

# Eclipse® 5 with autoSAT®



**User Manual (US)**

**Manuel d'utilisation (FR)**

**Bedienungsanleitung (DE)**

**Manual del usuario (ES)**

**Manuale dell'utente (IT)**

**Manual do utilizador (PT)**

**Gebruikershandleiding (NL)**

**Brugervejledning (DK)**

**Bruksanvisning (NO)**

**Bruksanvisning (SE)**

**Käyttöopas (FI)**

**Εγχειρίδιο χρήστη (GR)**


















**Kullanıcı El Kitabı (TR)**

















**Uživatelská příručka (CZ)**








**Instrukcja obsługi (PL)**

**Felhasználói kézikönyv (HU)**

## User Controls & System Status Indicators

| ISO 7000   |  |
|--|--|
|    | Operator's manual; operating instructions. Reg. # 1641   |
|    | Keep away from rain, keep dry. Reg. # 0626   |
|    | Stacking limit by number. Reg. # 2403  |
|    | Name and address of manufacturer. Reg. # 3082  |
|    | The country and date of manufacture. The "CC" identifies the two letter country code of the country of manufacture. The date of manufacture is in YYYY-MM-DD format. Reg. # 6049 |
|    | Catalog Number. Reg. # 2493  |
|    | Serial Number. Reg. # 2498   |
|    | Storage or operating temperature range. Reg. # 0632  |
|    | Storage humidity range. Reg. # 2620  |
|    | Atmospheric pressure limitation. Reg. # 2621   |
|   | This way up. Reg. # 0623   |
|  | Fragile, handle with care. Reg. # 0621   |
|  | Contains hazardous substances. Reg. # 3723   |
|  | Importer. Reg. # 3725  |
| ISO 7010   |  |
|  | The instruction manual must be read. Reg. # M002   |
|  | Keep away from open flame, fire, sparks. Open ignition source and smoking prohibited. Reg. # P003  |
|  | Do not smoke near unit or while operating unit. Reg. # P002  |

|    | Type BF applied part (degree of protection against electric shock). Reg. # 5333   |
|---|---|
| Council Directive 93/42/EEC   |   |
|    | Authorized representative in the European Community   |
|    | If the product unique device identifier (UDI) label has the CE#### symbol on it, the device complies with the requirements of Directive 93/42/EEC concerning medical devices. The CE#### symbol indicates notified body number. |
| Additional Symbols  |   |
|    | External Power Indicator  |
|    | Power Cartridge (battery) Status Gauge  |
|    | Power Cartridge Symbol  |
|    | Amperes   |
|    | Oxygen Output   |
|    | Recycle Symbol  |
|    | FAA Approved Symbol: The U.S. Federal Aviation Administration (FAA) has approved this device for use on-board commercial aircraft.  |
|  | Flow Setting Indicator  |
|  | Pulse Mode Operation  |
|  | Device operating normally; power button   |
|  | Increase Flow Setting   |
|  | Decrease Flow Setting   |
| Contains FCC ID: WAP2001<br>FCC Notice  |   |
|  | Authorized representative in Switzerland.   |

|   |  |
|---|--|
| <b>UK<br/>CA<br/>####</b>   | This device complies with the UK regulations. It bears the UKCA mark as shown. UCKA#### indicates notified body number.  |
| <b>IEC 60417</b>  |  |
|    | Class II Equipment, Double Insulated Reg. # 5172   |
|    | Alternating Current Reg. # 5032  |
|    | Direct Current Reg. # 5031   |
| <b>21 CFR 801.15</b>  |  |
| <b>RX ONLY</b>  | Federal law restricts this device to sale by or on the order of a physician.   |
| <b>IEC 60601-1</b>  |  |
| <b>IP22</b>   | Drip Proof   |
| <b>Council Directive 2012/19/EU</b>   |  |
|    | WEEE<br>This symbol is to remind the equipment owners to return it to a recycling facility at the end of its life, per Waste Electrical and Electronic Equipment (WEEE) Directive.<br>Our products will comply with the restriction of Hazardous Substances (RoHS) directive. They will not contain more than trace amounts of lead or other hazardous material content. |
| <b>IEC 60601-1-8</b>  |  |
|    | Low Priority Technical Alarm   |
| <b>ISO 15223-1</b>  |  |
| <b>MD</b>   | Medical Device. Reg. # 5.7.7   |
| <b>UDI</b>  | Unique device identifier # 5.7.10  |
| <b>CSA Certification</b>  |  |
|  | Certified for both the U.S. and Canadian markets, to the applicable U.S. and Canadian standards.   |
| <b>A S/NZS 4417.1, AS/NZS 4417.2</b>  |  |
|  | ACMA Regulatory Compliance Mark– indicates compliance with ACMA regulations.   |

**FCC NOTICE:**

This device may contain CYBLE-022001-00, including the antenna 2450AT18B100 from Johnson Technology, complies with par 15 of the FCC rules. The device meets the requirements for modular transmitter approval as detailed in FCC public Notice DA00-1407. Transmitter operation is subject to the following two conditions (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

This product may be covered by one or more patents, US and international. Please visit our website below for the listing of applicable patents. Pat.: [www.caireinc.com/corporate/patents/](http://www.caireinc.com/corporate/patents/).

**Aircraft Use:**

CAIRE confirms that this machine meets the Federal Aviation Administration (FAA) requirements (RTCA/DO-160, section 21, category M) for all phases of air travel.

**Wireless Technology**

|                     |                  |
|---------------------|------------------|
| Technology used     | Bluetooth        |
| Connection types    | SSP, iAP2, GATT  |
| Frequency           | 2402 to 2480 MHz |
| Max RF power output | +4 dBm           |
| Operating range     | 10m (Class 2)    |

It is recommended that the machine is at a minimum distance of 0.43" (1.1 cm) from the body during operation. Not applicable to masks, air tubing, or accessories.

# Eclipse 5

## Quick Start Guide

### 1 Unpack Your Eclipse 5

Eclipse 5



### 2 Getting to Know Your Eclipse 5

Review all Warnings, Cautions and additional device information in the rest of this manual. Become familiar with the key features of the Eclipse 5 and the User Control Panel.

FRONT



AC Power Supply



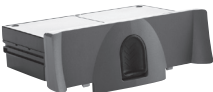
Universal Cart



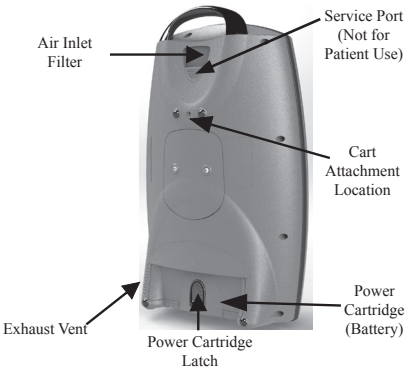
DC Power Supply



Power Cartridge (battery)



BACK



The Eclipse 5 User Control Panel displays important operating information.



**ON/OFF Button (Green) Indicator:** This button powers the device ON or OFF. The Green Indicator is illuminated when the device is ON and functioning properly.



**Increase or Decrease Flow Setting Buttons:** Use these buttons to set the flow to your prescribed setting.



**Delivery Mode Button and Indicator:** The button toggles between Continuous Flow and Pulse Dose Mode. The Pulse Dose Mode activates autoSAT Technology and allows a significant increase in the operating time while powered by the battery. When the Pulse Dose Mode is activated, the green Pulse Dose Mode Indicator illuminates and a pulse of oxygen is delivered with each inspiratory effort.



**Low Priority Technical Alarm:** When illuminated, this indicates a low priority awareness condition. Continue to use your system and refer to the trouble shooting table for the proper response, or contact your Home Care Provider.



**Flow Setting Indicator:** This is the main focus on your control panel. Your home care provider will correctly set your prescribed flow for the Continuous Flow Mode (LPM) and/or your Pulse Dose Mode (mL) settings. Each time you power the device ON, the previous mode and/or setting has been saved and will be used at start-up.



**Power Cartridge (battery) Status Gauge:** This indicator displays the charge remaining in the battery. Each of the five horizontal gray bars represents approximately 20% of the total battery charge. When the battery is being charged, the charge indicator bars will blink in a waterfall-type fashion. If the battery is not installed, or if it is improperly installed, the Power Cartridge (battery) Status Gauge will not be illuminated or will flash on and off.



**External Power Indicator:** When the Eclipse 5 is properly plugged in and is using the AC or DC Power Supply, this indicator will appear on the User Control Panel.

**Buzzer:** An audible alarm (or buzzer) alerts you to the operating condition of the device, either a warning or failure, and confirms a valid key press.

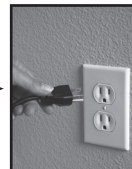
## 3 Powering on the Eclipse 5


To connect to AC power source: Insert the AC Power Supply cord securely into the External Power Receptacle on the right side of the device. If your power supply has three pins, plug the AC power cord into a grounded AC outlet. If your power supply has a two pin plug, plug the AC cord into a grounded or non-grounded AC outlet.

**Step 1**




**Step 2**



When the Eclipse 5 is plugged in properly, a green indicator on the AC Power Supply will light and the External Power Indicator, will appear on the user control panel. 

**Install the Battery:** Slide the battery into the empty compartment until it locks into position and is flush with the back of the device.



When the battery is properly installed and the Eclipse 5 is ON, the Power Cartridge Status Gauge will appear. 



**ON/OFF Button (Green) Indicator**

Press and hold the “ON/OFF” button for two (2) seconds to power ON your Eclipse 5. A brief audible and visual power on self-test will occur. Verify that all the indicators are illuminated and the buzzer sounds. Press and hold the “ON/OFF” button for two (2) seconds to power OFF your Eclipse 5.

