

# USER'S GUIDE

Airway Management Simulator

BT-CSIE



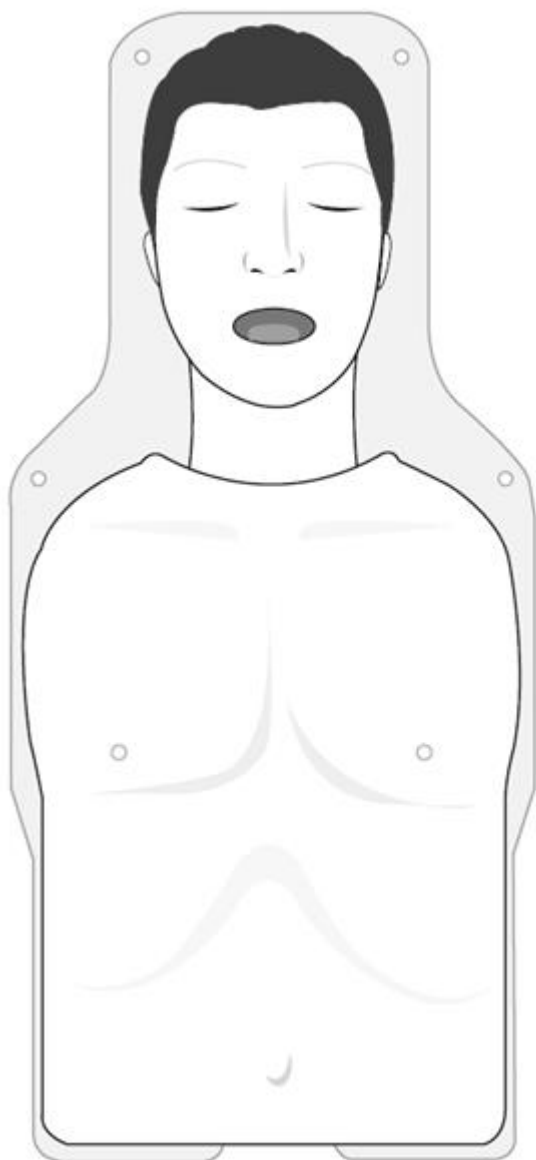
# 1. Cautions

- **This manual describes how to use BT-CSIE properly.  
Please read it carefully to avoid damaging the product and injuring yourself.  
Pay attention to the following warnings.**
- ① Use only components provided or approved by BT Inc.
- ② Do not use the product for other purposes described in the manual.
- ③ If you disassemble or modify the product without any permission by BT Inc., you cannot get the warranty. Also, making imitated or altered products for commercial purposes are prohibited by law.
- ④ If the product is overheated or smelled something burning during the usage, unplug the power converter and call customer service center.
- ⑤ Do not install other programs to the tablet PC. It can cause malfunction of the software.
- ⑥ Keep the product away from water and moisture. If the product gets wet, do not turn it on.
- ⑦ Do not use the product near strong magnetic fields or high voltage power lines.
- ⑧ Do not use the product under a weather of lightning. It can cause the malfunction and increase the risk of an electric shock.
- ⑨ Do not use the product with temperature below 0°C or above 40°C.  
(Operation temperature : 0°C ~ 40°C, Storage temperature : -10°C ~ 50°C).
- ⑩ Do not keep the product near hot places such as heating area. Deterioration of product or internal damage may occur.
- ⑪ Never clean the product with chemicals such as solvent, benzene or thinner as these may cause ignition or the surface deterioration.
- ⑫ BT Inc. can change or adjust the product specification without any notice in order to improve the product.

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### 3. Components



Adult Torso Manikin



Tablet PC  
(Option)



