficient and effective *e~cube* Biphasic Truncated Exponential shock waveform
- versatile Power Supply
  - Internal rechargeable battery pack
  - External disposable battery pack
  - AC/DC adapter
  - Car cigar lighter jack
- intelligent Data Management System
  - ECG of the patient is recorded all throughout the rescue operation.
  - Relevant events (e.g. shock advised, charging, shock delivery) are recorded together with timestamp.
  - Recorded data may be transferred to a PC for archiving and review.
  - Recorded data may be reviewed in the device.
- Automatic and Operator Initiated Self-Tests (power on / run-time / daily / weekly / monthly test)

Paramedic CU-ER3

(Dual Mode Defibrillator +SpO_2 Monitor)

SpO_2 Module (Nellcor)

Key Features

- AED and Manual Mode Defibrillation
- Synchronized Cardioversion
- ECG Monitoring Mode (3 Lead ECG Cable)
- SpO_2 Monitoring (Nellcor SpO_2 Module)
- Heart Rate and SpO_2 Alarm System
- CPR Coaching in AED
- Efficient and Effective *e~cube* Biphasic Truncated Exponential shock waveform
- Lightweight (2.8kg) and Highly Portable
- Versatile Power Supply
- Intelligent Data Management System
- Automatic and Operator Initiated Self-Tests (power on / run-time / daily / weekly / monthly test)

SPECIFICATIONS CU-ER1, CU-ER2, CU-ER3

Common

- ECG Monitor
  - Patient Connection : Defibrillation Pads, ECG Electrodes
  - Bandwidth : Monitoring Mode : 0.3 to 40Hz (-3dB)
  - EMS Mode : 1 ~ 30Hz
  - Heart Rate : Digital 30 to 300 bpm (±3bpm)
- Defibrillator
  - Waveform : *e~cube* Biphasic (Biphasic Truncated Exponential type)
  - Charging Time : Less than 10 seconds
  - Sensitivity & Specificity : Meets AAMI guidelines
  - Defibrillation Electrodes : Multifunctional electrodes (disposable, Pre-gelled)
- Voice & Text Prompts
  - Voice Prompts guide the user through the rescue protocol
  - All user interfaces are supported in local language
- Data Storage & Management
  - Internal Flash Memory : 12 Hours of event and ECG recording
  - SmartMedia Card(32M) : 42 hours of event and ECG recording or 1 hour if voice recording is enabled
  - Review the Patient ECG, incident details and device information
  - Transmit multi patient data to PC
- Display
  - Screen Type : High resolution display (Graphic LCD)
  - Screen Size : 4 inches (10.16 cm) diagonal, 320 X 240 pixels
  - Sweep Speed : 25mm / sec, nominal
  - Viewing Time : 3.2 seconds
- Automatic Self-Test
  - Power on Self-Test / Run Time Self-Test / Manual Self-Test
  - Periodic Self-Test (daily/weekly/monthly)
- AC Adapter
  - Input : 100 ~ 240V AC 50 / 60Hz 170VA
  - Output : +12V DC 3.6A
- Battery Pack
  - 12V 4.5Ah Nickel-Metal Hydride battery pack (Rechargeable)
  - Charging time : Minimum of 4 hours for full charging
  - Capacity : when new, minimum of 200 shock deliveries (Fully charged)
- External Link
  - UART port
  - IrDA port

- Parts & Accessories

Standard Package	Opition
- Device	- Carrying case
- Defi pads	- SMC card
- Power cord	- Printer
- AC adapter	- Cigar lighter jack car
- NI-MH battery	- ECG cable
- User's guide	- Disposable battery pack
- Quick refernce card	- Software for data managing
- SpO_2 Probe (only for CU-ER3)	- Pediatric pads

Differences

ECG Monitor		CU-ER1	CU-ER2	CU-ER3
ECG Size	auto-scaled	●	●	●
	5, 10, 20mm/mV		●	●
Defibrillator				
Operating Mode	Semi automatic	●	●	●
	Manual		●	●
Waveform	*e~cube* Biphasic (BTE type)	●	●	●
Energy	AED Mode 150J (default setting)	●	●	●
	Manual Mode : Variable energy levels selection (12 steps escalating, 2, 3, 5, 7, 10, 20, 30, 50, 70, 100, 150, 200J)		●	●
Synchronous Cardioversion	Energy delivery begins within 60ms of the QRS peak		●	●
Control	Manual Mode : CHARGE, SYNC(R-wave), DISARM		●	●
	AED Mode : ANALYZE, PAUSE		●	●
SpO_2				
Pulse Rate	20 ~ 250 bpm (±3bpm)			●
Saturation	70 ~ 100% (±3digits)			●
Perfusion	0.2 %			●
Physical				
Size (W X L X H)	254mm X 309mm X 93mm	●	●	●
Weight	Approximately 2.7 kg	●		
	Approximately 2.8 kg		●	●
Patient Isolation	Type BF	●	●	●
Optional Accessories				
ECG Cable	3 Lead	●	●	●
Package Contents				
SpO2 Module (Nellcor)				●

Paramedic CU-ER5

(Multifunction Defibrillator / Monitor)

The Paramedic CU-ER5 defibrillator / monitor is designed to accommodate both basic and advanced life support personnel.

