CPR add-on kit

Powered by **hearti**sense®

App User Manual
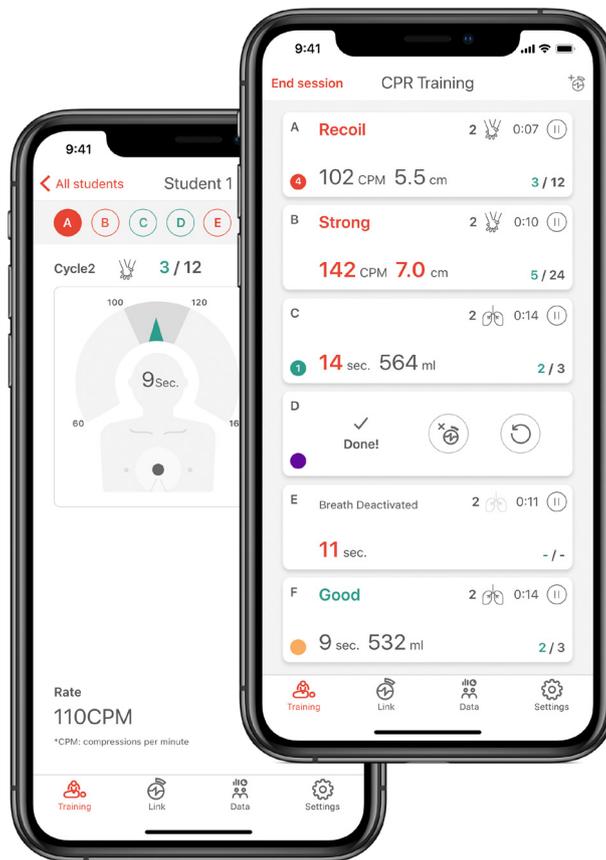
ENGLISH

Contents

1. Introducing and installing the app

1.1. CPR add-on Kit App

CPR add-on kit Student

The Student app is a learning application and this software analyzes CPR carried out by a student in real time and gives feedback.

· Measures the CPR performance and gives feedback
· Saves and converts measured data into a score
· Reviews and exports the saved score

CPR add-on kit Instructor

The Instructor app is a training application that enables the monitoring of CPR carried out by a student in real time and this software helps with evaluation, recording and management.

· Supports connection with up to 6 manikins and feedback
· Measures the CPR performance and gives feedback
· Saves and converts measured data into a score
· Reviews and exports the saved score

Supported device and version

Android Devices
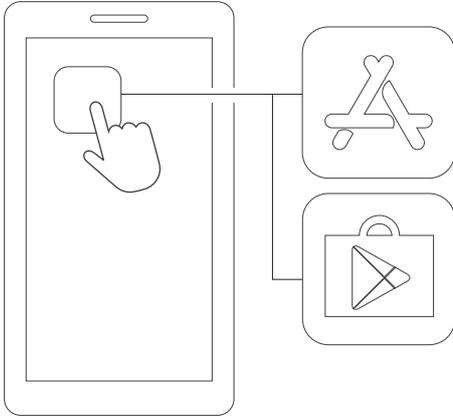
Devices released after 2017
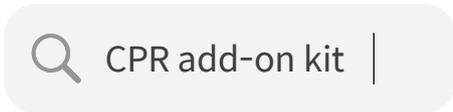Android 6.0 (Marshmallow) or later
BLE 4.2 or later

iOS Devices

iOS 11.0 or above
BLE 4.2 or above

1.2. Installing the apps

1) Connect to the App Store (iOS) or Google Play Store (Android).

2) Search for CPR add-on kit.

CPR add-on kit

CPR add-on kit Student

CPR add-on kit Instructor

3) Download the Student app or the Instructor app.

GET

2. Preparation for use

2.1. Checking the power of the kit

CPR Add-on Kit equipped manikin

Make sure the kit makes beeping sound when the batteries are inserted. Beeping sound means the power is on.

If there is no input (chest compression or breath delivery, or both) for more than 10 minutes while the power is on, the kit becomes sleep mode to conserve power.

To turn the kit back on from the sleep more, perform the chest compression more than twice. When the kit is on again, it makes beeping sound again.
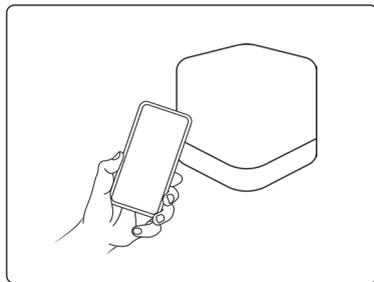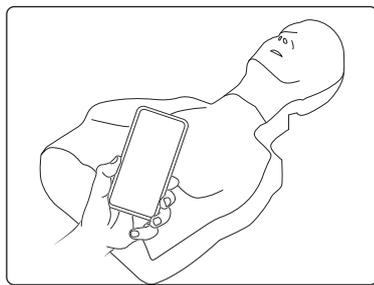
cprCUBE PRO

Push the power button underneath the device to turn it on.

2.2. Initial connection and set-up

When the kit is connected for the first time, assigning ColorID and breath calibration will be initiated. When you make the set-up for the first time, it will be saved, and you won't have to assign ColorID and calibrate breath again.

Initial connection
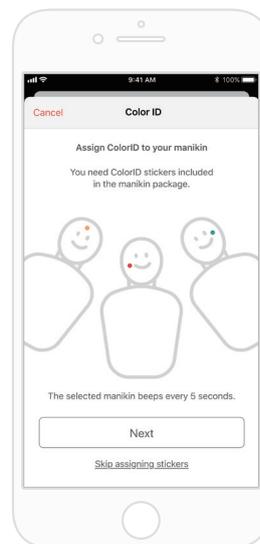
Setting ColorID
(Refer to sec. 2.3)
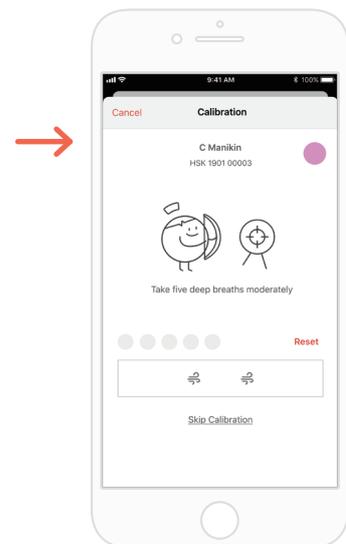
Calibrating Breath module
(Refer to sec. 3.2 and 3.3)

2.3 What is ColorID?

ColorID feature is used to identify each kit instead of the product's serial number, and color stickers and number stickers are used when searching and connecting kits.

2.4. Assigning ColorID

1) When new kit is connected to CPR add-on kit application for the first time, ColorID set-up is automatically initiated. During the set-up, connected kit makes beeping sound in interval of 5 seconds.

