AMSR
AMERICAN MEDICAL
SALES AND REPAIR

eclipse 3™ WITH autoSAT®

Eclipse 3™ with autoSAT®

Personal Ambulatory Oxygen System (PAOS)™

USERS MANUAL

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SEQUAL®

WARRANTY EXCLUSIONS

Abuse & Misuse. Defects or damages resulting from service, testing, adjustment, installation, alteration, maintenance or modification in any way are excluded from coverage, including:

a. improper operation, storage, abuse, accident or neglect, such as physical damage to the surface of the product resulting from misuse
b. ingress of liquids, water, rain, extreme humidity, sand, dirt or the like, extreme heat, food or animals
c. use of the Products or Accessories for commercial purposes or subjecting the Product and Accessories to abnormal usage or conditions
d. other acts which are not the fault of SeQual, are excluded from coverage or
e. lack of user and/or provider required preventive maintenance and/or calibration.

Use of Non-SeQual endorsed Products and Accessories. Defects or damages that result from the use of non-SeQual branded or certified Products, Accessories, Software or other peripheral equipment are excluded from coverage.

Altered Products. Products or Accessories with:

a. serial number or lot (date) code that has been removed, altered or obliterated
b. broken seals or that show evidence of tampering
c. mismatched board serial numbers or revision combinations or
d. nonconforming or non-SeQual parts are excluded from coverage

Who is Covered?

This warranty extends only to the first consumer purchaser and is not transferable.

What Will SeQual Do?

SeQual may at no charge repair or replace the purchase price of any Products, Accessories or Software that does not conform to this warranty. We may use functionally equivalent reconditioned/refurbished/pre-owned or new Products, Accessories or parts.

You will receive instructions on how to ship the Products, Accessories, or Software, at your expense to a SeQual Authorized Service Center.

No returns without authorization and a written confirmation from SeQual.
To obtain service, you must include:

a. a written description of the problem

b. the name of your Home Health Care Provider if you have one

c. your address, phone number, and email

PRODUCT REGISTRATION

Online Product Registration: www.sequal4me.com
Product registration is an important step toward enjoying your SeQual products. Registering helps us facilitate warranty service and permits us to contact you should your product require an update or other service. Registration is not required for warranty coverage.

For warranty service of your SeQual optional accessories, you will need to provide a copy of your dated sales receipt to confirm warranty status.

Thank you for choosing a SeQual product.

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SEQUAL LIMITED WARRANTY

Subject to the exclusions contained within, SeQual Technologies Inc. warrants its oxygen system products, basic accessories, optional accessories, software and product and accessories that are serviced, repaired or replaced to be free from defects in material and workmanship under normal consumer usage for the period(s) outlined within.

The limited warranty is a consumer's exclusive remedy, and applies as follows to new SeQual Products, Accessories and Software purchased by dealers, distributors and agents.

What Does This Warranty Cover?

PRODUCT	LENGTH OF COVERAGE
Oxygen Concentrator Stationary or Portable Oxygen Concentrators.	**New Product: Three (3) years** from the date of shipment to the Buyer directly from SeQual, or through its Dealers, Distributors or Agents. **Factory Reconditioned Product: Two (2) years** from the date of shipment to the Buyer directly from SeQual, or through its Dealers, Distributors or Agents.
Standard Accessories Parts and pieces shipped with the oxygen system that includes Power Cartridge, AC & DC Power Supplies, Power Cord and Universal Cart.	**One (1) year** from the date of purchase by the Buyer of the product as new equipment.
All Other Parts Parts and pieces that can be used with the oxygen products.	**Ninety (90) days** from the date of purchase by the Buyer as new equipment.
Product and Accessories that are Serviced, Repaired or Replaced by SeQual	**The balance of the original warranty or for ninety (90) days** from the date returned to the consumer, whichever is longer.
Software Applies only to physical defects in the media that embodies the copy of the software (e.g. CD-ROM, thumb drive, or internet download.)	**Ninety (90) days** from the date of purchase by the Buyer of the product as new equipment.

Limitations: In cases where devices are returned for warranty service and no warranted defect is found, a charge may be levied for diagnostics, assembly/disassembly, calibration and testing as required by local, federal or other governing bodies.

WARRANTY EXCLUSIONS

Normal wear and tear. Periodic maintenance, repair and replacement of parts due to normal operation are excluded from coverage.

Power Cartridges (Batteries): Only batteries whose fully charged capacity falls below 80% of their rated capacity are covered by this limited warranty. SeQual recommends replacing Power Cartridge after 2 years.

