User Manual

Luna GII

Auto CPAP / CPAP System

Table of Contents

1. Symbols	1
1. Symbols 1.1 Control Buttons	1
1.2 Device Symbols	1
2. Warning, Caution and Important Tip 3. Intended Use 4. Contraindications 5. Specifications	3
3. Intended Use · · · · · · · · · · · · · · · · · · ·	3
4. Contraindications · · · · · · · · · · · · · · · · · · ·	4
5. Specifications	5
6. Available Therapies 7. Glossary	7
7. Glossary ·····	7
8. Model ·····	8
9. Package Contents	9
10. System Features	10
11. First Time Setup	11
11.1 Placing the Device	11
11.1 Flacing the Device 11.2 Installing the Air Filter and Filter Cap 11.3 Connecting to Power 11.4 Assembling the Tube and Mask 11.5 Using Oxygen with the Device	12
11.3 Connecting to Power	12
11.4 Assembling the Tube and Mask · · · · · · · · · · · · · · · · · · ·	13
11.5 Using Oxygen with the Device	14
11.6 Inserting the SD Card (Only for the device that equipped with SD card)	15
11.7 Using the WL-200 Cellular Module	15
11.6 Inserting the SD Card (Only for the device that equipped with SD card) 11.7 Using the WL-200 Cellular Module	16
12.1 Connecting the Tube	16
12.1 Connecting the Tube	16
12.2 Adjusting the Tube	10
12 4 11	10
12.4 Heating the Water in the Humidirler 12.5 Using the Ramp Button 12.6 Turning the Device Off 13. Heated Humidifier	12
12.5 Using the Ramp Button	17
12.0 Turning the Device On	17
13.1 Filling the Water Chamber ·····	17
13.1 Filling the Water Chamber	17
13.1.1 Removing the Water Chamber	17
13.1.3 Returning Water 13.1.3 Returning the Water Chamber 13.2 Emptying the Water Chamber 13.3 Setting the Humidity Level 14. Navigating the Patient Menu	10
13.2 Emptying the Water Chamber	10
13.2 Cotting the Humidity Level	10
14. Navigating the Patient Manu	20
14.1 Steps to Navigating the Patient Menu	20
4444	
14.1.2 Bringing up the Initial Setup Interface ······	21
14.1.1 Accessing the Main Interface 14.1.2 Bringing up the Initial Setup Interface 14.1.3 Accessing the Setup Interface 14.1.4 Selecting Options 14.1.5 Adjusting Options 14.1.6 Confirming Adjustments 14.1.7 Turning Pages	21
14.1.4 Selecting Ontions	21
14.1.5 Δdiusting Ontions	22
14.1.6 Confirming Adjustments	22
14.1.7 Turning Pages	22
14 I X EVITING THE PATIENT WENT!	•• , ,
14.2 Options of the Patient Menu and Corresponding Descriptions	24
15. Alert	25
16. Cleaning and Disinfection	26
16.1 Cleaning the Mask and Headgear ······	26
16.2 Cleaning the WI-200 Cellular Module	26
16.3 Cleaning the Water Chamber	26
16.3 Cleaning the Water Chamber 16.4 Cleaning the Enclosure	27

Luna GII User Manual V1.0

16.5 Cleaning the Tube · · · · · · · · · · · · · · · · · · ·	
10.3 Cleaning the Tube	21
16.6 Replacing the Air Filter	27
16.7 Disinfection ·····	28
17. Traveling with the Device · · · · · · · · · · · · · · · · · · ·	29
18. Transferring the Device to Another Patient	30
19. Reordering	30
20. Technical Support · · · · · · · · · · · · · · · · · · ·	30
21. Disposal · · · · · · · · · · · · · · · · · · ·	30
22. Troubleshooting ······	31
22.1 Common Problems in Patients and Corresponding Solutions	31
22.2 Common Problems in the Device and Corresponding Solutions	33
23. FMC Requirements	34
24. Limited Warranty	39
= :: =::::::::::::::::::::::::::::::::	

1. Symbols

1.1 Control Buttons

Ramp Button

Mute Button

Knob

1.2 Device Symbols

Follow Instructions for Use

Operating Instructions

Type BF Applied Part (mask)

Class II (Double Insulated)

 \sim AC Power

DC Power

IP22 ≥12.5 mm Diameter, Dripping (15°tilted)

Mot Surface

SN Serial Number of the Product

Manufacturer

Authorized Representative in the European Community

Disassembly is prohibited

C E European CE Declaration of Conformity

LOT Lot number

 $((\overset{\bullet}{\overset{\bullet}{\bullet}}))$ Non-Ionizing Radiation

SD Card

WEEE Marking

Logo of BMC Medical Co., Ltd. add 3B logo????

