

SANUVOX

Troubleshooting manual for Sanuvox RMax Air Purifier



WARNING

Before servicing the unit, TURN OFF and disconnect unit from power source. Electrical shock may cause personal injuries or death.

Sanuvox Technologies, Montreal (Canada)

www.sanuvox.com

July 2018

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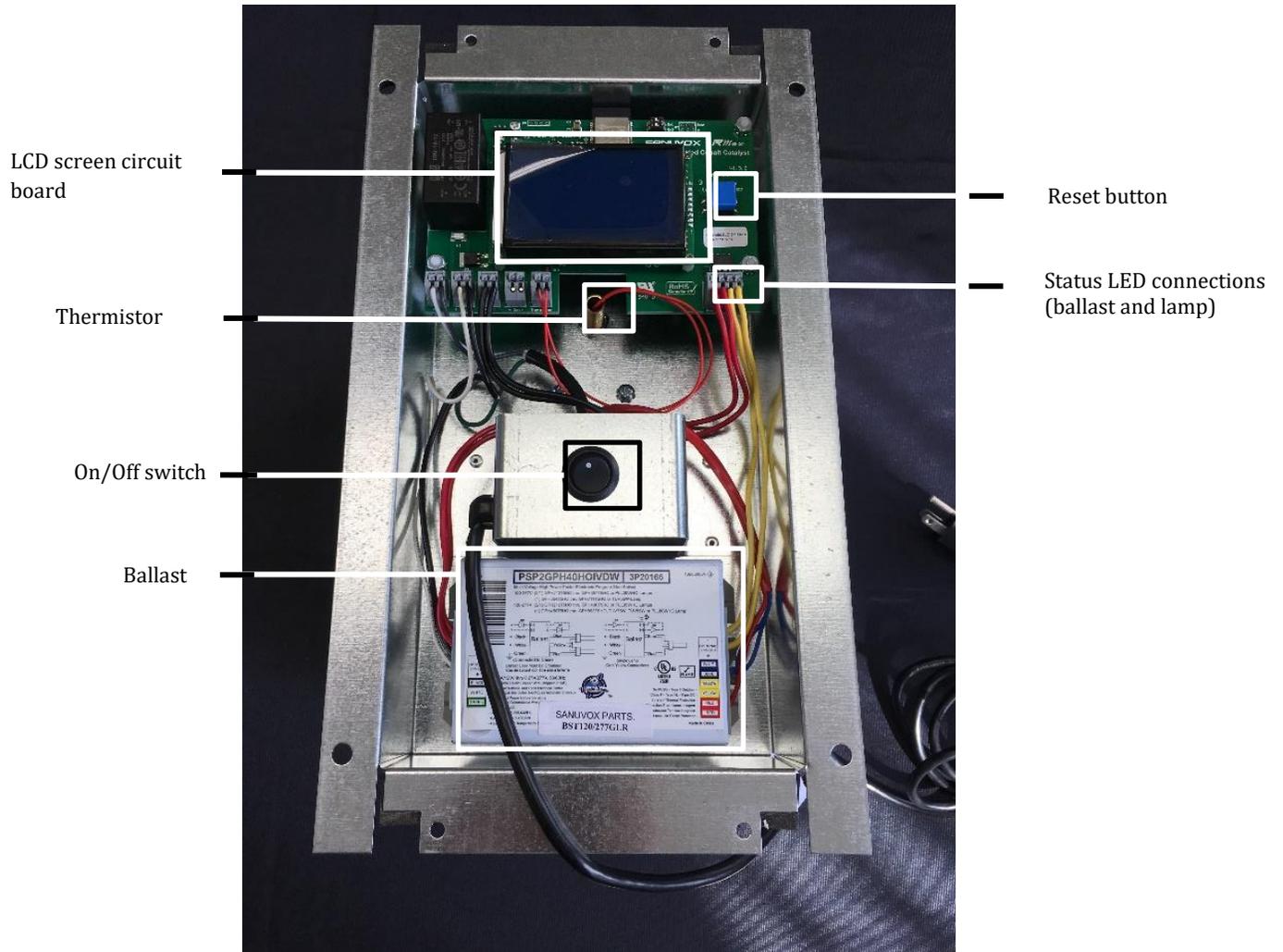
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1. Tools required for troubleshooting

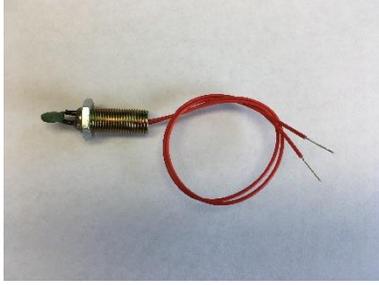
- Phillip screwdriver
- Ohmmeter
- 5/16" nutdriver

2. Identifying internal components inside RMax

To access internal components of the RMax, remove cover by following the Step-by-step instructions.



