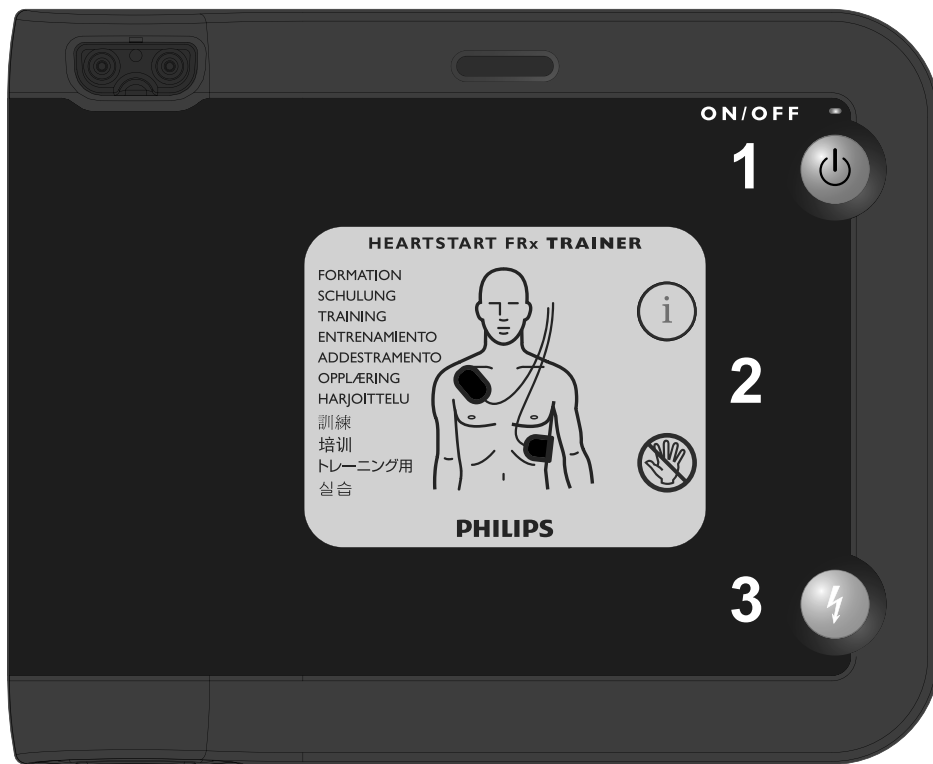


HeartStart FRx Trainer

INSTRUCTIONS FOR USE



861306
Edition 5

PHILIPS

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HeartStart FRx Trainer

861306

INSTRUCTIONS FOR USE

Edition 5

PHILIPS

About this edition

The information in this guide applies to the HeartStart FRx Trainer 861306. This information is subject to change. Please contact Philips at www.philips.com/productdocs or contact your local Philips representative for information on revisions.

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Device manufacturer

Philips Medical Systems, Seattle, WA, 98121-1825, USA

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HEARTSTART FRX TRAINER 861306

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INTENDED USE

The HeartStart FRx Trainer is designed to prepare emergency responders to use the FRx automated external defibrillator (AED). *The HeartStart FRx Trainer cannot be used to deliver defibrillation treatment.*

The FRx Trainer provides a variety of simulations, or training scripts, to help responders become familiar with the FRx defibrillator and allow them to practice the basic skills necessary to use the defibrillator in an emergency. The default Trainer configuration can be adjusted to meet local protocol requirements.

The FRx Trainer is supplied with one set of HeartStart Training Pads II [REF: 989803139271] and an External Manikin Adapter [REF: M5089A.]

