



The HP Codemaster XL Combines a defibrillator, cardioscope, and annotated recorder to provide a hands-off defibrillation option in this High-performance unit. The HP Codemaster XL offers multi-functional electrodes that allow you to do pacing and defibrillation with the same pads. The Defibrillation system has built-in paddles for pediatric and adult patients. With its easy 1-2-3 operation, the system is easy to use and offers a speed response in an emergency. The system can charge from 0 to 360 in 5 seconds and store up to 28 events in the memory. The HP Codemaster XI Plus has a bright 5-inch screen that can tell you the condition of the patient at a glance.

Features

- Defibrillator with ECG and recorder
- Provides 1-2-3 operation
- Built-in pediatric paddles under slide-off adult paddles
- Preset heart rate alarms
- High-capacity battery
- Built-in diagnostics



Specifications

Dimensions

Height: 7.9" (20 cm)
Width: 11.8" (30 cm)
Depth: 15.6" (39.7 cm)
Weight: 24 lbs (10.9 kg)

Defibrillator

Waveform: Damped sinusoidal (Lown)
Output Energy: 2, 3, 5, 7, 10, 20, 30, 50, 70, 100, 150, 200, 300, and 360 joules
Charge Control: Push-button on apex paddle and on front panel
Charge Time: Less than 5 seconds to 360 joules with battery present. Less than 15 seconds to 360 joules on AC only.
Armed Indicators: Charge done tone, charge done lamp on apex paddle, and available energy indicated on display.
Paddle Contact Indicator (optional): 3-color LED bar graph array on STERNUM paddle indicates quality of defibrillator paddle contact before discharge.
Paddles: Standard paddles are anterior/anterior, adult and pediatric. Adult electrodes (83 cm²) slide off to expose pediatric electrodes (21 cm²). Paddle cord is 10 ft (3 m). Full range of internal paddles available.

Monitor

Inputs: ECG may be viewed through paddles or patient cable. Lead I, II, III, or PADDLES selectable. Additional leads (aVR, aVF, aVL, V Leads) and PADS are available. Monitor and recorder indicate selected ECG source
Lead Fault: LEADS OFF message and dashed baseline appear on monitor if a lead becomes disconnected
Common Mode Rejection: Greater than 100 dB measured as per AAMI standards for cardiac monitors (EC13)
Display Size and Type: 5 inch (12.7 cm) diagonal CRT for 4 seconds of ECG data on screen; non-fade, fixed trace. Scrolling trace is selectable
Sweep Speed: 25 mm/sec nominal
Frequency Response: 0.5 to 40 Hz
Heart Rate Display: Digital readout on monitor from 15 to 300 BPM.
Heart Rate Alarms: Three pre-set pairs of high and low heart rate alarm limits from 20 to 280 BPM. (Configurable pairs are optional.)
ECG Output: 1V/mV
Patient Cable Length: 10 ft (3 m)



Specifications Continued

Thermal Array Recorder

Event Summary (optional): Stores and prints 3 seconds pre- and 8 seconds postcritical event data for up to 28 events. Data retained after unit is turned off

Annotates: Time, date, HR, event marker, ECG mode, defibrillator mode, selected energy, actual delivered energy, peak current, and patient impedance

Speed: 25 mm/sec.

Paper Size: 50 mm by 30 m (100 ft)

Recorder Mode: Automatically documents events and ECG during defibrillation episodes. The recorder can be configured to run in either real time or with a six second delay

Frequency Response: 0.5 to 40 Hz or 0.05 to 150 Hz selectable

Battery

Type: Rechargeable sealed lead-acid battery. 4 Ah, 12 V nominal

Charge Time: 2 hours to 90% of full capacity. 18 hours to 100% capacity. Repeated charging to less than 100% will reduce useful life of battery.

Capacity: 2 1/2 hours monitoring or fifty (50) full-energy discharges or 1 hour monitoring and recording.

Battery Indicators: Illuminated LED indicates battery is charging. LOW BATTERY message appears on monitor when limited battery capacity remains.

External Pacemaker (Optional)

Current Pulse Amplitude: 10 mA to 200 mA.

Pulse Width: 20 msec.

Rate: 40 ppm to 180 ppm.

Modes: Demand or fixed rate.

Refractory Period: 40 to 80 ppm 340 msec; 90 to 180 ppm 240 msec.

SpO2 (Optional)

Measurement Range: 0 to 100%

Accuracy with HP M1190A Sensor: 1 standard deviation, 65-80%: $\pm 2.5\%$, 80- 100%: $\pm 1.5\%$, resolution: 1%

Averaging: 8 beats

SpO2 Alarm Limits — Range: 100/90, 100/85, 100/80

SpO2 Alarm Delay: Ten seconds after value drops below the low alarm setting.

INOP Alerts: Triggered by disconnected sensor, noisy signal, light interference or low signal.

Pulse Rate Measurement Range: 30 to 300 bpm $\pm 1\%$; resolution 1 bpm.

Pulse Amplitude Indicator: Indicates pulsatile activity.