3. List of parts for replacement

| Sanuvox PN | Description | |
|---------------|-------------------------------|--|
| BST120/277GLR | Ballast |  |
| MSCELC13-2 | LCD screen circuit board |  |
| MSCTER2 | Thermistor |  |
| LMPHGXJ105 | 10.5in high intensity UV lamp |  |

4. Troubleshooting summary table

| Problem | Possible causes | Try ... |
|---|--|--|
| Screen doesn't come ON | <ul style="list-style-type: none"> - There is no power to the electrical outlet - The On/Off switch is not ON - Power cord is damaged - LCD screen circuit board is damaged or defective | <ul style="list-style-type: none"> - Test the outlet to make sure there is power by plugging in another electrical appliance - Turn the switch to the ON position - Check the power cord for damage and replace if damaged (contact Sanuvox) - Visually inspect the LCD screen circuit board and look for damage/burn marks - Contact Sanuvox to replace LCD screen circuit board and thermistor together |
| Screen indicates «Airflow» and lamp icon is not irradiating out | <ul style="list-style-type: none"> - There is no airflow or not sufficient airflow in the ductwork | <ul style="list-style-type: none"> - Turn the fan ON or set a higher speed to increase airflow circulating in the ductwork - If airflow is not sufficient to be detected by thermistor, remove airflow detection (refer to thermistor deactivation procedure) |
| Screen indicates «Ballast Out» | <ul style="list-style-type: none"> - Connection issues at the ballast level for ballast status signal (left side of ballast) - Connection issues at the circuit board level for ballast status - Issue with power supply to ballast - Defective ballast | <ul style="list-style-type: none"> - Check connections to ballast and circuit board for the 2 red wires connected into the Optional 2.5V LED connectors of the ballast (left side) - Make sure that the live (black) and neutral (white) wires from the circuit board to the ballast are secured - Contact Sanuvox to replace ballast |
| Screen indicates «Change Lamp» | <ul style="list-style-type: none"> - Connection issues at the ballast level for lamp status signal (right side of ballast) - Connection issues at the circuit board level for lamp status - Connection issues between the ballast and the lamp (plug) - Defective lamp | <ul style="list-style-type: none"> - Check connections to ballast and circuit board for the 2 yellow wires connected into the Optional 2.5V LED connectors of the ballast (right side) - Check the wire connections at the ballast and at the lamp (plug) - Check lamp continuity (refer to test) - Contact Sanuvox to replace UV lamp |
| Screen indicates «Lamp Expired» | <ul style="list-style-type: none"> - The UV lamp has exceeded its 3-year lifespan | <ul style="list-style-type: none"> - Get a genuine replacement lamp and reset the counter to 3 years (refer to time counter reset procedure) |
| Screen indicates «EC1» and blinks ON and OFF | <ul style="list-style-type: none"> - The thermistor is not connected - The thermistor is damaged or defective | <ul style="list-style-type: none"> - Check thermistor connections - Contact Sanuvox to replace thermistor |
| Screen indicates «EC2» and blinks ON and OFF | <ul style="list-style-type: none"> - The thermistor is damaged or defective | <ul style="list-style-type: none"> - Contact Sanuvox to replace thermistor |

| | | |
|---------------------------------------|--|--|
| Lamp burnt before the elapsed 3 years | - Overcycling of the UV lamp due to excessive start/stop of the variable speed fan | - Contact Sanuvox to replace lamp and bypass thermistor (refer to thermistor deactivation procedure) |
|---------------------------------------|--|--|

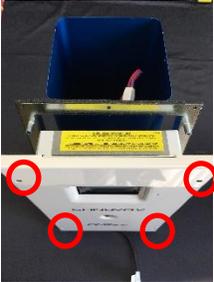
5. Step-by-step instructions



WARNING

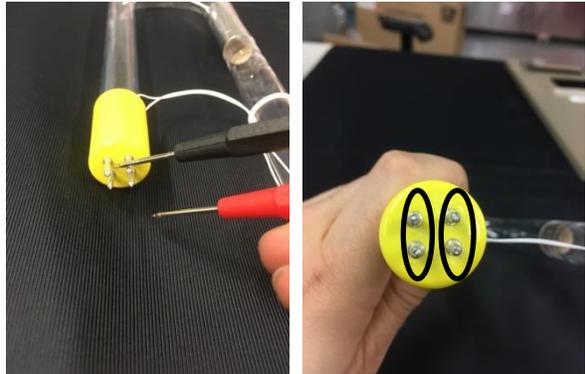
Before performing any of the instructions below, make sure the unit is turned OFF and unplugged from power.

