



Astral™ series



Quick setup guide  
English

# The Astral device



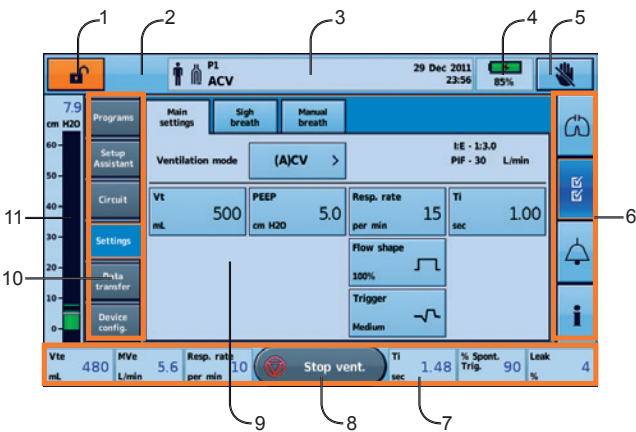
1. Adapter port  
Can be fitted with single limb adapter, single limb leak adapter or double limb adapter (Astral 150 only)
2. Handle
3. Inspiratory port (to patient)
4. Ethernet connector (service use only)
5. USB connector (for download to ResScan)
6. Mini USB connector (service use only)
7. DC power inlet
8. Device on/off push button
9. SpO2 Sensor connector
10. Remote alarm five pin connector
11. Low flow oxygen input (up to 30L/min)
12. Air inlet (complete with hypoallergenic filter)

# The Astral device interface



- 1. Touch screen
- 2. Power source indicators
  - AC (mains power supply)
  - DC (external battery or car accessory adapter)
  - Internal battery
- 3. Therapy on/off indicator
  - Device ready**  
Constant green display when the device is turned on but not ventilating.
  - Device ventilating**  
Flashes blue when the device is ventilating and the Ventilation LED setting is 'ON'. Otherwise is 'OFF'
- 4. Alarm mute/reset button  
Illuminates when an alarm is triggered and flashes when the sound is muted.
- 5. Alarm bar

## Touch screen






- 1. Clinical mode access button
  - Locked
  - Unlocked
- 2. Manual breath button only shown if enabled
- 3. Information bar
- 4. Internal battery indicator
  - 100%
  - 8h00
  - 70%
- 5. Lock touch screen button
- 6. Menu bar
- 7. Bottom bar
- 8. Start vent. button  
Start ventilation button
- Stop vent. button  
Stop ventilation button
- 9. Main screen
- 10. Sub menus
- 11. Pressure bar

# Patient circuits

The Astral device supports single and double limb circuits with the use of interchangeable circuit adapters. Breathing circuits may be of 10, 15 or 22 mm diameter.

There are three circuit adapters:



Adapter	For use with
1. Single limb leak	 Single limb circuit with intentional leak
2. Single limb	 Single limb circuit with expiratory valve (expiratory valve integrated into the circuit)
3. Double limb (Astral 150 only)	 Double limb circuit (expiratory valve integrated into the adapter) OR single limb circuit with intentional leak

## Fitting the circuit adapter

Before connecting the patient circuit, the adapter specific to the required circuit type must be fitted.

To fit the adapter:



1. Turn over the device and place on a soft surface (to protect the LCD screen).
2. Press and hold the eject button. Pull the cover out towards you.
3. Lift the adapter out of the socket.
4. Replace with the new adapter, ensuring it sits firmly in the socket.
5. Place the cover over the enclosure, ensuring the runners on the device and the cover are aligned. Slide the cover back into place until the latch clicks.

# Setting up the circuit

For complete details on setting up the circuit see *Assembling patient circuits* in the Astral Clinical Guide.

## Single limb circuit with intentional leak



## Single limb circuit with expiratory valve using ResMed proprietary circuit



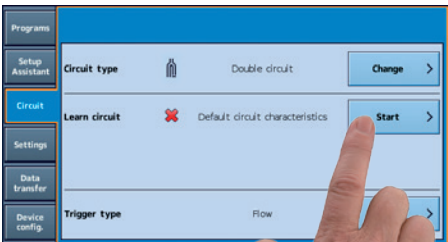
## Single limb circuit with expiratory valve using standard circuit



## Double limb circuit (Astral 150 only)



# Performing a Learn Circuit




Do not connect patient interfaces prior to performing the Learn Circuit.

