IMPORTANT INFORMATION

FLASHING SIGN SYSTEMS

Your guide to connect and configure your Flashing Sign System.

No Internet Connection Required!

THIS GUIDE APPLIES TO UNITS WITH OR WITHOUT TC-REMOTE CONNECTIVITY

If your system was supplied with a TC-Remote Modem, see the section at the end of this manual for its use and operation.

LOCAL SETUP IS REQUIRED FOR MODEM EQUIPPED SYSTEMS

NOTE: ***Once power is applied, TC Connect will be active for 2 hours. Should additional time be needed or if future changes need to be made - reset power by carefully removing the POWER CONNECTION TERMINAL. After 20 seconds re-insert.***

Refer to your Flashing Sign Installation Manual for connection details.

Applies to units running firmware V4

029-05300-0000 Rev C
Release 20240904

Connect to the System's Wi-fi

Open to view your Wireless Network Connections on your browser-enabled device.

1. Locate and select TraffiCalm_Setup_xxxxxx from the list of available wi-fi networks.

2. Enter security key / password:
   Tr@ffiCalm (case-sensitive)

Select: **OK or CONNECT**

Select: **OK** or **Connect**

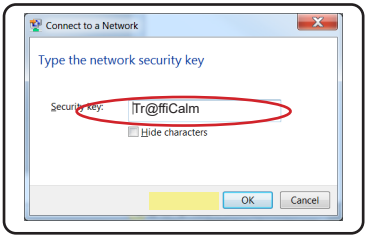
Example panes shown are
Windows-Based PC
and
ANDROID Device

TC Connect is also compatible with Apple devices. (not shown)

PC Procedure

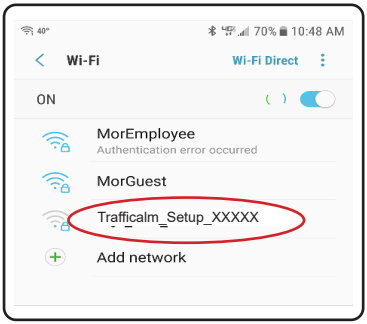
1

2

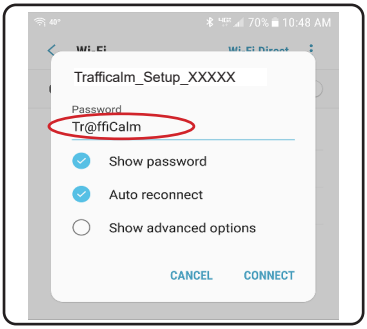


Mobile Procedure

1



2



You've now connected to the device's wi-fi. Note that the system does not have Internet connection, so your device will likely not be able to connect to web-sites, email, or perform other web-required functions. No Internet connection is required to configure the system.

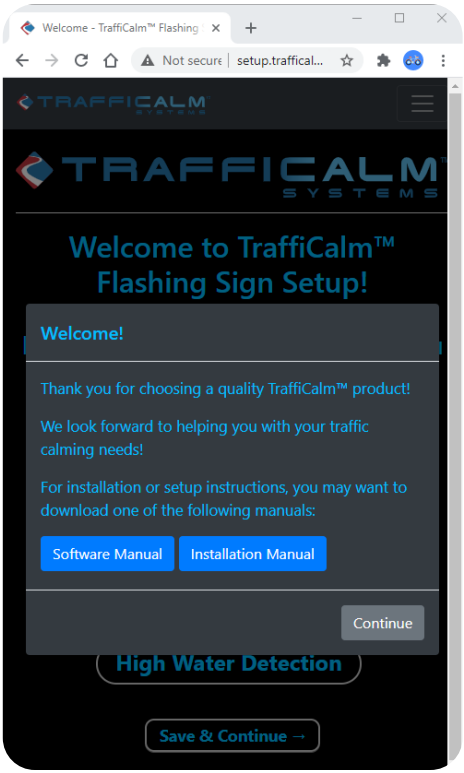
Open your web browser of choice (Chrome, Safari, Edge, etc...) and navigate to:

setup.trafficalm.com

Page 1 Downloadables

After you get logged in, you'll be given the option to download the software manual (this booklet), the installation manual (the other booklet), or to just continue.

This may come in handy if you have lost any of the documentation provided with the product, and for future generations to reflect on when things like books are "old fashioned" and AI drives your car for you.



Step 4 - System Selection

This is a big decision. Consider what type of sign you'll be highlighting, or what safety measure you'll be accomplishing.

Here are some examples...
Push 2 Cross- pedestrian crossing where a push button activates flashing signs or RRFBs
Chevron- curve warning system that illuminates the chevron signs through a curve
All Flash- one or a bunch of signs flash at the same time based on an activation event
High Water- a high water sensor activates remotely placed signs when roads flood

If you don't know what system type you'll be utilizing, consult the designer or engineer of the project.

Select system option from the following choices:
Push 2 Cross - for push-button activated applications (ex. pedestrian crossing)
Chevron – for sequencing curve warning applications
All Flash – for all other applications
Conflict Intersections - Where detections in one direction of traffic affect mobility in an intersecting direction of traffic
High Water - Where a water sensor or probe activates flashing signs.

Note: Depending on your selection, the setup utility will adapt accordingly. Jump to the following pages to proceed:
Push 2 Cross Pg 5*
Chevron Pg 7*
All Flash Pg 12
Conflict Intersection Pg 15*
High Water Detection Pg 19

***NOTE** for systems not utilizing Collaborators, Radio Communication, or remotely connected devices, set the system up as an ALL FLASH System.

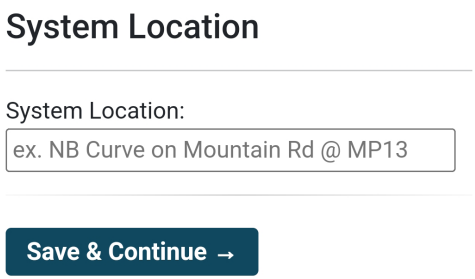
Login

With the system type selected, you will need to log in to ensure security

Enter login password:
Tr@ffiCalm (case-sensitive)
Select: **login**

P2C.1 - System Location

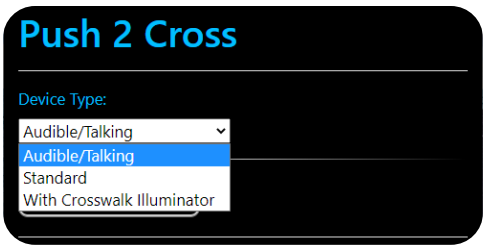
Assign and Alias Name to the device to identify it in TC-Remote (if equipped with modem)



NOTE: if you are not utilizing a Collaborator in your PUSH 2 CROSS system, use the ALL FLASH Setup!

P2C.2 - Operating Mode

Three options are given- a standard push button, or audible/talking type button, or where a crosswalk illuminator will be used.



P2C.3 - Brightness Settings

The system will automatically adjust its brightness output based on sensed ambient light. These settings allow you to tweak the automatic adjustment behavior.