Air Inlet

Air Outlet

2. Warning, Caution and Important Tip

WARNING!

Indicates the possibility of injury to the user or operator.

CAUTION!

Indicates the possibility of damage to the device.

IMPORTANT TIP!

Place emphasis on an operating characteristic.

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

3. Intended Use

The Luna GII CPAP and Auto-CPAP system are intended to deliver positive pressure for the treatment of obstructive sleep apnea. The optional integrated heated humidifier is indicated for the humidificationand warming of air from the flow generator. These devices are intended for single patient use by prescriptionin the home or hospital/institutional environment on adult patients.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.
- 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.

CAUTION!

- This device is restricted to sale by or on the order of a physician.
- The patient is an intended operator.

IMPORTANT!

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 health care professional.

4. 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!

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

5. Specifications

Device Size

Dimensions: 274mm×184 mm×115mm

Weight: 1.9 kg

Water capacity: To maximum fill line 360mL 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 ~ 1060 hPa 760 ~ 1060 hPa

Heated Humidifier

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

Humidifier Output: No less than 10 mg H₂O/L

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

Software Version of the device

V1

Mode of Operation

Continuous

Work Mode

CPAP, Auto

SD Card

The SD card can record patient data and fault information

AC Power Consumption

100 - 240 V AC, 50 / 60 Hz, 2.0 A

Device offer to USB Communications Port

5 V === 2.0 A

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 cmH2O (in 0.5 cmH2O increments), ≤30 cmH2O under single fault conditions.

Static Pressure Stability

 ± 0.5 cmH2O

Ramp

The ramp time ranges from 0 to 60 minutes.

Sound Pressure Level

<28 dB, when the device is working at the pressure of 10 cmH2O.

Sound Power Level

<38 dB, when the device is working at the pressure of 10 cmH2O.

Maximum Flow

Test Pressures (cmH2O)	4	10	15	20
Measured Pressure at the Patient Connection Port (cmH2O)	3	9	14	19
Average Flow at the Patient Connection Port (L/min)	85	135	140	140

Automatic leak compensation

The pressure error $\leq \pm 1$ cmH2O when the air leakage is no more than 70 L / min.

Pressure

Range: 0 \sim 20 cmH2O

Margin of Error: \pm (0.4 cmH2O + 4%)

Tube

Length: 6 ft. (1.83 m)

Maximum Delivered Gas Temperature

≤43°C

The Form and the Dimensions of the Patient Connection Port

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

6. 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. If your health care professional has prescribed ramp for you, you can press **the Ramp Button** ⊿ to reduce the pressure and then gradually increase the pressure to the therapeutic pressure setting so that you can fall asleep more comfortably.

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

7. Glossary

Apnea

A condition marked by the cessation of spontaneous breathing.

Auto-CPAP

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.

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" and "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 can reduce pressure and then gradually increase the pressure to the prescription setting so the patient can fall asleep more comfortably.

Reslex

A therapy feature that is enabled by your home care provider 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.

8. Model

	Product Description			
Model	Product Contents	Optional Accessory	Work Mode	Maximum Work Pressure (cmH2O)
G2S A20	Device (2.4-inch TFT)	Tube, Mask, Cellular	CPAP, Auto CPAP	20
G2S C20	Device (2.4-inch TFT)	Module	CPAP	20

9. Package Contents

After unpacking the system, make sure you have everything shown here (Different models of the product may contain different components):

No.	Articles	Qty.	Notes
1	Device	1	
2	Air Filter	2	
3	Power Adapter	1	
4	Power Cord	1	
5	Tube	1	Optional
6	SD Card	1	Optional
7	Carrying Case	1	Optional
8	Enclosed Documents	1	

Parts and accessories are free of natural rubber latex.

The product's service life is be five years if the use, maintenance, cleaning and disinfection are in strict accordance with the User Manual. If the key components are replaced, the service life may be prolonged.

IMPORTANTS!

- 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.