Power Converter



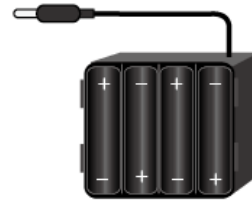
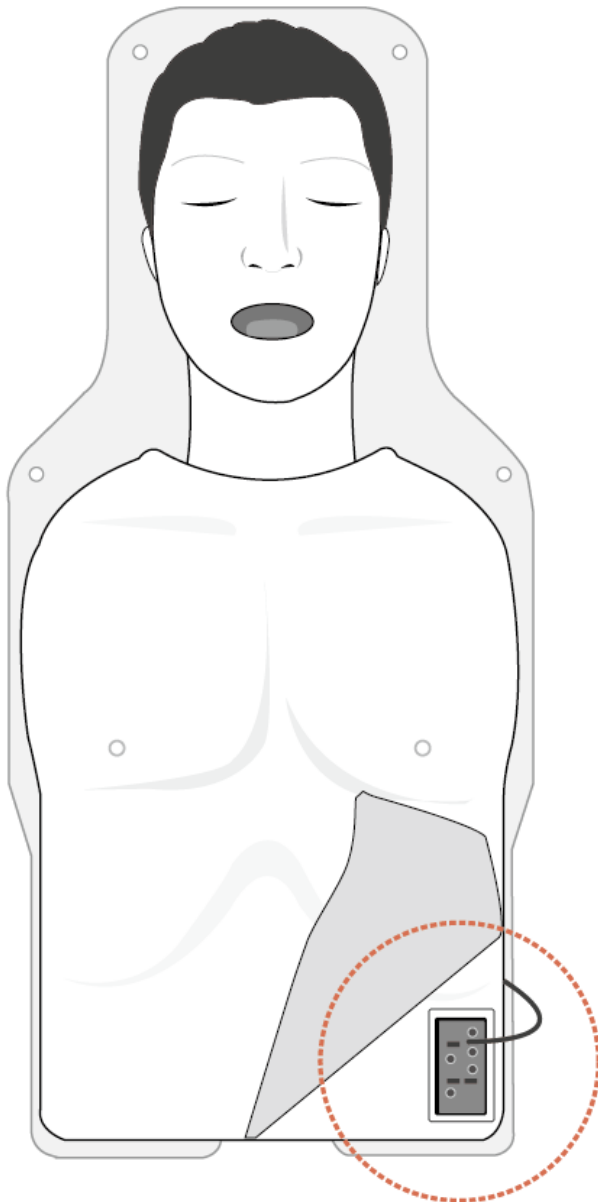
Lubricant



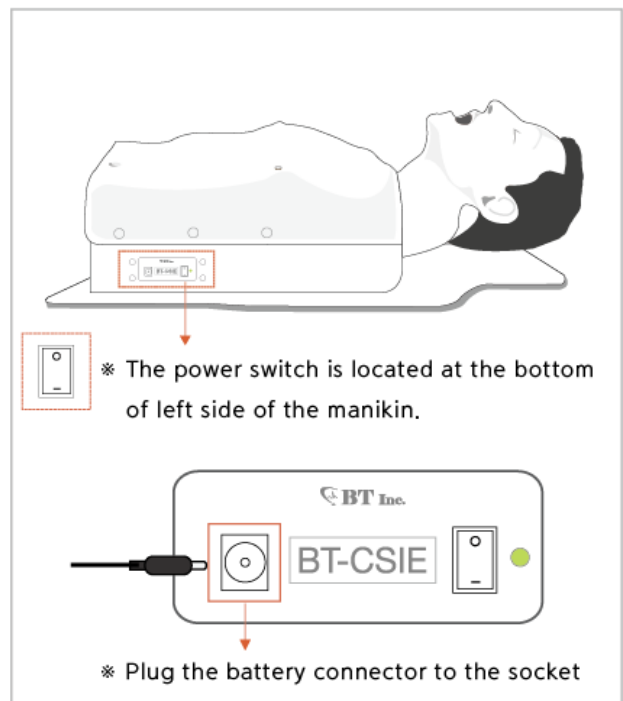
Battery Holder

※ Additional Components. –Storage Case for Manikin, User's guide

## 4. Insert / Replace Batteries

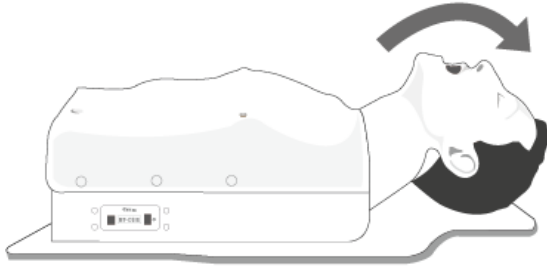


Battery Holder  
for 8 units of AA size Batteries

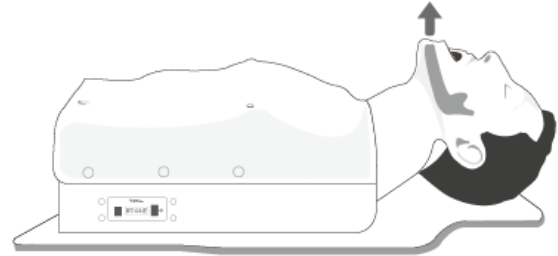


- ① Take off the skin, and pull out the battery holder which is located at the Left side of manikin.
- ② Insert the 8 batteries with correct polarities.
- ③ Plug the battery connector into the socket at the left side of the manikin.

