Masthead

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These instructions for use may be changed by the manufacturer without further notice.

Contents

[1 Introduction HeartSave Y | YA trainer 5](#_Toc194003345)

[1.1 Foreword 5](#_Toc194003346)

[1.2 Validity 5](#_Toc194003347)

[1.3 Intended use 5](#_Toc194003348)

[1.4 Disclaimers 5](#_Toc194003349)

[2 Device description 6](#_Toc194003350)

[2.1 Description of device details 6](#_Toc194003351)

[2.2 Language switch button 11](#_Toc194003352)

[2.3 Child button 11](#_Toc194003353)

[3 Preparation before starting device 11](#_Toc194003354)

[3.1 Unpack 11](#_Toc194003355)

[3.2 Rechargeable battery 11](#_Toc194003356)

[3.2.1 Battery insertion 11](#_Toc194003357)

[3.2.2 Battery removal 12](#_Toc194003358)

[4 Using HeartSave Y | YA trainer 12](#_Toc194003359)

[4.1 Switch on the trainer 12](#_Toc194003360)

[4.2 Connect electrode cables with pads 12](#_Toc194003361)

[4.3 Apply auxiliary pads 13](#_Toc194003362)

[4.3.1 Placement of AED auxiliary pads 13](#_Toc194003363)

[4.3.2 Method for applying the auxiliary pads 13](#_Toc194003364)

[4.3.3 Feature of auxiliary pads 13](#_Toc194003365)

[4.4 Apply electrodes 13](#_Toc194003366)

[4.5 Inserting electrodes 14](#_Toc194003367)

[4.6 Analysing rhythm 15](#_Toc194003368)

[4.6.1 Start the analysis 15](#_Toc194003369)

[4.6.2 Interrupt the analysis 15](#_Toc194003370)

[4.7 Simulate defibrillation 15](#_Toc194003371)

[4.7.1 Shock advised – Simulation: Shock recommended 15](#_Toc194003372)

[4.7.2 No shock advised – Simulation: No shock recommendation 15](#_Toc194003373)

[4.8 CPR – Cardiopulmonary Resuscitation 15](#_Toc194003374)

[4.8.1 CPR feedback sensor 16](#_Toc194003375)

[4.9 Switch off the Trainer 16](#_Toc194003376)

[5 Product repair and maintenance 17](#_Toc194003377)

[5.1 Device Maintenance 17](#_Toc194003378)

[5.2 Electrode pads maintenance 17](#_Toc194003379)

[5.3 Battery maintenance 17](#_Toc194003380)

[5.4 Programming the trainer 17](#_Toc194003381)

[6 Disposal 18](#_Toc194003382)

[7 Technical specification 18](#_Toc194003383)

[8 Warranty 19](#_Toc194003384)

[Appendix A: Index Diagram 20](#_Toc194003385)

# Introduction HeartSave Y | YA trainer

## Foreword

Dear User,

You are preparing to face the task of learning to perform a competent training demonstration of the safe use of HeartSave Y | YA Trainer. The HeartSave Y | YA Trainer you have acquired is not a defibrillator but is to be used solely for educational purposes and must not be used on patients.

Realistic training scenarios will be used to simulate the use of HeartSave Y | YA in a real emergency.

A HeartSave Y | YA Trainer is clearly identified by "Trainer" printed on both sides on the side surfaces and on the nameplate.

Keep these operating instructions near the device so that you consult any queries which may arise.

For questions regarding the device or other PRIMEDIC products, we are happy to help.

## Validity

The descriptions in these operating instructions refer to the HeartSave Y | YA Trainer.

## Intended use

The HeartSave Y | YA Trainer may only be used as described and under the conditions detailed in these operating instructions.

Any use above or beyond this is not considered as intended use and can lead to personal injury or damage to property.

## Disclaimers

Liability claims in the event of damages to people or property are excluded if they are based on one or more of the following reasons:

• Using the device in a manner for which it was not intended.

• Improper use and maintenance of the device.

• Operating the device with the protective covers removed or when there is obvious damage to cables and/or electrodes.

• Non-compliance with the instructions in these operating instructions regarding operation, maintenance and repair of the equipment.

• Using accessories and spare parts made by other manufacturers.

• Autonomous intervention, repairs or constructional changes to the device.

• Autonomous overrunning of the performance limits.