WARNINGSI

- This device should only be used with the mask and accessories manufactured or recommended by 3B Medical, Inc. 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.
- The use of accessories other than those specified, with the exception of cables sold by the manufacturer of the equipment or system as replacement parts for internal components, may result in increased emissions or decreased immunity of the equipment or system.
- 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 3B Medical, Inc. or your health care provider.
- Please contact 3B Medical, Inc. to to obtain an SD card if needed.

10. System Features

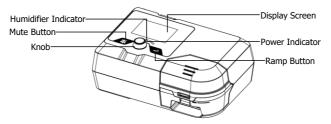


Fig. 10-1

Name	Function
Humidifier Indicator	Indicates the humidity level. There are five levels in total. The number of indicator lights that light up is directly proportional to the humidity level. If the indicator lights are off, it means the humidifier is turned off
Mute Button	Press this button to mute the alert. However, if the problem causing the alert is not solved, the alert will sound again two minutes later
Knob	Start treatment and adjust device settings
Ramp Button	Enable the Ramp feature
Display Screen	Display menus for operation, messages, monitoring data, etc.
Power Indicator	Indicate the power supply status

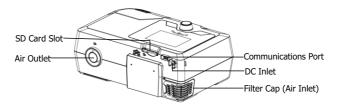


Fig. 10-2

Name	Function	
SD Card Slot	Insert the SD card into this slot	
Air Outlet	Deliver pressurized air; connects to the tube	
Communications Port	Connected to external equipment (Not for connection to un-recommended devices)	
DC Inlet	An inlet for the DC power supply	
Filter Cap (Air Inlet)	Place the cap on the air filter, which is used to filter dust and pollen in the air entering the device	

11. First Time Setup

11.1 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!

- 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.

11.2 Installing the Air Filter and Filter Cap

(1) Attach the air filter to the filter cap, as shown in Fig. 11-1.

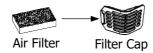


Fig. 11-1

(2) Install the filter cap containing the air filter to the device, as shown in Fig. 11-2.

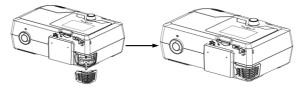


Fig. 11-2

CAUTION!

• The air filter must be in place when the device is operating.

11.3 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.

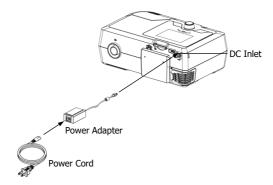


Fig. 11-3

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 5 "AC Power Consumption") may damage the device or cause device failure.

CAUTION!

• Inspect the power cord often for any signs of damage. Replace a damaged cord immediately.

IMPORTANTS!

- 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.

11.4 Assembling the Tube and Mask

(1) Connect one end of the tube to the air outlet of the device, as shown in Fig. 11-4.

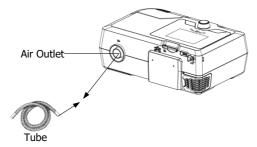


Fig. 11-4

(2) Connect the other end of the tube 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 tube.
- If you are using a mask with a separate exhalation port, connect the tube 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 CO₂ rebreathing, the patient should observe the following instructions:
- Use the accompanying tube and mask provided by 3B Medical, Inc.,

- 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.

11.5 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. <u>Explanation of Warning:</u> 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 your Luna GII 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.
- 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.

11.6 Inserting the SD Card (Only for the device that equipped with SD card)

Insert the SD card into the SD Card Slot, as shown in Fig. 11-6.

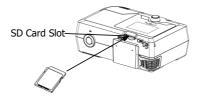


Fig. 11-6

If the SD card is inserted correctly, a symbol indicating correct insertion will appear in the Main Interface on the screen of the device, as shown in Fig. 11-7.



Fia. 11-7

If the SD card is inserted incorrectly, a symbol indicating incorrect insertion will appear in the Main Interface on the screen of the device, as shown in Fig. 11-8.



Fig. 11-8

CAUTION!

- If the SD card is not inserted, there will not be a symbol 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.

11.7 Using the WL-200 Cellular Module or WL-100 WiFi

Module

For more details, please refer to the corresponding user manual.

11.8 Starting Treatment

Connect the device to a power outlet, press **the Knob** , 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 equipment supplier.
- DO NOT connect any ancillary equipment to this device unless recommended by 3B Medical, Inc. or your physician. If you suffer from chest discomfort, shortness of breath, stomach bloating, or severe headache when using the device, contract your physician or qualified medical personnel immediately.

