

Saving Lives Everyday!



D 700

Monitor | Defibrillator

D700

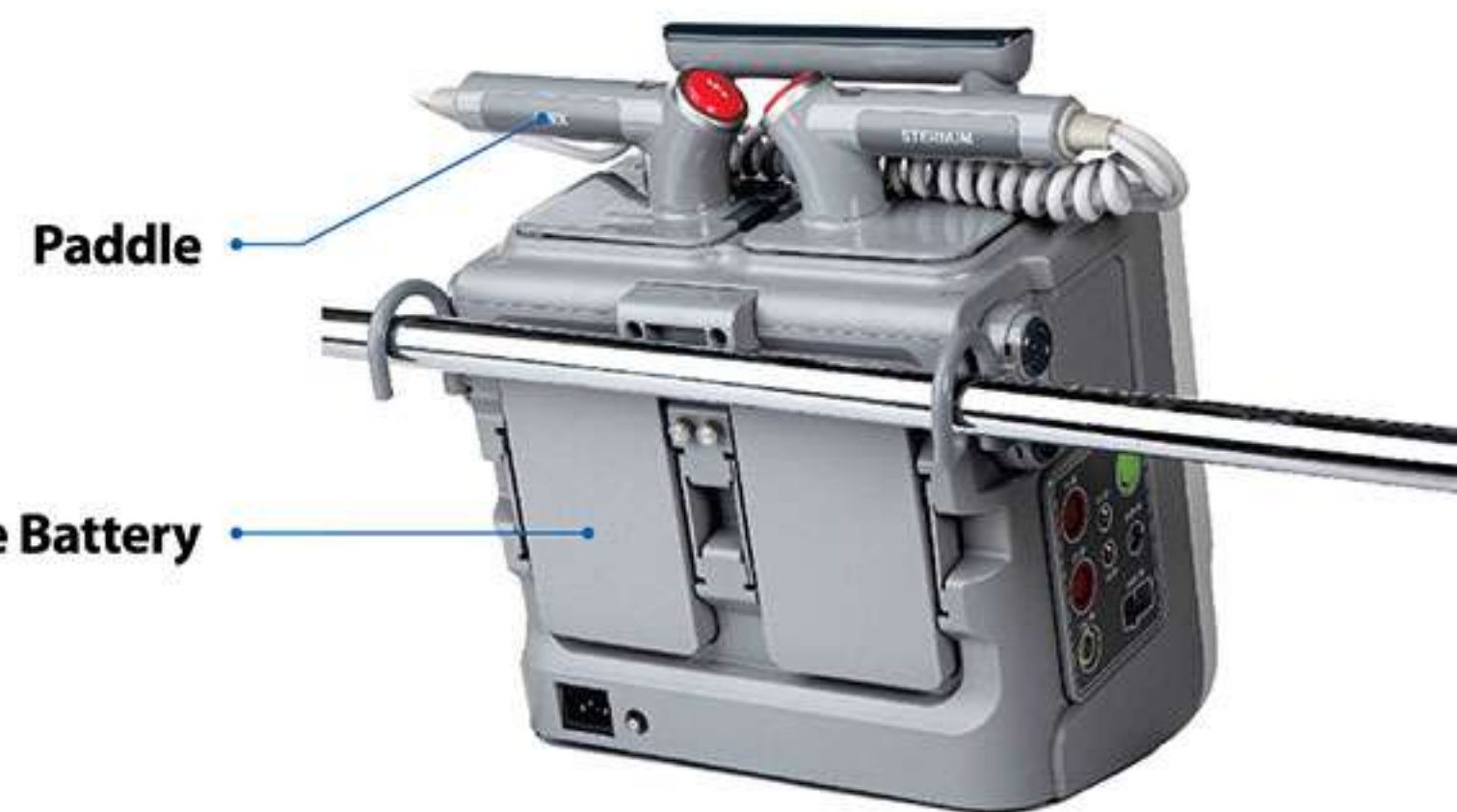
Monitor | Defibrillator



*Menu in multi-language : English, Spanish, Russian, German, Polish, French, Portuguese, Czechich, Italian

Biphasic Defibrillation, Pacing and Complete Monitoring in one Portable Device.

