Parts Included with System

- 10 Foot Attached Power Cord
- Universal Pole Clamp
- Display Module
- Mechanized Paddles for Compressing BVM
- Two Velcro Straps for Securing BVM
- Pelican Case
- Display Module and Controls

Overview

Basic Set-Up and Specifications

- On/Off Button

Quick Guide

10 Foot Attached Power Cord

Pelican Case

Display Module

Mechanized paddles

Velcro straps (to secure BVM)

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AustinP51 Specs

1. **Respiratory Rate (BPM):** 8-40 BPM
2. **Tidal Volume:** 200-700 mL
3. **Inspiratory Time:** .3sec - 3.75sec
4. **Peak Pressure:** 0-50 cmH₂O
5. **PEEP:** 0-20 cmH₂O
6. **Pressure Monitoring:** Yes
7. **Display of peak, plateau, and PEEP pressure:** Yes
8. **HEPA Filtration:** Yes
9. **Dead space:** 60 mL
10. **FiO₂:** 60-100%
11. **Alarms:** Open circuit, max pressure, alarm pressure, self monitoring

### Notes:

1. Maximum tidal volume dependant upon average airway pressure
2. Safety limited to 40cmH₂O by default but can be driven to 50cmH₂O with clinician override
3. When using recommended ventilator circuit consisting of standard circuit components
4. When using recommended O₂ regulator setup and flow rates
**Patient Circuits and BVMs**

**Example Patient Circuit**

- Westmed 9317 MRI transport circuit with PEEP
- Iso-Gard 28022 HEPA filter
- Flowmeter
- AMBU bag
- Oxygen bag
- Pressure Port

**Supported BVMs**

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 AMBU USA</td>
<td>523211000</td>
<td>Adult Bag Reservoir BVM with Pop-Off Valve, Medium Mask, Manometer Port</td>
</tr>
<tr>
<td>2 AMBU USA</td>
<td>524611001</td>
<td>Adult Tube Reservoir BVM with Pop-Off Valve, Medium Mask, Manometer Port and included PEEP Valve[^1]</td>
</tr>
</tbody>
</table>

[^1]: If using this BVM do not install the PEEP valve that comes with it as this can interfere with the other PEEP valve.
Overview
Display Module
Pressure Indicator
The pressure display shows the instantaneous pressure in the patient's circuit. This emergency use resuscitator does NOT support pressure control.

PEEP (cm H2O) Indicator
The PEEP indicator shows the PEEP levels and is measured once a cycle. PEEP levels should be adjusted using the PEEP dial on the patient circuit.

Settings

Clear Alarm
To reset any tripped alarms press the Clear Alarm button. The alarm will stop sounding and then the alarm text will appear on the screen. Go to the settings menu to view the past 1000 raised alarms.

Stop
The Stop mode is a mode in which the AustinP51 is not actively transferring air to the patients or assisting their breathing in any way.

Run/Mode
The Run/Mode button allows the user to run the unit in Controlled Mechanical Ventilation (CMV) mode.

Measure
When the measure button is selected the AustinP51 will take a peak and plateau measurement. Once completed the screen will display the peak and plateau pressure values.

Tidal Volume
Tidal volume is the volume of air delivered to the patient's lungs by the resuscitator and is measured in mL. This dial adjusts the tidal volume in 25 mL increments.

Respiratory Rate
The Respiratory Rate dial allows for a set number of breaths per minute to be input into the resuscitator.

Inspire:Expire Ratio
I:E ratio dial sets the inspiratory: expiratory time ratio. To set i-time directly, push down on the dial.

Alarms and Alarm Parameters

1. OVER MAX PRESSURE: Raised when system detects that it is over the max pressure.
2. OVER ALARM PRESSURE: Raised when system detects that it is over alarm pressure.
3. PRESSURE TOO LOW: Raised when system detects pressure that is below -50 cmH2O.
4. INSUFFICIENT PRESSURE: Raised if there is an insufficient increase in pressure during inspiratory phase.
5. PRESSURE SENSOR NOT CALIBRATED: Raised when pressure sensor needs calibrating.
6. PADDLES DID NOT HOME: Raised when the paddles do not move to the open position.
7. PADDLES DID NOT MOVE FROM HOME: Raised when the paddles do not move home from the open position.
8. TV NOT REACHED, HIGH PEEP: Raised when PEEP is high enough that resuscitator can't reach set tidal volume.
9. OVER OR UNDER TIDAL VOLUME: Raised when the motor takes too many or too few steps to get home.
10. BAD CALIBRATION, ENSURE AMBIENT PRESSURE: Raised when unit detects unacceptable calibration offset.
11. MACHINE SHUT DOWN FROM RUN STATE: Raised when power is cut while system is running.
12. PATIENT RR OVER, SET ALARM RR: Raised when patient is breathing faster than the set alarm value.
13. PEEP CHANGED, CHECK NEW VAL: Raised when PEEP has changed +/- 8 cmH2O for longer than 15 seconds.
14. SYSTEM ERRORS: Did Not Save Pressure Calibration; System Stuck in State Too Long; System in Error... Restart; Did Not Save Settings; Did Not Save Mode, Angle Offset Not Calibrated, Motor in Fault.
Overview

Display Module and Set-Up

Settings Menu Options

1. **BACK**: This allows you to navigate back to the main menu.
2. **ALARM LOG**: This allows you to view the last 1000 alarms that were raised.
3. **SET ALARM PRESSURE OPTION**: When the pressure reaches this limit an alarm will sound.
4. **SET MAXIMUM PRESSURE OPTION**: When the system senses that the pressure has reached this limit the mechanical paddles will stop adding pressure to the BVM.
5. **SET THRESHOLD DELAY PERCENT**: For AC mode (AC mode not currently available for this unit).

**RR(BPM) ALARM**: Alerts if patient is breathing at a higher rate than the rate set here. For AC mode (AC mode not currently available for this unit).

**CALIBRATE THE PRESSURE SENSOR**: This option allows you to calibrate the pressure sensor.

**RUNTIME**: This allows you to view how long the motor has been continuously running (in hours).

**SOFTWARE VERSION**: This allows you view your system’s software version.

AustinP51 Set-Up Instructions

1. Plug AustinP51 into a compliant outlet (100-240 VAC, 50/60 Hz, 1.4 - 0.7 A)
2. Secure BVM using the system's two velcro straps
3. Connect O₂ and other hoses between BVM, patient, and patient circuit
4. Turn power switch on and press Clear Alarm button
5. Adjust settings on display panel as needed
Detachable Pole Clamp

1. Can be used to attach the system to poles and/or bed rails
2. Can be removed with included tool to allow case to be set on a flat surface
3. Can be stored inside of the case

Pole Clamp Features

- The AustinP51 is intended to treat adults during the Covid-19 pandemic and should only be used when no other FDA approved ventilators are available
- A clinician is required to closely monitor and evaluate the patient for tidal volume, respiratory rate, oxygen flow, moment to moment SPO2, and end-tidal CO2 levels
- Only the following BVMs should be used with the AustinP51: Ambu Spur II (part #523211000), and Ambu Spur II (part #524611001)
- Using BVMs not listed here or in the manual could result in malfunctions that could cause serious harm or injury to the patient

For additional information please consult the AustinP51's user's manual or contact AIR BOOST support:
support@airboost.us
512-377-6075