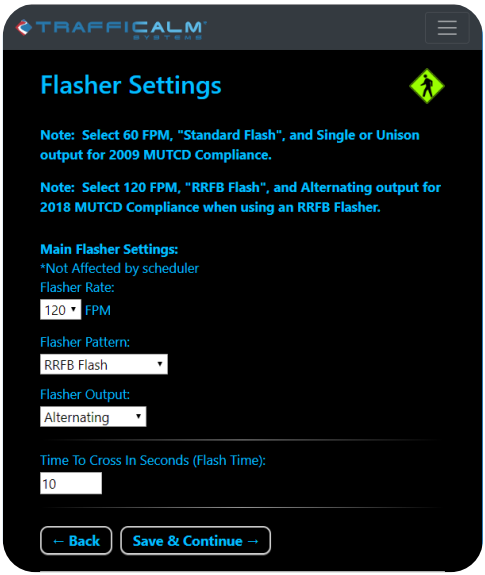
P2C.4 - Flasher Settings

Main Flasher Settings

Select flash characteristics that are displayed resulting from a pressed button

Time to Cross in Seconds

Amount of time the system will continue to flash for after the button is pressed

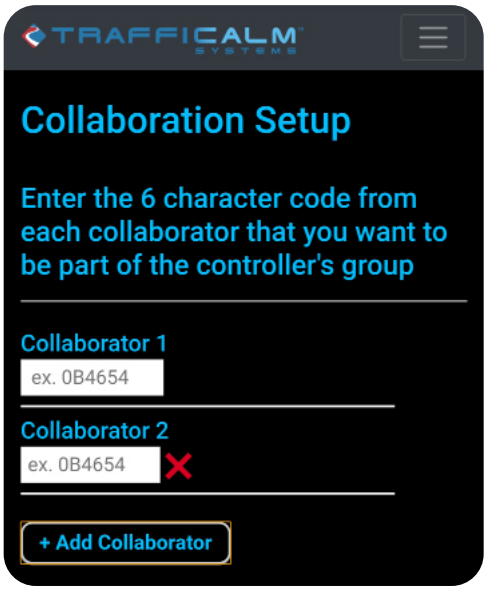


P2C.5- Collaboration Setup

Adding Collaborators

Add Collaborators to the Push 2 Cross group by typing in the 6 digit identifier found on the product label

Add as many connected Collaborators as are installed on the cross walk, do not include the controller or signs connected to other controllers



This concludes P2C Setup

⟨Sequential Chevron System Setup⟩

Introduction to Chevron System Setup

TraffiCalm Flashing Sign System tech is a revolutionary advancement in roadside signage. Given its flexibility, a particularly suiting application is Sequential Chevrons (or advanced curve warning)

These systems can prove complex in their nature, but the TC Connect Setup Wizard makes setup easy

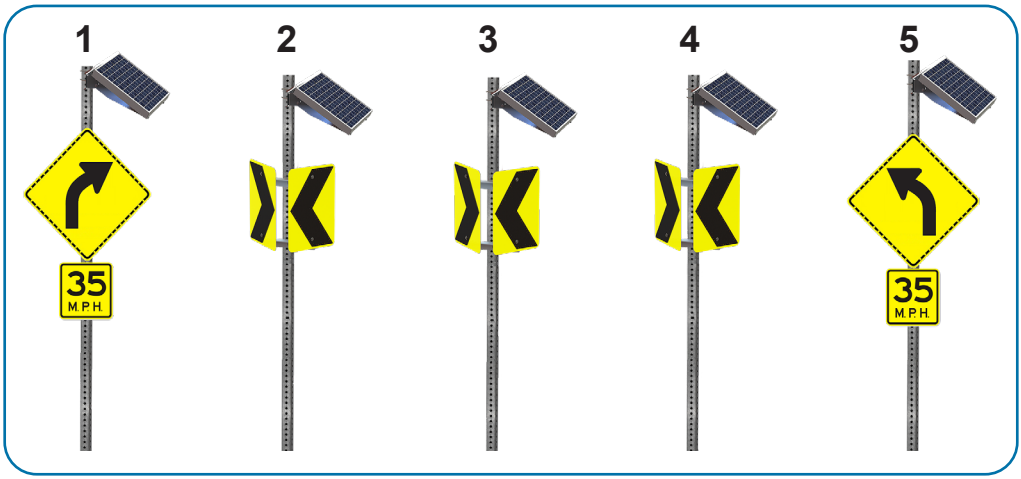
The diagram below displays the most complex application of Sequential Chevrons- radar activation in dual directions

In relation to the setup wizard, each unit will be identified as follows:

Unit 1 (Warning Sign): Controller with Radar detector (PN: M75-SA300-RDR0) activates a single warning sign and all chevrons on the left side

Units 2, 3, and 4 (Chevrons): Collaborator (PN: M75-SA300-CLBX) repeats sequential activation of either chevron (right and left)

Unit 5 (Warning Sign): Collaborator (PN: M75-SA300-CLBX) with Radar detector activates a single warning sign and all chevrons on right side



Notes

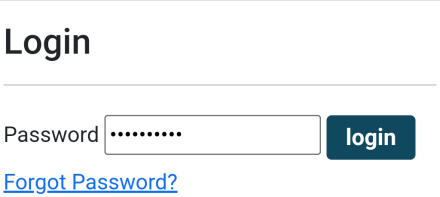
The Controller does not need to be in position 1, but it does need to be in the position where a Radar detector is located (1 or 5 in the above example)

When installing, Chevrons sequencing AWAY from the controller must be connected into Flasher A. Chevrons sequencing TOWARD the controller must be connected into Flasher B. Confusion on this point will result in the appearance of sequence malfunction

Login

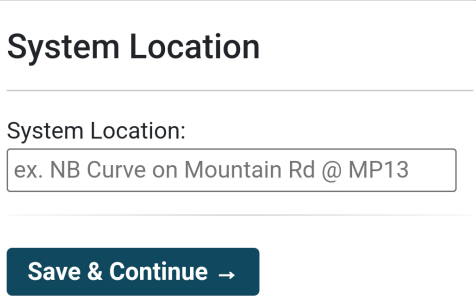
With the system type selected, you will need to log in to ensure security

Enter login password:
Tr@ffiCalm (case-sensitive)
Select: **login**



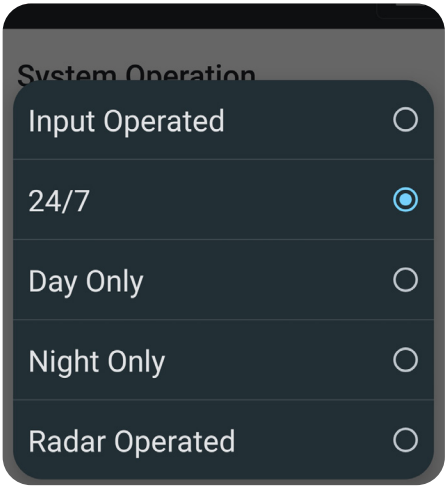
Chevron.1 - System Location

Assign and Alias Name to the device to identify it in TC-Remote (if equipped with modem)



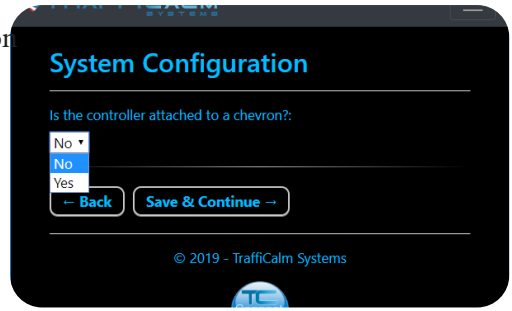
Chevron.2 - System Operation

Select what activates the flashing or sequencing of the signs flashers.



