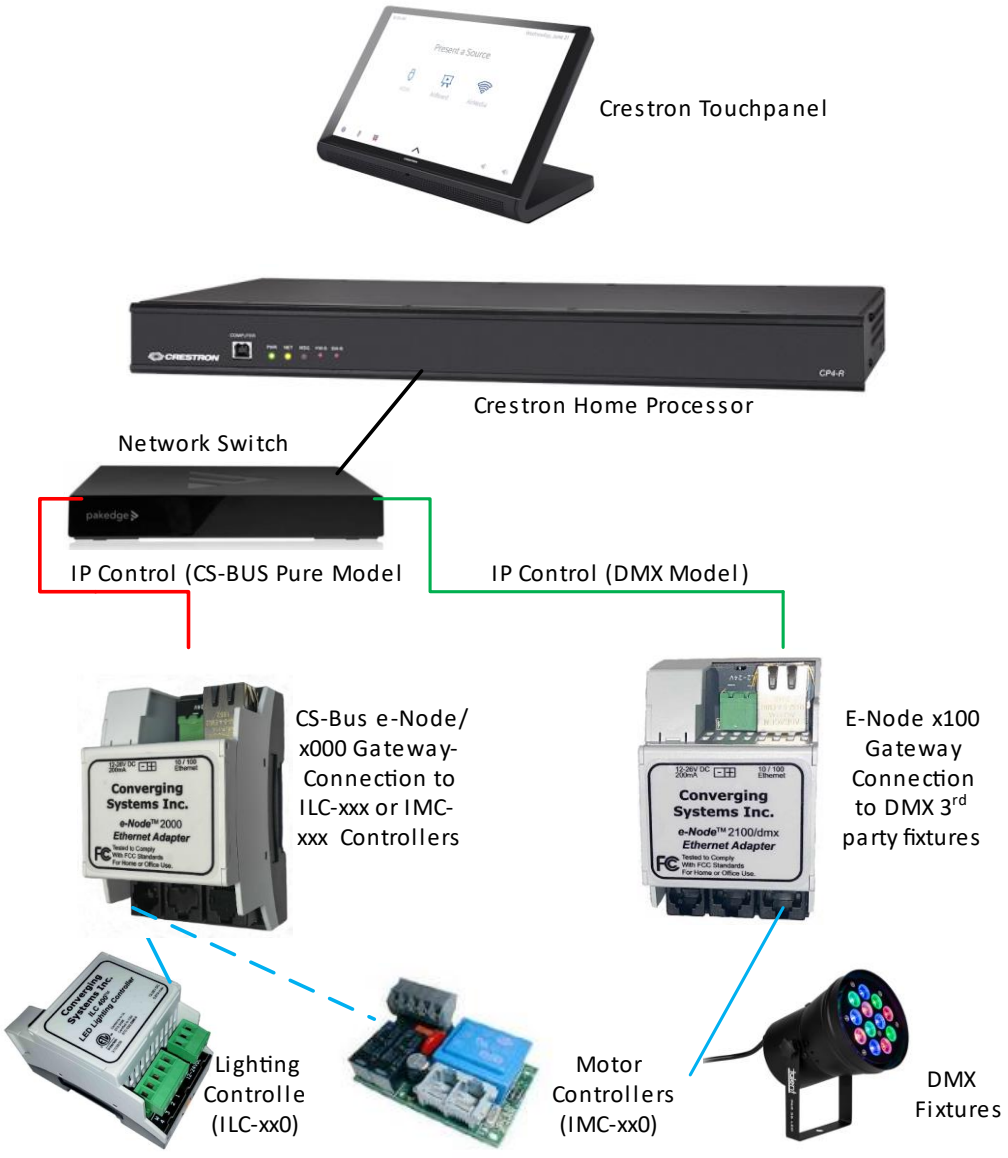
Converging Systems/Creston Home Interface Guide

Control of Converging Systems e-Node and CS-BUS compatible LED and/or Motor controllers through Ethernet (IP) (or DMX fixtures)



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Integration Note

Manufacturer:	**Converging Systems, Inc.**
Model Number(s):	**Converging Systems Gateways and connected Motor and Lighting Controllers**
Crestron Home Code Base	V3.006.0132 and later
Platform Cod Base	V2.00.002 and later
Document Revision Date:	11/11/2022 Rev 1.0

Latest documentation may be found at
https://www.convergingsystems.com/inres_crestron_home.php

Quick Access Links.

Section	Section	Subtopics
System Requirements		
Component Hardware Setup		Link provides preliminary information and links to Converging Systems for full documentation
Component Software Setup		Link provides preliminary information and links to Converging Systems for full documentation
Crestron Home Setup		
	CH-1	Install Platform Drivers
	CH-2	Discover Load/ZGN devices
	CH-3	Using Wildcard Devices
	CH-4a	Background on Circadian
	CH-4b	Setting up Circadian
	PE-1	Setting up Quick Actions
End User Experience		
Common Mistakes		
Nuances/Issues		
Licensing		

System Requirements and Dependencies

NOTE: Converging Systems LED and Motor Controllers REQUIRE a communication device (i.e., e-Node/2x00 or e-Node/4x00 for Ethernet connectivity). It is **not** possible to connect CSI LED or Motor controllers to a Crestron Home controller in any other way.