12. Routine Use

12.1 Connecting the Tube

Connect the power cord, power adapter, and tube properly according to the instructions in the First Time Setup (Chapter 11). Connect the mask and headgear according to the user manual for the mask.

CAUTION!

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

12.2 Adjusting the Tube

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

12.3 Turning on the Airflow

Press **the Knob** to turn on the airflow. The screen will display treatment pressure and other information.

12.4 Heating the Water in the Humidifier

Pay attention to the humidifier indicator lights when using the humidifier. The indicator lights indicate the On / Off state of the humidifier. It is off when all indicator lights go out.

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. The temperature of the heater plate is no more than 74°C.

12.5 Using the Ramp Button

Every time **the Ramp Button** is pressed, 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 press the Ramp Button \triangle as often as you wish during sleep.
- The ramp feature is not prescribed for all users.

12.6 Turning the Device Off

Take off the mask and headgear, press and hold **the Knob** for two seconds, and the device will stop delivering air. Disconnect the power cord from the power outlet to power off the device.

CAUTIONS!

• Do not position the device so that it is difficult to disconnect the device.

13. 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.

13.1 Filling the Water Chamber

13.1.1 Removing the Water Chamber

Grab the water chamber, and pull it out of the device, as shown in the figure below.

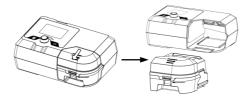


Fig. 13-1

WARNING!

 Turn the device off and allow approximately 15 minutes for the heater plate and water to cool.

13.1.2 Filling Water

Open the cap, as shown in Fig. 13-2, and fill the water chamber with approximately 360 ml

of water, as shown in Fig. 13-3. Make sure that the water does not exceed the maximum water level line.

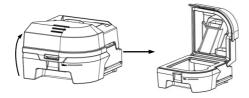


Fig. 13-2



Fig. 13-3

WARNING!

• Change water before every use and do not surpass the MAX fill line.

CAUTIONS!

- Empty the water chamber when the heated humidifier is not in use.
- Distilled water is recommended.

13.1.3 Inserting the Water Chamber

Close the cap after it is filled with water, as shown in Fig. 13-4, and return it to the device, as shown in Fig. 13-5.

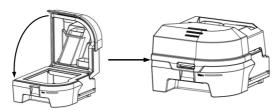


Fig. 13-4

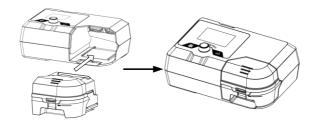


Fig. 13-5

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.

13.2 Emptying the Water Chamber

- (1) Removing the water chamber according to instructions in 13.1.1.
- (2) **Emptying the water chamber:** Open the cap, as shown below, and pour any remaining water out of the water chamber.

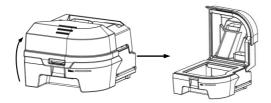


Fig. 13-6

CAUTION!

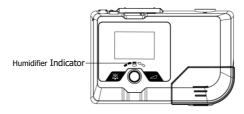
- Empty and air-dry the water chamber when the device is not in use.
- (3) Inserting the Water Chamber according to instructions in 13.1.3.

13.3 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 on the screen of the device.

There are five humidity levels available, and the number of blue indicator lights that light up is directly proportional to the humidity level. If none of the indicator lights light up, it means that the heated humidifier is turned off.

The temperature of the water in the water chamber maintains a constant set level. Three indicator lights light up when the humidity is adjusted to Level 3, as shown in Fig. 13-7.



Fia. 13-7

CAUTIONS!

- Generally speaking, 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.

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.

14. Navigating the Patient Menu

14.1 Steps to Navigating the Patient Menu

14.1.1 Accessing the Main Interface

Connect the power cord and power adapter properly. The screen displays the Main Interface shown in Fig. 14-1.



Fig. 14-1

14.1.2 Bringing up the Initial Setup Interface

From the Main Interface shown in Fig. 14-1, press and hold **the Ramp Button** \triangle for three seconds. The screen displays the Initial Setup Interface of the Patient Menu, as shown in Fig. 14-2.



Fig. 14-2

The first icon on the left side of the screen indicates the Main Interface, the second icon indicates the Initial Setup Interface, and the third icon indicates the iCode Interface. As you turn **the Knob**, the cursor switches among the three icons, and the interface displayed on the screen changes accordingly.