Chevron.3 - Controller Function

Select whether the Controller is connected to a Chevron or not
Yes - The Controller is connected to a Chevron
No – The Controller is connected to warning sign or no sign



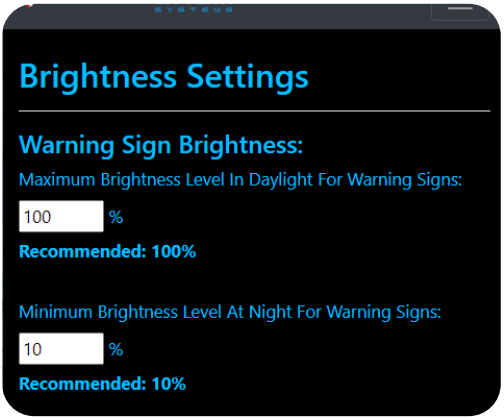
Chevron.4 - Brightness Settings

Warning Brightness

Note that brightness settings directly correlate to battery performance. Optimal settings are suggested

Chevron Brightness

See comments above



Chevron.5 - Flasher Settings

Warning Sign Setup

Speed Required To Activate System

Set to the lowest detection speed required to activate

Activate Curve Ahead Warning

Toggles warning sign activation

Warning Sign Flasher Rate

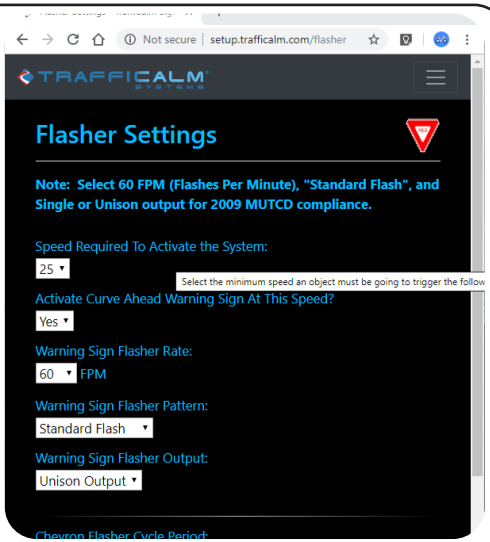
60 FPM is considered MUTCD compliant, all others are non-compliant

Warning Sign Flasher Pattern

Standard Flash is considered MUTCD compliant, all others are non-compliant

Warning Sign Flasher Output

Selects Flasher Output Channel (A or B)



Chevron.6 - Flasher Settings, cont'd

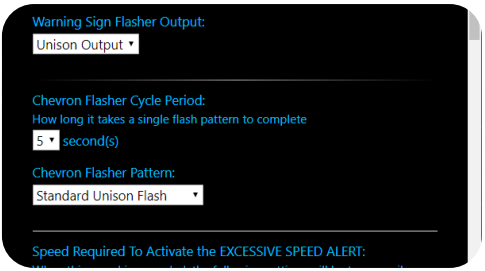
Chevron Sign Setup

Chevron Flasher Cycle Period

Set how long the sequence will take to complete. Set low for a for a fast sequence, set high for a slow sequence (dictated by expected road speed)

Chevron Flasher Pattern

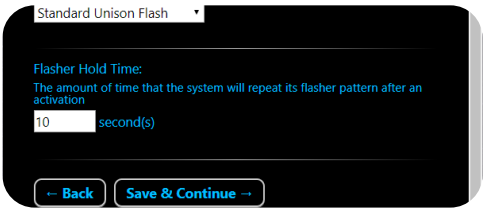
Toggles flash settings. Unison flash is considered MUTCD compliant. Set to Sequencing for sequencing function



Chevron.7 - Flasher Settings, cont'd

Flasher Hold Time

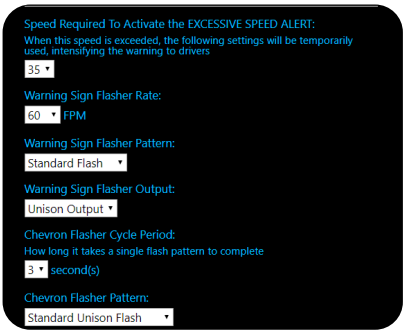
Dictates how long the system will continue flashing after last radar detection.



Chevron.8 - Flasher Settings, cont'd

Excessive Speed Escalation

This group of settings produces an "escalated" flash pattern if the selected speed threshold is detected by the Radar (if equipped).



Chevron.9 - Collaborators

Chevron Setup

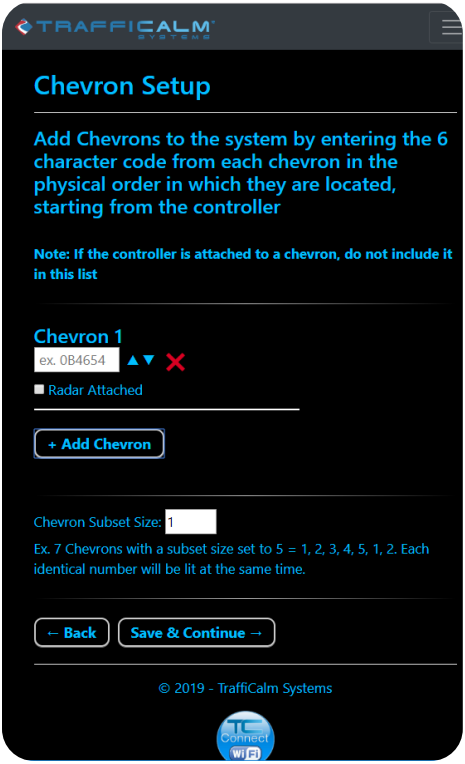
Add Collaborators to the chevron group by typing in the 6 digit identifier found on the product label

Add as many chevron connected Collaborators as are installed on the curve section, do not include the controller or signs connected to Warning signs

Chevron Subset Size

It is possible to "cap" the number of chevrons activated in sequence. Any additional signs will activate simultaneously with another sign. For example- if a group contains 8 chevrons, but the Subset Size is set to 4, units 1 and 5 will activate together, followed by 2 and 6, followed by 3 and 7, followed by 4 and 8. Long curves may benefit from this setting to maintain driver visibility.

Enter the value of the number of signs in a subset.



