



The **Philips Heartstart FR1** is also referred to as the Philips Heartstart Forerunner. The HeartStart FR1 is a semi-automatic defibrillator. The Defibrillation system comes with an LCD screen that can display prompts for resuscitation, patient information, and ECG readings. The Heartstart Forerunner is a lightweight, portable AED that runs off of battery power. it Runs Self diagnostic test periodically to make sure the system is always working and ready when needed. The Philips AED system can analyze the patient's ECG reading to decide if a shock is needed. The Philips Heartstart FR1 can produce a minimum of 130 joules of energy in a shock if needed.

## Features

- Disposable, recyclable sealed lithium battery.
- Nominal 150 Joule energy shock.
- Less than 10 seconds charge time.
- High-resolution backlit LCD screen that displays ECG and informational text messages.
- Disposable and self-adhesive defibrillation pads.
- Optional PC data card to record event information, ECG, voice, and other audible activity.



## Specifications

### Dimensions

**Height:** 2.53 in. (6.4 cm)  
**Width:** 8.75 in. (22.3 cm)  
**Depth:** 8 in. (20.3 cm)  
**Weight (With battery):** 4.4 lbs (2 kg)

### Battery

16 VDC 1300 mAH lithium  
 Disposable, recyclable, long-life, primary cells  
**Capacity:** 100 shocks or 5 hours of operating time  
**Shelf-Life:** 5 Years

### Display

High-resolution backlight LCD  
**Height:** 2.3 in. (5.8 cm)  
**Width:** 2.8 in. (7 cm)

### Defibrillator

**Waveform:** Truncated Exponential Biphasic. Waveform parameters are adjusted as a function of patient defibrillation impedance.  
**Energy:** Single Energy—a nominal of 150 Joules (minimum of 130 Joules) delivered to a 50 ohm load.  
**Charge Control:** Under control of the Patient Analysis System for semi-automatic operation. The manual override button allows manual charge control (FORERUNNER Model EM only).  
**Charge Time:** Typically less than 10 seconds. Charge time increases at the end of battery life as well as at temperatures below 10°C.  
**Shock-to-Shock Cycle Time:** Typically less than 20 seconds (including analysis time) in semiautomatic mode.  
**Shock Discharge Control:** Shock is delivered by a single shock button.

### ECG Display

**Monitored Lead:** ECG information is acquired through defibrillation pads in anterior-anterior (Lead II) placement.  
**Display Range:** Differential:  $\pm 2$  mV full scale nominal.  
 Sweep Speed: 23 mm/sec. nominal.  
**Frequency Response (Bandwidth):** Nondiagnostic rhythm monitor 1 Hz to 20 Hz (-3 dB) nominal.  
**Sensitivity:** 1.16 cm/mV nominal.  
**Heart Rate:** Displays a range of 30 to 300 beats per minute updated each analysis period. Heart rate is displayed only during monitoring mode and if ECG is displayed.

