Astral 150
Tracheostomy Ventilation

**Turning The Machine On**
To turn the machine on and off, press the green button on the rear of the machine.

**Entraining Oxygen**
Oxygen is entrained via the oxygen nozzle on the back of the machine.

**NB:** When the machine is not in use oxygen should be turned off. When oxygen is not required the oxygen nozzle should be removed.

**Locking & Unlocking**
To unlock the clinical menu press and hold the padlock symbol for 3 seconds.

To lock press the padlock icon then press confirm. The padlock will lock and the patient home screen will be displayed.

**To Alter Parameters**
Ensure the machine is unlocked. When unlocking the clinical menu the parameters should be displayed automatically. If already unlocked to view the parameters press this icon.

Press on the icon of the parameter you wish to change. The + and – buttons will then be displayed use the + and – button to alter press ‘Apply’ to confirm the change.

**NB:** Parameters must not be changed without consulting a member of the medical team.

**Starting/Stopping Ventilation**
To start ventilation press the start ventilation icon.

To stop the ventilation, press and hold the stop ventilation icon for 3 seconds.
Check Alarms at the Start of Each Shift and Document.
- When tubing is first disconnected check that low pressure/ disconnect and/or low tidal volume alarms are triggered
- Occlude the vent circuit whilst running and check the high pressure/ low pressure alarms are triggered.

Understanding Alarms

### Low VTE/Low MVE

<table>
<thead>
<tr>
<th>Disconnection/leak/High MVe/High Vte</th>
<th>Action</th>
<th>1 Assess child</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Assess child Accidental decannulation (i.e. tracheostomy has come out)</td>
<td>Immediately insert tracheostomy</td>
<td>Possible causes include: Blocked tracheostomy</td>
<td>Emergency algorithms</td>
</tr>
<tr>
<td>2 Assess equipment</td>
<td>2 Assess child</td>
<td>Retained secretions/ increased pulmonary resistance etc</td>
<td></td>
</tr>
<tr>
<td>Disconnection within circuit (follow circuit from child through to ventilator and ensure everything is connected – NB humidifier connectors etc may be slightly loose)</td>
<td>Cause - some leak may be tolerated and may be due to position of child – discuss with community or medical teams, who can consider need for cuffed trache or upsize</td>
<td>Action</td>
<td></td>
</tr>
<tr>
<td>3 Assess child</td>
<td>3 Assess equipment</td>
<td>1 Assess child</td>
<td></td>
</tr>
<tr>
<td>Possible causes include: Leak around tracheostomy (particularly when asleep)</td>
<td>• Reconnect any loose connections</td>
<td>Correct fault</td>
<td></td>
</tr>
<tr>
<td>• Re-assess</td>
<td>Circuit blockage (Follow circuit from child through to ventilator and ensure it is not knotted or obstructed)</td>
<td>Re-assess</td>
<td></td>
</tr>
</tbody>
</table>

Is the alarm set appropriately (i.e. as previously recorded and checked at start of shift)?
- Check alarm settings are as prescribed and re-set if any discrepancies

Is the alarm set appropriately (i.e. as previously recorded and checked at start of shift)?
- Check alarm settings are as prescribed and re-set if any discrepancies

NV Mask (Non-Vented) Mask Alarm
Check exhalation value is not blocked or covered and within circuit. NB: If Jetstream nebuliser is running in circuit this alarm is frequently triggered.