Chevron.10 - Collaborators, cont'd

Warning Sign Setup

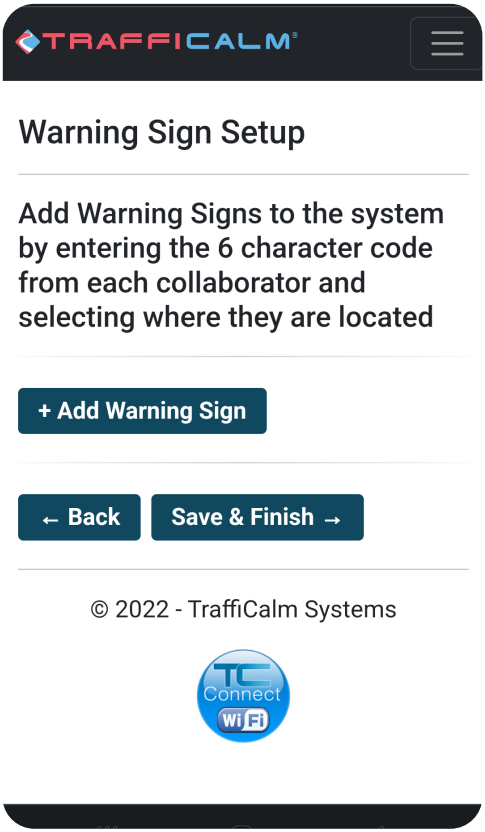
"Warning Sign" Collaborators differ from "Chevron" Collaborators in that they are connected to the warning sign typically found at the entrance to a curve

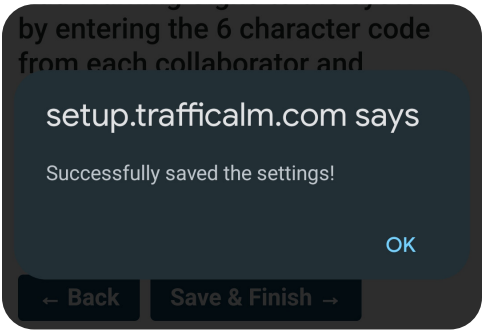
Add Collaborators to the Warning group by typing in the 6 digit identifier found on the product label

Add as many warning sign connected Collaborators as are installed on the curve section, do not include the controller or signs connected to chevron signs

Warning Sign Location

Select where the Warning Sign is in relation to the Controller



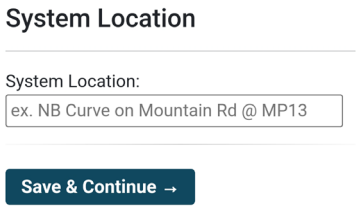


This concludes Chevron Setup
To learn more about TC-Remote connectivity, see page 24

All Flash System Setup

All Flash.1 - System Location

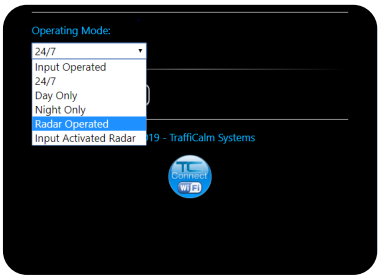
Assign and Alias Name to the device to identify it in TC-Remote (if equipped with modem)



All Flash.1 - Operating Mode

Select operating mode from the following choices:

Input Operated - Only operates by device wired into Controller or Collaborator Input
24/7 – System operates 24/7
Day Only – System operates during ambient daylight hours only.
Night Only - System operates during ambient no light hours only.
Radar Operated - Radar detected operation



All Flash.2 - Brightness Settings

Flashing Signs automatically adjust to ambient light, however the Brightness Settings can be used to dial in day and nighttime output, and how quickly the sign responds to ambient light.

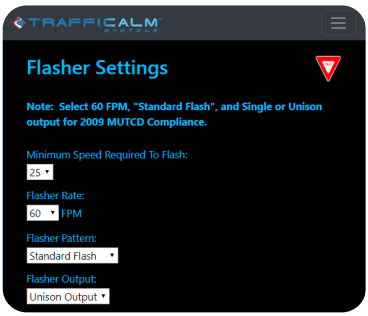
Note for US customers: The settings below may cause your device to deviate from 2009 MUTCD compliance. Concerning settings are noted in the configuration utility window.

All Flash.3 - Flasher Settings (minimum speed settings, for radar activation)

Minimum Speed Required to Flash:
Select the Minimum Speed (in MPH) from this pull-down menu in which the LED Flashers will begin to flash.

Flasher Rate
Select the FPM (Flash Per Minute) rate of the LED Flasher Rings.
Default setting is 60 FPM.

Flasher Output
Refer to Installation Manual for Wiring Connections
Select the desired Flasher Output.
UNISON: Activates both Flashers or Beacons simultaneously
A Only: Activates Flasher or Beacon wired into Terminal A
B Only: Activates Flasher or Beacon wired into Terminal B.
Alternating: Alternates a flashing sequence between Flashers or Beacons wired into both Terminal A and B.
Off: Flasher Output OFF



Flash Patterns

Select the desired Flash Patterns.

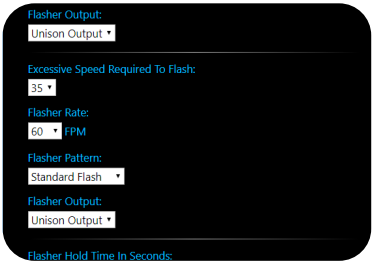
* Standard Flash
* Bright Pop-Flash
* Pulse Flash
* Solid On

All Flash.4 - Flasher Settings (excessive speed settings)

Excessive Speed Required to Flash:

Select the Excessive Speed (in MPH) from this pull-down menu in which the LED Flashers will begin to flash upon detection.
The LED Flashers will not activate below this threshold.

The next (3) fields (Flasher Rates, Flasher Output, and Flasher Pattern) will be applied when the Excessive Speed Threshold has been detected.



Flasher Rate

Select the FPM (F)lash (P)er (M)inute rate of the LED Flasher Rings.
Default setting is 60 FPM.

Flasher Output

Refer to Installation Manual for Wiring Connections

Select the desired Flasher Output.

UNISON: Activates both Flashers or Beacons simultaneously.
A Only: Activates Flasher or Beacon wired into Terminal A.
B Only: Activates Flasher or Beacon wired into Terminal B.
Alternating: Alternates a flashing sequence between Flashers or Beacons wired into both Terminal A and B.
Off: Flasher Output OFF.

Flash Patterns

Select the desired Flash Patterns.

* Standard Flash
* Bright Pop-Flash
* Pulse Flash
* Solid On

Flasher Hold Time

Input the desired Hold Time (in seconds).
This will set the run time of the LED Flashers each time the speed threshholds have been met or exceeded.

When all **minimum** and **excessive** speed settings have been completed:

Select: **"Apply"**
Select: **"Next"**

All Flash.5 - Collaboration Settings

Each Flashing Sign System consists of a single Controller and one or more Collaborators paired in a group.

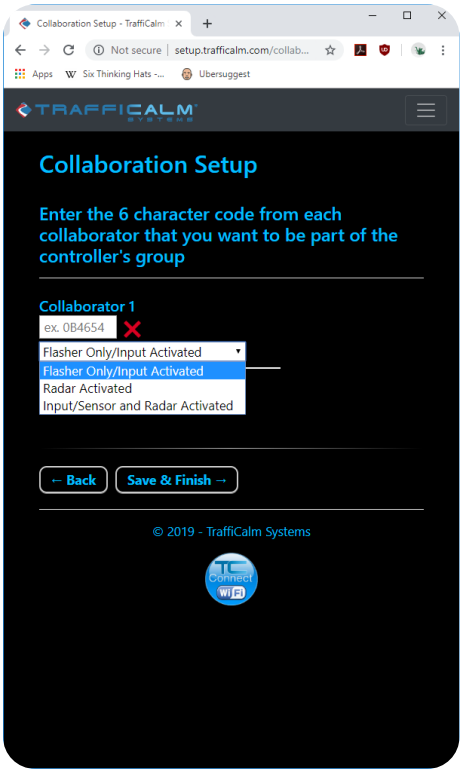
Identify the collaborator ID number found behind the solar panel and insert this number in the Collaborator Field.