# Eclipse 5

## 4 Select Flow Delivery Mode



### Flow Mode Button and Indicator

Press the Flow Mode button to select your desired flow mode. Pressing this button repeatedly will toggle you back and forth between continuous flow and pulse dose modes. In Continuous Flow Mode the oxygen is provided at a constant flow rate between 0.5 and 3.0 LPM. In Pulse Dose Mode, oxygen is supplied in a bolus at the beginning of each inspiration, providing a selectable range of settings 1-9 with bolus sizes 16-192 mL. Pulse Dose can be adjusted for sensitivity and breath bolus delivery. Flow settings in both modes should be prescribed for you by your physician.

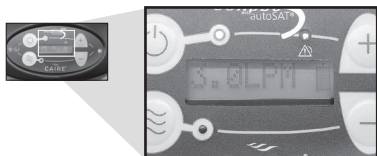
## 5 Adjust Flow Setting to Prescribed Level



### Increase or Decrease Flow Setting Button

Using the + or - buttons, adjust the setting to the prescription supplied by your physician.

### Continuous Flow Mode Display



### Pulse Dose Mode Display



**WARNING: IT IS VERY IMPORTANT TO SELECT ONLY THE PRESCRIBED LEVEL OF OXYGEN. DO NOT CHANGE THE FLOW SELECTION UNLESS YOU HAVE BEEN DIRECTED TO DO SO BY A LICENSED CLINICIAN. THE PORTABLE OXYGEN CONCENTRATOR MAY BE USED DURING SLEEP UNDER THE RECOMMENDATION OF A QUALIFIED CLINICIAN. YOUR DELIVERY SETTINGS SHOULD BE PERIODICALLY REASSESSED FOR EFFECTIVENESS OF THERAPY.**

## 6 Begin Using the Eclipse 5

### Air Inlet Filter



Your unit is equipped with an Air Inlet Filter (extra filter provided). Check daily and clean once a week.

Connect the oxygen supply tubing to the oxygen outlet and connect the oxygen cannula per the instructions provided with the cannula, or per the instructions from your home care provider.



Breathe normally through the nasal cannula. When operating on battery power, utilizing the Pulse Dose Mode will achieve longer duration-of-use.

## 7 Universal Cart Operation

Align the locator holes on the bottom of the device to the tabs on the Universal Cart. Align the large threaded screw to the insert at the back of the Eclipse 5. Then hand-tighten the knob on the cart until the Universal Cart is tightly secured to the device. Depress the push-button on the telescoping Universal Cart handle to adjust the height of the handle.



Contact your equipment provider for available training options. If you do not know your provider, contact CAIRE.

**Note:** For assistance, if needed, in setting up, or maintaining the Eclipse 5, or to report unexpected operation or events, contact CAIRE or CAIRE Representative.

## Important!

Safety Instructions are defined as follows:



**WARNING: IMPORTANT SAFETY INFORMATION FOR HAZARDS THAT MIGHT CAUSE SERIOUS INJURY.**



**CAUTION:** Important information for preventing damage to the Eclipse 5.

Note: Information needing special attention.

## Indications for Use

### Intended Use

The CAIRE Eclipse 5 Oxygen Concentrator is intended for the administration of supplemental oxygen. The device is not intended for life support nor does it provide any patient monitoring capabilities.



**WARNING: IT IS VERY IMPORTANT TO SELECT ONLY THE PRESCRIBED LEVEL OF OXYGEN. DO NOT CHANGE THE FLOW SELECTION UNLESS YOU HAVE BEEN DIRECTED TO DO SO BY A LICENSED CLINICIAN. THE PORTABLE OXYGEN CONCENTRATOR MAY BE USED DURING SLEEP UNDER THE RECOMMENDATION OF A QUALIFIED CLINICIAN.**

**WARNING: TO ENSURE RECEIVING THE THERAPEUTIC AMOUNT OF OXYGEN DELIVERY ACCORDING TO YOUR MEDICAL CONDITION, ECLIPSE 5 MUST BE USED ONLY AFTER ONE OR MORE SETTINGS HAVE BEEN INDIVIDUALLY DETERMINED OR PRESCRIBED FOR YOU AT YOUR SPECIFIC ACTIVITY LEVELS. ECLIPSE 5 MUST BE USED WITH THE SPECIFIC COMBINATION OR PARTS AND ACCESSORIES THAT ARE IN LINE WITH THE SPECIFICATION OF THE CONCENTRATOR MANUFACTURER AND THAT WERE USED WHILE YOUR SETTINGS WERE DETERMINED.**

**WARNING: FEDERAL (USA) LAW RESTRICTS THIS DEVICE TO SALE OR RENTAL BY ORDER OF A PHYSICIAN OR OTHER LICENSED HEALTH CARE PROVIDER.**

**WARNING: THIS UNIT IS NOT TO BE USED FOR LIFE SUPPORT. GERIATRIC, PEDIATRIC, OR ANY OTHER PATIENT UNABLE TO COMMUNICATE DISCOMFORT CAN REQUIRE ADDITIONAL MONITORING AND/OR A DISTRIBUTED ALARM SYSTEM TO CONVEY THE INFORMATION ABOUT THE DISCOMFORT AND OR THE MEDICAL URGENCY TO THE RESPONSIBLE CARE GIVER TO AVOID HARM. PATIENTS WITH HEARING AND/OR SIGHT IMPAIRMENT(S) MAY NEED ASSISTANCE WITH MONITORING ALARMS.**

## Contraindications for Use



**WARNING: IN CERTAIN CIRCUMSTANCES, THE USE OF NON-PRESCRIBED OXYGEN CAN BE HAZARDOUS. THIS DEVICE SHOULD ONLY BE USED WHEN PRESCRIBED BY A PHYSICIAN.**

**WARNING: NOT FOR USE IN THE PRESENCE OF FLAMMABLE ANESTHETICS.**

**WARNING: AS WITH ANY ELECTRICALLY POWERED DEVICE, THE USER MAY EXPERIENCE PERIODS OF NON-OPERATION AS A RESULT OF ELECTRICAL POWER INTERRUPTION, OR THE NEED TO HAVE THE Eclipse 5 SERVICED BY A QUALIFIED TECHNICIAN. THE Eclipse 5 IS NOT APPROPRIATE FOR ANY PATIENT WHO WOULD EXPERIENCE ADVERSE HEALTH CONSEQUENCES AS THE RESULT OF SUCH TEMPORARY INTERRUPTION.**

## Safety Guidelines



**WARNING: NO MODIFICATION OF THIS EQUIPMENT IS PERMITTED**

**WARNING: THE MANUFACTURER RECOMMENDS AN ALTERNATE SOURCE OF SUPPLEMENTAL OXYGEN IN THE EVENT OF A POWER OUTAGE, ALARM CONDITION, OR MECHANICAL FAILURE. CONSULT YOUR PHYSICIAN OR EQUIPMENT PROVIDER FOR THE TYPE OF RESERVE SYSTEM REQUIRED.**

**WARNING: THIS DEVICE SUPPLIES HIGH-CONCENTRATION OXYGEN THAT PROMOTES RAPID BURNING. DO NOT ALLOW SMOKING OR OPEN FLAMES WITHIN TWO (2) METERS OF (1) THIS DEVICE, OR (2) ANY OXYGEN-CARRYING ACCESSORY. FAILURE TO OBSERVE THIS WARNING CAN RESULT IN SEVERE FIRE, PROPERTY DAMAGE, AND/OR CAUSE PHYSICAL INJURY OR DEATH.**

**WARNING: DO NOT OPERATE UNIT IN A RESTRICTED OR CONFINED SPACE (I.E., A SMALL CASE OR HANDBAG) WHERE VENTILATION CAN BE LIMITED. THIS CAN CAUSE THE OXYGEN CONCENTRATOR TO OVERHEAT AND IMPAIR PERFORMANCE.**



**WARNING: THE CONCENTRATOR SHOULD BE LOCATED AS TO AVOID SMOKE, POLLUTANTS OR FUMES.**



## Eclipse 5

**WARNING: THE USE OF SOME OXYGEN ADMINISTERING ACCESSORIES NOT SPECIFIED FOR THIS OXYGEN CONCENTRATOR MAY IMPAIR ITS PERFORMANCE. RECOMMENDED ACCESSORIES ARE REFERENCED WITHIN THIS MANUAL.**

**WARNING: IF THE OXYGEN CONCENTRATOR HAS BEEN DROPPED, DAMAGED OR EXPOSED TO WATER PLEASE CONTACT YOUR HOME CARE PROVIDER FOR INSPECTION OR POSSIBLE REPAIR OF THE DEVICE. DO NOT USE THE OXYGEN CONCENTRATOR IF IT HAS A DAMAGED POWER CORD OR PLUG.**

**WARNING: PROPERLY SECURED, BELT OR OTHERWISE RESTRAIN THE OXYGEN CONCENTRATOR WHEN IN A VEHICLE DURING TRANSPORT TO PREVENT DAMAGE OR INJURY.**

**WARNING: DO NOT ALLOW EITHER THE AIR INTAKE OR THE AIR OUTLET VENTS TO BECOME BLOCKED. DO NOT DROP OR INSERT ANY OBJECTS INTO ANY OPENINGS ON THE DEVICE. THIS CAN CAUSE THE OXYGEN CONCENTRATOR TO OVERHEAT AND IMPAIR PERFORMANCE.**

**WARNING: DO NOT OVERFILL THE OPTIONAL HUMIDIFIER. FILL THE OPTIONAL HUMIDIFIER WITH WATER ONLY TO THE LEVEL SHOWN BY THE MANUFACTURER OF THE HUMIDIFIER.**

**WARNING: DO NOT OPERATE THE ECLIPSE 5 AND AMBULATE WHILE A HUMIDIFIER IS ATTACHED. REMOVE THE HUMIDIFIER BOTTLE BEFORE WALKING. DO NOT LAY THE ECLIPSE 5 DOWN WHILE ATTACHED TO A HUMIDIFIER BOTTLE.**