14.1.3 Accessing the Setup Interface

When the cursor is on the icon , the screen displays the Setup Interface. Access the Setup Interface by pressing **the Knob** . The first option on the Setup Interface is then displayed in blue, as shown in Fig. 14-3.

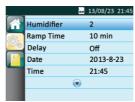


Fig. 14-3

14.1.4 Selecting Options

As you turn **the Knob** clockwise, the cursor moves downwards from one option to another. As you turn it counterclockwise, the cursor moves upwards. When the cursor is on a certain option, press **the Knob**, and the option is then displayed in yellow, meaning that the option can now be adjusted, as shown by the **Humidifier** option in Fig. 14-4.



Fig. 14-4

14.1.5 Adjusting Options

Adjust the option by turning **the Knob**. As shown in Fig. 14-4, 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. The **Humidifier** option is still displayed in yellow, as shown in Fig. 14-5.



Fig. 14-5

14.1.6 Confirming Adjustments

Confirm your adjustment to an option by pressing **the Knob**. The option is then displayed in blue, as shown in Fig. 14-6.

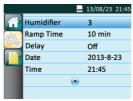


Fig. 14-6

14.1.7 Turning Pages

When the cursor is on **Mask Type**, the last option shown in Fig. 14-6, the remaining options will appear on a new page if you continue to turn **the Knob** clockwise, as shown in Fig. 14-7.

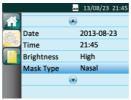


Fig. 14-7

Note: was are page turning symbols.

14.1.8 Exiting the Patient Menu

(1) Returning to the Initial Setup Interface

Move the cursor to the **Back** option by turning **the Knob** , as shown in Fig. 14-8.



Fig. 14-8

Press **the Knob** , the cursor jumps to the second icon on the left side of the screen. The screen displays the Initial Setup Interface, as shown in Fig. 14-9.



Fig. 14-9

(2) Returning to the Main Interface

Move the cursor to the **Home** option by turning **the Knob** , as shown in Fig. 14-10.



Fig. 14-10

Press **the Knob** to exit the Patient Menu. The screen will display the Main Interface shown in Fig. 14-1.

14.2 Options of the Patient Menu and Corresponding Descriptions

Option	Range	Description	
Humidifier	Off, 1 ~ 5	There are five humidity levels available. As the numbering increases, the humidity rises accordingly. "Off" means the humidifier is turned off. The default setting is "2"	
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. The default setting is " Off "	
Ramp Time	0 - 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 the Knob to the nearest point, the numbering increases or decreases by five minutes. The default setting is "10 minutes." The screen displays a real-time countdown of the remaining ramp time in minutes	
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 cmH2O) after you press the Knob 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 airfolw stops delivering air instantly after you press the Knob . The default setting is " Off "	
Date	2000-01-01 — 2099-12-31	Set date by adjusting this option	
Time	00:00 — 23:59	Set time by adjusting this option	
Brightness	High / Low	Setting screen brightness by adjusting this option. The default setting is " High "	
Mask Type	Full Face; Nasal; 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 "Nasal," but the patient can choose other suitable masks as well. When selecting masks other than the above three types of 3B Medical, Inc masks, the patient can identify the masks as other.	

iCode	iCode, iCode QR, 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 / 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.
About		Displays related information of the device (Model, SN, Version, ID). This is read-only and cannot be edited

15. Alert

Alert Message	Description
	An audible alert will sound in 6 s if the device is accidentally disconnected from power when it is delivering air. Note:
Power Failure!!!	(1) The alert will not sound if power failure occurs when the device is in standby state.
	(2) No alert message on the screen during a power failure
Device Fault!!!	An audible alert will sound if no airflow comes out of the machine; the screen will display " Device Fault!!! "
Leak!!	When the airflow is on, an audible alert will sound in 40 s if the air leak rate is excessive; the screen will display " Leak!! "
Low Input Voltage!!	If the voltage supplied by power adaptor is lower than 22V, an audible alert will sound and the screen will display " Low Input Voltage!! "
Humidifier Failure!!	When humidifier is applied, an audible alert will sound when the humidifier fails to work; the screen will display " Humidifier Failure!! "
Please Change Filter!	When the Filter Alert feature is enabled, an audible alert will sound if the preset replacement time reaches but without replacing the air filter; the screen will display " Please Change Filter! "
SD Card Full!	The screen will display "SD Card Full!" if the SD card has reached its maximum capacity
Reinsert SD card!	The screen will display " Reinsert SD card! " if the SD card fails to work

16. Cleaning and Disinfection

WARNINGS!