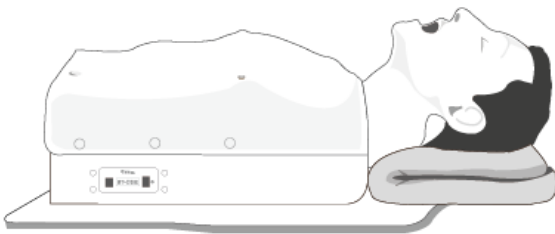
## 5. Basic Functions of Manikin



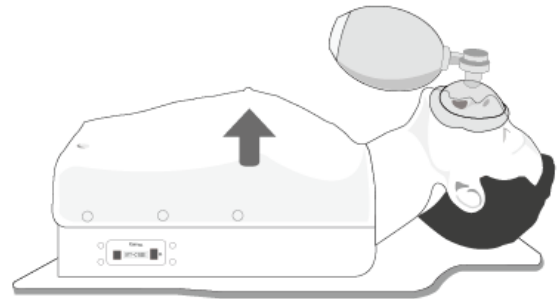
1. Head tilt



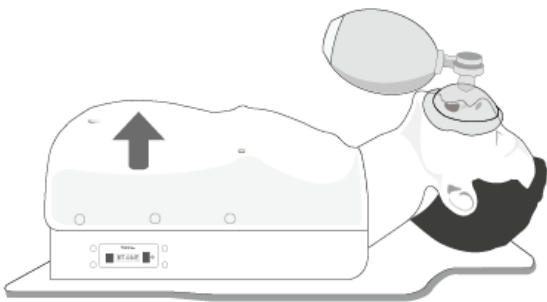
2. Jaw thrust maneuver



3. Sniffing position

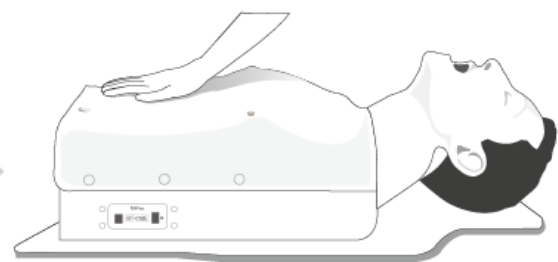


4. Ventilation with the bag valve mask



5. Gastric inflation

\* The Gastric inflation may happens by too strong , too much , too frequent ventilation or esophageal intubation.



6. Deflation by hand

\* If the gastric inflation happens, press the abdomen softly to discharge the air.

# 6. Functions of Software

## 6-1. Screen Configurations and User Guide



## 6-2. Screen Layout

The initial screen of the program is shown as the figure below.

This user's guide describes the standard configurations of the product.



① **Menu 1** : User can check the status of bluetooth connection and turn-down the Program.

② **Menu 2** : The functions of start, stop, Results and Settings can be operated.

③ **Checklist** : The checklist created by users will be displayed. User can check the items during the training session.

④ **History** : Training time and data are being logged.

### ⑤ **Training Screen** :

Scenario – Monitoring the status of manikin such as force on incisor during intubation, jaw thrust maneuver, head extension angle, sniffing Position and airway Intubation are provided in real time during the training performance.

ETT, LMA and Combi-Tube are available and the user can easily select the item

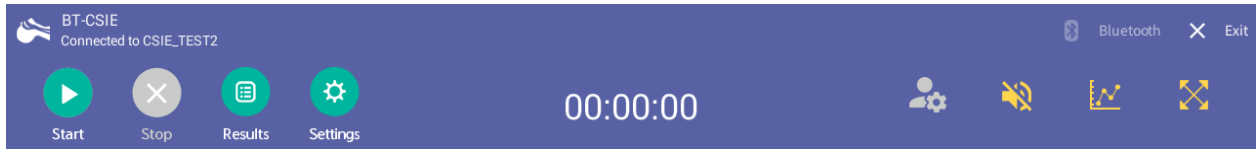
⑥ **Graph** : User can confirm the detail data about respiration rate, respiratory volume, expiration time, respiratory rate/min etc. by graphs and charts.













## 6-3. Introduction of Menu and icons

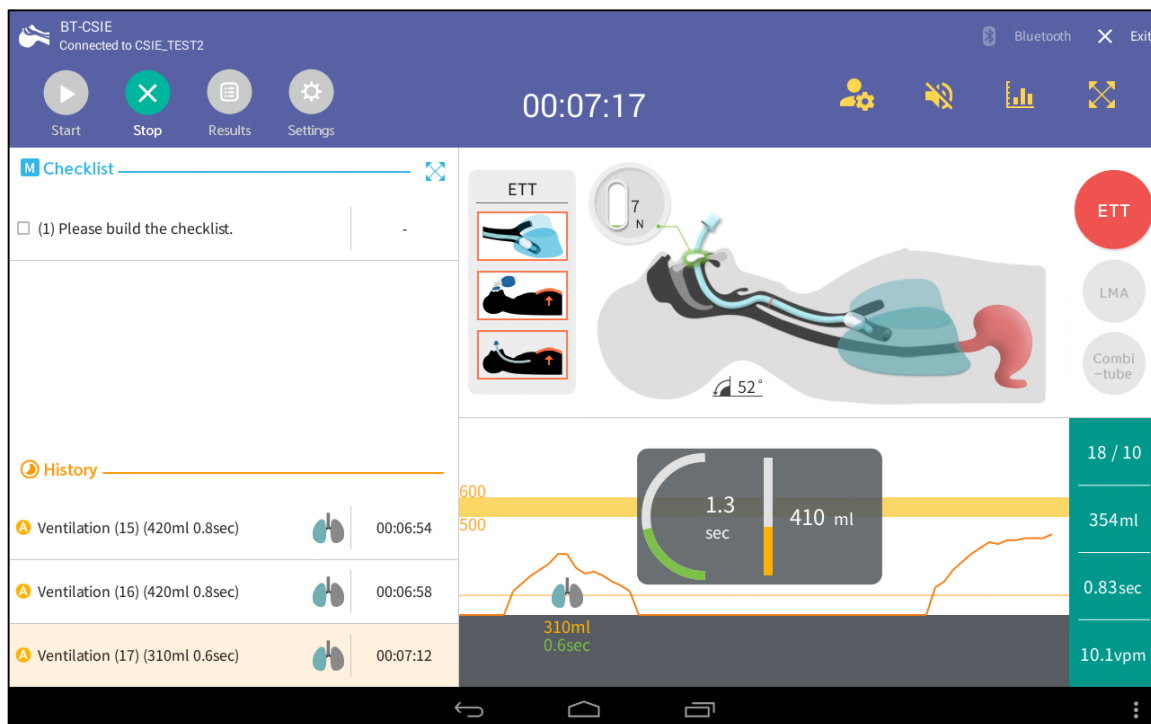
There are some icons at the top of the program screen. In this users guide, typical functions will be described