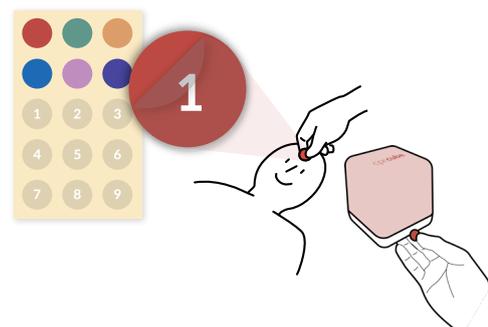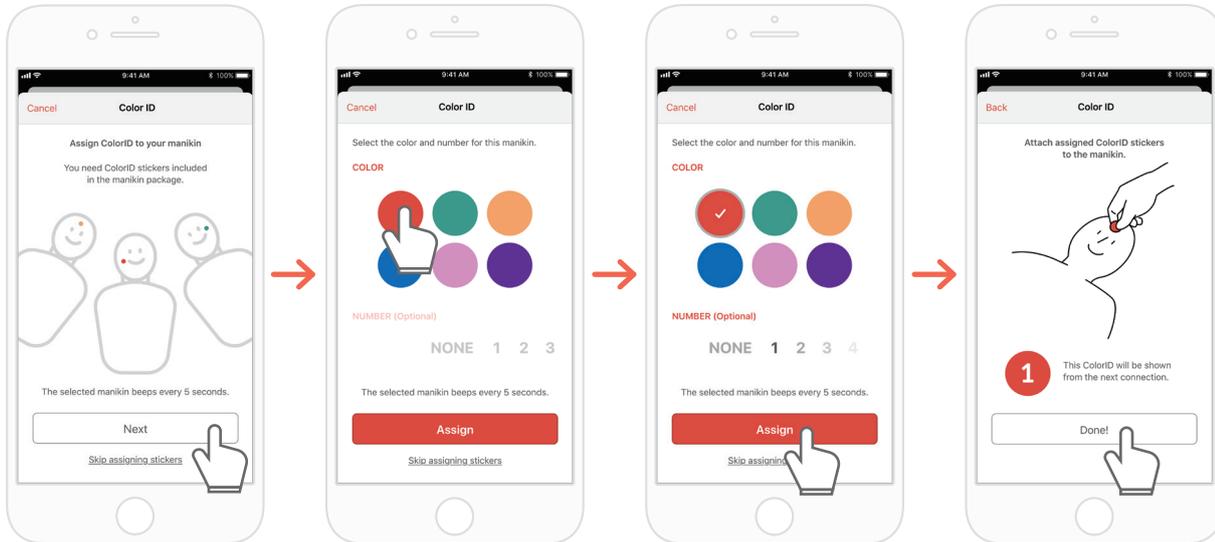2) Choose color + number combination you wish to use for each connected kit. (Choosing color is mandatory.)

3) When you choose 'Assign', ColorID assigning is completed.

4) Put corresponding color and number stickers to the manikin.
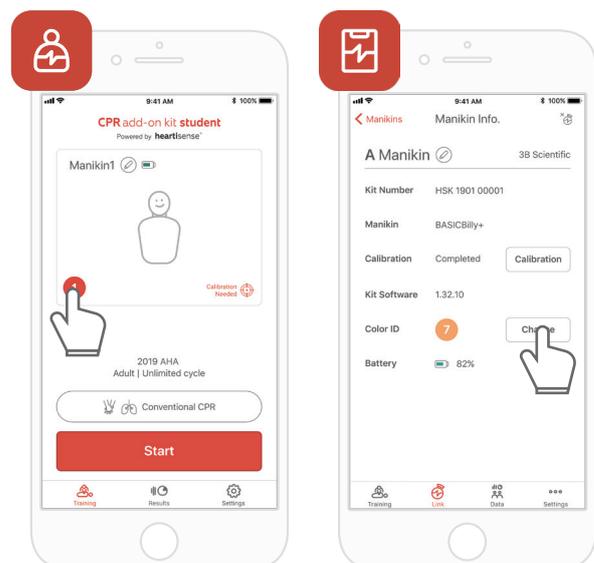
2.5. Resetting ColorID

ColorID for each kit may be re-set.

[Student App]
- Change ColorID by tapping ColorID icon on the left bottom of connected kit screen, shown on the main screen
- You may change ColorID from 'Kit information' from 'Settings' tab.
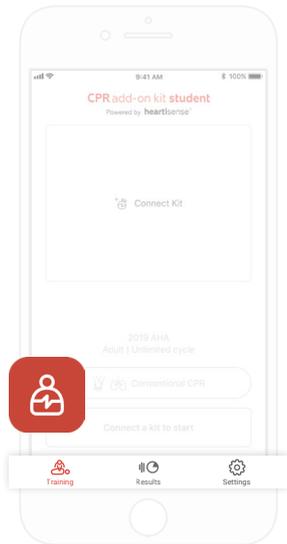
[Instructor App]
- Choose each manikin slot from 'Link' tab, then choose 'Change' on ColorID slot.

3. Main features of the application

3.1. Tab menu

CPR add-on kit Student

The CPR add-on kit Student consists of the following tabs.

Training
You can monitor CPR performance in real time.

Results
You can manage saved training records.

Settings
You can adjust the settings applied to the training including the guideline and score calculation settings.

CPR add-on kit Instructor

The CPR add-on kit Instructor consists of the following tabs.

Training
You can select the measurement method and monitor CPR performance in real time.

Link
The connected manikin information is displayed, allowing you to check the status before carrying out training.

Data
You can manage saved training, evaluation records and student list.

Settings
You can adjust the settings applied to the training including the guideline and score calculation settings.

3.2. Learning using the Student app
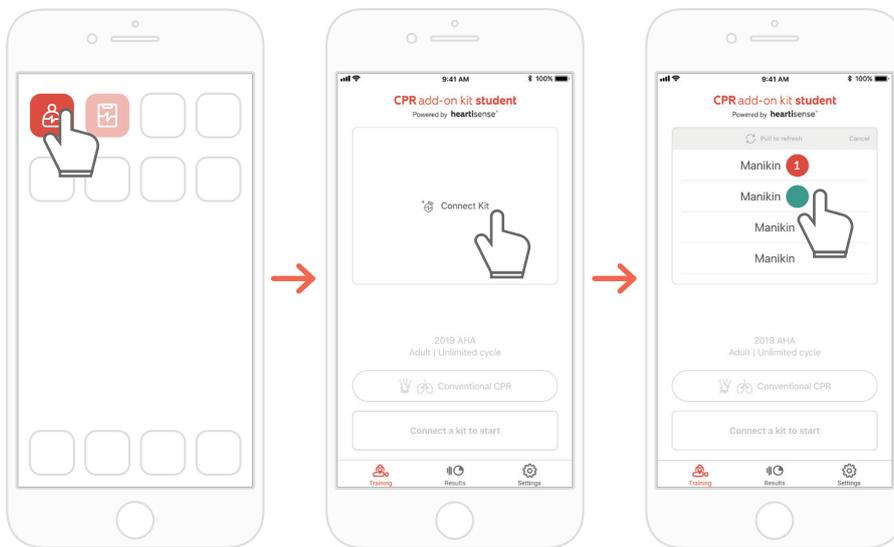
1) Run the CPR add-on kit Student and then select Connect Kit on the main screen.

2) Select the desired manikin ID from the list to begin the Bluetooth connection.
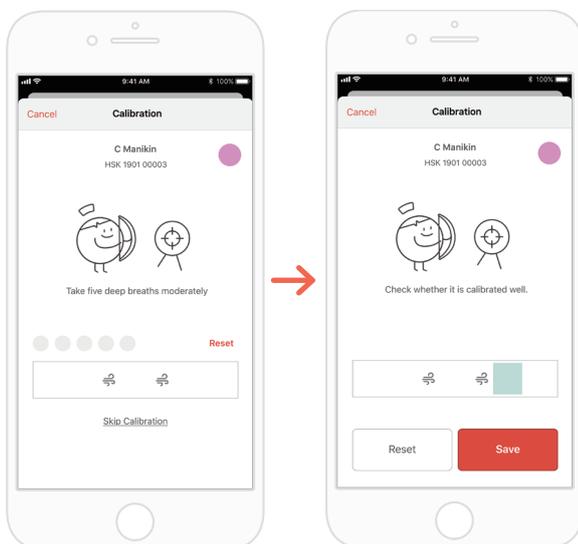
3) When the kit is connected to the app for the first time, the breath module should be calibrated. The calibration screen will pop up automatically.

*Deliver a proper volume of breath 5 times as instructed on the screen and press the Save button.

*The breath function is not applicable for cprCUBE models

4) When the Bluetooth connection is made successfully, the manikin information will be displayed on the screen. Select the evaluation item(s), measuring compression only or both compression and breath.

* You can calibrate the breath sensor by selecting the target-shaped icon.

