

# User Manual

Luna® G3 APAP / Luna® G3 CPAP

LG3600 / LG3500



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# 1. Introduction











Thank you for your purchase of the Luna® G3 APAP / Luna® G3 CPAP. This User Manual will provide you with information about your device. Please read it carefully. If you experience any difficulties or problems during use, please contact your homecare provider or physician.




















## 2. Symbols

### 2.1 Control Buttons

|   |                     |
|---|---------------------|
|  | Home Button         |
|  | Start / Stop Button |
|  | Knob                |

### 2.2 Device Symbols

|   |   |
|---|---|
|    | Follow Instructions for Use               |
|    | Consult instructions for use              |
|    | Type BF Applied Part (mask)               |
|    | Class II (Double Insulated)               |
|    | For indoor use only                       |
|  | AC Power                                  |
|  | DC Power                                  |
| <b>IP22</b>   | ≥ 12.5 mm Diameter, Dripping (15° tilted) |
|  | Hot Surface                               |
|  | Logo of BMC Medical Co., Ltd.             |
|  | Serial Number                             |

|  |   |
|--|---|
|             | Manufacturer  |
|             | Date of manufacture   |
|             | Made in China   |
|             | Use-by Date   |
|             | Do not use if package is damaged and consult instructions for use |
|             | Disassembly is prohibited   |
|  <b>Max</b> | Maximum water level   |
|             | Product is intended for use by a single patient only              |
|             | Batch code  |
|             | Non-Ionizing Radiation  |
|             | SD Card   |
|             | WEEE Marking  |
|             | Air Inlet   |
|           | Air Outlet  |
|           | Caution   |
|           | MR Unsafe   |
|           | Complies with RTCA DO-160 section 21, category M.                 |
|           | Medical Device  |
|           | Prescription only   |

**REF**

Catalogue number

**UDI**

Unique device identifier

**#**

Model Number



Temperature Limit



Humidity Limit



Atmospheric Pressure Limit

### 3. **Warning, Caution and Important Tip**

#### **⚠WARNING!**

Indicate the possibility of injury to the user or operator.

#### **CAUTION!**

Indicate the possibility of damage to the device.

#### **IMPORTANT TIP!**

Indicate the possibility that such operation may affect the effectiveness or ease of use of the device.

Warnings, Cautions, and Important Tips appear throughout this manual as they apply.

### 4. **Intended Use**

The Luna® G3 APAP / Luna® G3 CPAP is a CPAP (Continuous Positive Airway Pressure) device designed for the treatment of adult Obstructive Sleep Apnea (OSA). The integrated humidifier is indicated for the humidification and warming of air from the flow generator device. These devices are intended for single-patient use by prescription in the home or hospital/institutional environment on adult patients. It is to be used on patients > 66 lbs/30 kg for whom CPAP therapy has been prescribed.

#### **⚠WARNINGS!**

- This device is intended for adult use only.
- This device is not intended for life support.
- The instructions in this manual are not intended to supersede established medical protocols.
- To ensure that you receive the safe, effective therapy prescribed for you, use only REACT HEALTH accessories.
- Do not bring the device or accessories into a Magnetic Resonance (MR) environment as it may cause unacceptable risk to the patient or damage to the device or MR medical devices. The device and accessories have not been evaluated for safety in an MR environment.
- Do not use the device or accessories in an environment with electromagnetic equipment such as CT scanners, Diathermy, RFID and electromagnetic security systems (metal detectors) as it may cause unacceptable risk to the patient or damage to the device. Some electromagnetic sources may not be apparent, if you notice any unexplained changes in the performance of this device, if it is making unusual or harsh sounds, disconnect the power cord and discontinue use. Contact your home care provider.

**CAUTIONS!**

- U. S. federal law restricts this device to sale by or on the order of a physician.
- The patient is an intended operator.
- The device is intended for use by operators trained or experienced in similar equipment.
- Cleaning and disinfection can be performed by the patient.

**IMPORTANT TIP!**

- Read and understand the entire user manual before operating this system. If you have any questions concerning the use of this system, contact your home care provider or physician.

## 5. Contraindications

Studies have shown that the following pre-existing conditions may contraindicate the use of positive airway pressure therapy for some patients:

**Absolute Contraindications:** Pneumothorax, mediastinal emphysema; cerebrospinal fluid leak, traumatic brain injury, or pneumocephalus; shock caused by a variety of conditions before treatment; active epistaxis; upper gastrointestinal bleeding before treatment; coma or impaired consciousness making the use of mask during therapy impossible; giant vocal fold polyp, etc.

**Relative Contraindications:** Severe coronary heart disease complicated with left ventricular failure, acute otitis media, excessive respiratory secretions and weak cough, weak spontaneous breathing, nasal or oral tracheal intubation and tracheotomy, severe nasal congestion caused by a variety of conditions, lung bullae, and allergies to breathing masks, etc.

The following side effects may occur during treatment:

- Dryness of the mouth, nose and throat
- Abdominal bloating
- Ear or sinus discomfort
- Eye irritation
- Skin irritation due to the use of a mask
- Chest discomfort

**IMPORTANT TIPS!**

- An irregular sleep schedule, alcohol consumption, obesity, sleeping pills, or sedatives may aggravate your symptoms.
- Please use a mask which meets ISO 17510: 2015.

**CAUTION!**

- Contact your physician if symptoms of sleep apnea recur. Contact your physician if you have any questions concerning your therapy.



## 6. Specifications

### Device Size

Dimensions (L x W x H): 265 mm × 145 mm × 114 mm

Weight: 1.7 kg

Water capacity: To maximum fill line 360 mL

### Product Use, Transport and Storage

| Operation  | Transport and Storage          |
|--|--------------------------------|
| Temperature: 5°C to 35°C (41°F to 95°F)              | -25°C to 70°C (-13°F to 158°F) |
| Humidity: 15% to 93% Non-condensing                  | 15% to 93% Non-condensing      |
| Atmospheric Pressure: 760 to 1060 cmH <sub>2</sub> O | 760 to 1060 cmH <sub>2</sub> O |
| Altitude: Sea level to 2300 m                        | Sea level to 2300 m            |

### Heated Humidifier

Humidifier Settings: Off, Auto, 1 to 5 (95°F to 154.4°F / 35°C to 68°C)

Humidifier Output: No less than 15 mg H<sub>2</sub>O/L

Environmental Conditions: Maximum airflow, 35°C, 15% relative humidity

Maximum Operating Pressure: 40 cmH<sub>2</sub>O

Pressure Drop with Humidifier: < 0.4 cmH<sub>2</sub>O at 60 LPM flow

Maximum Delivered Gas Temperature: ≤ 43°C

### Mode of Operation

Continuous

### Work Mode

LG3600: CPAP, AutoCPAP

LG3500: CPAP

### SD Card

The SD card can record patient data and fault information

### AC Power Consumption

100 V - 240 V  $\sim$  , 50 Hz / 60 Hz, 2 A Max

### Device offer to Heated Tubing Communications Port

24 V  $\overline{\text{---}}$  18 W

### Type of Protection Against Electric Shock

Class II Equipment

### Degree of Protection Against Electric Shock

Type BF Applied Part

### Degree of Protection Against Ingress of Water

IP22

### Pressure Range

4 to 20 cmH<sub>2</sub>O (in 0.5 cmH<sub>2</sub>O increments) ≤ 30 cmH<sub>2</sub>O under single fault conditions.

**Static Pressure Stability at 10 cmH<sub>2</sub>O**±0.5 cmH<sub>2</sub>O**Dynamic Pressure Stability**

| Pressures (cmH <sub>2</sub> O) | 10 BPM | 15 BPM | 20 BPM |
|--------------------------------|--------|--------|--------|
| 6.5                            | ±0.5   | ±0.5   | ±0.5   |
| 10                             | ±1     | ±1     | ±1     |
| 20                             | ±1     | ±1     | ±1     |

Device with humidification and 22 mm Tubing or Heated Tubing.

**Ramp**

The ramp time ranges from 0 to 60 minutes.

**The A-weighted sound pressure level and sound power level**

When the device is working at the pressure of 10 hPa, its sound pressure level and sound power level shall not be greater than the values in the following table:

| Sound Pressure Level | Uncertainty | Sound Power Level | Uncertainty |
|----------------------|-------------|-------------------|-------------|
| 28 dB(A)             | 2 dB(A)     | 36 dB(A)          | 2 dB(A)     |

**Note:** Declared dual-number noise emission values in accordance with ISO 4871:1996.**Maximum Flow**

| Test Pressures (cmH <sub>2</sub> O)                                   | 4  | 8   | 12  | 16  | 20  |
|---|----|-----|-----|-----|-----|
| Measured Pressure at the Patient Connection Port (cmH <sub>2</sub> O) | 3  | 7   | 11  | 15  | 19  |
| Average Flow at the Patient Connection Port (L/min)                   | 85 | 135 | 140 | 140 | 140 |

When the working pressure is set to the values listed in the table, the average flow rate at the patient end should be greater than 80% of the corresponding flow value in the table.

**Air Tubing**

| Air tubing    | Length         | Inner diameter |
|---------------|----------------|----------------|
| Tubing        | 6 ft. (1.83 m) | 19 mm          |
| Heated Tubing | 6 ft. (1.83 m) | 19 mm          |

**The Form and the Dimensions of the Patient Connection Port**

The 22 mm conical air outlet complies with ISO 5356-1.