If "Advanced Settings" are not selected, the Collaborator will Copy Controller Settings as previously set in steps 5 & 6.

Select "+Add Collaborator" if more than one Collaborator is used.

Select "Apply Settings"

Select "Next"



Activation Settings

Advanced Settings alow the user to apply settings independent from those of the Controller.

Flasher Only/Input Activated:
Only listens for commands given by the Controller or directly connected input, but not a radar

Radar Activated
Activates when a radar input is detected

Input/Sensor and Radar Activated
Requires activation from both a radar and an input

When complete:
Select "+Add Collaborator" if more than one Collaborator is used.

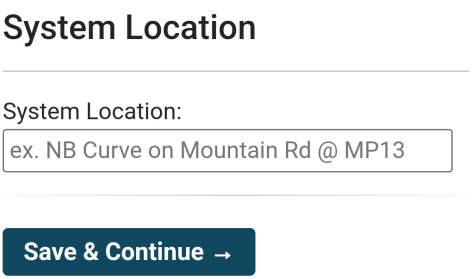
Select "Apply Settings"

Select "Next" to continue

This concludes All Flash Setup
To configure a schedule, select scheduling from the top menu, see page 20

CIWS.1 - System Location

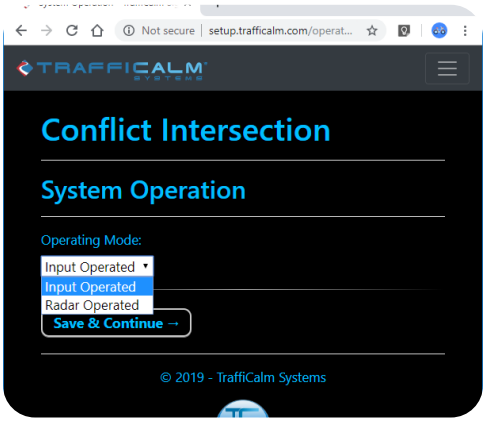
Assign and Alias Name to the device to identify it in TC-Remote (if equipped with modem)



CIWS.2 - System Operation

What activates your system?

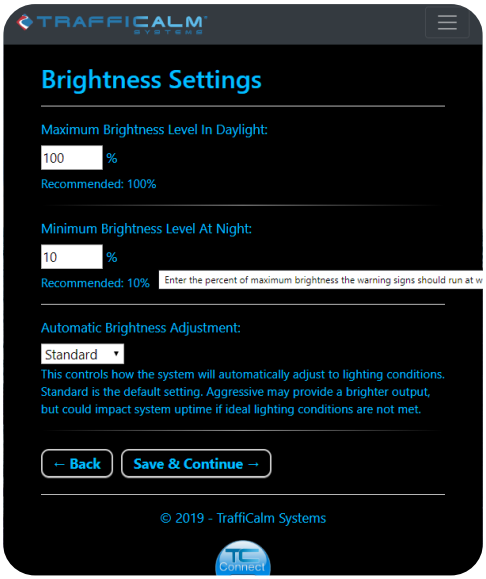
Select from inputs or radars. Examples of inputs include push buttons, environmental sensors, and height detectors



CIWS.3 - Brightness Settings

How bright do you want it?

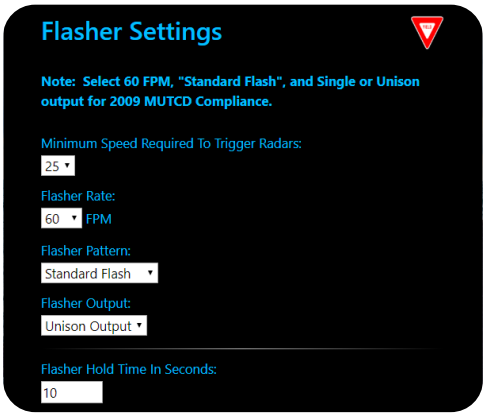
Select the maximum brightness, minimum brightness, and adjustment method based to best adapt the signage to the installation



CIWS.4 - Flasher Settings

How do you want to warn drivers?

Select a minimum detected speed, flasher rate (flashes per minute), flasher pattern (boring to exciting), and which outputs to fire off with the above settings.

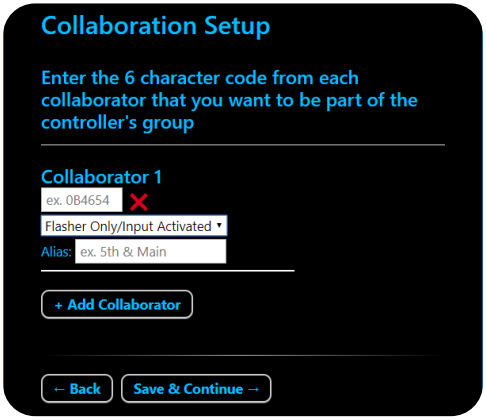


CIWS.5 - Collaboration Setup

The Hard Part

This is where the setup of the intersection begins. Each collaborator's id must be entered, along with selecting the input type used at the collaborator (ie. if a radar is attached, select radar). Finally, each collaborator must be given an alias. You get to pick the alias, just remember it.

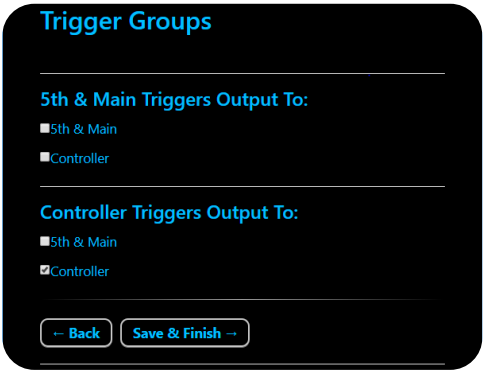
The next screen will use these names to build out the system matrix



CIWS.6 - Trigger Groups

The Really Hard Part

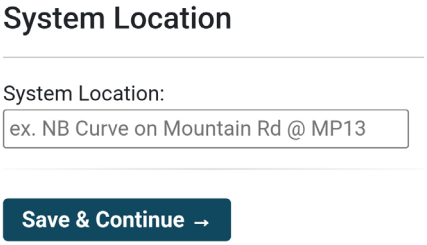
This set of selections dictates which collaborator's trigger the output on other collaborators (or the controller). See the next page for an illustration depicting a conflict system.



This concludes Conflict Intersection Setup

High Water.1 - System Location

Assign and Alias Name to the device to identify it in TC-Remote (if equipped with modem)



High Water.2 - Configuration

You've got a water sensor what's it hooked up to?