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

AC Power Supply, DC Power Supply, Power Cord and Outer Case: Turn OFF the Eclipse and disconnect from AC or DC power before any cleaning or disinfection activity. **DO NOT** spray the outer case. 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, use Lysol® Brand II disinfectant (or equivalent). Proceed as directed by the manufacturer.

WARNING:

UNPLUG POWER CORDS, AC OR DC POWER SUPPLIES BEFORE CLEANING THE EXTERIOR CABINET. DO NOT USE DENATURED ALCOHOL OR APPLY LIQUID SPRAY OR AEROSOL CLEANERS TO THE CORDS OR POWER SUPPLIES.

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. Replace the humidifier monthly, or as recommended by the manufacturer, or your home care provider.

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

Power Cartridge (Battery) Cleaning, Care and Maintenance

The Battery in the Eclipse requires special care to assure a longer life and the highest level of performance. The SeQual Battery is the only approved Battery recommended for use with the Eclipse.

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.

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.

WARNING:

USE OF A DAMAGED BATTERY MAY CAUSE PERSONAL INJURY.

PROTECT THE ECLIPSE AND ALL POWER SUPPLIES FROM FLUID SPILLS OR FLUID DRIPS TO AVOID POSSIBLE SHOCK HAZARDS.

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CLEANING, CARE AND ROUTINE MAINTENANCE

Routine Maintenance

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

Preventative Maintenance (PM) should be completed on a regular basis. Consult your provider to arrange PM schedule. Your home care provider or qualified technician will perform inspections and maintenance of the compressor, alarms, internal 9-volt battery, battery 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.

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 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:

THE AIR INLET FILTER SHOULD BE FREE OF LIQUID WATER AND DRY TO THE TOUCH BEFORE REINSTALLATION. MOISTURE IN THE FILTER MAY IMPAIR PROPER OPERATION OF THE ECLIPSE.

NOTE THAT THE SERVICE PORT IS EXPOSED (WHEN THE AIR INLET FILTER IS REMOVED). DO NOT ATTACH ANY CABLES TO THIS SERVICE PORT. THE PART IS TO BE USED BY A QUALIFIED SERVICE TECHNICIAN ONLY.

DO NOT PLACE FOREIGN OBJECTS INTO OR THROUGH THE VENT HOLES OF THE AIR INLET OR EXHAUST VENT.

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WARNING:

A BACK-UP SOURCE OF SUPPLEMENTAL OXYGEN IS RECOMMENDED IN CASE OF A POWER OUTAGE OR A MECHANICAL FAILURE OF THE DEVICE. CONSULT YOUR PROVIDER FOR A BACK-UP SOURCE OF OXYGEN.

TROUBLESHOOTING TABLE DO NOT IGNORE ALARMS.

SYMPTOM	PROBABLE CAUSE	REMEDY
Eclipse does not power on when ON/OFF button is pressed	No Battery installed	Install Battery or plug into external power
	Battery is discharged or no external power is present	Plug into external power
	AC or DC Power Supply is not plugged in correctly	Check plug at outlet, Power Supply box and at the Eclipse to ensure properly plugged in.
	Insufficient power from the outlet	Ensure there is adequate power from the outlet. (Outlet may be controlled by a wall switch or the circuit breaker may have engaged.)
	Other	Contact your dealer/provider
No Oxygen	Filter Blocked	Clean Air Inlet Filter
	Humidifier	Check humidifier attachment and tubing
	Eclipse not ON	Power Eclipse ON
	Tubing or cannula is not properly connected or kinked	Check tubing, cannula and connections
	Other	Contact your dealer/provider
Low Oxygen Concentration	Restriction in tubing or humidifier	Repair or replace tubing or humidifier. Place your Eclipse so there is adequate air flow.
	Filter restricted	Clean or replace air inlet filter. Place your Eclipse so there is adequate air flow.
	Exceeding maximum breath rate in Pulse Mode. *See Pulse Dose Mode Breath Rate Chart (p. 18)	Switch to Continuous Flow Mode until respiratory rate resumes to an acceptable rate.
	Other	Contact your dealer/provider
Low Oxygen Flow	Restriction in humidifier or tubing	Repair or replace humidifier or tubing
	Filter Blocked	Clean or replace air inlet filter
	Other	Contact your dealer/provider
No Oxygen Delivered in Pulse Flow Mode	Tubing/cannula longer than 7 feet (2.1m)	Attach 7 foot (2.1m) tubing/cannula
	Humidifier attached	Remove humidifier
	No inspiration detected	Contact your dealer/provider
	Unit in Continuous Mode	Switch to Pulse Mode
	Nasal cannula not in the nose or mouth breathing	Place nasal cannula in nostrils and breath through your nose
Power Cartridge Status Gauge never indicates fully charged	Power Cartridge (Battery) is aging	Contact your dealer/provider to replace Power Cartridge (Battery)

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Step 6: Begin Using Your Eclipse

Breathe normally through the nasal cannula.

