

SANUVOX

Troubleshooting manual for Sanuvox R+ 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

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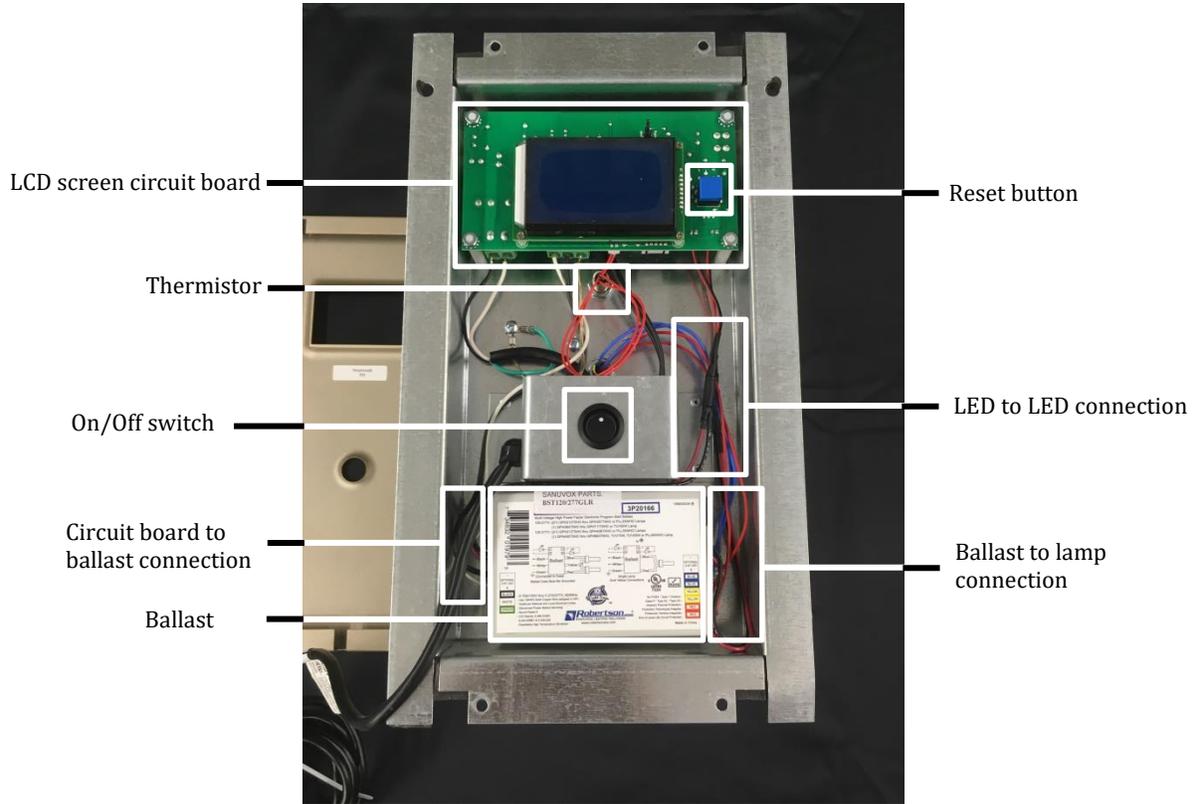
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1. Tools required for troubleshooting

- Phillip screwdriver
- Ohmmeter
- 5/16" nutdriver

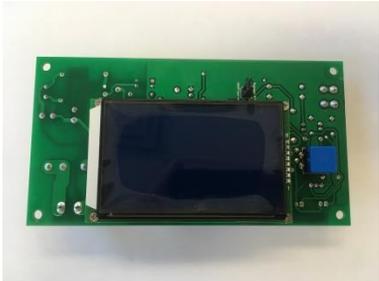
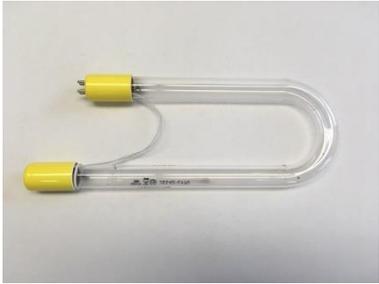
2. Identifying internal components inside R+

