Minleon USA

Unicorn Cloud-Based LED Control System

Last update: March 2020

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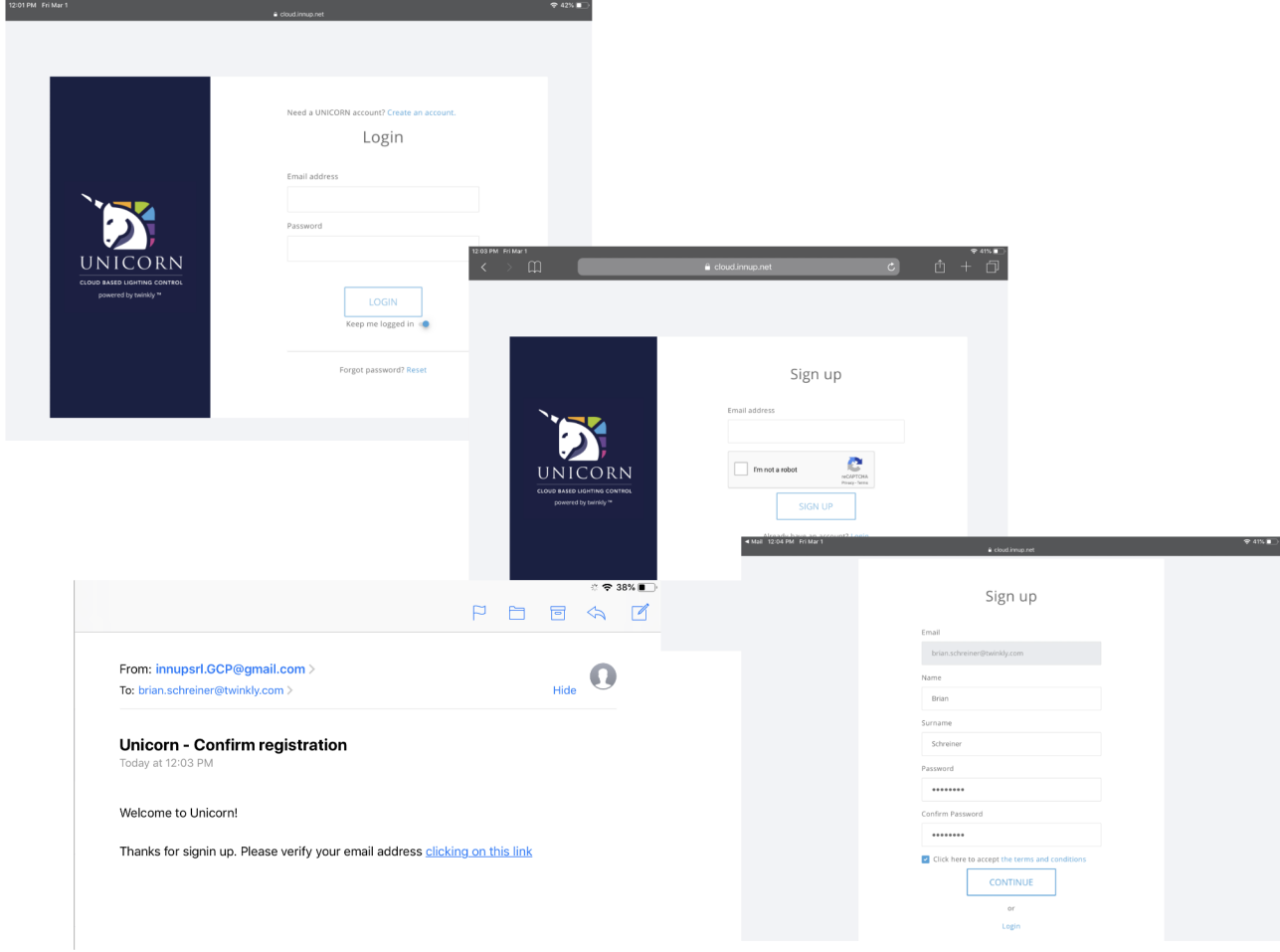
Account Creation

Go to the Unicorn Cloud account homepage: **cloud.innup.net**

- Select: CREATE AN ACCOUNT
- Fill out the form with all information
- Check your email for confirmation
- Verify your account by clicking the link.
- Fill out the Account Form and
- Create an easy to remember password.

Note: This step also can be used for a customer account creation.

Important: This info will also be used when Configuring your Field Controllers in the *SpectraShow* App (pp 14-20).



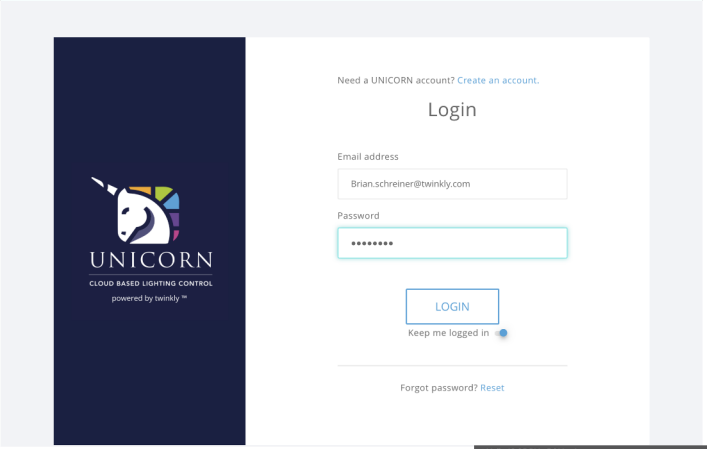
Logging in for the first time

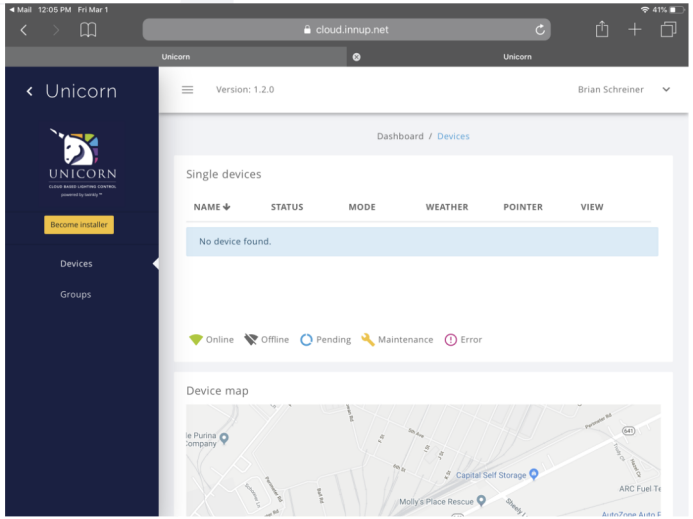
Go to **cloud.innup.net** and log in using the email you created an account with and the password you created.

Once you login you will see the Cloud as a user. This would be the view the customer has as well.

If you are going to be an Installer, click the **Become Installer** button.

Note: This is only used for being an installer. Customers will be denied this access.



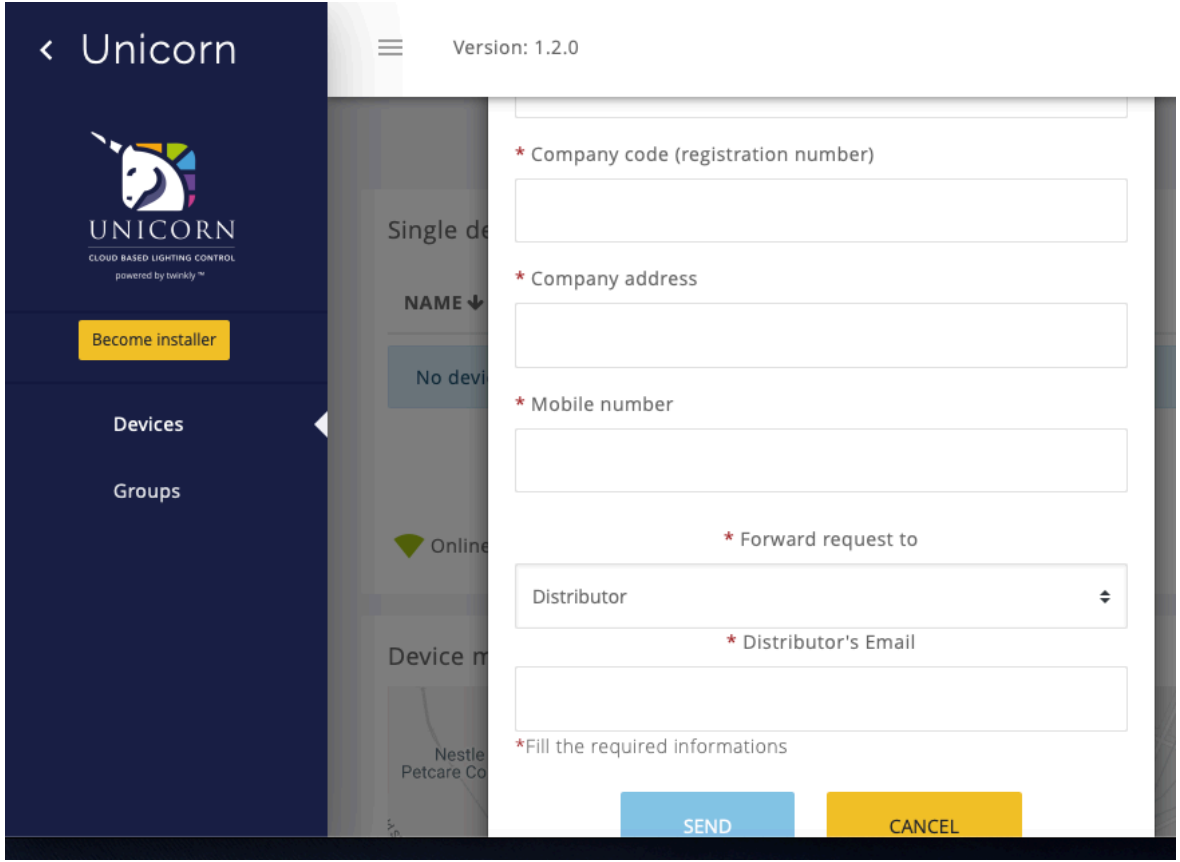


Becoming An Installer

Once you click on ***Become Installer*** you will fill out a Form requesting this permission:

- In the “Company Code” type “unicloud”.
- Forward request to DISTRIBUTOR, not Administrator.
- In “Distributor’s Email” field always type: unicorn@minleonusa.com
- SEND the form and wait for a response. This may take up to 24 hours.

Note: The status will change from PENDING to a disappeared status.



Installer Level

This is the Installer Level of the Unicorn. You can manage your installations from this screen.

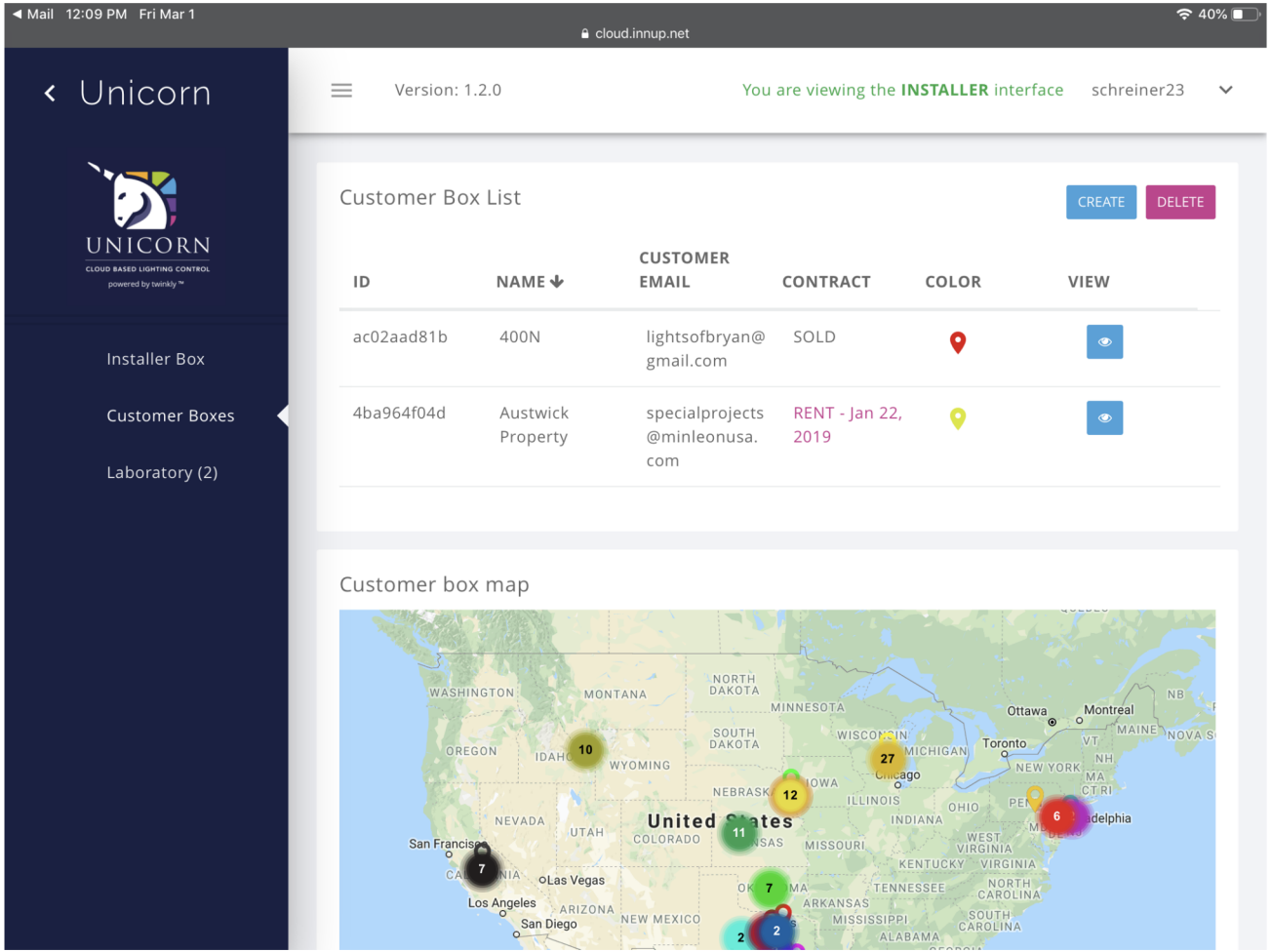
This is also where you create new projects for your customers

This is a management tool for the installers.

It is helpful to think in these terms:

Customer Box=Group of Field Controllers (aka “Devices”) delivered to the job site

Device=single Field Controller

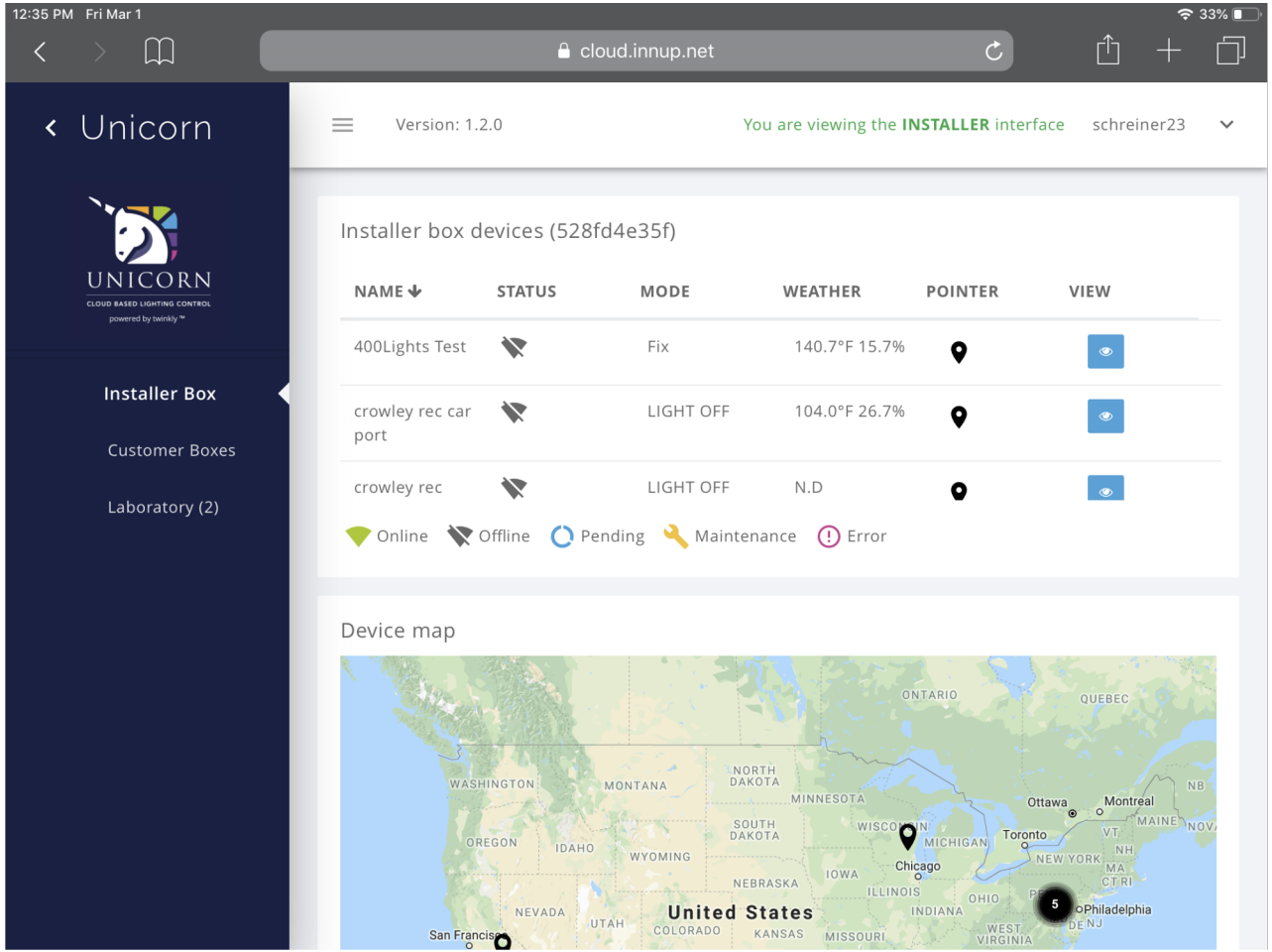


Installer Box

This is a virtual holding tank for controllers not currently in use.

