Crestron Pyng® OS 2 for CP4-R

Product Manual

Crestron Electronics, Inc.

Original Instructions
The U.S. English version of this document is the original instructions.
All other languages are a translation of the original instructions.

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Introduction

The Crestron Pyng® OS 2 for the CP4-R control processor is used to configure and control audio/video systems, lighting, shades, thermostats, door locks, and security systems for the entire home. Home devices are configured by using the free Crestron Pyng home automation app on an Apple® iPad® device and controlled via iPad devices, iPhone® devices, and iPod touch® devices. A Crestron® touch screen[1] that is connected to the Crestron Pyng system provides instant connectivity and control for the entire system.

Use the app to listen to music in any room, or share audio and video sources throughout rooms and trigger environmental scenes within the Crestron Pyng network. The Crestron Pyng app raises or lowers the lights, sets the thermostat to an ideal temperature, and tunes in the media system to a favorite streaming service, all with the touch of a button. Crestron Pyng is designed to integrate with every Crestron system. The onboard ports on the CP4-R can be used to set up media, lights, shades, thermostats, and locks in minutes. Then, program the rest of the devices in the system for a customized experience that may be adjusted easily by the homeowner.

For a general overview of the Crestron Pyng system, including supported devices, frequently asked questions, multimedia content, and tips and tricks, refer to OLH article 257 at https://support.crestron.com/app/answers/detail/a_id/257/kw/257.

NOTE: This version of the Crestron Pyng operating system is not available on the PYNG-HUB. The features described in this document are available on the CP3-R and CP4-R only.

[1]Compatible touch screen models include the TSW-560, TSW-760, TSW-1060, and TSW-560P.

Product Features

Refer to the following chart to determine the devices and product features that are compatible with the Crestron Pyng OS 1 (PYNG-HUB) and Crestron Pyng OS 2 (CP3-4 and CP4-R) operating systems.

Crestron Pyng OS Product Feature Chart

Feature Class	Feature	PYNG-HUB (OS 1)	CP3-R (OS 2)	CP4-R (OS 2)
Audio	Sonos® CONNECT™ Wireless Receivers	**Yes**	**Yes**	**Yes**
	Sonos CONNECT:AMP Devices	No	**Yes**	**Yes**
	All Sonos Speakers (including Sound Bars)	No	**Yes**	**Yes**
	Audio Grouping	Simple Audio Source Sharing	Hybrid Grouping of Sonos and Sonnex	Hybrid Grouping of Sonos and Sonnex
	Crestron Distribution Amplifiers	**Yes**	**Yes**	**Yes**
Video	Handheld Remotes	No	**Yes**	**Yes**
	Source Control	No	**Yes**	**Yes**
	Display Control	No	**Yes**	**Yes**
	A/V Receivers	No	**Yes**	**Yes**
	DigitalMedia™ Devices	No	**Yes**	**Yes**
	DM NVX™ Devices	No	**Yes**	**Yes**
MyCrestron Dynamic DNS Service	Automatic Backups	**Yes**	**Yes**	**Yes**
	Monitoring	**Yes**	**Yes**	**Yes**
	Lighting Preconfiguration	**Yes**	Coming soon	Coming soon
Lighting	Lighting	**Yes**	**Yes**	**Yes**
Thermostats	Thermostats	**Yes**	**Yes**	**Yes**
Shades	Shades	**Yes**	**Yes**	**Yes**
Door Locks	Door Locks	**Yes**	**Yes**	**Yes**
Security	Security	**Yes**	**Yes**	**Yes**
Sensors	Sensors	**Yes**	**Yes**	**Yes**
Keypads	Keypads	**Yes**	**Yes**	**Yes**

Crestron Pyng OS Product Feature Chart

Feature Class	Feature	PYNG-HUB (OS 1)	CP3-R (OS 2)	CP4-R (OS 2)
Touch Screens	Touch Screens	**Yes**	**Yes**	**Yes**
Connectors and Gateways	IR Ports	0	8	8
	Wireless Gateway	Built-in infiNET EX® gateway supports up to 50 devices. 5 additional gateways may be added to the system (excluding built-in gateway).	External gateway (such as CEN-GWEXER) must be added. 15 gateways may be added to the system with a recommended max of 50 devices per gateway.	External gateway (such as CEN-GWEXER) must be added. 15 gateways may be added to the system with a recommended max of 50 devices per gateway.
	RS-232/-422/-485	0	3	3
	Relays	0	8	8
	Digital I/O Ports & Analog In	0	8	8
	Net	**Yes**	**Yes**	**Yes**
	LAN	**Yes**	**Yes**	**Yes**
Devices Intentionally Not Supported	TSW-x52	**Yes**	No	No
	TS-1542	No	No	No
	TSD-2020	No	No	No
	DM-MD-6X4/-6X6	No	Coming soon	Coming soon
	CNX-PAD8/-BIPAD8	No	No	No
RAM and CPU	RAM	256 MB	1 GB	2 GB
	CPU	AM3352	i.MX53	i.MX6
	Clock speed	600 MHz	1 GHz	1 GHz
	Cores	1	1	4

NOTE: For a comprehensive list of devices that are supported by Crestron Pyng, refer to the Crestron Pyng product page at www.crestron.com/en-US/Products/Featured-Solutions/Crestron-Pyng. Support for new de\vices is added to the system via firmware updates.

Maximum System Size

Refer to the following chart to determine the maximum number of devices or components that may be added to the Crestron Pyng system. These system maximums are tested and have been guaranteed to work with the CP4-R.

For a complete list of devices that are supported by Creston Pyng OS 2 visit www.crestron.com/pyng.

Crestron Pyng OS Maximum System Size Chart

Type	Quantity
Touch Screens or TSR-310s	24
Apps in Home	8
Remotes (HR series)	24
Remotes per Room	2
Keypads	120
Active Audio Groups	4
Max Rooms in 1 Audio Group	20
Crestron Speaker Zones	32
Audio Sources	24
Sonos Speaker Zones or Players	16
Video Sources	32
Video Zones	32
Displays in a Room	1
Shades/Drapes	100
Lighting Loads	300
Thermostats	32
Security Systems	1
Locks	6
Streaming Cameras	10
Sensors	32
AVRs	6

Setup

The Crestron Pyng system may be configured with the Crestron Pyng app once a CP4-R control processor has been installed and connected to the local network. For more information on installing and connecting the CP4-R, refer to the CP4-R Quick Start (Doc.8415) at www.crestron.com/manuals.

Download the Crestron Pyng App

The Crestron Pyng app may be downloaded onto an Apple iPad device from the App Store® online store.

NOTES:

- An Apple ID is required to download the Crestron Pyng app. Refer to https://support.apple.com/kb/HT2731 for help with setting up an Apple ID.
- For a comprehensive list of iOS® hardware and software versions that are compatible with Crestron Pyng, refer to OLH article 5655 at https://support.crestron.com/app/answers/detail/a_id/5655.

To download the Crestron Pyng app:

1. Tap the **App Store** icon on the iPad device home screen.
2. Tap the search field, and enter the search term "Crestron Pyng."
3. Tap **Search**.
4. Tap the **Crestron Pyng** app icon .
5. Follow the prompts to download and install the app to the device.

Set Up the Crestron Pyng System

Once the Crestron Pyng app is downloaded and installed, system setup takes place entirely through the app.

Additionally, existing Pyng OS 2 system data can be transferred from a CP3-R to a CP4-R or from a dealer's CP4-R to a customer's CP4-R. For more information, refer to "Appendix I: Transfer Data between Hardware" on page 259.

NOTES:

- The Crestron Pyng system may also be configured on a computer using the CP4-R's built-in web XPanel interface by entering the CP4-R IP address or hostname into a web browser. If the CP4-R is assigned an IP address over DHCP, use the Device Discovery Tool in Crestron Toolbox™ software to discover the device and its IP address. For more information on configuring XPanel Web UI settings, refer to "Web Settings" on page 119.
- To connect to the CP4-R using Crestron Toolbox, XPanel, or the Crestron Pyng app, enter the default username ("admin") and password (the device serial number, which is located on the rear of the device) when prompted by the software. The default username and password can be changed using Crestron Toolbox. For more information, refer to the Crestron Toolbox help file.

To set up the Crestron Pyng system:

NOTE: Ensure that the iPad device and the CP4-R are placed on the same subnet prior to setup.

1. Tap the Crestron Pyng app icon on the iPad device home screen.
2. The Crestron Pyng app connects to the CP4-R automatically, and a splash screen is displayed.

   Crestron Pyng Splash Screen

NOTE: If the Crestron Pyng app does not connect to the CP4-R automatically, enter the CP4-R's hostname and tap **Connect**. The default hostname for a CP4-R is "CP4-R-*xxxxxxxx*," where *xxxxxxxx* is the last eight digits of the device's

MAC address (excluding punctuation). The MAC address label is located on the bottom or rear of the device.

3. Tap the **Tap Here to Begin** text. The **Step 1: Choose Language** screen is displayed.

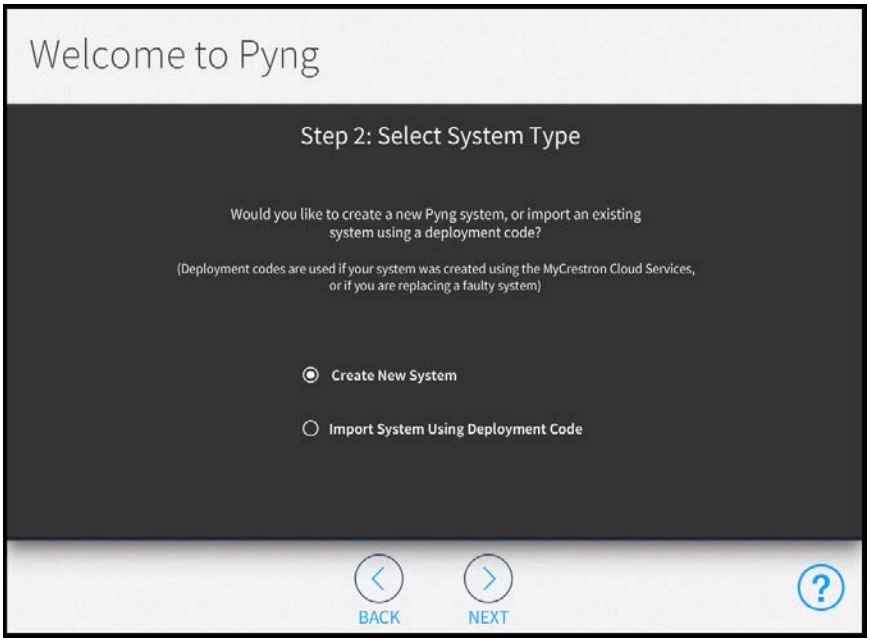
Step 1: Choose Language Screen

NOTES:

- Tap the help button (?) at any time to display help screens that explain the functions and features of each setup screen and that provide instructional videos. The iPad device or setup device must be connected to the network to access videos.
- Tap the **BACK** button (**<**) at any point during the setup process to return to the previous screen.

4. Swipe through the provided options to select a language that will be displayed by the system.
5. Tap the **NEXT** button (**>**). The **Step 2: Select System Type** screen is displayed.

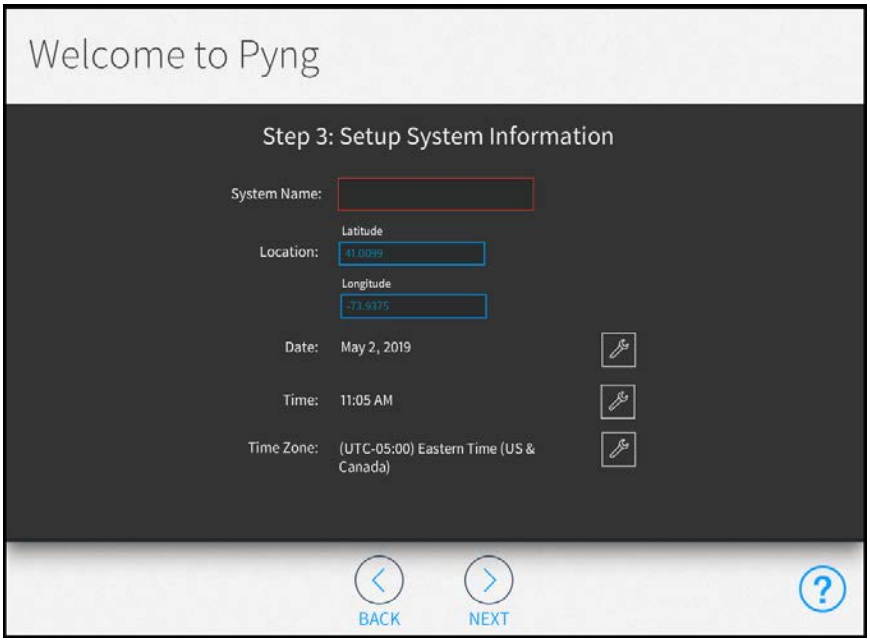
Step 2: Select System Type



6. Tap the **Create New System** radio button and then tap the **NEXT** button (**>**). The **Step 3: Setup System Information** screen is displayed.

NOTE: If transferring data from a CP3-R to a CP4-4 or from a dealer's CP4-R to a customer's CP4-R, refer to "Appendix I: Transfer Data between Hardware" on page 259.

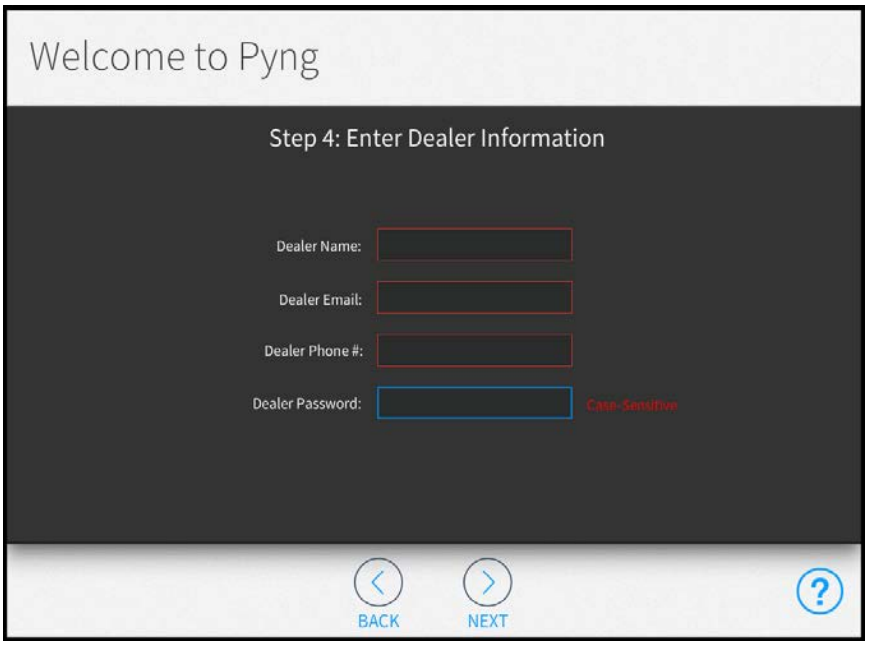
Step 3: Setup System Information Screen



7. Enter the following system information:
   - **System Name:** Enter a descriptive system name (for example, "Smith Residence").
   - **Location:** Enter the system longitude and latitude.

     NOTE: If setting up the Crestron Pyng system with an iPad device, tap the **Synchronize with iPad** button to synchronize the time zone, longitude, and latitude automatically with the iPad device's location services.
   - **Date:** Tap the wrench button to display spinners for selecting the month, day, and year.
   - **Time:** Tap the wrench button to display spinners for selecting the hour and minute buttons, and for selecting **AM** or **PM**.
   - **Time Zone:** Tap the wrench button to display a menu for selecting the time zone used by the system.
8. Tap the **NEXT** button (**>**). The **Step 4: Enter Dealer Information** screen is displayed.

   Step 4: Enter Dealer Information Screen



9. Enter the following dealer information:
   - **Dealer Name:** Enter the Crestron dealer responsible for the installation.
   - **Dealer Email:** Enter the email address of the Crestron dealer responsible for the installation.
   - **Dealer Phone #:** Enter the phone number of the Crestron dealer responsible for the installation.

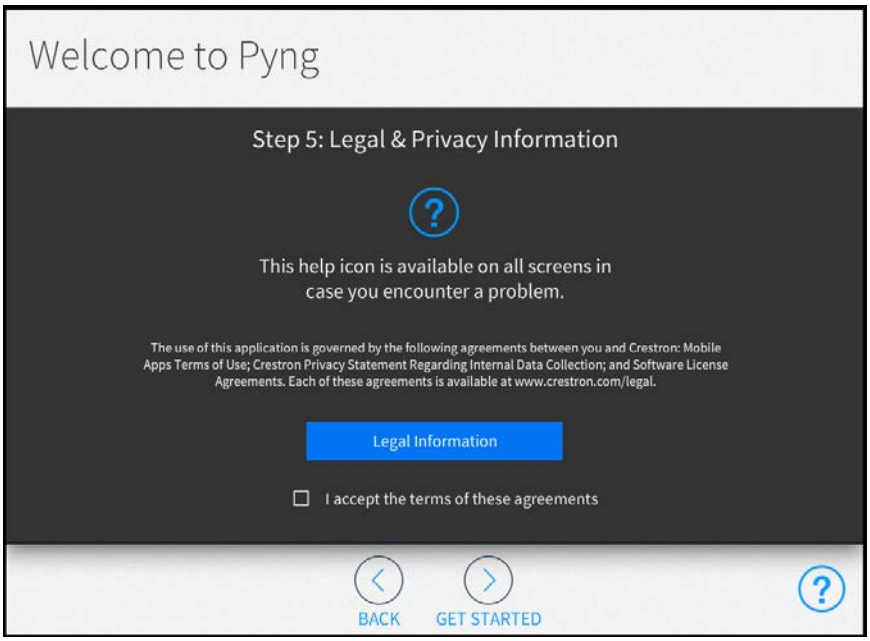
NOTE: Confirm that the dealer information is entered correctly, as this information is needed to place custom engraving orders through the Crestron Pyng system.

10. **Dealer Password:** Enter an installer password for accessing the advanced system setup and configuration pages in installer configuration mode.

    CAUTION: Do not lose the installer password, as the system must be reset to factory defaults to restore access to installer configuration mode.

11. Tap the **NEXT** button (**>**). The **Step 5: Legal & Privacy Information** screen is displayed.

    Step 5: Legal & Privacy Information Screen

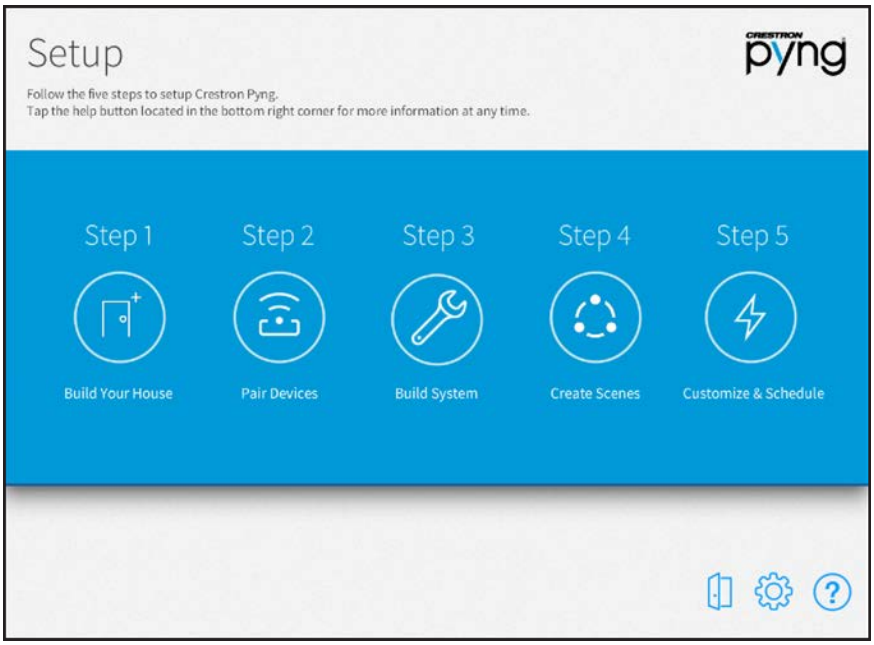


12. Tap **Legal Information** to review the legal information regarding the use of the Crestron Pyng application.
13. Tap the **I accept the terms of the agreement** check box to accept the legal agreement.
14. Tap the **Get Started** button (**>**) to complete the initial setup procedure and to display the main **Setup** page.

Installer Configuration

Once the initial setup procedure is complete, the main **Setup** screen is displayed.

Setup Screen



To set up a Crestron Pyng system, simply follow the five steps listed below. Perform each step by tapping its respective button on the **Setup** screen.

1. **Build Your House**
2. **Pair Devices**
3. **Build System**
4. **Create Scenes**
5. **Customize & Schedule**

Each configuration step is described in the sections that follow.

Tap the menu button on any of the setup screens to display a menu for navigating quickly through the screens. Tap on a button in the menu to access its respective setup screen. Tap the menu button again to hide the menu.

Refer to the following table for a list of menu functions.

Setup Screen Menu Buttons

Menu Button	Setup Page
	Build House
	Pair Devices
	Shade Groups
	Source Routes
	Light Scenes
	Shade Scenes
	Media Scenes
	Climate Scenes
	Actions & Events
	Scheduler
	Thermostats

Tap the help button on any of the **Setup** screens to display dialog boxes that explain screen functions and features and provide links to tutorial videos.

Tap the gear button to display the **Installer Settings** screen to configure advanced Crestron Pyng system settings. For more information on the **Installer Settings** screen, refer to "Installer Settings" on page 98.

Tap the door button to leave installer configuration mode and to enter user control mode. For more information of user control mode, refer to "Operation" on page 147.

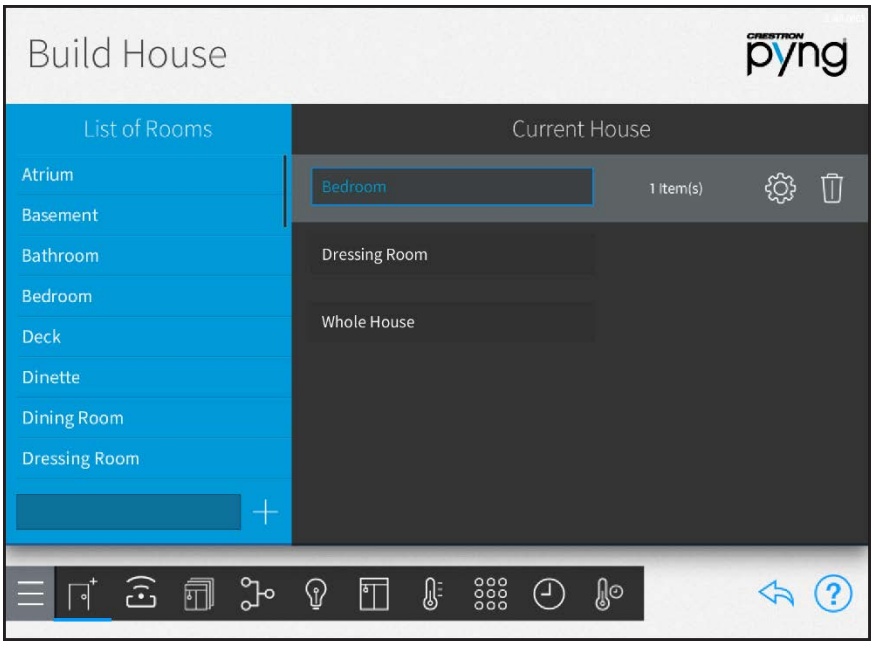
To access the installer setup screens while in user control mode:

1. On the home screen, select **Settings** from the collapsible side menu.
2. Enter the installer password when prompted, and then tap **OK**. The main **Setup** screen is displayed.

Step 1: Build Your House

Tap the **Build Your House** button on the **Setup** screen or the Build House button on the setup menu to display the **Build House** screen.

Build House Screen



Use the **Build House** screen to define and group physical rooms in the house. This screen also lists the rooms defined for the house and the number of devices associated with each room.

To add a new room:

1. Select a predefined room name from the **List of Rooms** menu.
2. If necessary, make any modifications to the room name in the lower-left text box.

   NOTE: Two rooms may not use the same name. The system rejects the new room if the room has the same name as one that has already been added.

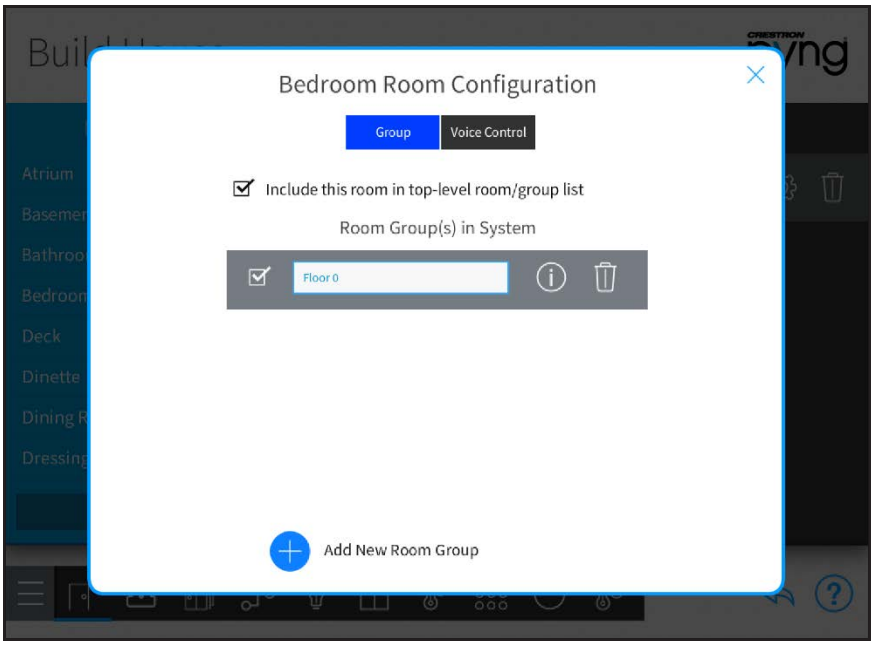
3. Tap the plus button (**+**) to add the room.

To edit an existing room, select the room from the **Current House** menu. The following options are provided for each room.

- To edit the room name, tap the room name to display a text box. Then, use the on-screen keyboard to edit the room name.
- To configure settings for the room, select the room from the Current House menu, and then tap the gear button next to the room name.
- To delete a room, tap the trashcan button next to the room name.

When the gear button is tapped, The **Room Configuration** dialog box opens with the **Group** tab open.

Bedroom Room Configuration Dialog Box - Group Tab



The following configuration options are provided for each room.

Room Groups

Tap the **Group** tab to select whether the room is included in the top-level room/group list in the user control interface. The room may also be added to a room group.

To add a new room group:

1. Tap the plus button (**+**) next to **Add New Room Group**.
2. Enter a descriptive name for the room group, and then tap **OK**.

Once a room group has been added, select the check box to the left of the group name to add the room to that group. The following options are provided for each room group:

- Tap the room group name, and then use the on-screen keyboard to edit the room name.
- Tap the information button to view all the rooms added to the group.
- Tap the trashcan button to delete the room group.

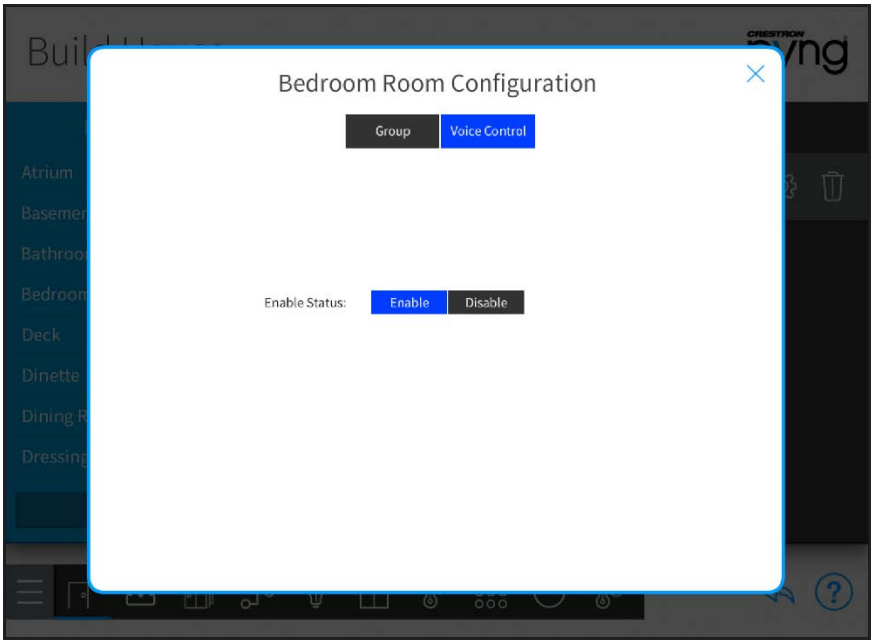
NOTE: Deleting a room group does not delete the assigned rooms from the system.

Select the check box at the top of the **Room Configuration** dialog box to add or remove the room from the top-level room list that is displayed in user control mode. A checked box indicates that the room is included in the top-level room list.

Voice Control

Tap the **Voice Control** tab to enable or disable the ability to control the room with voice control services (if enabled for the system).

Whole House Room Configuration Dialog Box - Voice Control Tab



Tap **Enable** to enable voice control for the room, or tap **Disable** to disable voice control for the room.

NOTE: For more information about setting up voice control on the Crestron Pyng system, refer to "Voice Control Settings" on page 120.

Tap the **x** button to return to the **Build House** screen.

On the **Build House** screen, tap the back arrow button to return to the main **Setup** screen.

Step 2: Pair Devices

Tap the **Pair Devices** button on the **Setup** screen or the Pair Devices button on the setup menu to display the **Pair Devices** screen.

Pair Devices Screen

Use the **Pair Devices** screen to pair devices, including Sonos® devices, with the Crestron Pyng system.

Associate a device with the room where it is installed after it is paired. This process establishes automatic scenes (such as **All On** and **All Off**) and enables adding the device to a programmed action or event.

NOTE: For a comprehensive list of devices that are supported by Crestron Pyng, refer to the Crestron Pyng product page at www.crestron.com/pyng. Support for new devices is added to the system via firmware updates.

The following sections describe the different device types that may be paired with the Crestron Pyng system.

Tap the back arrow button to return to the main **Setup** screen.

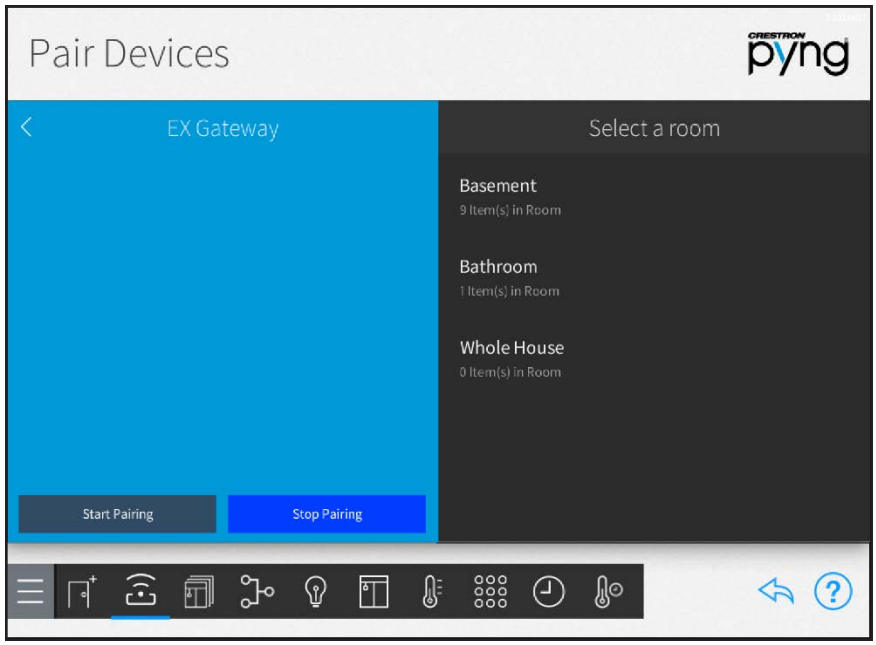
Pair Wireless Devices

To pair wireless devices with the Crestron Pyng system:

NOTE: For best practices regarding the installation and setup of Crestron RF (radio frequency) products, refer to the Installation and Setup of Crestron RF Products Best Practices Guide (Doc. 6689) at www.crestron.com/manuals.

1. Select **Crestron Wireless** from the **Device Types** menu.
2. Select a wireless gateway from the **Select Gateway Below** menu.

   Pair Devices Screen - EX Gateway

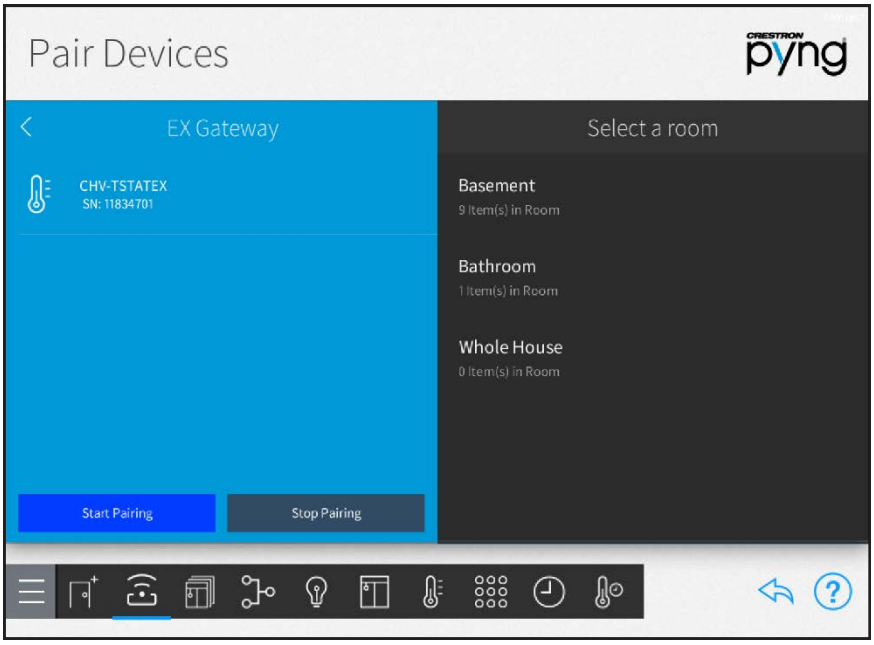


   NOTES:

   - A wireless gateway, such as the CEN-GWEXER, must be installed and configured on the network prior to pairing devices. For more information, refer to the gateway documentation.
   - If a TSR-310 will be added to the system, ensure that the TSR-310 is connected to a WAP that is in Crestron's list of recommended WAP brands. For more information and a complete list of brands, refer to the TSR-310 Supplemental Guide (Doc. 8226) at www.crestron.com/manuals.

3. Tap **Start Pairing** to place the selected gateway into acquire mode.
4. Place the wireless device(s) into acquire mode as described in the device documentation. Acquired devices display underneath the gateway on the **Pair Devices** screen.

Pair Devices Screen - EX Gateway

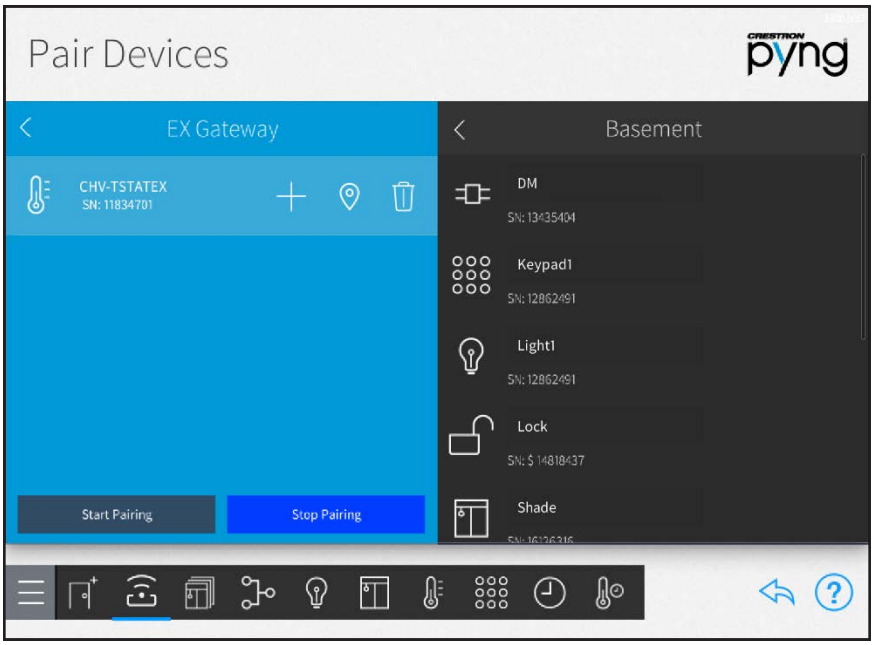


5. Tap **Stop Pairing** to remove the selected gateway from acquire mode.

To associate a paired wireless device with a room:

1. Select the room where the device is installed from the **Select a room** menu. Refer to the image above.
2. Select the device from the wireless gateway's menu.

Pair Devices Screen - EX Gateway



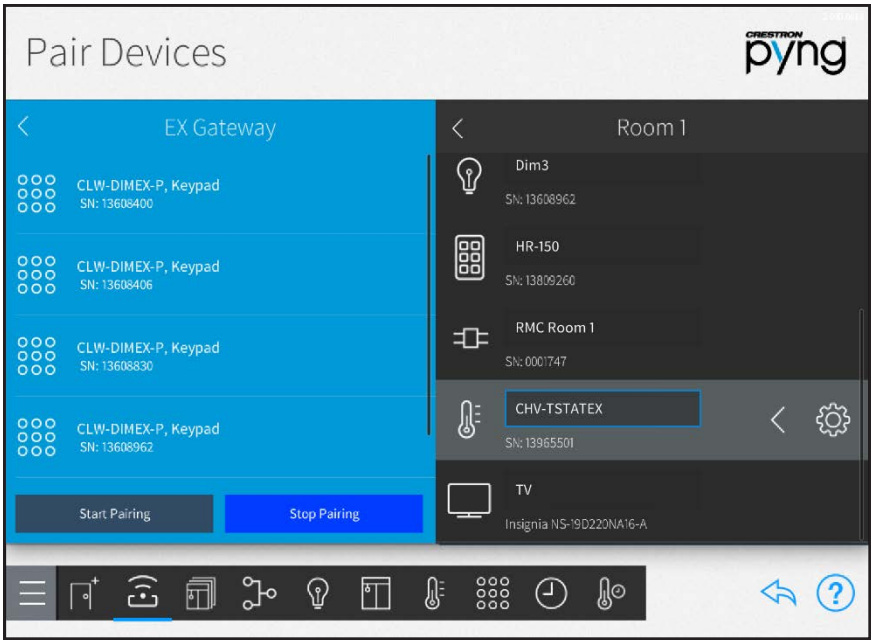
- Tap the location button to turn on the location feature for the device (if supported), which is used to locate the device in the room.

  NOTE: To identify paired TSR-310 handheld remotes using the locator feature, ensure that the TSR-310 is awake and placed on its charging dock before tapping the location button.

- Tap the trashcan button to delete the device from the gateway. The device must be reacquired if it needs to be added back to the system.

3. Tap the plus button (**+**) to add the device to the room selected in step 1.
4. Enter a descriptive name for the device in the text field that is displayed.
5. Tap **OK**. The device is added to the room.

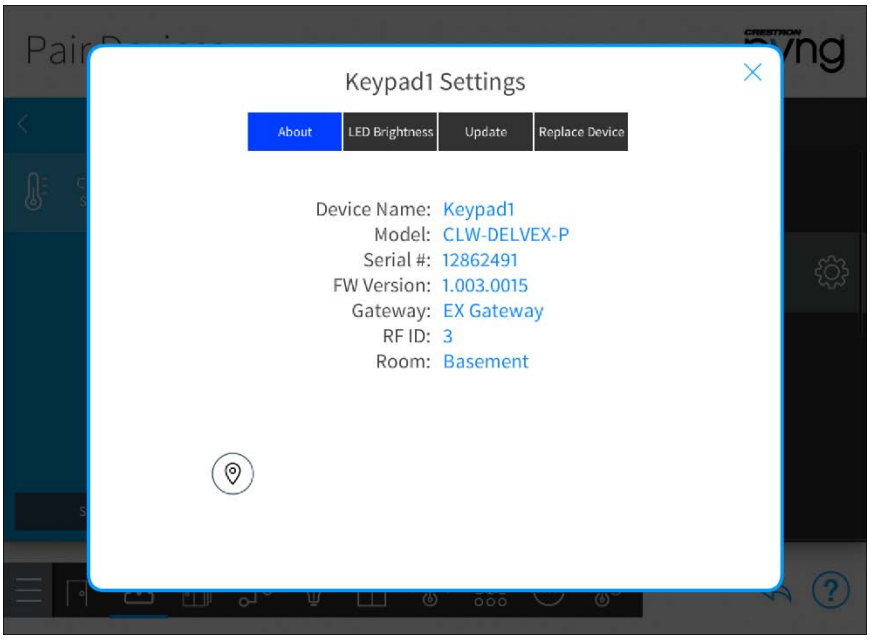
Pair Devices Screen - EX Gateway



After a wireless device is associated with a room, tap the gear button next to the device name to display a Settings dialog box, which is used to configure device settings.

The settings dialog box for a keypad is shown on the following page.

Keypad1 Settings Dialog Box



NOTE: For more information about configuring device-specific settings, click the help button (?) on the bottom of the device's settings dialog box (if available), or refer to the device documentation.

Tap the back arrow (**<**) next to a wireless device to disassociate the device from the room. The device is removed from the room and is added back to the gateway menu that was used to pair the device.

NOTE: For most devices, removing the device from a room does not remove it from the entire system.

Tap the back arrow (**<**) next to a gateway name to return to the **Select Gateway Below** menu.

Tap the back arrow (**<**) next to **Select Gateway Below** to return to the **Device Types** menu.

Pair Wired and Wi-Fi Network Devices

To pair wired and Wi-Fi® network devices with the Crestron Pyng system, including DM® switchers, DM-RMC series room controllers, and DM NVX™ devices:

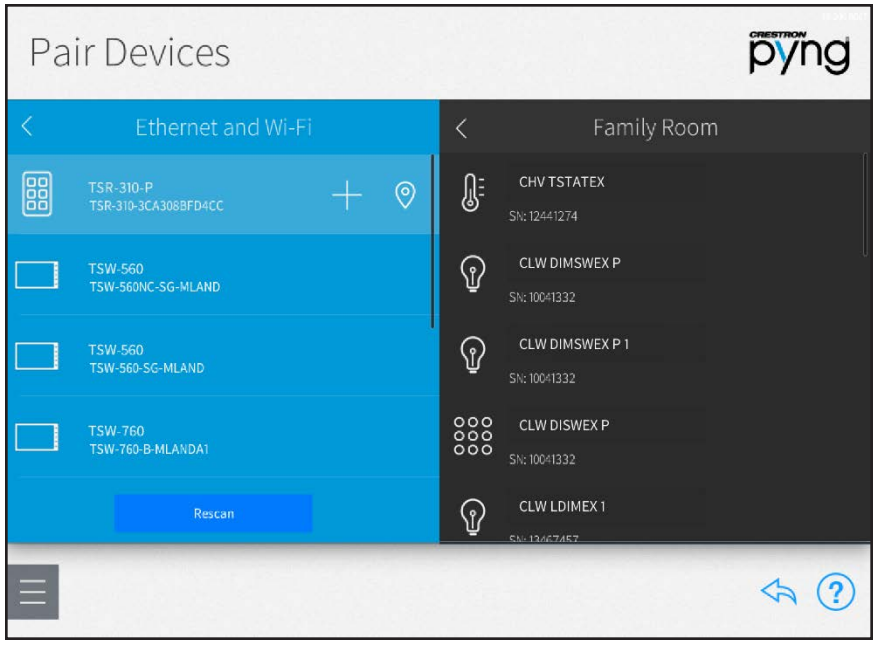
NOTE: After a TSW-x60 series touch screen or compatible handheld remote is added to the system, the Crestron Pyng user project is loaded to the device. If a TSR-310 is added to the system and is placed in Performance UI mode, the Performance UI software is displayed on the TSR-310. For more information, refer to the Performance UI for TSR-310 Operations Guide (8410) at www.crestron.com/manuals.

1. Select **Crestron Wired and Wi-Fi** from the **Device Types** menu.

   Pair Devices Screen - Crestron Wired and Wi-Fi

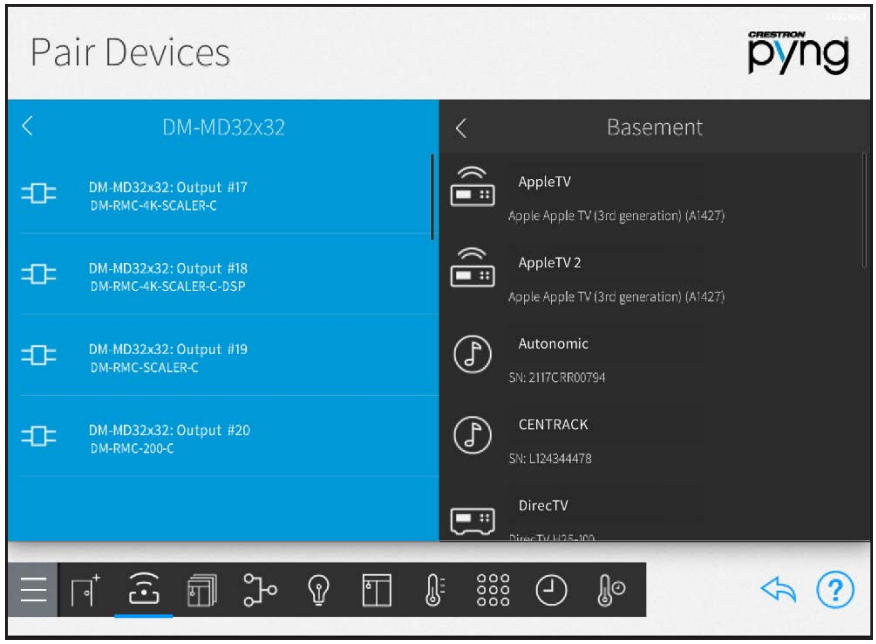
2. Select a wired connection from the **Crestron Wired and Wi-Fi** menu to scan the selected network for any unpaired devices. Discovered devices display underneath the wired network on the **Pair Devices** screen.

Pair Devices Screen - Ethernet and Wi-Fi



3. If adding a wired device with connected outputs, such as a SWAMP series audio expander or a DM-MD series video switcher, tap the device (represented by a folder icon) to view all of the available outputs that may be added to a room.

Pair Devices Screen - DM-MD32x32

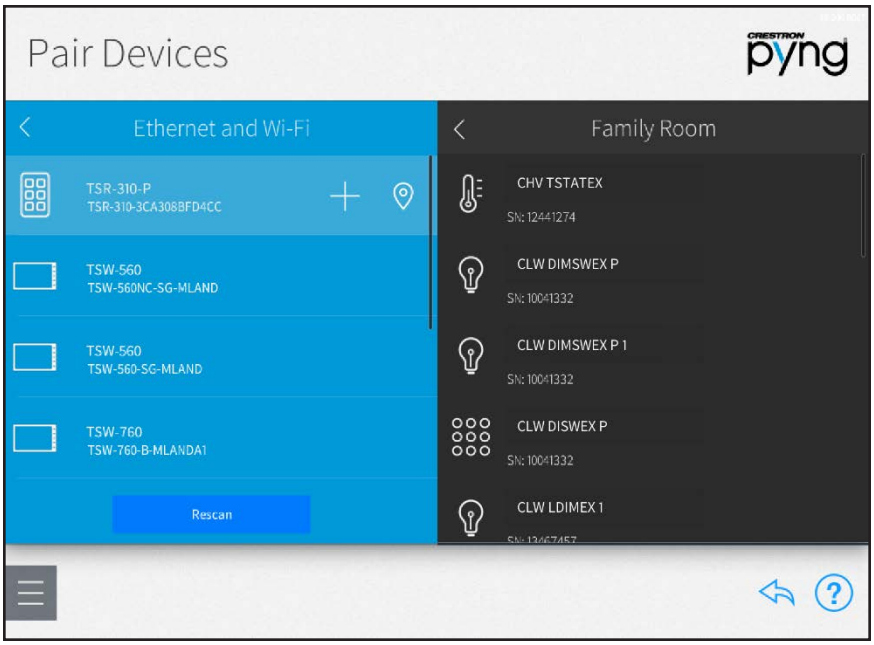


If necessary, tap **Rescan** to rescan the selected network for any unpaired wired devices.

To associate a paired wired device with a room:

1. Select the room where the device is installed from the **Select a room** menu. Refer to the image on pg. 21.
2. Select the device from the wired connection menu.

   Pair Devices Screen - Ethernet and Wi-Fi

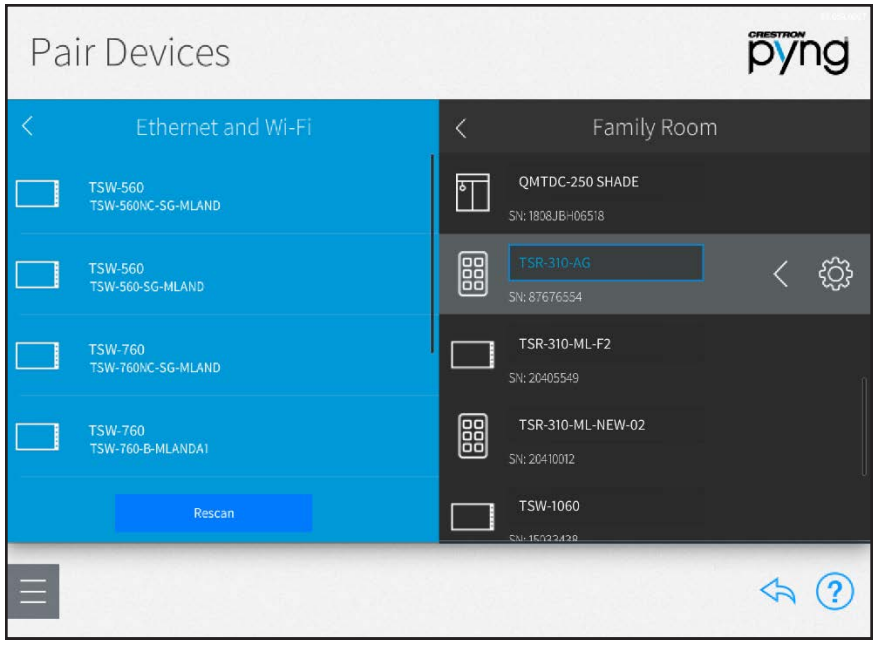


3. Tap the plus button (**+**) to add the device to the room selected in step 1.

   NOTE: Tap the location button to turn on the location feature for the device (if supported), which is used to locate the device in the room.

4. Enter a descriptive name for the device in the text field that is displayed.
5. For DM NVX devices, select whether the device will be configured as a receiver (audio input or output) or as a transmitter (audio input or output).
6. Tap **OK**. The device is added to the room.

Pair Devices Screen - Ethernet and Wi-Fi



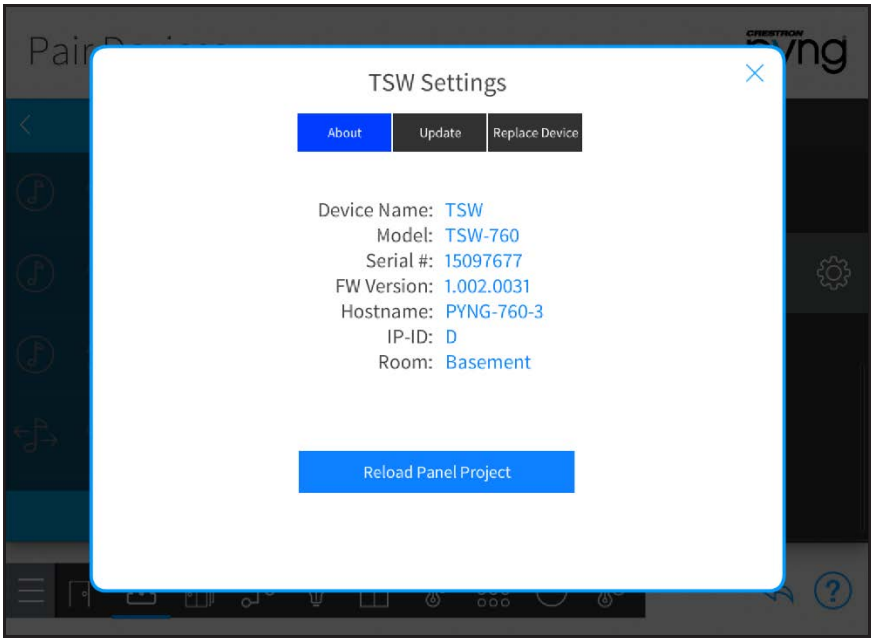
NOTES:

- After adding a DM NVX device, a pop-up dialog box is displayed that prompts the user to enter the device username and password. Enter the required credentials, and then tap **OK**. For new DM NVX devices, the default username and password are both "admin."
- For more information on configuring a DM NVX device on the network, refer to https://support.crestron.com/app/answers/answer_view/a_id/5861/loc/en_US.

After a wired device is associated with a room, tap the gear button next to the device name to display a Settings dialog box, which is used to configure device settings.

The settings dialog box for a touch screen is shown on the following page.

TSW Settings Dialog Box



NOTE: For more information about configuring device-specific settings, click the help button (?) on the bottom of the device's settings dialog box (if available), or refer to the device documentation.

Tap the back arrow (**<**) next to a wired device to disassociate the device from the room. The device is removed from the room and is added back to the wired connection menu that was used to pair the device.

NOTE: For most devices, removing the device from a room does not remove it from the entire system.

Tap the back arrow (**<**) next to a wired connection name to return to the **Crestron Wired and Wi-Fi** menu.

Tap the back arrow (**<**) next to **Crestron Wired and Wi-Fi** to return to the **Device Types** menu.

Pair Sonos Devices

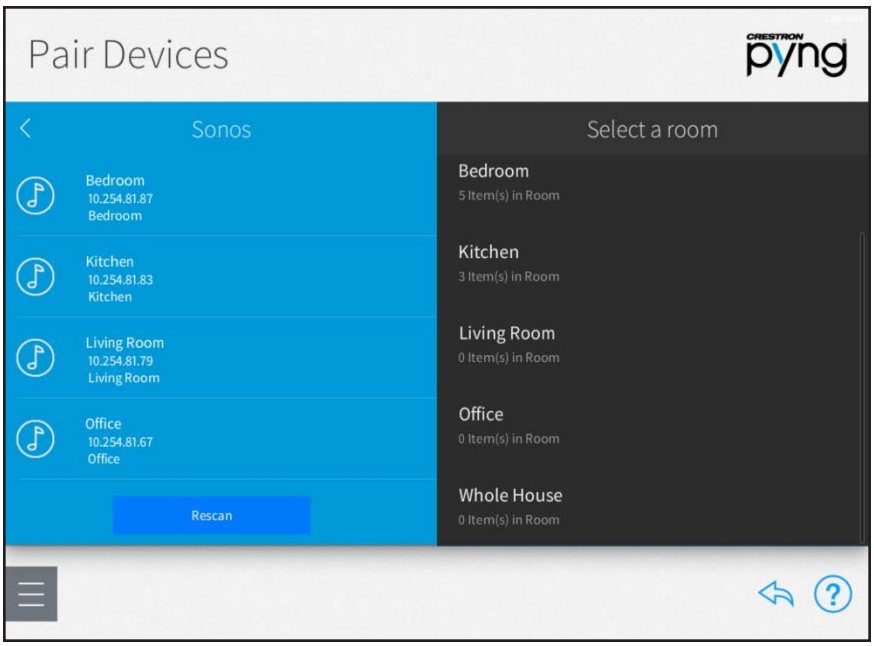
NOTE: For best practices, troubleshooting, and general information regarding integrating Sonos devices within the Crestron Pyng system, refer to "Appendix A: Sonos and Crestron Pyng Integration" on page 194.

To pair Sonos devices with the Crestron Pyng system, select **Sonos** from the **Device Types** menu to scan the local network for any Sonos devices.

NOTE: All Sonos devices must be discovered and configured using the Sonos app prior to pairing them with the Crestron Pyng system.

Discovered Sonos devices display underneath the **Sonos** menu.

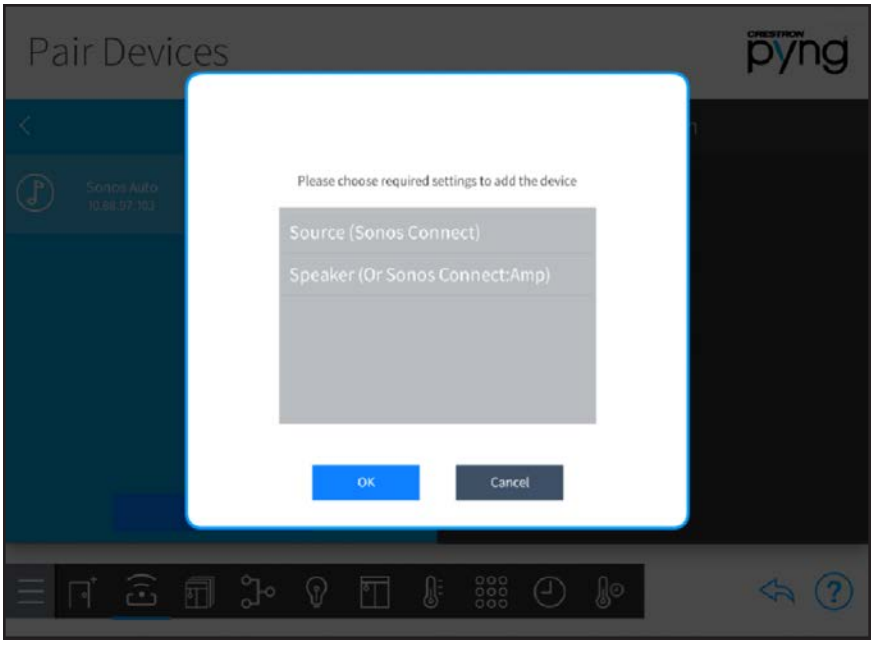
Pair Devices Screen - Sonos



To associate a paired Sonos device with a room:

1. Select the room where the Sonos device is installed from the **Select a room** menu.
2. Tap the plus button (**+**) next to the Sonos device name.
3. Use the pop-up menu to select whether the Sonos device is a source (CONNECT) or a speaker (One™, PLAY:1®, PLAY:3®, CONNECT, PLAY:5®, CONNECT:AMP, Sonos Beam™, PLAYBAR®, PLAYBASE® devices).

Sonos Device Source Selection Menu

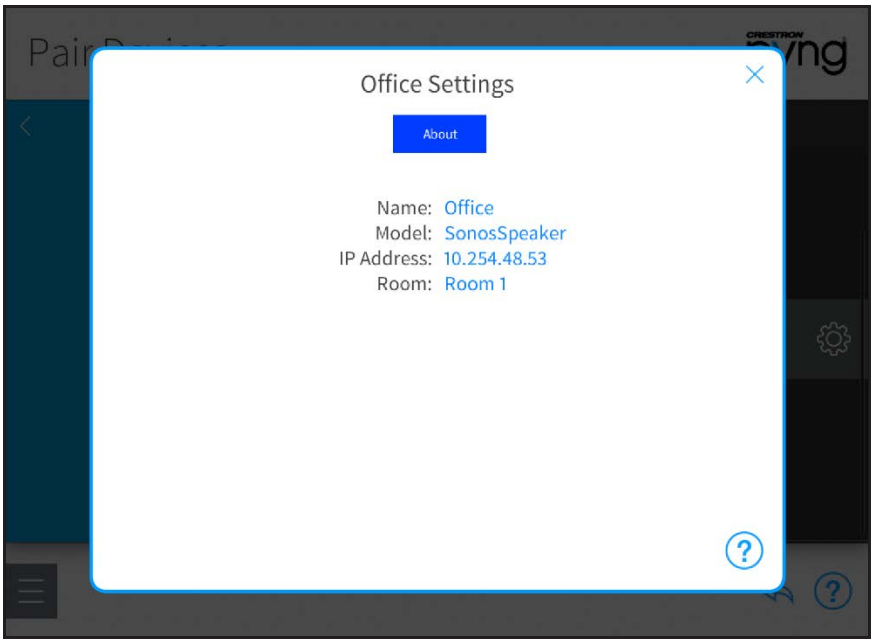


4. Tap **OK**. The Sonos device is added to the room.

If necessary, tap Rescan to rescan the network for unpaired Sonos devices.

After a Sonos device is associated with a room, tap the gear button next to the device name to display a Settings dialog box, which is used to configure device settings.

Sonos Device Settings Screen



NOTE: For more information about configuring device-specific settings, click the help button (?) on the bottom of the device's settings dialog box, or refer to the device documentation.

Tap the back arrow (<) next to a Sonos device to disassociate the device from the room. The device is removed from the room and is added back to the **Sonos** menu.

