Nasco
HEALTHCARE

Simulaids. Life/form.

CPR Metrix

LF03405U CPR Metrix Control Box Only

LF03406U CPR Metrix and iPad®

INSTRUCTION MANUAL

*iPad® is a trademark of Apple, Inc., registered in the U.S. and other countries.

OPERATING INSTRUCTIONS

CPR METRIX CONTROL BOX SPECIFICATIONS

Controls
Press the on/off switch to power on. Press again to power off.

Indicators
A green LED illuminates when CPR Metrix Control Box is powered on.

A blue LED illuminates when CPR Metrix Control Box is connected wirelessly to the CPR SkillsCoach application. When manikin data is transmitted from CPR Metrix Control Box, the blue LED will blink off momentarily.

Connector
An eight-pin jack is used for connecting the *Life*/*form*® manikin's interface cable to CPR Metrix.
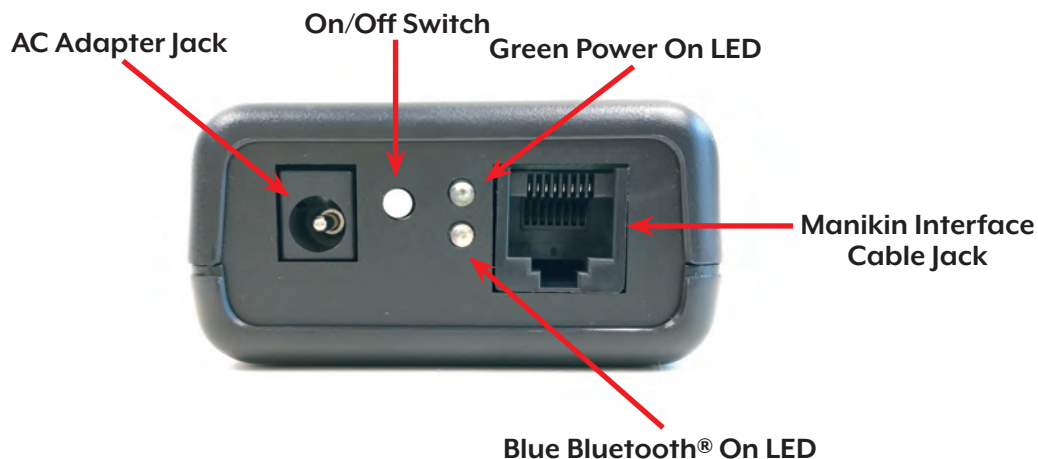
Batteries
CPR Metrix is powered from four "AA" alkaline batteries. Please observe correct battery polarity (+ and –) when installing batteries. The battery compartment is accessible through the battery door underneath CPR Metrix Control Box.

Battery Saver Feature
To help prolong battery life, CPR Metrix Control Box powers off automatically 30 minutes after the last compression or ventilation was detected.

Low Battery Detection
When battery voltage is low, the green LED will blink off momentarily, once per second. Batteries should be replaced then. If battery voltage falls too low, CPR Metrix Control Box will power off automatically.

AC Adapter

CPR Metrix can also be powered by an AC to DC adapter (5V DC output with a minimum power rating of 500 mW).

$$- \!\!-\!\!\circledcirc\!\!-\!\! +$$
DC IN 5V

Wireless Connection

CPR Metrix communicates wirelessly with the CPR SkillsCoach Application using Bluetooth® LE.

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

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

Cleaning CPR Metrix Control Box

Use a sponge or cloth dampened with water or rubbing alcohol to clean. Do not use abrasives or solvents.

Note: To clean the iPad®, follow Apple® instructions.

GETTING STARTED

Install the CPR SkillsCoach Application on your iPad®

From your iPad® home screen, find the App Store® icon and tap it to enter the store. Then search for the "CPR SkillsCoach" application and install it.
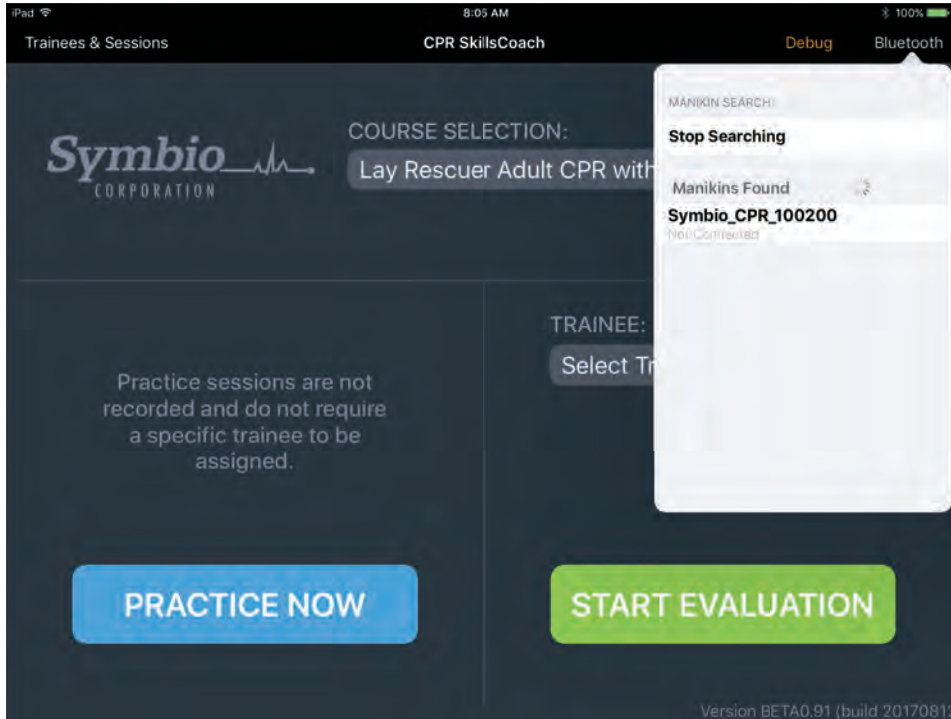
Attach Your Manikin to CPR Metrix Control Box and Power On

