Training Unit
for AED-3100
TRN-3100

OPERATOR'S MANUAL

NIHON KOHDEN

Please read this manual before use so that you can use the TRN-3100 training unit for the AED-3100 automated external defibrillator safely and maximize its usefulness. Read the other attached documents as well.

Level	Description
⚠ **WARNING**	A warning alerts the user to possible injury or death associated with the use or misuse of the instrument.
⚠ **CAUTION**	A caution alerts the user to possible injury or problems with the instrument associated with its use or misuse such as instrument malfunction, instrument failure, damage to the instrument, or damage to other property.

Pay attention to all safety information in this operator's manual.

⚠ WARNING

This instrument is designed for training and cannot deliver energy. Store the instrument in a place where it is not easily accessible to prevent people from using this instrument for rescue.

⚠ WARNING

The training pads are designed for training and cannot deliver energy. Do not connect the training pads to an AED that is used for rescue. Store the training pads in a place where it is not easily accessible to prevent people from using these training pads for rescue.

⚠ CAUTION

Do not store the TRN-3100 training unit in the carrying bag for the AED-3100 automated external defibrillator. This may cause the training unit to be mistaken for an AED.

GENERAL HANDLING PRECAUTIONS

Use only Nihon Kohden approved products with this device. Use of non-approved products or in a non-approved manner may affect the performance specifications of the device. This includes, but is not limited to, batteries.

Please read these precautions thoroughly before attempting to operate the unit.

1. **When installing or storing the unit, take the following precautions:**
   (1) Avoid moisture or contact with water, extreme atmospheric pressure, excessive humidity and temperatures, poorly ventilated areas, and dust, saline or sulphuric air.
   (2) Place the unit on an even, level floor. Avoid vibration and mechanical shock, even during transport.
   (3) Avoid placing in an area where chemicals are stored or where there is danger of gas leakage.

2. **Before Operation**
   (1) Check that the unit is in perfect operating order.
   (2) Check that all defibrillation pads are connected properly.
   (3) Check that battery level is acceptable and battery condition is good.
       When replacing the battery, follow the instructions in this manual.
   (4) Pay extra attention when the unit is in combination with other instruments to avoid misdiagnosis or other problems.

3. **During Operation**
   (1) When using the unit, do not exceed the specified time and value for diagnosis or treatment.
   (2) Both the unit and the patient must receive continual, careful attention.
   (3) To assure the patient's safety, turn the power off or remove the defibrillation pads if there is any abnormality in the unit.
   (4) Avoid direct contact between the unit and the patient.

4. **After Use**
   (1) Back the unit to its original position with all controls and its accessories in the condition described in this manual.
   (2) Remove the cords gently; do not use force to remove them.
   (3) Clean the unit together with all accessories for their next use.

5. **The unit must receive expert, professional attention for maintenance and repairs. When the unit is not functioning properly, it should be clearly marked to prevent use while it is out of order.**

6. **The unit must not be altered or modified in any way.**

7. **The unit and parts must undergo regular maintenance inspection as described in this manual.**

WARRANTY POLICY

Nihon Kohden Corporation (NKC) shall warrant its products against all defects in materials and workmanship for one year from the date of delivery. However, consumable materials such as battery pack and defibrillation pads are excluded from the warranty.

NKC or its authorized agents will repair or replace any products which prove to be defective during the warranty period, provided these products are used as prescribed by the operating instructions given in the operator's manual.

No other party is authorized to make any warranty or assume liability for NKC's products. NKC will not recognize any other warranty, either implied or in writing. In addition, service, technical modification or any other product change performed by someone other than NKC or its authorized agents without prior consent of NKC may be cause for voiding this warranty.

Defective products or parts must be returned to NKC or its authorized agents, along with an explanation of the failure. Shipping costs must be pre-paid.

This warranty does not apply to products that have been modified, disassembled, reinstalled or repaired without Nihon Kohden approval or which have been subjected to neglect or accident, damage due to accident, fire, lightning, vandalism, water or other casualty, improper installation or application, or on which the original identification marks have been removed.

EMC RELATED CAUTION

This equipment and/or system complies with IEC 61326-1 International Standard for electromagnetic compatibility for measurement, control and laboratory use equipment. However, an electromagnetic environment that exceeds the limits or levels stipulated in IEC 61326-1, can cause harmful interference to the equipment and/or system or cause the equipment and/or system to fail to perform its intended function or degrade its intended performance. Therefore, during the operation of the equipment and/or system, if there is any undesired deviation from its intended operational performance, you must avoid, identify and resolve the adverse electromagnetic effect before continuing to use the equipment and/or system.

The following describes some common interference sources and remedial actions:

1. Strong electromagnetic interference from a nearby emitter source such as a cellular phone
    Turn off the cellular phone.

2. Effect of direct or indirect electrostatic discharge
    Make sure all users and patients in contact with the equipment and/or system are free from direct or indirect electrostatic energy before using it. A humid room can help lessen this problem.

3. Electromagnetic interference with any radio wave receiver such as radio or television
    If the equipment and/or system interferes with any radio wave receiver, locate the equipment and/or system as far as possible from the radio wave receiver.

4. Warning: Use with other equipment
    When the equipment and/or system is adjacent to or stacked with other equipment, the equipment and/or system may affect the other equipment. Before use, check that the equipment and/or system operates normally with the other equipment.

5. Warning: Use of unspecified accessory, transducer and/or cable
    When an unspecified accessory, transducer and/or cable is connected to this equipment and/or system, it may cause increased electromagnetic emission or decreased electromagnetic immunity. The specified configuration of this equipment and/or system complies with the electromagnetic requirements with the specified configuration. Only use this equipment and/or system with the specified configuration.
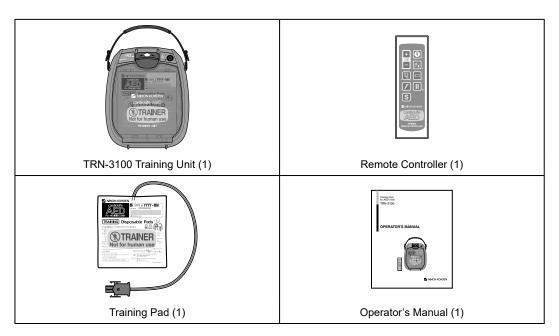
6. Use with radiation therapy equipment

   When the equipment and/or system is used in a radiotherapy room, it may cause failure or malfunction due to electromagnetic radiation or corpuscular radiation. When you bring the equipment and/or system into a radiotherapy room, constantly observe the operation. Prepare countermeasures in case of failure or malfunction.

If the above suggested remedial actions do not solve the problem, consult your Nihon Kohden representative for additional suggestions.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) this device may not cause harmful interference, and

(2) this device must accept any interference received, including interference that may cause undesired operation.

Unpacking

  TRN-3100 Training Unit (1)	 Remote Controller (1)
  Training Pad (1)	 Operator's Manual (1)

For the standard accessories and consumables, only use Nihon Kohden specified accessories to satisfy the safety and performance.

For the model and supply code of the standard accessories, refer to "Accessories (Consumables)" (p. 77) in this operator's manual.

Contents

Contents

Maintenance

Reference

Quick Reference for Remote Controller

Introduction

About This Training Unit

TRN-3100 is the training unit for the AED-3100 automated external defibrillator. With this AED training unit, you can demonstrate the entire rescue from attaching the defibrillation pads to the patient to pressing the shock button.

The rescue sequence employed in the training unit conforms to the following guidelines based on the 2015 CoSTR[1] recommended by the ILCOR[2].

- American Heart Association (AHA) 2015 guidelines[3]
- European Resuscitation Council (ERC) 2015 guidelines[4]

[1] 2015 International Consensus on Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science with Treatment Recommendations. Circulation, 2015; 132: S1 to S311

[2] International Liaison Committee on Resuscitation

[3] 2015 American Heart Association Guidelines Update for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care. Circulation, 2015; 132: S313 to S589

[4] European Resuscitation Council Guidelines for Resuscitation 2015. Resuscitation, 95 (2015) 1 to 312

⚠ WARNING

This instrument is designed for training and cannot deliver energy. Store the instrument in a place where it is not easily accessible to prevent people from using this instrument for rescue.

Introduction

Features

- The instructor can use the remote controller for more flexible use.
  - Move to a different stage of the rescue scenario.
  - Change the training sequence freely, for example, "shock advised" situation can be changed to "no shock needed" situation.
  - Pause the demonstration to give explanation to the students.
- Even though there is a "shock delivered" voice message when you press the shock button, the training unit does not discharge any energy.
- There are five rescue scenarios for possible events during the rescue.
- The training unit has a demonstration mode to show how the AED operates during rescue.
- To use this training unit, two LR14 (C) alkaline batteries are necessary. For the remote controller, two LR03 (AAA) alkaline batteries are necessary.
- By switching the adult or child mode, rescue training for both adult and child can be performed.

For Instructors

Before using this training unit, read this manual and understand how to use this training unit and its accessories safely and properly.

Make sure to explain to the students the difference between this TRN-3100 training unit and the AED-3100 automated external defibrillator.

The instructor has the responsibility to use this unit safely and properly for instruction. Before use, the instructor must learn the following.
- Defibrillation for basic life support
- How to use the AED-3100 and its accessories and options

Introduction

Symbols

The following symbols are used for this training unit and its accessories.

