



Technology Guide

Leading corporations, organizations and industry experts agree: HeartSine, a world leader in the provision of medical devices for the lifesaving treatment of Sudden Cardiac Arrest (SCA), has a comprehensive offering and benefits that deserve serious consideration when selecting a partner to supply lifesaving AED technology.

Our inventive technologists continue to change the way urgent care is delivered around the world, by delivering a series of world first defibrillator products:

- World's first portable, battery-operated defibrillator
- World's first portable defibrillator deployed in an ambulance
- World's first patent for automated recognition of ventricular fibrillation
- World's first defibrillator with flat screen display
- World's most environmentally-protected defibrillator on the market

Here's how HeartSine's leading AED technology differs from the technologies used by other AED manufacturers:

Patented SCOPE Technology. Our patented SCOPE™ biphasic technology is an escalating and low- energy waveform that automatically adjusts for patient impedance differences to optimize the efficacy of the HeartSine samaritan PAD.

Proprietary Electrode Technology. Electrodes, the primary point of contact between the patient and the defibrillator, form the critical link between the AED and its ability to deliver lifesaving energy to the patient. HeartSine electrode technology uses a patented construction method to provide a rapid recovery time (reducing the time between shock and CPR), and a four-year shelf life without significant increase in cost. This same technology provides good electrical performance and greatly reduced noise. HeartSine electrodes also are large and have very low impedance, both of which are critical to successful defibrillation.

Superior Protection. With a rating of IP56, the samaritan PAD provides the highest level of water and dust ingress protection in the industry. Because our products are some of the most robust AEDs available on the market, we're able to offer a standard eight- year product warranty which is second to none. This translates into comfort and security for your customers, employees, family and friends.

One-Change Maintenance. Our innovative, single-use Pad-Pak™ houses both the battery and electrodes with one expiration date that eliminates the need and reduces the costs to track and inventory two separate items.

Real-Time CPR Feedback. CPR Rate Advisor™ on the SAM 450P provides the rescuer with real-time verbal and visual instructions to guide the rescuer in performing effective CPR. This unique feature utilizes the Impedance Cardiogram (ICG) which guides the rescuer in the rate of compressions for the victim. All other HeartSine samaritan PAD devices provide CPR Coaching.

Most Portable. HeartSine offers the smallest and lightest AED on the U.S. market, so it's the most convenient to use and store. Significantly, the clever design of the HeartSine samaritan PADs allows these AEDs to be stored and used in the absence of their carry-case, truly making the most portable AED.

Easy to Use. Designed for ease of use, the HeartSine samaritan PAD is a completely self-contained unit with no lid to open, or complex displays or controls. Its simple two-button

operation and voice/visual prompts with clear instructions guide the user through every step, including electrode pad application, shock delivery and CPR.

Advanced technology balanced against the demands of real-world use. At HeartSine, our innovation changes lives. And saves lives.

Inventive, Innovative and Patented Technology

HeartSine products take advantage of our proprietary technology components, which include:

- Cardiac arrhythmia detection and defibrillation algorithm
- Advanced microprocessor-based energy switching and delivery system
- SCOPE, an optimized biphasic energy delivery waveform
- Innovative electrode design for monitoring heart activity and facilitating defibrillation energy delivery
- Unique ICG-based CPR Rate Advisor system