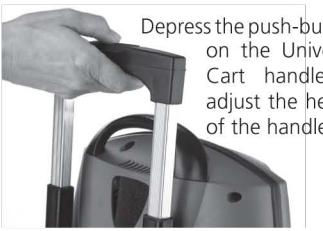
NOTE: You will achieve longer operating time on the Battery if you operate your Eclipse in the Pulse Mode.

Step 7: Universal Cart Operation

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

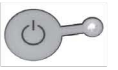
Align the locator holes on the bottom of the device to the tabs on the Universal Cart.

Align the large threaded screw to the insert at the back of the Eclipse. 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.

Store the Eclipse in a cool and dry location.

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

Eclipse Standard Components (Supplied with each Eclipse)

WARNING:

ONLY USE SEQUAL RECOMMENDED ACCESSORIES. OTHERS MAY IMPAIR PERFORMANCE.

UNIVERSAL CART

POWER CARTRIDGE (BATTERY)

AC POWER SUPPLY WITH NEMA POWER CORD

DC POWER SUPPLY

Universal Cart – Your Eclipse can be easily transported while attached to the Universal Cart.The Universal Cart features wheels and a telescoping handle to aid mobility.

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PULSE DOSE MODE AND autoSAT FEATURES

Your Eclipse has a feature, called autoSAT® that delivers a consistent-sized bolus of oxygen up to 40 breaths per minute (see max breath rate chart 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 SeQual and is utilized during Pulse Mode only.

Pulse Dose Setting	Bolus Size (± 15%) mL	AC Power Supply and Power Cartridge (Battery)	DC Power Supply
		Max Breath Rate	Max Breath Rate
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
-	128	23	15
-	160	18	12
-	192	15	10

BOLUS VOLUME (+/- 15%)

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

WARNING:

DO NOT USE SUPPLY TUBING OR CANNULA EXTENSIONS THAT ARE MORE THAN 50' (15.2M) IN LENGTH IN THE CONTINUOUS FLOW MODE.

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

DO NOT EXCEED 7 FEET (2.1M) IN LENGTH OF SUPPLY TUBING OR CANNULA TUBING WHEN OPERATING IN PULSE DOSE MODE IN ORDER TO ADEQUATELY DETECT ADEQUATE INSPIRATORY EFFORT.

AS WITH ALL OXYGEN-CONSERVING TYPE DEVICES, THE ECLIPSE MAY NOT BE ABLE TO DETECT ALL INSPIRATORY EFFORTS IN PULSE MODE. IF THE ECLIPSE DOES NOT RESPOND TO YOUR INSPIRATION EFFORTS, ASK YOUR HOME CARE PROVIDER TO CHECK THE SENSITIVITY SETTING.

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:

DO NOT CHANGE FROM PRESCRIBED FLOW SETTING WITHOUT CONSULTING WITH A QUALIFIED CLINICIAN OR PHYSICIAN.

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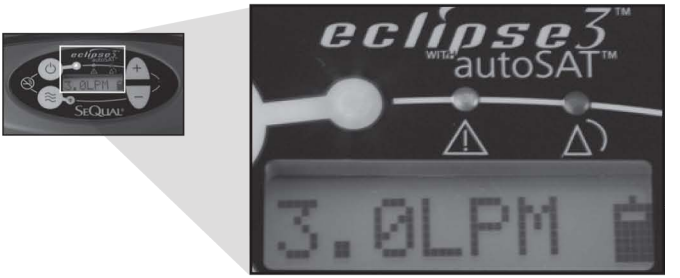
NOTE: If there are three beeps, this indicates a low battery condition for the 9-volt battery inside the cabinet of the Eclipse. Please contact your home care provider and request that the 9-volt battery be replaced.

NOTE: Please allow longer warm up times for cold weather start-ups.

The Eclipse 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), red light (alarm) 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.

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.

Secure a prescription for pulse dose from your physician with consideration to your needs at rest, during exercise and when traveling at altitude.

When operating in pulse dose mode, the Eclipse 3 supplies a continuous flow of oxygen when 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.

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CAUTION:

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

DO NOT ATTEMPT TO OPEN THE BATTERY, THERE ARE NO SERVICEABLE PARTS INSIDE THE BATTERY.

ONLY USE SEQUAL-PROVIDED BATTERIES.