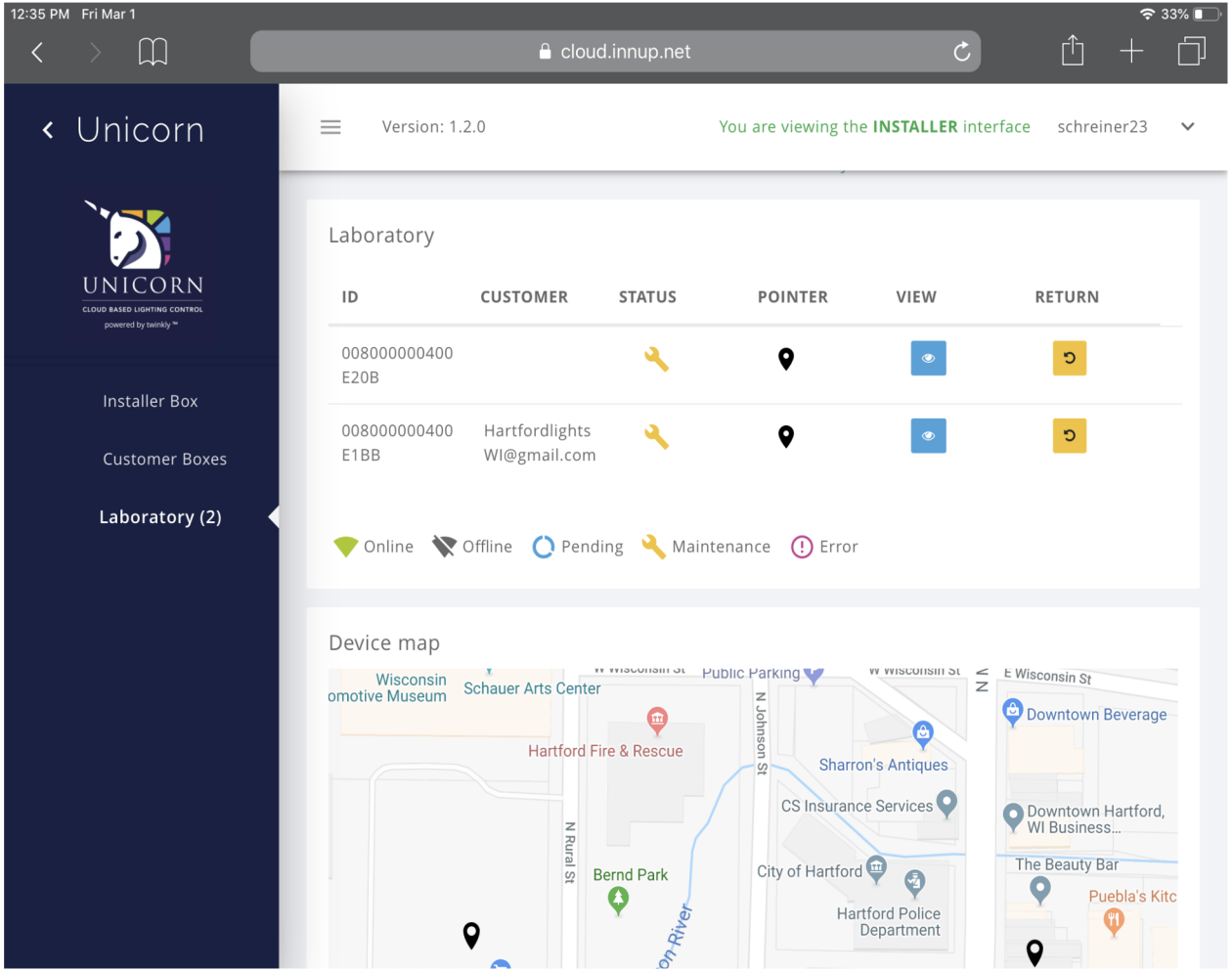
We place controllers that are taken off site along with controllers that have come out of a rental status here.

Again, a “box” is a group of “devices”. “Devices” are “Field Controllers”



Laboratory

This is a virtual holding tank for controllers (aka “Devices”) that a customer will “send to you” in the cloud for service. It is simple a place to isolate and test a controller and it not affect the customer‘s scheduled events.



Installing the Gateway

The Gateway is the conduit to the Cloud. Therefore it needs Internet to communicate the commands from the Cloud to the Field Controllers.

THE INTERNET CONNECTION MUST BE OPEN WITH NO FIREWALLS & HARDWIRED.

Also*, the* ***Ethernet PORT of the network to which you are connecting must be configured for DHCP***, random IP address assignment.

All configuration is done prior to you receiving the Gateway, so all you need to do is plug it in and connect the Cat 5 cable.

Note: The only thing our Gateways talk to is the Cloud and to the controllers, it can not communicate with anything else, so it is extremely secure.

Range: 1-2 mile radius - 4 mile end to end, must place in Drybox or indoors.

Installation of the IP67 Military Gateway

Like the Indoor Gateway, the Military Grade GW needs the same internet connection, but without the need for a dry box. This unit also uses POE, Power-Over-Ethernet, allowing you to plug the power supply closer to the internet connection and run cat5 cable up to 200’ away to the GW. This will give you the most mounting options and the ability to get it as high as possible giving you maximum coverage.

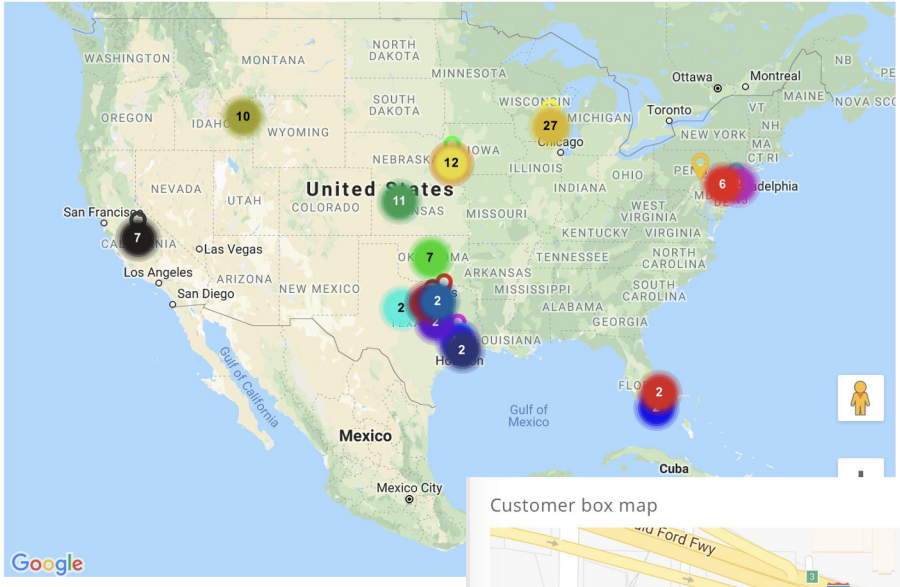
Range: 2.5 - 5 mile radius - 10 Miles end to end coverage max

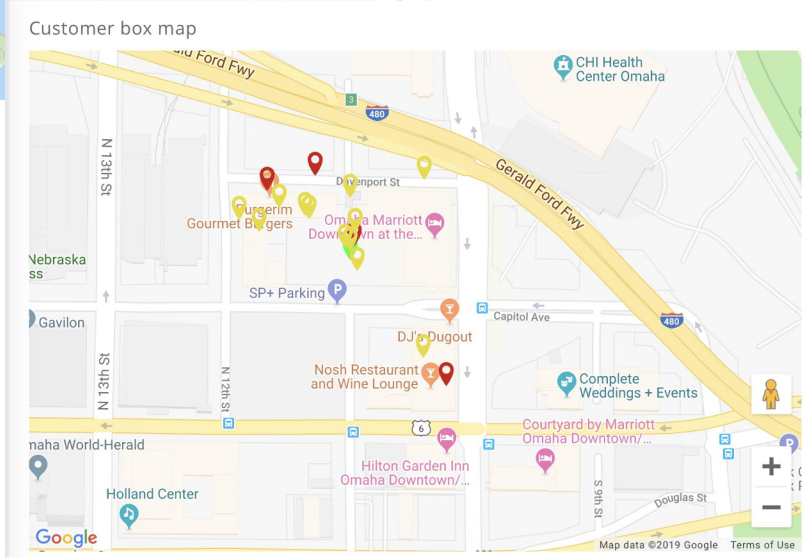
Creating a new installation

Because there is one Transmitter (aka: Gateway) to many Unicorn Receivers (aka: Field Controllers) and everything is controlled via the Cloud, you must have a unique ID for the installation.

This ID can be a single location (city or shopping center) but it can also be multiple locations across the country.

The ID allows us to assign specific controllers to specific customers, regardless of their physical location.





Create a Project ID

In the upper right hand corner of the Installer interface, in the Customer Boxes section press CREATE. Fill in:

CUSTOMER BOX NAME – Installation description

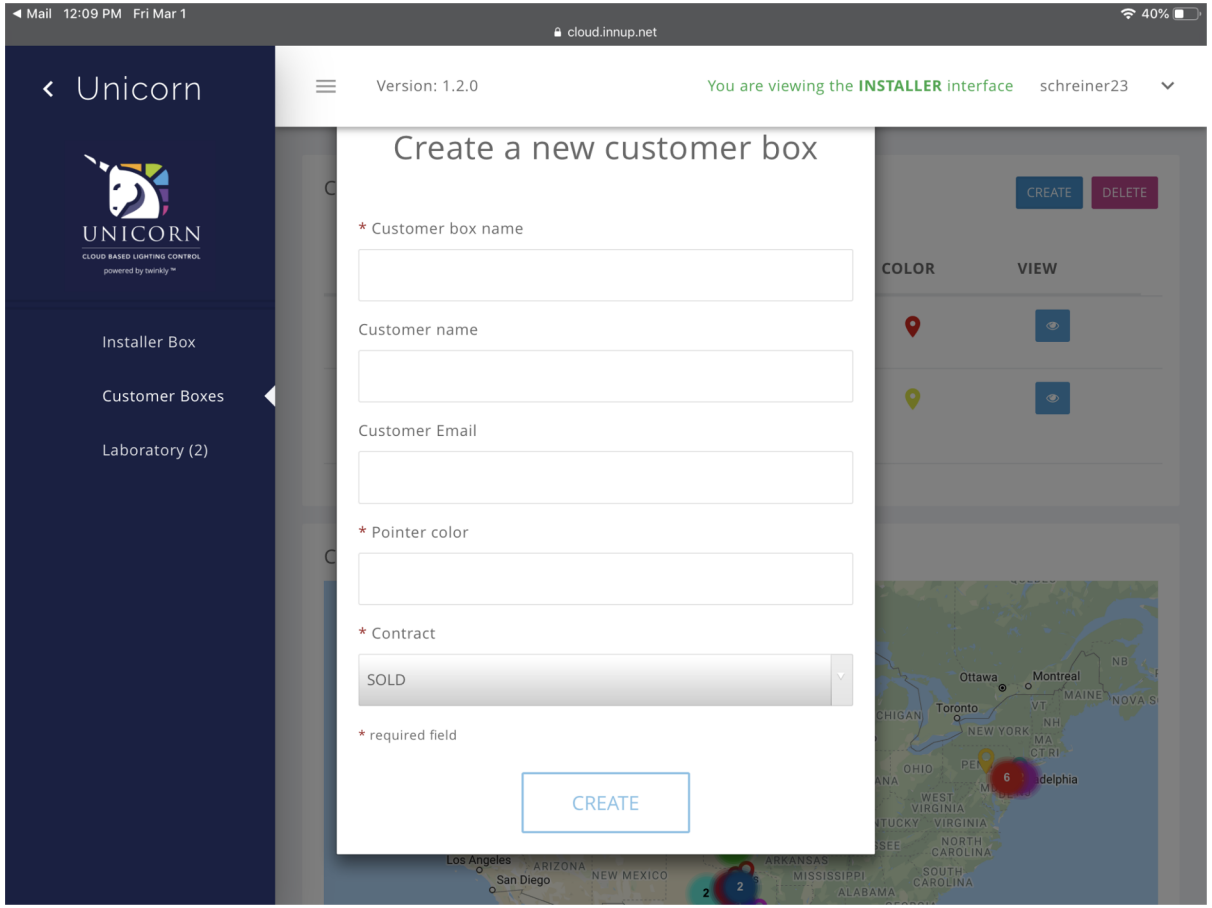
CUSTOMER NAME – Your client

CUSTOMER EMAIL – Email of customer, or an email you set up for the customer if you are managing the day to day operation of the system.

POINTER COLOR – Color of the PIN on the map)

CONTRACT – SOLD or RENT, select rent if there is an end date to a contract

Click CREATE - and you will see it appear in you list of CUSTOMER BOXES



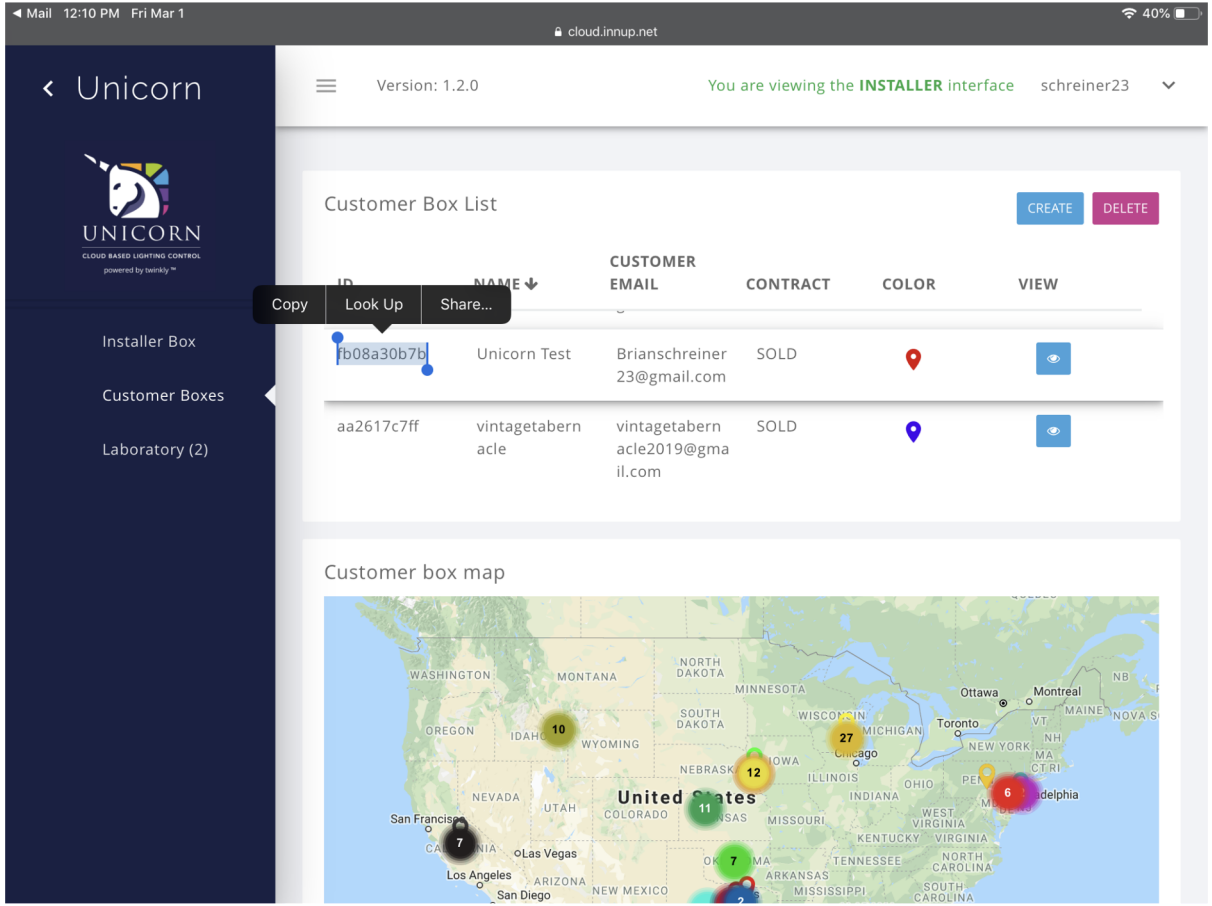
Customer Box ID

This ID tells the Cloud where the controllers belong.