**Air filter**

| Type            | Material     | Average arrestance  |
|-----------------|--------------|---------------------|
| Standard filter | Polyurethane | > 20% for 10 micron |

**Cellular Module**

|                              |   |   |
|------------------------------|---|---|
| Transportation Requirements  | Shock, severe vibration, and moisture should be avoided in transportation |   |
| Frequency Bands              | Bands <sup>1</sup> 2, 3, 4, 5, 8, 12, 13, 20, 28                          |   |
| Communication Mode           | LTE Cat M1/ NB1   |   |
| Effective Radiated Power LTE | LTE Cat M1/ NB1: ≤ +23 dBm (2100 mW), Class 3                             |   |
| FCC ID                       | XPY2AGQN4NNN  |   |
| Security Measures            | Authentication  | Enforced on all data channels (outgoing and incoming) |
|                              | Encryption  | Base 128 encoding                                     |

<sup>1</sup> The LTE bands supported by Cellular Module are defined in above, while the following Table 1 describes the Transmitting and Receiving frequencies.

Table 1 Transmitting and Receiving frequencies

| Parameter                                    |          | Min. | Max. | Unit | Remarks         |
|--|----------|------|------|------|-----------------|
| <b>Frequency range FDD Band 12 (700 MHz)</b> | Uplink   | 699  | 716  | MHz  | Module transmit |
|  | Downlink | 729  | 746  | MHz  | Module receive  |
| <b>Frequency range FDD Band 28 (700 MHz)</b> | Uplink   | 703  | 748  | MHz  | Module transmit |
|  | Downlink | 758  | 803  | MHz  | Module receive  |
| <b>Frequency range FDD Band 13 (700 MHz)</b> | Uplink   | 777  | 787  | MHz  | Module transmit |
|  | Downlink | 746  | 756  | MHz  | Module receive  |
| <b>Frequency range FDD Band 20 (800 MHz)</b> | Uplink   | 832  | 862  | MHz  | Module transmit |
|  | Downlink | 791  | 821  | MHz  | Module receive  |
| <b>Frequency range FDD Band 5 (850 MHz)</b>  | Uplink   | 824  | 849  | MHz  | Module transmit |
|  | Downlink | 869  | 894  | MHz  | Module receive  |
| <b>Frequency range FDD Band 8 (900 MHz)</b>  | Uplink   | 880  | 915  | MHz  | Module transmit |
|  | Downlink | 925  | 960  | MHz  | Module receive  |

| Parameter                                    |          | Min. | Max. | Unit | Remarks         |
|--|----------|------|------|------|-----------------|
| <b>Frequency range FDD Band 4 (1700 MHz)</b> | Uplink   | 1710 | 1755 | MHz  | Module transmit |
|  | Downlink | 2110 | 2155 | MHz  | Module receive  |
| <b>Frequency range FDD Band 3 (1800 MHz)</b> | Uplink   | 1710 | 1785 | MHz  | Module transmit |
|  | Downlink | 1805 | 1880 | MHz  | Module receive  |
| <b>Frequency range FDD Band 2 (1900 MHz)</b> | Uplink   | 1850 | 1910 | MHz  | Module transmit |
|  | Downlink | 1930 | 1990 | MHz  | Module receive  |

### **WARNING!**

- All other wireless technology emitters must be kept at least 30 cm (12 inches) from the Cellular Module.

### **CAUTION!**

- Considering the requirements of network security, the CPU on this equipment only supports the standard of our product software and does not support the operation of other foreign software.

## 7. Available Therapies

The device delivers the following therapies:

**CPAP** – Delivers Continuous Positive Airway Pressure; CPAP maintains a constant level of pressure throughout the breathing cycle.

**AutoCPAP** – Delivers CPAP therapy and provides an air pressure no less than the prescribed pressure based on the patient's needs.

## 8. Glossary

### **Apnea**

A condition marked by the cessation of spontaneous breathing.

### **AutoCPAP**

Adjust CPAP pressure automatically to improve patient comfort based on monitoring of apnea and snoring events.

### **Auto Off**

When this feature is enabled, the device automatically discontinues therapy whenever the mask is removed.

**Auto On**

With this feature, the device automatically initiates therapy when you breathe into the mask. This feature is always enabled.

**SmartC**

In CPAP mode, if SmartC is set to on, the device can adjust Treat P according to the patient's respiratory event during a certain time.

**SmartA**

In AutoCPAP mode, if SmartA is set to on, the device can adjust Initial P and Min APAP according to the patient's respiratory event during a certain time.

**Initial P**

Initial pressure.

**Min APAP**

Minimum Automatic Positive Airway Pressure.

**CPAP**

Continuous Positive Airway Pressure.

**iCode**

A feature that is intended to give access to compliance and therapy management information. The "iCode" consists of six separate codes displayed in the Patient Menu, each code is a sequence of numbers. The "iCode QR+" display two-dimensional codes.

**LPM**

Liters Per Minute.

**OSA**

Obstructive Sleep Apnea.

**Patient Menu**

The display mode in which you can change patient-adjustable device settings, such as the starting pressure for the Ramp feature.

**Ramp**

A feature that may increase patient comfort when therapy is started. It begins from a low pressure and then gradually increases to the prescribed setting pressure so that the patient can fall asleep more comfortably.

**Reslex**

A therapy feature that is enabled by your physician to provide pressure relief during exhalation.

**Standby State**

The state of the device when power is applied but the airflow is turned off.

**min**

Means the time unit "minute".

**h**

Means the time unit "hour".

**yy mm dd / mm dd yy / dd mm yy**

Denotes date.

## 9. Model

| Item No. | Product Description   |   | Work Mode      | Maximum Work Pressure (cmH <sub>2</sub> O) |
|----------|-----------------------|---|----------------|--|
|          | Product Contents      | Optional Accessory                            |                |  |
| LG3600   | Device (3.5-inch LCD) | Tubing(optional), Cellular Module (optional), | CPAP, AutoCPAP | 20   |
| LG3500   | Device (3.5-inch LCD) | Heated Tubing (optional)                      | CPAP           |  |

## 10. Package Contents

After unpacking the system, make sure you have everything shown here:

| No. | Articles               | Qty. | Notes    |
|-----|------------------------|------|----------|
| 1   | Device                 | 1    |          |
| 2   | Air Filter             | 2    |          |
| 3   | Power Adapter          | 1    |          |
| 4   | Power Cord             | 1    |          |
| 5   | Cellular Module        | 1    | Optional |
| 6   | Tubing                 | 1    | Optional |
| 7   | Heated Tubing          | 1    | Optional |
| 8   | SD Card                | 1    | Optional |
| 9   | Carrying Case          | 1    |          |
| 10  | Accompanying Documents | 1    |          |

All parts and accessories are natural rubber latex free.

The expected service life of the device is five years from first date of use, if the use, maintenance, cleaning and disinfection are in strict accordance with the User Manual. The shelf life of the device is ten years.

The expected service life of the Tubing and the Heated Tubing is six months from first date of use. The shelf life of the Tubing and the Heated Tubing is 3 years.

The expected service life of the Water Chamber is 6 months from first date of use.

### **WARNINGS!**

- The device should only be used with the mask and accessories manufactured or recommended by REACT HEALTH or with those recommended by your prescribing

physician. The use of inappropriate masks and accessories may affect the performance of the device and impair the effectiveness of therapy.

- Do not pile up the long tubing at the head of the bed, as it may wrap around the head or neck of the patient during sleep.
- Do not connect any equipment to the device unless recommended by REACT HEALTH or your health care provider.
- Exceeding the Expected Service life, our company cannot guarantee the normal function of the device, nor the safety and effectiveness of the device.

### **IMPORTANT TIPS!**

- If any of the above parts are missing, contact your home care provider.
- Contact your home care provider for additional information on the available accessories of this device. When using optional accessories, always follow the instructions enclosed with the accessories.

## **11. System Features**

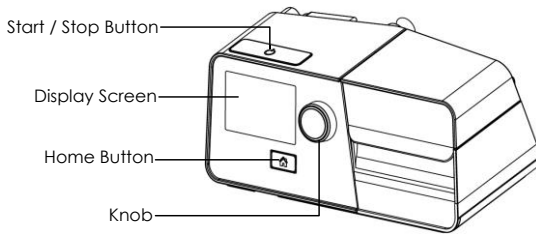


Fig. 11-1

| <b>Name</b>         | <b>Function</b>  |
|---------------------|--|
| Start / Stop Button | Start / Stop delivering air                                  |
| Display Screen      | Display menus for operation, messages, monitoring data, etc. |
| Home Button         | Return to the previous menu or main interface                |
| Knob                | Adjust device settings                                       |

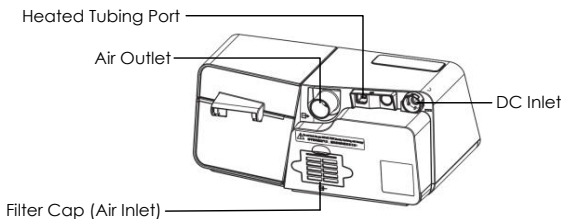


Fig. 11-2

| Name                   | Function  |
|------------------------|---|
| Air Outlet             | Deliver pressurized air; connect to the tubing  |
| Heated Tubing Port     | Connected to the plug of the heated tubing  |
| DC Inlet               | An inlet for the DC power supply  |
| Filter Cap (Air Inlet) | Cover and secure the air filter, which is used to filter dust and pollen in the air entering the device |

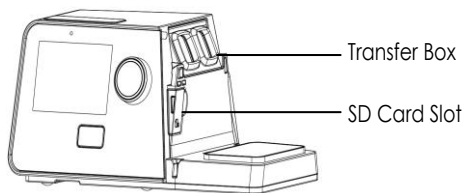


Fig. 11-3

| Name         | Function  |
|--------------|---|
| Transfer Box | For the connection of the device to the water chamber |
| SD Card Slot | Insert the SD card into this slot                     |

**CAUTION!**

- The pictures in this manual are only for reference, if they are different from the material object, the latter shall prevail.