• Lack of monitoring parts that are subject to wear and tear.

# Device description

## Description of device details

|  |
| --- |
| 1  2  3 |
| Fig. 1 Front view with lid  (1) Status display  (2) Device lid  (3) Open the lid as directed by the arrow |
| c  1  2 |
| Fig. 2 Back View  (1) Carrying handle  (2) Battery |
| 1 |
| Fig. 3 Bottom View   1. Device lid latch |
| C:\Users\18245\Desktop\HeartSave YA_EN_AED_4.3Display_Front view_Lid open (1) (1).pngHeartSave YA_EN_AED_4.3Display_Front view_Lid open (1) (1)  1  3  4  5  6  8  77    2  87b2048ac2e8ae63813c43620ac7e47e |
| Fig. 4 HeartSave Y|YA trainer front view  (1) Socket for electrodes and USB port  (2) Training electrodes  (3) Power button  Green light on: power-on status  (4) Language button  (5) Child button  Button light on: child mode  Button light off: adult mode   1. Shock button   Button light flashing: Preparing to deliver a shock.  (7) Auxiliary pads  (8) Speaker |

A red and black remote control

Description automatically generated

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Fig. 5 Remote Control

1. Power off Button – Switch on or off the trainer
2. Standard Training Modes

There are 6 standard training models in total. Different training scenarios can be selected by pressing 1-6 keys on the remote control. The Scenarios 1 through 3 operate in fully automated mode and scenarios 4 through 6 operate in semi-automated mode. The table below shows the preset profiles that can be used. After 6 sequences the scenario start from the beginning

1. 30:2 CPR Mode Switch for child mode
2. 15:2 CPR Mode Switch for child mode
3. Play/Pause Button

During operation, this button can be used to pause the sequence and the voice prompts. Press this button again to continue the training mode.

1. Simulation: Electrodes are connected to the manikin

When the standard-training-electrodes are connected, press the button no. 6 to advice the machine that the electrodes are attached and start the rhythm analysis.

1. Simulation: Electrodes are disconnected from the trainings model – only activated when electrodes are connected
2. Simulation: Shock recommendation – only activated when electrodes are connected
3. Simulation: No shock recommendation – only activated when electrodes are connected
4. Volume +/- Key

| **Scenario number** | **Description** | **Sequence** |
| --- | --- | --- |
| 1  fully-automated mode | Result of each analysis:   1. Shock recommended 2. No shock recommended 3. No shock recommended 4. No shock recommended 5. No shock recommended 6. No shock recommended | * Defibrillation * Two minutes CPR * No defibrillation * Two minutes CPR * Rest no defibrillation |
| 2  fully-automated mode | Result of each analysis:   1. Shock recommended 2. Shock recommended 3. No shock recommended 4. No shock recommended 5. No shock recommended 6. No shock recommended | * Defibrillation * Two minutes CPR * Defibrillation * Two minutes CPR * Rest no defibrillation |
| 3  fully-automated mode | Result of each analysis:   1. No shock recommended 2. Shock recommended 3. No shock recommended 4. Shock recommended 5. No shock recommended 6. Shock recommended | * No defibrillation * Two minutes compression-only CPR * Defibrillation * Two minutes compression-only CPR * Rest repeat sequence above |
| 4  semi-automated mode | Result of each analysis:   1. Shock recommended 2. No shock recommended 3. No shock recommended 4. No shock recommended 5. No shock recommended 6. No shock recommended | * Defibrillation * Two minutes CPR * No Defibrillation * Two minutes CPR * Rest no defibrillation |
| 5  semi-automated mode | Result of each analysis:   1. Shock recommended 2. Shock recommended 3. No shock recommended 4. No shock recommended 5. No shock recommended 6. No shock recommended | * Defibrillation * Two minutes CPR * Defibrillation * Two minutes CPR * Rest no defibrillation |
| 6  semi-automated mode | Result of each analysis:   1. No shock recommended 2. Shock recommended 3. No shock recommended 4. Shock recommended 5. No shock recommended 6. Shock recommended | * No defibrillation * Two minutes compression-only CPR * Defibrillation * Two minutes compression-only CPR * Rest repeat sequence above |

## Language switch button

You can press the language selection key during operation until the desired language is selected. The HeartSave Y | YA trainer optionally supports up to 4 languages. After each new press, the selected language is briefly announced.