5.1 Open the RMax ballast box

| Step | |
|---|---|
| 1. Take the RMax out from the ductwork by removing the 4 screws located on the cover (4 corners) that hold it to the frame |  |
| 2. Place the RMax face down on a flat surface and remove the 4 screws (2 top and 2 bottom) that attach the cover to the ballast box |  |

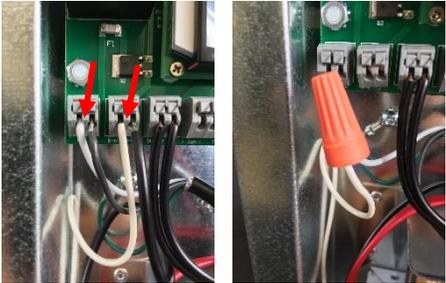
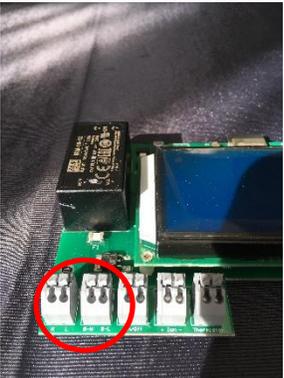
5.2 Test UV lamp continuity

| Step | |
|--|---|
| 1. Take the RMax out from the ductwork by removing the 4 screws located on the cover (4 corners) that hold it to the frame |  |

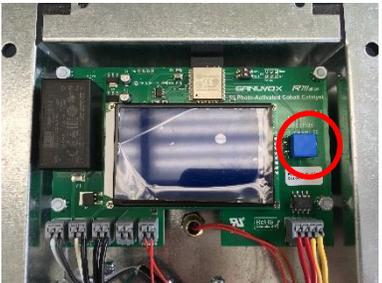
| | |
|--|--|
| <p>2. Remove the lamp socket from the UV lamp, open the retaining clamp and pull the UV lamp out of the reflector</p> |  |
| <p>3. Using an ohmmeter place 1 probe on 1 of the 4 pins and by sensing the 3 remaining pins, 1 should have continuity. Make sure the 2 remaining pins also have continuity. When both sets of pin test good for continuity, it is normally assumed that the lamp is good.</p> |  |

5.3 By-pass LCD screen circuit board (test ballast and UV lamp together)

| Step | |
|---|---|
| <p>1. Open the RMax ballast box</p> | <p>Refer to instructions above</p> |
| <p>2. Locate the power input to the circuit board (N,L) as well as the ballast input (B-N,B-L).</p> |  |
| <p>3. Disconnect L and B-L and join them together using a marrette (twist-on wire connector)</p> |  |

| | |
|--|---|
| <p>4. Disconnect N and B-N and join them together using a marrette (twist-on wire connector)</p> |  |
| <p>5. Place the unit on the ground and make sure that you don't have direct line of sight with the lamp. Plug the power cord directly in a power outlet and the UV lamp will light up if both UV lamp and ballast are still functional.</p> | |
| <p>6. After the test is completed, unplug the unit and replace the wires in their original position.</p> <p>Black wire from the power cord connects into L and white wire from the cord connects into N.</p> <p>Black wire going to the ballast connects into B-L and white wire going to the ballast connects into B-N.</p> |  |

5.4 By-pass thermistor

| Step | |
|--|--|
| <p>1. Open the RMax ballast box</p> | <p>Refer to instructions above</p> |
| <p>2. Plug in the RMax to a power source and turn the switch to the ON position. In the first 5 seconds from powering the unit ON, click the Reset button once. By doing so, you'll see "Air flow" appear on the screen. By clicking again, "Air flow" will disappear from the screen.</p> <p>Once your selection is made, wait 5 seconds for the setting to be recorded by the circuit.</p> |  |

5.5 Resetting lamp timer

| Step | |
|---|------------------------------------|
| <p>1. Open the RMax ballast box</p> | <p>Refer to instructions above</p> |
| <p>2. Plug in the RMax to a power source and turn the switch to the ON position and wait 10 seconds before next step.</p> | |

3. Press and hold the reset button for 3 seconds until the counter sets itself back to 1096days (3 years)

