

# FRED PA-1® Trainer

Training Device for Automated external  
defibrillator (AED)



## User Guide



# SCHILLER

The Art of Diagnostics



### Sales and service information


The SCHILLER sales and service centre network is world-wide. For the address of your local distributor, contact your nearest SCHILLER subsidiary.

In case of difficulty, a complete list of all distributors and subsidiaries is provided on our internet site:

<http://www.schiller.ch>

Sales information can also be obtained from:

[sales@schiller.ch](mailto:sales@schiller.ch)

Manufacturer and responsible for the  marking

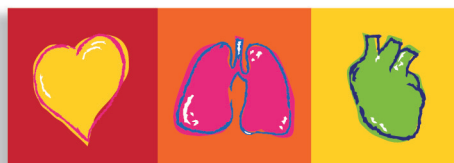
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# 1 Safety Notes

## 1.1 User profiles

The following people may use the **FRED PA-1® Trainer**:

- All persons who want to be trained in the application of an AED under supervision and instruction of a trainer.

## 1.2 Responsibility of the User



- ▲ Damaged or missing components must be replaced immediately.
- ▲ Properly dispose of the packaging material and make sure it is out of children's reach
- ▲ Do not store the training electrodes together with the right electrodes or with the defibrillator.

## 1.3 Intended Use



- ▲ The **FRED PA-1® Trainer** is a simple cost-effective simulator of the FRED PA-1 that is designed to be used exclusively for training.
- ▲ It should only be used on a mannequin.

## 1.4 Contraindication for use



- ▲ Do not use it as a conventional defibrillator.
- ▲ Do not use the device in or near magnetic resonance imaging equipment (MRI).
- ▲ It should not be connected to a patient.

## 1.5 Safety-Conscious Operation



- ▲ Immediately report any changes that impair safety (including operating behaviour) to the responsible person.
- ▲ Only use original SCHILLER training electrodes.
- ▲ Immediately replace a damaged unit, or damaged cables and connections.
- ▲ Only operate the device in accordance with the specified technical data.

## 1.6 Maintenance and Cleaning



- ▲ Before cleaning, switch the unit off and remove the battery.
- ▲ Do not use aggressive or abrasive cleaners.
- ▲ Do not, under any circumstances, immerse the device or cable assemblies in liquid.

## 1.7 Additional Terms

### 1.7.1 Terms of Warranty

Your SCHILLER **FRED PA-1® Trainer** is warranted against defects in material and manufacture according the general terms of condition. Excluded from this warranty is damage caused by an accident or as a result of improper handling. The warranty entitles to free replacement of the defective part. Any liability for subsequent damage is excluded. The warranty is void if unauthorised or unqualified persons attempt to make repairs.

In case of a defect, send the device to your dealer or directly to the manufacturer. The manufacturer can only be held responsible for the safety, reliability, and performance of the apparatus, and assume the warranty, if:

- assembly operations, extensions, readjustments, modifications, or repairs are carried out by persons authorised by him,
- spare parts used for assembly operations, extensions, readjustments, modifications or repairs are recommended or supplied by SCHILLER, and,
- the SCHILLER **FRED PA-1® Trainer** and approved attached equipment is used in accordance with the manufacturer's instructions.



There are no express or implied warranties which extend beyond the warranties hereinabove set forth. SCHILLER makes no warranty of merchantability or fitness for a particular purpose with respect to the product or parts thereof.

## 1.8 Symbols/Indicators

### 1.8.1 Symbols used in this user guide

The safety levels are classified according to ANSI Z535.6. The following overview shows the safety symbols and pictograms used in this user guide.

The terms Danger, Warning, and Caution are used in this User Guide to point out potential dangers and to indicate risk levels. Familiarise yourself with their definitions and significance.



For a possibly dangerous situation which could lead to severe personal injury or to death.



For a possibly dangerous situation which could lead to personal injury. This symbol is also used to indicate possible damage to property.



For general safety notes as listed in this section.



Important or helpful user information.

### 1.8.2 Symbols used on the device



CE marking



Do not dispose of the **FRED PA-1® Trainer** in the household waste.



Manufacturer, manufacturing date.

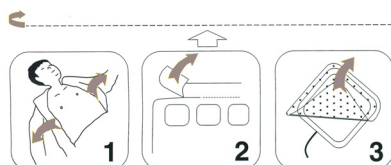


Ingress protection. Only for indoor use.

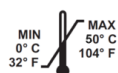
### 1.8.3 Symbols used on the training electrode packaging



- ▲ This electrodes are only for training, not for clinical use.
- ▲ Do not store these electrodes with your defibrillator.



- Remove the patient's clothes
- Open the electrode packaging
- Peel off the protective foil



Storage temperature for the electrodes



An open package cannot be conserved more than one day.