Training Unit

Symbol	Description
⚠⚡	Warning, dangerous voltage*[1]
(Background color: blue)	Follow instructions for use
⚠	Caution
SN	Serial number
⫟👤⫠	Defibrillation-proof type BF applied part*[1]
│	On (power)
○	Off (power)
🚫	Not for rescue
🔋	Battery indicator (100%)*[1]
🔋	Battery indicator (50%)*[2]
🔋	Battery indicator (0%)
⯐	Pad check indicator
🔧	Service indicator
単2形 LR14 / C	LR14 (C) alkaline battery

Introduction

Symbol	Description
⏏	Eject
⎓	Direct current
⊕	Plus, positive polarity
⊖	Minus, negative polarity
🏭	Manufacturer
EC REP	European representative
⑩	Products marked with this symbol comply with an environmental protection use period of 10 years according to the SJ/T11364 "Marking for the Restricted Use of Hazardous Substances in Electronic and Electrical Products" of the People's Republic of China Electronic Industry Standard.
CE	The CE mark is a protected conformity mark of the European Union.
UKCA	The UKCA mark is a regulatory conformity mark of the United Kingdom.
♲	Products marked with this symbol comply with the European WEEE directive 2012/19/EU and require separate waste collection. For Nihon Kohden products marked with this symbol, contact your Nihon Kohden representative for disposal.

*1 These symbols are printed on the training unit as a replica of the AED-3100 automated external defibrillator but the training unit does not have these functions.

*2 This symbol does not mean that the remaining battery is 50%. Refer to "Battery Status Indicator (Scenario Indicator)" (p. 17).

Introduction

Transport Package

Symbol	Description
↑↑	This way up
♉	Fragile
☂	Keep away from rain
⬙	Stacking limit by number ("n" is the limiting number)
🏭	Manufacturer
EC REP	European representative
♻	Recycle
🚫	Not for rescue
CE	The CE mark is a protected conformity mark of the European Union.
UK CA	The UKCA mark is a regulatory conformity mark of the United Kingdom.

Introduction

Remote Controller

Symbol	Description		Symbol	Description
➕	Increase volume		🔧	Simulation of repair needed condition
⚡	Start of heart rhythm analysis		⏸	Pause
➖	Reduce volume		S	Scenario change
🔲	Move to the next stage of pads attachment		+	Plus, positive polarity
🔲	Improper attachment of pads		—	Minus, negative polarity
🔋	Simulation of low remaining battery power		LR03	LR03 (AAA) alkaline battery
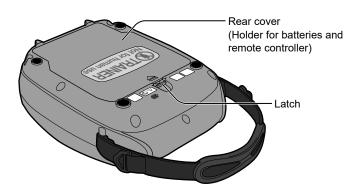
Training Pads

Symbol	Description
🚫	Not for rescue

Panel Description
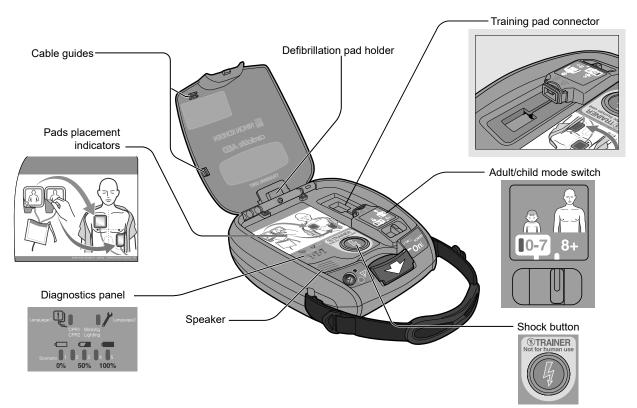
Training Unit

When the lid is closed

Lid

Receiver
for remote controller

Power switch

On

Off

Status indicator

Rear cover
(Holder for batteries and
remote controller)

Latch

Panel Description

When the lid is open

Cable guides

Defibrillation pad holder

Training pad connector

Pads placement indicators

Adult/child mode switch

0-7   8+

Diagnostics panel

Language 1
CPR1 : Blinking
CPR2 : Lighting
Language 2

Scenario 1 2 3 4 5
0%   50%   100%

Speaker

Shock button

TRAINER
Not for human use

Panel Description

Status Indicator

The status indicator of this training unit does not operate. It is always red with a "×" mark to show that the training unit cannot be used for rescue.

Shock Button

The shock button flashes when defibrillation shock is needed in the rescue training. By pressing this button, you can learn how to deliver defibrillation shock to a patient.

Battery Status Indicator (Scenario Indicator)

When the two LR14 (C) alkaline batteries are installed, the 25% and 50% indicators light in green. When the battery power is consumed, the 0% indicator lights in red. The 100% indicator does not light.

To simulate low remaining battery power, you can change the 0% indicator to red by pressing the 6 key on the remote controller.

You can check the current selected scenario by checking which LED lights when you turn the training unit power on and open the lid.

Pads Check Indicator (Language 1 Indicator)

To simulate correct and incorrect pads connection, you can change the setting by pressing the 5 key on the remote controller. When the pads are connected properly, the indicator does not light. When the pads are not connected properly, the indicator lights.

When you turn the training unit power on and open the lid, this indicator lights or blinks when Language 1 or Language 3 is selected.

Panel Description

Service Indicator (Language 2 Indicator)

To simulate the case where repair is necessary, you can change the setting by pressing the 7 key on the remote controller. When you press the 7 key, the indicator changes in red and if you press the 7 key again while the indicator lights, the training unit automatically restarts.

When you turn the training unit power on and open the lid, this indicator lights or blinks when Language 2 or Language 3 is selected.
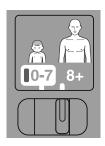
Pads Placement Indicators (Voice Guidance Mode Indicator)

To simulate the case where the defibrillation pads are not attached to the patient properly, you can change the pads placement setting by pressing the 5 key on the remote controller. When the pads are not attached correctly, orange and blue indicators blink. Press the 5 key again to turn off the indicators.

When Simple voice guidance mode is selected, these indicators light when turning the training unit power on and open the lid.
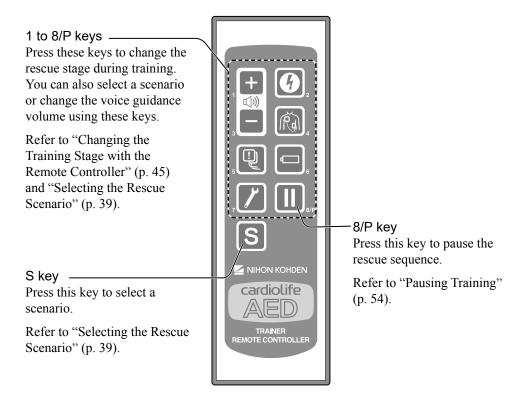
Adult/Child Mode Switch
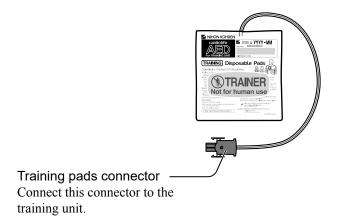
When you set the switch to "0-7", the LED lights in green and you can perform the training in the child mode.

Panel Description

Remote Controller
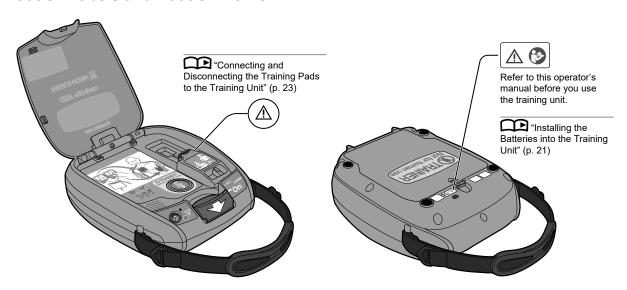
The provided remote controller is a consumable.

1 to 8/P keys
Press these keys to change the rescue stage during training. You can also select a scenario or change the voice guidance volume using these keys.

Refer to "Changing the Training Stage with the Remote Controller" (p. 45) and "Selecting the Rescue Scenario" (p. 39).

8/P key
Press this key to pause the rescue sequence.

Refer to "Pausing Training" (p. 54).

S key
Press this key to select a scenario.

Refer to "Selecting the Rescue Scenario" (p. 39).

Panel Description

Training Pads

Training pads connector
Connect this connector to the training unit.

Caution Labels and Caution Marks

"Connecting and Disconnecting the Training Pads to the Training Unit" (p. 23)

Refer to this operator's manual before you use the training unit.

"Installing the Batteries into the Training Unit" (p. 21)

Preparation
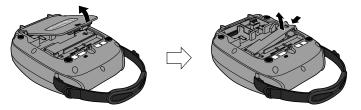
Installing the Batteries into the Training Unit

Two LR14 (C) alkaline batteries are necessary to use this training unit.

NOTE
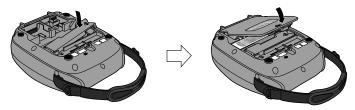
- When not using the training unit for a long time, remove the batteries.
- Do not use rechargeable batteries.

1. Press the latch and open the rear cover. Then open the battery holder cover.

2. Insert the batteries with the correct polarity direction.

3. Close the battery holder cover then close the rear cover.
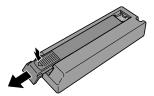
Preparation

Inserting the Batteries into the Remote Controller
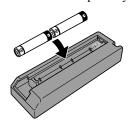
Two LR03 (AAA) alkaline batteries are necessary to use the remote controller.

NOTE
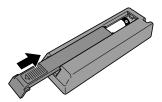
- When not using the remote controller for a long time, remove the batteries.
- Do not use rechargeable batteries.