RETURN THE BATTERY TO YOUR HOME CARE PROVIDER FOR PROPER DISPOSAL.

KEEP THE BATTERY AWAY FROM CHILDREN.

TYPICAL BATTERY RECHARGE TIME

The typical time to recharge your Battery, in order to achieve 80% capacity, from a fully discharged Battery is up to 5.0 hours, depending upon the device flow setting. When the battery is fully charged, the battery gauge will cease cascading.

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.

The Battery may not recharge when operating from the DC Power Supply, depending on flow setting and temperature.

The Battery charges when in the device or with the optional Desktop Charger.

OPERATING YOUR ECLIPSE FOR THE FIRST TIME

Step 1: Positioning Your Eclipse for Use

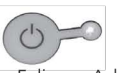
Place the Eclipse in a well-ventilated, well lit area. Be sure the air inlet and exhaust vent are not obstructed.

Position the Eclipse 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. 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 a grounded 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. A brief audible and visual power on self-test will occur. Verify that all the indicators are illuminated and that a buzzer sounds indicating the device is operating properly.

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WARNING:

DO NOT TAMPER WITH, CRUSH, DISASSEMBLE, INCINERATE, OR HEAT THE BATTERY ABOVE 140° F (60° C). DOING SO WILL VOID THE WARRANTY. THE BATTERY MAY PRESENT A RISK OF FIRE, EXPLOSION OR CHEMICAL BURN IF MISTREATED.

CAUTION:

DO NOT LEAVE YOUR ECLIPSE, OR YOUR BATTERY, IN THE SEATING AREA OF YOUR MOTOR VEHICLE OR IN THE TRUNK OF YOUR MOTOR VEHICLE DURING A HOT DAY. NOTE: THE STORAGE TEMPERATURE RANGE FOR THE DEVICE IS -4°F (-20°C) TO +140°F (+60°C) AND 95% NON-CONDENSING HUMIDITY.

ONLY USE SEQUAL-PROVIDED BATTERIES.

*** Batteries are recyclable. ***

In the event of an AC or DC power interruption, the Eclipse will automatically switch to Battery operation, as long as the Battery is present and charged. When AC power is restored, the Battery will automatically start recharging, if not fully charged. If the Battery is not present, or fully discharged, during an AC power interruption, the Eclipse 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 sound a low Battery alert until the device completely shuts down. This audible alert may continue for up to 5 minutes until the device shuts down.

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

TYPICAL NEW POWER CARTRIDGE OPERATING TIMES

FLOW RATE SETTING	*Continuous Flow (LPM)*	mL SETTING	*Pulse Dose Mode (12 BPM)*
0.5	4.4 hours	-	-
1.0	3.7 hours	16mL 1.0	5.4 hours
2.0	2.0 hours	32mL 2.0	5.1 hours
3.0	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	2.5 hours
		160mL	2.0 hours
		192mL	1.7 hours

NOTE: Battery times will decrease with higher bolus size, breath rate, ambient temperature, Battery age and use over time.

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Rechargeable Power Cartridge (Battery)

Item#7082

RECHARGEABLE POWER CARTRIDGE (Battery): The Eclipse 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 into position and is flush with the back of the device. When the Battery is properly installed and the Eclipse 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).

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

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 on page 15 provides operating time ESTIMATES for the Eclipse using a new, fully charged Battery based on flow settings and operating conditions as indicated.

CAUTION:

STORE IN A COOL AND DRY LOCATION TO HELP ENSURE THE LONGEVITY OF YOUR BATTERY.

INITIAL BATTERY CHARGING

The new Battery supplied with your Eclipse is not fully charged when it is shipped from the factory. Before using your Eclipse 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 Eclipse can be used while either discharging or recharging the Battery. It may take up to 5.0 hours, dependent upon the flow setting, to achieve 80% capacity from a fully discharged Battery.

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

WARNING:

SECURE THE ECLIPSE AND DC POWER SUPPLY IN YOUR VEHICLE AND BE SURE THERE IS ADEQUATE AIR FLOW TO THE ECLIPSE AND THAT THE AIR INLET AND EXHAUST VENTS ARE NOT BLOCKED. BLOCKING OF THE AIR INLET OR EXHAUST VENT MAY IMPAIR DEVICE PERFORMANCE.

DO NOT LEAVE THE ECLIPSE AND DC POWER SUPPLY PLUGGED INTO THE VEHICLE IF THE IGNITION IS OFF. DO NOT START THE VEHICLE WHILE THE DC POWER SUPPLY IS CONNECTED TO THE VEHICLE AND THE ECLIPSE. DOING SO MAY DRAIN THE VEHICLE'S BATTERY.