### 6-3-1. Menu and Icons



Icons	Description
	Start training
	End training
	Results after training
	Guideline Setting (Evaluation items, Distribution )
	Settings for the force on incisors and the head extension angle.
	Warning sound ON/OFF
	Bar Graph
	Line graph
	Enlarge the Graph Screen
	Reduce the Graph Screen

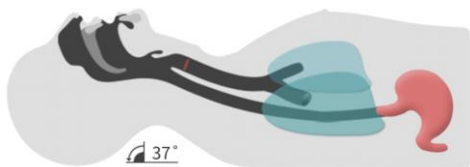
## 6-3-2. Training Screen



### Practice status Display

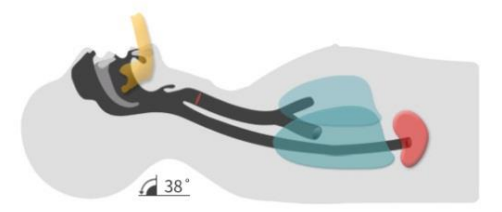
#### Airway

- The Head extension angle is displayed



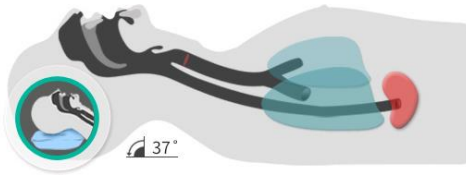
#### Jaw Thrust

- The jawbone shape icon will be displayed during the jaw thrust maneuver.



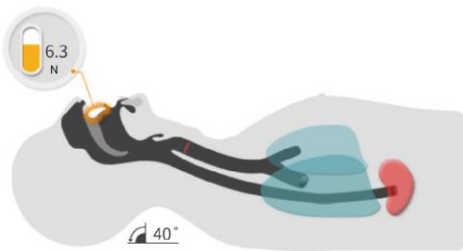
### Sniffing Position

- The head with pillow icon will be displayed during the sniffing position.



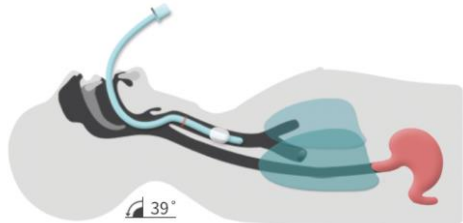
### Force on Incisor

- The bar graph icon will be displayed and the alarm may alerts when over-pressure is applied on incisors.

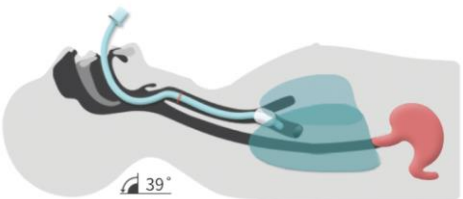


### Intubation display (ETT)

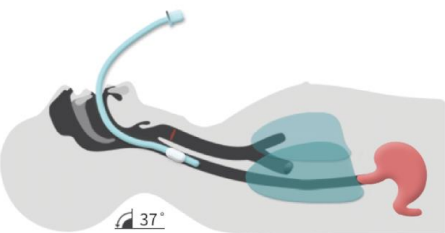
- Normal tracheal intubation



- Intubation to the right bronchus






- Esophageal intubation








### Evaluation items regarding intubation

- Intubation to the right bronchus and Stomach inflation can be detected

Icons	Descriptions
	Intubation to the right bronchus
	Stomach Inflation ( <b>by Bag Valve Mask</b> )
	Stomach Inflation ( <b>by Esophageal Intubation</b> )





