POGO Engineering

Welcome to **Wash Analytics**

Provided are basic instructions for installing and configuring your Wash Analytics monitor for use. We also have additional resources and support on our website. If you run into any issues, contact us through the “Owner’s Support” section from your WashAnalytics.com account.

Getting Started

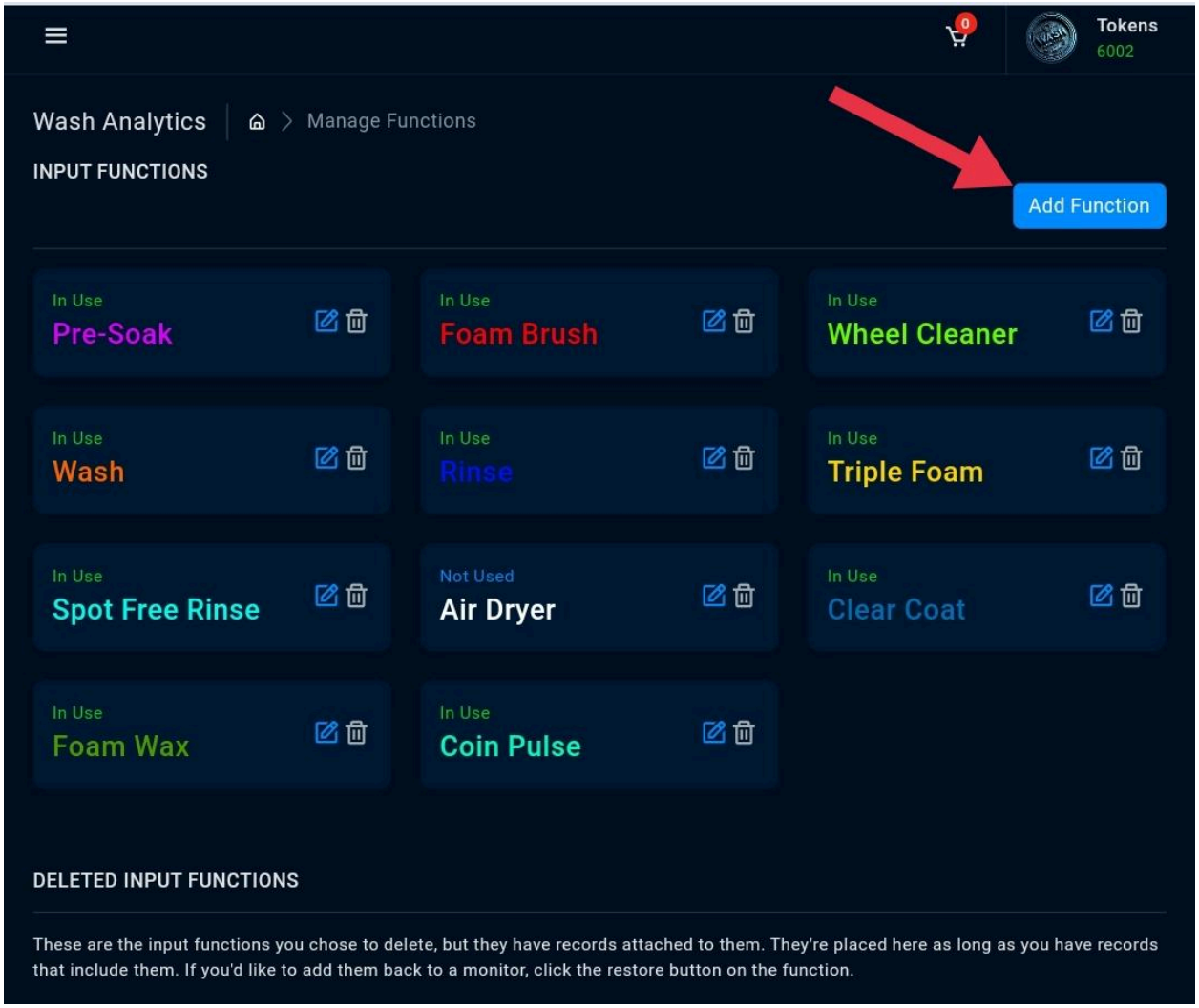
Register an account

In order to use your Wash Analytics monitors, you will need to register an account at www.WashAnalytics.com. This allows you to view all of the sales and customer data recorded by your monitors.