- » Multifunctional Defibrillator /Monitor
- » Manual and AED Operation
- » Non-invasive Pacing Mode
- » Advanced Biphasic Technology
- » Defibrillation with Paddles
- » Internal defibrillation with Internal spoons
- » 12 Lead ECG Monitoring



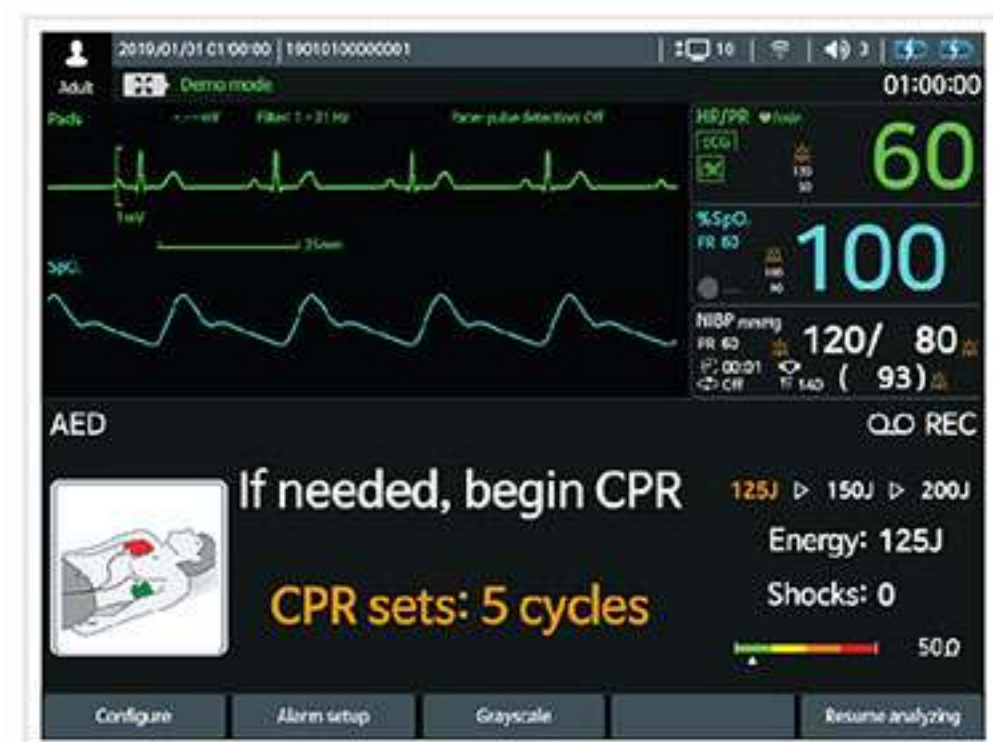


» Monitoring-12 Lead ECG Display



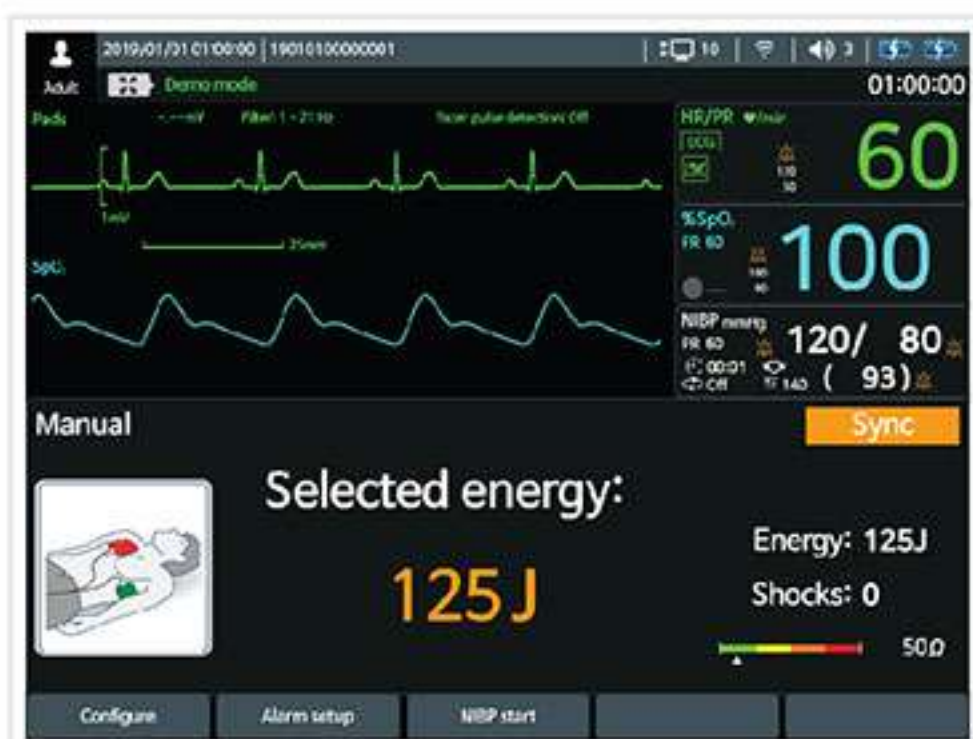
Full range of monitoring options available, including 3/5/12 Lead ECG(Glasgow University), Nellcor SpO2, Omron NIBP, IBP, Temp and Respiration EtCO2