Once you create this ID, it is important your ground installers have this code. Make sure you email, take a photo,or text it… somehow share it.

Have them copy & paste the ID to their notepad in their phone, or jot it down.

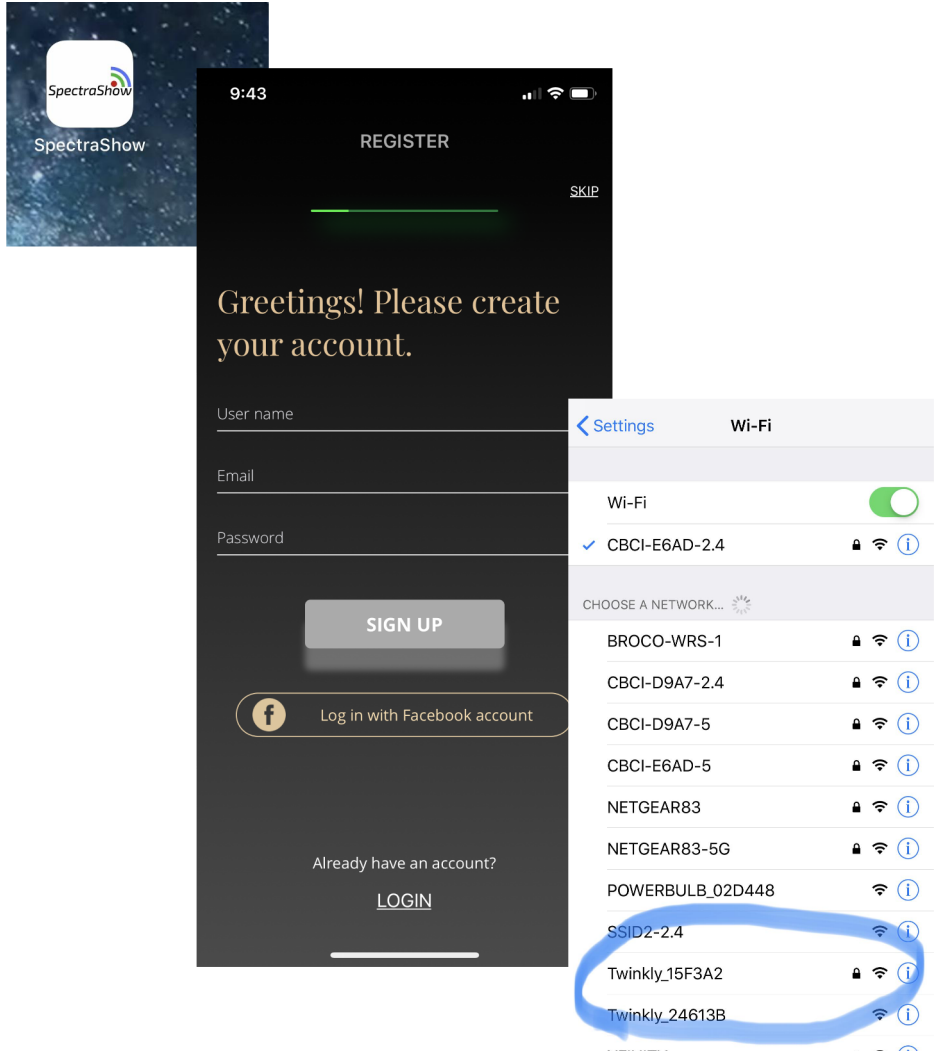
In the example to the right, the Box belongs to UNICORN TEST and customer brianschreiner23@gmail.com.



Installing field level controllers

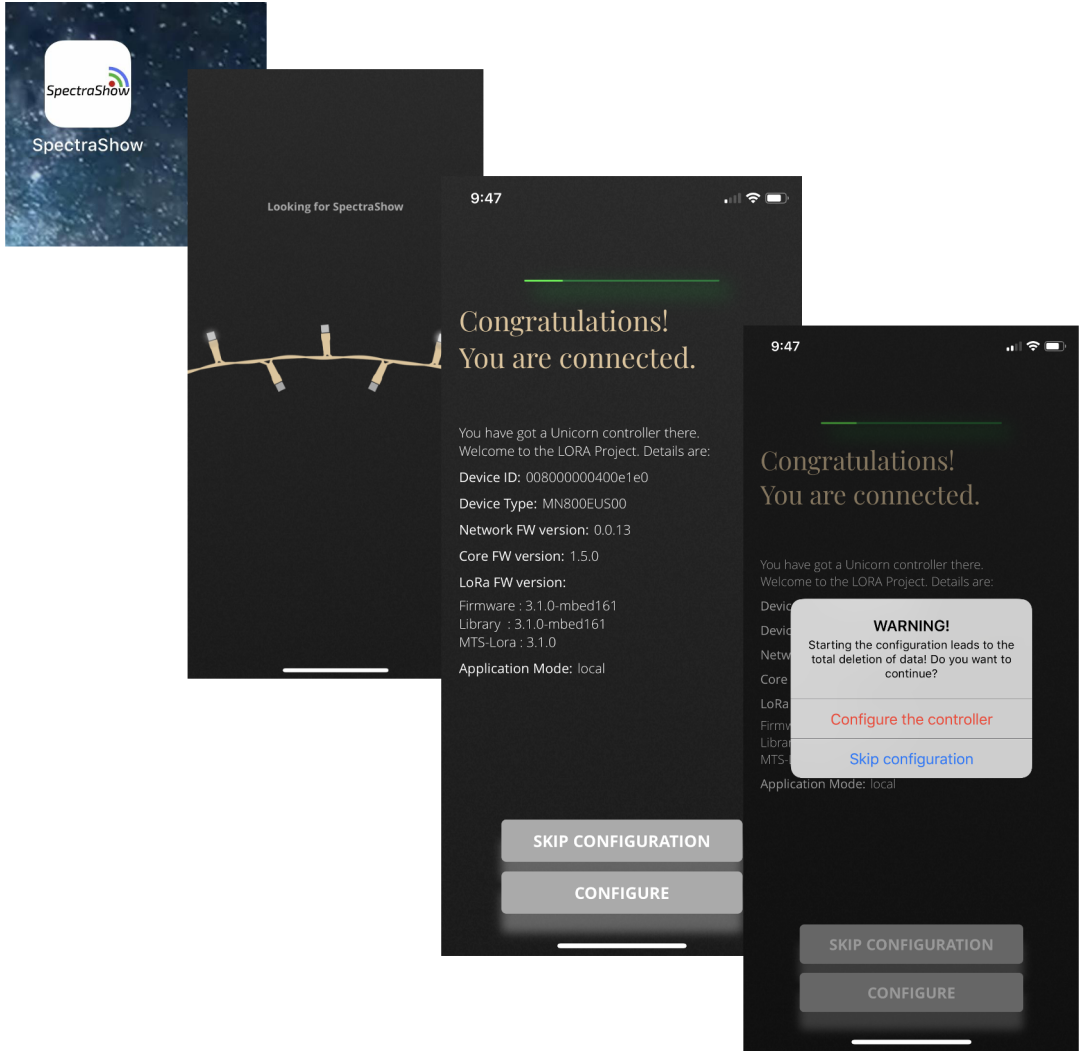
The process of bringing a controller online is done via a WiFi connection using an iOS device.

- Download *SpectraShow* from the App Store.
- Create an account, or use the account you created in the Cloud (p 3).
- Restart the app
- Look for an available WiFi Network name TWINKLY_____ that has a lock beside it.
- Connect using the password “Installer” with a capital “i”.



Controller Installation

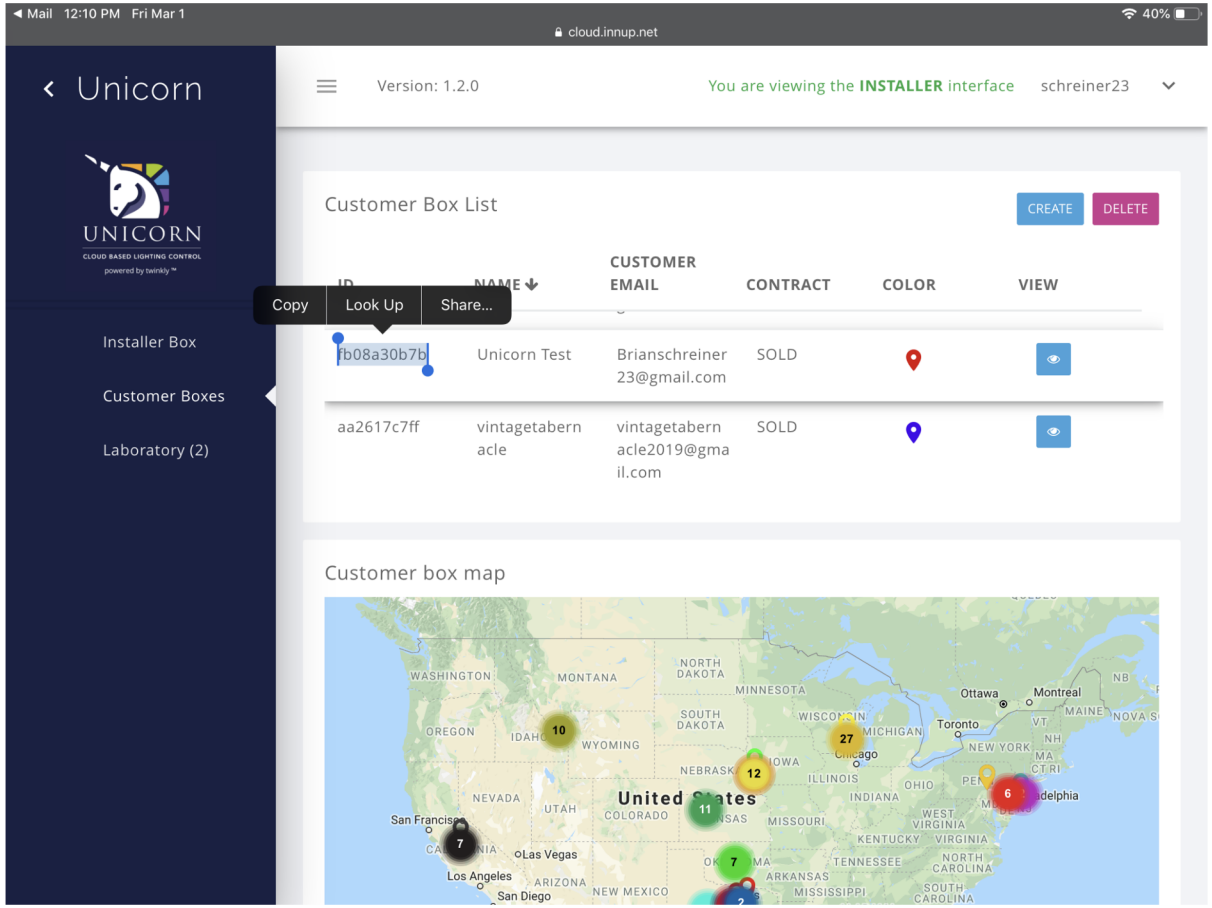
- Open *SpectraShow* and wait for the app to connect to the controller.
- If prompted to do an update, do it… they are needed to function properly.
- Click CONFIGURE
- Click CONFIGURE THE CONTROLLER



Controller Installation

Have your CUSTOMER BOX ID ready to Copy/Paste into a notepad on your phone, or written down exactly as it appears.

Remember this ID is the location where the CLOUD assigns the field controller its home. If this is not done correctly, you will be asked to reinstall the controllers.



Configuring your Controllers

APPLICATION MODE - select LORAWAN

CUSTOMER BOX ID - Copy & paste, or type the ID you created for this project

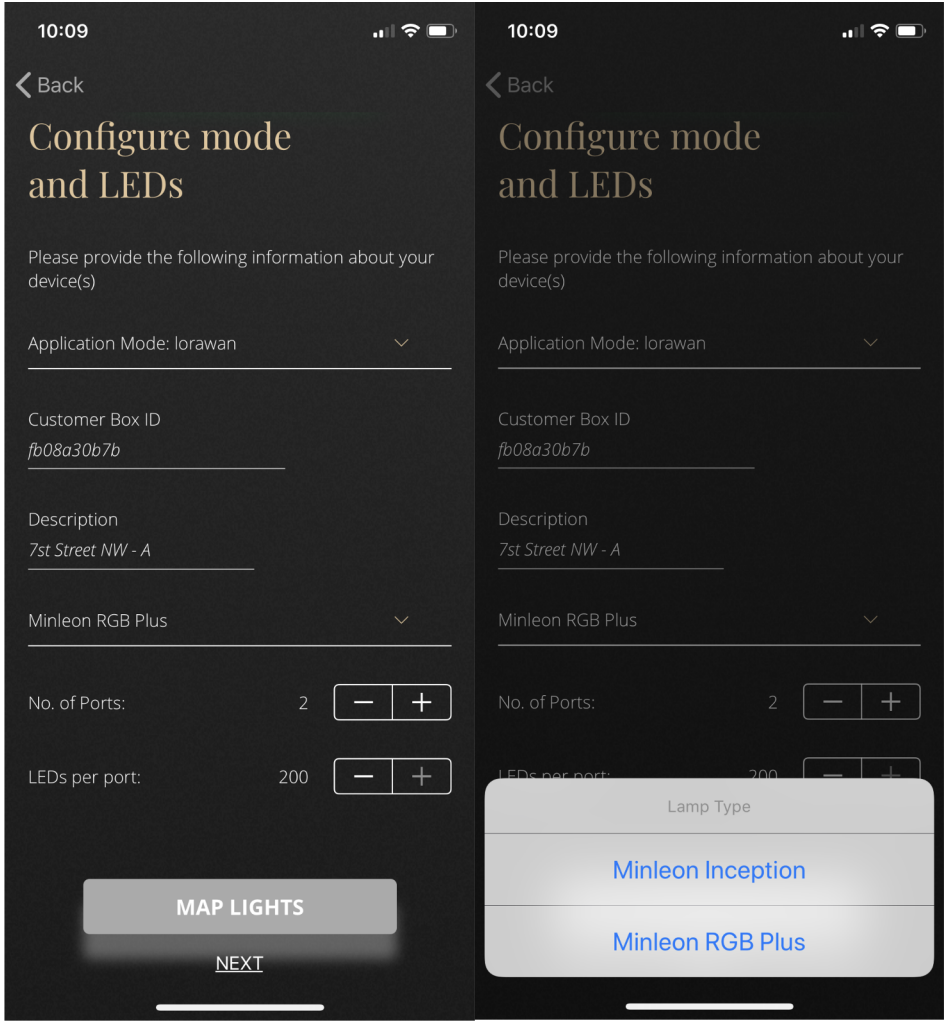
DESCRIPTION- Type the location, or name of the controller

LED TYPE - Select the LED type

NO of PORTS - Select how many ports you are using

LED per PORT - Select how many LEDS(up to 200 per)