## 12. First Time Setup

### 12.1 Placing the Device

Place the device on a firm, flat surface.

**⚠️ WARNINGS!**

- If the device has been dropped or mishandled, if the enclosure is broken, or if water has entered the enclosure, disconnect the power cord and discontinue use. Contact your home care provider immediately.
- If the room temperature is warmer than 95°F (35°C), the airflow produced by the device may exceed 109.4°F (43°C). The room temperature must be kept below 95°F (35°C) while the patient uses the device.

**CAUTIONS!**

- Always ensure that the device is placed in an area where the screen and indicators are clearly visible.
- If the device has been exposed to either very hot or very cold temperatures, allow



it to adjust to room temperature (approximately 2 hours) before beginning setup.

- Make sure the device is away from any heating or cooling equipment (e.g., forced air vents, radiators, air conditioners).
  - The device is not suitable for use in high humidity environments. Make sure that no water enters the device.
  - Make sure that bedding, curtains, or other items are not blocking the filter or vents of the device.
  - Keep pets, pests or children away from the device and avoid small objects being inhaled or swallowed.
  - To avoid explosion, this device must not be used in the presence of flammable gases (e.g. anesthetics).
  - Tobacco smoke may cause tar build-up within the device, leading to the malfunctioning of the device.
  - Air must flow freely around the device for it to work properly.
- Empty the water chamber completely before moving the device.

## 12.2 Installing the Air Filter and Filter Cap

(1) Attach the air filter to the filter cap, as shown in Fig. 12-1.

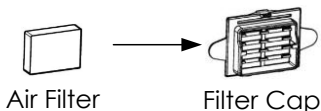


Fig. 12-1

(2) Install the filter cap containing the air filter to the device, as shown in Fig. 12-2.

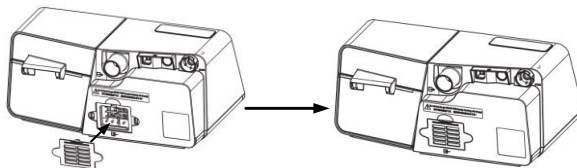


Fig. 12-2

### **⚠ WARNINGS!**

- Do not block the gas INTAKE PORT, thereby interfering with the therapy.
- Nebulization or humidification can increase the resistance of breathing system filters and the operator must monitor the breathing system filter frequently for increased resistance and blockage to ensure the delivery of the therapeutic pressure.

- Please change the Air Filter regularly and don't block it; Fire, open ignition source and smoking prohibited. (Refer to 18.6 Replacing the Air Filter)

### CAUTIONS!

- The air filter must be in place when the device is operating.
- Device must be unplugged when installing the air filter and filter cap.

## 12.3 Connecting to Power

- (1) Insert the plug of the power adapter into the DC Inlet on the back of the device.
- (2) Connect the power cord to the power adapter.
- (3) Plug the other end of the power cord into the power outlet.

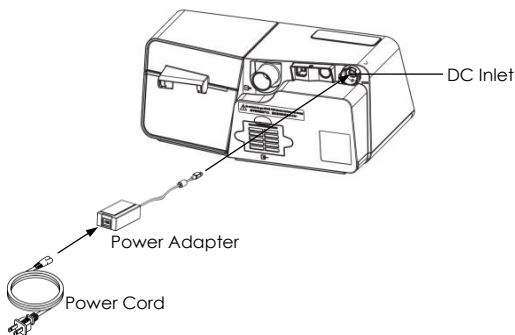



Fig. 12-3

**Note:** The length of the power cord and power adapter is 1.5 m and 1.8 m respectively without the function of preventing electromagnetic interference.

### ⚠️ WARNINGS!

- The device is powered on for use when the power cord and power adapter is connected. **The Knob**  turns the blower On / Off.
- Use of the device at an AC voltage beyond the stated range (see Section 6 "AC Power Consumption") may damage the device or cause device failure.
- Connect to appropriate power for proper operation of the device.
- Inspect the power cord often for any signs of damage. Replace a damaged cord immediately.

### IMPORTANT TIPS!

- After interruption and restoration of the power supply, the device will restore its pre-interruption working status automatically.
- To remove AC power, disconnect the power cord from the power outlet.

## 12.4 Assembling the Tubing / Heated Tubing and Mask

(1) Connect one end of the tubing to the air outlet of the device, as shown in Fig. 12-4.

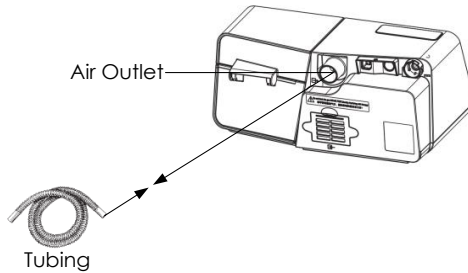


Fig. 12-4

(2) Connect the heated tubing joint to the air outlet of the device, and then insert the power plug of the heated tubing into the heated tubing port on the back of the device, as shown in Fig. 12-5.

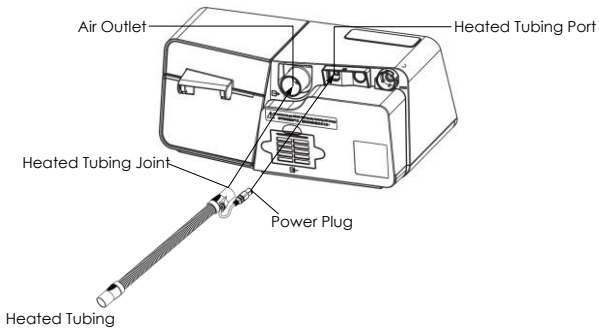



Fig. 12-5

### CAUTION!

- As the ambient temperature decreases, the humidifier can be reduced to improve or avoid condensation in the pipeline. If the ambient temperature is too low, in order to avoid condensation, it is recommended to use the heated tubing.

If the heated tubing is connected correctly, the icon  will become a number in the Main Interface on the screen of the device, as shown in Fig. 12-6.

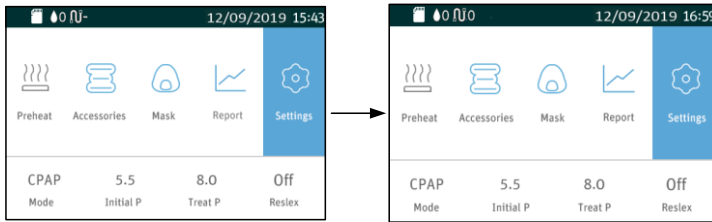




Fig. 12-6

Turn the **Knob**  to turn on or turn off the heated tubing and to adjust the heat level according to instructions of the Patient Menu of the device.

There are five heat levels available, and the number of heat level will appear in the Main Interface on the screen of the device. The number 3 next to the icon  indicating the heat is adjusted to Level 3, as shown in Fig. 12-7.

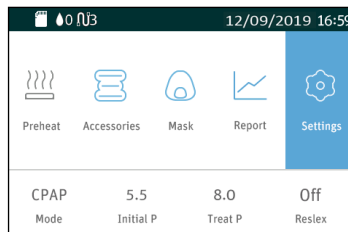


Fig. 12-7

(3) Connect the other end of the tubing to the mask according to the user manual for the mask.

### **WARNINGS!**

- If you are using a mask with a built-in exhalation port, connect the mask's connector to the tubing.
- If you are using a mask with a separate exhalation port, connect the tubing to the exhalation port. Position the exhalation port so that the vented air is blowing away from your face. Connect the mask's connector to the exhalation port.
- If you are using a full-face mask (a mask covering both your mouth and nose), the mask must be equipped with a safety (entrainment) valve.
- In order to minimize the risk of CO<sub>2</sub> rebreathing, the patient should observe the following instructions:
  - Use only tubing and mask provided by REACT HEALTH.
  - Do not wear the mask for more than a few minutes while the device is not operating.
  - Use only masks with vent holes. Do not block or try to seal the vent holes in the

exhalation port.

- If condensation appears in the tube, remove then drain the tube. Turn down the humidification.

## 12.5 Using Oxygen with the Device

Oxygen may be added at the mask connection. Please observe the instructions listed below when using oxygen with the device.

### **WARNINGS!**

- Connect the oxygen tube to the oxygen inlet of the mask.
- The oxygen supply must comply with the local regulations for medical oxygen.
- Turn on the device before turning on the oxygen. Turn off the oxygen before turning off the device. Explanation of Warning: When the device is turned off, but the oxygen flow still exists, oxygen may accumulate within the device's enclosure and pose a fire hazard. Turning off the oxygen before turning off the device will prevent oxygen accumulation in the device and reduce the risk of fire. This warning applies to CPAP devices.
- Oxygen supports combustion. Keep the device and the oxygen container away from heat, open flames, any oily substances, or other sources of ignition. DO NOT smoke in the area near Luna® G3 APAP / Luna® G3 CPAP or the oxygen container.
- Sources of oxygen should be located more than 1 m from the device.
- When using oxygen with this system, a Pressure Valve must be placed in-line with the patient circuit between the device and the oxygen source. The pressure valve helps prevent the backflow of oxygen from the patient circuit into the device when the unit is off. Failure to use the pressure valve could result in a fire hazard.
- When the pressure valve is installed, the Auto On function on the device will not work. To turn on the device either breath into your mask or select the On/Off button.
- Supplemental oxygen must not be used while smoking or in the presence of an open flame.
- When using the device with an oxygen supply, check the following:  
Starting therapy - ensure the device is on and blowing air before the oxygen supply is turned on.  
Stopping therapy - ensure the oxygen supply is turned off first, then the device.  
This will ensure oxygen does not accumulate within the device and create a risk of fire.
- Do not connect the device to an unregulated or high pressure oxygen source. The pressure of oxygen source does not exceed the work pressure of the device.