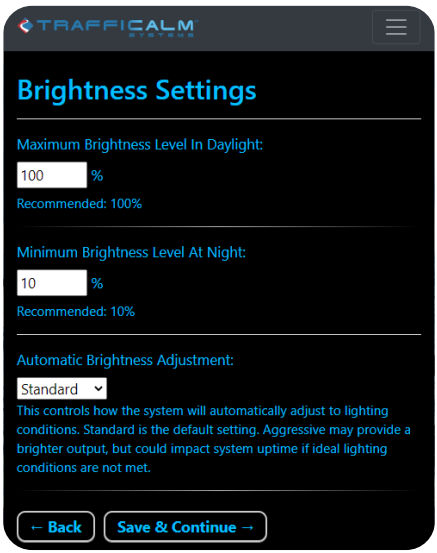
If the sensor is connected to the Controller, select Yes. If it's connected to a Collaborator, selet NO.

This helps the software deliver relevant options as you work through the configuration.

High Water.3 - Brightness

On this screen you can select the brightness settings for the flashing sign ring output.

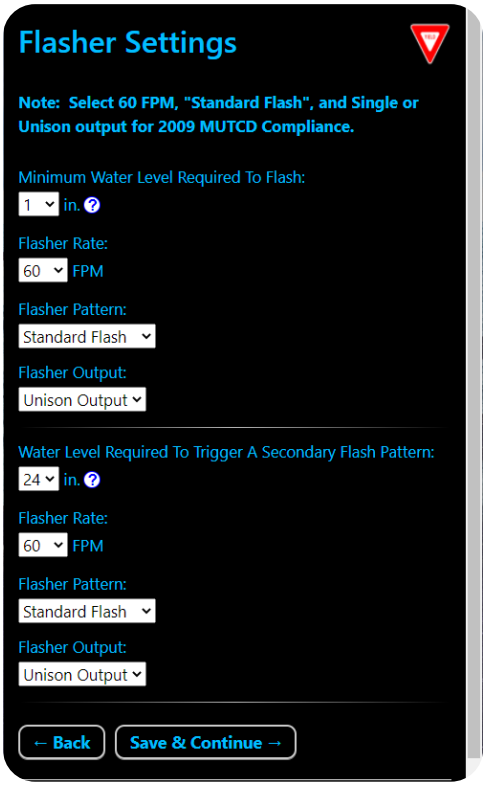
The system will accommodate for ambient light based on solar panel voltage or a photo (light) sensing device.



High Water.4 - Flash Settings

What does the system do when the water rises?

Because the water sensor can not only detect the presence of water, but also its depth, it is possible to increase or modify the warning method, or select another output port (A or B) based on actual conditions.



High Water.5 - Collaborators

Add wirelessly triggered, remote collaborators.

This is where the setup of the system begins. Each collaborator's id must be entered, along with selecting the input type used at the collaborator (Flasher only or TraffiCalm water/ depth sensor attached).

This concludes High Water Detection Setup

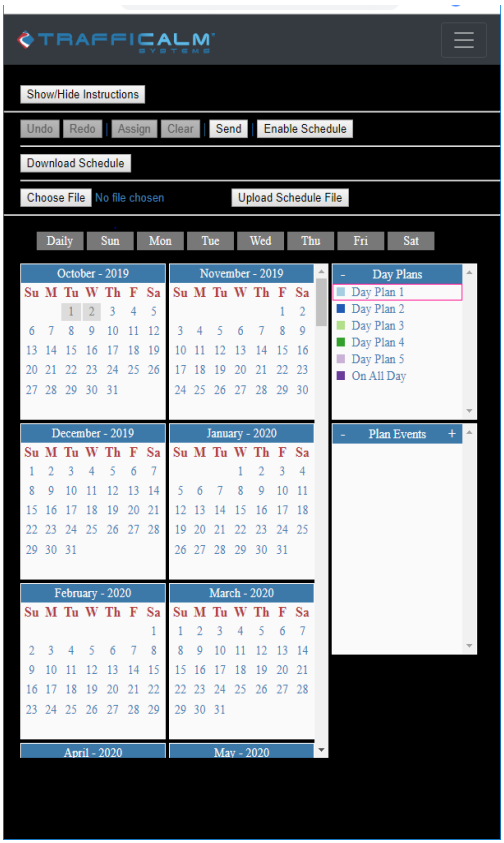
Scheduling Intro

The built in Flashing Sign Scheduler allows you to schedule OFF or ON behavior to occur throughout the day

Start by setting up events to happen on a day plan, then apply the day plan to either the daily button, the day buttons (Sun, Mon, etc.) or specific calendar days

Once completed, select to send the schedule to the Controller, then select to enable the schedule

The schedule will now activate on the Controller and all Collaborating group members



Scheduling Details

Undo- removes last action or application of a day plan
Redo- redacts the undo function
Assign- For Apple users, applies the day plan to selected day button or date
Clear- removes day plan from selected day button or date
Send- Sends the schedule to the group
Enable Schedule- starts the schedule operation

Daily- day plans assigned to the Daily button occur every day, repeating forever.

Sun, Mon, Tues...- day plans assigned to the Day buttons occur on that specific day, repeating forever

Calendar- day plans assigned to specific calendar dates will occur on that day ONLY, with no repetition

To apply a day plan, simply drag and drop the day plan to the desired day or date. Additionally, a range of dates may be selected; use the Assign button to apply the selected day plan to the selected dates

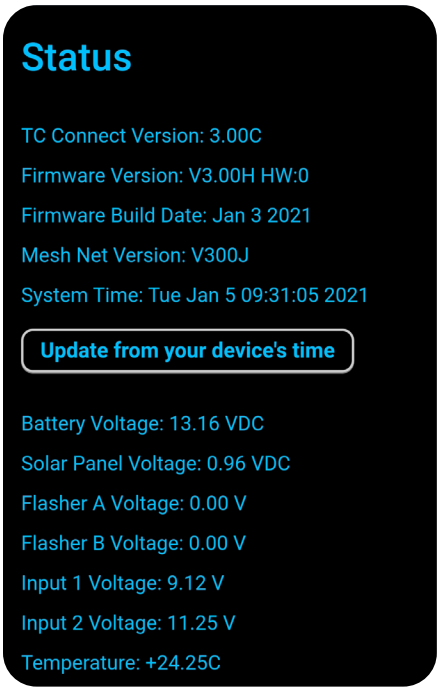
Note to some Apple IOS users, the drag and drop action may not function properly. In this case, use the Assign button to apply day plans to days or dates.

Download Schedule - Downloads developed schedule to phone, tablet, or PC for future use on other systems

Choose File/Upload Schedule File - Open and send a downloaded schedule to save time.

Status Menu

The status screen provides sensor information from the Controller and each connected Collaborator. Typically this will be used when troubleshooting the system at the request of the TraffiCalm™ support team.



Diagnostics Menu

The diagnostic screen displays the signal strength of the radio (mesh-net) connection between each device. Again, this is typically used while troubleshooting.