### Icons regarding condition of intubation

Icons	Descriptions
	Before Intubation ( <b>Ventilation by bag valve mask</b> )
	Ventilation after intubation ( <b>Normal tracheal intubation</b> )
	Ventilation after intubation ( <b>Intubation to the right bronchus</b> )



### Icons regarding stomach inflation

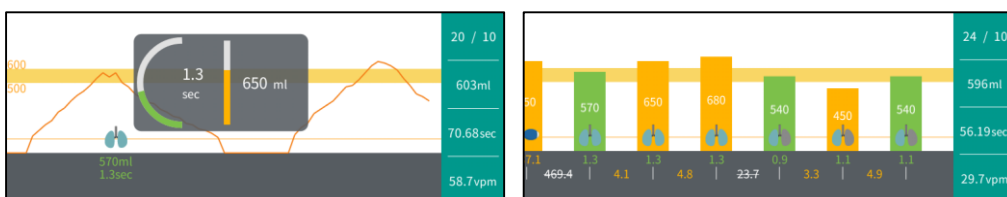
Icons	Descriptions
	Tube intubated
	Ventilation by bag valve mask



### Respiratory volume

- Line and bar graph are supplied for respiration monitoring.



- Respiration rate, respiration volume, expiration time, respiratory rate/min can be checked in real time by graphs.





## 6-4 Set Evaluation Items and Scores

### 6-4-1. Settings for Evaluation (Guide Line)




Settings for Evaluation	
	
Ventilation Number	10
Volume	500ml ~ 600ml
Ventilation Time	0.5sec ~ 1.5sec
Time Interval	5sec ~ 6sec
Max Time Interval	10sec
Practice Time	5min

Icons	Descriptions
	Initialize the settings
	Go back to the training screen



#### Settings for the evaluation

- Evaluation items can be revised regarding ventilation.
- The revised evaluation items are automatically applied by tapping the  icon at the upper right side of the screen.

## 6-4-2. Settings for Evaluation (Automatically recognized Items)



Total Score 120		
	Opening the airway?	10
	Lifting the chin?	10
	Positioning the sniffing?	10
	Breaking the incisors?	10
	Intubate the right side bronchus.	10
	Stomach inflation (BVM)	10
	Stomach inflation (Esophagus Intubation)	10
	Accuracy of Ventilation Number	10
	Accuracy of Volume	10

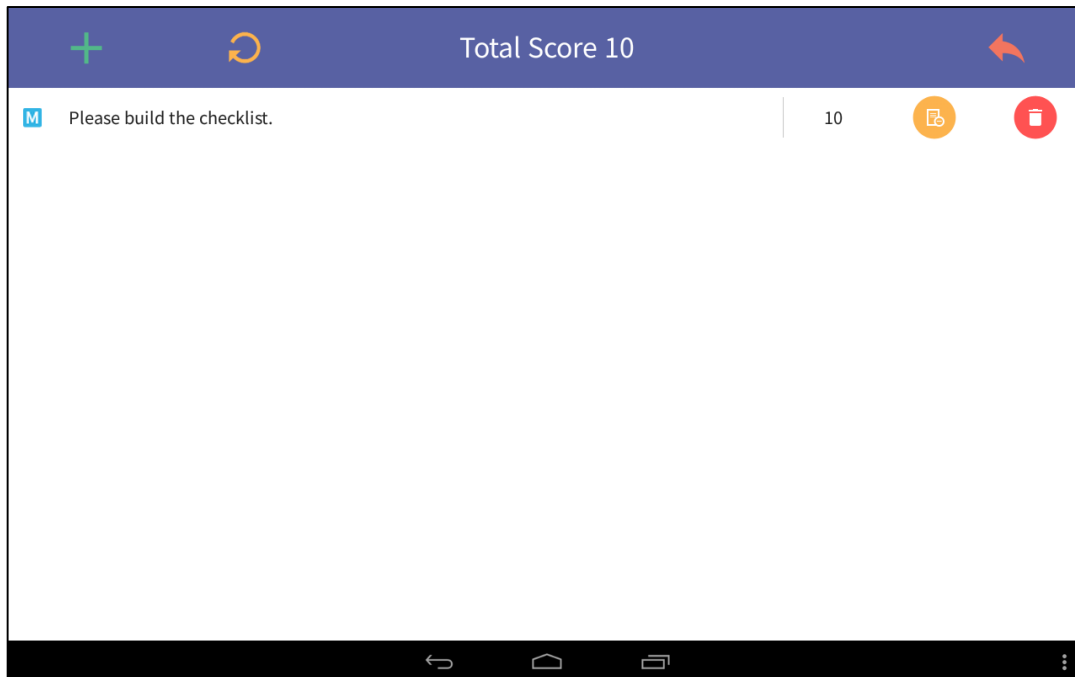
Icons	Descriptions
	Initialize the settings
	Go back to the training screen
	Exclude the evaluation item



### Settings for the evaluation

- User can select and exclude the items for the evaluation that are automatically recognized.
- User can set the total score to maximum 100 points.
- The revised evaluation items are automatically applied by tapping the icon at the upper right side of the screen.


