

HeartSine samaritan[®] PAD
SAM 450P Trainer
Model TRN-450-1
User Manual



Contents	2
Introduction	3
Preparing the TRN-450-1 for use	4
Turning the TRN-450-1 on and off	4
HeartSine samaritan® TRN-450-1	5
Managing the electrodes	6
Using the electrodes	6
Rewinding the electrodes after use	6
The remote control	7
Pre-programmed training scenarios	8
Manual control of the TRN-450-1	10
CPR Rate Advisor™ training module	11
HeartSine samaritan PAD with CPR Rate Advisor, SAM 450P	11
CPR Rate Advisor training	11
Compressions	12
Maintenance	14
TRN-450-1 battery management	14
Charging and recharging the TRN-450-1	14
Remote control batteries	15
TRN-450-1 Configuration Tool	15
CPR Guidelines 2010	16
Disposal instructions	17
Warranty exclusion	17

This User Manual provides instructions on how to operate the HeartSine® TRN-450-1.

The TRN-450-1 is a non-medical device intended to be used for the training of emergency responders in the proper use of the HeartSine samaritan® PAD 450P (SAM 450P) automated external defibrillator. The TRN-450-1 has no therapeutic capabilities and must not be used in real life rescue situations.



IMPORTANT: *In order to avoid confusion in the event of a real life rescue, do not store or leave the TRN-450-1 near the HeartSine samaritan PAD automated external defibrillator.*

To allow quick and easy identification, the TRN-450-1 incorporates a yellow front user interface membrane whereas the SAM 450P automated external defibrillator has a navy blue/black front membrane.

HeartSine recommends that responders who may use one of its defibrillators should be trained in Cardiopulmonary Resuscitation with defibrillator use (CPR-D). The TRN-450-1 is intended to be used by approved CPR-D training providers for this purpose.

The TRN-450-1 is factory configured to operate in accordance with the joint American Heart Association/European Resuscitation Council (AHA/ERC) 2010 guidelines for CPR. The device comes with six pre-programmed scenarios based on these guidelines.

Should the CPR guidelines change, software will be available to upgrade the TRN-450-1 to comply. Please contact your HeartSine authorized distributor or HeartSine Technologies directly.

Once turned on the TRN-450-1 will play audible voice prompts with accompanying visual indicators. The TRN-450-1 may also be controlled using the accompanying remote control included with the device.

Please contact your HeartSine authorized distributor for a list of replacement accessories.

Preparing the TRN-450-1 for use

- 1) Ensure that the TRN-450-1 is fully charged (see the Maintenance section of this manual).
- 2) Place the TRN-450-1 and the Trainer-Pak™ on a flat surface. Push the Trainer-Pak into the opening of the TRN-450-1 and listen for a “click” sound to ensure that it is properly inserted.
- 3) Place the batteries supplied with your TRN-450-1 into the remote control.



Do not press any buttons while inserting the remote control batteries as this will reset the remote control ID.

- 4) Press the On/Off button on the TRN-450-1 and listen to the voice prompts to ensure that the unit is functioning.



If the TRN-450-1 has insufficient charge, it will not function correctly. When switched on, the Status Indicator will flash red to indicate that charging is required. If the battery is fully depleted the device will not power on at all. For full charging instructions see the Maintenance section of this manual.

Turning the TRN-450-1 on and off

To turn on the TRN-450-1, press the green On/Off button.



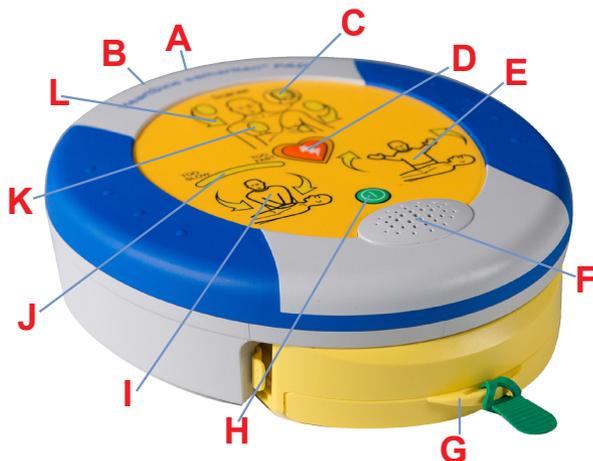
By default the TRN-450-1 will function in the last scenario setting used.