## 12.6 Inserting the SD Card

Insert the SD card into the SD Card Slot, as shown in Fig. 12-8.

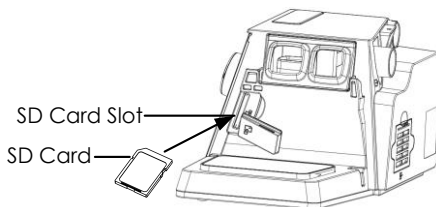




Fig. 12-8


If the SD card is inserted correctly, a symbol  indicating correct insertion will appear in the Main Interface on the screen of the device.

If the SD card is inserted incorrectly, a symbol  indicating incorrect insertion will appear in the Main Interface on the screen of the device.

### CAUTIONS!

- If the SD card is not inserted, there will not be a symbol appear in the Main Interface on the screen of the device.
- To avoid data loss or any damage to the SD card, the SD card can only be removed after the device stops delivering air.

## 12.7 Starting Treatment

Connect the device to a power outlet, press **the Start/Stop** , and the device will start delivering air.

### WARNINGS!

- Be sure to follow your physician's instructions on adjusting the settings! To order any accessories not included with this device, contact your home care provider.
- DO NOT connect any ancillary equipment to this device unless recommended by REACT HEALTH or your physician. If you suffer from chest discomfort, shortness of breath, stomach bloating, or severe headache when using the device, contact your physician or qualified medical personnel immediately.

## 13. Routine Use

### 13.1 Connecting the Tubing

Connect the power cord, power adapter, and tubing properly according to the instructions in the First Time Setup (Chapter 12). Connect the mask and headgear according to the user manual for the mask.


### CAUTION!

- Before each use, examine the tubing for any damage or debris. If necessary, clean the tubing to remove the debris. Replace any damaged tubing. Make sure that the mask does not leak.


## 13.2 Adjusting the Tubing

Lie down on your bed, and adjust the tubing so it is free to move if you turn over during sleep. Adjust the mask and headgear until you have a comfortable fit and until there are no airflow leaks around the mask.

## 13.3 Turning on the Airflow

Press **the Start / Stop Button**  to turn on the airflow. The screen will display treatment pressure and other information.

## 13.4 Heating the Water

Pay attention to the number next to the icon  when using the humidifier. The number indicate the **On / Off** state of the humidifier. It is off when the number next to the icon is 0.

### CAUTION!

- Observe the water level of the water chamber before using the humidifier. Make sure there is sufficient water in the water chamber, and avoid heating the device with an empty water chamber.




## 13.5 Using the Ramp Feature

Every time the feature is enabled, the pressure will drop to the initial pressure, and then gradually rise to the prescribed treatment pressure according to the preset ramp time, so as to make the patient fall asleep easily. The screen displays a real-time countdown of the remaining ramp time in minutes.

### CAUTIONS!

- You can use the ramp feature as often as you wish during sleep.
- The ramp feature is not prescribed for all users.

## 13.6 Accessing the iCode

After the device is powered on, move the cursor to the icon  by turning **the Knob** , as shown in Fig. 13-1. Access the iCode information by pressing **the Knob** , the screen displays the iCode Interface, as shown in Fig. 13-2.

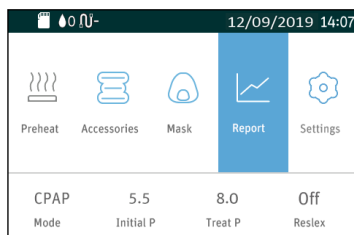



Fig. 13-1



Fig. 13-2

## 13.7 Turning the Device Off

Take off the mask and headgear, press the **Start / Stop Button** , and the device will stop delivering air. Disconnect the power cord from the power outlet to power off the device.

### CAUTION!

- Do not position the device where it is difficult to disconnect the power cord from the power outlet to power off the device.

## 14. Heated Humidifier

The humidifier is available from your home care provider. The humidifier may reduce nasal dryness and irritation by adding moisture (and heat if applicable) to the airflow.

### 14.1 Filling the Water Chamber

#### 14.1.1 Removing the Water Chamber

Press down the water chamber, and then remove it, as shown in Fig. 14-1.

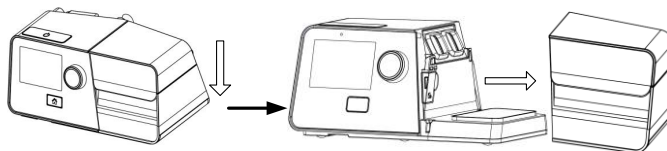


Fig. 14-1

### ⚠WARNING!

- Turn the device off and allow the heating plate and water to cool for approximately 15 minutes before remove the Water Chamber.

#### 14.1.2 Filling Water

(1) Remove the water chamber, open the cap, as shown in Fig. 14-2, and fill the water chamber with approximately 360 mL of water, as shown in Fig. 14-3. Make sure that the water does not exceed the maximum water level line.



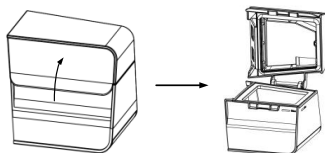


Fig. 14-2

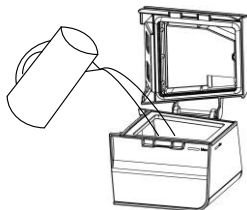


Fig. 14-3

(2) Open the cap, and fill the water chamber with approximately 360 mL of water, as shown in Fig. 14-4. Make sure that the water does not exceed the maximum water level line.

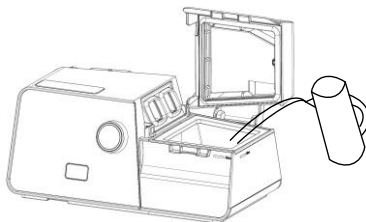


Fig. 14-4

### **⚠WARNING!**

- Change water before every use and do not surpass the maximum water level line.

### **CAUTIONS!**

- Empty the water chamber when the heated humidifier is not in use.
- Use only distilled water.

### **IMPORTANT TIP!**

- It is not necessary to remove the water chamber from the device. The users can open the cap of the water chamber directly to fill the water.

### **14.1.3 Returning the Water Chamber**

Close the cap after it is filled with water, as shown in Fig. 14-5, and return it to the device, as shown in Fig. 14-6.

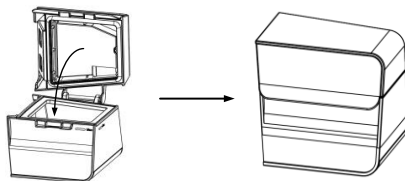


Fig. 14-5

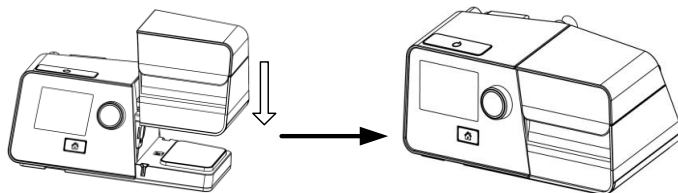


Fig. 14-6

**⚠ WARNING!**

- For safety purposes, the device must be placed on a flat surface at a level lower than the patient's head on a bed, so that the condensation flows back to the water chamber rather than remain in the tubing causing rainout.

**CAUTIONS!**

- Avoid moving or tilting the device when the water chamber has water in it.
- Take precautions to protect furniture from water damage.

**14.2 Emptying the Water Chamber**

- (1) **Remove the water chamber** according to instructions in 14.1.1.
- (2) **Empty the water chamber:** Open the cap, as shown below, and pour any remaining water out of the water chamber.

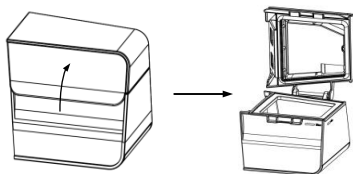



Fig. 14-7


**CAUTION!**

- Empty and air-dry the water chamber when the device is not in use.

- (3) **Return the Water Chamber** according to instructions in 14.1.3.

### 14.3 Setting the Humidity Level

After the device is powered on, turn **the Knob**  to turn on or turn off the heated humidifier and to adjust the humidity level according to instructions of the Patient Menu of the device.

There are five humidity levels available, and the number of humidity level will appear in the Main Interface on the screen of the device. The number 2 next to the icon  indicating the humidity is adjusted to Level 2, as shown in Fig. 14-8. The temperature of the water in the water chamber maintains a constant set level.

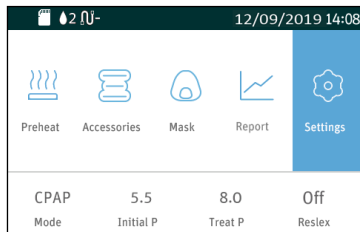


Fig. 14-8

#### **⚠WARNING!**

- Do not touch the heater plate of the device when it is working, otherwise you may get burned. Turn off the heat when the heated humidifier is not in use.

#### **CAUTIONS!**

- Generally, the humidity inside the mask is low when the water temperature is low.
- The greater the difference between the temperature inside the air tubing and room temperature is, the more easily condensation occurs inside the tubing.
- If there are only a few condensed water droplets inside the tubing in the morning after therapy, it means that the humidity level is appropriate; if there is lots of condensed water droplets inside the tubing and / or mask, it means that the humidity level is too high and should be set lower; Nasal dryness means that the humidity level is too low and should be set higher.

## 15. Using the Cellular Module

The Luna® G3 APAP / Luna® G3 CPAP with a Cellular Module can wirelessly communicate with the iCodeConnect cloud platform. iCodeConnect cloud platform is intended to augment the standard follow-up care of patients diagnosed with obstructive sleep apnea by displaying usage and therapeutic information that has been transmitted from the patient's Luna® G3 APAP / Luna® G3 CPAP therapy device to the clinician or healthcare professional.