Add your car wash functions

For the website to keep track of what was used at your car wash, we need to add functions. These can be anything from Wash, Rinse, Foam Brush, etc. Normally people will simply copy what's on their coin box rotary switch.

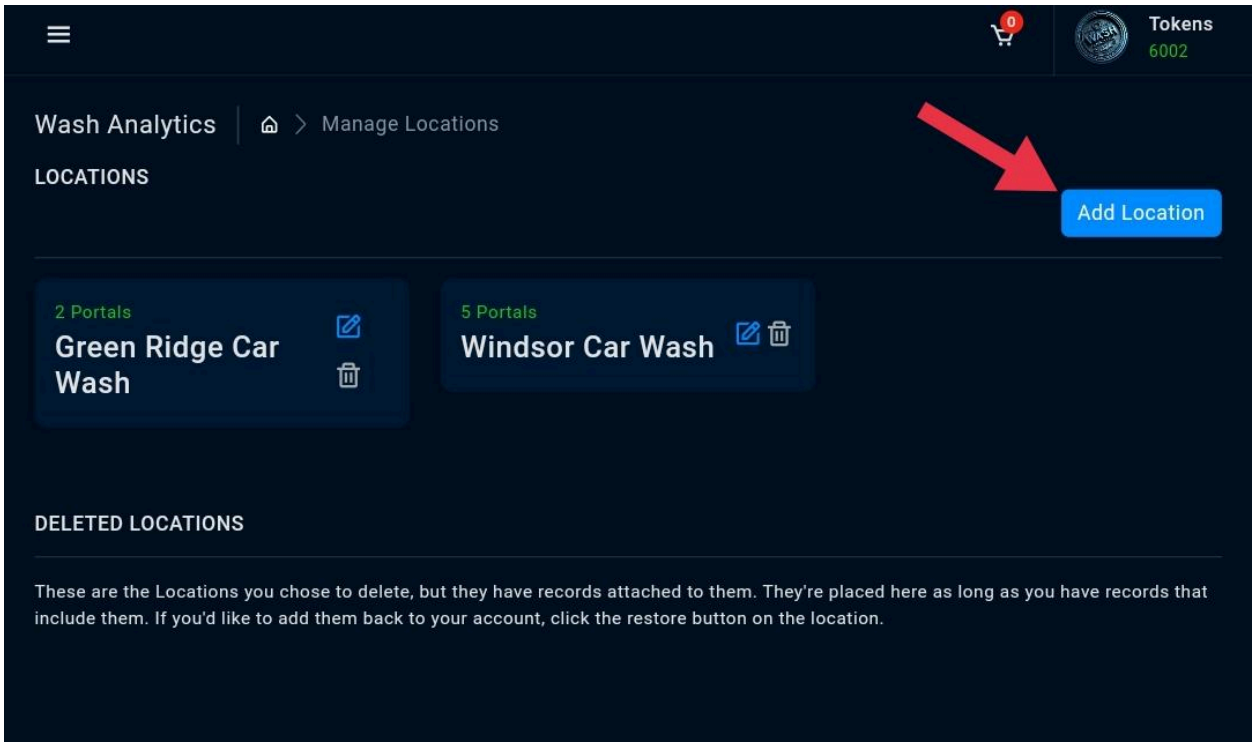
From the Account => Monitor Settings => Functions page, click "Add Function" and create a new function for each option on your bay's rotary switch. You can also select custom colors for each function, which will be displayed on charts and graphs within your account.