1. Remove battery door and install four "AA" alkaline batteries, or plug an AC adapter into the AC adapter jack.

2. Plug manikin's interface cable into the cable jack on CPR Metrix Control Box.

3. Press on/off switch to power on the CPR Metrix Control Box. The green LED will illuminate.

WIRELESSLY CONNECT CPR METRIX BOX TO THE CPR SKILLSCOACH APPLICATION

CPR Metrix Control Box communicates with the iPad® application via Bluetooth® LE, so it is necessary for the CPR SkillsCoach application to perform a search for CPR Metrix.
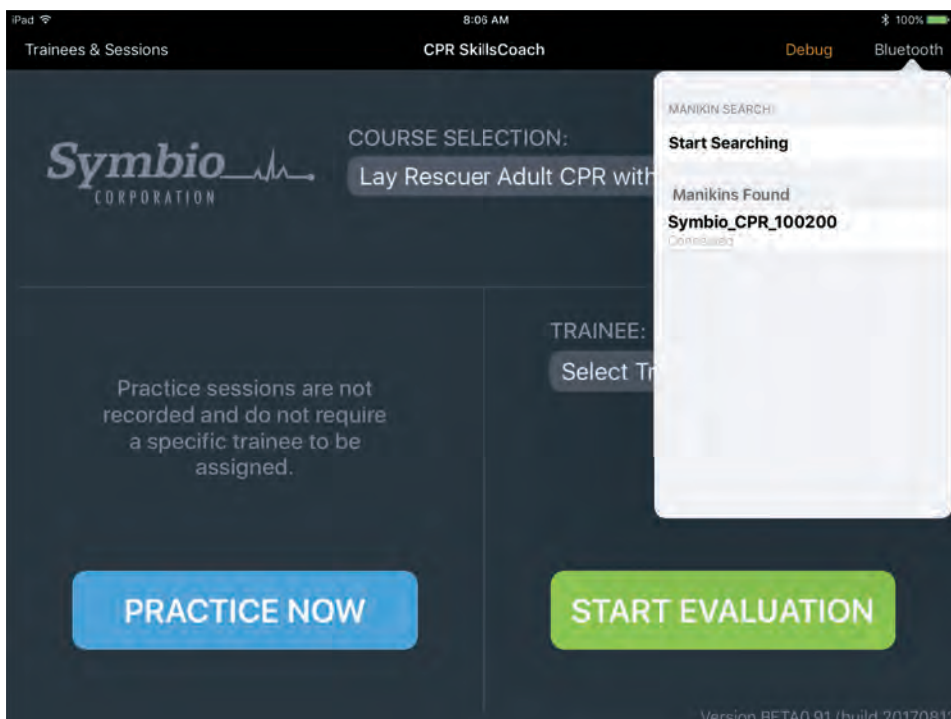

On the CPR SkillsCoach App main screen, tap "Bluetooth" (upper right corner) to start searching for CPR Metrix.

In the pop-up screen, tap on the name that contains the serial number of your CPR Metrix Control Box. (You will find the serial number on the bottom side of the CPR Metrix Control Box.)

When the Bluetooth® connection is made, the status will change to "Connected."

Main Screen — BT search started

After the connection is made, tap the main screen to dismiss the pop-up screen and to resume operation.

The blue LED on the CPR Metrix Control Box will illuminate, and will blink off when data is transmitted to the CPR SkillsCoach App.

When there are no compressions or ventilations, you will see the blue LED blink off every three seconds.

Main Screen — BT search completed

COURSE SELECTION

Each course has specific CPR parameters associated with it (e.g., compression rate, compression depth, compression volume). These parameters are the basis for evaluating students' CPR techniques on the Practice screen, Evaluation screen, and Debriefing screen.

Also associated with each course are the skills that the trainee should know (e.g., "Checks breathing in less than 10 seconds," "Applies AED as soon as it arrives on the scene.").
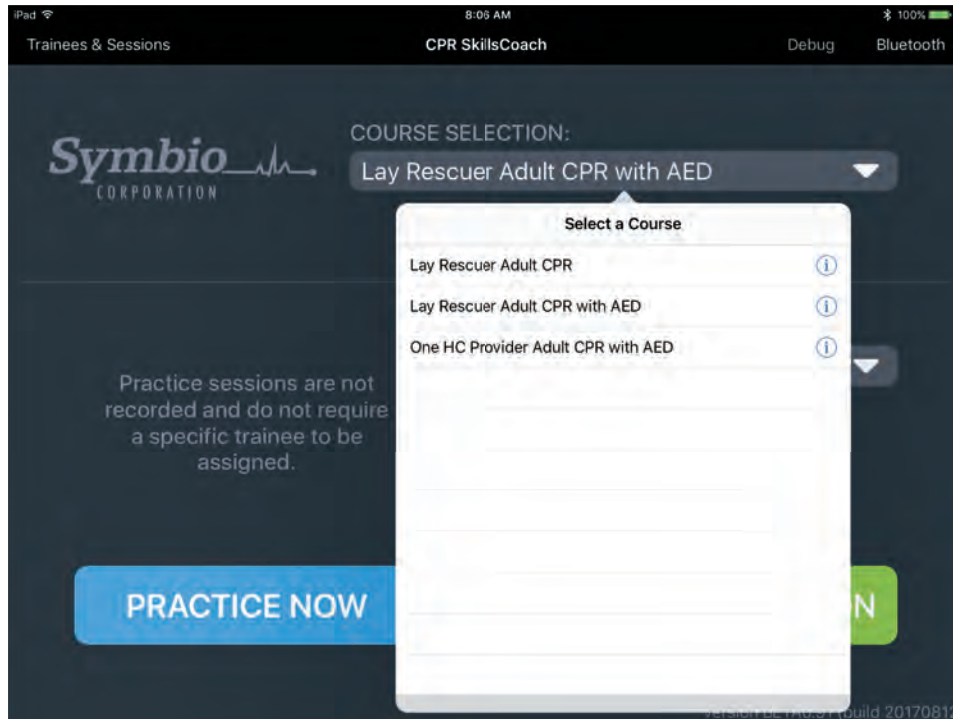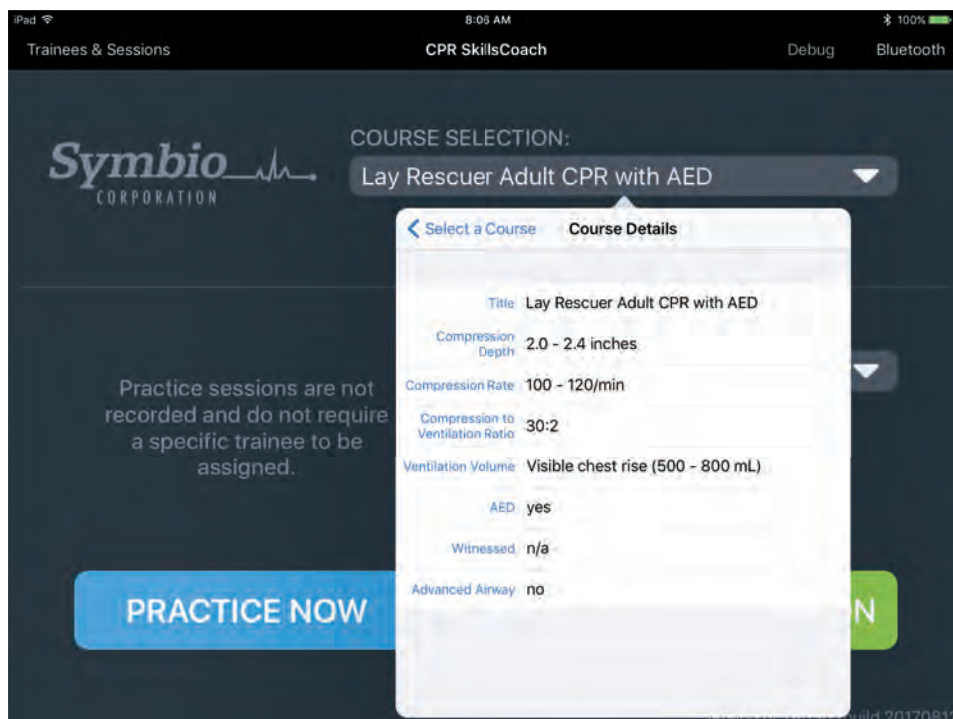