**WARNING: THE US DEPARTMENT OF TRANSPORTATION (DOT) AND UNITED NATIONS (UN) REGULATIONS REQUIRE THE REMOVAL OF THE BATTERY FROM THE DEVICE FOR ALL INTERNATIONAL AIRLINE TRAVEL WHEN THE OXYGEN CONCENTRATOR IS CHECKED AS LUGGAGE. WHEN SHIPPING THE OXYGEN CONCENTRATOR, THE BATTERY MUST ALSO BE REMOVED FROM THE DEVICE AND PACKAGED PROPERLY.**

**WARNING: DO NOT OPERATE THIS EQUIPMENT WITHOUT FIRST READING AND UNDERSTANDING THIS MANUAL. IF YOU ARE UNABLE TO UNDERSTAND THE WARNINGS AND INSTRUCTIONS, CONTACT YOUR EQUIPMENT PROVIDER BEFORE ATTEMPTING TO USE THIS EQUIPMENT; OTHERWISE, INJURY OR DAMAGE MAY RESULT.**

**WARNING: IF YOU FEEL DISCOMFORT OR ARE EXPERIENCING A MEDICAL EMERGENCY, SEEK MEDICAL ASSISTANCE IMMEDIATELY.**

**WARNING: OPERATING THE OXYGEN CONCENTRATOR OUTSIDE OF THE OPERATIONAL TEMPERATURE SPECIFICATIONS CAN LIMIT THE CONCENTRATOR'S ABILITY TO MEET OXYGEN CONCENTRATION SPECIFICATION. REFER TO THE SPECIFICATION SECTION OF THIS MANUAL FOR TEMPERATURE LIMITS.**

**WARNING: USE NO OIL, GREASE, OR PETROLEUM-BASED OR OTHER FLAMMABLE PRODUCTS WITH THE OXYGEN-CARRYING ACCESSORIES OR THE OXYGEN CONCENTRATOR. ONLY WATER BASED, OXYGEN COMPATIBLE LOTIONS OR SALVES SHOULD BE USED. OXYGEN ACCELERATES THE COMBUSTION OF FLAMMABLE SUBSTANCES.**

**WARNING: THE INCORRECT USE OF THE BATTERY CAN CAUSE THE BATTERY TO GET HOT, IGNITE, AND MAY CAUSE SERIOUS INJURY. BE SURE NOT TO PIERCE, STRIKE, STEP ON, DROP THE BATTERY, OR OTHERWISE SUBJECT THE BATTERY TO STRONG IMPACTS OR SHOCKS. THE USE OF A DAMAGED BATTERY MAY CAUSE PERSONAL INJURY.**

**WARNING: THE OXYGEN CONCENTRATOR SHOULD NOT BE USED ADJACENT TO OR STACKED WITH OTHER EQUIPMENT. IF ADJACENT OR STACKED USE IS UNAVOIDABLE, THE DEVICE SHOULD BE OBSERVED TO VERIFY NORMAL OPERATION.**

**WARNING: 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.**

**WARNING: THIS PRODUCT CAN EXPOSE YOU TO CHEMICALS INCLUDING NICKEL, WHICH IS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER. FOR MORE INFORMATION, GO TO [WWW.P65WARNINGS.CA.GOV](http://WWW.P65WARNINGS.CA.GOV).**





**WARNING: USE ONLY SPARE PARTS RECOMMENDED BY THE MANUFACTURER TO ENSURE PROPER FUNCTION AND TO AVOID THE RISK OF FIRE AND BURNS.**

**WARNING: DO NOT LUBRICATE FITTINGS, CONNECTIONS, TUBING OR OTHER ACCESSORIES OF THE OXYGEN CONCENTRATOR TO AVOID THE RISK OF FIRE AND BURNS.**



**WARNING: DO NOT ATTEMPT ANY MAINTENANCE OTHER THAN THE POSSIBLE SOLUTIONS LISTED WITHIN THIS MANUAL. DO NOT REMOVE COVERS, ONLY YOUR EQUIPMENT PROVIDER OR A QUALIFIED SERVICE TECHNICIAN SHOULD REMOVE THE COVERS OR SERVICE THIS DEVICE.**

**WARNING: ONLY ACCESSORIES RECOMMENDED BY THE MANUFACTURER. USE OF ANY OTHER MAY BE HAZARDOUS, CAUSE SERIOUS DAMAGE TO YOUR OXYGEN CONCENTRATOR AND WILL VOID THE WARRANTY.**



**WARNING: THE MANUFACTURER RECOMMENDS AN ALTERNATE SOURCE OF SUPPLEMENTAL OXYGEN IN THE EVENT OF A POWER OUTAGE, ALARM CONDITION, OR MECHANICAL FAILURE. CONSULT YOUR PHYSICIAN OR EQUIPMENT PROVIDER FOR THE TYPE OF RESERVE SYSTEM REQUIRED.**

**WARNING: IN THE EVENT THERE IS A SERIOUS INCIDENT OCCURRING WITH THIS DEVICE, THE USER SHOULD IMMEDIATELY REPORT THE INCIDENT TO THE PROVIDER AND/OR THE MANUFACTURER. A SERIOUS INCIDENT IS DEFINED AS AN INJURY, DEATH, OR POTENTIAL TO CAUSE INJURY/DEATH SHOULD THERE BE A REOCCURRENCE OF THE INCIDENT. THE USER CAN ALSO REPORT THE INCIDENT TO THE COMPETENT AUTHORITY IN THE COUNTRY WHERE THE INCIDENT OCCURRED.**



**WARNING: SMOKING WHILE USING OXYGEN IS THE NUMBER ONE CAUSE OF FIRE INJURIES AND RELATED DEATHS. YOU MUST FOLLOW THESE SAFETY WARNINGS:**

**WARNING: DO NOT ALLOW SMOKING, CANDLES, OR OPEN FLAMES IN THE SAME ROOM WITH THE DEVICE OR THE OXYGEN-CARRYING ACCESSORIES.**

**WARNING: SMOKING WHILE WEARING AN OXYGEN CANNULA MAY CAUSE FACIAL BURNS AND POSSIBLY DEATH.**

**WARNING: IF YOU SMOKE, THESE 3 STEPS MAY SAVE YOUR LIFE: TURN OFF THE OXYGEN CONCENTRATOR, TAKE OFF THE CANNULA, AND LEAVE THE ROOM WHERE THIS DEVICE IS LOCATED. IF UNABLE TO LEAVE THE ROOM, YOU MUST WAIT 10 MINUTES AFTER YOU HAVE TURNED THE OXYGEN CONCENTRATOR OFF BEFORE SMOKING.**

**WARNING: "NO SMOKING – OXYGEN IN USE" SIGNS MUST BE PROMINENTLY DISPLAYED IN THE HOME, OR WHERE OXYGEN IS IN USE. PATIENTS AND THEIR CAREGIVERS MUST BE INFORMED ABOUT THE DANGERS OF SMOKING IN THE PRESENCE OF, OR WHILE USING, MEDICAL OXYGEN.**

**WARNING: DO NOT USE YOUR OXYGEN CONCENTRATOR IN THE PRESENCE OF FLAMMABLE GASES. THIS CAN RESULT IN RAPID BURNING CAUSING PROPERTY DAMAGE, BODILY INJURIES OR DEATH.**

**WARNING: REMOVING THE CANNULA AND PUTTING IT ON CLOTHING, BEDDING, SOFAS, OR OTHER CUSHION MATERIAL WILL CAUSE A FLASH FIRE WHEN EXPOSED TO A CIGARETTE, HEAT SOURCE, OR FLAME.**

**WARNING: DO NOT LEAVE A NASAL CANNULA ON OR UNDER CLOTHING, BED COVERINGS OR CHAIR CUSHIONS. IF THE UNIT IS TURNED ON BUT NOT IN USE, THE OXYGEN WILL MAKE THE MATERIAL FLAMMABLE. SET THE I/O POWER SWITCH TO THE 0 (OFF) POSITION WHEN THE OXYGEN CONCENTRATOR IS NOT IN USE.**

**WARNING: PATIENT OR OTHERS MAY BE ENTANGLED IN CANNULA OR OTHER TUBING CAUSING ASPHYXIATION.**

**WARNING: DO NOT BLOCK ACCESS TO THE AC POWER CORD, IN THE EVENT OF AN EMERGENCY.**



**WARNING: ACCESSORIES MAY CONTAIN PHthalATES. CHILDREN, PREGNANT OR NURSING WOMEN SHOULD NOT USE ACCESSORIES THAT CONTAIN PHthalATES.**



**CAUTION:** Always disconnect AC power supply from the wall before disconnection the AC power supply from the oxygen concentrator.

**CAUTION:** Always place oxygen supply tubing and power cords in a manner that prevents a trip hazard.

**CAUTION:** When using the Oxygen Concentrator in an automobile, boat, or on other DC sources with the DC power supply, make sure that the vehicle is started and running before connecting the Oxygen Concentrator. If the DC power supply does not illuminate and requires resetting, disconnect the DC power supply from the DC outlet, restart your vehicle, and then reconnect your DC power supply into the DC outlet. Failure to follow these instructions can result in the power supply not supplying power to the Oxygen Concentrator.

**CAUTION:** When the automobile in which you are using the Oxygen Concentrator unit is turned off, disconnect and remove the device from the automobile. Do not store the Oxygen Concentrator in a very hot or cold automobile or in other similar, high-or low-temperature environments.



**CAUTION:** In the event of an alarm or you observe the Oxygen Concentrator is not working properly; consult the Troubleshooting section in this manual. If you cannot resolve the problem, consult your Equipment Provider.

**CAUTION:** To prevent a void warranty, follow all manufacturers' instructions.

Note: Portable and mobile RF communications equipment can effect medical electrical equipment.

## What is the Oxygen Concentrator

The air we breathe contains approximately 21% oxygen, 78% nitrogen, and 1% other gasses. In the Eclipse 5, room air is drawn into the machine through the air intakes. It then passes through an adsorbent material called molecular sieve. This material separates the oxygen from the nitrogen and allows only the oxygen to pass through. The result is a flow of high-concentration oxygen delivered to the user.