## Child button

Pressing the child button on the HeartSave Y | YA trainer switches the device to child mode. The default CPR instructions are changed to 15 chest compressions. Optionally, these CPR instructions can be changed to 30 cardiac compressions using the remote control.

# Preparation before starting device

## Unpack

When you receive the package, first check the outer packaging and the device for damage. If any damage is visible, please contact the manufacturer or distributor immediately. Provide the serial number of the back of the device and a description of the damage.

## Rechargeable battery

The device uses a rechargeable lithium-ion battery. Before using the device for the first time, please be sure to insert the battery into battery slot of the device.

### Battery insertion



Fig. 6 Insert the batterySteps:

* Put the device top down on a flat surface.
* Push the (new) battery (1) in the direction of the arrow into the device until it reaches its end position as shown in the diagram.
* Then press the battery in the direction of the arrow (2) into the battery slot until the battery flap securely in the slot.
* Press the battery completely into the device until you hear a "click" when it slide into slot.
* When battery inserted, the device will carry out a self-test. Follow the voice messages.
* After self-test has been done successfully, the device is ready for use.

### Battery removal



Fig. 7 Remove the battery

Steps:

* Put the device top down on a flat surface.
* Press the unlocking flap (1) to the right until the flap on the battery is released and the battery out of the slot slightly.
* Push the battery slightly in the direction of the arrow (2) and then pull it in the direction of the arrow (3) out of the device.

# Using HeartSave Y | YA trainer

## Switch on the trainer

The trainer can be switched on via:

* Opening the lid
* Pressing the power button of device
* Pressing the power button on the remote controller

## Connect electrode cables with pads

The trainer adapts with training electrodes which includes cable and pads.

Connect the cable with training electrode pads according to Fig. 8.

A pair of electric massagers

Description automatically generated

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Fig. 8 Connect cables with pads

1. Pads connector
2. Cable connector

## Apply auxiliary pads



Fig. 9 Application of auxiliary pads to a manikin

### Placement of AED auxiliary pads

To place the auxiliary pads on manikin, the position should be according to Fig. 9

### Method for applying the auxiliary pads

Procedure:

* Open the Auxiliary pads pouch.
* Remove the protection foil from Auxiliary pads and place the auxiliary pads onto specified position.
* Press electrodes carefully to ensure good contact with manikin.

### Feature of auxiliary pads

* Contact Detection: auto-detect whether trainer pads are attached during the training.
* Position Guidance: Provides visual instructions for trainer pads placement.

## Apply electrodes



Fig. 10 Application of electrodes to an adult manikin

HeartSave Y|YA trainer will give a voice prompt to guide you applying electrodes to the manikin.

**< Apply electrodes as shown >**

**< Remove all clothing from patient's chest, unpack electrodes and apply them to patient's bare chest as shown >**

Steps:

* Open the pouch to take out the training electrodes.
* For models without auxiliary electrodes, place the training electrodes on the corresponding positions of the manikin as shown in the illustration on the training electrodes. For models with auxiliary electrodes, first attach the auxiliary electrodes to the positions indicated for training electrodes in the illustration, and then place the training electrodes on the auxiliary electrodes.

|  |  |
| --- | --- |
| NOTE | * + - * The training electrode pads are shared for both children and adults, as shown in the figure above.       * The training electrode pads have similar looking to real defibrillators in appearance but do not give high-voltage shocks. Please note training electrode pads are for training purposes ONLY and must not be connected to a defibrillator for emergency use.       * Do not bend or stretch the electrode cables or pads.       * For auxiliary electrode pads, first attach the auxiliary electrode pads to the manikin, and then place the training electrode pads over the auxiliary electrode pads. |

## Inserting electrodes



Insert the connector into the socket

Fig. 11 Inserting electrodes

Steps:

* Pull the latch to allow the lid to be opened.
* Insert the electrodes plug into the socket.
* Place the electrodes into the device.

## Analysing rhythm

### Start the analysis

In case of electrodes connected, there are two options to start the analysis:

* Connect electrode connector to the trainer. The analysis starts when training electrodes attached with auxiliary electrodes.
* Press button 6 (Fig. 5) on the remote control to start the analysis.

