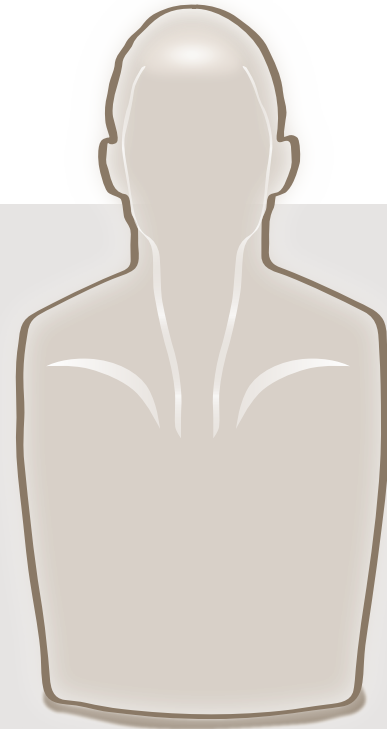


Advanced CPR Coaching

# BRAVDEN<sup>PRO</sup>

**Instructions for Use**



**INNOSONIAN**

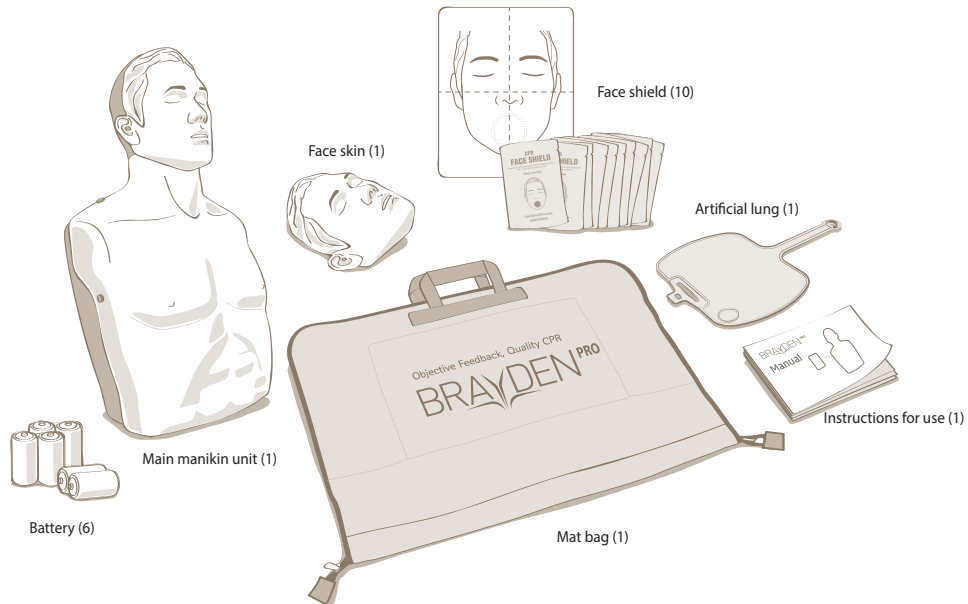
## Getting started

Thank you for purchasing our product.

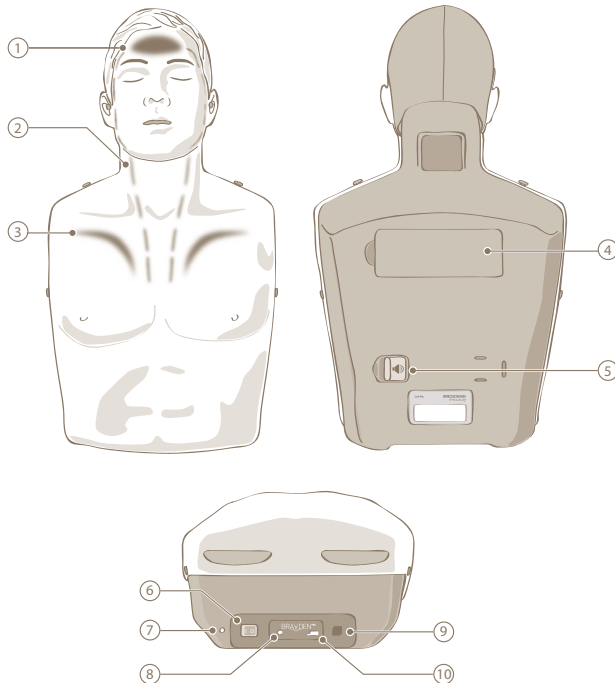
The purpose of CPR is to supply oxygen to the brain and heart of a patient whose heart has stopped beating normally. Applying chest compressions correctly achieves this by causing blood to flow, supplying oxygen to the brain and heart.