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

NOTE: While operating the device from a DC power supply, the Battery may NOT charge.

NOTE: When operating the Eclipse from a DC power supply, it is recommended that the Pulse Dose Mode be used.

NOTE: To ensure that the device is utilizing the DC power, check that the External Power Indicator is illuminated.If the indicator is not illuminated the battery is powering the device.

SETTINGS AVAILABLE WHEN OPERATING ON DC

Flow Setting	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	NO	40	Yes
3.0	NO	48	Yes
-	-	56	Yes
-	-	64	Yes
-	-	72	Yes
-	-	80	Yes
-	-	88	Yes
-	-	96	Yes
-	-	128	NO
-	-	160	NO
-	-	192	NO

NOTE: Actual performance of the Eclipse may vary depending upon usage conditions of the motor vehicle.

NOTE: When operating with a DC Power Supply, Eclipse settings greater than 2.0 LPM Continuous Flow, will automatically switch to the 2.0 LPM Continuous Flow setting.

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WARNING:

DO NOT USE ANY POWER CORD IF IT IS DAMAGED OR FRAYED. IMPROPER USE OF THE POWER CORD MAY RESULT IN A FIRE HAZARD. DO NOT TOUCH THE METAL CONNECTORS INSIDE THE POWER COMPARTMENT CABINET WITH THE DEVICE CONNECTED TO AN EXTERNAL AC OR DC POWER SOURCE. THIS MAY RESULT IN AN ELECTRICAL SHOCK

AC Power Supply

with NEMA Power Cord
Item# 5941

AC POWER SUPPLY: The Eclipse 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 a grounded AC outlet. When the Eclipse 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

CAUTION:

THE AC POWER CORDS USED WITH THE ECLIPSE MUST MEET THE ELECTRICAL REQUIREMENTS OF THE COUNTRY WHERE THE DEVICE IS USED.

USE ONLY WITH A GROUNDED, 3-PIN RECEPTACLE. DO NOT REMOVE THE GROUNDING PIN FROM THE POWER CORD. USE ONLY WITH SEQUAL SUPPLIED POWER CORDS.

DO NOT CONNECT THE ECLIPSE TO AN EXTENSION CORD, POWER STRIP OR TO AN ELECTRICAL OUTLET CONTROLLED BY A SWITCH.

ALWAYS DISCONNECT AC POWER SUPPLY FROM THE WALL BEFORE DISCONNECTING THE AC POWER SUPPLY FROM THE ECLIPSE.

DC Power Supply

Item# 5942

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.

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CAUTION:

PLACE THE DEVICE IN A WELL-VENTILATED AREA THAT PROVIDES ADEQUATE AIR MOVEMENT. PERIODICALLY CHECK IF AIR IS BEING PREVENTED FROM ENTERING OR EXITING THE DEVICE BY OBSTRUCTIONS SUCH AS FURNITURE, DRAPERIES, BEDDING, CLOTHING OR PETS.

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 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, please observe all of the safety precautions.

WARNING:

PROTECT THE ECLIPSE AND ALL POWER SUPPLIES FROM FLUID SPILLS OR FLUID DRIPS TO AVOID POSSIBLE SHOCK HAZARDS.

CAUTION:

ALWAYS CHECK THAT THE AIR INLET AND THE EXHAUST VENT OF THE DEVICE ARE NOT BLOCKED AND THE AIR INLET FILTER IS CLEAN AND DRY BEFORE USING YOUR ECLIPSE.

POWERING ON YOUR ECLIPSE

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

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

GENERAL CHARGING INFORMATION

The Eclipse charges the battery while using AC power and 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.

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.

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RECOMMENDED OPERATING ENVIRONMENTS

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

Operating Temperature	50° F to 104° F (10° C to 40° C)
Operating Humidity	10% - 95% at an 82.4° F (28° C) dew point
Transport/Storage Temperature	-4° F to 140° F (-20° C to 60° C) Humidity: Up to 95% Non-Condensing
Electrical	Use no extension cords. Use no electrical outlets controlled by a switch.
Altitude	0 – 13,123 feet (0 - 4,000 meters)
Placement	**DO NOT** block the air inlet or the exhaust vent. Place device a minimum of 3 inches (7.5 cm) away from walls, draperies, furniture, etc.
Environment	Must be smoke, pollutant, and fume free.
Operating Time	24-hours a day when connected to an external AC or DC power source.

NOTE: When moving the Eclipse from an extreme temperature environment, please allow time for your device to acclimate to the recommended operating temperature environment.