The system will need to be installed and configured according to the Converging Systems documentation, prior to integration with the Crestron Home system. The Converging Systems e-Node web-page commissioning tool can be accessed by selecting the triple settings icon on the e-Node webpage

NOTE: It is recommended that the Converging Systems' controller(s) as well as the Converging Systems designed and manufactured (ethernet) Gateways (communication device) are running the latest version of firmware available at the time of installation

Min. Requirements

Table 1

#	Device	Mfg.	Part Number	Protocol	Connector Type	Notes
1	Crestron Home	Crestron	CP4-R MC4-R DIN-AP4-R	Ethernet	RJ-45	
2	Network Switch	Various	Various	Ethernet	RJ-45	
3	Converging Systems' GATEWAY (i.e., e-Node/2x00 or e-Node/4x00 or CVM)	Converging Systems	e-Node (or CVM)	Ethernet	RJ-45 (for Ethernet)	
4	Lighting Controller (or Motor Controller) (Or connected DMX fixtures with x100 Gateways)	Converging Systems	ILC-x00 or IMC-x00	CS-Bus protocol	RJ-25 for CS-Bus communication	Must terminate beginning and end of bus with 120 ohm resister on pins 3/4
5	Flexible Linear Lighting (FLLA) luminaries	Converging Systems	FLLA-Monochrome/Bi-White/RGB or RGBW type		1-color 2 pin 2-color 3 pin 3-color 4 pin 4-color 5 pin	
5 alt.	Alternate RGBW Fixture	Various	Various	Requires ILC-450	8 pin Phoenix type	

COMPONENT HARDWARE SETUP

NOTE: Please refer to Quick Start Guides below for information on general hardware instructions for Converging Systems devices. You may also find the Quick Start Guides that accompanied your hardware useful. In addition, these documents provide additional detail as to Best Practices for wiring and setup.

-Once completed with this work, proceed to the next section

Other relevant and more detailed information can also be found as follows:

Lighting Control
https://www.convergingsystems.com/lighting_install_library.php
Motor Control
https://www.convergingsystems.com/motor_install_library.php

There are also a number of short Quick Start Guides for various products that can be downloaded from the above links as well.

Best Practice-Setup Hardware before proceeding to the next section

COMPONENT SOFTWARE SETUP (using e-Node and e-Node Pilot app)

NOTE: Please refer to Quick Start Guides for a reference document for complete software commissioning for Converging Systems devices. This includes information on software commissioning including Activation/ Addressing and Turning on Bi-Directional Communication (NOTIFY). You may also refer to Quick Start Guides that accompany your hardware. In addition, these documents provide additional detail as to Best Practices for programming.

-Once completed with this work, proceed to the next section.

Other relevant and more detailed information can also be found as follows:

Lighting Control
https://www.convergingsystems.com/lighting_install_library.php
Motor Control
https://www.convergingsystems.com/motor_install_library.php

There are also a number of short Quick Start Guides for various products that can be downloaded from the above links as well.

Best Practice-Active/Address and Customize Software (within Hardware) before proceeding to the next section

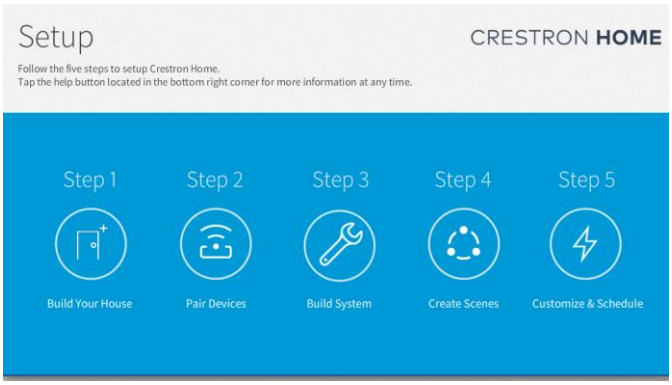
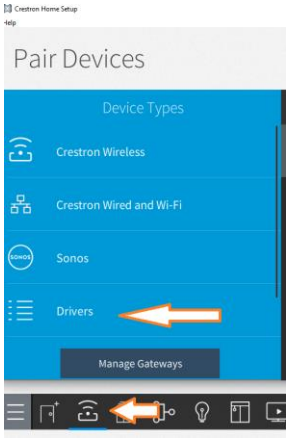
Crestron Home Setup and Programming