'BRAYDEN PRO' is the first CPR training manikin in the world which has a blood circulation display – designed to help the student understand and remember the principles of CPR – including a mobile app. The student can wirelessly connect this training manikin with a Google Android device (sold separately) to check, analyze, manage, and share the results of performing CPR in real time through the BRAYDEN PRO app (free of charge).

The product package includes the following components:



## Component names

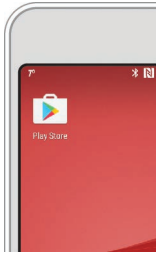


- ① **Normal circulation indication light**  
When the depth and speed of the compressions are correct, the light will illuminate. With this light, the student can easily see if the compressions are being performed at the correct depth and frequency.
- ② **Blood circulation indication lights**  
These illuminate to represent the flow of blood from the heart to the brain through chest compressions. The speed of the blood flow varies according to the depth and frequency of the chest compressions.
- ③ **Compression depth indication lights**  
These illuminate to represent the volume of blood being circulated by the chest compressions depending upon the depth of the compressions. Deeper compressions illuminate the lights for a longer time, shallower compressions illuminate the lights for a shorter time.
- ④ **Battery cover**  
If the battery is low, open the battery cover and replace the batteries.
- ⑤ **Clicker On/Off switch**  
This turns the clicker on and off.
- ⑥ **Power switch**  
This powers the manikin on and off.
- ⑦ **Power status indicator lamp**  
This indicates the power status. A green light indicates that it is operating normally, while a flashing red light indicates that the batteries are running low.
- ⑧ **Bluetooth button**  
While connecting, it will flash green every 2 seconds, becoming a solid green once the connection is made.  
Press this button to disconnect.
- ⑨ **AC adaptor connection**  
Connect the optional AC adapter here.
- ⑩ **Terminal for inspection**  
This terminal is used by a professional engineer to inspect the main unit. Users should not touch.

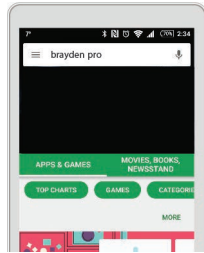
## Connecting the mobile app

### ■ Installing the mobile app

This mobile app runs on Google Android device.



Accessing Play Store



Search for brayden pro



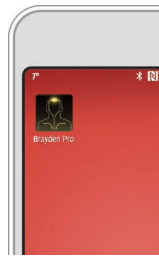
Installing BRAYDEN PRO app

- Should be downloaded under a WiFi environment. Communication charges may apply in some cases.
- For the smoothest operation of the BRAYDEN PRO app, a Google Android device equipped with Android operating system version 6.0 or higher and Bluetooth hardware 4.1 or higher is recommended.

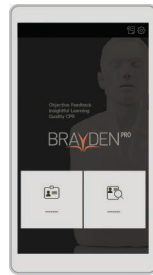


## Connecting the mobile app

### ■ Connecting with the BRAYDEN PRO manikin



- Opening **BRAYDEN PRO** app



- Select **Learner mode** or **Instructor mode**.



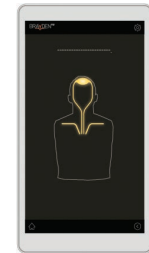
Learner mode



1. Turn on the manikin's **power switch**. (The **Bluetooth button** of the manikin will flash every 2 seconds.)
2. Click the circular **Find a manikin to connect** button.