Activation Report

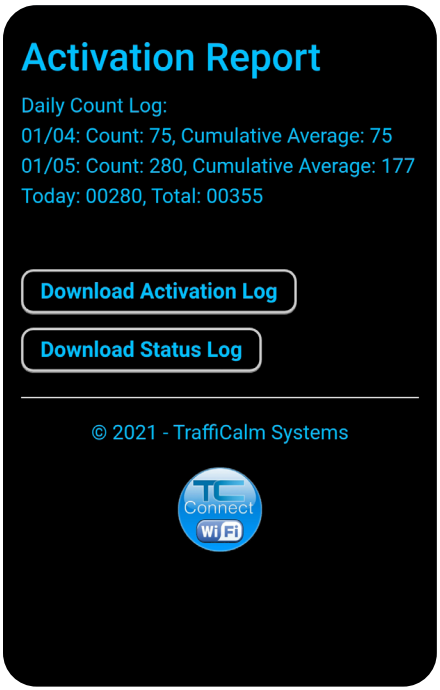
This screen facilitates the download of an activation log and a status log. Both are exported to your device as a spreadsheet that can be opened in software like Microsoft Excel.

Once a log is loaded to your device it can be emailed, shared, and otherwise distributed as much and as often as you want.

The activation log displays data about when the system detected vehicles and how that amounted to (or not to) flashing sign.

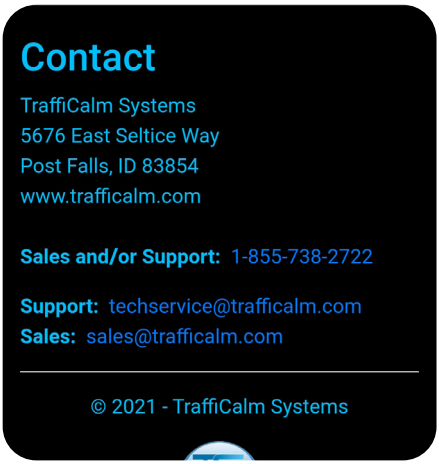
The status log provides system history, including charging status and power cycles.

Finally, this screen features several brief reference facts.



Contact

Want to get a hold of us? Here's all the ways you can (excluding LinkedIn and Facebook, which also work).



Advanced Settings

This screen offers several "advanced" features, some of which are critical to the operation of the system.

Power Type- should be selected to reflect each devices actual power supply. If in doubt, call our support department.

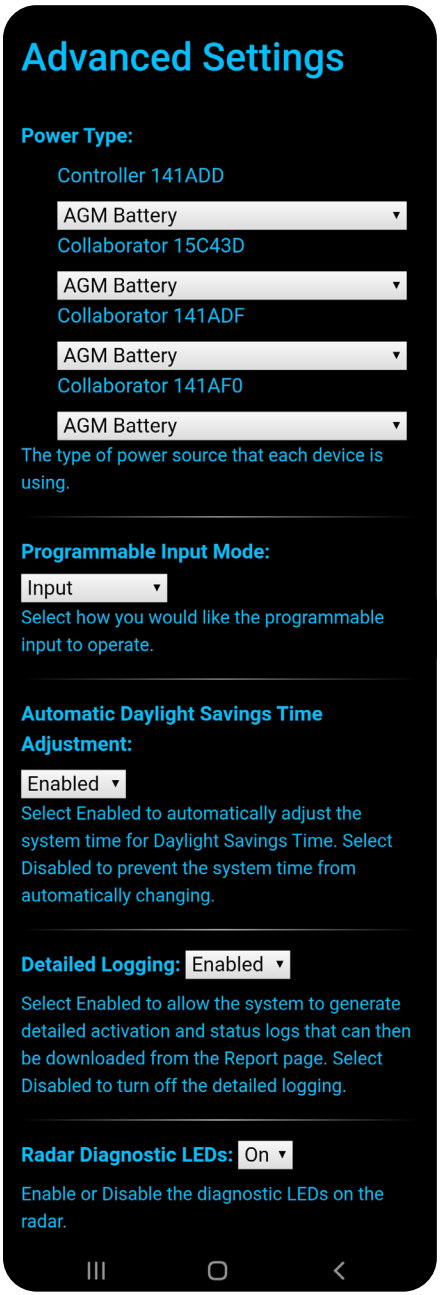
Programmable Input Mode- designates what input 2 on the controller accomplishes. It can act like an input, or a reset trigger.

Automatic Daylight Saving Time- turn off if you're in a place that does not observe the annual DST.

Detailed Logging- toggle the storage of detections and status logs. Some places don't allow it, so this allows for total compliance.

Radar Diagnostic LEDs- the radars have a green and a red LED to help with aiming and power status. But, they can be distracting under normal use. So, you can turn them off if the public demands it.

Various Resets (not pictured)-
Soft defaults retains most settings, like Collaborator IDs
Factory Reset wipes the whole thing clean
Clear Logs- resets the data logs

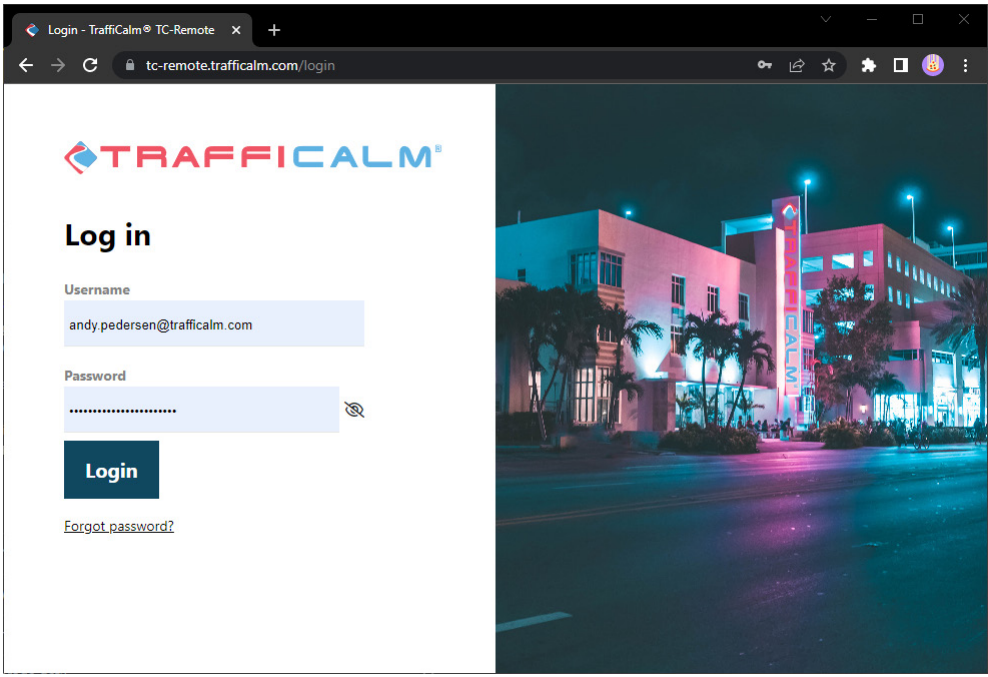


That's It. Well done!