WARNING:

OPERATING YOUR ECLIPSE OUTSIDE OF THE RECOMMENDED OPERATING ENVIRONMENT MAY NEGATIVELY IMPACT DEVICE PERFORMANCE, MAY CAUSE DAMAGE TO THE DEVICE AND WILL VOID THE WARRANTY.

PROPER PLACEMENT OF THE ECLIPSE

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 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.

DO NOT locate the device near flammable materials or cleaning agents or in the direct path of any heat source, such as a stove, range, heat register or car heater.

Keep the Eclipse at least five (5) feet (1.5 m) from heat sources, sparking objects or open flames.

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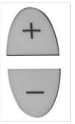
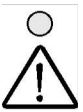


Increase or Decrease Flow Setting Buttons:
Use these buttons to set the flow to your prescribed setting.

Delivery Mode Button and Indicator: The button toggles between Continuous Flow and Pulse Dose Mode. The Pulse Dose Mode activates autoSAT Technology—as your breath rate changes, the Eclipse servo-controls the unit to provide a consistent bulus size. The Pulse Dose Mode allows a significant increase in the operating time while powered by the battery. When this mode is activated, the green Pulse Dose Mode Indicator illuminates and a pulse of oxygen is delivered with each inspiratory effort.



ALERT (Yellow) Indicator—Low and Medium Priority Alerts:
When illuminated, this indicates a low priority awareness condition or Caution. Continue to use your system and refer to the Troubleshooting Table for the proper response. A flashing yellow indicates a medium priority alert. A prompt response is necessary.

ALARM (Red) Indicator—High Priority Alarms: Indicates a high priority alarm condition. An immediate response is necessary. Refer to the Troubleshooting Table and 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.

External Power Indicator: When the Eclipse 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) is used to alert you to the operating condition of the device, either a warning or failure, and to confirm a valid key press by the user.

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HOW YOUR ECLIPSE 3 WORKS

The Eclipse 3, Personal Ambulatory Oxygen System with autoSAT Technology is a portable concentrator used to extract oxygen from the atmosphere, concentrate it to greater than 90% and present it to the patient. The device will operate in Continuous Flow or 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 setting of 16mL to 192mL.

The Eclipse 3 operates from either external power or from an internal rechargeable battery. The system includes a "Smart Battery" charger that recharges the internal battery whenever the Eclipse is connected to external power. The system monitors and controls the power source and the battery charger.

The Eclipse 3 separates oxygen from ambiant air. The air is filtered and then separated into oxygen and nitrogen, the nitrogen is then purged. This cycle concentrates the oxygen.

UNDERSTANDING THE CONTROLS ON THE CONTROL PANEL

USER CONTROLS AND SYSTEM STATUS INDICATORS

The Eclipse control panel displays important operating information. This section will help you understand this 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.

INTRODUCTION TO YOUR ECLIPSE 3

This Users Manual will inform you of the use and care of the Eclipse and its standard components. Please read all of the information in this manual before operating your Eclipse. Contact your home care provider for proper training on the use and care of this device.

Your physician has prescribed supplemental oxygen as part of a treatment plan. Long-Term Oxygen Therapy (LTOT) is now widely accepted as the standard treatment for chronic hypoxia caused by Chronic Obstructive Pulmonary Disease (COPD).

The Eclipse may be used in the home, an institution, a motor vehicle or in a commercial airplane.

Your physician has prescribed specific oxygen flow settings to meet your individual clinical needs.
• at rest • during activities or exercise • at night • for travel at altitude •

Become familiar with the key features of the Eclipse and the user control panel.

1	**Oxygen Outlet Port**	Oxygen supply tubing or a cannula is attached to this port.
2	**Air Inlet Filter** top rear	Ambient air is drawn into the device through the air inlet. This air inlet filter prevents dust and debris from entering the Eclipse and should be cleaned regularly.
3	**Service Port**	This connection, located behind the air inlet filter, allows qualified service personnel to diagnose and monitor the Eclipse performance. This port is not intended for the user.
4	**External Power Receptacle**	The Eclipse AC or DC Power Supply cords may be connected to this receptacle.
5	**Exhaust Vent**	Exhaust air from the Eclipse exits the device from this vent.
6	**Power Cord Retainer**	Retainer to secure the Power Cord.

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POWER CARTRIDGE (BATTERY) SAFETY

WARNING:

DO NOT DISASSEMBLE, PUNCTURE, OR CRUSH THE BATTERY. THE BATTERY ELECTROLYTES MAY BE TOXIC IF SWALLOWED AND CAN BE HARMFUL TO SKIN AND EYES. KEEP AWAY FROM CHILDREN.

