



## CPRLillyAIR with Advanced Airway Management Head

P71AIR / 1020137

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# CPRLillyAIR with Advanced Airway Management Head

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## ➤ INTRODUCTION

Thank you for choosing this 3B Scientific and collaborative TruCorp Ltd product. Please read the operating instructions carefully before setting up the device. This will ensure that it works correctly, and that you can work satisfactorily with this product.

CPRLillyAIR is a training simulator for cardio-pulmonary resuscitation (CPR) and airway management. The simulator meets the latest CPR guidelines of the AHA (American Heart Association) and the ERC (European Resuscitation Council). It has a robust construction, is easy to use, and offers realistic working scenarios. It is therefore suitable both for medical training and for first aid courses in schools and associations. It offers all the necessary features for learning about the life-saving algorithm comprising heart massage and artificial respiration for adults.

### Its features are:

- Torso with shoulders and the necessary anatomical features for finding the ideal pressure point for cardiac massage
- Resuscitator ventilation is possible
- Head with airways for mouth-to-mouth and mouth-to-nose resuscitation
- TruCorp airway with the most realistic internal anatomical details for full range of airway management techniques
- Realistic thoracic spring force and the required compression depth of 5 cm prepare the trainee for a situation with a real person
- Head tilt to open the airways
- A sound indicates that the required compression depth has been reached
- Thanks to the disposable respiration bags the mannequin is hygienic, and is easy to clean and maintain
- CPRLillyAIR has a two chamber respiratory system, allowing the separation of the user's breath from the inside of the mannequin. The advantage being that it leaves no condensation or contamination on the inside of the mannequin and thus remains hygienic for all users.

## DELIVERY CONTENTS

- 1 TruCorp Advanced Airway Management Head
- 1 CPRLilly head simulator with 5 Lower face masks (including teeth)
- 25 Throat bags
- 1 Carry case
- 1 Tracksuit top
- 1 Bottle of TruCorp Lubrication
- 1 Android tablet PC
- 1 Plug adaptor for the charger

While developing CPRLillyAIR we paid special attention to creating a simulator that would be quick and easy to use, especially with regard to hygiene and for large training groups.

The face mask is dish-washer safe and replacements can be bought. For maximum hygiene you can provide each course participant with his or her own mask and disposable throat bag.

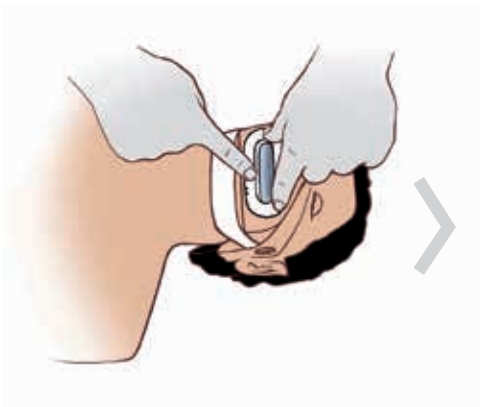
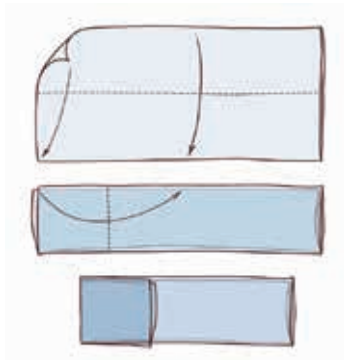
The TruCorp Advanced Airway Management Head is easy to interchange for quick training scenarios but CANNOT be used for mouth to mouth and should only be used for airway management using proper equipment.



Advanced Airway Management Head

# CPRLillyAIR with Advanced Airway Management Head

## > QUICK INTRODUCTION



## ➤ ASSEMBLY (START-UP AND USE)

### Instructions (safety and general information):

- Fully charge the CPRLillyAIR, and the Android tablet using the power pack provided before using it for the first time!

This may take up to 3 hours. While on charge, the LED indicator will flash orange quickly. When the LED flashes orange slowly, the battery is fully charged.