To see the list of courses, tap here.

To select a course, tap on its name.

To see the details of each course, tap on the ⓘ.

Main Screen — course selection

Main Screen — course details

SELECT TRAINEE

To evaluate and record a trainee's performance, and to provide after-session debriefing, the trainee's name must be selected. This requires that trainee information be entered before the evaluation session begins. If the trainee's name already appears on the main screen, it isn't necessary to reselect the name.
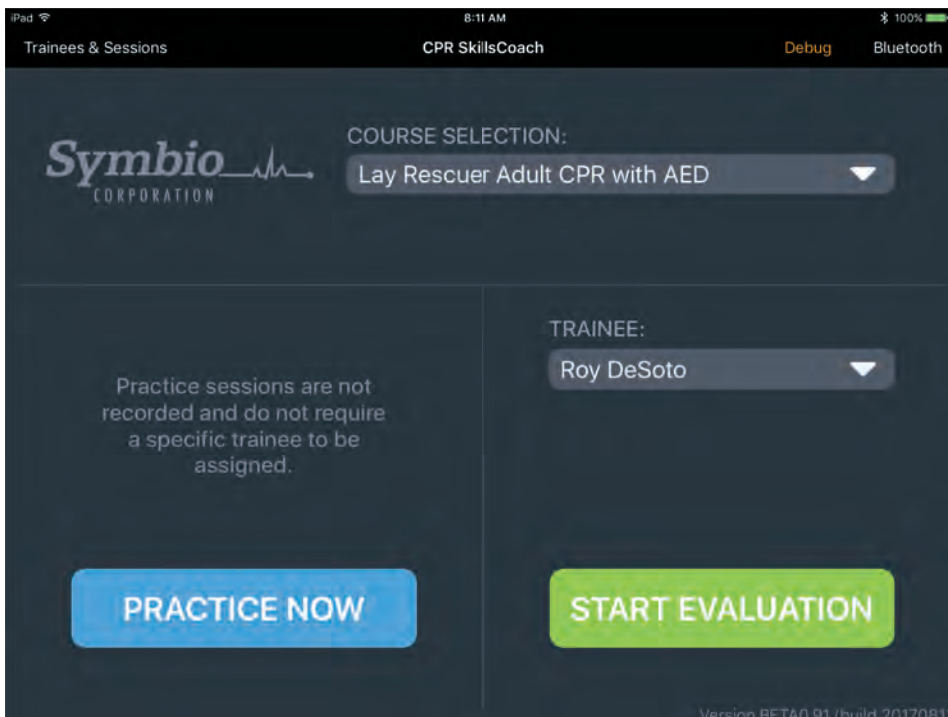
To use the Practice screen, selecting a trainee name is not required.

Main Screen — viewing trainee names
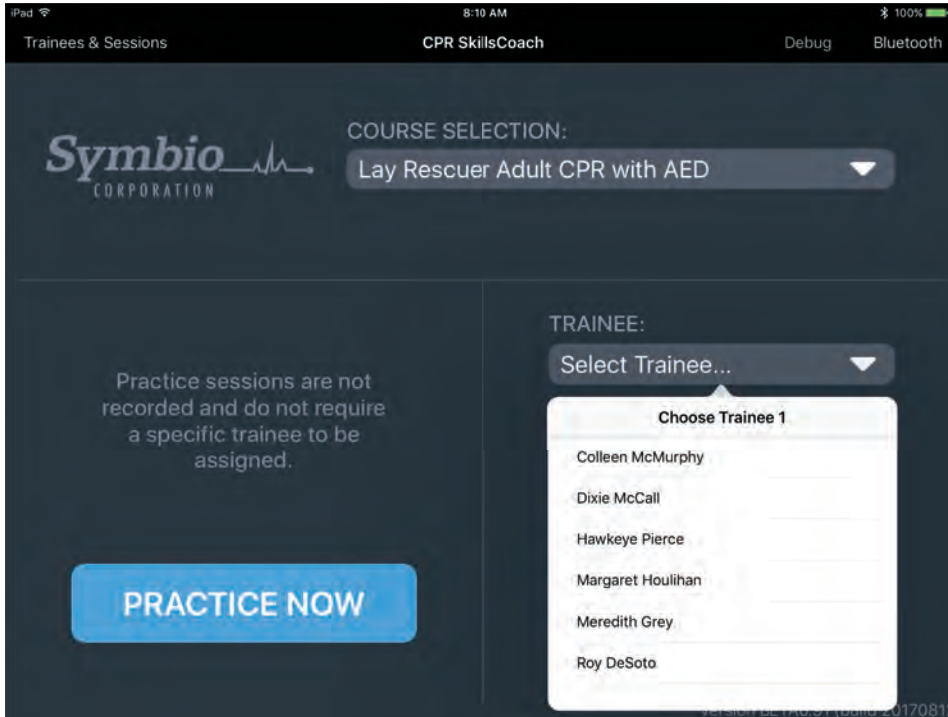
From the CPR SkillsCoach Application main screen, tap "Select Trainee."

To select a trainee, tap the person's name.

Main Screen — selected trainee name is displayed

PRACTICE NOW SCREEN

For those who are new to CPR, and for others who want to refresh their CPR motor skills, the Practice feature allows students to develop and master CPR techniques with support from visual and auditory real-time feedback.