1. From the Setup menu, select the Circuit sub menu.
2. Press **Start** and follow the on-screen prompts.

A test result screen is displayed if any of the tests fail, otherwise the Learn Circuit function has been successfully completed and you will be returned to the main settings page.

## Powering on the device



To power on the device, simply press the green power on/off switch  at the back of the device. The device will perform a system check.

On completion of the system check, the Patient Home screen and active program is displayed.

If more than one program displays, the active program will be highlighted orange.

**Note:** Settings configured in the active program will be used when ventilation is started.




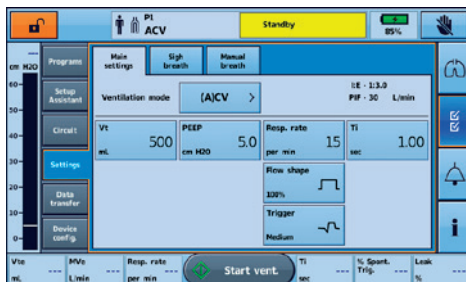
## Accessing Clinical mode




To access Clinical mode:

Clinical mode can be accessed from any screen, whether or not the Astral device is ventilating.

1. From the patient home screen, press and hold  for 3 seconds.
2. Select 20 minutes or Unlimited. The padlock is unlocked and the Main Settings screen is displayed.

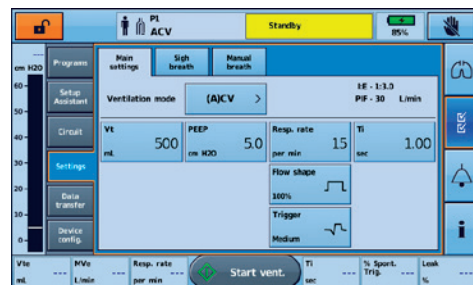
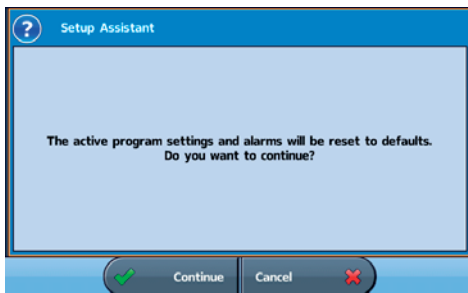


To exit Clinical mode:



1. Press . The Exit Clinical Mode screen is displayed.
2. Press **Confirm**. The padlock is locked and the Patient Home screen is displayed.

**Note:** If you do not make a selection within 7 seconds, the device returns to the previous screen.

## Using the Setup assistant



To quickly set up the Astral device and start ventilation for a **new patient**, use the Setup assistant.

1. Access Clinical mode.
2. From the Menu bar, press .
3. Select **Setup Assistant** and press **Start**.
4. A warning message will display. Select **Continue**.
5. Select the patient type to automatically configure alarm and setting ranges.
6. Select the circuit type to be connected.
7. Select **Start** to run the Learn Circuit.
8. Follow the on-screen prompts to attach and test the circuit.
9. Select your required ventilation mode. The default settings for the mode are displayed.
10. Review and adjust the settings as required.
11. Press  to start ventilation.

For further information on adjusting setting parameters and alarm settings, see **Adjusting patient settings** and **Adjusting alarm settings** in the Astral Clinical Guide.



## Navigating the menus



Monitors



**Waveforms** The Waveforms screen displays the last 15 seconds of patient airway pressure and flow in a graph. The graph updates in real-time.