Last updated: July 30, 2024

Add Locations to your account

Navigate to the Account => Monitor Settings => Locations page and click “Add Location” for each car wash location you’ll be monitoring.



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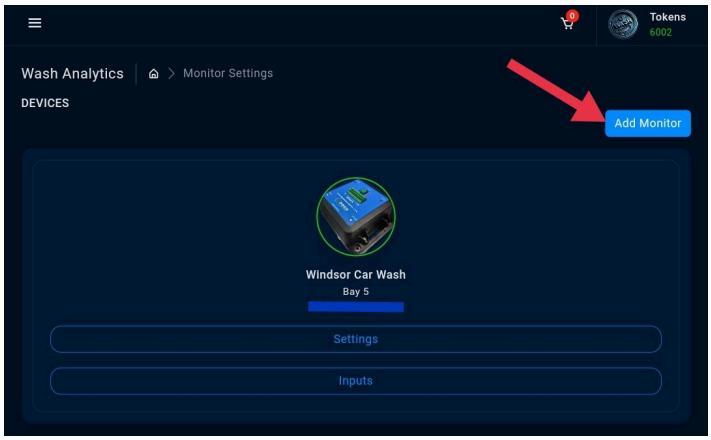
Add Wash Analytics Monitors to your account

You'll need to link each monitor to your account. Visit the Account => Monitor Settings => Devices page. Click "Add Monitor" and type in the serial number located on the Wash Analytics monitor. This serial is located on the bottom of the device.



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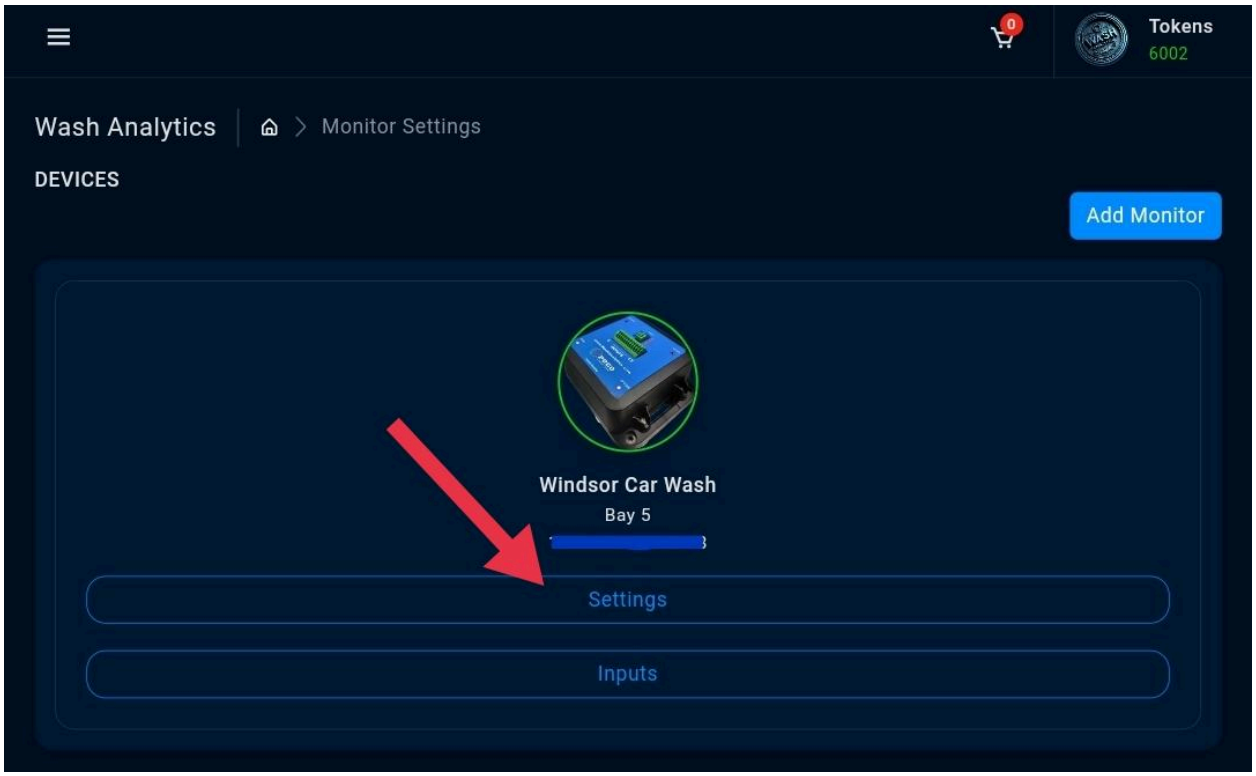
Configure each monitor