To turn off the TRN-450-1, press the On/Off button again.

Once the TRN-450-1 has been turned on, it may be turned off using the accompanying remote control. To turn off the TRN-450-1, press the red Off button on the remote control.



When turned on, the TRN-450-1 will automatically turn off after fifteen minutes if the device is not being used.



On/Off button



Action arrows



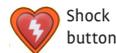
Pads placement indicator



Do not touch indicator



Safe to touch indicator



Shock button



Status indicator



CPR Rate Advisor

A. Data port - The data port connects the TRN-450-1 to a PC via the USB data cable. When the TRN-450-1 is connected, the training provider can change settings, such as training scenarios (see page 8 for training scenarios).

B. Battery charge status LED - The battery charge status LED flashes red when the TRN-450-1 needs to be charged, becomes a steady red when charging and turns off when fully charged.

C. Status indicator - Flashing green when in use; TRN-450-1 is ready for use, Flashing red when in use; TRN-450-1 requires charging.

D. Shock button - Press this button to simulate delivery of a therapeutic shock.

E. Do not touch indicator - Do not touch the patient when the action arrows around this icon are flashing. The SAM 450P may be analyzing the patient's heart rhythm or preparing to deliver a shock.

F. Speaker - The speaker plays recorded voice prompts and gives instructions to the trainee.

G. Trainer-Pak cartridge - The Trainer-Pak cartridge houses the pads. Pull the green tab to access the pads.

H. On/Off button - Press this button to turn the device on and off. (If pressed while a shock is advised, a warning is issued "Warning, Off button pressed"; the device will not power off unless you press the button again within three seconds.)

I. Safe to touch indicator - It is safe to touch the patient when the action arrows around this icon are flashing. You may perform CPR or check the patient.

J. CPR Rate Advisor - This is an array of lights which provide a graduated indication of the speed of the CPR compressions. When green lights illuminate the compressions are within the correct rate range.

K. Pads placement indicator - The action arrows around this icon will flash to instruct the user that the SAM 450P pads should be attached to the patient as indicated.

L. Action arrows - The action arrows around an icon will flash to indicate the actions that the user should perform.

Using the electrodes

The training scenarios include audible prompts to remove the electrodes from the Trainer-Pak and to position the electrode pads as indicated. Follow the steps below when prompted to do so.

- 1) Pull the green tab to open the TRN-450-1 Trainer-Pak cartridge and fully extend the electrode cables.
- 2) Peel the electrode pads from their protective liners.
- 3) Position the electrode pads as indicated by the Pads Placement Indicator; sternum and apex electrode pads are clearly identified on their respective pads.
- 4) Press the pads firmly to ensure that proper contact is made.

Rewinding the electrodes after use

- 1) Re-attach the protective liners to the electrode pads, or replace with new pads.
- 2) Fold the pads together so that the liner is on the outside.
- 3) Let the electrodes hang from the device and use the handle in the blue coil mechanism to fully rewind the electrodes:

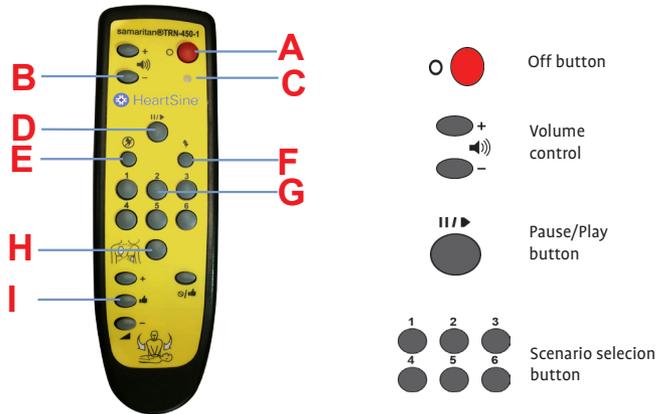


A Coil mechanism

B Coil handle

- 4) Place the pads on top of the Trainer-Pak cartridge, ensuring that the wires are beneath the pads.
- 5) Close the Trainer-Pak cartridge by sliding the yellow tray into place.

