ResMed

Mobi™

Portable oxygen concentrator

Provider's guide

English

Contents

Welcome

The ResMed Mobi™ is a portable oxygen concentrator (POC).

⚠ WARNING

Read this entire guide before using the device.

⚠ CAUTION

In the US, Federal law restricts this device to sale by or on the order of a physician.

Indications for use

The ResMed Mobi is used on a prescriptive basis by adult patients who are diagnosed as requiring supplemental oxygen. This oxygen concentrator will provide supplemental, high concentration oxygen to these patients. It is not life-supporting or life-sustaining.

It may be used continuously in a home, institution or travel environment. The Mobi is also portable.

Contraindications

- The device is not intended to be life-sustaining or life-supporting.
- In certain circumstances, oxygen therapy can be hazardous. Seek medical advice before using this device.
- The device is designed to provide a flow of high-purity oxygen at four different settings. The device should only be used by patients prescribed oxygen therapy within this range.
- Additional monitoring may be required for patients using this device who are unable to hear, see or understand audible/visual alarms or communicate discomfort.

⚠ GENERAL WARNINGS

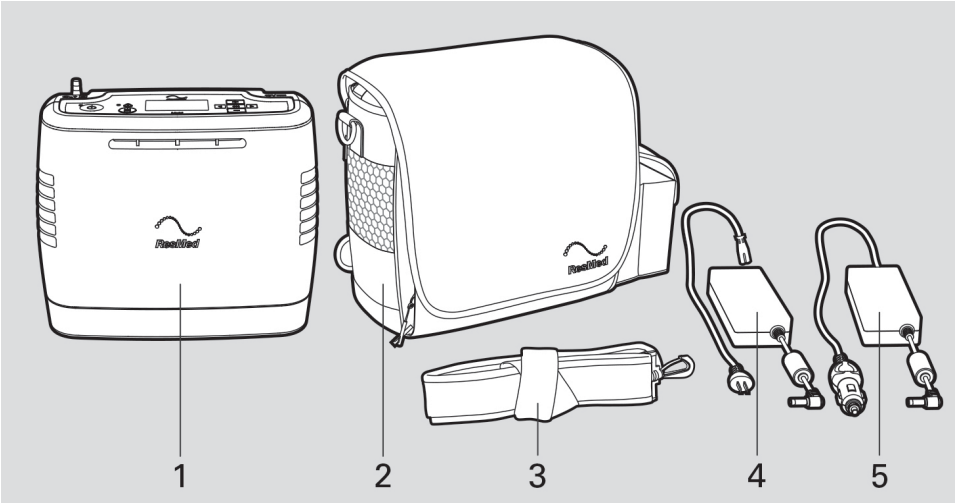
- It is the responsibility of the patient or provider to make back-up arrangements for an alternative oxygen supply in case of power outage or mechanical failure.
- The device is to be operated in the approved carrying case provided or other ResMed approved bag.
- Do not operate the device in any other enclosed bag as improper ventilation will impair performance. Use only the carrying case provided with the device or in a ResMed approved bag.
- Do not open or modify the device. There are no user serviceable parts inside. Repairs and maintenance should only be performed by an authorized ResMed service agent.
- Do not press the control panel buttons or screen with any hard, sharp or small object as it may damage the surface.
- The recommended nasal cannula maximum length to be used with the Mobi is 7 ft (2 m). Be cautious when using the nasal cannula or power cords as there is a risk of strangulation if misused.
- Prolonged exposure to cannula may cause skin irritation.
- Use only with tracheotomized patients when a nasal cannula is utilized.
- Do not use power supplies or accessories other than those provided with the device as the use of non-specified accessories may impair performance.
- Use only spare parts recommended by ResMed to ensure proper function and to avoid the risk of fire and burns.

⚠ GENERAL WARNINGS (continued)

- For proper operation, the device requires unobstructed ventilation. Always make sure any openings in the carrying case provided or in a ResMed approved bag are not obstructed by items which may prevent ventilation. Do not place the device in a small closed space (eg, closet).
- The device should be located as to avoid pollutants or flames.
- 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.
- Portable and mobile RF communications equipment can affect medical electrical equipment.
- When traveling by air, the device and external battery must be transported as carry-on (not checked) baggage.
- Do not operate the device at altitudes, temperatures and humidity levels outside the specified operational environment conditions. Extreme altitudes, temperatures and humidity levels are expected to adversely affect the flow rate and the percentage of oxygen; and consequently the quality of the therapy.
- The device and external battery contain lithium-ion batteries that are subject to special shipping regulations. If shipping either the device or external battery, notify the shipper that the shipment will contain lithium-ion batteries.
- In the event of a battery's cell leaking, do not allow the liquid to come in contact with the skin or eyes. If contact has been made, wash the affected area with ample amounts of water and seek medical advice.
- Do not dismantle, open or shred secondary cells or batteries.
- Do not expose cells or batteries to heat or fire and avoid storing them in direct sunlight.
- Do not use alcohol, solvents, polishes or any oily substances on the device, as they are flammable.
- Do not use oil, grease or petroleum-based products on or near the device as the use of such products may damage the electronic components of the device.
- Do not submerge or expose the device to liquids as it may damage the electronic components of the device.
- Use only water-based lotions or salves before and during oxygen therapy. Do not use petroleum or oil-based lotions or salves to avoid the risk of fire and burns.
- Do not lubricate fittings, connections, tubing or other device accessories to avoid the risk of fire and burns.
- To avoid electric shock, unplug the device and remove the external battery before cleaning the carrying case. Do not put the device under any liquids.
- Always set the device to the patient's prescribed level of oxygen flow. Do not increase or decrease the flow rate from the prescribed level until a physician is consulted.
- Open flames or smoking during oxygen therapy are dangerous and may result in fire, facial burns, or death. Do not allow smoking or open flames within 7 ft (2 m) of the device or any oxygen carrying accessories, such as an attached cannula.
- Oxygen makes it easier for a fire to start and spread. Do not leave the nasal cannula on bed covers or chair cushions if the device is turned on, but not in use; the oxygen can make the materials flammable. Turn the device off when not in use to prevent oxygen enrichment.
- The settings of this device may not correspond with continuous flow oxygen, or other models or brands of oxygen concentrator.
- Use of equipment in environments with strong wind or draughts may affect delivery of oxygen.

At a glance

The Mobi includes the following:

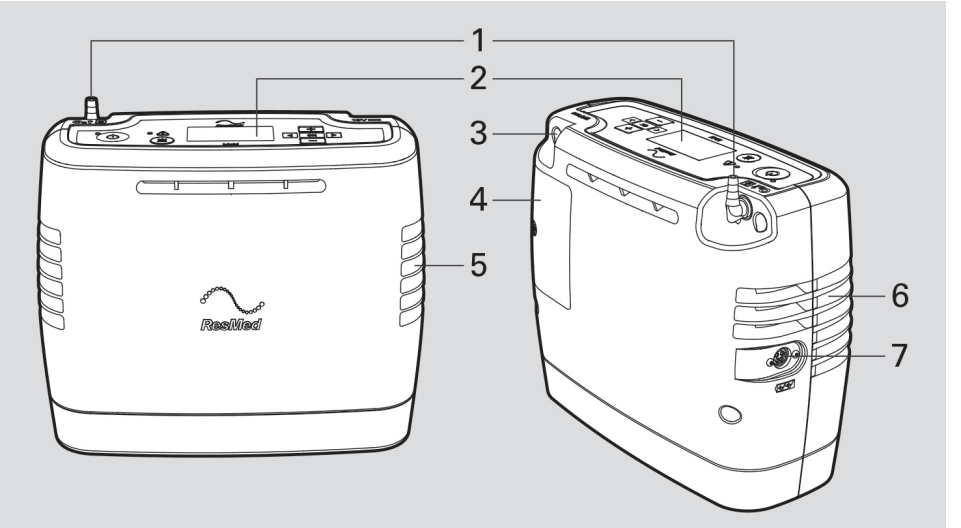


1 Device
2 Carrying case
3 Shoulder strap
4 AC power supply and cord
5 DC power supply

Contact your local ResMed dealer or ResMed office for a range of accessories available for use with the device including:

- External battery
- Standard single-lumen nasal cannula
- Mobi backpack
- Mounting straps.