- To avoid getting moisture into the inner circulation, respiration may only be carried out when a throat bag has been inserted.

- The throat bag should not be changed in the rain, because water could get into the inner circulation. The CPRLillyAIR could get damaged.

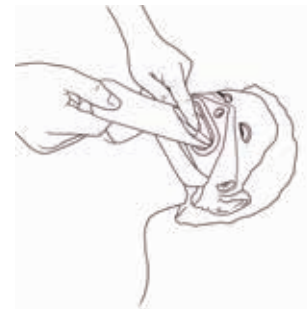
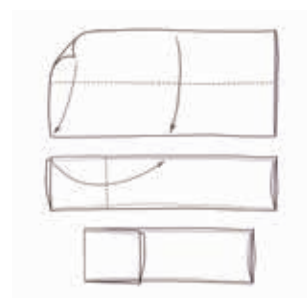
- When being used, “noises” will be heard (this does not mean that the simulator is not working properly!).

## ➤ ASSEMBLY / INSTALLATION

### • Removing the face mask



### • Putting in a new bag



### • Attaching a face mask



### • Disinfecting the face mask





# CPRLillyAIR with Advanced Airway Management Head

## › INTERCHANGING THE TRUCORP ADVANCE AIRWAY HEAD

1. Loosen the button studs at the back of the neck.



2. Roll back the skin up over the collar to gain access to this area.



3. Rotate CPRLilly head counter clockwise to loosen the head and ensure the rotation pin has passed along to the end point.

4. Carefully pull the head towards you to detach it from the CPRLilly body.

5. Remove all 3 connection points:  
1: Airway connector  
2: PCB black plastic housing cable  
3: Pneumatic pressure tubing  
All 3 connection points have snap fittings and should be easily disconnected.



6. Remove the CPRLilly head and attach the TruCorp with Advanced Airway Management Head for intubation and airway management.

7. Align head up and ensure that cylindrical part of the collar is aligned with the cavity in the CPRLilly body.

8. Slowly attach all 3 connection points.



9. Slowly align the rotation pin with the CPRLilly body and insert rotating clockwise to lock into place.

10. Rotate fully until head is perpendicular to the floor or surface and facing straight forwards.

11. Pull neck skin back down and around the newly secured head and reconnect the button studs for security.

12. The head is now ready to use.

13. The head needs to be calibrated when it has been interchanged to start a new simulation.

### Calibrating head for simulation

1. Allow the head to lie flat on a surface so that the electronics can reconfigure that this is in the neutral position.
2. Wait until you see a message stating that the head is calibrated and that you can begin a new simulation
3. Upon doing a simulation putting the head into the sniffing position will trigger the head image on the tablet to go 'green' to illustrate the head is in the correct position to allow intubation and bag mask ventilation
4. The head will need to be in the sniffing position to ensure full electronics are used for each simulation.

### Power supply

The CPRLillyAIR is powered via the small-device 15 Volt socket. CPRLillyAIR comes with a multinational mains adaptor for use in over 150 countries. It can operate between 100 and 240 Volts and at a mains frequency of 50 or 60 Hz. We recommend always charging the CPRLillyAIR with the supplied mains adaptor included.



### Changing/charging the battery

**Doing a course with a flat battery**  
Even if the battery is flat, you can still do

your course! Simply connect the mains adaptor to the CPRLillyAIR.

### Extended period of non-use

If the device is not used for an extended period of time, ensure that CPRLillyAIR is charged at least every two years, so that the battery is not damaged by becoming completely discharged. If you intend to not use the device for an extended period, charge the battery up completely until the LED flashes orange slowly.

### Changing the battery

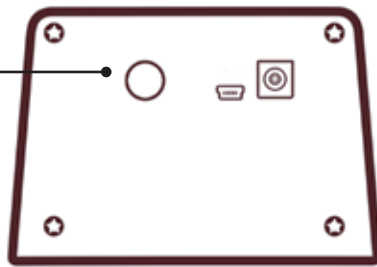
The CPRLillyAIR has a very long-life NiMH a battery that only discharges very slowly. It should only be changed by a specialist or an authorized electrician. You can order a replacement battery from the accessory list if necessary. The instructions for inserting the new battery are provided with the battery. If the LED flashes red, either a battery defect has been detected, or the connected charger is not powerful enough. If the LED is flashing red, but you are using the original mains adaptor, please contact the customer service.