The remote control



A. Turning off the TRN-450-1 - The remote control can be used to turn off the TRN-450-1. To turn off the TRN-450-1, press the red Off button on the remote control.

B. Changing the volume - There are four volume settings available on the TRN-450-1. To increase the volume press the '+' button and to decrease the volume press the '-' button.

C. Low battery indicator - During use of the remote control, if the battery is low on charge the low battery indicator flashes red each time a button on the remote is pressed. This alerts the training provider to change the batteries in the remote control.

D. Pausing the TRN-450-1 - The TRN-450-1 may be paused during training. To pause the TRN-450-1 press the Pause/Play button (II/▶). The TRN-450-1 will remain paused until the Pause/Play button is pressed again, at which point it will continue to play the scenario selected.

E. 'No shock advised' scenario - When the 'no shock advised' scenario button is pressed, the TRN-450-1 plays the 'no shock advised' voice prompt subsequently followed by the rest of the voice prompts in the programmed scenario.

F. 'Shock required' scenario - When the 'shock advised' scenario button is pressed, the TRN-450-1 plays the 'shock advised' voice prompt subsequently followed by the rest of the voice prompts in the programmed scenario.

G. Changing the scenario - The TRN-450-1 comes with six preprogrammed training scenarios. (For details of the scenarios see the training scenarios section of this manual.) The scenario can be changed by pressing the appropriate number button on the remote control. For instance pressing '3' will select training scenario three. Once the scenario has been changed the device will operate as detailed in the scenarios section. The device will remain in this scenario until a new scenario is selected.

H. Attach electrode pads - The attach electrode pads button is pressed to simulate a good connection between the pads and the patient.

I. CPR Rate Advisor rate control - One of the three CPR Rate Advisor rate control buttons is pressed to simulate the prompts heard on the AED to indicate the quality of the CPR rate: "Press faster", "Press slower" or "Good speed".

Pre-programmed training scenarios

The TRN-450-1 has six preprogrammed training scenarios to choose from. All preprogrammed scenarios are based on AHA/ERC 2010 guidelines. Details of the preprogrammed scenarios are given below.

Scenario 1

- | | | |
|----|-------------------|---|
| 1. | Setup mode | Trainee to “Call for Medical assistance”, “Pull green tab”, etc |
| 2. | User intervention | Training provider presses the Attach electrode pads button to confirm electrodes placed |
| 3. | Monitor mode | Trainee hears “Assessing heart rhythm”, “Do not touch the patient”, etc |
| 4. | Shock advised | Trainee to press the shock button |
| 5. | CPR mode | Trainee to perform CPR with guidance from prompts |
| 6. | Monitor mode | Trainee hears “Assessing heart rhythm”, “Do not touch the patient”, etc |
| 7. | No shock advised | Trainee notified that no shock is advised |
| 8. | CPR mode | Trainee to perform CPR with guidance from prompts |
| 9. | Repeat | Trainee to repeat Steps 6 to 8 until ‘On/Off’ button is pressed |

Scenario 2

- | | | |
|----|-------------------|---|
| 1. | Setup mode | Trainee to “Call for Medical assistance”, “Pull green tab”, etc |
| 2. | User intervention | Training provider presses the Attach electrode pads button to confirm electrodes placed |
| 3. | Monitor mode | Trainee hears “Assessing heart rhythm”, “Do not touch the patient”, etc |
| 4. | No shock advised | Trainee notified that no shock is advised |
| 5. | CPR mode | Trainee to perform CPR with guidance from prompts |
| 6. | Monitor mode | Trainee hears “Assessing heart rhythm”, “Do not touch the patient”, etc |
| 7. | Shock advised | Trainee to press the shock button |
| 8. | CPR mode | Trainee to perform CPR with guidance from prompts |
| 9. | Repeat | Trainee to repeat Steps 6 to 8 until ‘On/Off’ button is pressed |