About the device

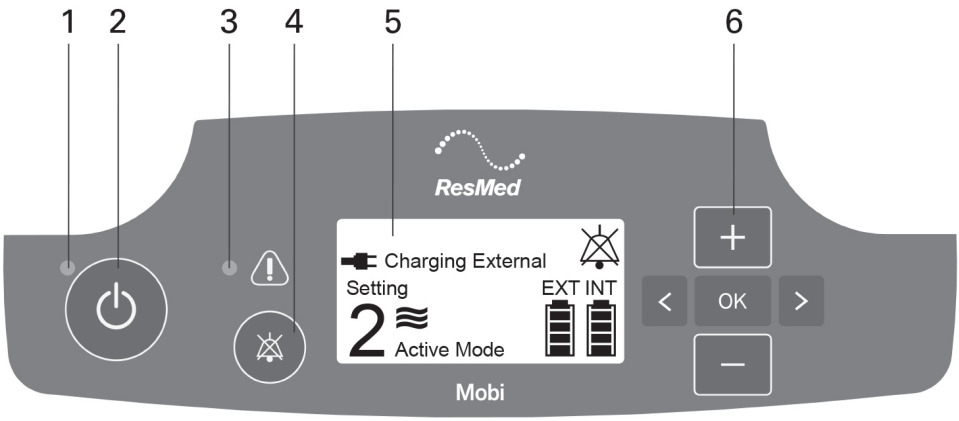


1 Oxygen port
2 Control panel
3 Charger port
4 Air filter cover
5 Fan inlet vent
6 Fan outlet vent
7 External battery port

⚠ CAUTION

The use of accessories or service equipment not specified for use with the device may impair its performance.

Control panel

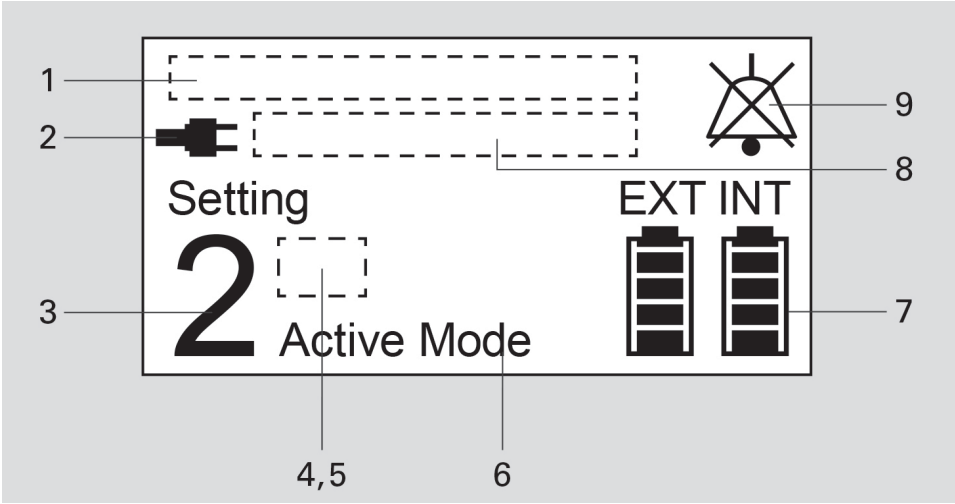


1	Power indicator	Displays a green LED when the device is on and in use.
2	Power button	• Illuminates the display screen when pressed once. • Turns the device on or off when pressed and held.
3	Alarm indicator	Displays a yellow LED and sounds an audible signal (a tone or alarm) when a change in operating status or a condition occurs that requires response.
4	Mute button	Disables audible alarm signals during operation. If an alarm has been muted, the Mute symbol will appear on the Display Screen.
5	Display screen	Displays operational indicators.
6	Navigation controls	Plus and minus buttons: Adjusts the device setting (1, 2, 3 or 4). Right and left arrow buttons: Illuminates the screen when pressed once. OK button: • Illuminates the screen when pressed once. • Displays the device serial number and run times when pressed and held.

⚠ CAUTION

Use the mute button appropriately as it mutes essential audio signals regarding the status of the device.

Display screen



1	**Message field**	Displays the highest priority alarm.
2	**External power symbol**	Displays when the device is connected to an external power supply (AC or DC).
3	**Device setting level**	Represents the selected device setting (1, 2, 3 or 4).
4	**PULSE-WAVE® breath detection symbol**	Displays when a breath is detected and the device delivers a bolus of oxygen.
5	**Auto-dose symbol**	Displays when an automatic bolus of oxygen is delivered.
6	**User mode**	Displays inhalation sensitivity modes: Active or Rest. These settings automatically adjust based on breathing patterns.
7	**INT and EXT battery bars**	Represent the charging level of the internal (INT) and external (EXT) batteries.
		Each battery bar is divided into four segments representing 25% charge levels.
		When the battery is almost empty, an X may show on the battery bar.
8	**Operating status field**	Indicates if the device is **Running**, **Charging Internal** or **Charging External**. When the battery is fully charged, **Charging Internal** or **Charging External** will disappear from the display.
9	**Mute symbol**	Appears only when the mute function is activated.

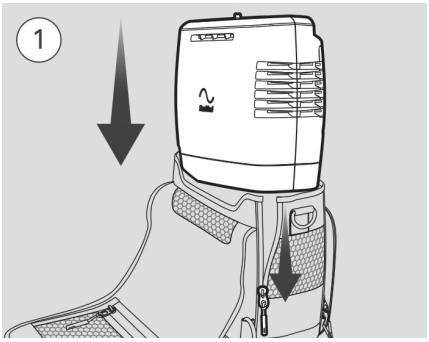
Getting started

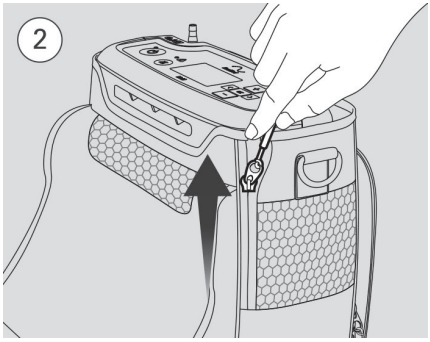
The Mobi is to be operated and stored in its carrying case. Before using the device for the first time, charge the battery and set up the patient's prescribed device setting.

If assistance is needed in setting up, using or maintaining Mobi, contact your local ResMed dealer or ResMed office.

Using the carrying case

The Mobi carrying case provides protection for the device.

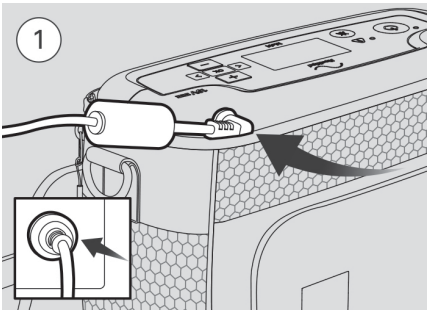


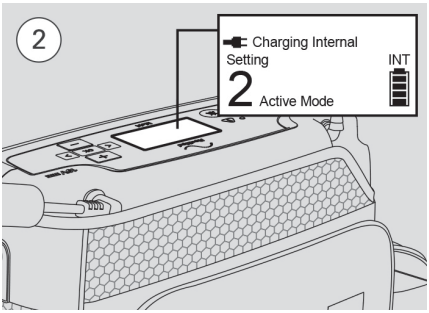


1. Unzip the carrying case and insert the device with the oxygen port and charger port facing the front pocket of the carrying case.
2. Fully zip up the side of the carrying case.

Note: Verify that the air vents are not blocked as blockage may cause the device to overheat during operation and power off.