Now that all monitors have been added to your account, We can configure each one.

From the Devices page, click the Settings button on a monitor to review your monitor's settings.



These settings control how the device operates. The device will sync these settings to itself when it checks in.

Set the Wifi name and password that the devices will be using at your car wash.

CRITICAL: The device can only connect to 2.4ghz wifi signals. Many modems and routers will transmit a single wifi name on both 2.4ghz and 5ghz signals. This will cause connectivity issues! If your wifi is being transmitted on both signals, change your router settings so that they are being transmitted as separate SSID names. (eg: CarWashWifi & CarWashWifi_5g)

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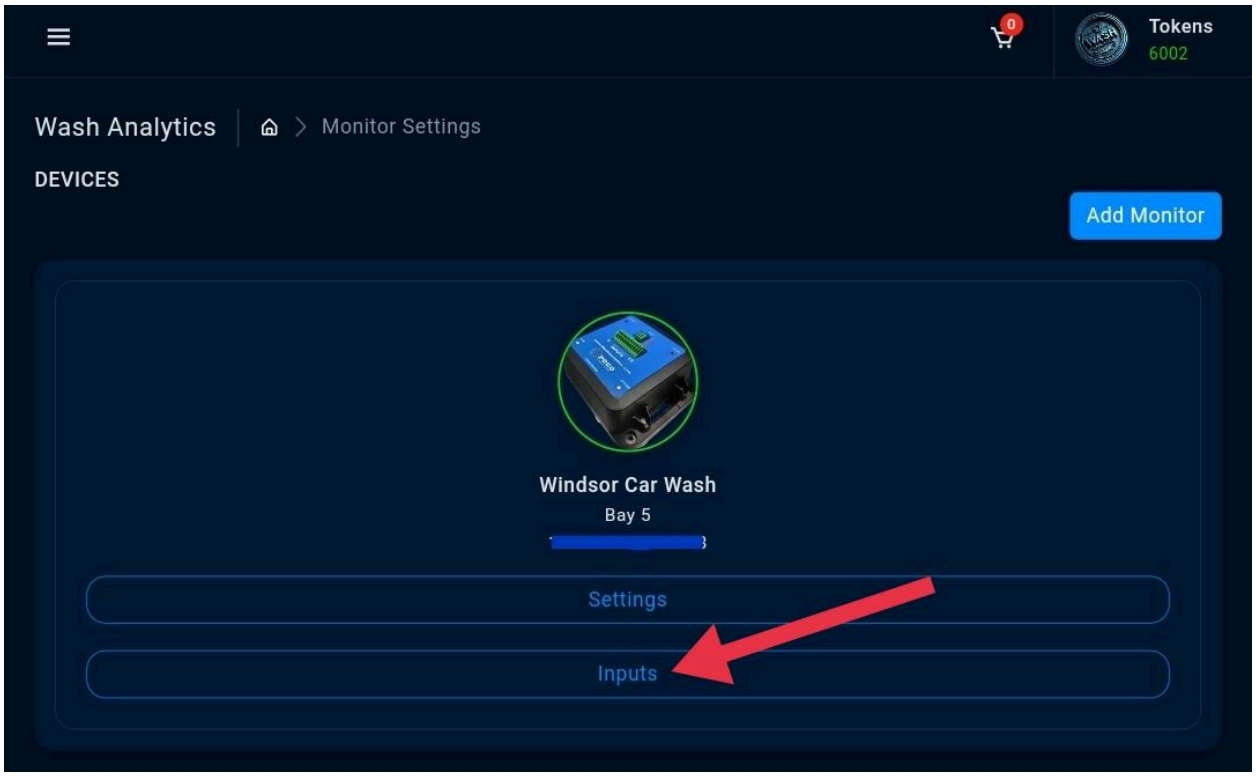
Assign functions to device inputs