DO NOT SHORT-CIRCUIT THE BATTERY'S METAL CONTACTS WITH METALLIC OBJECTS, SUCH AS KEYS OR COINS. THIS MAY CAUSE SPARKS OR EXCESSIVE HEAT TO BE GENERATED.

USE OF A DAMAGED BATTERY MAY CAUSE PERSONAL INJURY.

EXPOSING THE BATTERY TO WATER OR OTHER LIQUIDS MAY CAUSE PERSONAL INJURY.

THE BATTERY MAY EXPLODE AND CAUSE POTENTIAL INJURY IF EXPOSED TO A FIRE, OR DISPOSED OF IN A FIRE.

CAUTION:

DO NOT EXPOSE THE BATTERY TO TEMPERATURES ABOVE 140° F (60°C), SUCH AS IN A VEHICLE PARKED IN THE SUN ON A HOT DAY.

DO NOT DROP THE BATTERY.

CHARGING THE BATTERY BELOW 50° F (10° C) OR ABOVE 104° F (40° C) MAY DEGRADE THE PERFORMANCE OF THE BATTERY.

To charge your battery outside of the Eclipse unit, use the Desktop Charger Item# 7112.

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SAFETY GUIDELINES CONT.

- **Properly secured, belt or otherwise restrain the Eclipse when in a vehicle.**
- **DO NOT use the Eclipse if it has a damaged power cord or plug.**
- **DO NOT drop or insert any objects into any opening on the device.**
- **DO NOT block the air inlet or the exhaust vent of the Eclipse when it is on a soft surface, such as a carpet, bed, couch, chair or automobile seat.**
- **DO NOT cover the device with a blanket, towel or quilt, etc.**
- **DO NOT overfill the optional humidifier. Fill the optional humidifier with water only to the level shown by the manufacturer of the humidifier.**
- **DO NOT ship with battery installed inside the unit.**

GENERAL SAFETY

WARNING:

DO NOT REMOVE THE COVER. THERE ARE NO USER-SERVICEABLE PARTS INSIDE THE DEVICE. ONLY QUALIFIED SERVICE PERSONNEL SHOULD REMOVE THE COVER OF THE DEVICE.

DO NOT OPERATE THE DEVICE, COMPONENTS OR ACCESSORIES ON WET SURFACES OR IN STANDING WATER AND DO NOT SUBMERSE OR EXPOSE TO WATER. THE COVER DOES NOT PROVIDE PROTECTION AGAINST THE INGRESS OF LIQUIDS. MAY CAUSE ELECTRICAL SHOCK OR DAMAGE.

DO NOT INSERT OBJECTS OR HANDS INSIDE THE BATTERY COMPARTMENT WHEN THE BATTERY IS REMOVED, AS ELECTRICAL SHOCK MAY OCCUR IF CONNECTED TO AN EXTERNAL POWER SUPPLY.

PROTECT ELECTRICAL POWER CORDS FROM SHARP EDGES. IF DAMAGED OR FRAYED, ELECTRICAL SHOCK, FIRE AND SERIOUS PHYSICAL INJURY MAY OCCUR.

ONLY USE THE SEQUAL SUPPLIED POWER SUPPLIES WITH YOUR ECLIPSE. USE OF ANY OTHER MAY BE HAZARDOUS, CAUSE SERIOUS DAMAGE TO YOUR ECLIPSE AND WILL VOID THE WARRANTY.

CAUTION:

ALWAYS DISCONNECT AC POWER SUPPLY FROM THE WALL BEFORE DISCONNECTING THE AC POWER SUPPLY FROM THE ECLIPSE.

PLACE OXYGEN SUPPLY TUBING AND POWER CORDS IN A MANNER THAT PREVENTS TRIPPING.

DO NOT PLACE AN OPERATING ECLIPSE IN A ENCLOSED SPACE, SUCH AS A BATHROOM OR CLOSET.

DO NOT EXPOSE THE DEVICE TO TEMPERATURES OUTSIDE OF THE SPECIFIED OPERATING OR STORAGE RANGE AS THIS MAY DAMAGE THE DEVICE.

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INDICATIONS FOR USE

The Eclipse Oxygen System is intended for administration of supplemental oxygen.

Your physician has prescribed a specific oxygen flow setting to meet your individual needs. Ask your physician to provide you with both a continuous flow prescription in LPM and a pulse dose prescription in mL.

OXYGEN FLOW SETTINGS SHOULD BE ADJUSTED ONLY UNDER THE ADVICE OF A PHYSICIAN.

FEDERAL U.S. LAW RESTRICTS THIS DEVICE TO SALE BY OR ON THE ORDER OF A PHYSICIAN.