## › SIMULATION SOFTWARE

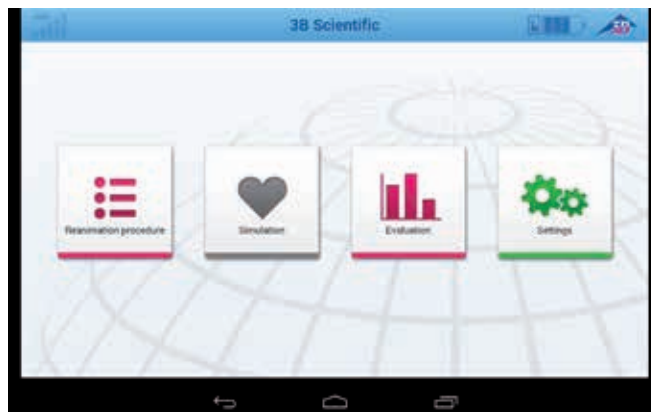
### Switching the device on/off

#### 1. Switching the device on/off

The electronics inside the CPRLillyAIR automatically switch off after 5 minutes of inactivity, or the device can be switched off manually by holding down the on/off button.



#### 2. Switching on the tablet and starting up the program

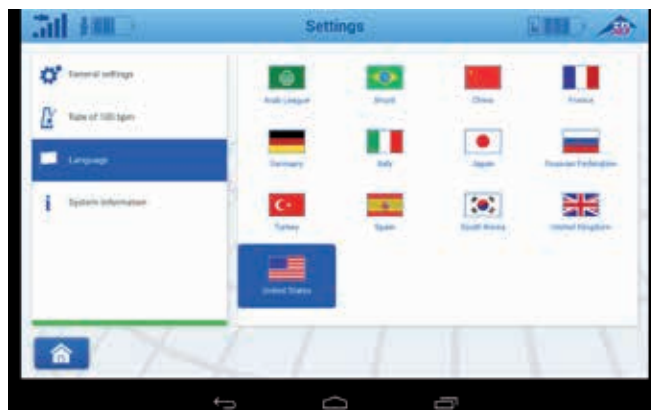


The app can also be used offline without connecting to CPRLillyAIR. Some functions are not available without an existing connection.

### 3. About the software

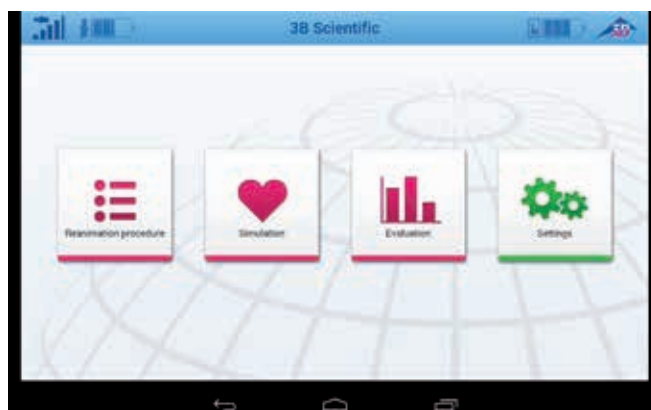
#### 3.1. Selecting the language

Upon initial set-up the app is automatically set to English. Once the tablet has booted up, the select dialogue-box for the language of the application software is displayed on the touch-sensitive screen. To change language, select Settings, then Language.