The Eclipse 5 combines advanced oxygen concentrator and oxygen conserving technologies to create a portable device that allows for maximum portability and ambulation. The advanced pulse flow delivery quickly senses when the user breathes in and delivers a pulse of oxygen at the beginning of each inhalation. Pulse flow delivery is ideal for activities and time away from home. It conserves oxygen and extends battery life as opposed to continuous flow. The Eclipse 5 is lightweight enough to be carried via handle or cart. It can be operated on AC, DC (vehicle) or battery power.

The Essential Performance of the Eclipse 5 is to provide oxygen concentrations between 82% to 96% at the prescribed flow setting. If Essential Performance cannot be attained the Eclipse 5 Low Priority Technical Alert will be activated. If the Eclipse 5 is exposed to an extreme electromagnetic disturbance the device may shut down without activating the alert.

The Eclipse Oxygen System is intended for the administration of supplemental oxygen to the patient continuously in the end user's home or for their portable needs outside the home and can also be used in institutions such as nursing homes or sub-acute care facilities. The device is not intended for life support nor does it provide any patient monitoring capabilities. The instruction manual of the device recommends an alternate source of supplemental oxygen in the event of power outage, alarm condition or mechanical failure.

The device is used by COPD patients or those with diminished breathing capacity. The device is prescribed to the patient. Typically the device is sold to a provider that is trained to operate and service the Eclipse 5. The provider trains the user. Those devices purchased through CAIRE's website receive setup instructions and the User Manual that defines setup and usage instructions.

## Recommended Operating Environments

For proper use of the device, the following chart provides important information concerning the recommended operating environments, or operating conditions.

### Specifications

|                                      |   |
|--------------------------------------|---|
| <b>Operating Temperature</b>         | 50° F to 104° F (10° C to 40° C)  |
| <b>Operating Humidity</b>            | 10% - 95% at an 82.4° F (28° C) dew point   |
| <b>Transport/Storage Temperature</b> | -4° F to 140° F (-20° C to 60° C)<br>Humidity: Up to 95% Non-Condensing   |
| <b>Electrical</b>                    | Use no extension cords. Use no electrical outlets controlled by a switch.   |
| <b>Altitude</b>                      | 0 – 13,123 feet (0 - 4,000 meters)  |
| <b>Placement</b>                     | DO NOT block the air inlet (top back cover) or the exhaust vent (back bottom left). Place device a minimum of 3 inches (7.5 cm) away from walls, draperies, furniture, etc. |
| <b>Environment</b>                   | Must be smoke, pollutant, and fume free.  |
| <b>Operating Time</b>                | 24-hours a day when connected to an external AC or DC power source.   |
| <b>Oxygen Concentration</b>          | 90%+5.5%/-3% @ sea level  |
| <b>Dimensions</b>                    | 19.3 high x 12.3 wide x 7.1 deep (inches), 49.0 height x 31.2 wide x 18.0 deep (CM)   |
| <b>Weight</b>                        | Eclipse 15 lbs., Battery 3.4 lbs.   |
| <b>Power</b>                         | AC Power (100-240 VAC, 50-60 Hz; DC Power (12V nominal); Battery (Lithium Ion)  |
| <b>Nominal Battery Recharge Time</b> | 1.8 to 5.0 hrs recharge time to achieve 80% capacity (dependent upon the flow)  |
| <b>Alarms/Alerts</b>                 | Loss of power, Low Battery, Low Therapeutic O2 Output, O2 flow outside normal limits. No Inspiration detected in Pulse Dose Mode, Unit Malfunction                          |
| <b>O2 Concentration Indicator</b>    | Green Light=Normal<br>Yellow=Caution <85%   |
| <b>Outlet Pressure</b>               | Nominal: 7.0 psig<br>Maximum: 14.0 psig   |

|                    |   |
|--------------------|---|
| <b>Sound Level</b> | 48 dBA at 3.0 LPM Continuous Flow Mode; 40 dBA at 3.0 Pulse Dose Setting; 59 dBA while alarming |
|--------------------|---|

|                     |         |
|---------------------|---------|
| <b>Applied Part</b> | Cannula |
|---------------------|---------|

The expected service life is a minimum of five years.



**WARNING: USE OF THIS DEVICE AT AN ALTITUDE ABOVE 13,123 FEET (4,000 METERS) OR OUTSIDE TEMPERATURE OF 50° F TO 104° F (10° C TO 40° C) OR A RELATIVE HUMIDITY ABOVE 95% IS EXPECTED TO ADVERSELY AFFECT THE FLOWRATE AND THE PERCENTAGE OF OXYGEN AND CONSEQUENTLY THE QUALITY OF THE THERAPY.**

Note: If the Oxygen Concentrator has been stored for and extended period of time outside its normal operating temperature range, the unit should be allowed to return to normal operating temperature before use. The recommended time is 3 hours.

### Available Settings

The Eclipse 5, including the cannula and other accessories, are specified for use at the following specific flows.

| <b>Continuous Flow Settings in LPM</b> | <b>Pulse Dose Setting Bolus Size (mL)</b> |
|--|---|
| 0.5                                    | -   |
| 1.0                                    | 16  |
| 1.5                                    | 24  |
| 2.0                                    | 32  |
| 2.5                                    | 40  |
| 3.0                                    | 48  |
| -                                      | 56  |
| -                                      | 64  |
| -                                      | 72  |
| -                                      | 80  |
| -                                      | 88  |
| -                                      | 96  |
| -                                      | 128                                       |
| -                                      | 160                                       |
| -                                      | 192                                       |

Minimum oxygen concentration (82%).

## Proper Placement of the Eclipse 5

Select a location for the device that avoids the intake of smoke, fumes and pollutants. Correct placement of the device should allow intake of air through the air inlet filter at the top rear of the cabinet and allow exhaust air to freely leave the exhaust vent at the bottom left of the device.

Place the device such that the alarms can be heard. Position the oxygen supply tubing in such a way that it does not kink or occlude.



**WARNING: DO NOT USE YOUR OXYGEN CONCENTRATOR IN THE PRESENCE OF FLAMMABLE GASES. THIS CAN RESULT IN RAPID BURNING CAUSING PROPERTY DAMAGE, BODILY INJURIES OR DEATH. USE NO OIL, GREASE, OR PETROLEUM-BASED OR OTHER FLAMMABLE PRODUCTS WITH THE OXYGEN-CARRYING ACCESSORIES OR THE OXYGEN CONCENTRATOR. ONLY WATER BASED, OXYGEN COMPATIBLE LOTIONS OR SALVES SHOULD BE USED. OXYGEN ACCELERATES THE COMBUSTION OF FLAMMABLE SUBSTANCES.**

**WARNING: THIS DEVICE SUPPLIES HIGH-CONCENTRATION OXYGEN THAT PROMOTES RAPID BURNING. DO NOT ALLOW SMOKING OR OPEN FLAMES WITHIN THE SAME ROOM OF (1) THIS DEVICE, OR (2) ANY OXYGEN-CARRYING ACCESSORY. FAILURE TO OBSERVE THIS WARNING CAN RESULT IN SEVERE FIRE, PROPERTY DAMAGE, AND/OR CAUSE PHYSICAL INJURY OR DEATH.**

Note: When the automobile in which you are using the Oxygen Concentrator unit is turned off, disconnect and remove the device from the automobile. Do not store the Oxygen Concentrator in a very hot or cold automobile or in other similar, high-or low-temperature environments. DO NOT leave the Oxygen Concentrator or the Power Supply plugged into the vehicle if the ignition is in the off position. Doing so may drain the vehicle's battery.



**CAUTION: Do not operate unit in a restricted or confined space (i.e., a small case or handbag) where ventilation can be limited. This can cause the Oxygen Concentrator to overheat and impair performance. Do not allow either the air intake or the air outlet vents to become blocked. This can cause the Oxygen Concentrator to overheat and impair performance.**

## Operating Instructions

### Before Operating

This users manual serves as your reference to help you operate and maintain the device. If you have any questions or concerns please call your home care provider.

**Important! DO NOT attempt to operate the Eclipse 5 without first reading the Safety Guidelines section of this manual. Please follow all of the operating instructions. Please observe all Warnings on the device and in the Users Manual. In order to reduce the risk of fire, personal injury and serious damage to the Eclipse 5, please observe all of the safety precautions.**



**WARNING: CLEAN THE CABINET, CONTROL PANEL, AND POWER CORD ONLY WITH A MILD HOUSEHOLD CLEANER APPLIED WITH A DAMP (NOT WET) CLOTH OR SPONGE, AND THEN WIPE ALL SURFACES DRY. DO NOT ALLOW ANY LIQUID TO GET INSIDE THE DEVICE. PAY SPECIAL ATTENTION TO THE OXYGEN OUTLET FOR THE CANULA CONNECTION TO MAKE SURE IT REMAINS FREE OF DUST, WATER, AND PARTICLES.**



**CAUTION: Do not allow either the air intake or the air outlet vents to become blocked. This can cause the Oxygen Concentrator to overheat and impair performance. Do not operate the Oxygen Concentrator without the air intake filter in place. If a second filter is provided, insert the "replacement" filter before you clean the dirty filter. Clean the dirty filter in a warm soap and water solution then dry thoroughly prior to use.**

## Powering on your Eclipse 5

The device is capable of being operated directly from three (3) different power sources:

- AC Power Supply with NEMA Power Cord
- DC Power Supply
- Rechargeable Power Cartridge (Battery)

## General Charging Information

The Eclipse 5 charges the battery while using AC power and when the battery temperature is within safe charging temperature. When external power is disconnected, the device will automatically switch over to the battery if the battery is installed and charged. When external power is restored by plugging into an AC outlet, the device will accept power from the external power source and replenish the battery. It is not mandatory for the battery to be installed for the Eclipse 5 to operate.

Proper connection of the AC or DC Power Supply requires aligning the power plug with the recessed external power receptacle of the device. The recessed external power receptacle is located on the right side of the device when facing the Control Panel. Push the power plug into the recessed receptacle.