Large, simple graphics and auditory prompts guide students to perform "on target" compression rates, depths, and release points, as well as ventilation volumes and hands off times.

During rest periods, a summary of the student's performance is displayed automatically.
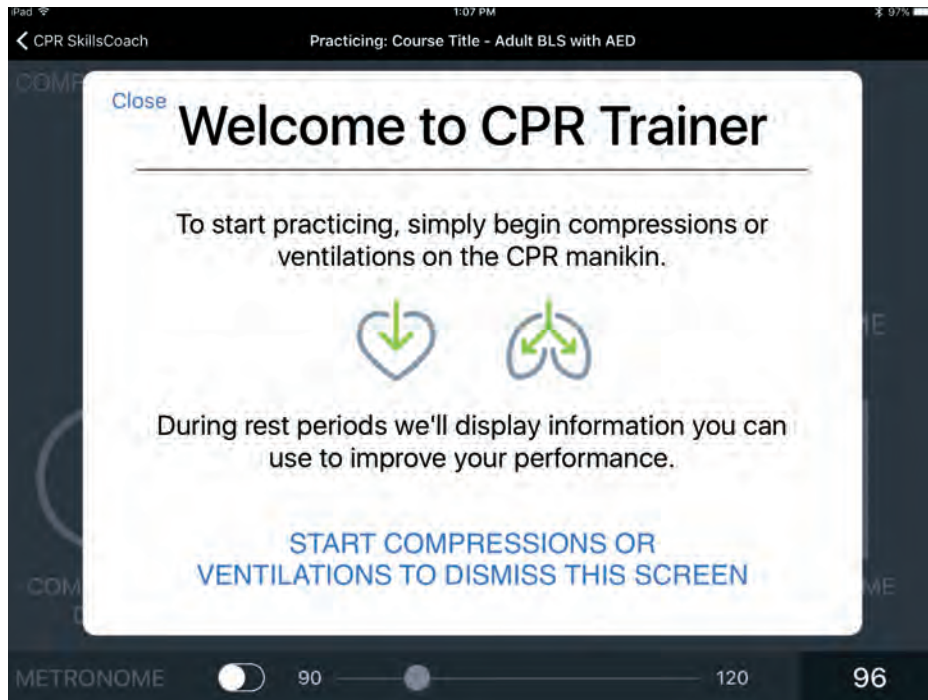
Welcome panel explains that the trainee simply starts compressions or ventilations to begin the practice session.

Practice Screen — welcome panel
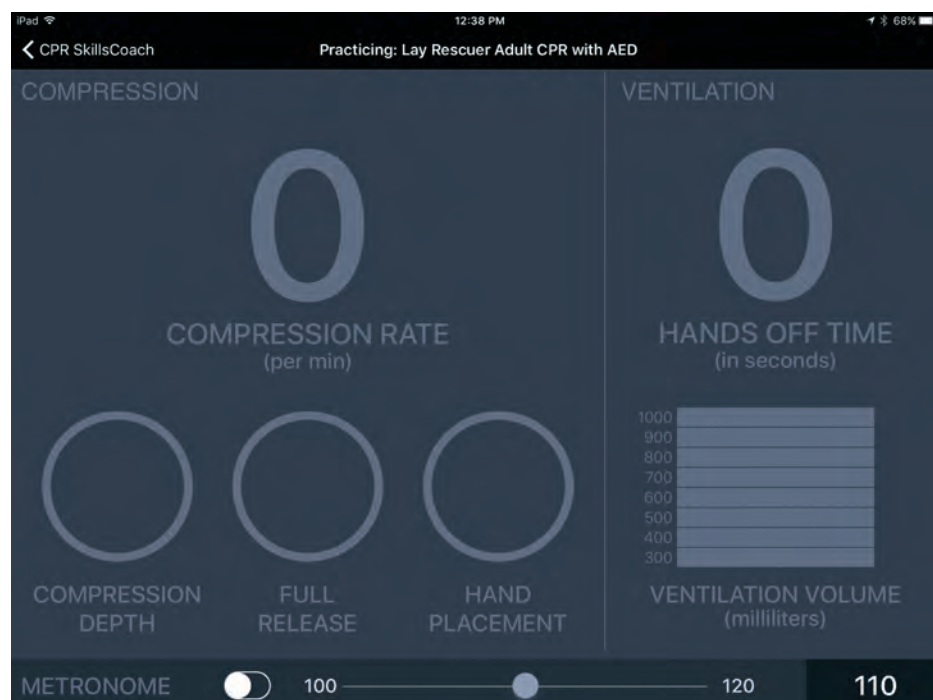
Practice screen is dimmed at the start of the practice session while waiting for compressions or ventilations.

Practice Screen — start of practice session

PRACTICE SCREEN: COMPRESSIONS

Chest compression parameters are displayed on the left side of the screen. While compressions are performed, ventilation parameters are dimmed.

Compression rate is presented numerically, and is updated every two seconds.

Compression depth, full release, and hand placement are presented using icons, and are also updated every two seconds.

COMPRESSION RATE is green, which indicates it is within target range.

COMPRESSION DEPTH, FULL RELEASE, and HAND PLACEMENT are green, which indicates they are within target range.

Practice Screen — compressions within target range

COMPRESSION RATE is yellow, which indicates it is out of target range.

Auditory prompts will be heard if chest compressions are out of target range. In addition, the metronome can be used as an aid for performing chest compressions.

COMPRESSION DEPTH is yellow, which indicates it is out of range.

Practice Screen — compression rate and depth not in target range

PRACTICE SCREEN: VENTILATIONS

Ventilation volume and hands off time are displayed on the right side of the screen. While ventilations are preformed, chest compression parameters are dimmed.

Practice Screen — ventilations and hands off time within target range

HANDS OFF TIME is green, which indicates it is within target range.

VENTILATION VOLUME has a green icon, which indicates it is within target range.

Practice Screen — ventilations and hands off time outside the target range

HANDS OFF TIME is yellow, which indicates it is outside the target range.

VENTILATION VOLUME has a yellow icon, which indicates it is outside the target range.

PRACTICE SCREEN: RESTING REPORT

During practice sessions, the Resting Report is created and displayed automatically when there is a pause in the delivery of compressions and ventilations.