#### 3.2. Function menu

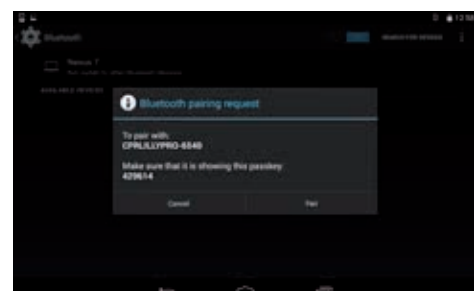
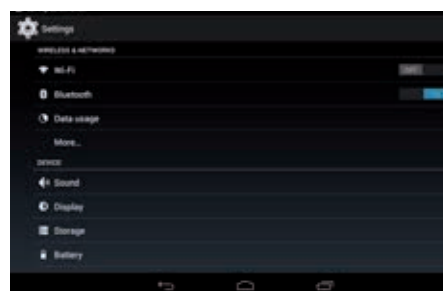
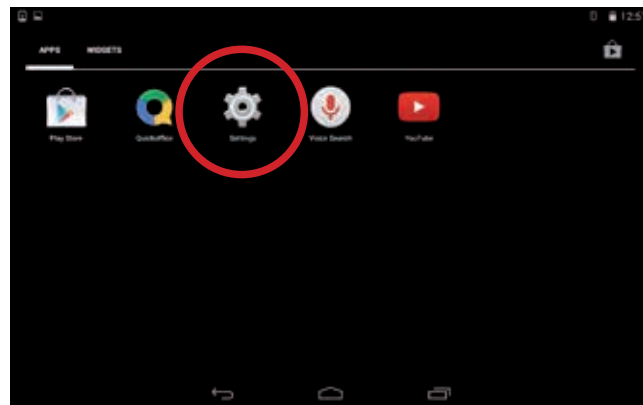
The following application notification is displayed. The heart turns red when a connection to CPRLillyAIR exists. The connection display indicates the strength of the connection.



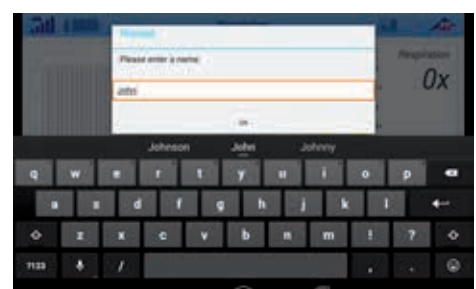
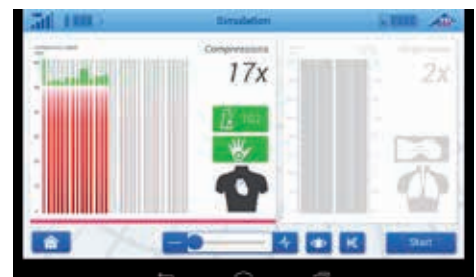
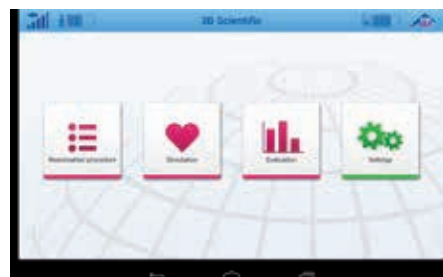
# CPRLillyAIR with Advanced Airway Management Head

## 3.3. Setting up/removing a bluetooth connection

To connect another CPRLillyAIR, Bluetooth can be deleted or set up again via the Settings function. Only one CPRLillyAIR can be connected to the tablet at a time.

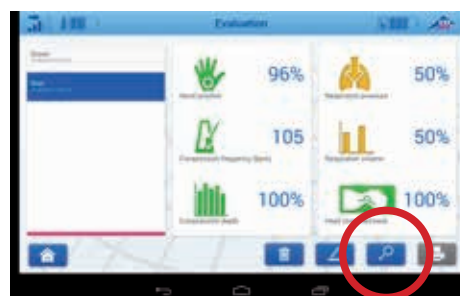
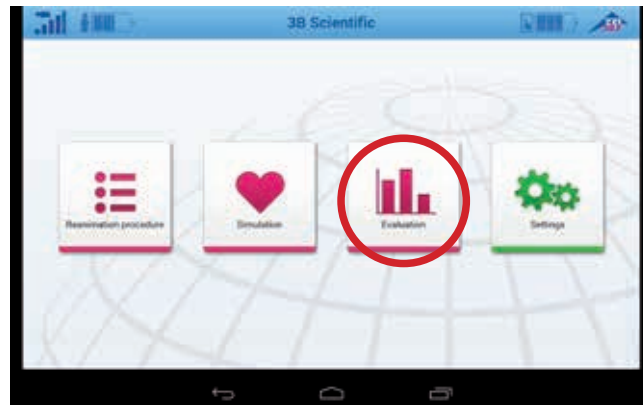


