

**Industrial Andons, LLC**

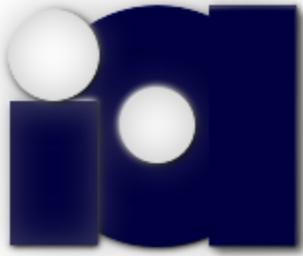
Efficient Manufacturing Solutions

## **User Manual v.1-6**

**2023**

Last updated 9-26-23

Full manual can be found online at:  
[www.industrialandons.com/webmanual.pdf](http://www.industrialandons.com/webmanual.pdf)



# Industrial Andons, LLC

Efficient Manufacturing Solutions

## Quick Start-Preparation and Setup

1. **NOTE that the FSS's (Floor Signal Stations) have a label indicating "LINE # and Unit #". You will want to put these in an order that makes sense for your facility so that it's not confusing later.**
2. Decide where you will place FSS's (Floor Signal Stations), PSU (Plant Signal Unit if included) and Computer Module (SFV-Receiver). You should have a standard 120vac outlet within 8 feet of the location.
3. The Computer Module will need to be in the vicinity of the FSS's and will be plugged into a customer provided computer via USB or Ethernet drop. This computer will need internet access and will need to be on during any period of time you want to feed data to the SFV (Shop Floor View) System.
4. Once all units are roughly where you want them, you should test to make sure they are talking to each other. The FSS talk directly to the PSU and the Computer Module. When a light is turned on or off the FSS will send a signal out and then waits for a unique acknowledgement from both the PSU and Computer Module. If the FSS does not receive the acknowledgements, it will resend the signal. One full send wait cycle is about 1 second. The FSS will continue this cycle for 10-15 seconds if no acknowledgement is received. At the end of the period the unit will "fault out" and the yellow light will flash rapidly for about 10 seconds indicating that no acknowledgement was received. If this occurs, you will need to reposition the units and retest.
5. Floor Signal Stations can be mounted in a variety of manners. Typically if mounting to a flat surface, a flange mount (shown below) and desired length of ½" black pipe works well. Units can also be mounted using beam clamps and small conduit bands.



6. Switch boxes can be mounted using beam clamps or mounting magnets to the tabs. You can also 3D print switchbox mounts that can mount vertically or horizontally to a strut tube. 3D designs can be downloaded from. [www.industrialandons.com/3DPrint](http://www.industrialandons.com/3DPrint)
7. Plant Signal unit can be hung on a beam using a standard beam clamp or if a dual horn unit you may need to weld up a frame to mount the unit.
8. You will need to install a program called a “service” on the computer. The service runs in the background and will not interfere with normal use of the computer. Therefore, a supervisor’s computer on the shop floor works fine for this use.
9. You will receive an email from Industrial Andons with instructions on installing the service. This will require full admin rights for the installation.
10. Industrial Andons can remote in and install the service if desired. Again, full admin rights will be required. We use Splashtop to remote onto systems or we can use something you may already have.

# Installation Considerations/Recommendations

The system operates at 418mhz or 433mhz. Therefore, you should avoid other wireless products in this range. Most 2 way radios and remote crane pendants operate in the 900mhz range and cell phone and wifi systems operate in the giga hertz range and will not interfere with one another.

Make sure all units are plugged into a well-grounded outlet. **DO NOT** remove the ground prong from the power cable; this will reduce the systems wireless range.

Avoid plugging the units into outlets or circuits that have electrically noisy equipment plugged into them. Electrically noisy items include fluorescent lights, electrical motors, fans and some electronics. If your unit signals automatically, move the unit to a different outlet or circuit.

Do not run the switch box cable directly next to the power cable. The magnetic field created by the power cable (minimized by the shielded power cable) can cause false signals.

Mount units such that the antenna is above shelving or other obstructions as best possible and ideally has a line of sight to the receiving unit.

Try not to mount units directly against steel beams and columns. This can shield signals coming from units behind the column.

If you have any questions about location and placement, please free to contact us.

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## Declaration of Conformity

Trade Name:	Andon Communication System
Model Number:	IA201
Compliance Test Report Number:	B31001A1, B31001A2
Compliance Test Report Date:	April 2006
Responsible Party (in USA)	Industrial Andons LLC
Address:	391 C Sportsplex Dr, Dripping Springs TX 78620

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If the unit does cause harmful interference to radio or television reception, please refer to your user's manual for instruction on correcting the problem.

I the undersigned, hereby declare that the equipment specified above conforms to the above requirements.

Place: Hays County

Date: October 2011

Signature:

Robert Wilson  
Owner  
Industrial Andons

## Information to the User for a Class A Digital Device

**WARNING:** This equipment has been tested and found to comply with the limits for Class A digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction's manual, may cause interference to radio communications. Operation of this equipment in a residential area is likely to cause interference in which case the user will be required to correct the interference at his own expense.

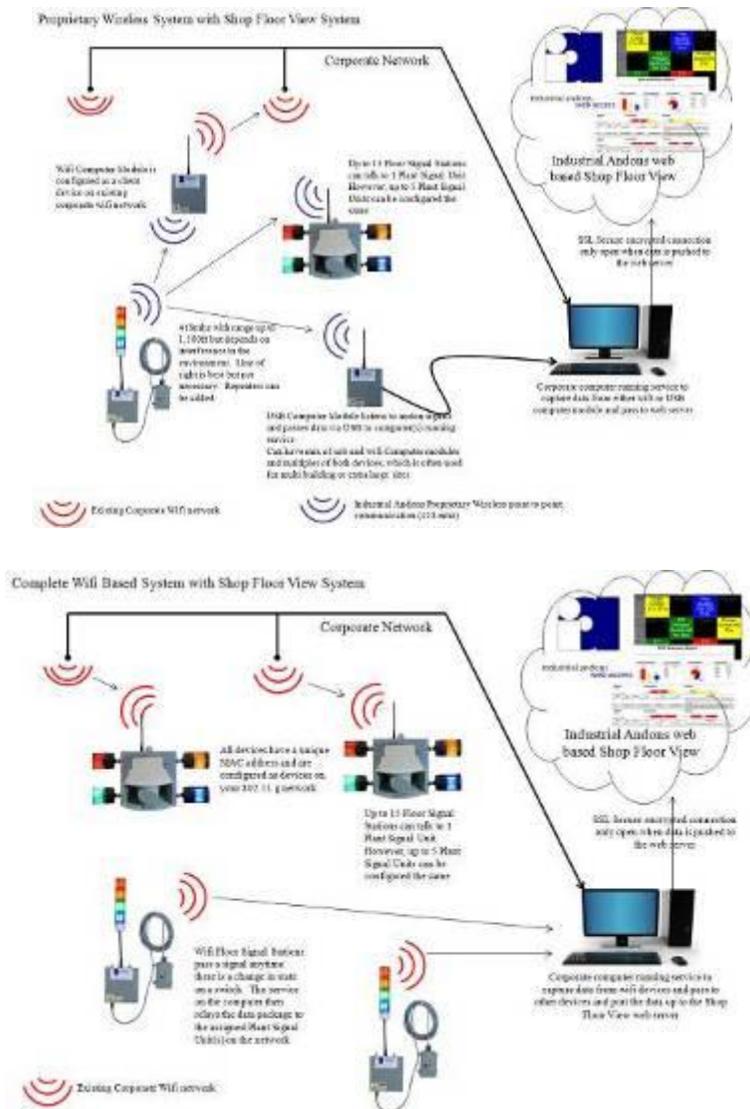
The user is cautioned that changes and modifications made to the equipment without approval of the manufacturer could void the user's authority to operate this equipment.

### Warranty

Industrial Andons, LLC offers a 90-day full parts and labor warranty on all workmanship issues. The warranty does not cover abuse, neglect or improper use or installation. Defective components must be shipped back to Industrial Andons, LLC for evaluation. Industrial Andons, LLC maintains the right to decide whether defective components will be replaced, repaired in part or repaired in whole. Should you have a question with you system after the 90 days, please contact us for support. We will support and service our product after purchase.

# System Overview

The below two diagrams show an overview of all the standard components in a system and how they communicate to one another. You do not have to have all the components and may have a custom system that is different than shown below.



## Standard Components

### **Wireless Stack Light with Keyfob Control** (Upgradable to Wifi Floor Signal Station)

The WLRX is a standalone remote controlled stack light that is placed at or near the workstation.

- 4 light LED stack light (Red, Amber, Green, Blue)
- Lights are remotely controlled by wireless keyfob
- Keyfob remote control has 4 sets of On/Off buttons for turning on and off each light and has a range of ~75 feet allowing increased flexibility between light mounting location and team member location
- Keyfobs have a belt clip on back or can easily be secured to a pole or other location
- Unit can identify and track 2 unique keyfobs
- Multiple keyfobs can be set identically for multiple users to turn lights on and off
- Standard power cord for connection to a 110 vac outlet
- Includes L-Bracket for mounting
- Units are approximately 24" in overall length
- Optional Alarm can be added to any single light
- Units are upgradeable to WIFI for future data collection needs or to communicate with wifi based Plant Signal Unit
- -Requires the purchase of wifi board for each light, this enables the individual light to be viewed via the companies intranet
- -Expanded data collection and notification capabilities requires the Shop Floor View Resource Control System
- Units are customizable, call to discuss



## Floor Signal Station- FSS: (Proprietary Wireless)

- A four light LED stack light (Red, Amber, Green, Blue)
- Switch box(FSS-SB) or Keyfob(FSS-KF) input
- Switch box on a 6 meter cordset has four colored pushbutton switches for turning on the lights and actuating the andon system plus one momentary switch for cancelling the tone on the Plant Signal Unit (PSU)
- Keyfob remote control has 4 sets of On/Off buttons for turning on and off each light and has a range of ~75 feet
- Keyfobs have a belt clip on back or can easily be secured to a pole or other location
- 2 sets of inputs for each light. Default input turns lights on solid, second input turns on flashing. If two inputs are used and both on (switch box and/or keyfob), lights will flash twice as fast for added visual control
- Additional switch boxes(SB1) or keyfobs(KFob) can be added
- Additional tapped and plugged holes for easily adding receptacles and switch boxes or other switches, sensors, timers etc...
- 7 additional inputs (contact closure activated) that can be used to send data to the Shop Floor Viewer for collection and analysis
- Floor Signal Station can be mounted to any ½” pipe nipple or optional tripod stand for quick set up
- Standard grounded power cord for connection to a 110 vac outlet
- Units can be used with Plant Signal Units
- Units are customizable, call to discuss



## **Plant Signal Unit-PSU:** **(Proprietary PSU-P and Wifi PSU-W versions)**

- PSU aggregates signals from up to 15 Floor Signal Stations-FSS's that are assigned to the same line. Anytime a new light is turned on, the tone module will begin to play the single line melody until all lights are turned off or a 'tone cancel' signal is received from a FSS
- Four flashing LED lights color matched to the four colors on the FSS's
- One 105 db horn style tone modules with 32 selectable melodies
- Standard grounded power cord for connection to a 110v a/c outlet
- One Plant Signal Unit can control up to 15 Worker Signal Stations
- Up to 15 Plant Signal Units can exist in one rf environment
- Optional Multi-tone PSU (PSU-Multi) has a louder 119db horn and has a Compact Flash Card that allows customers to select and change the melodies played. Unit can also be configured to play different melodies depending on which FSS sent the signal or other logic, call to discuss options

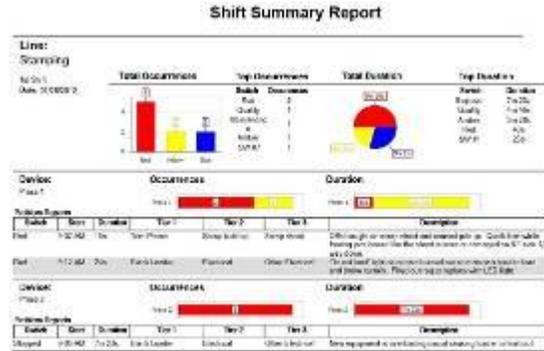


## Shop Floor View, Resource Control System Computer Module and Software

All wireless systems can add this option in the future with no changes to the existing equipment!

The Shop Floor View software is a web based subscription service. The service can be easily accessed from any computer with an internet connection.

Stamping Line	Draw Amber 11h 37m	Pierce	Trim Quality 10d 20h 51m	Flange
Paint Prep Line	Body Insp	ED Phosph Switch #5 4m 52s	Sealer	Primer Switch #3 23s
Paint Final Line	3-1 Switch #5 2m 53s	3-2	3-3 Switch #1 1m 55s	



- The computer module is the physical component which monitors a wireless environment and collects all signals from the various andon systems in the environment and sends a record of all signals to the software in the attached computer (computer to be supplied by customer)
- The software allows you to send out different email messages tied to each andon light per Floor Signal Station. You can also tie automation into the andon lights or utilize up to 7 more discrete inputs not tied to lights.
- You can count operations, time operations automatically.
- Tag specific switches so that a problem report is required when the switch is turned on.
- Run reports and use pivot tables to analyze the data
- You can also view the current status of all andon lights via the internet and display this information on large screen displays

## Set Up- Physical System

1. Carefully remove the tripod stands (if purchased) and set them up. You do not have to use the stands. The Worker Signal Stations can be mounted directly to equipment using a standard ½” pipe nipple attached to a pipe flange.
2. Remove the Floor Signal Station.
3. Attach Floor Signal Station to the tripod stand using the ½” pipe nipple and the ½” female pipe thread.
4. Place the Floor Signal Station and cut the zip ties holding the wires bundled together. You are now ready to place the Floor Signal Station and start using the system.
5. All components with your andon system are already coded to work as one complete system. However, you can mix components with other Industrial Andons, LLC, andon systems. The following page shows the structure for the dip switches.
6. You are now ready to prepare the Plant Signal Unit. Before hanging the unit you will want to set the volume. With the horn style tone generator you change the volume by removing the screws and opening the cover on the top of the horn. The cover has been labeled “Volume”. Gently turn the dial inside for the desired volume
7. You can also change the melody. To change the melody, go to [www.industrialandons.com/Sound](http://www.industrialandons.com/Sound). Here you will find the instructions for changing the melodies.
8. You are now ready to hang your Plant Signal Unit and position your Floor Signal Stations and start using your system.