**WARNING: THE ECLIPSE BATTERY CARTRIDGE AND DC POWER SUPPLY MUST BE PERIODICALLY CHECKED. WHEN AC POWER IS NOT AVAILABLE THESE ALTERNATE POWER SOURCES MAY BE USED.**



## AC POWER SUPPLY WITH TWO PINS



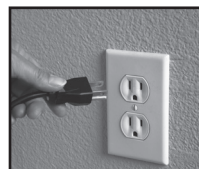
AC Two-Pin Power Supply  
Item# 21334759

The Eclipse 5 includes a universal AC Power Supply for use at home or wherever standard AC power is available. To connect to an AC power source, be sure the AC Power Supply cord is securely inserted into the recessed power receptacle on the side of the device and that the cord from the AC Power Supply is plugged into an AC outlet. When the Eclipse 5 is plugged in properly, a green indicator on the AC Power Supply will light and the External Power Indicator, , will appear on the user control panel.

Step 1



Step 2



Note: Use only electrical voltage specified on the specification label affixed to the device.



**CAUTION: Use only accessories recommended by the manufacturer. Use of any other may be hazardous, cause serious damage to your oxygen concentrator and will void the warranty.**

**CAUTION: Do not use extension cords with this unit or connect too many plugs into the same electrical outlet. The use of extension cords could adversely affect the performance of the device. Too many plugs into one outlet can result in an overload to the electrical panel causing the breaker/fuse to activate or fire if the breaker or fuse fails to operate.**

**CAUTION: Use of cables and adapters other than those specified, with the exception of cables and adapters sold by the manufacturer of the medical electrical equipment as replacement parts for internal components, may result in increased emissions of decreased immunity of the Oxygen Concentrator.**

# Eclipse 5


## DC POWER SUPPLY

DC Power Supply  
Item# 5942-SEQ



A DC Power Supply allows the system to operate from DC outlets, such as those found in motor vehicles.

1. Start your vehicle.
2. Insert the DC cord into the recessed power receptacle on the side of the device.
3. Insert the DC Power Supply plug into the DC power outlet in your motor vehicle.
4. Start the unit on the lowest flow setting and slowly increase the flow setting to the prescribed flow rate. (Starting the unit at a setting of 3 LPM on DC power can cause a temporary overload of the power supply).


When the device is properly connected and receiving power from the DC power source, a green indicator light on the Power Supply and the External Power Indicator  on the control panel will illuminate.

### Eclipse 5 DC Supply Connection

When the Eclipse 5 is connected to the DC supply in a vehicle, the following applies:

- The Eclipse 5 is able to run at all continuous flow settings up to 3.0LPM and all pulse flow settings up to 9.0 (192 mL) while being operated with the DC supply in a car.\*
- The Eclipse 5 is able to charge the battery while on DC Supply in a car while running on continuous flow at 2LPM or less, and at all pulse settings.\*
- If the Eclipse 5 battery is being charged, the battery symbol will waterfall. If the Eclipse 5 battery is not charging, the battery symbol will be displayed solid.

\*Capabilities of the unit on DC power are dependent on the vehicle electrical system. Some features or flow settings may not be available depending on the power available from the vehicle's DC power outlet.



**WARNING: DO NOT ALLOW EITHER THE AIR INTAKE OR THE AIR OUTLET VENTS TO BECOME BLOCKED. THIS CAN CAUSE THE OXYGEN CONCENTRATOR TO OVERHEAT AND IMPAIR PERFORMANCE.**

**WARNING: IF THE VEHICLE'S DC POWER SOURCE DROPS BELOW 11.5 VOLTS, THE ECLIPSE 5 WILL REVERT TO THE BATTERY OPERATION (IF THE BATTERY IS PRESENT AND CHARGED). (THE EXTERNAL POWER INDICATOR MAY REMAIN ON.)**



**CAUTION: The DC Power Supply is designed for 12VDC minimum (150 Watt) vehicle electrical systems. Do not attempt to operate with 6V, 24V, or other vehicle electrical system. Device performance may be impacted by operating on a 120 Watt DC system.**

Note: While operating the device from a DC power supply, the Battery may not charge if the DC power source does not supply sufficient power. The Eclipse will dedicate power to running the device first. Any leftover power is used to supply a trickle charge to the battery.

Note: To ensure that the device is utilizing the DC power, check that the External Power Indicator is illuminated. If a beep is heard, this could indicate a loss of external power. Check if the green Battery Power Verification LED is on or off. If the battery is removed on DC power, it will ensure no loss of charge while the unit is running. If the indicator is not illuminated, the battery is powering the device.

### Settings Available When Operating on DC for Eclipse 5

| Flow Setting (LPM) | Continuous | Bolus Size (mL) | Pulse |
|--------------------|------------|-----------------|-------|
| 0.5                | Yes        | -               | -     |
| 1.0                | Yes        | 16              | Yes   |
| 1.5                | Yes        | 24              | Yes   |
| 2.0                | Yes        | 32              | Yes   |
| 2.5                | Yes        | 40              | Yes   |
| 3.0                | Yes        | 48              | Yes   |
| -                  | -          | 56              | Yes   |
| -                  | -          | 64              | Yes   |
| -                  | -          | 72              | Yes   |
| -                  | -          | 80              | Yes   |
| -                  | -          | 88              | Yes   |
| -                  | -          | 96              | Yes   |
| -                  | -          | 128             | Yes   |
| -                  | -          | 160             | Yes   |
| -                  | -          | 192             | Yes   |



**WARNING: ACTUAL PERFORMANCE OF THE ECLIPSE 5 MAY VARY DEPENDING UPON USAGE CONDITIONS OF THE MOTOR VEHICLE AND THE PERFORMANCE SPECIFICATIONS OR CONDITION OF ITS ELECTRICAL SYSTEM.**

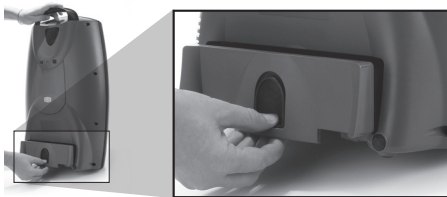
## Rechargeable Power Cartridge (Battery)



Rechargeable Power  
Cartridge (Battery)  
Item#7082-SEQ

The Eclipse 5 can be powered by the rechargeable Power Cartridge (Battery), which is supplied with the device.

Installing the Battery: Align the Battery so that it will slide into the empty Power Compartment. Push the Battery into the empty Power Compartment until it locks (clicks) into position and is flush with the back of the device. When the Battery is properly installed and the Eclipse 5 is ON, the Battery Status Gauge will appear on the Control Panel. (If you DO NOT have a Battery installed, the Power Cartridge Status Gauge will not illuminate). The unit will still operate on external power.



To remove the Battery, pull down on the black release lever. While holding DOWN the release lever, pull the Battery away from the Eclipse 5.

**Battery Operating Times:** The duration-of-use of the Battery is displayed at the top of the Control Panel. A variety of factors, such as flow setting, Pulse or Continuous Flow Mode, and breath rate will impact the operating time. The table Typical New Power Cartridge Operating Times provides operating time estimates for the Eclipse 5 using a new, fully charged Battery based on flow settings and operating conditions as indicated.



**WARNING: FOR OXYGEN CONCENTRATORS EQUIPPED WITH BATTERIES: STORE IN A COOL AND DRY LOCATION TO HELP ENSURE THE LONGEVITY OF YOUR BATTERY. STORING YOUR OXYGEN CONCENTRATOR FOR EXTENDED PERIODS OF TIME AT HIGH TEMPERATURES OR WITH A FULLY CHARGED OR COMPLETELY DISCHARGED BATTERY CAN DEGRADE ITS OVERALL BATTERY LIFE. DO NOT ATTEMPT TO OPEN THE BATTERY; THERE ARE NO SERVICEABLE PARTS INSIDE THE BATTERY. KEEP BATTERIES AWAY FROM CHILDREN.**

### Initial Battery Charging

The new Battery supplied with your Eclipse 5 is not fully charged when it is shipped from the factory. Before using your Eclipse 5 for the first time, you must first fully charge the Battery.

With the AC Power Supply plugged in, and the Battery correctly installed in the Power Compartment of the device, allow the Battery to completely charge. The Battery is fully charged when the Power Cartridge Status Gauge, on the Control Panel, is no longer cascading.

The initial battery charge can occur with the Eclipse either on or off and connected to AC or DC power. The Eclipse can be used while either discharging or recharging the Battery. It may take between 2 and 5 hours, dependent upon the flow setting, to achieve 80% capacity from a fully discharged Battery. The battery will also recharge when the Eclipse is plugged into AC or DC power and turned off.



**CAUTION: When the automobile in which you are using the Oxygen Concentrator unit is turned off, disconnect and remove the device from the automobile. Do not store the Oxygen Concentrator in a very hot or cold automobile or in other similar, high-or low-temperature environments. DO NOT leave the Oxygen Concentrator or the Power Supply plugged into the vehicle if the ignition is in the OFF position. Doing so may drain the vehicle's battery.**

**CAUTION: Only use the Manufacturer's provided batteries. For proper battery disposal, contact your Equipment Provider or your local government agency for disposal requirements.**



# Eclipse 5



\* Batteries are recyclable. \*

In the event of an AC or DC power interruption, the Eclipse 5 will beep and automatically switch to Battery operation, as long as the Battery is present and charged. When AC power is restored, the Eclipse 5 will beep and the Battery will automatically start recharging, if not fully charged or too warm. If the Battery is not present, or fully discharged, during an AC power interruption, the Eclipse 5 will shut down and alarm. The Battery is fully discharged when the Power Cartridge Status Gauge on the control panel is no longer illuminated. The device will display a yellow light and sound a beep for 120 seconds. The yellow light will remain on and the beep will repeat after 20 seconds until the device completely shuts down.