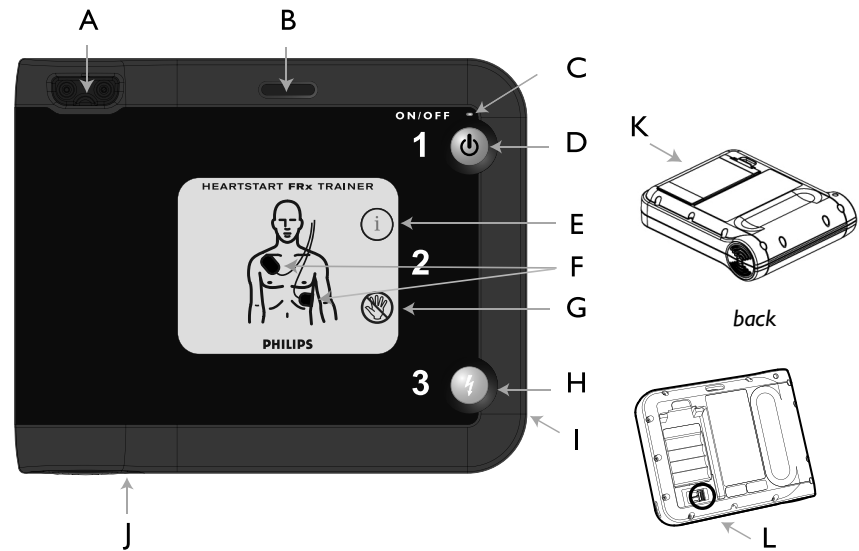
FEATURES

- The HeartStart FRx Trainer provides simulated shock delivery. It has no high-voltage capabilities, ensuring safety during training.
- The HeartStart FRx Trainer is designed for use with HeartStart Training Pads II and training manikins when equipped with the External Manikin Adapter M5089A provided with the Trainer. The FRx Trainer and Training Pads II can also be used with Laerdal training manikins when equipped with an Internal Manikin Adapter M5088A, available separately from Philips.
- Reusable HeartStart Training Pads II are available in a kit (REF: 989803139271). The kit contains one set of Training Pads II in a reusable training pads case, an adult pads placement guide, Instructions for Use of the training pads, and an illustrated guide. Replacement training pads (REF: 989803139291) are available for use with the Training Pads II case.
- The HeartStart FRx Trainer and Training Pads II can also be used with an Infant/Child Pads Placement Guide and an Infant/Child Key, available separately from Philips, for training in pediatric defibrillation.

- The HeartStart FRx Trainer has eight training scenarios that simulate realistic sudden cardiac arrest episodes. See “Standard Training Scenarios” for scenario descriptions. These scenarios are compatible with training programs developed by nationally recognized responder programs.
- The HeartStart FRx Trainer is powered by four standard AA alkaline batteries.

WARNING: Do not store the Trainer with your defibrillator, or where it could be confused with a defibrillator during an emergency.

OVERVIEW



The HeartStart FRx Trainer is designed to look similar to the HeartStart FRx Defibrillator. However, the yellow center label identifies it as a training device. In addition, some of the FRx defibrillator’s features are either inactive in the FRx Trainer or behave differently from their counterparts in the Trainer. The FRx Trainer’s physical features are described below.

- A TRAINING PADS CONNECTOR PORT. The Training Pads II connector is inserted in this port.
- B INFANT/CHILD KEY SLOT. The Infant/Child Key, available separately, is inserted into this slot to simulate a defibrillation scenario for an infant or child under 8 years old or 55 pounds.
- C ON LIGHT. The FRx Trainer's green ON light is on solid when the Trainer is on, and off otherwise. (In the FRx Defibrillator, the green Ready light blinks when the defibrillator is in standby mode.)
- D ON/OFF BUTTON. To turn on the FRx Trainer, press this green button. To turn off the Trainer, press and hold the button down for one (1) second.
- E INFORMATION-BUTTON. In the FRx Trainer, this blue “i-button” flashes when scenario selection is available and at the beginning of a patient care pause when CPR Coaching is available.
- F PADS ICONS. The pads icons flash as a guide to pads placement during the training scenario. They turn off as soon as the pads are placed.
- G CAUTION LIGHT. This light flashes during rhythm analysis and is on solid when a shock is advised, as a reminder that no one should be touching the patient.
- H SHOCK BUTTON. This orange button flashes when the FRx Trainer advises you to deliver a shock; press the Shock button to deliver the simulated shock.
- I INFRARED (IR) COMMUNICATIONS PORT. This feature is not active in the FRx Trainer. (In the FRx Defibrillator, this feature is used for data transfer.)
- J SPEAKER. When the device is being used, its voice instructions come from this speaker.