- Regular cleaning of the device and its accessories is very important for the prevention of 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 tube and on determining the frequency of cleaning.
- Before cleaning, check whether the device has been disconnected from the power supply, whether the power cord has been unplugged, and whether the water chamber of the device has cooled down. Make sure the plate has cooled down to room temperature, so you do not get burned.
- Do not open or modify the device. There are no user serviceable parts inside. Repairs and servicing should only be performed by an authorized service agent.

CAUTIONS!

- Overheating of the materials could lead to early fatigue of these materials.
- Do not use solutions containing chlorinated lime, chlorine, or aromatics 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.
- \bullet Do not clean or dry the device and its accessories when the temperature is higher than 80°C (176°F). High temperatures could reduce product life.
- Do not immerse the device in any fluids.

16.1 Cleaning the Mask and Headgear

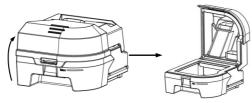
For details, refer to the cleaning instructions in the user manual for the mask.

16.2 Cleaning the Cellular and WiFi Modules

Wipe the surface of the Modules with a clean, soft, and slightly damp cloth.

16.3 Cleaning the Water Chamber

(1) **Opening the Water Chamber:** Open the cap of the water chamber, as shown in Fig. 16-1.



Fia. 16-1

- (2) **Cleaning the Water Chamber:** You may also clean the water chamber with a soft cloth which does not scratch the water chamber (dip the soft cloth in liquid soap if necessary), rinse it thoroughly, and then wipe it dry with a soft cloth.
- (3) **Returning the Water Chamber** according to instructions in 13.1.3.

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 throughly 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 accumulations.
- Inspect the water chamber for any leak or damage. Replace the water chamber if any damage is present.

16.4 Cleaning the Enclosure

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

CAUTION!

• The device can only be used after the enclosure is dry, so that no moisture enters the device.

16.5 Cleaning the Tube

- (1) Remove the tube from the device and mask before cleaning.
- (2) Clean the tube in warm water which contains washing liquid, and then rinse it in clean water thoroughly.
- (3) After cleaning, air-dry the tube in a cool, well-ventilated area, and avoid direct sunlight. It takes approximately 30 minutes to completely air-dry the tube. Check whether the tube is completely dry before re-use.

16.6 Replacing the Air Filter

- (1) Open the air filter cap to remove the air filter.
- (2) Put the new air filter in the filter area, and then place the filter cap back properly.

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 2 weeks (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.

16.7 Disinfection

Generally speaking, if you have strictly followed the above cleaning instructions, you do not have to disinfect the device and / or water chamber. If the device is contaminated or used in clinical trials, you may purchase disinfectants from a home medical equipment company to disinfect the device.

Disinfection of the Water Chamber:

Prior to disinfection, clean the water chamber according to Section 16.3 "Cleaning the Water Chamber". The disinfection methods are as follows:

- (1) Heat disinfection: Disinfect the water chamber by immersing it in tap water at $75^{\circ}C\pm2^{\circ}C$ for 30 minutes.
- (2) Use mild disinfectants.

CAUTIONS!

- Disinfectants tend to damage materials and reduce the life of components. Try to select the appropriate disinfectant, and follow the disinfectant manufacturer's instructions and recommendations.
- After disinfection, check the disinfected component for any signs of damage. Replace any damaged component immediately.

WARNINGS!

- After disinfection, rinse any disinfected component in clean water thoroughly, especially components in close contact with the patient such as the mask, headgear, and tube, so as to prevent disinfectant residuals from damaging the skin or respiratory tract or causing allergies.
- The device shall not be serviced or maintained while in use with a patient.
- Sterilization of this device and its components other than recommended is not permitted.

17. Traveling with 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.
- Using the device at an incorrect elevation setting could result in airflow pressures higher than the prescribed setting. Always verify the elevation setting when traveling or relocating.
- If the device is used when the atmospheric pressure is out of the stated range (See Section 5), the accuracy of the leakage alert will be affected.
- (1) Use the 3B medical, Inc. 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 \sim 240 V and 50 / 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 that 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.