1. Put your thumb on the △ mark on the battery cover and slide it open as shown below.

2. Insert the batteries with the correct polarity direction.

3. Slide the battery cover closed.

Preparation

Connecting and Disconnecting the Training Pads to the Training Unit

You cannot use the training pads for defibrillation; they are only for the training unit. You can attach the training pads in the same way as you attach the defibrillation pads. The training pads are not disposable and you can use them more than once.

When using the training pads, open the zipper and remove the pads. After using the pads, store them in the package.

⚠ **WARNING**

The training pads are designed for training and cannot deliver energy. Do not connect the training pads to an AED that is used for rescue. Store the training pads in a place where it is not easily accessible to prevent people from using these training pads for rescue.

Preparation

Connecting the Training Pads

1. Slide the power switch and open the lid.

2. Insert the tab on the connector into the slot.
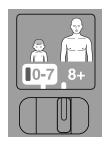
3. Slide the connector all the way in until it locks with a click.

4. Store the pads in the defibrillation pad holder and run the cable through the cable guides.

Preparation

5. Set the adult/child mode switch to "8+" which is the adult mode.

6. Close and lock the lid by sliding the power switch until it clicks.

Disconnecting the Training Pads

Hold the both sides of the training pads connector and remove the connector by sliding it out.

Preparation

Setting Language, CPR Mode and Voice Guidance and Initializing the Settings

You can set the following items with the remote controller.

- Language
  Language 1 (local language), Language 2 or Language 3 can be
  selected. Language 1 depends on the country or region.

- CPR mode
  There are two CPR modes. CPR assist sound is selectable for CPR 1.
  - CPR 1:
    With 100 "pip" sounds per minute
    With 110 "pip" sounds per minute
    With 120 "pip" sounds per minute

  - CPR 2:
    No "pip" sounds (factory default)

- Voice guidance mode
  There are two voice guidance modes, Simple and Detailed. The
  factory default is Simple mode.

- Initializing the settings
  The settings of language, CPR mode, voice guidance mode and
  sound volume can be initialized to the factory default settings.

Preparation

Setting the Language
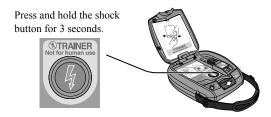
You can check the currently selected language with the pads check (Language 1) and/or service (Language 2) indicators when you turn the training unit power on and open the lid.

You can also set the language with the shock button on the training unit. For details, refer to "Changing the Settings with the Remote Controller and Shock Button on the Training Unit" (p. 37).

1. Slide the power switch and open the lid.

2. While all indicators are lit, press and hold the shock button for three seconds.

Press and hold the shock button for 3 seconds.

3. The indicator for the currently selected language lights or blinks in red and the shock button lights.

Example:
If Language 1 is selected and the CPR mode is 2, the pads check indicator lights.

Preparation

4. Press the 2 key on the remote controller to change the language. The following indicators light or blink depending on the selected language.

Language 1: Pads check (Language 1) indicator
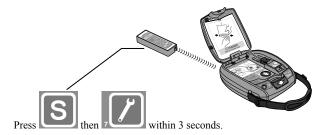
Language 2: Service (Language 2) indicator

Language 3: Pads check (Language 1) and Service (Language 2) indicators

Press the 2 key.

Once you change the language, the shock button starts blinking slowly. While the shock button is blinking, shock function is not available.

5. Do either of the following while the target language indicator is lit or blinking.

- Press the S key then the 7 key within three seconds.

or,

- Turn the training unit power off then turn the training unit power on again.

Press [S] then [7] within 3 seconds.

Preparation

Setting CPR Mode
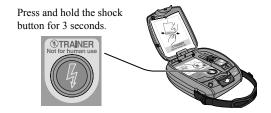
You can check the current CPR mode by checking whether the pads check (Language 1) and/or service (Language 2) indicators light or blink.

You can also set the CPR mode with the shock button on the training unit. For details, refer to "Changing the Settings with the Remote Controller and Shock Button on the Training Unit" (p. 37).

1. Slide the power switch and open the lid.

2. While all indicators are lit, press and hold the shock button for three seconds.

Press and hold the shock button for 3 seconds.

3. Check the currently selected CPR mode and check that the shock button lights.

Example:
If Language 1 is selected and the CPR mode is 2, the pads check indicator lights.

Preparation

4. Press the 5 key on the remote controller to change the CPR mode. For example, when Language 1 is selected, every time you press the 5 key on the remote controller, the pads check (Language 1) indicator changes as follows.

CPR Mode	Language 1 Indicator
CPR 1, with 100 "pip" sounds per minute:	Blinks slowly
CPR 1, with 110 "pip" sounds per minute:	Blinks
CPR 1, with 120 "pip" sounds per minute:	Blinks fast
CPR 2, no "pip" sound:	Lights
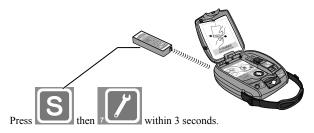
    Press the 5 key.

    Once you change the CPR mode, the shock button starts blinking slowly. While the shock button is blinking, shock function is not available.

5. Do either of the following while the target CPR mode is selected.
    -   Press the S key then the 7 key within three seconds.

    or,

    -   Turn the training unit power off then turn the training unit power on again.

    Press [S] then [7] within 3 seconds.

Preparation

Setting Voice Guidance Mode

You can check that the current voice guidance mode is Simple or Detailed by checking if the pads placement indicators are lit or not. Refer to "List of Voice Guidance" (p. 65).

NOTE

You need the remote controller to set the voice guidance mode. You cannot set the voice guidance mode only with the training unit itself.

1. Slide the power switch and open the lid.

2. While all indicators are lit, press and hold the shock button for three seconds.

Press and hold the shock button for 3 seconds.
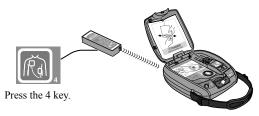
3. Check the currently selected voice guidance mode. For Simple mode, the pads placement indicators light. For Detailed mode, the pads placement indicators are turned off. The shock button lights while the pads placement indicators show the voice guidance mode.

If the voice guidance mode is Simple, the pads placement indicators light in red.

Preparation
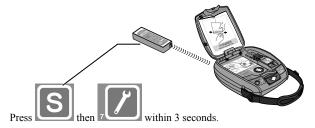
4. Press the 4 key on the remote controller to change the voice guidance mode. The pads placement indicators light or turn off when you press the 4 key on the remote controller.

Press the 4 key.

Once you change the voice guidance mode, the shock button starts blinking slowly. While the shock button is blinking, shock function is not available.

5. Do either of the following while the target voice guidance mode is selected.
    - Press the S key then the 7 key within three seconds.

    or,

    - Turn the training unit power off then turn the training unit power on again.

Press [S] then [7] within 3 seconds.

Preparation

Checking the Current Settings

You can check the current settings by checking the indicators when you turn the training unit power on and open the lid. The selected language, CPR mode and scenario can be checked on the diagnostics panel and the voice guidance settings can be checked on the pads placement indicators.

Slide the power switch and open the lid. All indicators light and the battery status indicators light in order. Then the current settings are shown on the diagnostic panel for about two seconds.

Example

Pads check and service indicators light:	Language 3, CPR mode 2
Battery status indicator 4 lights:	Scenario 4
Pads placement indicators light:	Simple voice guidance mode

After the indicators show the settings, the battery status indicators show the remaining battery power and the training unit automatically starts training in the currently selected scenario.

Preparation

List of the Settings

Settings for language, CPR mode and voice guidance mode

Underlined items are factory default settings.

Indicator		Blink	Lit	Not lit
	Pads check (Language 1) indicator	Language 1 CPR mode 1	Language 1 CPR mode 2	–
	Service (Language 2) indicator	Language 2 CPR mode 1	Language 2 CPR mode 2	–
	Pads check (Language 1) and Service (Language 2) indicators	Language 3 CPR mode 1	<u>Language 3 CPR mode 2</u>	–
	Pads placement indicators (Voice guidance mode)	–	<u>Simple</u>	Detailed

Setting for scenario

Underlined item is factory default setting.

	Battery status indicator	1	2	3	4	5	1 and 5
Scenario		1	2	3	<u>4</u>	5	Demonstration mode

Initializing the Settings to the Factory Default Settings
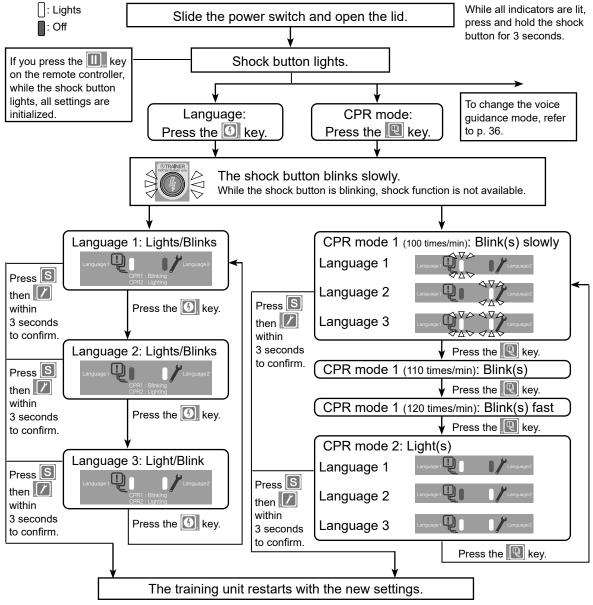
You can initialize the settings of language, CPR mode, voice guidance mode and sound volume to the factory default settings.