3. Select the relevant manikin item from the Bluetooth list. If the item does not appear, click the **Rescan** button.



4. Once the connection is made, the **Bluetooth button** of the manikin will illuminate blue.

### ! Note

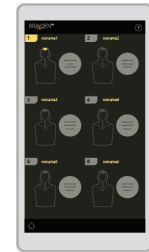
- Once the connection is made for the first time, the manikin and app will connect automatically.
- For more detailed instructions on use, refer to the instruction manual provided with the BRAYDEN PRO app.



1. Turn on the manikin's **power switch**. (The **Bluetooth button** of the manikin will flash every 2 seconds.)
2. A list of 6 items will appear. Click the **Find a manikin to connect** button of the item you intend to use.



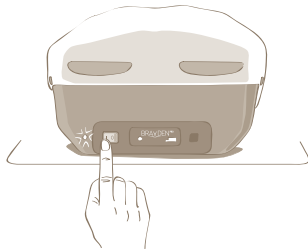
3. Select the relevant manikin item from the Bluetooth list. If the item does not appear, click the **Rescan** button.



4. Once the connection is made, the same position on the manikin and the app will illuminate.
  5. The **Bluetooth button** of the manikin will illuminate blue.
- Repeat steps 1 to 5 when connecting to 2 or more manikins at the same time.

## Using the manikin

### ■ Chest compression



- Turn on the manikin. The Power status indicator lamp will illuminate in green, the 'blood circulation' indication light and 'compression depth' indication light will cyclically flash once and the 'normal circulation' indication light will illuminate once.

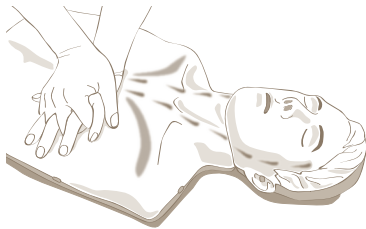


- Once you start compressions, the 'blood circulation' and 'compression depth' indication lights will cyclically illuminate.



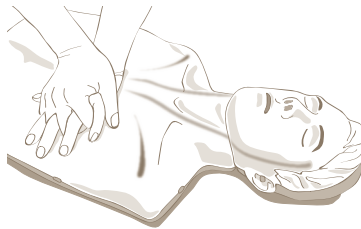
- Once you are performing compressions at a proper depth and speed, the 'blood circulation' and 'compression depth' indication lights will cyclically flash and the 'normal circulation' indication light will illuminate.

### ■ Excessive compression



When chest compressions of excessive depth are performed, the 'compression depth' indication light will illuminate.

### ■ Fast compression

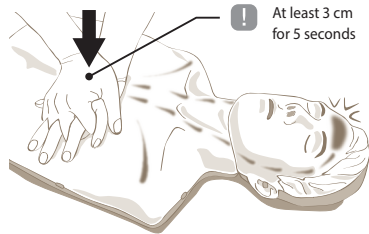


When chest compressions are performed rapidly, all of the 'blood circulation' indication lights will illuminate.

### ! Note

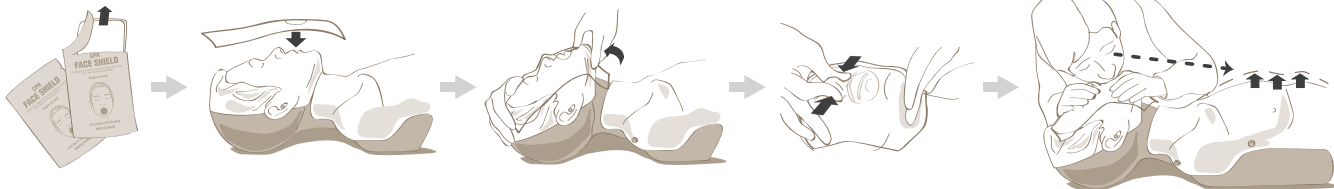
- When the BRAYDEN PRO app is connected, the manikin's indication lights will not illuminate if the chest compressions are performed for the purpose of education.
- When the manikin is turned on, a one-time automatic calibration will be carried out for approximately 2 seconds. It is recommended that chest compressions on the manikin not be performed when automatic calibration is being carried out.
- If the battery is low, the power status indicator lamp will flash red. At this time, replace the battery with a new one.