Charging the internal battery





1. Fully charge the internal battery by connecting the AC power supply to the charger port on the device and a power outlet.

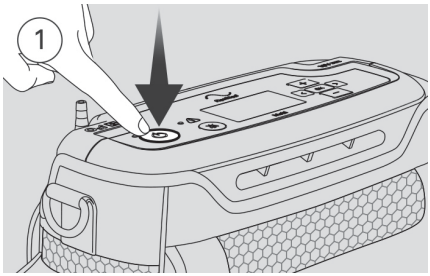
   It can take up to 4 hours to reach a full charge on the internal battery.
2. Verify that the external power symbol, the **Charging Internal** message and the INT battery bar appear on the display screen.

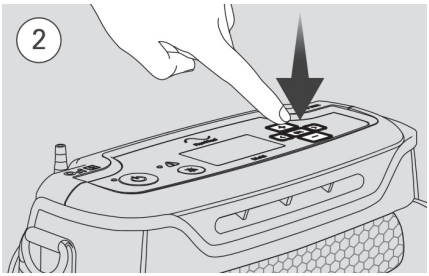
   This indicates that the device recognizes the external power source and is charging the internal battery.

⚠ CAUTION

- If the device has been stored at the minimum or maximum storage temperature, it may take up to 60 minutes at ambient temperature 68° F (20°C) before the device will be ready for use.
- When power supply is connected, ensure that the device is positioned so that it is not difficult to disconnect the power supply.

Setting up the prescribed device setting





1. Press and hold the power button to turn the device on. The display screen and power indicator will illuminate.
2. Use the plus or minus buttons to select the prescribed device setting. This device setting will be set and used when therapy starts.
3. Press and hold the power button to turn off the device.

Power supply options

AC power supply

The device can be powered and charged from a standard 100-240 VAC, 50-60 Hz power outlet.

- When the device is connected to an AC power supply, that power supply powers the device and charges the internal or external battery.
- The external power symbol will appear on the display screen when the device is connected to an AC power supply.
- Using an AC power supply that is not specified by ResMed may damage the device and will void all warranties.

DC power supply

The device can be powered and charged from a vehicle's (eg, car, boat, motor home) standard 12 VDC power outlet.

- The vehicle battery will power the device and charge the internal or external battery.
- The external power symbol will appear on the display screen when the device is connected to a DC power supply.
- The 12 VDC power outlets in some vehicles will not provide sufficient current to operate the device and charge the battery at the same time. Verify that a DC power outlet can provide at least 10 amps at 12 VDC.
- Auxiliary power on vehicles varies significantly, so charge times will vary.
- It is recommended that the vehicle be turned on before plugging the DC power supply into the device.

Internal battery

A rechargeable internal battery is located within each device.

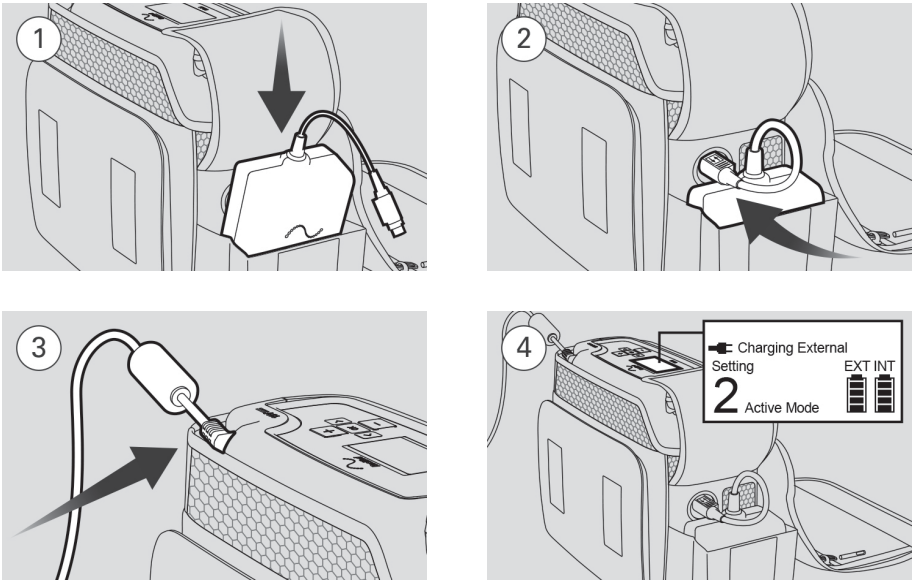
- When the device is being powered by the internal battery, the display will read **Running Internal** and the **INT** battery bar will appear.
- If the device is not connected to the AC or DC power supply, the internal battery will slowly discharge over time even when not in use.
- Always check the battery charge level prior to use to make sure there is an adequate charge.
- It is recommended that the internal battery, even if only partially used, be recharged as often as possible. The internal battery cannot be overcharged, so the device can be left plugged into an external power supply continuously.

External battery

The external battery connects directly into the device's external battery port.

- When the external battery is connected and the device is running, the display will read **Running External** and the **EXT** battery bar will appear.

Charging the external battery



1. Place the external battery into the side pouch.
2. Connect the external battery to the external battery port.
3. Connect the device to a power outlet using either an AC or DC power supply.
4. Verify that the external power symbol, the **Charging External** message and the **EXT** battery bar appear on the display screen.

⚠ CAUTION

- Do not use an external battery that is not authorized by ResMed.
- Ensure that the device is not powered on when connecting and disconnecting the external battery.

Notes:

- It can take up to 2 hours for an external battery to reach a full charge. When the external battery is fully charged, the **Charging External** message will disappear from the display screen.
- By design, the external battery will power the device when the external battery is connected to the device.
- Once the external battery is empty, the device will switch to internal battery power. If both the internal and external batteries are empty, it can take up to 6 hours to achieve a full charge in both batteries.
- A new device or one taken from storage may not display **Charging Internal** or **Charging External** when plugged into the charger. If this operating status does not display, reset the device to default factory settings. Refer to Troubleshooting Alarms to perform an electronic reset (see page 22).
- When **Charging Internal** or **Charging External** appears, leave the charger on. Recharging an empty internal battery can take up to 6 hours and less time for an external battery.

Battery life and recharge times

The following table provides guidance when powering the device with the battery:

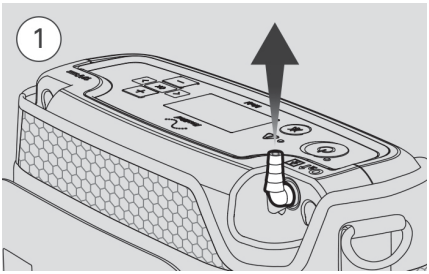
Battery type	Battery life				Battery recharge	
	Device setting				While in use	While not in use
	1	2	3	4		
Internal battery	8.6 hrs	6.0 hrs	3.8 hrs	3.2 hrs	6.1 hrs	3.6 hrs
External battery	4.5 hrs	3.0 hrs	1.9 hrs	1.6 hrs	3.1 hrs	1.8 hrs

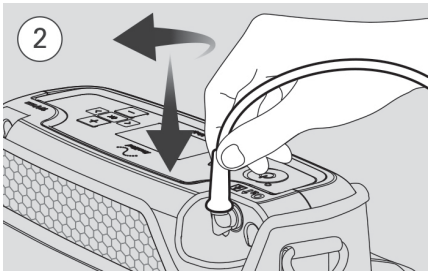
Note: Hours are approximate and based on a breath rate of 20 bpm. The device will operate up to the battery life (hours) specified.

Using a nasal cannula

The oxygen port on the device rotates to reduce the risk of a kinked cannula.