Driver Details

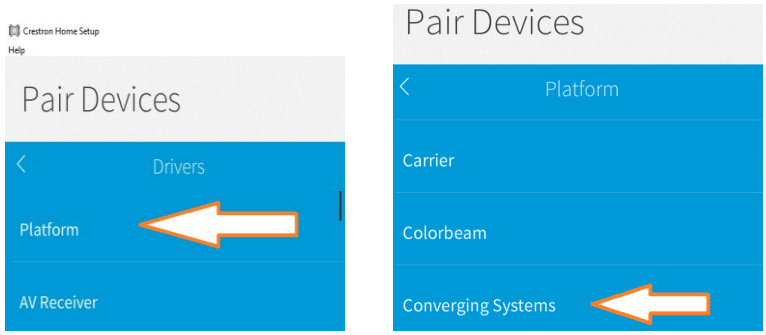
Platform Drivers are currently downloadable from within Crestron Home Setup software.

Note: ***In some special cases, the latest driver may only be available on the Converging Systems website. See*** https://www.convergingsystems.com/software/local_profiles_library.php#crestronhome for the latest drivers. If you are downloading driver(s) from the Converging Systems' website, make sure you install as per separate documentation.

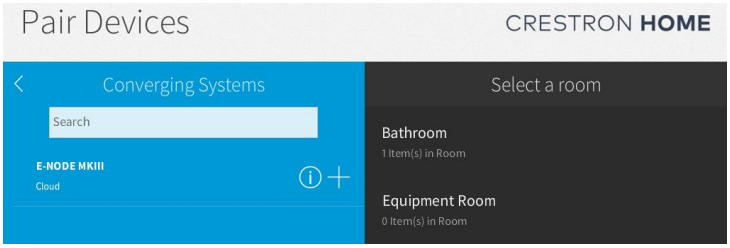
Crestron Home Programming (using Crestron Home Setup)

Type	Step	Detail
CH-1	Install Platform Driver (for IP Gateway)	-Select **Pair Device**  -Select **Drivers**  -Allow Crestron Home **auto-download** to complete 

-Select **Platform** and scroll down and select "**Converging Systems**"



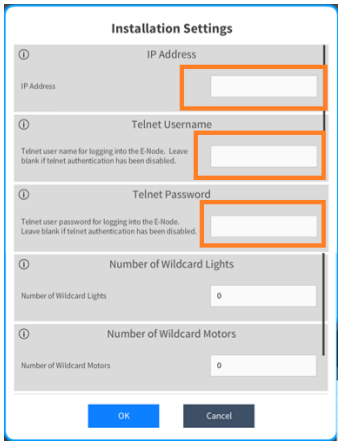
-Select a **Room** and then select the "**+**" mark to add the Gateway there.



Note: It really does not matter where you add the Gateway. However, it is only important that each connected **ZGN** device (that needs controlling) is assigned to a particular room for control. We recommend that you place all Gateways in a utility room or similar room for ease of organization and/or programming.

-Configure the **IP** Settings and **Telnet Login** credentials

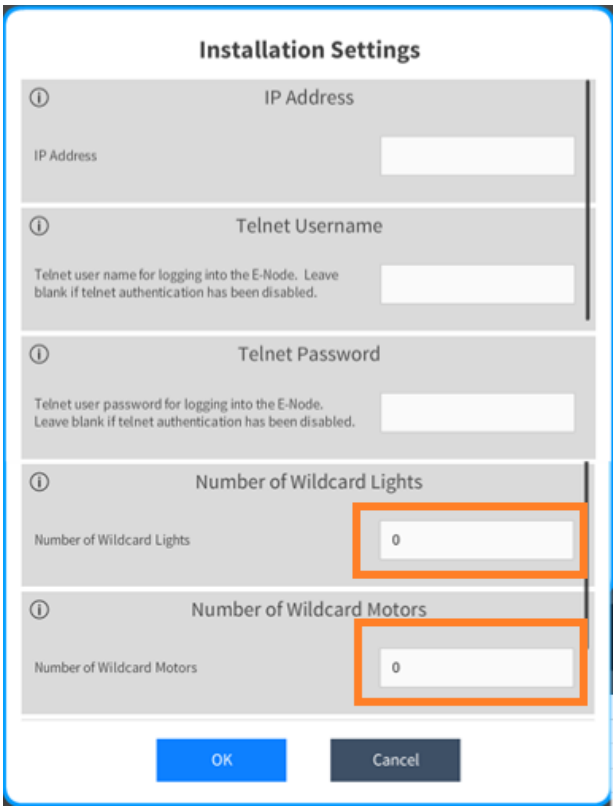
Note: The Telnet Username and Password credentials were initially setup using the Converging Systems' Gateway's webpage. Go to the Gateway's **Telnet** tab for credentials. Up to four IP sockets are available--just use the credentials for one socket here (i.e., Username and Password as provided there for User 1) to enable the Crestron Home processor to communicate with the Gateway.