Do not expose to sunlight



Do not expose to rain



Manufacturer



## 2 Components and Operation

### 2.1 General Information

**FRED PA-1® Trainer** is a simple cost-effective simulator of the **FRED PA-1®** that is designed to be used exclusively for training.

The **FRED PA-1® Trainer** doesn't deliver any energy, it simply plays through the resuscitation process with different scenarios. It is powered by 4 standard 1.5 V AA/LR6 batteries.

The device provides 3 simulations or scenarios that aim to help to familiarise with the **FRED PA-1® Trainer** and shows that the users have the knowledge required to use it if necessary.

#### Operating modes

The operating mode can be selected by configuration. One device is enough to train both the fully automatic and semi-automatic mode. Three predefined scenarios are available:

- shock always recommended
- shock never recommended
- shock recommended and then shock not recommended

#### Languages

All languages available on the **FRED PA-1®** are also available on the Trainer.

Language selection as well as scenario selection is done by configuration (at production site or distributor or customer).

#### Standard package

The **FRED PA-1® Trainer** standard package includes:

- 1 **FRED PA-1® Trainer**
- 1 SD card with the scenario shock recommended and then shock not recommended
- 1 set of training electrodes
- 1 training electrodes cable
- 4x 1.5V AA/LR6 batteries

## Configurations

<b>Config</b>	<b>Values</b>
Device type (Automatic / semi-automatic)	DA / DSA
Resuscitation protocol	detailed/short instructions
Patient type	Adult / Child
CPR duration (in minutes)	1 / 2 / 3
Metronom frequency (beat/min)	100/110/120
Insuflation	Yes/no
Nb compressions for child	15 / 30
Scenario 1	(shock always recommended)
Scenario 2	(shock never recommended)
Scenario 3	(first shock recommended, all next shock not recommended)
Audio Language	List of available language

## 2.2 Operating and Display Elements



The status LEDs are not active!

### 2.2.1 Overview FRED PA-1® Trainer



Battery 4 x 1.5 V AA/LR6 batteries

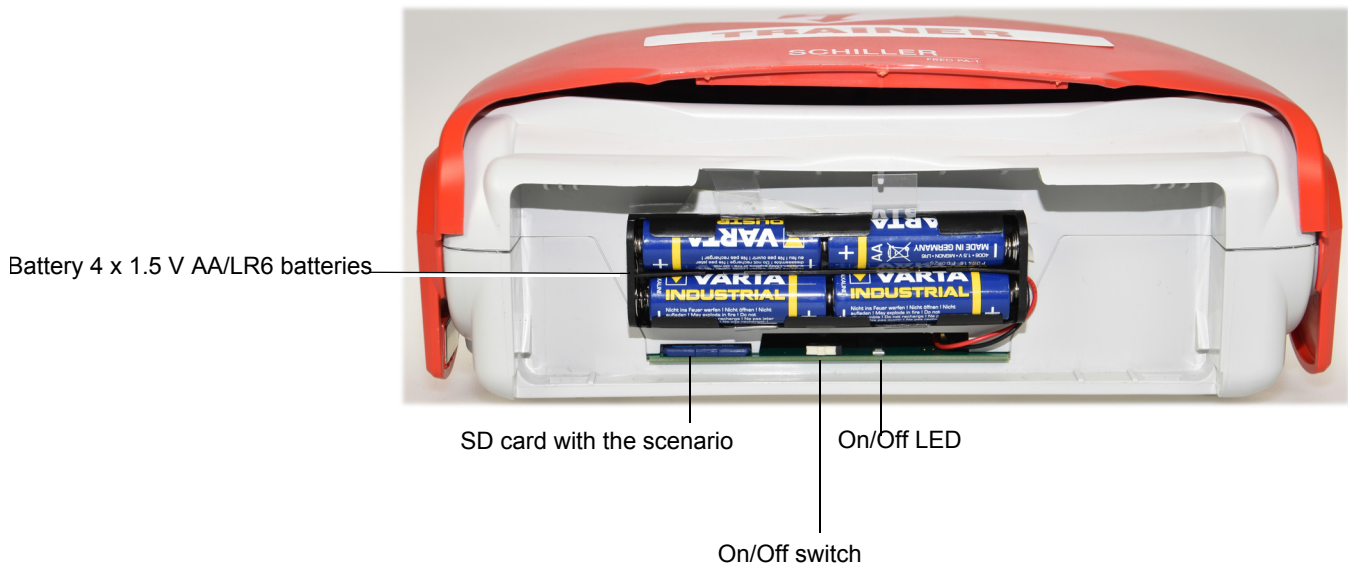
Training electrodes (only pads) to simulate opening and applying the pads on the patient body