- K **BATTERY COMPARTMENT DOOR.** This door is lifted off in order to install or replace batteries. The Trainer is powered by four disposable AA alkaline cells inserted in the recess on the back of the unit. (The FRx Defibrillator is powered by a custom battery pack.)
- L **CONFIGURATION SWITCHES.** Located inside the battery compartment well, these switches allow you to alter certain Trainer parameter settings. See “Configuring the FRx Trainer” for details. (The FRx Defibrillator does not have these switches.)

The HeartStart Training Pads II are provided in a gray case with a yellow label to distinguish them from the HeartStart SMART Pads II case, which has a gray label. The Training Pads II wires also have a red “NOT FOR CLINICAL USE” flag around the pad wires near the connector plug.

WARNING: Do not store your Training Pads II with your FRx defibrillator, or where it could be confused with defibrillator pads during an emergency. Do not put the training pads on a person.

HEARTSTART FRx TRAINER KIT CONTENTS

The FRx Trainer 861306 includes one each of the following:

- HeartStart FRx Trainer
- HeartStart Training Pads II
- HeartStart FRx Trainer carry case
- HeartStart FRx Defibrillator Quick Reference Guide
- HeartStart FRx Trainer Instructions for Use
- External Manikin Adapter

Check with your medical director or Emergency Medical Services provider for additional training requirements, protocols, and materials.

OPTIONAL ACCESSORIES

The following accessories are available from Philips separately:

- FRx Trainer Instructions for Use [REF: 989803139401]
- HeartStart Training Pads II (kit containing one set of Training Pads II in training pads case, adult pads placement guide, Instructions for Use, and illustrated guide) [REF: 989803139271]
- Replacement Training Pads II (pair of training pads on disposable liner for use in training pads case provided with HeartStart Training Pads II) [REF: 989803139291]
- Adult pads placement guide [REF: M5090A]
- Infant/Child pads placement guide [REF: 989803139281]
- Infant/Child Key [REF: 989803139311]
- HeartStart FRx Defibrillator Instructor's Training Toolkit (NTSC) [REF: 989803139321]
- HeartStart FRx Defibrillator Instructor's Training Toolkit (PAL) [REF: 989803139331]
- HeartStart FRx Defibrillator Training DVD (NTSC) [REF: 989803139341]
- HeartStart FRx Defibrillator Training DVD (PAL) [REF: 989803139351]
- External Manikin Adapter, 5 pack [REF: M5089A]
- Internal Manikin Adapter [REF: M5088A]
- Replacement FRx Trainer carry case [REF: 989803139531]

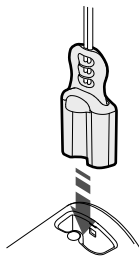
SETUP

INSTALLING OR REPLACING THE BATTERIES

The HeartStart Trainer is powered by four AA alkaline batteries (not included). To install or replace the batteries, follow the steps below:

1. Press the latch on the battery compartment door on the back of the FRx Trainer. Lift off the door and set it aside.
2. Remove the old batteries and recycle or dispose of in accordance with your local regulations.
3. Insert four new AA alkaline batteries into the recess, oriented as illustrated in the battery holder.
4. Replace the battery compartment door and press down to ensure the latch holds it in place.

NOTE: It is recommended that you replace all four batteries at the same time.



CONNECTING OR REPLACING THE TRAINING PADS II

To connect the Training Pads II to the FRx Trainer, simply plug the Training Pads II connector into the connector port of the FRx Trainer. Be sure the connector clicks into place.

When the original training pads have reached the end of their service life, you can order Replacement Training Pads for the training pads case.

To install replacement training pads in the reusable training pads case, remove and discard the old pads from the case. Open the Replacement Training Pads II package and remove each training pad from the disposable liner. Repack the replacement pads in the reusable case according to the following directions.