## 3.4. Starting a new simulation





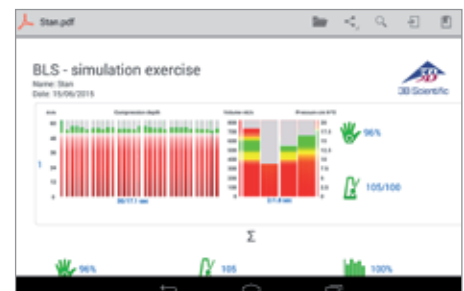
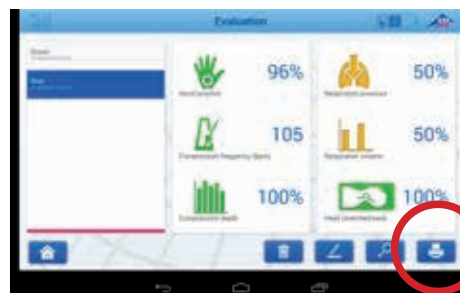
### 3.4. Displaying/evaluating the graphs



### 3.5. Exporting the data

It is only possible to export data if the CPRLillyAIR is switched off and/or the Bluetooth connection has been deactivated.

If CPRLillyAIR is connected, the Print icon is deactivated.



# CPRLillyAIR with Advanced Airway Management Head

## Compression

If fewer than 30 compressions per cycle are made, the remainder will be allocated 0 points.

If more than 30 compressions per cycle are made, the additional compressions will not be assessed.

Green		
	In mm	In %
Lower limit	$\geq 50$	$\geq 83$
Upper limit	$\infty$	$\infty$

## Compression frequency

If fewer than 30 compressions per cycle are made, only the completed compressions will be counted.

If more than 30 compressions per cycle are made, the additional compressions will not be assessed.

The BPM values can only be shown after the first 2 compressions; otherwise 0 is shown. An average compression frequency is given for all compressions made.

	Lower Yellow	Green	Upper Yellow
	In BMP	In BMP	In BMP
Lower limit	$\geq 85$	$\geq 95$	$> 105$
Upper limit	$< 95$	$\leq 105$	$< 115$

## Volume

If fewer than 2 ventilations per cycle are made, the remainder will be allocated 0 points.

If more than 2 ventilations per cycle are made, the additional ventilations will not be assessed.

	Lower Orange		Lower Yellow		Green		Upper Yellow		Upper Orange	
	In ml/s	In %	In ml/s	In %	In ml/s	In %	In ml/s	In %	In ml/s	In %
Lower limit	$\geq 360$	$\geq 45$	$\geq 384$	$\geq 48$	$\geq 464$	$\geq 58$	$> 608$	$> 76$	$\geq 624$	$\geq 78$
Upper limit	$< 384$	$< 48$	$< 464$	$< 58$	$\leq 608$	$\leq 76$	$< 624$	$< 78$	$< 664$	$< 83$

## Pressure

If fewer than 2 ventilations per cycle are made, the remainder will be allocated 0 points.

If more than 2 ventilations per cycle are made, the additional ventilations will not be assessed.

	Lower Orange		Lower Yellow		Green		Upper Yellow	
	in cm H <sup>2</sup> O	In %	in cm H <sup>2</sup> O	In %	in cm H <sup>2</sup> O	In %	in cm H <sup>2</sup> O	In %
Lower limit	$\geq 10,56$	$\geq 48$	$\geq 12,54$	$\geq 57$	$\geq 14,3$	$\geq 65$	$> 18,7$	$> 85$
Upper limit	$< 12,54$	$< 57$	$< 14,3$	$< 65$	$\leq 18,7$	$\leq 85$	$\leq 19,14$	$\leq 87$

## Hand placement

Depending on the compressions.