Attaching the cannula

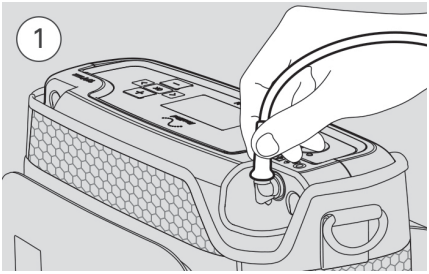


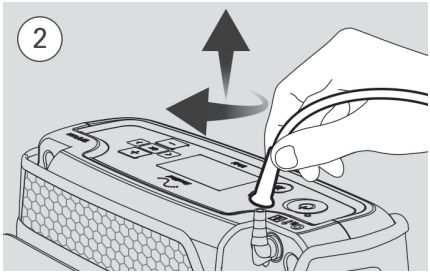


1. Align the oxygen port to the upright position. The oxygen port should be aligned at a 90° position.
2. Install the cannula adapter by rotating and pressing it onto the fitting. Press down to fully seal the connection and test the seal with a light pull.

   Note: To ease cannula removal, the adapter should not be advanced past the fourth rib of the fitting.

Removing the cannula



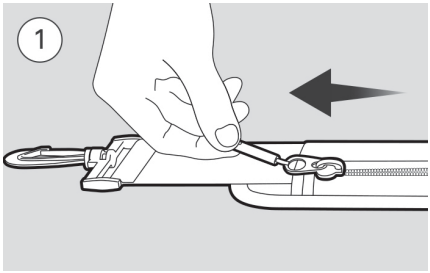


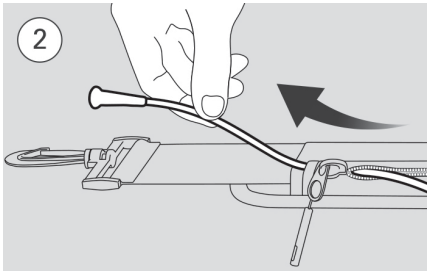
1. Place the fitting in the upright position and grasp the cannula adapter as close to the fitting tip as possible.
2. Remove the cannula by rotating and pulling straight up on the cannula adapter.

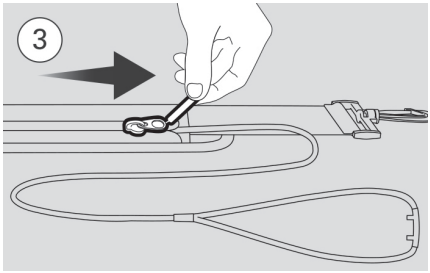
   Note: Do not pull the cannula abruptly or at any direction as it may break the fitting.

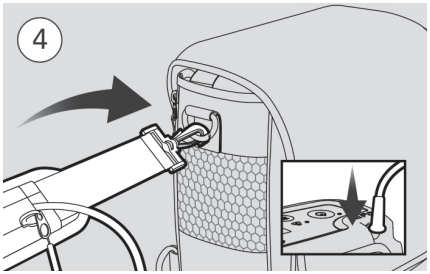
Managing the cannula

The carrying case strap can be used to wrap the cannula tubing. This will prevent the cannula from being pinched or kinked to avoid disruption of oxygen flow.









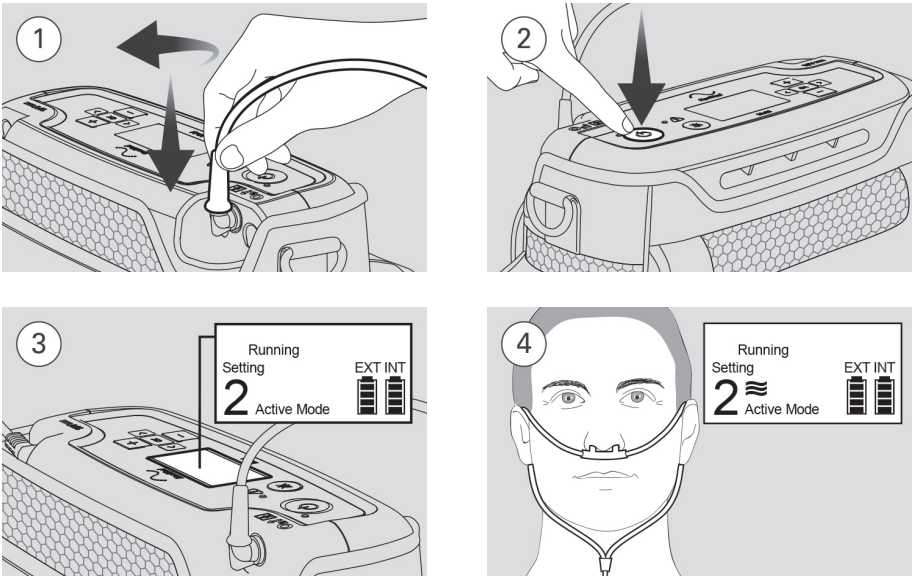
1. Fully unzip the strap.
2. Pass the adapter end of the cannula tubing through the closed zipper end of the strap until the adapter is through. Adjust the cannula tubing to a suitable position.
3. Hold the adapter in position and then zip up the strap.
4. Make sure the zipper is facing outwards then clip the strap to the carrying case and attach the cannula to the device.

Operating the device

Make sure that the device is in a well-ventilated location. The fan inlet and outlet vents must not be obstructed.

Check that the batteries are fully charged before running the device.

Starting therapy



1. Attach the nasal cannula to the oxygen port.
2. Press and hold the power button to start therapy.
3. Confirm the prescribed device setting as established in Setting up the prescribed device setting (see page 8).
4. Position the nasal cannula on the patient's face and let the patient breathe normally. Verify that the ≋ symbol appears on the display screen.

Notes:

- When the device detects inhalation, oxygen is supplied through the cannula. The duration and size of the pulse is dependent upon the device setting selected.
- Allow 3 minutes for the device to reach stated performance. If used routinely, the last used device setting will appear on the display screen after powering on.
- The device utilizes PULSE-WAVE which delivers oxygen corresponding to the inhalation rate. This type of delivery is very gentle so that the bolus of oxygen may not be felt. The ≋ symbol will flash next to the device setting on the display screen every time a breath is detected.
- After starting therapy, check for the ≋ symbol appearing briefly on the screen when the patient starts to breathe in. Wait for approximately 5 minutes to make sure no alarms turn on.
- The cannula may reach a contact temperature of 107.6°F (42°C) when ambient conditions are at 104°F (40°C). Therapy can continue; however, if you feel discomfort or irritation from contact with the cannula, temporarily remove the cannula or relocate to a cooler location.

- It is the responsibility of the equipment provider or clinician to ensure that parts and accessories are compatible with this device prior to use by the patient.

⚠ WARNINGS

- Some respiratory efforts of the patient might not trigger the device.
- Proper placement and positioning of the cannula is critical to the consistent operation of this equipment.
- To ensure correct oxygen therapy is delivered, the device must be used only after one or more settings have been prescribed for you at your specific activity level, and must only be used with the specific combination of parts and accessories used to determine these settings.
- The prescribed device setting may need to be periodically reassessed for effectiveness.

Turning on/off the device

Press and hold the Power button until you hear an audible tone.

Note: The audible tone confirms that the alarm system is functioning and should be heard every time the device is turned on or off.

Verifying normal operation

During normal operation, the Control panel and Display screen should appear as described below:

Operation	Description
Active or Rest Mode activated	The user mode setting will appear next to the selected device setting: • Active Mode—breath rate is typical for an active user. • Rest Mode—breath rate is slower than the normal active breath rate.
Alarm muted	The audible alarm signal will be muted and the Mute symbol  will display on screen. The yellow alarm LED will remain illuminated on the Control panel and the alarm message will remain on the display.
Breath detected	The  symbol will flash as the patient breathes. This indicates that the device is delivering a bolus of oxygen with each inhaled breath. If the patient stops breathing through the nasal cannula (mouth breathing),the  symbol will flash on the display screen and the device will begin delivering boluses of oxygen automatically. After 75 seconds, the device will activate a No Breath Detected alarm and will continue to automatically provide boluses of oxygen until normal breathing resumes. When the device detects normal breathing, the No Breath Detected alarm will cease and the  symbol will display indicating detection of the patient's breath.