1. Slide the power switch and open the lid.

2. While all indicators light, press and hold the shock button for three seconds.

3. Press the 8/P key on the remote controller while the shock button is lit or blinking slowly. The settings are initialized.

Preparation

Changing the Settings with the Remote Controller

Setting the language and CPR mode

☐ : Lights
⬛ : Off

Slide the power switch and open the lid.

While all indicators are lit, press and hold the shock button for 3 seconds.

If you press the ⏸ key on the remote controller, while the shock button lights, all settings are initialized.

Shock button lights.

Language: Press the ⚡ key.

CPR mode: Press the 🔋 key.

To change the voice guidance mode, refer to p. 36.

The shock button blinks slowly.
While the shock button is blinking, shock function is not available.

Language 1: Lights/Blinks

Press Ⓢ then 🗝 within 3 seconds to confirm.

Press the ⚡ key.

Language 2: Lights/Blinks

Press Ⓢ then 🗝 within 3 seconds to confirm.

Press the ⚡ key.

Language 3: Light/Blink

Press Ⓢ then 🗝 within 3 seconds to confirm.

Press the ⚡ key.

CPR mode 1 (100 times/min): Blink(s) slowly
Language 1
Language 2
Language 3

Press Ⓢ then 🗝 within 3 seconds to confirm.

Press the 🔋 key.

CPR mode 1 (110 times/min): Blink(s)

Press the 🔋 key.

CPR mode 1 (120 times/min): Blink(s) fast

Press the 🔋 key.

CPR mode 2: Light(s)
Language 1
Language 2
Language 3

Press Ⓢ then 🗝 within 3 seconds to confirm.

Press the 🔋 key.

The training unit restarts with the new settings.

If you close the training unit lid while changing the settings and then open it again, the training unit starts with the settings that were in effect when the lid was closed.

Operator's Manual TRN-3100

35

Preparation

Setting the voice guidance mode

☐ : Lights

⬛ : Off

Slide the power switch and open the lid.

While all indicators are lit, press and hold the shock button for 3 seconds.

Shock button lights.

If you press the ⏸ key on the remote controller, while the shock button is lit, all settings are initialized.

To change the language/CPR mode, refer to p. 35.

Voice guidance: Press the 🔊 key.

⚠TRAINER Not for human use

The shock button blinks slowly.
While the shock button is blinking, shock function is not available.

Simple mode: Lights

0-7 8+

If you press the 🖐 key, the LED on the adult/child mode switch lights. But this does not have any function.

Press S then / within 3 seconds to confirm.

Press the 🔊 key.

Detailed mode: Does not light

Press S then / within 3 seconds to confirm.

Press the 🔊 key.

The training unit restarts with the new settings.

If you close the training unit lid while changing the settings and then open it again, the training unit starts with the settings that were in effect when the lid was closed.

Preparation

Changing the Settings with the Remote Controller and Shock Button on the Training Unit

You can change the language and CPR mode in the following way.

☐ : Lights
▓ : Off

The remote controller is needed to set the voice guidance mode.

Slide the power switch and open the lid.

While all indicators are lit, press and hold the shock button for 3 seconds.

Shock button lights.

If you press the ⏸ key on the remote controller, while the shock button is lit, all settings are initialized.

Language 1: Lights/Blinks

Press ⓢ then ✎ within 3 seconds.

Hold the shock button for a few seconds.

Language 2: Lights/Blinks

Press ⓢ then ✎ within 3 seconds.

Hold the shock button for a few seconds.

Language 3: Light/Blink

Press ⓢ then ✎ within 3 seconds.

Hold the shock button for a few seconds.

The language is set.

When you close the training unit lid and then open it again, the training unit starts with the selected language.

Language 1   Language 2   Language 3

CPR mode 1 (100 times/min): Blink(s) slowly

Press ⓢ then ✎ within 3 seconds.

Hold the shock button for a few seconds.

CPR mode 1 (110 times/min): Blink(s)

Press ⓢ then ✎ within 3 seconds.

Hold the shock button for a few seconds.

CPR mode 1 (120 times/min): Blink(s) fast

Press ⓢ then ✎ within 3 seconds.

Hold the shock button for a few seconds.

CPR mode 2: Light(s)

Press ⓢ then ✎ within 3 seconds.

Hold the shock button for a few seconds.

CPR mode is set.

When you close the training unit lid and then open it again, the training unit starts in the selected CPR mode.

Training

Before Starting the Training

Check the operation on the training unit.

1. Slide the power switch and open the lid.

2. Check the following.
   - All the indicators light after opening the lid and they turn off.
   - The voice guidance sounds.
   - The remote controller operates the training unit.

Training

Selecting the Rescue Scenario

This training unit has five rescue scenarios. These scenarios conform to the guidelines based on the 2015 CoSTR recommended by the ILCOR. You can select different rescue scenarios for different rescue conditions. The default setting is rescue scenario 4.

List of Scenarios

For details on each rescue scenario, refer to "Explanation of Each Scenario" (p. 55).

Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5
Heart rhythm analysis	Heart rhythm analysis	Heart rhythm analysis	Heart rhythm analysis	Heart rhythm analysis
↓	↓	↓	↓	↓
No shock advised	No shock advised	Shock	Shock	Shock
↓	↓	↓	↓	↓
CPR	CPR	CPR	CPR	CPR
↓	↓	↓	↓	↓
Heart rhythm analysis	Heart rhythm analysis	Heart rhythm analysis	Heart rhythm analysis	Heart rhythm analysis
↓	↓	↓	↓	↓
No shock advised	Shock	Shock	No shock advised	Noise
↓	↓	↓	↓	↓
CPR	CPR	CPR	CPR	CPR
		↓		
		Heart rhythm analysis		
		↓		
		Shock		
		↓		
		CPR		

Training

Selecting the Scenario

1. Slide the power switch and open the lid.

2. After the voice guidance starts, press the S key on the remote controller.

Press the S key

3. Within three seconds after you press the S key, press the number key 1 to 5 to select a scenario.

Press the key for the scenario

The training unit automatically restarts. Then the battery status indicator for the selected scenario lights for a few seconds.

After a few more seconds, voice guidance for the selected rescue scenario starts.

Training

Starting the Training

The procedure of the training depends on the selected rescue scenario This section provides the common procedure for all scenarios.
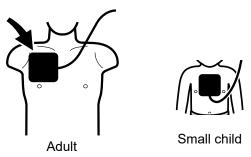
1. Have the student slide the power switch and open the lid. There is a voice guidance.
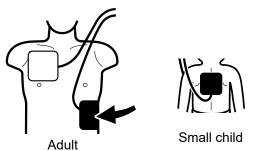
2. Have the student check if the patient is not breathing and unconscious by following the voice guidance.

3. Have the student check the patient's age. If you assume a child age 0 to 7, have the student set the adult/child mode switch to "0-7" which is the child mode.

Training

4. Have the student attach the training pads.

    1) Have the student attach the first training pad to the right upper
        chest of the patient body by following the voice guidance.
        If assuming a small child, attach the pad to the center of the
        patient's chest.

        Adult   Small child

    2) Have the student attach the second training pad to the left
        side of the patient body by following the voice guidance. If
        assuming a small child, attach the pad to the center of the
        patient's back.

        Adult   Small child

Training

5. After confirming that the student attached the pads properly, press the 2 key on the remote controller. There is a voice guidance that the AED is analyzing the patient's heart rhythm.

6. There is a voice guidance that defibrillation shock is needed or not needed. The guidance depends on the selected rescue scenario.

<u>When defibrillation shock is needed</u>
Have the student press the shock button and explain to the student that the AED delivers defibrillation shock when the button is pressed.

NOTE
The training unit does not deliver a defibrillation shock.

<u>When no defibrillation shock is needed</u>
Have the student start CPR by following the voice guidance. In training, the rescue data is not saved.
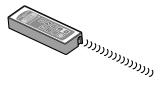
Training

When a Scenario Finishes

NOTE

When the scenario finishes, the training unit automatically enters pause mode and there is a pause sound every 10 seconds.
To start the training again, press the 8/P key on the remote controller or close the training unit lid to turn the training unit power off then turn the training unit power on again.

Training

Changing the Training Stage with the Remote Controller

Though the training is assumed to follow the selected scenario, you can change the training stage at any time with the remote controller.

In this section, Simple mode is assumed for voice guidance and the following icons indicate the adult and child modes.

: Adult mode
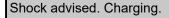
: Child mode

Changing the Heart Rhythm Analysis Result to "No Shock Needed"

Press the [S] key then the [🔧] key on the remote controller within three seconds to change the training stage to "shock is not necessary".

The voice guidance changes as follows.

> Shock advised. Charging.
>
> Do not touch patient, press flashing button.

Press the [S] then the [🔧] key.
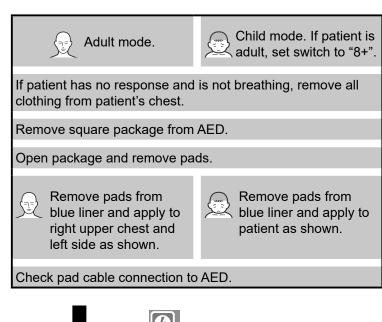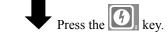
> Heart rhythm changed. Shock canceled.
> It is safe to touch patient. Start CPR.

Training

Changing the Stage to "Pads are Attached"

Press the key on the remote controller to change the training stage to "start analyzing the heart rhythm".

The voice guidance changes as follows. To move to the next message in the table, press the 4 key on the remote controller. Refer to "Moving to the Next Stage of the Pads Attachment" (p. 51).