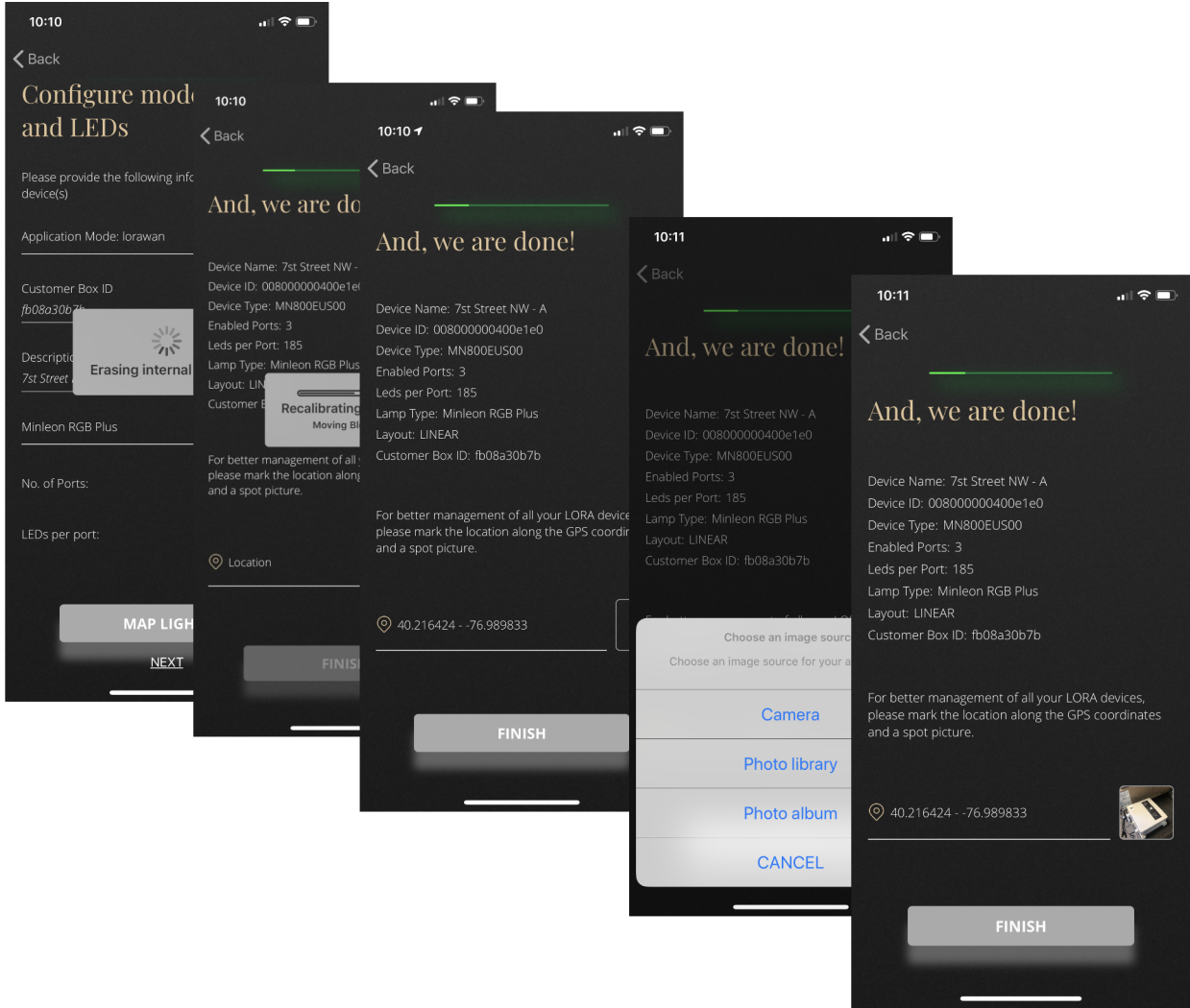
CLICK - **NEXT**



Configuring your Controllers

Once you click next the APP will delete all existing information on the field controller.

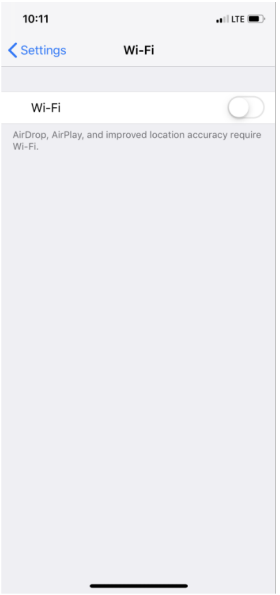
- Notice a summary of your configuration.
- Click the LOCATION link. The App will use your iPhone's GPS & drop a PIN for the Cloud to record where it has been installed.
- Click the CAMERA at the bottom right and take a photo of where the controller is installed (NOT A CLOSE UP)
- Click FINISH

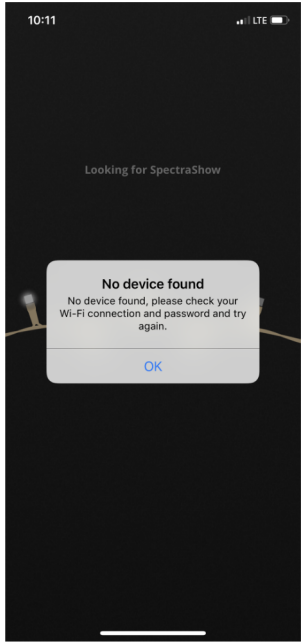


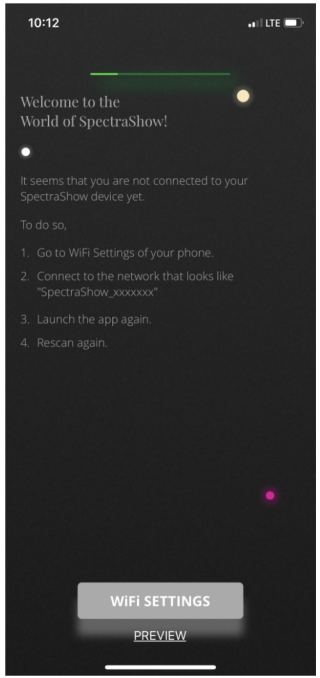
Uploading your Controllers to the Cloud

Now that you have configured the Controller you have to upload the profile to the Cloud. This is done using your **Cellular data**, or WiFi that has **Internet**.

- CLOSE THE APP
- *DISCONNECT from the controller's network*
- *CONNECT to the Internet or cellular data plan*
- REOPEN THE APP
- You will get an error that says it can't connect, CLICK OK, then click PREVIEW at the very bottom.

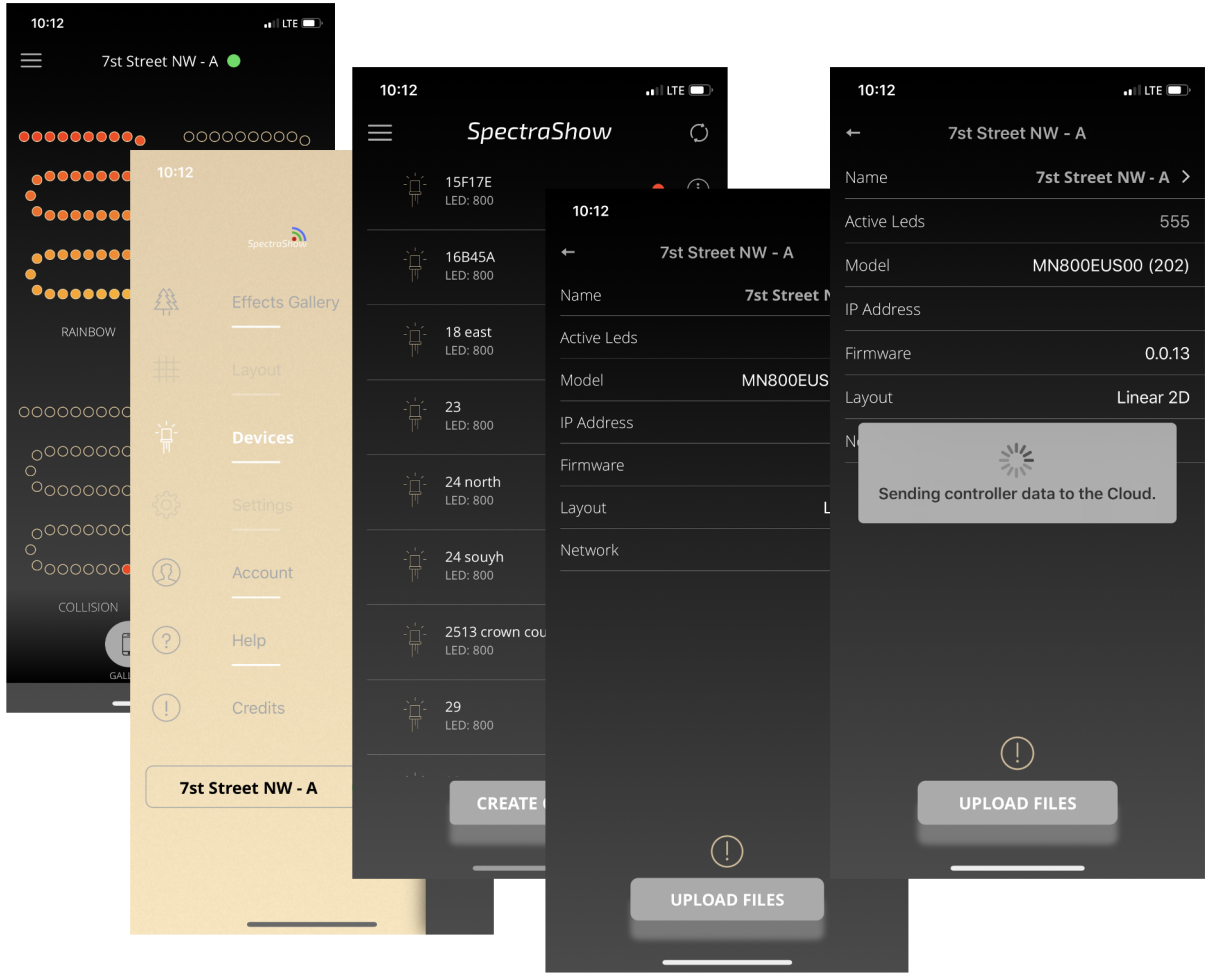






Uploading your Controllers to the Cloud

- In the upper Left Hand Corner hit the 3 horizontal Lines
- Select DEVICES
- FIND THE CONTROLLER YOU CONFIGURED
- Select the “i” button
- At the bottom you will see UPLOAD FILES with an “!”
- Click UPLOAD FILES
- The “!” Will change to a ☑ check mark once uploaded
- This should take about 10-20 seconds



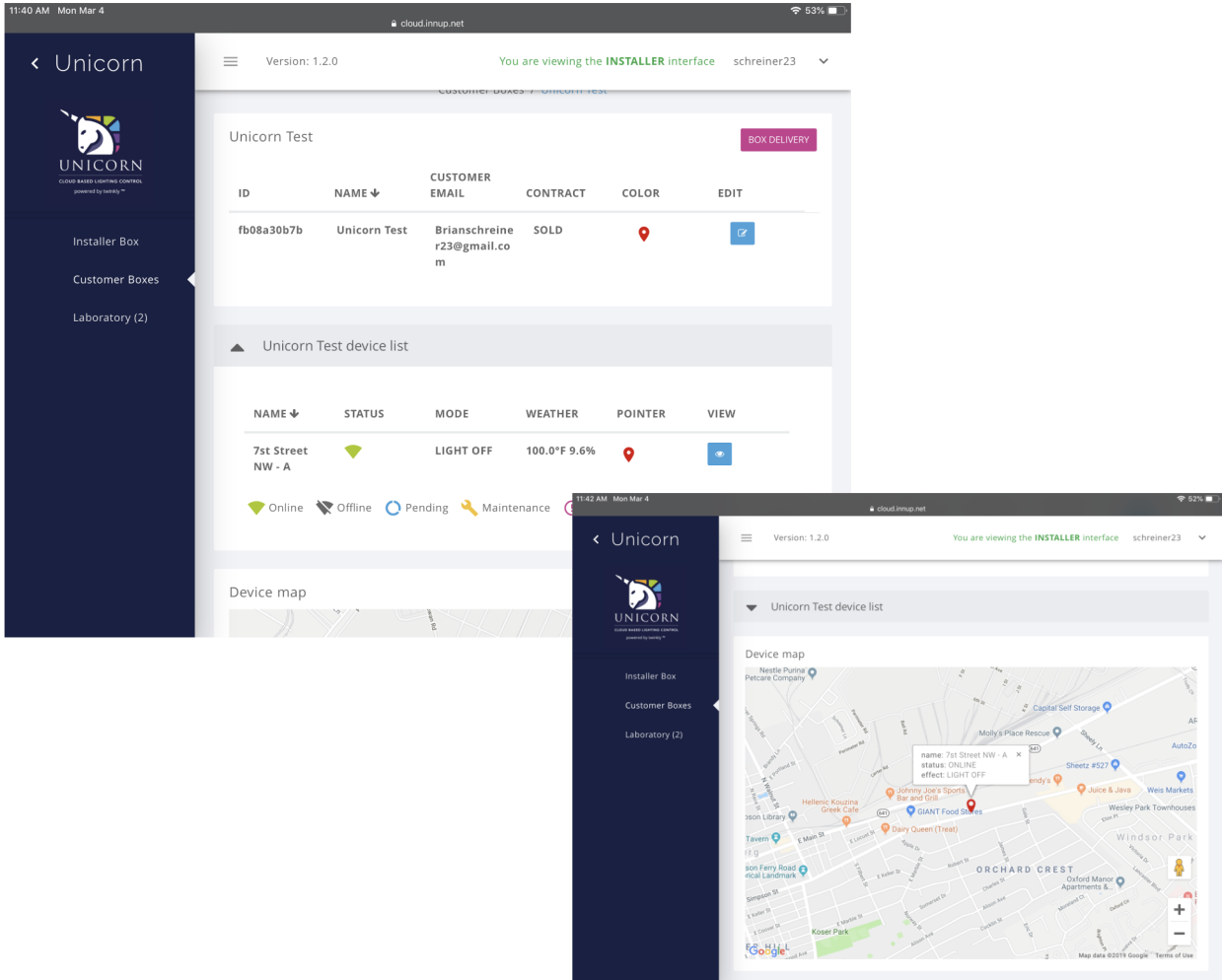
Confirmation Of Uploaded Controllers

Once you hit UPLOAD PROFILE and the Check Mark appears you will now be able to see the Controller in your Customer Box List under the Customer's Project ID.

Notice that the Controller is listed as ONLINE in the STATUS area and currently the Lights are OFF.

You will also see the TEMP and HUMIDITY of the controller

You can also see the LOCATION in visual form on the MAP. This was done when you hit LOCATION in the app.

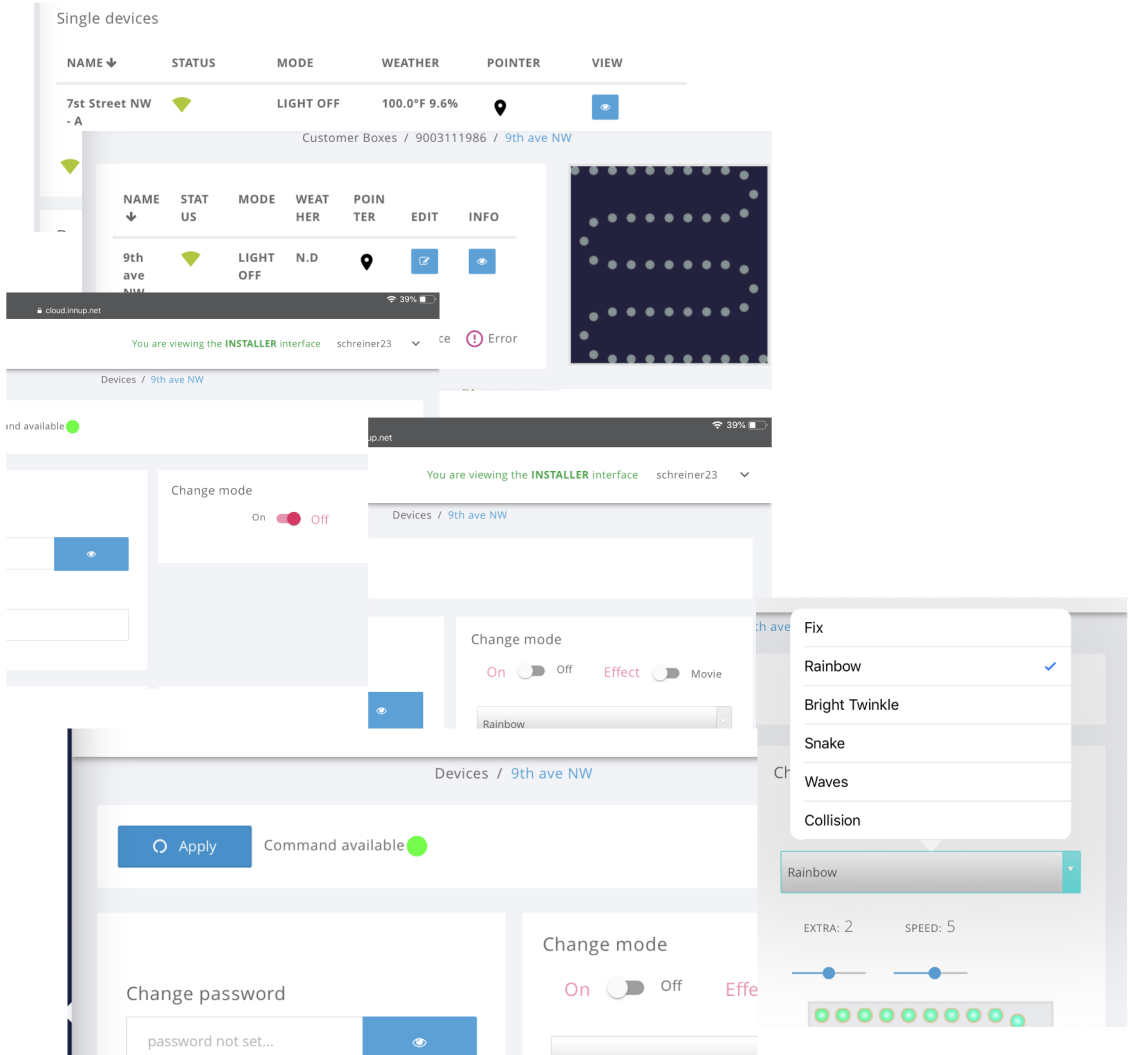


Check Functions

Verify everything is working. If you are doing a LARGE installation with many controllers, the preferred method is turning on each building as you go. This will give your installers a visual representation of what is completed. This also allows you to double check lights and communication