Note: Press and hold the Eclipse 5 ON/OFF button for a minimum of 5 seconds, to silence the Loss of Power alarm. Connecting the Eclipse 5 to an external AC power supply for 2 minutes will also eliminate this alarm.

## Typical New Power Cartridge Operating Times

| Continuous Flow | Battery Duration | Pulse Setting | Battery Duration (12 BPM) |
|-----------------|------------------|---------------|---------------------------|
| 0.5 LPM         | 4.4 hours        | -             | -                         |
| 1.0 LPM         | 3.7 hours        | 16mL–1.0      | 5.4 hours                 |
| 2.0 LPM         | 2.0 hours        | 32mL–2.0      | 5.1 hours                 |
| 3.0 LPM         | 1.3 hours        | 48mL–3.0      | 4.9 hours                 |
|                 |                  | 64mL–4.0      | 4.0 hours                 |
|                 |                  | 80mL–5.0      | 3.7 hours                 |
|                 |                  | 96mL–6.0      | 3.5 hours                 |
|                 |                  | 128mL–7       | 2.5 hours                 |
|                 |                  | 160mL–8       | 2.0 hours                 |
|                 |                  | 192mL–9       | 1.7 hours                 |

Note: Operating the Oxygen Concentrator outside of its normal operating temperature range can affect performance and decrease battery run time and/or increase battery charge time. (Refer to the Specifications section in this manual.) You will achieve longer operating time on the Battery if you operate your Eclipse 5 in the Pulse Mode (Physician approved mode).

## Typical Battery Recharge Time

The typical time to recharge your Battery to achieve 80% capacity from a fully discharged Battery is between 2 and 5 hours, depending upon the device flow setting. When the battery is fully charged, the battery gauge will cease cascading. The battery can be charged in the unit when the Eclipse 5 is turned off and plugged in.

If the Battery becomes too warm during discharging, recharging will not begin until the Battery sufficiently cools. Removing the Battery and allowing it to cool may expedite this cooling process.

When operating the Eclipse 5 on DC power, the battery will recharge while the unit is running at 2.0LPM or less if sufficient power is available.

## Typical Power Cartridge Operating Times at 80% Charge

| Continuous Flow | Battery Duration (12 BPM) | Pulse Setting | Battery Duration (12 BPM) |
|-----------------|---------------------------|---------------|---------------------------|
| 0.5 LPM         | 4.0 hours                 | 16mL–1.0      | 3.0 hours                 |
| 1.0 LPM         | 3.5 hours                 | 24mL–1.5      | 3.0 hours                 |
| 1.5 LPM         | 2.5 hours                 | 32mL–2.0      | 3.0 hours                 |
| 2.0 LPM         | 2.0 hours                 | 40mL–2.5      | 3.0 hours                 |
| 2.5 LPM         | 1.5 hours                 | 48mL–3.0      | 3.0 hours                 |
| 3.0 LPM         | 1.3 hours                 | 56mL–3.5      | 3.0 hours                 |
|                 |                           | 64mL–4.0      | 3.0 hours                 |
|                 |                           | 72mL–4.5      | 3.0 hours                 |
|                 |                           | 80mL–5.0      | 2.5 hours                 |
|                 |                           | 88mL–5.5      | 2.5 hours                 |
|                 |                           | 96mL–6.0      | 2.5 hours                 |
|                 |                           | 128mL–7.0     | 2.0 hours                 |
|                 |                           | 160mL–8.0     | 1.5 hours                 |
|                 |                           | 192mL–9.0     | 1.5 hours                 |

## First Time Eclipse 5 Operation

### Step 1: Positioning Your Eclipse 5 for Use

Place the Eclipse 5 in a well-ventilated, well lit area. Be sure the air inlet and exhaust vents are not obstructed.

Position the Eclipse 5 so that all audible and visual indicators or alarms can be easily seen and heard.

Be sure the air inlet filter is in place before operating your Eclipse 5. If the air inlet filter is missing, contact your home care provider. If the air inlet filter is dirty, wash with warm soapy water, rinse with clear water and allow it to dry before placing the air inlet filter back in the device. If necessary, replace it with a new, clean air inlet filter.

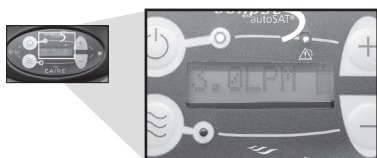


Plug the device into an appropriate AC Power outlet, a DC Power source, or be sure there is a fully charged Battery installed.

### Step 2: Power ON the Device and Allow it to Warm-Up

Press and hold the "ON/OFF" Button for two (2) seconds to power ON your Eclipse 5. A brief audible and visual power-on self-test will occur. Verify that all the power verification indicators are illuminated and that a buzzer sounds to indicate the device is operating properly.

The Eclipse 5 has an oxygen concentration status indicator (OCSI) built in to the device. The OCSI continually monitors the oxygen output of the device and incorporates a green light (normal), yellow light (alert), and a buzzer. These indicators will all illuminate during the power-on self-test at start-up. After initially powering ON the device, please allow up to five (5) minutes for the device to reach its performance specifications. When only the green indicator light is illuminated, the device has reached its performance specifications.



### Step 3: Connect the Oxygen Supply Tubing or Nasal Cannula to the Oxygen Outlet

Replace the cannula and oxygen supply tubing regularly, as recommended by your home care provider. Consult your home care provider for cannula and supply tubing cleaning and replacement information.

Note: Ensure the cannula is fully inserted and secure. This ensures that the Oxygen Concentrator can properly detect inspiration for oxygen delivery. During inhalation, you should hear or feel oxygen flow to the prongs of the nasal cannula. The proper placement and positioning of the prongs of the nasal cannula in your nose is critical to the amount of oxygen delivered to the respiratory system of the end user.

### Step 4: Select the Flow Mode

Press the Flow Mode button to select the desired mode. Pressing this button repeatedly will toggle you back and forth between Pulse Dose Mode and Continuous Flow Mode. The proper mode and proper setting should be prescribed for you by your physician.

#### Continuous Flow Mode Operation:

When operating in the Continuous Flow Mode, a continuous supply of oxygen measured in liters per minute (LPM) will flow through your tubing and nasal cannula.

#### Pulse Dose Mode Operation:

When operating in Pulse Mode, a bolus of oxygen, measured in milliliters (mL), is delivered upon inspiration. DO NOT use a humidifier in the Pulse Dose Mode.

To ensure proper saturations, secure a prescription for pulse dose from your physician with consideration to your needs at rest, during exercise, and when traveling at altitude. Contact your care provider for prescription and boarding forms.

When operating in pulse dose mode, the Eclipse 5 supplies a continuous flow of oxygen if a breath is not detected. The device will continually check for an inspiratory effort every 15 seconds. Once an inspiration is detected, the device reverts to measured bolus delivery. To exit Pulse Dose Mode and engage Continuous Flow Mode, push the flow mode button.

# Eclipse 5

## Pulse Dose Mode and autoSAT Features

Your Eclipse 5 has a feature, called autoSAT® that delivers a consistent-sized bolus of oxygen up to 40 breaths per minute (see Max Breath Rate table below). As your breath rate increases, ie. during ambulation, the autoSAT feature servo-controls the device, delivering the set bolus size. autoSAT Technology is proprietary to CAIRE and is utilized during Pulse Mode only.

### Max Breath Rate

|                        | Pulse Dose Setting | Bolus Size (± 15%) mL | AC Power Supply & Power Cartridge (Battery) | DC Power Supply |
|------------------------|--------------------|-----------------------|---|-----------------|
|                        |                    |                       | Max Breath Rate                             | Max Breath Rate |
| Bolus Volume (+/- 15%) | 1.0                | 16                    | 40  | 40              |
|                        | 2.0                | 32                    | 40  | 40              |
|                        | 3.0                | 48                    | 40  | 40              |
|                        | 4.0                | 64                    | 40  | 31              |
|                        | 5.0                | 80                    | 37  | 25              |
|                        | 6.0                | 96                    | 31  | 20              |
|                        | 7                  | 128                   | 23  | 15              |
|                        | 8                  | 160                   | 18  | 12              |
|                        | 9                  | 192                   | 15  | 10              |

Note: Bolus volume decreases as breath rate exceeds published range.

Note: The pulse dose setting number (1-9) is not equal to LPM.



**WARNING: PULSE DOSE MODE SETTINGS MUST BE DETERMINED FOR EACH PATIENT INDIVIDUALLY FOR THEIR NEEDS AT REST, DURING EXERCISE AND WHEN TRAVELING.**

**WARNING: THE ECLIPSE 5 MAY NOT BE ABLE TO DETECT ALL INSPIRATORY EFFORTS IN PULSE MODE. IF THE ECLIPSE 5 DOES NOT RESPOND TO YOUR INSPIRATION EFFORTS, ASK YOUR HOME CARE PROVIDER TO CHECK THE SENSITIVITY SETTING.**

Note: To Equipment Provider: The following oxygen administration accessories are recommended for use with the Eclipse 5:

- Nasal Cannula: CAIRE Part Number 5408-SEQ
- Firebreak: CAIRE Part Number 20629671

A firebreak is required for use with any cannula.

• CAIRE offers a firebreak intended to be used in conjunction with the oxygen concentrator. The firebreak is a thermal fuse to stop the flow of gas in the event that the downstream cannula or oxygen tubing is ignited and burns to the firebreak. It is placed in-line with the nasal cannula or oxygen tubing between the patient and the oxygen outlet of the Eclipse 5. For proper use of the firebreak, always refer to the manufacturer's instructions (included with each firebreak kit).

• For any additional recommended accessories, please see the Accessories Catalog (PN MLLOX0010) available on [www.caireinc.com](http://www.caireinc.com).

## Step 5: Adjust the Flow Setting to the Prescribed Level

Using the Flow Setting Buttons, adjust the flow setting to the prescribed setting supplied by your physician.