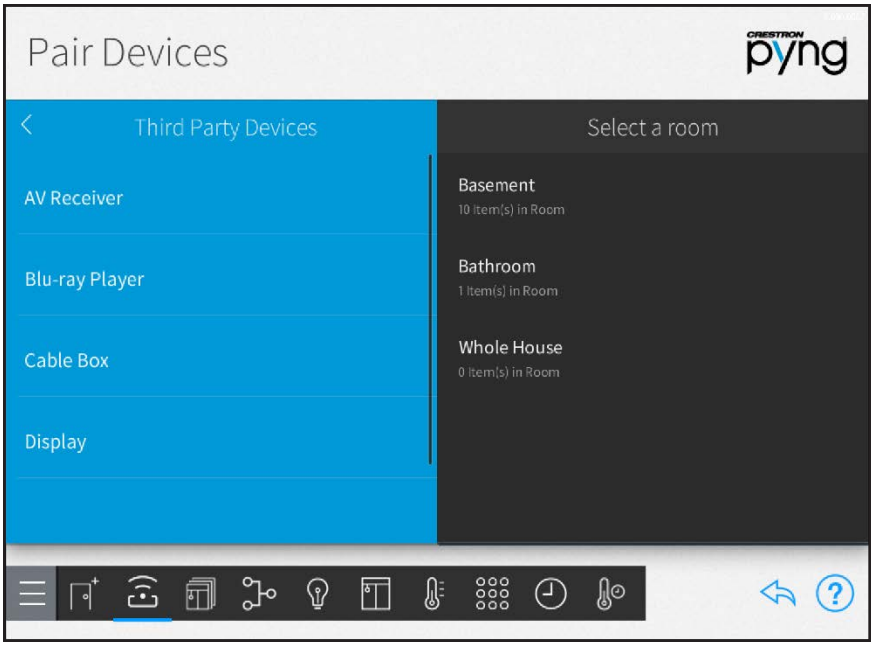
Tap the back arrow (<) next to **Sonos** to return to the **Device Types** menu.

Pair Third Party Devices

Select Third Party from the Device Types menu to pair third party devices with the Crestron Pyng system. Third party devices may be paired after their drivers are downloaded and installed into the system.

NOTE: Only devices with discrete on and off commands should be paired with the system. If, for example, a device with an auto-off timer is paired with the system, the device may turn itself off while the room remains on. This behavior causes the device to power on and become out of sync with the room after the room is powered off.

Pair Devices - Third Party Devices

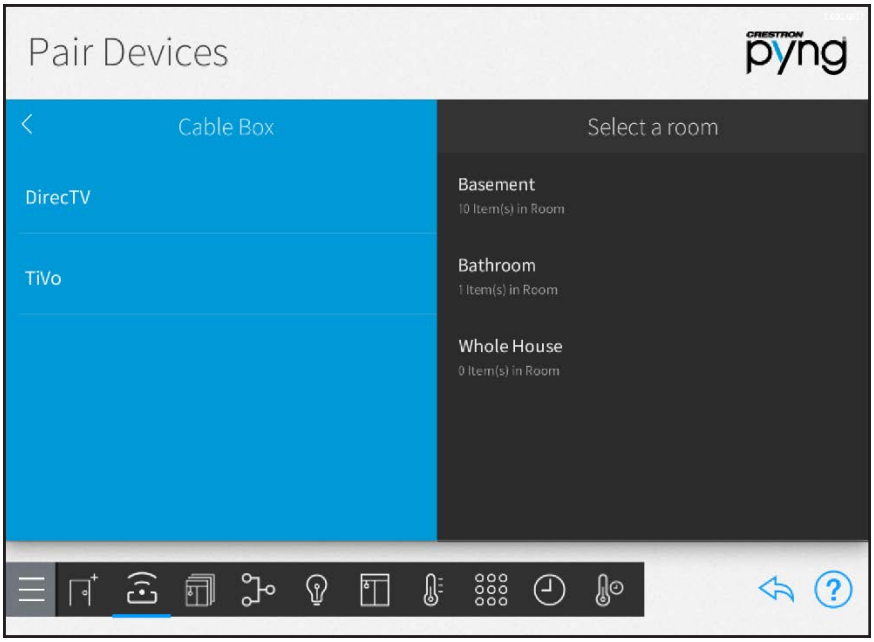


Crestron Certified Drivers for third party devices are added automatically to the system after they become certified. Additionally, custom device drivers may be side loaded directly into the CP4-R for added device support.

To pair third party devices with the Crestron Pyng system:

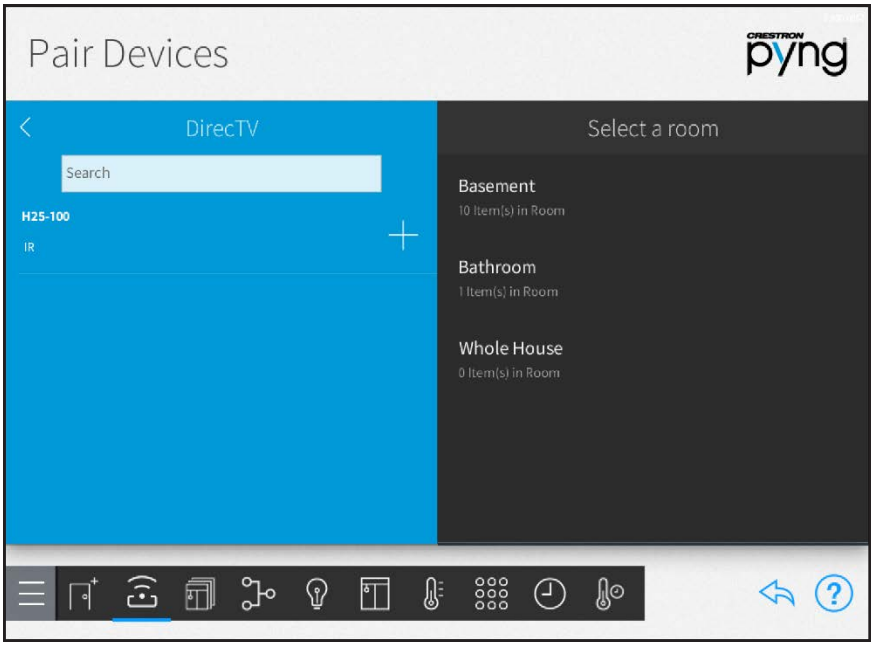
1. Select the device type from the **Third Party Devices** menu.

   Pair Devices - Cable Box



2. Select the device manufacturer from the device type menu. The menu for DirecTV® cable boxes is shown below.

   Pair Devices - DirecTV



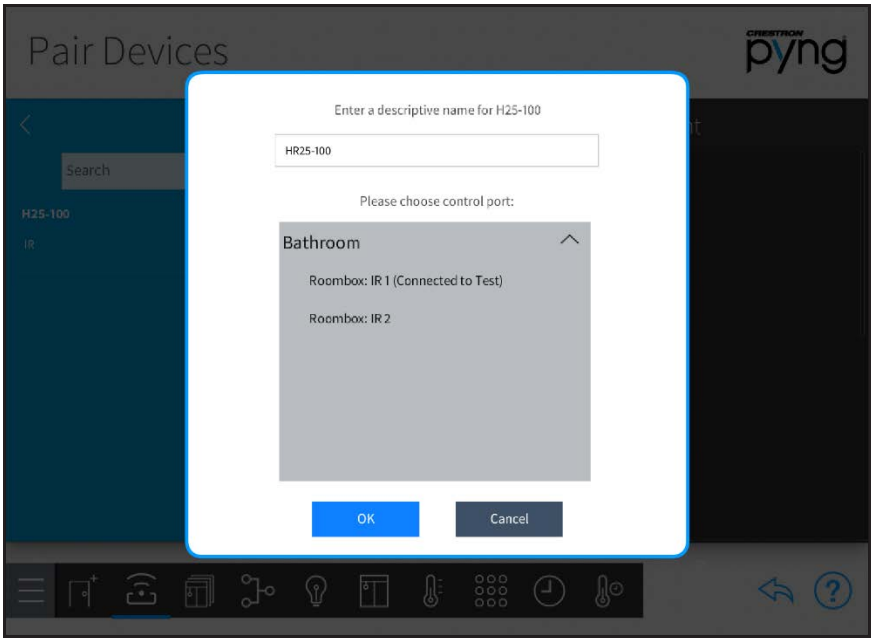
3. Select a room from the **Select a room** menu where the third party device is installed.

4. Tap the plus button (+) next to the appropriate device model. The device driver downloads from the cloud (if it has not been already downloaded).

   NOTE: When a device is added to the system using a Crestron Certified device driver, the device driver does not update automatically in the system when a new version is released in the cloud. For instructions on installing an updated Crestron Certified device driver, refer to "Appendix G: Update Crestron Certified Drivers" on page 248.

5. Enter a descriptive name for the device in the pop-up dialog box that is displayed.
6. Configure the provided transport settings used for device communication:
   - For IR, serial, and CEC-controlled devices, select a control port from the list of available ports.

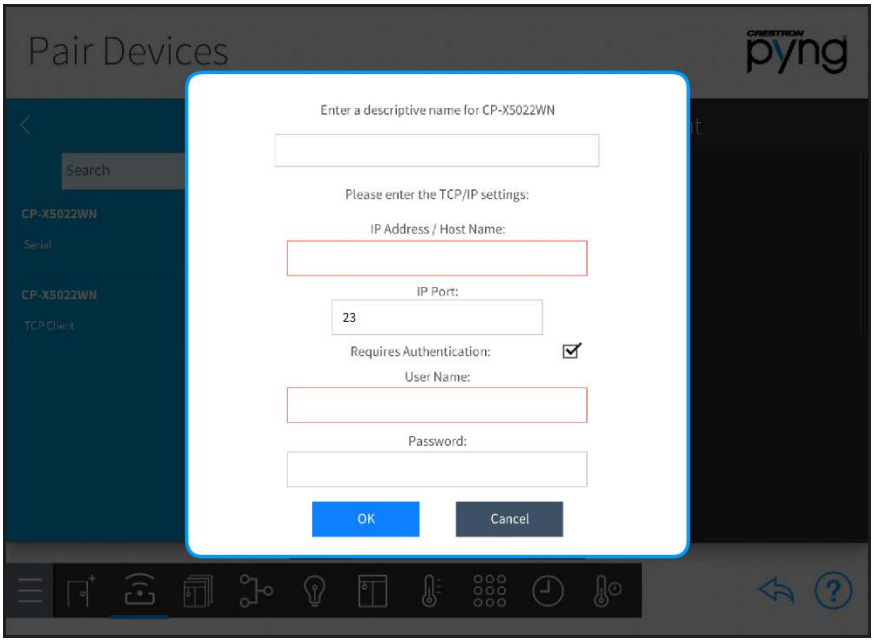
     Pair Devices - IR Device Configuration

     NOTE: IP devices must be configured with a static IP address. The system will no longer be able to detect the device if its IP address changes.

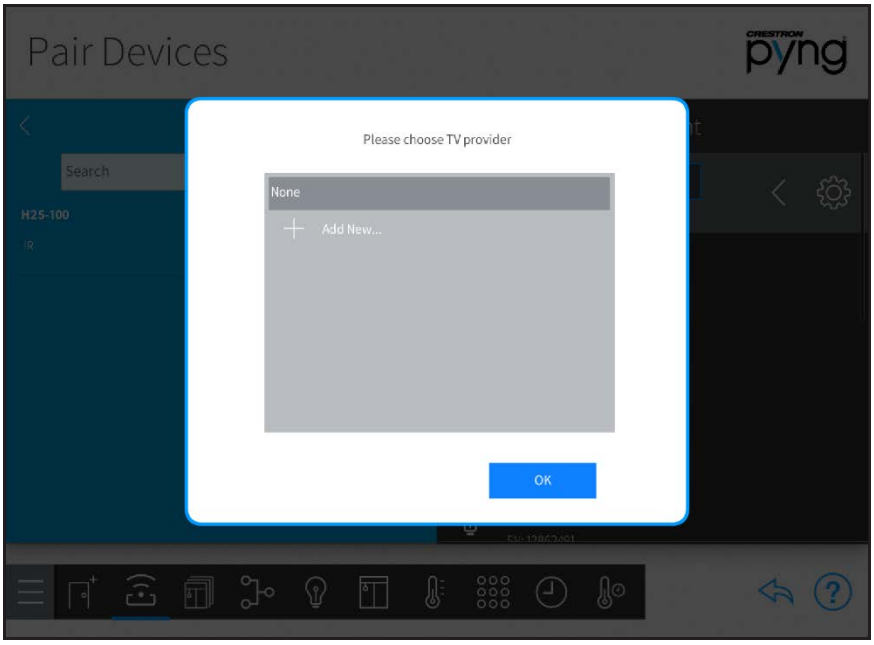
   - For TCP client devices, enter the device IP address or hostname, IP port, and authentication credentials (if required).

Pair Devices - TCP Device Configuration



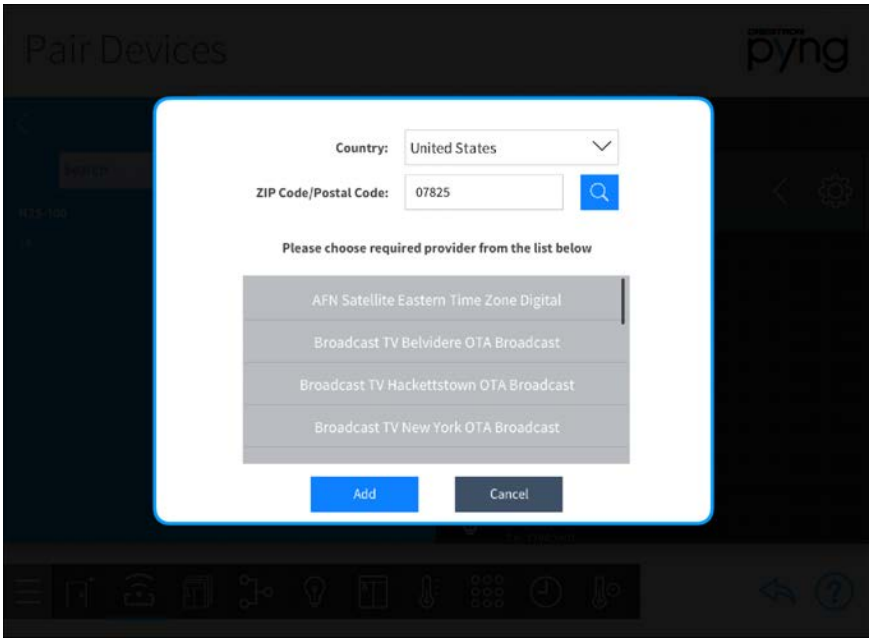
7. For cable boxes, select a television provider from the list if it has already been added for another cable box, or tap **+ Add New** to add a new provider.

   Pair Devices - Please choose TV provider



8. Add a new television provider (if necessary):
   a. Select a country and a zip/postal code to display a list of available providers.
   b. Select a provider from the list, and then tap **Add**.

Pair Devices - Select a Provider



NOTE: A custom cable provider file must be created and made available to the system if the desired cable provider is not available. For more information, refer to "Appendix F: Create and Upload a Custom Television Provider" on page 243.

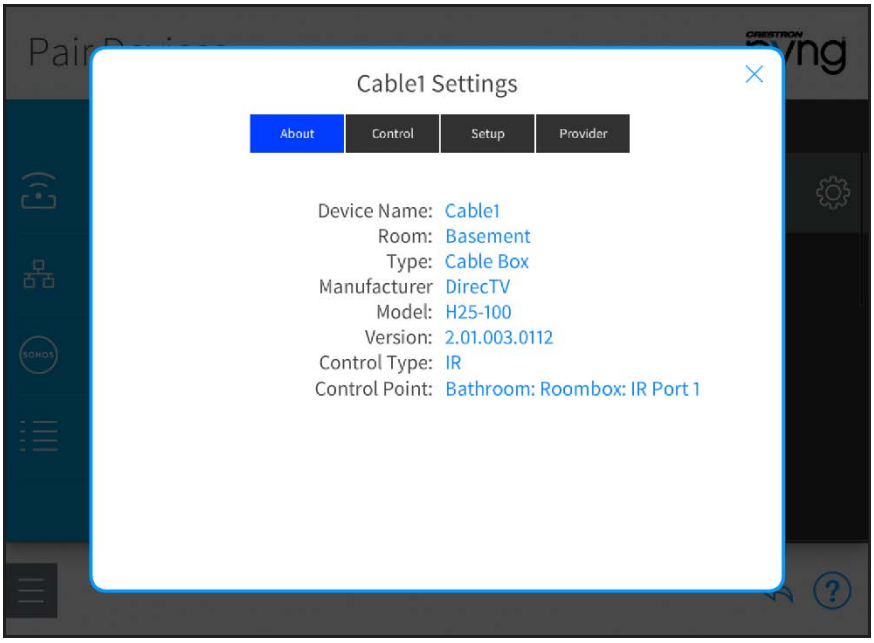
9. Tap **OK**. The third party device is added to the room.

NOTES:

- Custom driver package files or IR files may also be side loaded into the CP4-R over FTP or via the Device Learner tool in Crestron Toolbox. For more information, refer to "Appendix C: Create and Upload a Custom Device Driver" on page 213.
- Media controls for custom third party devices must be created manually and uploaded with the drive package file. For more information, refer to "Appendix C: Create and Upload a Custom Device Driver" on page 213.

After a third party device is associated with a room, tap the gear button next to the device name to display a Settings dialog box, which is used to configure device settings. The settings dialog box for a cable box is shown below.

Cable1 Settings Dialog Box



NOTE: For more information about configuring device-specific settings, click the help button ⓘ on the bottom right of the device's settings dialog box (if available), or refer to the device documentation.

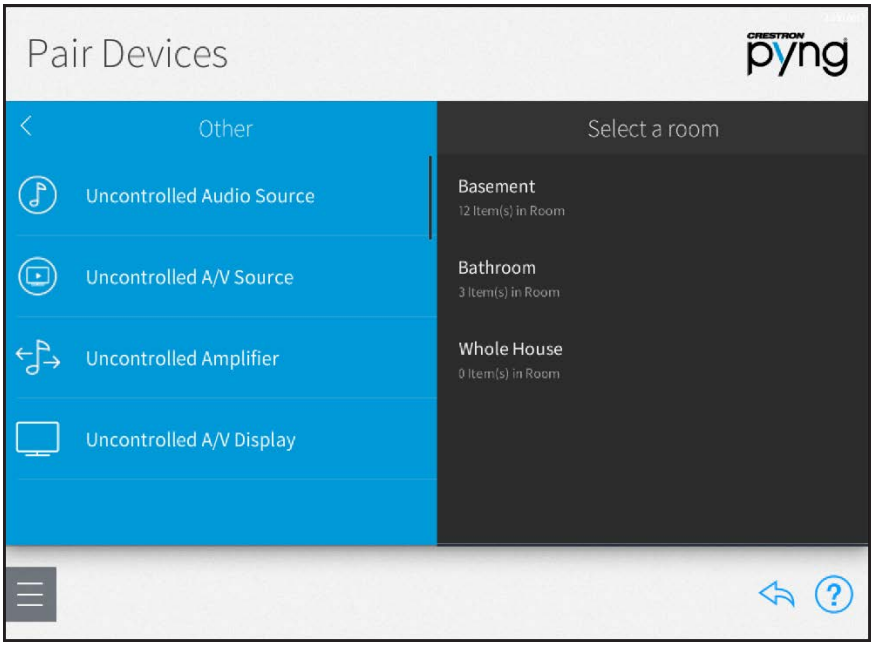
Tap the back arrow (**<**) next to a third party device to disassociate the device from the room. The device is removed from the room.

Tap the back arrow (<) next to **Third Party Devices** to return to the **Device Types** menu.

Pair Other Devices

Select **Other** from the **Device Types** menu to pair other devices with the Crestron Pyng system, including uncontrolled A/V devices, relay-controlled devices, and sensor devices.

Pair Devices Screen - Other



To pair a device with the Crestron Pyng system:

1. Select the room where the device is installed from the **Select a room** menu.
2. Select the device type from the **Other** menu, and tap the plus button (**+**).
3. Enter a descriptive name for the device.
4. Tap **OK**. The device is added to the room.

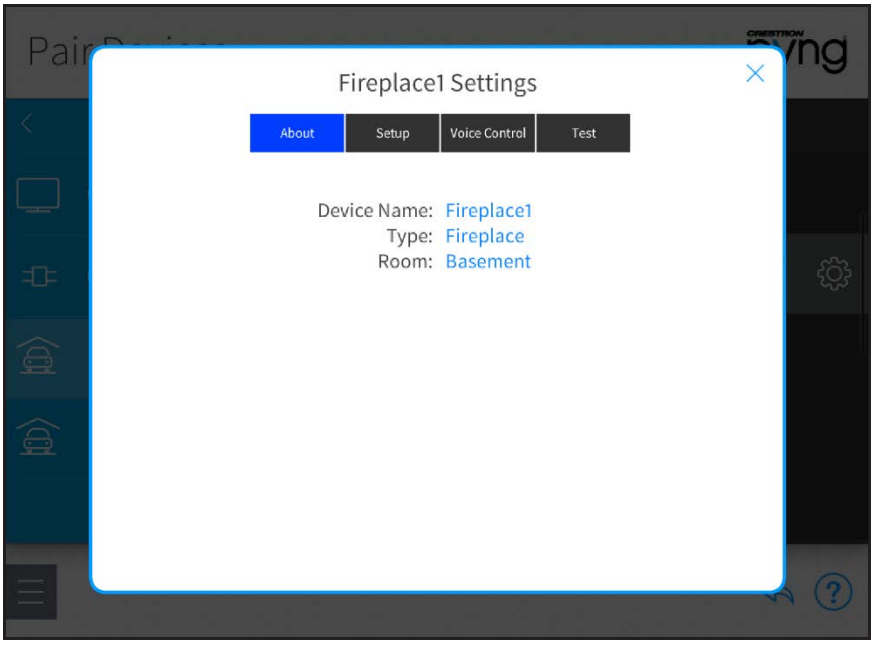
NOTES:

- Uncontrolled and relay-controlled devices must be connected to the appropriate hardware in order to function properly in the system. Set up and test connections for applicable devices in the device's settings screen.
- The status of controlled devices is not reported by the system. The device status must be verified manually.

After a device is associated with a room, tap the gear button next to the device name to display a Settings dialog box, which is used to configure device settings.

The settings dialog box for a relay-controlled fireplace is shown on the following page.

Fireplace1 Settings Dialog Box



NOTE: For more information about configuring device-specific settings, click the help button (?) on the bottom of the device settings dialog box (if available), or refer to the device documentation.

Tap the back arrow (**<**) next to a device to disassociate the device from the room. The device is removed from the room.

Tap the back arrow (**<**) next to **Other** to return to the **Device Types** menu.

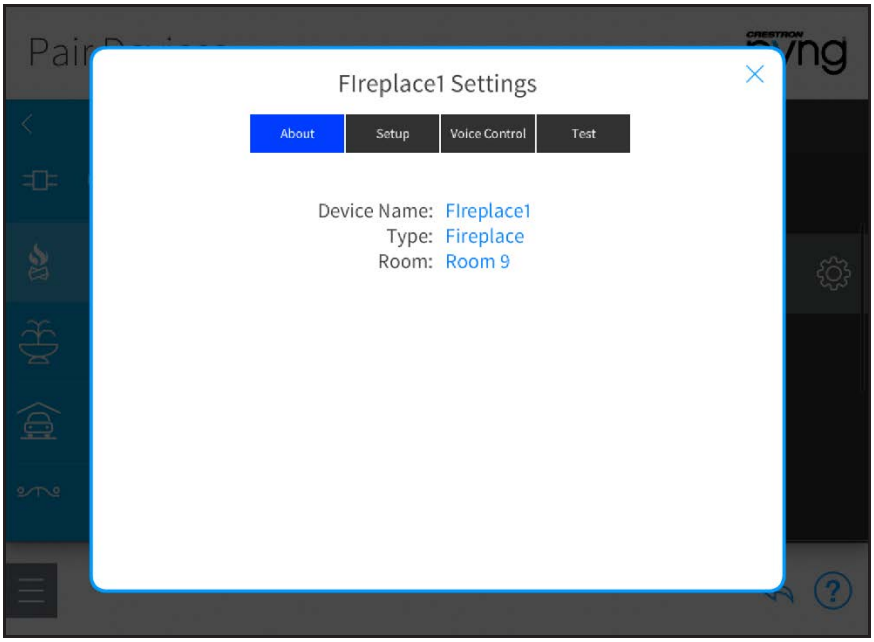
Configure a Relay-Controlled Device

To configure a relay-controlled device with the Crestron Pyng system:

NOTE: The relay device must be installed in the room and wired to the relay port of a paired control device in order to function properly. For more information, refer to the relay device's documentation.

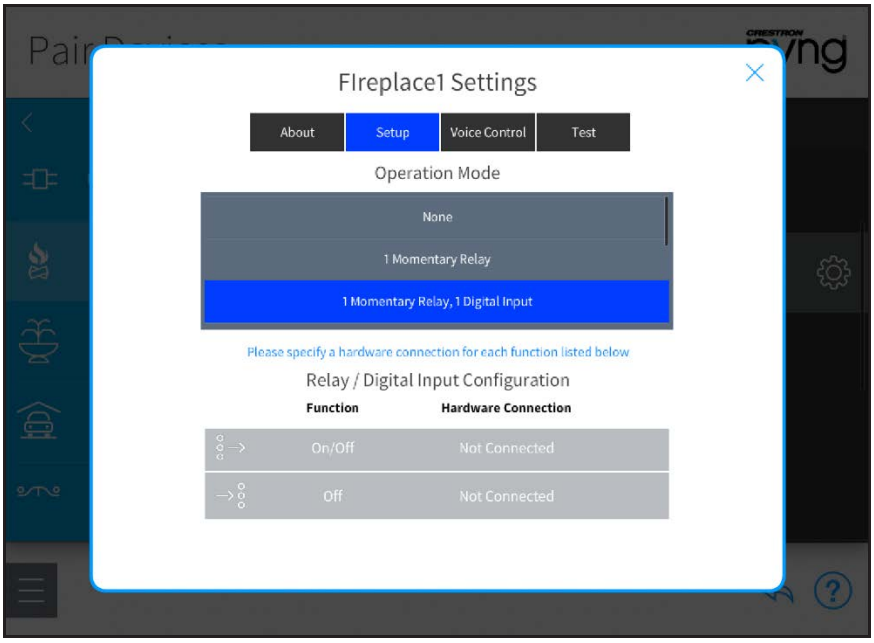
1. Select the room where the relay device is installed from the **Select a room** menu.
2. Tap the gear button next to the relay device. The Settings dialog box for the relay device is displayed.

   Fireplace1 Settings - About Tab



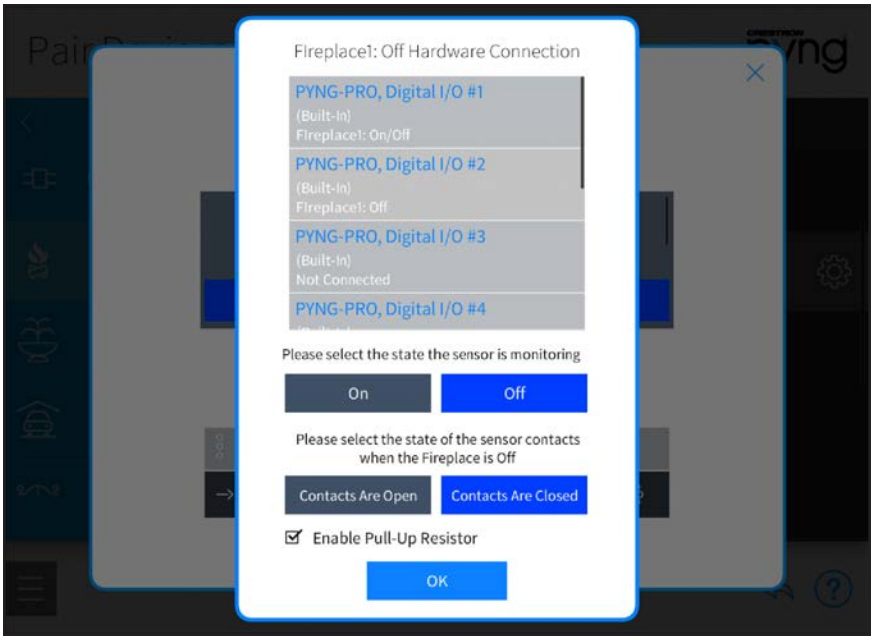
3. Tap the **Setup** tab.

Fireplace1 Settings - Setup Tab



4. Choose the appropriate relay behavior from the **Operation Mode** menu:
   - If a Momentary behavior is selected, the controlled device is set (turned on) or reset (turned off) by a relay command, and remains in the selected state for a set duration.
   - If a Latching behavior is selected, the controlled device is set or reset by a relay command, and remains in the selected state until an inverse command is sent.
5. Select a relay connection from the **Relay / Digital Input Configuration** menu.
6. Tap the gear button next to a relay or input to set a hardware connection for the selected behavior.

Fireplace1: Off Hardware Connection



NOTE: The appropriate devices must be added to the system prior to configuring a hardware connection.

a. Select the appropriate input port from the provided options.
b. If applicable, select the sensor monitoring state (**On** or **Off**).
c. If applicable, select the sensor contact states when turning off the relay device (**Contacts Are Open** or **Contacts Are Closed**).
d. Tap the checkbox next to **Enable Pull-Up Resistor** to enable or disable using a pull-up resistor for the hardware connection. A checked box indicates an enabled pull-up resistor.

7. Tap the **Test** tab to view and test the configured relay behavior(s). The hardware connection for the relay behavior(s) must be configured before they may be tested.

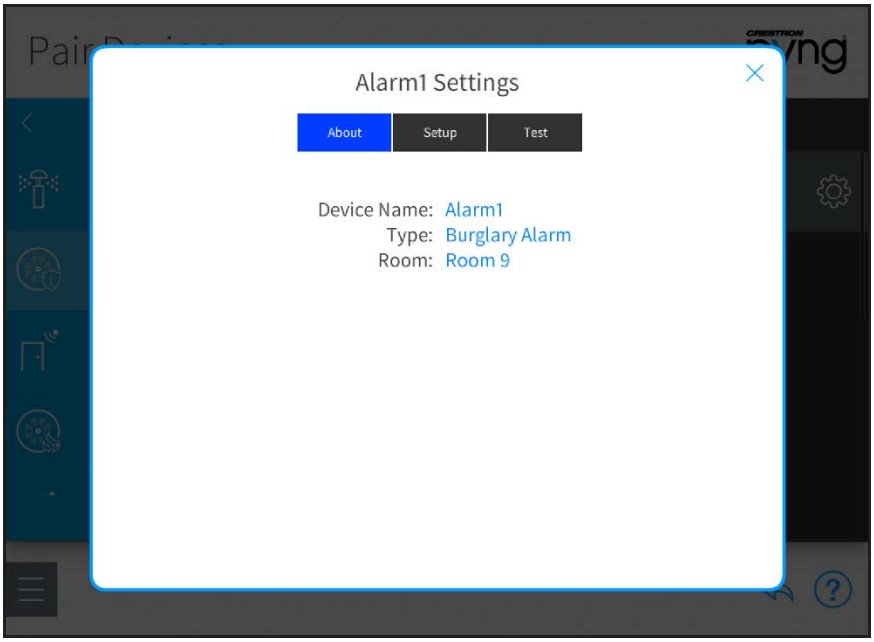
Configure a Sensor Device

To configure a sensor device with the Crestron Pyng system:

NOTE: The sensor device must be installed in the room and wired to a paired control device in order to function properly. For more information, refer to the sensor device documentation.

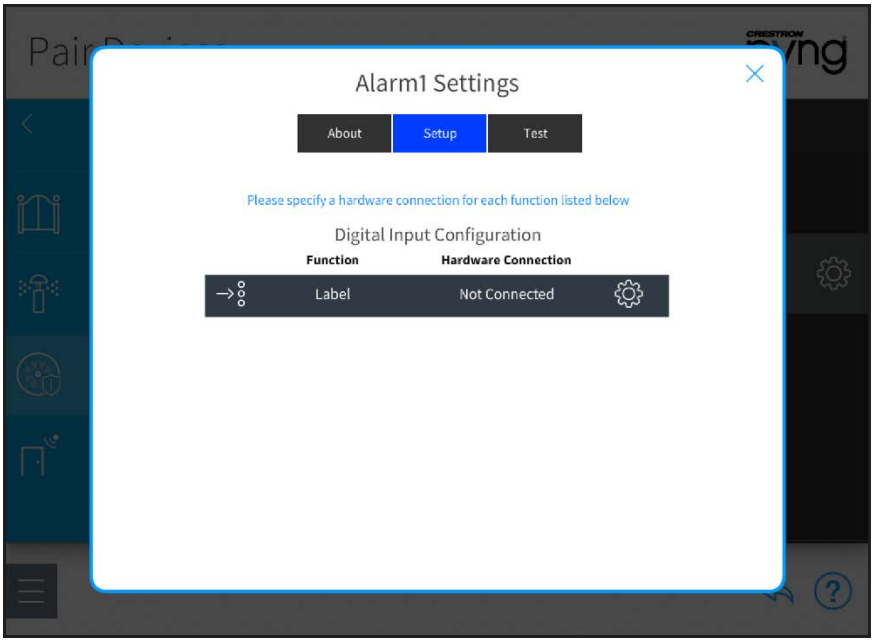
1. Select the room where the sensor device is installed from the **Select a room** menu.
2. Tap the gear button next to the sensor device. The Settings dialog box for the sensor device is displayed.

   Alarm1 Settings - About Tab



3. Tap the **Setup** tab.

Alarm1 Settings - Setup Tab



4. Select a device function from the **Digital Input Configuration** menu.
5. Tap the gear button next to an input to set a hardware connection for the selected function.

Alarm1: Label Hardware Connection

NOTE: The appropriate devices must be added to the system prior to configuring a hardware connection.

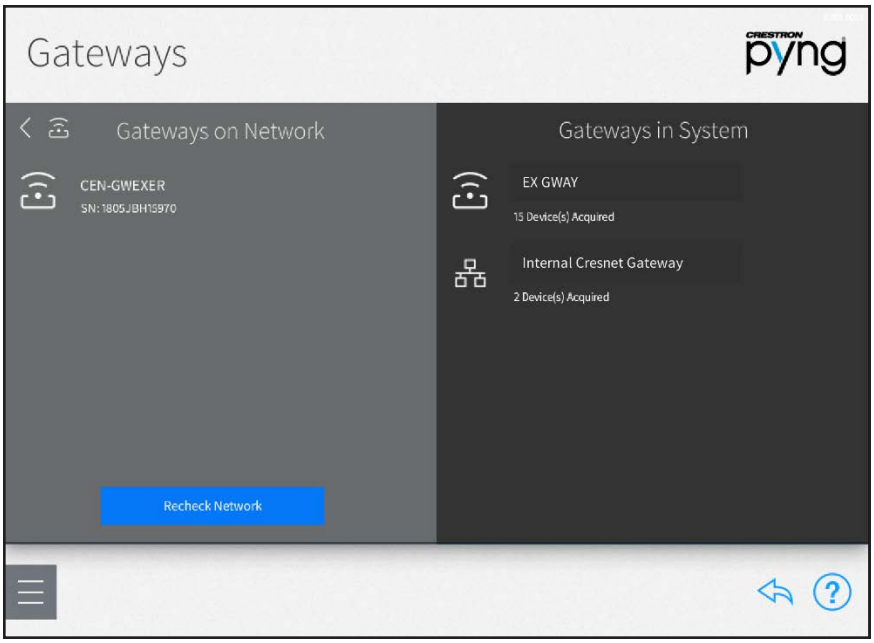
a. Select the appropriate input port from the provided options.
b. If applicable, select the sensor monitoring state (**On** or **Off**).
c. If applicable, select the sensor contact states when turning off the sensor device (**Contacts Are Open** or **Contacts Are Closed).**
d. Tap the checkbox next to **Enable Pull-Up Resistor** to enable or disable using a pull-up resistor for the hardware connection. A checked box indicates an enabled pull-up resistor.

6. Tap the **Test** tab to view and test the configured device function(s). The hardware connection for the device function(s) must be configured before they may be tested.

Manage Gateways

Tap **Manage Gateways** in the **Device Types** menu to scan the local network for any gateways that may be added to the Crestron Pyng system. Discovered gateways appear under the **Gateways on Network** menu.

Gateways Screen



Tap the plus button (**+**) next to a discovered gateway to add it to the system. A system may contain up to 15 gateways with a maximum of 50 paired devices per gateway.

Once a gateway has been added to the system, select it from the **Gateways in System** menu to access the following options.

Tap the gear button next to the gateway name to display a Settings dialog box, which is used to configure gateway settings.

EX GWAY Settings Dialog Box - About Tab

- Tap the **About** tab to view various gateway settings, including the gateway name, model, serial number, firmware version, and network status. Additionally, the assigned RF channel is displayed for wireless gateways.
- Tap the **Devices** tab to view all devices acquired to the gateway. The device name, serial number, device components (such as keypad or dimmer) and their locations in the house, and the network status are displayed for each device.
- Tap the **Channel** tab to view and configure the RF channel assigned to the gateway. For more information about assigning an RF channel, refer to the gateway's documentation.

NOTE: Removing a gateway also removes all devices acquired by that gateway.

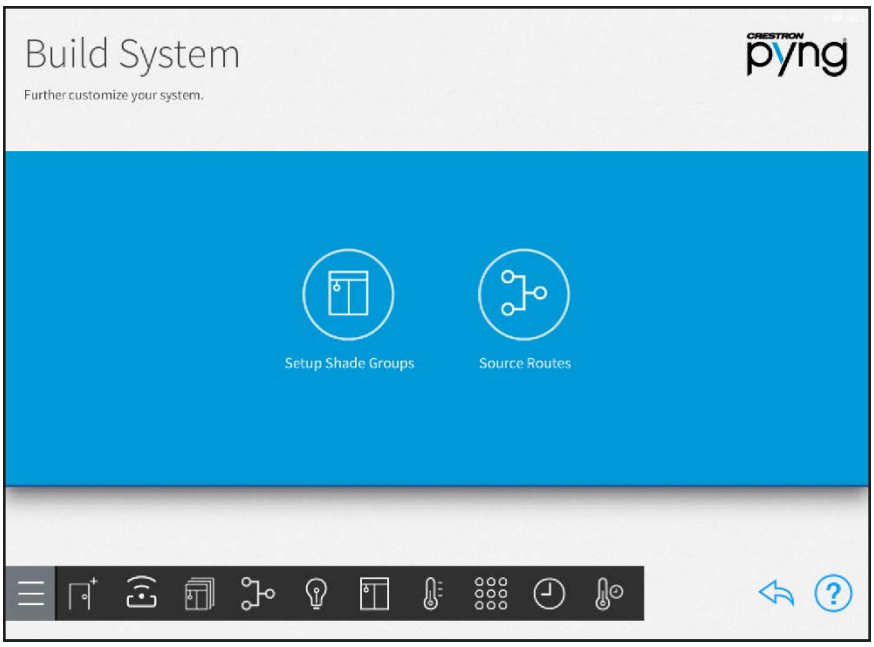
If necessary, tap **Recheck Network** to rescan the network for available gateways.

Tap the back arrow (**<**) next to **Gateways on Network** to return to the **Pair Devices** menu.

Step 3: Build System

Tap the Build System button on the **Setup** screen to display the **Build System** screen.

Build System Screen



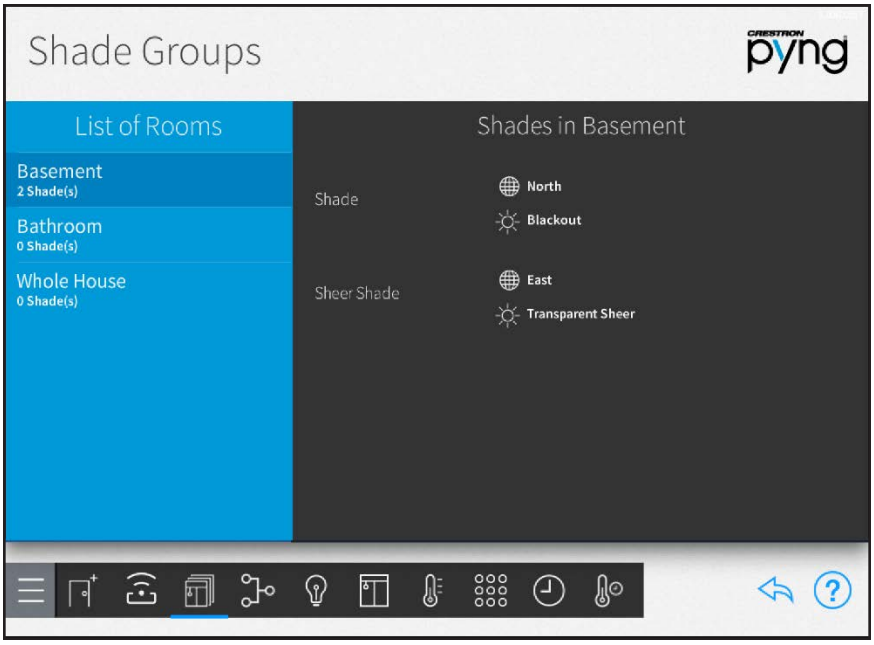
Use the **Build System** screen to group multiple shade motors together and to configure audio and video source routing behavior for the Crestron Pyng system.

Tap the back arrow button to return to the main **Setup** screen.

Shade Groups

Tap the **Setup Shade Groups** button on the **Build System** screen or the Shade Groups button on the setup menu to display the **Shade Groups** screen.

Shade Groups Screen



Use the **Shade Groups** screen to group multiple shade motors together. Shade motors that have the same fabric type and that are installed on the same window may be grouped. When shade motors are grouped, all shade motors for an entire window may be controlled as one.

Select a room from the **List of Rooms** menu to view all of the shade motors configured for that room. The user-defined name, the direction the associated window is facing, and the fabric type are displayed for each shade motor.

Shades motors that share the same window facing direction, the same fabric type, or both are grouped together automatically. From this point forward, the shade groups will appear in the configuration steps instead of the individual motors.

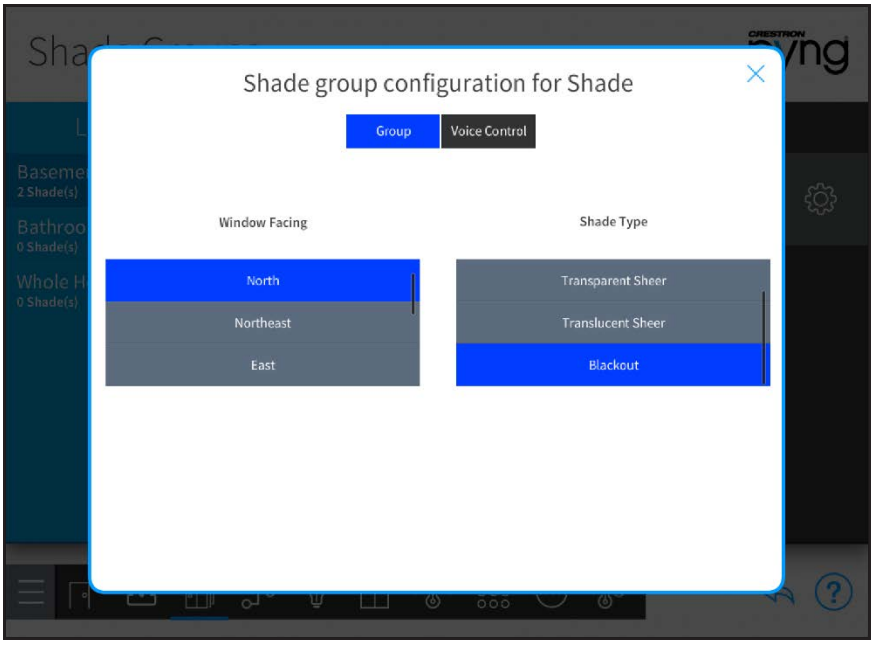
NOTES:

- Shade groups do not span across multiple rooms. However, multiple shade groups in different rooms may be controlled at the same time using shade scenes, actions, and events.
- Shade motors may be grouped by window facing direction only, fabric type only, or both window facing direction and fabric type.

To view and edit shade motor settings:

1. Select the shade motor from the **Shades in [Room]** menu.
2. Tap the gear button next to the motor name. The **Shade group configuration** dialog box is displayed.

Shade group configuration for Shade Dialog Box - Group Tab



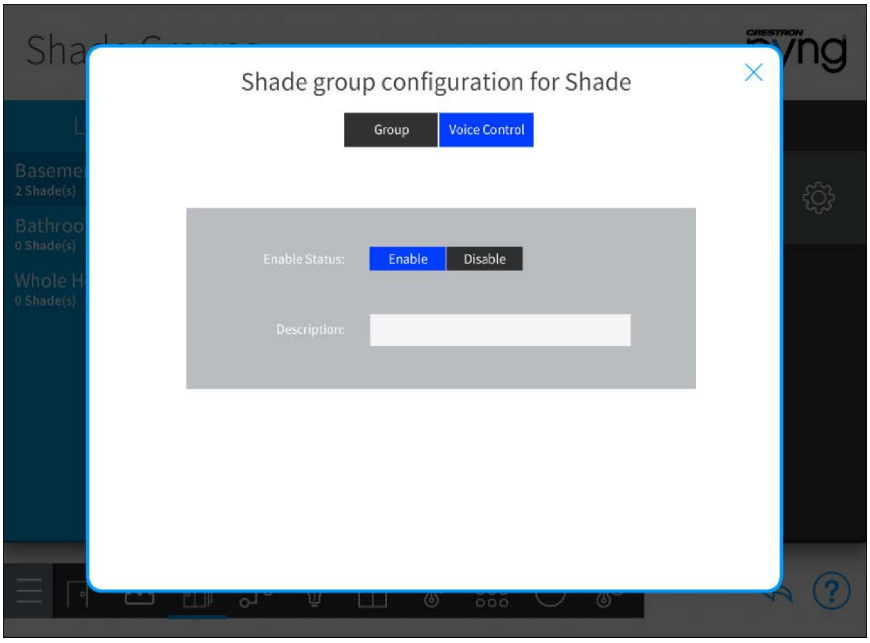
Tap the **Group** tab to change the window facing direction and the fabric type for the shade motor.

The following configuration options are provided:

- **Window Facing:** Select the direction that the shade motor's associated window is facing.
- **Shade Type:** Select the fabric type of the shade controlled by the shade motor.

Tap the **Voice Control** tab to enable or disable the ability to control the shade motor with voice control services (if enabled for the system).

Shade group configuration for Shade Dialog Box - Voice Control Tab



NOTE: For more information on configuring voice control for the Crestron Pyng system, refer to "Voice Control Settings" on page 120.

The following configuration options are provided:

- **Enable Status:** Select whether voice control is enabled or disabled for the shade motor.
- **Description:** Enter a description for the voice control command that appears in the voice control application.

Tap **Save** on the **Group** tab to save any changes.

On the **Shade Groups** screen, tap the back arrow button to return to the **Build System** screen.

Source Routes

Tap the **Source Routes** button on the **Build System** screen or the Source Routes button on the setup menu to display the **Source Routes** screen.

Source Routes Screen

Use the **Source Routes** screen to configure audio and video source routing behavior for the Crestron Pyng system.

Media sources and content items may be routed to the appropriate endpoints in one or more rooms across the system. Rooms may also be defined as media zones so that the room's media sources may be controlled from the user control interface.

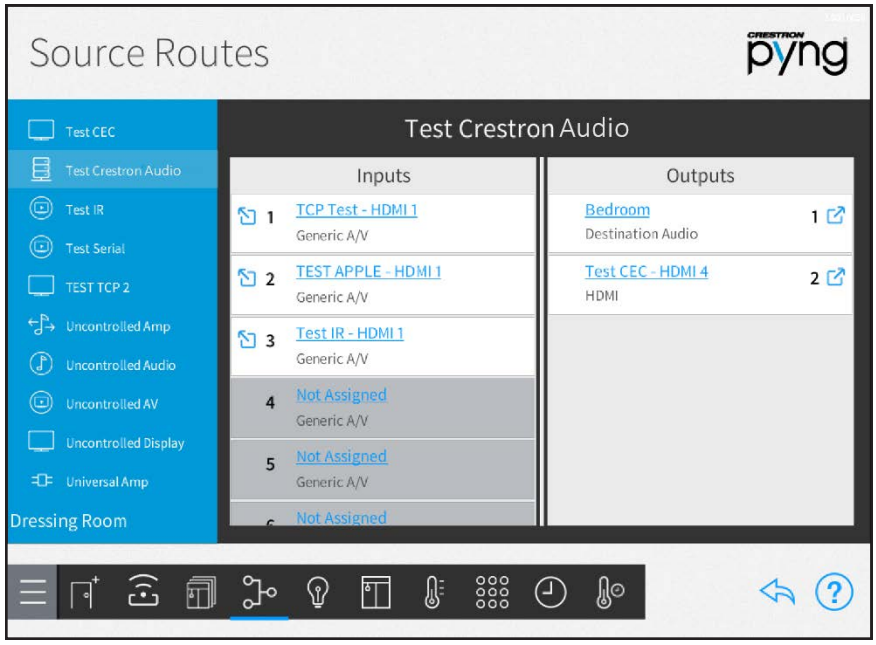
Select a room from the left screen menu to view all media devices for the room and to enable or disable the room as a media zone.

Configure Source Routes

To configure source routing behavior for a media device:

1. Select a room from the left screen menu.
2. Select a media device from the provided options. The input and output channels for the media device are displayed, as well as any device ports that have been assigned to a channel.

Source Routes Screen - Test Crestron Audio



The following source routing options may be configured:

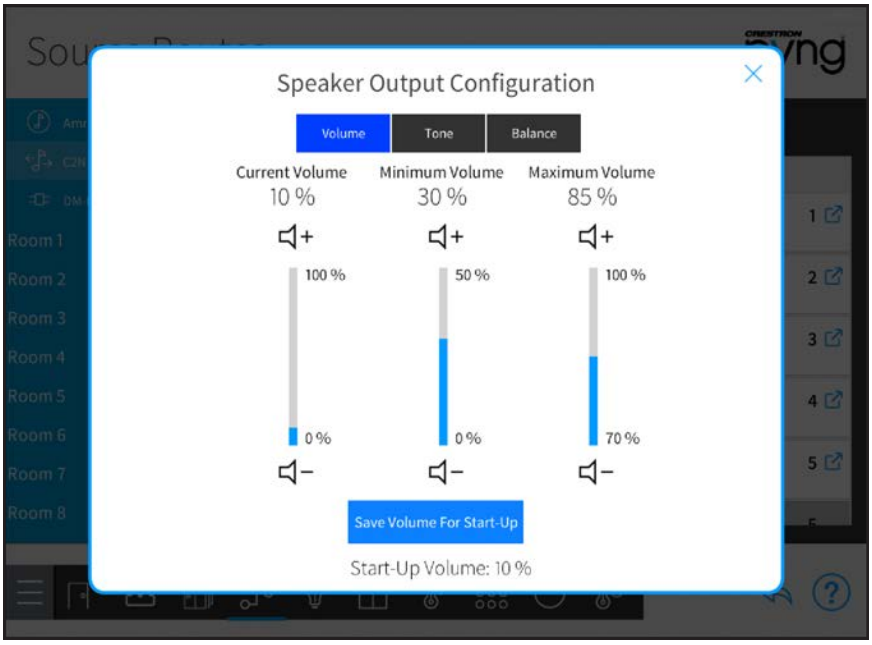
- Tap on an input or output channel to assign an available media device port to the selected channel.
- Tap the diagonal arrow button to the left of an input channel name to navigate to the input device's source routing selections.
- Tap the diagonal arrow button to the right of an output channel name to navigate to the output device's source routing selections.

Observe the following points when configuring source routes:

- If two media sources are routed to a DM NVX device (via the Input 1 and Input 2 ports), both media sources may not be used at the same time. For example, if switching from Input 1 to Input 2 in a media zone, all media zones where Input 1 is selected switch to Input 2.
- CEC devices must be routed manually to the HDMI® input that matches the control port that was assigned to the device.
- If the audio signal for a video source is routed to a SWAMP audio expander endpoint, the audio signal will lag behind the video signal by a few seconds when the source is selected. This behavior occurs because the SWAMP device is warming up.

Tap the gear button next to an audio input or output channel to edit settings for the speaker channel.

Speaker Output Configuration



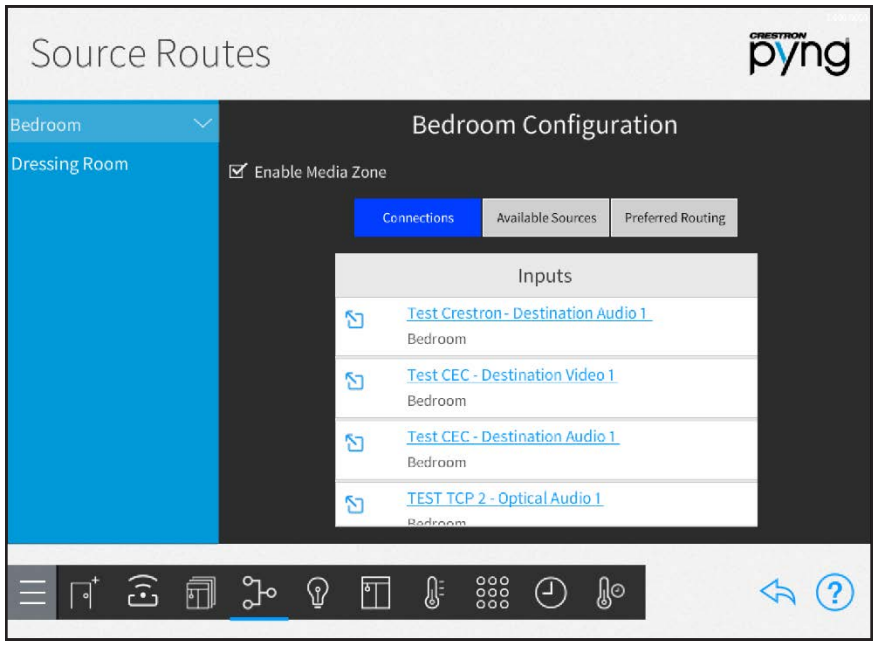
NOTE: The audio outputs of certain Crestron audio expanders may be bridged or bussed by assigning two output channels to the same speaker output, and tapping the gear button next to one of the outputs. A dialog box is displayed asking whether the outputs should be bridged or bussed. For more information, refer to the device documentation at www.crestron.com/manuals.

Configure a Media Zone

To enable a room as a media zone:

1. Select a room from the left screen menu.
2. Tap the check box next to Enable Media Zone to enable or disable the room as a media zone. A filled checkbox indicates that the room is enabled as a media zone.

Source Routes Screen - Bedroom Configuration (Connections)



When enabled as a media zone, the room may be selected from the **Media** screen in the user control interface for source control. Actions and events may also be configured for the media zone.

Rooms configured as media zones may be controlled by the TSR-310 user interface. For more information, refer to the Performance UI for TSR-310 Operations Guide (Doc. 8410) at www.crestron.com/manuals.

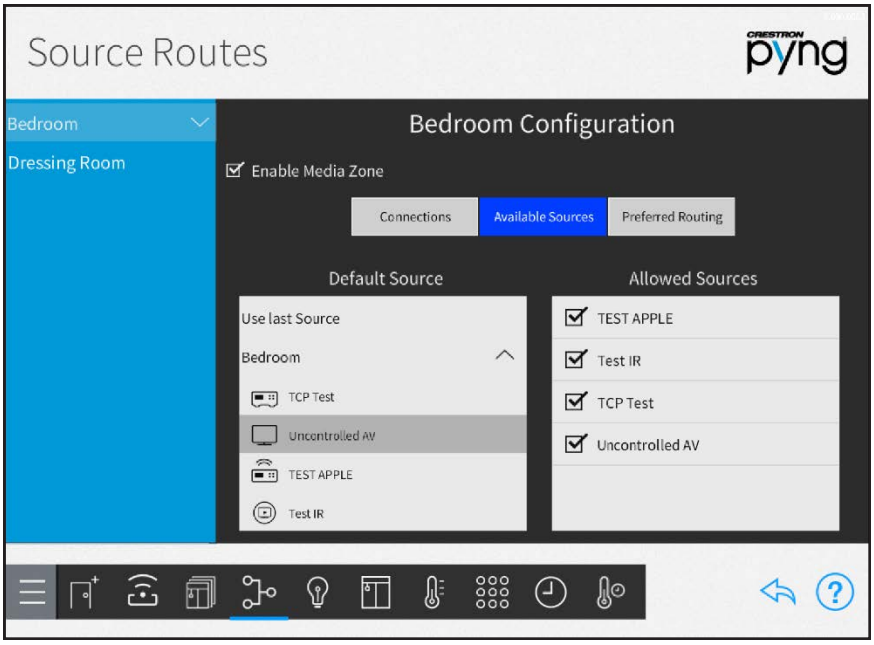
The following options may be viewed and configured for the media zone.

Tap the **Connections** tab to view and configure the media device inputs that are available for the room.

- Tap the input name to select a different input from the available options.
- Tap the diagonal arrow button to the left of the input to view the input device's source routing selections.

Tap the **Available Sources** tab to set the default media source for the room and to select the sources that may be controlled from the room.

Source Routes Screen - Bedroom Configuration (Available Sources)

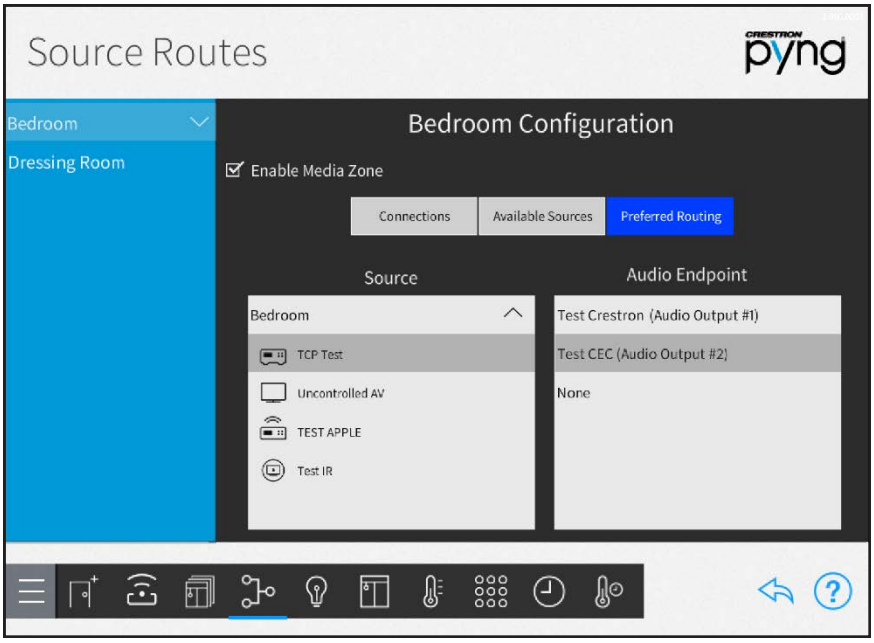


- Use the Default Source menu to select the default source that is shown for the room in the user control interface.
  - Select Use Last Source to make the last-used source the default.
  - Select None to have no source display by default. A blank screen is displayed instead.
- Use the Allowed Sources menu to select the media sources that may be controlled from the room.
  - Tap the checkbox next to a source name to enable or disable the source from appearing as a selectable item in the user control interface for the room.
  - A filled check box indicates that the source may be selected for the room.

NOTE: Tap and hold a media source in the Allowed Sources menu until it turns green to move it up or down in the menu. The order of the Allowed Sources menu matches the order that the media sources appear in the user control interface.

Tap the **Preferred Routing** tab to set a preferred audio endpoint in the room for a media source.

Source Routes Screen - Bedroom Configuration (Preferred Routing)



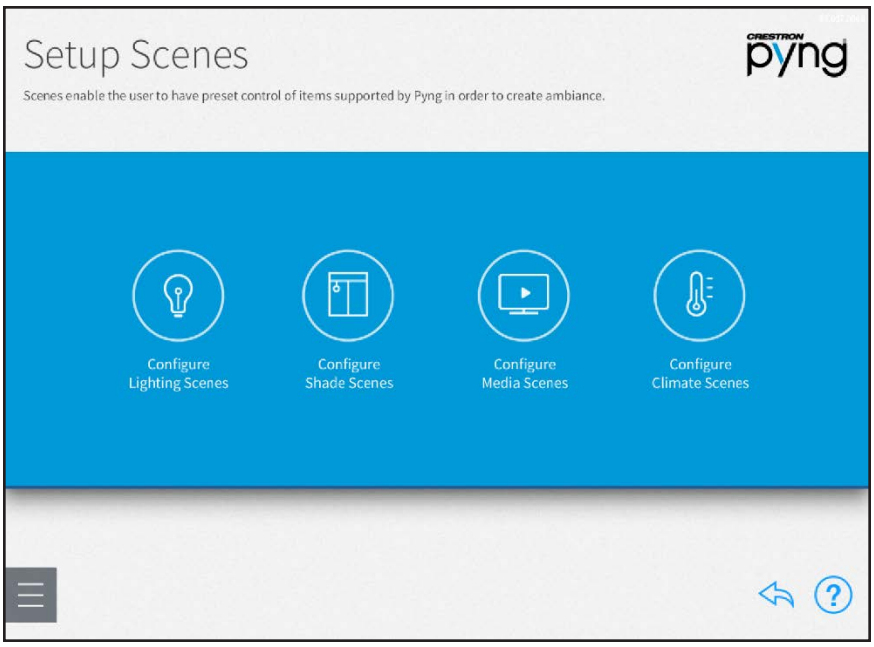
- Use the **Source** menu to select the media source that will be routed to an audio endpoint.
- Use the **Audio Endpoint** menu to select the preferred audio endpoint once a media source has been selected.