- Select a controller/device - Click VIEW, then click EDIT.
- **Change Mode=LED Mode**
- TOGGLE the ON/OFF switch to ON, then Select an effect.
- **Fix=Static effect**
- Press APPLY—If you don't hit APPLY and wait, a command is not sent

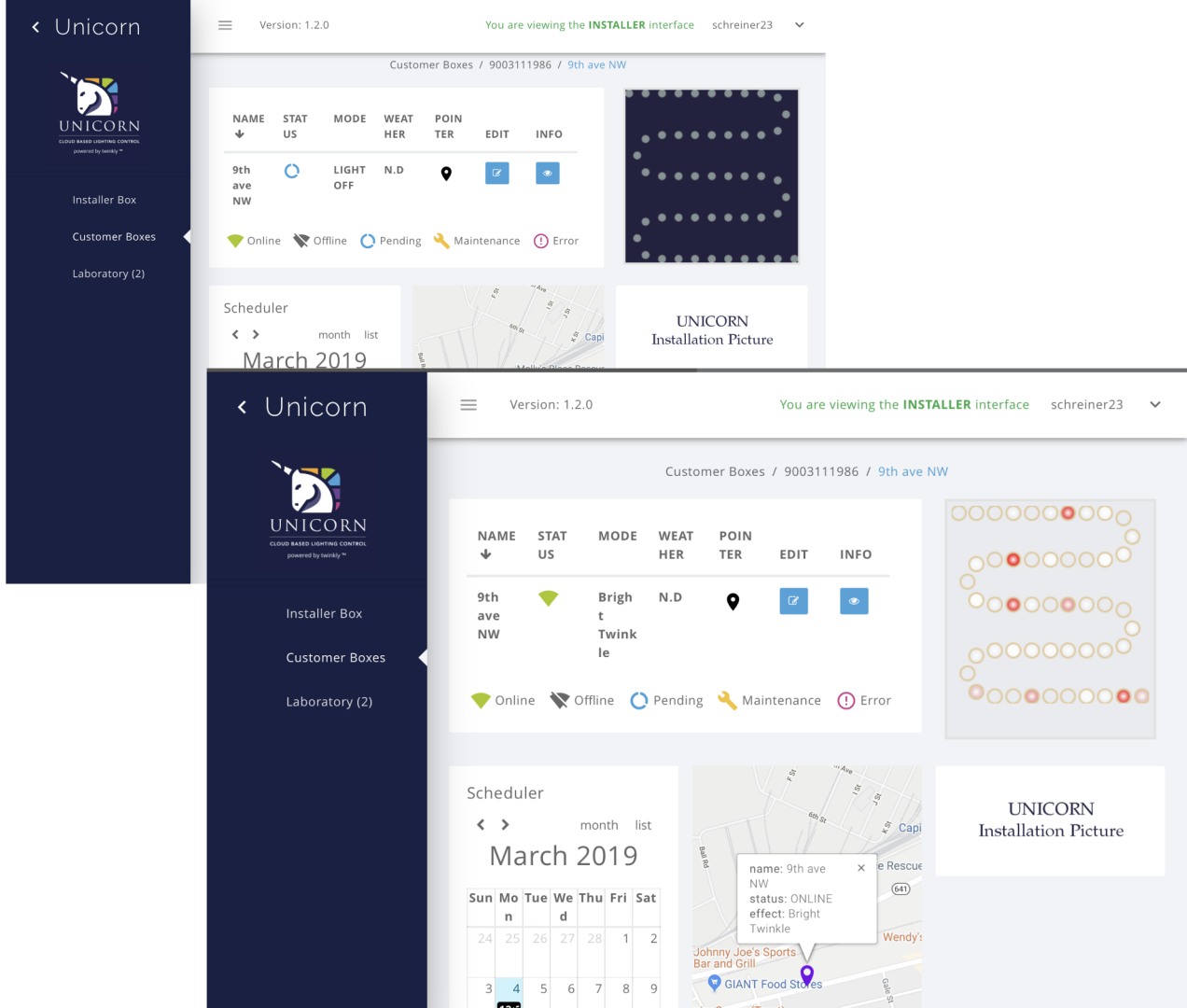
You will see the status change from ONLINE to PENDING as the command is being sent to the controller and the controller reports back to the Cloud that it received the command.



Check Functions

You will see the status go from PENDING to ONLINE once the system is satisfied everything is communicating properly. If there is a communication error the system will indicate it in the STATUS field.

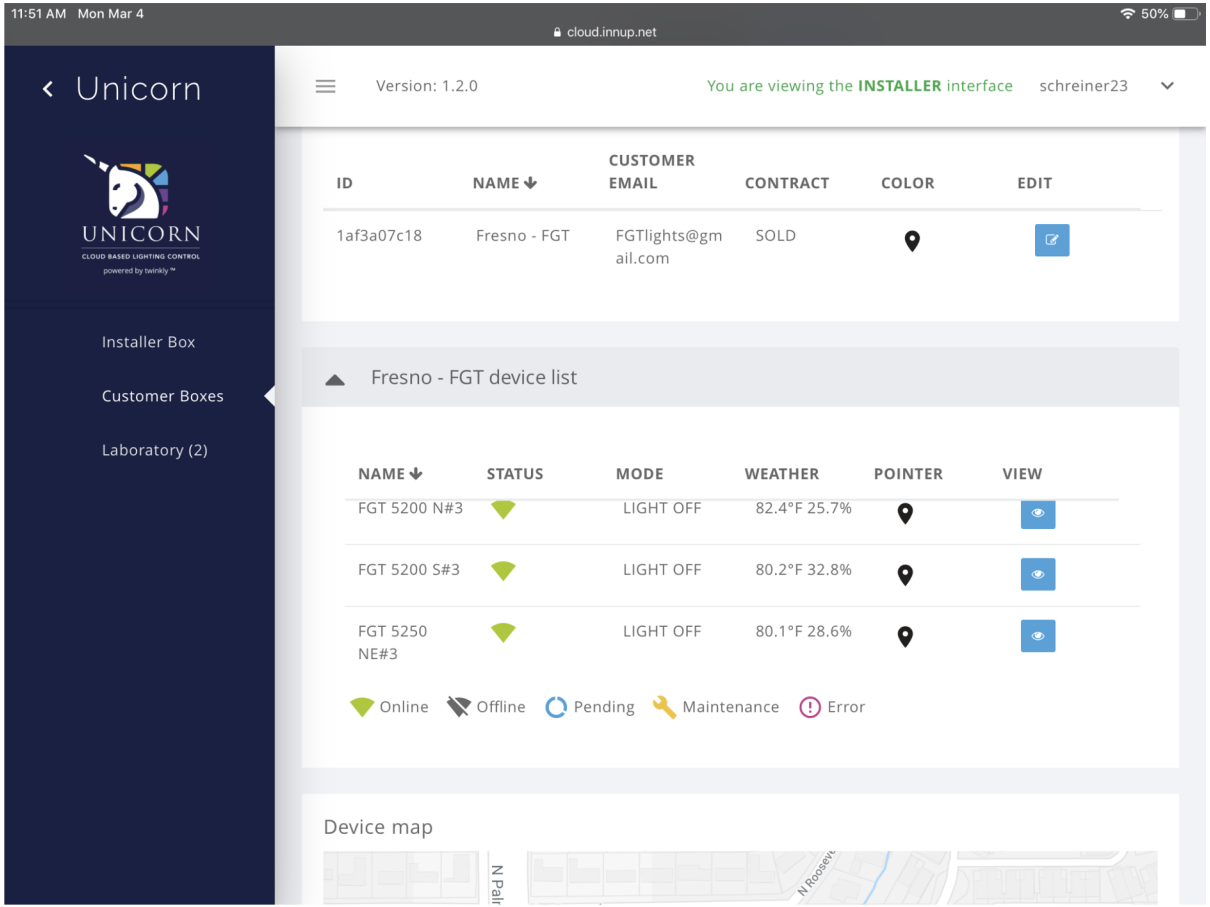
A preview window gives you a quick view of what is currently playing or not playing. Notice the box on the RIGHT, has changed from a BLANK off effect preview, to the effect that we now have playing on the lights.



Finishing your Installation

The process for adding additional controllers for the installation is nearly identical. Simply repeat the process changing only the ***Description***, which is the name of the controller in the Cloud. Using street names or business names works well and allows for efficient troubleshooting later.

<u>Make a Note</u>: Does the Status say ONLINE or OFFLINE? Are there Temp Readings? This confirms the controller is communicating with the Gateway and in turn communicating with the Cloud.

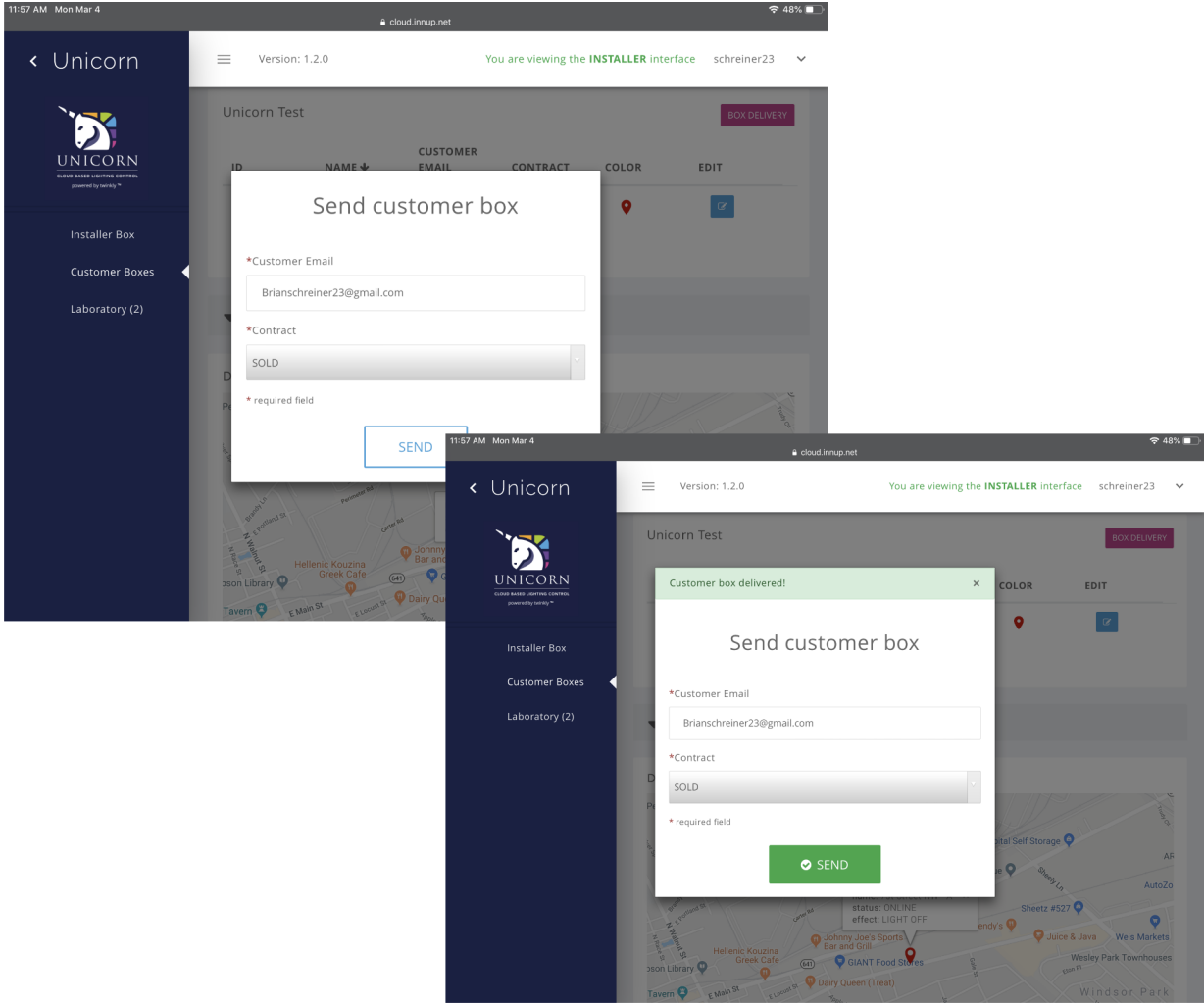


Install Complete - Now Deliver to customer

Once installation is complete, we need to VIRTUALLY deliver your BOX of field controllers (devices) to the customer…

Moving the responsibility for LED control from the Installer's Cloud account to the Customer's Cloud account. This will go to the account linked to customer email address you provided before generating a "Customer Box ID" on page 12:

- Click on the CUSTOMER BOX you installed
- Click on BOX DELIVERY in the upper RIGHT
- Verify Customer Email (they need to setup a CLOUD ACCOUNT)
- Click DELIVER BOX

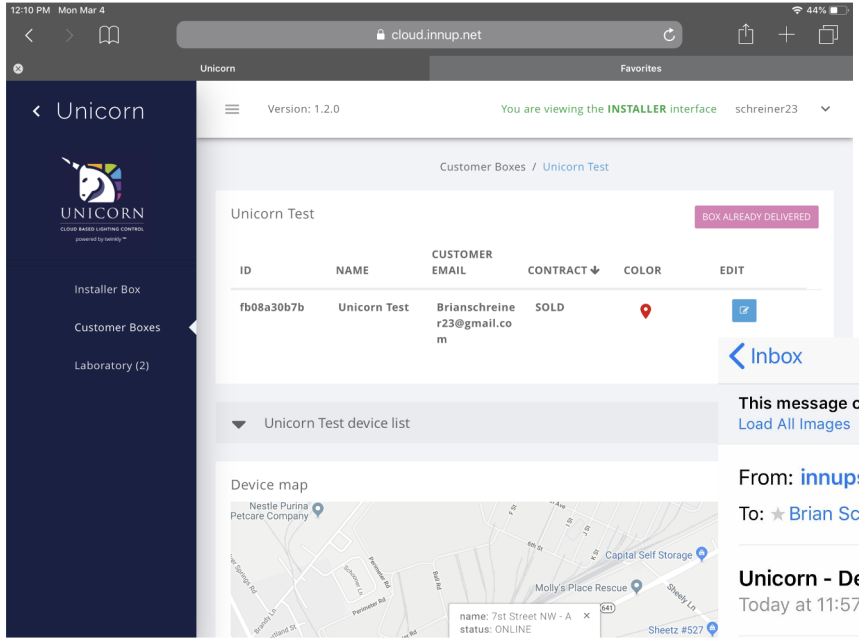


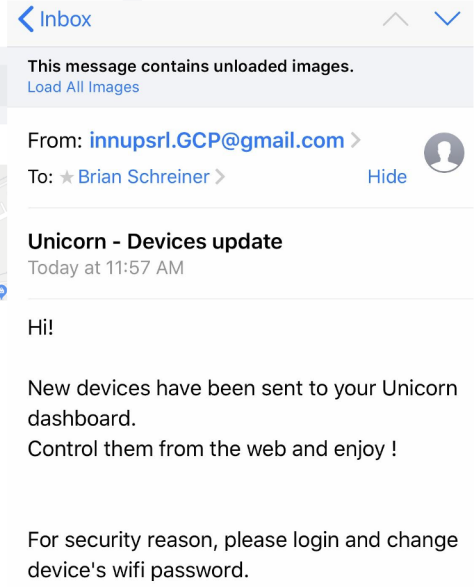
VERIFY DELIVERY

At this point the status of this CUSTOMER BOX has been changed to BOX ALREADY DELIVERED, meaning now the customer has control of their lights. The INSTALLER can view what is going on, but for customer security and liability we shift the control to the customer.

Your customer will receive an email letting them know that a new UNICORN(s) has been sent to their dashboard.

They can now control their lights as they wish.