Correct      Green

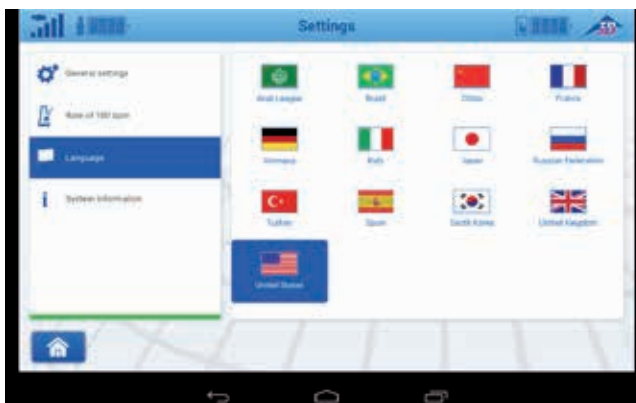
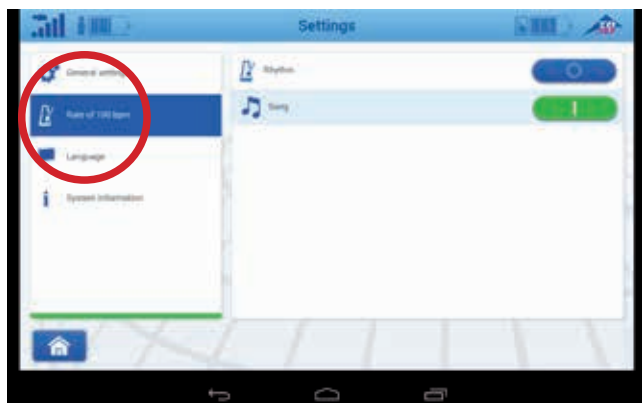
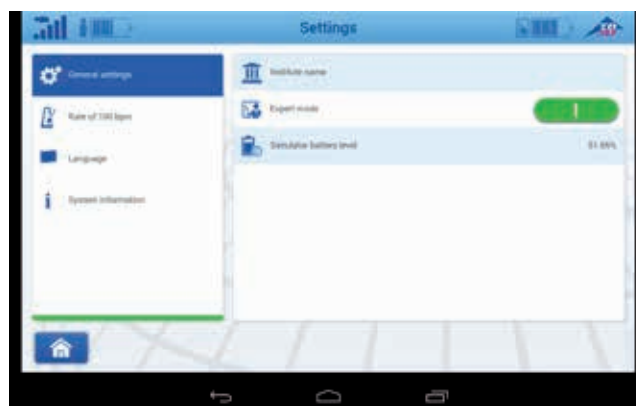
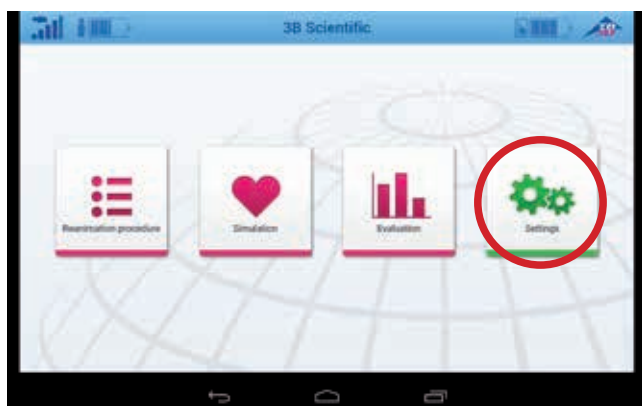
Wrong      Red

## Head tilt

The head tilt is only assessed in connection with respiration. For a movement of 23 degrees or more from the resting position, the head tilt display lights up green. The assessment may show a yellow symbol for the head tilt, regardless of the mean over the simulation round.