## ■ Change the operation method



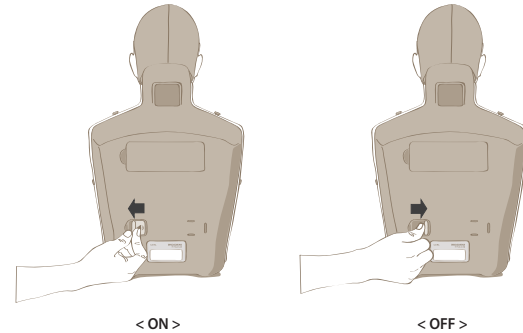
- When the manikin is turned on, the manikin always operates in <basic operation>. When chest compressions with a constant depth of compression at least 3 cm for 5 seconds are performed, it will switch to <specialized operation>.
- In <basic operation>, the 'normal circulation' indication light will illuminate when chest compressions have a depth of compression at least 5cm and a speed between 100 times and 120 times per minute .
- In <specialized operation>, the 'normal circulation' indication light will illuminate when chest compressions have a depth of compression between 5cm and 6cm and a speed between 100 times and 120 times per minute.

## ■ Artificial respiration



- Open the face shield.
- Place the mouth part of the face shield on the mouth of the manikin.
- Open the airway.
- Hold the nose with your thumb and index finger, and blow air through the mouth for 1 second.
- Visually check that the manikin chest is rising. Or, connect it to the mobile app and check for a change in the CPR graph.

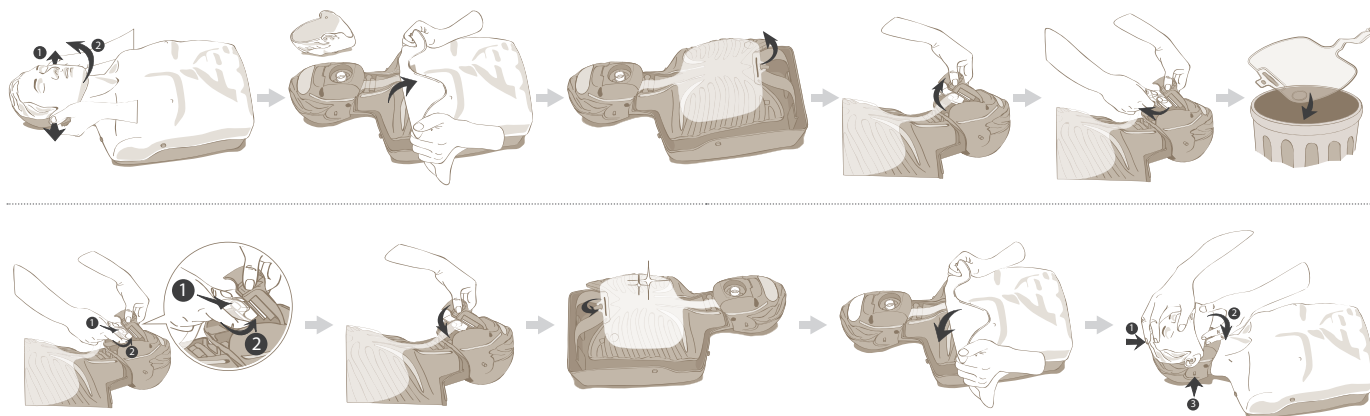
## ■ Change the clicker setting



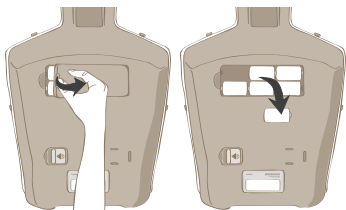
- Turn the 'clicker' on and off using the switch as shown. When the clicker is <ON>, it makes a "clicking" sound when the chest is compressed at least 5 cm.