Next, click the “Inputs” button below each monitor and match the functions to their corresponding location on the device’s input terminal. This step can be completed after wiring is complete if you’re unsure which inputs will be used for which functions.



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Device Installation

Requirements and Considerations

Powering the Device

The device is designed to be powered by 24V AC or DC, the same voltage used to power all your car wash functions. The power inputs are labeled COM and HOT for AC, and color coded red for positive and black for negative when using DC power.

Function Input wiring

There are 12 inputs for recording function usage. Each input accepts the 24v AC/DC HOT or Positive lead of the function. The device uses a shared Com/GND from your power input to complete the circuit on your function inputs. For this reason, you should be using the same transformer/power supply to power your device as is used for your bay timer and rotary switch. There are images that better illustrate the common wiring setup located on the website.

Attach the output wires from your rotary switch to the input terminals in accordance with how they’re set on the website.

Device Setup

Connect devices to the internet

There are multiple ways for us to get our devices connected to the internet. The easiest way is to follow these instructions and configure each device online before physically installing the devices.

Because the devices can assist each other in communicating with the Wash Analytics servers, Once a single device is set up and online, it will automatically assist all the other devices in getting online.

If you have a phone that is able to mobile hotspot, create a mobile hotspot with an SSID of “washme” and a password of “123456789”. This is the default wifi settings for the device from the factory. Creating a mobile hotspot will allow them to contact the website and retrieve their new settings. Once connected to your mobile hotspot, the devices will retrieve their new settings from the internet and migrate to their correct wifi connection.

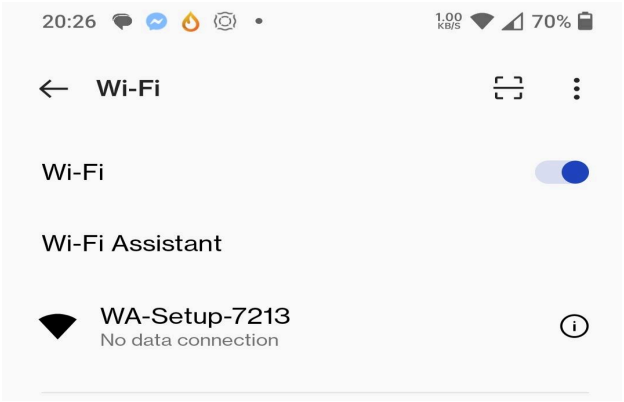
If you cannot create a mobile hotspot, Press and hold the “setup” button on the device for 5 seconds. When it begins to flash blue and green, let go.

Note: Holding the setup button for 15 seconds will make it flash red and blue causing a factory reset, so you must let go of the button before that happens.

The blue and green flash means we’re now in user setup mode.

Note: The device will only flash green and blue for 5 seconds and return to its normal lighting behavior. The device will stay in user setup mode until it’s restarted. It will flash blue and green every 60 seconds to remind you it’s still in user setup mode.

You should now see an Wifi network named, “WA-Setup-XXXX” where the X’s are the first 4 digits of your serial number. This is an open network with no password.