REPACKING THE TRAINING PADS II

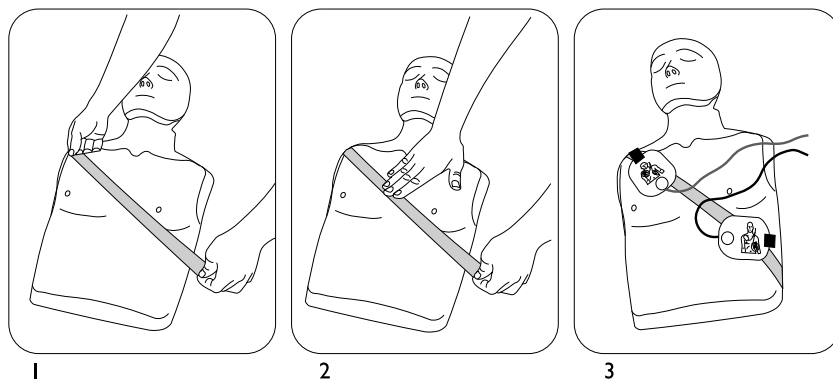
1. Firmly press one pad into each side of the open training pads case.
2. Untwist the pads wires if necessary.
3. Coil the pads wires inside the case with the connector plug exiting through the hole in the pads case.

USING THE MANIKIN ADAPTERS

To simulate the patient, use the Training Pads II on a CPR training manikin equipped with a disposable External Manikin Adapter M5089A or an Internal Manikin Adapter M5088A. Alternatively, you can use a Laerdal Resusci Anne training manikin equipped with Laerdal Link technology and an adapter available at most electronics stores. Contact Philips for information.

INSTALLING THE EXTERNAL MANIKIN ADAPTER

The M5089A External Manikin Adapter is provided with the FRx Trainer. It can be applied to any training manikin as illustrated in steps 1 and 2 below. (When the manikin is used in training, Training Pads II should be placed as shown in step 3 below.)



1

2

3

Applying the External Manikin Adapter M5089A to an adult manikin.

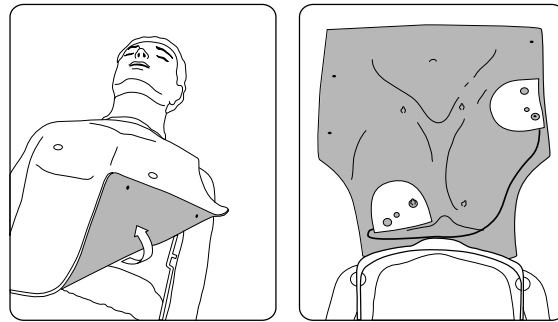
NOTE: The M5089A External Manikin Adapter has a limited service life. You can order replacement sets of five adapters.

INSTALLING THE INTERNAL MANIKIN ADAPTER

The Internal Manikin Adapter M5088A, sold separately, works with Laerdal Little Anne CPR and Laerdal Resusci Anne CPR Manikins.

To install the Internal Manikin Adapter on a Laerdal Little Anne CPR or Laerdal Resusci Anne CPR Manikin, follow the steps below:

1. Remove the skin from the manikin.
2. Peel off the liner from the adhesive backing of the Internal Manikin Adapter.
3. Place the Internal Manikin Adapter sections in the appropriate locations on the underside of the manikin's skin. See the Instructions for Use provided with the Internal Manikin Adapter for detailed placement illustrations.



Installing the Internal Manikin Adapter M5088A with the Laerdal Resusci Anne.

4. Replace the manikin skin.
5. Using the Trainer in a practice trial, check that the Internal Manikin Adapter is located appropriately to teach proper pad placement.

SELECTING A TRAINING SCENARIO

1. Make sure the pads connector is plugged in and the FRx Trainer is turned off. (Press and hold the On/Off button if necessary to turn off the Trainer.)
2. Press the flashing i-button once. The FRx Trainer will tell you how to select a scenario.
3. Press the i-button again to have the FRx Trainer identify the current training scenario. If you want to use this scenario, briefly press the On/Off button to run the scenario immediately.
4. To select a different scenario, press the flashing blue i-button to scroll through each of the eight scenarios in sequence. When you reach the scenario number you want, briefly press the On/Off button to run the scenario immediately. Or, to simply select the scenario without running it, press and hold the On/Off button until the Trainer turns off, or wait for 10 seconds and it will automatically turn off.

The FRx Trainer will run the selected scenario every time until the batteries are replaced or until a different scenario is selected. The Trainer defaults to Scenario 1 each time the batteries are installed.