## System Use and Error Signal (YELLOW light flashing)

To use your system make sure all components have their antenna securely installed and that all components are turned on.

At the Floor Signal Stations, turn on the desired toggle switch and the corresponding light on the Floor Signal stack light will turn on. Almost immediately, the matching strobe light and tone module on the Plant Signal Unit will turn on. If you want the lights to stay on but the melody to stop, press the momentary button on the switch box. This will activate the “Tone Cancellation” feature. The tone will remain off until a new signal comes in. The “Tone Cancellation” can be initiated from any Floor Signal Station coded to the same line.

Your andon system uses transceivers to communicate between the Floor Signal Stations and the Plant Signal Unit. This means that when a switch is turned on at the Floor Signal Station, it starts sending out its message once every second until it receives a confirmation signal back from the Plant Signal Unit that it received its message. If the Floor Signal Station doesn’t get a confirmation signal in about 10 seconds, it will shut down and the Yellow light will begin flashing. If this occurs, you will have to turn the Floor Signal Station off and then back on to reset the unit.

If this occurs, make sure that the Plant Signal Unit is turned on and set to the same line code as the Floor Signal Station. If this is correct, then you may need to move the Floor Signal Station or Plant Signal Unit to a better location to improve communications.

## DIP Address Settings

All of your physical devices are set using DIP switches. These are factory set based on the information provided to Industrial Andons, LLC when the system was ordered so it should not be necessary to change these settings in the beginning. However, things change. So if there is a need to change units around, use the below chart to change the settings.

DIP Switch Addresses



Sample DIP switch configuration showing for Line 1 Floor Signal Station 1

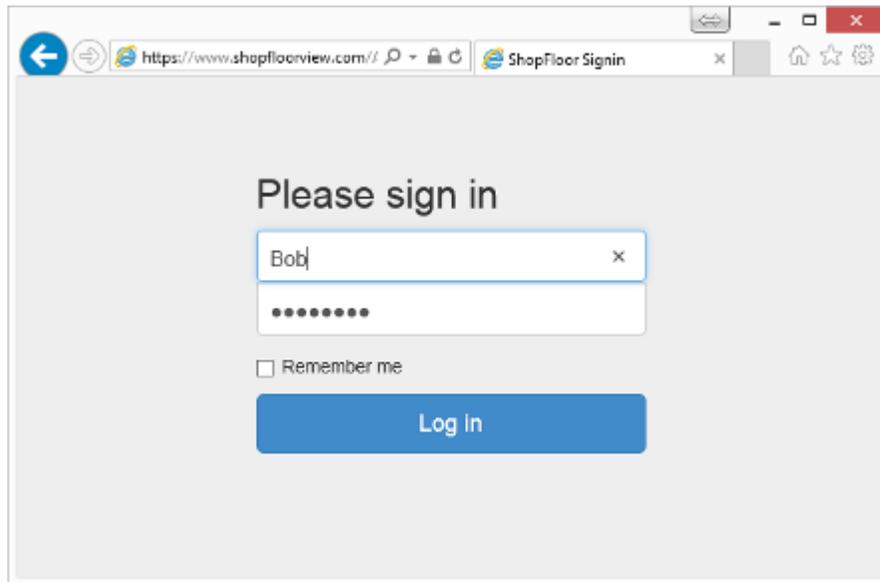
Line ID	SW1	SW2	SW3	SW4	
0	-	-	-	-	Not Used
1	V	-	-	-	"-"= Dip Up "ON" V = Dip Down
2	-	V	-	-	
3	V	V	-	-	
4	-	-	V	-	
5	V	-	V	-	
6	-	V	V	-	
7	V	V	V	-	
8	-	-	-	V	
9	V	-	-	V	
10	-	V	-	V	
11	V	V	-	V	
12	-	-	V	V	
13	V	-	V	V	
14	-	V	V	V	
15	V	V	V	V	
Unit ID	SW5	SW6	SW7	SW8	
0	-	-	-	-	Receiver Mode
1	V	-	-	-	"-"= Dip Up V = Dip Down
2	-	V	-	-	
3	V	V	-	-	
4	-	-	V	-	
5	V	-	V	-	
6	-	V	V	-	
7	V	V	V	-	
8	-	-	-	V	
9	V	-	-	V	
10	-	V	-	V	
11	V	V	-	V	
12	-	-	V	V	
13	V	-	V	V	
14	-	V	V	V	
15	V	V	V	V	

The first four dip switches set the Line number and must be the same for all transmitters and receiver in a system. If the second four dip switches are ZERO the unit will be a receiver unit. If the second four are set to 1-15 it will be a transmitter unit. In other words, the setting of the second four dip switches determines the functionality of the system.

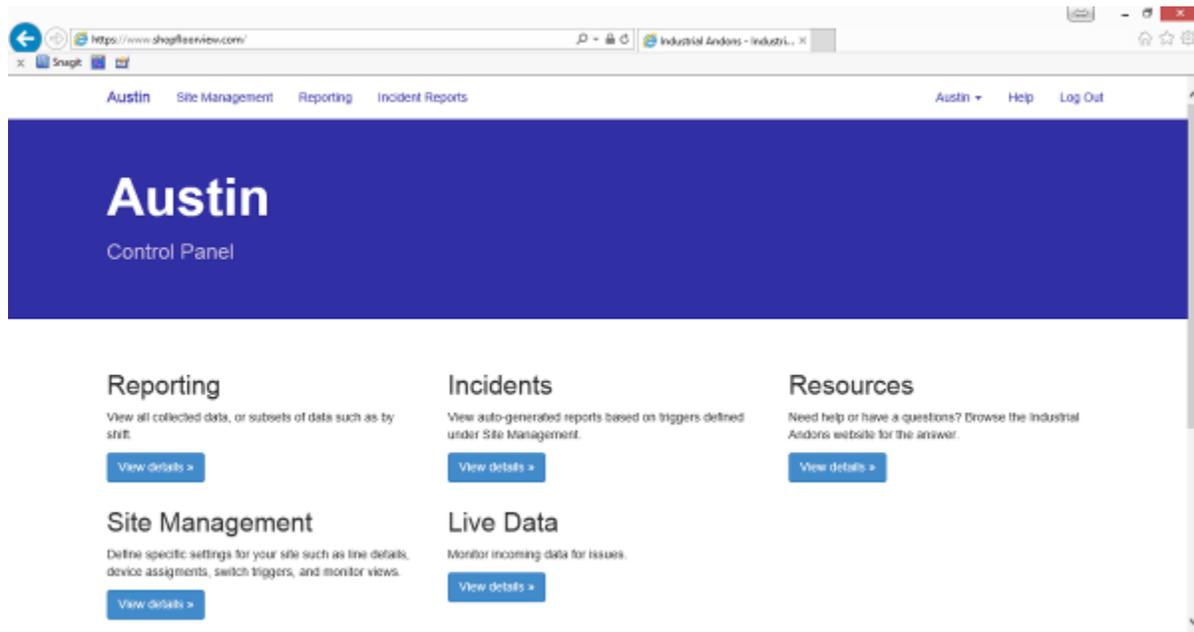
## Database Set Up and Use

### Logging in for the first time: (site or corporate admin)

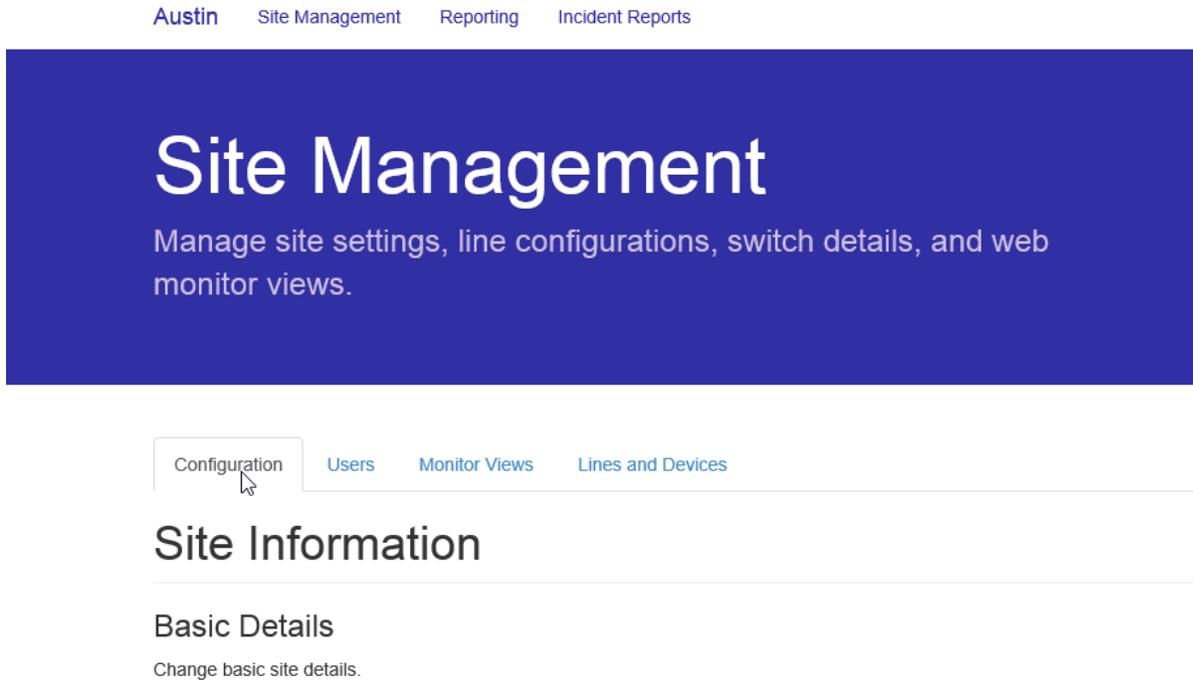
Goto: <https://www.ShopFloorView.com> and login with the Username and Password provided by Industrial Andons, llc.



You will now see the Home Page.



First, select the “Site Management” button and select the “Configuration” tab below the header.



## Setting up the service

A “service” is a small program that runs in the background and once configured does not require any input from the user. In order to use the Shop Floor View system you have to install “Industrial Andons” service on a local computer or server. This service manages the secure passing of data from the local physical or virtual andon system up to the web servers. There is a SFV-RX (Shop Floor View Receiver) physical module that listens to the FSS-Floor Signal Stations. This device then passes the raw data signal to the service. The SFV-RX can be connected to a computer running the service via USB cable or to a network drop via Ethernet cable. If you are using USB, you will need to install the FTDI driver for the device. Before connecting the device to the computer go to [www.industrialandons.com/FTDI](http://www.industrialandons.com/FTDI) to download the executable to install the drivers. Once the drivers have been successfully installed the device can be plugged into the computer and turned on. Contact Industrial Andons for the links and instructions for the Service files.

## Change User Account Associated with Service

The service can run in a few different modes, but the default is the Local Service account.

You may need to specify a service account to use that has internet access when the computer is locked or no one is logged in. Once this account is created, you can edit the services properties and under the "Log On" tab specify that users credentials in the "this account" section.

1. run "services.msc"
2. find the "Industrial Andons - Shop Floor Service" in the list of services
3. right-click the the service and click "Properties"
4. click on the "Log On" tab
5. select "this account" radio button
6. browse for the service account name and select
7. enter the password
8. hit apply and restart the service

## USB Cable Based Computer Module

Turn on your Computer Module and plug the USB cable into your computer.

Your computer should automatically install the device drivers.

Go back and hit 'Restart' on the service one more time.

Now test that data is being passed up to the Shop Floor View system. Turn on a switch (light) on the system. Then click on your site name in the upper left corner and then select "View details" under Live Data.

The screenshot shows the Austin Control Panel interface. At the top, the site name 'Austin' is highlighted in a yellow box with a red arrow and the number '1'. Below the dashboard, the 'Live Data' section is highlighted in a yellow box with a red arrow and the number '2' pointing to its 'View details' button. Other sections include Reporting, Incidents, Resources, and Site Management.

You should see some entries on the page like this

The screenshot shows the Site Logging page with two log entries. The first entry is from 1/12/2015 1:58:21 PM and the second is from 1/12/2015 1:58:20 PM. Both entries show detailed JSON data including ClientName, Created, Data, DeviceNumber, LineNumber, TagId, and FingerPrint.

```
1/12/2015 1:58:21 PM [{"ClientName":"John-WorkLaptop","Created":"VDate(1421096296635)"},"Data":{"__type":"VirtualDeviceInfo#","ClientName":null,"Data":{"Created":"VDate(1421096296635)"},"Data":{"11111111 11111111","DeviceNumber":"01","LineNumber":"01","TagId":"2835cd08-77b9-46b0-a234-9170d03d99"},"ExtendedData":{},"FingerPrint":"00008022011018","OccurredAt":"VDate(1421096296635)","Type":0}

1/12/2015 1:58:20 PM [{"ClientName":"John-WorkLaptop","Created":"VDate(1421096294159)"},"Data":{"__type":"VirtualDeviceInfo#","ClientName":null,"Data":{"Created":"VDate(1421096294159)"},"Data":{"11111110 11111111","DeviceNumber":"01","LineNumber":"01","TagId":"294e471b-46d4-4979-86cb-c1d6e9e76c78"},"ExtendedData":{},"FingerPrint":"00008022011018","OccurredAt":"VDate(1421096294159)","Type":0}
```

## Changing System Configuration Settings

If you need to make changes to the configuration settings; like adding a new wifi device or changing an email on the list of recipients. Go to the Start or Windows icon, select 'All Programs' and find the Industrial Andons folder.