### 6-4-3. Settings for Evaluation (Manual Checklist)



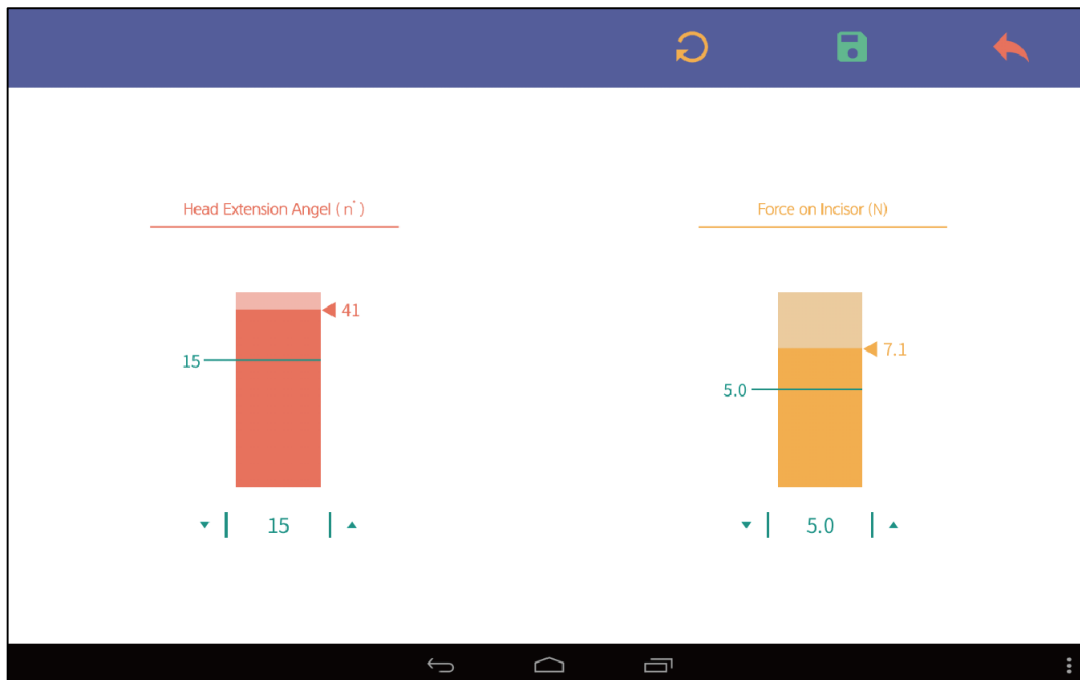
Icons	Descriptions
	Add Evaluation items
	Initialize the settings
	Go back to the training screen
	Exclude the Evaluation item
	Delete the Evaluation item






#### Settings for the evaluation


- User can add, revise, exclude and delete the evaluation items.
- User can set the total score from -100 to maximum 100 points.
- The revised evaluation items are automatically applied by tapping the  icon at the upper right side of the screen.

## 6-4-4 Parameter Settings for Manikin (Head Extension Angle, Force on Incisor)



Icons	Descriptions
	Initialize the settings
	Save the settings
	Go back to the training screen

### Settings for the evaluation

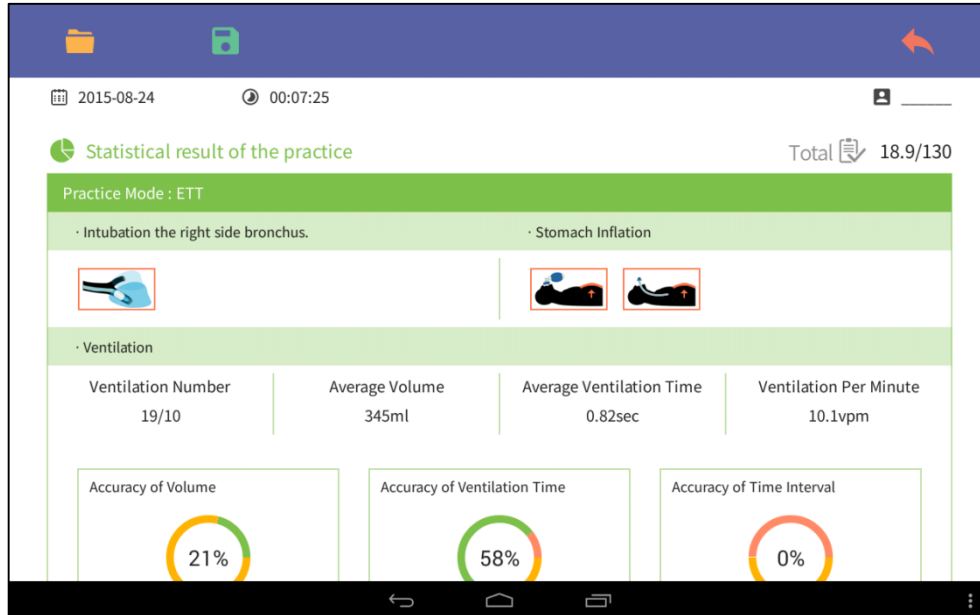
- User can adjust the standard angle of judgment for airway opening.
- User can adjust the standard force of judgment for dental injury.
- The revised evaluation items are automatically applied by tapping the  icon at the upper right of the screen.