RUNNING A TRAINING SCENARIO

To run the selected training scenario, treat the FRx Trainer exactly as you would the FRx Defibrillator.

1. Press the green On/Off button to turn on the FRx Trainer.
2. To practice defibrillation of an infant or child under 8 years or 55 pounds (25 kg), insert the Infant/Child Key in the Trainer's Infant/Child Key slot.

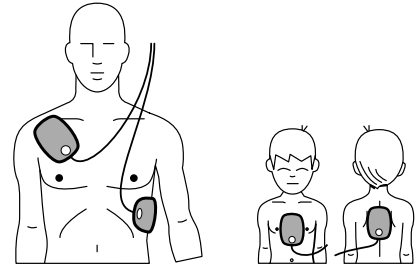
NOTE: Inserting or removing the Infant/Child Key during a scenario will restart the scenario.

3. Follow the FRx Trainer's voice instructions.

4. If using a clothed manikin, remove the clothing as instructed.
5. Open the Training Pads II case and peel off one pad.

NOTE: Avoid touching the pad's adhesive gel, because this may cause the Trainer to begin analysis prematurely.

6. Place the pad on the manikin.
Press the pad down firmly.
Then peel and place the other pad.



7. Continue to follow the FRx Trainer's instructions for remainder of scenario.
8. When the scenario has been completed, or to stop a scenario in process, press and hold the On/Off button until the FRx Trainer turns off.
9. To repeat the same scenario, repack the pads as described in "To repack the Training Pads II." Then begin again by pressing the green On/Off button. To select a different scenario, press the i-button.

NOTE: If battery power is depleted, the FRx Trainer will say REPLACE BATTERY. The FRx Trainer will continue to operate for a short time. Replace the batteries as soon as possible to ensure correct Trainer behavior.




STANDARD TRAINING SCENARIOS

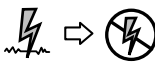
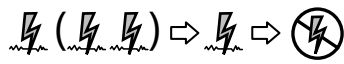
The FRx Trainer provides eight training scenarios. When the Trainer directs you to press the Shock button, the scenario will not advance unless the button is pressed. When the Trainer detects a non-shockable rhythm, it instructs you to provide CPR if needed.





In the Trainer scenarios, "conversion" means a change from a shockable to a non-shockable rhythm.



The legend below identifies the symbols used on the rear label of the FRx Trainer and in the following scenario descriptions.

NOTE: The shock series can be configured to either one or three shocks. If configured for the default one-shock series, the Trainer provides a pause after each shock.

SYMBOL	MEANING
	(Simulated) shockable rhythm detected by Trainer.
	(Simulated) non-shockable rhythm detected by Trainer.
	(Simulated) pads problem detected by Trainer.

SCENARIO DESCRIPTION	SCENARIO DETAILS
<p>Scenario 1</p>  <p>Shockable rhythm detected, one shock needed for conversion</p>	<ul style="list-style-type: none"> • Trainer detects a shockable rhythm, instructs user to deliver a shock. • Trainer detects a non-shockable rhythm.
<p>Scenario 2</p>  <p>Shockable rhythm detected, multiple shocks needed for conversion</p>	<ul style="list-style-type: none"> • Trainer detects a shockable rhythm, instructs user to deliver one shock if configured for a one-shock series, or three shocks if configured for a three-shock series. • Trainer detects a shockable rhythm, instructs user to deliver a shock. • Trainer detects a non-shockable rhythm.

SCENARIO DESCRIPTION	SCENARIO DETAILS
<p style="text-align: center;">Scenario 3</p>  <p>Troubleshooting pads, one shock needed for conversion</p>	<ul style="list-style-type: none"> • Trainer detects poor pad contact, repeats pads placement instructions. • After one pad is removed and reapplied, Trainer detects a shockable rhythm, instructs user to deliver a shock. • Trainer detects a non-shockable rhythm.
<p style="text-align: center;">Scenario 4</p>  <p>Shockable rhythm detected, conversion, return to shockable rhythm, conversion</p>	<ul style="list-style-type: none"> • Trainer detects a shockable rhythm, instructs user to deliver a shock. • Trainer detects a non-shockable rhythm. • Trainer detects refrillation (return to a shockable rhythm), instructs user to deliver a shock. • Trainer detects a non-shockable rhythm.
<p style="text-align: center;">Scenario 5</p>  <p>Non-shockable rhythm detected</p>	<ul style="list-style-type: none"> • Trainer detects a non-shockable rhythm throughout.
<p style="text-align: center;">Scenario 6</p>  <p>Shockable rhythm detected, two shocks needed for conversion</p>	<ul style="list-style-type: none"> • Trainer detects a shockable rhythm, instructs user to deliver a shock. • Trainer still detects a shockable rhythm, instructs user to deliver another shock. • Trainer detects a non-shockable rhythm.