Red	Yellow	Green
<50%	<=50%	<=80%

## 3.6. Settings



Instead of the metronome, the song "Stayin' alive" can be selected.

In online mode, the firmware versions of the CPRLilyAIR can be queried via the tablet. They are not visible unless a doll is connected.



# CPRLillyAIR with Advanced Airway Management Head

## 3.7. Introduction



## ➤ MEDICAL PROCEDURES

### 1. Heart massage

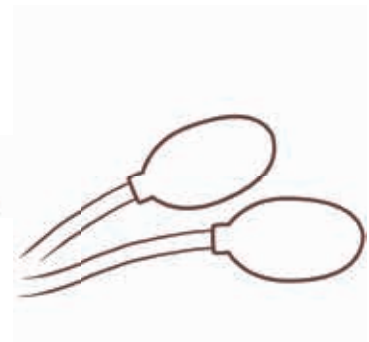
#### a) Talk to the patient (eyes open)

The “speak to doll” function (that opens the eyes) can be set via the tablet. This feature does not work on the Advanced Airway Management Head.



#### b) Check the pulse (settings via the tablet)

To control the pulse and eye-blinking via the software, please activate the learning mode using the “Settings” and “General” menus.



### c) Expose the chest



### d) Heart massage (curve/graph)



### 2. Clearing the mouth and pharynx area

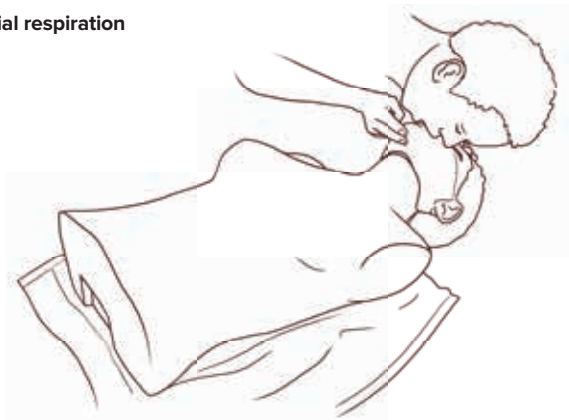
To free the airways, the simulator head can be rotated by 90°.



This feature is not available on the TruCorp Advance Airway Head. A blunt foreign body may be introduced into the mouth of the CPR*lily*AIR. Even semi-liquid foreign bodies, such as shaving foams, can and should be introduced for practice purposes. They can then be thrown away with the throat bag.

**Important:** Sharp foreign bodies or removing items with sharp foreign bodies are not permitted. The respiratory system of the CPR*lily*AIR would be damaged by this.

### 3. Artificial respiration





# CPRLillyAIR with Advanced Airway Management Head



## FAQs

### Can I use my own song for the simulation?

No.

### Where do I choose the languages?

In the settings window under the language section

### How do I switch the acoustic rhythm output to the song?

In the settings window under the section 100 bpm rate

### Where can I find the silence button?

You can find this in the simulator window if the teaching mode has been activated

### What do the colors on the LED button mean?

Green light → The CPRLillyAIR is switched on and ready for use

No light → CPRLillyAIR is switched off

Green-red flashing light → The battery is almost flat

Flashing slowly orange → The battery is charged

Flashing quickly orange → The battery is being

Charged flashing red only → Device error

### What should I do if the LED is flashing red?

Remove the USB cable from the device

Hold the LED button down for five seconds until the device switches off.

Plug the cable back in and press the LED button.

If, after trying the LED button several times, the red light keeps flashing, contact your supplier.

### How do I set up a Bluetooth connection to the BLS simulator?

Please go to the tablet settings and look for Bluetooth, then activate Bluetooth. The Bluetooth connection is switched on and configured upon leaving the factory.

### Is the simulation data lost if I accidentally touch the start screen button (home button)?

Unfortunately, the simulation will be lost if you do this. The program is stopped and must be restarted.

### Why can I not breathe into the CPRLillyAIR?

The head has not been tilted back. Tilt back the head to enable respiration.