Its purpose is to provide feedback on the trainee's effectiveness in performing CPR techniques. It is presented on two sliding pop-up screens. The Resting Report summarizes the most recent series of compressions and ventilations.
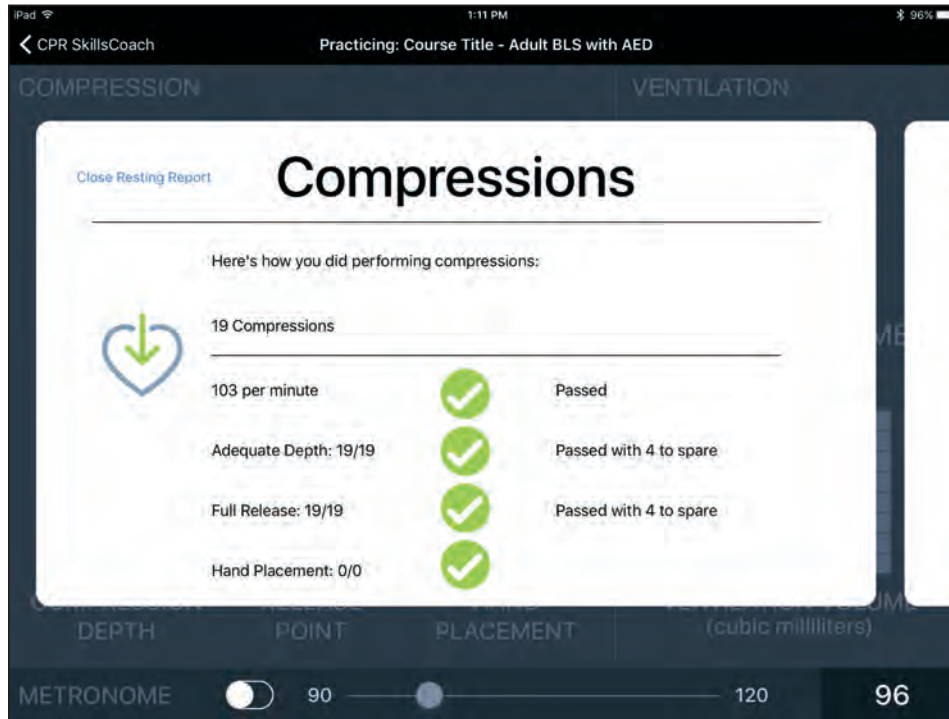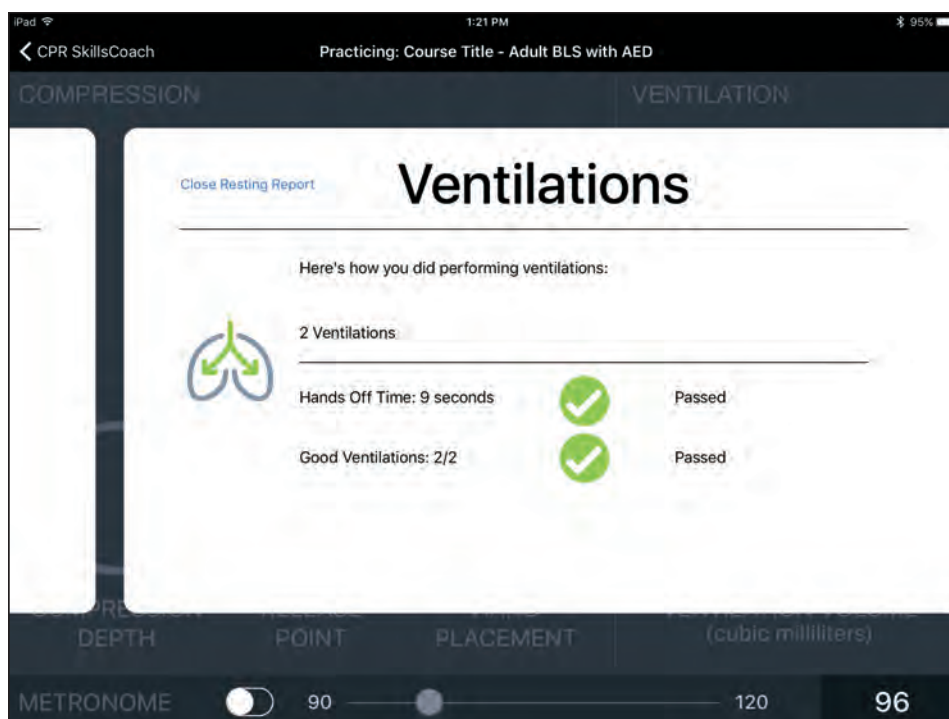

Resting Report — Compressions
Gives feedback to the trainee on:
• Number of compressions
• Compression rate
• Depth
• Full release
• Hand placement

When finished viewing Compressions, slide the panel to the left to view the Ventilations panel.

Resting Report — Compressions

Resting Report — Ventilations
Gives feedback to the trainee on:
• Number of ventilations
• Hands off time
• Adequate ventilations

Resting Report — Ventilations and hands off time

START EVALUATION

Real-time graphing on the left side of the screen shows the quality of compressions and ventilations the student is performing.

Skills Check on the right side of the screen is used to record the student's actions during the evaluation session (e.g., activating the ERS, checking the responsiveness of victim, and using the AED correctly).

Sessions can be saved and later reviewed with the student in the Debriefing screen.

Evaluation Screen — before starting a session
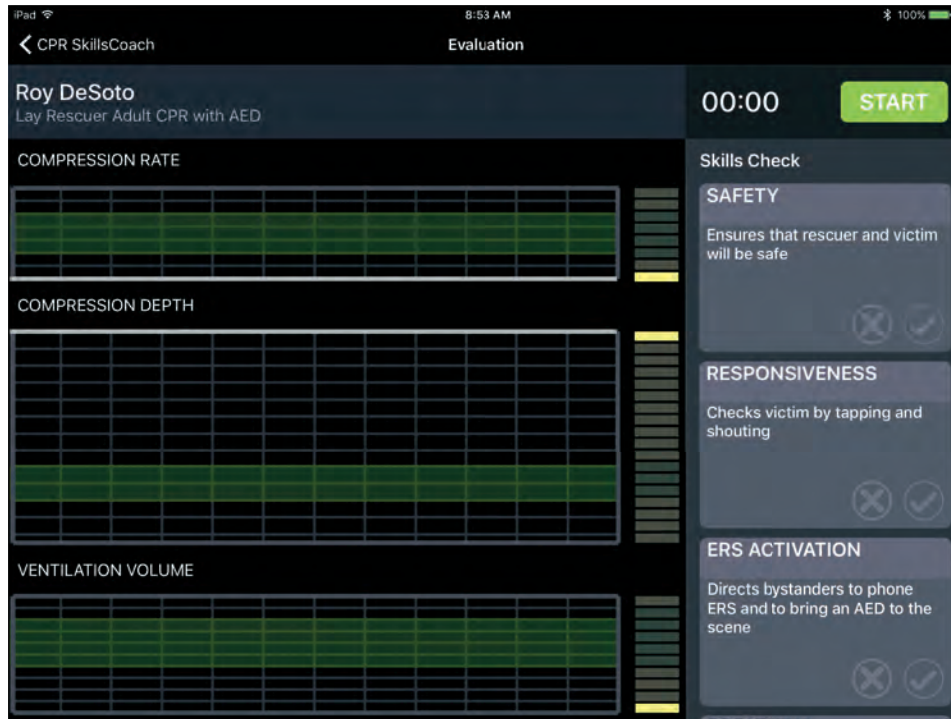
Students' CPR techniques are displayed using three graphs:
• Compression Rate
• Compression Depth
• Ventilation Volume

Instructors can record students' CPR actions by tapping a ✓ for positive actions or an ✕ for actions missed in the Skills Check boxes.