(1) Insert the Cellular Module into the device, and turn on the device. The device screen displays the Main Screen shown in Fig. 15-1.

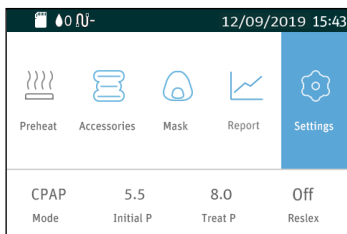


Fig. 15-1

(2) The Cellular Module starts searching for signals in a few seconds. Once a signal is found, the module will automatically connect to it, and a signal icon will appear in the status bar at the top of the device screen.

There are four different signal icons, as listed in Table 2:

Table 2 Description of Signal Icons

| Icon | Description     |
|------|-----------------|
|      | Strong signal   |
|      | Moderate signal |
|      | Weak signal     |
|      | No signal found |

**Note:**

- (1) When the signal is weak, data transmission may become slow and even stop.
- (2) The Cellular Module will keep searching for GPRS signals until one is found.

If the signal is strong, the signal icon appears in the Main Screen, as shown in Fig. 15-2 (the signal icons of different strength appear in a similar way).

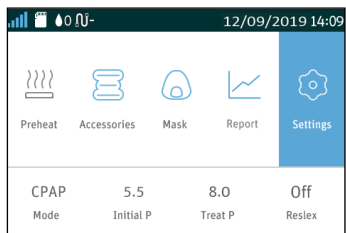


Fig. 15-2

The device screen will not show the signal if the Cellular Module is connected to the device improperly or if the Module is not working properly.

**⚠WARNING!**

- To ensure successful data transmission through the Cellular Module, computers, televisions, radios or similar devices should not be placed near the Cellular Module.

## 16. Navigating the Patient Menu

### 16.1 Steps to Navigate the Patient Menu

#### 16.1.1 Accessing the Main Interface

Connect the power cord and power adapter properly. The screen displays the Main Interface shown in Fig. 16-1.

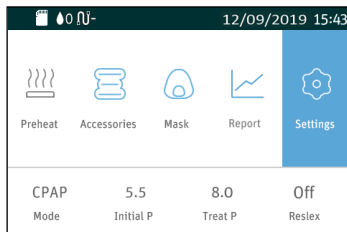


Fig. 16-1

**Note:** The above interface only applicable to the device and does not activate the SmartC or SmartA. If the SmartC or SmartA is enabled, the symbol **S** will appear in the status bar at the top of the screen, as shown in Fig. 16-2.

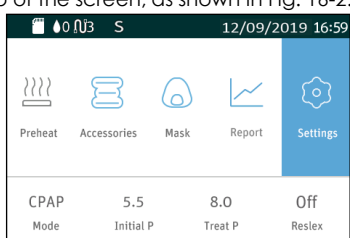








Fig. 16-2

The first icon  on the upper part of the screen indicates the Preheat Function Icon, the second  indicates the Accessories the third icon  indicates Mask Setup, the fourth icon  indicates the Report Interface and the fifth icon  indicates the Initial Setup. As you turn **the Knob** , the cursor switches among the five icons, and the interface displayed on the screen changes accordingly.

**Note:** As the humidity levels is off, the Preheat Function Icon  will become gray, as shown in Fig. 16-2.

#### 16.1.2 Bringing up the Initial Setup Interface



After the display screen displays the Main Interface shown in the Fig. 16-1, turn **the Knob** . When the cursor is on the icon , press **the Knob** , the screen displays the Initial Setup Interface of the Patient Menu, as shown in Fig. 16-3.



Fig. 16-3

**Note:** The **Heated Tubing** option can only be adjusted when the device is connected to the heated tubing, as shown in Fig. 16-4.



Fig. 16-4

### 16.1.3 Selecting Options



As you turn **the Knob**  clockwise, the cursor moves downwards from one option to another. When the cursor is on a certain option, press **the Knob** , and the color of the option is changed, meaning that the option can now be adjusted, as shown by the **Humidifier** option in Fig. 16-5.



Fig. 16-5

### 16.1.4 Adjusting Options





Adjust the option by turning **the Knob** . As shown in Fig. 16-6, the **Humidifier** option is selected. As you turn **the Knob**  clockwise, the numbering increases, indicating a higher humidity level. As you turn **the Knob**  counterclockwise, the numbering decreases, indicating a lower humidity level.



Fig. 16-6

### 16.1.5 Confirming Adjustments

Confirm your adjustment to an option by pressing **the Knob** . The option is then displayed in white, as shown in Fig. 16-7.

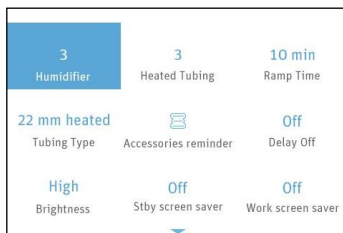



Fig. 16-7

### 16.1.6 Turning Pages

When the cursor is on **Work screen saver**, the last option shown in Fig. 17-7, the remaining options will appear on a new page if you continue to turn **the Knob**  clockwise, as shown in Fig. 16-8.

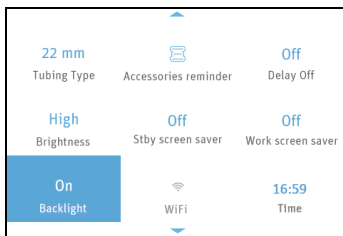







Fig. 16-8

**Note:**   are page turning symbols.



### 16.1.7 Exiting the Patient Menu

The users can press **the Home**  to return to the Main Interface shown in Fig. 16-1.

## 16.2 Options of the Patient Menu and Corresponding Descriptions

| Option        | Range                                | Description  |
|---------------|--------------------------------------|--|
| Humidifier    | Off, Auto,<br>1 ~ 5                  | There are five humidity levels available. As the numbering increases, the humidity rises accordingly. "Off" means the humidifier is turned off.  |
| Preheat       | On / Off                             | Set humidifier to preheat by adjusting this option. This feature automatically turns off after 30 minutes.   |
| Reslex        | Off, 1 ~ 3                           | This feature enables the device to automatically reduce the treatment pressure when the patient exhales, so as to make the user more comfortable. The higher the numbering is, the more pressure the device reduces. "Off" means this feature is disabled.   |
| Heated Tubing | Off, Auto,<br>1 ~ 5                  | There are five heat levels available. As the numbering increases, the heat rises accordingly. "Off" means the heat is turned off.<br>Note: <b>Heated Tubing</b> is displayed in the patient menu only when it is connected.  |
| Ramp Time     | Auto, 0 -<br>Max Ramp                | In order to increase comfort and help the patient fall asleep easily, the pressure can increase gradually, when the Ramp feature is enabled. The ramp time during which the initial pressure rises to the prescribed treatment pressure can be adjusted. As you turn <b>the Knob</b>  to the nearest point, the numbering increases or decreases by five minutes. The screen displays a real-time countdown of the remaining ramp time in seconds.  |
| Delay         | On / Off                             | When the humidifier is on, this feature allows the airflow to continue for about 15 minutes at a low pressure (about 2 cmH <sub>2</sub> O) after you press <b>the Start/Stop</b>  to discontinue treatment. This will blow off the vapor left in the water chamber to avoid any damage to the device. When this feature is set to "Off", which means it is disabled, the airflow stops delivering air instantly after you press <b>the Start/Stop</b>  . |
| Date Format   | yy mm dd /<br>mm dd yy /<br>dd mm yy | Turn <b>the Knob</b>  to choose among three date formats.   |
| Time          | 00:00<br>—<br>23:59                  | Set time by adjusting this option.   |



| Option               | Range  | Description  |
|----------------------|--|--|
| Time Format          | 12-hour / 24-hour  | Turn <b>the Knob</b>  to choose between the two time formats.   |
| Brightness           | High / Low   | Set screen brightness by adjusting this option.  |
| Backlight            | Auto / On  | The backlight of the LCD screen can be set to "Auto" or "On". Turn <b>the Knob</b>  to choose between the two modes. If it is set to "Auto", the backlight will turn off automatically after 30 seconds of inactivity. If it is set to "On", the backlight will always be on. |
| Mask Type            | Full Face;<br>Nasal;<br>Pillow; Other                    | There are three mask types available, Full Face (full-face mask), Nasal (nasal mask), and Pillow (nasal pillow mask). The default mask type is " <b>Nasal</b> ", but the patient can choose other suitable masks as well. When the user select masks other than the above three types of REACT HEALTH masks, the patient can identify the masks as other.      |
| Mask Fitting Test    | Start the Mask Fitting Test                              | Test whether the mask is worn correctly, the screen will display the "great" icon if it is qualified, otherwise the screen will display the "need to adjust" icon.   |
| iCode                | iCode,<br>iCode QR+                                      | iCode provides access to the patient's compliance data during a recent time period. The iCode mode displays data in sequences of numbers, and the iCode QR+ mode displays data in two-dimensional codes.   |
| Use Time             | 0 ~ 50000 h  | Use Time displays how long has the device been used by the patient. The use time can be erased.  |
| Accessories          | —  | Reset the use time of the filter, tubing and mask.   |
| Accessories Reminder | 30 days /<br>60 days /<br>180 days /<br>365 days<br>/Off | This function is used for setting filter reminder, tube reminder and mask reminder. After opening, can set the use time of filter, tube and mask.  |
| Language             | English  | The default setting is " <b>English</b> ".   |
| About                | —  | Displays related information of the device (Model, SN, Version, ID). This is read-only and cannot be edited.   |