Then **Right Click** on the "Configuration Wizard", select properties and then the "Run this program as an administrator" under the "Compatibility" tab.

You will then step through all of the setup screens and you can make any necessary changes.

## Restarting the Ethernet Device

If the Ethernet device is turned off and back on, you must restart the Industrial Andons Service in order to reestablish the connection.

## Industrial Andons WiFi Board Configuration

Overview:

You can watch a video on configuring the wifi boards by going here:

[www.industrialandons.com/wifi/wifi.mp4](http://www.industrialandons.com/wifi/wifi.mp4)

The WiFi board connects to the andon controller board via a serial link. The WiFi board receives data from the controller board and relays it over a WiFi link. The signal is sent to the IP address of the computer/server that is running the “Industrial Andons Service”. **The Industrial Andons Service should be installed first before configuring the WiFi board** because you will need the IP address of the computer/server running the Industrial Andons Service. The WiFi board also generates web pages that can be viewed with any standard web browser. The web pages show the status of the four andon lamps, and are also used to configure the WiFi board. The wifi board is a 2.4GHz 802.11g low power module that connects at 56mb/sec and uses 40mhz channel width.

### Board Specifications

The wifi board is a 2.4GHz 802.11g low power module that connects at up to 56mb/sec and uses 40mhz channel width.

### Resetting the Board



Press small gold reset button here

During the set up process, if you ever have to start over you can reset the wifi board to its original configuration.

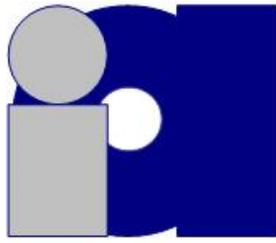
1. Press the small gold reset button attached to SW1
2. With the button pressed connect the power and the Red LED should come on solid for 5-10 seconds and then flicker and a blue LED will also light up.

3. Release the button, turn unit off and back on. Unit is now reset

#### Initial Configuration:

The WiFi board is delivered from the factory with certain default settings.

- On power up the board will attempt to connect to an “ad-hoc” WiFi network with the SSID set to “IAxxxxxxxxxxxx” where “xxxxxxxxxxxx” is replaced by the MAC address of the wireless chip, without the colons. So if the MAC address is 00:1E:C2:00:22:98, the initial SSID will be “IA001EC2002298”. This guarantees that if several boards are powered up in WiFi range of each other, they won’t conflict because each one has a unique SSID.
- To connect to the board to configure it, open the wireless network on your pc, click on “search for available wireless networks”, and click on the SSID of the board you want to configure.
- By default the boards use an IP address of 192.168.123.123. To finish connecting to the board, set your PC’s network address to 192.168.123.100, and your netmask to 255.255.255.0. Then open a browser window, and enter <http://192.168.123.123> in the address field.
- You should see a web page like Figure 1



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Version: 1.00

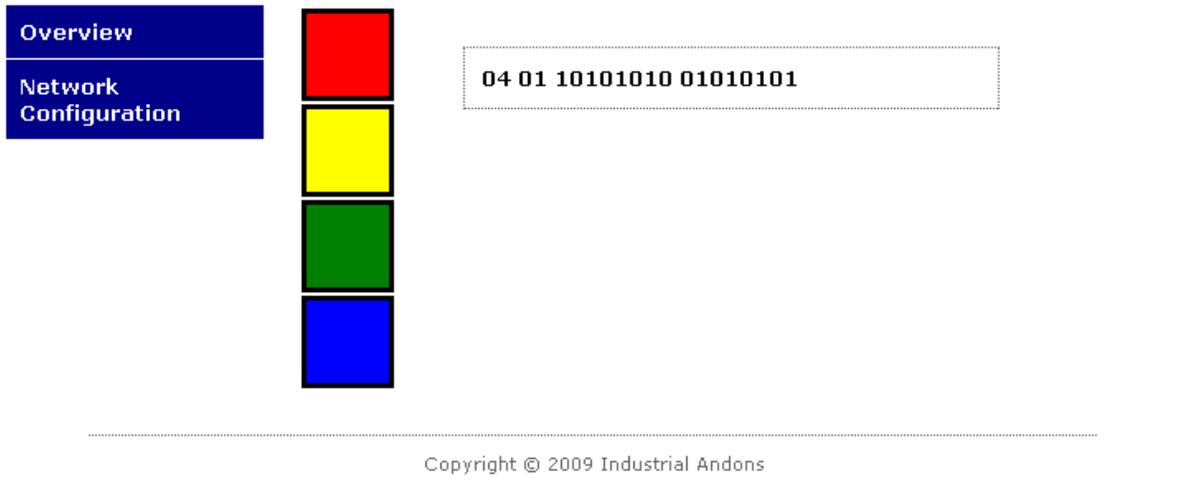


Figure 1 – Overview Page

- Once the board is operating with the andon controller the status of the lamp stack will be shown here. If any of the lamps are lighted the corresponding colored boxes will be filled in on this page. The boxes will be clear if the corresponding lamp is not lighted. When there is a change in state, you will need to hit refresh on your web browser to see the change.
- The box to the right of the lamp stack image shows the last command the board received from the andon controller board. It is used for debugging.
- Click on the “Network Configuration” Tab. Figure 2 will appear

Overview

Network  
Configuration

## Network Configuration

Target IP Address:	<input type="text" value="192.168.123.1"/>
Target Port:	<input type="text" value="8000"/>
<input type="button" value="Save Config"/>	

Figure 2 Configuration Page

- The first thing you must do is enter the ip address of the computer/server running the Industrial Andons Service and leave the Target Port set to 8000 and press the “Save Config” button

Once the page refreshes, scroll to the next box down and fill in the appropriate data for your network.

**MAC Address:** 00:1E:C0:01:4E:D6  
**Host Name:** IAFINCH

Enable DHCP

**IP Address:** 192.168.123.123  
**Gateway:** 192.168.123.1  
**Subnet Mask:** 255.255.255.0  
**Primary DNS:** 169.254.1.1  
**Secondary DNS:** 0.0.0.0

**SSID:** IA001EC0014ED6  
**Mode:** Infrastructure  AdHoc   
**Active Channels:** 1,6,11

**Security:** None  WEP  WPA/WPA 2

**WEP Configuration:**  
Authentication: Open  Shared   
Wep Keys:

**WPA/WPA 2 Configuration:**  
WPA/WPA 2:   
Passphrase:

Save Config

- Select a suitable hostname.
- If you have a central DHCP server check that box. If not, select an IP address that is within the network you intend to use. You must also set the gateway address, the subnet mask, and the DNS server addresses.
- Set the SSID to the ID of the network you intend to use. If you have a central wireless access point select the “Infrastructure” mode. If not, select “ad-hoc”. Note: this board and the relay or database server device must use the same SSID. If you only have a few WiFi boards in the current installation it doesn’t matter which mode you use. If you have more than a few, it is better to set up a wireless access point, or “WAP”. Otherwise all the boards in the installation have to process every message, even ones that are not addressed to them.
- There are eleven possible WiFi channels available, numbered 1-11. In most cases the defaults shown will work fine. If you have many many WiFi boards in range of each other, it might be better to have some boards use different channels.

- Select no security, WEP security, or WPA. If you select WEP or WPA you have to enter keys or a passphrase. Every device on this SSID has to use the same values in order to connect to the network.
- CLICK ON “Save Config”. At this point the device will no longer be connected to the computer via the ad hoc connection as it is trying to connect to the network and should be viewable on your list of connected network devices. See “Red LED status for connection status”

### **Red LED Light Flashing**

The Red LED on the WiFi board indicates the connectivity of the board as follows:

**Solid LED:** ad-hoc mode or ad-hoc transitioning to infrastructure

**Fast blink:** infrastructure connected (on for about 1/2 second, off for about 1/2 second)

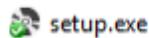
**No LED:** infrastructure was connected, but now lost

**Slow blink:** infrastructure connection failed, retrying

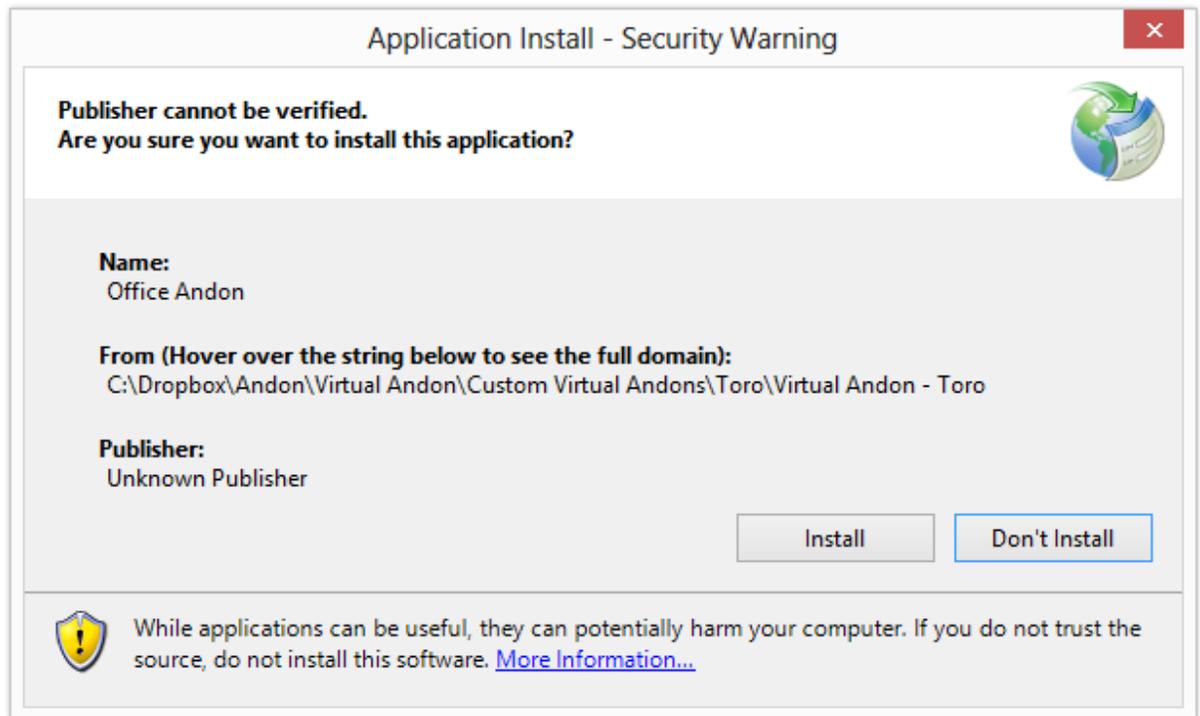
## Setting up the Virtual Andon

The virtual andon system is a computer based andon system. You can install the program on a computer, then you can turn on lights (virtual and physical) and pass data to the Shop Floor View system just like the physical andon units.

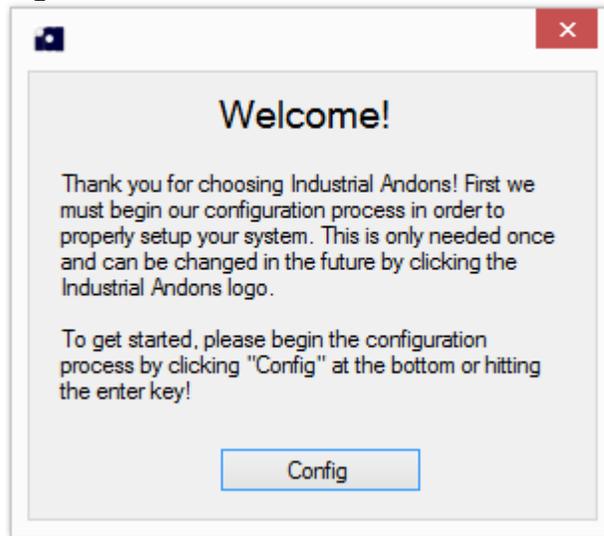
1. Download the zip file from the IAWebaccess site or provided by Industrial Andons.
2. Unzip the folder and then run the “setup.exe” file. Be sure to first right click and **“Run as Administrator”**



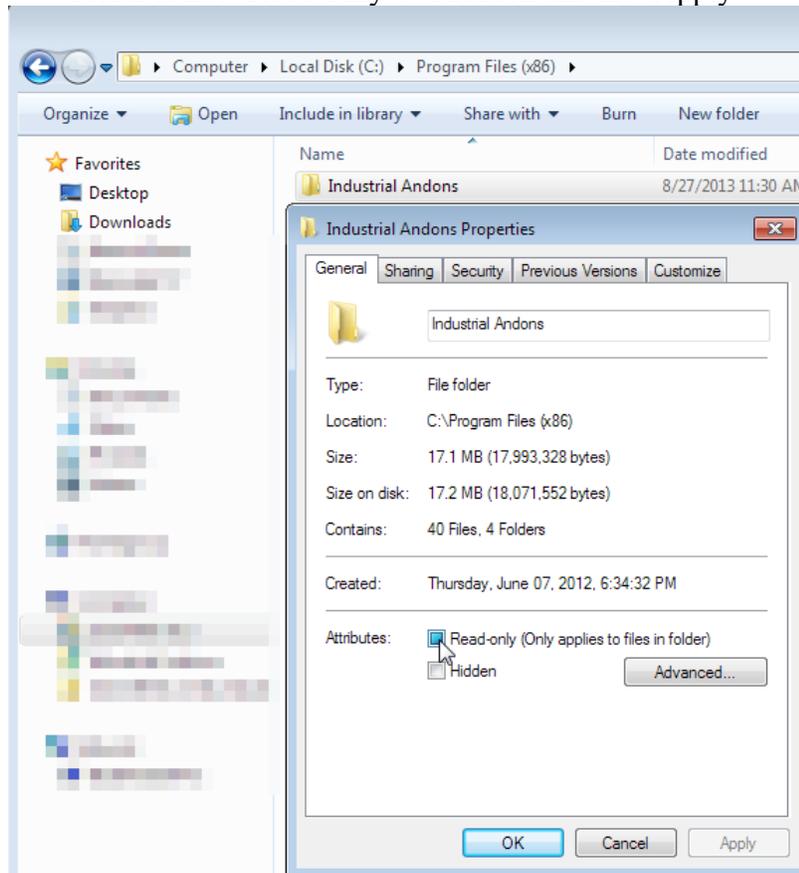
3. Select “Install”



4. Select “Config”



If you get an error opening or saving your configuration settings, you will need to find the “Industrial Andons” folder under your program files (C:\Program Files (x86)). Then right click on the “Industrial Andons” folder, select “properties” and make sure the folder is not “Read Only”. Uncheck and hit “Apply”



# Configure the Virtual Andon

Enter the Line # and Unit # that the Shop Floor View System (SFV) will associate with this installation on this computer. Do not use ones that are already used by physical andons.