To begin graphing and recording, tap the "START" button in the upper right corner of the screen.

Evaluation Screen — at the start of a session

Compression and ventilation waveforms travel across the graphs from right to left.
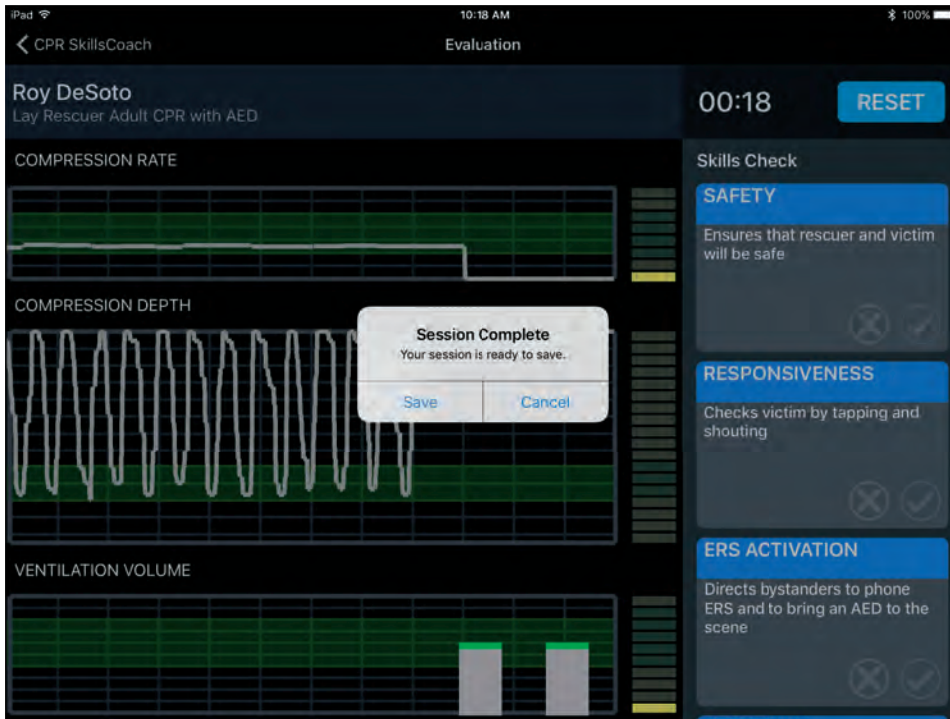
Graphs are divided into 12 one-second intervals.

Green horizontal areas in each graph represent the target rates, depths, and volumes.

Skills Check box labels turn from gray to blue, indicating they are enabled. To stop the evaluation graphing and recording, tap the "STOP" button.

Evaluation Screen — at the end of a session

When the "STOP" button is tapped, the Session Complete message appears, giving you the option of saving the session.

Students' saved sessions can be reviewed in the Debriefing screen.

To clear the graphs and the Skills Check boxes, tap the "RESET" button.

Evaluation Screen — example 1

Evaluation screen, example 1 shows that compressions and ventilations are within target range.

Three skills have been checked, which means the instructor observed they were done correctly. The color of those Skills Check box labels turned from blue to green.

Evaluation Screen — example 2

On the Compression Depth graph, there are yellow markers on two compressions.

The marker at the bottom of the compression indicates inadequate depth.

The marker at the top of the compression indicates incomplete release.

On the Ventilation Volume graph, the first ventilation volume is greater than the target range. The top of the bar graph is yellow.

In the Skills Check column, the instructor recorded two skills as being performed correctly by tapping the ✓.

The instructor also recorded one skill as not being performed correctly by tapping the ⊗. The color of that Skills Check box label turned from blue to yellow.

DEBRIEFING SCREEN

Instructors can review results saved from evaluation sessions and can use them to provide one-on-one feedback to the student. Debriefing data is organized by cycles. The usual cycle starts with compressions and ends with ventilations.

To reach the Debriefing screen, return to the main screen, "CPR SkillsCoach," and tap the navigation button, "Trainees & Sessions." On the Trainees screen, select the name of the trainee, then under "Sessions," select the session to be reviewed. Session results will open and will be presented in the Debriefing screen.


Debriefing Screen — cycle 1
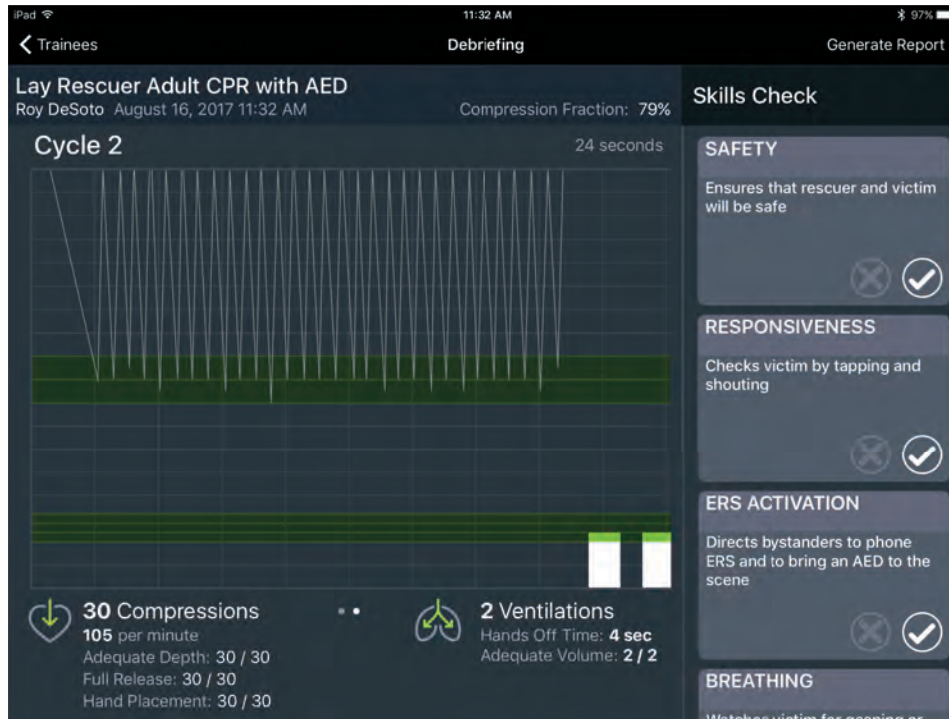
On the Debriefing screen, compressions and ventilations performed during the evaluation are presented both graphically and numerically.