On the **Source Routes** screen, tap the back arrow button to return to the **Build System** screen.

Step 4: Create Scenes

Tap the **Create Scenes** button on the **Setup** screen to display the **Setup Scenes** screen.

Setup Scenes Screen



Use the **Setup Scenes** screen to create and configure scenes for the Crestron Pyng system, including lighting scenes, shade scenes, media scenes, and climate scenes.

Scenes are preset configurations for different device types that create a specific ambiance or perform a specific function when recalled. Scenes may be recalled from keypads, touch screens, and scheduled or triggered events.

For more information on programming buttons and events to recall scenes, refer to "Actions & Events" on page 71.

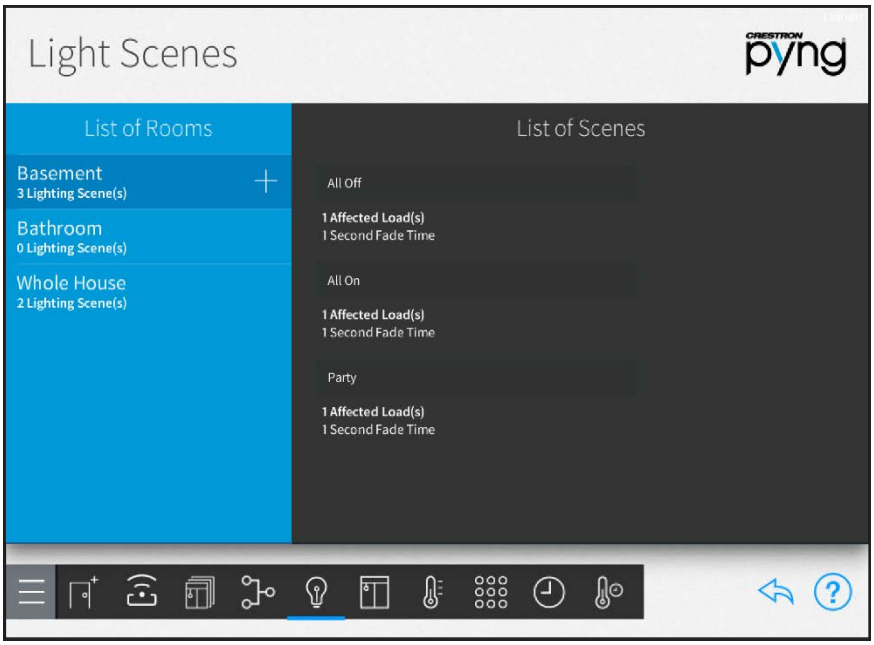
NOTE: Each room may contain up to 24 scenes for each scene type. (For example, a room may contain up to 24 lighting scenes, up to 24 shade scenes, and so forth.)

Tap the back arrow button to return to the main **Setup** screen.

Light Scenes

Tap the **Configure Lighting Scenes** button on the **Setup Scenes** screen or the Light Scenes button on the setup menu to display the **Light Scenes** screen.

Light Scenes Screen



Use the **Light Scenes** screen to create lighting scenes for one or more rooms or for the entire house.

Lighting scenes are used to set predefined levels for multiple lighting loads. By default, the Crestron Pyng system creates **All On** and **All Off** scenes for every room with a lighting load. Additionally, **All On** and **All Off** scenes are created automatically for the whole house after the first lighting load has been added to the system.

NOTE: Lighting scenes may also be created and configured by the homeowner in user control mode. Refer to "Create a User Lighting Scene" on page 150.

Create New Lighting Scenes

To create a new lighting scene:

1. Select a room from the **List of Rooms** menu. Refer to the image above.
2. Tap the plus button (**+**) next to the room name.
3. Enter a descriptive name for the lighting scene in the dialog box that is displayed.
4. Tap **OK**.

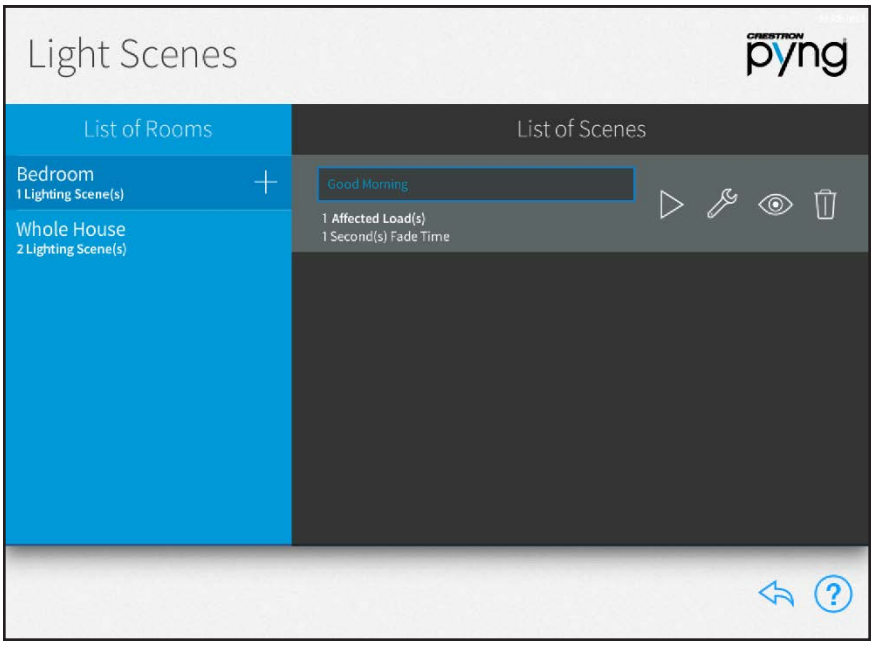
The new lighting scene is added to the room under the **List of Scenes** menu.

NOTE: All of the lighting loads that have been added to the chosen room are added to a new lighting scene at their current brightness levels. These levels may be adjusted by tapping the wrench button next to the lighting scene name.

Configure Lighting Scenes

A lighting scene may be configured and tested after it has been added to the system. Use the **List of Scenes** menu to select a lighting scene for configuration.

Light Scenes Screen - List of Scenes Menu

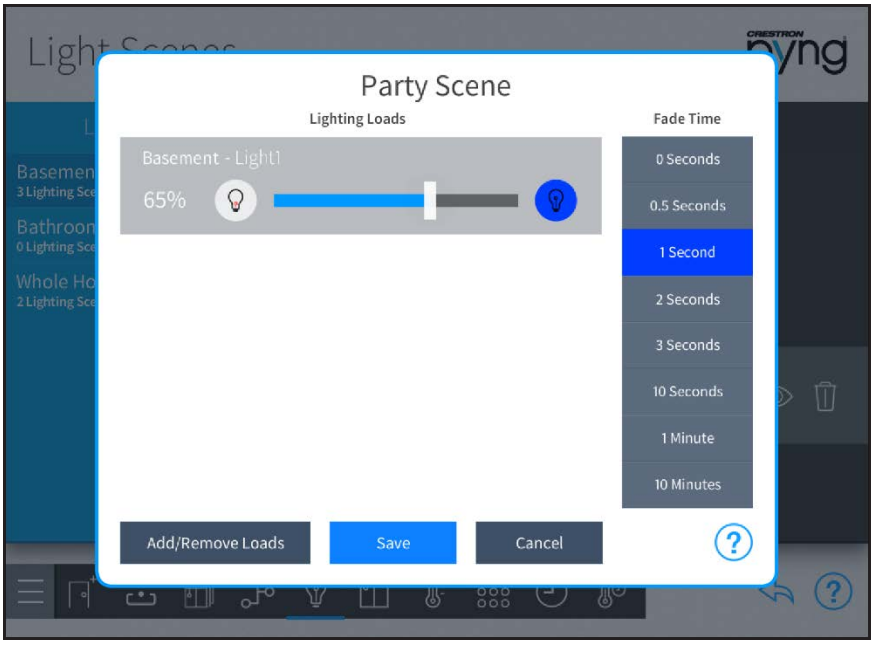


The following configuration options are displayed next to the lighting scene selection:

Tap the play button to recall the lighting scene in real time.

Tap the wrench button to edit the lighting loads that are affected by the scene. A dialog box for editing scene settings is displayed.

Party Scene Dialog Box



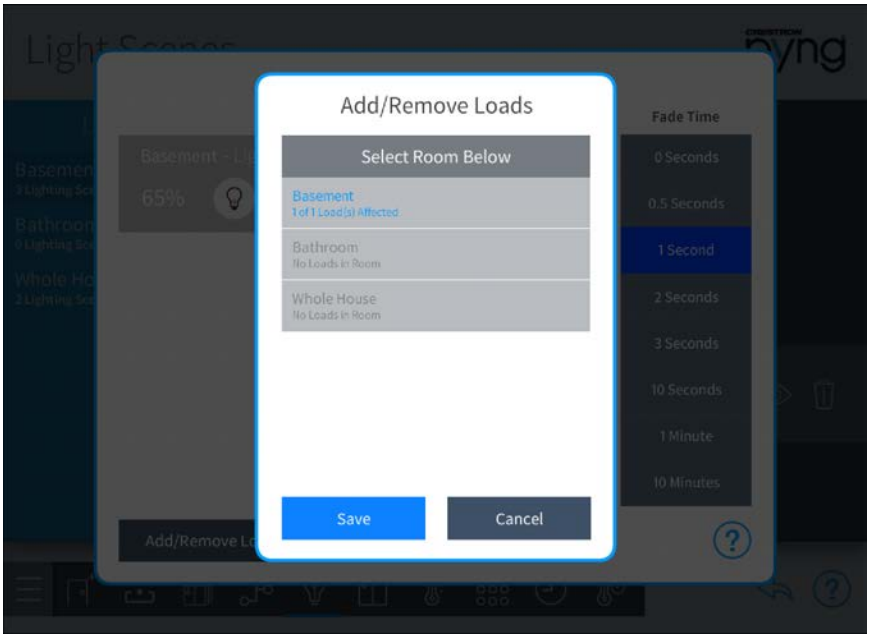
The following settings may be configured for each lighting scene:

- **Lighting Loads:** Use the provided controls to adjust the brightness levels for any lighting loads that have been added to the scene. Lighting loads are adjusted in real time.
  - Tap the left lightbulb button to turn off a lighting load (0%).
  - Tap the right lightbulb button to set a lighting load to its maximum brightness (100%).
  - Use the slider to adjust the brightness level incrementally for lighting loads with dimmers.

  NOTE: Lighting loads may also be adjusted using the dimmers or switches configured to control the lighting load.
- **Fade Time:** Select the duration that a lighting scene fades in after being recalled and fades out after the scene is completed.

Tap **Add/Remove Loads** to add lighting loads from different rooms or to remove existing lighting loads. An **Add/Remove Loads** dialog box is displayed.

Add/Remove Loads Dialog Box



To add or remove a lighting load from the scene:

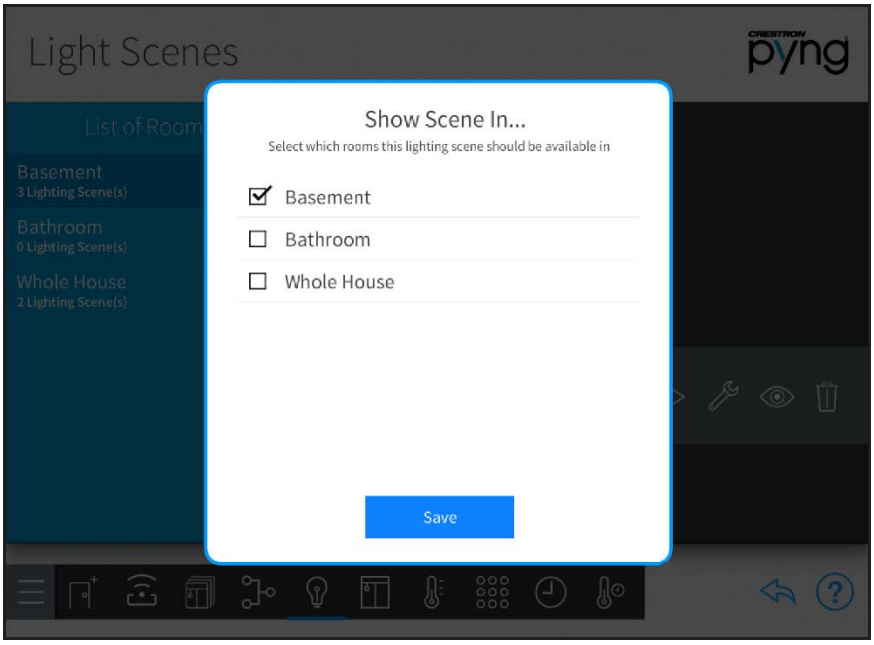
1. Select a room from the **Select Room Below** menu.
2. Tap the check box next to a lighting load to add or remove it from the scene. A filled check box indicates that load has been added to the scene.
3. Tap **Save** to save any changes or **Cancel** to discard the changes.

Any new lighting loads added to the scene may be adjusted in the **Lighting Loads** section of the scene configuration dialog box.

Once all changes have been made, tap **Save** to save any changes to the lighting scene or tap **Cancel** to discard the changes.

Tap the eye button to select the room(s) in which the scene will be visible. The **Show Scene In...** dialog box is displayed.

Show Scene In... Dialog Box



Tap the check box next to a room name to make the lighting scene visible in that room. A filled check box indicates that the lighting scene is visible and may be recalled from a control device in the room (such as a touch screen). Tap **Save** to save any changes.

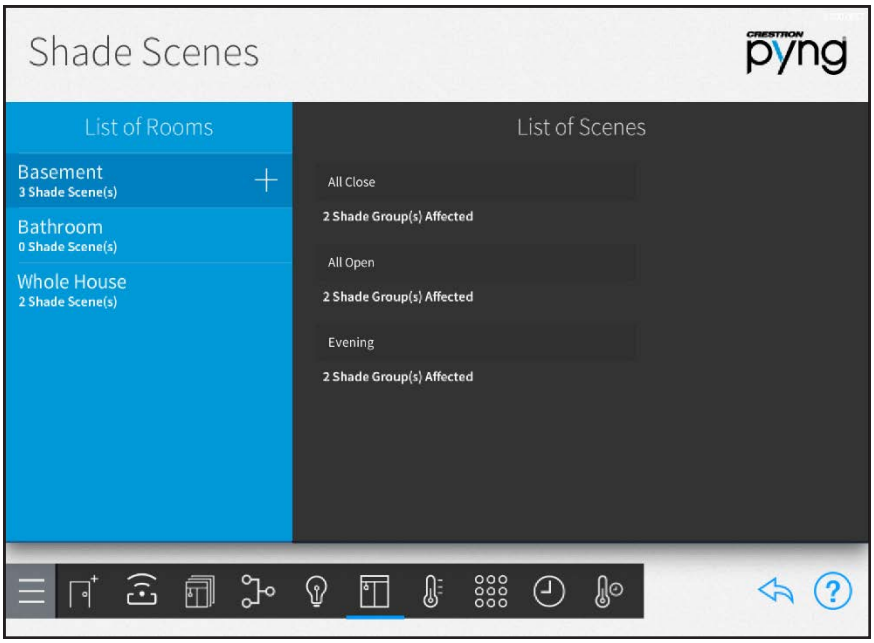
Tap the trashcan button to delete the lighting scene.

Tap the back arrow button to return to the **Setup Scenes** screen.

Shade Scenes

Tap the **Configure Shade Scenes** button on the **Setup Scenes** screen or the Shade Scenes button on the setup menu to display the **Shades Scenes** screen.

Shade Scenes Screen



Use the **Shades Scenes** screen to create shade scenes for one or more rooms or for the entire house.

Shade scenes are used to set predefined levels for multiple shade groups. By default, the Crestron Pyng system creates **All Open** and **All Closed** scenes for every room with a shade group. Additionally, **All Open** and **All Closed** scenes are created automatically for the whole house after the first shade motor has been added to the system.

NOTE: Shade scenes may also be created and configured by the homeowner in user control mode. Refer to "Create a User Shade Scene" on page 155.

Create New Shade Scenes

To create a new shade scene:

1. Select a room from the **List of Rooms** menu. Refer to the image above.
2. Tap the plus button (**+**) next to the room name.
3. Enter a descriptive name for the shade scene in the dialog box that is displayed.
4. Tap **OK**.

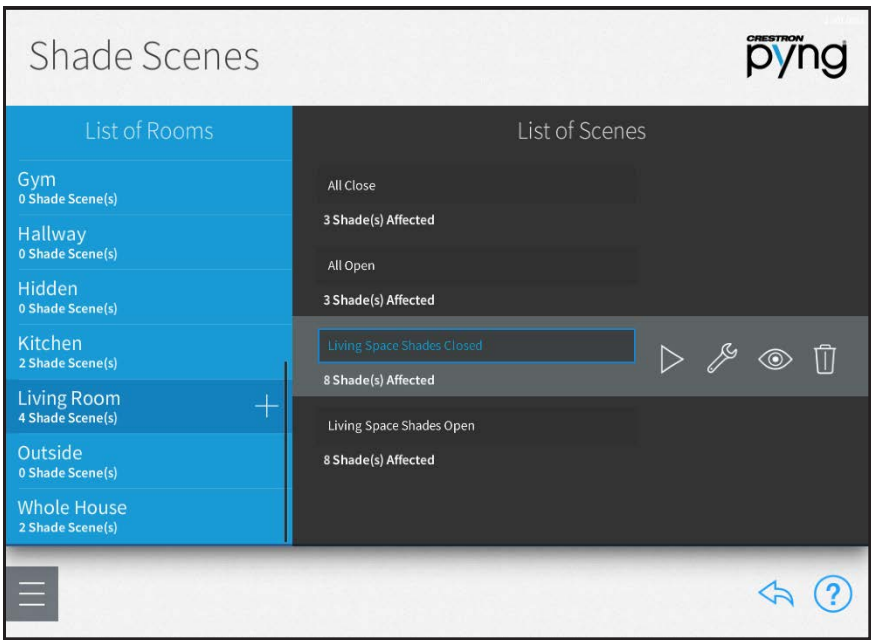
The new shade scene is added to the room under the **List of Scenes** menu.

NOTE: All of the shade groups that have been added to the chosen room are added to a new shade scene at their current levels. These levels may be adjusted by tapping the wrench button next to the shade scene name.

Configure Shade Scenes

A shade scene may be configured and tested after it has been added to the system. Use the **List of Scenes** menu to select a shade scene for configuration.

Shade Scenes Screen - List of Scenes Menu

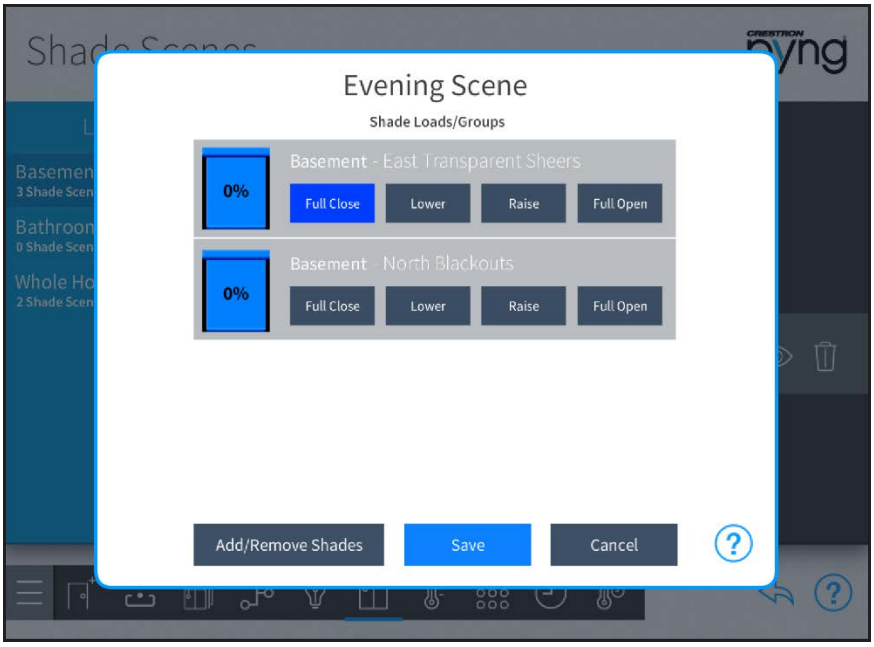


The following configuration options are displayed next to the shade scene selection:

Tap the play button to recall the shade scene in real time.

Tap the wrench button to edit the shade groups that are affected by the scene. A notice is displayed stating that the shade scene will be recalled upon entering the scene configuration dialog box. Tap **OK** to display the dialog box or tap **Cancel** to cancel.

Evening Scene Dialog Box



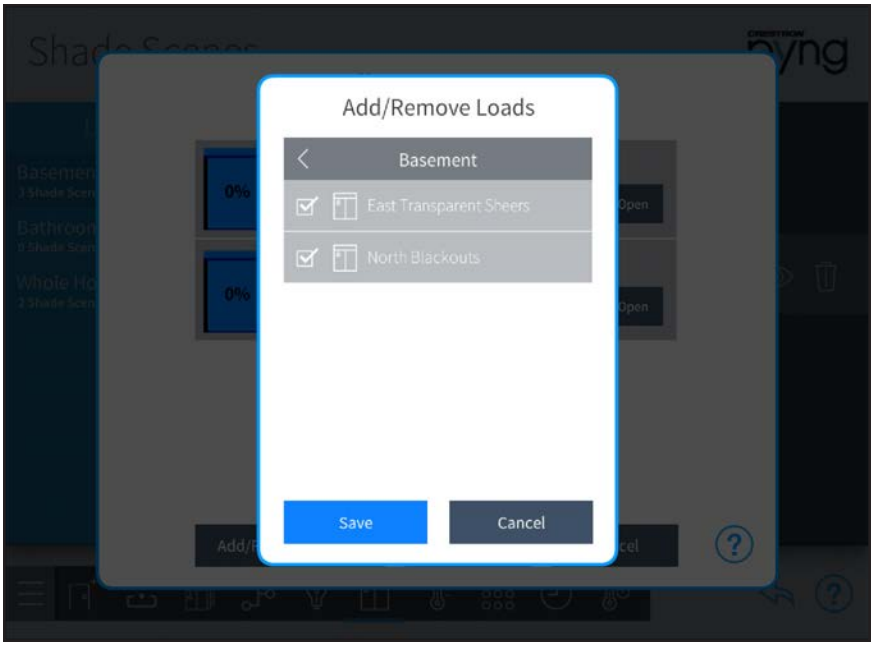
Use the **Shade Loads/Groups** controls to adjust the levels for any shade groups that have been added to the scene. Shade motors are adjusted in real time.

- Tap **Raise** or **Lower** to raise or lower the shade incrementally.
- Tap **Full Open** or **Full Close** to open or close the shade fully.
- The icon to the left of each shade load shows the percentage that the shade group is open in real time.

NOTE: Shade loads may also be adjusted using the shade motor controls or using keypads configured to control the shade motors.

Tap **Add/Remove Loads** to add shade groups from different rooms or to remove existing shade groups. An **Add/Remove Loads** dialog box is displayed.

Add/Remove Loads Dialog Box



To add or remove a shade group:

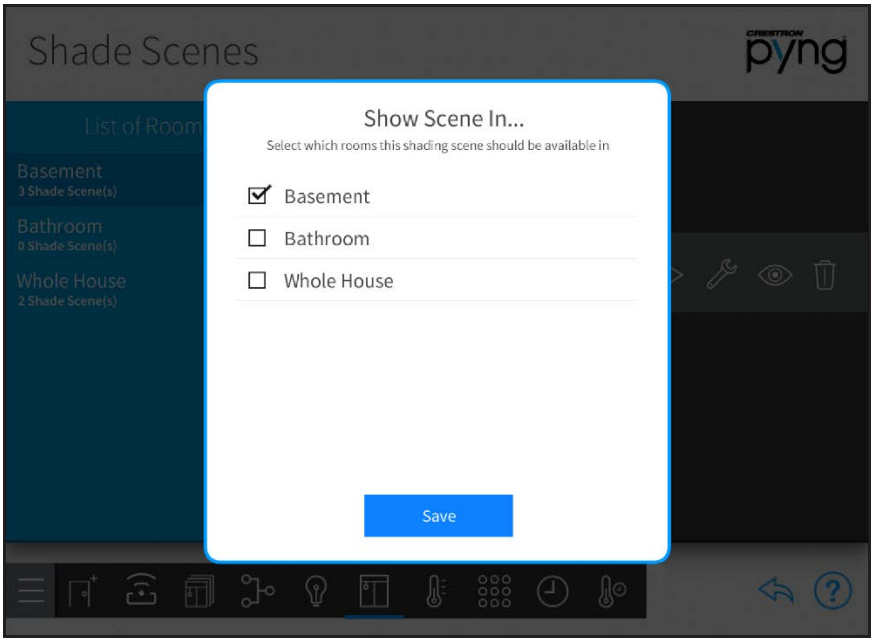
1. Select a room from the **Select Room Below** menu.
2. Tap the check box next to a shade group to add or remove it from the scene. A filled check box indicates that shade group has been added to the scene.
3. Tap **Save** to save any changes or **Cancel** to discard the changes.

Any new shade groups added to the scene may be adjusted in the **Shade Loads/Groups** section of the scene configuration dialog box.

Once all changes have been made, tap **Save** to save any changes to the lighting scene or tap **Cancel** to discard the changes.

Tap the eye button to select the room(s) in which the scene will be visible. The **Show Scene In...** dialog box is displayed.

Show Scene In... Dialog Box



Tap the check box next to a room name to make the shade scene visible in that room. A filled check box indicates that the shade scene is visible and may be recalled from a control device in the room (such as a touch screen). Tap **Save** to save any changes.

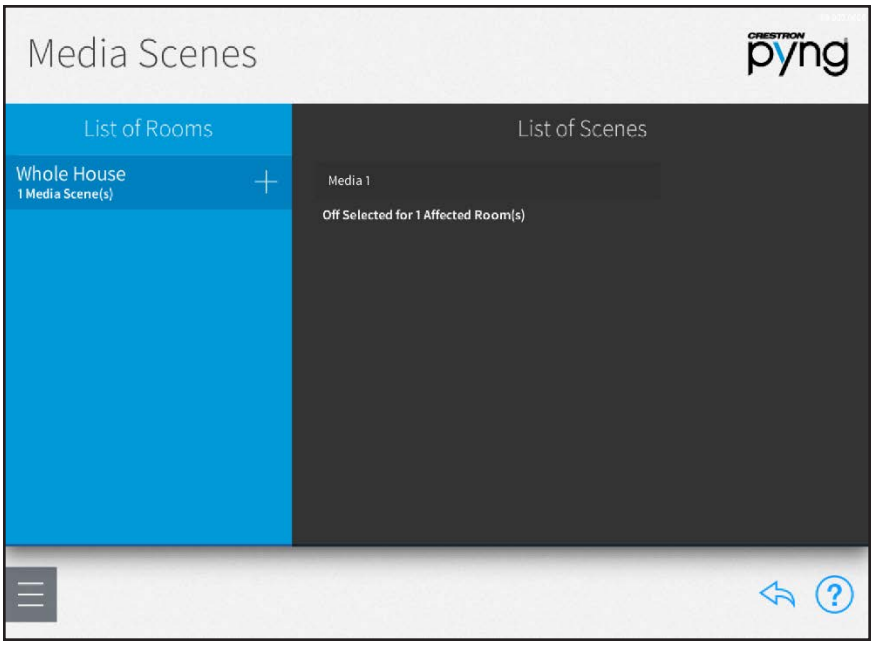
Tap the trashcan button to delete the shade scene.

Tap the back arrow button to return to the **Setup Scenes** screen.

Media Scenes

Tap the **Configure Media Scenes** button on the **Setup Scenes** screen or the Media Scenes button to display the **Media Scenes** screen.

Media Scenes Screen



Use the Media Scenes screen to create media scenes for the entire house. Media scenes are used to control source routing and on/off behavior for various media zones in the home.

Create New Media Scenes

To create a new media scene:

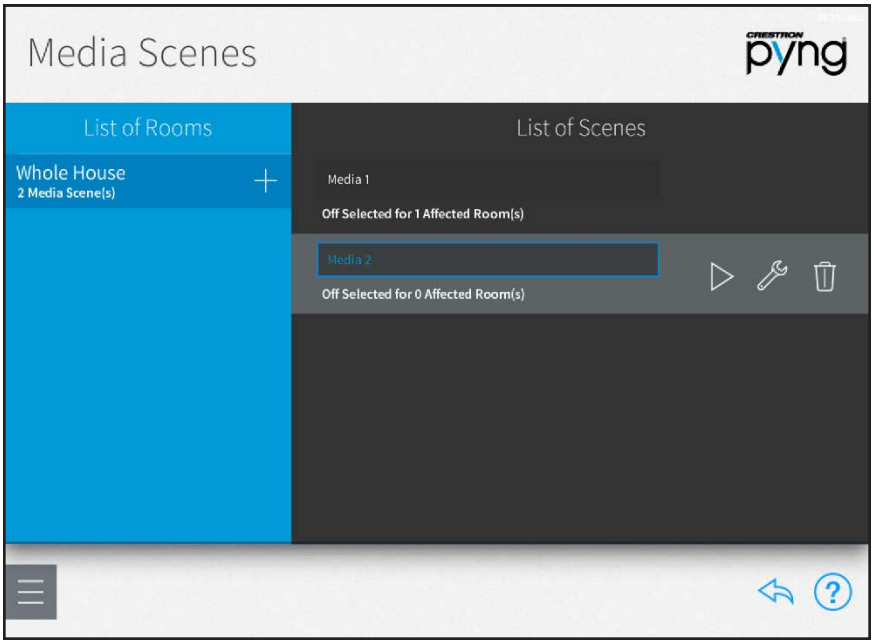
1. Tap the plus button (**+**) next to Whole House in the **List of Rooms** menu. Refer to the image above.
2. Enter a descriptive name for the media scene in the dialog box that is displayed.
3. Tap **OK**.

The new media scene is added to the room under the **List of Scenes** menu.

Configure Media Scenes

A media scene may be configured and tested after it has been added to the system. Use the **List of Scenes** menu to select a media scene for configuration.

Media Scenes Screen - List of Scenes Menu

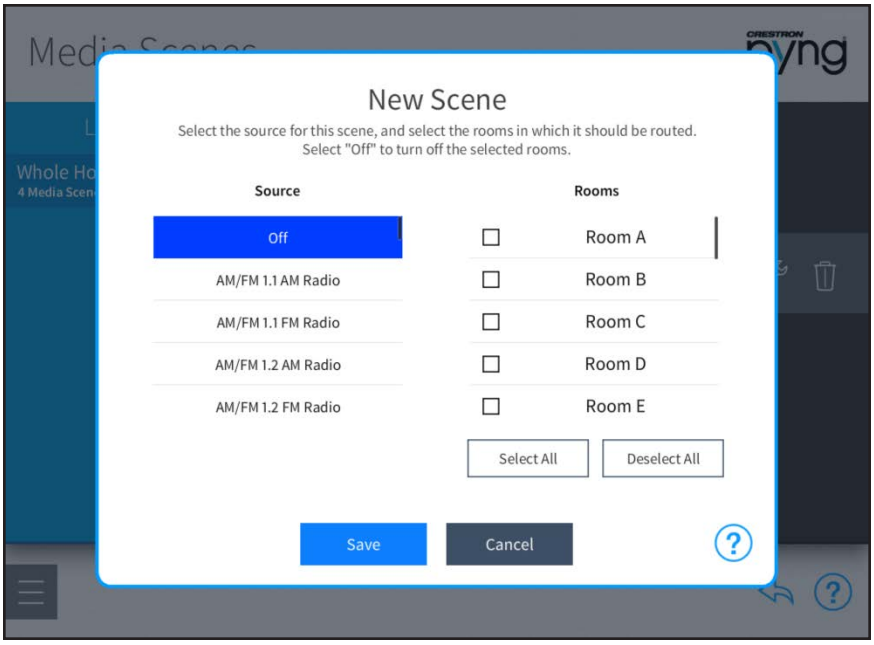


The following configuration options are displayed next to the media scene selection:

Tap the play button to recall the media scene in real time.

Tap the wrench button to view and configure the media zone behavior for the media scene. A dialog box for editing scene settings is displayed.

New Scene Dialog Box



The following settings may be configured for each media scene:

- **Source:** Swipe up or down to select the media source or favorite that will be added to the scene. Select **Off** to have the scene turn off all media sources for the selected rooms.
- **Rooms:** Swipe up or down to select the room(s) in which the media source will be routed when the scene is triggered. A filled checkbox to the left of the room name indicates that the room is selected.

  NOTE: A room must be configured as a media zone before it can be selected for a media scene. For more information, refer to "Configure a Media Zone" on page 50.

  - Tap **Select All** to select all available rooms.
  - Tap **Deselect All** to deselect all available rooms.

Tap **Save** at the bottom of the screen to save changes or tap **Cancel** to discard changes.

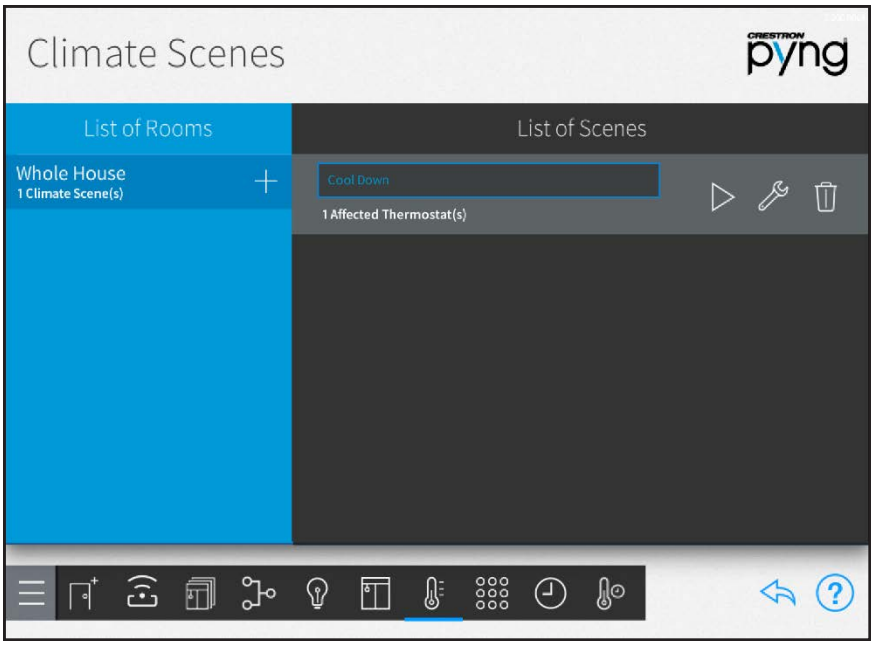
Tap the trashcan button to delete the media scene.

Tap the back arrow button to return to the **Setup Scenes** screen.

Climate Scenes

Tap the **Configure Climate Scenes** button on the **Setup Scenes** screen or the Climate Scenes button on the setup menu to display the **Climate Scenes** screen.

Climate Scenes Screen



Use the **Climate Scenes** screen to create climate scenes for thermostats that have been added to the system.

Climate scenes are used to configure predefined temperature set points or modes for a thermostat when recalled. Climate scenes are ideal for changing the HVAC system parameters during specified times of day.

Create New Climate Scenes

To create a new climate scene:

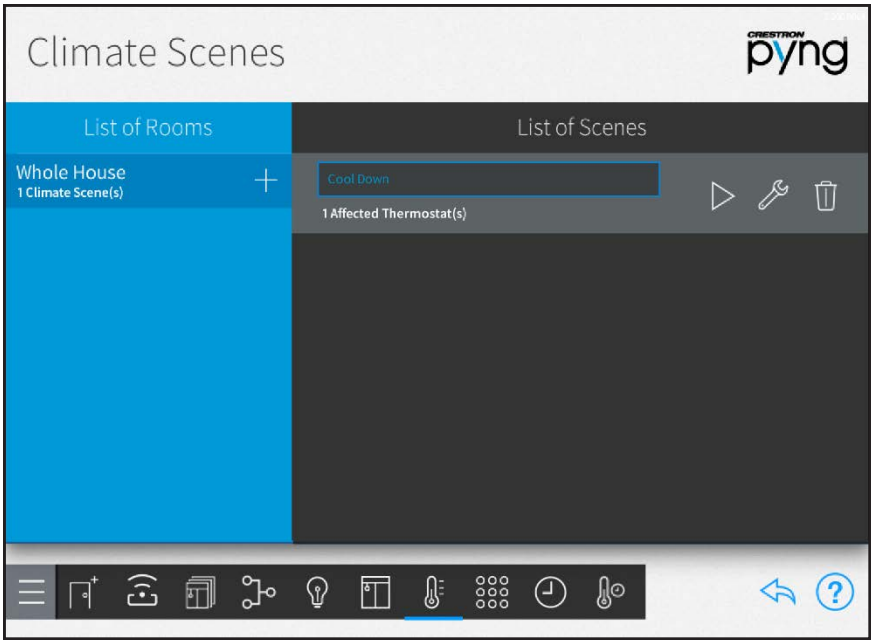
1. Tap the plus button (**+**) next to **Whole House** in the **List of Rooms** menu. Refer to the image above.
2. Enter a descriptive name for the climate scene in the dialog box that is displayed.
3. Tap **OK**.

The new climate scene is added to the room under the **List of Scenes** menu.

Configure Climate Scenes

A climate scene may be configured and tested after it has been added to the system. Use the **List of Scenes** menu to select a climate scene for configuration.

Climate Scenes Screen - List of Scenes Menu

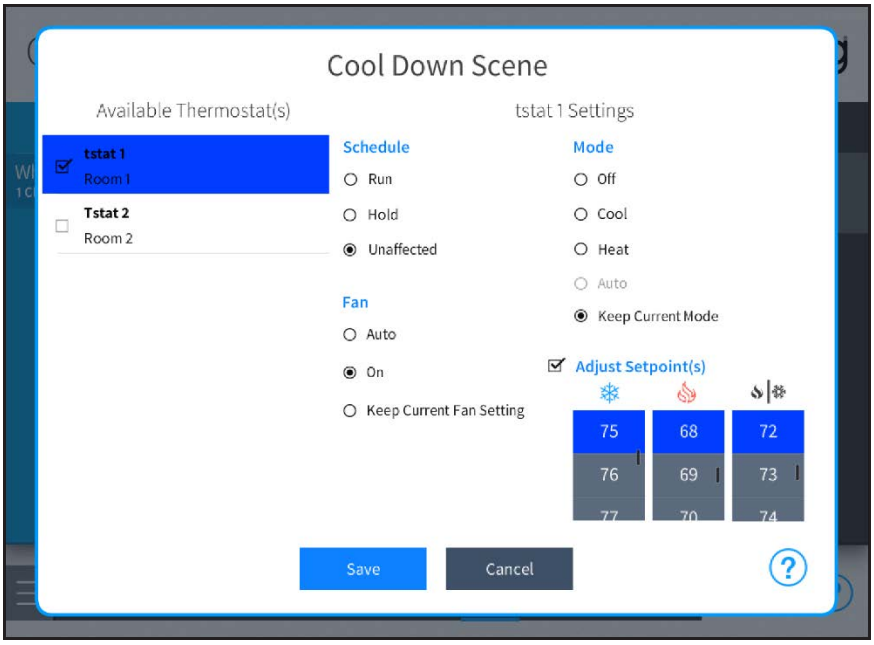


The following configuration options are displayed next to the climate scene selection:

Tap the play button to recall the climate scene in real time.

Tap the wrench button to view and configure the thermostat behavior for the climate scene. A dialog box for editing scene settings is displayed.

Cool Down Scene Dialog Box



The following settings may be configured for each climate scene:

- **Available Thermostats:** Tap the check box next to one or more thermostats in the **Available Thermostat(s)** menu to add the thermostats to the climate scene. A filled check box indicates that the thermostat is added to the scene.

  Tap on a thermostat to configure its behavior within the scene.

- **Schedule:** Select one of the following scheduling options:
  - Select **Run** to have the scene start the thermostat schedule.
  - Select **Hold** to have the scene stop the thermostat schedule.
  - Select **Unaffected** to have the scene keep the current thermostat schedule.

NOTE: If the thermostat schedule is running because **Run** or **Unaffected** was triggered by the scene, the next scheduled climate event will overwrite the climate scene's set points.

- **Fan:** Select one of the following fan behavior options:
  - Select **Auto** to have the scene run the fan automatically.
  - Select **On** to have the scene turn the fan on.
  - Select **Keep Current Fan Setting** to have the scene keep the current thermostat schedule.
- **Mode:** Select one of the following thermostat modes:
  - Select **Off** to have the scene turn the thermostat off.
  - Select **Cool** to have the scene turn cooling mode on.
  - Select **Heat** to have the scene turn heating mode on.

- Select **Auto** to have the scene control the temperature automatically via a chosen set point
- Select **Keep Current Mode** to have the scene keep the current thermostat mode.

- **Adjust Setpoint(s):** If this checkbox is selected, the scene adjusts the set points for Heat, Cool, and Auto modes to the chosen temperature values. Select the temperature set point for each mode from the appropriate spinner menu.

Tap **Save** at the bottom of the screen to save changes or tap **Cancel** to discard changes.

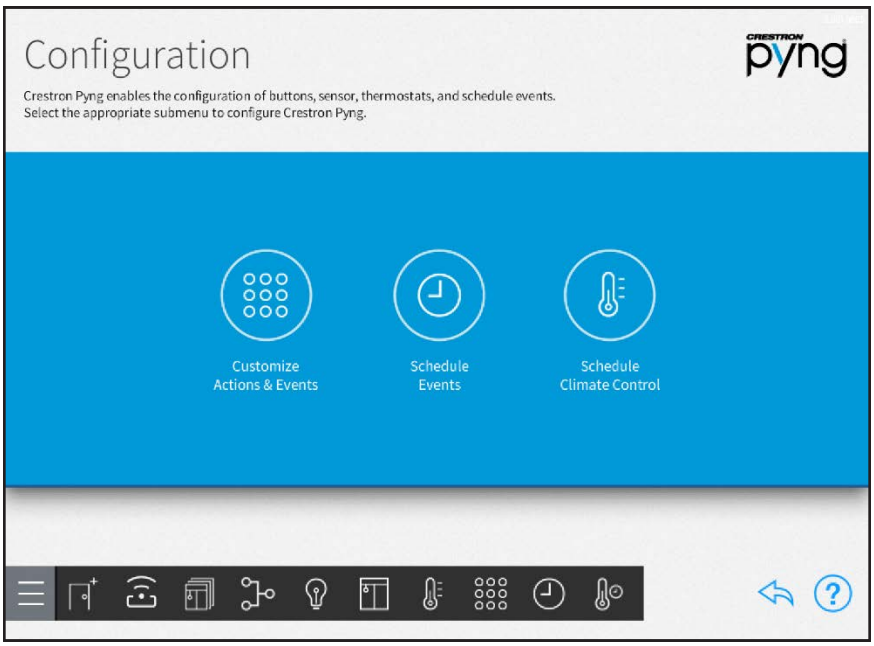
Tap the trashcan button to delete the climate scene.

Tap the back arrow button to return to the **Setup Scenes** screen.

Step 5: Customize & Schedule

Tap the **Customize & Schedule** button on the **Setup** screen to display the **Configuration** screen.

Configuration Screen



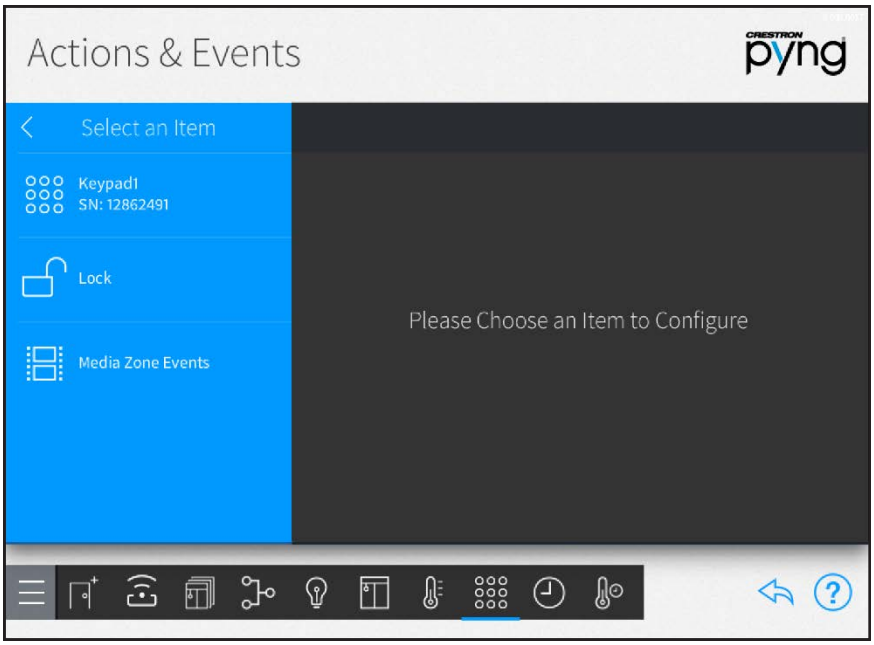
Use the **Configuration** screen to create and schedule system events that are triggered when specific conditions are met, such as by pressing a button or triggering a system event. Thermostat events may also be configured using this screen.

Tap the back arrow button to return to the main **Setup** screen.

Actions & Events

Tap the **Customize Actions & Events** button on the **Configuration** screen or the Actions & Events button on the setup menu to display the **Actions & Events** screen.

Actions & Events Screen



Use the Actions & Events screen to configure the behavior of remotes and keypads, occupancy sensors, door locks, security systems, remote system events, media zone events, and quick actions.

Scenes and other actions may be programmed to occur when a button is pressed or a system event is triggered.

NOTE: The same basic configuration settings are provided for each item, although some settings are added or removed for different device types and models. Refer to the following sections for specific information on each configurable device.

To select an item for configuration:

1. Select the room that contains the item from the **Select a Room** menu.
2. Select the item to configure from the **Select an Item** menu. A configuration screen for the device is displayed.

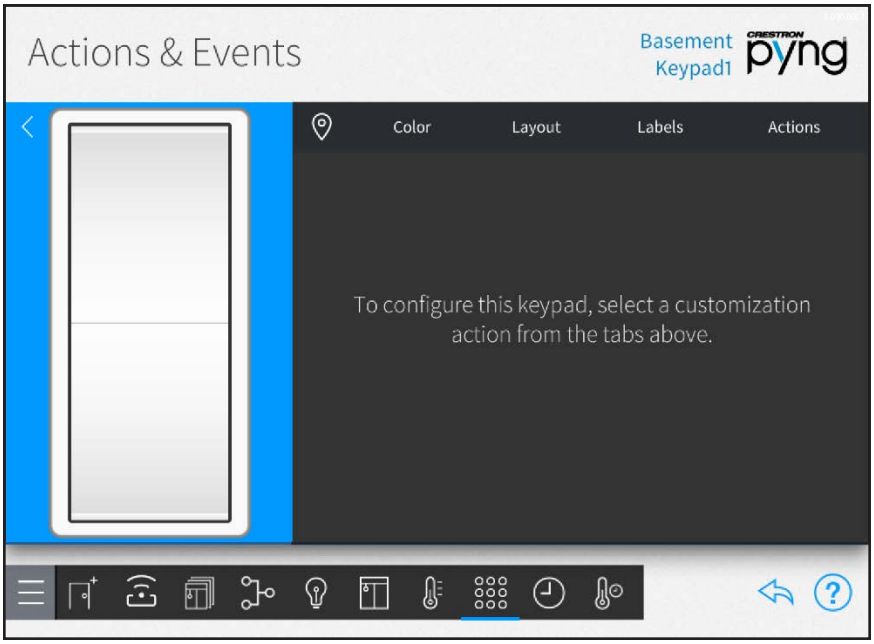
Tap the back arrow button to return to the **Configuration** screen.

Configure Keypads

Select a keypad device from the **Select an Item** menu to display a configuration screen for the keypad.

NOTE: Horizon™ keypads provide additional settings, such as backlight customization, that are configured using the keypad and not through Crestron Pyng. For more information, refer to the HZ-KPCN Installation Guide (Doc. 8285) at www.crestron.com/manuals.

Actions & Events Screen - Basement Keypad1



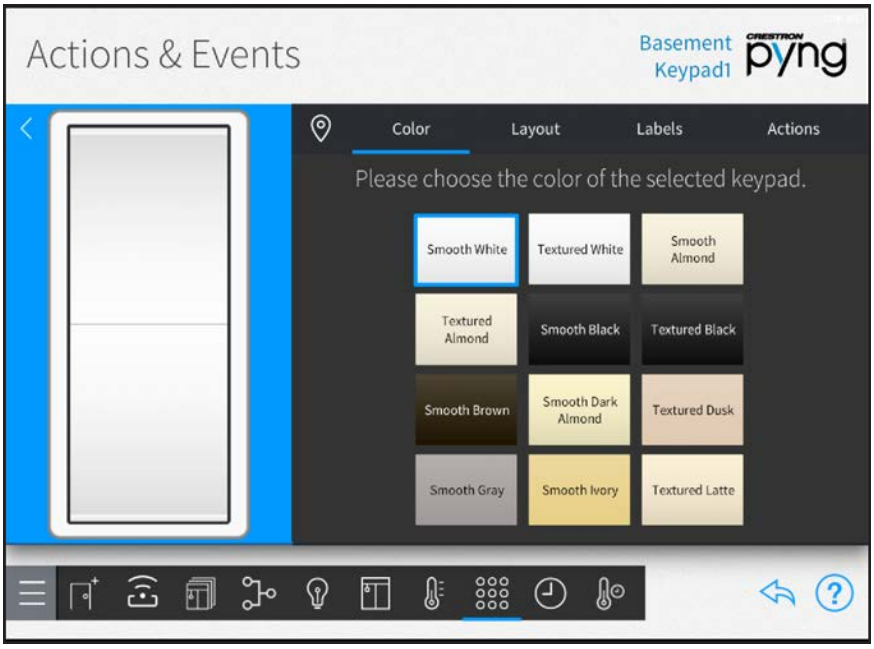
Use the keypad configuration screen to configure keypad button colors and layout, to create custom keypad button labels, and to program keypad buttons to recall scenes and other actions.

The following configuration options are provided:

Tap the location button to turn on the location feature for the keypad (if supported), which may be used to locate the device in the room.

Tap the **Color** tab to set the keypad color.

Actions & Events Screen - Color Tab

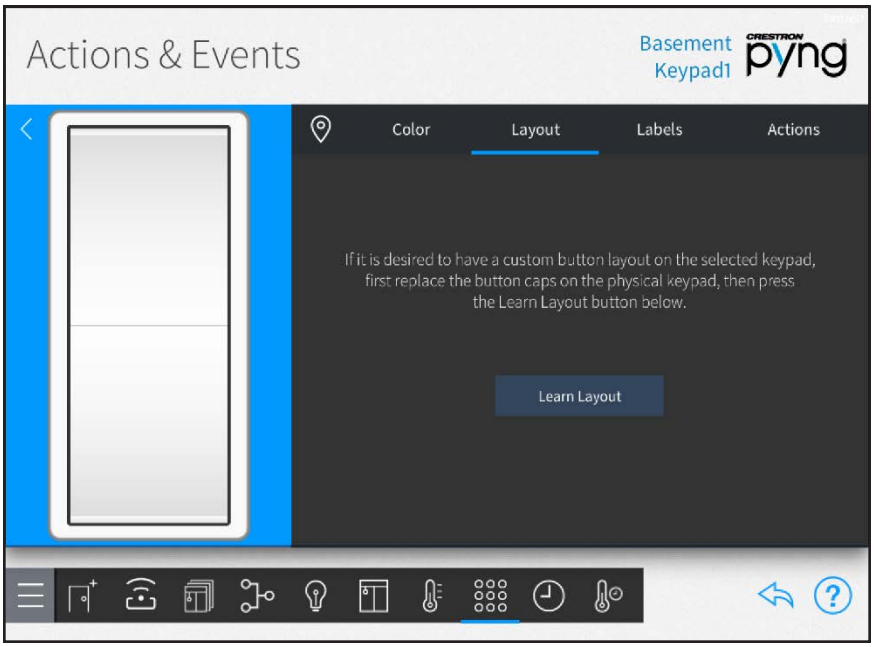


When custom-engraved keypad buttons are ordered through MyCrestron, the button color is generated automatically based on the selected color.

NOTE: Confirm that the keypad color selected with the Color tab matches the actual keypad color before ordering custom-engraved buttons.

Tap the **Layout** tab to configure a custom button layout for the keypad.

Actions & Events Screen - Layout Tab



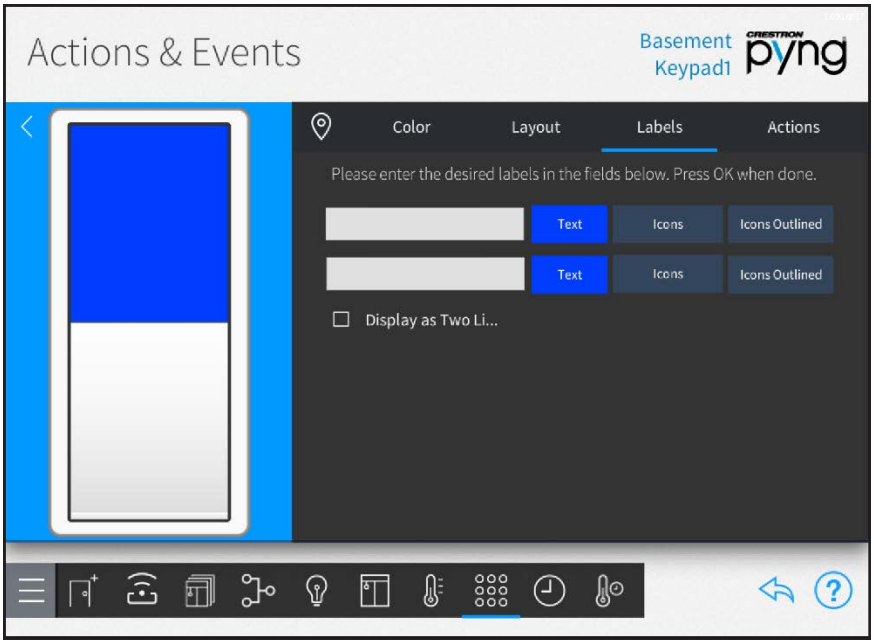
Tap **Learn Layout** to display options for teaching the keypad a custom button layout.

NOTE: Install the custom buttons on the keypad prior to making this selection.

Tap **Done** to confirm the new layout once it has been assigned to the keypad.

Tap the **Labels** tab to create custom text labels for the keypad button.

Actions & Events Screen - Labels Tab



Each line item represents a corresponding button on the keypad. The selected button lights blue on the onscreen keypad while it is being edited.

One of the following label options may be selected for each keypad button:

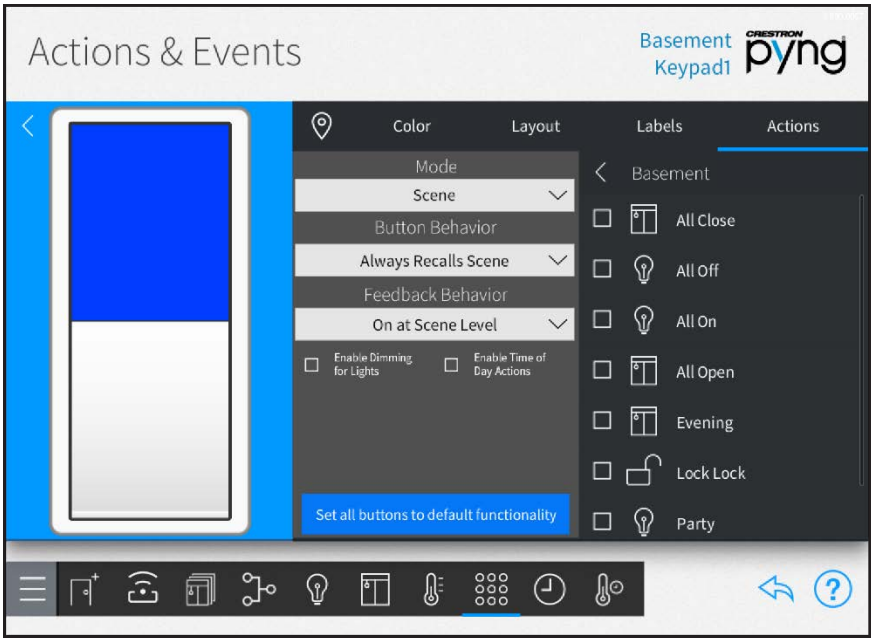
NOTE: For more information on ordering custom labels using the MyCrestron service, refer to "MyCrestron Services" on page 109.

- Tap **Text** to create custom text labels for the keypad button.
  - Enter the desired label text in the text box using the on-screen keyboard.
  - Tap **OK** to save the label.

    NOTE: For larger buttons, select the check box next to **Display as Two Lines** to separate the label text for the button into two lines.
- Tap **Icons** to select a label icon from the provided options.
- Tap **Icons Outlined** to select an outlined label icon from the provided options.

Tap the **Actions** tab to program the keypad buttons to recall scenes and other actions.

Actions & Events Screen - Actions Tab



The following configuration options are provided:

- Use the left screen panel to select the keypad button that will be associated with an action. Tap the desired button to select it.
- Use the center panel to select the type of action that will be associated with the keypad button and to configure action-related behavior.

  NOTE: Other configuration options may be provided depending on the selected mode.

  - Use the **Mode** drop-down menu to select the type of action that is recalled by pressing the keypad button (such as "Scene").
  - If a compatible mode is selected, use the **Button Behavior** drop-down menu to set the keypad button behavior for recalling the selected action.
  - If **Scene** is selected for **Mode**, use the **Feedback Behavior** drop-down menu to set the feedback behavior for recalling the scene.
  - If **Scene** is selected for **Mode**, tap the check box next to **Enable Dimming for Lights** to allow lighting loads to be dimmed via a press-and-hold keypad action.
  - If **Scene** is selected for **Mode**, tap the check box next to **Enable Time of Day Actions** to enable setting actions based on the time of day.
  - Tap **Set all buttons to default functionality** to restore the keypad buttons to their default functionality.
- Use the right screen panel to associate an action with the keypad button.

NOTE: The same action or scene may be assigned to multiple keypad buttons. Multiple actions or scenes may also be assigned to the same keypad button.

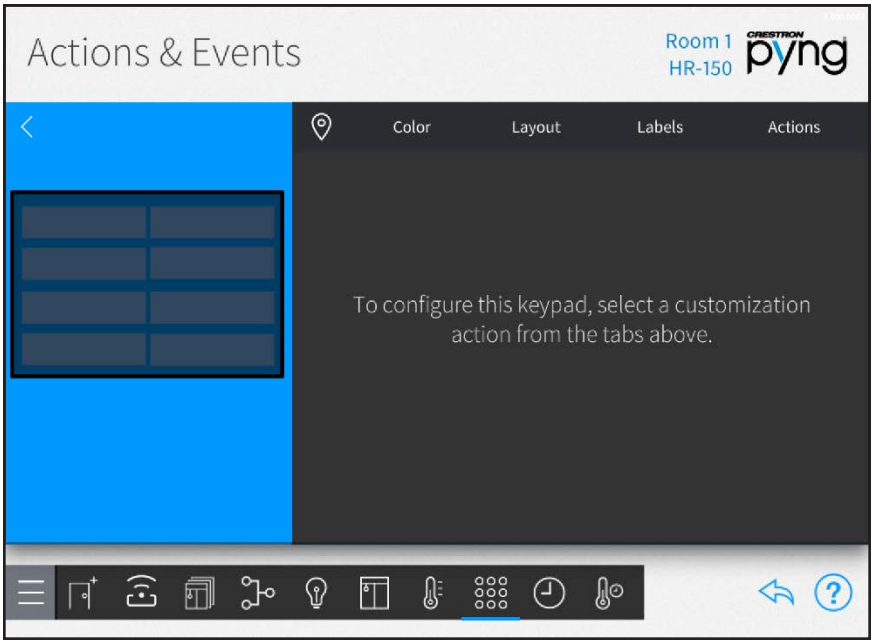
- Use the **Select Room Below** menu to select the room that contains the desired action or scene.
- Tap on a room name to display a list of actions that may be selected for the room. The type of action that is displayed is set using the **Mode** drop-down menu in the center panel.
- Tap the check box next to an action to add or remove that action from the keypad button. A checked box indicates that the action is set to occur when the button is pressed.
- Tap the back arrow (<) next to the room name to return to the **Select Room Below** menu.

NOTE: Only rooms that contain selectable actions appear on the **Select Room Below** menu. Once an action is selected from a room, the room name is shown with blue text in the **Select Room Below** menu.

Configure Remotes

Select a remote from the **Select an Item** menu to display a configuration screen for the remote.

Actions & Events Screen - Room 1 HR-150



Use the remote configuration screen to configure remote button colors and layout, to create custom remote button labels, and to program remote buttons to recall scenes and other actions.