When analysis starts you will hear the voice prompts:

**< Analysing rhythm >**

**< Don’t touch the patient >**

### Interrupt the analysis

In case of analysis starts, there are several options to interrupt the analysis:

* Interrupt the analysis by disconnect one pad
* Press button 7 (Fig. 5) on the remote control
* Remove the electrodes connector from device socket.

## Simulate defibrillation

The result of the analysis refers to the selected scenario on the remote control.

### Shock advised – Simulation: Shock recommended

When press button 8 (Fig.5 Remote Control), the current scenario is interrupted and simulate a shock recommendation immediately not depending on the before chosen scenario. There will be an analysis right after pressing the button and the trainer will always recommend a shock for the next sequences.

|  |  |
| --- | --- |
| NOTE | Only available when trainer electrodes are connected. |

### No shock advised – Simulation: No shock recommendation

When press button 9 (Fig.5 Remote Control), the current scenario is interrupted and simulate a no shock recommendation immediately not depending on the before chosen scenario. There will be an analysis right after the pressing the button and the trainer will always recommend no shock for the next sequences.

|  |  |
| --- | --- |
| NOTE | Only available when trainer electrodes are connected. |

## CPR – Cardiopulmonary Resuscitation

The duration of the CPR is approx. 120s consists of chest compressions and rescue breaths. Adult and child should follow different compression recommendations as below.

**Adult mode**

30:2 Adult CPR Mode, following the standard CPR procedure.

Device prompts:

**< Begin CPR >**

**< Give 30 chest compressions >**

**< Give two rescue breaths >**

OR (under mode 3 or 6)

**< Begin CPR >**

**< Perform chest compressions for 2 minutes >**

**Child mode**

15:2 Paediatric CPR Mode, also possible to switch to 30 compressions.

Device prompts:

**< Begin CPR >**

**< Give 15 chest compressions >**

**< Two rescue breaths>**

OR (under mode 3 or 6)

**< Begin CPR >**

**< Perform chest compressions for 2 minutes >**

|  |  |
| --- | --- |
| NOTE | For auxiliary electrode pads: If the electrode plug is disconnected during CPR, the CPR process will be interrupted, and the device will prompt **< Stop chest compression>**. If CPR is initiated due to unattached electrode pads and the pads are subsequently attached, the CPR process will also be interrupted, and the device will prompt **< Stop chest compression>**. |

### CPR feedback sensor

When CPR feedback sensor applied, during CPR, the compression frequency and depth will be prompted acoustically or visually. There will be prompts for no compressions, bad compressions, or good compressions. The compression quality is calculated based on the average measurement from 1-15 compressions of each cycle.

A compression frequency between 100 and 120 compressions per minute is considered normal.

If the average compression frequency is too slow, the device will prompt **< Press faster >**.

If the average compression frequency is too fast, the device will prompt **< Press slower >**.

A compression depth between 50mm and 60mm is considered normal.

If the average compression depth is too shallow, the device will prompt **< Press harder >**.

If the average compression depth is too deep, the device will prompt **< Press lighter >**.

If CPR sensor is not used, the device will prompt **< Use CPR sensor to improve CPR quality >.**

If all compressions with good quality, the device will prompt **< Compression quality good, keep it up >.**

A person's chest with a device attached to it

AI-generated content may be incorrect.

**Fig. 12 Position for CPR Feedback Sensor**

## Switch off the Trainer

The trainer can be switched off via:

* Pressing the power button of the device
* Closing the lid of device
* Pressing “On/Off” button on the remote control

# Product repair and maintenance

## Device Maintenance

* Please clean the main unit with a soft cloth with water or neutral detergent.
* Do not use gasoline to clean the trainer.
* Please do not let liquids such as water flow into the device.
* Do not store the trainer in places exposed to direct sunlight, high temperature, humidity, dust and corrosive gases. Please refer to chapter 7.

## Electrode pads maintenance

* The electrode pads should be kept clean to avoid dust, oil and dirt.
* Please do not scratch the adhesive surface.
* Please do not clean the electrodes with water or other liquids.
* Do not store the electrodes in places exposed to direct sunlight, high temperature, humidity, dust and corrosive gases.