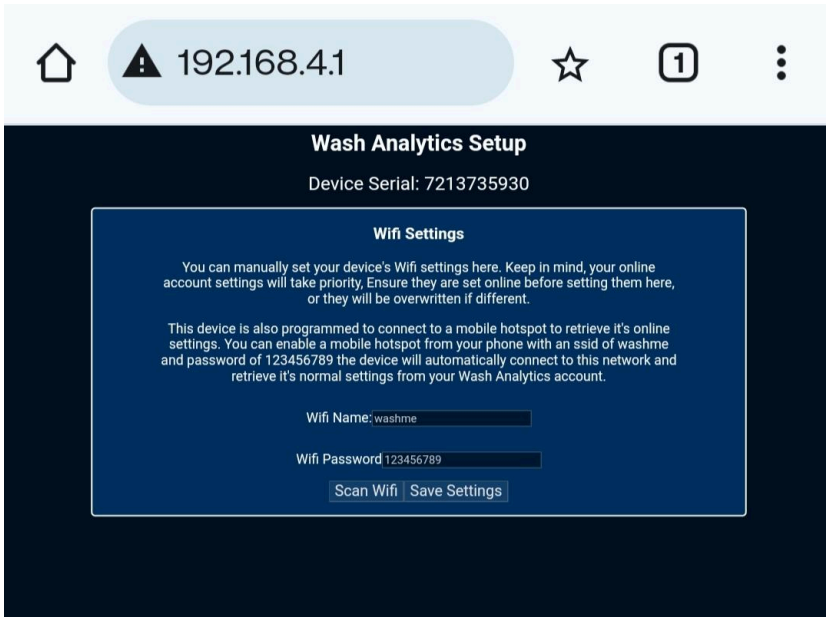


Connect to this wifi network and point your web browser to "Http://192.168.4.1" to display a setup page. From here you can configure and save the Wifi network your device should connect to.

A page will load allowing you to manually connect the device. Enter the wifi name and password and click Save Settings. This cannot be used for saving new settings, but to allow your device to make initial contact with WashAnalytics.com to retrieve its settings.

The device will permanently save the connection settings it receives from WashAnalytics.com.

The device will automatically reboot to exit setup mode after 5 minutes of inactivity.



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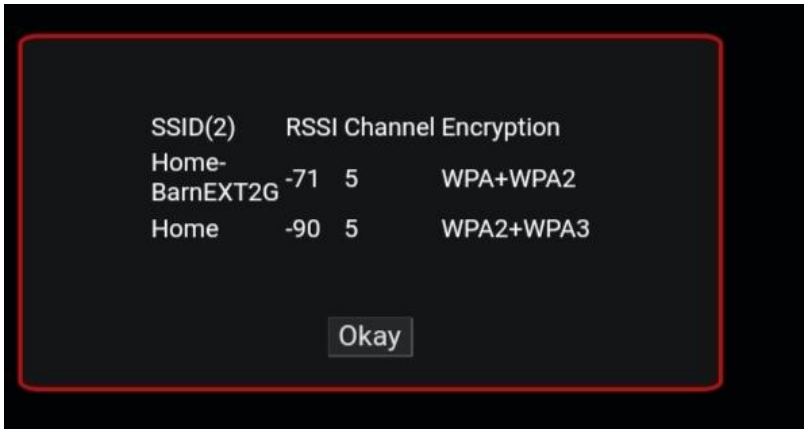
Once you have the first device configured, the other devices will begin to automatically set themselves up by communication through the mesh network. That is why it is best to have all devices configured on your WashAnalytics.com account before setting up the physical devices.

This page can also be used to test the device's mounting location and its wifi signal strength. Click the scan wifi button to see available connections and their signal strength.



RSSI is the signal strength of the connection. They are displayed in negative numbers, and the closer to 0 they get, the better. -71 is better than -90. You should strive to achieve better than -70.

You can confirm the device is communicating normally by viewing the "Last Contact" time listed on your account dashboard. This is updated as soon as WashAnalytics.com makes contact with your device. The device regularly checks in with WashAnalytics.com regardless of bay activity to ensure internet/power outages are detected promptly.