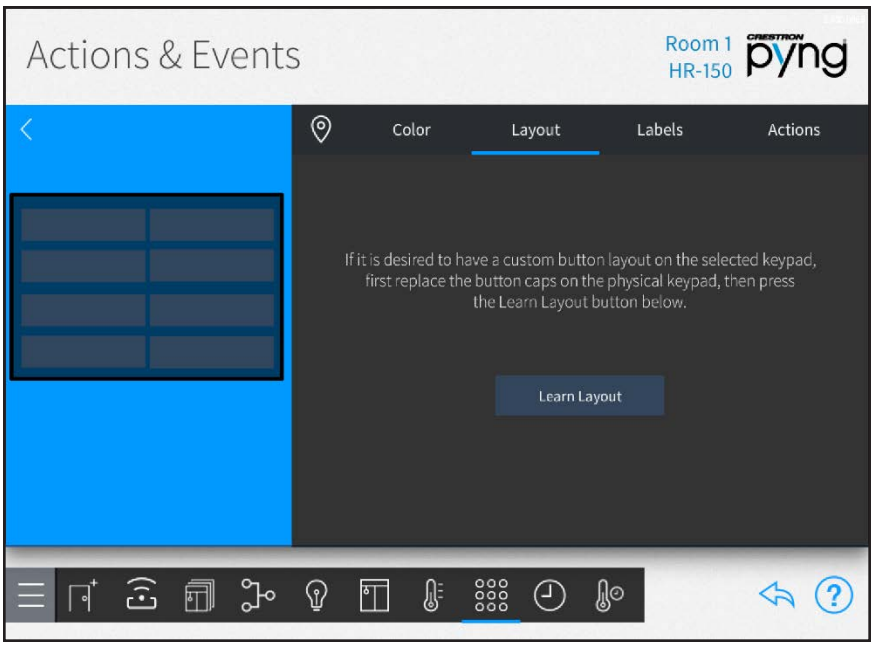
Tap the location tab to turn on the location feature for the remote (if supported), which may be used to locate the device in the room.

Tap the **Color** tab to select the remote color (if supported). When custom-engraved remote buttons are ordered through MyCrestron, the button color is generated automatically based on the selected color.

NOTE: Confirm that the remote color selected with the **Color** tab matches the actual remote color before ordering custom-engraved buttons.

Tap the **Layout** tab to configure a custom button layout for the remote.

Actions & Events Screen - Layout Tab



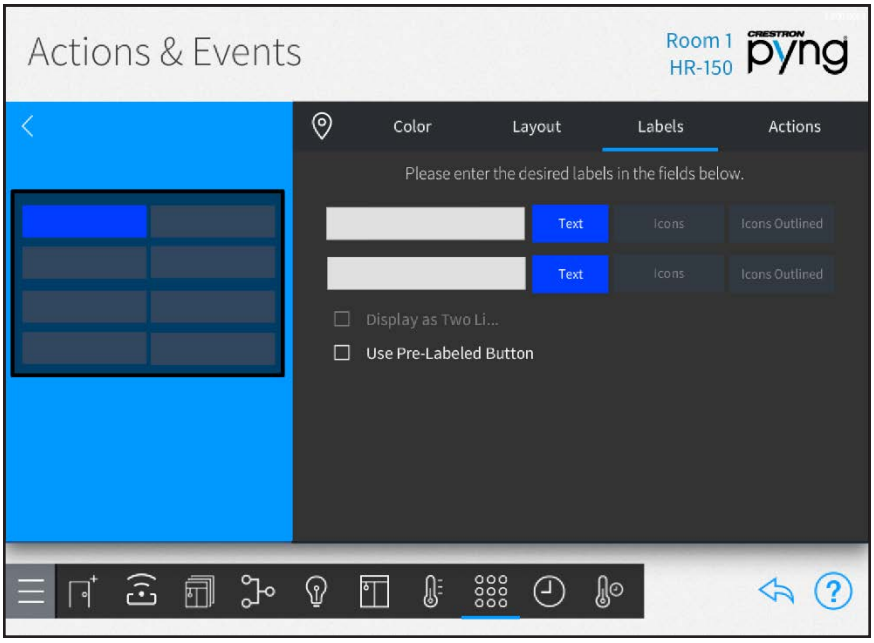
Tap **Learn Layout** to display options for teaching the remote a custom button layout.

NOTE: Install the custom buttons on the remote prior to making this selection.

Tap **Done** to confirm the new layout once it has been assigned to the remote.

Tap the **Labels** tab to create custom text labels for the remote buttons.

Actions & Events Screen - Labels Tab



Each line item represents a corresponding button on the remote. The selected button lights blue on the onscreen remote while it is being edited.

One of the following label options may be selected for each remote button:

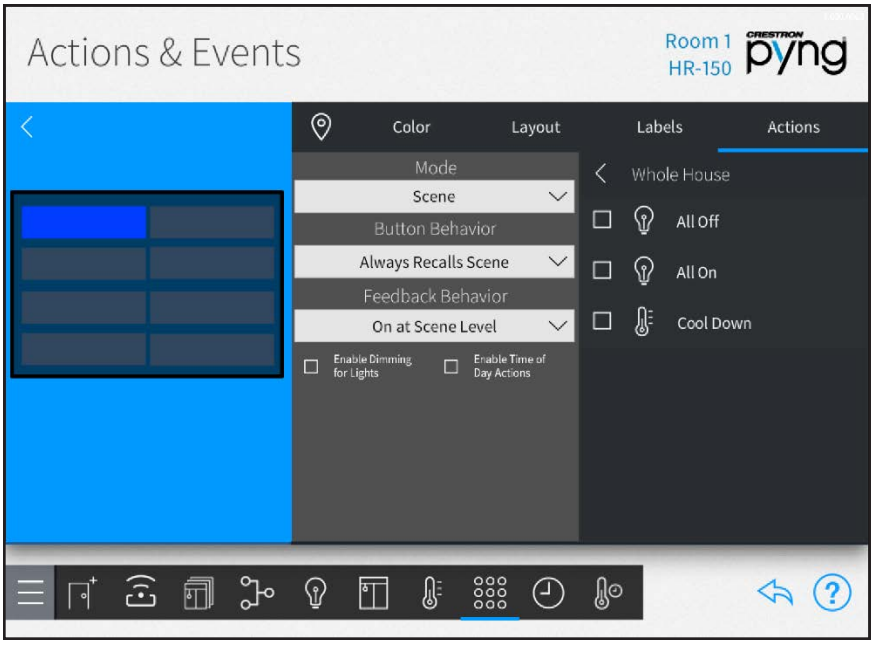
NOTE: For more information on ordering custom labels using the MyCrestron service, refer to "MyCrestron Services" on page 109.

- Tap **Text** to create custom text labels for the remote button.
  - Enter the desired label text in the text box using the onscreen keyboard.
  - Tap **OK** to save the label.

  NOTES:
  - For larger buttons, tap the check box next to **Display as Two Lines** to separate the label text for the button into two lines.
  - Tap the check box next to **Use Pre-Labeled Button** if a button with an existing label will be used.
- Tap **Icons** to select a label icon from the provided options.
- Tap **Icons Outlined** to select an outlined label icon from the provided options.

Tap the **Actions** tab to program the remote buttons to recall scenes and other actions.

Actions & Events Screen - Actions Tab



The following configuration options are provided:

- Use the left screen panel to select the remote button that will be associated with an action. Tap the desired button to select it.
- Use the center panel to select the type of action that will be associated with the remote button and to configure action-related behavior.

  NOTE: Other configuration options may be provided depending on the selected mode.

  - Use the **Mode** drop-down menu to select the type of action that is recalled by pressing the remote button (such as "Scene").
  - If a compatible mode is selected, use the **Button Behavior** drop-down menu to set the remote button behavior for recalling the selected action.
  - If **Scene** is selected for **Mode**, use the **Feedback Behavior** drop-down menu to set the feedback behavior for recalling the scene.
  - If **Scene** is selected for **Mode**, tap the check box next to **Enable Dimming for Lights** to allow lighting loads to be dimmed via a press-and-hold remote button action.
  - If **Scene** is selected for **Mode**, tap the check box next to **Enable Time of Day Actions** to enable setting actions based on the time of day.
  - Use the right screen panel to associate an action with the remote button.

  NOTE: The same action or scene may be assigned to multiple remote buttons. Multiple actions or scenes may also be assigned to the same remote button.

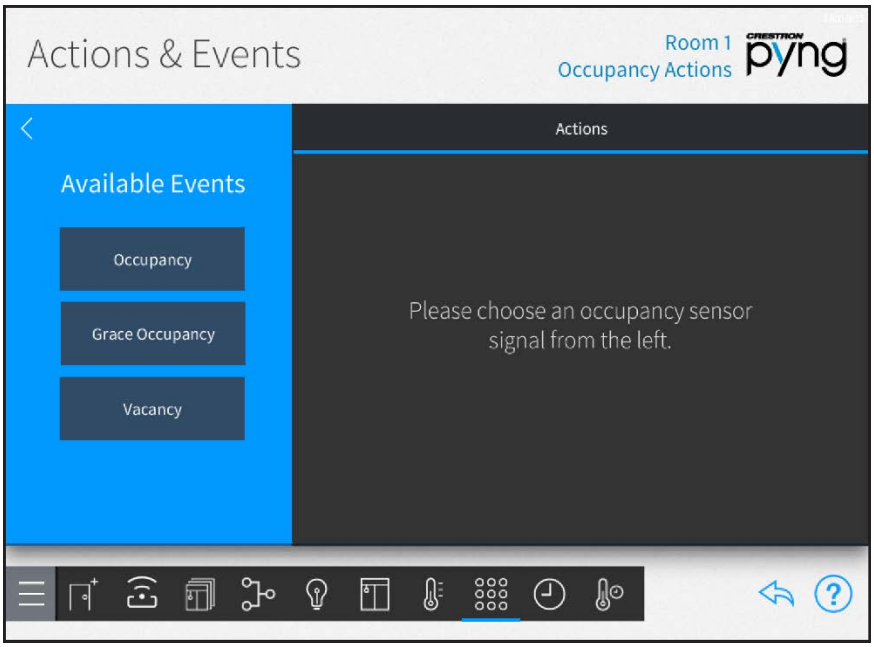
- Use the **Select Room Below** menu to select the room that contains the desired action or scene.
- Tap on a room name to display a list of actions that may be selected for the room. The type of action that is displayed is set using the **Mode** drop-down menu in the center panel.
- Tap the check box next to an action to add or remove that action from the remote button. A checked box indicates that the action is set to occur when the button is pressed.
- Tap the back arrow (<) next to the room name to return to the **Select Room Below** menu.

NOTE: Only rooms that contain selectable actions appear on the **Select Room Below** menu. Once an action is selected from a room, the room name is shown with blue text in the **Select Room Below** menu.

Configure Occupancy Sensors

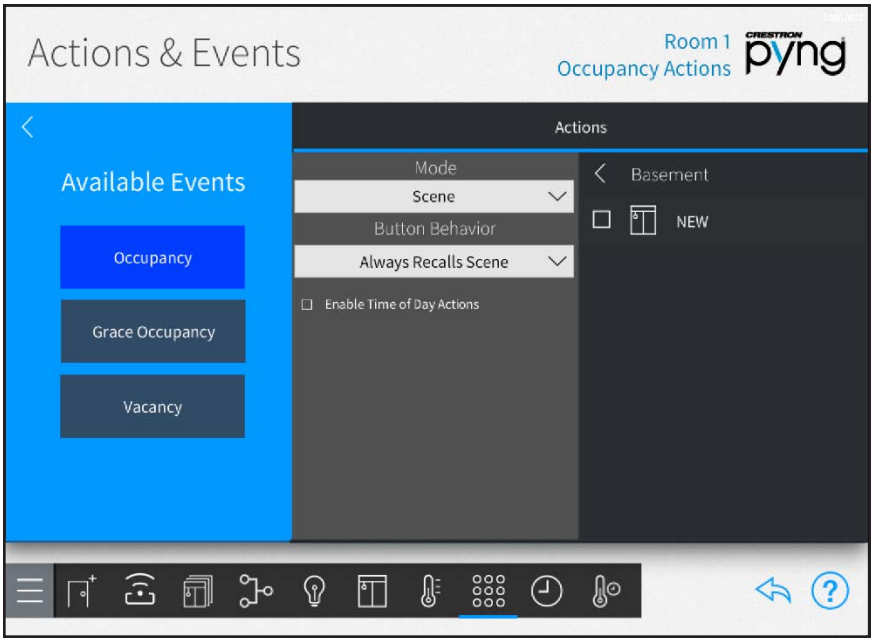
Select an occupancy sensor from the **Select an Item** menu to display a configuration screen for the occupancy sensor.

Actions & Events Screen - Room 1 Occupancy Actions



Use the occupancy sensor configuration screen to associate scenes and other actions with occupancy events.

Actions & Events Screen - Actions



The following configuration options are provided:

- Use the left screen panel to select the occupancy event that will be associated with an action. Tap the desired event to select it.
- Use the center panel to select the type of action that will be associated with the occupancy event and to configure action-related behavior.

  NOTE: Other configuration options may be provided depending on the selected mode.

  - Use the **Mode** drop-down menu to select the type of action that is recalled when the occupancy event is triggered (such as "Scene").
  - If a compatible mode is selected, use the **Button Behavior** drop-down menu to set the occupancy event behavior for recalling the selected action.
  - If **Scene** is selected for **Mode**, tap the check box next to **Enable Time of Day Actions** to enable setting actions based on the time of day.
- Use the right screen panel to associate an action with the occupancy event.

  NOTE: The same action or scene may be assigned to multiple occupancy events. Multiple actions or scenes may also be assigned to the same occupancy event.

  - Use the **Select Room Below** menu to select the room that contains the desired action or scene.
  - Tap on a room name to display a list of actions that may be selected for the room. The type of action that is displayed is set using the **Mode** drop-down menu in the center panel.

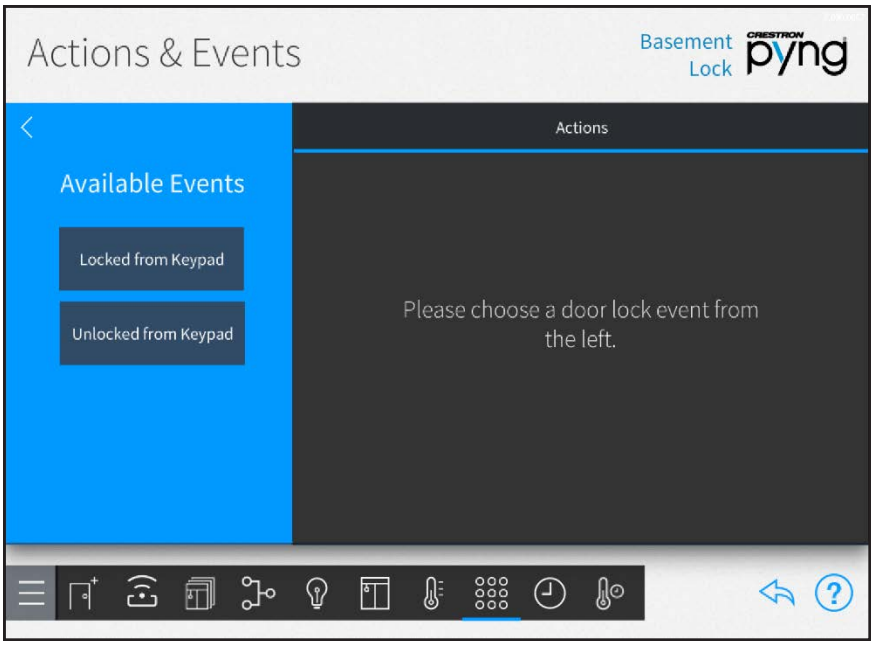
- Tap the check box next to an action to add or remove that action from the occupancy event. A checked box indicates that the action is set to occur when the event is triggered.
- Tap the back arrow (**<**) next to the room name to return to the **Select Room Below** menu.

NOTE: Only rooms that contain selectable actions appear on the **Select Room Below** menu. Once an action is selected from a room, the room name is shown with blue text in the Select Room Below menu.

Configure Door Locks

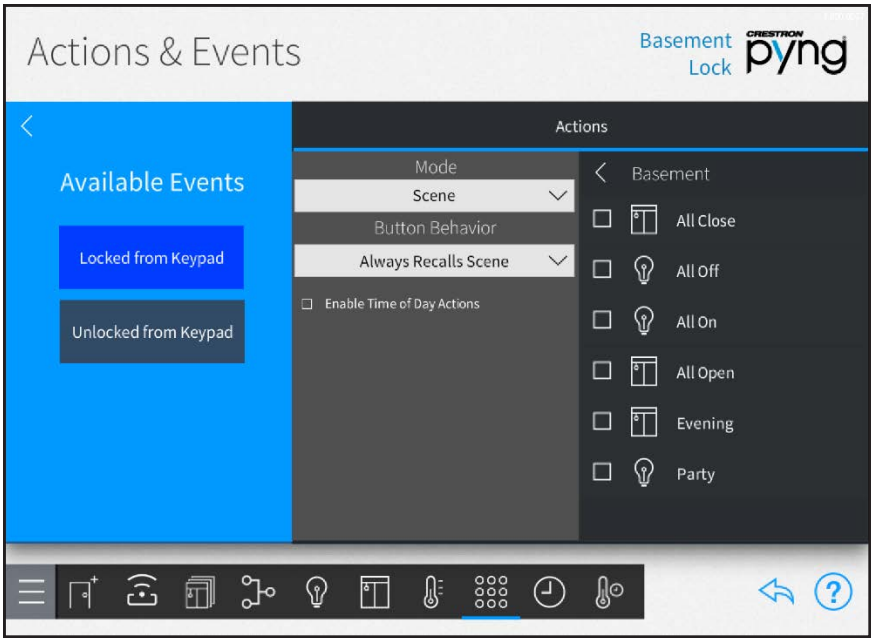
Select a door lock from the **Select an Item** menu to display a configuration screen for the door lock.

Actions & Events Screen - Basement Lock



Use the door lock configuration screen to associate scenes and other actions with door lock events.

Actions & Events Screen - Actions



The following configuration options are provided:

- Use the left screen panel to select the door lock event that will be associated with an action. Tap the desired event to select it.
- Use the center panel to select the type of action that will be associated with the door lock event and to configure action-related behavior.

  NOTE: Other configuration options may be provided depending on the selected mode.

  - Use the **Mode** drop-down menu to select the type of action that is recalled when the door lock event is triggered (such as "Scene").
  - If a compatible mode is selected, use the **Button Behavior** drop-down menu to set the door lock event behavior for recalling the selected action.
  - If **Scene** is selected for **Mode**, tap the check box next to **Enable Time of Day Actions** to enable setting actions based on the time of day.
  - Use the right screen panel to associate an action with the door lock event.

  NOTE: The same action or scene may be assigned to multiple door lock events. Multiple actions or scenes may also be assigned to the same door lock event.

  - Use the **Select Room Below** menu to select the room that contains the desired action or scene.
  - Tap on a room name to display a list of actions that may be selected for the room. The type of action that is displayed is set using the **Mode** drop-down menu in the center panel.

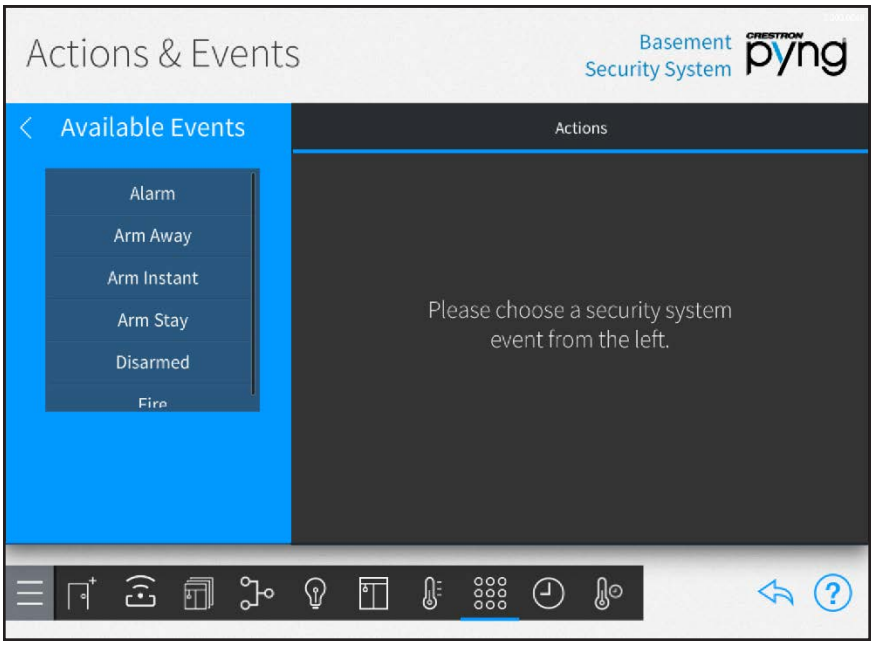
- Tap the check box next to an action to add or remove that action from the door lock event. A checked box indicates that the action is set to occur when the event is triggered.
- Tap the back arrow (**<**) next to the room name to return to the **Select Room Below** menu.

NOTE: Only rooms that contain selectable actions appear on the **Select Room Below** menu. Once an action is selected from a room, the room name is shown with blue text in the Select Room Below menu.

Configure Security Systems

Select a security system from the **Select an Item** menu to display a configuration screen for the security system.

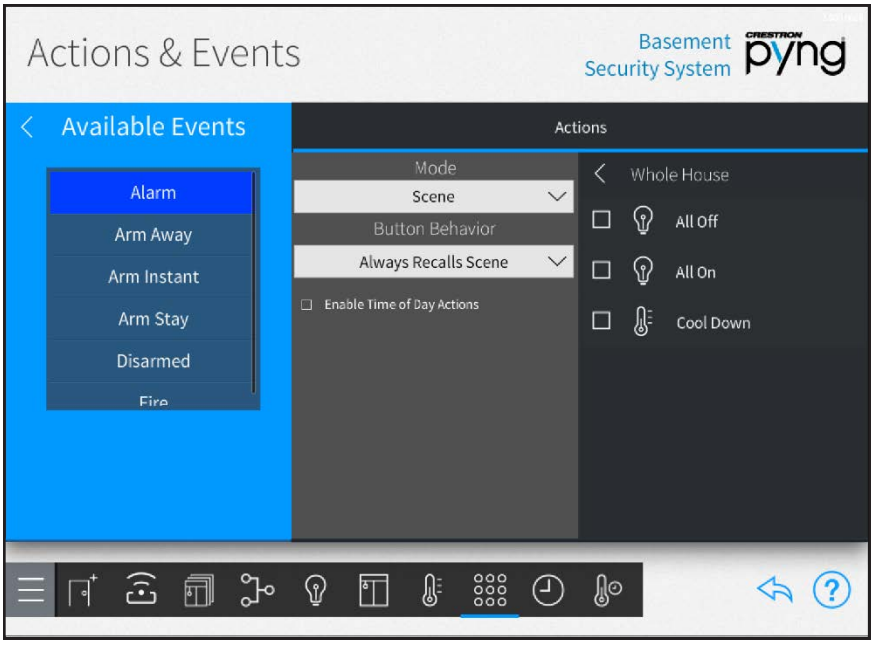
Actions & Events Screen - Basement Security System



NOTE: Security systems must be connected to a PYNG-CONNECT-COM device before they may be discovered by the Crestron Pyng system. For more information, refer to the PYNG-CONNECT-COM DO Guide (Doc. 7697) at www.crestron.com/manuals.

Use the security system configuration screen to associate scenes and other actions with security events.

Actions & Events Screen - Actions



The following configuration options are provided:

- Use the left screen panel to select the security event that will be associated with an action. Tap the desired event to select it.
- Use the center panel to select the type of action that will be associated with the security event and to configure action-related behavior.

  NOTE: Other configuration options may be provided depending on the selected mode.

  - Use the **Mode** drop-down menu to select the type of action that is recalled when the security event is triggered (such as "Scene").
  - If a compatible mode is selected, use the **Button Behavior** drop-down menu to set the security event behavior for recalling the selected action.
  - If **Scene** is selected for **Mode**, tap the check box next to **Enable Time of Day Actions** to enable setting actions based on the time of day.
- Use the right screen panel to associate an action with the security event.

  NOTE: The same action or scene may be assigned to multiple security events. Multiple actions or scenes may also be assigned to the same security event.
- Use the **Select Room Below** menu to select the room that contains the desired action or scene.
  - Tap on a room name to display a list of actions that may be selected for the room. The type of action that is displayed is set using the **Mode** drop-down menu in the center panel.

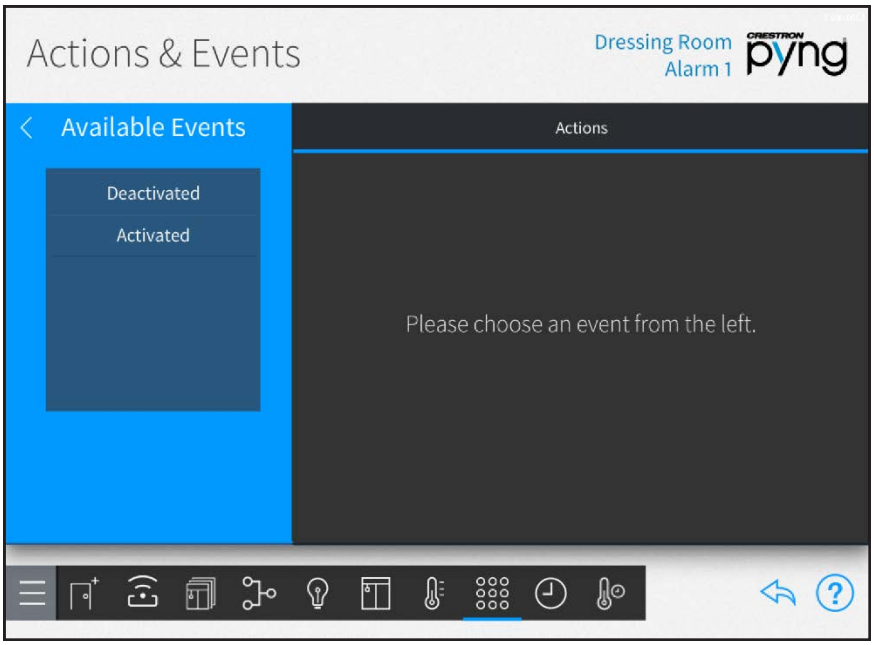
- Tap the check box next to an action to add or remove that action from the security event. A checked box indicates that the action is set to occur when the event is triggered.
- Tap the back arrow (**<**) next to the room name to return to the **Select Room Below** menu.

NOTE: Only rooms that contain selectable actions appear on the Select Room Below menu. Once an action is selected from a room, the room name is shown with blue text in the Select Room Below menu.

Configure Alarms

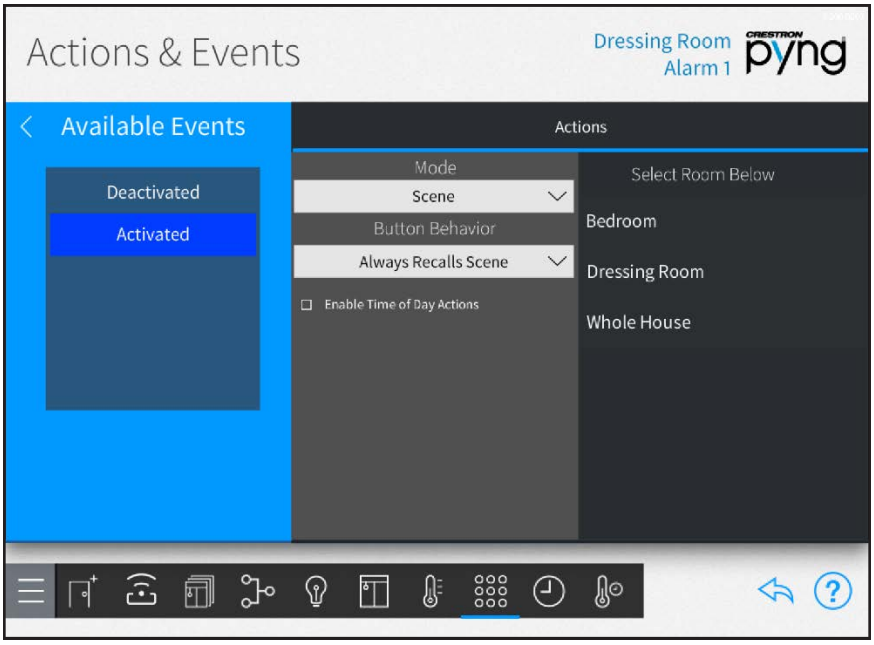
Select an alarm device from the Select an Item menu to display a configuration screen for the alarm.

Actions & Events Screen - Dressing Room Alarm 1



Use the alarm configuration screen to associate scenes and other actions with alarm events.

Actions & Events Screen - Actions



The following configuration options are provided:

- Use the left screen panel to select the alarm event that will be associated with an action. Tap the desired event to select it.
- Use the center panel to select the type of action that will be associated with the alarm event and to configure action-related behavior.

  NOTE: Other configuration options may be provided depending on the selected mode.

  - Use the **Mode** drop-down menu to select the type of action that is recalled when the alarm event is triggered (such as "Scene").
  - If a compatible mode is selected, use the **Button Behavior** drop-down menu to set the alarm event behavior for recalling the selected action.
  - If **Scene** is selected for **Mode**, tap the check box next to **Enable Time of Day Actions** to enable setting actions based on the time of day.
- Use the right screen panel to associate an action with the alarm event.

  NOTE: The same action or scene may be assigned to multiple alarm events. Multiple actions or scenes may also be assigned to the same alarm event.

  - Use the **Select Room Below** menu to select the room that contains the desired action or scene.
  - Tap on a room name to display a list of actions that may be selected for the room. The type of action that is displayed is set using the **Mode** drop-down menu in the center panel.

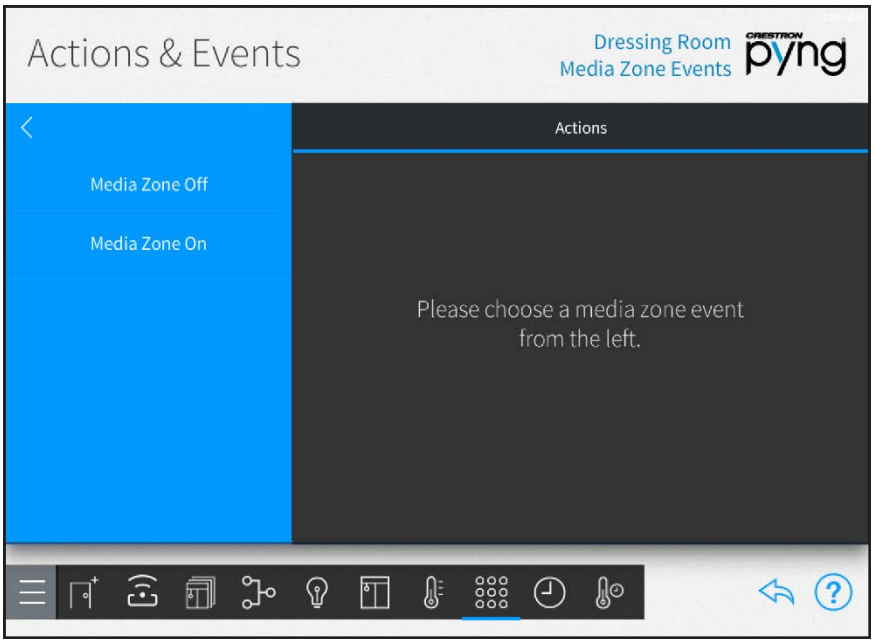
- Tap the check box next to an action to add or remove that action from the alarm event. A checked box indicates that the action is set to occur when the event is triggered.
- Tap the back arrow (**<**) next to the room name to return to the **Select Room Below** menu.

NOTE: Only rooms that contain selectable actions appear on the **Select Room Below** menu. Once an action is selected from a room, the room name is shown with blue text in the **Select Room Below** menu.

Configure Media Zones

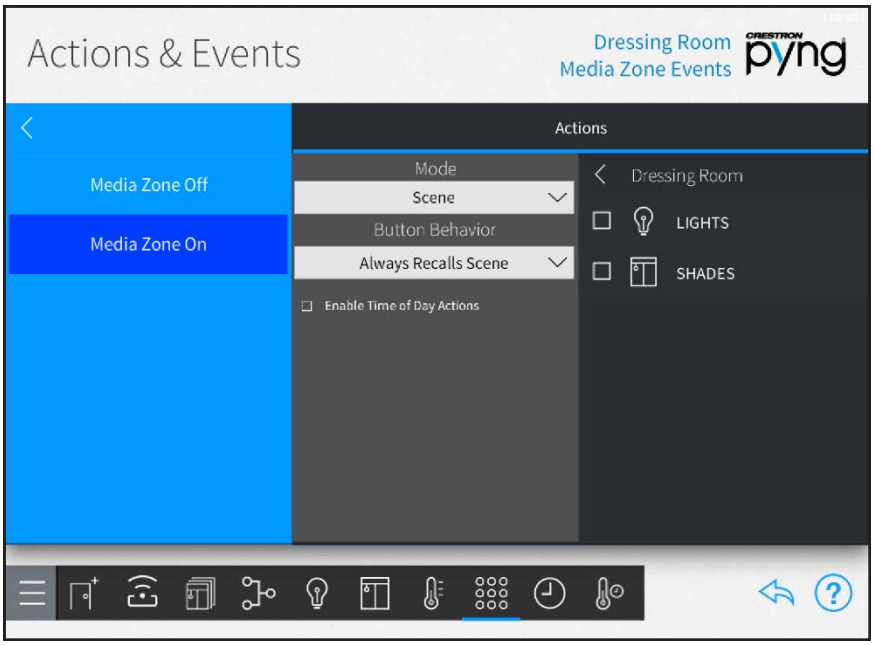
Select an media zone from the **Select an Item** menu to display a configuration screen for the media zone.

Actions & Events Screen - Dressing Room Media Zone Events



NOTE: For more information on configuring media zones, refer to "Configure a Media Zone" on page 50.

Use the media zone configuration screen to associate scenes and other actions with media zone events.



The following configuration options are provided:

- Use the left screen panel to select the media zone event that will be associated with an action. Tap the desired event to select it.
- Use the center panel to select the type of action that will be associated with the media zone event and to configure action-related behavior.

  NOTE: Other configuration options may be provided depending on the selected mode.

  - Use the **Mode** drop-down menu to select the type of action that is recalled when the media zone event is triggered (such as "Scene").
  - If a compatible mode is selected, use the **Button Behavior** drop-down menu to set the media zone event behavior for recalling the selected action.
  - If **Scene** is selected for **Mode**, tap the check box next to **Enable Time of Day Actions** to enable setting actions based on the time of day.
- Use the right screen panel to associate an action with the media zone event.

  NOTE: The same action or scene may be assigned to multiple media zone events. Multiple actions or scenes may also be assigned to the same media zone event.

  - Use the **Select Room Below** menu to select the room that contains the desired action or scene.
  - Tap on a room name to display a list of actions that may be selected for the room. The type of action that is displayed is set using the **Mode** drop-down menu in the center panel.

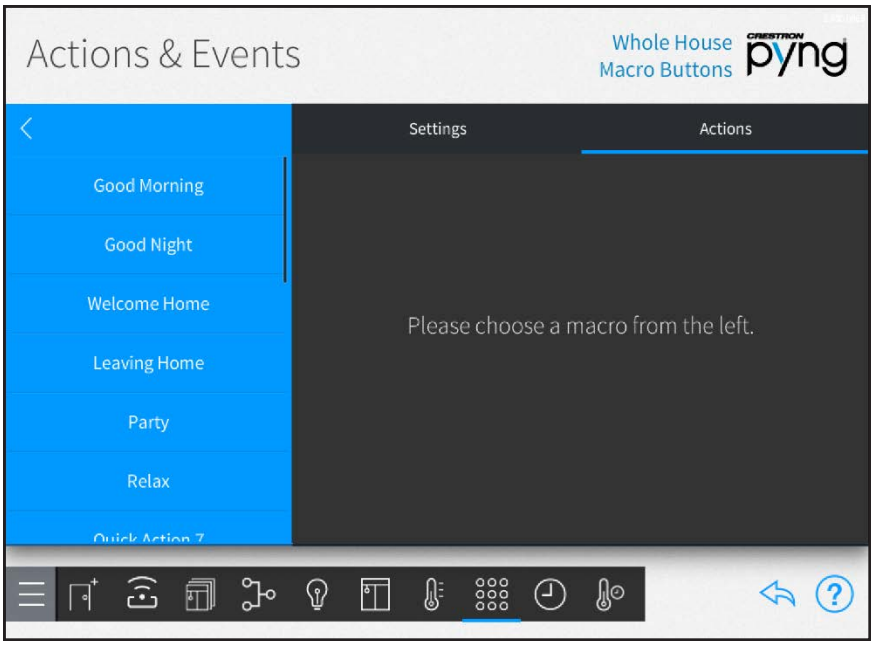
- Tap the check box next to an action to add or remove that action from the media zone event. A checked box indicates that the action is set to occur when the event is triggered.
- Tap the back arrow (**<**) next to the room name to return to the **Select Room Below** menu.

NOTE: Only rooms that contain selectable actions appear on the **Select Room Below** menu. Once an action is selected from a room, the room name is shown with blue text in the **Select Room Below** menu.

Configure Macro Buttons

Select **Whole House** from the **Select a Room** menu, and then select **Macro Buttons** from the **Select an Item** menu to display a configuration screen for macro buttons (quick actions).

Actions & Events Screen - Whole House Macro Buttons

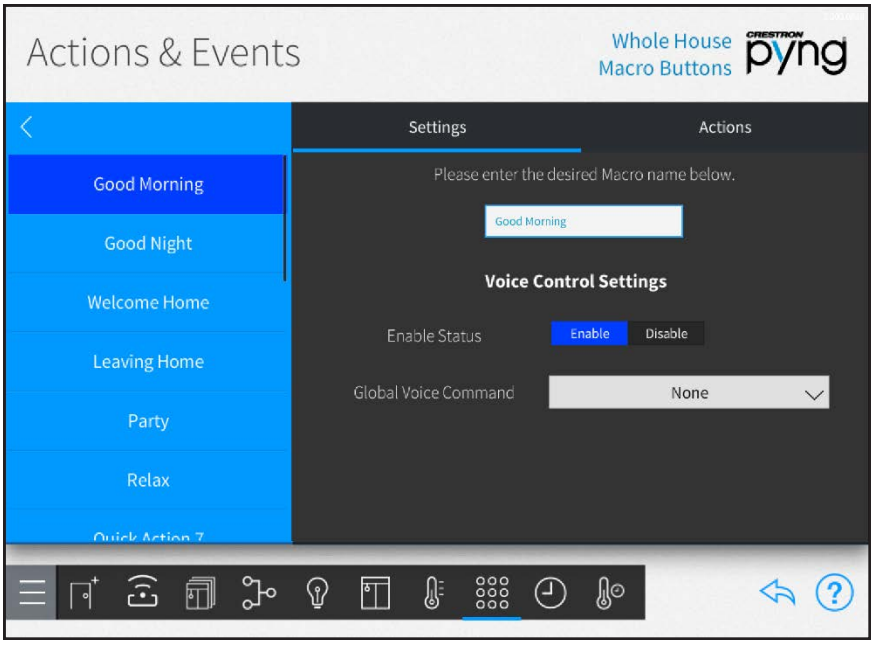


NOTE: Each Crestron Pyng system supports a maximum of 20 macro buttons.

Use the macro button configuration screen to configure macro button settings and to associate scenes and other actions with macro buttons.

Tap the **Settings** tab to configure basic settings for macro buttons.

Actions & Events Screen - Settings



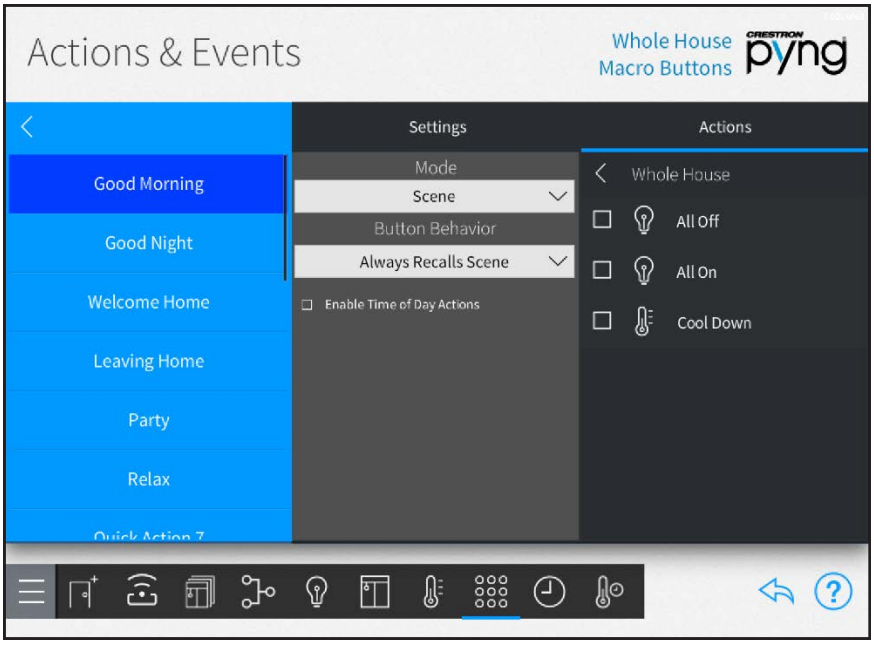
The following configuration options are provided:

- Use the left screen panel to select the macro button to configure. Tap the desired event to select it.
- Use the right screen panel to configure settings for the selected macro button.
  - Enter a new macro button name or edit the existing macro button name in the text box at the top of the screen.
  - Tap **Enable** or **Disable** next to **Enable Status** to enable or disable the ability to trigger the macro button with voice control.

    NOTE: For more information on configuring voice control for the Crestron Pyng system, refer to "Voice Control Settings" on page 120.
  - Use the drop-down menu next to **Global Voice Command** to select a global voice command for recalling the macro button (if voice control is enabled).

Tap the **Actions** tab to associate scenes and other actions with the macro button.

Actions & Events Screen - Actions



The following configuration options are provided:

- Use the left screen panel to select the macro button that will be associated with an action. Tap the desired event to select it.
- Use the center panel to select the type of action that will be associated with the macro button and to configure action-related behavior.

  NOTE: Other configuration options may be provided depending on the selected mode.

  - Use the **Mode** drop-down menu to select the type of action that is recalled when the macro button is triggered (such as "Scene").
  - If a compatible mode is selected, use the **Button Behavior** drop-down menu to set the macro button behavior for recalling the selected action.
  - If **Scene** is selected for **Mode**, tap the check box next to **Enable Time of Day Actions** to enable setting actions based on the time of day.
- Use the right screen panel to associate an action with the macro button.

  NOTE: The same action or scene may be assigned to multiple macro buttons. Multiple actions or scenes may also be assigned to the same macro button.

  - Use the **Select Room Below** menu to select the room that contains the desired action or scene.
  - Tap on a room name to display a list of actions that may be selected for the room. The type of action that is displayed is set using the **Mode** drop-down menu in the center panel.

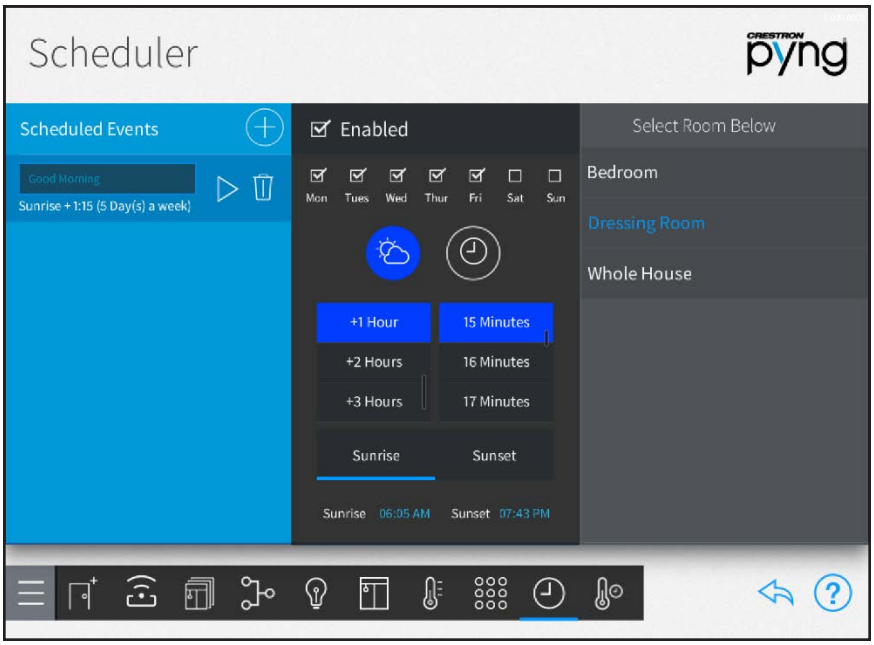
- Tap the check box next to an action to add or remove that action from the macro button. A checked box indicates that the action is set to occur when the macro button is triggered.
- Tap the back arrow (**<**) next to the room name to return to the **Select Room Below** menu.

NOTE: Only rooms that contain selectable actions appear on the **Select Room Below** menu. Once an action is selected from a room, the room name is shown with blue text in the **Select Room Below** menu.

Scheduler

Tap the **Schedule Events** button on the **Configuration** screen or the Scheduler button on the setup menu to display the **Scheduler** screen.

Scheduler Screen



Use the **Scheduler** screen to schedule events that recall one or more scenes at specific times and days of the week.

Create a New Scheduled Event

To create a new scheduled event:

1. Tap the plus button (**+**) next to **Scheduled Events**. Refer to the image above.
2. Enter a descriptive name for the event.
3. Tap **OK**.

The new event is displayed in the **Scheduled Events** menu.

Configure a Scheduled Event

To configure an existing scheduled event:

- Tap the **Enabled** check box to enable the event and add it to the system schedule. New events are disabled by default.
- Tap the appropriate check boxes above each day of the week to select the days that the event will occur. A filled check box indicates that the event is scheduled to occur on the associated day.
- To schedule the event to occur at a specific time of day, tap the clock button , and then set the time using the provided spinner menus.
- To schedule the event to occur at a time relative to sunrise or sunset (calculated by date and time zone), tap the sun and cloud button . Then, select whether the event should occur at sunrise or sunset, and set when the event should occur relative to the sunrise or sunset time.

  NOTE: To adjust the default times for sunrise and sunset, navigate to **Installer Settings** > **System Configuration** > **System Settings**, and then tap the wrench button on the **Current Times of Day** panel. For more information, refer to "Current Times of Day" on page 103.

- Select a room from the **Select Room Below** menu, and then select the scene(s) within each room that will be triggered by the event.

  NOTE: Only rooms that contain scenes display on the **Select Rooms Below** menu. Any room with a selected scene is shown with blue text on the **Select Rooms Below** menu.

Tap the play button next to the event name to recall the scenes that are scheduled to be triggered by the event.

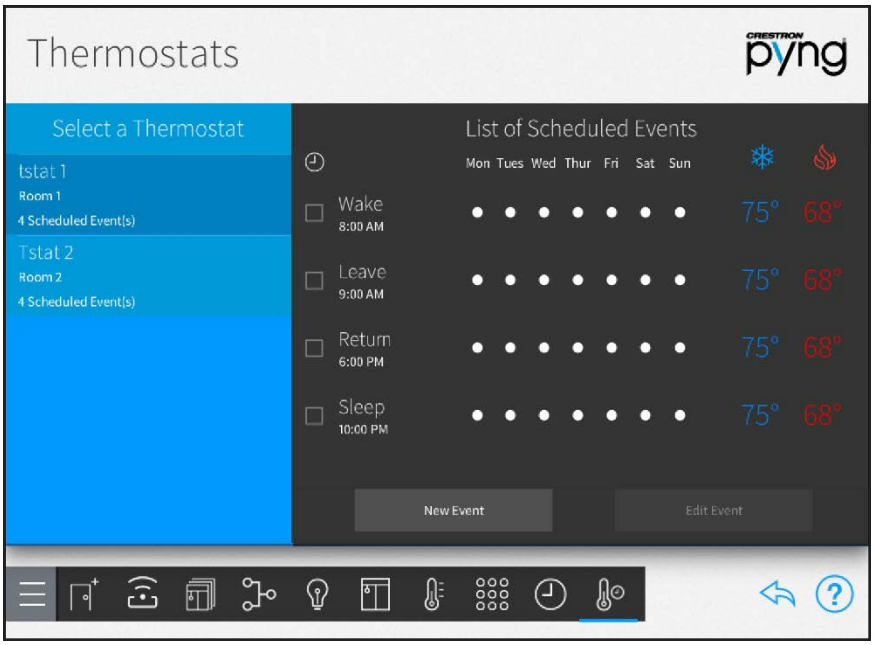
Tap the trashcan button next to the event name to delete the event.

Tap the back arrow button to return to the **Configuration** screen.

Thermostats

Tap the **Schedule Climate Control** button on the **Configuration** screen or the Thermostats button on the setup menu to display the **Thermostats** screen.

Thermostats Screen



Use the **Thermostat** screen to view and schedule events for the thermostats in the Crestron Pyng system.

By default, each thermostat includes events for "Sleep", "Wake", "Leave", and "Return". These events are disabled by default. To enable them, tap the event's check box to the left of the event name. A filled check box indicates that the scene is enabled.

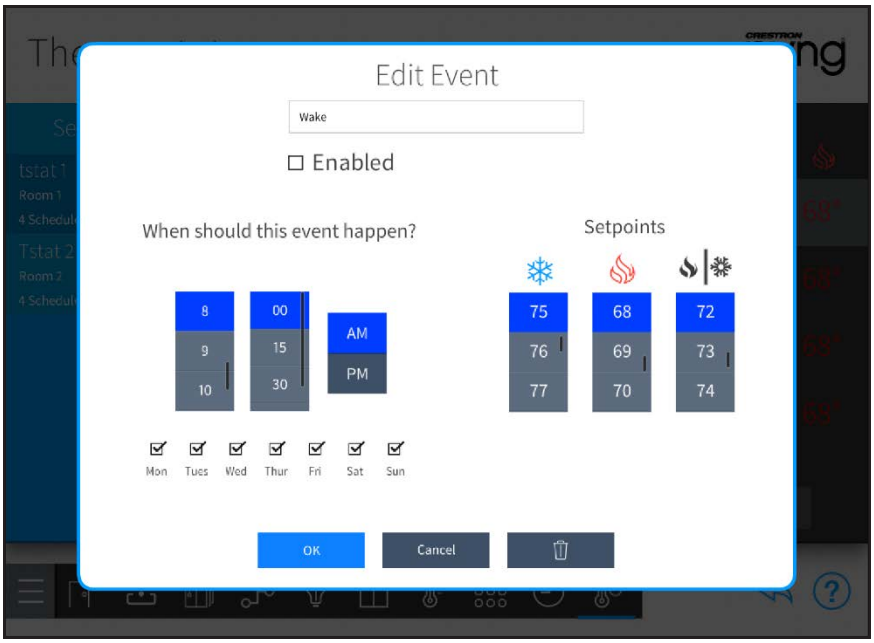
The **List of Scheduled Events** lists the thermostat events that have been created for each thermostat. Each thermostat event provides the time and days that it is scheduled to occur, as well as its cooling and heating set points.

Create a New Thermostat Event

To create a new scheduled thermostat event:

1. Select a thermostat from the **Select a Thermostat** menu.
2. Tap **New Event**. The **Edit Event** dialog box is displayed.

   Edit Event Dialog Box



3. Configure the following event settings:
   - Enter a descriptive name for the event in the text box at the top of the dialog box using the on-screen keyboard.
   - Tap the check box next to **Enabled** to enable the event and add it to the thermostat schedule. New events are disabled by default.
   - Set the time that the thermostat event should occur using the provided spinner menus.
   - Tap the check box above each day of the week to select the days that the thermostat event should occur. A filled check box indicates that the event is scheduled to occur on the associated day.
   - Select the temperature set points for cooling, heating, and auto modes using the appropriate spinner menu.
4. Tap **OK** to save the new thermostat event.

   Tap **Cancel** to cancel any changes. Tap the trashcan button to delete the event.

Configure a Thermostat Event

To configure an existing thermostat event:

1. Select a thermostat from the **Select a Thermostat** menu.
2. Select a thermostat event from the **List of Scheduled Events.**
3. Tap **Edit Event** to display the **Edit Event** dialog box.
4. Use the settings described in "Creating a New Scheduled Thermostat Event" on page "Create a New Thermostat Event" on the previous page to configure the event.
5. Tap **OK** to save the thermostat event or tap **Cancel** to cancel any changes.

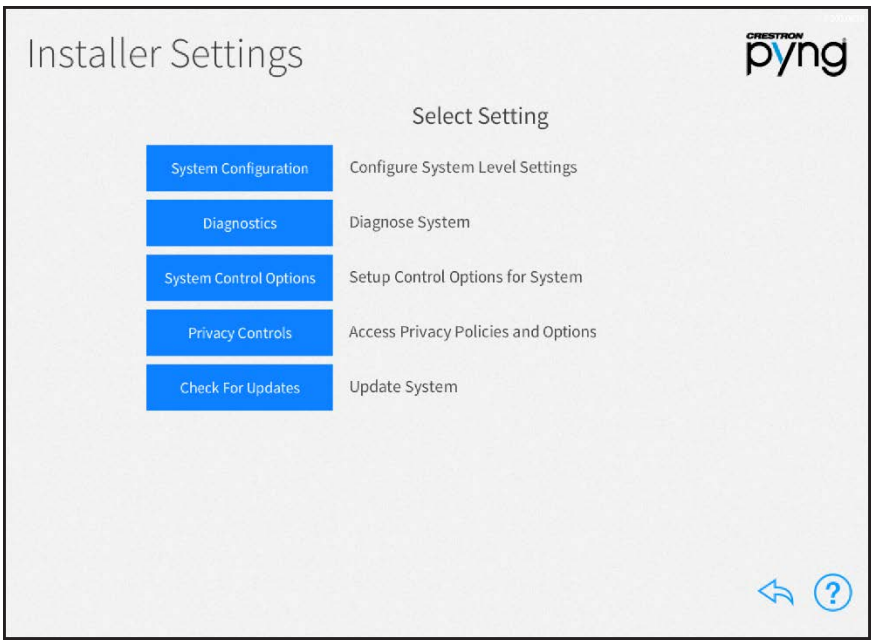
Tap the trashcan button to delete the thermostat event.

Tap the back arrow button to return to the **Configuration** screen.

Installer Settings

Tap the gear button on the bottom right of the **Setup** screen to display the **Installer Settings** screen.

Installer Settings Screen



Use the **Installer Settings** screen to configure various settings for the Crestron Pyng system and the CP4-R:

- Tap **System Configuration** to configure system settings, system information and passwords, Ethernet settings, and MyCrestron services. This selection also provides an option for resetting the CP4-R to its factory default settings.
- Tap **Diagnostics** to configure various settings for the Crestron Pyng system and the CP4-R.
- Tap **System Control Options** to set up a MyCrestron account, to adjust the XPanel web server settings, to configure voice control settings, and to update the web API authentication token.
- Tap **Privacy Controls** to view and edit privacy settings for collecting system information.
- Tap **Check for Updates** to check for and download software updates for the Crestron Pyng system and for connected devices.

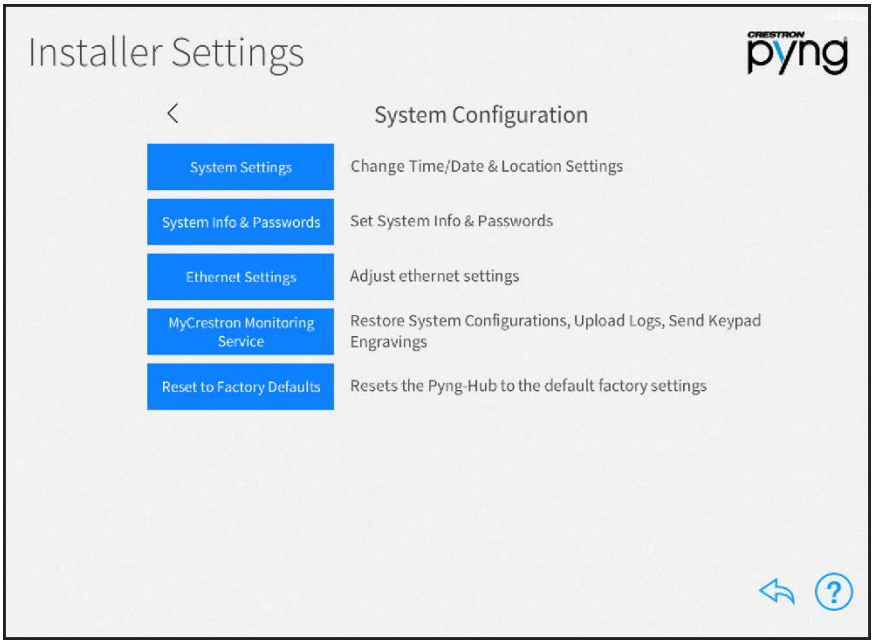
Tap the help button on any of the **Installer Settings** screens to display dialog boxes that explain the screen functions and features and provide links to tutorial videos. (The iPad or setup device must be connected to the network to access videos.)

Tap the back arrow button to return to the main **Setup** screen.

System Configuration

Tap **System Configuration** on the **Installer Settings** screen to display the **Installer Settings - System Configuration** screen.

Installer Settings - System Configuration Screen



Use the **Installer Settings - System Configuration** screen to configure various Crestron Pyng system settings.

- Tap **System Settings** to configure the time and date, location settings, time of day settings, and the system language.
- Tap **System Info & Passwords** to update the system information and to change the user password.
- Tap **Ethernet Settings** to view and configure the Ethernet settings for the CP4-R.
- Tap **MyCrestron Monitoring Service** to obtain a registration code for registering the CP4-R with a MyCrestron domain and to access various MyCrestron services.
- Tap **Reset to Factory Defaults** to reset the CP4-R to its factory default settings.

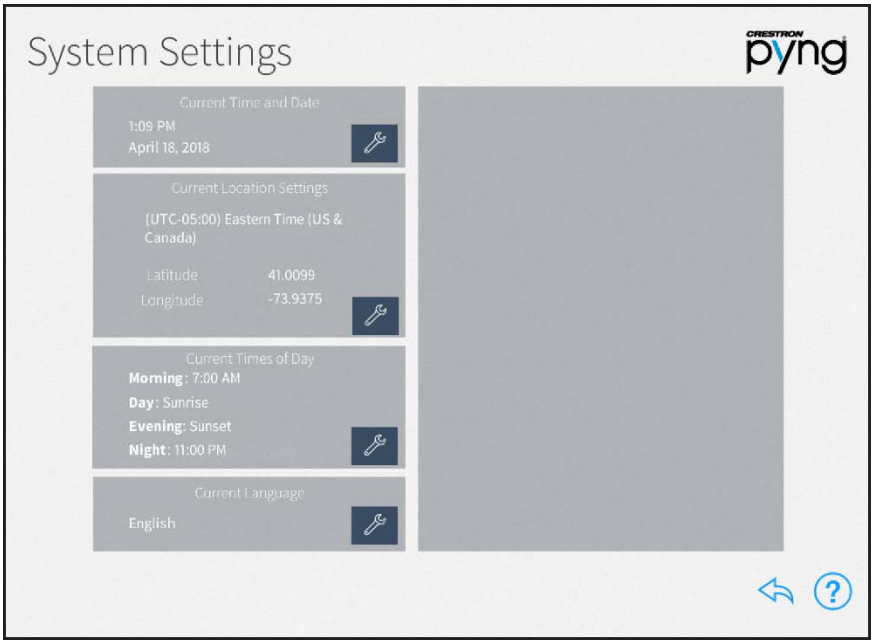
Tap the back arrow (**<**) next to **System Configuration** to return to the main **Installer Settings** screen.

Tap the back arrow button to return to the main **Setup** screen.

System Settings

Tap **System Settings** on the **Installer Settings - System Configuration** screen to display the **System Settings** screen.

System Settings Screen

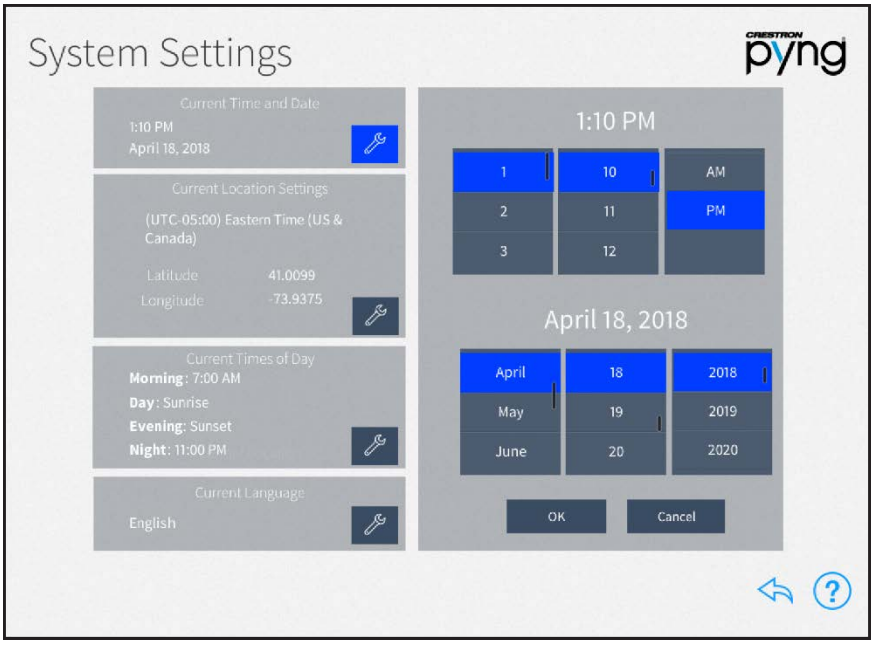


Use the **System Settings** screen to configure the date and time, the location settings, the preset times of day used for events, and the system language.