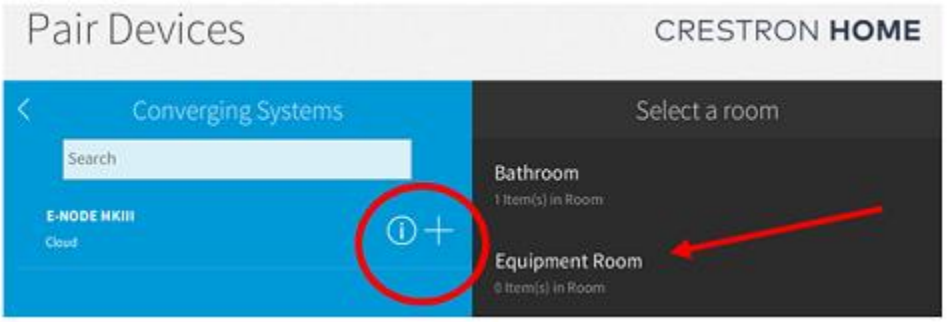
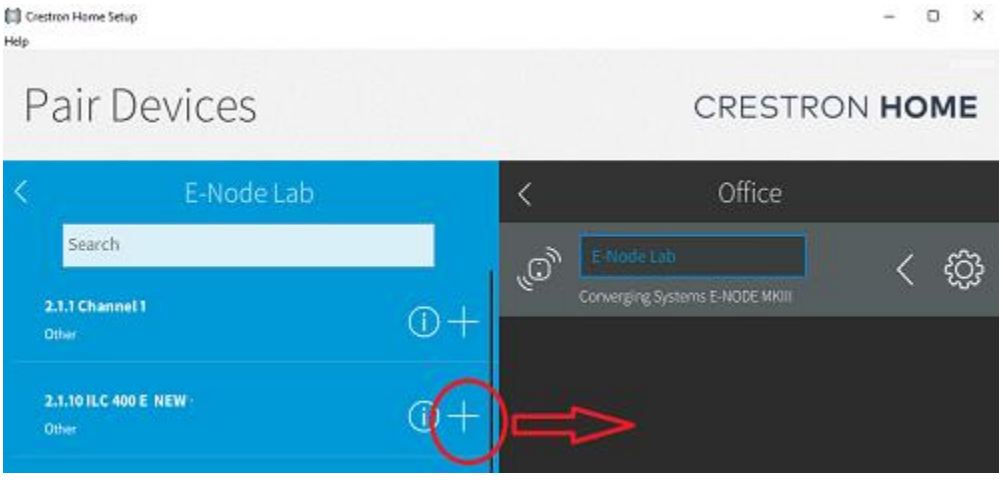
-Create any **Wildcard** Devices now. Within the above **Installations Settings** window, you can set these devices. It is important that you set up these devices now rather than later for there is no way of adding wildcard devices later without re-adding the Gateway again later on (and then assigning connected devices to applicable rooms). **We recommend setting up a few extra devices now so that in the future should you desire to add a new one, you will save considerable time.** See Step CH-4b for an example.

Here is their application.

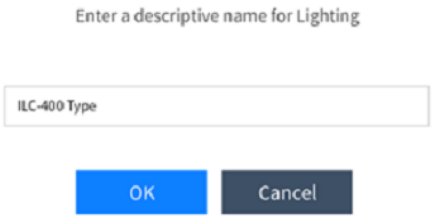
Variable	Detail
Number of Wildcards Lighting	This is for ZGN groupings that can control multiple lighting controllers (i.e., 2.1.0 controls 2.1.1, 2.1.2, 2.1.3 etc.)
Number of Wildcards Motors)	This is for ZGN groupings that can control multiple motor controllers (i.e., 1.1.0 controls 1.1.1, 1.1.2, 1.1.3 etc.)



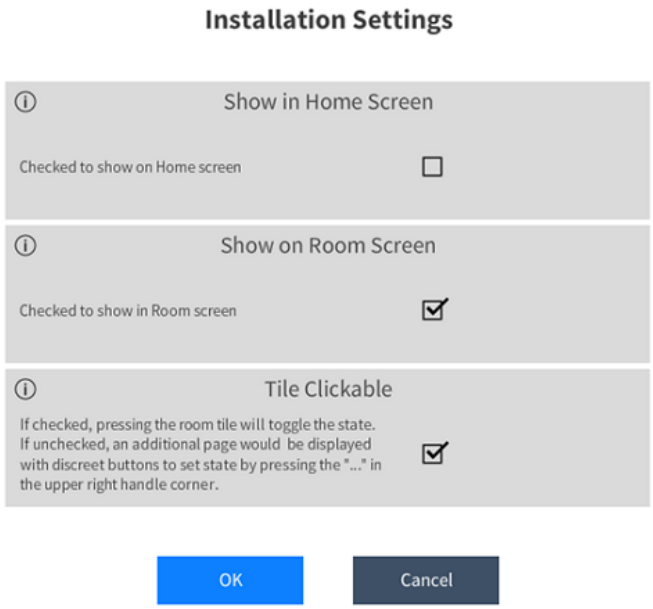
-When finished, select **OK** to continue.