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



3. List of parts for replacement

Sanuvox PN	Description	
BST120/277GL	Ballast [Replace with same part number]	

BST120/277GLR	Ballast [Replace with same part number]	
MSCELC13	LCD screen circuit board	<p>Version 1</p>  <p>Version 2</p> 
MSCTER1	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 at 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 - Put the switch to the ON position - Check the power cord for damage and replace if damaged (contact Sanuvox) - Visually inspect both sides of the LCD screen circuit board (fuse or burn marks) - Contact Sanuvox to replace LCD screen circuit board and thermistor together
Screen indicates «Stand-by»	<ul style="list-style-type: none"> - The unit is still in the 45 seconds warm-up period - There is no airflow in the ductwork 	<ul style="list-style-type: none"> - Wait for the 45 seconds warm-up period to complete - Turn the fan ON so there is airflow moving in the ductwork
Screen indicates «Ballast Out»	<ul style="list-style-type: none"> - Bad LED to LED connection for ballast status - Connection issues between circuit board and ballast (supply side) - Defective ballast 	<ul style="list-style-type: none"> - Verify that the LED to LED connection is secured and alignment is straight - 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 «Lamp Out»	<ul style="list-style-type: none"> - Bad LED to LED connection for lamp status - Connection issues between the ballast and the lamp - Defective lamp 	<ul style="list-style-type: none"> - Verify that the LED to LED connection is secured and alignment is straight - Check the wires connection at the ballast and at the lamp socket - Check lamp continuity (refer to test) - Contact Sanuvox to replace UV lamp
Screen indicates «UV intensity low»	<ul style="list-style-type: none"> - The UV lamp has almost reached its 3 years lifespan 	<ul style="list-style-type: none"> - Get a genuine replacement lamp and reset the counter to 3 years (refer to reset procedure)
Screen indicates «Contact Installer» 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
The lamp doesn't come ON when air is circulating in the ductwork	<ul style="list-style-type: none"> - Not enough airflow circulating in the ductwork 	<ul style="list-style-type: none"> - Change the fan setting for higher speed - Reposition the R+ in the ductwork where the airflow is unobstructed - By-pass the thermistor (contact Sanuvox for instructions)
Lamp burned before the 3 years elapsed	<ul style="list-style-type: none"> - Overcycling of the UV lamp due to excessive start/stop of the variable speed fan 	<ul style="list-style-type: none"> - Contact Sanuvox to replace lamp and by-pass thermistor (refer to thermistor by-pass procedure)

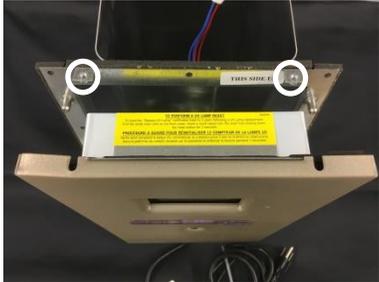
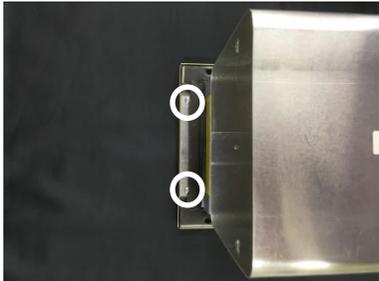
5. Step-by-step instructions



WARNING

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

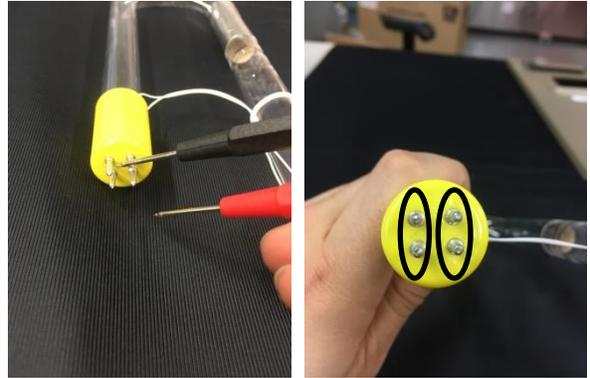
5.1 Open the R+ ballast box

Step	
<p>1. Take the R+ out from the ductwork by removing the 4 screws located on the cover (top/bottom or 4 corners) that hold it to the frame</p>	
<p>2. Place the R+ face down on a flat surface and remove the 4 screws that attach the cover to the ballast box</p>	