Adult mode.	Child mode. If patient is adult, set switch to "8+".
If patient has no response and is not breathing, remove all clothing from patient's chest.	
Remove square package from AED.	
Open package and remove pads.	
Remove pads from blue liner and apply to right upper chest and left side as shown.	Remove pads from blue liner and apply to patient as shown.
Check pad cable connection to AED.	

Press the key.

Do not touch patient.
Analyzing heart rhythm. Do not touch patient.

Training
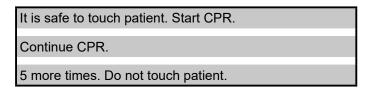
Changing the CPR Mode On or Off

Press the key on the remote controller during CPR. Every time the 2 key is pressed, the CPR mode toggles between 1 and 2.

When CPR mode 1 is selected and the 2 key is pressed, the "pip" sound is turned off.

When CPR mode 2 is selected and the 2 key is pressed, the "pip" sound is turned on.

For details on the CPR mode setting, refer to "Setting Language, CPR Mode and Voice Guidance and Initializing the Settings" (p. 26)".

It is safe to touch patient. Start CPR.
Continue CPR.
5 more times. Do not touch patient.

Press the key.

Every time you press the 2 key, the CPR mode toggles between 1 and 2.

The "pip" sounds which tell that CPR for the last 5 times are not turned off when the 2 key is pressed.

Training

Analyzing the Heart Rhythm during CPR

Press the [icon]₄ key on the remote controller during CPR.

It is safe to touch patient. Start CPR.
Continue CPR.
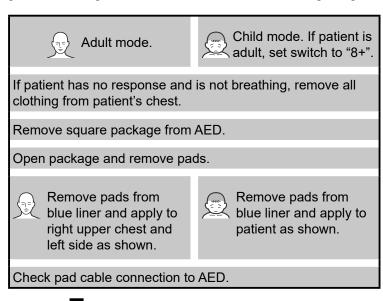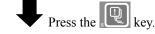
⬇ Press the [icon]₄ key.

5 more times. Do not touch patient.
Analyzing heart rhythm. Do not touch patient.

Training

Change the Stage to "Pads are Expired"

Press the key on the remote controller while the voice guidance is being heard. The scenario restarts from the beginning.

Adult mode.	Child mode. If patient is adult, set switch to "8+".
If patient has no response and is not breathing, remove all clothing from patient's chest.	
Remove square package from AED.	
Open package and remove pads.	
Remove pads from blue liner and apply to right upper chest and left side as shown.	Remove pads from blue liner and apply to patient as shown.
Check pad cable connection to AED.	

Press the key.

Pads are past expiration date.

After this guidance, the scenario restarts from the beginning. The pads check indicator lights in red.

Adult mode.	Child mode. If patient is adult, set switch to "8+".
If patient has no response and is not breathing, remove all clothing from patient's chest.	

The pads check indicator lights in red until the training unit power is turned off or the scenario is changed.

Training

Change the Stage to "Pads are Not Attached Properly"

Press the ⬜ key on the remote controller while the unit is analyzing the heart rhythm, charging or waiting for the shock button to be pressed.

Do not touch patient.
Analyzing heart rhythm. Do not touch patient.
Shock advised. Charging.
Do not touch patient. Press flashing button.

⬇ Press the ⬜ key.

Check skin contact and cable connection.

The pads check indicator lights in red and the pads placement indicators blink.

When you press the 5 key on the controller again, there are voice guidance "Do not touch patient" and "Analyzing heart rhythm. Do not touch patient".

Training

Moving to the Next Stage of the Pads Attachment

Press the [key] key on the remote controller during the voice guidance for attaching the defibrillation pads.

To shortcut the pads attachment stage and move to the heart rhythm analyzing stage, press the 2 key on the remote controller.

Adult mode.	Child mode. If patient is adult, set switch to "8+".

If patient has no response and is not breathing, remove all clothing from patient's chest.

Press the [key] key.

Remove square package from AED.

Press the [key] key.

Open package and remove pads.

Press the [key] key.

Remove pads from blue liner and apply to right upper chest and left side as shown.	Remove pads from blue liner and apply to patient as shown.
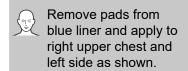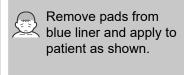
The voice guidance is repeated five times until you press the 4 key.

Press the [key] key.

Check pad cable connection to AED.

Training

The voice guidance is repeated until you press the 4 key.

Press the [icon] key.

Do not touch patient.

Analyzing heart rhythm. Do not touch patient.

Changing the Stage to "Noise and the AED cannot Analyze the Heart Rhythm"

Press the [S] key then the [II] 8/P key on the remote controller within three seconds while the unit is analyzing.

Analyzing heart rhythm. Do not touch patient.
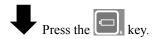
Press the [S] then the [icon] key.

Could not analyze heart rhythm.

It is safe to touch patient. Start CPR.

Training

Change the Stage to "Remaining Battery Power is Low"

Press the [🔋]₆ key on the remote controller.

When the training unit battery power is too low to operate, the 0% battery status indicator lights in red and you cannot change the stage.

The training unit power is on and the training unit lid is open.

⬇ Press the [🔋]₆ key.
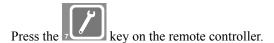
Battery low.

After the voice guidance, the 0% battery status indicator lights in red.

To return to the previous stage, press the 6 key again.

Changing the Stage where the Repair is Needed

Press the [🔧]₇ key on the remote controller.

The training unit power is on and the training unit lid is open.

⬇ Press the [🔧]₇ key.

AED not working. Do not use AED. Start CPR.

After the voice guidance, the service indicator lights in red.

The voice guidance is repeated until the training unit power is turned off or the scenario is changed.

When you press the 7 key again, the training unit restarts.

Training

Changing Volume

You can change the volume for voice guidance and CPR sounds in eight volume levels. The default setting is 8.

Turning the Volume Down

Press the [−] key on the remote controller.

Turning the Volume Up

Press the [+] key on the remote controller.

Pausing Training

Press the [❚❚] 8/P key on the remote controller. When the training pauses, there are pause sounds every 10 seconds. To continue the training, press the 8/P key again.

Training
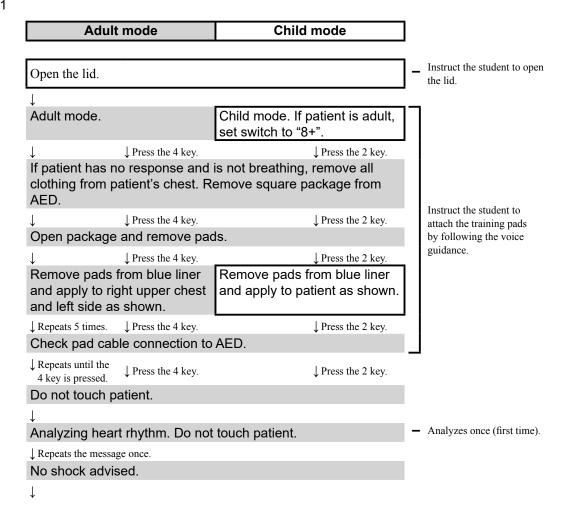
Explanation of Each Scenario
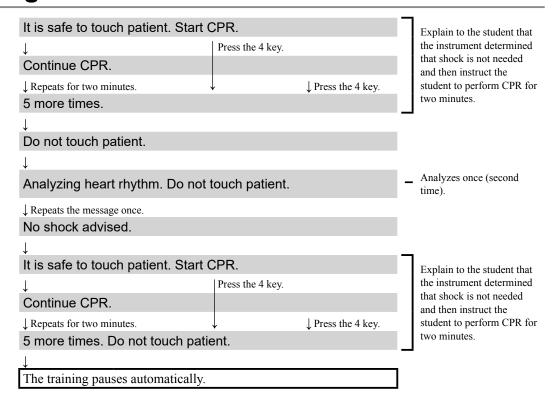
The voice guidance in the tables is for Simple mode.

NOTE
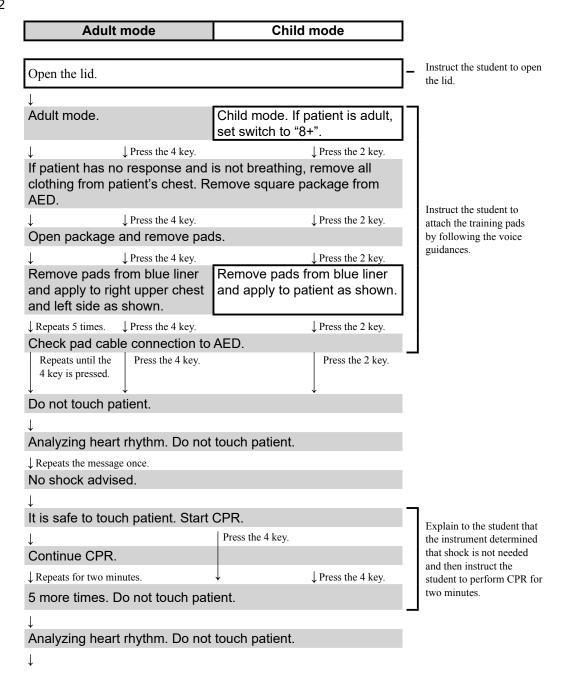
When the scenario finishes, the training unit enters the pause mode and there are pause sounds every ten seconds. To start the training again, press the 8/P key on the remote controller, or close the lid and then open the lid so that the training unit is restarted.