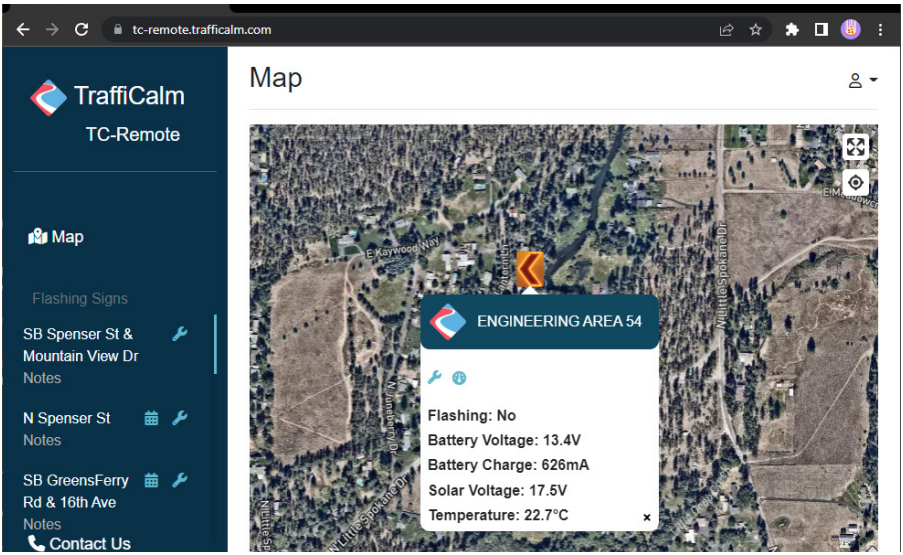
If so equipped, your TraffiCalm Intelligent Sign system may be connected to TC-Remote via a cellular modem.

With the system powered up and connected, you'll be able to access the device and its parameters from any Internet connected device in the world.

To access TC-Remote, navigate to tc-remote.trafficalm.com. Upon initial log in, you will be required to set a password, this can be recoverd if forgotten later.

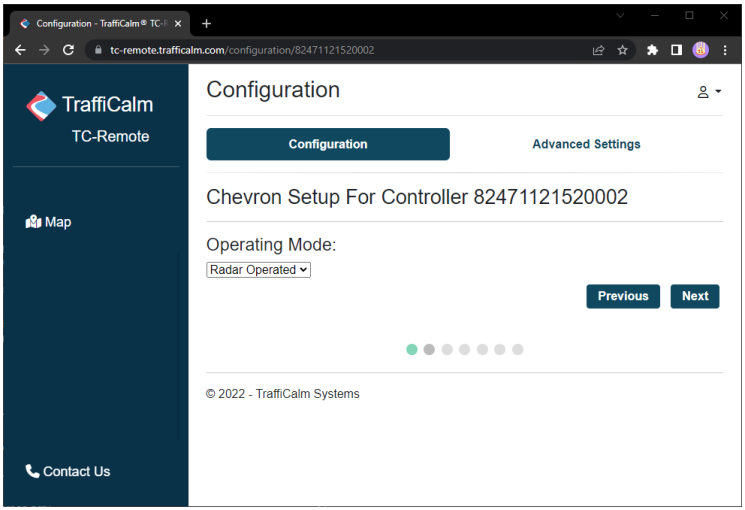


After logging in, all of your devices will be visible on both the map and left navigation panel.



Clicking on any device will expand it's quick-stats view where you can see system data as well as expand setup (wrench icon) and system data (meter icon) views.

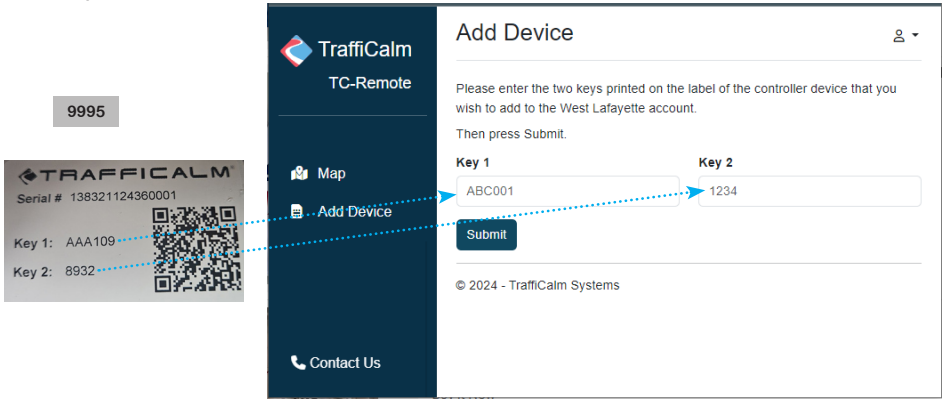
Selecting the icon in any given system will open its configuration parameters, much of this is similar to local setup.



Adding A Device

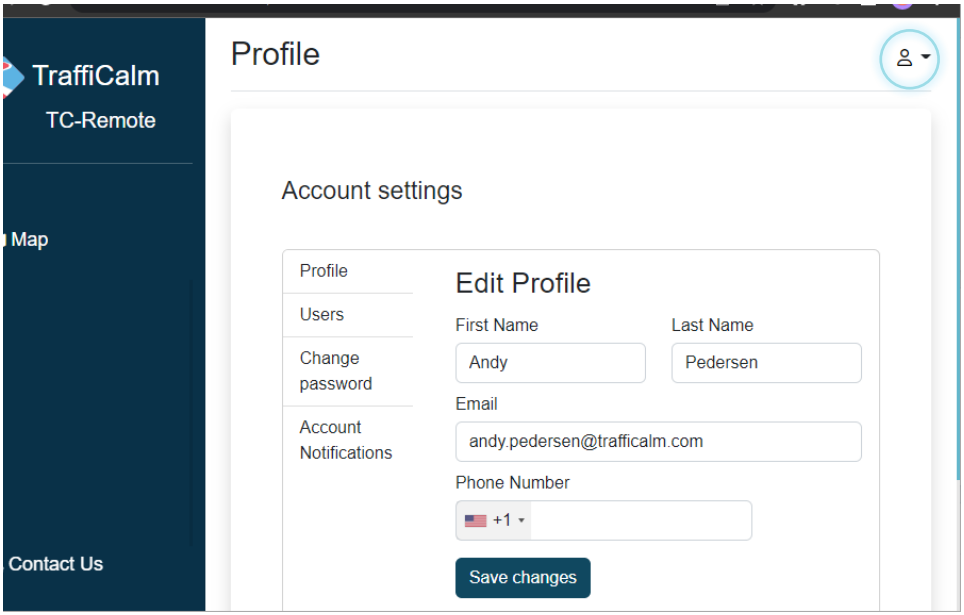
After installing a new TC Remote device, steps will need to be taken to claim ownership of the system. Select ADD A DEVICE to start the process

Found on the modem, a label calls out two “key” values that must be entered accurately on the Add a Device pane. An example of this label



Successful entry of the correct key values will result in the unit reporting to your account. If either key value is entered incorrectly the website will warn you the operation was unsuccessful.

Clicking the Account Preferences Icon (highlighted in blue below) opens your account's settings.



This page features contact info setup, notification preference settings, and password management.

If the account logged in is designated as an administrator, it is possible to invite new users via the users pane.

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Scan to contact TraffiCalm Customer Success for additional info

Revision	Reason	Owner/Date
A	Initial release for Gen 4 devices	AP 20220921
B	Updated TC-Remote details	AP 20221208
C	Updated Add A Device in TC Remote	AP 20240904