## Maintenance of the manikin

### ■ Replacing the artificial lung



### ■ Replacing the battery



#### ! Caution

- Keep used batteries out of reach of children and dispose of safely.
- Do not use new batteries and old batteries together. Replace all 6 batteries together.
- If you do not plan to use the manikin for a long period of time, remove and store the batteries.



## Product specifications and optional accessories

### ■ Product specifications (IM16)

<b>Dimensions</b>	32 cm x 59 cm x 21 cm (W x H x D)
<b>Weight</b>	3.2 kg (7.0 lb)
<b>Operating temperature</b>	0 °C – 40 °C (32 °F – 104 °F)
<b>Storage temperature</b>	-20 °C – 60 °C (-4 °F – 140 °F)
<b>Humidity</b>	Relative humidity between 5 % – 95 % (without dew condensation)
<b>Power</b>	AC adaptor (AC 100 – 260 V, Output DC 9 V 1 A) Battery C type 1.5 V (6 batteries)

### ■ Components and optional accessories



Face skin  
IM16-SA01



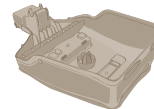
Body skin  
IM16-SA02



Head unit  
IM16-SA03



Chin  
IM16-SA04



Body  
IM16-SA05



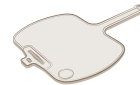
Rib  
IM16-SA06



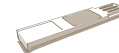
Face connection  
IM16-SA07



Airway valve  
IM16-SA08



Artificial lung  
IM16-SA09



Clicker  
IM16-SA10



Clicker actuator  
IM16-SA11



Spring  
IM16-SA12



Mat bag  
IM16-SA13



Instructions for use  
IM16-SA14



Face shield  
IM16-SA15



Respiration backflow  
prevention film  
IM16-SA16



Air filter  
IM16-SA17



AC adaptor  
IM16-OA01



Google Android device

## Quality assurance

The manikin is guaranteed against defects for 3 years from the date of purchase. The electronic components are guaranteed for 2 years from the date of purchase. Consumable items are excluded from this guarantee. If making a claim, you must enclose a proof of purchase and details of when and where the manikin was purchased, to check the guarantee period. In the event that you are not able to supply a proof of purchase, or if it is illegible, free after sales service may be restricted.

Also, in any of the following cases, after-sales service may be restricted:

- Damage or defect of the manikin due to abnormal use, user's negligence or accident
- Damage or defect of the manikin due to repair of the manikin at a place other than the company, authorized sales agency or service center or replacement of component with another company's product which is not provided by us
- Damage or defect of the manikin due to its use or storage in unsuitable environments such as high temperatures, high humidity, or exposed to chemical compounds or microorganisms
- Damage or defect of the manikin due to natural disasters such as fire, earthquake, flood, lightning, and other events that are beyond the scope of the company's control
- When information such as the date of purchase, customers name, name of supplier and manufacture's serial number has been modified intentionally
- When there is no proof of purchase with the product guarantee

## Service center

### Innosonian, Inc.

Homepage	www.innosonian.com
Address	3rd floor, 10-11, Seocho-daero 19-gil, Seocho-gu, Seoul, Korea, (Zip code)06573
Tel	+82 2-533-9410
Fax	+82 70-8673-5285