Operation	Description
Charging status	The following messages will appear on the display screen depending on the battery charging status: • **Charging Internal**—internal battery is charging. • **Charging External**— external battery is charging. • **Running Internal**—internal battery is in use. • **Running External**—external battery is in use. **Note:** By design, the device will preserve the internal battery charge as long as possible. This means that the external battery will be out of charge before the internal battery and the internal battery will charge before the external battery when connected to power.
Power interruption	The device will emit a two-second audible tone if the AC or DC power is interrupted or intentionally unplugged and the device will automatically switch to battery operation.
Powered on	The power indicator is illuminated green and the display screen is on when the device is powered on.
Setting selected	**1**, **2**, **3** or **4** will appear under **Setting** on the display screen when a setting is selected.

Understanding alarm indicators

The device will activate an alarm to alert you to conditions that may require your attention or action. All the alarms on the device are classified as low priority.

Note: All alarm checks on the device are performed automatically.

Each alarm will trigger:

- a repeating audible tone
- an illuminated yellow Alarm indicator on the control panel
- an alarm message displayed in the Message field unless noted differently below:

Alarm	Description
Low battery	This alarm is triggered when the internal battery has approximately a 5% charge remaining.
Critical low battery	When the internal battery has a <5% charge remaining, a countdown timer of the final 180 seconds of battery life will appear on the display screen and an X will appear over the INT battery bar.
Low oxygen purity	This alarm is triggered when the delivered oxygen concentration is lower than specified.
No breath detected	This alarm is triggered by a kinked cannula, unattached cannula or shallow or mouth breathing.

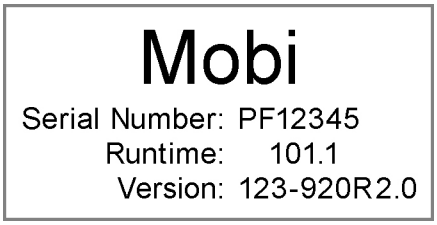
Alarm	Description
High temperature	This alarm is triggered when: • the internal temperature of the device exceeds 149°F (65°C). The device will power off and the audible alarm will cease. The yellow alarm indicator and the alarm message will remain until the device sufficiently cools. • the temperature of the compressor exceeds 167°F (75°C). The device will continue running, but the yellow alarm indicator and the alarm message will remain until the device sufficiently cools.

Accessing maintenance modes

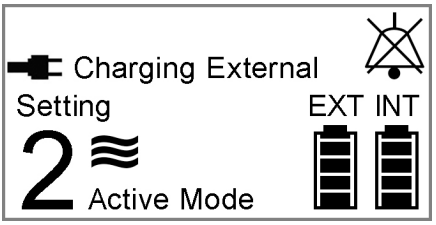
The Mobi control panel allows for simple operation and clearly stated status and alarm conditions for the patient. Additional features are available to the provider for maintenance and technical support.

Device information

There are two patient-facing screens available on the device:



Greeting screen—displays Serial Number, Patient Runtime and Software Version when OK button is pressed and held.



Home screen—displays after turning on the device.

Provider modes

The device includes additional provider modes to enable device maintenance and technical support. These modes are accessed by pressing unique combinations of buttons to prevent patients from accidentally accessing the mode.

- Maintenance mode—allows the provider to set, view or adjust the System Time Clock, Total Run Time and Patient Run Time.
- Auto Pulse mode—allows the provider to test the flow of oxygen purity from the device.

Maintenance mode

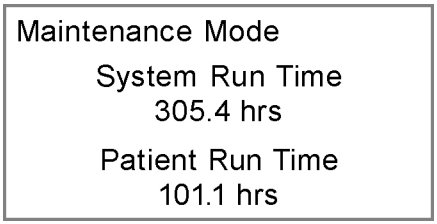
To enter Maintenance mode, press OK, left arrow < and plus + buttons simultaneously on the control panel.

The maintenance screens can then be accessed using the right arrow >. The screens will appear in the following order:

1. Language selection

   This screen allows you to choose the language you want displayed. The default language is English.
2. Run time

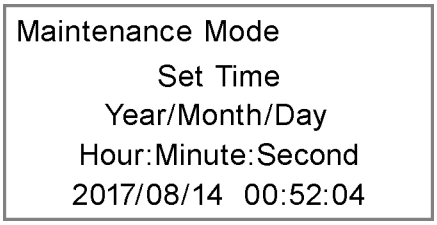
This screen displays both the total System Run Time and the Patient Run Time.



Only the Patient Run Time can be cleared (see step 4). Press the right arrow [>] to move to the next screen.

3. Set time

   This screen allows the time and date to be set on the device.



   - To access the Year, press [OK] with Set Time displayed.
   - To access the next fields (ie, Month, Day, Hour, Minute, Second), press the right arrow [>].
   - To change the values if required, press the plus [+] or minus [−] button.
   - Once complete, press [OK].

4. Clear **Patient Run Time**.

   To reset the Patient Run Time, press [OK]. The display will then show **0.0 hrs**.

   If you do not want to reset the Patient Run Time, do not press [OK]. Press the right arrow [>] to move to the Exit Screen.

5. Exit screen.

   To exit Maintenance mode, press [OK].

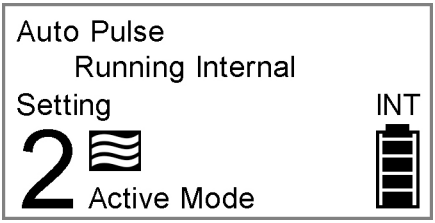
Auto Pulse mode

Placing the device into Auto Pulse Mode will initiate the automatic delivery of pulse boluses so oxygen purity can be checked. This mode is only accessible to the provider by pressing a combination of buttons on the Control Panel.

The recommended oxygen purity measurement device is the PRO_2 check Elite® multifunction oxygen indicator by Salter Labs.

Checking the oxygen purity level

1. Power on the device.
2. Press and release OK, right arrow > and plus + buttons simultaneously. The control panel will display the following:



   The Auto-dose symbol will flash as a bolus is delivered.
3. Select the desired pulse setting.

   Note: This mode delivers a bolus of oxygen at 20 bpm across all pulse settings (1, 2, 3 or 4).
4. Connect 1/8" silicon tubing to the oxygen flow port of the measurement device and the oxygen port on the device.
5. Allow approximately 15 to 30 minutes for the device to reach full oxygen concentration and to stabilize. If you change the pulse setting, allow the device time to stabilize at the new setting before recording readings.

   Note: It is normal for oxygen concentration values to cycle up and down. The highest value should be considered final for the device. If the swing is more than 2%, the device is not yet stable enough to measure.
6. To exit Auto Pulse mode, press OK or hold down the Power button until the device turns off. When powered back on, the device will be in normal operating mode.

Language selection

To enter Language selection screen, press OK, left arrow < and plus + buttons simultaneously on the control panel. This will display the Maintenance mode screen.

1. Press the right arrow > to go the Language selection screen.

   This screen allows you to choose the language you want displayed. The default language is English.
2. To continue in English, press the right arrow > to move to the Run Time screen.
3. To select a language other than English, press minus − and search for available languages.

   Once you have selected the language you want to use, press the right arrow > to move to the next screen.
4. Press OK to exit.

Caring for the device

The device was designed to minimize the amount of required routine maintenance. There are no user repairable parts. Aside from the preventative maintenance outlined below, all other maintenance must be performed by qualified service personnel.

All maintenance must be performed when the device is powered off.

Cleaning the fan vents

Make sure that there is no build-up of lint, hair or other materials that could obstruct the flow of air into the device's fan vents. At least once a month, inspect the grille of the vents, and if it appears dirty, use a dry cotton swab to clean it.

Cleaning the device and carrying case

If it is necessary to clean the device or the carrying case, use only warm water and a mild liquid dish detergent. Dampen a cloth in the solution and carefully wipe the outside surfaces of the device and the carrying case. Allow sufficient drying time before placing the device back in the carrying case.