Current Time and Date

On the **System Settings** screen, tap the wrench button next to **Current Time and Date** to display selections for editing the date and time.

System Settings Screen - Current Time and Date



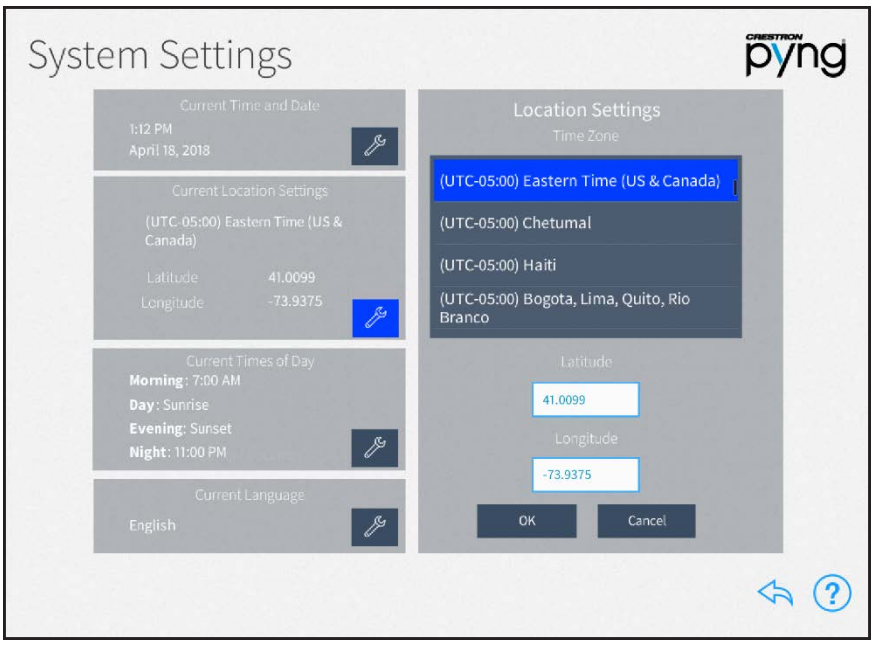
- Set the time (hour, minute, and **AM** or **PM**) using the appropriate spinner menus that are provided under the listed time.
- Set the date (month, day, and year) using the appropriate spinner menus that are provided under the listed date.

Tap **OK** to save any changes. Tap **Cancel** to cancel any changes.

Current Location Settings

On the **System Settings** screen, tap the wrench button next to Current Location Settings to display selections for editing location settings.

System Settings Screen - Current Location Settings



NOTE: If configuring the system with an iPad, tap **Synchronize with iPad** to synchronize the time zone, longitude, and latitude with the iPad device's location services.

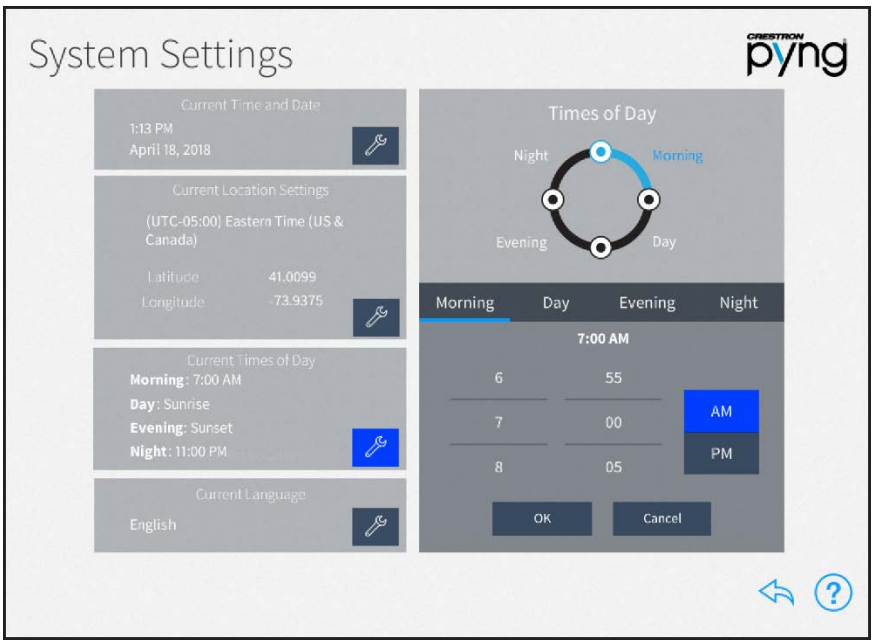
- Select the time zone for the system using the menu provided under **Time Zone**.
- Enter the system latitude in the **Latitude** field.
- Enter the system longitude in the **Longitude** field.

Tap **OK** to save any changes. Tap **Cancel** to cancel any changes.

Current Times of Day

On the **System Settings** screen, tap the wrench button next to **Current Times of Day** to display selections for editing the times of day recognized by the Crestron Pyng system.

System Settings Screen - Current Times of Day Settings



Times of day are used to trigger different actions and events within the system when the preset clock time is reached.

Tap the tab for each time of day to display the following configuration options:

- **Morning:** Set the time (hour, minute, and **AM** or **PM**) for the Morning preset, which is when the homeowner wakes using the provided spinner menus.
- **Day:** Set how long before or after sunrise (calculated by date and time zone) the Day preset occurs using the provided spinner menus.

  NOTE: In some cases (such as in the summer months), the time set for the Day preset may occur before the time set for the Morning preset. In these cases, any actions or events set for the Morning preset do not occur.

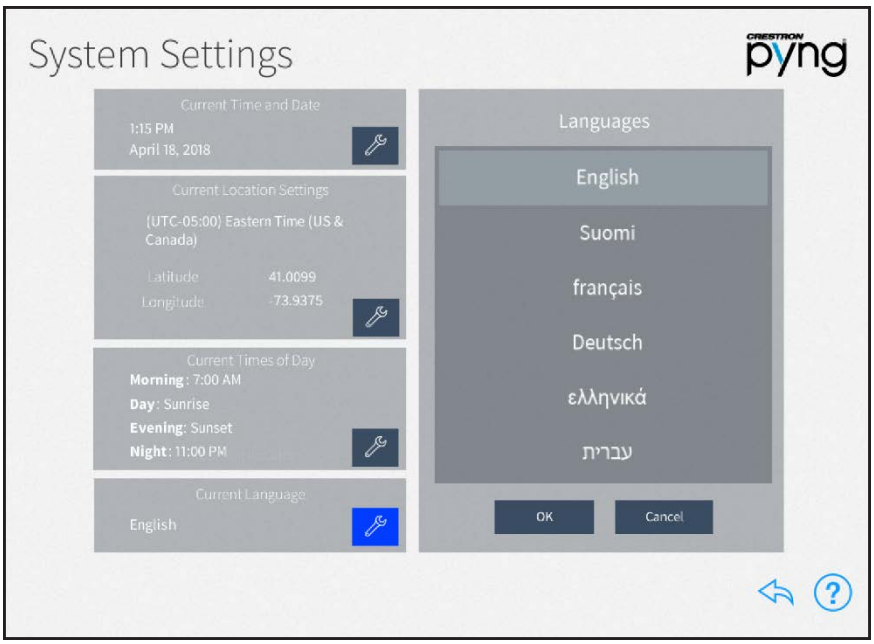
- **Evening:** Set how long before or after sunset (calculated by date and time zone) the Evening preset occurs using the provided spinner menus.
- **Night:** Set the time (hour, minute, and AM or PM) for the Night preset, which is when the homeowner goes to sleep, using the provided spinner menus.

Tap **OK** to save any changes. Tap **Cancel** to cancel any changes.

Current Language

On the **System Settings** screen, tap the wrench button next to **Current Language** to edit the language displayed by the system.

System Settings Screen - Current Language



Select the system language from the menu provided under **Languages**.

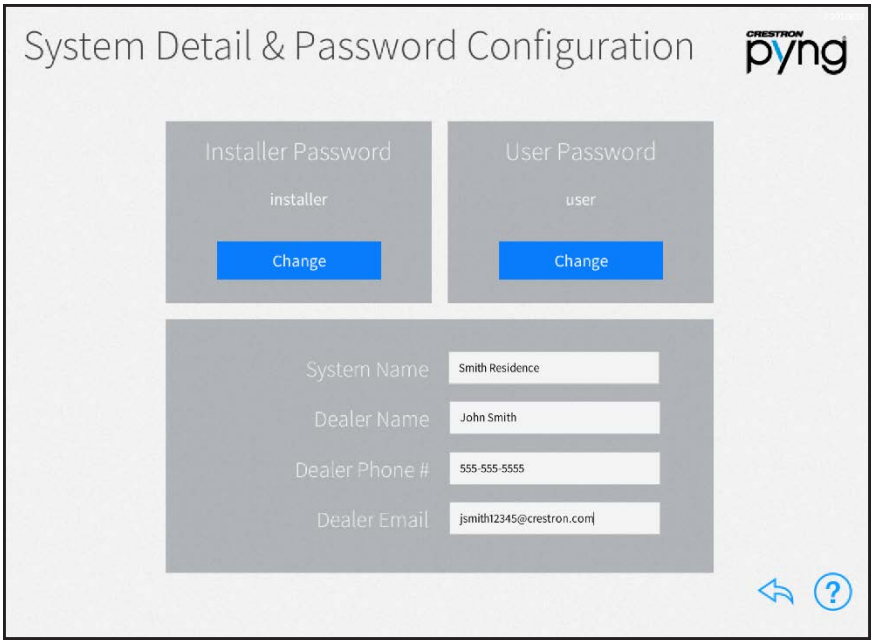
Tap **OK** to save any changes. Tap **Cancel** to cancel any changes.

Tap the back arrow button to return to the **Installer Settings - System Configuration** screen.

System Detail & Password Configuration

Tap **System Info & Passwords** on the **Installer Settings - System Configuration** screen to display the **System Detail & Password Configuration** screen.

System Detail & Password Configuration Screen



Use the **System Detail & Password Configuration** screen to update the system information and to change the user and installer passwords used to access the configuration screens.

The following settings may be configured:

- **Installer Password:** Tap Change to set a new installer password. Enter a new password using the pop-up dialog box that is displayed, and then tap **OK**.

  CAUTION: Once an installer password is set, installer configuration mode may not be accessed without entering the password. If the installer password is lost, all Crestron Pyng system passwords must be reset by issuing the resetpyngpasswords command via the Text Console tool in Crestron Toolbox.

- **User Password:** Tap **Change** to set a new user password. Enter a new password using the pop-up dialog box that is displayed, and then tap **OK**.

  NOTE: The installer password and user password may not be the same.

- **System Name:** Enter a descriptive system name (for example, "Smith Residence").
- **Dealer Name:** Enter the Crestron dealer responsible for the system installation.
- **Dealer Phone #:** Enter the phone number of the Crestron dealer responsible for the system installation.
- **Dealer Email:** Enter the email address of the Crestron dealer responsible for the system installation.

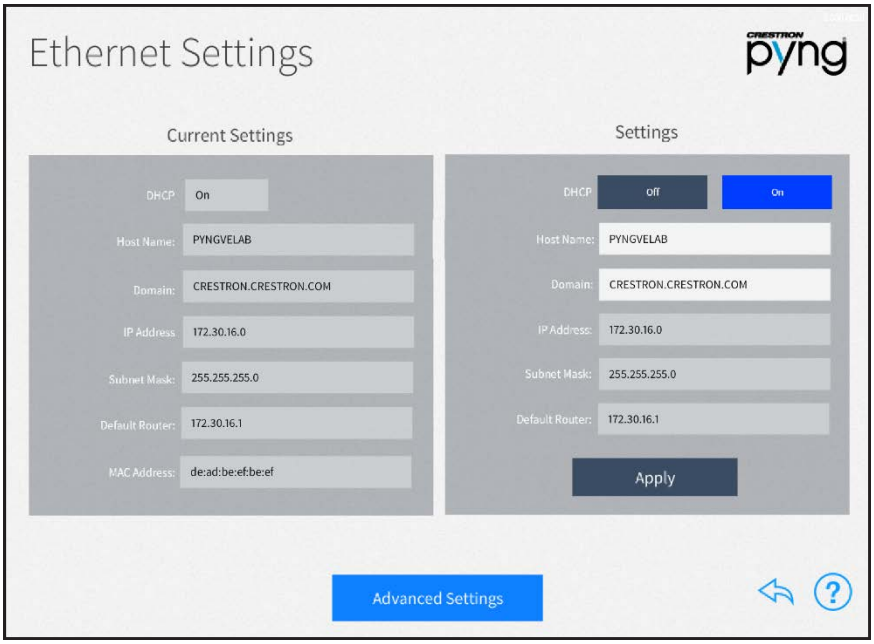
> **NOTE:** Ensure that the dealer information is kept up to date, as this information is needed to place custom engraving orders through the Crestron Pyng system.

Tap the back arrow button to return to the **Installer Settings - System Configuration** screen.

Ethernet Settings

Tap **Ethernet Settings** on the **Installer Settings - System Configuration** screen to display the **Ethernet Settings** screen.

Ethernet Settings Screen



Use the Ethernet **Settings** screen to view and modify Ethernet settings for the CP4-R.

The following Ethernet settings may be viewed in the **Current Settings** panel:

- **DHCP:** Reports whether DHCP (Dynamic Host Configuration Protocol) is turned on or off
- **Host Name:** The CP4-R hostname
- **Domain:** The CP4-R domain name
- **IP Address:** The CP4-R IP address

  > **NOTE:** If a static IP address is set for the CP4-R, a DNS server must also be set to generate the IP address. DNS servers may be added or edited by tapping Advanced Settings.

- **Subnet Mask:** The CP4-R subnet mask address
- **Default Router:** The default gateway router address
- **MAC Address:** The CP4-R unique MAC (Media Access Control) address

The following Ethernet settings may be edited in the **Settings** panel.

- **DHCP:** Tap **On** to turn DHCP on, or tap **Off** to turn DHCP off.

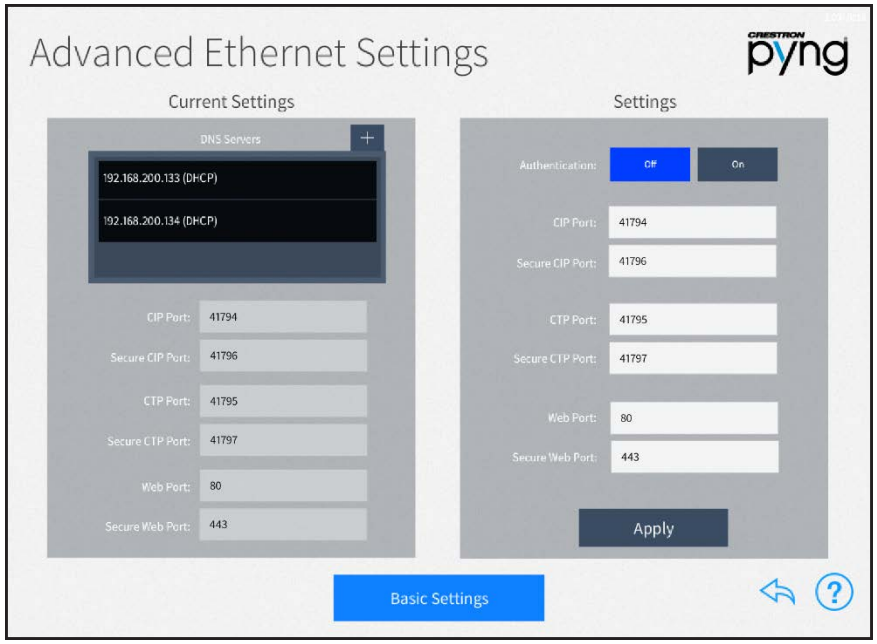
  NOTE: If DHCP is turned on, the device IP address, the subnet mask, and the default router settings may not be changed manually.

- **Host Name:** Enter the CP4-R hostname,
- **Domain:** Enter the CP4-R domain name used for connection.
- **IP Address:** If DHCP is turned off, enter the CP4-R IP address.
- **Subnet Mask:** If DHCP is turned off, enter the CP4-R subnet mask address.
- **Default Router:** If DHCP is turned off, enter the default gateway router IP address.

After making any changes to the Ethernet settings, tap **Apply**. A dialog box is displayed confirming whether the changes should be submitted. Tap **OK** to save the changes and to reboot the device using the new Ethernet settings. Tap **Cancel** to cancel the changes.

Tap **Advanced Settings** at the bottom of the screen to display the **Advanced Ethernet Settings** screen.

Advanced Ethernet Settings Screen



Use the **Advanced Ethernet Settings** screen to view and modify advanced Ethernet settings. This screen is also used to configure authentication for the device.

The following Ethernet settings may be viewed in the Current Settings panel.

- **DNS Servers:** The DNS (Domain Name Servers) servers that are used to generate IP addresses for the CP4-R
  - Tap the plus button (**+**) at the top of the **DNS Servers** menu to display a dialog box for entering a new DNS server IP address.

- Enter the new DNS server address in the provided text field
- Tap **OK** to save the new DNS server or tap **Cancel** to cancel the addition.

- **CIP Port:** The CIP (Crestron Internet Protocol) port number for the CIP routing protocol
- **Secure CIP Port:** The secure CIP port number for the CIP routing protocol
- **CTP Port:** The CTP (Crestron Toolbox Port) number for the CTP routing protocol
- **Secure CTP Port:** The secure CTP number for the CTP routing protocol
- **Web Port:** The web port number for the hypertext transfer protocol
- **Secure Web Port:** The secure web port number for the hypertext transfer protocol

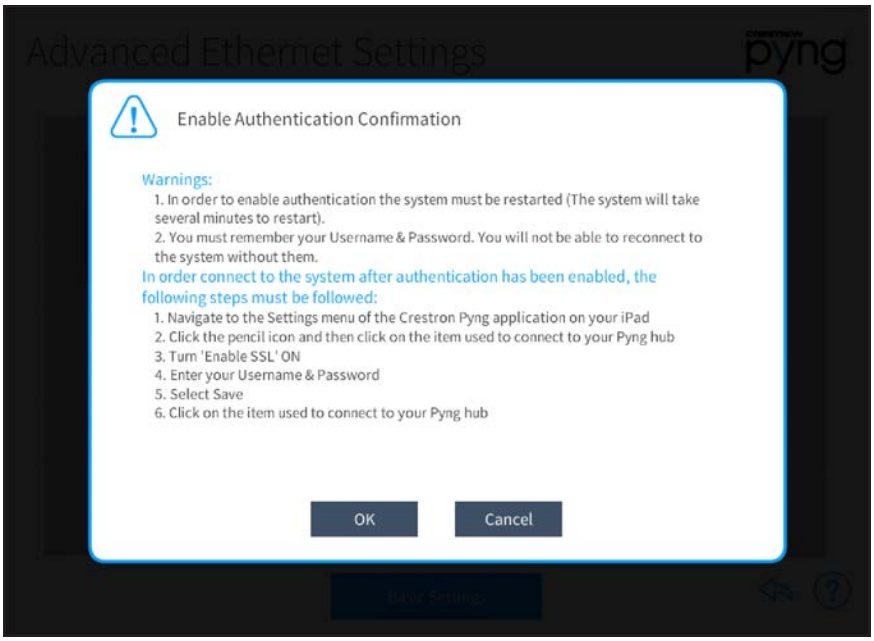
The following Ethernet settings may be edited in the **Settings** panel.

- **Authentication:** Tap **On** to turn device authentication on, or tap **Off** to turn device authentication off.

  If authentication is turned on, an **Enable Authentication** dialog box is displayed.

  - Enter a username and password in the appropriate fields, and then reenter the password. Tap **OK** to proceed.
  - A pop-up dialog box is displayed that provides warnings about authentication and steps for connecting to the system after authentication is enabled.

    Enable Authentication Confirmation Dialog Box

  - Tap **OK** to proceed or **Cancel** to cancel enabling authentication.

    CAUTION: Once authentication is enabled, do not lose the username and password required for authentication, as the Crestron Pyng system may not be accessed without these credentials. If the authentication credentials are lost, the CP4-R must be restored to factory defaults.

- **CIP Port:** Enter the CIP port number for the CIP routing protocol.
- **Secure CIP Port:** Enter the secure CIP port number for the CIP routing protocol.
- **CTP Port:** Enter the CTP port number for the CTP routing protocol.
- **Secure CTP Port:** Enter the secure CTP port number for the CTP routing protocol.
- **Web Port:** Enter the web port number for the hypertext transfer protocol.
- **Secure Web Port:** Enter the secure web port number for the hypertext transfer protocol.

After making any changes to the advanced Ethernet settings, tap **Apply**. A dialog box is displayed confirming whether the changes should be submitted. Tap **OK** to save the changes and to reboot the device using the new advanced Ethernet settings. Tap **Cancel** to cancel the changes.

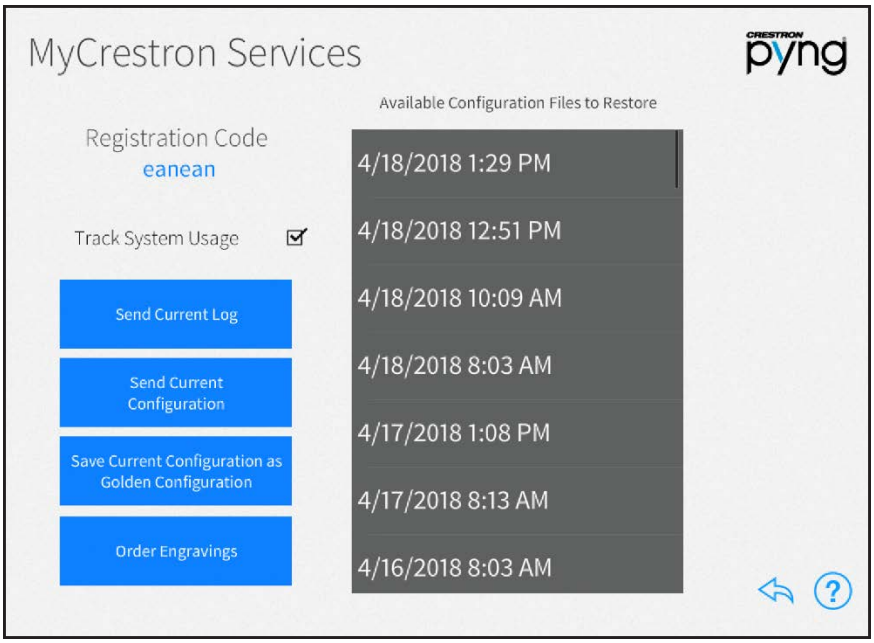
Tap **Basic Settings** to return to the main **Ethernet Settings** screen.

Tap the back arrow button to return to the **Installer Settings - System Configuration** screen.

MyCrestron Services

Tap MyCrestron Monitoring Services on the **Installer Settings - System Configuration** screen to display the **MyCrestron Services** screen.

MyCrestron Services Screen



Use the **MyCrestron Services** screen to manage saved configuration files, to send message logs to the cloud, and to order custom engravings. A registration code is also provided for registering the Crestron Pyng system with a MyCrestron account.

For more information on registering the Crestron Pyng system with a MyCrestron account, refer to "MyCrestron Settings" on page 118.

The following settings may be configured:

- Tap the check box next to **Track System Usage** to enable or disable tracking the Crestron Pyng system usage through MyCrestron.
- Tap **Send Current Log** to send the current message log file to MyCrestron. Tap **OK** in the dialog box that is displayed to send the current log file, or tap **Cancel** to cancel sending the log file.
- Tap **Send Current Configuration** to send the current system configuration settings to MyCrestron. Tap **OK** in the dialog box that is displayed to send the current configuration, or tap **Cancel** to cancel sending the configuration.
- Tap **Save Current Configuration as Golden Configuration** to save the current configuration as a golden configuration. Tap **OK** in the dialog box that is displayed to save the current configuration or tap **Cancel** to cancel saving the configuration.

  NOTE: Golden configurations represent known, working system states that may always be restored safely, and are indicated by a star icon in the **Available Configuration Files to Restore** menu.

- Tap **Order Engravings** to order any custom engravings created in the system (after the system has been linked with a MyCrestron account). Tap **OK** in the dialog box that is displayed to order the engravings or tap **Cancel** to cancel the order.

  NOTES:

  - An email that contains all of the information needed to order the engravings is generated and sent to the integrator. This information is generated based on the button layouts configured during the Actions & Events step.
  - The dealer information must be entered correctly and up to date in order to ensure that the order is processed correctly. For more information, refer to "System Detail & Password Configuration" on page 105.

- Select a configuration file from **the Available Configuration Files to Restore** menu to restore the system to the selected configuration. Golden configurations are indicated by a star icon.

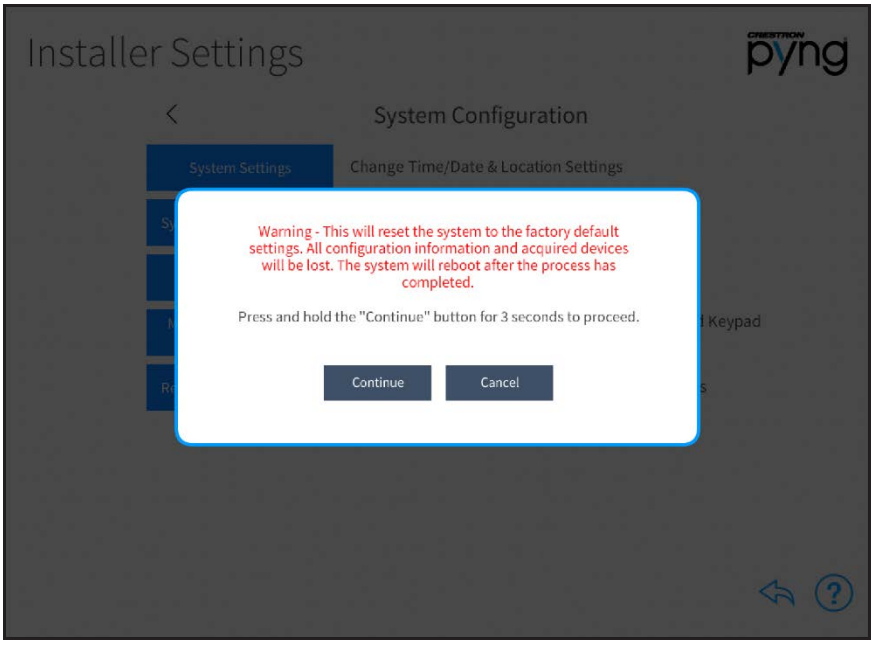
  NOTE: The Crestron Pyng system records the system configuration settings periodically and saves them in configuration files, which are sorted by time and date. If an issue arises with the system, the system may be restored to an earlier working configuration. Golden Configurations always appear the top of the **Available Configuration Files to Restore** list.

Tap the back arrow button to return to the **Installer Settings - System Configuration** screen.

Reset to Factory Defaults

Tap **Reset to Factory Defaults** on the **Installer Settings** screen to display a dialog box used to restore the CP4-R to its factory default settings.

Installer Settings Screen - Reset to Factory Defaults



The dialog box contains a warning stating that all configured settings and devices are lost following a factory restore, and provides instructions for restoring the CP4-R.

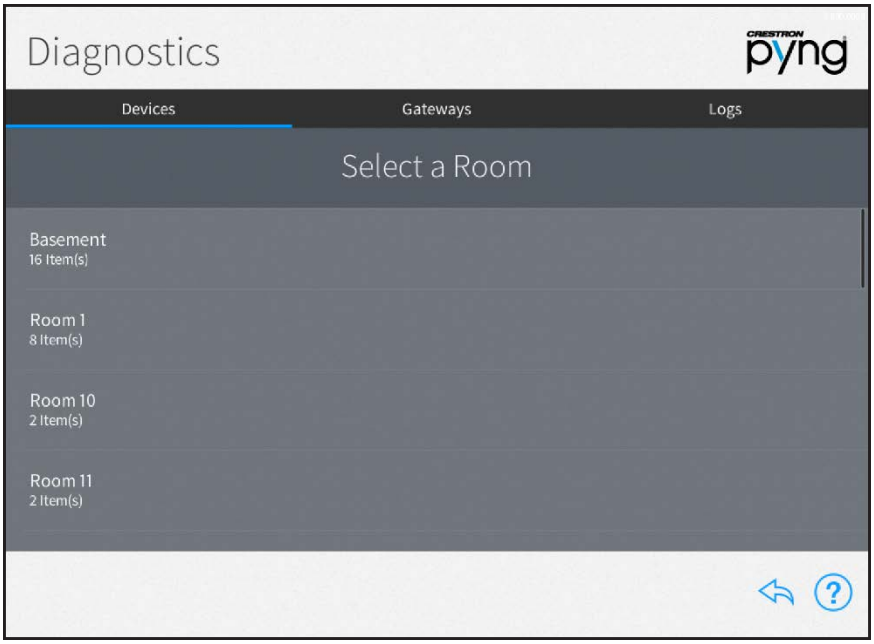
To restore the CP4-R, press and hold the **Continue** button for three seconds. The device reboots after the restore process completes.

Tap **Cancel** to cancel the factory restore and to return to the **Installer Settings - System Configuration** screen.

Diagnostics

Tap **Diagnostics** on the **Installer Settings** screen to display the **Diagnostics** screen.

Diagnostics Screen - Devices Tab



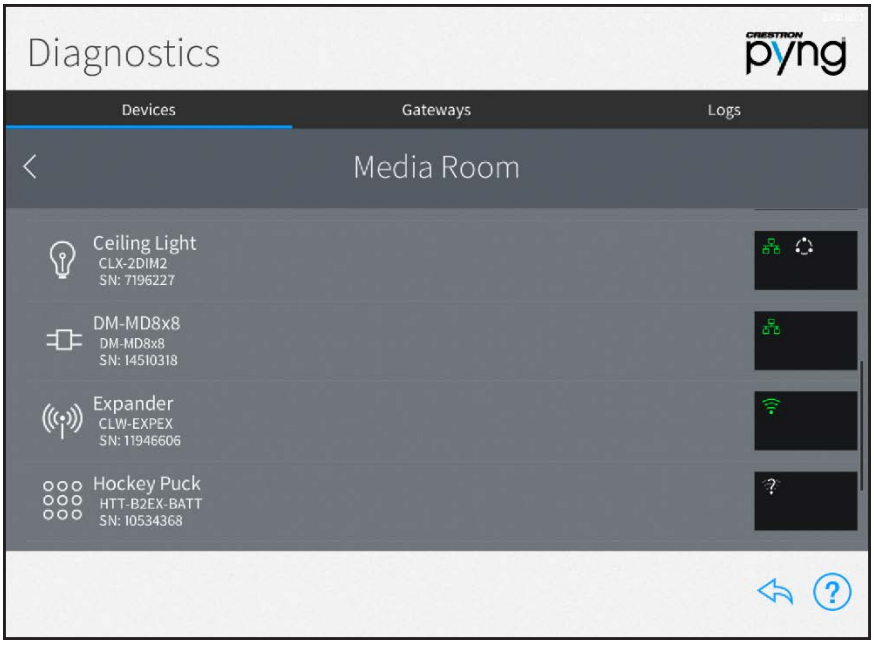
Use the **Diagnostics** screen to troubleshoot devices and gateways connected to the system and to view system message logs.

Devices

Tap the **Devices** tab to view all of the network devices that are paired with the Crestron Pyng system, organized by room. Each device reports its network status, firmware status, whether it is included in a scene, and whether it is affected by a scheduled event.

Select a room from the list to view the status of the devices configured for the room.

Diagnostics Screen - Media Room



The following status information is provided for each device in the room:

- If the device is online and detected by the system, a green wireless network icon or wired network icon is shown in the box to the right of the device name.
- If the device is offline or not detected by the system, a network icon with a red x (or) is shown.
- If a network connection cannot be determined or if the device is being scanned, a network icon with a question mark over the icon is shown.
- If a serial device is functioning and is associated with a COM port in the system, a signal pulse icon is shown. If a serial device is functioning but is not associated with a COM port, a signal pulse icon with a red x is shown.
- If an IR device is functioning and is associated with an IR port in the system, a beamed signal icon is shown. If an IR device is functioning but is not associated with an IR port, a beamed signal icon with a red x is shown.
- If a CEC device is functioning and is associated with a CEC port in the system, a port icon is shown. If a CEC device is functioning but it not associated with a CEC port in the system, a port icon with a red x is shown.
- If the device is part of a scene, a white scene icon is shown.
- If the device is running an outdated firmware version that is not supported by the system, a red computer chip icon is shown.

- If the device is battery-operated and has low battery power, a low battery icon is shown.
- If the system detects an issue with the device, a caution icon is shown.

NOTE: Devices that are not connected to the network, such as relay-controlled devices and uncontrolled audio sources, do not display any network connection information.

Tap the gear button next to a device to view and modify device settings.

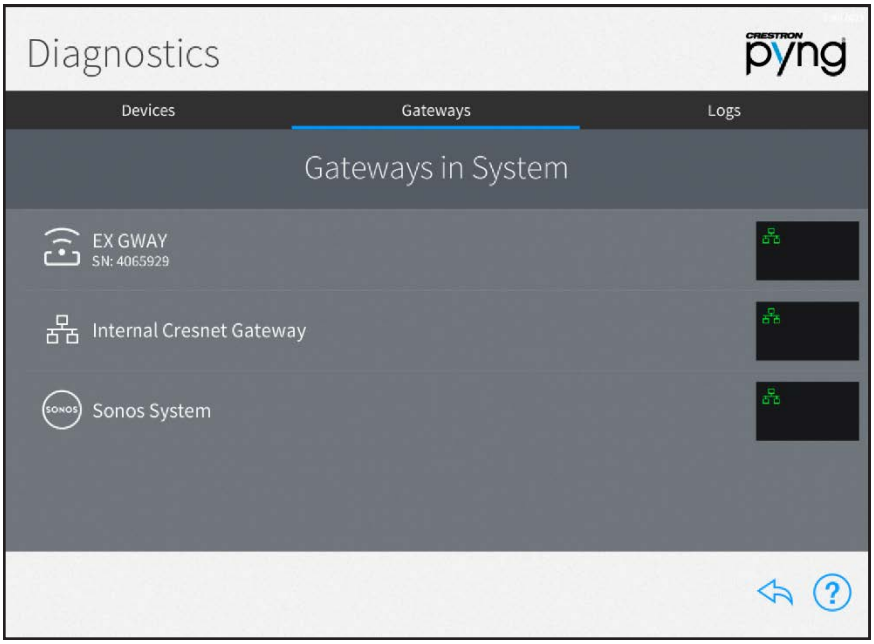
If a device is configured as part of a scene, tap the scene button next to the device to view the scenes that include the device.

If an issue is found with a device, tap the warning button next to the device to view more information about the issue.

Gateways

Tap the **Gateways** tab to view all of the gateways that are paired with the Crestron Pyng system. The **Gateways** tab also provides an option for viewing the system of paired Sonos devices. Each gateway reports its network and firmware status.

Diagnostics Screen - Gateways Tab



The following status information is provided for each gateway:

- If the gateway is online and detected by the system, a green network icon is shown in the box to the right of the device name.
- If the gateway is offline or not detected by the system, a network icon with a red x is shown.

- If the gateway is running an outdated firmware version that is not supported by the system, a red computer chip icon is shown.
- If the system detects an issue with the gateway, a caution icon is shown.

The following additional status information is provided for the **Sonos System** gateway:

NOTE: For more information on troubleshooting the Sonos system, refer to "Appendix A: Sonos and Crestron Pyng Integration" on page 194.

- If the Sonos system has discovered devices from multiple households after a device from one household has been paired, a two house icon with a red x is shown.
- If the Sonos system is not detected by the Crestron Pyng system, a network tree icon with a red x is shown.
- If the Sonos system is disabled, an unfilled house icon is shown.
- If a paired Sonos device is not detected by the Crestron Pyng system, a music note icon with a red x is shown.

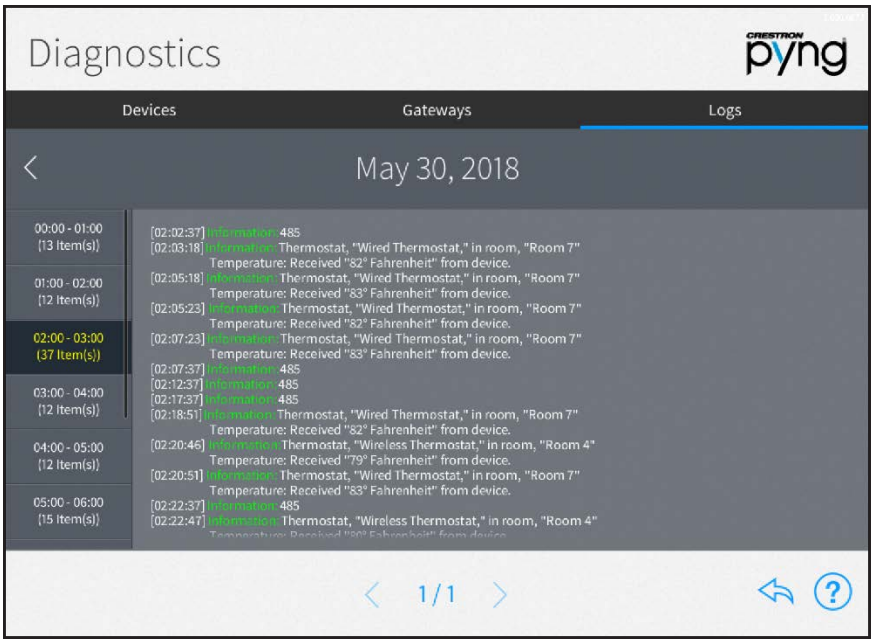
Tap the gear button next to a gateway to view and modify gateway settings and to view all devices paired to the gateway. For more information on configuring gateway settings, refer to .

If an issue is found with a gateway, tap the warning button next to the device to view more information about the issue.

Logs

Tap the **Logs** tab on the top of the screen to view the message logs for the entire system, organized by day and time. Each item in the message log includes a time stamp, a recorded event description, and a message level indicating whether the item is general information or an error.

Diagnostics Screen - Logs Tab



NOTE: An SD card must be loaded into the **MEMORY** slot on the rear of the CP4-R to store log files.

The message logs display all of the actions that have occurred in the Crestron Pyng system during a specified date and time range.

To navigate the message logs:

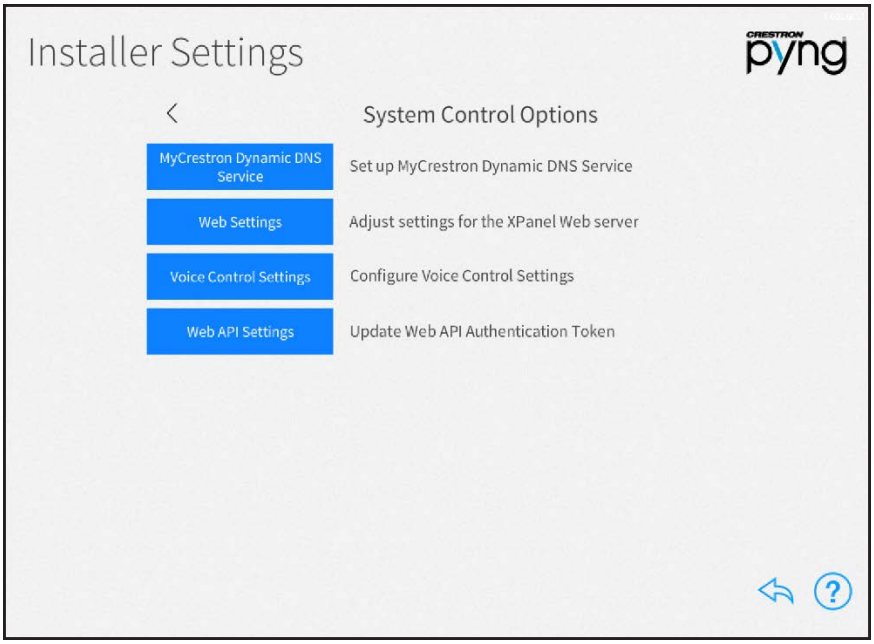
- Select a date from the **Select a Log** menu.
- Tap the left and right arrow buttons (**<** and **>**) at the top of the screen to move forward and backward through logs for each day (starting with the current day).
- Swipe up or down through the list of times on the far left of the screen to view the logs for a specific time range (broken down into one-hour intervals).
- If more than one page of the log is available for the selected time range, use the left and right arrow buttons (**<** and **>**) at the bottom of the page to move forward or backward through the log pages.

Tap the back arrow button ( ) to return to the **Installer Settings** screen.

System Control Options

Tap **System Control Options** on the **Installer Settings** screen to display the **Installer Settings - System Control Options** screen.

Installer Settings - System Control Options Screen



Use the **Installer Settings - System Control Options** screen to configure various options for system control:

- Tap **MyCrestron Dynamic DNS Service** to register the Crestron Pyng system with a MyCrestron domain and to view the current MyCrestron registration status.
- Tap **Web Settings** to adjust settings for the web XPanel interface.
- Tap **Voice Control Settings** to associate the Crestron Pyng system with a supported voice control service provider.
- Tap **Web API Settings** to update the web API authentication token for the Crestron Pyng system.

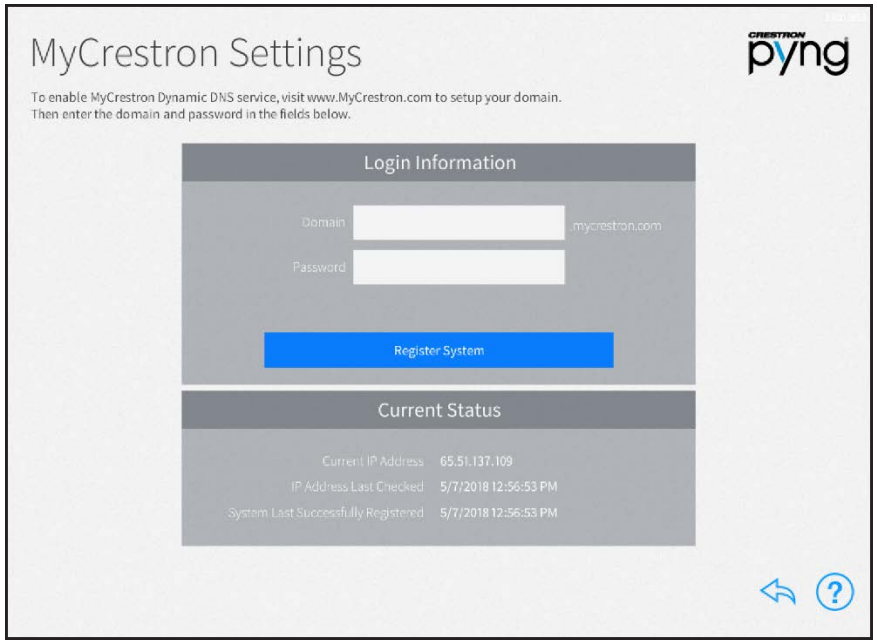
Tap the back arrow (**<**) next to **System Control Options** to return to the main **Installer Settings** screen.

Tap the back arrow button to return to the main **Setup** screen.

MyCrestron Settings

Tap **MyCrestron Dynamic DNS Service** on the **Installer Settings - System Control Options** screen to display the **MyCrestron Settings** screen.

MyCrestron Settings Screen



Use the **MyCrestron Settings** screen to enable remote access to the Crestron Pyng system through the MyCrestron Dynamic DNS service.

NOTE: A MyCrestron domain name must be registered at www.mycrestron.com prior to registering the system with MyCrestron.

To register the Crestron Pyng system with a MyCrestron account:

1. Enter the MyCrestron account domain name in the **Domain** text box.
2. Enter the password for the MyCrestron account in the **Password** field.
3. Tap **Register System**.

If the registration is successful, a success message is displayed, and the System Last Successfully Registered date updates in the Current Status panel.

The **Current Status** panel provides the following information:

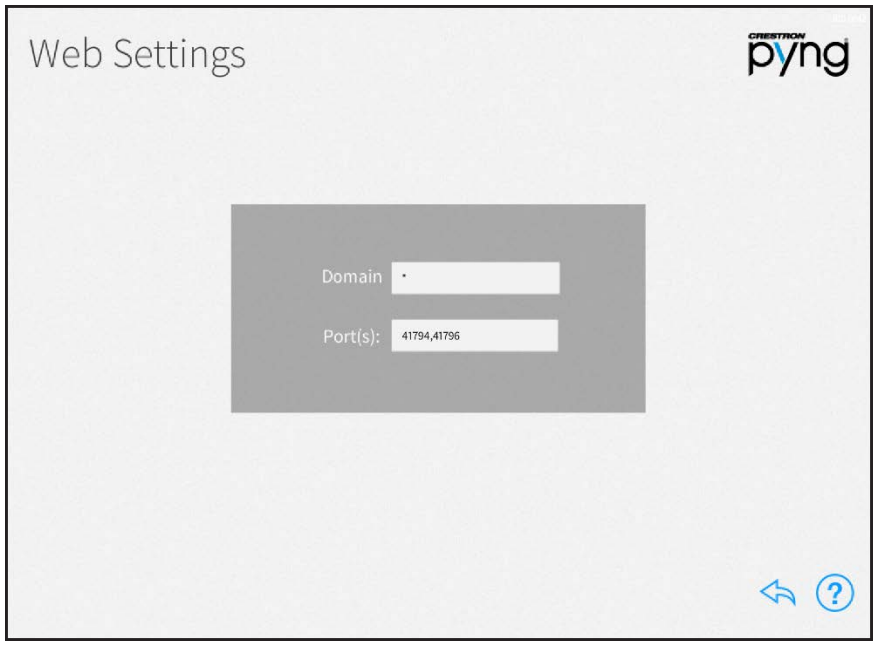
- **Current IP Address:** The IP address associated with the MyCrestron account domain name
- **IP Address Last Checked:** The date and time that the MyCrestron account IP address was last checked
- **System Last Successfully Registered:** The date and time that the Crestron Pyng system was last successfully registered to a MyCrestron account

Tap the back arrow button to return to the **Installer Settings - System Control Options** screen.

Web Settings

Tap **Web Settings** on the **Installer Settings - System Control Options** screen to display the **Web Settings** screen.

Web Settings Screen



Use the **Web Settings** screen to enter a domain and port for accessing the CP4-R's built-in web XPanel interface. The following XPanel settings may be edited:

- **Domain:** Enter the XPanel web domain.
- **Port(s):** Enter the XPanel web port(s).

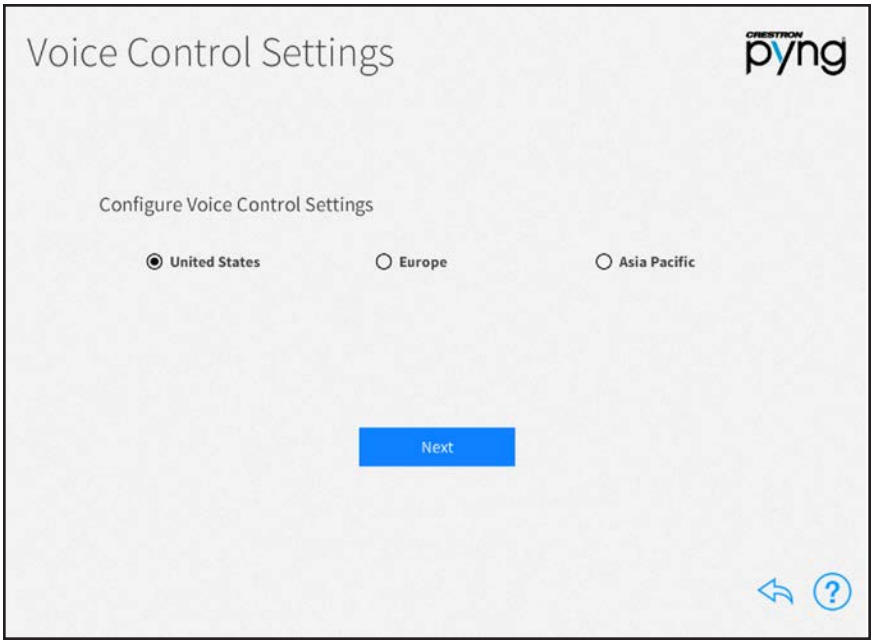
> **NOTE:** For most applications, set **Domain** to "*" and set **Port(s)** to "41794,41796". For more information on advanced web XPanel configurations, refer to OLH article 5793 at www.crestron.com/onlinehelp.

Tap the back arrow button to return to the **Installer Settings - System Control Options** screen.

Voice Control Settings

Tap **Voice Control Settings** on the **Installer Settings - System Control Options** screen to display the **Voice Control Settings** screen.

Voice Control Settings Screen



Use the **Voice Control Settings** page to pair the Crestron Pyng system with an Amazon® software Alexa™ voice services account or the Google® software Google Assistant™ voice services account.

To configure voice control settings for the Crestron Pyng system:

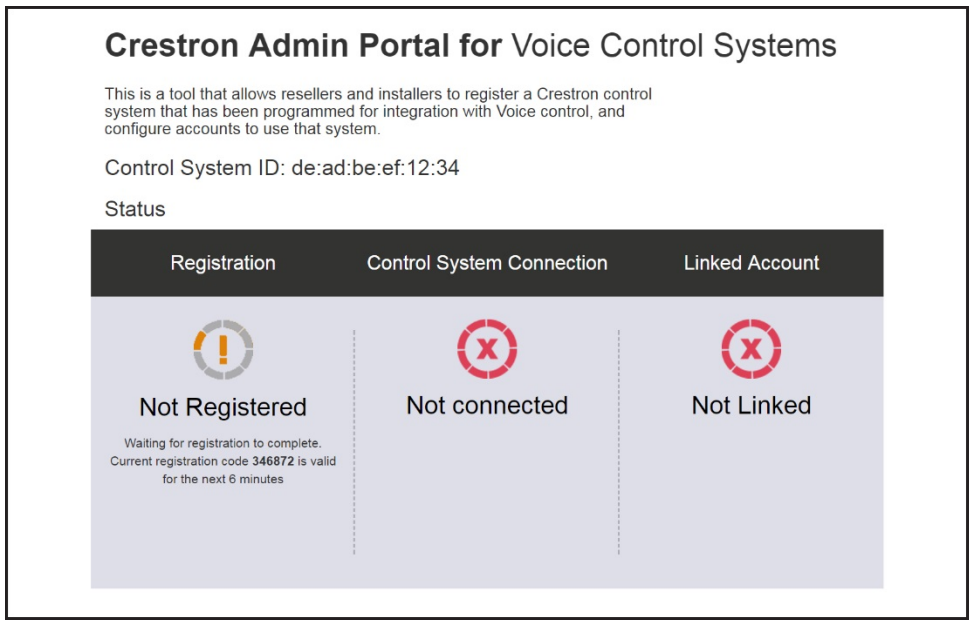
1. Select the region associated with the Crestron Pyng system (**United States**, **Europe**, or **Asia Pacific**).

   NOTE: Voice control via the TSR-310 is applicable only to systems that are registered in the United States region at this time.

2. Tap **Next**.
3. After a region is selected, tap the URL provided on the screen to open the Crestron Admin Portal for Voice Control Systems for the selected region.

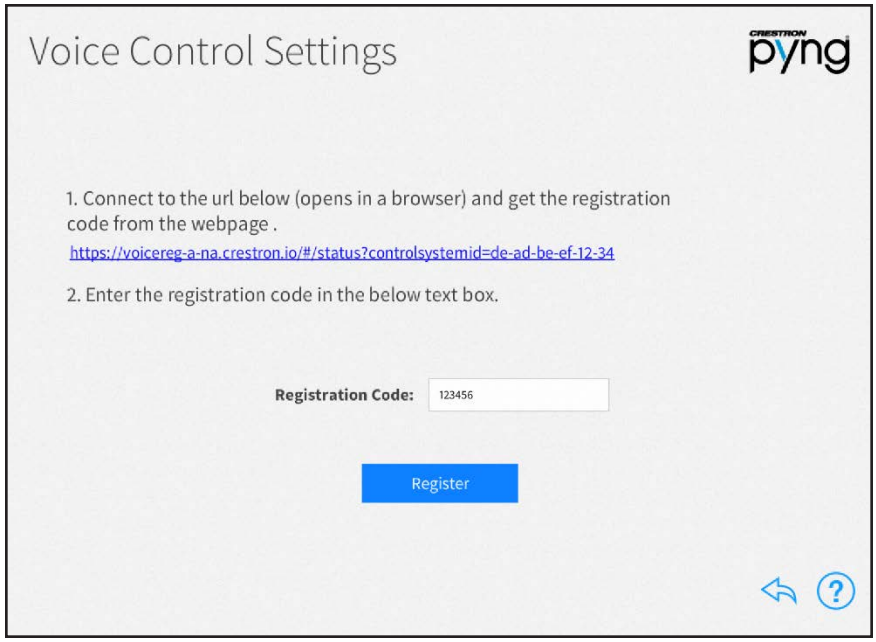
   NOTE: If Google Assistant will be used as the voice services provider, enter "https://voicereg-g-na.crestron.io/#/status?controlsystemid=[MacAddress]" into a web browser instead, where [MacAddress] is the CP4-R MAC address.

Crestron Admin Portal for Voice Control Systems Page



4. If the device is not already registered, record the six-digit registration code provided under the **Registration** section.
5. Enter the registration code obtained in the above step in the **Registration Code** field on the **Voice Control Settings** screen.

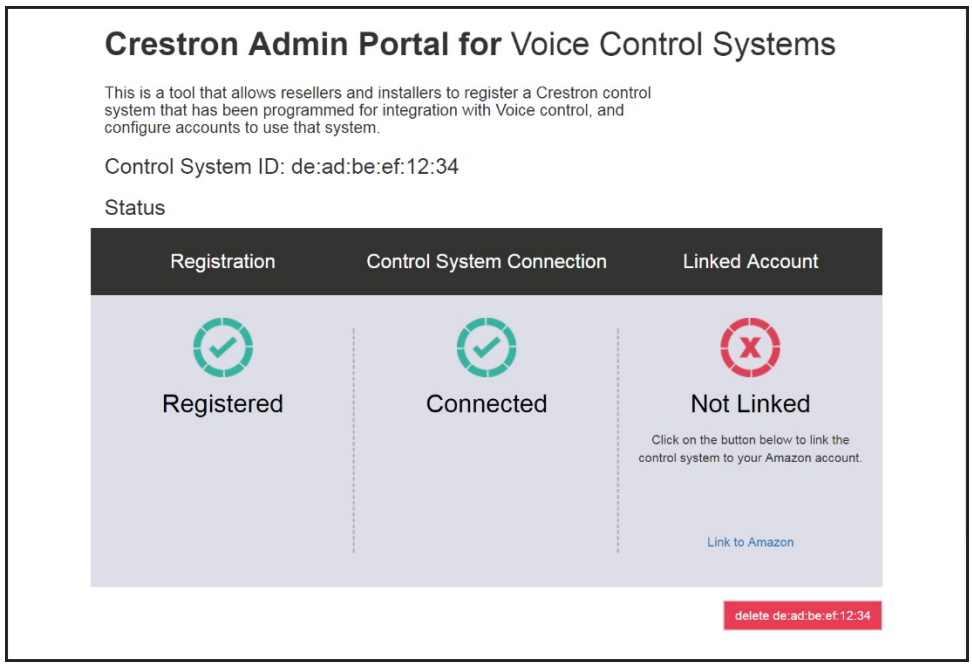
Voice Control Settings Screen - Registration Code



6. Tap **Register**. If the registration credentials are valid, a dialog box is displayed stating that the registration was successful. Tap **OK** to continue.

7. A second dialog box is displayed stating that the homeowner's Alexa or Google Assistant account must be linked to the Crestron Pyng system. Tap the **Registration Portal** link to display the **Crestron Admin Portal for Voice Control Systems** page in the web browser.

Crestron Admin Portal for Voice Control Systems Page



NOTE: To unlink the CP4-R from the voice services provider, tap the red button at the bottom right of the page. The registration process must be completed again to relink the CP4-R with the voice services provider.

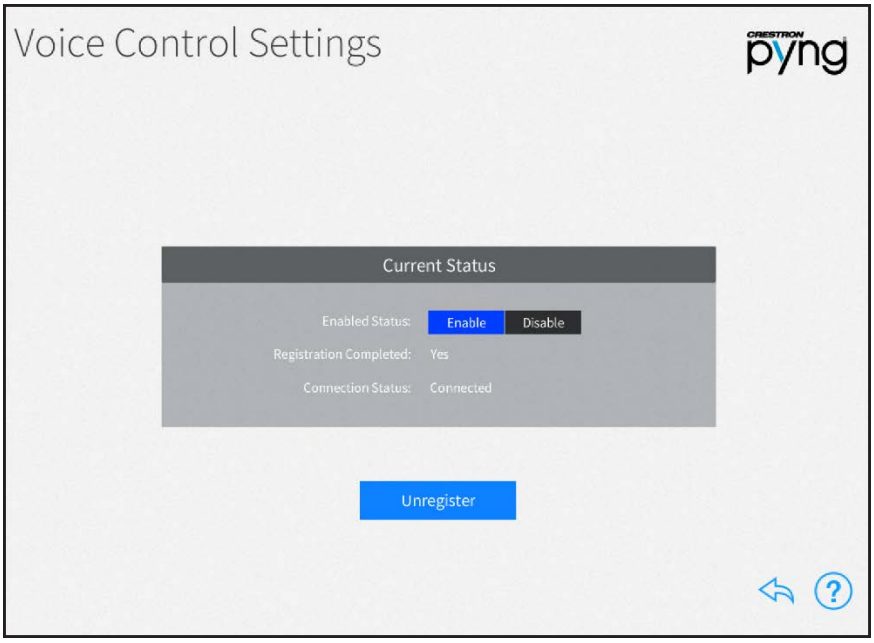
8. Tap the link at the bottom of the **Linked Account** section. A dialog box for entering the voice provider account credentials is displayed.
9. Enter the credentials for the voice provider account.

NOTE: If the control system is registered with an Amazon account, a dialog box is displayed asking whether the linked account is for a smart home or for an Alexa for Business (AWS) account. Tap **Smart Home** to use the control system with a residential Amazon account. Alexa for Business accounts are not supported by the TSR-310.

If the registration process is successful, the **Linked Account** status changes to Linked.

Once the Crestron Pyng system is registered with a voice services account, the **Voice Control Settings** screen provides selections for viewing and configuring voice control settings.

Voice Control Settings Screen - Current Status



The following settings may be viewed and configured:

- **Enable Status:** Tap **Enable** or **Disable** to enable or disable voice control, respectively, for the system.
  - If **Enable** is selected, the system connects to and processes commands from the voice recognition service.
  - If **Disable** is selected, the system disconnects from the voice control service, and voice control commands will no longer be processed.
- **Registration Completed:** Indicates whether or not the system is registered with the voice recognition service
- **Connection Status:** Indicates the connection state between the system and the voice control service (If the system is enabled but unable to connect to the service, additional details are provided in the message logs.)

NOTE: If the system is unable to connect to the voice control service (**Connection Status** does not display as "Connected"), navigate to the registration portal and delete the control system from the portal. If the system is registered and connected, but voice commands are not working, ensure that Crestron is enabled on the voice service provider's app.

Tap **Unregister** to clear the registration credentials from the system and the voice control administration portal. Tap **OK** in the dialog box that is displayed to unregister from voice control services, or tap **Cancel** to cancel unregistering the system.

NOTE: To enable or disable control of a specific room or load, navigate to the **Voice Control** tab in the configuration settings for the room or load. Loads without a **Voice Control** tab are not compatible with voice control.

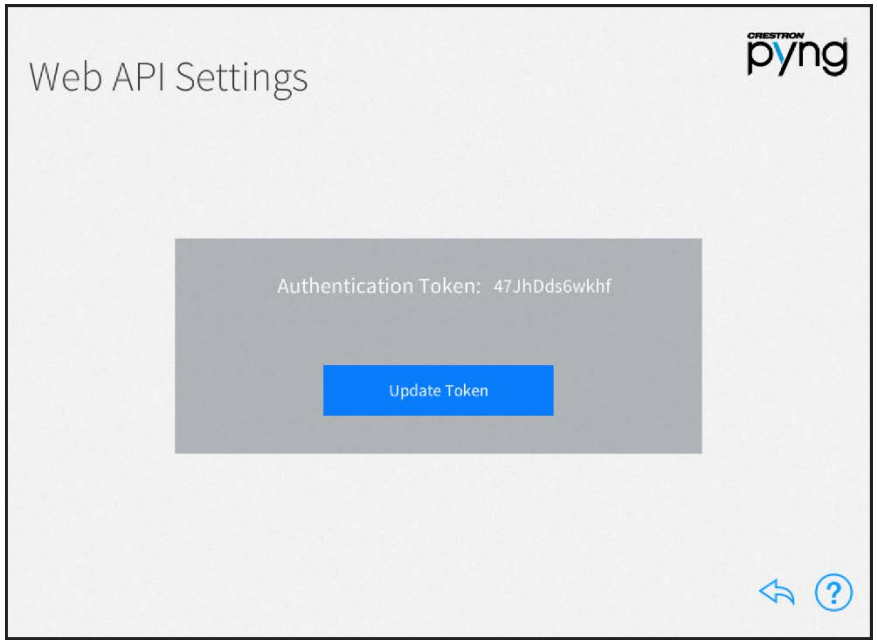
To enable voice services on a TSR-310 that has been added to the Crestron Pyng system, refer to the Performance UI for TSR-310 Operations Guide (Doc. 8410).