**WARNING: IT IS VERY IMPORTANT TO SELECT ONLY THE PRESCRIBED LEVEL OF OXYGEN. DO NOT CHANGE THE FLOW SELECTION UNLESS YOU HAVE BEEN DIRECTED TO DO SO BY A LICENSED CLINICIAN.**

## Step 6: Begin Using Your Eclipse 5

Breathe normally through the nasal cannula.

## Step 7: Universal Cart Operation

The Universal Cart is designed for use on pedestrian-type surfaces.

Align the locator holes on the bottom of the device to the tabs on the Universal Cart.

Align the large threaded screw to the insert at the back of the Eclipse 5. Then hand-tighten the knob on the cart until the Universal Cart is tightly secured to the device.

Depress the push-button on the Universal Cart handle to adjust the height of the handle.



### Step 8: Power Off the Device

Press and hold the “ON/OFF” Button for two (2) seconds to power OFF your Eclipse 5.



Note: DO NOT operate the Eclipse 5 and ambulate while a humidifier is attached. Remove the humidifier bottle before walking. DO NOT lay the Eclipse 5 down while attached to a humidifier bottle.

Store the Eclipse 5 in a cool and dry location for a period no longer than 1 month. The Eclipse 5 must run for a minimum of 2 hours per month to ensure proper function of the unit.

## User Troubleshooting Table

### Do Not Ignore Alarms



**WARNING: THE MANUFACTURER RECOMMENDS AN ALTERNATE SOURCE OF SUPPLEMENTAL OXYGEN IN THE EVENT OF A POWER OUTAGE, ALARM CONDITION, OR MECHANICAL FAILURE. CONSULT YOUR PHYSICIAN OR EQUIPMENT PROVIDER FOR THE TYPE OF RESERVE SYSTEM REQUIRED.**

| Yellow Light   |  |  |
|--|--|--|
| Symptom  | Possible Cause   | Your Action  |
| The yellow light is on solid. There is no audible alarm.   | The Eclipse 5 has detected a problem with the connection to the power cartridge. | 1) Remove power cartridge and re-install to ensure that it is secure in the concentrator.<br>2) If possible, install a separate power cartridge in the Eclipse 5.<br>3) If this problem persists, contact healthcare provider.   |
| The yellow light is on. Battery symbol is flashing on LCD. | The Eclipse 5 power cartridge may be warm.                                       | 1) Re-attach the Eclipse 5 to external power or install a fully-charged power cartridge in the Eclipse 5. Allow warm power cartridge to cool outside the concentrator for 30 minutes.<br>2) Re-charge the power cartridge using AC power<br>3) Replace the power cartridge if another is available.<br>4) If the condition persists, contact your healthcare provider.   |
| The yellow light is on. Battery symbol is flashing on LCD. | The Eclipse 5 power cartridge voltage may be low.                                | 1) Plug Eclipse 5 into AC power supply and recharge or replace power cartridge with fully charged power cartridge.   |
| The yellow light is on. The green light is off.            | The Eclipse 5 may have detected a flow restriction causing low or blocked flow.  | 1) Clean and replace cabinet inlet filter<br>2) Ensure that the cannula is not kinked or blocked. If used with a humidifier bottle, ensure that it is filled properly and not creating a blockage.<br>3) Ensure that the Eclipse 5 has proper ventilation. It needs to be at least 3 inches from any surface to ensure the vents are not blocked.<br>4) If the problem persists, switch to an alternate source of oxygen and contact healthcare provider for assistance. |

# Eclipse 5

## Alarms Table

| Alarm                                       | LCD Text  | Green     | Yellow | Audio   | Code |
|---|-----------|-----------|--------|---|------|
| All OK, warm-up done                        | NO ALARM  | ON        | OFF    | OFF   | 000  |
| Warm-up O2 < 85%                            | O2 LOW    | ON        | ON     | No Beeps  | 008  |
| No breath detected (less than 45 seconds)   | NO ALARM  | ON        | OFF    | OFF   | 000  |
| No breath detected (exceeding 45 seconds)   | P <--> C  | ON        | ON     | 1 alarm beep, repeat every 20 seconds                 | 200  |
| One wire communication loss                 | ONE WIRE  | ON OR OFF | ON     | 1 alarm beep, repeat every 20 seconds                 | 100  |
| Cannot charge battery                       | CHARGER   | ON OR OFF | ON     | 1 alarm beep, repeat every 20 seconds                 | 001  |
| Ambient pressure fail                       | AMB PRESS | ON OR OFF | ON     | 1 alarm beep, repeat every 20 seconds                 | 004  |
| O2 < 85% (After warm-up)                    | O2 LOW    | OFF       | ON     | 1 alarm beep, repeat every 20 seconds                 | 008  |
| Flow rate error > +/-10%                    | FLOWRATE  | OFF       | ON     | 1 alarm beep, repeat every 20 seconds                 | 020  |
| Warm battery > 60°C                         | WARM BAT  | ON        | ON     | 1 alarm beep, repeat every 20 seconds                 | 002  |
| Low battery (5% remaining battery capacity) | LOW BAT   | ON        | ON     | 1 alarm beep, repeat every 20 seconds                 | 010  |
| Loss of power                               | *****     | OFF       | ON     | 1 alarm beep, repeat every 20 seconds for 200 seconds | 040  |
| Malfunction                                 | FAIL XX   | OFF       | ON     | 1 alarm beep, repeat every 20 seconds for 200 seconds | 080  |

| Other Alarm Conditions   |  |  |
|--|--|--|
| Symptom  | Possible Cause   | Your Action  |
| While in pulse mode, the compressor speeds up and the pulse mode LED turns on. | The Eclipse 5 is unable to detect the user's breathing effort. See page 18 for pulse mode information. | 1) Pulse mode may not work correctly if the user has any condition that causes blocked/restricted nasal passages. (Illness, deviated septum, etc.)   |
|  |  | 2) Ensure cannula is no longer than 7 feet in length.  |
|  |  | 3) Ensure that there are no kinks or blockages in cannula tubing.  |
|  |  | 4) If a humidifier bottle is connected, remove the humidifier bottle and connect cannula directly to outlet port. Pulse mode will not work with a humidifier bottle installed.   |
|  |  | 5) If the condition persists, contact your healthcare provider.  |
| Power Cartridge is draining while plugged in to AC/DC power supply             | The Eclipse 5 is not receiving power from the attached power supply.                                   | 1) Verify that the outlet is providing power. Do not connect the power supply to a dimmer circuit or a power strip.  |
|  |  | 2) Check that cable connections on power supplies are secure to the wall/vehicle and concentrator. If using the AC power supply, check the cable connection on the power supply transformer as well.   |
|  |  | 3) Ensure that the power verification lights are on.   |
|  |  | - There will be a green light on the power supply box.   |
|  |  | - There will be a green light on the Eclipse 5 concentrator control panel in the shape of a power cord.  |
| The Power Cartridge (battery) charge is not lasting as long as it should.      | The power cartridge was not fully charged  | 4) If power verification LEDs are not lit, remove all connections of the power supply for 20 seconds and reconnect.  |
|  |  | 5) If the condition persists, contact your healthcare provider.  |
|  | The Eclipse 5 was not operating at the anticipated flow rate.  | 1) Connect to AC power to recharge the battery. Verify that the battery charges for 2-5 hours and the battery icon is full and not flashing before use.  |
|  |  | 2) Refer to the actions for "Power Cartridge is Not Charging" Symptom below.   |
|  | The power cartridge is not performing to specifications.   | 1) Ensure that you are using the flow rate prescribed by your physician and that pulse or continuous flow is being used as required.   |
|  |  | 1) Attempt to drain the battery cartridge completely. Do this by running the Eclipse 5 on battery power until the machine shuts off completely. Then remove the battery and allow it to cool for approximately 30 minutes. After this time, re-insert the battery in the Eclipse 5 and recharge it using AC power. |
|  |  | 2) If the battery still does not last as long as it should after following step 1, contact your healthcare provider.   |

# Eclipse 5

| Symptom  | Possible Cause  | Your Action   |
|--|---|---|
| The Power Cartridge (battery) is not charging. | The Eclipse 5 is not receiving external AC or DC power to charge the battery. | 1) Verify that the AC or DC outlet is providing power. Do not connect the power supply to an AC dimmer circuit or a power strip.  |
|  |   | 2) Check that cable connections on power supplies are secure to the wall/vehicle and concentrator. If using the AC power supply, check the cable connection on the power supply transformer as well.                      |
|  |   | 3) Ensure that the power verification lights are on.<br>- There will be a green light on the power supply box.<br>- There will be a green light on the Eclipse 5 concentrator control panel in the shape of a power cord. |
|  |   | 4) If power verification LEDs are not lit, remove all connections of the power supply for 20 seconds and reconnect.   |
|  |   | 5) If the condition persists, contact your healthcare provider.   |
|  | The Eclipse 5 is not properly communicating the power cartridge to charge it. | 1) Remove power cartridge and re-install to ensure that it is secure in the concentrator.   |
|  |   | 2) Inspect the Eclipse 5 for a solid yellow light when the battery is installed, or a flashing battery icon when attempting to charge. If either of these symptoms is present, continue to step 3                         |
|  |   | 3) If possible, install a separate power cartridge in the Eclipse 5. If the replacement cartridge works properly, then the original cartridge needs to be replaced.   |
|  |   | 4) If this problem persists, contact healthcare provider.   |



## Cleaning, Care & Routine Maintenance

### Routine Maintenance

Servicing of the internal components inside the cabinet of the Eclipse 5 must be conducted by a CAIRE trained and qualified service technician as needed.

Preventative Maintenance (PM) to be completed on an annual or yearly basis. Consult your provider to arrange PM schedule. Your home care provider or qualified technician will perform inspections of the alarms, internal 9-volt battery, battery, internal filters and other internal parts only as needed.

### User Care and Cleaning of the Device

#### Cannula Replacement

Replace your supply tubing and cannula on a regular basis as recommended by your home care provider. Your physician or home care provider will provide you with cleaning, disinfection and replacement information.