⚠ CAUTION

Do not use alcohol, solvents, polishes or any oily substances as they may be flammable. Do not stick cotton swab into vent while the device or fan is running as it may cause damage.

Storing the device

Store the device in a cool, dry place where it will remain clean and dry. This will help extend the device service life.

Inspecting the nasal cannula

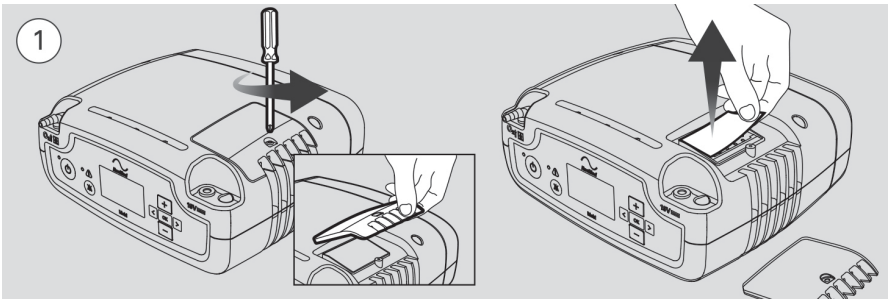
Inspect the nasal cannula and make sure there are no kinks or obstructions. Nasal cannula cannot be used between other patients.

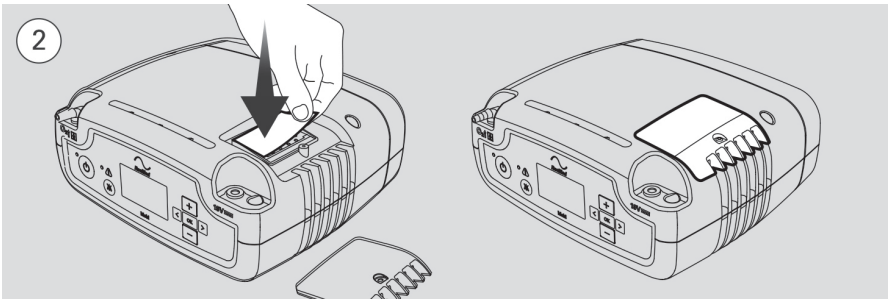
⚠ WARNING

Clean and replace the cannula and tubing as instructed by the manufacturer and your local ResMed dealer or ResMed office.

Replacing the air filter

Check the air filter and replace it at least every 12 months. Replace it more often if there are any holes or blockages caused by dirt or dust.





1. Open the air filter cover and remove the old air filter.
2. Insert a new air filter and replace the air filter cover.

Extending the service life of the rechargeable batteries

The device uses lithium-ion rechargeable batteries.

- Recharge the batteries as often as possible.
- Avoid leaving the device or external battery in a hot environment, especially if exposed to direct sunlight.
- For long term storage of the external battery, it is recommended that a charge of approximately 40% be maintained on the battery.

Traveling with the device

The Mobi is approved by the Federal Aviation Administration (FAA) for use on commercial aircraft. This approval is listed as a part of the labeling on the bottom panel of the device. As every airline has different requirements for traveling with oxygen, review the airline's requirements in addition to following these instructions:

1. Two weeks before traveling, verify that the internal and external battery, if purchased, will provide enough battery life for the trip. Typically, airlines require having enough battery life for one and a half times the duration of the flight.
2. Fully charge the internal and external battery, if purchased, within 24 hours before a trip. Keep the device connected to a power supply until departure.
3. Pack all required accessories, including AC or DC power supplies, the user guide and an extension cord.
4. Download and complete a physician's statement from the airline's website. Have the signed and completed form available for inspection if requested by the airline.

Reprocessing the device

When the device is used for multiple patients, for example, at a health care provider, the device and carrying case should be reprocessed between each patient.

Note: Nasal cannula and inlet air filter cannot be used between other patients and should be disposed of and replaced.

Described here are ResMed's recommended procedures for disinfecting the device and carrying case. However, the steps for disinfection vary regionally and each health care provider should consult its own procedures before carrying out those within this guide.

For cleaning instructions for a device with single user, or cleaning prior to disinfection, refer to the cleaning instructions in Caring for the device (see page 19).

⚠ WARNING

When using disinfectants, always follow the manufacturer's instructions.

Surface disinfection

1. Wipe the exterior of the device including display, externally accessible ports, and carrying bag with a paper or cloth towel and an alcohol disinfectant (Cavicide™).
2. Remove any excess disinfectant with a dry paper or cloth towel.
3. Allow device to completely air dry prior to operation.

Note: Cavicide may not be available in all regions.

Troubleshooting

If you have any problems, have a look at the following troubleshooting topics. If you are not able to fix the problem or if persistent unexpected operation or events occur, contact your local ResMed dealer or ResMed office. Do not try to open the device.

Alarms

Problem/possible cause	Solution
The device is beeping and the alarm LED is on.	
The **No breath detected alarm** has been activated.	Check the cannula to make sure it is open and clear. Let the patient breathe through the nose and verify that the  symbol displays on the screen. If the alarm persists, turn the device off and then turn it back on again to restart the device.
The **Low battery** alarm has been activated.	Approximately 15 minutes of power remain. Connect the device to an AC or DC power supply. Make sure all your charger connections are secure and the Charging Internal message and the external power symbol appear on the display. The device will begin charging and the alarm should stop. If the alarm persists, switch to another source of oxygen and contact your local ResMed dealer or ResMed office.
The **Low oxygen purity** alarm has been activated.	The device is delivering an oxygen concentration lower than specified. It is recommended to reduce activity and if problems persist, switch to a backup source of oxygen and contact your local ResMed dealer or ResMed office.
The **High temperature** alarm has been activated.	Move the device away from any potential heat source and switch to another source of oxygen. After allowing sufficient time to cool, turn on the device. If the alarm resumes, continue to use an alternate source of oxygen and contact your local ResMed dealer or ResMed office.
The display screen is blank.	
Reset required alarm has been activated. A sudden spike in current from an external source of power may have triggered this alarm.	Perform an electronic reset to reset the device to default factory settings: 1. Verify that the device has at least 25% (1 bar) charge on the battery or plug it into an external power source. 2. With the device powered off, press and hold down the power button. The display screen will start flashing. In 10 to 15 seconds, the device will beep one time and the display screen will appear. 3. Release the power button. The device will run for a few seconds and then turn off. If the alarm resumes, immediately after the electronic reset, switch to another source of oxygen and contact your local ResMed dealer or ResMed office.

Rest mode

Problem/possible cause	Solution
The device switches to Rest mode while in active use.	
The device automatically switches to **Rest** mode based on the number of breaths it detected during the last minute.	The oxygen dispensed during **Active** and **Rest** modes is exactly the same, so there is no cause for concern. The mode changes automatically to increase the sensitivity of the device when the patient is sleeping or breathing lightly. Let the patient close their mouth and consciously breathe through the nose, and the device should return to **Active** mode.

Power

Problem/possible cause	Solution
The device will not turn on.	
The battery is out of charge.	Check the internal battery charge level. If it is empty, plug the device into a charger.
Power is interrupted.	
Loose power connections.	If the power was not intentionally removed, check all connections between the device and the power source to make sure all are secured and firmly plugged in. If the Power indicator does not illuminate, switch to another power source (AC or DC) or source of oxygen and contact your local ResMed dealer or ResMed office.

Charging

Problem/possible cause	Solution
The battery does not charge when it is plugged into a vehicle or power outlet.	
Either the AC power outlet is faulty or there is a loose connection.	To determine whether the charger is working, look for the external power symbol on the display. If the symbol does not display, check a green LED on the charger. If there is no green LED on the charger, try another power outlet and make sure the electrical cord from the power outlet is pressed firmly into the charger.
Either the DC power outlet is faulty or there is a loose connection.	If the battery will be charged in a vehicle, the vehicle should be running before the device is plugged in. To determine whether the charger is faulty, look for the **Charging Internal** message on the display screen. If the message does not display, look for a green LED on the charger. If there is no green LED on the charger, unplug the charger and plug it again.
A wrong charger may have been used.	Read the label on the charger and make sure it is an EDAC charger.
If **Charging Internal** is not displayed on the screen, the device must be reset.	Perform an electronic reset. Refer to Troubleshooting alarms (see page 22). **Charging Internal** should appear on the display screen. An overnight charge may be necessary.