Troubleshooting

LED Indicators

There are two multi-color LEDS located on the device. One for the main system which is labeled, “System” and the other for the redundant mesh network labeled, “Mesh”

The LEDs will light, flash, and change colors based on the current conditions of the system to aid in identifying their current status. Below is a list of colors and the conditions they represent.

At startup, each device will quickly cycle through Red,Green, and Blue colors simply to show that the LEDs themselves are working properly. If a single color is missing this typically means there is a problem with the LED component itself. However, if the LED does nothing, this could be an indication of a larger problem with the device as a whole, such as failure to boot or a power issue.

System Lighting

1. **Blue flashing**
2. **Green & Blue flashing once a minute for 5 seconds.**
3. **Red flashing 100 ms on, 100ms off.**
4. **Red flashing 200ms on, 300ms off, ending with a White flash.**
5. **Red fading in and out**
6. **Red solid**
7. **Green fading in and out.**
8. **Green solid**
9. **Purple light**

1. **When the System light is quickly flashing a blue light repeatedly, this means the device is currently recording car wash usage in this bay.**

2. **The green/blue flashing will occur for 5 seconds once a minute as a reminder that the device is still in setup mode. Press the reset button to exit out of setup mode.**

3. **This indicates that the pending logs are full and the device cannot hold any more. This typically only occurs when there is an internet or server outage. Check your wifi and router to ensure you have internet at your car wash.**

4. **This indicates that the pending log is full, and the device has begun to drop tickets to make room for new ones. The number of red flashes indicate how many tickets have been erased to record new ones. This is typically due to an internet or server outage, and it means the device has been unable to report any sales directly or through the redundant network. Check your modem and router to ensure you have wifi and internet connectivity. If your wifi and internet are operating normally, report this problem to Wash Analytics. The flashing will automatically stop when the device is able to make contact with the webserver and report the lost tickets, or when it is restarted.**

5. **A red light that's fading in and out indicates the device is not connected to WiFi, but has good communication with the redundant mesh network. This may be normal if you're too far away from your Wifi signal and relying on nearby devices to report usage through the mesh network.**

6. **A solid red light indicates that the device is not connected to WiFi, and there is a problem with the mesh network. This is normal during the first 60 seconds of start up while it establishes connections.**

7. **A green light that's fading in and out indicates the device is connected to WiFi, but there is a connection issue with the mesh network. This can happen for a variety of reasons. This can be seen at first startup while connections are still being made. This can also happen as the devices change connections to keep the mesh network optimized, causing short temporary periods of this light. This will also be displayed if there are no other devices within range, and thus there is no redundant mesh network to be made.**

8. **A solid green light indicates all connections are good. Wifi is connected, and communication with the redundant mesh network is established.**

9. **A purple light is displayed when none of the above conditions have been met.**

Mesh Lighting

1. **Red Light flashing 200ms on, 1 seconds off.**
2. **Red fading in/out.**
3. **Red light solid.**
4. **Green light flashing 100ms on, 3 seconds off.**
5. **Green light solid**
6. **Blue light solid**

    1. **Red light flashing 200ms on, 1 second off indicates that the mesh network has not received the serial number from the main system. This is normal during initial start up, and may take as long as 60 seconds to finish initial start up connections.**

    2. **Red light fading in and out indicated that the main system is communicating with the mesh system normally, but there are no other devices connected to the mesh network.**

    3. **A solid red light indicates that there are no other devices on the mesh network, and a communication error is detected between the mesh and system.**

4. **A flashing green light 100ms on, 3 seconds off indicates the mesh network is connected, but has not had any communication with the system for over 60 seconds.**

5. **A solid green light indicates that the mesh network is connected with other devices and is also communicating with the system normally.**

6. **A solid blue light is shown when none of the above conditions are met.**