Scenario 3

- | | | |
|-----|-------------------|---|
| 1. | Electrodes | Device assumes the electrodes are already attached |
| 2. | Monitor mode | Trainee hears “Assessing heart rhythm”, “Do not touch the patient”, etc |
| 3. | Check Pads | Trainee to check the pad placement. |
| 4. | User intervention | Training provider presses the Attach electrode pads button to confirm electrodes placed |
| 5. | Monitor mode | Trainee hears “Assessing heart rhythm”, “Do not touch the patient”, etc |
| 6. | Shock advised | Trainee to press the shock button |
| 7. | CPR mode | Trainee to perform CPR with guidance from prompts |
| 8. | Monitor mode | Trainee hears “Assessing heart rhythm”, “Do not touch the patient”, etc |
| 9. | No shock advised | Trainee notified that no shock is advised |
| 10. | CPR mode | Trainee to perform CPR with guidance from prompts |
| 11. | Repeat | Trainee to repeat Steps 3 to 10 until ‘On/Off’ button is pressed |

Scenario 4

- | | | |
|-----|------------------|---|
| 1. | Electrodes | Device assumes electrodes are already attached |
| 2. | Monitor mode | Trainee hears “Assessing heart rhythm”, “Do not touch the patient”, etc |
| 3. | Shock advised | Trainee to press the shock button |
| 4. | CPR mode | Trainee to perform CPR with guidance from prompts |
| 5. | Monitor mode | Trainee hears “Assessing heart rhythm”, “Do not touch the patient”, etc |
| 6. | Shock advised | Trainee to press the shock button |
| 7. | CPR mode | Trainee to perform CPR with guidance from prompts |
| 8. | Monitor mode | Trainee hears “Assessing heart rhythm”, “Do not touch the patient”, etc |
| 9. | No shock advised | Trainee notified that no shock is advised |
| 10. | CPR mode | Trainee to perform CPR with guidance from prompts |
| 11. | Repeat | Trainee to repeat Steps 5 to 10 until ‘On/Off’ button is pressed |

Scenario 5

Scenario 5 is the same as Scenario 1 with the addition of audible indications of when to perform rescue breaths during CPR mode.

- | | | |
|----|-------------------|---|
| 1. | Setup mode | Trainee to “Call for Medical assistance”, “Pull green tab”, etc |
| 2. | User intervention | Training provider presses the Attach electrode pads button to confirm electrodes placed |
| 3. | Monitor mode | Trainee hears “Assessing heart rhythm”, “Do not touch the patient”, etc |
| 4. | Shock advised | Trainee to press the shock button |
| 5. | CPR mode | Trainee to perform CPR with guidance from prompts; this includes an audible indication of when to perform rescue breaths. The metronome changes from a “beep” to a “tick” for the duration of ten compressions. |
| 6. | Monitor mode | Trainee hears “Assessing heart rhythm”, “Do not touch the patient”, etc |
| 7. | No shock advised | Trainee notified that no shock is advised |
| 8. | CPR mode | Trainee to perform CPR with guidance from prompts; this includes an audible indication of when to perform rescue breaths. The metronome changes from a “beep” to a “tick” for the duration of ten compressions. |
| 9. | Repeat | Trainee to repeat Steps 6 to 8 until ‘On/Off’ button is pressed |

Scenario 6

Scenario 6 is the same as Scenario 2 with the addition of audible indications of when to perform rescue breaths during CPR mode.