If the breath sensor is calibrated

If the breath sensor is not calibrated

* You can set the metric of measurement

| Hands-only CPR | Evaluation is carried out based on the hands-only CPR. |

| Conventional CPR | Evaluation is carried out based on the CPR (30:2). |
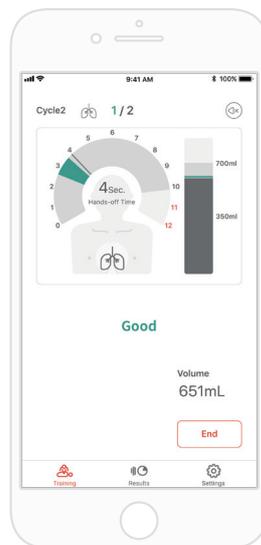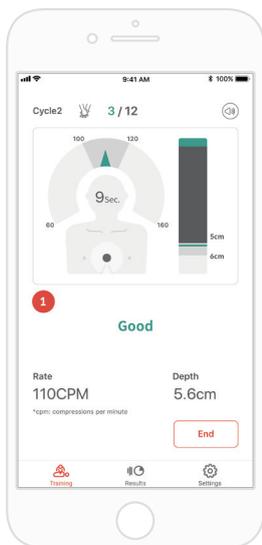
After the session
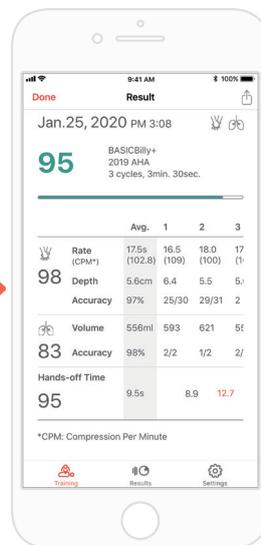
5) When a user performs CPR, the application gives feedback for the compression or breath.
*Please refer to the section 4.1 'Compression & Breath Feedback UI' for further details about the feedback on display

6) When CPR is completed, the measured data will be shown in numerical figures.

3.3. Training using the Instructor app
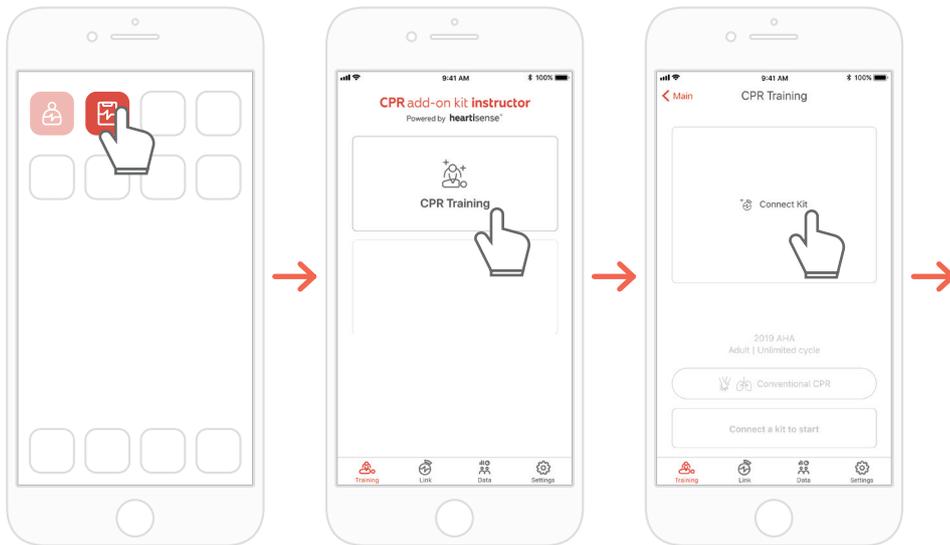
1) Run the CPR add-on kit Instructor and select 'CPR training' on the main screen.

2) When you press 'Connect Kit', available kits for connection will be showned.
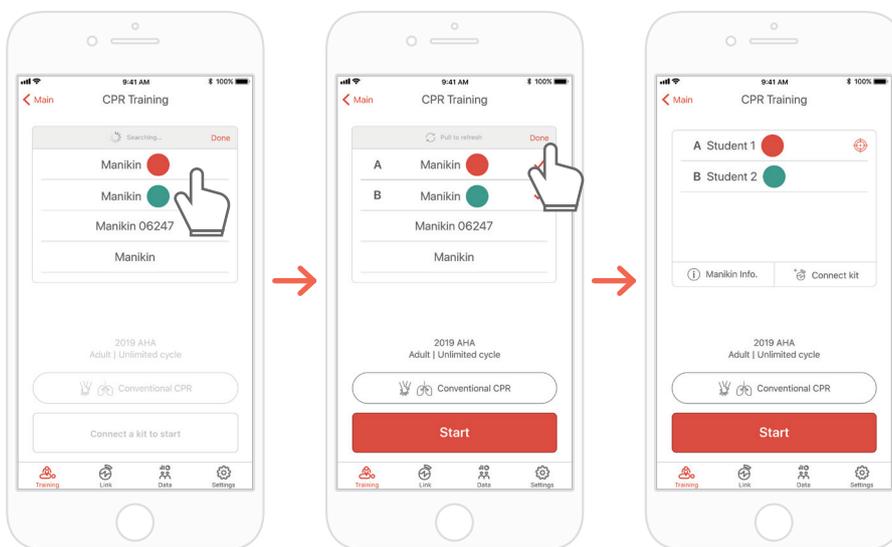
3) Select the manikin name you wish to connect from the list and try the Bluetooth connection.

4) When the connection is made, press the 'Done' button to end searching for kits
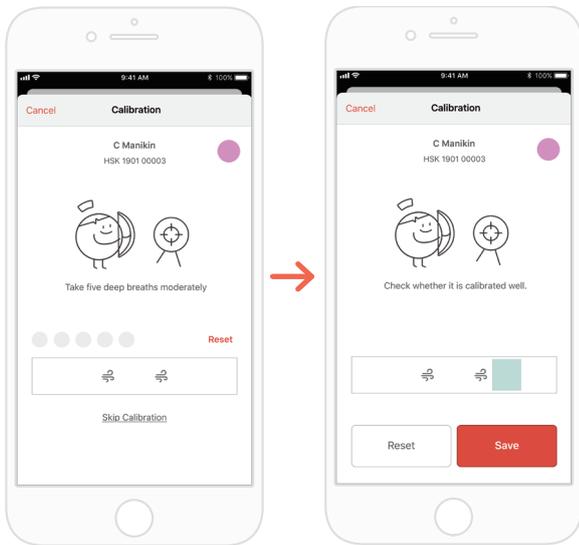
5) When the kit is connected to the app for the first time, the breath sensor should be calibrated.
The calibration screen will pop up automatically.
*Deliver a proper volume of breath 5 times as instructed on the screen and press the Save button.
*The breath function is not applicable for cprCUBE models
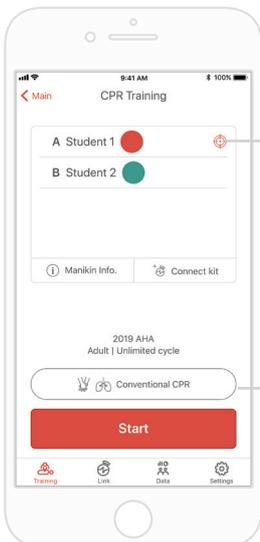
6) When the Bluetooth connections are made successfully, students will be shown on the screen.

* You can calibrate the breath sensor by selecting the target-shaped icon.

If the breath sensor is not calibrated

* You can set the metric of measurement

Hands-only CPR   Evaluation is carried out based on the hands-only CPR.