### Product purchase and service inquiries

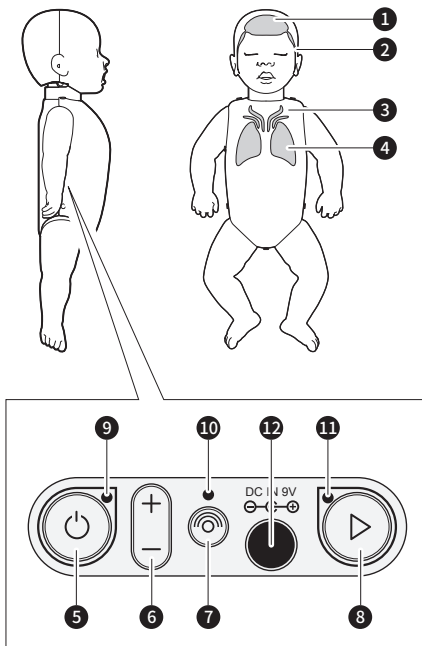
Tel	+82 70-4801-5378
E-mail	info@innosonian.com
Product name	BRAYDEN PRO
Model name	IM16
Manufacturer / Country	Innosonian, Inc. / Korea
Authenticator identification code	MSIP-RMM-InM-IM16
Class B device (Broadcasting communication device for home use)	This device has gone through EMC registration for home use (Class B) which means it is intended mainly for home use. This device can be used in all areas.
	This device may malfunction when operated very close to a wireless communication device such as a mobile phone, WiFi connections or a Bluetooth device.



This manikin observes the environmental requirements specified in EMC Guideline 2004/108/EC and EU Guideline RoHS 2011/65/EU for harmful substances.

### Cautions when disposing of battery

Do not dispose of used batteries in a fire. Recycle them through your local, free battery return system.



## A Component parts

- 1 **CPR quality indication light** The CPR quality indication light illuminates if the correct chest compression depth, speed, release are performed and the correct fingers (or thumbs) position detected.
- 2 **Chest compression rate indication light** Indicates the speed /rate of chest compressions performed.
- 3 **Chest compression depth indication light** Indicates the depth of chest compressions performed.
- 4 **Ventilation indication light** Indicates the ventilation volume performed.
- 5 **Power button** Press the power button for approximately 1 second to turn on/turn off the manikin.
- 6 **(+) and (-) button** This switches on/off ventilation feedback and facilitates audio and/or lights.
- 7 **Bluetooth disconnect button** Terminates the Bluetooth connection. (Brayden Baby Pro only)
- 8 **Scenario mode button** Sets the scenario mode. (Brayden Baby Pro only). This switches on the brachial pulse on the left arm.
- 9 **Power status indication light** Illuminates green if the battery is normal and flashes red if the battery is low.
- 10 **Bluetooth connection status indication light** Illuminates blue if the Bluetooth connection is established.
- 11 **Scenario mode indication light** Illuminates blue to indicate that the manikin is operating currently in scenario mode. (Brayden Baby Pro only)
- 12 **AC Adaptor connection socket** Allows the optional AC adaptor to be connected.

## B Installing and connecting the mobile app

1. Search for the **BRAYDEN ONLINE app** from the **App Store** on the iPad and install it.
2. Turn on the manikin and run the app.
3. Press the **Connect** button on the app and select the desired item to connect.
4. When you press the **Connect** button, the manikin and app will connect and the **Bluetooth connection status indication light** of the manikin will illuminate blue.

(Note) Recommended specifications for iPad  
- Operating system : iOS 13 or higher

## C What the CPR real time feedback lights indicate

### 1. Ventilations

- a. The **Ventilation indication light** will illuminate when ventilations are delivered at the correct volume and will flash when an excessive volume is delivered.

### 2. Chest Compressions

- a. The **Chest compression depth indication light** illuminates according to the depth of compressions delivered. All the lights flash if the depth of the chest compressions are too excessive.
- b. The **Chest compression rate indication light** (which go from the chest to the head) illuminates according to the rate/speed of the compressions delivered. If too fast, then the rate/speed is too fast.
- c. The **CPR quality indication light** only illuminates if the correct chest compression depth, speed, release are performed and the correct fingers (or thumbs) position detected.

(Note)

- When the manikin is turned on, an initial automatic calibration will be carried out for approx. 2 seconds. It is recommended that chest compressions are not performed on the manikin at this time.

(Note) for Brayden Baby Pro only

- When connecting the manikin to the App for assessment, the CPR real time feedback lights will not illuminate.