## 17. Alert

| Alert Message          | Description  |
|------------------------|--|
| Power Failure!!!       | <p>An audible alert will sound in 6s if the device is accidentally disconnected from power when it is delivering air.</p> <p><b>Note:</b></p> <p>(1) The alert will not sound if power failure occurs when the device is in standby state.</p> <p>(2) No alert message on the screen during a power failure.</p> |
| Device Fault!!!        | <p>An audible alert will sound if no airflow comes out of the machine; the screen will display "<b>Device Fault!!!</b>".</p>   |
| Leak!!                 | <p>When the airflow is on, an audible alert will sound if the air leak rate is excessive; the screen will display "<b>Leak!!</b>".</p>   |
| Low Input Voltage!!    | <p>If the voltage supplied by power adaptor is lower than 22 V, an audible alert will sound and the screen will display "<b>Low Input Voltage!!</b>".</p>  |
| Humidifier Failure!!   | <p>When humidifier is applied, an audible alert will sound when the humidifier fails to work; the screen will display "<b>Humidifier Failure!!</b>".</p>   |
| Please Change Filter!  | <p>When the Filter reminder feature is enabled, an audible alert will sound if the preset replacement time reaches but without replacing the air filter; the screen will display "<b>Please Change Filter!</b>".</p>   |
| Please Replace Tubing! | <p>When the tubing reminder feature is enabled, an audible alert will sound if the preset replacement time reaches but without replacing the tubing; the screen will display "<b>Please Replace Tubing!</b>".</p>  |
| Please Replace Mask!   | <p>When the Mask reminder feature is enabled, an audible alert will sound if the preset replacement time reaches but without replacing the mask; the screen will display "<b>Please Replace Mask!</b>".</p>  |
| SD Card Full!          | <p>The screen will display "<b>SD Card Full!</b>" if the SD card has reached its maximum capacity.</p>   |
| Reinsert SD Card!      | <p>The screen will display "<b>Reinsert SD Card!</b>" if the SD card fails to work.</p>  |

## 18. Cleaning

### **⚠️ WARNINGS!**

- Cleaning the device and its accessories as recommended in the following sections is essential to prevent respiratory infections.
- To avoid electric shock, always unplug the device before cleaning.
- Use mild soap that is nontoxic to humans.
- Follow the manufacturer's instructions on cleaning the mask and tubing and on determining the frequency of cleaning.
- Before cleaning, check that the device is disconnected from the power supply, whether the power cord is unplugged, and whether the water chamber of the device has cooled down. Make sure that the heating plate has cooled down to room temperature, so that you do not get burned.
- Do not open or modify the device. There are no operator serviceable parts inside. Repairs and service should only be performed by an authorized service agent.
- Avoid the use of any CPAP cleaner or disinfection device that relies on ozone (i.e. activated oxygen). Device warranty may terminate if the damage is caused by the use of an ozone cleaner.
- In order to prevent contamination of the device, use only manufacturer-approved filters on this device conforming to ISO 23328-1:2003 and ISO 23328-2:2002 standards.
- The device shall not be serviced or maintained while a patient is using it.

### **CAUTIONS!**

- Overheating of the materials could lead to early fatigue of the materials.
- Do not use solutions containing chlorinated lime, chlorine, or aromatic to clean the device and its accessories. Liquid soap containing moisturizing agents or antimicrobials should not be used, either. These solutions may harden cleaned materials or reduce their lifespan.
- Do not clean or dry the device and its accessories when the temperature is above 80°C (176°F). High temperatures could reduce product life.
- Do not immerse the device in any fluids.

| <b>Accessories that need to be cleaned</b> | <b>Detergent</b>        | <b>Water temperature</b>                       |
|--|-------------------------|--|
| Water chamber                              | Alconox (diluted at 1%) | Warm water (approx 113 to 140°F or 45 to 60°C) |
| Transfer box                               | Alconox (diluted at 1%) | Warm water (approx 113 to 140°F or 45 to 60°C) |
| Air filter                                 | -                       | The tap water 5°C to 35°C (41°F to 95°F)       |

## 18.1 Cleaning the Water Chamber

(1) **Opening the Water Chamber:** Open the cap of the water chamber, as shown in Fig. 18-1.

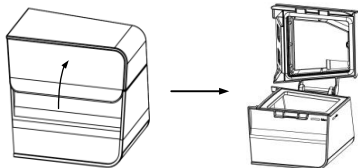


Fig. 18-1

(2) **Cleaning the Water Chamber:** Dilute Alconox to 1% with water 45°C to 60°C (113°F to 140°F). Soak the water chamber in the detergent for 5 minutes. Clean the water chamber with a soft bristled brush for one minute. Pay particular attention to all gaps and cavities. Then rinse the water chamber with running water for 5 minutes. Wipe it dry with a soft cloth or air dry it away from direct sunlight.

(3) **Putting the Water Chamber back:** according to instructions in 14.1.3.

### **⚠️ WARNINGS!**

- Emptying and cleaning the water chamber daily will help prevent mold and bacteria growth.
- Allow the water in the chamber to cool down to room temperature before removing it from the device.

### **CAUTIONS!**

- Clean the water chamber only after the water in it cools. Make sure that no water enters the device.
- After cleaning, rinse the water chamber thoroughly in clean water to make sure that no soap residue is left; then wipe it dry with a lint-free cloth, so as to prevent calcareous accumulation.
- Check the water chamber for any leak or damage. Replace the water chamber if there is any damage.
- It is recommended to clean the water chamber and change the water daily.

## 18.2 Cleaning the Transfer Box

(1) **Removing the Transfer Box:** First remove the water chamber from the device, and then remove the transfer box, as shown in Fig. 18-2.

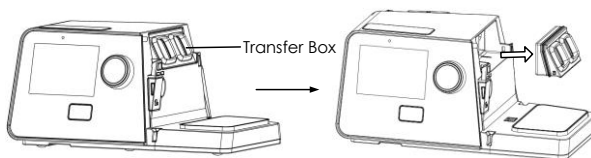


Fig. 18-2

(2) **Cleaning the Transfer Box:** Dilute Alconox to 1% with water 45°C to 60°C (113°F to 140°F). Soak the transfer box in the detergent for 5 minutes. Clean the transfer box with a soft bristled brush for one minute. Pay particular attention to all gaps and cavities. Then rinse the transfer box with running water for 5 minutes. Wipe it dry with a soft cloth or air dry it away from direct sunlight.

(3) **Putting the Transfer Box back:** as shown in Fig. 18-3.

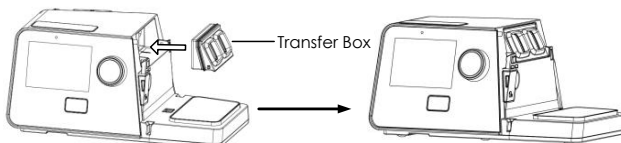


Fig. 18-3

#### **CAUTION!**

- It is recommended to clean the transfer box once a week.

### **18.3 Cleaning the Mask and Headgear**

For details, refer to the cleaning instructions in the user manual for the mask.

### **18.4 Cleaning the Enclosure**

Wipe the enclosure of the device with a soft, slightly damp cloth.

#### **CAUTIONS!**

- The device can only be used after the enclosure is dry, so that no moisture enters the device.
- It is recommended to clean the enclosure once a week.

### **18.5 Cleaning the Tubing**

(1) Remove the tubing from the device and mask before cleaning.

(2) Hold the cuff of the tubing and gently pull it away from the device as shown in Fig. 18-4. Or disconnect the power of the heated tubing, then hold the cuff of the heated tubing and pull it away from the device, as shown in Fig. 18-5.

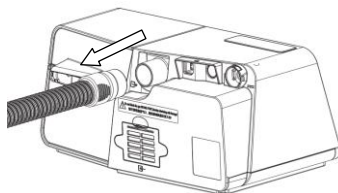


Fig. 18-4

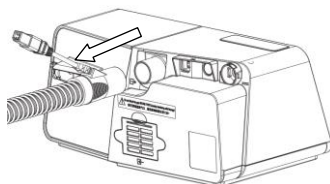


Fig. 18-5

(3) Hold both the cuff of the air tubing and the swivel of the mask, then gently pull apart as shown in Fig. 18-6.

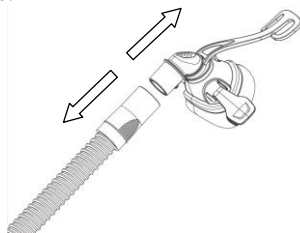


Fig. 18-6

(4) Soak the tubing in 2% soapy water at 35°C to 40°C for 10 minutes, then clean the inside and outside surfaces with a soft brush 5 times, and rinse it with sterile water for 5 minutes.

(5) Gently tap the tubing to remove excess moisture from the connector ports. Hang the tubing so that both ends of the opening face the floor, let the tubing naturally dry, out of direct sunlight.

(6) Inspection

Carry out a visual inspection of the components. If there are any obvious signs of deterioration (holes, tears or cracks, etc.), these parts should be discarded and replaced. A slight fade may occur, which is acceptable.

#### **⚠WARNINGS!**

- Please clean the tubing by hand.
- The tubing should be cleaned daily.
- If the heated tubing is damaged (such as broken hole, tear, exposed heating wire)

or does not function well, please do not repair and use it by yourself, but replace it immediately.

- Failure to clean in accordance with the User Manual may result in reduced performance of the heating tubing or shortened product life.
- After cleaning and before reuse, the tubing should be inspected for holes, creases and tears.

## 18.6 Cleaning and Replacing the Air Filter

(1) Open the air filter cap to remove the air filter. Attach a new air filter to the filter cap, as shown in Fig. 18-7.

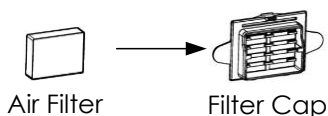


Fig. 18-7

(2) Install the filter cap containing the air filter to the device, as shown in Fig. 18-8.