» AED



Semi-automatic AED mode with easy to follow step by step visual and audio instructions

» Manual Defibrillation



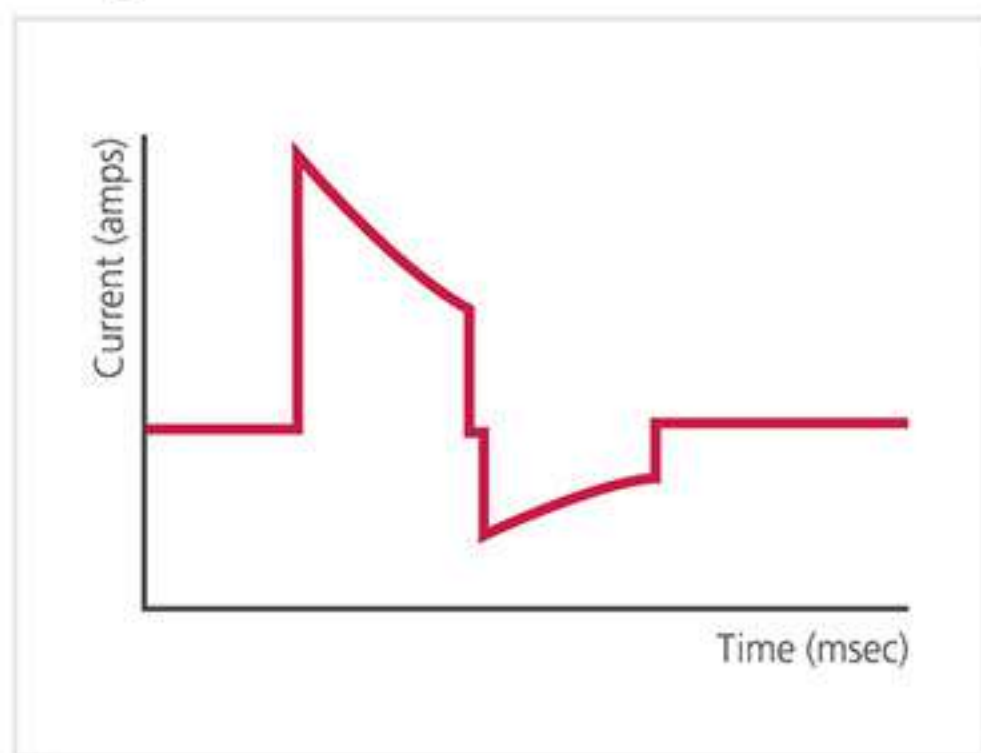
Biphasic Manual Defibrillation with maximum Energy level of 360 J. With Synchronous Cardioversion.

» Non-Invasive Pacing



Demand and Non-Demand Pacing modes with Pacing rates adjustable from 30 to 180 ppm.