Tap the back arrow button to return to the **Installer Settings - System Control Options** screen.

Web API Settings

Tap **Web API Settings** on the **Installer Settings** screen to display the **Web API Settings** screen.

Web API Settings Screen



Use the **Web API Settings** screen to view and update the Web API (Application Programming Interface) authentication token used to access the Crestron Pyng system's REST API interface.

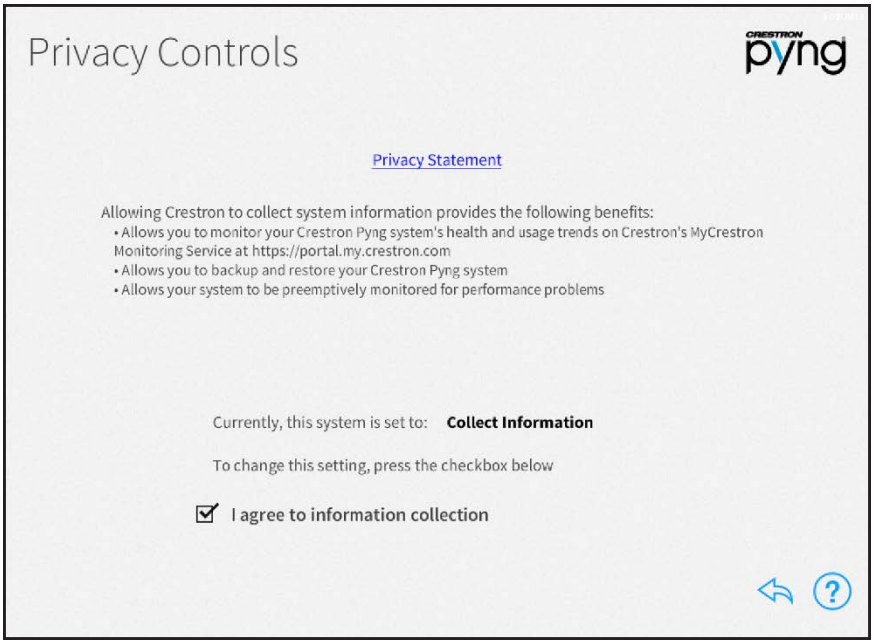
Tap **Update Token** to display a dialog box asking whether the authentication token should be updated. Tap **OK** to update the token or **Cancel** to cancel the update.

Tap the back arrow button to return to the **Installer Settings - System Control Options** screen.

Privacy Controls

Tap **Privacy Controls** on the **Installer Settings** screen to display the **Privacy Controls** screen.

Privacy Controls Screen



Use the **Privacy Controls** screen to view a privacy statement regarding the collection of system data and to view and configure privacy controls.

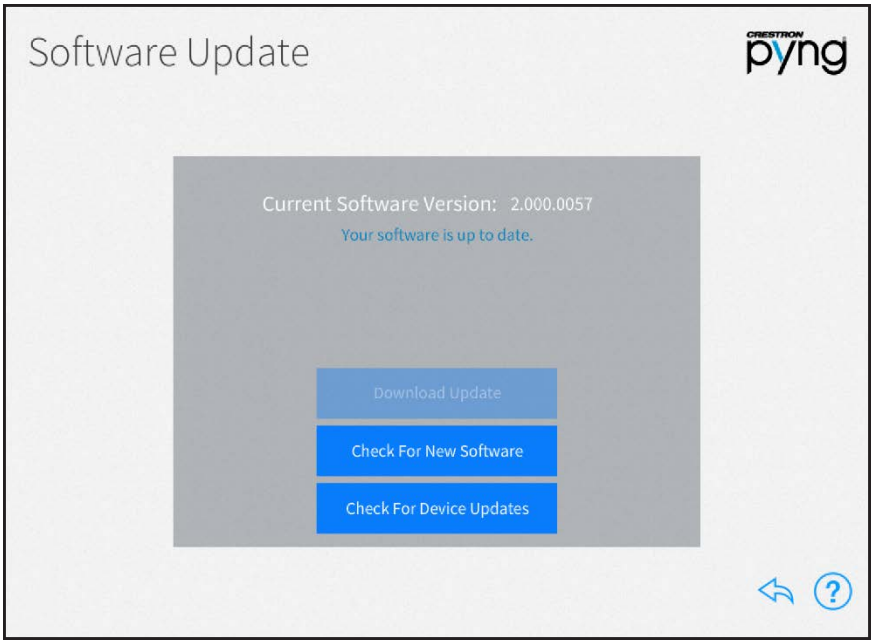
Tap the check box next to **I agree to information collection** to enable or disable allowing Crestron to collect information about the Crestron Pyng system. (A checked box indicates that Crestron will collect information from the system.)

Tap the back arrow button to return to the **Installer Settings** screen.

Software Update

Tap **Check For Updates** on the **Installer Settings** screen to display the **Software Update** screen.

Software Update Screen



Use the **Software Update** screen to check for and download software updates for the Crestron Pyng system and for connected devices. System updates must be initiated manually.

The system scans the cloud for software updates and shows a pop-up notification on the user interface and setup pages when an update is available. Software downloads may be initiated from this notification or from the **Software Update** screen.

Tap **Download Update** to update the system software if an update is available. Once the software downloads, tap **Update Software** to begin the software update.

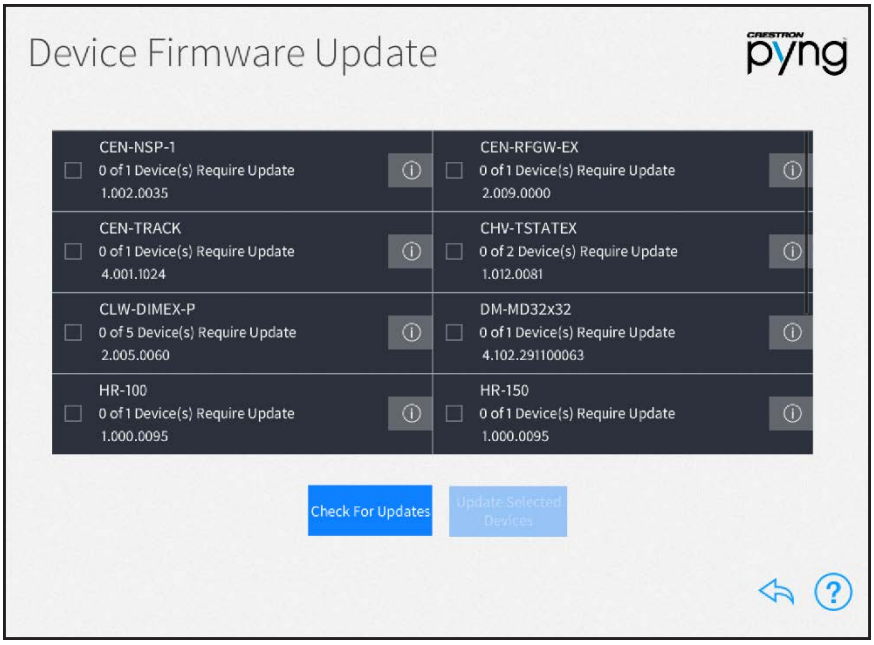
NOTE: A software update takes up to 30 minutes to complete, and the CP4-R reboots several times throughout the update process. Therefore, updates should be performed when the system is not in use.

If a software update is available, tap the information button to view release notes for the update.

Tap **Check For New Software** to scan the cloud manually for software updates.

Tap **Check For Device Updates** to discover and install firmware updates for network devices paired with the system. The **Device Firmware Update** screen is displayed.

Device Firmware Update Screen



The **Device Firmware Update** screen scans the Crestron Pyng system for network devices, and searches for any firmware updates if a network connection is established.

Once the scan is complete, the **Device Firmware Update** screen presents a list of devices with recommended firmware updates. Tap the check box next to a device to select the device to receive a firmware update. Then, tap **Update Selected Drivers** to perform firmware updates for the selected devices.

Tap the information button ⓘ next to a device to view release notes for the device firmware update.

Tap **Check For Updates** to rescan the update server for new device firmware updates.

Tap the back arrow button ↩ to return to the **Installer Settings** screen.

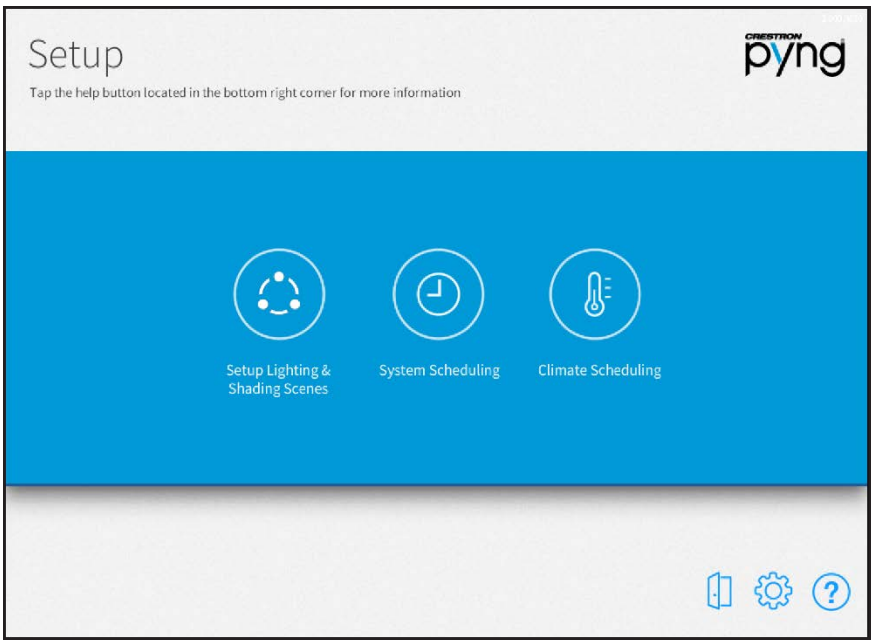
User Configuration

The user setup screens provide the homeowner with advanced options to customize their Crestron Pyng system.

To access the user setup screens while in user control mode:

1. On the home screen, select **Settings** from the collapsible side menu.
2. Enter the user password when prompted, and then tap **OK**.
3. Tap **Configure System**.
4. Enter the user password again when prompted, and then tap **OK**. The main **Setup** screen is displayed.

User Setup Screen



The following sections describe the different settings that may be configured through the user setup screens.

Tap the help button (?) on any of the user setup screens to display dialog boxes that explain the screen functions and features and provide links to tutorial videos.

Tap the gear button to display the **User Settings** screen to configure advanced Crestron Pyng system settings. For more information on the **User Settings** screen, refer to "User Settings" on page 132.

Tap the door button to leave the user setup screens and to enter user control mode. For more information of user control mode, refer to "Operation" on page 147.

Setup Scenes

Tap the **Setup Lighting & Shading Scenes** button on the user **Setup** screen to display the **Setup Screens** screen.

Setup Scenes Screen

Use the **Setup Scenes** screen to create and configure scenes for the Crestron Pyng system, including lighting scenes, shade scenes, and climate scenes.

Scenes are preset configurations for different device types that create a specific ambiance when recalled. Scenes may be recalled from keypads, from touch screens, and from scheduled events.

Scenes are created and configured the same way in the user setup screens as they are in the installer setup screens. For more information on creating specific scenes, refer to the following sections:

- For lighting scenes, refer to "Light Scenes" on page 54.
- For shade scenes, refer to "Shade Scenes" on page 59.
- For media scenes, refer to "Media Scenes" on page 64.
- For climate scenes, refer to "Climate Scenes" on page 67.

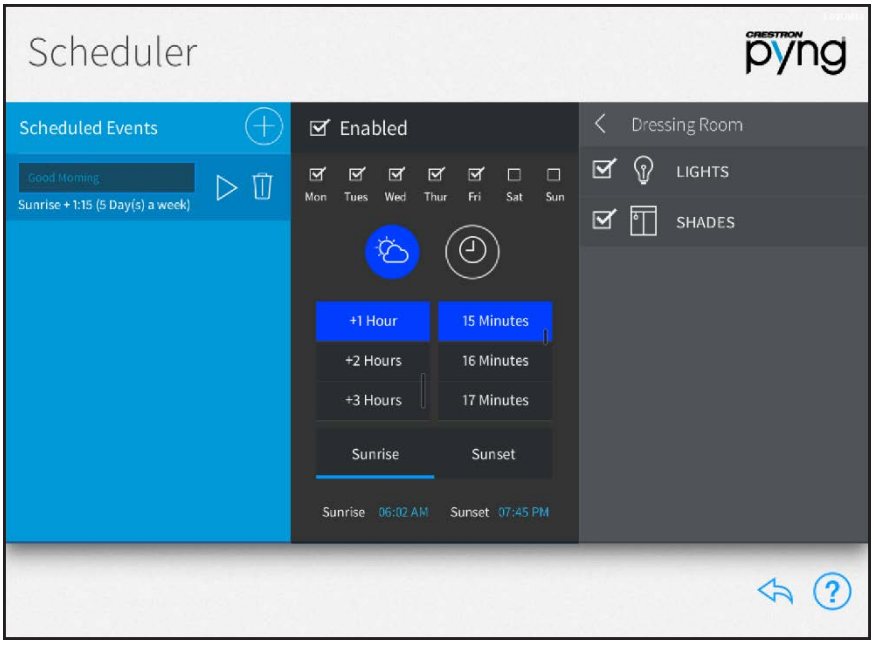
> **NOTE:** Each room may contain a maximum of 24 scenes for each scene type. (For example, a room may contain up to 24 lighting scenes, up to 24 shade scenes, and so forth.)

Tap the back arrow button to return to the main **Setup** screen.

Scheduler (User)

Tap the **System Scheduling** button on the user **Setup** screen to display the **Scheduler** screen.

Scheduler Screen



Use the **Scheduler** screen to schedule events that trigger one or more scenes at specific times and on one or more specific days of the week.

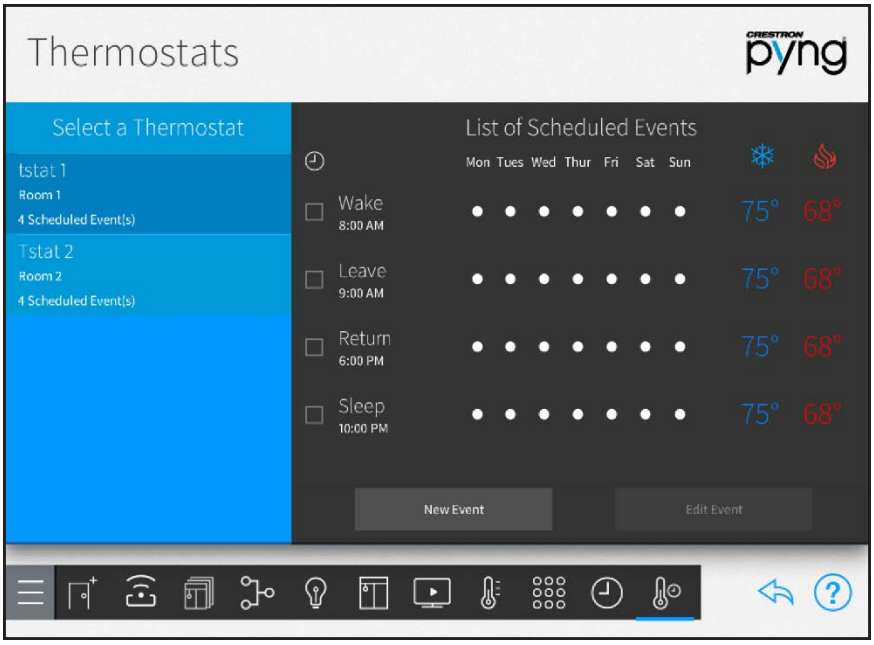
Events are created and scheduled the same way in the user setup screens as they are in the installer setup screens. For more information on scheduling events, refer to "Scheduler" on page 93.

Tap the back arrow button to return to the main **Setup** screen.

Thermostats (User)

Tap the **Climate Scheduling** button on the user **Setup** screen to display the **Thermostats** screen.

Thermostats Screen



Use the **Thermostat** screen to schedule events for the thermostats in the Crestron Pyng system.

By default, each thermostat includes events for "Sleep", "Wake", "Leave", and "Return". These events are disabled by default. To enable them, tap the event's check box to the left of the event name. A filled check box indicates that the scene is enabled.

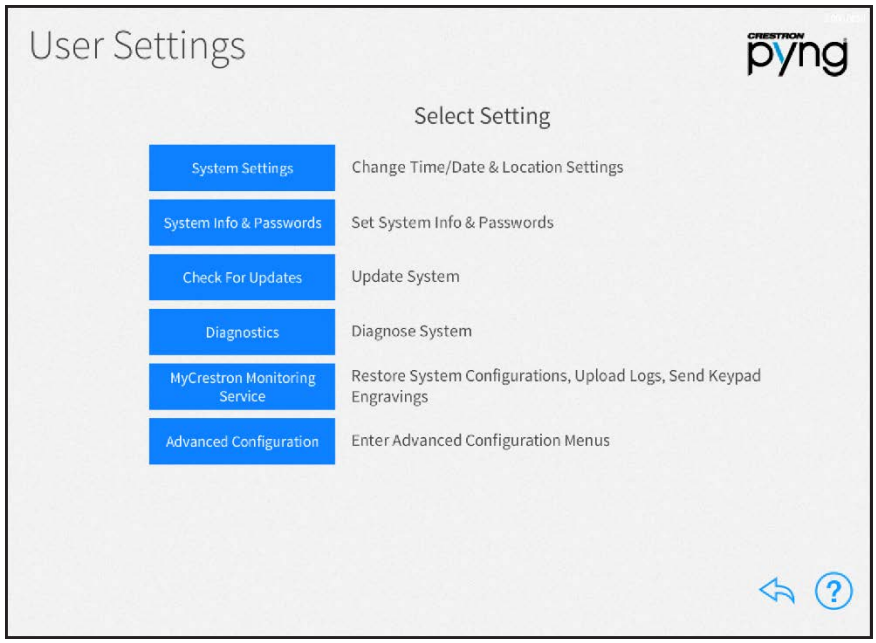
Thermostat events are created and scheduled the same way in the user setup screens as they are in the installer setup screens. For more information on scheduling events, refer to "Thermostats" on page 95.

Tap the back arrow button to return to the main **Setup** screen.

User Settings

Tap the gear button on the bottom right of the user **Setup** screen to display the **User Settings** screen.

User Settings Screen



Use the **User Settings** screen to configure various settings for the Crestron Pyng system and the CP4-R:

- Tap **System Settings** to configure the time and date, location settings, time of day settings, and the system language.
- Tap **System Info & Passwords** to change the user password.
- Tap **Check for Updates** to check for and download software updates for the Crestron Pyng system and for connected devices.
- Tap **Diagnostics** to configure various settings for the Crestron Pyng system and the CP4-R.
- Tap **MyCrestron Monitoring Service** to obtain a registration code for registering the CP4-R with a MyCrestron domain and to access various MyCrestron services.
- Tap **Advanced Configuration** to access the installer setup screens. An installer password is required.

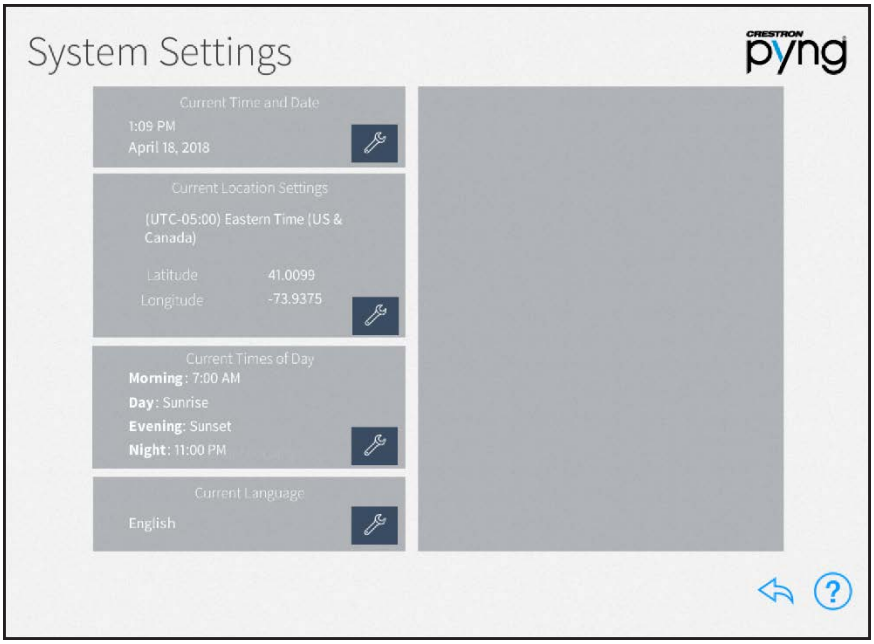
Tap the help button on any of the **User Settings** screens to display dialog boxes that explain the screen functions and features and provide links to tutorial videos. (The iPad or setup device must be connected to the network to access videos.)

Tap the back arrow button to return to the main **Setup** screen.

System Settings

Tap **System Settings** on the **User Settings** screen to display the **System Settings** screen.

System Settings Screen

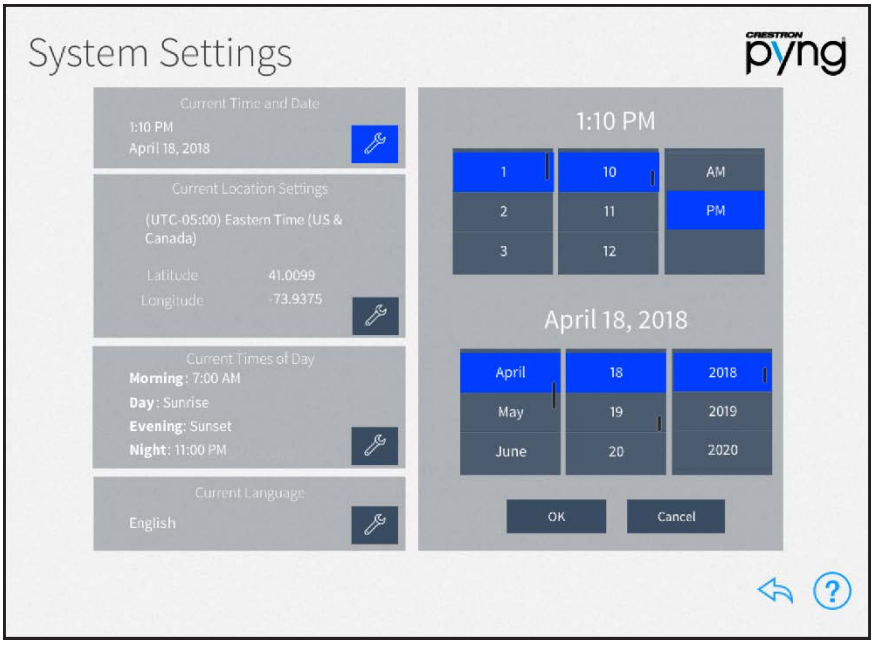


Use the **System Settings** screen to configure the date and time, the location settings, the preset times of day used for events, and the system language.

Current Time and Date

On the **System Settings** screen, tap the wrench button next to **Current Time and Date** to display selections for editing the date and time.

System Settings Screen - Current Time and Date



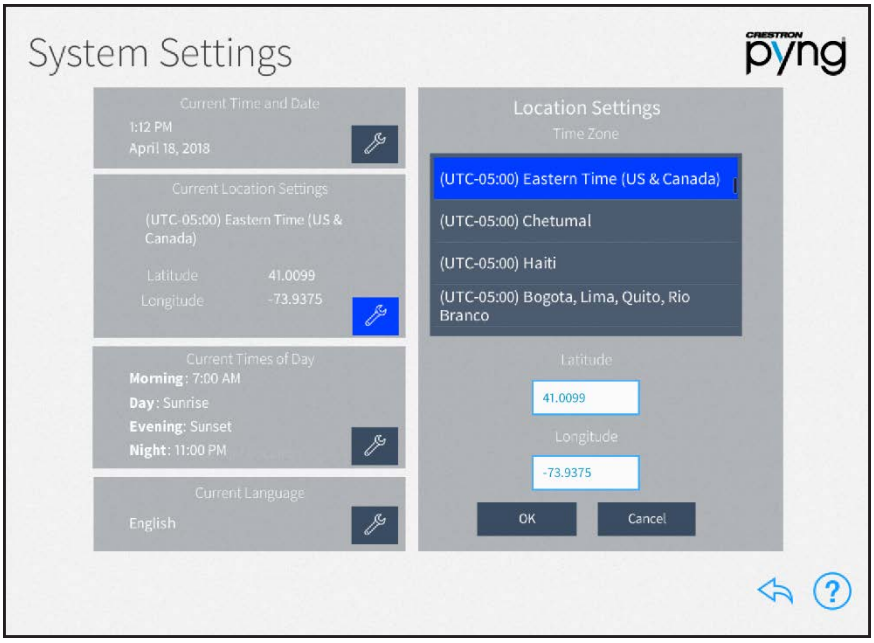
- Set the time (hour, minute, and **AM** or **PM**) using the appropriate spinner menus that are provided under the listed time.
- Set the date (month, day, and year) using the appropriate spinner menus that are provided under the listed date.

Tap **OK** to save any changes. Tap **Cancel** to cancel any changes.

Current Location Settings

On the **System Settings** screen, tap the wrench button next to **Current Location Settings** to display selections for editing location settings.

System Settings Screen - Current Location Settings



NOTE: If configuring the system with an iPad, tap **Synchronize with iPad** to synchronize the time zone, longitude, and latitude with the iPad device's location services.

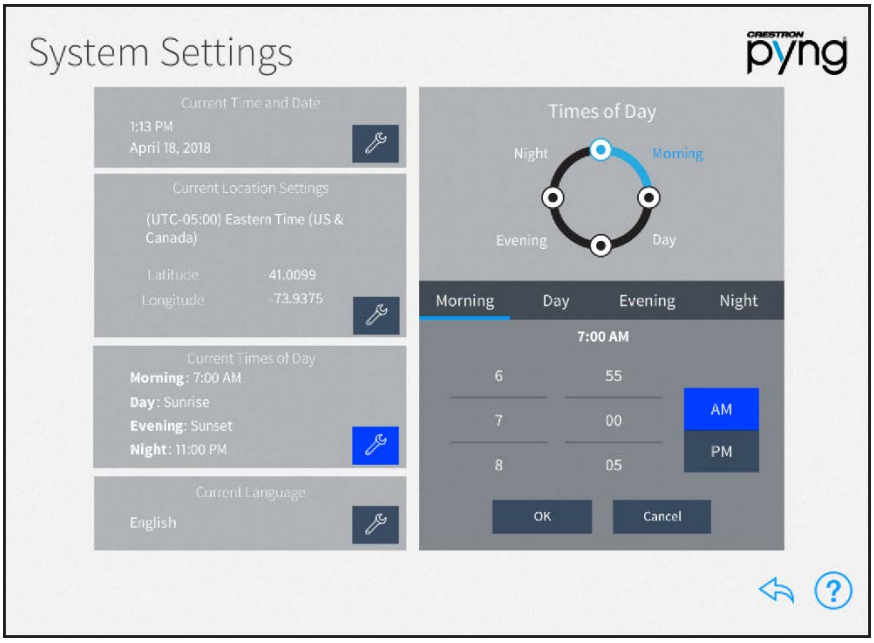
- Select the time zone for the system using the menu provided under **Time Zone**.
- Enter the system latitude in the **Latitude** field.
- Enter the system longitude in the **Longitude** field.

Tap **OK** to save any changes. Tap **Cancel** to cancel any changes.

Current Times of Day

On the **System Settings** screen, tap the wrench button next to **Current Times of Day** to display selections for editing the times of day recognized by the Crestron Pyng system.

System Settings Screen - Current Times of Day



Times of day are used to trigger different actions and events within the system when the preset clock time is reached.

Tap the tab for each time of day to display the following configuration options:

- **Morning:** Set the time (hour, minute, and **AM** or **PM**) for the Morning preset, which is when the homeowner wakes using the provided spinner menus.
- **Day:** Set how long before or after sunrise (calculated by date and time zone) the Day preset occurs using the provided spinner menus.

  NOTE: In some cases (such as in the summer months), the time set for the Day preset may occur before the time set for the Morning preset. In these cases, any actions or events set for the Morning preset do not occur.

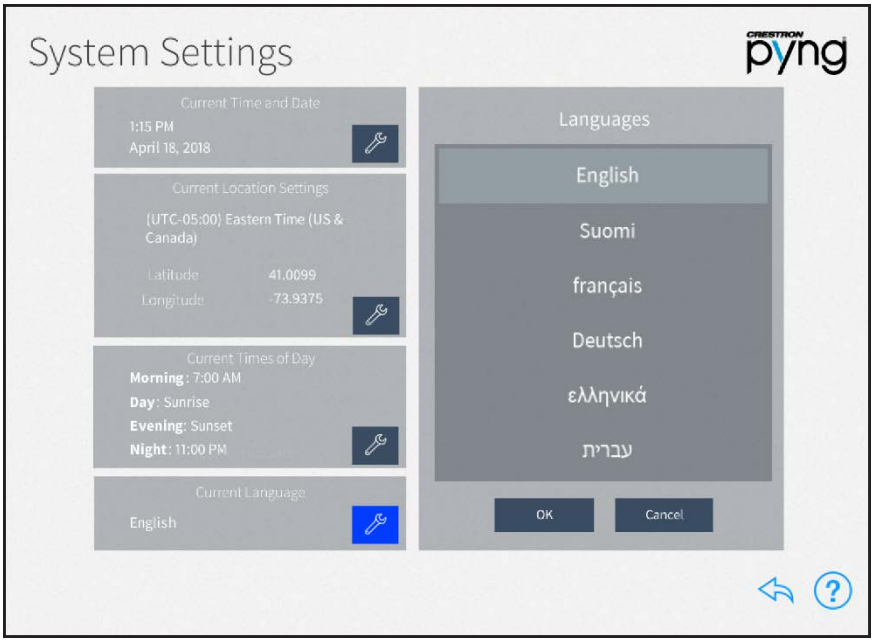
- **Evening:** Set how long before or after sunset (calculated by date and time zone) the Evening preset occurs using the provided spinner menus.
- **Night:** Set the time (hour, minute, and **AM** or **PM**) for the Night preset, which is when the homeowner goes to sleep, using the provided spinner menus.

Tap **OK** to save any changes. Tap **Cancel** to cancel any changes.

Current Language

On the **System Settings** screen, tap the wrench button next to **Current Language** to edit the language displayed by the system.

System Settings Screen - Current Language



Select the system language from the menu provided under **Languages**.

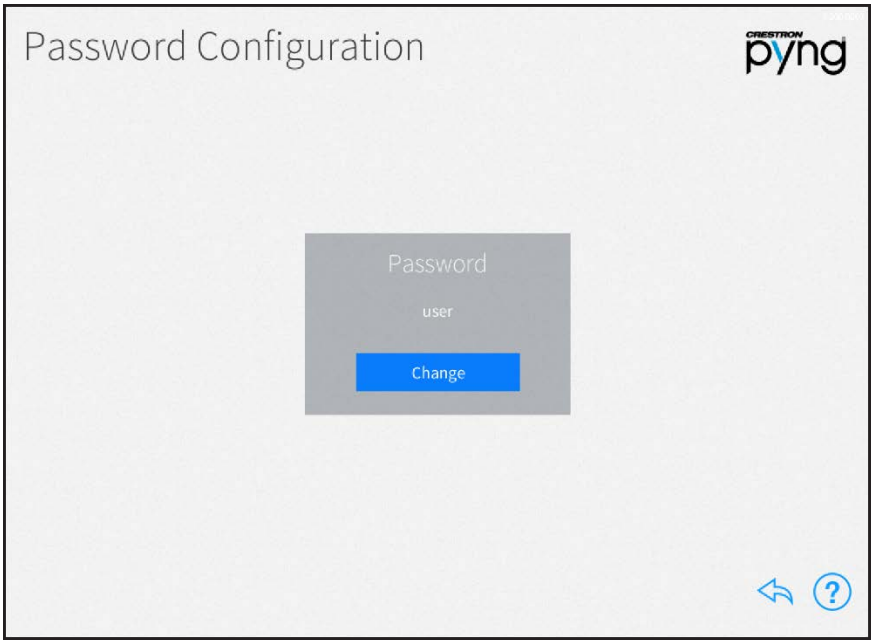
Tap **OK** to save any changes. Tap **Cancel** to cancel any changes.

Tap the back arrow button to return to the **User Settings** screen.

Password Configuration

Tap **System Info & Passwords** on the **User Settings** screen to display the **Password Configuration** screen.

Password Configuration Screen



Use the **Password Configuration** screen to change the password that is required to access the user setup screens.

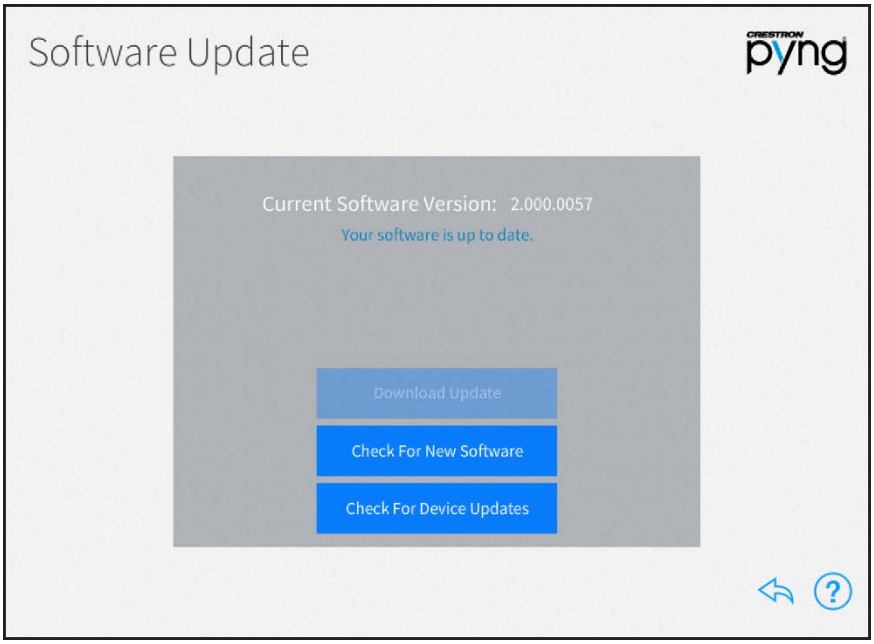
Tap **Change** under **Password** to set a new user password. Enter a new password using the pop-up dialog box that is displayed, and then tap **OK**.

Tap the back arrow button to return to the **User Settings** screen.

Software Update (User)

Tap **Check For Updates** on the **User Settings** screen to display the **Software Update** screen.

Software Update Screen



Use the **Software Update** screen to check for and download software updates for the Crestron Pyng system and for connected devices. System updates must be initiated manually.

The system scans the cloud for software updates and shows a pop-up notification on the user interface and setup pages when an update is available. Software downloads may be initiated from this notification or from the **Software Update** screen.

Tap **Download Update** to update the system software if an update is available. Once the software downloads, tap **Update Software** to begin the software update.

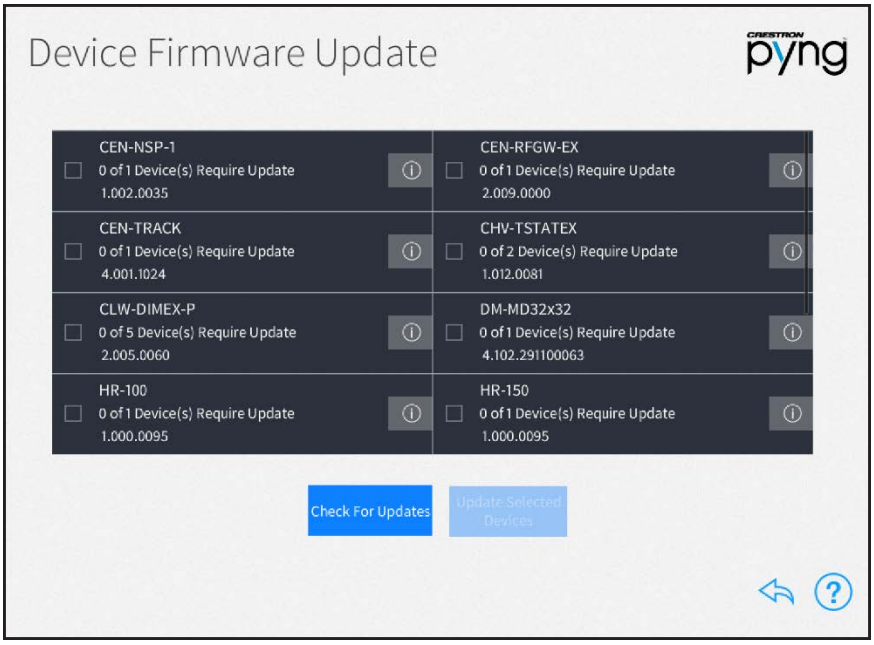
NOTE: A software update takes up to 30 minutes to complete, and the CP4-R reboots several times throughout the update process. Therefore, updates should be performed when the system is not in use.

If a software update is available, tap the information button to view release notes for the update.

Tap **Check For New Software** to scan the cloud manually for software updates.

Tap **Check For Device Updates** to discover and install firmware updates for network devices paired with the system. The **Device Firmware Update** screen is displayed.

Device Firmware Update Screen



The **Device Firmware Update** screen scans the Crestron Pyng system for network devices, and searches for any firmware updates if a network connection is established.

Once the scan is complete, the **Device Firmware Update** screen presents a list of devices with recommended firmware updates. Tap the check box next to a device to select the device to receive a firmware update. Then, tap **Update Selected Drivers** to perform firmware updates for the selected devices.

Tap the information button ⓘ next to a device to view release notes for the device firmware update.

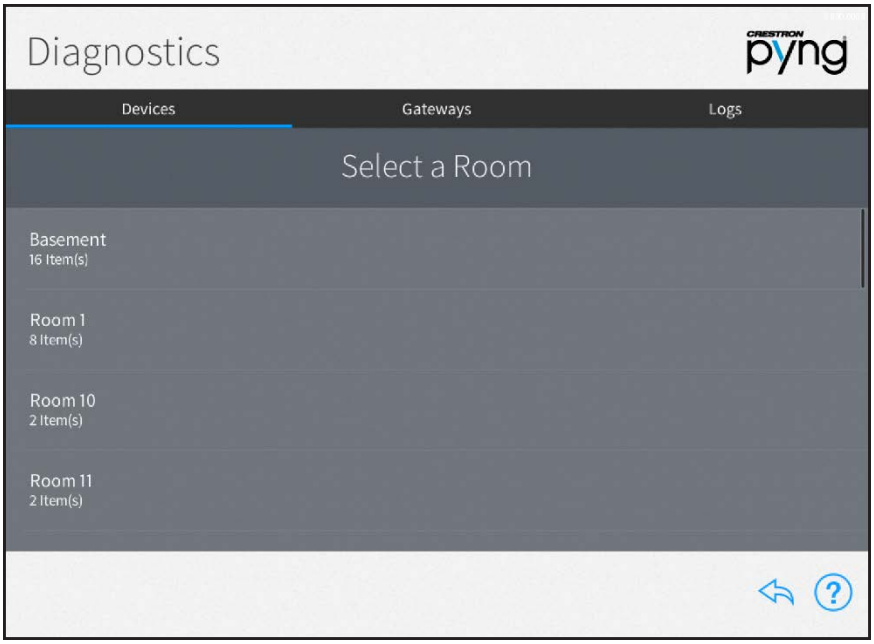
Tap **Check For Updates** to rescan the update server for new device firmware updates.

Tap the back arrow button ↩ to return to the **User Settings** screen.

Diagnostics (User)

Tap **Diagnostics** on the **User Settings** screen to display the **Diagnostics** screen.

Diagnostics Screen - Devices Tab



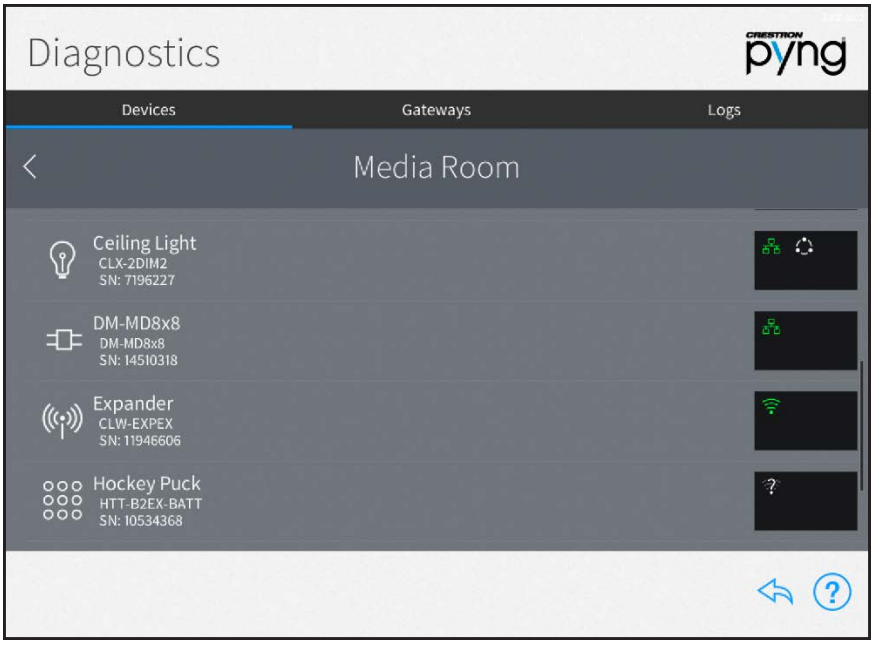
Use the **Diagnostics** screen to troubleshoot devices and gateways connected to the system and to view system message logs.

Devices

Tap the **Devices** tab to view all of the network devices that are paired with the Crestron Pyng system, organized by room. Each device reports its network status, firmware status, whether it is included in a scene, and whether it is affected by a scheduled event.

Select a room from the list to view the status of the devices configured for the room.

Diagnostics Screen - Media Room



The following status information is provided for each device in the room:

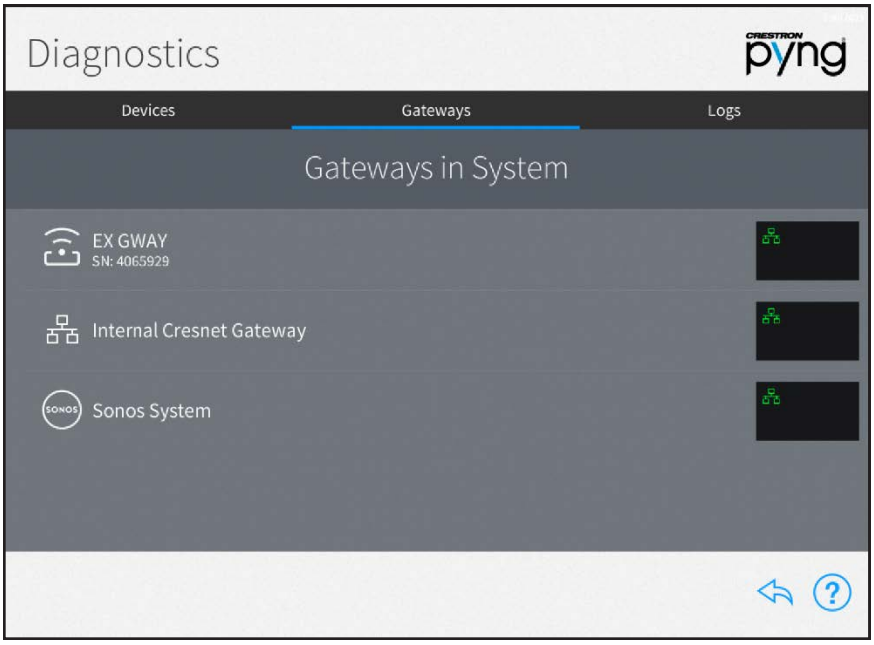
- If the device is online and detected by the system, a green wireless network icon or wired network icon is shown in the box to the right of the device name.
- If the device is offline or not detected by the system, a network icon with a red x (or) is shown.
- If a network connection cannot be determined or if the device is being scanned, a network icon with a question mark over the icon is shown.
- If a serial device is functioning and is associated with a COM port in the system, a signal pulse icon is shown. If a serial device is functioning but is not associated with a COM port, a signal pulse icon with a red x is shown.
- If an IR device is functioning and is associated with an IR port in the system, a beamed signal icon is shown. If an IR device is functioning but is not associated with an IR port, a beamed signal icon with a red x is shown.
- If a CEC device is functioning and is associated with a CEC port in the system, a port icon is shown. If a CEC device is functioning but it not associated with a CEC port in the system, a port icon with a red x is shown.
- If the device is part of a scene, a white scene icon is shown.
- If the device is running an outdated firmware version that is not supported by the system, a red computer chip icon is shown.

- If the device is battery-operated and has low battery power, a low battery icon is shown.
- If the system detects an issue with the device, a caution icon is shown.

Gateways

Tap the **Gateways** tab to view all of the gateways that are paired with the Crestron Pyng system. The **Gateways** tab also provides an option for viewing the system of paired Sonos devices. Each gateway reports its network status and firmware status.

Diagnostics Screen - Gateways Tab



The following status information is provided for each gateway:

- If the gateway is online and detected by the system, a green network icon is shown in the box to the far right of the device name.
- If the gateway is offline or not detected by the system, a network icon with a red x is shown.
- If the gateway is running an outdated firmware version that is not supported by the system, a red computer chip icon is shown.
- If the system detects an issue with the gateway, a caution icon is shown.

The following additional status information is provided for the **Sonos System** gateway:

NOTE: For more information on troubleshooting the Sonos system, refer to "Appendix A: Sonos and Crestron Pyng Integration" on page 194.

- If the Sonos system has discovered devices from multiple households after a device from one household has been paired, a two house icon with a red x is shown.
- If the Sonos system is not detected by the Crestron Pyng system, a network tree icon with a red x is shown.
- If the Sonos system is disabled, an unfilled house icon is shown.
- If a paired Sonos device is not detected by the Crestron Pyng system, a music note icon with a red x is shown.

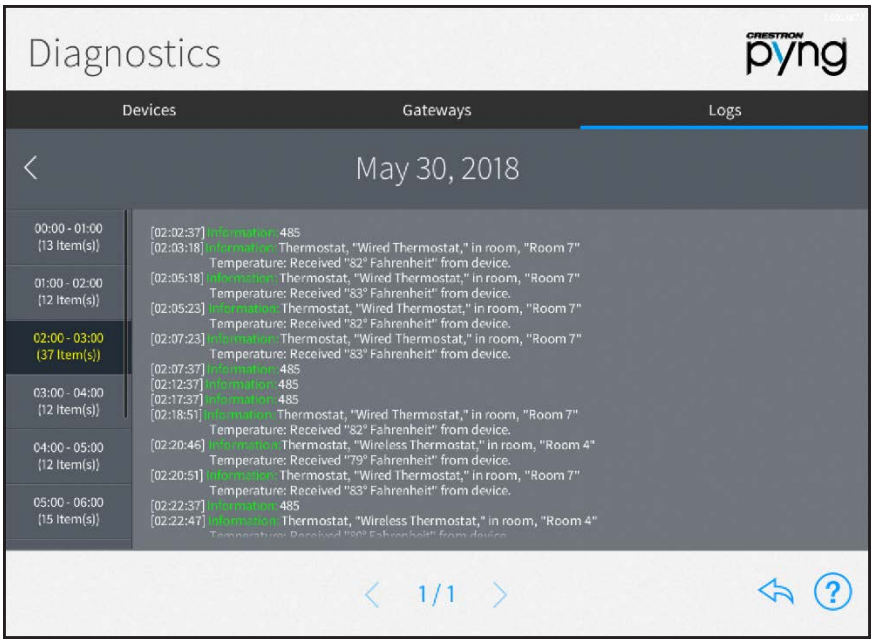
Tap the gear button next to a gateway to view and modify gateway settings and to view all devices paired to the gateway. For more information on configuring gateway settings, refer to "Manage Gateways" on page 41.

If an issue is found with a gateway, tap the warning button next to the device to view more information about the issue.

Logs

Tap the **Logs** tab on the top of the screen to view the message logs for the entire system, organized by day and time. Each item in the message log includes a time stamp, a recorded event description, and a message level indicating whether the item is general information or an error.

Diagnostics Screen - Logs Tab



NOTE: An SD card must be loaded into the **MEMORY** slot on the rear of the CP4-R to store log files.

The message logs display all of the actions that have occurred in the Crestron Pyng system during a specified date and time range.

To navigate the message logs:

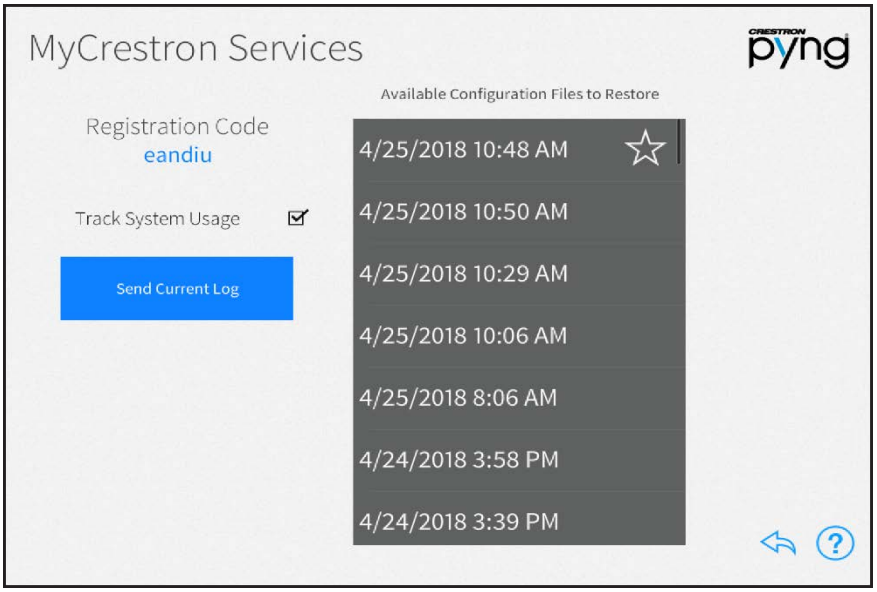
- Select a date from the **Select a Log** menu.
- Tap the left and right arrow buttons (**<** and **>**) at the top of the screen to move forward and backward through logs for each day (starting with the current day).
- Swipe up or down through the list of times on the far left of the screen to view the logs for a specific time range (broken down into one-hour intervals).
- If more than one page of the log is available for the selected time range, use the left and right arrow buttons (**<** and **>**) at the bottom of the page to move forward or backward through the log pages.

Tap the back arrow button to return to the **User Settings** screen.

MyCrestron Services

Tap **MyCrestron Monitoring Service** on the **User Settings** screen to display the **MyCrestron Services** screen.

MyCrestron Services Screen



Use the **MyCrestron Services** screen to manage saved configuration files and to send message logs to the cloud. A registration code is also provided for registering the Crestron Pyng system with a MyCrestron account.

The following settings may be configured:

- Tap the check box next to **Track System Usage** to enable or disable tracking the Crestron Pyng system usage through MyCrestron.
- Tap **Send Current Log** to send the current message log file to MyCrestron.
- Select a configuration file from the **Available Configuration Files to Restore** menu to restore the system to the selected configuration.

  NOTES:

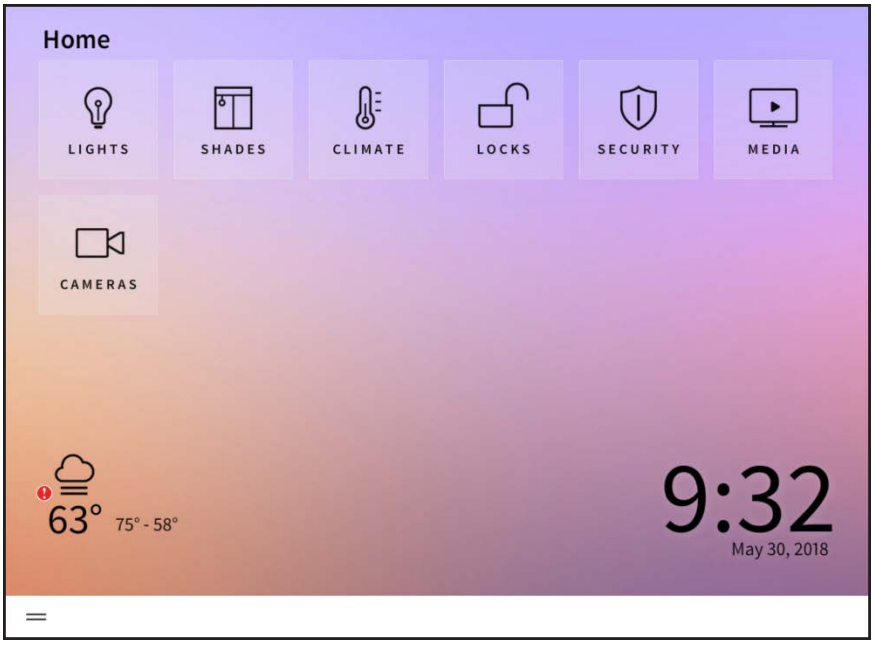
  - The Crestron Pyng system records the system configuration settings periodically and saves them in configuration files, which are sorted by time and date. If an issue arises with the system, the system may be restored to an earlier working configuration.
  - Golden configurations represent known, working system states that may always be restored safely, and are indicated by a star icon in the **Available Configuration Files to Restore** list. They always appear at the top of the **Available Configuration Files to Restore** list.

Tap the back arrow button to return to the **User Settings** screen.

Operation

On the **Setup** screen, tap the door button to leave installer configuration mode and to enter user control mode. The **Home** screen is displayed.

Home Screen



The **Home** screen is the primary screen that the homeowner uses to access and create scenes, to play quick actions, and to edit basic configuration settings for the Crestron Pyng system. The **Home** screen also shows the time and date, as well as a weather widget (if enabled).

Depending on the devices and scenes that are configured for the Crestron Pyng system, the following selections may be selected from the home screen:

Home Screen Selections

Button	Device Group
	Lighting
	Shades
	Climate
	Locks
	Security

Home Screen Selections

Button	Device Group
	Media
	Cameras

Each device group screen is described in the sections that follow.

NOTE: If a scene or event has not been configured for a device group, that device group selection does not appear on the home screen, even if it has been enabled in the user configuration settings.

Tap the menu button ☰ to show or hide the collapsible side menu. For more information, refer to "User Menu" on page 180.

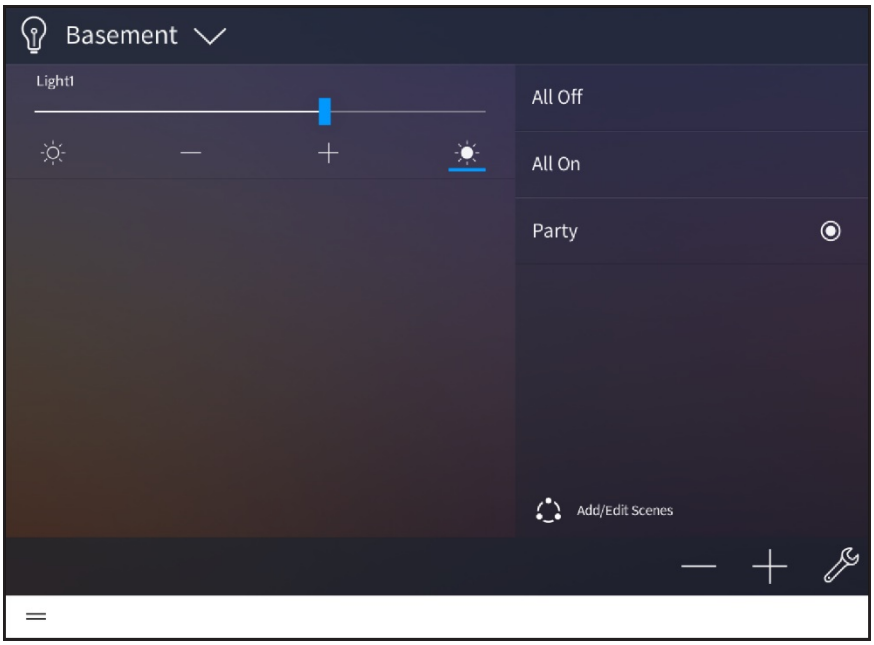
Tap the lightning bolt button ⚡, if enabled, to access a side menu for selecting quick actions (macro buttons). For more information, refer to "Quick Actions" on page 191.

NOTE: The menu bar is located on the bottom of the screen in XPanel and on the left side of the screen in the touch screen user project.

Lights

Tap the **Lights** button on the **Home** screen or select **Lights** from the **Devices** section of the user menu to display the lights screen.

Basement Screen - Lights



Use the Lights screen to select and play any lighting scene or load in the Crestron Pyng system. The lights screen also allows the homeowner to add and edit lighting scenes. This process is similar to creating lighting scenes in the setup pages.

Use the drop-down menu on the top left of the screen to select a room that contains a lighting scene. Only rooms with lighting scenes or loads may be selected from this menu.

Any lighting loads configured for the room appear in the left screen panel.

- Tap the filled sun button to set a lighting load to its maximum brightness (100%).
- Tap the empty sun button to turn off a lighting load (0%).
- Tap the plus button (**+**) or minus button (**-**) to raise or lower the brightness level incrementally for lighting loads with dimmers.
- Use the slider to adjust the brightness level manually for lighting loads with dimmers.

Any lighting scenes configured for a room appear in the right screen panel.

- Tap on the scene name to recall that scene.
- Tap **Add/Edit Scenes** to add new lighting scenes or to edit existing lighting scenes. Refer to the following sections for more information.

Tap the wrench button to configure the lights screen settings. After entering the user password (if required), the **Configuration** screen for the lights screen is displayed (not pictured).

The following light screen settings may be configured:

- Tap the **Room List** tab to select the rooms that may be controlled from the lights screen. Tap the check box next to a room to enable or disable controlling the room from the lights screen.
- Tap the **Default** tab to select the default room for the lights screen. The default room is displayed automatically when the lights screen is accessed.

Tap the back arrow button to return to the lights screen.

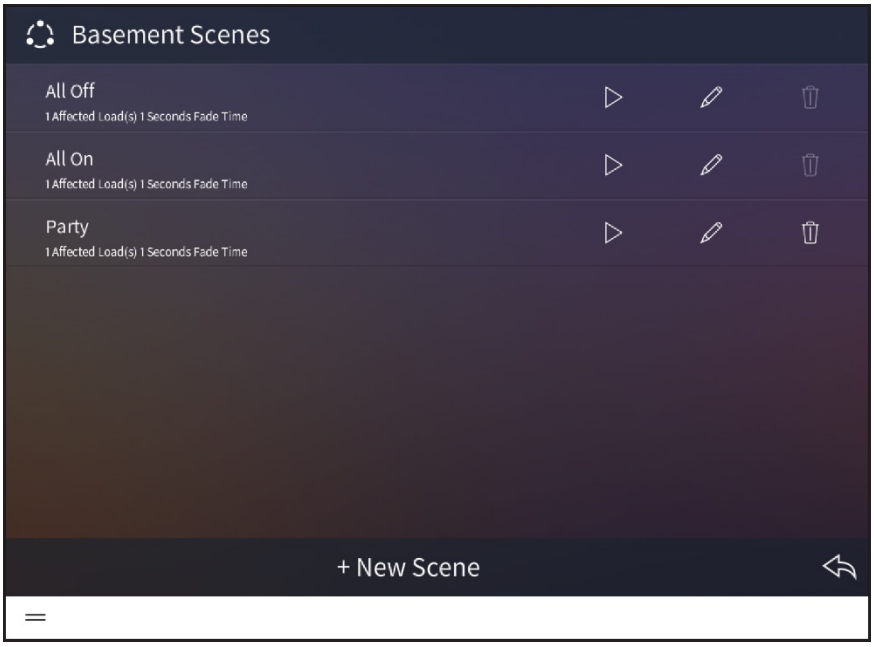
Tap **Home** in the user menu to return to the **Home** screen.

Create a User Lighting Scene

To create a new lighting scene in user control mode:

1. Select a room from the drop-down menu on the top left of the screen.
2. Tap **Add/Edit Scenes**. All lighting scenes configured for the room are displayed.