Note: Always follow the cannula manufacturer's instructions for proper use. Replace the disposable cannula as recommended by the cannula manufacturer or your Equipment Provider. Additional supplies are available from your Equipment Provider.

#### Air Inlet Filter

Ambient air is drawn into the device through the air inlet located on the top rear of the device. Cleaning the air inlet filter is the most important maintenance activity you will perform as a user. Cleaning the air inlet filter will keep your Eclipse 5 performing properly. Check this air inlet filter daily and clean it at least once a week using the following procedure:

1. Remove the air inlet filter
2. Wash the filter in warm tap water using a mild soap detergent solution
3. Rinse the filter thoroughly with clear tap water and squeeze out the excess water
4. Allow the filter to air dry
5. Reinsert the filter in the cabinet



Cleaning tip: Keep a clean second filter as a replacement for use when one filter is drying.



**CAUTION:** Do not operate the Oxygen Concentrator without the air intake filter in place. If a second filter is provided, insert the "replacement" filter before you clean the dirty filter. Clean the dirty filter in a warm soap and water solution then dry thoroughly prior to use.

Note: The Manufacturer does not recommend the sterilization of this equipment.

Note: Do not operate the Oxygen Concentrator without the air intake filter in place. If a second filter is provided, insert the "replacement" filter before you clean the dirty filter. Clean the dirty filter in a warm soap and water solution then dry thoroughly prior to use.

The air inlet filter should be replaced annually. If the Eclipse 5 is used in a dusty environment, the filter may need to be replaced more frequently. You should not operate the Eclipse 5 without an air inlet filter installed for more than 5 minutes.

#### AC Power Supply, DC Power Supply, Power Cord and Outer Case:

Turn OFF the Eclipse 5 and disconnect from AC or DC power before any cleaning or disinfection activity. DO NOT spray the outer case directly. Use a damp (not wet) cloth or sponge. Spray the cloth or sponge with a mild detergent solution to clean the cabinet and power supplies. To disinfect the Eclipse 5, use Lysol® Brand II disinfectant (or equivalent). Proceed as directed by the cleaner manufacturer.



**WARNING: ELECTRICAL SHOCK HAZARD. TURN OFF THE UNIT AND DISCONNECT THE POWER CORD FROM THE ELECTRICAL OUTLET BEFORE YOU CLEAN THE UNIT TO PREVENT ACCIDENTAL ELECTRICAL SHOCK AND BURN HAZARD. ONLY YOUR EQUIPMENT PROVIDER OR A QUALIFIED SERVICE TECHNICIAN SHOULD REMOVE THE COVERS OR SERVICE THE UNIT. DO NOT USE LIQUID DIRECTLY ON THE UNIT. A LIST OF UNDESIRABLE CHEMICAL AGENTS INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING: ALCOHOL AND ALCOHOL-BASED PRODUCTS, CONCENTRATED CHLORINE-BASED PRODUCTS (ETHYLENE CHLORIDE), AND OIL-BASED PRODUCTS (PINE-SOL®, LESTOIL®). THESE ARE NOT TO BE USED TO CLEAN THE PLASTIC HOUSING ON OXYGEN CONCENTRATOR, AS THEY CAN DAMAGE THE UNIT'S PLASTIC.**

**WARNING: ELECTRICAL SHOCK HAZARD. DISCONNECT THE POWER CORD FROM THE ELECTRICAL OUTLET BEFORE YOU CLEAN THE UNIT TO PREVENT ACCIDENTAL ELECTRICAL SHOCK AND BURN HAZARD. ONLY YOUR EQUIPMENT PROVIDER OR A QUALIFIED SERVICE TECHNICIAN SHOULD REMOVE THE COVERS OR SERVICE THE UNIT.**

**WARNING: CARE SHOULD BE TAKEN TO PREVENT THE OXYGEN CONCENTRATOR AND THE BATTERY FROM GETTING WET OR ALLOWING FLUIDS TO ENTER THE UNIT. THIS CAN CAUSE A MALFUNCTION OR SHUT DOWN, AND CAUSE AN INCREASED RISK FOR ELECTRICAL SHOCK OR BURNS.**

**WARNING: CLEAN THE CABINET, CONTROL PANEL, AND POWER CORD ONLY WITH A MILD HOUSEHOLD CLEANER APPLIED WITH A DAMP (NOT WET) CLOTH OR SPONGE, AND THEN WIPE ALL SURFACES DRY. DO NOT ALLOW ANY LIQUID TO GET INSIDE THE DEVICE. PAY SPECIAL ATTENTION TO THE OXYGEN OUTLET FOR THE CANULA CONNECTION TO MAKE SURE IT REMAINS FREE OF DUST, WATER, AND PARTICLES.**

the humidifier monthly, or as recommended by the manufacturer, or your home care provider. (Do not overfill the humidifier.)



**CAUTION: DO NOT operate the Eclipse 5 and ambulate while a humidifier is attached. Remove the humidifier bottle before walking. DO NOT lay the Eclipse 5 down while attached to a humidifier bottle.**

## Universal Cart

Before cleaning the Universal Cart, remove it from the Eclipse 5. Use a damp (not wet) cloth or sponge and mild detergent solution to clean the Universal Cart.

## Power Cartridge (Battery)

The Battery in the Eclipse 5 requires special care to assure a longer life and the highest level of performance. The CAIRE Battery is the only approved Battery recommended for use with the Eclipse 5. Use a damp (not wet) cloth or sponge to clean the Battery. First spray the cloth or sponge with a mild detergent then clean the Battery case and the latch.

CAIRE Recommended Monthly Battery Service: Run the Eclipse 5 on Battery completely down to power loss condition (yellow light and alarm). Plug Eclipse 5 into AC power and recharge until full on indicator. The device does not have to be running to charge (which allows for shorter charge time).

## Battery Disposal

Your Battery is rechargeable and can be recycled. Always return it to your home care provider for proper disposal. You can also contact your local city or town offices for instructions on proper disposal of the Battery.

## Optional Humidifier

If used, clean your humidifier daily to reduce the possibility of contamination. Follow the cleaning recommendations provided by the home care provider, or the manufacturer of the humidifier. Consult your home care provider for suitable humidifier options and proper placement. Replace

## EMC Testing

Medical equipment needs special precautions regarding EMC and needs to be installed and put into service according to the EMC information provided in this section.

### Guidance and Manufacturer's Declaration—Electromagnetic Emissions

The Eclipse 5 is intended for use in the electromagnetic environment specified below. The customer or the user of the Eclipse 5 should assure that it is used in such an environment.

| Emissions Test  | Compliance | Electromagnetic Environment - Guidance   |
|---|------------|--|
| 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.<br><br>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. |
| RF emissions<br>CISPR 11                                    | Class B    |  |
| Harmonic emissions<br>IEC 61000-3-2                         | Class A    |  |
| Voltage fluctuations/<br>flicker emissions<br>IEC 61000-3-3 | Complies   |  |



**WARNING: THE DEVICE SHOULD NOT BE USED ADJACENT TO OR STACKED WITH OTHER EQUIPMENT. IF ADJACENT OR STACKED USE IS NECESSARY, THE DEVICE SHOULD BE OBSERVED TO VERIFY NORMAL OPERATION IN THE CONFIGURATION IN WHICH IT WILL BE USED.**

**WARNING: THE USE OF ACCESSORIES OTHER THAN THOSE SPECIFIED FOR THE DEVICE IS NOT RECOMMENDED. THEY MAY RESULT IN INCREASED EMISSIONS OR DECREASED IMMUNITY OF THE DEVICE.**

# Eclipse 5

| Guidance and Manufacturer's Declaration—Electromagnetic Immunity  |   |  |
|---|---|--|
| The Eclipse 5 is intended for use in the electromagnetic environment specified below. The customer or the user of the Eclipse 5 should assure that it is used in such an environment. |   |  |
| Immunity test   | Compliance level                                  | Electromagnetic environment – guidance   |
| Electrostatic discharge (ESD) IED 61000-4-2   | ±8 kV contact<br>±15 kV air                       | Floors 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  | ±2 kV   | Mains power quality should be that of a typical commercial or hospital environment.  |
| Surge<br>IEC 61000-4-5  | ±1 kV<br><br>±2 kV                                | 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 IEC 61000-4-11   | 100V-240V   | Mains power quality should be that of a typical commercial or hospital environment. If the user of the Eclipse 5 requires continued operation during power mains interruptions, it is recommended that the Eclipse 5 is powered from an uninterruptible power supply (UPS).  |
| Power frequency magnetic field IEC 61000-4-8  | 30A/m   | Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.  |
| Conducted RF<br>IEC 61000-4-6   | 10 Vrms<br>150 kHz to 80 MHz                      | The Eclipse 5 complies with all applicable electromagnetic compatibility requirements (EMC) according to IEC 60601-1-2:2014, for residential, commercial and light industry environments. Portable and mobile RF communications equipment should be used no closer to any part of the machine, including cables, than the recommended 10cm separation distance. The Eclipse 5 has been designed to meet EMC standards. However, should you suspect that the machine performance (e.g. pressure or flow) is affected by other equipment, move the machine away from the possible cause of the interference. |
| Radiated RF<br>IEC 61000-4-3  | 9 V/m to 85 V/m<br>At frequencies, up to 5.785GHz | The Eclipse 5 complies with Part 15 of the FCC rules and industry Canada license-exempt RSS standards. Operation is subject to the following two conditions: this machine may not cause harmful interference, and this machine must accept any interference received, including interference that may cause undesired operation.<br><br>FCC ID: WAP2001  |



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CAIRE Inc.  
2200 Airport Industrial Dr., Ste. 500  
Ball Ground, GA 30107 U.S.A.



Medical Product Service GmbH  
Borngasse 20  
35619 Braunfels, Germany  
Tel: +49 (0) 6442-962073  
E-mail: [info@mps-gmbh.eu](mailto:info@mps-gmbh.eu)



Accumed Sagl Viale  
Serfontana 10  
6834 Morbio Inferiore  
Switzerland

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