» Biphasic Waveform



Most effective Biphasic Truncated Exponential Waveform with impedance compensation. (25 to 175 Ohm)

» Data Storage



Powerful memory for saving of numerical data and ECG, EtCO2 and IBP waveforms. Saves data for up-to 100 patients and 250 events.

» Dual Battery



Dual Battery system with Automatic Switching. Each battery supports a minimum of 200 shocks and 5 hours operating time.

» Integrated Thermal Printer



Device features an integrated Printer with 80mm Paper Width that can print up to 3 Channels and Report / Patient information. 12 lead interpretive Analysis Report.

» Paddle (Adult & Pediatric)

» Pads

» ECG Cables



D700 Monitor | Defibrillator Specification

Display

Screen Size	8.4" TFT-LCD
Screen Type/Color	Liquid Crystal Display (LCD) Color
Resolution	170 x 128 mm

Controls

Multifunction Knob, Mode selection Knob (Power Off, AED, Manual, Monitor and Pacing), 13 function buttons (Paddle energy selection, Patient selection, ECG Lead change, ECG size change, Print, Paddle charge, Energy selection, charge, ECG analyze, Shock, Sync, Event, Alarm), 5 soft keys.

Alarms

Categories	Patient Status and System Status
Priorities	Low, Medium and High Priorities
Notification	Audible and Visual
Setting	Default and Individual
Alarm Volume Level	45 to 85 dB

Physical Characteristics and Printer

Instrument	
Dimensions	310*290*215 (mm) (W*H*D)
Weight	6.5 kg

Internal paddle

Type	Length	Weight
Spoon 16cm ²	16cm	80g
Spoon 32cm ²	23cm	270g
Spoon 54cm ²	24.5cm	310g
Interface cable	3.6m	540g
Trunk cable	66cm	190g

Printer

Type	Thermal
Weight	190g
Number of Channels	1 to 3 channels
Paper Type	Thermal transfer paper
Paper Width	80 mm
Printer Speed	25 mm/sec, 50 mm/sec

Electrical

Instrument	
Power Requirement	AC Mains 100 to 240 V, 50/60 Hz, 140 - 130 VA
Battery (Option)	
Type	Li-ion battery
Dimensions	105.40 x 143.97 x 36.00 mm (W x H x D)
Voltage/Capacity	4S2P 14.52V / 6600mAh
Discharge	A minimum of 200 shocks at 200 Joules (per battery)
Operating Time	5 hours (per battery) At the following condition: no printing, no external communication, no audible alarm sound, room temperature: 25°C
Recharging Time	8 hours with operating Defibrillation/Patient monitor 5 hours with power off
Dual Battery	Automatic Switching

Environmental Conditions

Operation	
Temperature	0 to 50°C (32 to 113°F)
Humidity	5 to 95% RH, non-condensing
Atmospheric pressure	583.28 ~ 1013.25 hpa (0 ~ 4,575m at 25°C)
Water Resistance	IP34
Transport and Storage (in shipping container)	
Temperature	-20°C to 60°C (-4°F to 140°F)
Humidity	5 to 95% RH, non-condensing
Atmospheric pressure	200.36 ~ 1013.25 hpa (0 ~ 12,192m at 25°C)

Defibrillator

Biphasic Waveform | Biphasic Truncated Exponential
Resuscitation Guidelines: Selectable AHA/ERC

Manual Mode

Shock Energy Level

When connecting pads or external paddles :

- Adult : 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 15, 20, 30, 40, 50, 75, 100, 125, 150, 175, 200, 300, 360 J
- Pediatric : 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 15, 20, 30, 40, 50, 75, 100 J

When connecting internal paddles :

- Adult/Pediatric : 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 15, 20, 30, 40, 50 J

Automatic Discharge Time: 20, 60 seconds

Charging Time to 200 J Within 5 seconds at AC / DC rated voltage

Within 6 seconds with fully charged battery power

Charging Time to 360 J Within 8 seconds at AC / DC rated voltage

Within 8 seconds with fully charged battery power

Synchronous Cardioversion : Energy transfer begins within 60msec of the QRS peak

AED Mode

1 ch ECG measurement

Lead	Lead II
Patient Impedance	When connecting pads or external paddles : 25 to 175 Ohm When connecting internal paddles : 15 to 175 Ohm
Heart Rate	20 to 300 bpm
Charging Time to 200J	Within 5 seconds at AC / DC rated voltage Within 6 seconds with fully charged battery power