SCENARIO DESCRIPTION	SCENARIO DETAILS
<p style="text-align: center;">Scenario 7</p>  <p>Shockable rhythm detected, two shocks needed for conversion, return to shockable rhythm detected, one shock needed for conversion</p>	<ul style="list-style-type: none"> • Trainer detects a shockable rhythm, instructs user to deliver a shock. • Trainer still detects a shockable rhythm, instructs user to deliver another shock. • Trainer detects a non-shockable rhythm. • Trainer detects refrillation (return to a shockable rhythm), instructs user to deliver a shock. • Trainer detects a non-shockable rhythm.
<p style="text-align: center;">Scenario 8</p>  <p>Troubleshooting pads, two shocks needed for conversion</p>	<ul style="list-style-type: none"> • Trainer detects poor pad contact, repeats pads placement instructions. • After one pad is removed and reapplied, Trainer detects a shockable rhythm, instructs user to deliver a shock. • Trainer still detects a shockable rhythm, instructs user to deliver another shock. • Trainer detects a non-shockable rhythm.

Not all scenarios are appropriate for all user training. Training scenario number 1 is the default scenario and is most commonly used when teaching how to use the FRx to treat a victim of sudden cardiac arrest. If the training scenarios are used as part of a formal training course, the instructor may wish to:

- select only the scenarios appropriate for the training level goals,
- create case histories and patient details for the selected scenarios,
- highlight certain aspects of the defibrillator's performance,
- assure that users conform to local protocols,

- check pad placement, and
- evaluate user knowledge on topics such as CPR and assessing the patient.

TRAINER PERFORMANCE DURING USE

The Philips HeartStart FRx Trainer is designed for use in an automated external defibrillator training class taught by a qualified instructor.

When a training scenario is running, the FRx Trainer mimics the behavior of the FRx Defibrillator during actual emergency use. It provides voice instructions, guides the user through one or more simulated shocks, provides pauses for CPR, offers CPR Coaching, etc. If there is no user interaction (no buttons are pressed) for ten minutes, the Trainer turns off.

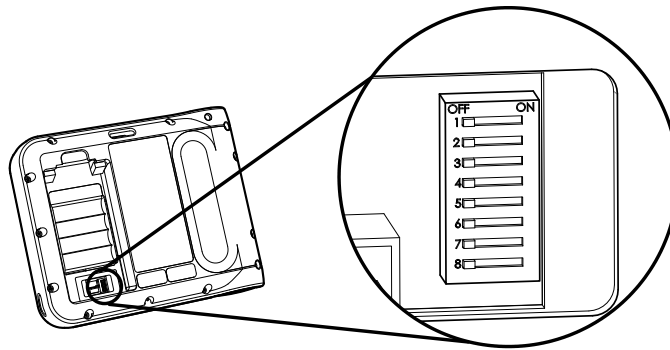
IMPORTANT: Certain features of the actual HeartStart FRx Defibrillator are not reproduced by the FRx Trainer.

- The FRx Trainer cannot be used with the (clinical) SMART Pads II. If the SMART Pads II are installed, the FRx Trainer will repeatedly ask you to install training pads.
- The FRx Trainer does not perform the battery insertion and periodic self-tests.
- Inserting or removing the Infant/Child Key from the Trainer during a scenario restarts the scenario.
- The FRx Trainer always uses a standard NSA pause.

CHANGING THE DEFAULT TRAINER CONFIGURATION

The HeartStart FRx Trainer comes with a factory default configuration designed to meet the needs of most users. The settings for certain parameters, listed in the table below, can be altered by the user.