Scenario 1

Adult mode	Child mode

Open the lid.	— Instruct the student to open the lid.

↓

Adult mode.	Child mode. If patient is adult, set switch to "8+".

↓ ↓ Press the 4 key. ↓ Press the 2 key.

If patient has no response and is not breathing, remove all clothing from patient's chest. Remove square package from AED.

↓ ↓ Press the 4 key. ↓ Press the 2 key.

Open package and remove pads.

↓ ↓ Press the 4 key. ↓ Press the 2 key.

Remove pads from blue liner and apply to right upper chest and left side as shown.	Remove pads from blue liner and apply to patient as shown.

↓ Repeats 5 times. ↓ Press the 4 key. ↓ Press the 2 key.

Check pad cable connection to AED.

Instruct the student to attach the training pads by following the voice guidance.

↓ Repeats until the 4 key is pressed. ↓ Press the 4 key. ↓ Press the 2 key.

Do not touch patient.

↓

Analyzing heart rhythm. Do not touch patient. — Analyzes once (first time).

↓ Repeats the message once.

No shock advised.

↓

Operator's Manual TRN-3100

Training

It is safe to touch patient. Start CPR.	Explain to the student that the instrument determined that shock is not needed and then instruct the student to perform CPR for two minutes.

↓ | Press the 4 key.

Continue CPR.	

↓ Repeats for two minutes.   ↓   ↓ Press the 4 key.

5 more times.

↓

Do not touch patient.

↓

Analyzing heart rhythm. Do not touch patient.   — Analyzes once (second time).

↓ Repeats the message once.
No shock advised.

↓

It is safe to touch patient. Start CPR.   Explain to the student that the instrument determined that shock is not needed and then instruct the student to perform CPR for two minutes.

↓   Press the 4 key.

Continue CPR.

↓ Repeats for two minutes.   ↓   ↓ Press the 4 key.

5 more times. Do not touch patient.

↓

The training pauses automatically.

Training

Scenario 2

Adult mode	Child mode

Open the lid.

— Instruct the student to open the lid.

↓

Adult mode.	Child mode. If patient is adult, set switch to "8+".

↓   ↓ Press the 4 key.   ↓ Press the 2 key.

If patient has no response and is not breathing, remove all clothing from patient's chest. Remove square package from AED.

↓   ↓ Press the 4 key.   ↓ Press the 2 key.

Open package and remove pads.

↓   ↓ Press the 4 key.   ↓ Press the 2 key.

Remove pads from blue liner and apply to right upper chest and left side as shown.	Remove pads from blue liner and apply to patient as shown.

↓ Repeats 5 times.   ↓ Press the 4 key.   ↓ Press the 2 key.

Check pad cable connection to AED.

Repeats until the 4 key is pressed.   Press the 4 key.   Press the 2 key.

↓   ↓

Instruct the student to attach the training pads by following the voice guidances.

Do not touch patient.

↓

Analyzing heart rhythm. Do not touch patient.

↓ Repeats the message once.

No shock advised.

↓

It is safe to touch patient. Start CPR.

↓   Press the 4 key.

Continue CPR.

↓ Repeats for two minutes.   ↓   ↓ Press the 4 key.

5 more times. Do not touch patient.

Explain to the student that the instrument determined that shock is not needed and then instruct the student to perform CPR for two minutes.

↓

Analyzing heart rhythm. Do not touch patient.

↓

Training

Shock advised. Charging.	— Explain that the instrument determined that shock is needed and started charging.

↓

Do not touch patient. Press flashing button.	— Instruct the student to press the shock button.

↓ The voice guidance is repeated until the shock button is pressed.

Shock delivered.	— Explain that shock is delivered. If 30 seconds passes without the shock button pressed, there is a message "Shock canceled". In this case, instruct the student to start CPR.

↓ If the 30 seconds passes without the shock button pressed, there is no voice message above.

It is safe to touch patient. Start CPR.

↓   Press the 4 key.

Continue CPR.

↓ Repeats for two minutes.   ↓   ↓ Press the 4 key.

5 more times. Do not touch patient.

Instruct the student to perform CPR for two minutes.

↓

The training pauses automatically.

Training

Adult mode	Child mode

Open the lid. — Instruct the student to open the lid.

↓

Adult mode.	Child mode. If patient is adult, set switch to "8+".

↓   ↓ Press the 4 key.   ↓ Press the 2 key.

If patient has no response and is not breathing, remove all clothing from patient's chest. Remove square package from AED.

↓   ↓ Press the 4 key.   ↓ Press the 2 key.

Open package and remove pads.

Instruct the student to attach the training pads by following the voice guidance.

↓   ↓ Press the 4 key.   ↓ Press the 2 key.

Remove pads from blue liner and apply to right upper chest and left side as shown.	Remove pads from blue liner and apply to patient as shown.

↓ Repeats 5 times.   ↓ Press the 4 key.   ↓ Press the 2 key.

Check pad cable connection to AED.

Repeats until the 4 key is pressed.	Press the 4 key.	Press the 2 key.
↓	↓	↓

Do not touch patient.

↓

Training

Analyzing heart rhythm. Do not touch patient.	— Analyzes three times. (first, second and third time)

↓

Shock advised. Charging.	— Explain that the instrument determined that shock is needed and started charging.

↓

Do not touch patient. Press flashing button.	— Instruct the student to press the shock button.

↓ The voice guidance is repeated until the shock button is pressed.

Shock delivered.	— Explain that the shock is delivered. If 30 seconds pass without the shock button pressed, there is a message "Shock canceled". In this case, instruct the student to start CPR.

If the 30 seconds passes without the shock button pressed, there is no voice message above.

It is safe to touch patient. Start CPR.	
↓	Instruct the student to perform CPR for two minutes.
Continue CPR.	
↓ Repeats for two minutes.	
5 more times. Do not touch patient.	

↓

The training pauses automatically.

Repeat this sequence three times.

Training

Scenario 4

Adult mode	Child mode

Open the lid.	

— Instruct the student to open the lid.

↓

Adult mode.	Child mode. If patient is adult, set switch to "8+".

↓	↓ Press the 4 key.	↓ Press the 2 key.

If patient has no response and is not breathing, remove all clothing from patient's chest. Remove square package from AED.

↓	↓ Press the 4 key.	↓ Press the 2 key.

Open package and remove pads.

↓	↓ Press the 4 key.	↓ Press the 2 key.

Remove pads from blue liner and apply to right upper chest and left side as shown.	Remove pads from blue liner and apply to patient as shown.

Instruct the student to attach the training pads by following the voice guidance.

↓ Repeats 5 times.	↓ Press the 4 key.	↓ Press the 2 key.

Check pad cable connection to AED.

Repeats until the 4 key is pressed.	Press the 4 key.	Press the 2 key.
↓	↓	↓

Do not touch patient.

↓

Analyzing heart rhythm. Do not touch patient.

— Analyzes once (first time).

↓

Shock advised. Charging.

↓

Do not touch patient. Press flashing button.

— Instruct the student to press the shock button.

↓ The voice guidance is repeated until the shock button is pressed.

Shock delivered.

— Explain that the shock is delivered. If 30 seconds pass without the shock button pressed, there is a message "Shock canceled". In this case, instruct the student to start CPR.

Training

If 30 seconds pass without the shock button pressed, there is no voice message above.

| It is safe to touch patient. Start CPR. |

↓

| Continue CPR. |

↓ Repeats for two minutes.

| 5 more times. Do not touch patient. |

Instruct the student to perform CPR for two minutes.

↓

| Analyzing heart rhythm. Do not touch patient. |

Analyzes once (second time).

↓ Repeats the message once.

| No shock advised. |

↓

| It is safe to touch patient. Start CPR. |

↓

| Continue CPR. |

↓ Repeats for two minutes.

| 5 more times. Do not touch patient. |

Explain to the student that the instrument determined that shock is not needed and then instruct the student to perform CPR for two minutes.

↓

| The training pauses automatically. |

Operator's Manual TRN-3100

Training

Scenario 5

Adult mode	Child mode

Open the lid.	
— Instruct the student to open the lid.

↓

Adult mode.	Child mode. If patient is adult, set switch to "8+".

↓   ↓ Press the 4 key.   ↓ Press the 2 key.

If patient has no response and is not breathing, remove all clothing from patient's chest. Remove square package from AED.	

↓   ↓ Press the 4 key.   ↓ Press the 2 key.

Open package and remove pads.	

↓   ↓ Press the 4 key.   ↓ Press the 2 key.

Remove pads from blue liner and apply to right upper chest and left side as shown.	Remove pads from blue liner and apply to patient as shown.

↓ Repeats 5 times.   ↓ Press the 4 key.   ↓ Press the 2 key.

Check pad cable connection to AED.	

Instruct the student to attach the training pads by following the voice guidance.

Repeats until the 4 key is pressed.   Press the 4 key.   Press the 2 key.

↓   ↓   ↓

Do not touch patient.	

↓

Analyzing heart rhythm. Do not touch patient.	
— Analyzes once. (first time)

↓

Shock advised. Charging.	

↓

Do not touch patient. Press flashing button.	
— Instruct the student to press the shock button.

↓ The voice guidance is repeated until the shock button is pressed.

Shock delivered.	
— Explain that the shock is delivered. If 30 seconds pass without the shock button pressed, there is a message "Shock canceled". In this case, instruct the student to start CPR.

Training

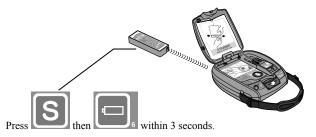If 30 seconds pass without the shock button pressed, there is no voice message above.