## 6-5. Evaluation Results

### Result briefing and saving

- After training, the user can tap the Stop icon and go to the 'Result' page.
- The result data can be confirmed and saved in this page.



#### Icons

#### Descriptions



Search for the previous files



Save the results the name of trainee



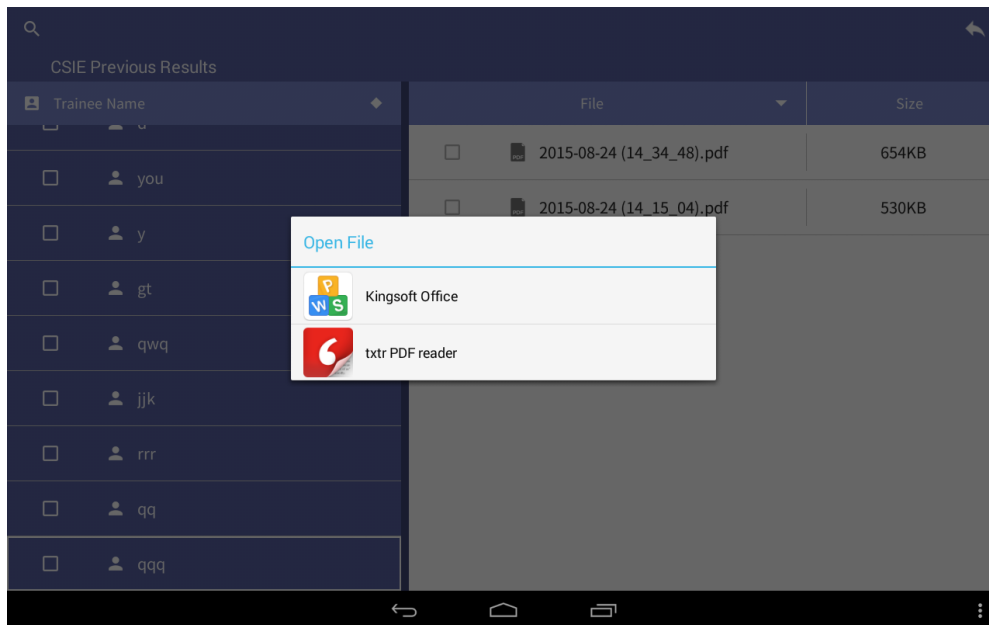
Go back to the training screen

CSIE Previous Results

Trainee Name	File	Size
<input type="checkbox"/> you	<input type="checkbox"/> 2015-08-24 (14_34_48).pdf	654KB
<input type="checkbox"/> y	<input type="checkbox"/> 2015-08-24 (14_15_04).pdf	530KB
<input type="checkbox"/> gt		
<input type="checkbox"/> qwq		
<input type="checkbox"/> jjk		
<input type="checkbox"/> rrr		
<input type="checkbox"/> qq		
<input type="checkbox"/> qq		

## 6-6. Previous Evaluation Results

### 6-6-1 Search for the file

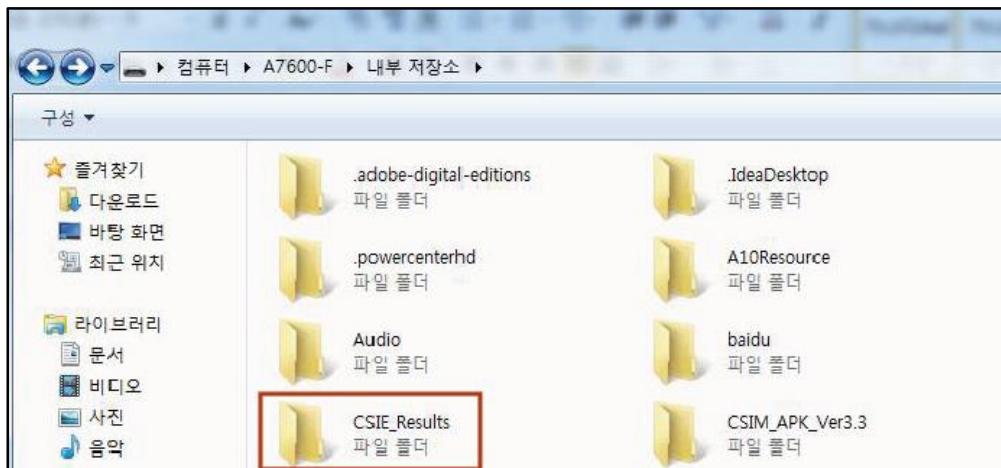


#### Check results and save

- Previous results can be found in the 'Previous result' folder.
- User can convert the result file to a Microsoft Office format or a PDF file after finding it in the 'Previous result' folder.

