4. How to Use the i-PAD CU-SP1

4.1 Chain of Survival

If you think that you are witnessing someone go down in sudden cardiac arrest, perform the chain of actions recommended by the American Heart Association (AHA) in its Chain of Survival emergency response to sudden cardiac arrest.



- 1. Immediate recognition and activation of the emergency response system.
 - Check for a response by tapping the victim on the shoulder and shouting at the victim.
 - Activate the community emergency response system (e.g. call 911 or the equivalent service in your locality)
- 2. Early CPR
 - Perform CPR.

3. Early defibrillation

• Use this device (i-PAD CU-SP1).

Using this device can be summarized in 3 steps:

After pressing the Power Button,

Step 1: Place pads on the patient.

Step 2: Press the Shock Button if instructed by the device.

Step 3: Perform CPR.

- 4. Effective advanced life support Perform advanced care in order to restore spontaneous circulation.
- 5. Integrated post-cardiac arrest care Transfer the patient to a medical institution or a specialized facility

NOTICE

• If finding and/or operating the defibrillator takes time, monitor the patient's status until the defibrillator is available, perform CPR if necessary.

4.2 Preparation for Defibrillation

1) Set the Adult/Pediatric Selection Switch to match the victim.

Adult victim

• Open the switch cover



• Set the switch to adult defibrillation mode as shown in the following picture



Child victim (victim is under 25kg or 8 years old)

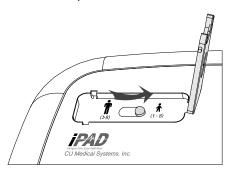
If the pediatric pads are attached, the i-PAD CU-SP1 automatically adjusts its defibrillation energy output for pediatric defibrillation regardless of the position of the Adult/Pediatric Selection Switch (i.e. the output will be pediatric even if the selection switch is set to adult)

If there are no pediatric pads for the pediatric patient, adult pads may be used. Ensure that the Adult/Pediatric Selection Switch is set to Pediatric Mode. If the switch has not been set yet, move it to Pediatric Mode as shown in the figures below

· Open the switch cover



• Set the switch to pediatric defibrillation mode as shown in the following picture



If a young victim is over 25kg or 8 years old, or if you are not sure of the exact weight or age:

- DO NOT DELAY TREATMENT
- Set the Adult/Pediatric Selection Switch to Adult mode.
- · Use the adult pads.

↑ WARNING

 Never perform defibrillation in pediatric mode to a patient who is either heavier than 25 kg or older than 8 years old. Ensure the slide key for Adult/Pediatric Mode is as shown on the bottom.



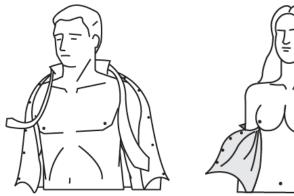
- You can switch the adult/pediatric selection switch before or after turning on the i-PAD CU-SP1. However, the defibrillation mode should be changed before placing the pads on the patient. Once the pads are in place, you cannot change the defibrillation mode anymore. When the mode is correctly selected, the defibrillation energy is set to an adult value (150 J) or pediatric value (50 J).
- 2 Turn the device on by pressing the Power Button.



When the power turns ON the following occurs in sequence:

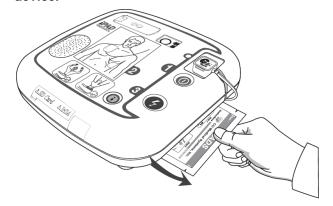
- the beeper will beep for 1 seconds
- · Voice instruction: "Call emergency Medical services, now"

3 Remove clothes from patient's chest.



• CAUTION

- Time is essential for the cardiac arrest patient. Tear or cut clothes if removing them will take time.
- Dry the patient's skin such that pads can adhere well on the chest. Shave hair on the chest if necessary.
- Remove the pads package from the Pads Storage Compartment at the bottom of the device.



⑤ Open the pads package.



6 Take pads out of the pads package.



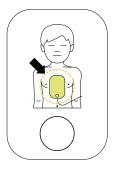
? Refer to the pictures on both pads.

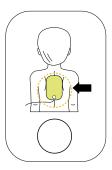
Adult Pads





Pediatric Pads





OCAUTION

• The adhesive material on the pads starts to dry out as soon as the package is opened. Use immediately after opening. Refer to [Section 6.2: Maintenance] of these Instructions for Use for procedures on how to check the expiration date of the pads and pads maintenance.

4.3 Defibrillation in Adult Mode

Step 1: Place pads on the patient.

① Remove **pad 1** from the single liner and stick the pad to the patient's upper chest as shown below.





② Remove pad 2 from the single liner, and stick the pad to the patient's side torso as shown below.





3 If the device detects the connection with the patient after placing the pads, follow the voice instruction of the device.

NOTICE

- Defibrillation can be done even if the pads are reversed. If the locations of pads are switched, follow the next voice instruction without changing the directions of pads. It is more important to begin defibrillation as soon as possible.
- In the event the pad is not adhering well, check if the adhesive side of the pads is dry. Each pad has an adhesive gel. If the gel does not adhere well, replace it with a new pads.

⚠ WARNING

• Ensure the patient is not on a wet surface when performing defibrillation. If the patient's skin is wet, dry the skin first prior to using the device.

Step 2: Press the Shock Button if instructed.

The device acquires and analyzes the patient's ECG immediately after being connected. The device will instruct you not to touch the patient by flashing the Do-Not-Touch-Patient Indicator and by issuing the voice prompt: "Do not touch the patient, analyzing heart rhythm". After analyzing the ECG, the device will determine whether or not the patient needs defibrillation.