It is safe to touch patient. Start CPR.

↓

Continue CPR.

↓ Repeats for two minutes.

5 more times. Do not touch patient.

Instruct the student to perform CPR for two minutes.

↓

Analyzing heart rhythm. Do not touch patient.

Analyzes once. (second time)

↓

Could not analyze heart rhythm.

Explain to the student that the AED could not analyze the heart rhythm because of noise.

↓

It is safe to touch patient. Start CPR.

↓

Continue CPR.

↓ Repeats for two minutes.

5 more times. Do not touch patient.

↓

The training pauses automatically.

Training

List of Voice Guidance

Simple	Detailed
Adult mode.	Adult mode. Stay calm. Follow voice instructions. Call Emergency Medical Service.
Child mode. If patient is adult, set switch to "8+".	Child mode. Stay calm. Follow voice instructions. If patient is adult, set switch to "8+". Call Emergency Medical Service.
If patient has no response and is not breathing, remove all clothing from patient's chest.	
Remove square package from AED.	
Open package and remove pads.	
Remove pads from blue liner and apply to right upper chest and left side as shown.	
Remove pads from blue liner and apply to patient as shown.	
Check pad cable connection to AED.	
Do not touch patient.	
Analyzing heart rhythm. Do not touch patient.	
Shock advised. Charging.	
Do not touch patient. Press flashing button.	
Shock delivered.	
No shock advised.	
Heart rhythm changed. Shock cancelled.	
It is safe to touch patient. Start CPR.	
Continue CPR.	
5 more times. Do not touch patient.	
Check skin contact and cable connection.	
AED not working. Do not use AED. Start CPR.	
Battery low.	
Could not analyze heart rhythm.	

Demonstration
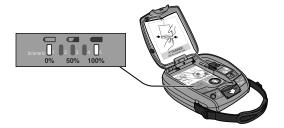
To demonstrate how the AED works at rescue, this training unit has a demonstration mode.

Selecting the Demonstration Mode

1. Slide the power switch and open the lid.

2. When the voice guidance starts, press the S key then the 6 key on the remote controller within 3 seconds.

Press [S] then [battery 6] within 3 seconds.

3. The training unit automatically restarts and the "1" and "5" battery status indicators light.

Demonstration

4. The demonstration starts. The training unit repeats demonstration until you close the training unit lid and turn the training unit power off.

   If you turn the training unit power off when the training unit is in demonstration mode, the training unit automatically enters demonstration mode the next time you turn the training unit power on.

   To return to the training mode, select the scenario when the training unit power is on. Refer to "Selecting the Rescue Scenario" (p. 39).

Demonstration

Explanation of the Demonstration Mode

Adult mode	Child mode
Open the lid.	

↓

Adult mode.	Child mode. If patient is adult, set switch to "8+".

These procedures are repeated while the training unit power is on.

↓

If patient has no response and is not breathing, remove all clothing from patient's chest. Remove square package from AED.

↓

Open package and remove pads.

↓

Remove pads from blue liner and apply to right upper chest and left side as shown.	Remove pads from blue liner and apply to patient as shown.

↓

Check pad cable connection to AED.

↓

Do not touch patient.

↓

Analyzing heart rhythm. Do not touch patient.

↓

Shock advised. Charging.

↓

Do not touch patient. Press flashing button.

↓ The voice guidance is repeated until the shock button is pressed or 30 seconds passes.

Shock delivered.

↓

It is safe to touch patient. Start CPR.

↓

Continue CPR.

↓ Repeats for two minutes.

5 more times. Do not touch patient.

↓

Analyzing heart rhythm. Do not touch patient.

↓ Repeats the message once.

No shock advised.

↓

It is safe to touch patient. Start CPR.

↓

Continue CPR.

↓ Repeats for two minutes.

5 more times. Do not touch patient.

Maintenance

The parts of this training unit can only be repaired by Nihon Kohden service personnel. Contact your Nihon Kohden representative.

Repair Parts Availability Policy

Nihon Kohden Corporation (NKC) shall stock repair parts (parts necessary to maintain the performance of the instrument) for a period of 6 years from the date of delivery. In that period NKC or its authorized agents will repair the instrument. This period may be shorter than 6 years if the board or part necessary for the faulty section is not available.

NOTE

- Depending on the time of purchase, the service period may be shorter.
- Some parts of the training unit can be repaired even after the service period.
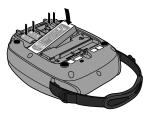
Maintenance

Inserting the Remote Controller and Spare Batteries in the Training Unit

1. Press the latch and open the rear cover.

2. Insert the remote controller and spare batteries for the training unit and remote controller.

3. Close the rear cover.

Maintenance

Replacing the Batteries

Training Unit

When the remaining battery power is low or empty, the following conditions may occur.

- 0% battery status indicator lights in red.
- While there is voice guidance, the battery status indicators become dark, start blinking or do not light.
- Voice guidance becomes unstable.
- There is no voice guidance even when the training unit power is on.
- An unexpected combination of indicators light.
- The training unit does not operate.

If any of these conditions occur, replace the batteries. Refer to "Installing the Batteries into the Training Unit" (p. 21).

Remote Controller

When the remaining battery power is low or empty, the following conditions may occur.

- The operating distance of the remote controller becomes shorter.
- The training unit does not operate unless you place the remote controller close to the training unit.

If these occur, replace the batteries. Refer to "Inserting the Batteries into the Remote Controller" (p. 22).

Replacing the Remote Controller

The remote controller for this training unit is a consumable. When the remote controller does not operate even if you replace the batteries, replace the remote controller.

Maintenance

Disposal of the Batteries

Follow your local laws when disposing of the alkaline batteries.

Cleaning

Clean the surface of the training unit with a soft cloth moistened with neutral soap or water.

Checking the Appearance

Periodically check that there are no cracks or loose parts.

Checking the Accessories

Periodically check that all accessories are ready for next use.

Reference

Specifications

Dimensions

Training unit: 100 (H) × 206 (W) × 252 (D) mm
Remote controller: 20.6 (H) × 40 (W) × 124.9 (D) mm

Weight

Training unit: 1.3 kg (not including the batteries and training pads)
Remote controller: 70 g (not including the batteries)

Operating Conditions

Temperature: 5 to 45°C (41 to 122°F)
Humidity: 5 to 95% (noncondensing)
Atmospheric pressure: 700 to 1060 hPa

Storage Conditions (without Batteries)

Temperature: −20 to +70°C (−4 to +158°F)
Humidity: 5 to 95%
Atmospheric pressure: 700 to 1060 hPa

Batteries

Training unit: two LR14 (C) alkaline batteries
Remote controller: two LR03 (AAA) alkaline batteries

Safety Standards

This training unit is designed based on safety and functional standards such as EMC. The TRN-3100 training unit and training pads meet the requirement of the following standards.

Reference

EMC

IEC 61326-1:2012

Electromagnetic Emissions/Immunity

The TRN-3100 training unit and training pads are intended for use in the electromagnetic environment specified below.

The customer or the user of the TRN-3100 training unit and training pads should assure that it is used in such an environment.

Emissions Tests

Applied Standard: CISPR11:2009, A1:2010 Group 1, Class B

Test Item	Compliance	Remarks
Conducted disturbance at mains terminals	N/A	Test was not carried out because the EUT operates only on battery power.
Radiated disturbance	Group 1, Class B	—

Low-frequency Emissions Tests

Applied Standard	Test Item	Compliance	Remarks
IEC 61000-3-2:2014 Class A	Harmonic current emissions	N/A	Test was not carried out because the EUT operates only on battery power.
IEC 61000-3-3:2013	Voltage fluctuations and flicker	N/A	

Reference

Immunity Tests

Applied Standard: IEC 61326-1:2012

Test Item	Criterion	Compliance	Remarks
Electrostatic discharge IEC 61000-4-2	B	A	—
Radiated, radio-frequency, electromagnetic field IEC 61000-4-3	A	A	—
Electrical fast transient/burst IEC 61000-4-4	B	N/A	See Note
Surge IEC 61000-4-5	B	N/A	See Note
Conducted disturbances, induced by radio-frequency fields IEC 61000-4-6	A	N/A	See Note
Power frequency magnetic field IEC 61000-4-8	A	A	—
Voltage dips, short interruptions and voltage variations IEC 61000-4-11 Voltage dip: 0.5 cycle, 0% Voltage dip: 1 cycle, 0% Voltage dip: 25/30 cycle, 70% Short interruption: 250/300 cycle, 0%	 B B C C	N/A	See Note
NOTE: Test was not carried out because the EUT operates only battery power.			

Performance Criteria

A	No degradation reboot except a specified timing operating in demonstration mode is allowed. Timing to reboot intentionally: After the EUT is started in demonstration mode, it will be automatically reboot after pronouncing "5 more times. Do not touch patient." for the second time.
B	Temporary lighting on/off of lamp indication, break of the sound and abnormal noise is allowed.
C	Not applicable because this EUT is not an AC drive apparatus.

Reference

System Composition for EMC Test

We tested that the TRN-3100 complies with IEC 61326-1:2012 with the following configuration. If other cables and equipments are used with the TRN-3100, the TRN-3100 may not comply with these standards.