Battery

Problem/possible cause	Solution
The battery does not last as long as it used to.	
The rechargeable batteries may have degraded over time.	Charge the battery overnight. Contact your local ResMed dealer or ResMed office if requiring battery replacement.
The external battery is plugged in but the EXT bar does not display.	
The external battery is likely out of charge and could not be detected by the device.	Turn off the device and plug it into a charger while the external battery is connected. Press and hold down the mute and **OK** buttons at the same time. When the **EXT** battery bar flashes on the display screen, release the buttons.
The EXT battery bar has an X over it.	
The external battery may be out of charge.	Charge the external battery. If **Charging External** is displayed on the display screen, the external battery is charging and at less than 3%. The **X** will disappear in this case. If **Charging External** is not displayed, contact your local ResMed dealer or ResMed office.
The INT battery bar has an X over it.	
The internal battery may be almost empty. The X appears at less than 3% charge.	Charge the internal battery. Make sure **Charging Internal** is displayed on screen. The X will disappear in about an hour. If **Charging Internal** does not display, perform an electronic reset (see page 22). **Charging Internal** should appear on the display screen after the electronic reset. An overnight charge may be necessary. If problem persists, contact your local ResMed dealer or ResMed office.
The EXT battery bar does not illuminate after the internal battery has been fully charged.	
External battery is not being detected by the device.	Power off the device and connect it to the AC or DC charger. Press and hold down the mute and **OK** buttons. When the external battery bar starts flashing, immediately release the buttons. If connection is established, the **EXT** battery bar and the **Charging External** message will appear on the display screen.

Note: The warrantied use life of the battery is one year. Refer to the Limited Warranty disclaimer. With proper care and maintenance, the battery can last 500 recharge cycles and may last years. When the device is charging with the rechargeable internal battery, there will be no changes or interruptions in device operation (eg, the device operates and charges simultaneously).

Fan

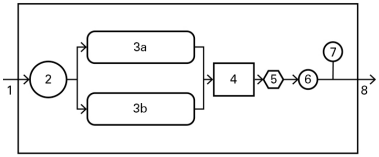
Problem/possible cause	Solution
The fan is running when the device is turned off.	
The fan keeps the device cool when it is operating and batteries cool when they are charging.	When the device reaches full charge, the fan will turn off.

Triggering

Problem/possible cause	Solution
Triggering is inconsistent.	
Breath is not being detected. The device is triggering breaths although there is no breathing into the cannula.	Power cycle the device by turning it off and turning it on again. If problem persists, contact your local ResMed dealer or ResMed office.

Technical specifications

Power supply	
AC input:	100-240VAC, 1.0-2.0A, 50-60 Hz; Output: 19VDC, 6.31A
DC input:	12VDC, 10A; Output: 19VDC, 6.3A
External battery:	14.8V, 4400mAh/65Wh
POC input:	19VDC, 6A
Environmental conditions	
Operating temperature:	41°F to 104°F (5°C to 40°C)
Operating humidity:	15–93%, non-condensing
Operating atmospheric pressure:	700 hPa to 1013 hPa
Operating altitude:	Sea level to 10,000 ft (3,048 m) Performance degradation may occur at high altitude.
Storage and transport temperature:	32°F to 140°F (0°C to 60°C)
Storage and transport humidity:	15–93%, non-condensing
Electromagnetic compatibility	This product complies with all applicable electromagnetic compatibility requirements (EMC) according to IEC 60601-1-2, for residential, commercial and light industry environments.
IEC 60601-1 classification	Class II (double insulation, Type BF when connected to AC/DC or DC/DC power supply. Internally powered when not connected to the AC/DC or DC/DC power supply.
Ingress protection rating	**Device:** IP20 (Protected against access to hazardous parts with a finger or solid foreign objects of 12.5 mm diameter and greater) **Device and carrying case:** IP22 (Protected against access to hazardous parts with a finger or solid foreign objects of 12.5 mm diameter and greater, and protected against vertically falling water drops when tilted up to 15 degrees) **Carrying case:** IP02 (Protected against vertically falling water drops when tilted up to 15 degrees)
Physical	
Weight:	5.5 lbs (2.49 kg)
Dimensions (H x W x D):	7.95" x 9.60" x 4.49" (202 mm x 244 mm x 114 mm)
Housing construction:	Flame-retardant engineering thermoplastic (unless otherwise specified)
Air filter	Two-layered, powder-bonded, polyester non-woven fiber
Nasal cannula	Recommended maximum length: 7 ft (2 m) single-lumen cannula
Applied part	Patient interface (cannula)
Operator	The patient is the intended operator.
Mode of operation	Stationary/portable

Operator position	The device is designed to be operated within arm's length. An operator should position their line of sight within an angle of 30 degrees from a plane perpendicular to the screen.
Principle of operation	The ResMed Mobi is designed to provide low-flow pulse oxygen therapy. Room air is drawn through an electrically powered compressor and passed through a molecular sieve. The molecular sieve removes nitrogen from the air, thereby increasing the oxygen content of the gas supplied by the device. Oxygen is delivered to the patient through a nasal cannula.
Pneumatic flow path	 1. Air inlet 2. Compressor 3. Sieve beds (a, b) 4. Oxygen accumulation tank 5. Oxygen release valve 6. Oxygen sensor 7. Pressure sensor 8. Patient interface/cannula
Service life	With regular servicing, the expected service life of the Mobi device is 5 years

Notes:

- The manufacturer reserves the right to change these specifications without notice.
- The AC and DC power supplies are considered part of the Mobi equipment.
- The device does not contain PVC, DEHP or phthalates.

Displayed values

Value	Range
Oxygen settings	
Setting	1, 2, 3, 4

Performance values

Value	Range	Accuracy
Oxygen concentration	90%	–3/+6%
Deviation of delivered oxygen volume per breath		±15%
Maximum deviation across environmental conditions		±20%
Maximum outlet pressure	29 psi	
Pneumatic inspiratory trigger sensitivity	0.140 cm H_2O (Active mode) 0.101 cm H_2O (Rest mode)	
Supported breath rates	10–30 bpm	
Start-up time	5 mins	
Sound pressure level at setting 2	38.2 dBA	
Sound pressure level at setting 4	45.5 dBA	
Sound power level at setting 4	53.5 dBA	
Alarm sound pressure level	70 dBA	

Internal battery values

Value	Range
Chemistry	Lithium-ion 14.4 VDC (nominal)
IATA classification	UN 3481 (Lithium-ion batteries contained in equipment)

Note: After 300 full charge/discharge cycles, the operational battery time may be reduced to 70% of its original operational time.

Bolus delivery

Setting vs breath rate	10 bpm	15 bpm	20 bpm	25 bpm	30 bpm
1	18.9 mL	13.0 mL	9.8 mL	7.9 mL	6.6 mL
2	31.5 mL	21.4 mL	16.1 mL	12.9 mL	10.8 mL
3	50.8 mL	34.3 mL	25.9 mL	20.8 mL	17.4 mL
4	68.0 mL	45.3 mL	34.0 mL	27.2 mL	22.7 mL

Note: Results are measured at ATPD (Ambient Temperature and Pressure, Dry)

Standard compliance

The Mobi device is designed to conform to the following safety standards:

- IEC 60601-1 and collateral standards

Symbols

The following symbols may appear on the product or packaging.