External Paddle
(Adult, Pediatric)

- Size : 455 × 365 × 105 with paddle (W × L × H, mm)
- Weight : 4.7kg (with external paddle)

❖ Specifications

• Defibrillation

- ECG Lead Select	I, II, III, aVR, aVL, aVF, V, Paddle/Pads, Ext ECG
- Waveform	*e~cube* Biphasic (Biphasic Truncated Exponential type)
- Output Energy	Manual : 1~10J, 15J, 20J, 30J, 70J, 100J, 120J, 150J, 170J, 200J AED : 150J (Fixed) Internal Paddle : 1~10J, 15J, 20J, 30J, 50J
- Charge Time	Less than 10 seconds to 150J
- Shock Delivery	Via multifunction defib. electrode pads or paddle
- Patient Impedance	Shock range : 25 Ohm ~ 175 Ohm
- AED Mode	Shock advisory sensitivity and specificity meet AAMI DF-80 guidelines
- Synchronous Cardioversion	Energy transfer begins within 60ms of QRS peak
- Voice & Text Prompts	Multi language support

• ECG Monitoring

- Input	Lead I, II, III (3-lead ECG cable) Lead I, II, III, aVR, aVL, aVF or V (5-lead ECG cable)
- Heart Rate Display	30 to 300 bpm
- ECG Size	5, 10, 20mm/mV and Auto-gain
- Heart Rate Alarm	Less than minimum setting rate / Over than maximum setting rate
- Waveform Sweep Speed	25mm/sec

• SpO_2 Pulse Oximetry (Nellcor)

- Saturation	70~100% (±3digits)
- Pulse Rate	20~250bpm (±3bpm)
- Perfusion	0.2%

• Power

Internal Battery

- Type	Rechargeable / 12V 4.5Ah Ni-MH battery pack
- Capacity	When new, minimum of 200 shock deliveries (200J)
- Recharging Time	Minimum of 4 hours for full charging

External Battery Pack

- Type	Disposable / 15V 4.2Ah $LiMnO_2$ battery pack
- Capacity	When new, minimum of 200 shock deliveries (200J)

AC/DC Adapter

- Input	100~240V AC 50/60Hz
- Output	DC 12V, 3.6A
- Car Cigar Lighter	DC 12V

• Physical

- Dimensions	Without eternal paddle : 254*365*105 (mm) With external paddle : 455*365*105 (mm)
- Weight	4.7Kg (with external paddle)

• Environmental Requirement

- Temperature	Operation : 0℃~ 40℃ Storage : -20℃ ~ 60℃
- Humidity	5% ~ 95%

• Display

- LCD Dimensions	4" diagonal (80mm*60mm)
- Type	High resolution mono graphic LCD
- Resolution	320*240 pixels
- Wave Viewing Time	3.2 seconds (ECG)
- Back Light	EL back light

• Data Storage & Management

- Internal Flash Memory	12 hours of event and ECG recording
- Data Card (SMC 32M)	42 hours of event and ECG recording or 1 hours if voice recording is enabled
- Data Transfer to PC	UART / IrDA

• Self-Test

- Power on Self-Test
- Run Time Self-Test
- Manual Self-Test
- Periodic Automatic Self-Test (Daily / Weekly / Monthly)

• Parts & Accessories

Standard Package

- Device
- External Paddle (Adult, Pediatric)
- 3-Lead ECG Cable
- Power Cord
- AC Adapter
- Internal Battery (Ni-MH)
- User's Guide

Option

- Date Card (SMC 32M)
- Thermal Printer
- Printer Paper (10 rolls)
- Cigar Lighter Jack for Car
- Multifunction Defib. Pads
- Adapter for Defib. Pads
- 5-Lead ECG Cable
- ECG Electrodes (50EA)
- SpO_2 module set (probe, extension cable)
- Disposable Battery Pack ($LiMnO_2$)
- IrDA Adapter for Data Communication
- Software for Data Management with Key File (UART Cable included)

LiFEGAIN CU-HD1

(Multifunction Defibrillator / Monitor)

Someone goes down in cardiac arrest, resuscitation is just a hand away...