Numerical data located at the bottom of the screen presents actual counts of compressions and ventilations during the cycle.

Compression Fraction is also calculated and is presented above the graph.

The Skills Check column displays skills that were marked by the instructor during the evaluation.

Debriefing Screen — cycle 2
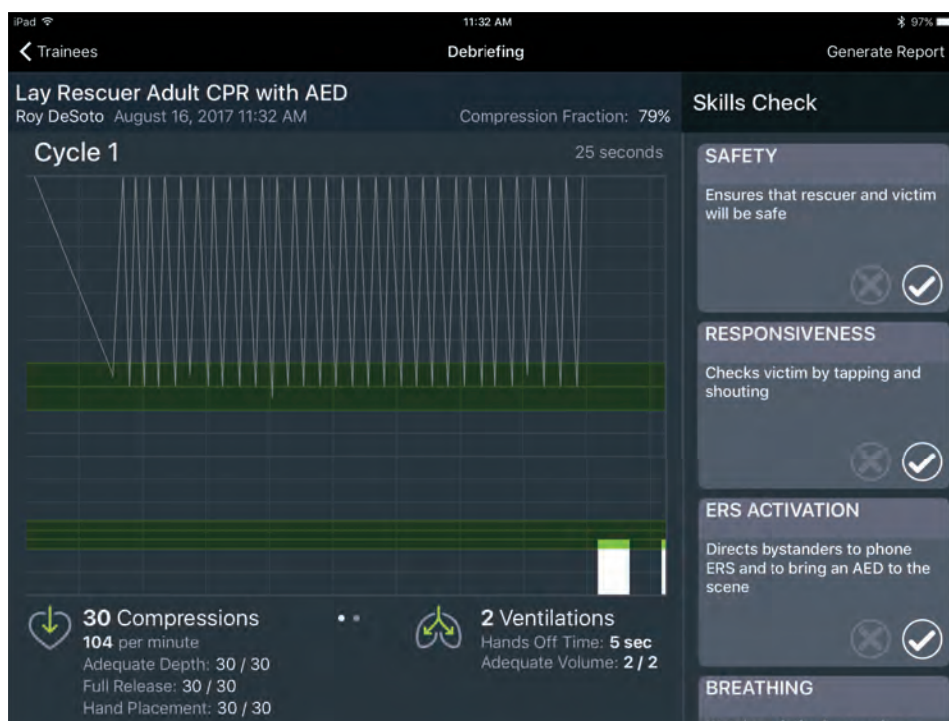
If more than one cycle was performed, the remaining cycles can be viewed by swiping the screen from right to left.

A report that summarizes the CPR techniques and CPR skills for all cycles of that session can be created by tapping the button, "Generate Report" in the upper right corner of the screen.

This assessment report will be generated in PDF form for emailing or printing.

CPR SkillsCoach

Assessment Report · Jan. 20, 2017

Trainee:
Roy DeSoto

Course Title:
Lay Rescuer Adult CPR with AED

Compressions
111 per minute
Adequate Depth: **98%**
Full Release: **94%**
Hand Placement: **100%**

Ventilations
Adequate Volume: **86%**

Average Hands Off Time: **6 Sec**
Compression Fraction: **75%**

## Skills Summary
Skills successfully completed: **5 of 7**

- ✅ Ensures that the rescuer & victim will be safe
- ✅ Checks victim by tapping and shouting
   Directs bystanders to phone ERS and to bring an AED to the scene
- ✅ Watches victim for gasping or absence of breathing in less than 10 seconds

- ⊗ Turns on AED and applies pads as soon as it is brought to the scene
- ✅ Clears victim before AED analyzes
- ✅ Clears victim before AED shocks
- ⊗ Resumes CPR immediately after shock is delivered

Session Detail:

① cycle

Compressions	Ventilations
110 per minute	Adequate Volume: **2/2**
Adequate Depth: **30/30**	Hands Off Time: **6 Sec**
Full Release: **28/30**	
Hand Placement: **30/30**	

② cycle

Compressions	Ventilations
112 per minute	Adequate Volume: **1/2**
Adequate Depth: **29/30**	Hands Off Time: **4 Sec**
Full Release: **30/30**	
Hand Placement: **30/30**	

③ cycle

Compressions	Ventilations
118 per minute	Adequate Volume: **2/2**
Adequate Depth: **27/30**	Hands Off Time: **7 Sec**
Full Release: **28/30**	
Hand Placement: **30/30**	

④ cycle

Compressions	Ventilations
106 per minute	Adequate Volume: **2/2**
Adequate Depth: **30/30**	Hands Off Time: **7 Sec**
Full Release: **28/30**	
Hand Placement: **30/30**	

⑤ cycle

Compressions	Ventilations
117 per minute	Adequate Volume: **1/2**
Adequate Depth: **30/30**	Hands Off Time: **7 Sec**
Full Release: **28/30**	
Hand Placement: **30/30**	

⑥ cycle

Compressions	Ventilations
102 per minute	Adequate Volume: **2/2**
Adequate Depth: **30/30**	Hands Off Time: **4 Sec**
Full Release: **28/30**	
Hand Placement: **30/30**	

⑦ cycle

| Compressions	Ventilations
115 per minute	Adequate Volume: **2/2**
Adequate Depth: **30/30**	Hands Off Time: **7 Sec**
Full Release: **28/30**	
Hand Placement: **30/30**	

TRAINEES & SESSIONS

Students' names, addresses, and contact information are listed alphabetically. All saved Evaluation sessions are listed for each student as well.