Check this box to keep the Virtual Andon on top of all windows on your desktop

Enter the IP Address of the computer running the service. If you run the service on the same computer running the Virtual Andon Program enter "localhost" here

Additional data can be sent to the SFV system. Click here to configure the extra data fields.

v1.3.3

Save

Check boxes next to the switches you want to appear in the list of active switches

Checking the radio button will automatically turn this switch on if all others are off

Labels switches for easier identification. This does not update switch names in the SFV, only for the user interface of the Virtual Andon

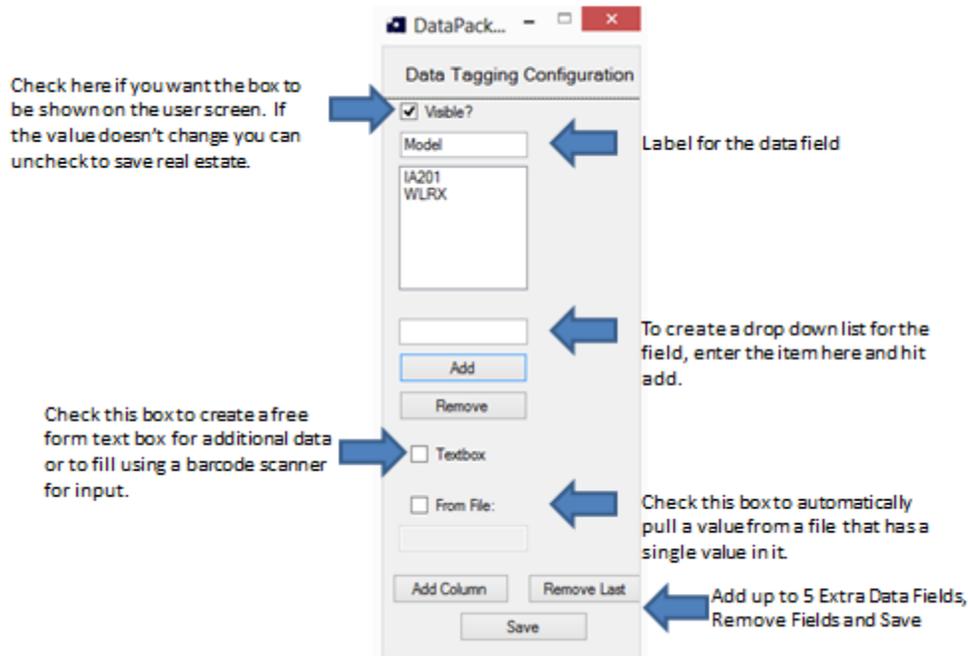
Checking this box will turn on the light when all others are off. If selected, you must first turn the light on then it will go off any time the others are off. Can be used to track uptime or availability if another light is used when busy.

Save

## Data Tagging Configuration [EDP\_]

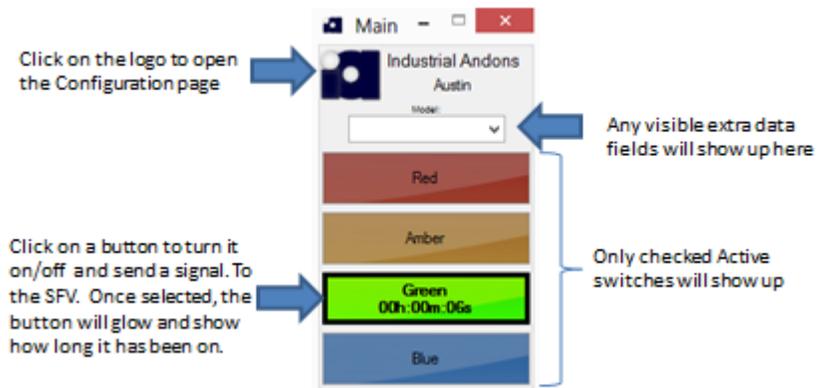
You can tag all of your andon calls with up to 5 additional data fields. This means every andon signal will pass this extra data to the Shop Floor View System and will be recorded with that occurrence.

The extra data can be downloaded and analyzed when the raw data is exported to Excel.



## Using the Virtual Andon

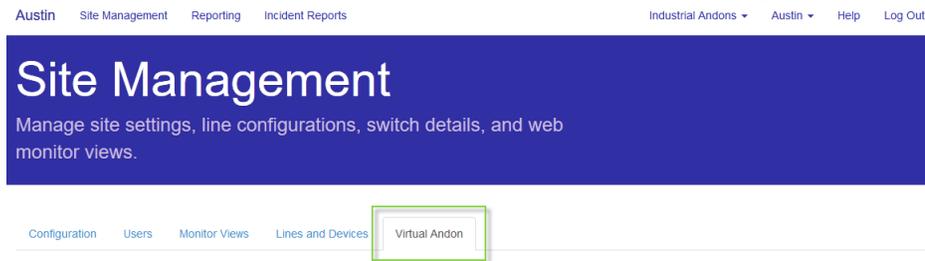
Once the entire configuration is complete, click on Save to save the settings and open the Virtual Andon user window.



## Using the Shop Floor View Virtual Andon

The SFV-Shop Floor View system now has a Virtual Andon included in the web based system. This can be used to turn a signal in the SFV on or off. This can be used to clear a signal or initiate a signal within the system. This will not turn the physical system on or off.

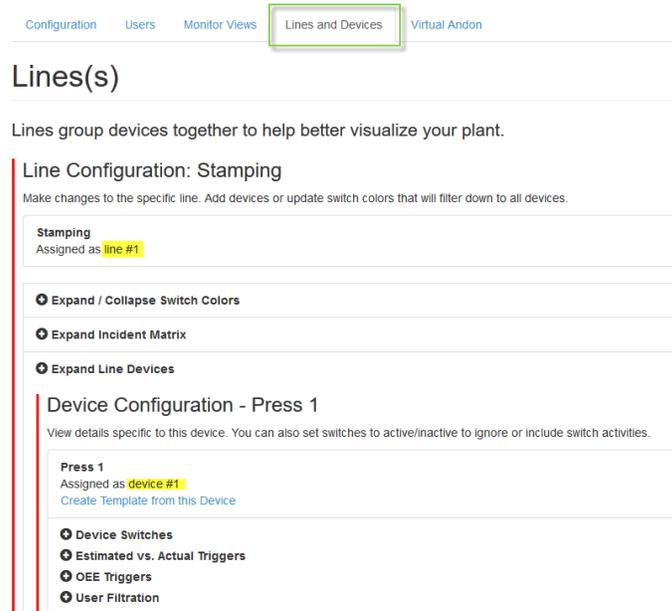
The SFV Virtual Andon can be found as a new tab under “Site Management”.



### Virtual Andon

To use the Virtual Andon you will need to know the Line # and Unit # of the device you want to send the signal for. To find this, select the “Lines and Devices” tab and find the desired device.

In this example, the “Stamping” Line is Line #1 and the Device “Press 1” is Device #1.



Go back to the Virtual Andon tab, select the desired Line # and Unit #. Then check the box next to signals you want to turn “On” and hit the “Submit Data” button.

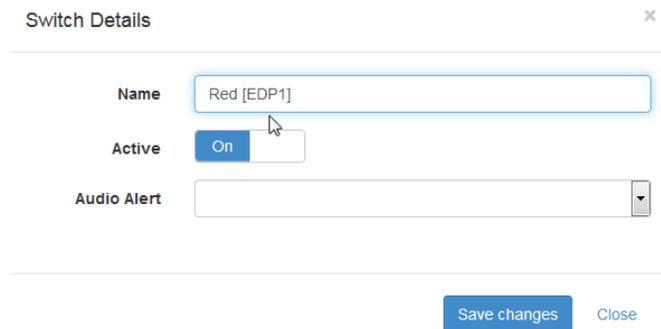
To clear an andon, check the (SW #16) box, hit Submit Data, then uncheck the box and hit Submit Data again.

## Extra Data Field Set Up [EDP#]

Any extra data fields configured in the Virtual Andon are passed to the SFV system. The data is sent and referenced using the token [EDP#]. The first field configured (like shown above) is [EDP1]. If there were more, they would be [EDP2], [EDP3] etc.

This data is saved and shown when a raw data report is run but can also be displayed on the Web Monitor or in the notifications sent out. To display this information you have to add the [EDP\_] token to either the switch name or notifications.

### Display [EDP\_] information on the Web Monitor



Switch Details

Name: Red [EDP1]

Active: On

Audio Alert: [Empty field]

Save changes Close

Edit the name of the switch to include the desired [EDP\_] token to show the sent information on the Web Monitor. See next sections on Renaming Site, Lines, Devices and Switches.

## Include [EDP\_] information in Notifications

Notifications

Incident Reporting

On Timer Change

On State Change

Trigger is

Notify On

Email Subject

[View Tokens](#)

Recipients

Edit the desired notification to include the [EDP\_] token in the Email Subject field. See next sections on Renaming Site, Lines, Devices and Switches.

## Renaming Your Site Name

It's now time to configure the Shop Floor View system so that it is Labeled to fit your site.

Goto 'Site Management' / 'Configuration' and click on 'Edit Details' to the right, under 'Basic Details'.

Austin Site Management Reporting Incident Reports Austin Help Log Out

Site Details

Name

Contact

Address

City/State/Postal

Time Zone

Basic Details

Change basic site details.

Austin  
No Site Contact  
Central Standard Time

Subscription Expires on January 01, 2016

## Shifts

The system has a default “All Day, Every Day” shift. This should be left intact so that no matter what hours end up being worked, the system will capture the data. However, you can add additional shifts to the system as necessary. The system can handle swing or crew shifts as well where people work different hours on different days.

It is important to have all shifts in the system as you can assign users to a shift. When a user is assigned to a specific shift, they will not receive notifications from the system when it is not during their shift.

### Shifts

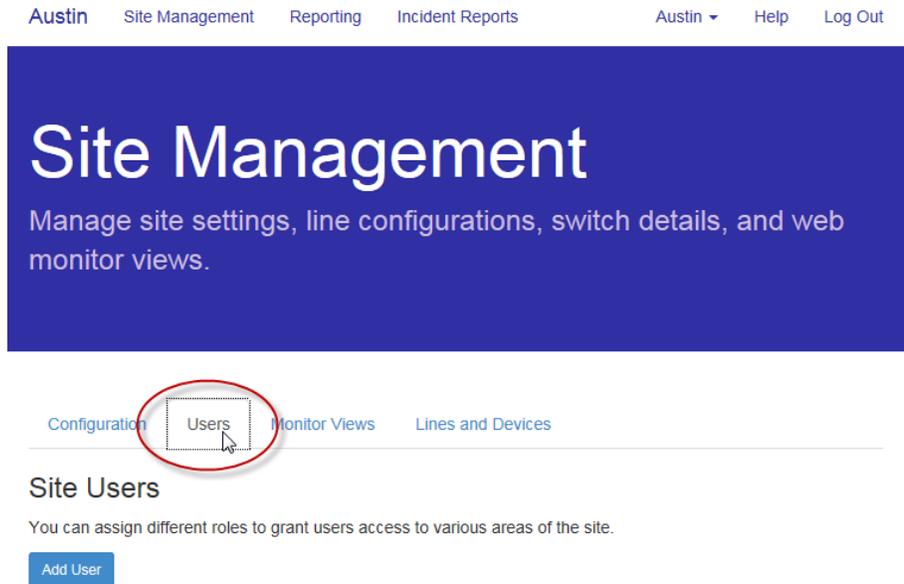
In addition to adding shifts, you can also add non-working time such as breaks.