Conventional CPR   Evaluation is carried out based on the CPR (30:2).
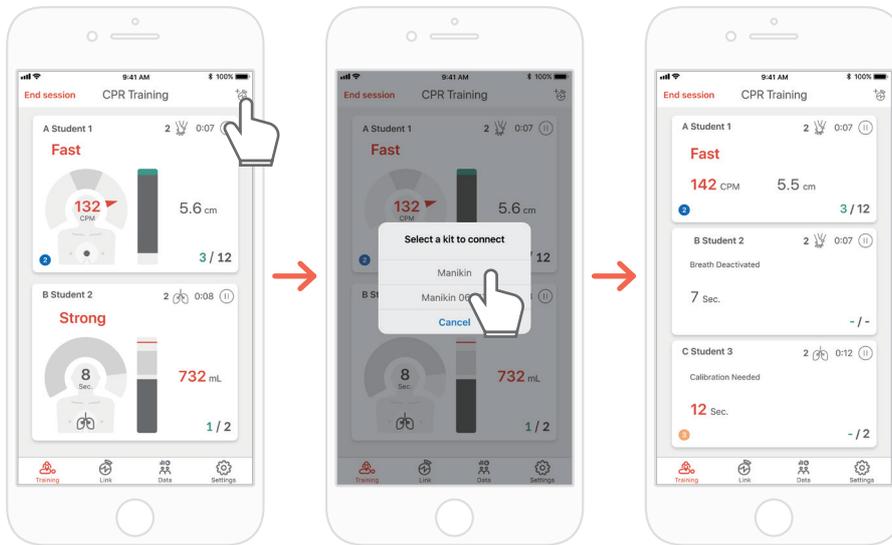
7) The CPR add-on kit Instructor app can monitor up to 6 students.
You can add a kit through the icon on the top right side while evaluating.
*Refer to '4.1 Compression & Breath Feedback UI' for information regarding the feedback displayed on the screen.
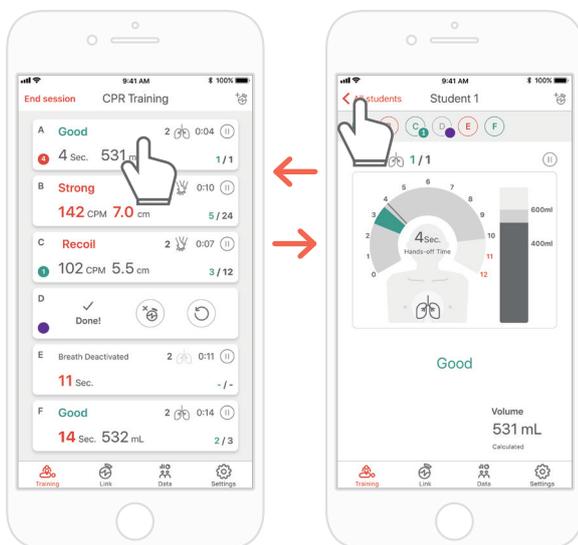
8) If there is a student marked with red text, you can select the slot and check the problem in detail.
*On the 'Detailed view' screen, you can press the back arrow button to return to the previous screen or press the alphabet button to move to a different slot..
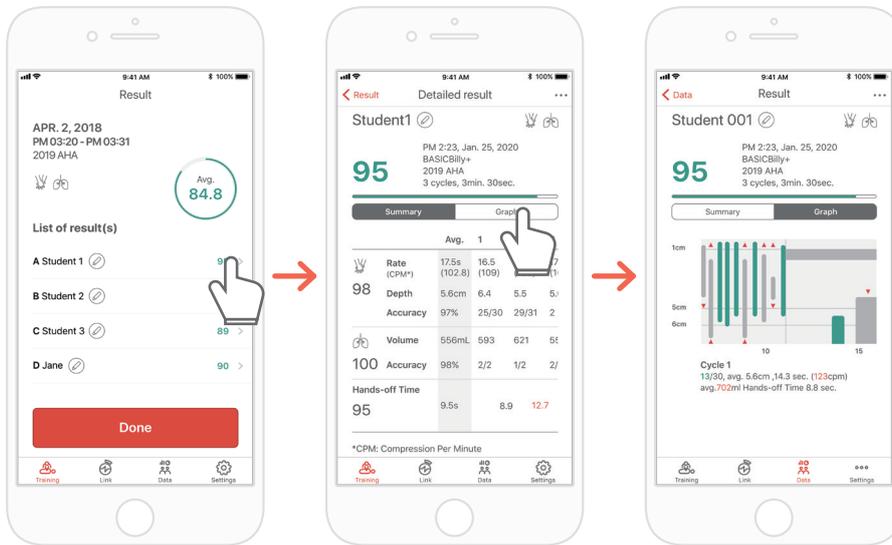
9) You can review CPR performance data in the form of a summary or graph.
*Refer to '4.2. Graph UI (Instructor app)' for information regarding graph view

To connect a number of manikins at the same time, connect them from the list in consecutive order and press the 'Done' or 'Start' button without searching for them repeatedly.

If there is a kit which is not calibrated among the kits, the calibration screen for the relevant kit will pop up immediately. You can connect manikins continuously after completing the calibration.
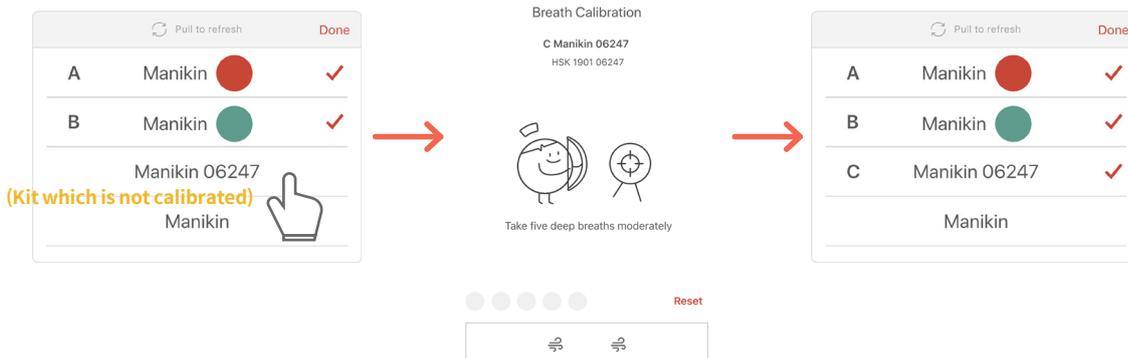
4. Feedback & Graph UI