CH-2	Discover/Load **ZGN**-Zone/Group/ Node) Devices	-Select a **Room**  -Select the Gateway that was set up in CH-1, and all discovered/connected **ZGN** devices will auto-populate  -Select the "**+**" mark next to the targeted **ZGN** device that you with to position (into that room) 

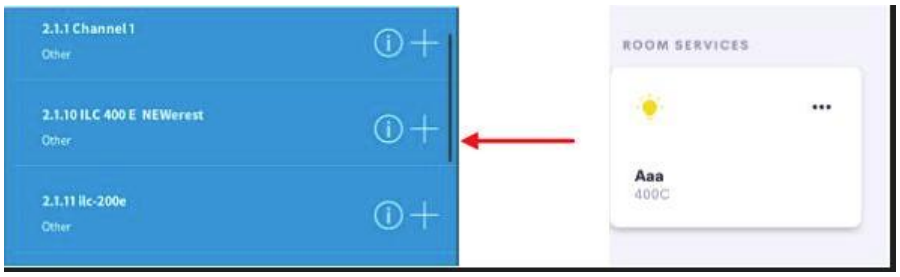
-Provide a useful name for the **ZGN** controller and select **OK** to continue



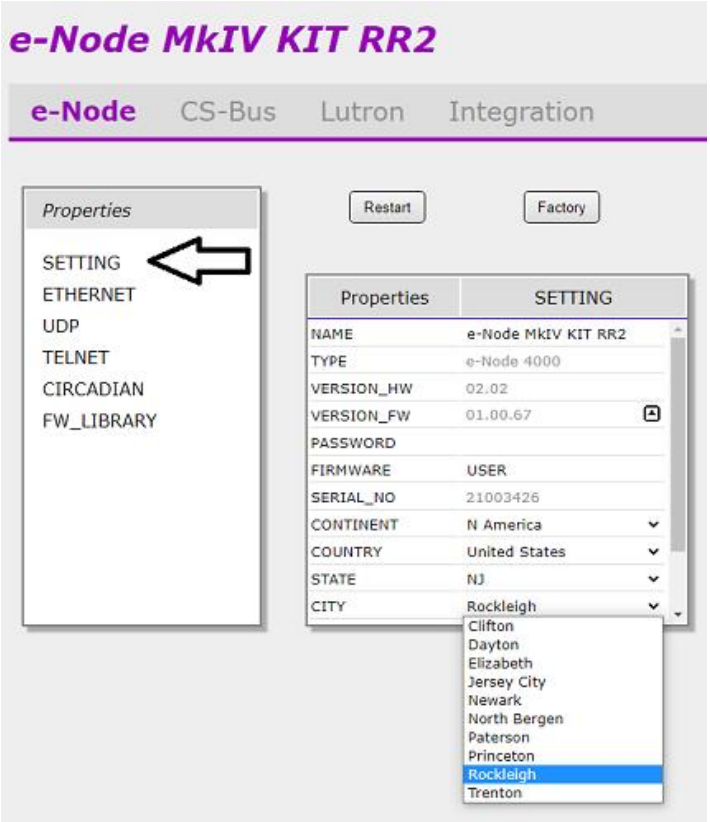
-Within the Installation Settings window, choose from available options, the Select **OK** to continue.

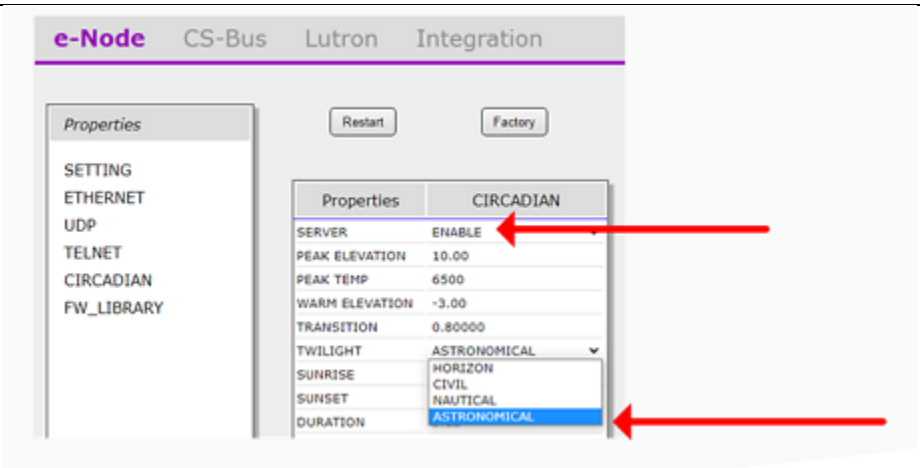
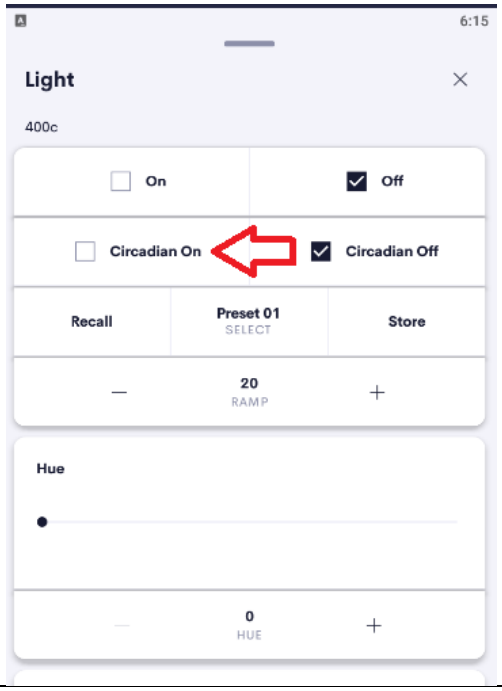