Trainees & Sessions Screen — select trainee
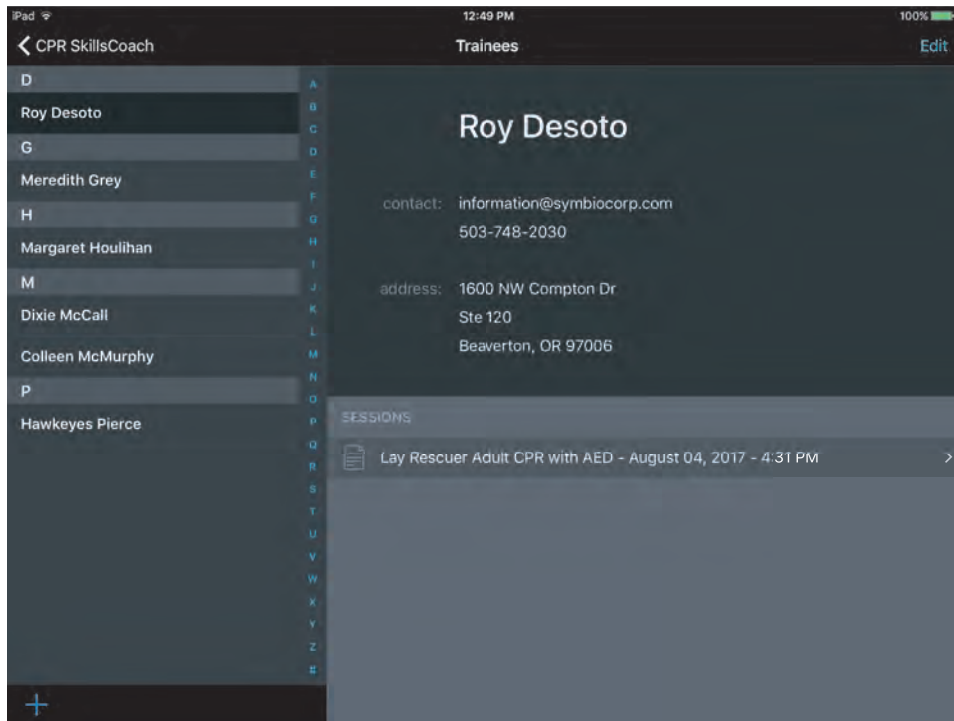
Tap on a trainee's name in the list to view contact information, address, and saved sessions.

Tap on a session to view the saved Evaluation within the Debriefing screen.

Trainees & Sessions Screen — edit trainee
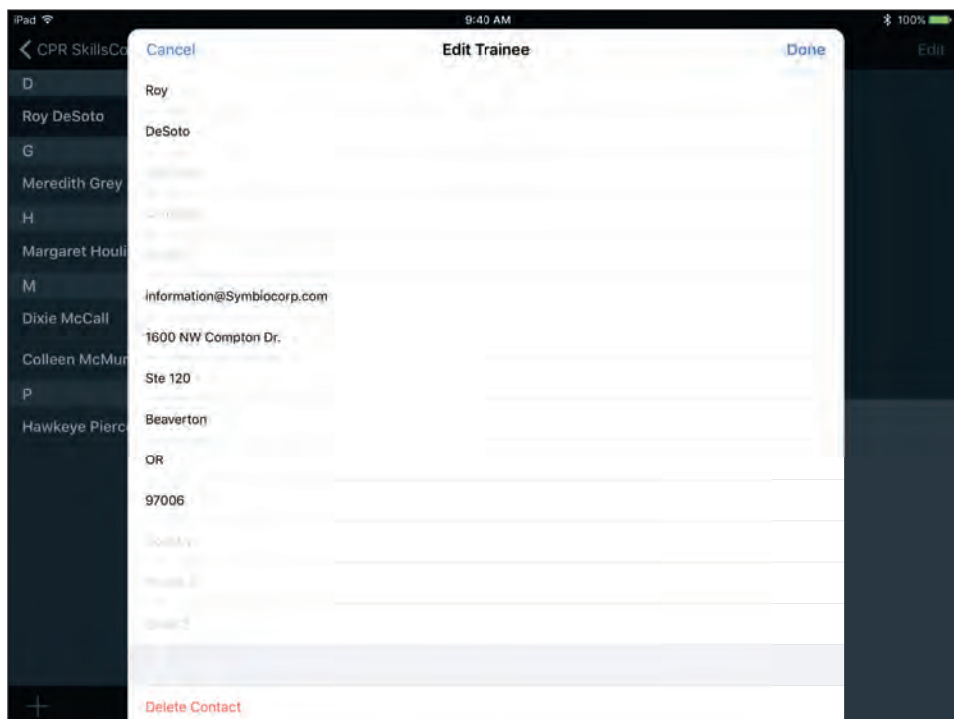
Tap the "Edit" button in the upper right corner of the screen to edit the trainee's information.

Tap the "+" button in the lower left corner of the screen to add a trainee.

CPR Metrix Control Box

- Use fresh batteries
- Remove batteries when not in use to extend useful life

CPR SkillsCoach Application

- Verify Bluetooth® connectivity

Life/Form® Manikin

- Ensure electronics inside the torso are properly seated
- Ensure black, adult, chest compression springs are installed
- Replace chest compression chest plate and chest skin appropriately

*Use CPR Metrix Control Box and CPR SkillsCoach App with the following **Life/form** Simulators:*

LF03956U   Deluxe "Plus" **CR*isi*s™** Manikin with ECG and CPR Monitoring

LF03988U   Deluxe "Plus" **CR*isi*s™** Manikin with ECG, CPR Monitoring, and Advanced Airway Management

LF03968U   Deluxe "Plus" **CR*isi*s™** Auscultation Manikin

LF03985U   Deluxe "Plus" **CR*isi*s™** Ausculation Manikin with Advanced Airway Management

LF03672U   Full Body "Airway Larry" with Electronic Connections

LF03595U   Full Body "Airway Larry" with Electronic Monitoring, Memory, and Printer Unit

LF03596U   Full Body "Airway Larry" with Light Controller

LF03711U   **CPARLENE®** Full-Size Manikin with Electronics, Memory, and Printer Unit (Light)

LF03811U   **CPARLENE®** Full-Size Manikin with Electronics, Memory, and Printer Unit (Dark)

LF03933U   **CPARLENE®** Full-Size Manikin with Electronics, Memory, Printer Unit, and Light Controller

LF03713U   **CPARLENE®** Full-Size Manikin with Electronics (Light)

LF03813U   **CPARLENE®** Full-Size Manikin with Electronics (Dark)

LF03714U   **CPARLENE®** Torso with Electronics and Light Controller (Light)

LF03814U   **CPARLENE®** Torso with Electronics and Light Controller (Dark)

LF03956U

Actual product may vary slightly from photo. Nasco reserves the right to change product color, materials, supplies, or function as needed.

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Simulaids. **Life/form**