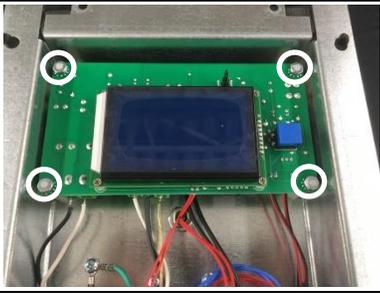
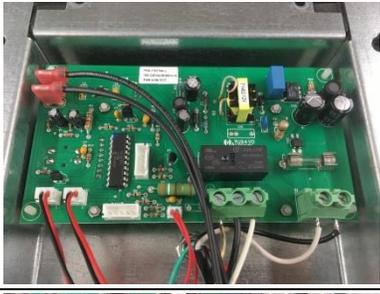
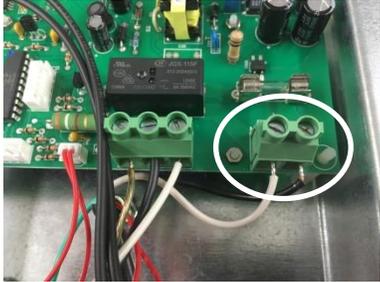
5.2 Test UV lamp continuity

Step	
<p>1. Take the R+ out from the ductwork by removing the 4 located on the cover (top/bottom or 4 corners) screws that hold it to the frame</p>	
<p>2. Remove the lamp socket from the UV lamp, unlock the lever and pull the UV lamp out of the reflector</p>	

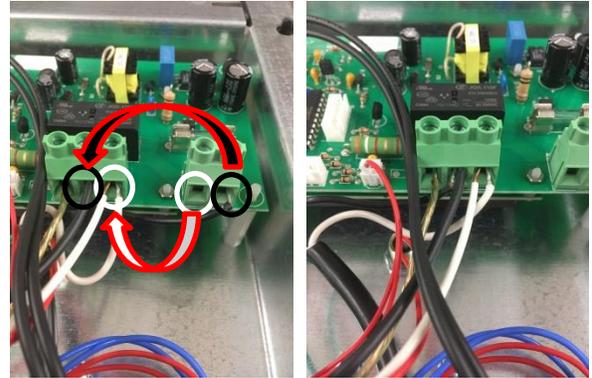
3. Using an ohmmeter place 1 probe on 1 of the 4 pins and by sensing the 3 remaining pins, 1 should have continuity. Make sure the 2 remaining pins also have continuity.



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

Step	
1. Open the R+ ballast box	Refer to instructions above
2. Remove the 4 nuts that secure the LCD screen circuit board to the 4 standoffs	
3. Take the LCD screen circuit board and flip it over and set it back on the 4 standoffs	
4. Unscrew both black and white wires from the terminal to the right	

5. Move the live (black) wire from the cord to the black wire going to the ballast. Move the neutral (white) wire from the cord to the white wire going to the ballast.



6. 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.

7. After the test is completed, unplug the unit and replace the wires from the cord in their original position. White wire to be plugged in N and black in L.



8. Flip the circuit board over so the LCD screen is facing up, making sure no wires are tangled and secure it using the 4 nuts.



5.4 By-pass thermistor

Step	
1. Open the R+ ballast box	Refer to instructions above
<p>2.</p> <p>[Version 1] Disconnect thermistor and install thermistor by-pass (P/N: MSC11)</p> <p>[Version 2] Move the thermistor by-pass jumper over to the 2 pins on the right (position Bypass PTC)</p>	<p>[Version 1] Contact Sanuvox to obtain part and instructions</p> <p>[Version 2]</p> 

5.5 Resetting lamp timer

Step	
1. Open the R+ ballast box	Refer to instructions above
2. Plug in the R+ to a power source and turn the switch to the ON position	
3. Press and hold the reset button for 3 seconds until the counter sets itself back to 1096days (3 years)	