Pacer

Pacing Mode	Demand or non-demand
Pacing rate	30 ppm to 180 ppm (The increment unit is 2 bpm)
Accuracy	± 1.5 %
Output current	0 mA to 140 mA
Resolution	2 mA
Accuracy	± 5% or 5 mA, whichever is greater
QRS Marker	In the demand mode

ECG

Heart Rate

Measurement Rate	0, 20 to 300 bpm
Resolution	1 bpm
Accuracy	±1 bpm or ±1% (whichever is greater)

ECG (Electrocardiograph)

Leads	3 / 5 / 12 Lead Lead I, II, III, aVR, aVL, aVF, V1, V2, V3, V4, V5, V6, Paddles, Pads
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Lead Off Detection Detected and displayed

Pacer Detection Detected pacer pulses of ±2mV to ±700mV with pulse widths of 0.1 to 2msec and rise times 10% of width not to exceed 100msec

Input

Input Impedance 2.5 M Ohm or more (for 0.05 to 40 Hz, with lead cable and relay cable)

Input Dynamic Range ±5mV AC, ±300mV DC

Voltage Range ±0.3mV ~ ±5mV

Signal Width 40 to 120 ms (Q to S)

Output (Frequency Response)

ECG Filter	Interpretation	0.05 to 150Hz
	Low	0.05 to 40Hz
	Med	0.5 ~ 40 Hz
	High	0.5 ~ 30 Hz
	Hum filter	50 Hz, 60 Hz (not shown or 60 dB or over)
	ECG size	Auto, 5.0, 10.0, 15.0, 20.0, 30.0, 40.0 mm/mV

Display Sweep Speeds 25.0 mm/sec

Display Sensitivity 10 mm/mV

Pacing Pulse Detection On, Off

Electrode Disconnect Alarm Display and/or sound

Common Mode Rejection(CMRR) 90 dB or more

Defibrillator Discharge Recovery less than 5 sec per IEC 60601-2-27

Defibrillation Protection Protected

Interpretive Algorithm

12-Lead Interpretive Algorithm University of Glasgow 12-Lead ECG Analysis Program

Respiration

IM Respiration

Technique	Impedance Pneumography
Range	0 ~ 150 BPM
Resolution	1 BPM
Accuracy	±3 BPM
Base impedance	500 to 2000 ohm
Delta impedance	≥3 ohm
Lead Off Detection	Yes

AW Respiration

Technique	Non-dispersive Infrared Spectroscopy
Range	0 to 150 breaths/min
Accuracy	±1 breaths/min

NIBP

Pulse Rate

Pulse Rate Range	Adult/Pediatric/Neonatal 30 to 240 bpm
Resolution	1 bpm
Accuracy	±5%

NIBP (Non-Invasive Blood Pressure)

Technique	Oscillometric Measurement
Measurement Modes	Off, Cont, 1, 2, 2.5, 5, 10, 15, 30, 60, 120 minutes Edit program measurement interval
Measurement Range	Adult/Pediatric SYS 40 to 270 mmHg DIA 20 to 200 mmHg Neonatal SYS 40 to 120 mmHg DIA 20 to 90 mmHg
Accuracy	±3 mmHg
Resolution	1 mmHg
Initial Cuff Inflate Pressure	Adult/Pediatric Auto, 120, 140, 160, 180, 200, 220, 240, 260, 280 mmHg (16.0, 18.7, 21.3, 24.0, 26.7, 29.3, 32.0, 34.7, 37.3 kPa) Neonatal Auto, 80, 100, 120, 140 mmHg (10.7, 13.3, 16.0, 18.7 kPa)
Automatic Cuff Protector	Adult/Pediatric 300 mmHg Neonatal 150 mmHg
Defibrillator Protection	Protected

IBP

Pulse Rate

Pulse Rate Range	Adult/Pediatric/Neonatal 20 to 250 bpm
Pulse Rate Resolution	1 bpm
Pulse Rate Accuracy	± 1 bpm