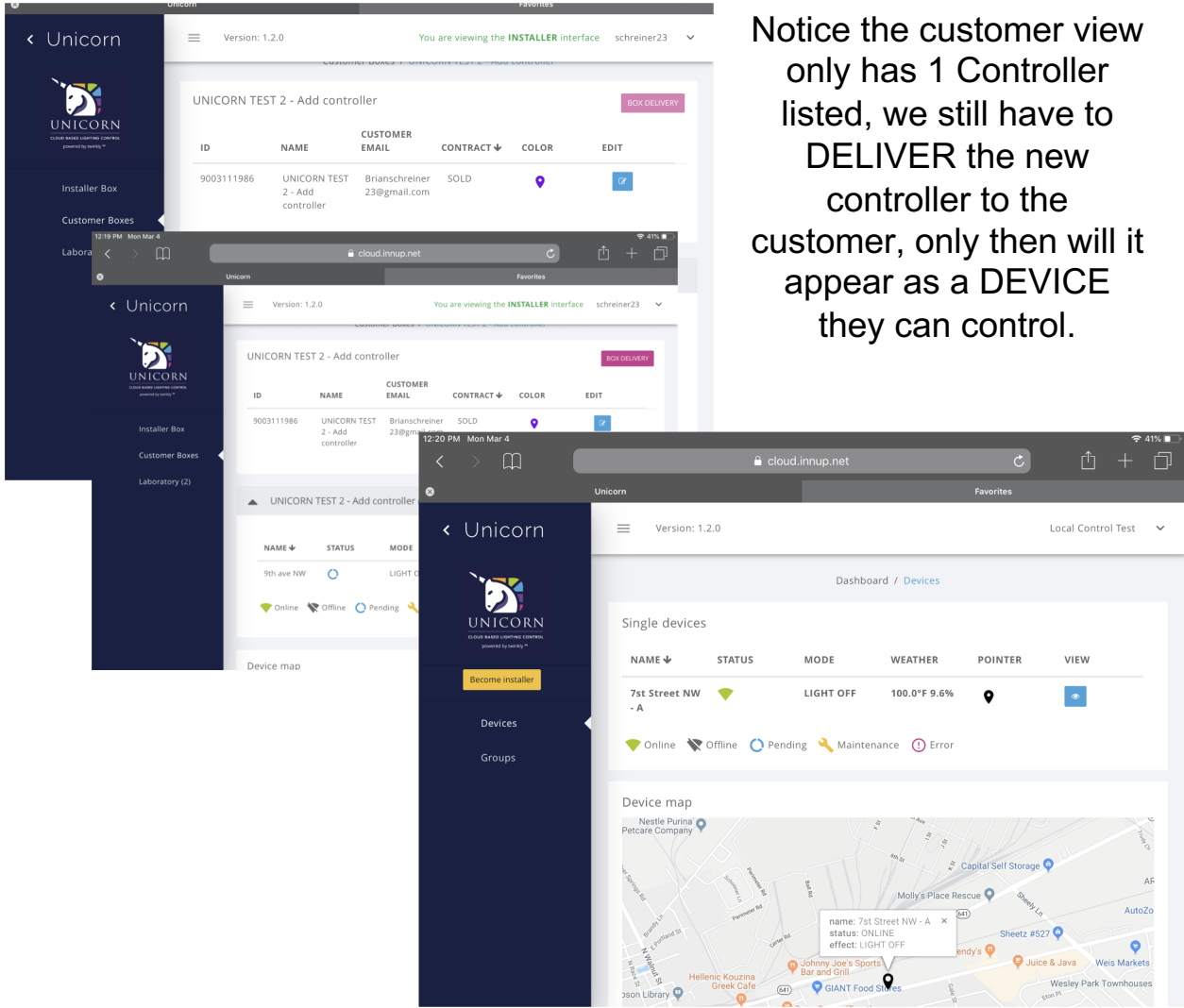
Adding Controllers to a Customer

Many times customers install things in phases. We need to be able to add or replace controllers if one goes bad. The process is easy.

Create a NEW CUSTOMER BOX ID and repeat the steps from the installation process using the NEW ID.

Deliver the NEW CONTROLLER virtually to the customer. They see no difference, just an additional Controller appears in their account.

<u>Note</u>: Do NOT use a previously delivered ID. You will have to repeat the install with a new Box ID. This is necessary to avoid issues with multiple controllers in multiple areas.

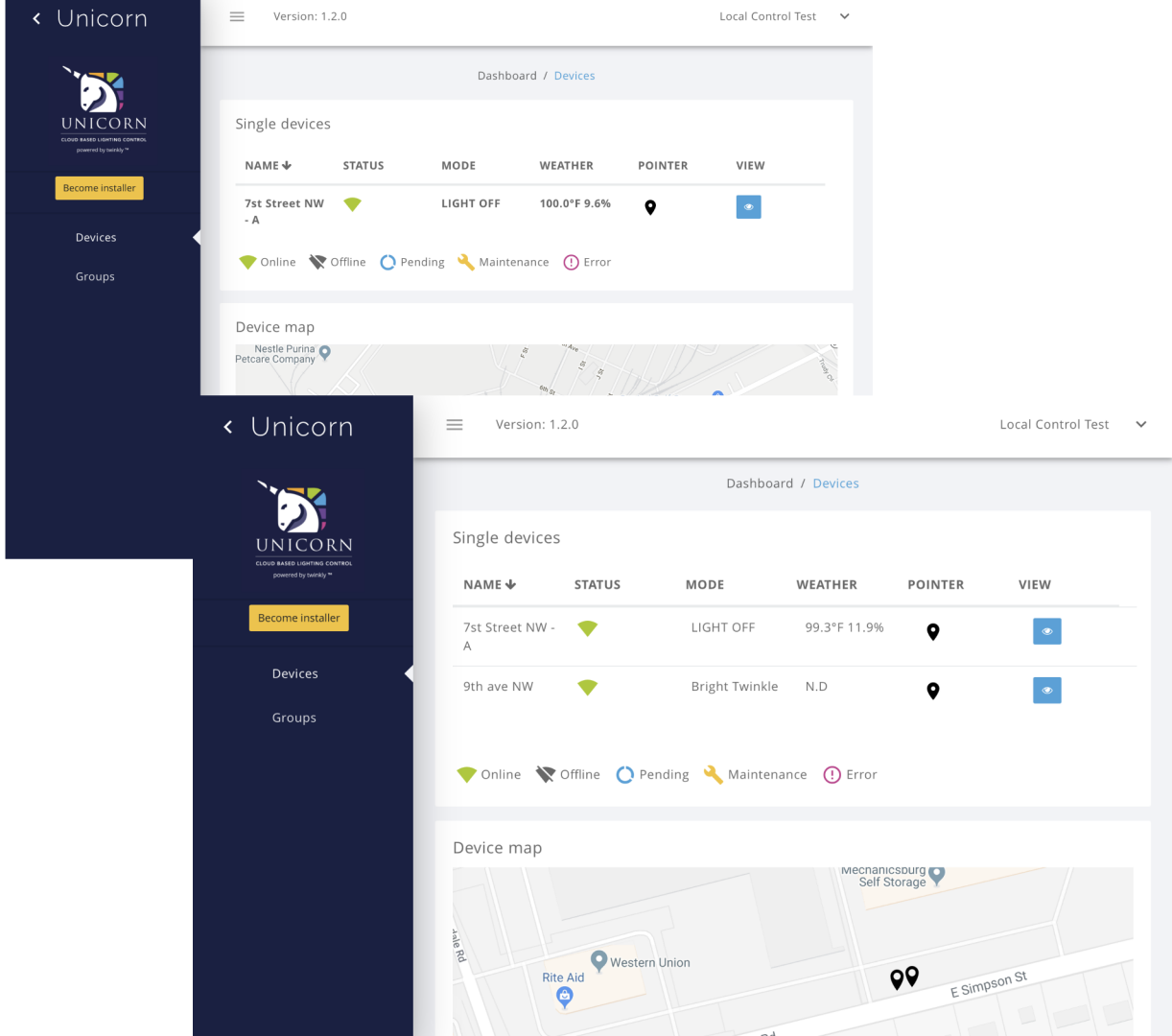


Notice the customer view only has 1 Controller listed, we still have to DELIVER the new controller to the customer, only then will it appear as a DEVICE they can control.

Delivering New Controllers

Repeat the process of delivering the CUSTOMER BOX.

Send the new Controller(s) to the customer. Say you sold a job with 1 controller, delivered it and your client has been using it for a month. They only see 1 controller in their Customer Account. Now, you want to add a new controller to their account. Deliver the box and it will now appear in their Dashboard as an additional Device.

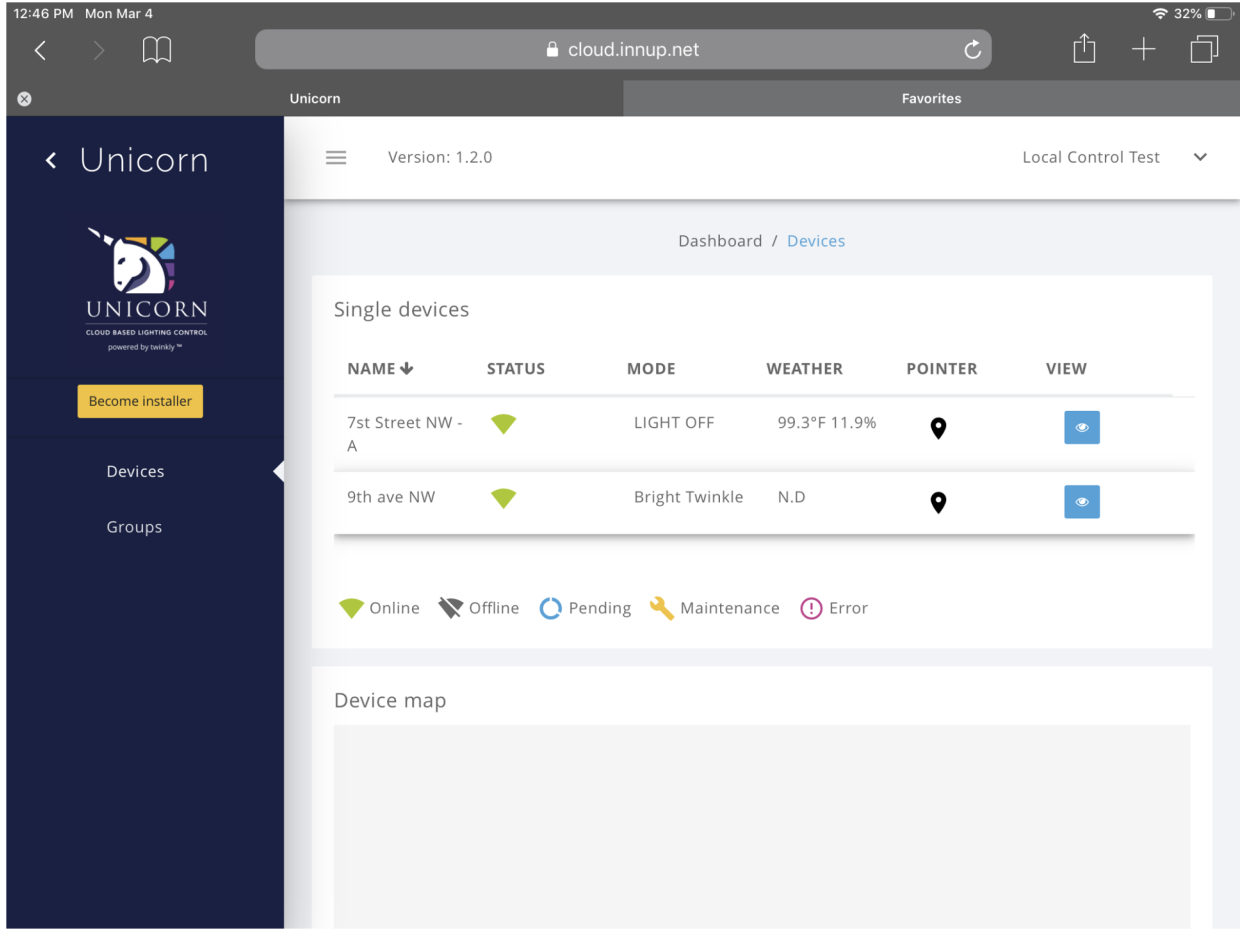


Customer View

DEVICES - This is a list of **Unicorn Filed Controllers** available for control. They are available to set a schedule, run an effect, change colors, switch OFF, rename, check Temps and Humidity, but only individually.

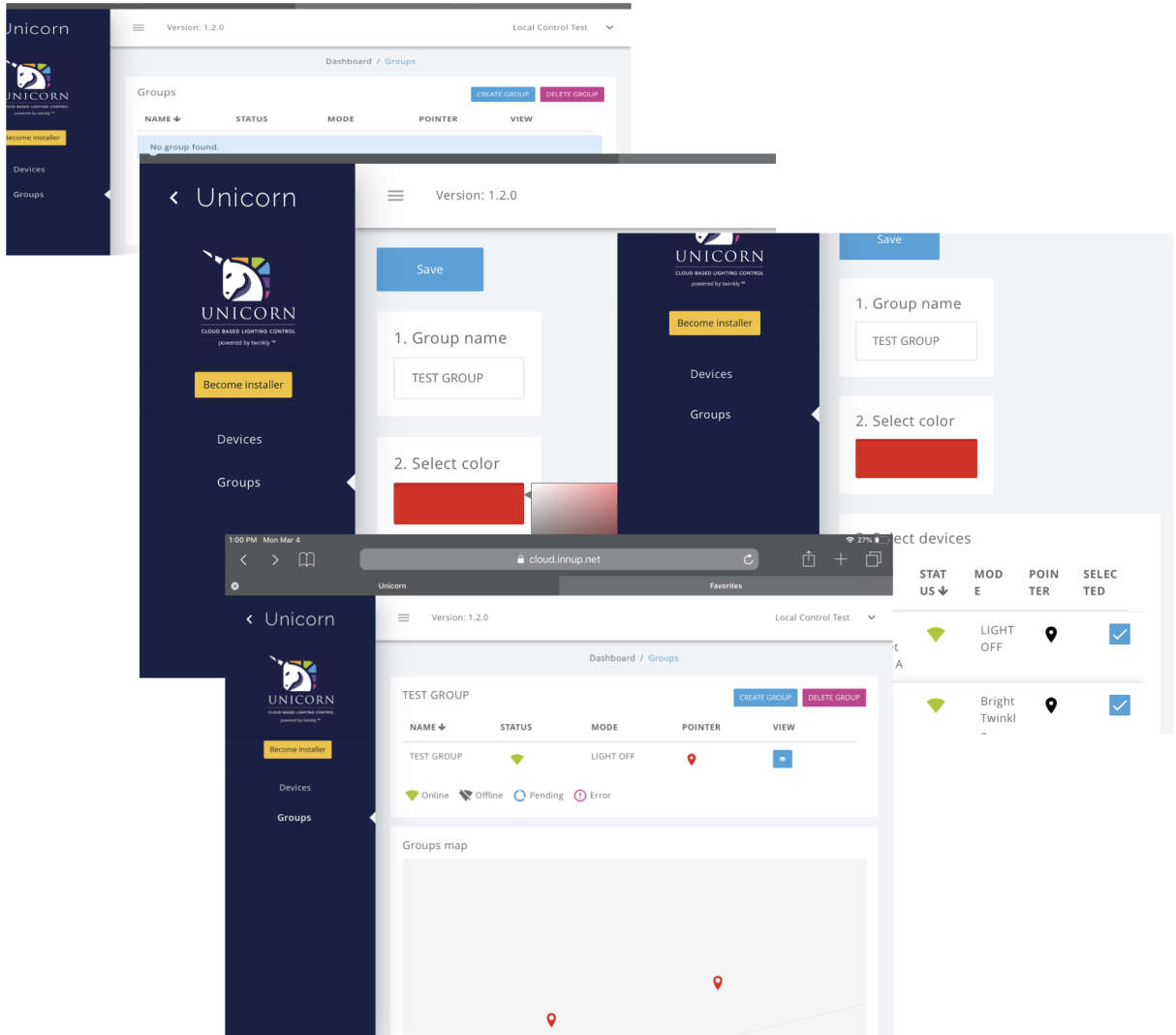
GROUPS - this is a place to create a GROUP of individual devices/field controllers. A device/field controller can not occupy multiple groups.

Groups can be edited or undone. Changes here do not have to be permanent. Group or ungroup as you experiment with your display.