18. Transferring the Device to Another Patient

If the device is transferred to another patient, components in close contact with the previous owner, including the mask, headgear, tube, and air filter, should be replaced to prevent cross-infection.

19. 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 3B Medical, Inc. -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 3B Medical, Inc., for technical support and documents.

20. Technical Support

Please contact 3B Medical, Inc. 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. 3B Medical, Inc. will provide the circuit diagram and / or other technical documents in whole or in part according to your needs.

21. Disposal

When the device reaches the end of its service life, dispose of the device and packaging in accordance with local laws and regulations.

22. 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.

22.1 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. Contact your physician, and continue treatment unless the physician suggests the opposite
Dry mouth and throat	Probably 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. 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. Add additional filling to the mask so it does not leak. Contact your equipment supplier 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
	The mask is too tight	Loosen the headgear
Facial reddening	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 equipment supplier for a correct-size mask

	The patient is allergic to the materials of the mask	Contact your physician and equipment supplier. Use a mask which is not made with natural rubber latex. Place a lining between the skin and mask
Water in mask	When the humidifier is used, the humidified air tends to condense in the cold tube and mask if the room temperature is low	Turn the humidity setting down, or raise the room temperature. Place the tube under the quilt, or use the tube cover. Hang the tube loosely, and the lowest part of the tube 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 cmH2O. However, the treatment pressure is determined according to the patient's conditions, and cannot treat sleep apnea if the treatment pressure is set too low	It takes a maximum of four weeks to adapt to pressurized air. Relax and breathe through the nose. If the problem still exists, contact your physician
Obstructive sleep apnea symptoms recur	Probably because the patient sleeps with his or her mouth open, and the pressurized air goes out via the mouth, leading to blockage in the respiratory tract	Use a chin strap to prevent the mouth from opening during sleep, or use a full-face mask. Contact your physician for details
The device is too noisy	The tube is not connected properly	Reconnect the tube 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	The air inlet of the device may	Replace the air filter (see 15.6 Replacing the Air 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	

22.2 Common Problems in the Device and Corresponding Solutions

Problem	Possible Cause	Solution(s)		
	The Auto On / Off feature is enabled	Take a few deep breaths with the mask on, and the device will start automatically		
The device does not work when it is turned on	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 equipment supplier for repair		
	Cannot find any cause	Contact your equipment supplier		
The device is working, but the	The tube is not connected properly	Reconnect the tube properly		
pressure inside the mask differs from the set treatment	There may be holes in the mask or pressure sensing tube	Contact your equipment supplier		
pressure	It is a faulty device	Contact your equipment supplier		
	The air inlet of the device may be blocked	Replace the air filter (see 16.6 Replacing the Air Filter), and clean the air inlet. Make sure the air inlet is unblocked		
The device produces very low	The treatment pressure has been changed accidentally	Contact your physician		
pressures	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		

23. EMC Requirements

Guidance and manufacturer's declaration - electromagnetic emissions

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.

Emissions Test	Compliance	Electromagnetic Environment - Guidance		
RF emissions 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 CISPR 11	Class B	The device is suitable for use in all		
Harmonic emissions IEC 61000-3-2	Class A	establishments including domestic establishments and those directly connected to the public low-voltage		
Voltage fluctuations / flicker emissions IEC 61000-3-3	Complies	power supply network that supplies buildings used for domestic purposes		

Guidance and manufacturer's declaration - electromagnetic immunity

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.