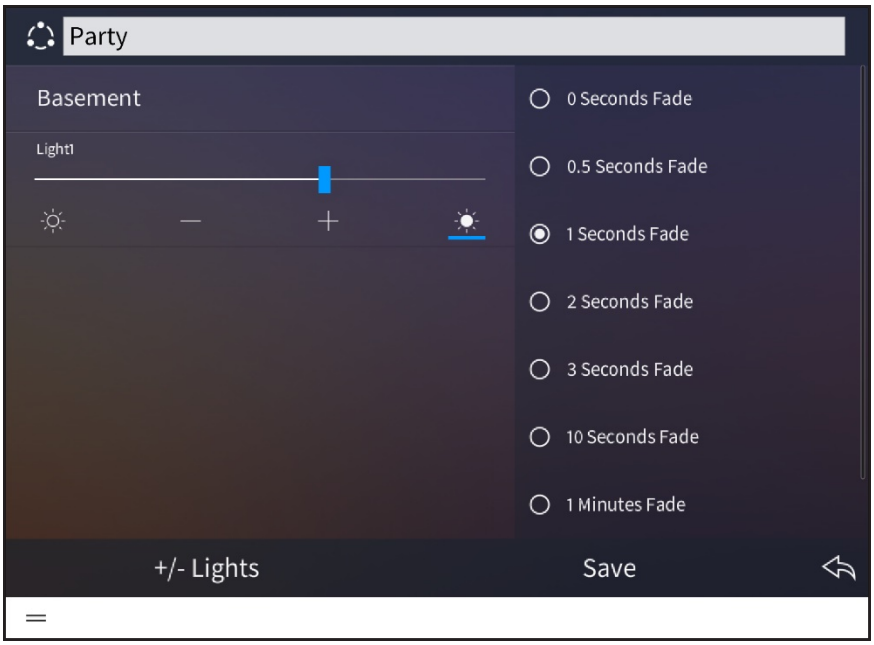
   Basement Scenes Screen - Lights



3. Tap **+ New Scene**.
4. Enter a descriptive name for the new lighting scene in the dialog box that is displayed.
5. Tap **OK**.

The configuration screen for the lighting scene is displayed.

Lighting Scene Configuration Screen



NOTE: All of the lighting loads that have been added to the chosen room are added to a new lighting scene at their current brightness levels.

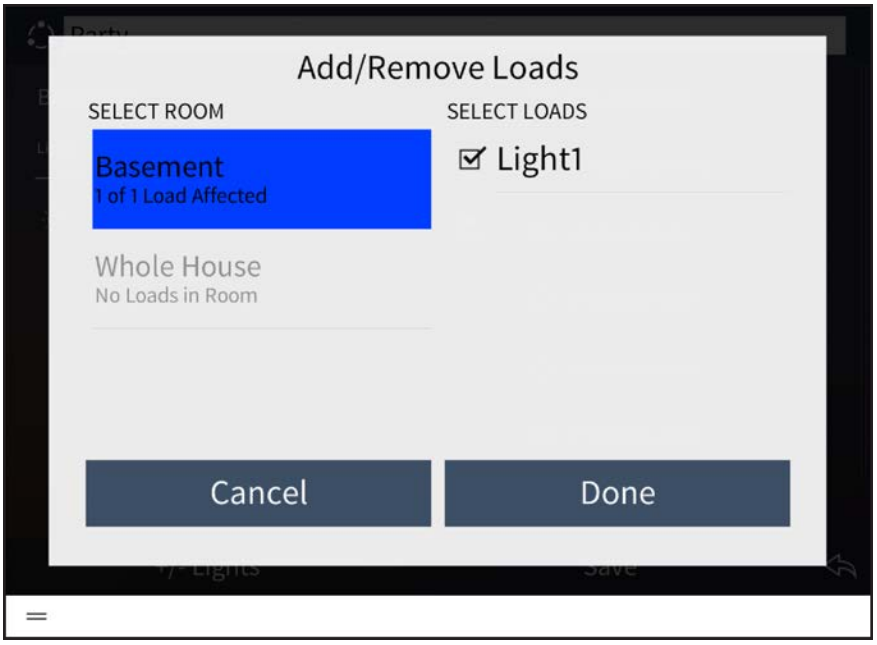
The following settings may be configured for the lighting scene:

- Use the text box at the top of the screen to edit the lighting scene name.
- Use the provided controls to adjust the brightness levels for any lighting loads that have been added to the scene. Lighting loads are adjusted in real time.
  - Tap the filled sun button to set a lighting load to its maximum brightness (100%).
  - Tap the empty sun button to turn off a lighting load (0%).
  - Tap the plus button (**+**) or minus button (**-**) to raise or lower the brightness level incrementally for lighting loads with dimmers.
  - Use the slider to adjust the brightness level manually for lighting loads with dimmers.

  NOTE: Lighting loads may also be adjusted using the dimmers or switches configured to control the lighting load.
- Select the duration that a lighting scene fades in after being recalled and fades out after the scene is completed.

Tap **Add/Remove Loads** to add lighting loads from different rooms or to remove existing lighting loads. An **Add/Remove Loads** dialog box is displayed.

Add/Remove Loads Dialog Box



To add or remove a lighting load from the scene:

1. Select a room from the **Select Room** menu.
2. Tap the check box next to a lighting load to add or remove it from the scene. A filled check box indicates that the load has been added to the scene.
3. Tap **Done** to save any changes or **Cancel** to discard the changes.

Any new lighting loads added to the scene may be adjusted in the scene configuration dialog box.

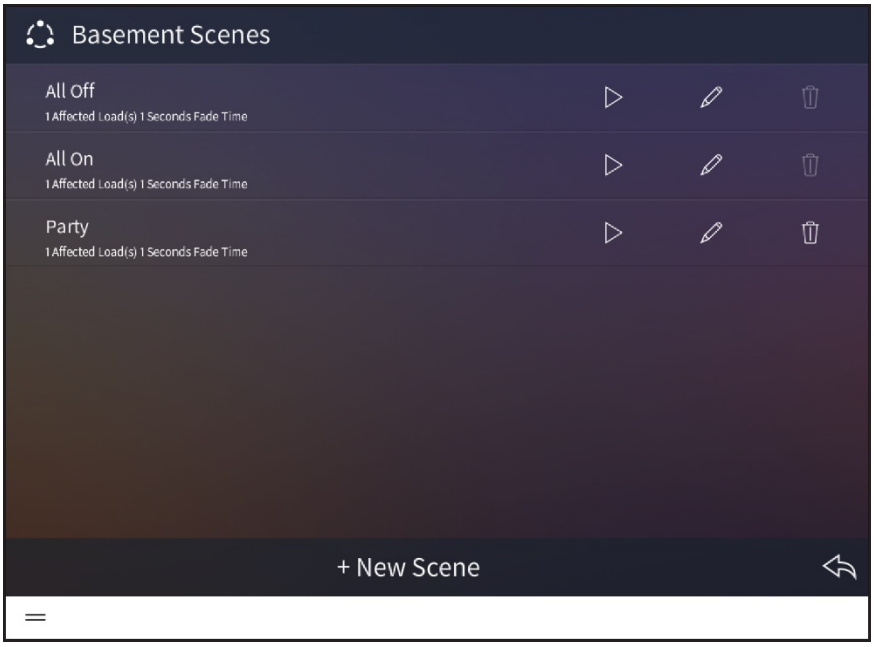
Once all changes have been made, tap **Save** to save any changes to the lighting scene or tap the back arrow button to discard the changes.

Configure a User Lighting Scene

To configure an existing lighting scene:

1. Select a room from the drop-down menu on the top left of the screen.
2. Tap **Add/Edit Scenes**. All lighting scenes configured for the room are displayed.

Basement Scenes Screen - Lights



The following configuration options are displayed next to each lighting scene:

- Tap the play button ▷ to recall the lighting scene in real time.
- Tap the pencil button ✎ to edit the lighting loads that are affected by the scene. A dialog box for editing scene settings is displayed. Use the settings described in "Create a User Lighting Scene" on page "Create a User Lighting Scene" on page 150 to configure the lighting scene.
- Tap the trashcan button 🗑 to delete the lighting scene.

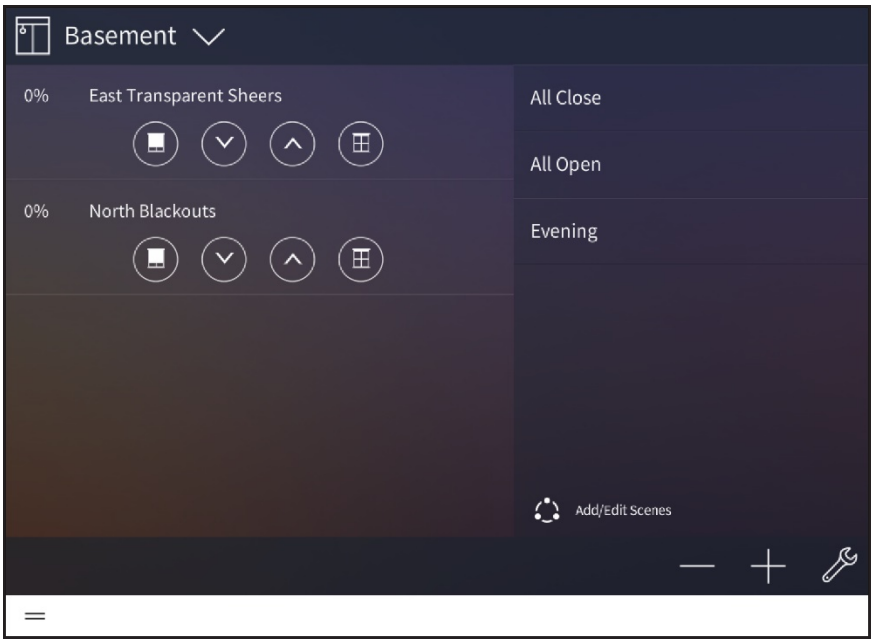
NOTE: All On and All Off lighting scenes may not be deleted in user control mode.

Tap the back arrow button ↩ to return to the lights screen.

Shades

Tap the **Shades** button on the **Home** screen or select **Shades** from the **Devices** section of the user menu to display the shades screen.

Basement Screen - Shades



Use the shades screen to select and play any shade scene or group in the Crestron Pyng system. The shades screen also allows the homeowner to add and edit shade scenes. This process is similar to creating shade scenes in the setup pages.

Use the drop-down menu on the top left of the screen to select a room that contains a shade scene. Only rooms with shade scenes or loads may be selected from the menu.

Any shade groups configured for the room appear in the left screen panel.

- Tap the closed shade button to lower a shade group fully (0%).
- Tap the down button (**v**) to lower a shade group incrementally.
- Tap the up button (**^**) to raise a shade group incrementally.
- Tap the open shade button to open a shade group fully (100%).

Any shade scenes configured for a room appear in the right screen panel.

- Tap on the scene name to recall that scene.
- Tap **Add/Edit Scenes** to add new shade scenes or to edit existing shade scenes. Refer to the following sections for more information.

Tap the wrench button to configure the shade screen settings. After entering the user password (if required), the **Configuration** screen for the shades screen is displayed (not pictured).

The following shade screen settings may be configured:

- Tap the **Room List** tab to select the rooms that may be controlled from the shades screen. Tap the check box next to a room to enable or disable controlling the room from the shades screen.
- Tap the **Default** tab to select the default room for the shades screen. The default room is displayed automatically when the shades screen is accessed.

Tap the back arrow button to return to the shades screen.

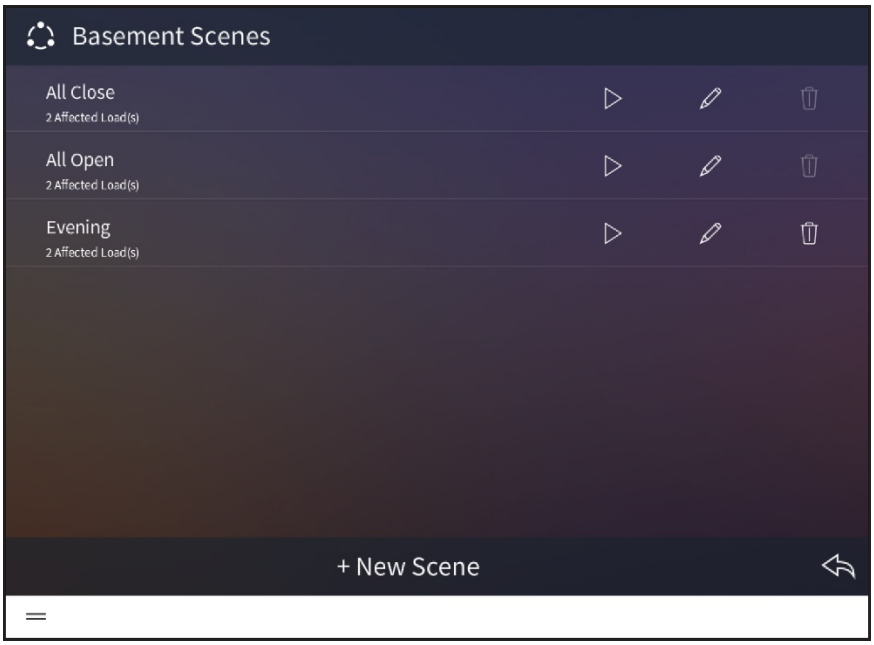
Tap **Home** in the user menu to return to the **Home** screen.

Create a User Shade Scene

To create a new shade scene in user control mode:

1. Select a room from the drop-down menu on the top left of the screen.
2. Tap **Add/Edit Scenes**. All shades scenes configured for the room are displayed.

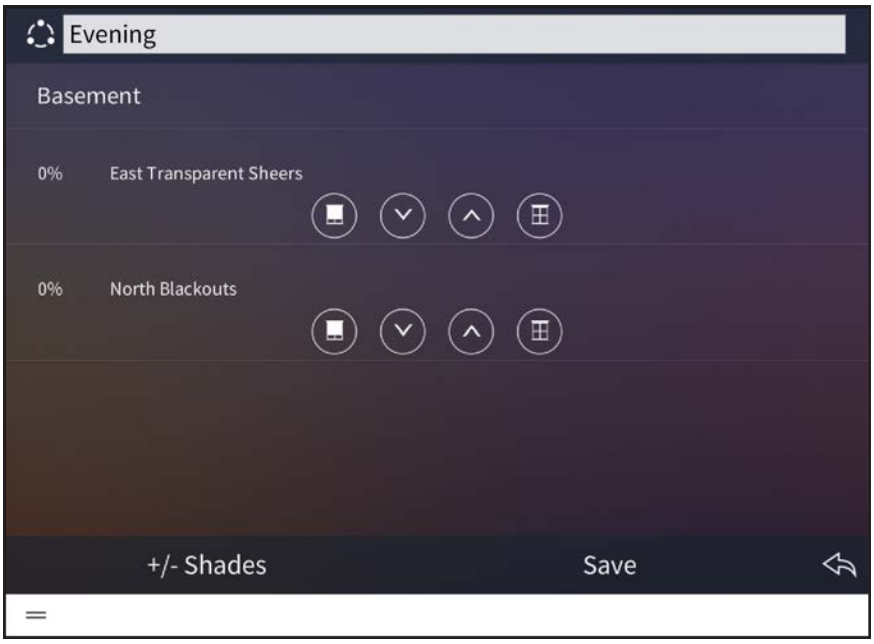
   Basement Scenes Screen - Shades



3. Tap **+ New Scene**.
4. Enter a descriptive name for the new shade scene in the dialog box that is displayed.
5. Tap **OK**.

The configuration screen for the shade scene is displayed.

Shade Scene Configuration Screen



NOTE: All of the shade groups that have been added to the chosen room are added to a new shade scene at their current levels.

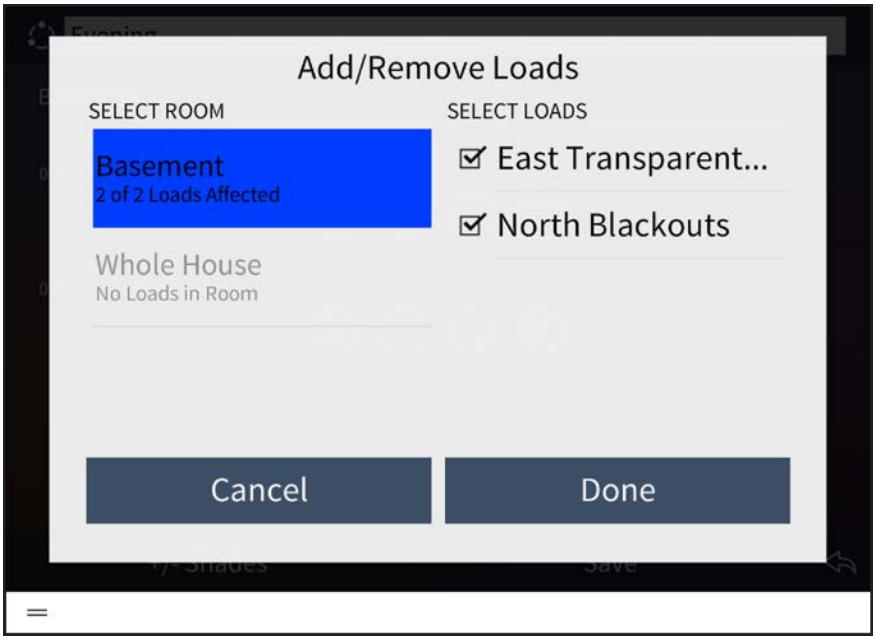
The following settings may be configured for the shade scene:

- Use the text box at the top of the screen to edit the shade scene name.
- Use the provided controls to adjust the levels for any shade groups that have been added to the scene. Shade groups are adjusted in real time.
  - Tap the closed shade button to close a shade load fully (0%).
  - Tap the open shade button to open a shade load fully (100%).
  - Tap the down arrow (**v**) to lower a shade load incrementally.
  - Tap the up arrow (**^**) to raise a shade load incrementally.

  NOTE: Shade groups may also be adjusted using the shade motor controls or using keypads configured to control the shade group.

Tap **Add/Remove Loads** to add shade groups from different rooms or to remove existing shade groups. An **Add/Remove Loads** dialog box is displayed.

Add/Remove Loads Dialog Box



To add or remove a shade group from the scene:

1. Select a room from the **Select Room** menu.
2. Tap the check box next to a shade group to add or remove it from the scene. A filled check box indicates that the shade group has been added to the scene.
3. Tap **Done** to save any changes or **Cancel** to discard the changes.

Any shade groups added to the scene may be adjusted in the scene configuration dialog box.

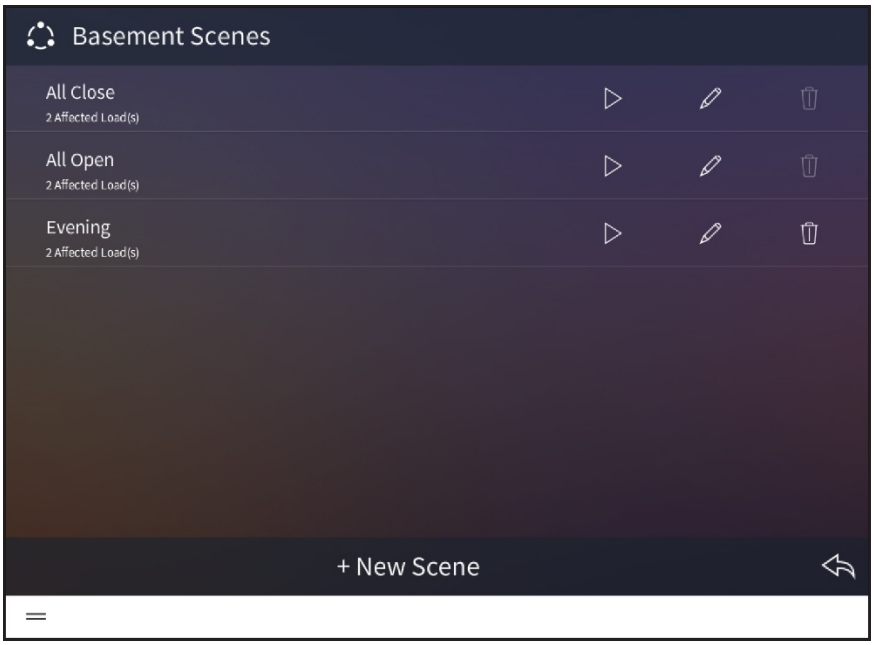
Once all changes have been made, tap **Save** to save any changes to the shade scene or tap the back arrow button to discard the changes.

Configure a User Shade Scene

To configure an existing shade scene:

1. Select a room from the drop-down menu on the top left of the screen.
2. Tap **Add/Edit Scenes**. All shade scenes configured for the room are displayed.

   Basement Scenes Screen - Shades



The following configuration options are displayed next to each shade scene:

- Tap the play button ▷ to recall the shade scene in real time.
- Tap the pencil button ✎ to edit the shade groups that are affected by the scene. A dialog box for editing scene settings is displayed. Use the settings described in "Create a User Shade Scene" on page "Create a User Shade Scene" on page 155 to configure the shade scene.
- Tap the trashcan button 🗑 to delete the shade scene.

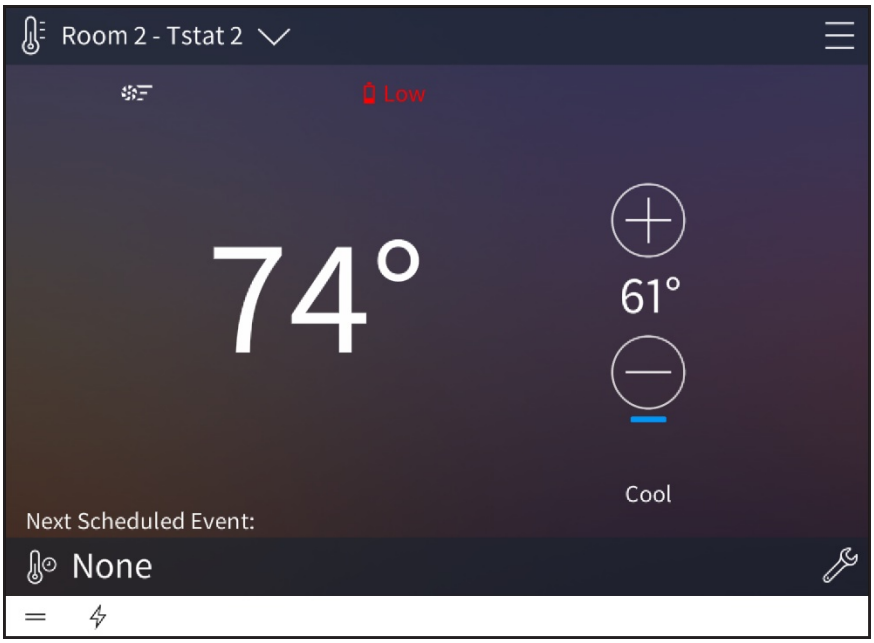
NOTE: **All Open** and **All Closed** shade scenes may not be deleted in user control mode.

Tap the back arrow button ↩ to return to the shades screen.

Climate

Tap the **Climate** button on the **Home** screen or select **Climate** from the **Devices** section of the user menu to display the climate screen.

Room 2 - Tstat 2 Screen



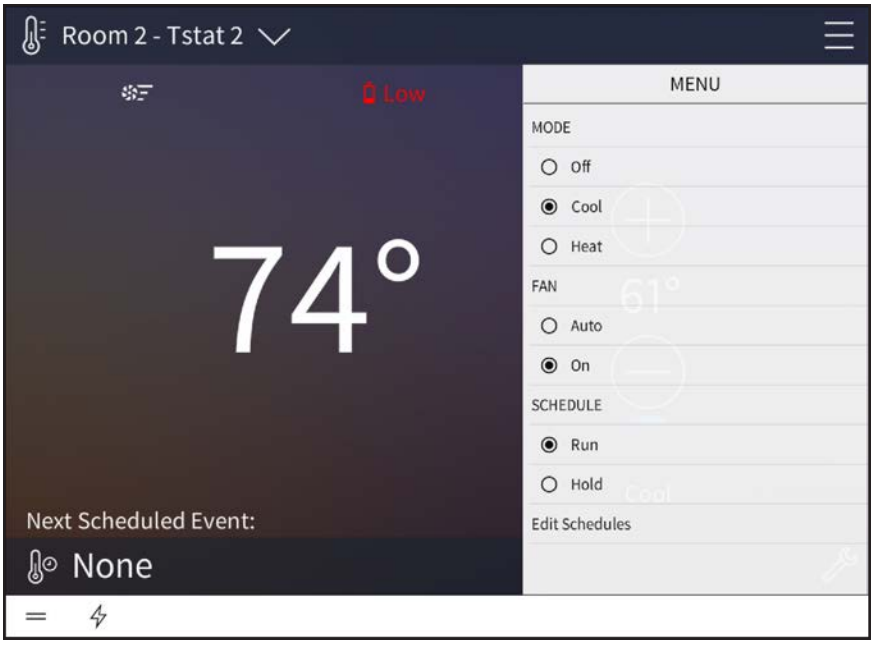
Use the climate screen to select and play any climate event in the Crestron Pyng system and to adjust the behavior of configured thermostats. The climate screen also allows the homeowner to schedule climate events. This process is similar to creating thermostat events in the setup pages.

Use the drop-down menu on the top left of the screen to select a thermostat. The current thermostat settings and the next scheduled thermostat event are displayed.

- Tap the plus button (**+**) to raise the temperature set point of the thermostat mode configured for the room.
- Tap the minus button (**-**) to lower the temperature set point of the thermostat mode configured for the room.

Tap the menu button on the top right of the screen to display a menu for configuring the mode, fan, and schedule settings for the selected thermostat.

Room 2 - Tstat 2 Screen - Menu



The following thermostat settings may be configured:

NOTE: The configurable settings may vary depending on the thermostat functionality. For more information, refer to the thermostat documentation.

- **Mode:** Select one of the following thermostat modes
  - Select **Off** to turn the thermostat off
  - Select **Cool** to turn cooling mode on.
  - Select **Heat** to turn heating mode on.
- **Fan:** Select one of the following fan behavior options:
  - Select **Auto** to have the scene run the fan automatically.
  - Select **On** to have the scene turn the fan on.
- **Schedule:** Select one of the following scheduling options:
  - Select **Run** to start the thermostat schedule.
  - Select **Hold** to stop the thermostat schedule.
- **Edit Schedules:** Tap to create new climate events or to configure existing climate events. Refer to "Create a User Climate Event" on the facing page and "Configure a User Climate Event" on page 163.

Tap the wrench button to configure the climate screen settings. After entering the user password (if required), the **Configuration** screen for the climate screen is displayed.

The following climate screen settings may be configured:

- Tap the **Thermostats** tab to select the thermostats that may be controlled from the climate screen. Tap the check box next to a thermostat to enable or disable controlling the thermostat from the climate screen.
- Tap the **Default** tab to select the default thermostat for the climate screen. The default thermostat is displayed automatically when the climate screen is accessed.

Tap the back arrow button to return to the climate screen.

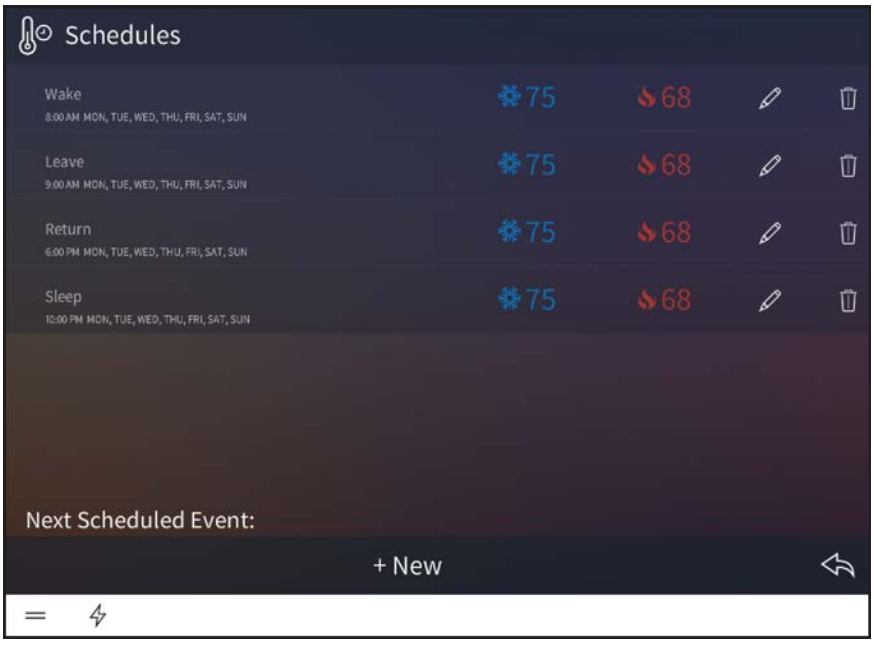
Tap **Home** in the user menu to return to the **Home** screen.

Create a User Climate Event

To create a new climate event in user control mode:

1. Select a thermostat from the drop-down menu on the top left of the screen.
2. Tap the menu button on the top right of the screen.
3. Tap **Edit Schedules**. The **Schedules** screen for the thermostat is displayed.

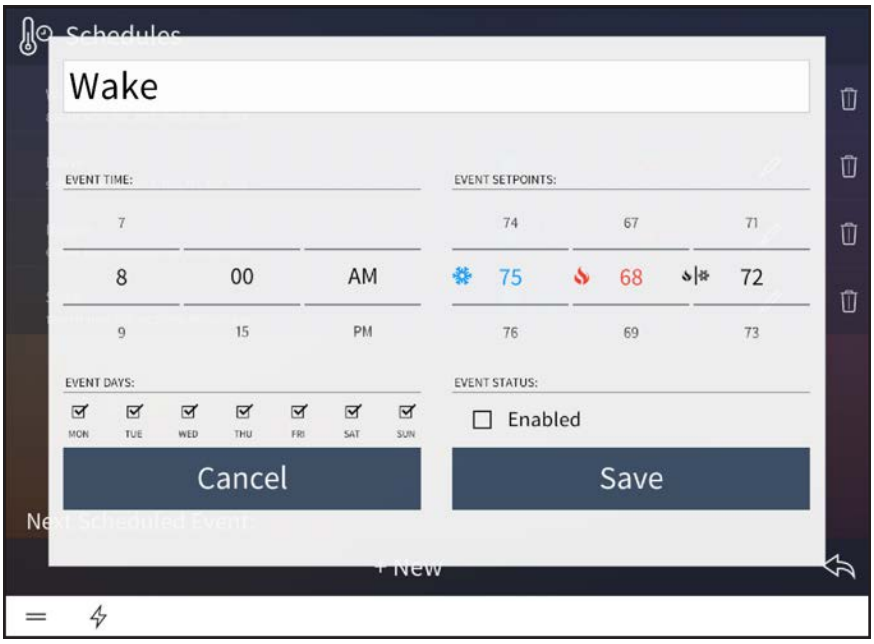
   Schedules Screen - Climate



4. Tap **+ New**.
5. Enter a descriptive name for the new climate event in the dialog box that is displayed.
6. Tap **OK**.

The configuration screen for the climate event is displayed.

Scene Configuration Screen - Climate



The following settings may be configured for the climate event:

- Use the text box at the top of the screen to edit the name for the climate event.
- **Event Time:** Set the time that the climate event should occur using the provided spinner menus.
- **Event Days:** Tap the appropriate check boxes above each day of the week to select the days that the climate event should occur. A filled check box indicates that the event is scheduled to occur on the associated day.
- **Event Setpoints:** Select the temperature set points for cooling, heating, and auto modes using the appropriate spinner menu.

  NOTE: Depending on the selected mode, the thermostat switches to cooling mode when the room temperature reaches the cooling set point, switches to heating mode when the room temperature reaches the heating set point, or maintains the auto mode set point.

- **Event Status:** Tap the check box to enable the event and add it to the thermostat schedule. New events are disabled by default.

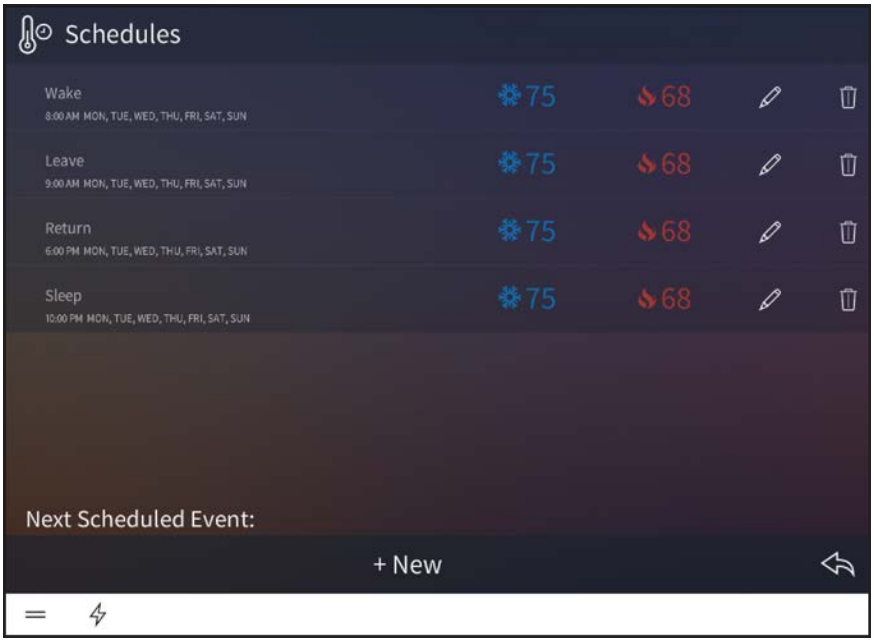
Tap **Save** to save the climate event or tap **Cancel** to cancel creating the event.

Configure a User Climate Event

To configure an existing climate event:

1. Select a thermostat from the drop-down menu on the top left of the screen.
2. Tap the menu button on the top right of the screen.
3. Tap **Edit Schedules**. The **Schedules** screen for the thermostat is displayed.

Schedules Screen - Climate



The **Schedules** screen lists the thermostat events that have been created for the thermostat. Each thermostat event provides the time and days that it is scheduled to occur, as well as its cooling and heating set points.

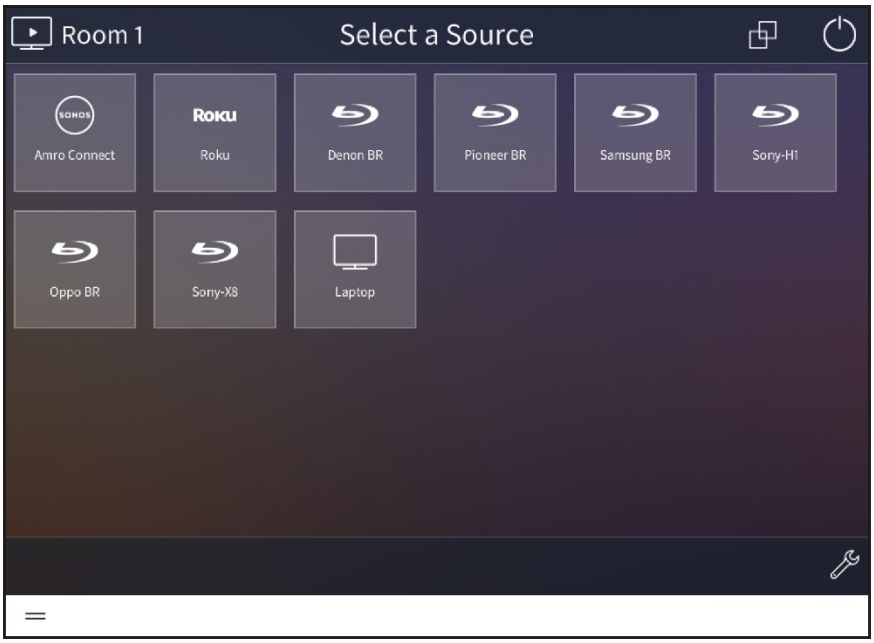
The following configuration options are provided:

- Tap the pencil button to edit the thermostat behavior for the climate event. A dialog box for editing event settings is displayed. Use the settings described in "Create a User Climate Scene" on page "Create a User Climate Event" on page 161 to configure the climate event.
- Tap the trashcan button to delete the climate event.
- Tap the back arrow button to return to the climate screen.

Media

Tap the **Media** button on the **Home** screen or select **Media** from the **Devices** section of the user menu to display the media screen.

Room 1 - Media



Use the media screen to select and play media sources configured for the Crestron Pyng system. The media screen also allows the homeowner to create favorites, to enable or disable media sources, to group media rooms, and to power off the media systems.

NOTE: For more information on source routing behavior for media devices in user control mode, refer to "Appendix D: Source Routing Behavior for Media Sources" on page 238.

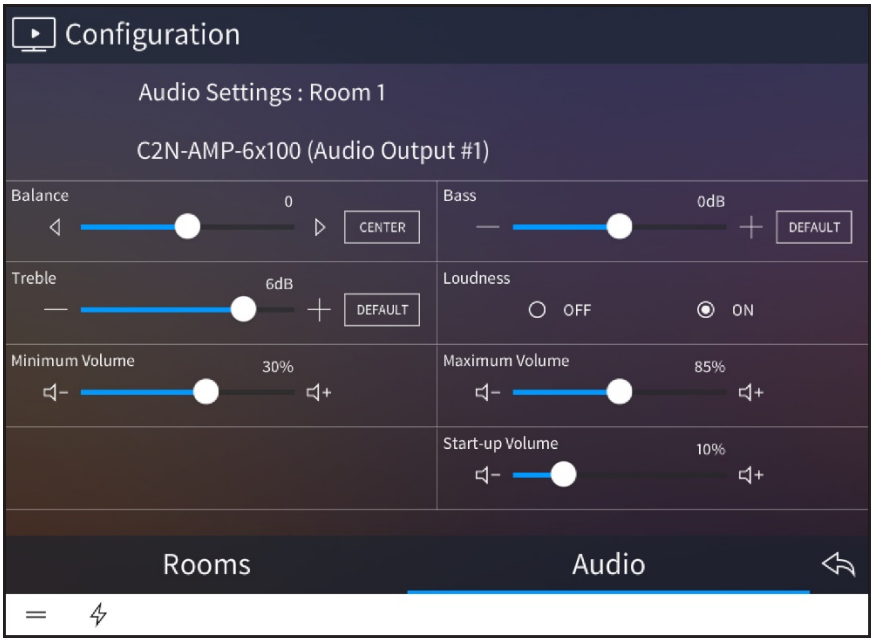
Use the drop-down menu on the top left of the screen to select a room that contains a media source. Only rooms with media sources may be selected from the menu.

Tap the wrench button to configure the media screen settings. After entering the user password (if required), the **Configuration** screen for the media screen is displayed.

The following media screen settings may be configured:

- Tap the **Rooms** tab to select the rooms that may be controlled from the media screen. Tap the check box next to a room to enable or disable controlling the room from the media screen.
- Tap the **Audio** tab to configure the audio output volume, balance, and tone settings for the room (if an audio output has been configured for the room).

Media - Configuration (Audio)



Tap the back arrow button to return to the media screen.

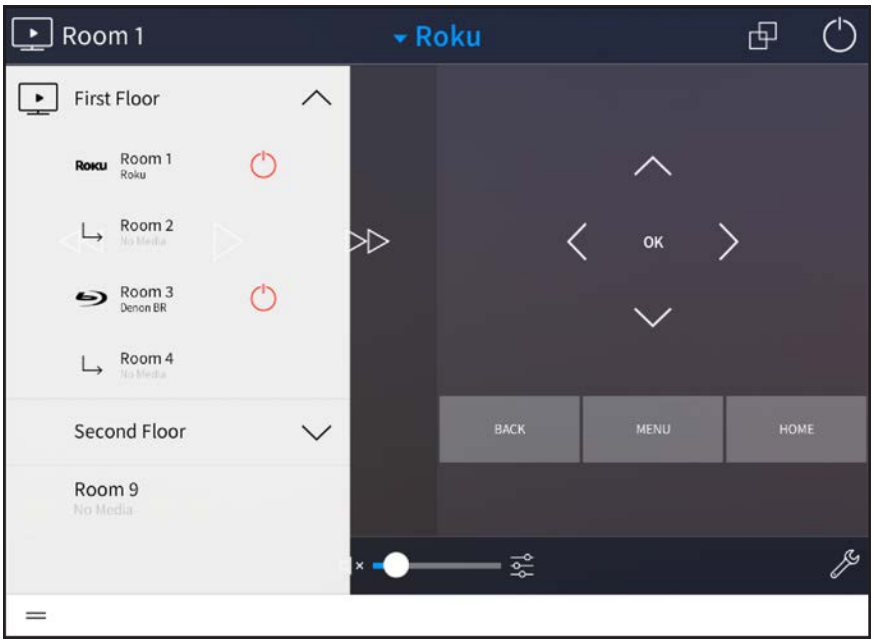
Tap **Home** in the user menu to return to the **Home** screen.

Select a Media Source

To select a media source:

1. Select a room from the drop-down menu on the top left of the screen.

   Room 1 - Room Selection Menu

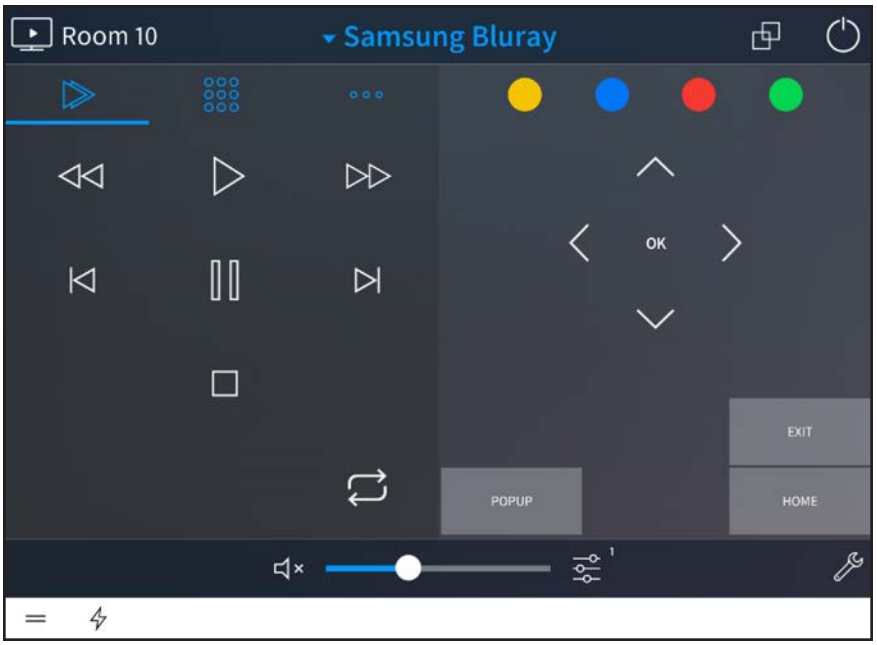
   If a media device is powered on in a room, the device name is displayed underneath the room name, and a red power icon appears to the right of the room name.

2. Select the source by tapping its respective button on the screen.

   NOTE: Tap **Select a Source** to display the available sources in list format. Then, select the source from the list.

Once a source has been selected, a screen with device controls is displayed. The screen for a Samsung® Blu-ray Disc® player device is shown on the following page as an example.

Room 10 - Samsung Bluray



The controls that display on the screen provide the same functions as the controls that are available normally for the media device. For more information on device-specific controls, refer to the media device's documentation.

NOTES:

- The media device must be configured and routed within the system before its controls may be used. For information, refer to"Source Routes" on page 47.
- Custom control interfaces must be created for devices that are added to the system via custom device drivers. For more information, refer to "Appendix C: Create and Upload a Custom Device Driver" on page 213.

For media sources with favorites (such as Sonos CONNECT devices), use the **Favorites** menu on the right of the screen to select a favorite from the provided options.

The **Favorites** menu for a Sonos CONNECT with TuneIn, Spotify® streaming service, and Pandora® streaming service stations is shown on the following page as an example.

Room 1 - Sonos Connect

NOTES:

- When using the web XPanel interface to access a media source with Favorites, preset images or station names are not displayed in the interface.
- For optimal performance, no more than six touch panels should access the audio source page at the same time within a span of ten seconds.

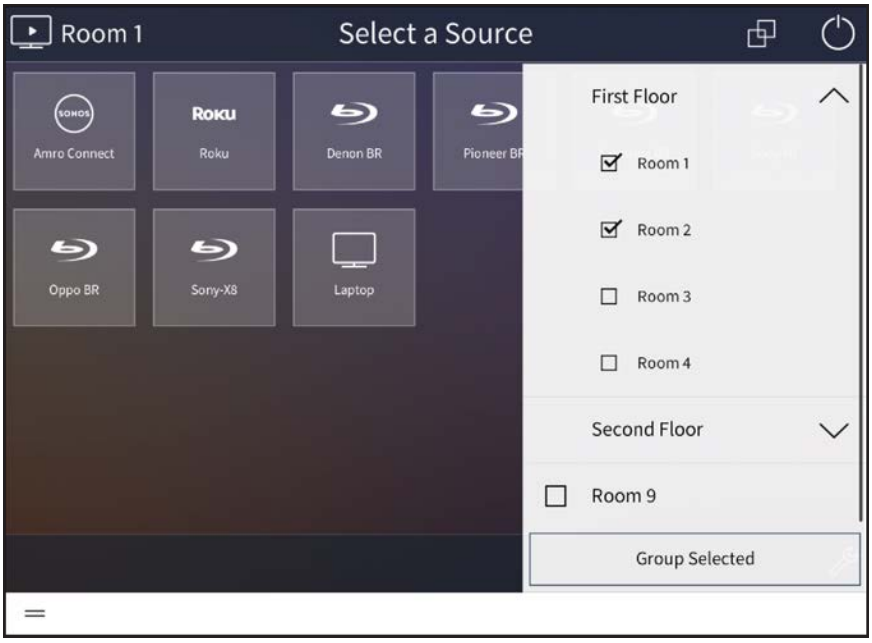
The following volume controls are provided at the bottom of the screen (if supported by the media source):

- Tap the volume mute button to mute or unmute the source volume.
- Use the slider to adjust the volume level.
- Tap the levels button to manage the media volume for the room. For more information, refer to "Manage Media Volume" on page 172.

Group Media Rooms

Press the grouping button at the top right of the screen to display a menu for grouping media rooms.

Room 1 - Group Media Rooms Menu



A media group is a user-defined group of rooms (independent of what devices are in them) that plays the same media simultaneously.

When media rooms are grouped, all of the media sources that may be selected from the grouped rooms are displayed together on the source selection screen, and all grouped audio sources may be controlled together. Media groups also work with Sonos device groups to synchronize audio output across rooms.

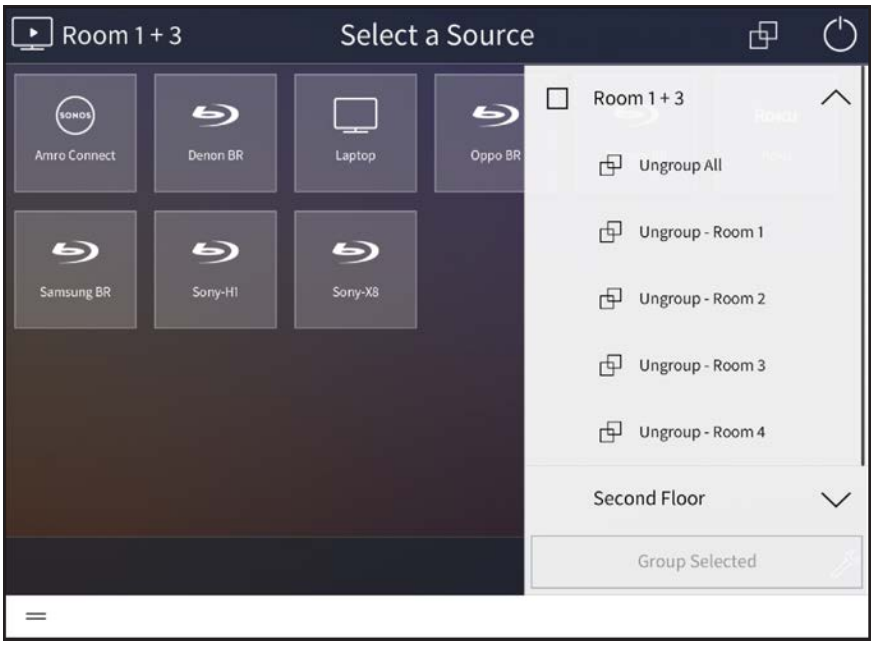
NOTE: A room that has a video source selected may be added as the lead room to a media group (or may have other rooms grouped to it); however, doing so powers off the media devices in the room. If the room with a video source is added to a group that contains a lead room routing an audio-only source, the display in the room powers off and the audio source is routed to the group source that is currently selected.

Tap the check box next to a room to select the room for grouping. When two or more rooms are selected, tap **Group Selected** to group the selected rooms. The source selection screen updates to show the rooms as grouped.

NOTE: Crestron recommends placing no more than 8 media rooms in one group for optimal performance. However, the Sonos app allows for more than 8 Sonos devices to be grouped together, which may cause inconsistencies between the Sonos app and the Crestron Pyng user interface.

To ungroup media rooms, open the group media rooms menu, and then tap the down arrow next to the grouped rooms. Options for ungrouping the rooms are displayed.

Room 1 + 3 - Group Media Rooms Menu



Tap the appropriate item to remove a room from the grouping or to ungroup all rooms.

Observe the following points about media groups and Sonos device groups:

- Group Creation
  - All compatible endpoint devices that may be grouped (such as a Sonos PLAYBAR) are grouped immediately at the device level.
    - When compatible endpoints and sources are available in the same room, only source devices show as available.
    - A Sonos endpoint (PLAYBAR) may be added to a device group in the Sonos app, but it is ignored by the Crestron Pyng media system.
  - All compatible endpoint devices have their sources displayed as one. For example, all Sonos speakers are displayed as one source named "Sonos."
  - Source devices that are added as individual sources and later grouped are displayed alone. For example, a Sonos CONNECT device added as an individual source is displayed alone with the name set for it in the Sonos app.
  - Media group names do not always match the device group names set in the Sonos app.
- Device-Grouped Source Routes
  - All compatible Sonos devices that may be grouped and that are required to complete the routes to all rooms in the group are added to the appropriate device group.

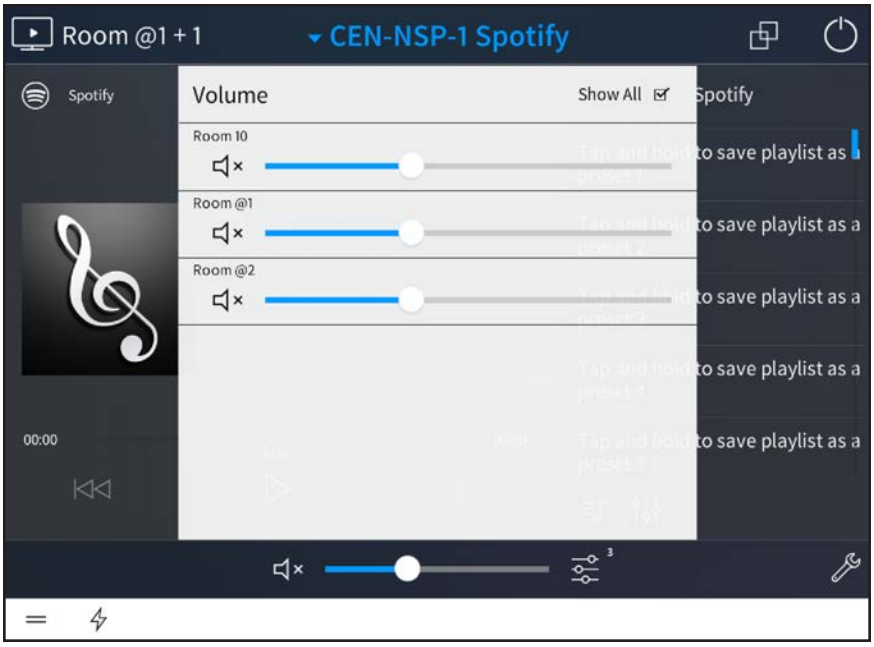
        - If a speaker's "Sonos" source is routed, but a room only allows routing from a Sonos CONNECT, the CONNECT is added to the Sonos group so that is may play audio in sync with the routed Sonos speakers.
        - If an individual Sonos CONNECT is routed, it is always added to the group of Sonos speakers (if any exist).
        - If an individual Sonos CONNECT is routed, but other rooms only allow routing from other Sonos CONNECT devices, those CONNECT devices are grouped together.
    - All Source devices that may be grouped but are no longer routed anywhere are removed from the device group.
- Non-Device-Grouped Source Routes
    - All source devices that may be grouped are removed from the group.
    - Group power off shares this behavior.
- Group Modification
    - Any rooms added to a media group abide by the behavior listed under the Group Creation bullet on the previous page. If a group source exists, the added rooms have the source routed to them using the source routing behavior described above.
    - If any rooms removed from the media group, the compatible endpoint devices from that room are removed from the device group.
    - All Source devices that may be grouped but are no longer available to the group or routed anywhere are removed from the device group.
- Group Deletion
    - All source devices and endpoint devices in the grouped rooms are ungrouped after a deletion.
- Grouping via a Third-Party App (Sonos)
    - When endpoint devices are grouped for the first time, a new media group is created with the rooms that contain the endpoints.
    - When endpoint devices are added to an existing device group, the room containing the endpoints is added to the corresponding media group.
    - When source devices are grouped, the Crestron Pyng media subsystem does nothing.
    - When source devices are ungrouped, the Crestron Pyng media subsystem turns off the rooms that use the source devices. However, these rooms are not removed from the media group.

Manage Media Volume

Tap the levels button at the bottom of the screen to display the **Volume Manager** menu.

The **Volume Manager** menu provides settings for managing the volume for all media sources within a room or all of the rooms within a group. The number next to the button indicates the number of media sources or rooms that may be managed.

Volume Manager Menu



NOTE: In order for volume management controls to display on the source selection page, the chosen media room must be powered on. For more information, refer to "Power the Media System" on the facing page.

The following options are provided for each source or room:

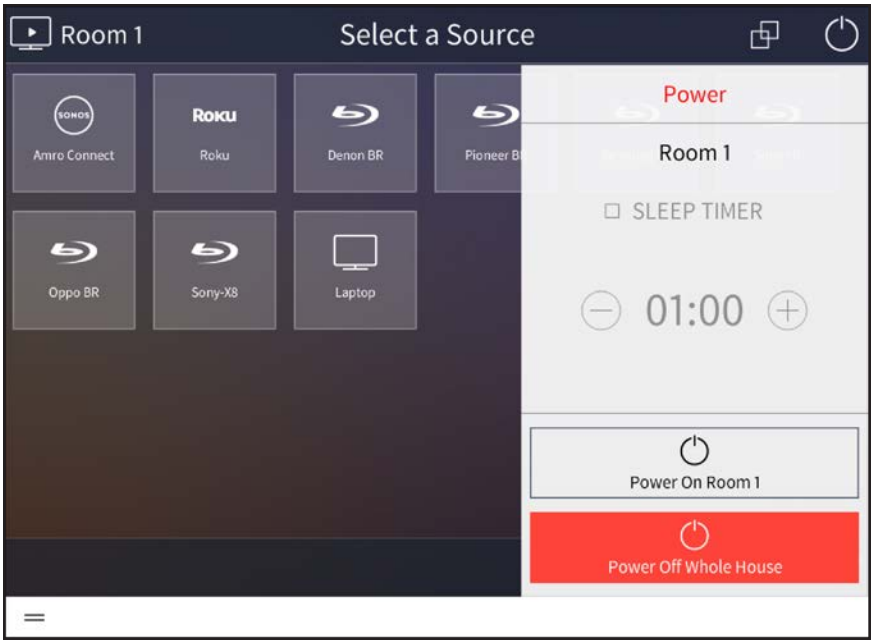
- Tap the volume mute button to mute or unmute the volume for the source or room.
- Use the slider to adjust the volume level for the source or room.

If the selected media room is part of a group, tap **All Rooms** to show or hide volume controls for the individual rooms in the group.

Power the Media System

Tap the power button at the top right of the screen to display the **Power** menu.

Room 1 - Power Menu



Use the **Power** menu to power on or off media rooms or to power off the entire media system in the house.

The following options are provided:

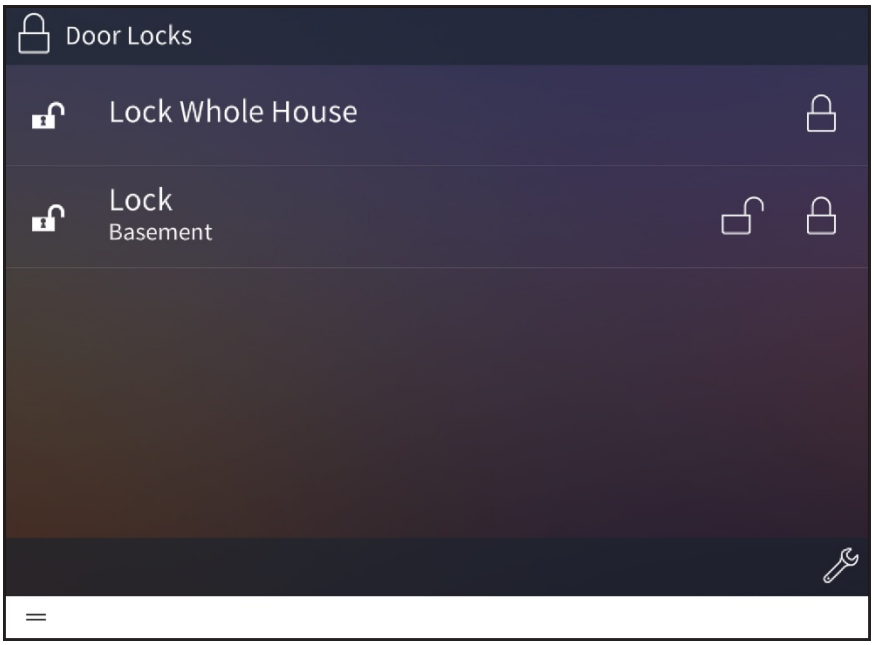
- Tap the check box next to **Sleep Timer** to enable or disable using a timer to put the media system to sleep. A filled check box indicates that the sleep timer is enabled.
- If **Sleep Timer** is enabled, tap the minus (**-**) or plus (**+**) buttons to lower or raise, respectively, the sleep timer by 15 minute increments.
- Tap **Power Off [Room]** to power off all media devices in the room. If the room is off, tap **Power On [Room]** to power on all media devices in the room.
- Tap **Power Off Whole House** to power off all media devices in the house.

NOTE: To access the **Power** menu via the TSR-310 remote control, press and hold the power hard button for three seconds. Tap the power button to turn the room on or off.

Locks

Select the **Locks** button from the **Home** screen or select **Locks** from the **Devices** section of the user menu to display the **Door Locks** screen.

Door Locks Screen



Use the **Door Locks** screen to view and control all of the door locks configured for the Crestron Pyng system.

The following icons are shown to indicate the status of the locks:

- A closed lock icon indicates that a lock is currently closed.
- An open lock icon indicates that a lock is currently open.
- A low battery icon indicates that the lock battery is low and should be charged.
- A warning icon that there is an issue with the lock (For more information on troubleshooting faulty door locks, refer to "Devices" on page 112)

To control door locks:

- Tap the open lock button to open a lock.
- Tap the closed lock button to close a lock.
- Tap the closed lock button next to **Lock Whole House** to close all of the locks in the system.

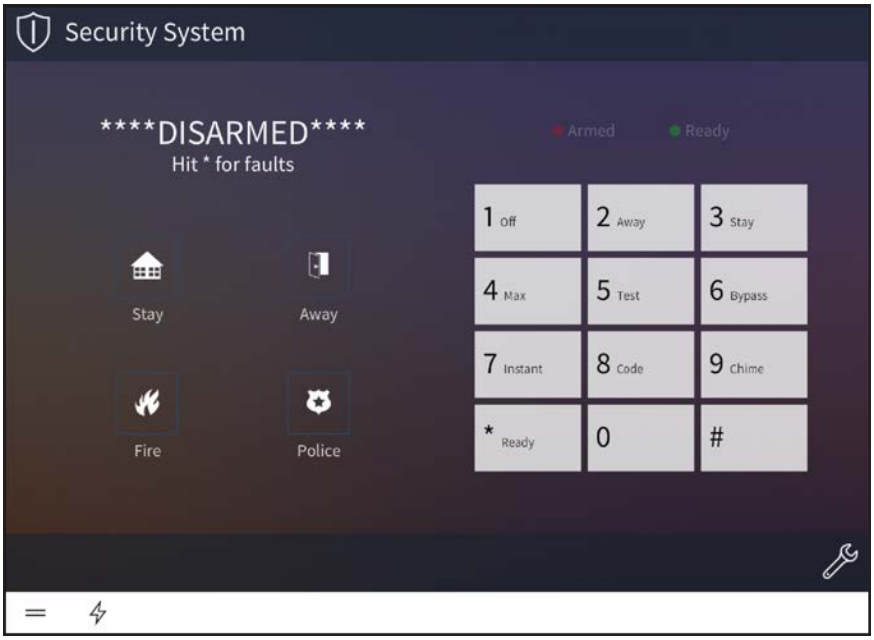
To control general door lock settings:

- Tap the wrench button to configure the **Door Lock** screen settings. After entering the user password (if required), the **Configuration** screen for the **Door Locks** screen is displayed.
  - Tap the check box next to a door lock to enable or disable controlling the door lock from the **Door Locks** screen.
  - Tap the back arrow button to return to the **Door Locks** screen.
- Tap **Home** in the user menu to return to the **Home** screen.