Confirmation button that electrodes are applied and connected

Training cable with connector to simulate preconnected electrodes

### 2.2.2 Operating elements



## 3 Initial operation

### 3.1 Inserting the batteries

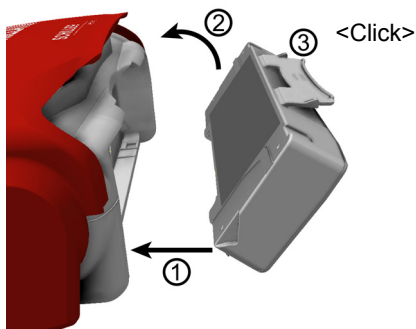


- ▲ **Danger of explosion!** The battery must not be exposed to high temperatures or disposed of with household waste.
- ▲ Do not short-circuit, cut, destroy, burn or charge a battery.
- ▲ Replace the battery if the device indicates a battery problem. A defective battery must not be used.

1. Open battery cover as indicated in the illustration below
2. Insert the batteries with the right polarity



Insert the battery cover as indicated in the illustration on the left.



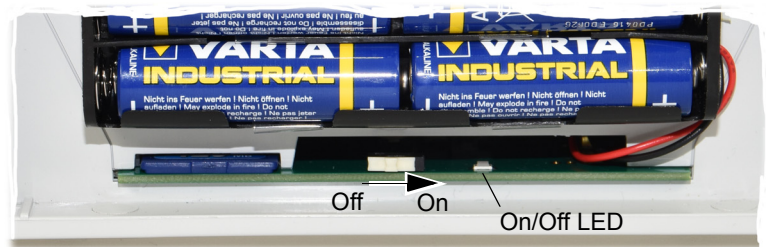
1. Insert the two stop blocks located at the bottom of the battery in the device slots.
2. Perform a rotational movement until the battery locks in place.

**Fig. 3.1** Inserting the battery cover

### 3.1.1 Switching device On and Off

#### Switching ON

1. Open the battery cover.
2. Slide the On/Off switch to the right. The On/Off LED lights up.
3. Close the battery cover. The device is now ready for training.



#### Switching OFF

1. Open the battery cover.
2. Slide the On/Off switch to the left. The On/Off LED is off.
3. Close the cover.



If the cover is closed the device will remind you periodically with an acoustic signal that the device is switched on.

## 4 Training

### i

- The training electrode cable is already connected (normally the pads are pre-connected)
- As soon the cover is opened the voice prompts starts.
- Advise the trainee to follow the instruction.
- If the trainer presses again the confirm button during the resuscitation process it will simulate disconnected pads.

### 4.1 Training procedure semi automated AED

- The following instruction is with the scenario “shock recommended and then shock not recommended (A)”

**Trainee start with opening cover and follows instructions**

1. stay calm and follow instructions
2. call emergency service dial number written on the device
3. use only if patient is unresponsive
4. check that electrodes connector is correctly fitted in machine
5. remove clothes from upper body - cut if necessary
6. tear open electrode package located in device cover
7. as shown on package peel off the backing and apply both electrodes to the upper body.

**Trainer has to confirm correct performance with the button**



- Trainer confirm that the above procedure was correctly performed by the trainee if not the instruction repeats from step 1, after the second repetition it jumps to step 15.
- 8. stand clear of patient heart rhythm analysis will be performed
- 9. analysing heart rhythm
- 10. shock advised
- 11. do not touch the patient
- 12. Press orange button - now (if shock button is not pressed within 20 seconds it jumps to 14.)
- 13. shock delivered
- 14. it is now safe to touch the victim
- 15. advise to do chest compression: according to configuration
- 16. repeat until next instruction (the next instruction starts with step 8)
  - After the instruction “no shock advice” (Step 10) it jumps to step 14.

**Finishing resuscitation process**

- To finish the resuscitation process and switch the device to standby mode, the pads connection confirmation button must be pressed to simulate the disconnection of the patient and the cover closed. After 30 seconds the device will be in standby mode.
- If the patient is not disconnected the resuscitation process will continue even if the cover is closed (like the real FRED PA-1).
- The device will remind that it is in standby by regular bips. To switch the device off completely the ON/OFF switch must be used.

## 4.2 Training procedure fully automated AED

- The following instruction is with the scenario “shock recommended and then shock not recommended

**Trainee start with opening cover and follows instructions**

1. stay calm and follow instructions
2. call emergency service dial number written on the device
3. use only if patient is unresponsive
4. check that electrodes connector is correctly fitted in machine
5. remove clothes from upper body - cut if necessary
6. tear open electrode package located in device cover
7. as shown on package peel off the packing and apply both electrodes to the upper body.