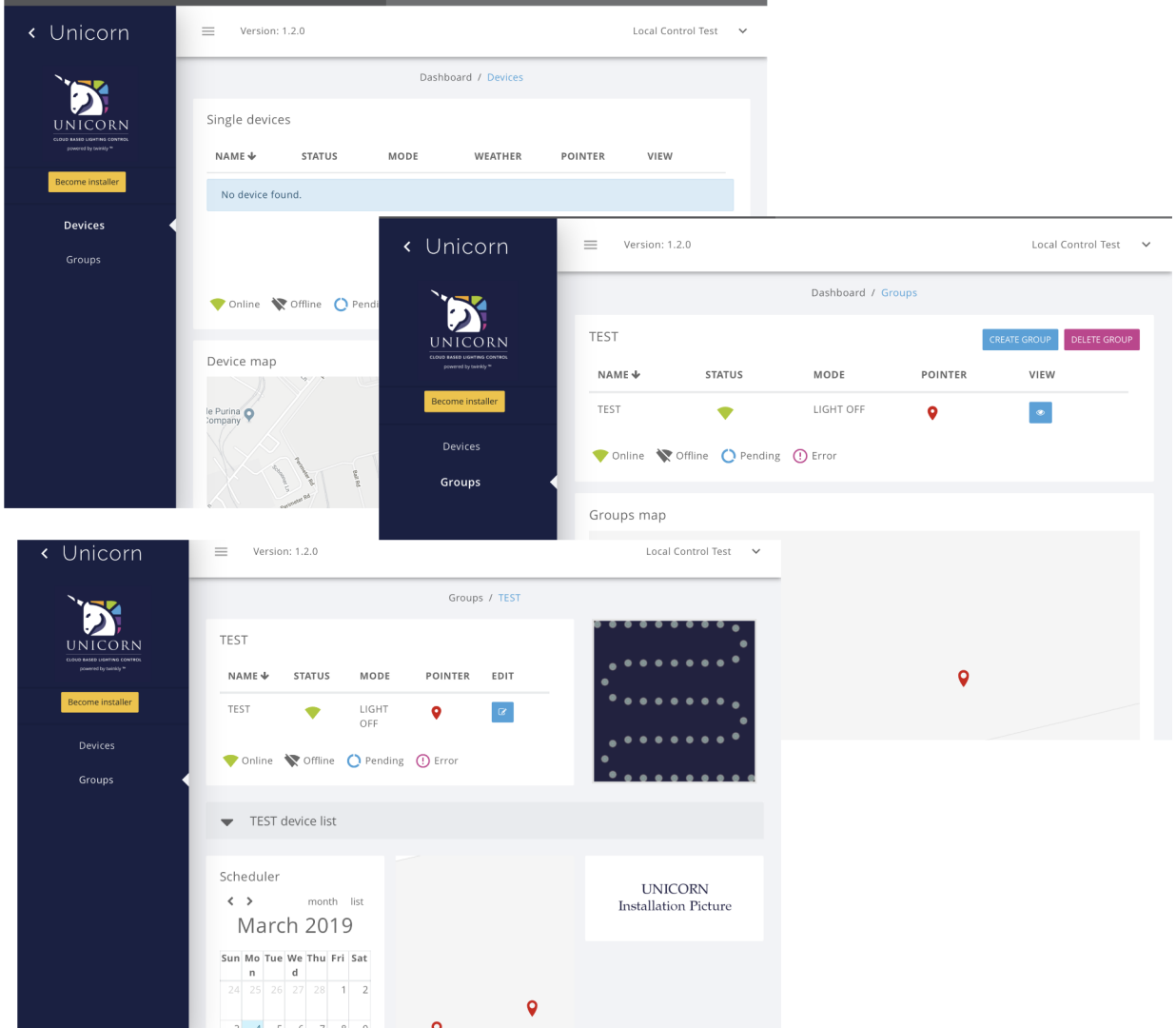
Creating a GROUP

- Select GROUPS
- Select CREATE GROUP
- NAME THE GROUP
- Select a POINT COLOR
- Select each Controller in the GROUP
- CLICK SAVE



Groups

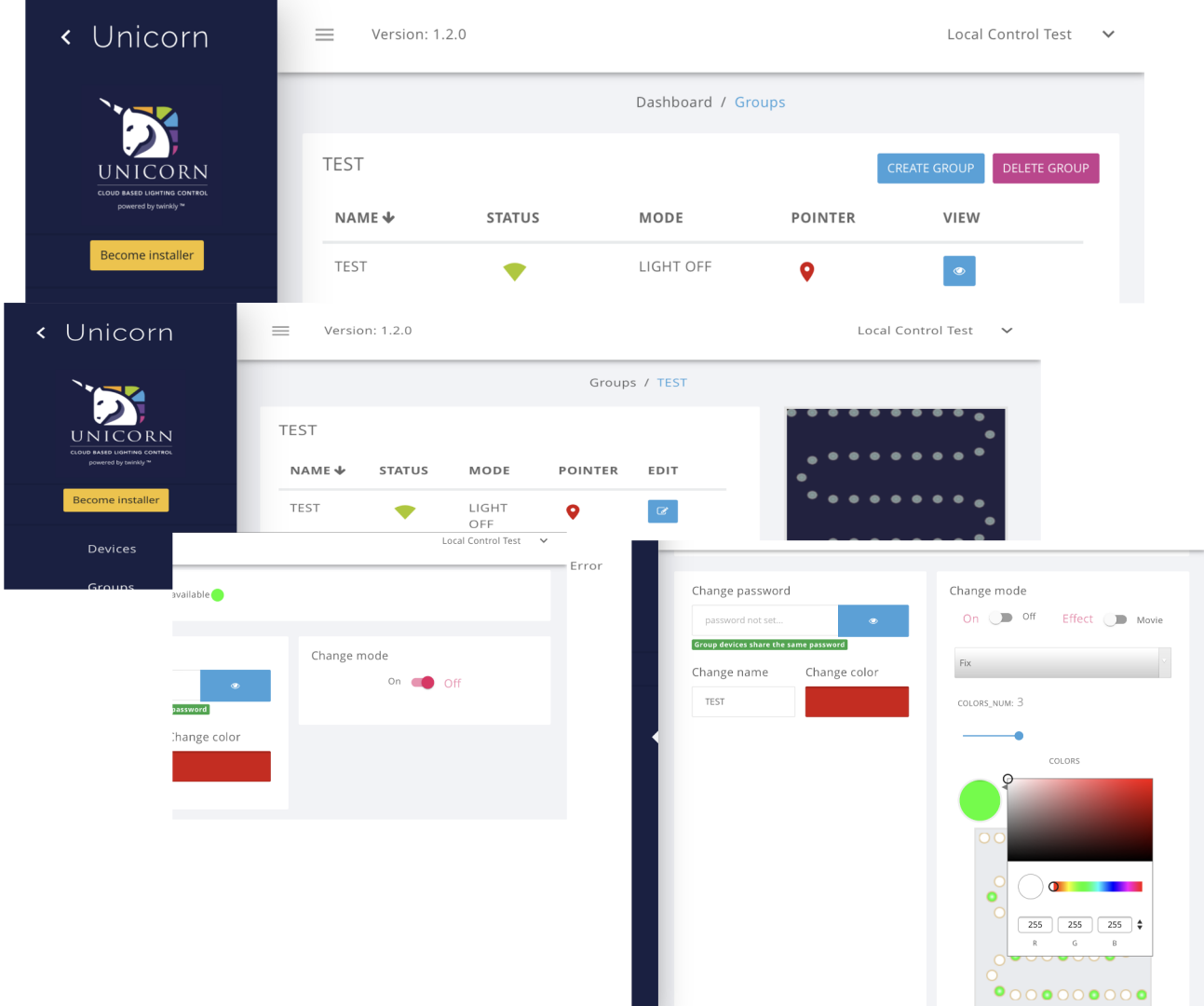
Now that you have placed the controllers in a GROUP, they will no longer appear in DEVICES, since they are now occupying a GROUP. They cannot be in both. They are either a single device or in a group.



Controlling your Group

Now that you created a group, to control them as one use the same process for single devices:

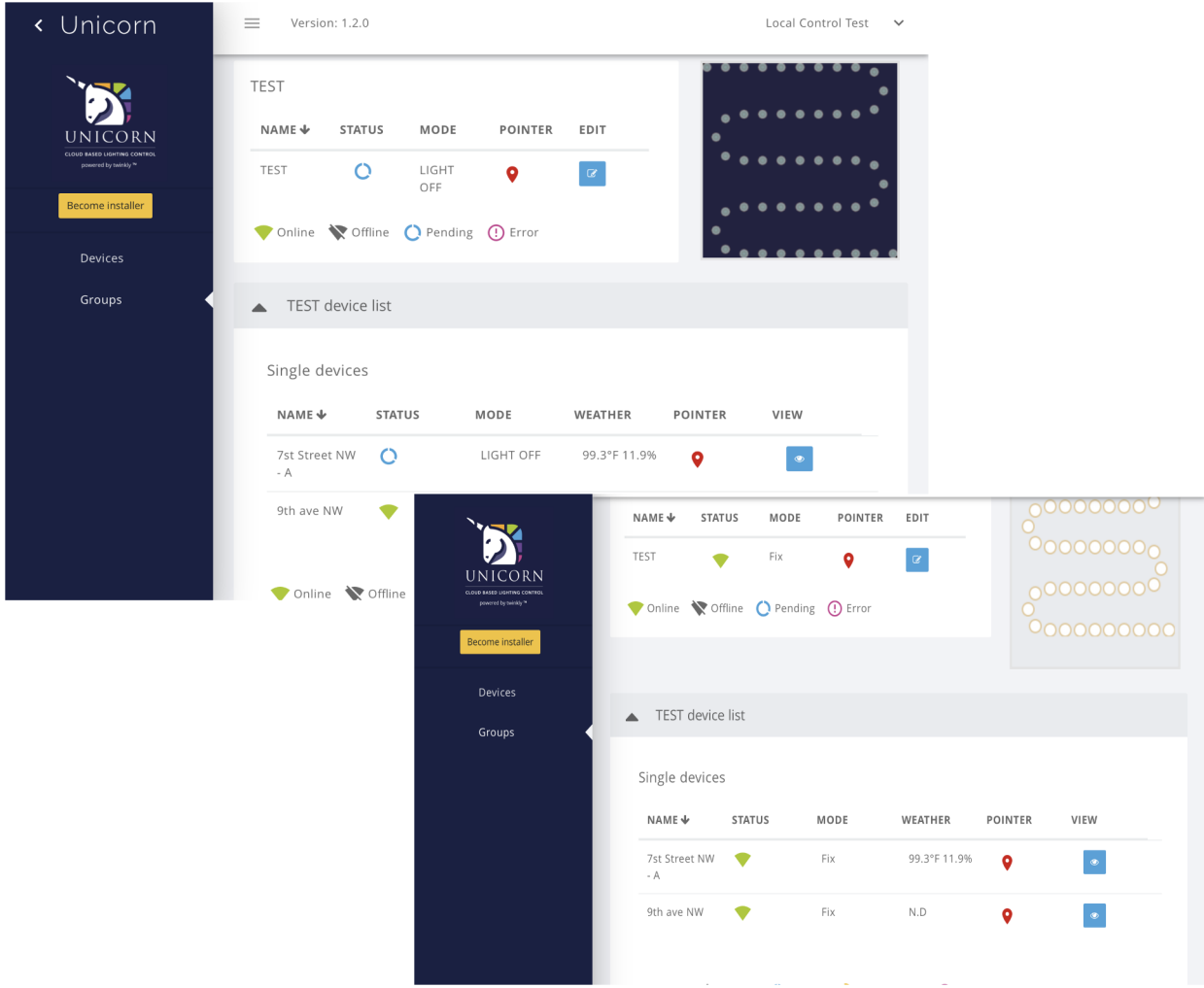
- Select your GROUP and hit VIEW
- Click EDIT
- Toggle the ON/OFF switch to ON
- Select the EFFECT, COLOR, and SPEED, you desire
- Click APPLY
- Status will go from PENDING to ONLINE once all devices receive the command



Controlling Lights

The Cloud system is a redundant system meaning the command to a group will be sent over and over again until every controller in the group receives the information. Once every controller reports back that all is ok and received, only then will the status appear as ONLINE for the entire group.

Once in a group you can click VIEW to see all controllers in the group and the status of each as well. This is a TOP DOWN view of the GROUP and everything in it.

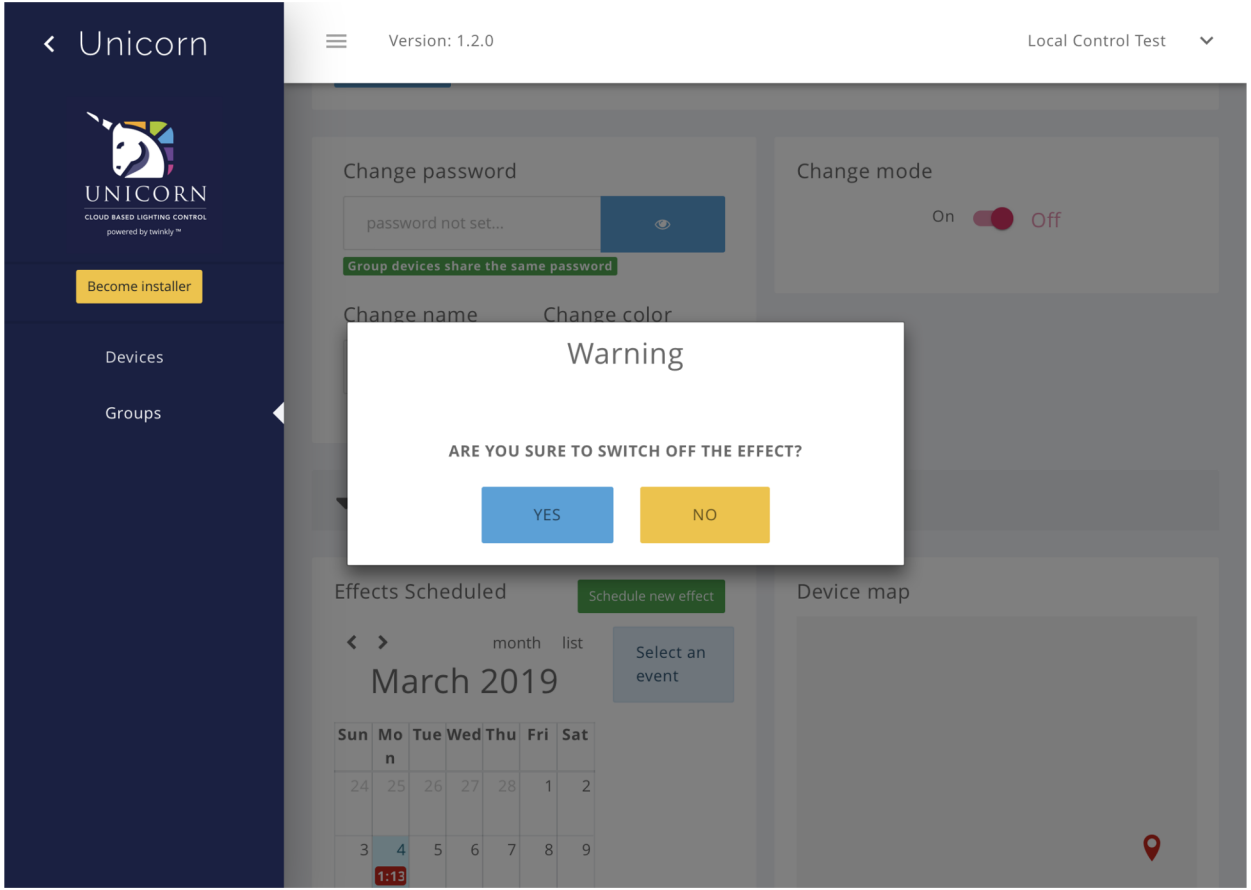


Turning off the lights

This system functions under a Command for everything scenario. So an OFF command is just like an effect. So we must tell the controller to TURN OFF the lights, which actually CUTS POWER to the ports.

This is a great feature as it increases the life of the pixels. By having no power running to the lights, your “burning hours” are decreased.