## Battery maintenance

* Do not charge/discharge over the specified current.
* Do not short circuit the battery pins, it may cause permanent damage.
* Do not burn or destroy the battery.
* Store batteries in a cool and dry place.
* Keep away from children.

|  |  |
| --- | --- |
| NOTE | Rechargeable battery maintenance instruction  Periodic charging and discharging - If the battery is planned to store for a long period (> 6 months), it is recommended to fully discharge the battery and recharge it once every half year. |

A black charger with a cord

Description automatically generated

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1

Fig. 13 Power-Adapter

(1) Power socket plug

(2) Charging cable plug

## Programming the trainer

To trainer provides a possibility to update the software or configuration. To update the software or configuration, you need to prepare:

* 1 x USB drive
* 1 x PC

USB drive must follow specifications below:

* Capacity no greater than 32GB
* Format: FAT32
* USB 2.0/ USB 2.0 card reader

Procedure for USB drive updates：

Insert the USB drive into the USB port and power on the AED trainer. After the screen lights up, press and hold the voice button until the program update interface appears, then wait for the update to complete.

|  |  |
| --- | --- |
| NOTE | During the update process, the voice button will flash.  Completion Indicators: The voice button remains steadily light, or the device restarts (after updating the configuration file, you can export it again to check if the successful modification).  Failure Indicator: The voice button turns off. |

# Disposal

At the end of the service life of the device, please hand it over to a local recycling company. Proper disposal of this device is conductive to environmental protection.

# Technical specification

|  |  |
| --- | --- |
| **DEVICE** |  |
| Power supply | 7.4V (rechargeable lithium battery) |
| Residual current when switched off | ≤ 2mA |
| Rated current during operation | ≤ 500mA |
| Dimensions (L x W x H) | 29.6cm x 22.0cm x 9.7cm (±0.1cm) |
| Weight | 1.59kg (±0.3kg) |
| Power adapter of battery | Input AC 100-240V  Output DC 12V 1A |
|  |  |
| **REMOTE CONTROL** |  |
| Power supply | DC 3.0V (AAA battery x 2) |
| Residual current when switched off | 5 µA |
| Rated current during operation | 10 mA |
|  |  |
| **ENVIRONMENT SPECIFICATION** |  |
| Operating conditions |  |
| Temperature | 5°C – 40°C |
| Relative humidity | ≤ 80% without condensation |
| Air pressure | 86kPa – 106kPa |
| Storage conditions |  |
| Temperature | -20°C – 55°C |
| Relative humidity | ≤ 93% without condensation |
| Air pressure | 70kPa – 106kPa |

# Warranty

Jiangsu Yuyue Medical Equipment & Supply Co., Ltd. undertakes a 2-year warranty period for this equipment from the date of purchase. Please keep the purchase certificate properly.

During this period, the company will exclude defects and malfunctions of this equipment due to materials or production free of charge. At the company's option, repair or replacement will be used for maintenance.

The fulfilment of the warranty responsibility does not extend the original warranty period. Warranty and legal guarantee requirements do not apply to these situations: the usability has not been greatly affected, natural wear and tear (such as electrode pads consumables), or caused by wrang or wrang operation, excessive use and special external force influences other than those specified in the manual damage, and the purchaser or a third party has not modified or repaired the equipment in accordance with the regulations.

Other contractual or non-contractual demands on the company are excluded, unless these demands are based on deliberate acts, negligent acts or mandatory legal liability principles.

lf you need warranty, please send the equipment, purchase certificate (such as a copy of the invoice) and warranty card to your seller or our company.

After the warranty period, the company will continue to provide you with after-sales service but will charge a certain fee accordingly.

# Appendix A: Index Diagram

[Fig. 1 Front view with lid 6](#_Toc193880778)

[Fig. 2 Back View 7](#_Toc193880779)

[Fig. 3 Bottom View 8](#_Toc193880780)

[Fig. 4 HeartSave Y|YA trainer front view 8](#_Toc193880781)

[Fig. 5 Remote Control 9](#_Toc193880782)

[Fig. 6 Insert the batterySteps: 11](#_Toc193880783)

[Fig. 7 Remove the battery 12](#_Toc193880784)

[Fig. 8 Connect cables with pads 13](#_Toc193880785)

[Fig. 9 Application of auxiliary pads to a manikin 13](#_Toc193880786)

[Fig. 10 Application of electrodes to an adult manikin 14](#_Toc193880787)

[Fig. 11 Inserting electrodes 15](#_Toc193880788)

[Fig. 12 Position for CPR Feedback Sensor 16](#_Toc193880789)

[Fig. 13 Power-Adapter 17](#_Toc193880790)