Key Features

- Efficient and *e~cube* Biphasic Biphasic technology (BTE Type)
- Manual and AED operation
- Defibrillation using paddles, pads or internal paddles
- ECG Monitoring (3-Lead ECG / 5-Lead ECG / 10-Lead ECG)
- SpO_2 pulse oximetry with alarms (Nellcor)
- Noninvasive pacing mode
- NIBP (Non-Invasive Blood Pressure)

❖ Specifications

• Display

- LCD Dimensions : 7 inch Diagonal (152mm * 91mm)
- Type : TFT Color
- Resolution : 800 * 480 pixels

• Defibrillation

Defib Common
- Waveform : Truncated Exponential Biphasic (e~cube)
- Charge Time : Adapter : Less than 5 seconds to 200 Joules
  Battery : Less than 7 seconds to 200 Joules

AED Mode
- Output Energy : 200J
- Shock Delivery : Via multifunction defib electrode pads
- AED Develop Guideline : Shock advisory sensitivity and Specificity meet AAMI DF-80 guidelines
- Voice & Text Prompts : Guide the user through the protocol via multifunction defib electrode pads

Manual Mode
- Output Energy : 1~10J, 15J, 20J, 30J, 50J, 70J, 100J, 120J, (Selected) 150J, 170J, 200J
- Shock Delivery : External paddle (with Pediatric) / Internal paddle
- Synchronous Cardioversion

• Printer

- Continuous ECG Strip : Real-Time (8 seconds delay)
- Auto Printing : Recorder can be configured to print marked event, charge, shock and alarms
- Printing Speed : 25mm/s
- Paper : 50mm Width / 40mm Diameters

• Automatic Self-Test

- Power On Self-Test
- Run Time Self-Test
- Manual Self-Test
- Periodic Self-Test (Daily / Weekly / Monthly)

• Data Storage

- External memory card
  : SD Card (ECG data, Event, Voice)

• Power Source

External Battery Pack : Lithium Polymer
- Type : 14.8V 3.1Ah (Rechargeable)
- Capacity : When new, minimum of 100 shock deliveries (200J)

AC Power Pack
- Output : 18V, 6A

• Noninvasive Pacing

- Waveform : Monophasic Truncated Exponential
- Mode : Demand and Fixed Mode
- Amplitude Accuracy : 0 ~ 200mA (±5mA)
- Pulse Width : 20ms (±1.5%)
- Pulse Rate : 30 ~ 180ppm (±1.5%)
- Refractory Period : 340 msec (30 to 80 ppm)
  240 msec (90 to 180 ppm)

• SpO_2 Pulse Oximetry

- Saturation : 70 ~ 100% (±3digits)
- Pulse Rate : 20 ~ 250 bpm (±3bpm)
- Perfusion : 0.2%
- Module Manufacturer : Nellcor
- SpO_2 Alarm : Less than Minimum setting rate
  Over than Maximum setting rate

• NIBP

- Patient Population : Adult, Pediatric, Neonate
- Method : Oscillometric
- Control : Autometic and manual measurements
- Auto Intervals : 1, 3, 5, 10, 15, 30, 60, 120 min
- Displayed Pressures : Systolic, Diastolic, MeanmmHg
- Displayer Units : Adult : 40 to 260 mmHg
  Pediatric : 40 to 160 mmHg
  Neonate : 40 to 130 mmHg
- Systolic Range : Adult : 20 to 200 mmHg
  Pediatric : 20 to 120 mmHg
  Neonate : 20 to 100 mmHg
- Diastolic Range : ±3mmHg
- Pressure Transducer Accuracy : Adult : 300 mmHg
  Pediatric : 300 mmHg
  Neonate : 150 mmHg
- Redundant Circuit Overpressure Limit

• ECG Monitoring

- Input : 3-Lead Cable : I, II, III
  5-Lead Cable : I, II, III, aVR, aVL, aVF or V
  10-Lead Cable : I, II, III, aVR, aVL, aVF or V1, V2, V3, V4, V5, V6
  (Display View : All 12-Lead ECG waves display simultaneously)
- Lead Fault : "Lead Fault" message and dashed line display, if an electrode or lead wire becomes disconnected
- Heart Rate Display : 30 to 300 bpm (±3bpm)
- ECG Size : 5, 10, 20mm/mV and Auto-gain
- Heart Rate/Arrhythmia Alarm : HR, Asystole, VF, VT

- Size : 318 × 208 × 355 (W × L × H, mm)
- Weight : 5kg (with external paddle)

• Parts & Accessories

Standard Package
- Device
- External Paddle (Adult, Pediatric)
- 3 Lead ECG cable
- ECG electrodes
- Defi pads & Adaptor
- Built in printer
- Power cord & SMPS
- Internal Battery
- Gel
- User's Guide

Opition
- Carrying case
- SD card
- SD card reader
- Pediatric pads
- 5 Lead ECG cable
- Car cigar lighter jack
- SpO_2 Module Set
- Pacer
- 10 Lead ECG cable
- NIBP (Non-Invasive Blood Pressure)
- Software for data management (CU-EX2)