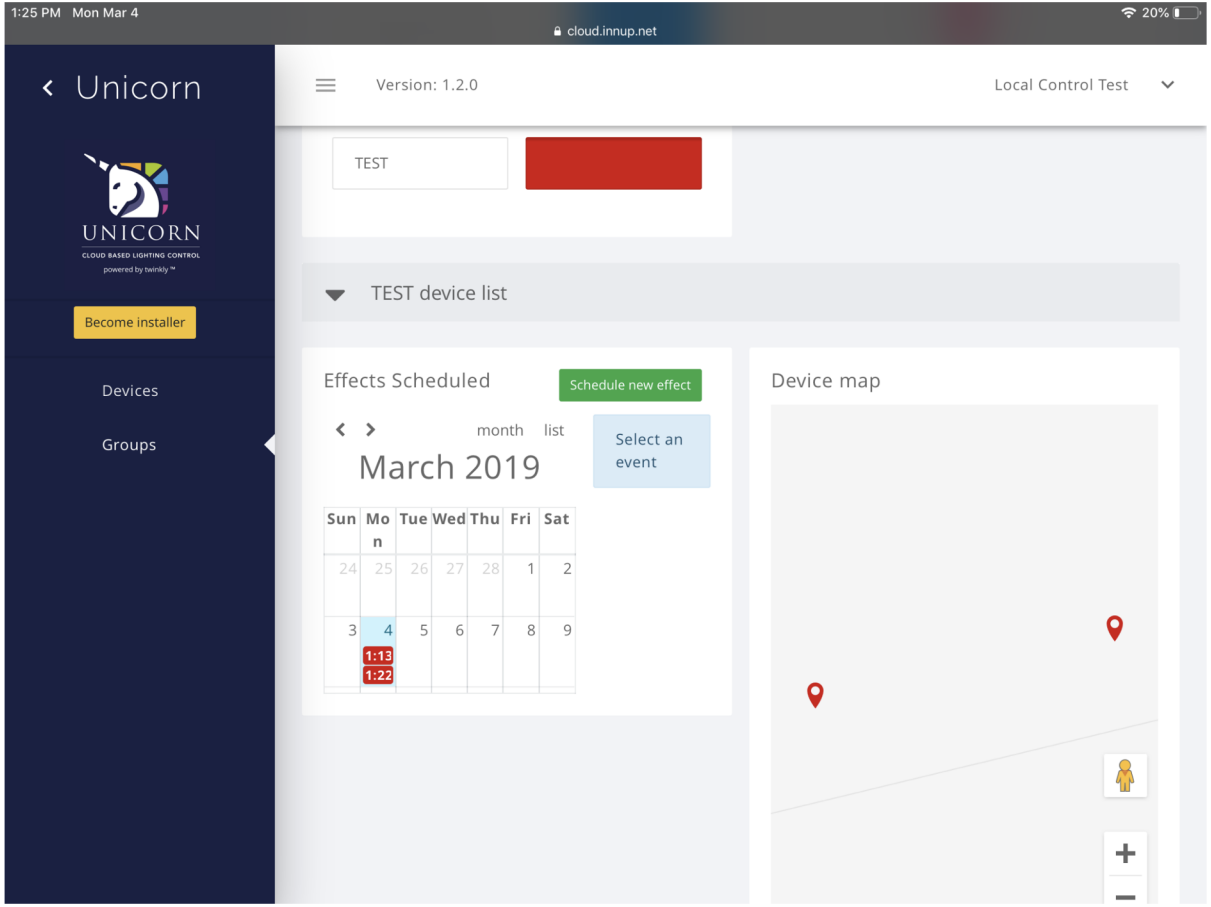
To turn OFF the lights simply follow the previous steps but this time toggle the switch to OFF and then CLICK YES and wait.



Scheduling Effects

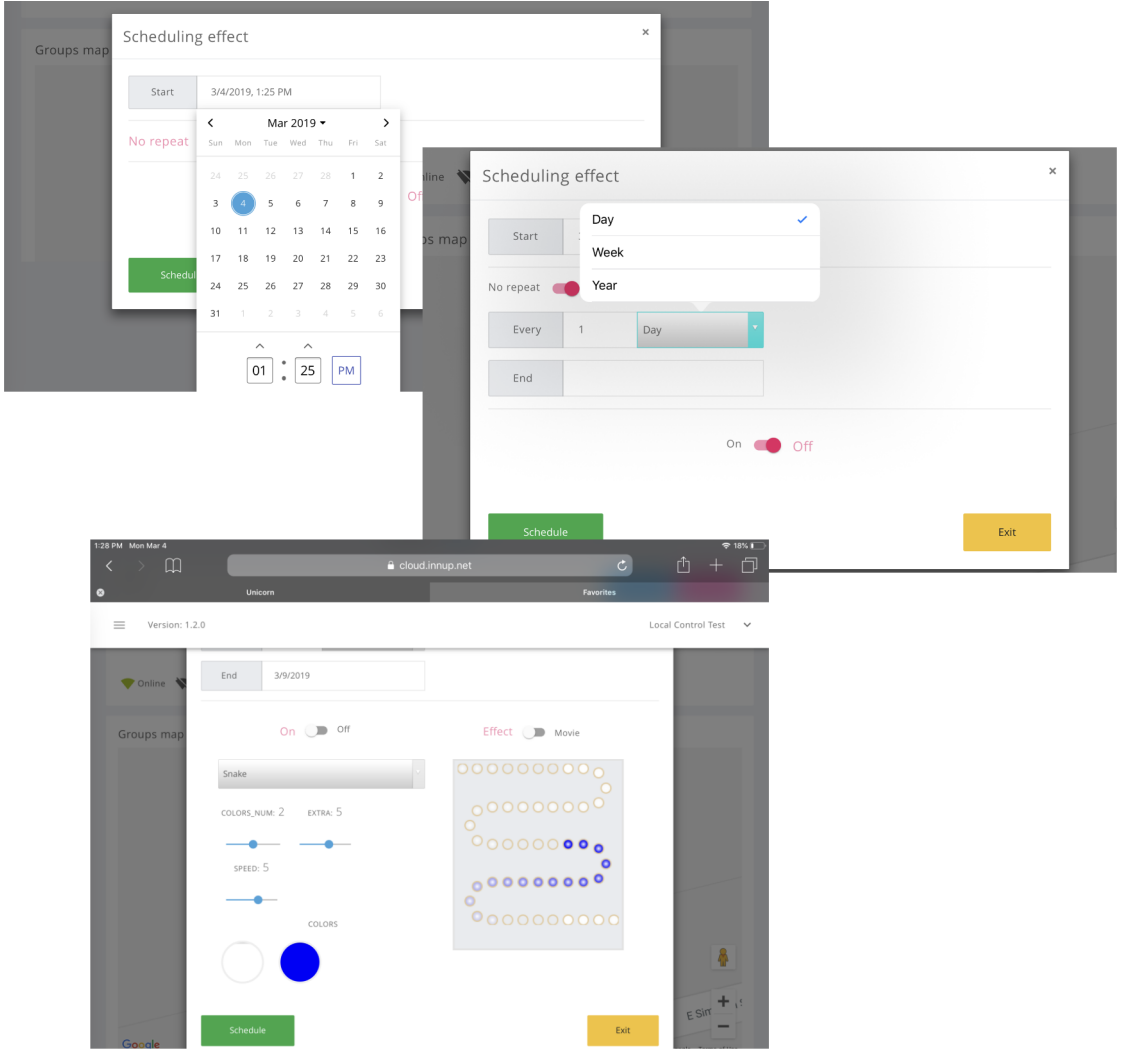
There is a full scheduling feature available. You can schedule as a group or single devices but it depends on your setup. To Schedule an event:

- Click VIEW
- Hit EDIT
- Scroll down to SCHEDULE NEW EFFECT



Scheduling

- Select your START date and time
- Select if you want it to REPEAT, Daily, weekly, monthly, yearly… and an END DATE of the repeated Effect.
- Toggle to ON and select the effect you want.
- Click SCHEDULE

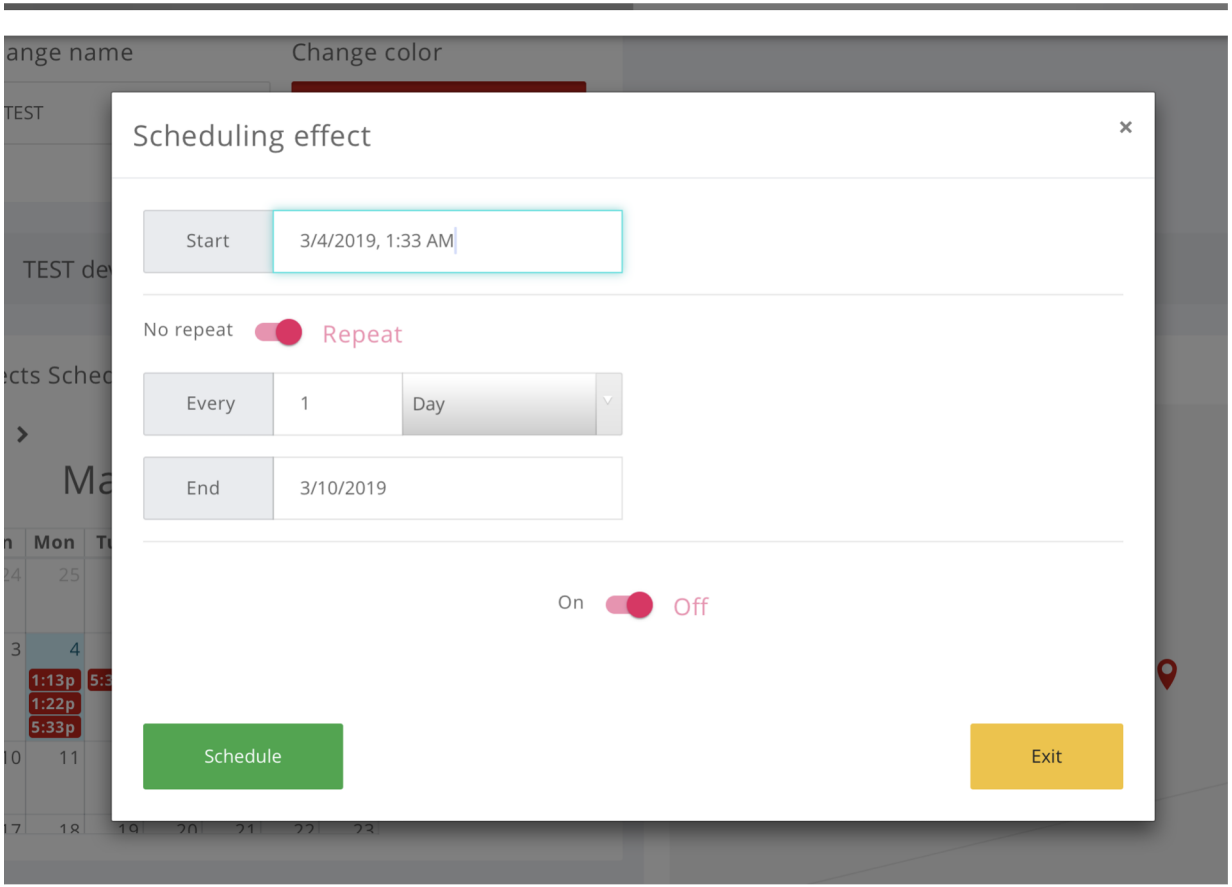


Scheduling OFF

We need to send an OFF, or dark, command via the Scheduler when we do not want the LED's on.

Schedule an additional EFFECT, but this time don't select the toggle ON...

Leave toggler in the OFF position & do you repeat functions, and the time to make it happen. Once that is done click APPLY way up at the top.

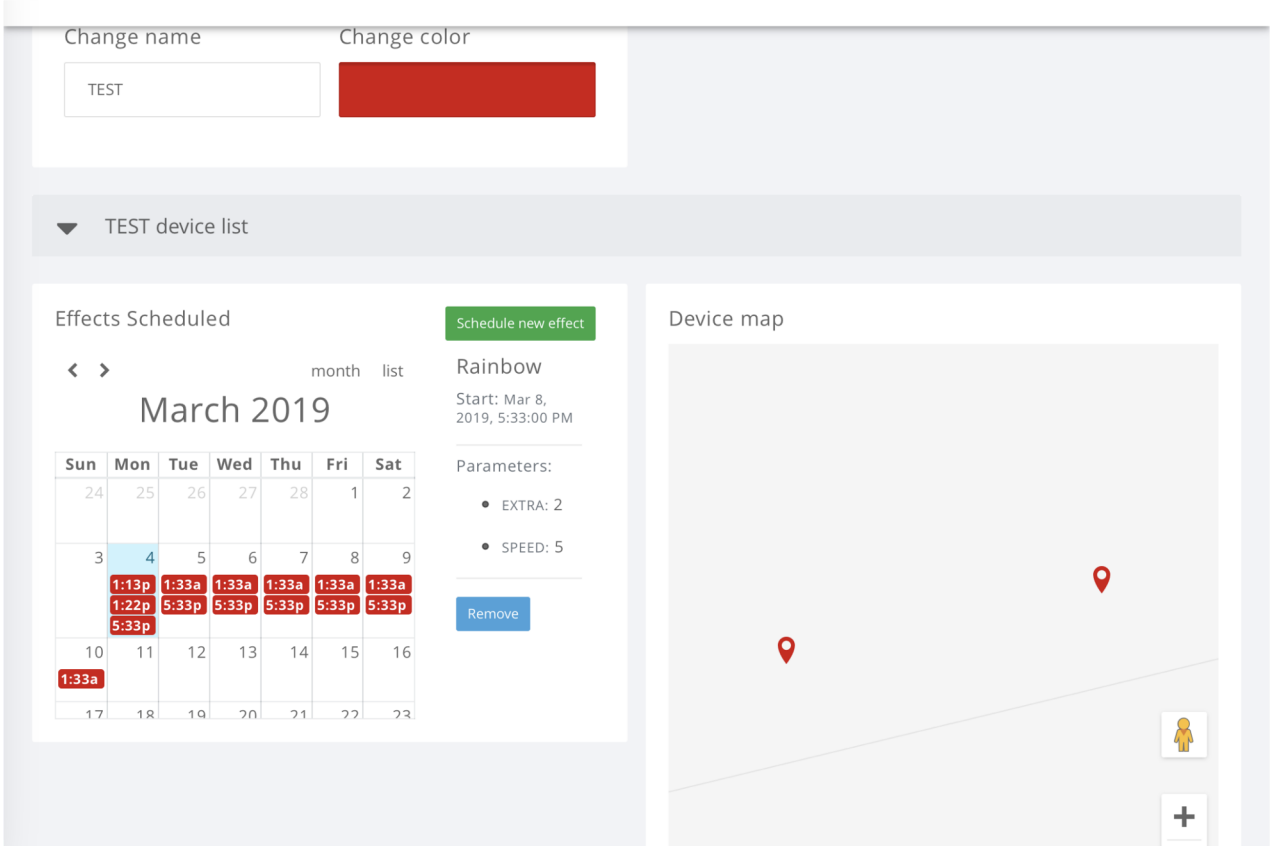


Scheduling

Now that you have scheduled when your effects turn ON and OFF you will see them in your CALENDAR at the bottom of the screen. You can MOUSE over each event to see what is scheduled.

If you made an error simply click VIEW, then EDIT and scroll to the bottom and click on the event you want to delete. Select REMOVE and then CLICK APPLY

You will have to create a NEW event in the place of the deleted event.



Unicorn Cloud-based LED Control System Troubleshooting Tips

GATEWAY TIPS:

1. Be sure your Internet port is ***not* firewalled**.
2. Be sure your Internet port is **set to DHCP** (random IP addressing). Static IP addresses are unsupported.
3. Be sure the **antennae is as unobstructed** as possible. Outdoors is preferable. Obstructions to line-of-sight will reduce the maximum range of the Gateways. Ideal placement is often on a rooftop with open surroundings.

FIELD CONTROLLER TIPS:

1. When installing the RGB+Line Unicorn controllers, please abide by the cable limitations outlined in **Minleon's** Field Guide to Power & Data Management. **Use Power injections and Data Boosters where necessary.**
2. The power transformers for the Field Controllers are switching power supplies—they protect themselves & turn OFF when overpowered with LED's and spacers. **If your power supply cuts power**, remove light strings and extra cabling and try again.
3. Are you running **more than 400 lights total, or more than 200L per output**? This is the maximum lights given the 24Vdc Field Controller's power supply. (***The 12Vdc Unicorn Field Controller will power 200L max.)*** Move lights #401+ to a new Field Controller. If under the data limitations, another option is to inject proper voltage inline with a Power T.
4. Do the **lights flash when powered ON**? This means we do not have enough power for the display. Reduce the amount of lights, or the amount of spacer cables which could be inducing extra voltage drop. Or inject power.
5. One or more of the **output ports is not working**? Maybe a fuse has blown. Was a light run overpowered, or shorted by water ingress? Unscrew the control box and see if one of the fuses has blown. Replace if needed. *(more…)*

Unicorn Cloud-based LED Control System Troubleshooting Tips (continued)

FIELD CONTROLLER TIPS (*cont.*):

6. If the Field Controller **will not accept the password** "Installer" (with a capital I), and you are certain that you typed it properly, the controller will need hard reset. Unscrew the lid, and press the button next to the antennae for 5 seconds. Only reset the controller once at a time. Never twice within the same minute, as this could damage the controller. Be sure you can log into the controller with the password, before re-assembling the box. If this does not work, contact your account manager or sales rep for a warrantied replacement.
7. Field Controllers are **only able to communicate to one device** (smart phone or tablet) at a time. Make sure all other smart phones and tablets are disconnected before trying to log in.
8. When configuring in the *SpectraShow* App, it **will not allow Preview Mode** – Remember to sign in with your Unicorn ID and password.
9. Configuration **files will not upload** – Be sure your wireless device is connected to the Internet, and not the Field Controller's access point. Double check you have the correct "Installer Box ID"
10. Field Controller (Device) **will not appear in the Unicorn Cloud** – Make sure the Box ID is correct. Make sure you are not using a previously delivered box ID – As this will cause the controller to be uploaded to nowhere. Re-cycle the power to the Field Controller & reconfigure via SpectraShow.

CLOUD TIPS:

1. Be sure to select "**APPLY**" when making changes to the Groups, Scheduler or Effects in the Unicorn Cloud.
2. To turn your lights OFF, in the Unicorn's Cloud Scheduler, remember to **schedule a unique OFF command**—separate from the Effect command.

Unicorn Cloud-Based LED Control System

Minleon USA

HAVE MORE QUESTIONS?

Please e-mail

support@minleonusa.com

& reference this presentation.