• Do not move or touch the patient during ECG analysis.

If the patient needs defibrillation, the device will do the following:

The device announces that a defibrillation shock is needed, and instructs you to keep away from the patient.



• While the device is charging after a shockable rhythm is detected, the ECG of the patient is continuously acquired and analyzed. The device disarms itself if the ECG rhythm changes to a non-shockable rhythm before shock delivery.

When it is charged, the device activates the following indicators in sequence:



- continuous beep while the Shock Button flashes in orange.
- the device instructs you to press the flashing orange Shock button;
 you should press the Shock Button at this time.

When the Shock Button is pressed, the device delivers a defibrillating shock to the patient. If defibrillation is properly done, the device reports that an electric shock has been delivered.

After shock delivery, the device indicates that you may touch the patient, and the CPR Mode Indicator is lit. Then, the voice instruction for CPR starts.

If the flashing Shock Button is not pressed within 15 seconds, the device will cancel the shock delivery and disarm. Then, the device issues CPR instructions.

If the patient does not need defibrillation, the device will do the following in sequence:

- the device announces that the patient does not need a defibrillating shock and that you may touch the patient.
- the CPR Mode Indicator is lit.
- · voice instruction for CPR starts.

MARNING

- Do not touch (you or anybody else) the patient during shock delivery.
- Before defibrillation, make sure that there is no contact between 1 and 2 below which may provide unwanted pathways for the defibrillating current.
 - the patient's body (such as exposed skin or head or limbs), conductive fluids (such as gel), blood, or saline
 - metal objects (such as bed frame or stretcher)

CAUTION

- While analyzing ECG, keep the patient still and minimize movements around the patient. Do
 not touch the patient and pads while the Do-Not-Touch-Patient Indicator is on. Electrical noise
 (interference) may delay the ECG analysis.
- As a safety measure, the device will not deliver a shock until the flashing orange SHOCK button is pressed. If the SHOCK button is not pressed within 15 seconds of the voice instruction to press the SHOCK button, the device will disarm itself (dumps the shock energy in its internal load) and will instruct you to make sure that emergency medical services have been called. The device will then instruct you to begin CPR.
- During defibrillation, disconnect other medical electrical equipment which has no defibrillationproof applied parts from the patient.
- If the device malfunctions during a rescue operation, it will instruct you to get a replacement defibrillator and will start the voice instruction for CPR. Have CPR performed until the replacement defibrillator is ready to use.

Step 3: Perform CPR.

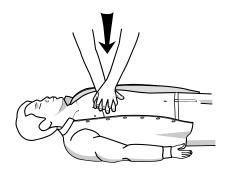
Perform CPR when the i-PAD CU-SP1 instructs you to do so.

By default, the CU-SP1 gives voice instruction for CPR during pause for CPR after a shock delivery. When voice instruction for CPR is needed outside of the default setting, press the flashing blue i-Button for at least 15 seconds.

[CPR Method]

1. Compression Point

Place the heel of your hand in the middle of the patient's chest between nipples (which is the lower half of the sternum), and put the heel of your other hand on top of the first so that your hands are overlapped and parallel.



2. Compression Speed and Depth

Compress the chest at least 5 cm deep, and at a rate of at least 100 compressions per minute.

3. Opening the Airway

While lifting the patient's chin up, tilt the head backward to open the airway.

4. Ventilation Method

Pinch the patient's nose as shown in the figure below, and give the patient enough breath to make the chest rise significantly.



NOTICE

- If you have not been trained in CPR, you should perform only chest compression or follow the instructions of the emergency medical services' agent on the phone.
- If you are trained for CPR and able to perform ventilation, perform the chest compression along with ventilation.
- The CPR guide can be set on an administrator's mode. Refer to [Section 5.3: Device Setting] for more information.

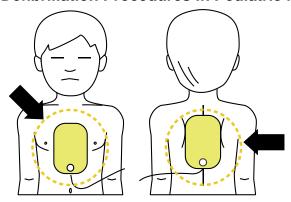
OCAUTION

• While playing the CPR guide, the device does not analyze the patient's ECG. After the CPR guide, the device automatically starts the reanalysis of the patient's ECG.

NOTICE

• In order to turn the device off after use, press the Power Button for at least 1 second.

4.4 Defibrillation Procedures in Pediatric Mode



When the patient is older than 1 year and younger than 8 years, defibrillation can be done using the pediatric pads. When the device is in pediatric mode (pediatric pads are connected to the device or the Adult/Pediatric Selection Switch is set to Pediatric), it automatically sets the defibrillation energy to 50 J and provides pediatric CPR guide.

Place pads on the middle of the chest and back as illustrated above. Pads are not specific to either chest or back.

If there are no pediatric pads for the pediatric patient, use adult pads but set the Adult/Pediatric Selection Switch to Pediatric Mode, and then perform defibrillation according to the voice instructions.

NOTICE

- Follow the instructions below when giving first aid during pediatric cardiac arrest.
 - When giving first aid during a pediatric cardiac arrest, ask others to call the emergency medical center and to bring the i-PAD CU-SP1 while you are performing pediatric CPR.
 - When there is no one else around, perform CPR for 1 to 2 minutes, call emergency medical services, and then get the i-PAD CU-SP1.
 - If you witnessed the child's collapse, call emergency medical services immediately, and then get the i-PAD CU-SP1.