



# PurpleAir Monitor Maintenance Guide

## SETUP ISSUES

2 – 3

### WiFi

I don't see my "PurpleAir-xxxx"

My device won't connect to "PurpleAir-xxxx"

I'm connected to the monitor, but I don't see my network in the list

My monitor is connected to the network and still isn't showing up on the map

### Power to the Device

## ONLINE REGISTRATION

3

### Registration Form Issues

### Map Issues

## MONITOR DOWNTIME

4

### Gray Dot on the Map

### No Point on the Map

## MONITOR MAINTENANCE

4

### Suspicious Monitor Data

## RESOURCES

5

### Performance Resources

### Return Policy

# SETUP ISSUES

## WiFi

Your PurpleAir Device uses Wifi to connect to the internet and report air pollution data. Setting up the WiFi can be a tricky step, so be sure to give it a few extra tries. Here are some common issues:

### *I don't see my "PurpleAir-xxxx"*

1. The monitor might not have power. Try plugging it in and making sure you see a red light inside the device or hear a small whirr from the fans. The monitor may also need to be powered for several minutes before it can connect to a device.
2. The monitor will connect to an open WiFi network first, like those at coffee shops, or from public internet networks. If it's connected, the monitor will disappear. In order to teach the monitor the right network and password you may need to move it out of range of the open network (plug it in somewhere else) and set it up. Then bring it back to the location and it will connect to the network you taught it in setup.
3. The monitor's network may turn on and off repeatedly during setup. Keep trying to connect. Sometimes smartphones are more successful than using a laptop.



### *My device won't connect to "PurpleAir-xxxx"*

1. Sometimes smartphones and laptops will not connect to a WiFi network that doesn't reach the internet (like the monitors). This is a security feature. You will need to respond to a pop up alert to tell the device to "trust" the network, or "connect anyway."

### *I'm connected to the monitor, but I don't see my network in the list*

1. The monitor can only work with 2.4Ghz networks. If you are trying to connect to a 5Ghz network, it won't be able to see it.
2. The monitor might not be in range. If the monitor is placed too far from the Wireless Router for the network, it won't be able to "hear" the network. Try moving the monitor a bit closer to the router. If your phone has a good Wifi signal, that's usually a good sign.

### *My monitor is connected to the network and still isn't showing up on the map*

1. The monitor will show up on the Purple Air map when it's connected and registered. Complete the registration step and check again.

## Power to the Device

The monitor needs to be continuously connected to a power source in order to collect data. Here are a few common pitfalls:

1. The monitor should be plugged in securely, and the Micro USB cable securely connected to the device. Test the connections.
2. Be sure that the outlet has power. If not, check if there is a switch which controls it, or if the outlet has a ground fault circuit interrupter try pushing the “reset” button.

**In the event the monitor loses power, it will attempt to reconnect to the WiFi network used to set it up once power is restored. This helps out a lot if there are outages, or the accidental flip of a switch. Most of the time you will not need to do anything to restore monitor function after an outage.**

## ONLINE REGISTRATION

### Registration Form Issues

1. The monitor can be registered and installed in either order. However, it will not show up on the map until it is registered. Most people choose to register their sensor before they install it, usually immediately after connecting the sensor to WiFi.
2. The registration form can be found on the PurpleAir website. Make sure the ‘Device-ID’ field is correctly filled out (and the colons are included). It can be found on the exterior label of the sensor body. Watch this instructional video for further assistance.
3. Use [commsci@cleanairenc.org](mailto:commsci@cleanairenc.org) in the ‘Associate Email’ field for any monitor given to you by CleanAIRE NC. **NOTE: this will not be the same as the ‘Device Owner’s Information’ field.**
4. Check the box indicating whether you have installed the monitor indoors or outdoors. When naming the location, always start with “CleanAIRE NC,” followed by a unique identifier for your location. This can be a neighborhood, street, or an area.
5. **DO NOT** edit the ‘Onboard LED Options’ or ‘Data Processors’ field.