4.1. Compression & Breath Feedback UI

Graph Feedback

Text Feedback

Quantitative Feedback

Compression rate

Elapsed time

Recoil feedback

Compression depth

Maximum depth performed

Status of compression input

Timer

Maxium volume delivered

Breath volume

Hands-off time

Status of Breath input
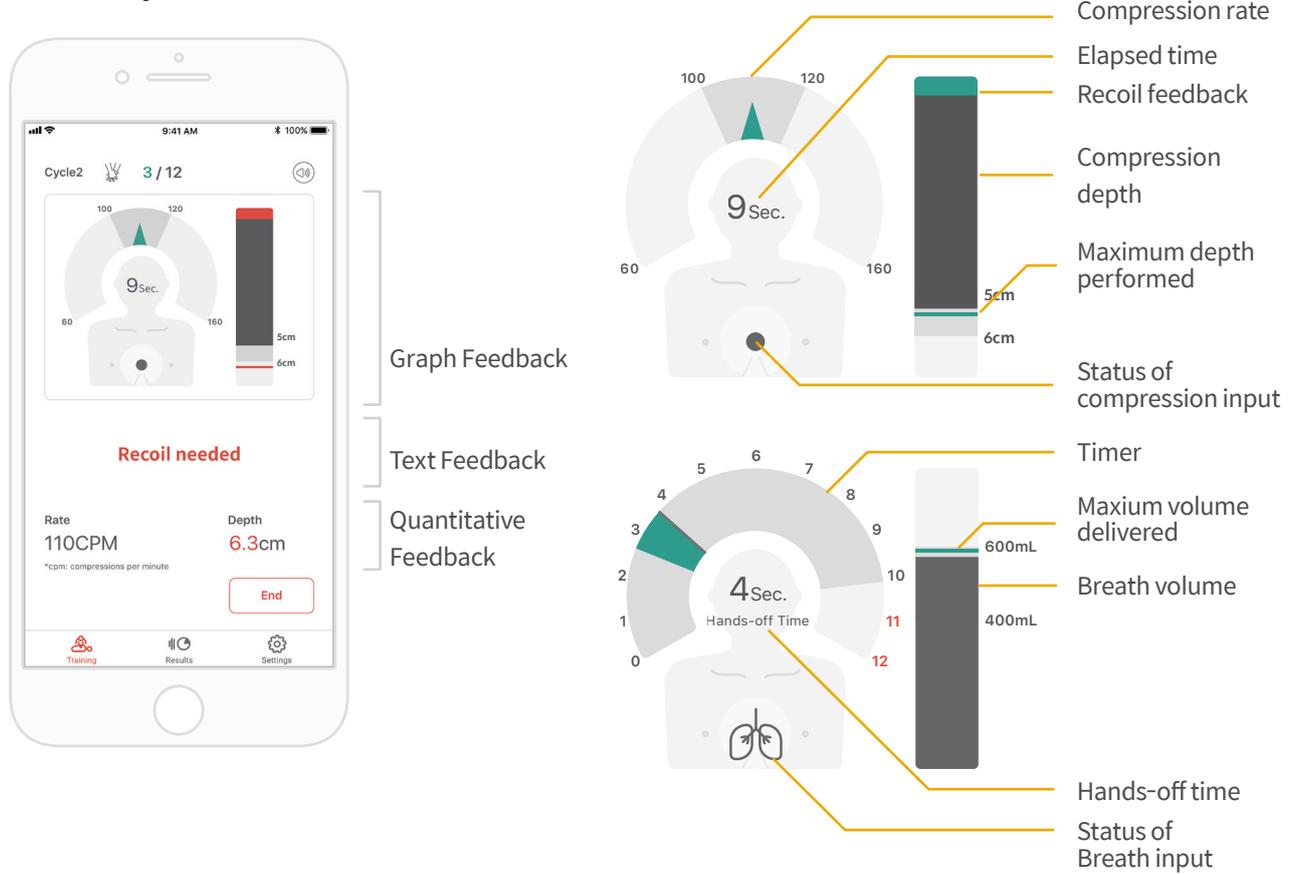
4.2. Graph UI (for Instructor app only)
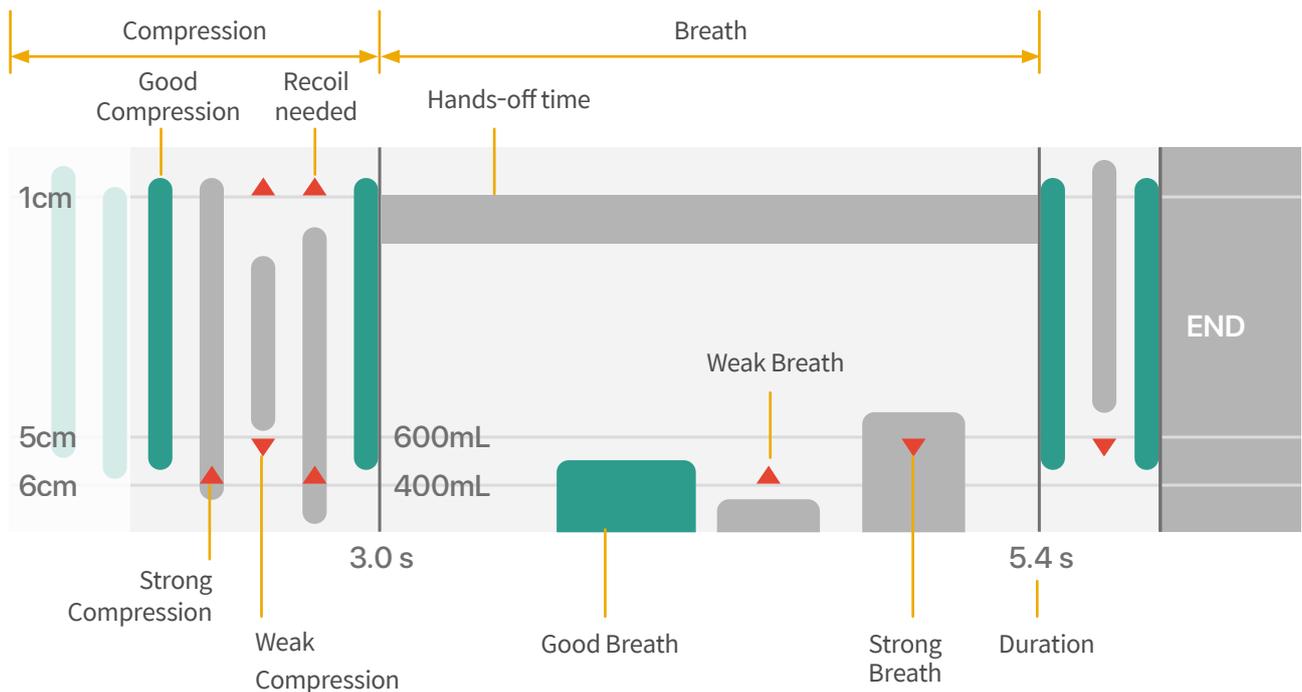
5. More Features

5.1. Reviewing saved data

CPR add-on kit Student
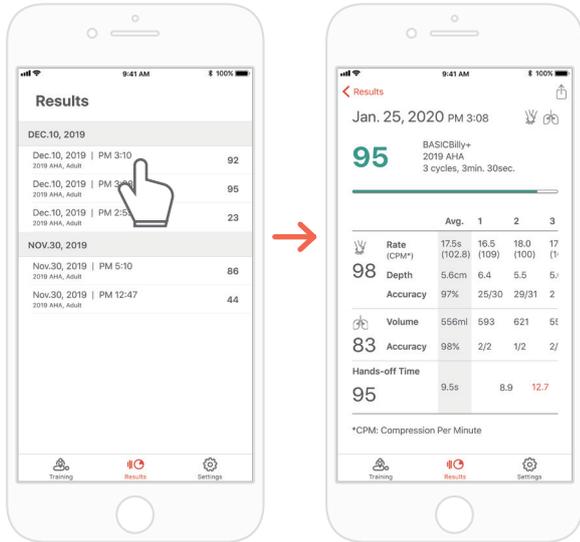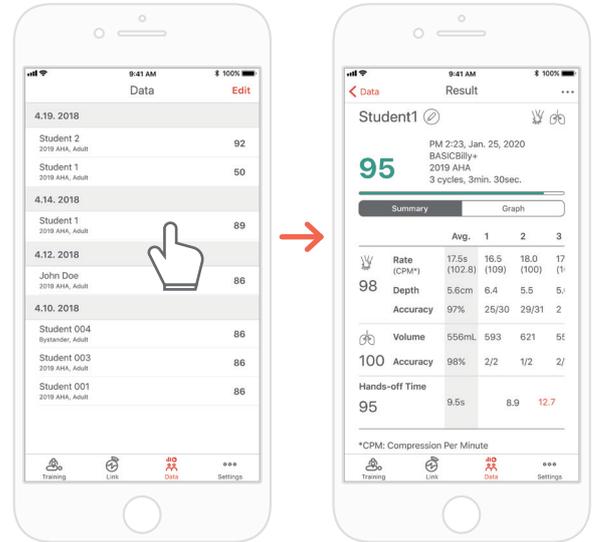
 The 'Result' tab of the Student app