**Trainer has to confirm correct performance with the button**



- Trainer confirm that the above procedure was correctly performed by the trainee if not the instruction repeats from step 1, after the second repetition it jumps to step 15.
- 8. stand clear of patient heart rhythm analysis will be performed
- 9. analysing heart rhythm
- 10. shock advised
- 11. warning stand clear of patient shock will be delivered
- 12. 3-2-1
- 13. shock delivered
- 14. advise to do chest compression: according to configuration
- 15. repeat until next instruction (the next instruction starts with step 8.
  - After the instruction “no shock advice” (Step 10) it jumps to step 14.

**Finishing resuscitation process**

- To finish the resuscitation process and switch the device to standby mode, the pads connection confirmation button must be pressed to simulate the disconnection of the patient and the cover closed. After 30 seconds the device will be in standby mode.
- If the patient is not disconnected the resuscitation process will continue even if the cover is closed (like the real FRED PA-1).
- The device will remind that it is in standby by regular bips. To switch the device off completely the ON/OFF switch must be used.



## 4.3 Accessories and disposables



Risk to Persons, Equipment Damage — Always use SCHILLER replacement parts and disposables, or products approved by SCHILLER. Failure to do so may endanger life and/or invalidate the warranty.

Your local representative stocks all the consumables and accessories for the **FRED PA-1® Trainer**. A full list of all SCHILLER representatives can be found on the SCHILLER website ([www.schiller.ch](http://www.schiller.ch)). In case of difficulty, contact SCHILLER. Our staff will be pleased to help process your order or to provide details for all SCHILLER products.

### 4.3.1 Order Information

#### Devices

Part No.	Description
1-134-9901/2.230379	<b>FRED PA-1® Trainer</b>
0-21-0019	1 training electrodes cable

#### Accessories/Disposable

Part No.	Description
0-21-0031	1 set of training electrodes

### 4.3.2 Required accessories

- User Guide
- 1 set of training electrodes
- 1 training electrodes cable
- 4 x 1.5 V AA/LR6 alkaline batteries
- SD card with shock recommended and then shock not recommended scenario

## 4.4 Disposal information

### 4.4.1 Battery Disposal



- ▲ Danger of explosion! The battery must not be incinerated, exposed to high temperatures or disposed of with household waste.
- ▲ Do not expose the battery to chemicals that could dissolve ABS, polypropylene, polyvinyl chloride, nickel, mylar or steel.
- ▲ Do not cut, destroy, or incinerate the battery.
- ▲ Danger of acid burns! Do not open or heat up the battery.



The battery is to be disposed of in municipally approved areas or sent back to SCHILLER.

### 4.4.2 Disposal at the end of its useful life



At the end of their service life, the device and its accessories must be recycled in compliance with local regulations. Apart from the internal and plug-in batteries, the device does not contain hazardous material and can be recycled like any other piece of electronic equipment. In accordance with national law, the battery must be disposed of at an appropriate waste disposal station or returned to SCHILLER.

According to European legislation, this device is considered as electronic waste equipment. It can be returned to the distributor or manufacturer where the device will be disposed of in compliance with legal requirements. The customer must bear the shipping costs. This unit must be disposed of in a municipally approved collection point or recycling centre when no longer used.

If no such collection point or recycling centre is available, you can return the unit to your distributor or the manufacturer for proper disposal. In this way, you contribute to the recycling and other forms of utilisation of old electrical and electronic equipment. Improper disposal harms the environment and human health due to the presence of dangerous substances in electrical and electronic equipment.

## 4.5 Troubleshooting

### 4.5.1 Troubleshooting

Problem	Possible causes	Remedy
The ON/OFF LED is off and the device cannot be turned on.	<ul style="list-style-type: none"> <li>Battery depleted or inserted with the wrong polarity.</li> <li>Device defective.</li> </ul>	<ul style="list-style-type: none"> <li>→ Replace the battery.</li> <li>→ Insert the battery correctly.</li> <li>→ Have the device repaired.</li> </ul>

# 5 Technical Data

## 5.1 System Specifications

<b>Manufactured by</b>	SCHILLER MEDICAL
<b>Device name</b>	<b>FRED PA-1® Trainer</b>
<b>Dimensions</b>	310 x 255 x 100 mm (h x l x w)
<b>Weight</b>	Approx. 1.7 kg with battery and standard accessories
<b>Protection class of the device housing</b>	IP21
<b>Power supply</b>	
<b>Battery type</b>	4 x 1.5V AA/LR6 alkaline batteries
<b>Environmental conditions</b>	
<b>Device</b>	
Operation	• 0...40 °C at a relative humidity of 30 to 95% (no condensation)
Storage before use	• 0...40 °C with the battery inserted
	• Atmospheric pressure 700 to 1060 hPa
<b>Storage and transport</b>	• -20 ... 50 °C at a relative humidity of 30 to 95% (no condensation)
	• Atmospheric pressure 500 to 1060 hPa



The SCHILLER quality management system complies in full with the international standards ISO 9001 and ISO 13485.