THE ECLIPSE IS NOT INTENDED FOR LIFE SUPPORTING OR LIFE SUSTAINING APPLICATIONS, NOR DOES IT PROVIDE ANY PATIENT MONITORING CAPABILITIES.

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.

NOT FOR USE IN THE PRESENCE OF FLAMMABLE ANESTHETICS.

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 SERVICED BY A QUALIFIED TECHNICIAN. THE ECLIPSE IS NOT APPROPRIATE FOR ANY PATIENT WHO WOULD EXPERIENCE ADVERSE HEALTH CONSEQUENCES AS THE RESULT OF SUCH TEMPORARY INTERRUPTION.

A BACK-UP SOURCE OF SUPPLEMENTAL OXYGEN IS RECOMMENDED IN CASE OF POWER OUTAGE OR MECHANICAL FAILURE OF THE DEVICE. CONSULT YOUR PROVIDER FOR A BACK-UP SOURCE OF OXYGEN.

SAFETY GUIDELINES

These are **Warnings** and **Cautions** that apply to hazards or unsafe practices that could result in serious injury or property damage.

- **Keep the Eclipse and the power cord away from hot surfaces or open flames.**
- **Your Eclipse should be located in a well-ventilated area to allow for adequate air intake.**
- **Avoid the intake of airborne pollutants, smoke and fumes.**
- **ONLY use this device with accessories specified by, or recommended by, SeQual.**
- **If the Eclipse has been dropped, damaged or exposed to water please contact your home care provider for inspection or possible repair of the device.**

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IPX1

Drip Proof Equipment-IPX1: The Eclipse Power Cartridge (Battery), AC and DC Power Supplies provide protection against the harmful effects of the ingress of liquids. (IPX1, per IEC 60529)

IEC Icon for DC Power (Input)

Type B Equipment: Indicates equipment providing a degree of protection against electric shock, particularly regarding:

- Allowable leakage current;
- Reliability of the protective earth connection (grounding).

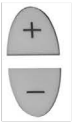
A

Amperes

Alternating Current

Audible Alarm: An audible indicator is provided to announce a reduction in oxygen concentration or when the power has been interrupted or lost.

ON/OFF: Powers the device ON and OFF, but does not directly disconnect the main power.



Increase Flow Setting: Increases the flow setting each time the button is pressed.

Decrease Flow Setting: Decreases the flow setting each time the button is pressed.

Flow Mode: Activates either Continuous Flow Mode or Pulse Mode Operation.

External Power is Present Indicator: Indicates the presence of external power to operate the Eclipse.

Power Cartridge Status Gauge: Shows the amount of charge remaining in the Power Cartridge (Battery).

Power Cartridge Symbol: The symbol on the Power Cartridge (Battery).

O_2

Oxygen Output: The port from which the oxygen flows and where the tubing or interface (standard nasal cannula) is attached.

THE U.S. FEDERAL AVIATION ADMINISTRATION (FAA) HAS APPROVED THIS DEVICE FOR USE ONBOARD COMMERCIAL AIRCRAFT.

Recycle Symbol

WEEE Symbol: Do Not Discard. Recycle. Contact the local city or town offices for instructions on proper disposal of the Power Cartridge (Battery), electrical or electronic equipment.

CE REP

Authorized European Representative

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This Users Manual will inform you about the use and care of the Eclipse and its standard components. Please read all of the information in this manual before operating your Eclipse. Contact your home care provider for proper training on the use and care of this device.

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.

DO NOT: Information needing special attention.

SYMBOLS USED IN THE USERS MANUAL AND ON THE ECLIPSE

Refer to this section for an explanation of the symbols and the Warnings that accompany them.

Read Instructions: Please consult the Users Manual provided with the product.

Attention or Caution: Indicates important information that requires the user to take special precautions when certain conditions are present.

No Smoking or Open Flames: The use of oxygen requires that special care be taken to reduce the risk of fire. Materials that burn in air, and even some materials that will not burn in air, are easily ignited and burn more rapidly in high concentrations of oxygen. For safety concerns, all possible sources of ignition must be kept away from the Eclipse and preferably out of the room in which it is being used. Smoking in the proximity of an operating Eclipse is dangerous, and can permanently damage the device and void the warranty.

Use No Oils or Grease: Indicates important information about the possibility of spontaneous and violent ignition that may occur if oils, grease or other petroleum based substances come into contact with oxygen under pressure.

IPXO

Drip Proof Equipment-IPX0: The Eclipse enclosure does not provide protection against the harmful effects of the ingress of liquids.
(IPX0, per IEC 60529)

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