CPR add-on kit Instructor

 The 'Data' tab of the Instructor app

Deleting the result from the list (common for both the Instructor and Student apps)
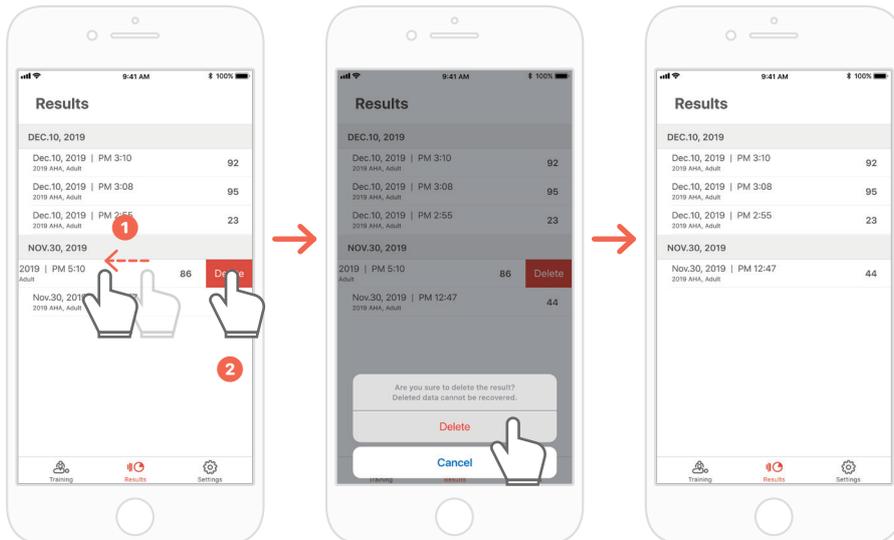
5.2. Exporting the result/certificate as a PDF file
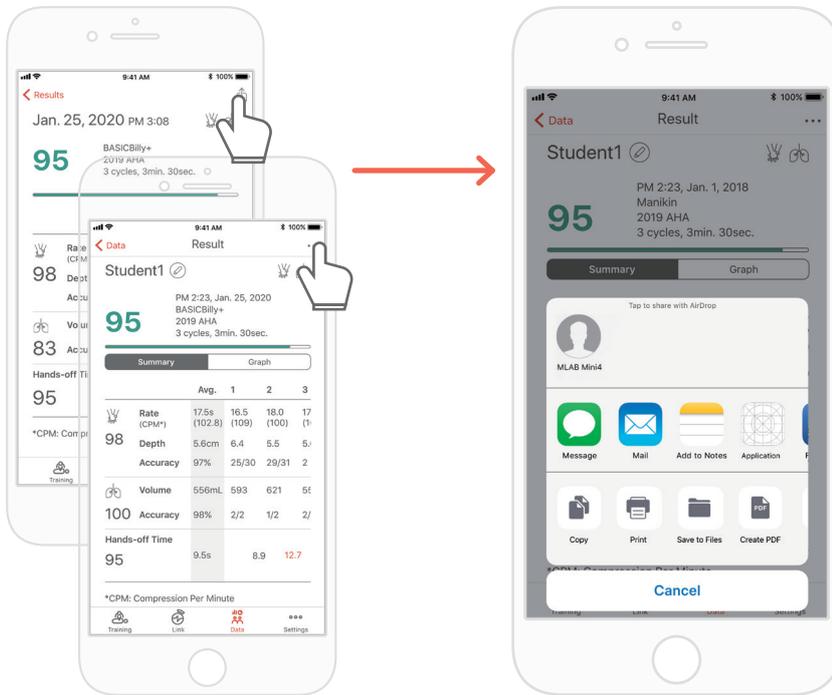
You can print the results or export PDF files to other apps by clicking the top right icon
in the individual(detailed) results of the Student / Instructor app.

Result sheet (left) and certificate (right). Certificates can only be exported from the Instructor app.

5.3. Renaming the manikin

CPR add-on kit Student app
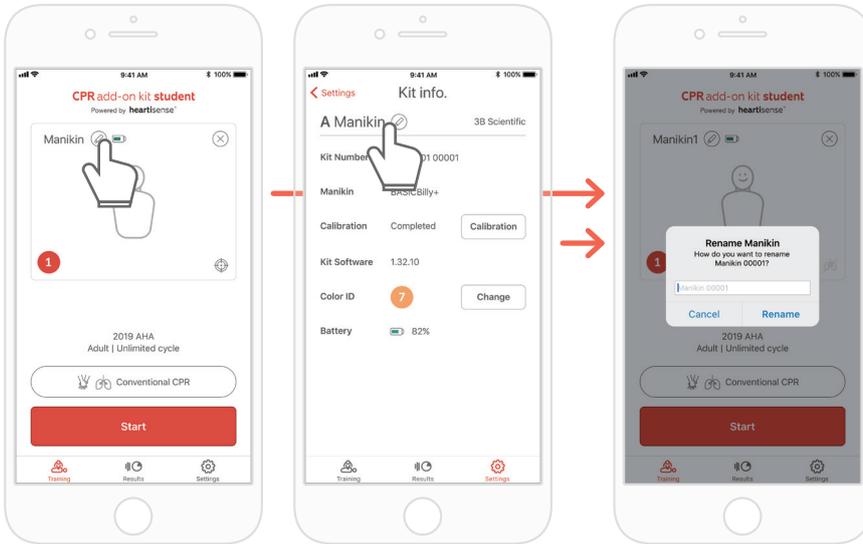
When the manikin is renamed, it will be saved in the kit so that the changed name will be displayed at the next connection.

The manikin name can be up to 15 alpha-numeric characters.

You can rename the manikin by pressing the pencil-shaped icon next to the manikin name.

CPR add-on kit Instructor app
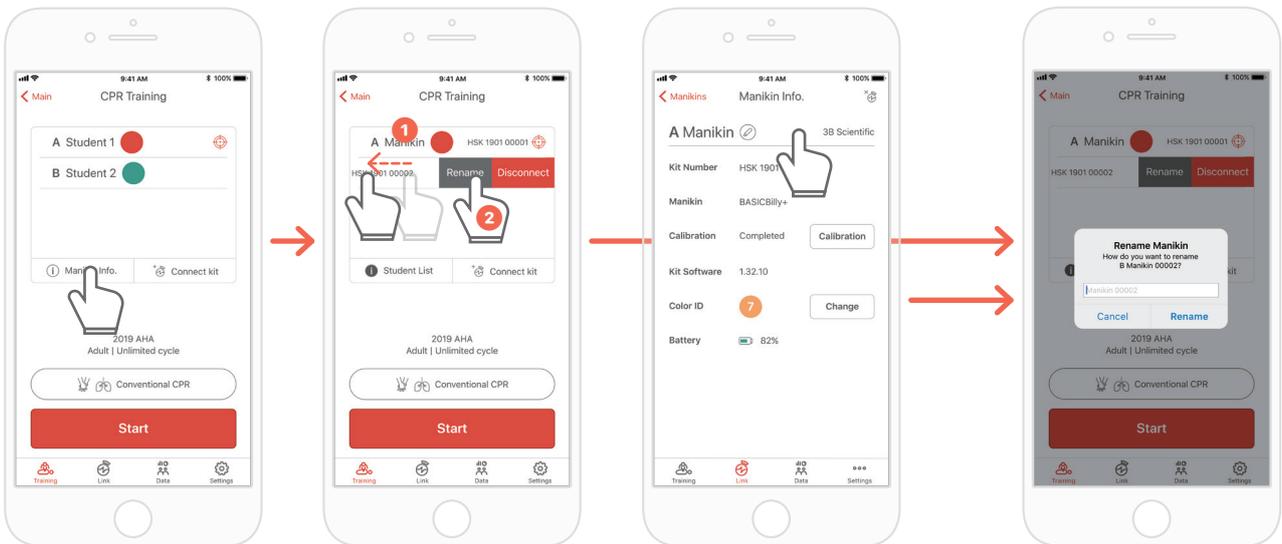
When you display the manikin list and push the slot whose name you intend to change to the left, the Rename button will be displayed. You can also rename it from the kit information on the Link tab.