Shift Name	Working Days			Options
All Day, Every Day	<b>Day</b>	<b>Start / Stop</b>	<b>Non-Working Events</b>	<a href="#">Shift Actions</a> ▾
	Sunday	0001 - 2359		
	Monday	0001 - 2359		
	Tuesday	0001 - 2359		
	Wednesday	0001 - 2359		
	Thursday	0001 - 2359		
	Friday	0001 - 2359		
	Saturday	0001 - 2359		

[Add new Shift](#)

# Adding New Site Users and Site Contacts

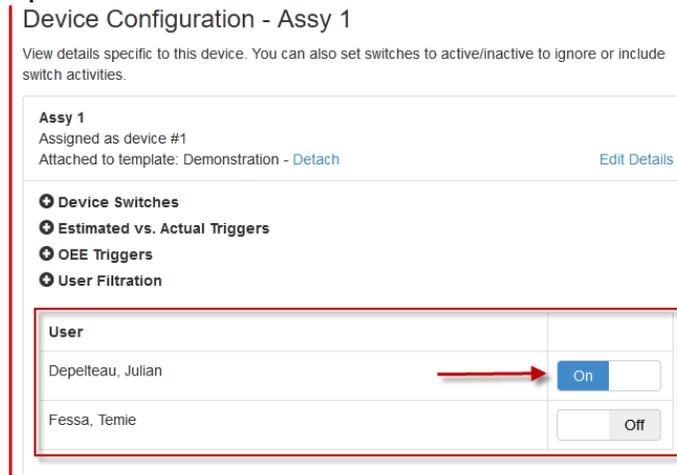
Click on the “Users” tab from the “Site Administration” screen



There are 2 types of users in the system, Site Users and Site Contacts. If people will need to log into the SFV system to run reports or access data they should be set up as a Site User. This will give them a User Name and Password to access the site.

Site Users can be configured as “Administrators” or “Users” depending on the level of access required. Admins can see everything and will see all open reports and be able to change the names of Lines, Devices, Buttons and Notifications.

Site Users can go in and run reports. They can also be enabled to enter reports but must be given access to see specific reports. Go to Site Management and drill down to the specific device desired and expand User Filtration and turn on the slider for the desired user.



If someone does not need to access the SFV system but will receive Notifications from the system (Material Handler for example) then add them as a “Site Contact”. They will not be able to log into the SFV system but can be added to distribution lists and notifications.

Select ‘Add User’ or ‘Add Site Contact’ and fill in the required data. The email entered here is what the system will use to send out notifications. If you want a text message to be sent, enter the proper email to text format for your cell carrier here. For a list of common carrier’s email to text format please go here: [www.industrialandons.com/Text.pdf](http://www.industrialandons.com/Text.pdf) .

You must assign users to a shift in order to receive notifications. The system will only send them notifications during their assigned shift times. This is so they do not get notifications when they are not at work.

If they need to get notifications all the time, assign them to the “All Day, Every Day Shift”.

## Site Distribution Lists

### Site Distribution Lists

Manage groups of Email recipients by adding users to distribution lists which can then be assigned to notifications.

[Add Distribution List](#)

Name	Member Users	Options
Service Alerts	Campbell, Tony;	<a href="#">User Actions</a> ▾

Distribution Lists can be found on the Users tab under Site Management, below Site Users and Site Contacts.

There are two ways to send notifications to Site Users and Site Contacts. First, they can be added individually to a Switch Notification. Second, you can create ‘Site Distribution Lists’ and add the Distribution Lists to Switch Notifications.

The Distribution Lists allows for a single place to update and make changes to notifications that are sent out without going in and updating every individual Switch Notification.

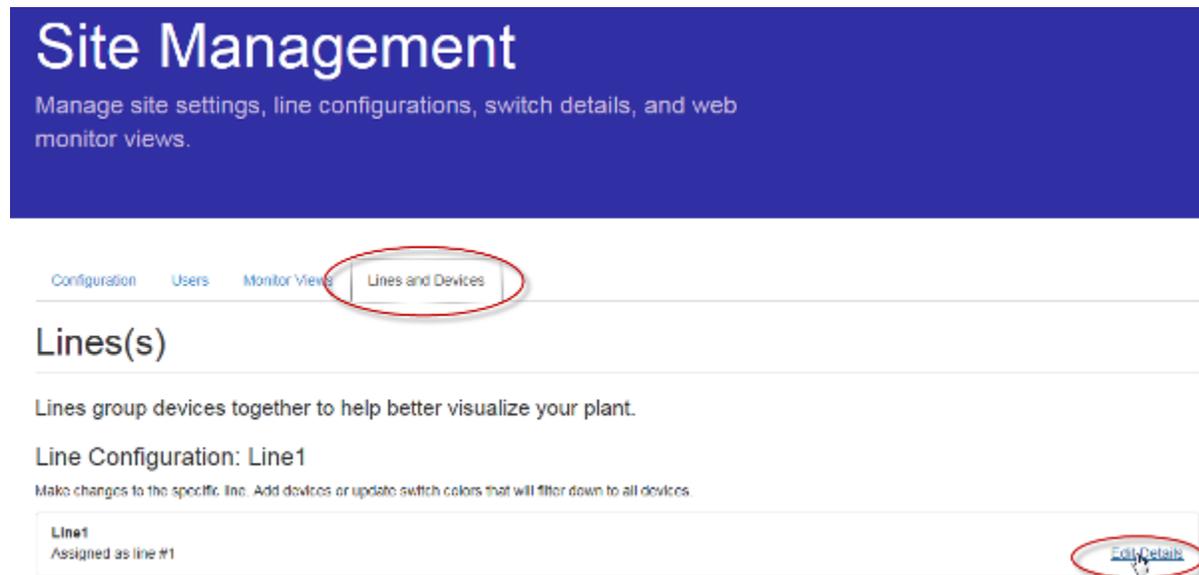
Select 'Add Distribution List', give it a name and then add the desired users and then save.

## “Service Alerts” Site Distribution List

There is one preconfigured Distribution List named 'Service Alerts' that cannot be deleted. This Distribution List will send notifications out in case the local computer running the 'Industrial Andons Shop Floor Service' program loses connection with the SFV servers for more than 10 minutes. IT or other parties responsible for keeping the local computer turned on and connected to the internet should be added to this distribution list.

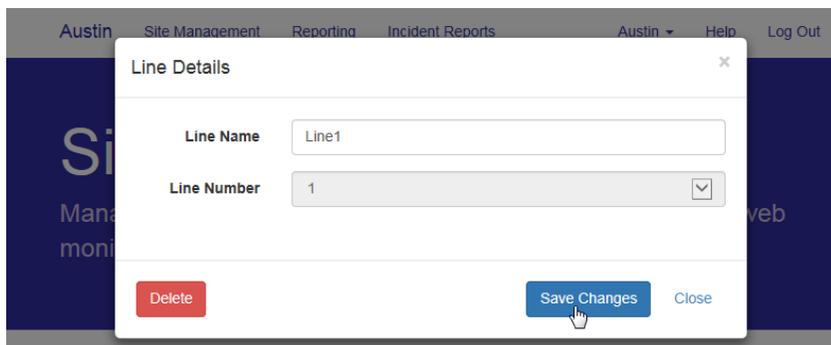
## Renaming Lines and Devices

You can rename your Lines, Devices and Switches to suite your needs. Select the 'Lines and Devices' tab and then the 'Edit Details'



The screenshot shows the 'Site Management' dashboard. The 'Lines and Devices' tab is selected and circled in red. Below the tabs, the 'Lines(s)' section is visible, with a description: 'Lines group devices together to help better visualize your plant.' Underneath, there is a section for 'Line Configuration: Line1' with the instruction: 'Make changes to the specific line. Add devices or update switch colors that will filter down to all devices.' A table entry for 'Line1' is shown, with the text 'Assigned as line #1' and an 'Edit Details' button circled in red.

Change the name of the Line here and then save the change.



The screenshot shows a 'Line Details' dialog box. The 'Line Name' field contains 'Line1' and the 'Line Number' dropdown is set to '1'. At the bottom of the dialog, there are three buttons: 'Delete' (red), 'Save Changes' (blue, with a mouse cursor over it), and 'Close' (grey).

To configure the specific devices (Floor Signal Stations) in your system, select the + next to 'Expand Line Devices'

## Lines(s)

Lines group devices together to help better visualize your plant.

### Line Configuration: Line1

Make changes to the specific line. Add devices or update switch colors that will filter down to all devices.

**Line1**  
Assigned as line #1 [Edit Details](#)

---

⊕ **Expand / Collapse Switch Colors**

---

⊕ **Expand Incident Matix**

---

⊕ **Expand Line Devices**

To change the name of the Device, select the 'Edit Details' button, change the name and save the setting

### Device Configuration - Device 1

View details specific to this device. You can also set switches to active/inactive to ignore or include switch activities.

**Device 1**  
Assigned as device #1  
Attached to template: Line 1 - [Detach](#) [Edit Details](#)

---

⊕ **Device Switches**

⊕ **Estimated vs. Actual Triggers**

⊕ **OEE Triggers**

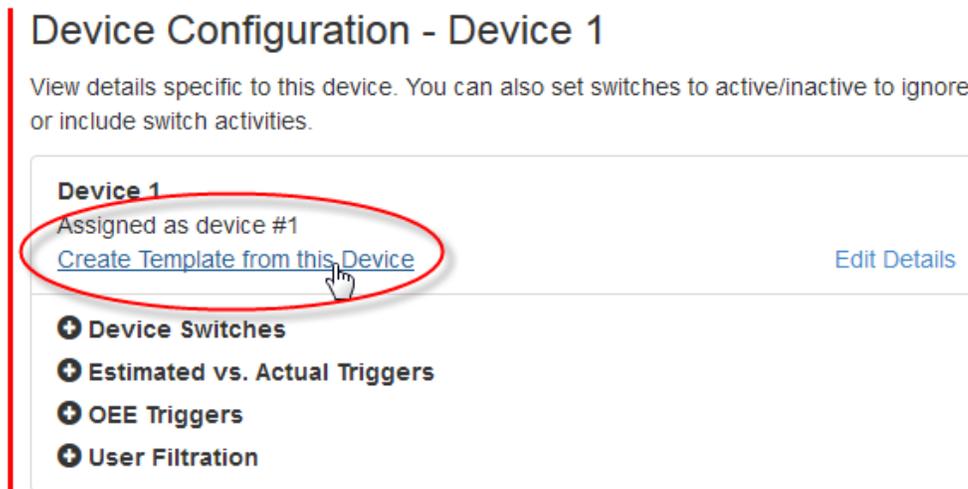
⊕ **User Filtration**

# Device Templates

If a number of devices will have the same notifications or other settings you can create Template. Once a template is created, other devices can be associated with the template and will have the same Switch Names and Notification settings.

This enables you to configure one device and the settings will blow across all devices associated with the template. Additionally, any changes made to any device that is part of the template, will update the template.

Select 'Create Template from this Device'. Then give the Template a name and hit 'Save'.



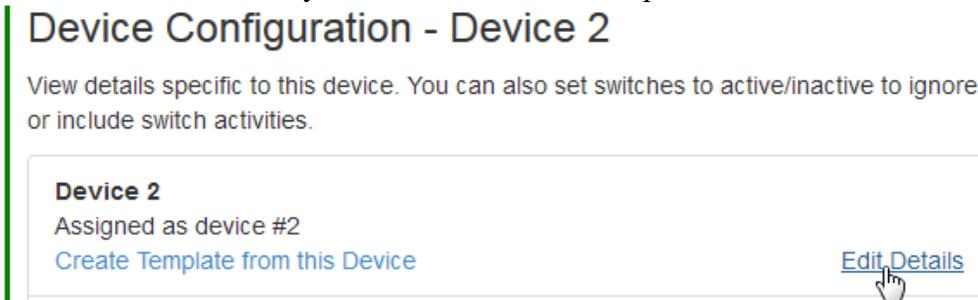
**Device Configuration - Device 1**

View details specific to this device. You can also set switches to active/inactive to ignore or include switch activities.

**Device 1**  
Assigned as device #1  
[Create Template from this Device](#) [Edit Details](#)

- + Device Switches
- + Estimated vs. Actual Triggers
- + OEE Triggers
- + User Filtration

Then go to the next device that you want to add to the template and select 'Edit Details'



**Device Configuration - Device 2**

View details specific to this device. You can also set switches to active/inactive to ignore or include switch activities.

**Device 2**  
Assigned as device #2  
[Create Template from this Device](#) [Edit Details](#)

From the drop down, select the desired template and then 'Save Changes'.

**Device Details** ✕

---

**Device Name**

**Device Number**

**Device Type**

**Device Template**

The devices settings will now reflect those of the selected Template.

Please note, you will want to utilize the tokens in the system for naming switches and notifications and avoid using device specific labels with Templates.

## Renaming Switches

Next, expand out the ‘Device Switches’ by clicking on the + next to ‘Device Switches’. There are two switch inputs for each color light. On a standard system with one switch box, the device will use the first of each of the inputs.

The system is also configured with a default label with tokens that will auto populate and display on the web monitor.

For example, if this was Line 5, Unit 6 and the Yellow light (switch #3) was turned on, the Label would read: “Yellow 5-6-3”.

Using tokens and a coding system is an easy way to convey a lot of information quickly and to ensure the system records all occurrences uniquely.

### Device Configuration - 1-1

View details specific to this device. You can also set switches to active/inactive to ignore or include switch activities.

**1-1**  
Assigned as device #1  
[Create Template from this Device](#) [Edit Details](#)

---

**+ Device Switches**

Switch	Enabled	Audio	Options
Red [LINE#]-[DEVICE#]-[SWITCH#]	Enabled	Not Configured	<a href="#">User Actions ▾</a>
Red [LINE#]-[DEVICE#]-[SWITCH#]	Enabled	Not Configured	<a href="#">User Actions ▾</a>
Amber [LINE#]-[DEVICE#]-[SWITCH#]	Enabled	Not Configured	<a href="#">User Actions ▾</a>
Amber [LINE#]-[DEVICE#]-[SWITCH#]	Enabled	Not Configured	<a href="#">User Actions ▾</a>
Green [LINE#]-[DEVICE#]-[SWITCH#]	Enabled	Not Configured	<a href="#">User Actions ▾</a>
Green [LINE#]-[DEVICE#]-[SWITCH#]	Enabled	Not Configured	<a href="#">User Actions ▾</a>
Blue [LINE#]-[DEVICE#]-[SWITCH#]	Enabled	Not Configured	<a href="#">User Actions ▾</a>
Blue [LINE#]-[DEVICE#]-[SWITCH#]	Enabled	Not Configured	<a href="#">User Actions ▾</a>

To change the name of a switch, select 'User Actions' and 'Edit'. Then change the name accordingly. You can also turn a switch off if you do not want the system to anything with data coming in from that switch.