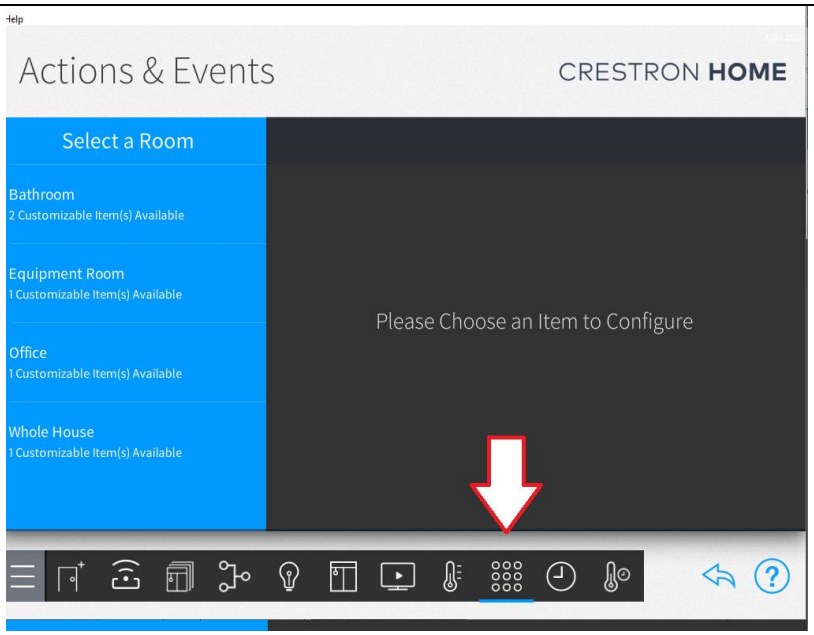
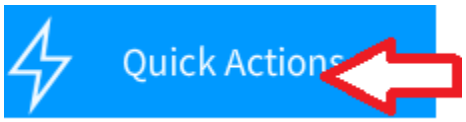
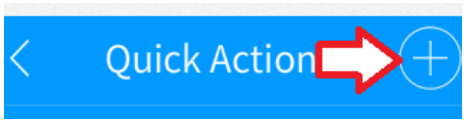
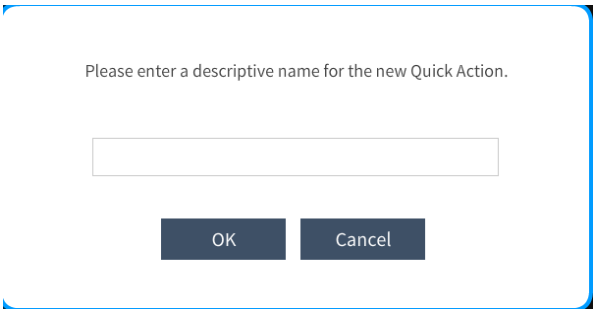
-Continue through these steps for each additional **ZGN** device that you wish to assign (to a particular room for control)