IBP (Invasive Blood Pressure)

Measurement Range	BP -50 mmHg to 300 mmHg
Resolution	BP 1 mmHg
Input Sensitivity	5 µV/V/mmHg
Transducer Volume Displacement	0.1 mm ³ /100 mmHg
Zero Calibration Range	-50 ~ 100 mmHg
Frequency Response	25 Hz
Waveform display ratio	Auto, 0 ~ 50, 0 ~ 100, 0 ~ 200, 0 ~ 300 mmHg
Defibrillator Protection	Protected

SpO2

Measurement Range	<i>Mediana module</i> 0 ~ 100 % <i>Medtronic module</i> 1 ~ 100 %
Accuracy	<i>Mediana module</i> ±2 digits (70% to 100%) (Unspecified if less than 70%) <i>Medtronic module</i> If there is no movement ±2 digits (70% to 100%) Low Saturation ±3 digits (60% to 80%) Low Perfusion ±2 digits (70% to 100%) If there is movement ±3 digits (70% ~ 100 %)

Capnography

Display parameters	EtCO ₂ , InCO ₂
Measurement Range	0 to 150 mmHg (0kPa - 20kPa, 0% - 20%)
Accuracy	0 to 40 mmHg ±2 mmHg of reading 41 to 70 mmHg ±5% of reading 71 to 100 mmHg ±8% of reading 101 to 150 mmHg ±10% of reading Not decreased according to respiratory rate or I / E ratio
Display Accuracy	±2 mmHg
Response Time	<i>Mainstream</i> : Less than 60ms <i>Sidestream</i> : Less than 3sec
Barometric pressure correction	-152.4 - 4572 meters (-500 - 15,000 feet), 775 - 429 mmHg, Auto
Gas Compensation	User selective at O ₂ > 60% and N ₂ O > 50%
Stability	<i>Short term drift</i> : Less than 0.8 mmHg over 4 hours <i>Long term drift</i> : Maintain accuracy over 120 hours
Accuracy change due to gas and chemical interference	0-40 mmHg ± 1 mmHg Additional Error 41-70 mmHg ± 2.5% Additional Error 71-100 mmHg ± 4% Additional Error 101-150 mmHg ± 5% Additional Error
Measurement preparation time	2 minutes maximum
Sweep Speeds	6.25, 12.5, 25.0 mm/s
Extraction rate	100Hz
Sound Noise Level	Less than 41dB (when ambient noise level is 22dB)

Temperature

Probe Types	Thermistor probe YSI compatible type
Measurement Range	0.0 to 50°C (32.0 to 122°F)
Resolution	0.1°C
Defibrillator Protection	Protected

Trend

Type	12 lead, Events, Trend
Data storage	Internal memory, SD card
Memory	12 lead Saves total 100 data Saves ECG waveform, ECG analysis result/data/date/time HR/PR, NIBP, SpO ₂ , Respiration, Temperature, IBP, EtCO ₂ numeric data, alarm condition
Event	Saves total 250 data Saves defibrillation shock information (number of shock, energy level selection, actual passed energy, impedance) Pacing information (pace rate, pace current, async mode) Clinical action list 1 channel ECG waveform, Event date and time HR/PR, NIBP, SpO ₂ , Respiration, Temperature, IBP, EtCO ₂ numeric data, alarm condition
Trend	Saves total 200 data Saves date and time HR/PR, NIBP, SpO ₂ , Respiration, Temperature, IBP, EtCO ₂ numeric data, alarm condition

Optional Items

Non-invasive Blood Pressure with cuffs and cuff hoses
SpO₂ (Nellcor) with DS-100A and DOC-10
12 Lead ECG with Interpretation from the University of Glasgow
Continuous Temperature Monitoring
EtCO₂, selectable either Mainstream or Sidestream from Respironics
Invasive Blood Pressure Monitoring (2 lines)
Wi-Fi/3G Communication module
Wireless LAN data transmission
Additional Battery

Healthcare Solutions You Can Trust



Our mission is to save lives by developing, manufacturing and selling state-of-the-art medical technology.

Our ultimate goal is to earn the trust of our customers by using our imagination and skills to continuously offer better medical solutions.



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