If you want the Web Monitor to play a sound when a new signal comes in from this switch, you can select the desired 'Audio Alert' from the choices shown. NOTICE: Depending on your browser, you might get an error the first time a signal comes in and it tries to play the sound. Once you allow it, your browser will play all melodies without issue for as long as the window stays open and active.

**Switch Details** [Close]

**Name**

**Active**  On

**Audio Alert**

Red [LINE#]-[DEVICE#]-[SWITCH#]	Enabled	Not Configured	User Actions
---------------------------------	---------	----------------	--------------

## Report Required and Notifications (email and text)

1-1  
Assigned as device #1  
[Create Template from this Device](#) [Edit Details](#)

● Device Switches

Switch	Enabled	Audio	Options
Red [LINE#]-[DEVICE#]-[SWITCH#]	Enabled	Not Configured	<a href="#">User Actions +</a>
Red [LINE#]-[DEVICE#]-[SWITCH#]	Enabled	Not Configured	<a href="#">Edit</a> <a href="#">Notifications</a>
Amber [LINE#]-[DEVICE#]-[SWITCH#]	Enabled	Not Configured	<a href="#">User Actions +</a>

You can now go all the way down to the Switch resolution to set up various notifications.

Under 'User Actions', select 'Notifications'

If you are planning on filing reports against andon calls you will need to turn the 'Trigger', 'On' under 'Incident Reporting'. This will place every occurrence in a special queue where users can go in and enter reasons and a description as to what the problem was.

### Notifications

**Incident Reporting**

Trigger is  On  Off

Create Report On

On Timer Change

On State Change

On Counter Change

## On Timer Change

This sends out email messages based off how long the switch has been on. You can add multiple alerts sent out at different time intervals. You can use the token [TIME] in the subject line that will automatically fill in how long the light has been on.

On Timer Change

**Trigger is**

**Last Alert**

**Email Subject**   
[+ View Tokens](#)

Alert Intervals	Interval (min)	Repeat?	Recipients	
	<input type="text" value="2"/>	<input type="button" value="Off"/>	<input type="text" value="Wilson, Bob x"/>	<input type="button" value="Delete"/>
	<input type="text" value="10"/>	<input type="button" value="Off"/>	<input type="text" value="Wilson, Bob x Ivey, John x"/>	<input type="button" value="Delete"/>

## On State Change

This sends out a notification as soon as the switch hits the desired state (turn on, off, or both).

Notifications ➤

Incident Reporting

On Timer Change

On State Change

**Trigger is**

**Notify On**

**Email Subject**   
[+ View Tokens](#)

**Recipients**

## On Counter Change

This notification is sent based off the number of times a switch is turned on. This can be used as an electronic kanban signal. This is often used on switches not tied to turning a light on and can be used with an added limit switch.

On Counter Change

Trigger is	<input type="button" value="On"/>
Max Count	<input type="text" value="24"/>
Current Count	<input type="text" value="3"/>
Email Subject	<input type="text" value="Line 1 Final Station Pallet is FULL (24 pieces)"/> <a href="#">+ View Tokens</a>
Recipients	<input type="text" value="Wilson, Bob x"/>

# Web Monitor

## Site Management

Manage site settings, line configurations, switch details, and web monitor views.

[Configuration](#) [Users](#) [Monitor Views](#) [Lines and Devices](#)

### Monitor Views

Set up a group of devices to monitor which can be assigned to a display device for viewing.

#### View Configuration: IA

Configure details, assigned devices, zones, and what switches should be active in the view.

<b>IA</b> No description given This view is <b>Active</b> The zone column has been <b>Disabled</b>	<a href="#">Edit Details</a>
Expand / Collapse Assigned Devices	
Expand / Collapse Assigned Zones	
Expand / Collapse Assigned Grid Switches	

Now it's time to set up the Web Monitor. Go to 'Monitor Views' tab and you can either edit an existing view or create a new view.

View Details ✕

Active	<input checked="" type="checkbox"/>
View Name	<input type="text" value="IA"/>
Description	<input type="text" value="Name"/>
Message	<input type="text" value="Welcome to INDUSTRIAL ANDONS Web Monitor!!!"/>
Use Message	<input checked="" type="checkbox"/>
Border Color	<input type="text" value="#cccccc"/>
Performance	<input type="checkbox"/>
Shift	<input type="text" value="All Day, Every Day"/>
Zone Column	<input type="checkbox"/>
Large Scale	<input type="checkbox"/>
Fixed Font	<input type="checkbox"/>

Select 'Edit Details' or Add Monitor View' to change the name of the view and to turn 'On or Off' the Zone Column (Label for the rows in the monitor).

You can add a scrolling message to the bottom of the screen by entering the message into the field and turn 'Use Message' to 'On'.

You can change the color of the border between the cells by changing the border color selected.

The 'Performance' view will scroll the current andon status through the current shift metrics (like what you would see if you ran the Shift Summary Report).

The 'Large Scale' feature should be used for views with more than 50 devices. This view will put the standard label in the boxes but will then only show the color of what light is on and not the time or switch labels. This improves readability of the cells when there are many devices in the view.

When complete, hit 'Save Changes'.

Click on 'Expand / Collapse Assigned Devices' to add or edit devices assigned to a view.

#### View Configuration: IA

Configure details, assigned devices, zones, and what switches should be active in the view

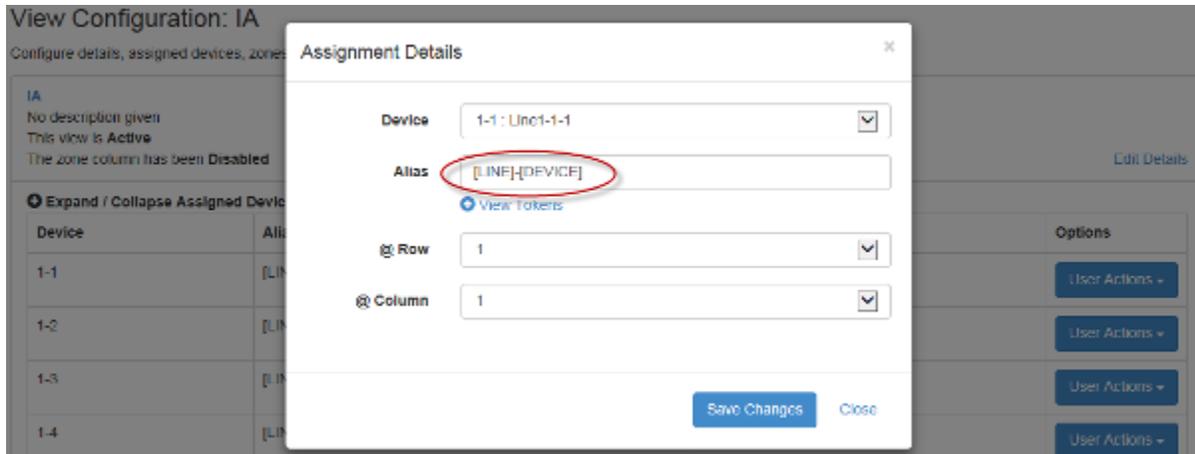
IA  
No description given  
This view is Active  
The zone column has been Disabled Edit Details

**Expand / Collapse Assigned Devices**

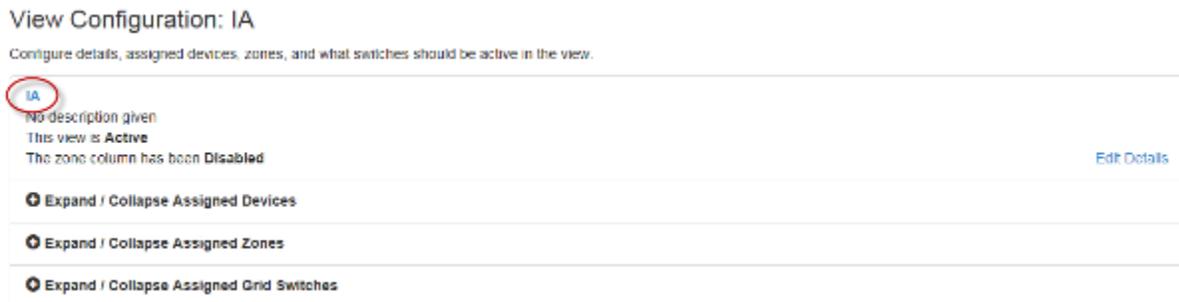
Device	Alias	Summary	Options
1-1	[LINE]{DEVICE}	Row 1, Col 1	User Actions ▾
1-2	[LINE]{DEVICE}	Row 1, Col 2	User Actions ▾
1-3	[LINE]{DEVICE}	Row 2, Col 1	User Actions ▾
1-4	[LINE]{DEVICE}	Row 2, Col 2	User Actions ▾

Assign New Device

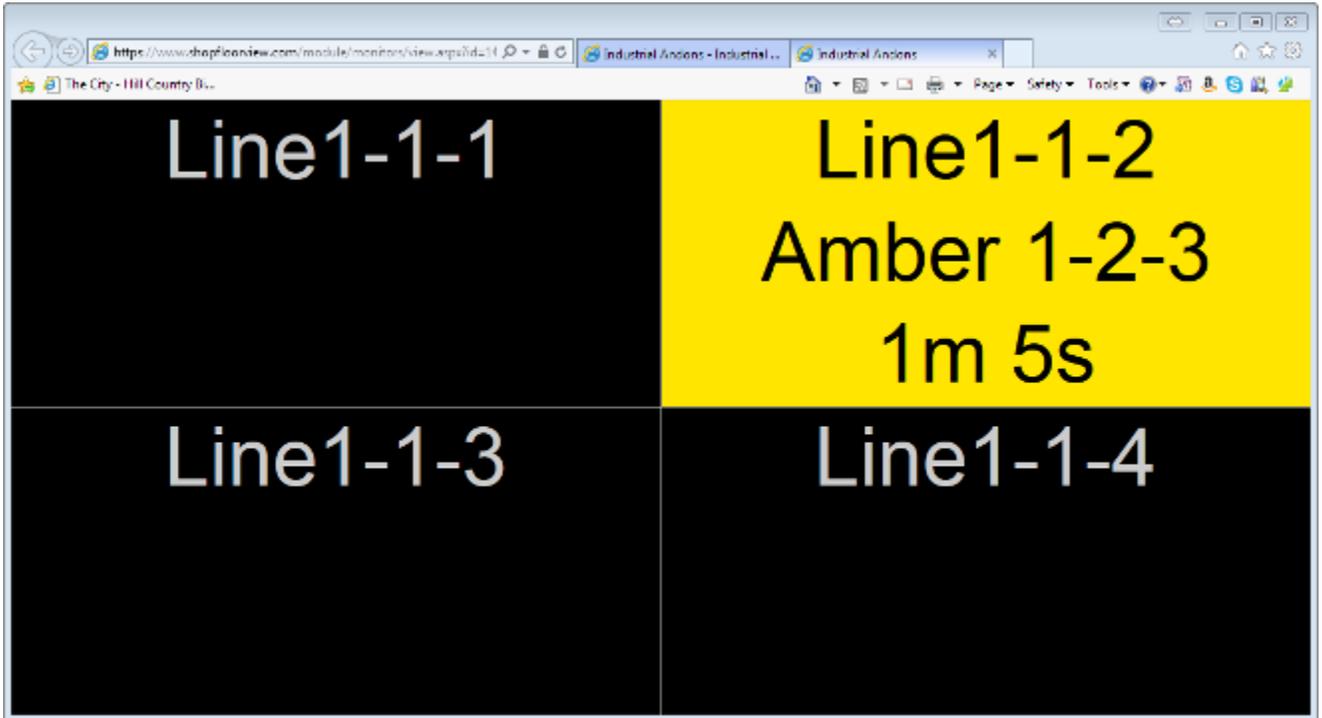
To add a new device, select 'Assign New Device'. The Alias blank is what shows up in the block as the label when no light is on. You can use tokens to pull the label in or type it in.



Once complete, click on the name of the view to open the link to the view.



This will open the view you just created and will show any lights that are on in the system. The fonts and grid will resize to the shape of the window.



You can run the Web Monitor in Full Screen Mode. To enable this view, open the Web Monitor and place the window in the monitor where you want it displayed. Hit function F11.

## Target vs Actual Monitor View

Assembly 1 Target vs. Actual	
Shift Target	<b>1200</b>
Present Target	<b>718</b>
Present Actual	<b>618</b>
Present Percent	<b>87%</b>
Downtime (mins)	<b>20m 34s</b>

The Target vs Actual view is a unique view with background conditional formatting. This view shows the overall goal for the shift, how many should be completed at the current time and how many have been completed. It then shows the present percent complete to the target and how much downtime has accrued based off a designated input signal (red light on, for example).

**Target vs. Actual**  
Single screen view showing target vs. actual for the provided counter. Also provides a quick glance out downtime.

[Target vs Actual](#)

Scroll to the bottom of the Monitor View Tab and select the Target vs Actual Button. This will open a new tab on your browser.

Management

**Monitor Views**

- Views
- Shift Targets
- Shift Logs

### Target vs Actual Views

Estimated vs actual views allow you to have a dedicated screen to monitor your progress and quickly identify you are running behind are hitting your target.