**Monitoring** The Monitoring screen displays all measured parameters in numerical form.

**Trends**



Setup



**Programs \***

**Setup Assistant \***

**Circuit**

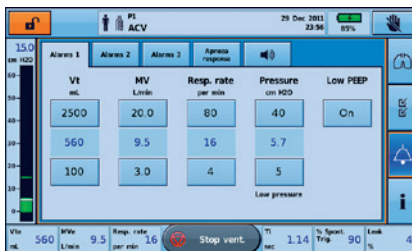
**Settings** Main Settings  
Manual Breath

**Data Transfer** Transfer Data  
Import / Export

**Device Config.** Display  
Date / Time  
Units / Option  
Reset



Alarms



**Alarms 1** Tidal Volume (Vt)  
Minute Ventilation (Mv)  
Respiratory Rate  
Pressure  
Low PEEP

**Alarms 2** Ventilation Stop  
Leak  
Non-vented Mask (NV Mask)

**Alarms 3** FiO<sub>2</sub>  
SpO<sub>2</sub>  
Pulse

**Apnoea Response** Apnea Response  
Apnea Definition

**Alarm Volume** Alarm Level  
Alarm Test

**Events** Alarms  
Settings  
System

**Device** Information



Information






\*Available in Clinical mode only





# Alarms

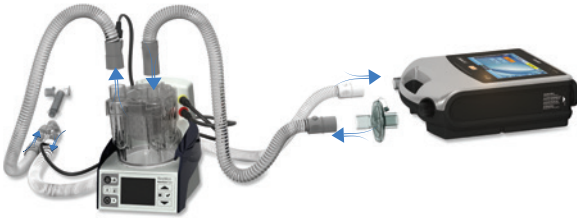
When an alarm is activated, the Astral device provides both audible and visual alerts, and displays an alarm message in the Alarm display on the Information bar.



Alarm priority	Alarm bar	Audible alert
High	 Red flashing light	10 beeps every 5 seconds
Medium	 Yellow flashing light	3 beeps every 15 seconds
Low	 Yellow steady	2 beeps every 25 seconds

Indicator	Description
1. Alarm display	<p>Displays either the alarm message for the highest priority active alarm, or the last alarm not yet reset.</p> <p>Press the Alarm display for further alarm information.</p> <p>Certain conditions may result in multiple alarms.</p> <p> indicates that there are multiple active alarms.</p> <p>Press  when displayed to view all active alarms and respond appropriately. Alarms are displayed in order of priority.</p>
2. Active Alarms screen	<p>Displays the full set of active alarms. Will automatically display upon activation of an alarm in patient mode.</p>
3. Information menu	<p>Some alarms clear automatically. To view a history of alarms, view the alarm log through the Information menu.</p>
4. Alarm mute/reset button	<p>State:</p> <ul style="list-style-type: none"><li>• <b>no light</b> – no active alarms</li><li>• <b>steady light</b> – active alarm/s</li><li>• <b>flashing light</b> – alarm mute on.</li></ul> <p>This button also allows you to:</p> <ul style="list-style-type: none"><li>• mute the audible alert</li><li>• reset the currently displayed alarm (if permitted).</li></ul>
5. Alarm bar	<p>Indicates the priority of the alarm in the Alarm display.</p>

## Attaching a humidifier



1. Connect a length of air tubing to the inspiratory port of the device.
2. Connect the other end of the air tubing to the inlet port of the humidifier.
3. Connect the patient circuit to the outlet port on the humidifier.

Note: Monitor the air tubing for water condensation during initial use. A water trap can help if high humidification is causing water condensation in the tubing.

## Attaching a Heat Moisture Exchange (HME)



An HME can be used with the Astral device with a double limb circuit or single limb circuit with integrated valve.

Place the HME between the patient end of the circuit and the patient interface.

Do not connect patient interfaces prior to performing the Learn Circuit.

## Attaching an antibacterial filter



1. Fit the antibacterial filter to the inspiratory port of the device.
2. Connect the air tubing to the other side of the filter.
3. Perform the Learn Circuit function.
4. Attach the patient interface to the free end of the air tubing.

For complete details on attaching patient circuit accessories, see Accessories in the Astral Clinical Guide.

For a full list of accessories, see the Ventilation accessories guide on [www.resmed.com](http://www.resmed.com). If you do not have internet access, please contact your ResMed representative.

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