The volume of the air contained inside is not sufficient. Please remove the throat bag briefly in order to fill the breathing system with air. Please note, not to breath into the TruCorp Advance airway head!

## GENERAL SAFETY INSTRUCTIONS

- The CPRLillyAIR packaging is not a toy – there is a risk of suffocation!
- Intubation is only possible on the TruCorp Advanced Airway Management Head, mouth to mouth on the CPRLillyAIR Head
- Do not “fish around” for the throat bag with sharp objects (such as a knife)!
- The CPRLillyAIR should not be used near open flames.
- Do not use the CPRLillyAIR outside in heavy rain
- Do not plunge the CPRLillyAIR under water
- Do not use sharp objects to operate the touch screen
- Joint in the head: Do not remove the studs (risk of injury)
- When in operation, “noises” will occur. This does not mean that the simulator is not working properly!
- Important! Do not press on the abdomen area. There is a risk of damaging the electronics.
- The CPRLillyAIR should only be used for artificial respiration if a throat bag has been inserted
- It is not advisable to change the bag in the rain

## TECHNICAL DATA

### Dimensions

- CPRLillyAIR (H x W x D) 26 x 39 x 78 cm, Weight: 9 kg

### Power requirements

- Supply voltage: 15 V
- Safety extra low voltage (device class III)

### Operating conditions

- CPRLillyAIR is splash-proof (protection class IP 45)
- Operating temperature: -10°C to 40°C
- Storage temperature: -20°C to +60°C
- The plastics used meet the requirements of the DIN EN 71-3/9 Toy Safety Directive
- The CPRLillyAIR is designed for use outdoors and can therefore also be used outside
- The TruCorp Advance Airway Head is made from Latex and silicone rubber and if latex allergies are present it is not advisable to use the product

## > MAINTENANCE AND CARE

### Storage

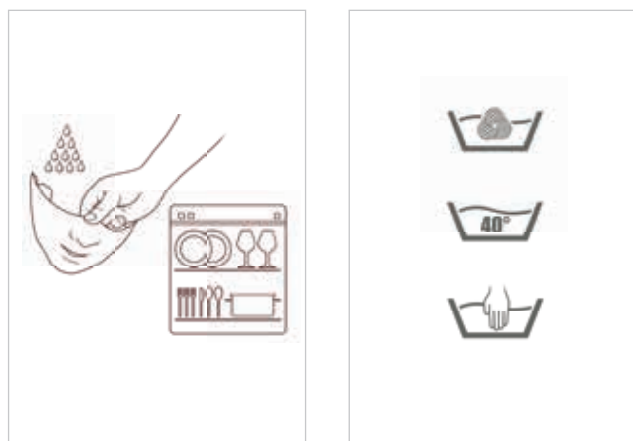
- The CPR*Lilly*AIR is best stored in a dry place at room temperature
- Protect the CPR*Lilly*AIR from direct sunlight because heat of over 40°C can deform the material or make it brittle
- Never store the CPR*Lilly*AIR with a fully discharged battery. Not even for a short time.

### Care instructions




All parts that come into contact with the trainee, such as the face skin, the mouthpiece and the airbag holder, can be disinfected. The disposable airways (airbag) also ensure that using the device is especially hygienic. Please do not use any harsh chemicals for cleaning, because they can damage the model materials.

The upper skin of the CPR*Lilly*AIR may, if severely soiled, be cleaned in a washing machine without the spin cycle (e.g. using the wool program) at a maximum of 40° C with usual washing products. The rest of the surface of the simulator can be cleaned with a mild soap solution. Do not use any cleaning products containing solvents because the surface could be damaged.

The tracksuit top can be washed by hand or in the washing machine using normal washing products in warm water up to a temperature of 40°C.



## > REPLACEMENT PART ORDERS

Replacement parts	Item No.	
Upper face mask light (1x)	1017737	
Lower face mask with teeth light (5x)	1017738	
Bag clip	1017748	
Throat bag (pack of 50)	1017739	
Throat bag (pack of 100)	1017743	
Trucorp Advance Airway Head	1019711	