5.4. Renaming the student name (for Instructor app only)

Renaming the student for each slot
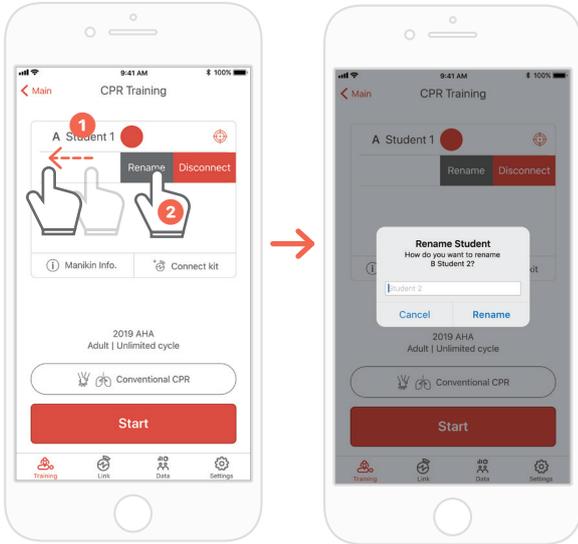
You can change the relevant student name by pushing the slot to the left.
 *The changed student name is maintained while the relevant connection is maintained,
 and the result will be saved under the changed name..

Renaming the student for the result
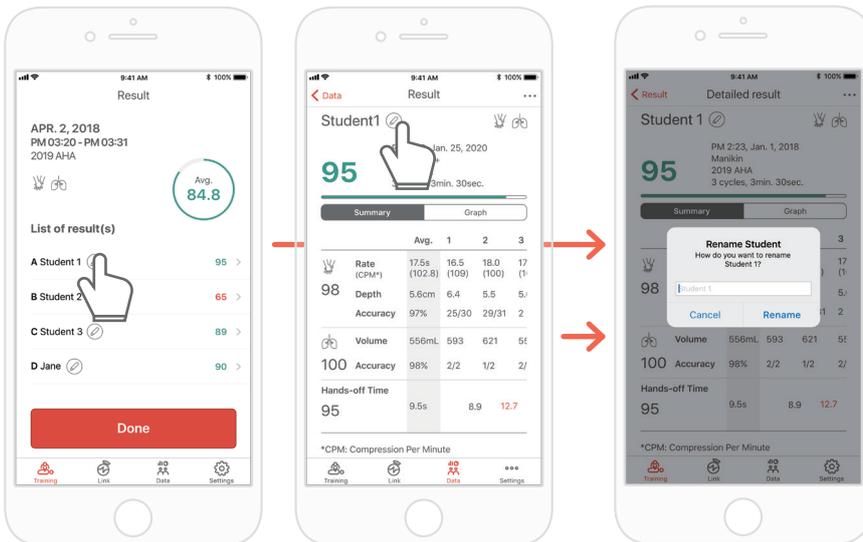
5.5. Checking the connected kit information

CPR add-on kit Student
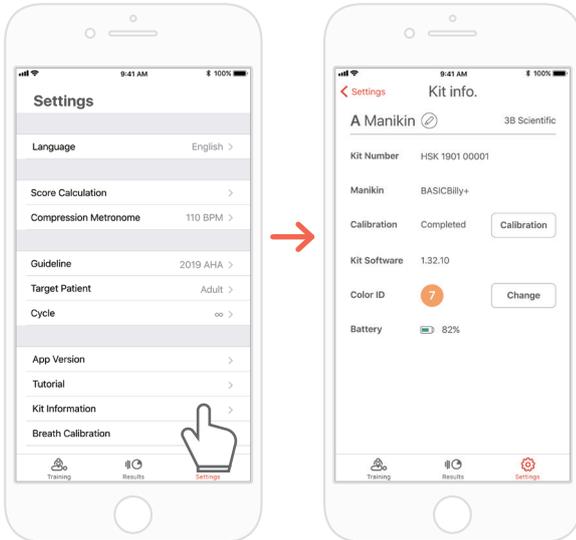
The 'Settings' tab of the Student app
→ 'Kit Information'

CPR add-on kit Instructor
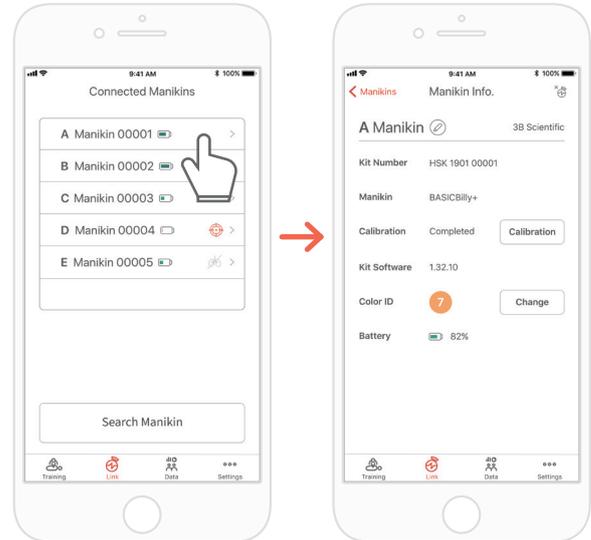
The 'Links' tab of the Instructor app
→ Select the manikin desired to
check its detailed information

Calibrating the breath sensor again from the kit information
(common for the Instructor and Student apps)
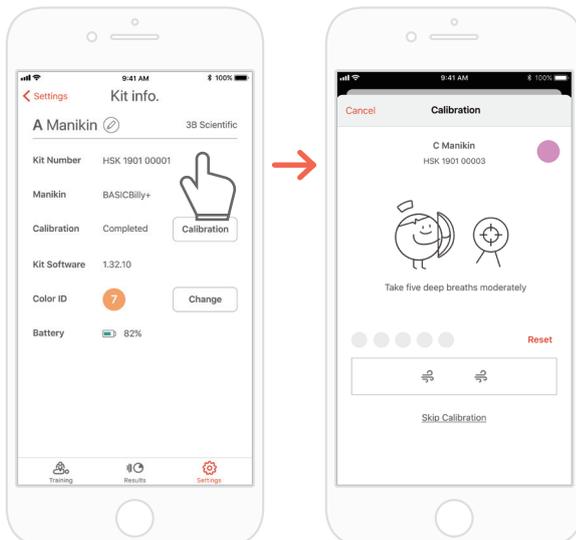
5.6. Changing the settings

Change the language setting.
When English(US) is selected, the depth will be displayed in inches.

An item to be reflected in the score among the compression/breath elements can be excluded or included. Compression and breath scoring ratio can be adjusted. (default setting - 75:25)

You can adjust the rate of the metronome sound that guides the compression. (for the Student app only)

You can select the guideline and the rescuer type.

You can set the patient type.
It may not be supported depending on the manikin model.

When the set cycle is reached, the evaluation will end automatically.
When ∞ (infinity) is set, the measurement will be taken until the user ends the measurement.

You can watch the tutorial video again.