- | | | |
|----|-------------------|---|
| 1. | Setup mode | Trainee to “Call for Medical assistance”, “Pull green tab”, etc |
| 2. | User intervention | Training provider presses the Attach electrode pads button to confirm electrodes placed |
| 3. | Monitor mode | Trainee hears “Assessing heart rhythm”, “Do not touch the patient”, etc |
| 4. | No shock advised | Trainee notified that no shock is advised |
| 5. | CPR mode | Trainee to perform CPR with guidance from prompts; this includes an audible indication of when to perform rescue breaths. The metronome changes from a “beep” to a “tick” for the duration of ten compressions. |
| 6. | Monitor mode | Trainee hears “Assessing heart rhythm”, “Do not touch the patient”, etc |
| 7. | Shock advised | Trainee to press the shock button |
| 8. | CPR mode | Trainee to perform CPR with guidance from prompts; this includes an audible indication of when to perform rescue breaths. The metronome changes from a “beep” to a “tick” for the duration of ten compressions. |
| 9. | Repeat | Trainee to repeat Steps 6 to 8 until ‘On/Off’ button is pressed |

The remote control allows training providers to control the scenario manually. When turned on, the TRN-450-1 will operate as described in the training scenarios listed. Training providers can override this by pressing the 'Shock required', 'No shock required' or 'Attach electrode pads' button.



Shock required

Pressing the 'Shock required' button will cause the TRN-450-1 to override the selected training scenario and simulate a shockable rhythm. Each subsequent analysis period will advise a shock to be delivered until either the TRN-450-1 is turned off or the 'No shock required' button on the remote control is pressed.



No shock required

Pressing the 'No shock required' button will cause the TRN-450-1 to override the selected training scenario and simulate a non-shockable rhythm. Each subsequent analysis period will advise no shock to be delivered until either the TRN-450-1 is turned off or the 'Shock required' button on the remote control is pressed.



Attach electrode pads

If the 'Attach electrode pads' button is pressed the TRN-450-1 will play the 'Attach electrode pads' prompts during the analysis period of operation. The TRN-450-1 will continue to play 'Attach electrodes pads' prompts until the 'Attach electrode pads' button is pressed again.

HeartSine samaritan PAD with CPR Rate Advisor, SAM 450P

The SAM 450P automated external defibrillator incorporates a CPR feedback module called 'CPR Rate Advisor'. The SAM 450P uses the CPR Rate Advisor function to provide simple feedback on the quality of the compression rate being provided by rescuers. The CPR Rate Advisor analyzes the rate at which compressions are being performed, and prompts the rescuer to push faster or slower as appropriate. If the CPR being provided is within the correct speed range, the SAM 450P will play a 'Good speed' prompt.

All audible prompts are accompanied by visual prompts on the CPR Rate Advisor icon.

CPR Rate Advisor training

Training providers can use the remote control to simulate the CPR Rate Advisor function on the TRN-450-1 by using the remote control. Training providers should observe the CPR being provided by the trainees and based on observations press the appropriate button.

The TRN-450-1 will initially assume correct compressions are being performed and play the audible prompt:



"Good speed"

The CPR control buttons are located at the bottom of the remote control. The buttons to the left are used to provide feedback on the rate at which the trainee is performing compressions, and the buttons to the right are used to toggle between the Begin CPR prompt (if no CPR is being performed) and the Good speed prompt.



Compressions

The TRN-450-1 can mimic the CPR Rate Advisor function on the SAM 450P defibrillator.



CPR not started

If the trainee has not started to perform CPR, press the 'Begin CPR/good speed' button. The TRN-450-1 will play the audible prompt:



"Begin CPR"



The CPR Rate Advisor on the TRN-450-1 has a single flashing red light on the left hand side of the display as shown. The trainee should begin CPR immediately.



Compressions Too Slow

If the trainee is performing compressions too slowly, press the 'Slow compressions' button.



When the button is pressed once, the two amber LEDs on the left hand side of the CPR Rate Advisor illuminate to indicate the trainee is providing CPR compressions at a rate slower than the AHA/ERC Guidelines. The trainee should increase the speed of their compressions.