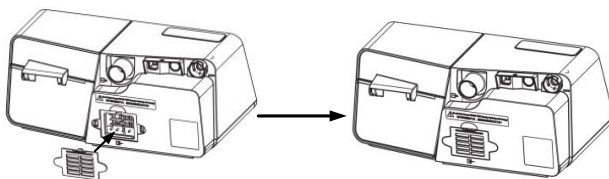


Fig. 18-8

(3) When the filter is dirty, the filter can be cleaned as follows:

Hold the air filter and align it with the tap water flow. Rinse the air filter with running water. When cleaning, gently press the air filter, but do not pull the air filter.

Allow the filter to air dry completely before reinstalling it.

**CAUTION:** Never install a wet filter into the device. You must ensure sufficient drying time for the cleaned filter.

### CAUTIONS!

- To avoid material damage, do not place the spare air filter in direct sunlight, humid environments, or temperatures below the freezing point. The air filter should be replaced every 6 months (it may be replaced more frequently based on actual sanitary conditions).
- Operating the device with a dirty air filter may stop it from working properly and may cause damage to the device.

## 19. Traveling

### 19.1 Traveling with the Device

(1) Use the REACT HEALTH carrying case to carry the device and accessories along with you. Do not put them in your checked baggage.

(2) This device operates on power supplies of 100 V - 240 V and 50 Hz / 60 Hz, and is suitable for use in any country in the world. No special adjustment is necessary, but you will need to find out the types of the power sockets in your destination. Bring, if necessary, a power socket adaptor which can be purchased in electronics stores.

(3) Remember to bring a spare air filter and the emergency documents (filled and signed by your physician) about this device. If you plan to travel by air, remember to bring the multi-language emergency documents about respiratory therapy, in case the border and customs officers in your destination country inspect the device. With the emergency documents, you can prove to them that it is a medical device.

(4) Security Stations: For convenience at security stations, there is a note on the bottom of the device stating that it is medical equipment. It may be helpful to bring this manual along with you to help security personnel understand the device.

#### **CAUTIONS!**

- Empty the water chamber before packing the device for your trip; in order to prevent any remaining water from entering the device.
- If the device is used when the atmospheric pressure is out of the stated range (See Section 6), the accuracy of the leakage alert will be affected.

### 19.2 Traveling by airplane

For some airlines, medical devices do not count toward carry-on luggage limits. Please check with your airline for their policy regarding medical equipment.

You can use your device on a plane as it meets the Federal Aviation Administration (FAA) requirements.

#### **Aircraft Use**

REACT HEALTH confirms that the device meets the Federal Aviation Administration (FAA) requirements (RTCA DO 160, section 20, category T and section 21, category M) for all phases of air travel.

## 20. Reordering

Contact your home care provider to order accessories or replacement filters. The device does not require routine servicing.

#### **⚠WARNINGS!**

- If you notice any unexplained changes in the performance of the device, if it is



making unusual or harsh sounds, if it has been dropped or mishandled, if the enclosure is broken, or if water has entered the enclosure, discontinue use. Contact your home care provider.

- If the device malfunctions, contact your home care provider immediately. Never attempt to open the enclosure of the device. Repairs and adjustments must be performed by REACT HEALTH - authorized service personnel only. Unauthorized service could cause injury, invalidate the warranty, or result in costly damage.
- If necessary, contact your local authorized dealer or REACT HEALTH, for technical support and documents.

## **21. Technical Support**

Please contact REACT HEALTH directly if you need the circuit diagram of the device and the list of components for certain purposes such as maintenance or connection to other equipment. REACT HEALTH will provide the circuit diagram and / or other technical documents in whole or in part according to your needs.

## **22. Disposal**

Electrical product components contain chemical substance which may pollute environment, when the device reaches the end of its service life, dispose of the device and packaging in accordance with local laws and regulations.

## **23. Troubleshooting**

The table below lists common problems you may have with the device and possible solutions to those problems. If none of the corrective actions solve the problem, contact your home care provider.

## 23.1 Common Problems in Patients and Corresponding Solutions

| Problem   | Possible Cause  | Solution(s)  |
|---|---|--|
| Dry, cold, runny, and blocked nose; having a cold | The nose reacts to the airflow and cold. Due to fast airflow, the air becomes cold, leading to nasal mucosa irritation and subsequent dryness and swelling. | Increase the humidity setting of the device.<br>Contact your physician, and continue treatment unless the physician suggests otherwise.  |
| Dry mouth and throat                              | Possibly because the patient sleeps with his or her mouth open, and the pressurized air goes out via the mouth, leading to nasal and throat dryness.        | Use a chin strap to prevent the mouth from opening during sleep, or use a full-face mask.<br>Contact your physician for details.   |
| Eye irritation                                    | The mask size or model may not be correct, or the mask is not positioned correctly, thereby leading to air leakage.   | Narrow the distance between the forehead support of the mask and the forehead. Note that adjusting the mask too tight may leave markings on the patient's face.<br>Contact your home care provider for an appropriate mask. Add additional filling to the mask if necessary. |
|   | Mask cushion (the soft part of the mask) hardens.   | Replace the mask or mask cushion.  |
| Facial reddening                                  | The mask is too tight.  | Loosen the headgear.   |
|   | The distance between the forehead support of the mask and the forehead is not correct.  | Try a different distance. The angle and size of the forehead support differ according to the type of masks.  |
|   | Wrong mask size.  | Contract your home care provider for a correct-size mask.  |
| Facial reddening                                  | The patient is allergic to the materials of the mask.   | Contact your physician and home care provider.<br>Use a mask which is not made with natural rubber latex.<br>Place a lining between the skin and mask.   |

| Problem  | Possible Cause  | Solution(s)   |
|--|---|---|
| Water in mask  | When the humidifier is used, the humidified air tends to condense in the cold tubing and mask if the room temperature is low.   | Turn the humidity setting down, or raise the room temperature. Place the tubing under the quilt, or use the tubing cover. Hang the tubing loosely, and the lowest part of the tubing should be lower than the patient's head. |
| Nasal, sinus, or ear pain                                      | Sinus or middle ear inflammation.   | Contact your physician immediately.   |
| Discomfort due to inability to adapt to the treatment pressure | The patient will feel uncomfortable when the treatment pressure is higher than 13 cmH <sub>2</sub> O. However, the treatment pressure is determined according to the patient's prescription, and cannot treat sleep apnea if the treatment pressure is set too low. | Patients may experience a variance in time to acclimate to their therapy. If the problem persists, contact your physician or home care company for assistance.  |
| Obstructive sleep apnea symptoms recur                         | There are many causes of recurring symptoms including weight change, medication or alcohol, and poor mask fit.  | Contact your physician for assistance.  |
| The device is too noisy  | The tubing is not connected properly.   | Reconnect the tubing properly.  |
| Air delivered from the device is abnormally hot                | The air inlet of the device may be partially blocked, leading to insufficient airflow into the device.  | Replace the air filter (refer to 18.6 Cleaning and Replacing the Air Filter / PM2.5 Filter), and clean the air inlet.   |
|  |   | Place the device in an area where air flows freely, and make sure the device is at least 20 centimeters away from the wall, curtain, or other things.   |

## 23.2 Common Problems in the Device and Corresponding Solutions

| Problem   | Possible Cause   | Solution(s)   |
|---|--|---|
| The device does not work when it is turned on   | The Auto On / Off feature is enabled.  | Take a few deep breaths with the mask on, and the device will start automatically.  |
|   | Power is not connected properly.   | Ensure that the power cord, power adapter, and the device are connected properly.   |
|   | There is no voltage.   | Check whether a power outage occurs by turning on a light or other means. If you are sure the fuse in the device is broken, contact your home care provider for repair. |
|   | Cannot find any cause.   | Contact your home care provider.  |
| The device is working, but the pressure inside the mask differs from the set treatment pressure | The tubing is not connected properly.  | Reconnect the tubing properly.  |
|   | There may be holes in the mask or pressure sensing tubing.   | Contact your home care provider.  |
|   | It is a faulty device.   | Contact your home care provider.  |
| The device produces very low pressures  | The air inlet of the device may be blocked.  | Replace the air filter (refer to 18.6 Cleaning and Replacing the Air Filter / PM2.5 Filter), and clean the air inlet. Make sure the air inlet is unblocked.             |
|   | The treatment pressure has been changed accidentally.  | Contact your physician.   |
|   | When the Ramp feature is enabled, it takes some time for the initial pressure to rise to the treatment pressure. This is normal. | If necessary, disable the Ramp feature, or set the ramp time shorter.   |
| After the device is turned on, the screen displays intermittently, or displays nothing at all   | The operating system of the device needs to be readjusted or restarted.  | Unplug the power cord of the device, and re-plug it 20 seconds later.   |
| The device is in standby, and will not start  | The operating system of the device needs to be readjusted or restarted.  | Unplug the power cord of the device, and re-plug it 20 seconds later.   |

## 24. Information of QoS

QoS is a security mechanism of the network and a technology used to solve problems such as network delay and congestion.

The data transmission between the Luna® G3 APAP / Luna® G3 CPAP with a Cellular Module and iCodeConnect is a daily transmission. The Cellular Module transmits the following four types of data: Therapy summary data in a defined period of time, compliance data, system settings, and device information.

This process is not real time communication.

The size of the data transmitted to Cellular Module per second is no more than 1 k in normal condition, and no more than 1 M within 8 hours per night.

### **Acceptable latency**

As the user information is not viewed by the physician in real time, sometimes it can be delayed for 24 or more hours.