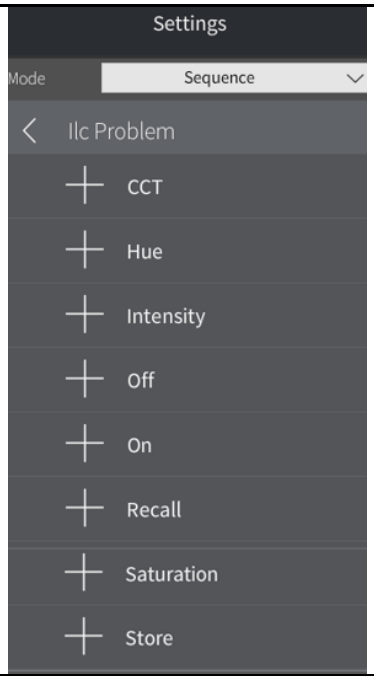


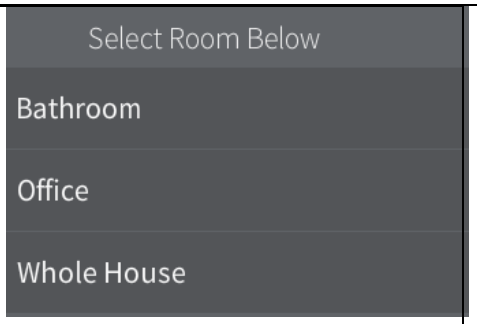
		-Assign any Wildcard device(s) that were set up in CH-1 that are now needed.
CH-3	Using Wildcard Devices	As an example, if you had three devices with **ZGN** address of 2.1.**1**, 2.1.**2** and 2.1.**3** you could create one Wildcard device (with an address of 2.1.**0**) to control all three. Just remember, the **"0"** entered for the Wildcard device controls all other devices with the first and second octets ("2.1" above) matching its own **but without regard** to the third octet (**1~254**).
CH-4a	Background on Circadian Lighting	**Circadian Server** The e-Node/4000 processor enables Circadian tracking for any location throughout the world. (Other e-Node platforms currently do not support this feature set but are all compatible with Crestron Home in all other regards.) **Customized Twilight Settings** Extended Circadian spectral output is dealer selectable **User Selectable Activation** A lighting option within each Circadian compatible load can be activated ty the end-user **Automatic Restart Everyday** Provided the **Circadian On** button has been end-user selected, the Circadian server **re**starts every calendar day **End-User Override** Whenever an override command (any action to the device) is evoked by an end-user, the Circadian Service is paused but will (i) automatically resume to the current Circadian level at the resume time (when the user selects the **Circadian ON** button) or (ii) automatically re-trigger itself to start afresh on the next calendar day, **whichever comes first**

CH-4b	Setting Up Circadian operation with supported LED elements/ controllers	-Make sure that the user location is setup within the Gateway's webpage (under **Settings**)  -Make sure that (i) the Circadian Server has been Enabled within the Gateway's web page (under **Circadian**) and (ii) the **Twilight** (Horizon) Tracking type is set as desired. 

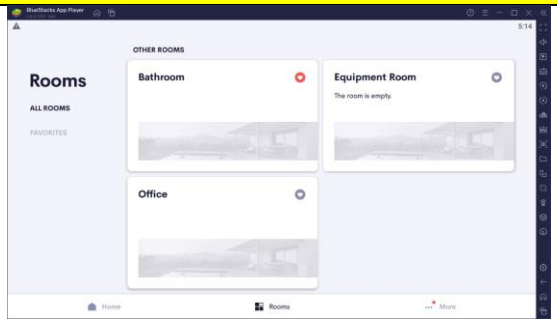
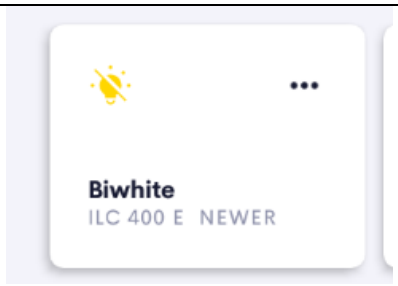
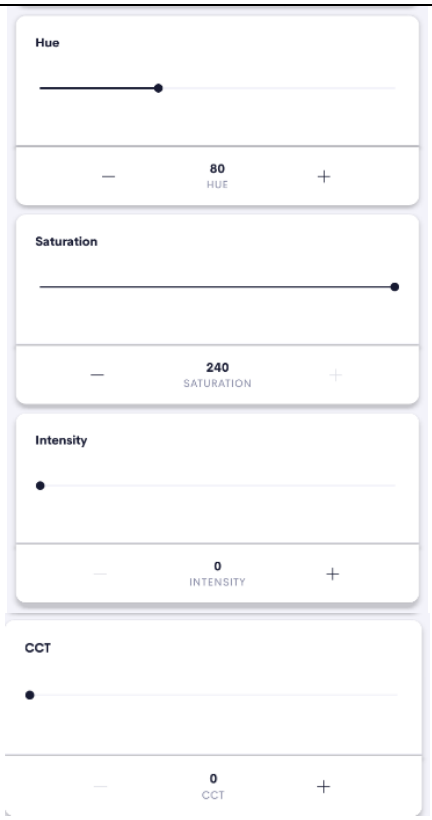
		 -Activate the linkage between the Circadian-supported (calibrated-Full Spectrum) device and the Gateway's Circadian Server by selecting "**Circadian On**" 
PE-1	Create new Quick Action type	-Go to the Actions and Events Tab