Press the button a second time. The illuminated amber LEDs will be replaced by two red LEDs and the voice prompt will play:



"Push faster"



Compressions Too Fast

If the trainee is performing compressions too quickly, press the 'Fast compressions' button.



When the button is pressed once, the two amber LEDs on the right hand side of the CPR Rate Advisor illuminate to indicate the trainee is providing CPR compressions at a rate faster than the AHA/ERC Guidelines. The trainee should reduce the speed of their compressions.



Press the button a second time. The illuminated amber LEDs will be replaced by two red LEDs and the voice prompt will play:



“Push slower”



Compressions Correct Rate

If the trainee is performing compressions at the correct rate, press the ‘Correct rate’ button. The TRN-450-1 will play the prompt:



“Good speed”



Four green LEDs in the center of the CPR Rate Advisor on the TRN-450-1 will illuminate. The trainee should maintain this speed for the compressions.

TRN-450-1 battery management

The TRN-450-1 contains a rechargeable battery. It is recommended that you ensure the TRN-450-1 is fully charged prior to commencing training activities.

When fully charged, the TRN-450-1 will provide approximately seven hours of usage before it needs to be recharged.

The TRN-450-1 will monitor the capacity of the battery as it approaches depletion. A minimum of one hour prior to the battery becoming depleted the TRN-450-1 will play the following message:



“Warning. Low battery”

If this warning is heard you may continue to use your TRN-450-1 for a limited period of time. If the battery becomes completely depleted the TRN-450-1 will shut itself down. At this point the TRN-450-1 should be recharged.

Charging and recharging the TRN-450-1

To safely charge or recharge the TRN-450-1 follow the instructions given below.

- 1) Insert the charger adaptor into the socket on the side of the TRN-450-1. Ensure that the adaptor is fully inserted.
- 2) Plug the charger into the mains power outlet.
- 3) Leave the TRN-450-1 to charge. The Battery Charge Status LED (located beside the socket) will be red when fast charging and will flash when charging is almost complete. Once charging is complete the LED will switch off. Charging a depleted TRN-450-1 will take a maximum of six hours.
- 4) Remove the adaptor from the TRN-450-1. Turn on the TRN-450-1 to ensure that the device is working.

If the TRN-450-1 is switched on during charging, the charger should be switched off then on again to restart fast charging.

The TRN-450-1 must only be charged with the charger supplied with it. Use of any other charging device will nullify the warranty and may result in damage to the TRN-450-1.

The TRN-450-1 and charger are designed for indoor use only. Do not use in wet or damp environments.

There are no user serviceable parts inside your TRN-450-1, TRN-450-1 Trainer-Pak or charger. Do not open these products. In the unlikely event of a malfunction, please contact your distributor immediately.

Remote control batteries

The remote control contains a low battery warning indicator. If this indicator flashes red two times after a button on the remote control is pressed, the batteries within the remote control need to be replaced.

The remote control uses two standard AAA batteries. The batteries can be accessed by removing the battery cover at the back of the remote control.



Inserting the batteries into the remote control while pressing the Off button will cause the remote control to enter pairing mode and take a new transmission ID. This will be different to that previously stored on the TRN-450-1. If this occurs accidentally it will be necessary to complete the pairing procedure in full to pair the remote control with the TRN-450-1 again.

Normal battery replacement does not cause a problem since pairing is only initiated when the Off button is also held down.

TRN-450-1 Configuration Tool

The TRN-450-1 Configuration Tool is software that can be downloaded for free from the HeartSine website (www.heartsine.com). This software allows you to upgrade your TRN-450-1. The following options are available.

Language

The TRN-450-1 can be reprogrammed to operate with audible prompts in any one of a selection of languages. Download the current TRN-450-1 Configuration Tool user manual from the HeartSine website for instructions on how to do this.

Pairing a remote control with the TRN-450-1

Each TRN-450-1 is operated with a specific remote control. This is to allow multiple devices to be used in close vicinity without interference. In the unlikely event that your remote control no longer operates with your TRN-450-1 it may need to be paired with your TRN-450-1 again.