Configuration at testing	Cable length (m)
Training unit, TRN-3100	–
Training pad	1.5 m
Remote controller, RY-310V	–

Safety

Equipment type:	Portable
Pollution degree:	2 (Only non-conductive pollution occurs except that occasionally a temporary conductivity caused by condensation is to be expected.)
Type of protection against electrical shock:	Internally powered equipment (Battery)
Degree of protection against harmful ingress of water:	IPX0 (non-protected)
Mode of operation:	Continuous operation

Safety Standards

IEC 61010-1:2010
IEC 61326-1:2012

Reference

Accessories (Consumables)

When you order the consumables, contact your Nihon Kohden representative.

RY-310V remote controller

YZ-061H6 training pads

Options

YZ-061H6 training pads

Spare sticker for training pads
(Supply code: Y262B)

Quick Reference for Remote Controller

Changing the Training Stage

Moving to the Next Stage of the Pads Attachment

Key on Remote Controller		Voice Guidance after Key Operation		
	4	Every time the 4 key is pressed, the guidance proceeds to the next.	Adult mode.	Child mode. If patient is adult, set switch to "8+".
			If patient has no response and is not breathing, remove all clothing from patient's chest. Remove square package from AED.	
			Open package and remove pads.	
			Remove pads from blue liner and apply to right upper chest and left side as shown.	Remove pads from blue liner and apply to patient as shown.
			Check pad cable connection to AED.	
			Analyzing heart rhythm. Do not touch patient.	

Changing the Heart Rhythm Analysis Result to "No Shock Needed"

Key on Remote Controller	Operation		Voice Guidance after Key Operation
S →	S → 7	Press the keys while charging or waiting for the shock button to be pressed.	Heart rhythm changed. Shock canceled.

Changing the Stage to "Pads are Attached"

Key on Remote Controller	Operation		Voice Guidance after Key Operation
	2	Press the key while attaching the training pads.	Do not touch patient. Analyzing heart rhythm. Do not touch patient.

Analyzing the Heart Rhythm during CPR

Key on Remote Controller	Operation		Voice Guidance after Key Operation
	4	Press the key during CPR.	5 more times. Do not touch patient.

Change the Stage to "Pads are Expired"

Key on Remote Controller	Operation		Voice Guidance after Key Operation
	5	Press the key while attaching the training pads.	Pads are past expiration date.

Quick Reference for Remote Controller

Change the Stage to "Pads are Not Attached Properly"

Key on Remote Controller		Operation	Voice Guidance after Key Operation
	5	Press the key while analyzing the heart rhythm, charging or waiting for the shock button to be pressed.	Check skin contact and cable connection.

Changing the Stage to "Noise and the AED cannot Analyze the Heart Rhythm"

Key on Remote Controller		Operation	Voice Guidance after Key Operation
	S → 8	Press the keys while analyzing heart rhythm.	Could not analyze heart rhythm.

Change the Stage to "Remaining Battery Power is Low"

Key on Remote Controller		Operation	Voice Guidance after Key Operation
	6	—	Battery low.

Changing the Stage where the Repair is Needed

Key on Remote Controller		Operation	Voice Guidance after Key Operation
	7	—	AED not working. Do not use AED. Start CPR.

Others

Key on Remote Controller		Function
	8/P	Pause/Play
	S	Changing scenario

Key on Remote Controller		Function
	1	Increasing volume
	3	Lowering volume

Quick Reference for Remote Controller

Settings

Language

1. Press and hold the shock button for 3 seconds.
2. Press ⚡ (2) key and select language 1, 2 or 3.
3. Press Ⓢ (S) → ⑦ (7) keys to confirm.

CPR Mode

1. Press and hold the shock button for 3 seconds.
2. Press 🖳 (5) key and select the CPR mode.
3. Press Ⓢ (S) → ⑦ (7) keys to confirm.

CPR1 (100 times/min): Blinks slowly
CPR1 (110 times/min): Blinks
CPR1 (120 times/min): Blinks fast
CPR2 (no pip sound):   Lights

Voice Guidance

1. Press and hold the shock button for 3 seconds.
2. Press 🔉 (4) key and select the voice guidance mode.
3. Press Ⓢ (S) → ⑦ (7) keys to confirm.

Light: Simple mode
Off: Detailed mode

Scenarios and Demonstration Mode

To change the scenario, press the Ⓢ (S) key then the scenario number key.

Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6 (Demo Mode)
Heart rhythm analysis	Heart rhythm analysis	Heart rhythm analysis	Heart rhythm analysis	Heart rhythm analysis	Heart rhythm analysis
↓	↓	↓	↓	↓	↓
No shock advised	No shock advised	Shock	Shock	Shock	Shock
↓	↓	↓	↓	↓	↓
CPR	CPR	CPR	CPR	CPR	CPR
↓	↓	↓	↓	↓	↓
Heart rhythm analysis	Heart rhythm analysis	Heart rhythm analysis	Heart rhythm analysis	Heart rhythm analysis	Heart rhythm analysis
↓	↓	↓	↓	↓	↓
No shock advised	Shock	Shock	No shock advised	Noise	No shock advised
↓	↓	↓	↓	↓	↓
CPR	CPR	CPR	CPR	CPR	CPR
		↓			↓
		Heart rhythm analysis			Repeat from the beginning until the power is turned off.
		↓			
		Shock			
		↓			
		CPR			

Manufacturer

NIHON KOHDEN CORPORATION
1-31-4 Nishiochiai, Shinjuku-ku Tokyo 161-8560, Japan
Phone +81 3-5996-8041

North and South America

NIHON KOHDEN AMERICA, INC.
15353 Barranca Parkway, Irvine, CA 92618, U.S.A.
Toll-free +1-800-325-0283
Phone +1 949-580-1555
Fax +1 949-580-1550

NIHON KOHDEN MEXICO S.A. DE C.V.
Insurgentes Sur 730, Piso 9 Oriente, Col. Del Valle
C.P. 03100, Delegacion Benito Juarez, Ciudad de Mexico
Phone +52 55-8851-5550
Fax +52 55-8851-5580

NIHON KOHDEN DO BRASIL LTDA.
Rua Diadema, 89, 1º andar, conjuntos 11 a 17, bairro Mauá
no Município de São Caetano do Sul, Estado de São Paulo
CEP 09580-670, Brasil
Phone +55 11-3044-1700
Fax +55 11-3044-0463

Europe

EC REP European Representative
NIHON KOHDEN EUROPE GmbH
Raiffeisenstrasse 10, 61191 Rosbach, Germany
Phone +49 6003-827-0
Fax +49 6003-827-599

NIHON KOHDEN DEUTSCHLAND GmbH
Raiffeisenstrasse 10, 61191 Rosbach, Germany
Phone +49 6003-827-0
Fax +49 6003-827-599

NIHON KOHDEN FRANCE SARL
Centre d'Affaires La Boursidière, Bât C – RDC,
92357 Le Plessis Robinson, France
Phone +33 1-49-08-05-50
Fax +33 1-49-08-93-32

NIHON KOHDEN IBERICA S.L.
Calle Toronga 23, Oficina 1 28043 Madrid, Spain
Phone +34 917-161-080
Fax +34 913-004-676

NIHON KOHDEN ITALIA S.r.l.
Via Fratelli Bronzetti 28, 24124 Bergamo, Italy
Phone +39 035-219543
Fax +39 035-232546

UK Responsible Person
NIHON KOHDEN UK LTD.
Unit 3, Heyworth Business Park,
Old Portsmouth Road, Peasmarsh,
Guildford, Surrey, GU3 1AF, UK
Phone +44 14-8333-1328

Asia

**SHANGHAI KOHDEN
MEDICAL ELECTRONIC INSTRUMENT CORP.**
No. 567 Huancheng Bei Road
Shanghai Comprehensive Industrial Development Zone
Fengxian District, Shanghai 201401, China
Phone +86 21-5743-6998

NIHON KOHDEN SINGAPORE PTE LTD
1 Maritime Square, #10-34 HarbourFront Centre
Singapore 099253
Phone +65 6376-2210
Fax +65 6376-2264

NIHON KOHDEN INDIA PVT. LTD.
308, Tower A, Spazedge, Sector 47, Sohna Road
Gurgaon-122 002 Haryana, India
Toll-free +91 1800-103-8182
Phone +91 124-493-1000
Fax +91 124-493-1029

NIHON KOHDEN MIDDLE EAST FZE
JAFZA One Tower A, 19th floor, Office No. 1912
P.O. Box 261516, Jebel Ali Free Zone, Dubai, U.A.E.
Phone +971 4-884-0080
Fax +971 4-880-0122

NIHON KOHDEN KOREA, INC.
3F, Cheongok Bldg., 88, Dongmak-ro, Mapo-gu,
Seoul, 04075, Republic of Korea
Phone +82 2-3273-2310
Fax +82 2-3273-2352

Contact information is accurate as of Sep 2022. Visit https://www.nihonkohden.com/ for the latest information.

The model and serial number of your device are identified on the rear or bottom of the unit.

Write the model and serial number in the spaces provided below. Whenever you call your representative concerning this device, mention these two pieces of information for quick and accurate service.

Model _____   Serial Number _____

Your Representative

Note for users in the territory of the EEA and Switzerland:
Any serious incident that has occurred in relation to the device should be reported to the European Representative designated by the manufacturer and the Competent Authority of the Member State of the EEA and Switzerland in which the user and/or patient is established.

TRN-3100_0614-907543D

Training Unit
TRN-3100

NIHON KOHDEN

Manufacturer

NIHON KOHDEN CORPORATION
1-31-4 Nishiochiai, Shinjuku-ku
Tokyo 161-8560, Japan
Phone +81 (3) 5996-8036
Fax   +81 (3) 5996-8100