You can modify the kit information and calibrate the breath sensor.
(for the Student app only)

Checking the version of the current app
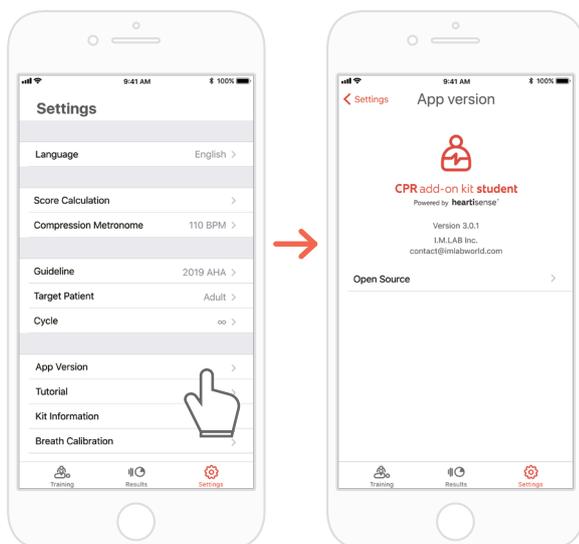
6. Maintenance

6.1. Checking the remaining battery level of the kit
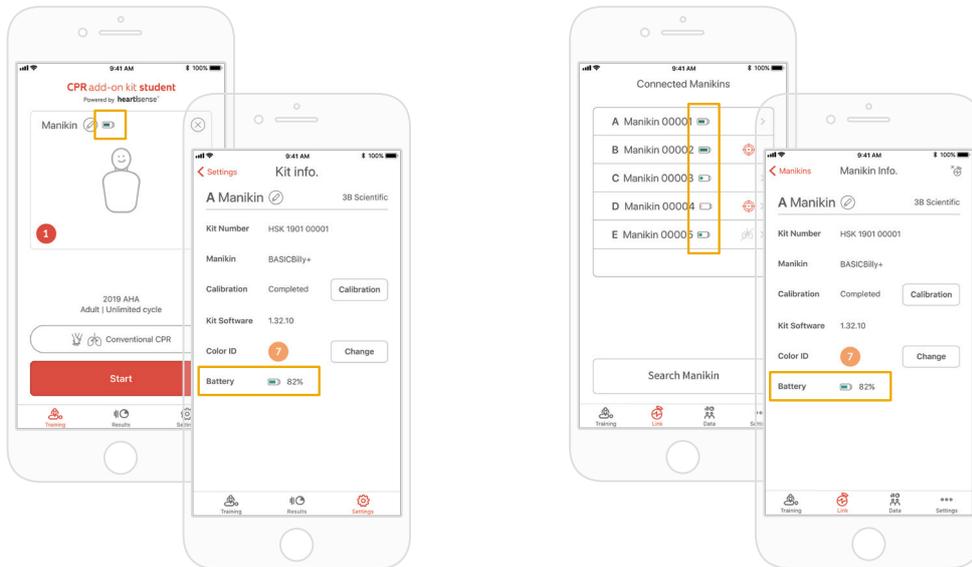
Check it from the kit information on the 'Training' main screen or 'Settings' of the Student app.

Check it from 'Link' or the Manikin Info of the Instructor app.

7. Troubleshooting

7.1. Frequently Asked Questions

Q. **The app does not recognize the kit.**

A. ① Perform chest compression on the manikin to 'wake-up' the kit. If beeping
sound is not made, take out the batteries and put them back in again.

② If the beeping sound is still not made after taking out the batteries and
putting them back in again, change the batteries.

③ If the kit is still not searched on the application after doing the above, please
contact the customer center.

Q. **The Upgrade kit's power seems to be on, but the application cannot search the kit.**

A. If you're using '**HeartiSense**' app not '**Add-on kit**' app, the kit cannot be connected.
Please search "Add-on kit" from the app store and download the correct app.

| | CPR add-on kit
Student/Instructor apps | | HeartiSense
Student/Instructor apps |

Q. **The batteries are inserted correctly, but the kit does not wake up even after compression
(Or, it does not make the beeping sound).**

A. ① Please make sure that batteries are properly inserted.
If the ends of the batteries are not touching the electrodes, the power wouldn't turn on.

② Please replace the old batteries with the new batteries.

Q. **While using the app, the message "Low Battery" is shown.**

A. Please replace the old batteries with the new batteries.
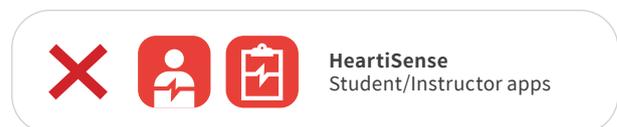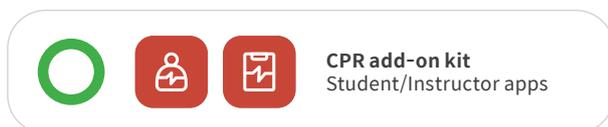
> **Low Battery**
> The batteries in your kit are low.
> Please replace the batteries.
>
> **OK**

Q. **When breath is delivered, manikin's chest rises (due to the air filled) but the app does not show any value.**

A. Please check and make sure that the breath module is properly attached to the lung bag.

Q. **Where can I check kit software(firmware) information?**

A. For Student app, go to 'Settings' > 'Kit Information', then check 'Kit Software'.
For Instructor app, go to 'Link' tab, then choose the kit you wish to check the information for further details.
*Please refer to section 5.5.

Q. **Where can I check app version?**

A. Go to 'Settings' > 'App Version'.
*Please refer to section 5.6.

7.2. Troubleshooting

Symptom	Cause	Troubleshooting
While trying to connect with the kit, the message "Connection Failed" is shown. Or the icon on the left is shown.	The breath module is not good to use and needs to be replaced.	The breath module has to be replaced, please contact the customer center.
Even after being disconnected from the application, the kit repeatedly makes the beeping sound.	It is possible that something is blocking the sensor part, causing wake-up function error.	Remove obstruction (kit module cable, object, etc) near the sensor part (the hole on the kit) from the kit.
Breath module is properly connected but the value shown is not correct.	The breath module is not good to use and needs to be replaced.	The breath module has to be replaced, please contact the customer center.
	The saved breath calibration value might be wrong so that the appropriate breath volume cannot be shown.	Open the 'Kit Information' screen, then press the 'Calibration' button to recalibrate the breath sensor.

During CPR session, within 5 minutes and 5m distance range, the connection with the kit continues to be lost.	The mobile device you're using is not compatible with the kit.	Recommended technical specification for mobile devices:
		• **iOS**
		  OS version equal to or above 11, iPhone 6 or later, iPod Touch 6th generation or later, iPad 5th generation or later, iPad mini 4 or later, iPad Air 2 or later are recommended.
		• **Android**
		  Devices released after 2017 that support operating systems version 6.0 (Marshmallow) or later, and BLE 4.2 or later
		• * Some low-end models may experience connectivity issues even with BLE 4.2 or later

	The kit software is outdated.	Refer to the section '5.5. Checking the kit information ' and check 'Kit software'. Update is required if the firmware version is below 1.1.1. Please contact customer service center.
	The connection might be lost if there is an obstacle between the kit and the user's mobile device.	Please make sure that there is no obstacle between the kit and the user's mobile device.

8. Warranty

1. Manufacturer offers a LIMITED WARRANTY against any defects in workmanship or materials under normal use for one (1) year from the date of purchase. Any component of the "CPR add-on Kit" or "cprCUBE PRO" which proves defective within the warranty period will be repaired, free of charge. The customer is responsible for shipping and handling fees to the place which manufacturer designates.

2. Customer must provide proof of the date of purchase, place of purchase and the purchase price in order to obtain service under this limited warranty. No agent, representative, dealer of Manufacturer has the authority to alter the obligations or limitations of this limited warranty.

3. CUSTOMER'S SOLE AND EXCLUSIVE REMEDY AGAINST MANUFACTURE SHALL BE FOR THE REPAIR OR REPLACEMENT OF DEFECTIVE GOODS AS PROVIDED HEREIN. Repair of any component of any "CPR add-on Kit" or "cprCUBE PRO" does not extend this limited warranty or begin a new limited warranty period.

4. Manufacturer reserves the right to refuse warranty service or replacement when product failure is due to abrasion, abnormal use, misuse, mishandling, misapplication, accident, neglect, improper installation, modification, use of unauthorized parts or attachments, adjustments or repair performed by anyone other than manufacturer or its authorized agent, or any causes other than defective workmanship or material. This limited warranty does not cover failure or damage resulting from unsuitable operating environments or storing environments or natural disasters or acts of God. MANUFACTURER SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OF THE "CPR add-on Kit" or "cprCUBE PRO" OR THE BREACH OF THIS OR ANY OTHER EXPRESSED OR IMPLIED WARRANTY.

9. Contact

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interactive media lab

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