The TRN-450-1 Configuration Tool can be used to pair a remote control with your TRN-450-1. Full instructions are contained within the accompanying user manual.

Device identifications

Each TRN-450-1 is given an identification number between 001 and 255 during manufacture. The remote control for each TRN-450-1 is then given the same identification number. In the unlikely event that two devices with the same ID number are being used at the same time, use the TRN-450-1 Configuration Tool to assign new numbers to the devices. It will be necessary to pair the device with its remote control after assigning a new ID number.

The following is a brief overview of the fundamentals of CPR for lay rescuers as advised by both the American Heart Association (AHA) and the European Resuscitation Council (ERC) in their 2010 published Guidelines for CPR and ECC. This is intended only as a quick reference for trained CPR providers. HeartSine recommends that all potential users of the SAM 450P are trained by a competent training organization in both the use of CPR and SAM 450P, prior to placing a SAM 450P into service. Should the Guidelines change, software will be available to upgrade the SAM 450P to comply. Please contact your HeartSine authorized distributor or HeartSine Technologies directly.



1. Remove danger

Remove any source of danger or move the victim away from danger. Ensure your own safety.



Caution: You must use the SAM 450P at least 2 m (6 feet) away from all radio frequency devices. Alternatively switch off the equipment causing the electromagnetic interference.



2. Check for a response

Shake the victim by the shoulders. Speak loudly to the victim.



3. Check the airway

Check for breathing. Open the airway with a head tilt-chin lift if necessary.

4. Get help

Call the emergency services. Get other people to help you. Get the SAM 450P. You do not need to remove the SAM 450P from its soft carry case to use it.



5. Perform CPR

Push hard and fast at a rate of at least 100 beats per minute, 5 to 6 cm deep, on victim's chest. Perform 30 compressions followed by 2 breaths.

Disposal instructions

The TRN-450-1 is a reusable device. If maintained in accordance with the instructions in this manual it has a warranty period of two years from the date of manufacture. The year of manufacture of the device is indicated by the first two digits of the serial number.

If you wish to dispose of the TRN-450-1 unit, it should be disposed of at an appropriate recycling facility according to national, state and local requirements. Alternatively return the unit to your local distributor or HeartSine Technologies for disposal.

Disposal within the European Union:

Do not dispose of the TRN-450-1 unit as unsorted municipal waste: keep the TRN-450-1 separate, to be reused or recycled in accordance with Directive 2002/96/EEC of the European Parliament and the Council of the European Union on Waste Electronic and Electrical Equipment (WEEE), or return to your local distributor or HeartSine Technologies for disposal.

Warranty exclusion

HeartSine Technologies or its authorized distributors are not obliged to carry out service/repairs under warranty if:

- a. Unauthorized modifications have been made to the device.
- b. Non-standard components are used.
- c. The user has not used the device in accordance with the indications for use or the instructions provided in this manual.
- d. The serial number of the apparatus is removed, defaced, misused or altered.
- e. The device, electrodes or batteries are stored or used operationally outside of environmental specifications.
- f. The device has been tested using unapproved methods or inappropriate equipment (see the Maintenance section of this manual).

Any claims made under warranty must be directed via your distributor from whom the device was originally purchased. Before carrying out service under warranty, HeartSine Technologies requires evidence of purchase. The product must be used in accordance with the User Manual and for the purpose for which it was intended. If you have any questions please contact support@heartsine.com for assistance.

Authorized Distributor

www.heartsine.com

support@heartsine.com



EMEA/APAC

HeartSine Technologies, Ltd.
203 Airport Road West
Belfast, Northern Ireland, BT3 9ED

Tel: +44 28 9093 9400
Fax: +44 28 9093 9401

US/Americas

HeartSine Technologies, Inc.
121 Friends Lane, Suite 400
Newtown, PA. 18940, USA
Tel: +1 215 860 8100

Toll Free: +1 866 478 7463
Fax: +1 215 860 8192



H041-019-300-1
English