### **Acceptable level of probability for loss of information within the network**

The data has little effects on treatment effectiveness. These are key data, and their integrity should be ensured, but they do not involve real-time control of therapeutic medical devices, and do not rely on network quality.

Wrong transmission of the information described in sections above data will be abandoned based on a checking mechanism, and correct data will be sent continuously until received completely.

The data transmission protocol between the module and the server includes unpacking information and ID value, which ensure the completeness of the data transmission.

### **Signal priorities of the network**

The therapy device itself does not have high-priority medical device alerts, and its treatment of patients does not rely on wireless communications.

Based on the above analysis, the Cellular Module has low requirements for QoS.

## 25. EMC Requirements

| <b>Guidance and manufacturer's declaration - electromagnetic emissions</b>  |                   |   |
|---|-------------------|---|
| The device is intended for use in the electromagnetic environment specified below. The user of the device should ensure that it is used in such an environment. |                   |   |
| <b>Emissions Test</b>   | <b>Compliance</b> | <b>Electromagnetic Environment - Guidance</b>   |
| RF emissions<br>CISPR 11  | Group 1           | The device uses RF energy only for its internal function. Therefore its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment   |
| RF emissions<br>CISPR 11  | Class B           | The device is suitable for use in all establishments including domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes |
| Harmonic emissions<br>IEC 61000-3-2   | Class A           |   |
| Voltage fluctuations / flicker emissions<br>IEC 61000-3-3   | Complies          |   |

| <b>Guidance and manufacturer's declaration - electromagnetic immunity</b>  |  |  |   |
|--|--|--|---|
| The device is intended for use in the electromagnetic environment specified below. The user of the device should make sure that it is used in such an environment. |  |  |   |
| <b>Immunity Test</b>   | <b>IEC 60601 Test Level</b>  | <b>Compliance Level</b>  | <b>Electromagnetic Environment - Guidance</b>   |
| Electrostatic discharge (ESD)<br>IEC 61000-4-2   | $\pm 8$ kV contact<br>$\pm 2$ kV, $\pm 4$ kV, $\pm 8$ kV, $\pm 15$ kV air  | $\pm 8$ kV contact<br>$\pm 2$ kV, $\pm 4$ kV, $\pm 8$ kV, $\pm 15$ kV air  | Floor should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%   |
| Electrical fast transient / burst<br>IEC 61000-4-4   | $\pm 2$ kV for power supply lines  | $\pm 2$ kV for power supply lines  | Mains power quality should be that of a typical commercial or hospital environment  |
| Surge<br>IEC 61000-4-5   | $\pm 1$ kV<br>Line (s) to line (s)   | $\pm 1$ kV<br>Line (s) to line (s)   | Mains power quality should be that of a typical commercial or hospital environment  |
| Voltage dips, short interruptions and voltage variations on power supply input lines<br>IEC 61000-4-11   | 0% $U_T$ ; 0.5 cycle<br>At 0°, 45°, 90°, 135°, 180°, 225°, 270° and 315°<br>0% $U_T$ ; 1 cycle<br>70% $U_T$ ; 25 / 30 cycle<br>At 0°<br>0% $U_T$ ; 250 / 300 cycle | 0% $U_T$ ; 0.5 cycle<br>At 0°, 45°, 90°, 135°, 180°, 225°, 270° and 315°<br>0% $U_T$ ; 1 cycle<br>70% $U_T$ ; 25 / 30 cycle<br>At 0°<br>0% $U_T$ ; 250 / 300 cycle | Mains power quality should be that of a typical commercial or hospital environment. If the user of the device requires continued operation during power mains interruptions, it is recommended that the device be powered from an uninterruptible power supply or a battery |
| Power frequency (50 Hz / 60 Hz) magnetic field<br>IEC 61000-4-8  | 30 A/m   | 30 A/m   | Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment  |
| Note: $U_T$ is the AC mains voltage prior to application of the test level.  |  |  |   |





### Recommended separation distances between portable and mobile RF communications equipment and the device

The device is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the device can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the device as recommended below, according to the maximum output power of the communications equipment.

| Rated maximum output of transmitter (W) | 150 kHz ~ 80 MHz<br>$d = 1.17\sqrt{p}$ | 80 MHz ~ 800 MHz<br>$d = 0.35\sqrt{p}$ | 800 MHz ~ 2.5 GHz<br>$d = 0.70\sqrt{p}$ |
|---|--|--|---|
| 0.01                                    | 0.12                                   | 0.04                                   | 0.07                                    |
| 0.1                                     | 0.37                                   | 0.12                                   | 0.23                                    |
| 1                                       | 1.17                                   | 0.35                                   | 0.70                                    |
| 10                                      | 3.70                                   | 1.11                                   | 2.22                                    |
| 100                                     | 11.7                                   | 3.50                                   | 7.00                                    |


Note 1: At 80 MHz and 800 MHz, the higher frequency range applied.

Note 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

For transmitters rated at a maximum output power not listed above, the recommended separation distance  $d$  in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where  $p$  is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

**Recommended separation distances between RF wireless communications equipment**

The device is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the device can help prevent electromagnetic interference by maintaining a minimum distance between RF wireless communications equipment and the device as recommended below, according to the maximum output power of the communications equipment.

| Frequency (MHz) | Maximum Power (W) | Distance | IEC 60601 Test Level | Compliance Level | Electromagnetic Environment - Guidance   |
|-----------------|-------------------|----------|----------------------|------------------|--|
| 385             | 1.8               | 0.3      | 27                   | 27               | <p>RF wireless communications equipment should be used no closer to any part of the device, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter.</p> <p><b>Recommended separation distance</b></p> $E = \frac{6}{d} \sqrt{P}$ <p>Where <math>p</math> is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and <math>d</math> is the recommended separation distance in meters (m). Field strengths from fixed RF transmitter, as determined by an electromagnetic site survey, should be less than the compliance level in each frequency range. Interference may occur in the vicinity of equipment marked with the following symbol:</p>  |
| 450             | 0.2               | 0.3      | 9                    | 9                |  |
| 710             |                   |          |                      |                  |  |
| 745             |                   |          |                      |                  |  |
| 780             |                   |          |                      |                  |  |
| 810             | 2                 | 0.3      | 28                   | 28               |  |
| 870             |                   |          |                      |                  |  |
| 930             |                   |          |                      |                  |  |
| 1720            | 2                 | 0.3      | 28                   | 28               |  |
| 1845            |                   |          |                      |                  |  |
| 1970            |                   |          |                      |                  |  |
| 2450            |                   |          |                      |                  |  |
| 5240            | 0.2               | 0.3      | 9                    | 9                |  |
| 5500            |                   |          |                      |                  |  |
| 5785            |                   |          |                      |                  |  |

Note: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

** WARNINGS!**

- The device should not be used in the vicinity of other electronic equipment such as diathermy, electrocautery and radio frequency identification (RFID), security systems (such as electromagnetic anti-theft systems and metal detectors), cell phone, transceiver or radio control products. If you have to do so, the device should be observed to verify normal operation.
- Use of the device adjacent to or stacked with other equipment should be avoided because it could result in improper operation. If such use is necessary, this equipment and the other equipment should be observed to verify that they are operating normally.
- Use of accessories, transducers and cables other than those specified or provided by the manufacturer of this equipment could result in increased electromagnetic emissions or decreased electromagnetic immunity of this equipment and result in improper operation.
- Portable RF communications equipment (including peripherals such as antenna cables and external antennas) should be used no closer than 30 cm (12 inches) to any part of the Luna® G3 APAP / Luna® G3 CPAP, including cables specified by the manufacturer. Otherwise, degradation of the performance of this equipment could result.
- The device may be interfered with by other equipment, even if that other equipment complies with CISPR EMISSION requirements.
- The device may be subject to interference by the electromagnetic field of some known or unknown radio frequency transmitters in the environment during use. If interference occurs, please stay away from the interfered electromagnetic environment, or find and turn off the electromagnetic field interference source before continuing to use it.
- When the device is exposed to welding, electrosurgery, defibrillation, X-ray (γ ray), infrared radiation, transient electromagnetic field, including nuclear magnetic resonance (MRI) and radio interference environment, the product may be damaged.
- During operation of the device, due to electrostatic interference, the following phenomena may occur: (1) Temporary loss of function or degradation of performance, such as abnormal screen display. The device will recover to normal after being restarted; (2) Automatic restart of the device. These phenomena will not affect the normal use of the device, and will not cause permanent performance degradation or function loss of the device.

## 26. Limited Warranty

REACT HEALTH warrants that the device shall be free from defects of workmanship and materials and will perform in accordance with the product specifications for a period of two (2) years for main device and three (3) months for all accessories from the date of sale by REACT HEALTH to the dealer. If the product fails to perform in accordance with the product specifications, REACT HEALTH will repair or replace, at its option, the defective material or part. REACT HEALTH will pay customary freight charges from REACT HEALTH to the dealer location only. This warranty does not cover damage caused by accident, misuse, abuse, alteration and other defects not related to material or workmanship.

REACT HEALTH DISCLAIMS ALL LIABILITY FOR ECONOMIC LOSS, LOSS OF PROFITS, OVERHEAD OR CONSEQUENTIAL DAMAGES WHICH MAY BE CLAIMED TO ARISE FROM ANY SALE OR USE OF THIS PRODUCT. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

To exercise the rights under this warranty, contact the local authorized dealers or:

**Manufactured for:**

**REACT HEALTH**

5101 Fruitville Rd., Suite 200

Sarasota, FL 34232

T: (863) 226-6285

For additional information, please visit our Patient Portal at:

[www.reacthealth.com](http://www.reacthealth.com)

[icodeconnect.com](http://icodeconnect.com) – Web-based cloud for report generation and storage

**Manufacturer:**

**BMC Medical Co., Ltd.**

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