### Map Issues

1. The monitor’s data is made visible through a Google Maps API. Navigate to and click on your sensor to see its data just like you would with regular Google Maps.
2. If you can’t see your sensor you may need to zoom the map closer in, or adjust the visibility settings in the top left corner.

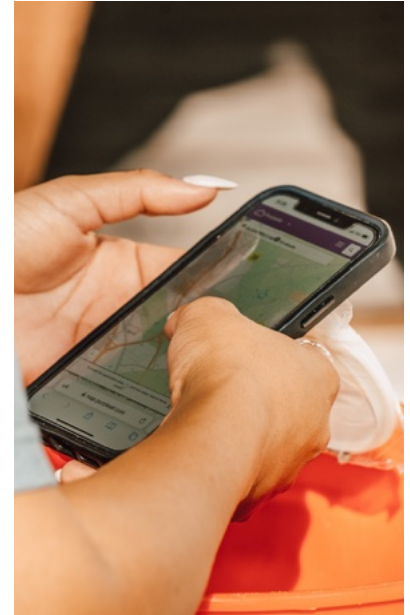
# MONITOR DOWNTIME

## Gray Dot on the Map

1. If the monitor is showing on the map but is gray, the monitor has disconnected. This could mean it doesn't have power, or is not connected to WiFi. Check "SETUP ISSUES" to see if it's properly connected.

## No Point on the Map

1. It's possible the monitor has been inactive for too long. Adjust the monitor visibility settings in the top left of the map to "active all time." Then, see "SETUP ISSUES" to reconnect your monitor.
2. It's possible the point on the map is in the wrong place. Contact CleanAIRE NC if you've checked all other options.



# MONITOR MAINTENANCE

**The monitor is pretty self-sufficient. However if it is left without care, the data will not be of high quality. Regularly check the monitor (about once a month) for damage or debris. You can also give it a careful cleaning with a can of compressed air to spray out the device. Be sure to get it into the sensors as well.**

## Suspicious Monitor Data

If you see the monitor data on the map, but it doesn't match the expectations, either too high or too low, you can check and see if the monitor is working effectively.

1. If there are large spikes in the data that other sensors in the area don't also report, it's possible the sensor is reading localized pollution. This could be a lawnmower, outdoor grill, or smoke that is entering the sensor exaggerating the readings. If possible, move the sensor away from these nearby sources.
2. If the sensor data seems consistently too high, it's possible the sensor is dirty. Use a can of compressed air (keyboard cleaner) to spray out the device. Be sure to get it into the sensors.
3. If the data from the two sensors seems to be inconsistent, showing widely different numbers, there could be a spider or other small creature inside the monitor. Again, use a can of compressed air to spray out the device. Be sure to get it into the sensors.

# RESOURCES

## Performance Resources

Below are a few resources about PurpleAir and other air sensor technology to aid in the understanding of Community Science air quality monitoring efforts:

- CleanAIRE NC Community Science Webpage: [cleanairenc.org/community-science](https://cleanairenc.org/community-science)
- PurpleAir: Sensor Startup Guide: [bit.ly/PAstartup](https://bit.ly/PAstartup)
- PurpleAir: Troubleshooting Sensor that is Down: [bit.ly/PAtroubleshoot](https://bit.ly/PAtroubleshoot)
- EPA Air Sensors Guidebook: [bit.ly/EPASensorGuide](https://bit.ly/EPASensorGuide)
- PurpleAir Monitor Performance Study: [bit.ly/PAMonitorPerformance](https://bit.ly/PAMonitorPerformance)

## Return Policy

If you have attempted all of the above steps and are still having trouble with your sensor, contact [commsci@cleanairenc.org](mailto:commsci@cleanairenc.org) to see if it's possible to replace your sensor.

Additionally, if you no longer wish to be a part of the Community Science program with CleanAIRE NC, contact us so that we may retrieve your sensor for other monitoring efforts.

# Thank You!