[New View](#) [Add View](#)

Name	Description	Actions
Assembly 1		<a href="#">Edit</a> <a href="#">Delete</a>

### Edit Estimated vs Actual View ✕

---

**View Name**

**View Description**

---

**Actual Count Trigger**  
 Provide the input trigger for the actual count to increase.

Shift(s)

Line

Device

Switch

**Downtime Trigger**  
 Provide the input trigger for downtime calculation.

Line

Device

Switch

---

**Conditional Formatting**

Use Conditional Formatting

<p>Green / Yellow <input type="text" value="above 89%"/></p> <p style="font-size: small;">Above this % Background will be Green</p>	<p><input type="text" value="above 79%"/></p> <p style="font-size: small;">Above this % Background will be Yellow, below this % will be Red</p>
---	---

Fill in the blanks. Add all shifts that will use this view. The system will calculate each shift based off the shift schedule and demand. The Actual Count Trigger area defines the input for the system to get the “Present Actual” value that will be displayed on the screen. The Downtime Trigger defines what activity from the system will be used to calculate when the line is down. The “Downtime” may or may not correlate to the Present Actual value depending on if the operation is running at takt time.

Once complete, hit “Update View”.

To open the view, go back to the home landing page and scroll to the bottom of the page the Target vs Actual Webmonitor views will be listed at the bottom of the page.

## Managing Target vs Actual Estimated Values & Logs

Once a view is created, goto “Shift Targets” to enter the goal value per shift. The system will save this value and use it each day until the value is updated. If the “Present Actual” value gets off for some reason (someone came in early and made some parts before shift start) the value can be over ridden up or down by entering a value in the Offset field. This will adjust the Present Actual value to be correct. This value will be cleared at the end of the current shift.

Shift Started	Shift Ended	Shift Name	View Name	Shift Target	Shift Actual	Shift Offset	Downtime (in seconds)
9/14/2023 12:00	9/14/2023 22:00	Day Shift 7-5	Assembly 2	1200	33	0	64
9/14/2023 12:00	9/14/2023 22:00	Day Shift 7-5	Assembly 1	50	22	0	40
9/19/2023 12:00	9/19/2023 22:00	Day Shift 7-5	Assembly 2	1200	1	0	2

To view past shift performance the data can be downloaded to Excel. This will show the values as of the end of the shifts including any offsets that were submitted.

## Estimated vs. Actual Feature

With this feature you can add an estimated vs. actual field to a specific Floor Signal Station (FSS) cell in the web monitor. To add a trigger goto the 'Lines and Devices' tab on the Site Management page. Expand the Devices for the line you want to add as the trigger, expand the 'Estimated vs. Actual Triggers' and select 'Add Trigger'.

### Device Configuration - 1-1

View details specific to this device. You can also set switches to active/inactive to ignore or include switch activities.

1-1  
Assigned as device #1  
[Create Template from this Device](#)

⊕ Device Switches  
⊕ Estimated vs. Actual Triggers

No Estimated vs. Actual Triggers Found.  
Triggers are used with the web monitor to display estimated vs. actual totals.

Add Trigger

⊕ OEE Triggers

Estimated vs Actual Entry

Trigger Name: Red Complete  
[View Tokens](#)

Switch / On State: Red [LINE#]-[DEVICE#] Switch ON

Estimated / Current: 24 11

Time / Shift (s): By Shift All Day, Every Day

Display in Cell: ON

Save Changes Close

Name the Estimated vs Actual trigger and then select which switch will provide the count to the system, this is what will index the 'Actual' count.

Enter the Estimated number to be completed during a shift and the actual amount currently or leave blank.

Next select whether you need tracking by time or shift. By time is for projects with lead times longer than 1 shift. Typically it will be tracked by shift and you will need to select the shift this applies to.

Finally, select whether you want the value shown in the cell on the web monitor or not. The Shop Floor View system will then calculate the takt rate based off the shift selected and the available time (subtracting out the non value added times from the shift). It will then determine what the current number completed should be. If the OEE feature is also being used on this device. The two values will toggle back and forth at the bottom of the cell.



## OEE Triggers

This feature can calculate the current OEE of a workstation based off the assumption that when certain switches are on, the station is not performing at all or at full capacity. If this is integrated with a piece of equipment, the calculation will potentially be more accurate.

Select 'OEE Triggers' under the desired device and then 'Add Trigger'

Give the trigger a name and select the shift to use. The system needs a shift so that it can calculate the total available time in which to base 100% OEE. Then select which switches will impact OEE and by how much. In this example, when the Red light is on, the station is stopped 100%. However, when the Amber light is on, they are still working at 50%. Then decide whether you want the value displayed in the cell on the web monitor.

### OEE Entry

<b>Trigger Name</b>	<input type="text" value="OEE"/>	
	<a href="#">+ View Tokens</a>	
<b>Shift</b>	<input type="text" value="All Day, Every Day"/>	
<b>Not Working Switches</b>		
<b>Switch</b>	<b>%</b>	<b>Use</b>
Red [LINE#]-[DEVICE#]-[SWITCH#]	<input type="text" value="100"/>	<input checked="" type="checkbox"/> ON <input type="checkbox"/>
Red [LINE#]-[DEVICE#]-[SWITCH#]	<input type="text" value="100"/>	<input type="checkbox"/> OFF <input checked="" type="checkbox"/>
Amber [LINE#]-[DEVICE#]-[SWITCH#]	<input type="text" value="50"/>	<input checked="" type="checkbox"/> ON <input type="checkbox"/>
Amber [LINE#]-[DEVICE#]-[SWITCH#]	<input type="text" value="100"/>	<input type="checkbox"/> OFF <input checked="" type="checkbox"/>
Green [LINE#]-[DEVICE#]-[SWITCH#]	<input type="text" value="100"/>	<input type="checkbox"/> OFF <input checked="" type="checkbox"/>
Green [LINE#]-[DEVICE#]-[SWITCH#]	<input type="text" value="100"/>	<input type="checkbox"/> OFF <input checked="" type="checkbox"/>
Blue [LINE#]-[DEVICE#]-[SWITCH#]	<input type="text" value="100"/>	<input type="checkbox"/> OFF <input checked="" type="checkbox"/>
Blue [LINE#]-[DEVICE#]-[SWITCH#]	<input type="text" value="100"/>	<input type="checkbox"/> OFF <input checked="" type="checkbox"/>
<b>Display in Cell</b>	<input checked="" type="checkbox"/> ON <input type="checkbox"/>	

## Problem Matrix

You can create a 3 tiered, hierarchical matrix by which you can categorize and record problems. This is used in the 'Incident Reporting' if it was enabled under the 'Notifications' portion of each switch.

Switch #	Friendly Name	Enabled	Audio	Options
1	Red [EDP1]	Enabled	Ding	User Actions ▾ Edit Notifications
2	Red [LINE#]-[DEVICE#]-[SWITCH#]	Enabled	Not Configured	
3	Amber [LINE#]-[DEVICE#]-[SWITCH#]	Enabled	Not Configured	

Then turn the selection under "Incident Reporting" to On for the desired switch. All future andon calls on this switch will now create an incident report under the "Incident Reports" section of the website.

### Notifications

#### Incident Reporting

Trigger is  On

Create Report On  ▾

On Timer Change

On State Change

On Counter Change

[Save changes](#) [Close](#)

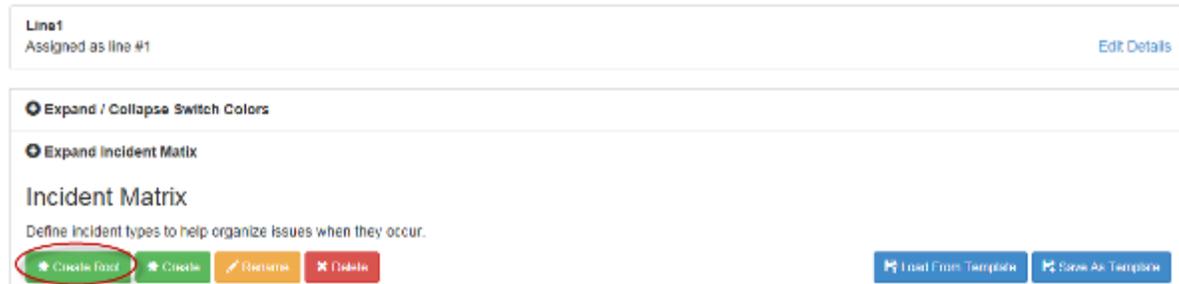
Different areas have different problems depending on the process, equipment, materials or other conditions. Therefore, each line can have a different Incident Matrix. To set up the matrix, go to the Lines and Devices tab on the Site Management page and go to the Line level and expand the ‘Expand Incident Matrix’

## Lines(s)

Lines group devices together to help better visualize your plant.

### Line Configuration: Line1

Make changes to the specific line. Add devices or update switch colors that will filter down to all devices.



Line1  
Assigned as line #1 [Edit Details](#)

Expand / Collapse Switch Colors

Expand Incident Matrix

### Incident Matrix

Define Incident types to help organize issues when they occur.

[\\* Create Root](#) [\\* Create](#) [Rename](#) [Delete](#) [Load From Template](#) [Save As Template](#)

First create your top level Root Items. Select the item and rename it. Then you can use the ‘Create’ button to add up to two sub levels.

In the example below you see that the top level has been designated by groups like Maintenance, Material Handling, Production and Quality. Under those groups you get greater level of detail for categorizing the issues.

Once the full matrix has been created, it can be saved as a template and applied to other lines. You can also use the template as a starting point for the other lines and then customize as necessary.

# Incident Matrix

Define incident types to help organize issues when they occur.

\* Create Root   \* Create   ✎ Rename   ✕ Delete

- ▾ Maintenance
  - ▾ Blank Press
    - Die Height
    - Scrap
    - Other
  - ▾ CNC
    - Fixture
    - Program
    - Tooling
    - Other
  - ▾ Mill
    - Coolant
    - Sensor
    - Collet
    - Other
  - Materials
  - Production
  - Quality

## Configure Users to See Reports

Once Incident Reporting is turned on, you will need to determine who needs to see the reports to complete them. The system will filter open reports and only show a user the reports they are responsible for. This is only for “Users”. Users with an Administrative log in will not be listed as they will see ALL reports listed under the “Incident Reports” tab.

Expand the section “User Filtration” under each device and turn the indicator “On” for each User that needs to see reports for this device.

[Expand / Collapse Switch Colors](#)  
[Expand Incident Matrix](#)  
[Expand Line Devices](#)

### Device Configuration - Workstation 1

View details specific to this device. You can also set switches to active/inactive to ignore or include switch activities.

**Workstation 1**  
Assigned as device #1  
Attached to template: Line 1 - [Detach](#) [Edit Details](#)

- [Device Switches](#)
- [Estimated vs. Actual Triggers](#)
- [OEE Triggers](#)
- [User Filtration](#)

User	
Depelteau, Julian	<input checked="" type="checkbox"/> On
Fessa, Temie	<input type="checkbox"/> Off

## Entering Incident Reports

**NOTICE:** When you enter a problem report, or start and save a report, you **MUST** enter something in all three Tiers and the Brief Description box in order to save or save and close a report.

**NOTICE:** Open Incident Reports are saved for two weeks. If no report is filed after two weeks the report is automatically purged. The raw data regarding the event is saved. Select ‘Incident Reports’ from the top of the page. This will open the page that shows all open reports that are waiting for a report to be filed against the occurrence.

[Austin](#)   [Site Management](#)   [Reporting](#)   [Incident Reports](#)   [Austin](#)   [Help](#)   [Log Out](#)

# Site Incidents

Document incidents that have occurred as a result of a trigger.

### Site Incidents

#### Open Incidents

Below is the list of incidents that have occurred for this site. Reports can be started and closed later or removed if the event is erroneous.

Address	Switch	Changed To	Event Started	Event Stopped	Duration (s)	
Line1-1-1	Red [LINE#][DEVICE#]-[SWITCH#]	Light being ON	1/16/2015 3:08:40 PM	1/16/2015 3:17:46 PM	546	<a href="#">User Actions</a>
Line1-1-1	Red [LINE#][DEVICE#]-[SWITCH#]	Light being ON	1/16/2015 3:17:54 PM	1/16/2015 3:20:08 PM	133	<a href="#">User Actions</a>

Select 'User Actions' and 'Edit' for the desired occurrence. Now based off the line the occurrence happened on, the appropriate Incident Matrix will be loaded onto the screen. Select the appropriate categories and then a 'Brief' and 'Full' description can be added. The 'Brief Description' and problem categories will be shown on the Shift Report.

Incident Details

**When**  
(Start, Stop, Duration)

**What**  
(Address, Switch, State)

**Problem**  
(Root, Level 1, Level 2)

**Brief Description**

**Full Description**

Save Only Save & Close

Address	State	Light being ON	Start Time	Stop Time	Duration
Line1-1-1	Red [LINE#]-[DEVICE#]-[SWITCH#]	Light being ON	1/16/2015 3:08:40 PM	1/16/2015 3:17:46 PM	546

User Actions

If the report is complete, select 'Save & Close'. If more information needs added later or by someone else, select 'Save Only' and the report can be reopened later.

## Running Reports-Shift Summary

The Shift Summary Report is the standard report designed to give an overview of the performance of a Line for a shift or period of time. Select the “Reporting” tab from the top of the Shop Floor View screen.

### Shift Summary

Provides a report that shows activity for the selected shift, or all shifts, for the given time range.