To change configurable Trainer parameters, remove the battery compartment door from the Trainer and locate the switches in the bottom of the battery compartment. Using a small implement, adjust the ON and OFF switch settings as described in the following table.



PARAMETER	SWITCH #	SETTING (DEFAULT = OFF)		
volume	1	OFF:	high	
		ON:	low	
NSA pause* (minutes)	2 & 3	switch #2	switch #3	setting
		OFF	OFF	2.0
		ON	OFF	1.0
		OFF	ON	1.5
		ON	ON	3.0
CPR Coaching compressions/ ventilations†	4	OFF:	adult	30 compressions/2 ventilations
			pediatric	30 compressions/2 ventilations
		ON:	adult	30 compressions/2 ventilations
			pediatric	15 compressions/2 ventilations

PARAMETER	SWITCH #	SETTING (DEFAULT = OFF)		
CPR Coaching ventilations	5	OFF:	with ventilations	
		ON:	without ventilations	
shock series	6	OFF:	1	
		ON:	3	
protocol pause* (minutes)	7 & 8	switch #7	switch #8	setting
		OFF	OFF	2.0
		ON	OFF	1.0
		OFF	ON	1.5
		ON	ON	3.0

* If the Trainer is configured for CPR Coaching with ventilations, and the user selects CPR Coaching by pressing the i-button, the default pause and CPR Coaching settings (2 minutes pause, 30 compressions/2 ventilations) result in 5 cycles of CPR Coaching. The number of cycles varies for other settings. For all settings, CPR Coaching begins and ends with compressions.

† The CPR Coaching compressions/ventilations selection (switch 4) is applicable only if the CPR Coaching ventilations (switch 5) is set to OFF (with ventilations). Otherwise, the CPR Coaching compressions will be continuous, without breaks for ventilations.

TROUBLESHOOTING

The following table provides troubleshooting tips.

BEHAVIOR	POSSIBLE CAUSE	RECOMMENDED ACTION
Trainer says ANALYZING before pads are applied to manikin.	<ul style="list-style-type: none"> User touched the adhesive gel on the pads and activated the sensing circuitry of the Trainer. Pad wires are twisted. Pad wires are not separated. Pads are touching each other. 	<ul style="list-style-type: none"> Avoid touching the adhesive gel on the pads. Untwist the pad wires. Separate the pad wires between the pads and the red label. Separate pads.

BEHAVIOR	POSSIBLE CAUSE	RECOMMENDED ACTION
<p>Trainer does <i>not</i> say ANALYZING when pads are applied to the manikin adapter.</p>	<ul style="list-style-type: none"> • Pads placement is incorrect. • Pads are old, damaged, or use discontinued blue gel. • Manikin adapter is broken. • In scenarios 3 and 8, pad has not been removed and repositioned. • Pad wires are twisted. 	<ul style="list-style-type: none"> • Check for proper pad and manikin adapter placement. Remove and reposition pads or adapter if indicated. • Replace training pads. • Replace manikin adapter. • Remove and reapply one pad. • Untwist the pad wires.
<p>Trainer's voice instructions are distorted.</p>	<ul style="list-style-type: none"> • One of the batteries is installed backwards. 	<ul style="list-style-type: none"> • Reinstall batteries according to the diagram in the battery holder.
<p>Battery depletes prematurely.</p>	<ul style="list-style-type: none"> • Trainer is stored so that On/Off button is inadvertently pressed. • One of the batteries is installed backwards. 	<ul style="list-style-type: none"> • Store the Trainer so as to prevent inadvertent pressure on the On/Off button. • Reinstall batteries according to the diagram in the battery holder.

ENVIRONMENTAL CONSIDERATIONS

By complying with your national regulations regarding disposal of electric, electronic, and battery waste, you can make a positive contribution to our shared environment. Such waste can introduce harmful elements into the environment as a whole and may also endanger human health.

The FRx Trainer contains electronic components. Do not dispose of it as unsorted municipal waste. As a reminder, the Trainer bears the following symbol as a reminder to collect such electronic waste separately and dispose of it at an appropriate recycling facility according to your country's regulations.



NOTES

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