## 6-6-2 Print The Evaluation Results

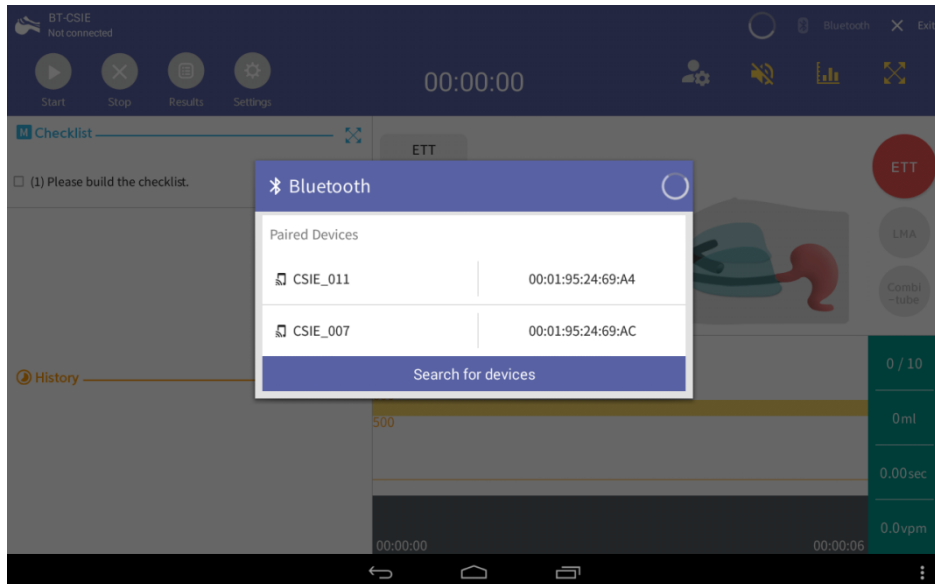
- ① If user wants to transfer the result file, connect data cable between the tablet PC of CSIE and desktop PC.
- ② The laptop PC of CSIC can be found at the "Computer" of Desktop PC.




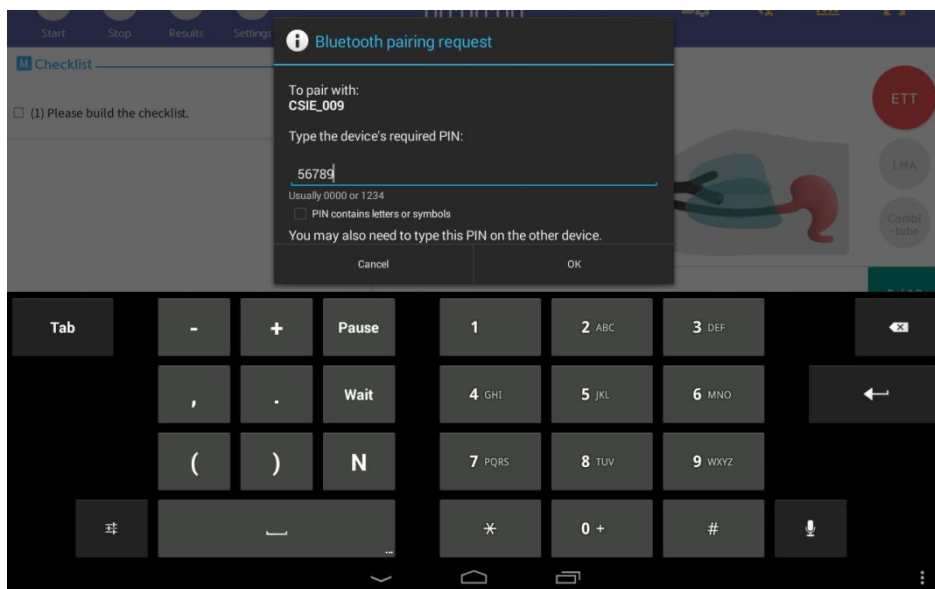
- ③ User can find and open a file in desktop PC by **Computer > Laptop PC model > CSIE\_Results**.


## 6-7. Bluetooth Connection

- CSIE manikin and Display device (Tablet PC) are connected by Bluetooth.
- Please refer to the procedures below in case of connection problem arises.



- ① Check the Power of CSIE device.
- ② Press 'Bluetooth'  Bluetooth button to check up the device pairing.
- ③ Try connection again by selecting the pairing device.



- ④ If pairing failed, enter the Pin Code below and re-try the device pairing.  
 **Pin Code : 56789**
- ⑤ Try connection again by selecting the pairing device.
- ⑥ Device will be connected automatically after successful procedures.