<b>Shift</b>	<input type="text" value="Every Shift"/>	<b>Line Summaries</b>	<input checked="" type="checkbox" value="ON"/>
<b>Starting From</b>	<input type="text" value="4/16/2015"/>	<b>To</b>	<input type="text" value="4/17/2015"/>
<b>Line</b>	<input type="text" value="Line1"/>	<b>Extended Switches</b>	<input type="checkbox" value="OFF"/>
		<b>Station Summaries</b>	<input checked="" type="checkbox" value="ON"/>
		<b>Incident Reports</b>	<input type="checkbox" value="OFF"/>
		<b>All Occurrences</b>	<input checked="" type="checkbox" value="ON"/>

<b>Switches to Include</b>	<input checked="" type="checkbox"/> (SW #1) <span style="color:red">■</span>	<input checked="" type="checkbox"/> (SW #2) <span style="color:red">■</span>	<input checked="" type="checkbox"/> (SW #3) <span style="color:yellow">■</span>	<input checked="" type="checkbox"/> (SW #4) <span style="color:yellow">■</span>
	<input checked="" type="checkbox"/> (SW #5) <span style="color:green">■</span>	<input checked="" type="checkbox"/> (SW #6) <span style="color:green">■</span>	<input checked="" type="checkbox"/> (SW #7) <span style="color:blue">■</span>	<input checked="" type="checkbox"/> (SW #8) <span style="color:blue">■</span>
	<input checked="" type="checkbox"/> (SW #9) <span style="color:grey">■</span>	<input checked="" type="checkbox"/> (SW #10) <span style="color:grey">■</span>	<input checked="" type="checkbox"/> (SW #11) <span style="color:grey">■</span>	<input checked="" type="checkbox"/> (SW #12) <span style="color:grey">■</span>
	<input checked="" type="checkbox"/> (SW #13) <span style="color:grey">■</span>	<input checked="" type="checkbox"/> (SW #14) <span style="color:grey">■</span>	<input checked="" type="checkbox"/> (SW #15) <span style="color:grey">■</span>	<input checked="" type="checkbox"/> (SW #16) <span style="color:grey">■</span>

<b>Email Recipients</b>	<input type="text" value="Select Some Options"/>
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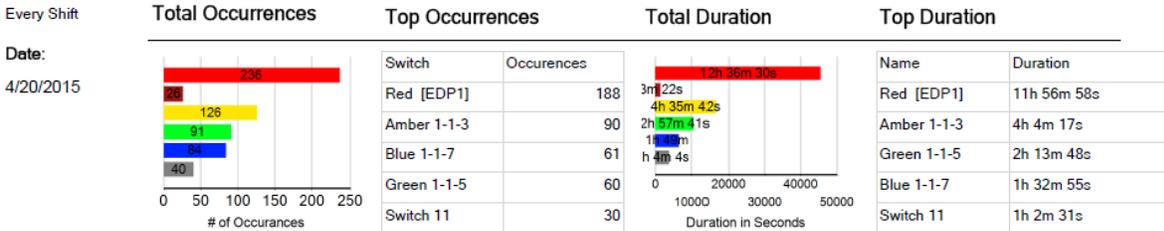
[Create Report \(PDF\)](#) [Create Report \(XLS\)](#)

Select the Shift, Date Range and Line that you want to see data for. If you select the “All Day, Every Day” shift, this will show data for the entire day for the chosen line and not just a specific shift.

Next you can choose to see data for all switches or filter out information you don’t want to see that might skew the charts (if the green light is on when all others are off, you may want to turn off the green switches). To turn off a switch, uncheck the box next to the switch.

## Line Summary

**Line:**  
Line1



The “Line Summaries” option will give an overall aggregation of the data from all devices on the line so that you can see in total the Occurrences and Duration of all calls from all devices.

The Extended Switches selection is should only be turned on if you have times that lights will be on for periods longer than a shift (ie you have a change over that lasts for 3 days).

## Station Summary

**Device: 1-3**



The “Station Summary” will give a similar overview as the “Line Summary” but only shows the andon calls related to the specific device.

## Incident Reports

**Incident Reports**

Switch	Started	Duration (s)	Tier 1	Tier 2	Tier 3	Description
Red [EDP1]	1/16/2015 9:08:40 AM	9m 6s	Maintenance	CNC	Program	Wrong program loaded on machine
Red [EDP1]	1/16/2015 9:17:54 AM	2m 13s	Maintenance	CNC	Program	WRONG REV OF PROGRAM
Red [EDP1]	1/16/2015 9:33:29 AM	11s	Maintenance	CNC	Fixture	fixture not cleaned, gunk build up.

If you use the “Incident Matrix” and file problem reports against your andon calls this will show the occurrences with the basic information filed against the call.

## All Occurrences

### Occurrences

Switch	Started	Stopped	Duration
Amber 1-2-3	1/16/2015 9:20:42 AM	1/16/2015 9:20:46 AM	4s
Amber 1-2-3	2/10/2015 1:19:58 PM	2/10/2015 1:21:38 PM	1m 39s
Red 1-2-1	2/10/2015 1:24:59 PM	2/10/2015 1:25:06 PM	8s
Red 1-2-1	2/12/2015 5:56:31 PM	2/12/2015 6:00:00 PM	3m 30s
Amber 1-2-3	2/12/2015 5:59:56 PM	2/12/2015 6:00:44 PM	48s
Red 1-2-1	2/13/2015 7:21:56 AM	2/13/2015 7:23:51 AM	1m 55s

“All Occurrences” will show every andon call for the selected switches for the shift selected.

## Export Raw Data

[Shift Summary](#) [Export Raw Data](#) [OEE Report](#)

### Export Raw Data

Provides a report that shows all activity for the given time range including extended data provided by virtual andons.

**Starting From**  **To**

**Email Recipients**

[Create Report](#)

Exporting the Raw Data is a way for you to access the full raw data in the system so that you can do your own analysis and drop the data into your own templates. You can either download the excel file or email it by selecting some recipients before hitting the “Create Report” button.

# Troubleshooting

## Data is Not Being Passed to the Web Server

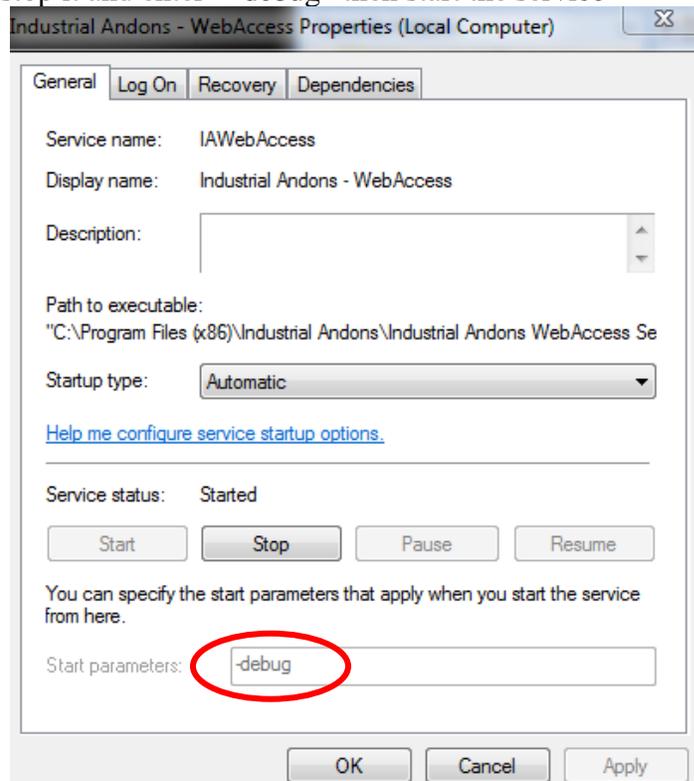
One of the most common installation issues is that the service is unable to pass the data packet up to the web server. First, confirm in the service wizard that the correct username and password have been entered. This is not the login that you use to log into the Shop Floor View system. This is found under your site information.

Second, check with your IT group and confirm whether or not you are using a proxy server. If you are, you will want to open the service wizard and configure the proxy server information.

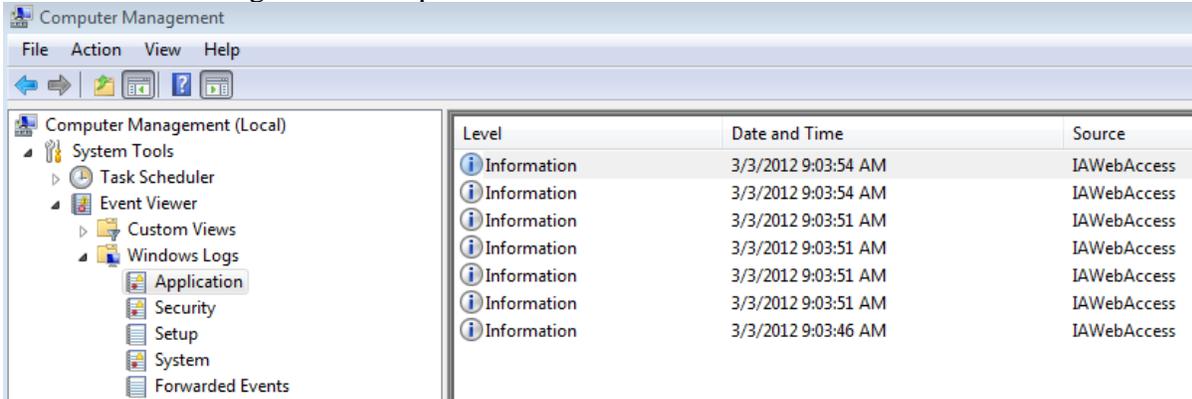
Third, the data is likely getting blocked by your firewall or other internet filters. Follow the below steps to run the service in –debug mode. This will log any issues and get information on where the service is not able to communicate.

Click on ‘Start’ or the Windows icon in your tool bar then  
Right click on ‘computer’ and select ‘Manage’

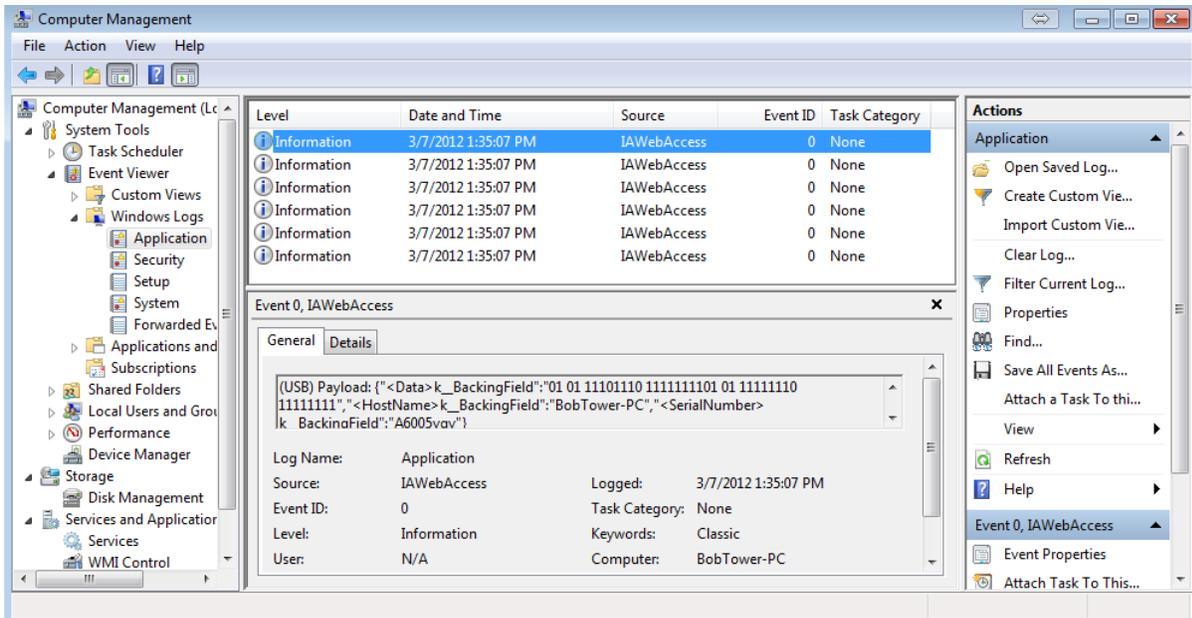
Open the service, stop it and enter “–debug” then start the service



Go to Event Viewer, Windows Logs and Application  
 Clear the current log and then flip a switch and refresh the view



Click on each log to see the status of the actions



If data is being passed, you should see information like above.

Before exiting, go back and restart the service which will take it out of debug mode making the system run better.

## Configuration System Failed to Initialize Error

The service is installed and starts but does not actually run. This is caused by a permission denial for .NET framework on the network. You will need to allow the .NET framework to run on at least the computer running the service.

Here is a sample fix provided by a customer with this issue.

@echo off

```
icacls c:\Windows\Microsoft.NET\Framework64\v2.0.50727\CONFIG\machine.config /grant
everyone:F
icacls C:\Windows\Microsoft.NET\Framework64\v4.0.30319\Config\machine.config /grant
everyone:F
icacls C:\Windows\Microsoft.NET\Framework\v2.0.50727\CONFIG\machine.config /grant
everyone:F
icacls C:\Windows\Microsoft.NET\Framework\v4.0.30319\Config\machine.config /grant
everyone:F
```

## Data Use and Access

Covers Data Stored as part of Industrial Andons, LLC Shop Floor View System

Industrial Andons does not share or sell any customer data or information without prior customer consent. Industrial Andons does not analyze any customer data unless asked by the customer.

Customers have full access to all their data so long as their subscription is paid and in good standing. It is recommended that customers periodically download their raw data from the Shop Floor View system and retain copies locally.

If customer cancels or does not renew their subscription, Industrial Andons will keep their raw data for at least one month allowing customer to renew their subscription. After one month, customer's raw data may be deleted during the next cleanup cycle. It is the customer's responsibility to download and store any data prior to the expiration/cancellation of their subscription.