±8 kV contact ±15 kV air	±8 kV contact ±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%
±2 kV for power supply lines	±2 kV for power supply lines	Mains power quality should be that of a typical commercial or hospital environment
±1 kV line(s) to line(s)	±1 kV line(s) to line(s)	Mains power quality should be that of a typical commercial or hospital environment
0% <i>U_{ti}</i> , 0.5 cycle At 0°, 45°, 90°, 135°, 180°, 225°, 270° and 315° 0% <i>U_{ti}</i> , 1 cycle 70% <i>U_{ti}</i> , 25 / 30 cycle At 0° 0% <i>U_{ti}</i> , 250 / 300 cycle	0% <i>U_{ri}</i> ; 0.5 cycle At 0°, 45°, 90°, 135°, 180°, 225°, 270° and 315° 0% <i>U_{ri}</i> ; 1 cycle 70% <i>U_{ri}</i> ; 25 / 30 cycle At 0° 0% <i>U_{ri}</i> ; 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
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
	ines ±1 kV ine(s) to line(s) 0% U ₇ ; 0.5 cycle At 0°, 45°, 90°, 135°, 180°, 225°, 270° and 315° 0% U ₇ ; 1 cycle 70% U ₇ ; 25 / 30 cycle At 0° 0% U ₇ ; 250 / 300 cycle 30 A/m	ines lines ±1 kV line(s) to line(s) 20% U _{7i} , 0.5 cycle At 0°, 45°, 90°, 135°, 180°, 225°, 270° and 315° 20% U _{7i} , 1 cycle 20% U _{7i} , 25 / 30 cycle At 0° 20% U _{7i} , 250 / 300 cycle 21 kV line(s) ±1 kV line(s) ±1 kV line(s) 50% U _{7i} , 0.5 cycle At 0°, 45°, 90°, 135°, 180°, 225°, 270° and 315° 0% U _{7i} , 1 cycle 70% U _{7i} , 2 5 / 30 cycle At 0° 0% U _{7i} , 250 / 300 cycle

Guidance and manufacturer's declaration - electromagnetic immunity

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.

Immunity	IEC 60601	Compliance	Electromagnetic Environment -
Test	Test Level	Level	Guidance
Conducted RF IEC 61000-4-6 Radiated RF IEC 61000-4-3	3 V 0.15 MHz ~ 80 MHz 6 V in ISM and amateur radio bands between 0.15 MHz and 80 MHz 10 V/m 80 MHz to 2.7 GHz	3 V 0.15 MHz ~ 80 MHz 6 V in ISM and amateur radio bands between 0.15 MHz and 80 MHz 10 V/m 80 MHz to 2.7 GHz	Portable and mobile RF 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. Recommended separation distance $d = 1.17\sqrt{p}$ $d = 0.35\sqrt{p}$ 80 MHz to 800 MHz $d = 0.70\sqrt{p}$ 800 MHz to 2.5 GHz Where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in meters (m). Field strengths from fixed RF transmitter, as determined by an electromagnetic site survey, ^a should be less than the compliance level in each frequency range. ^b Interference may occur in the vicinity of equipment marked with the following symbol: ((**)*)

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.

^a Field strengths from fixed transmitters, such as base stations for radio (cellular / cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the device is used exceeds the applicable RF compliance level above, the device should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating the device.

 $^{^{\}rm b}$ Over the frequency range 150 kHz to 80 MHz, the field strengths should be less than 10 V/m.

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 \sim 80 MHz $d = 1.17 \sqrt{p}$	80 MHz \sim 800 MHz $d = 0.35\sqrt{p}$	800 MHz \sim 2.5 GHz $d = 0.70\sqrt{p}$
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	RF wireless communications
450	2	0.3	28	28	equipment should be used
710					no closer to any part of the device, including cables,
745	0.2	0.3	9	9	than the recommended
780					separation distance
810					calculated from the equation
870	2	0.3	28	28	applicable to the frequency
930					of the transmitter.
1720					Recommended
1845	2	0.3	28	28	separation distance $E = \frac{6}{d} \sqrt{P}$
1970					
2450	2	0.3	28	28	u ·
5240					Where <i>P</i> is the maximum
5500					output power rating of the
5785	0.2	0.3	9	9	transmitter in watts (W) according to the transmitter manufacturer and d 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:

Note 1: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

WARNINGS!

- This device should not be used in the vicinity or on the top of other electronic equipment such as cell phone, transceiver or radio control products. If you have to do so, the device should be observed to verify normal operation.
- The use of accessories and power cord other than those specified, with the exception of cables sold by the manufacturer of the equipment or system as replacement parts for internal components, may result in increased emissions or decreased immunity of the equipment or system.

Luna GII User Manual V1.0

24. Limited Warranty

3B Medical, Inc. 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 one

(2) years for main unit and three (3) months for all accessories from the date of sale by ${\tt 3B}$

Medical, Inc. to the dealer. If the product fails to perform in accordance with the product specifications, 3B Medeical, Inc. will repair or replace, at its option, the defective material or

part. 3B Medical, Inc. will pay customary freight charges from 3B Medical 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.

3B Medical,Inc. 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:

3B Medical, Inc.

799 Overlook Dr

Winter Haven, FL 33884

Tel:863-226-6285

Fax:863-226-6284

www.3BProducts.com

Issue date: 06/08/2018