Read instructions before use (symbol is blue on the device label). Indicates a warning or caution. Consult instructions for use. Manufacturer. EC REP European Authorized Representative. LOT Batch code. REF Catalog number. SN Serial number. DN Device number. Standby. Device weight. **IP22** Protected against access to hazardous parts with a finger or solid foreign objects of 12.5 mm diameter and greater, and protected against vertically falling water drops when tilted up to 15 degrees. **IP20** Protected against access to hazardous parts with a finger or solid foreign objects of 12.5 mm diameter and greater. **IP02** Protected against vertically falling water drops when tilted up to 15 degrees. Keep dry. Fragile, handle with care. European RoHS. Direct current. Type BF applied part. Class II equipment. Humidity limitation. Temperature limitation. Contains no China environmental hazardous substances. 10/20 years of China environmental protection use period. **Rx Only** Prescription only (In the US, Federal law restricts these devices to sale by or on the order of a physician). Canadian Standards Association. Operating altitude. Atmospheric pressure limitation. Complies with RTCA DO-160 section 21, category M. Recyclable. Rechargeable battery. O_2 Gas flow. Radio frequency. This side up. MR unsafe (symbol's prohibition sign is red on the device label). No open flame (symbol's prohibition sign is red on the device label). No smoking (symbol's prohibition sign is red on the device label). No oil or grease (symbol's prohibition sign is red on the device label). Do not disassemble (symbol's prohibition sign is red on the device label). VI Level VI power supply efficiency rating.

Servicing

The Mobi device is intended to provide safe and reliable operation when operated in accordance with the instructions provided by ResMed. ResMed recommends that the Mobi device be inspected and serviced by an authorized ResMed Service Center if there is any sign of wear or concern with device function.

Technical support

Please contact your local ResMed dealer or ResMed office for technical support.

Limited warranty

ResMed Pty Ltd (hereafter 'ResMed') warrants that your ResMed product will be free from defects in material and workmanship from the date of purchase for the period specified below.

Item	Warranty period
• Portable oxygen concentrator (POC)	5 years
• Sieve bed • Battery – internal and external/supplemental • Accessories	1 year

This warranty is only available to the initial consumer. It is not transferable.

If the product fails under conditions of normal use, ResMed will repair or replace, at its option, the defective product or any of its components.

This Limited Warranty does not cover: a) any damage caused as a result of improper use, abuse, modification or alteration of the product; b) repairs carried out by any service organization that has not been expressly authorized by ResMed to perform such repairs; and c) any damage or contamination due to cigarette, pipe, cigar or other smoke.

Warranty is void on product sold, or resold, outside the region of original purchase.

Warranty claims on defective product must be made by the initial consumer at the point of purchase.

This warranty replaces all other expressed or implied warranties, including any implied warranty of merchantability or fitness for a particular purpose. Some regions or states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

ResMed will not be responsible for any incidental or consequential damages claimed to have resulted from the sale, installation or use of any ResMed product. Some regions or states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights which vary from region to region. For further information on your warranty rights, contact your local ResMed dealer or ResMed office.

Guidance and manufacturer's declaration electromagnetic emissions and immunity

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

The Mobi device has been designed to meet EMC standards. However, should you suspect that the device performance (eg, pressure or flow) is affected by other equipment, move the device away from the possible cause of interference.

Guidance and manufacturer's declaration—electromagnetic emissions

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

Emissions test	Compliance	Electromagnetic environment — guidance
RF emissions CISPR 11	Group 1	The device uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF emissions CISPR 11	Class B	The device is suitable for use in all establishments, including domestic establishments and those directly connected to the public low-voltage network that supplies buildings used for domestic purposes.
Harmonic Emissions IEC 61000-3-2	Class A	
Voltage Fluctuations/Flicker Emissions IEC 61000-3-3	Complies	

Guidance and manufacturer's declaration – electromagnetic immunity

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

Immunity test	IEC60601-1-2 test level	Compliance level	Electromagnetic environment — guidance
Electrostatic discharge (ESD) IEC 61000-4-2	±6 kV contact ±8 kV air	±6 kV contact ±8 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 IEC 61000-4-4	±2 kV for power supply lines ±1 kV for input/output lines	±2 kV for power supply lines Not applicable	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	±1 kV differential mode ±2 kV common mode	±1 kV differential mode ±2 kV common mode	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	<5% Ut (>95% dip in Ut) for 0.5 cycle 40% Ut (60% dip in Ut) for 5 cycles 70% Ut (30% dip in Ut) for 25 cycles <5% Ut (>95% dip in Ut) for 5 sec	<5% Ut (>95% dip in Ut) for 0.5 cycle 40% Ut (60% dip in Ut) for 5 cycles 70% Ut (30% dip in Ut) for 25 cycles <5% Ut (>95% dip in Ut) for 5 sec	Mains power quality should be that of a typical commercial or hospital environment. If the user of the device requires continued operation during power mains interruptions, it is recommended that the device be powered from an uninterruptible power source.
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	3 A/m	3 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.

Immunity test	IEC60601-1-2 test level	Compliance level	Electromagnetic environment — guidance
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	3 V	Portable and mobile RF communications equipment should be used no closer to any part of the device, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter.
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2.5 GHz	3 V/m	Recommended separation distance $d = 1.17 \sqrt{P}$ $d = 1.17 \sqrt{P}$ 80 MHz to 800 MHz $d = 2.33 \sqrt{P}$ 800 MHz to 2.5 GHz Where (P) is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in meters (m). Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey,[a] should be less than the compliance level in each frequency range.[b] Interference may occur in the vicinity of equipment marked with the following symbol:

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

[b] Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.

Notes:

- Ut is the AC mains voltage prior to application of the test level.
- At 80 MHz and 800 MHz, the higher frequency range applies.
- These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

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

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

Rated maximum output power of transmitter (W)	Separation distance according to frequency of transmitter (m)		
	150 kHz to 80 MHz $d = 1.17 \sqrt{P}$	80 MHz to 800 MHz $d = 1.17 \sqrt{P}$	800 MHz to 2.5 GHz $d = 2.33 \sqrt{P}$
0.01	0.12	0.12	0.23
0.1	0.37	0.37	0.74
1	1.2	1.2	2.3
10	3.7	3.7	7.4
100	12	12	23

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

Notes:

- At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.
- These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

Appendix A

Product preparation checklist

Follow the steps below to examine a Mobi device before reusing on a new patient.

Completed	Action
	Examine contents and confirm receipt of all accessory items.
	Connect the AC adapter to the device and the charger to an electrical outlet. The fans will activate and the external power symbol and Charging Internal will display on the screen.
	Fully charge the internal battery before first use. (4 hours minimum).
	Confirm the INT battery bar shows full charge. If available, attach an external battery and confirm the EXT battery bar appears.
	Press the power button to turn on the device. Connect a cannula to the oxygen port but do not place the cannula in the patient's nose.
	Observe the message on the screen change from Active mode to Rest mode.
	Allow approximately 75 seconds for the No Breath Alarm to sound and confirm that No Breath Detected appears on the screen.
	Check the mute feature by pressing the mute button to disable the audible alarm and then press again to turn the mute feature off.
	Place the cannula in the patient's nose and confirm the PULSE-WAVE symbol flashes on the display screen as the patient breathes in and that the No Breath Detected message turns off.
	Check for the following: • Power (solid green) LED • Rest mode or Active mode displays on the screen • Setting 1, 2, 3 or 4 displays on the screen
	Test the oxygen purity.

Appendix B

Patient training checklist

Patient name	POC Serial Number

Instructed	Topic
	Read the Quick Start Guide and the User Guide
	Check accessories
	Review control panel
	Auto Mode technology
	PULSE-WAVE delivery
	Mute feature
	Alarm indicators
	Battery life timetable
	Battery recharge timetable
	Traveling with the device
	Charging the device
	Setting up prescribed device setting
	Caring for the device
	Cannula management

Follow-up instructions

Date	Instruction

I have been fully instructed and understand how to operate the Mobi portable oxygen concentrator. I have also been informed to follow up as outlined in the Follow-Up Instructions section above.

Patient name	Date
Provider representative	Date

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