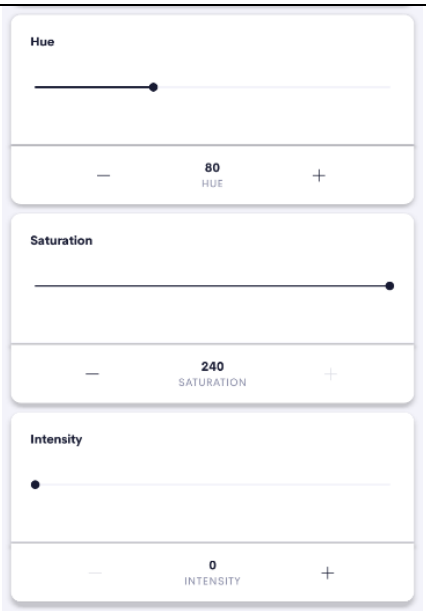
		 -Select a Room, and select **Quick Action**  -Select the "**+**" mark to add a new Quick Action  -Name your new Quick Action  -Select "**OK**" to continue -Next to "**Mode**" scroll down and select "**Sequence**"
PE-2	Customize Entry	-The following pulldown will appear. Select one or parameters followed by a room selection.


Settings
Mode
Sequence
Ilc Problem
CCT
Hue
Intensity
Off
On
Recall
Saturation
Store


Select Room Below
Bathroom
Office
Whole House

End-User Experience

Details	User Interface
Room View -Displays the rooms that are active and where loads are programmed -See below for user interface types available	
Adjustment Controls **General** Each room will display an ON/OFF toggle and intelligently configured sliders for control of the targeted load (once the ... icon is selected) Status "light bulb" reacts to ON/OFF Status (bi-directional feedback)	
Adjustment Controls-**Full Spectrum Devices** (calibrated LED type) -Sliders will reach to actual state (bi-directional feedback) -Sliders will control HSB (or RGB or RGBW if dealer configured alternatively)	

Adjustment Controls-**RGB devices** (and uncalibrated RGBW devices) -Sliders will reach to actual state (bi-directional feedback) -Sliders will control HSB (or RGB or RGBW if dealer configured alternatively)	
Adjustment Controls-**Bi-White Devices** **-**Sliders will control Intensity and Color Temp (CCT) -Sliders will reach to actual state (bi-directional feedback)	
Adjustment Controls-**Monochrome Devices** -Slider will control Intensity only -Slider will reach to actual state (bi-directional feedback)	

Nuances/Known Issues

-The driver will automatically communicate with the Gateway to import dynamically any changes to the current configuration (made within the Gateway). For instance, new **ZGN** devices (i.e., any additions made through the e-Node webpage discovery process), any name changes, and changes in **ZGN** addresses will be automatically reflected in the existing Crestron Home Setup software and Mobile App.

-Any controller changes to existing discovered controllers (i.e., color to bi-white to mono) may require a reboot of the Crestron processor.

-If any changes are not properly reflected, you may need to restart your Crestron Home processor.

COMMON MISTAKES

1. Forgetting to set TELNET credentials for Converging Systems Gateway devices within the Lighting Interface page. Typically, Telnet sessions require a LOGIN ID. Unless you setup the Gateway to not require credentials (**TELNET LOGIN OFF**), then you must enter one of the available IP sockets' credentials (Telnet 1/Password 1 are the factory default credentials for socket 1. Unless you are using the system with older Converging Systems devices or you have changed the credentials, use the new default username of **Telnet 1** and password of **Password 1**.
2. Forgetting to update **Z**one/**G**roup/**N**odes addresses (to non "0" values) in all connected **ZGN** devices to the Gateway. The default **ZGN** assignment for Converging Systems' lighting devices is set to **2.1.0** and for motor devices is set to **1.1.0** – these must be changed by the installer at initial setup. If a wildcard address is desired within Crestron Home, a "0" in the last location of the **ZGN** address refers to a wildcard setting which causes all devices with a "Node" octet from 1 to 254 to respond. For example, if you have a setup that has a 2.1.1 and a 2.1.2 and a 2.1.3 for addresses, a wildcard **ZGN** address of 2.1.0 will cause all devices to react. When using a wildcard, it is critical that there is a "speaker of the house" with an address of "1" in the last octet such that the wildcard operator can query for back-channel information from that device (i.e., you cannot use a 2.1.0 to control a 2.1.3 and 2.1.4 without having a 2.1.1 present).
3. Forgetting to check to make sure you have the latest Converging Systems drivers loaded for your system.

Appendix 1

Licensing and Copyright Information

Contact information*

Control Programming LLC Randy Johnson randy@CPLLC.net https://cpllc.net license: https://cpllc.net.product/converging-systems-platform/	Converging Systems info@convergingsystems.com www.convergingsystems.com

*Be sure to contact CPLLC.net for other professional grade Crestron Home Extensions including site licenses.

Version Information

2022-11-13	**Initial Release**