Security

Select the **Security** button from the **Home** screen or select **Security** from the **Devices** section of the user menu to display the **Security System** screen.

Security System



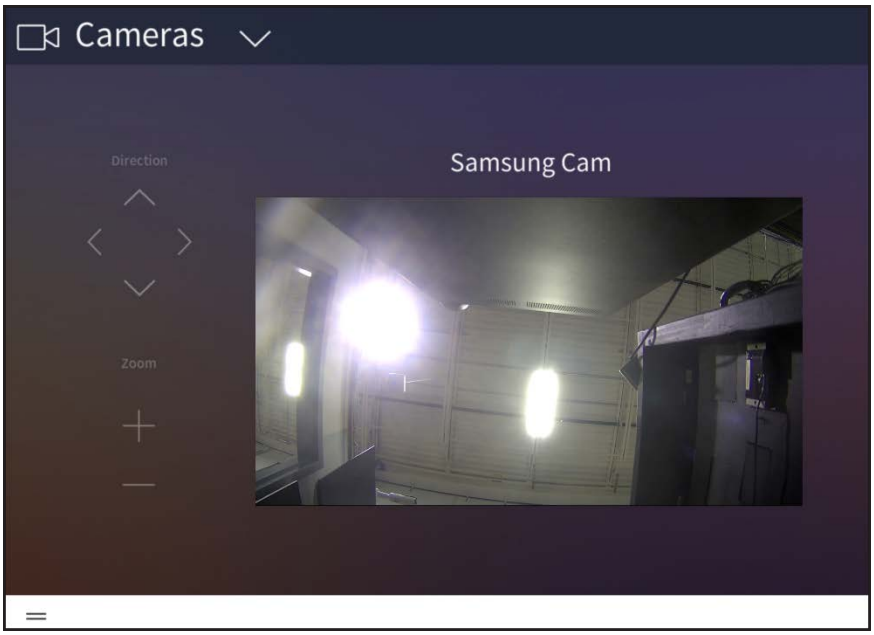
- Use the security screen to view and control all of the security systems configured for the Crestron Pyng system.
- Use the drop-down menu on the top left of the screen to select a security system. Controls for the selected security system are displayed.
- Tap the buttons on the left side of the screen to perform the respective security system action. Use the keypad on the right side of the screen to enter the code for arming and disarming the security system.
- Tap the wrench button to configure the security screen settings. After entering the user password (if required), the **Configuration** screen for the security screen is displayed.

    - Tap the check box next to a security system to enable or disable controlling the security system from the **Security** screen.
    - Tap the back arrow button to return to the **Security** screen.
- Tap **Home** in the user menu to return to the **Home** screen.

Cameras

Select the **Cameras** button from the **Home** screen or select **Cameras** from the **Devices** section of the user menu to display the **Cameras** screen.

Cameras Screen



Use the **Cameras** screen to view and control all of the cameras configured for the Crestron Pyng system. The selected camera feed is shown in the bottom right portion of the screen.

If multiple cameras are configured for the Crestron Pyng system, use the dropdown menu on the top left of the screen to select a camera to view.

The following camera controls are provided:

- Tap any of the **Direction** arrows to change the camera view direction (if supported by the camera).
- Tap the plus (**+**) or minus (**-**) buttons under **Zoom** to have the camera zoom in or out, respectively (if supported by the camera).
- Tap the camera feed to view it in full screen mode. Tap the camera feed again to return it to its normal size.

Tap **Home** in the user menu to return to the **Home** screen.

Door Stations

If a TSW-x60 series touch screen has been added to the Crestron Pyng system and is running the Crestron Pyng user project, the touch screen may be connected to a 2N® door station to provide a door station solution for the system.

For more information on integrating a 2N door station with Crestron Pyng, refer to "Appendix H: Connect to a 2N Door Station" on page 250.

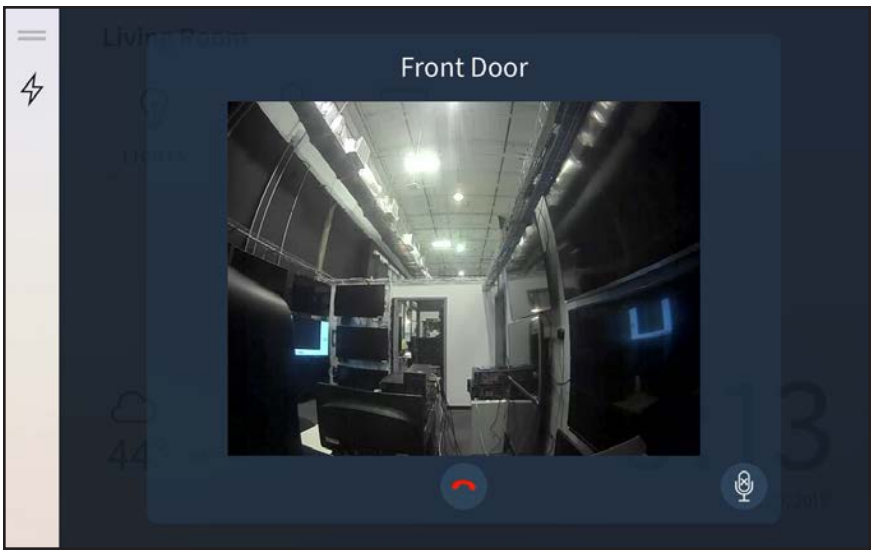
When the touch screen receives a call from the door station, an incoming call window opens on the touch screen with the door station name and the camera feed.

Incoming Call Window

- Tap the green phone button to answer the call.
- Tap the red phone button to decline the call.

If the call is answered, controls to end the call and to toggle the microphone mute are shown in the window. Tap the red phone button to end the call. Tap the microphone button to mute or unmute the intercom microphone.

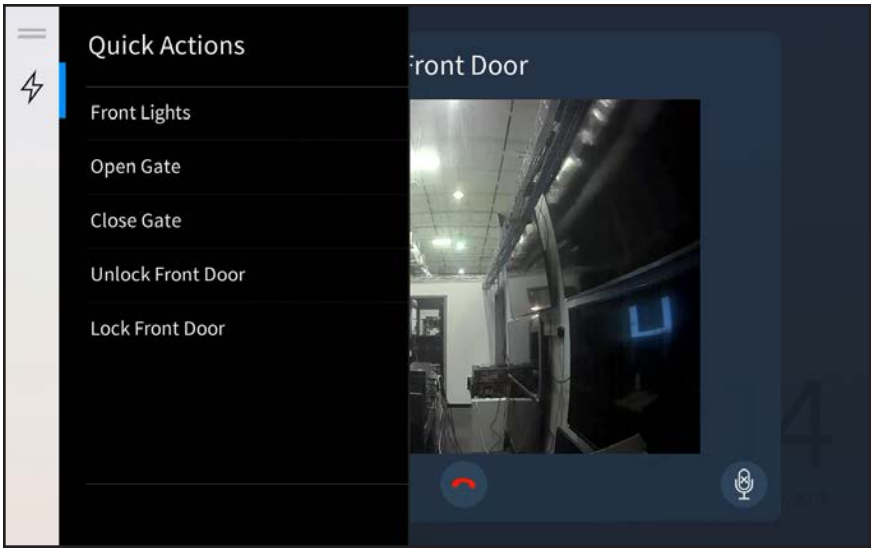
Incoming Call Window - Call Answered



If the call is declined or ended, the call window is closed.

Tap the lightning bolt icon on the left menu to view and activate quick actions during the call (such as "Open Gate"). A quick actions menu is displayed.

Incoming Call Window - Quick Actions Menu

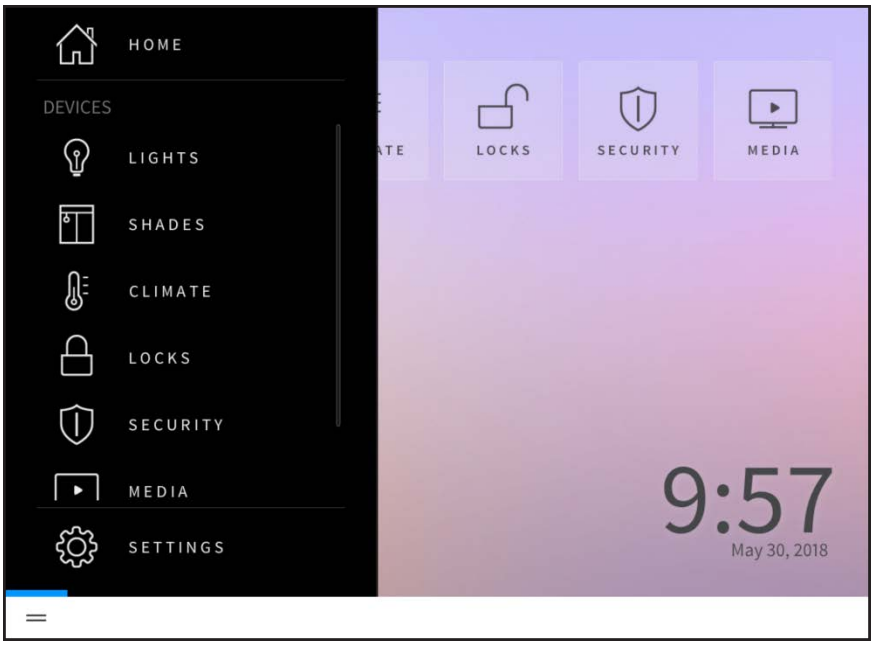


Tap a quick action to activate it. Tap the lightning bolt icon again to close the quick action menu.

User Menu

Tap the menu button ═ on the bottom left of any screen in user control mode to display the collapsible user menu on the left side of the screen.

Home Screen - User Menu



The following selections are available from the user menu:

- Tap **Home** to return to the **Home** screen.
- Tap any of the selections available under the **Devices** menu (**Lights**, **Shades**, **Climate**, **Media**, **Locks**, **Security**, or **Cameras**) to load the screen for that group of devices.

  NOTE: These selections are only available if devices, scenes, or events have been added to the system for the device group.

- Tap **Metrics** to load a screen for displaying energy usage metrics for the Crestron Pyng system. For more information, refer to "Metrics" on the facing page.
- Tap **Settings** to load the **Settings** screen, which provides settings for basic system configuration. For more information, refer to "Settings" on page 182.

After 30 seconds of inactivity, the user menu closes automatically.

Metrics

Tap **Metrics** on the user menu to open the metrics page for the Crestron Pyng system in a web browser.

NOTE: The **Metrics** feature requires the Crestron Pyng system to be registered with a MyCrestron account and for the user control device to be connected to the network. For more information, refer to "MyCrestron Settings" on page 118.

Crestron Pyng Metrics Page - Lighting

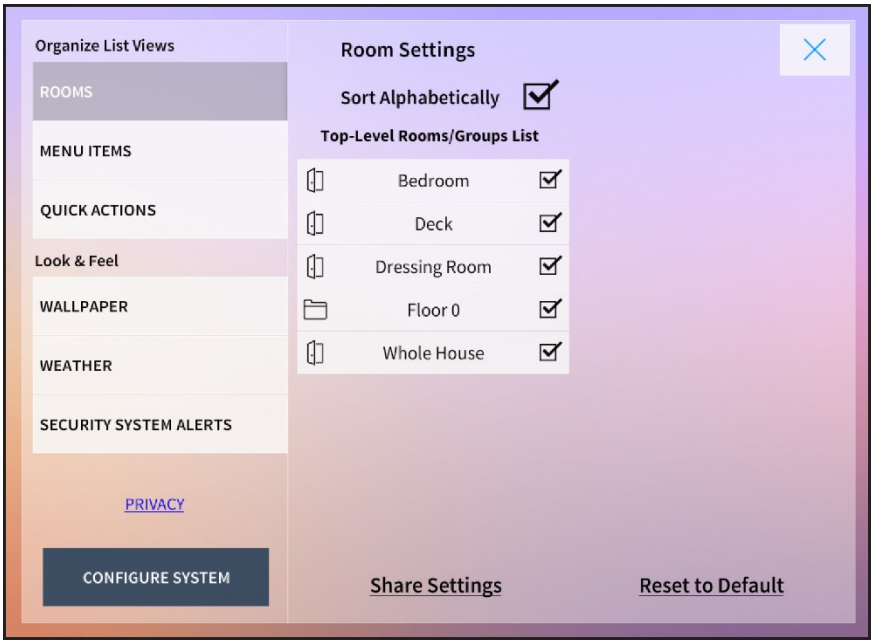
The Crestron Pyng metrics page provides an overview of lighting and climate usage for the entire Crestron Pyng system.

- Tap the **Lighting** tab to view the lighting usage for each configured room and to compare the lighting hours used during the current week to the prior week.
- Tap the **Climate** tab to view the daily, monthly, or yearly climate usage for each configured thermostat.
- Tap **Quick Tips** to display tips for optimizing energy and climate usage.

Settings

Tap **Settings** on the user menu to access settings for user control mode. A dialog box is displayed prompting for a password. Enter the user password to display the **Settings** screen.

Settings Screen - Room Settings



The **Settings** screen provides selections for selecting and organizing the items that appear on the user menus and for customizing the look and feel of the user interface.

The following general controls are provided on the **Settings** screen.

- Tap **Share Settings** to share the configured user settings with other user control devices (such as iPad devices, smart phones, and touch screens) configured for the Crestron Pyng system.
- Tap **Reset to Default** to reset the user settings to their default values.
- Tap **Configure System** to access the user setup screens (by entering the user password) or to access the installer setup screens (by entering the installer password).
- Tap **Privacy** to view privacy policies regarding use of the Crestron Pyng system and to view whether the system is set to collect user data.

The following settings may be configured using the **Settings** screen.

NOTE: The **Settings** screen for the TSW-x60 series touch screens provides an additional **Hardware** menu for configuring touch screen settings, as well as an alternate menu layout. For more information, refer to "Touch Screen Settings" on page 188.

Rooms List

Tap **Rooms** from the **Organize List Views** menu to display the **Room List** panel. (Refer to the image above.)

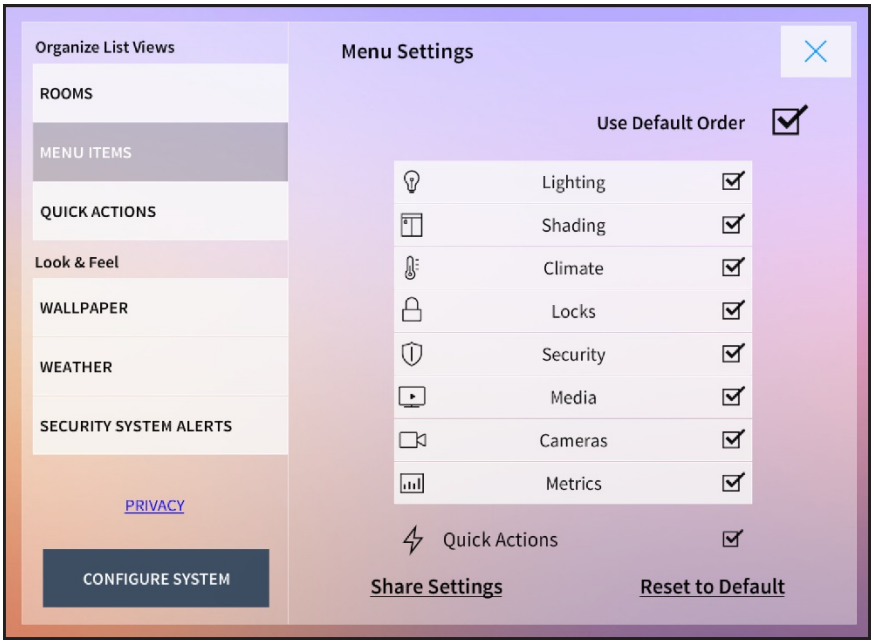
Use the **Room List** panel to select the rooms or room groups that appear as top-level items in user control mode.

- Tap the check box next to **Sort Alphabetically** to select whether rooms are sorted automatically (in alphabetical order) or manually.
- Tap the check box next to a room or room group in the **Top-Level Rooms/Groups List** menu to select whether the room or room group appears as a top-level item.
- Tap a room group to display a **Room(s) In Group** menu, which enables the rooms in that group to be selected as top-level items or to be sorted manually.
- If **Sort Alphabetically** is disabled, press and hold a room or room group until the list item turns green. Then, slide the room up or down the list to sort the room manually.

Menu Settings

Tap **Menu Items** from the **Organize List Views** menu on the **Settings** screen to display the **Menu Settings** panel.

Settings Screen - Menu Settings



Use the **Menu Settings** panel to select the device groups that may be selected from the **Home** screen and from the user menu.

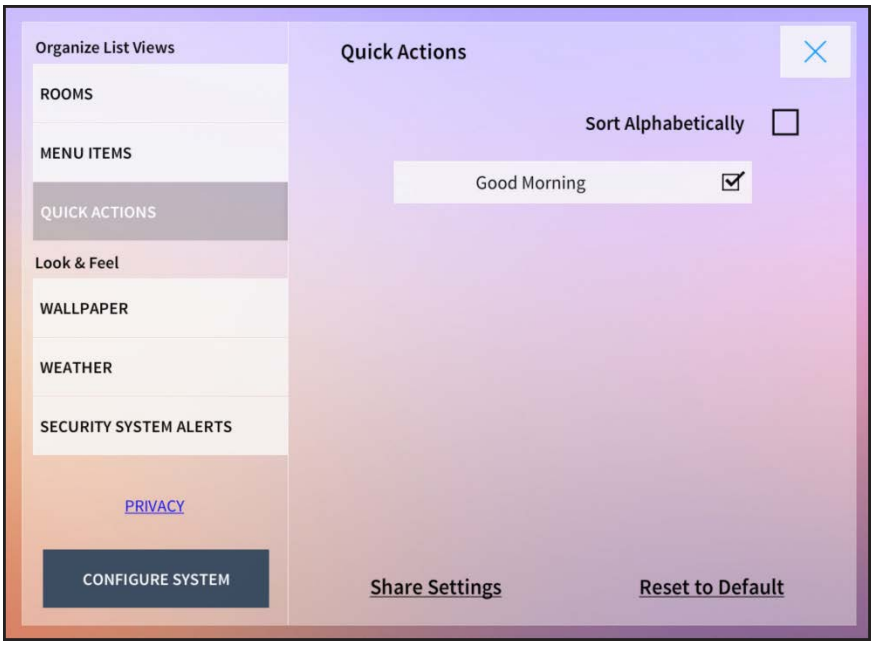
- Tap the check box next to **Use Default Order** to select whether device groups are sorted automatically (by the default order for the system) or manually.
- Tap the check box next to a device group to select whether the device group appears as a selectable item from the **Home** screen and the user menu.

- If **Use Default Order** is disabled, press and hold a device group until the list item turns green. Then, slide the device group up or down the list to sort the group manually.
- Tap the check box next to **Quick Actions** to enable or disable showing the **Quick Actions** menu in user control mode.

Quick Actions

Tap **Quick Actions** from the **Organize List Views** menu on the **Settings** screen to display the **Quick Actions** panel.

Settings Screen - Quick Actions



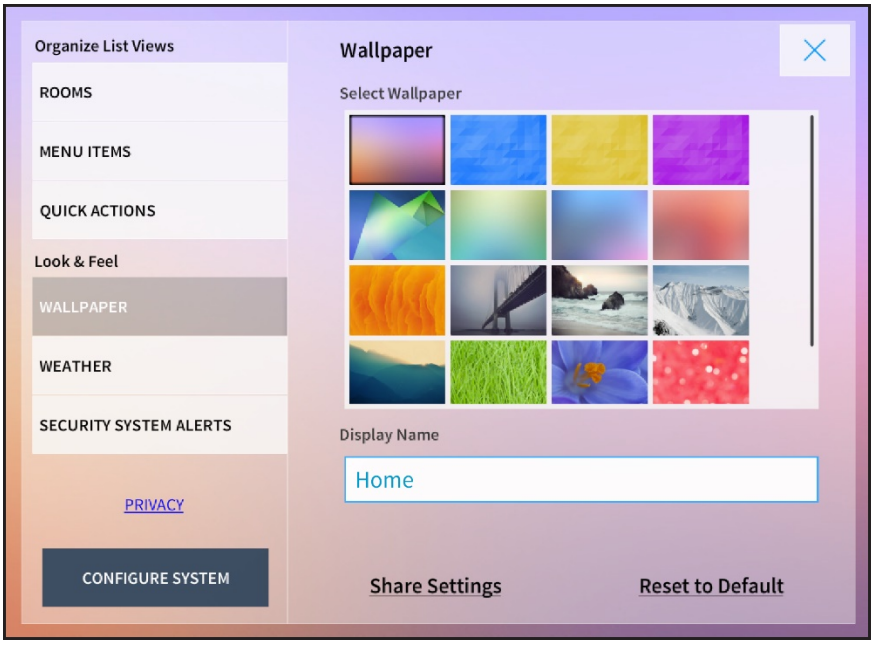
Use the **Quick Actions** panel to select the quick actions (macro buttons) that may be selected from the **Quick Actions** menu (if enabled). For more information, refer to "Quick Actions" on page 191.

- Tap the check box next **to Sort Alphabetically** to select whether quick actions are sorted automatically (in alphabetical order) or manually.
- Tap the check box next to a quick action to select whether the quick action appears as a selectable item from the **Quick Actions** menu.
- If **Sort Alphabetically** is disabled, press and hold a quick action until the list item turns green. Then, slide the quick action up or down the list to sort the quick action manually.

Wallpaper

Tap **Wallpaper** from the **Look & Feel** menu to display the **Wallpaper** panel.

Settings Screen - Wallpaper



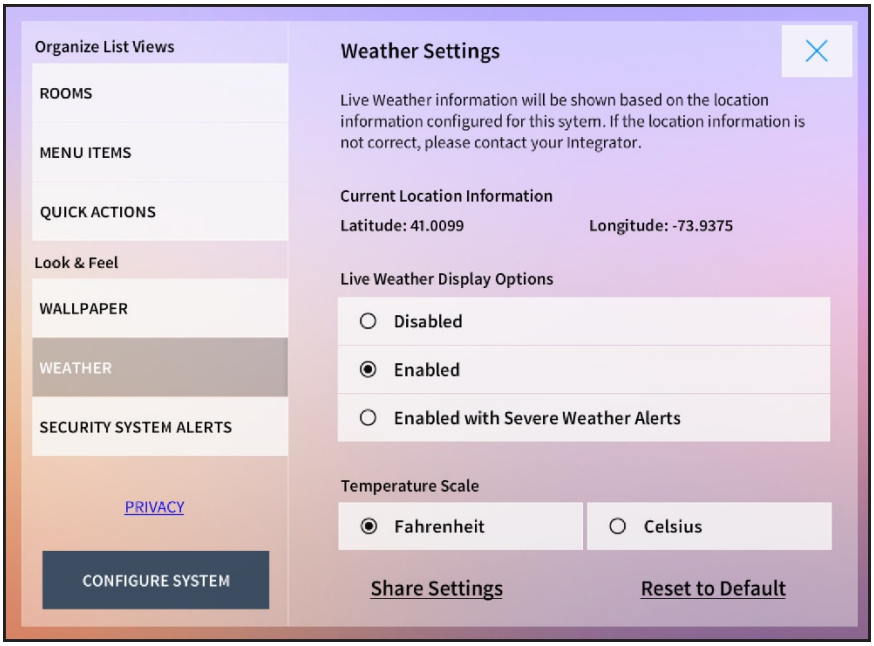
Use the Wallpaper panel to select a wallpaper for the user interface background and to change the **Home** screen display name.

- Tap a wallpaper thumbnail in the **Select Wallpaper** menu to select that wallpaper for the user interface background.
- Tap the textbox under **Display Name** to edit the **Home** screen display name.

Weather Settings

Tap **Weather** from the **Look & Feel** menu to display the **Weather Settings** panel.

Settings Screen - Weather Settings



Use the **Weather** panel to enable or disable displaying the weather widget on the **Home** screen and to configure display settings for the widget.

NOTE: The user control device must support location services and must be connected to the network to display live weather information.

The following weather widget display selections are provided:

- Select **Disabled** to disable displaying the weather widget on the **Home** screen.
- Select **Enabled** to enable displaying the weather widget on the **Home** screen.
- Select **Enabled with Severe Weather Alerts** to enable displaying the weather widget on the **Home** screen with severe weather alert notifications.

  NOTE: If **Enabled with Severe Weather Alerts** is selected, a red exclamation mark icon appears next to the weather widget when a severe weather alert is broadcast. Tap the weather widget to view more information about the alert.

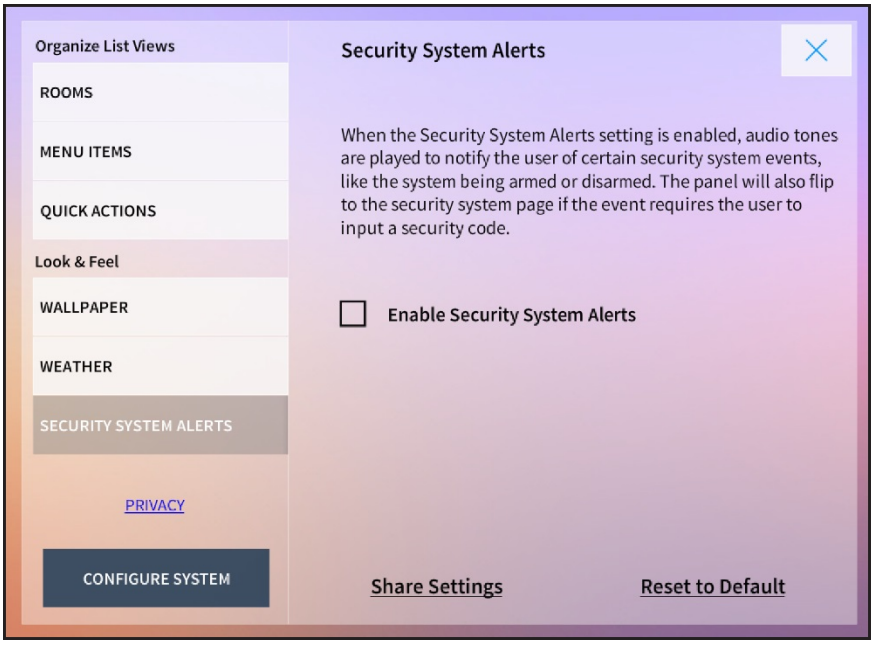
The following temperature display selections are provided:

- Select **Fahrenheit** to display the temperature in Fahrenheit.
- Select **Celsius** to display the temperature in Celsius.

Security System Alerts

Tap **Security System Alerts** from the **Look & Feel** menu to display the **Security System Alerts** panel.

Settings Screen -Security System Alerts



Use the **Security System Alerts** panel to enable or disable security system alerts in User Control mode.

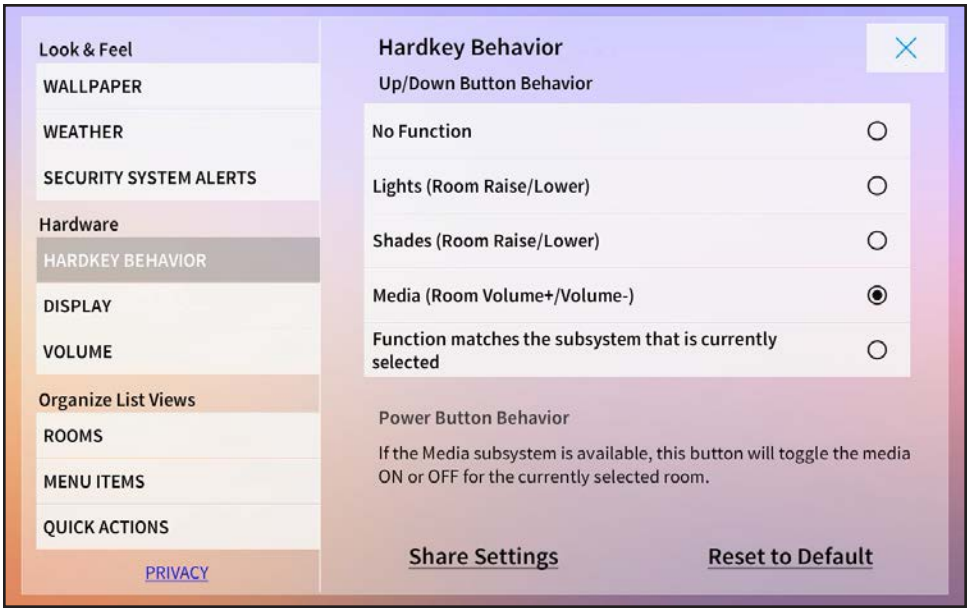
Security system alerts sounds tones that notify the user when the security system is armed or disarmed, and the user control device automatically loads the security screen if an event requires the user to input a security code.

Tap the check box next to **Enable Security System Alerts** to enable or disable security systems alerts in user control mode.

Touch Screen Settings

The **Settings** screen for the TSW-x60 series touch screens provides an additional **Hardware** menu for configuring touch screen settings.

Settings Screen - Hardware Menu



Hardkey Behavior

Tap **Hardkey Behavior** from the **Hardware** menu to display the **Hardkey Behavior** screen. Refer to the image above.

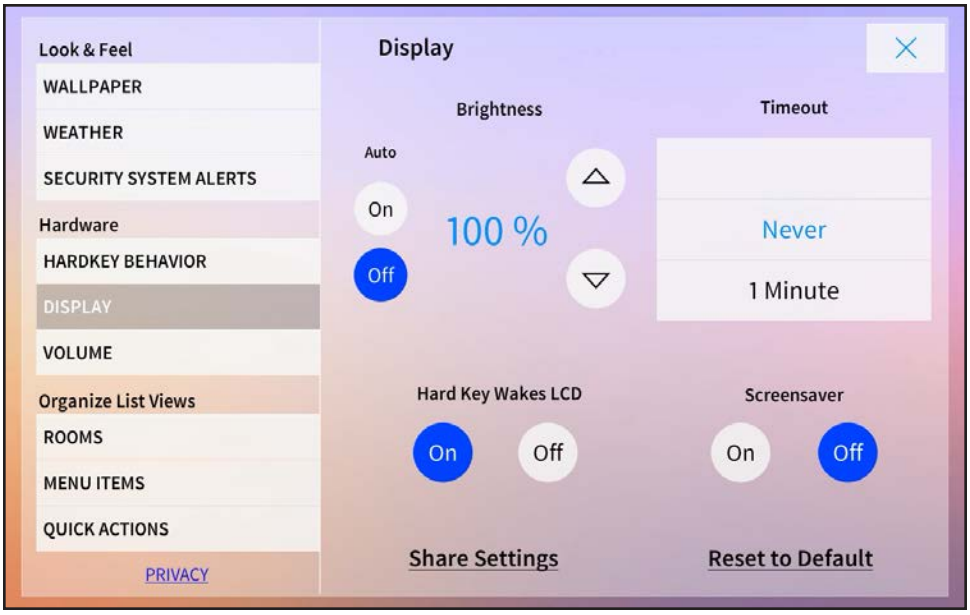
Use the **Hardkey Behavior** screen to toggle the behavior of the up and down hard key buttons on the touch screen. Tap one of the following options to select it:

- **No Function:** Disables using the up and down hard keys for system control
- **Lights (Room Raise/Lower):** Enables raising or lowering the lighting loads in the room using the up and down hard keys
- **Shades (Room Raise/Lower):** Enables raising or lowering the shade loads in the room using the up and down hard keys
- **Media (Room Volume+/Volume-):** Enables raising or lowering the media volume of the room using the up and down hard keys
- **Function matches the subsystem that is currently selected:** Enables using the hard keys to control the subsystem (lights, shades, media) that is currently selected.

Display

Tap **Display** from the **Hardware** menu to display the **Display** screen.

Settings Screen - Display



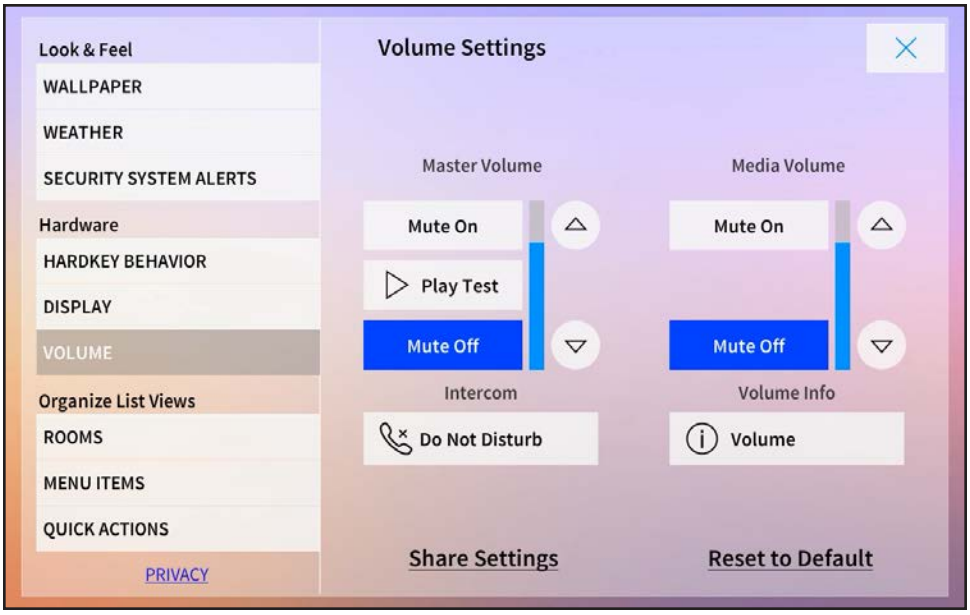
Use the **Display** screen to configure the touch screen LCD display settings.

- Brightness
  - Tap the **On** and **Off** buttons under **Auto** to turn on or off automatic brightness for the touch screen display. When **On** is selected, the touch screen display adjusts its brightness based on the ambient light level in the room.
  - Tap the up and down arrow buttons to raise or lower the touch screen brightness manually from 0 to 100%.
- **Timeout:** Swipe up or down through the menu to select the duration before the touch screen enters standby timeout mode and displays a black screen. Select **Never** to disable standby timeout mode.
- **Hard Key Wakes LCD:** Tap **On** or **Off** to turn on or off the user's ability to wake the touch screen display by pressing one of the hard keys.
- **Screensaver:** Tap **On** or **Off** to turn on or off using a touch screen screensaver during standby timeout mode.

Volume

Tap **Volume** from the **Hardware** menu to display the **Volume Settings** screen.

Settings Screen - Volume Settings



Use the **Volume Settings** to configure volume settings for the touch screen and for the 2N door station intercom (if configured).

- Master Volume
  - Tap the up and down arrow buttons to raise or lower the master volume incrementally.
  - Tap **Mute On** to mute the master volume.
  - Tap **Play Test** to play a test recording at the current master volume level.
  - Tap **Mute Off** to unmute the master volume.
- Media Volume
  - Tap the up and down arrow buttons to raise or lower the media volume incrementally.
  - Tap **Mute On** to mute the media volume.
  - Tap **Mute Off** to unmute the media volume.
- Intercom

  NOTE: The **Intercom** settings are only applicable if the touch screen is connected to a 2N door station for use within the Crestron Pyng system. For more information, refer to "Door Stations" on page 178.

  - Tap **Do Not Disturb** to disable receiving calls on the touch screen from the connected 2N door station intercom. **Do Not Disturb** is shown with a blue background if it is selected.

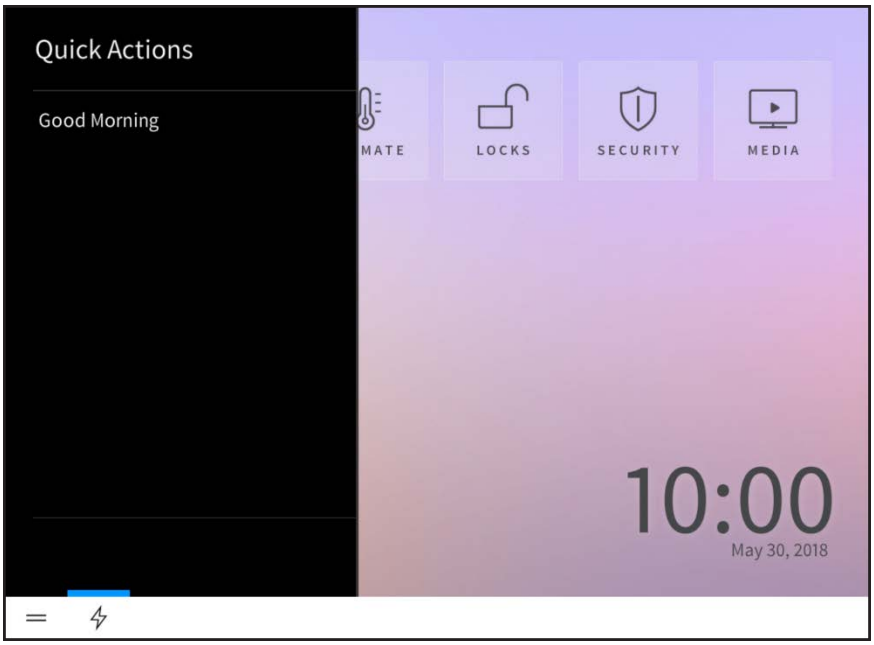
- If selected, tap **Do Not Disturb** again to enable receiving calls on the touch screen from the connected 2N door station intercom.

- **Volume Info:** Tap the information icon to view a statement describing the relationship between the master volume and media volume controls.

Quick Actions

Tap the lightning bolt button on the bottom left of any screen in user control mode to display the **Quick Actions** menu on the left side of the screen.

Quick Actions Menu



NOTE: The **Quick Actions** menu may be accessed only if the **Quick Actions** setting is enabled in the **Menu Settings** panel of the **Settings** screen and if one or more quick actions have been created for the system.

Swipe up or down through the menu items to select a quick action (macro button), and then tap the quick action to recall it.

For more information on creating quick actions in Installer Configuration mode, refer to "Actions & Events" on page 71.

Troubleshooting

The following table provides troubleshooting information. If further assistance is required, contact a Crestron customer service representative.

Crestron Pyng Troubleshooting

Problem	Possible Causes(s)	Corrective Action
Crestron Pyng is showing Cresnet® devices in the Network Device Tree, but is not discovering them in the Pyng system.	The CP4-R device firmware is not up to date.	Update the CP4-R to the latest recommended firmware.
Crestron Pyng is showing Cresnet thermostats in the Network Device Tree, but is not discovering them in the Crestron Pyng system.	The CHV-THSTAT3F firmware is for 3-Speed-Fan applications only, which are not supported by Crestron Pyng at this time.	Use the CHV-TSTAT/THSTAT firmware instead.
Crestron Pyng shows a "Gateway Could Not Be Added" dialogue box when attempting to add a CSA-PWS10S-HUB-ENET gateway to the Crestron Pyng system.	The mode switch on the device is not set correctly.	Ensure that the mode switch on the CSW-PSW10S-HUB-ENET is set to match the physical connection method (CRES or ETH).
Crestron Pyng cannot discover a security system.	Crestron Pyng does not support the security system at this time.	Refer to the Security section of www.crestron.com/en-US/Products/Featured-Solutions/Crestron-Pyng to view the security systems compatible with Crestron Pyng.
After an Autonomic® audio unit is added to the Crestron Pyng system, some sources that were disabled from the MMS web user interface still appear in the Crestron Pyng source list.	Disabling a source in the MMS web interface does not disable it automatically in Crestron Pyng.	Remove the MMS and then add it back to the system using the Pair Devices screen to reflect the update.

Crestron Pyng Troubleshooting

Problem	Possible Causes(s)	Corrective Action
A connection to Crestron Pyng cannot be established from both an iPad device or from the web XPanel interface, but the device is still communicating in Crestron Toolbox.	SSL may have been enabled after a firmware update or a system restore.	Connect to the CP4-R in Crestron Toolbox to determine if SSL is enabled using one of the following methods:If using Text Console, issue the SSL command. If the "SSL On" prompt is returned, issue the SSL command followed by the restore command.If using the System Info dialog box, navigate to Functions > SSL Management, uncheck the SSL box, and then click OK.
The web XPanel interface loads, but there is no response when clicking buttons or some page elements are missing.	The domain web setting for XPanel is set incorrectly.	In Installer Settings, select Web Settings, and then ensure that Domain is set to "*". For more information on XPanel web settings, refer to OLH article 5793.
The CP4-R is not communicating with Crestron Toolbox via Ethernet or USB.	The CP4-R needs to be restored to factory settings.	Follow the procedures described in "Appendix C: Create and Upload a Custom Device Driver" on page 213.

Appendix A: Sonos and Crestron Pyng Integration

A Sonos system is also referred to as a Sonos household. A Sonos household includes all of the Sonos devices that are part of the same system. Sonos devices that are part of the same household may be grouped together and may share a Favorites list.

The Sonos app shows the devices for only one household. When the Sonos app is first launched, the app asks the user to add one Sonos device to the same subnet as the controller (the device that is running the Sonos app). Once the controller is synced with the Sonos device, the Sonos household that includes the device becomes the default household for the controller.

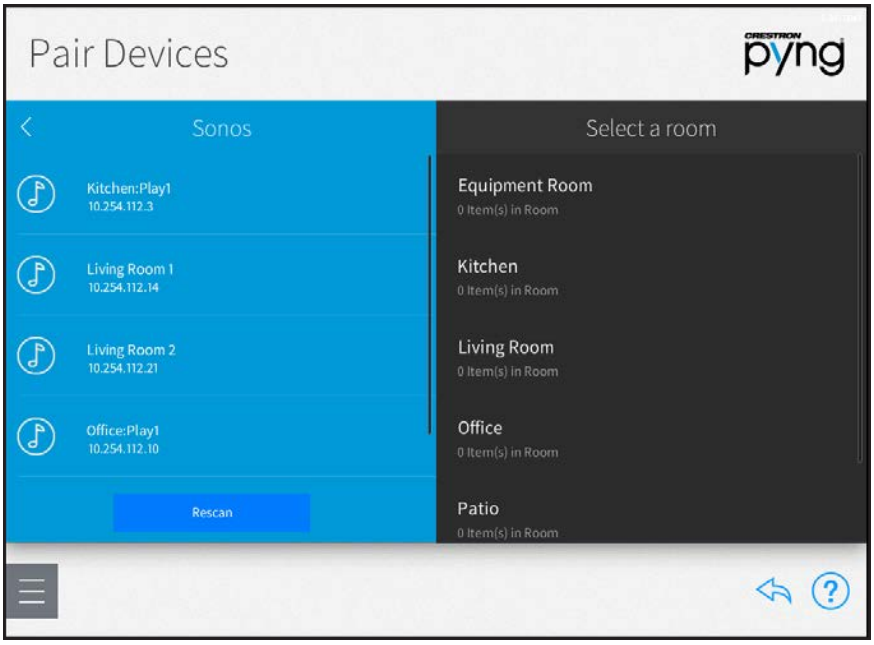
When a Sonos device from a different Sonos household is added to the same network, the Sonos app does not display the Sonos device in the device list until it is added using the appropriate procedure (**Manage** > **Add a player or sub**). To display devices from another household in the Sonos app, select **Help** > **Reset Controller**. Doing so will reset the household for the Sonos app and allows for a different household to be assigned.

The Crestron Pyng system allows only Sonos devices that belong to the same household to be added to the system. If no Sonos devices have been added to the system, all discovered Sonos devices are listed in the unassigned devices list, regardless of their configured Sonos household.

Once the first Sonos device is assigned to the Crestron Pyng system, the unassigned devices list is updated to display warning signs for all devices that are not part of the same Sonos household. These devices may not be added to the system unless they are added to the Sonos household that is currently associated with the system.

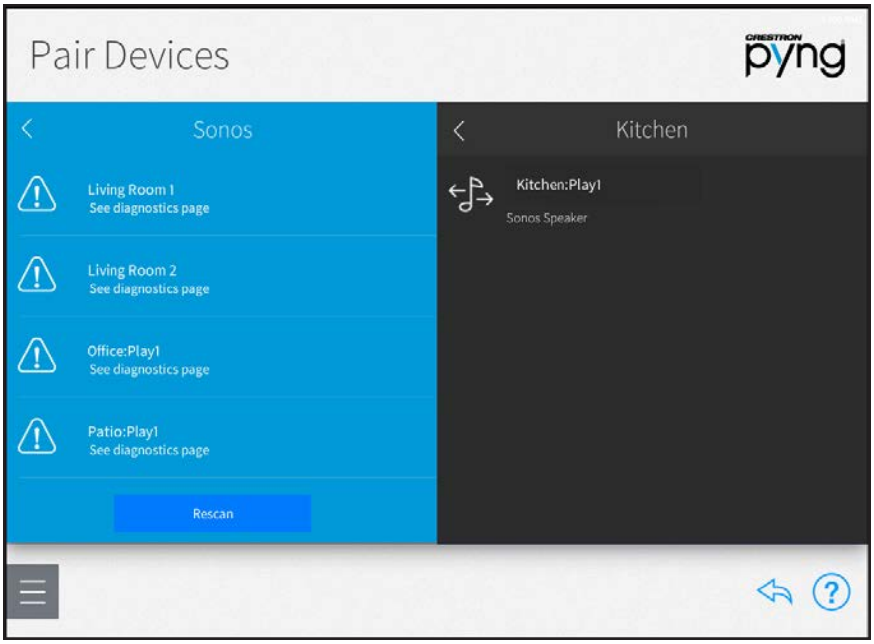
In the image on the following page, the "Kitchen:Play:1" device is assigned to a different Sonos household than the other devices that are shown.

Pair Devices Screen - Sonos (Devices from Multiple Households Shown)



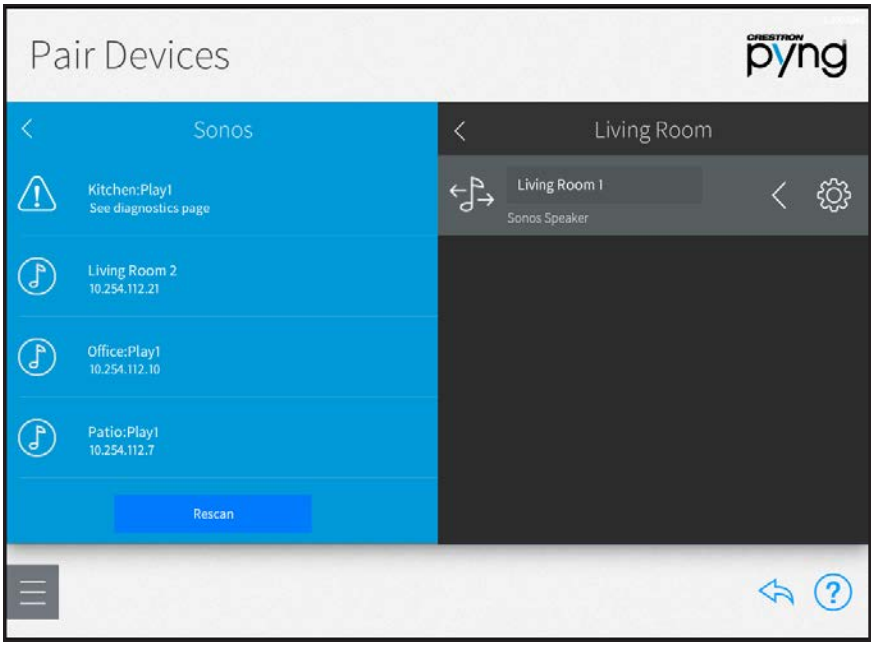
If the "Kitchen:Play:1" device is added to a room within the Crestron Pyng system, the devices from the other Sonos household may no longer be added.

Pair Devices Screen - Sonos (Kitchen:Play:1 Added)



If the "Living Room:Play:1" device is added to a room within the Crestron Pyng system, the "KitchenPlay1" device from the other Sonos household may no longer be added.

Pair Devices Screen - Sonos (Living Room:Play:1 Added)



Sonos Troubleshooting

The following sections describe troubleshooting procedures for some of the common issues that may occur when adding Sonos devices to the Crestron Pyng system.

Multiple Sonos Households Found

This issue occurs when multiple Sonos households are discovered by the Crestron Pyng system.

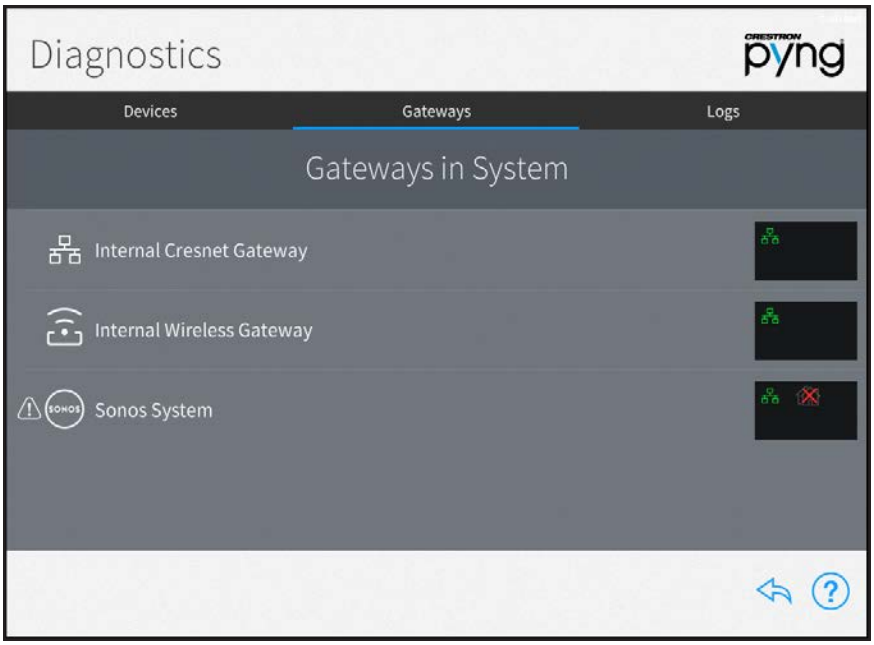
Issue(s)

- Not all discovered Sonos devices may be added to the Crestron Pyng system.
- A Sonos device is reporting as offline after it is moved to a different Sonos household.

Explanation

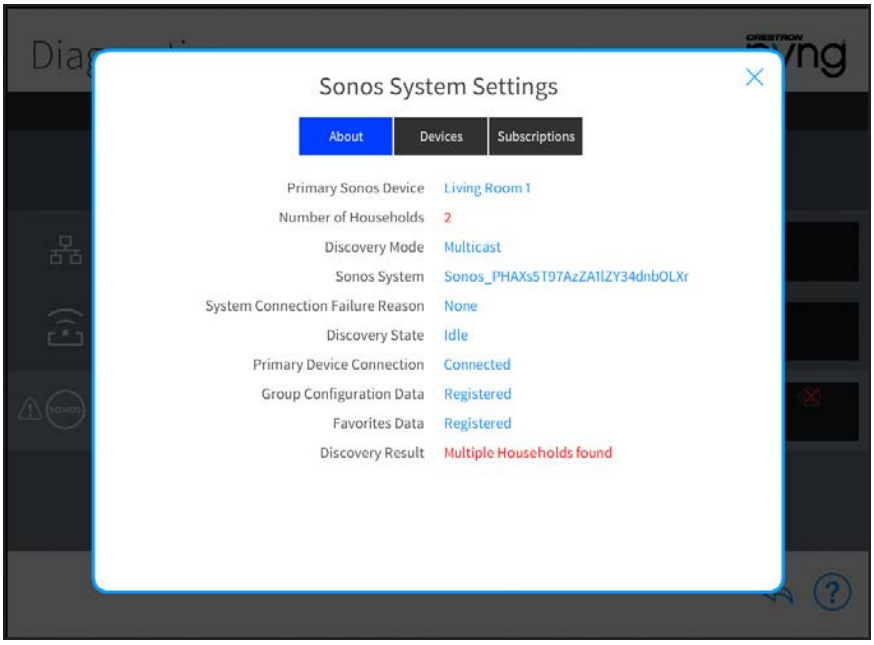
Devices from different Sonos households have been discovered on the network. The Crestron Pyng system provides a notification of this issue on the **Diagnostics** screen.

Diagnostics Screen - Multiple Sonos Households Found



Tap the gear icon next to the Sonos System gateway to view the **Sonos System Settings** page with the **About** tab open by default. A "Multiple Households found" status is indicated for **Discovery Result**.

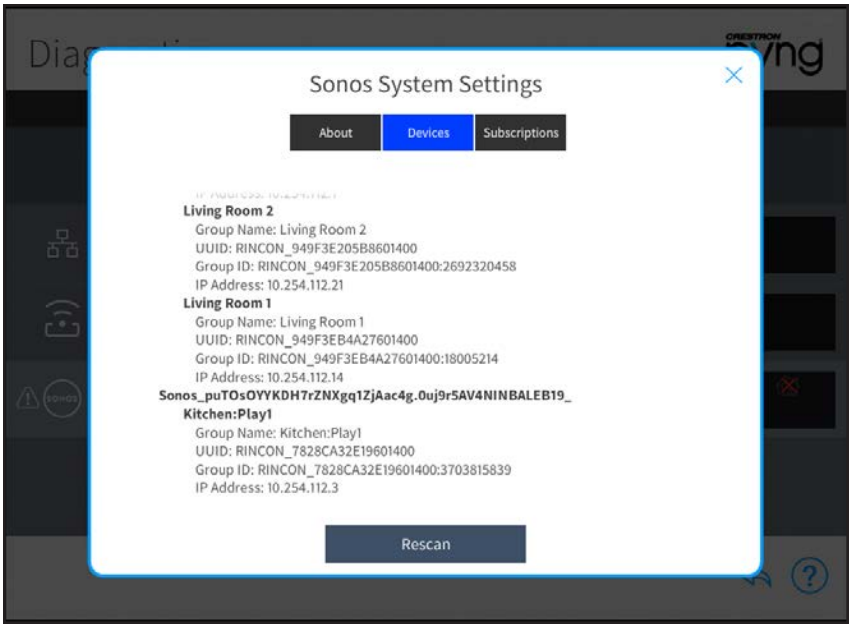
Sonos System Settings Screen - Multiple Sonos Households Found



Solution

1. Tap the **Devices** tab on the **Sonos System Settings** page.
2. Scroll through the list of devices to determine which devices belong to different Sonos households.

   Sonos System Settings Screen - Devices Tab

3. Reconfigure devices in the Sonos app so that they are added to the Sonos household that is assigned to the Crestron Pyng system.

Desired Household Not Found

This issue occurs when the desired Sonos household cannot be discovered by the Crestron Pyng system.

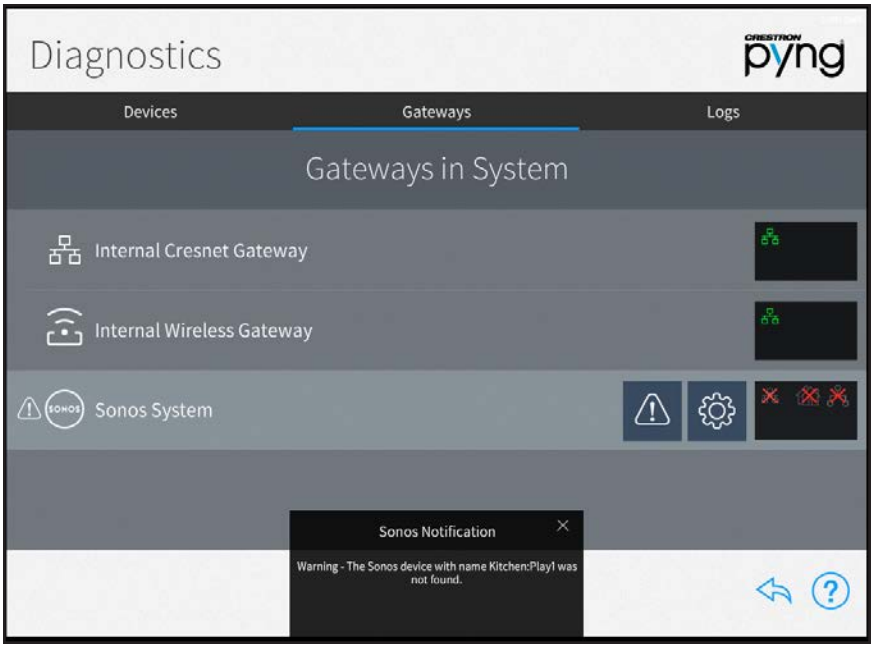
Issue(s)

- The Sonos discovery scan found Sonos devices, but all Sonos devices in the Crestron Pyng system report as offline.
- All Sonos devices in the Sonos household were reset to factory default settings.

Explanation

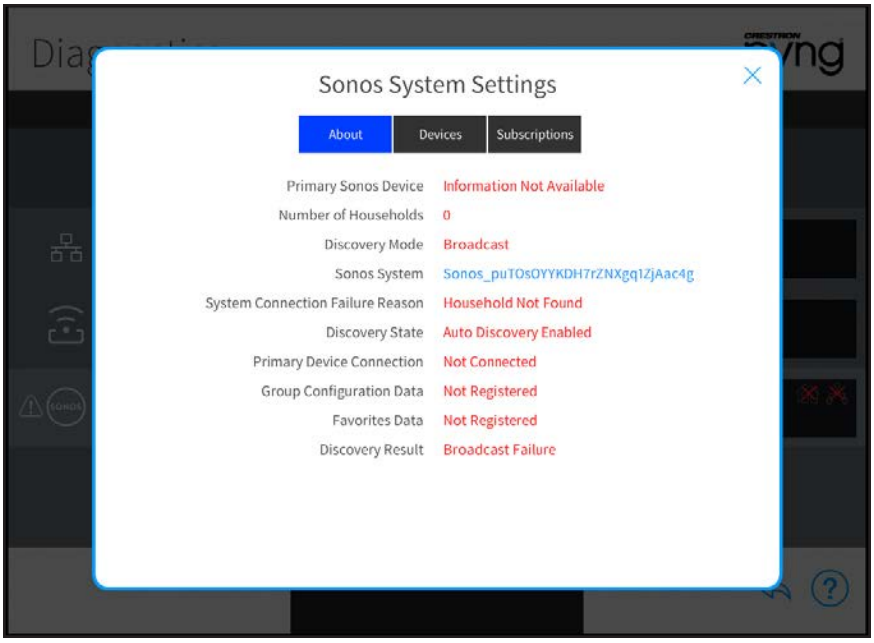
When the first Sonos device is added to the Crestron Pyng system, the Sonos household that the device belongs to is saved in the system configuration files. The Sonos System in Crestron Pyng reports as online only when a connection is established with one of the devices that is part of the saved Sonos household. The Crestron Pyng system provides a notification of this issue on the **Diagnostics** screen.

Diagnostics Screen - Desired Household Not Found



Tap the gear icon next to the Sonos System gateway to view the **Sonos System Settings** page with the **About** tab open by default. A "Household Not Found" status is indicated for **Discovery State**.

Sonos System Settings Screen - Multiple Sonos Households Found



Solution

1. Open the Sonos app.
2. To verify that the devices that are assigned in the Crestron Pyng system are online, test to see if the devices can be controlled via the app.

   NOTE: Always close the Sonos app before verifying that a Sonos device is online.

3. If the device can be controlled, start a Sonos discovery scan on the **Pair Devices** screen to discover the device.

No Devices Found

This issue occurs when no Sonos devices are discovered by the Crestron Pyng system.

Issue(s)

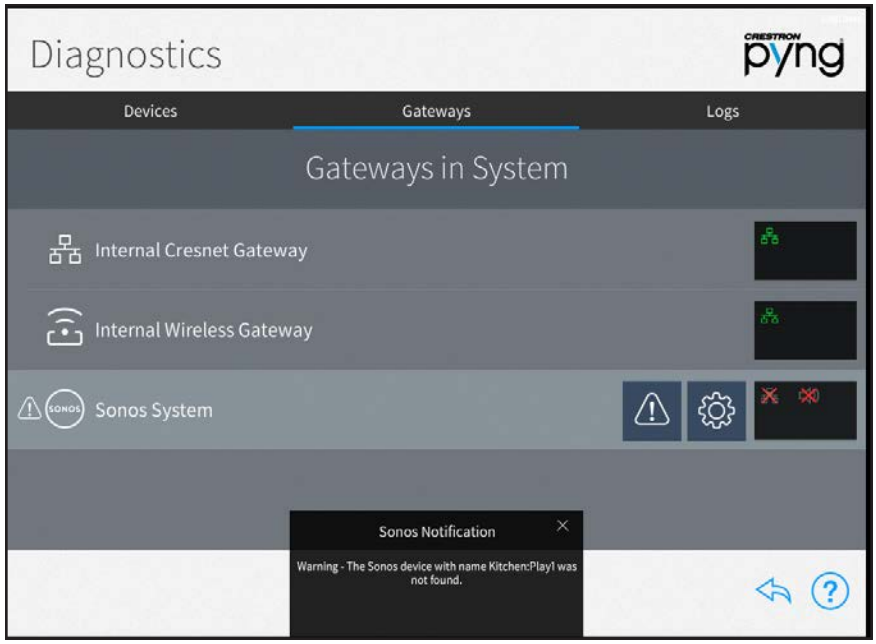
No Sonos devices were found during the Sonos discovery scan.

Explanation

When a Sonos discovery is initiated, a two-stage discovery process begins. In the first stage, a multicast message is sent out on the network. The Crestron Pyng system gives Sonos devices 30 seconds to respond. If at least one device responds during this interval, discovery is stopped. On the **Sonos System Settings** screen, a "Multicast Success" message is displayed.

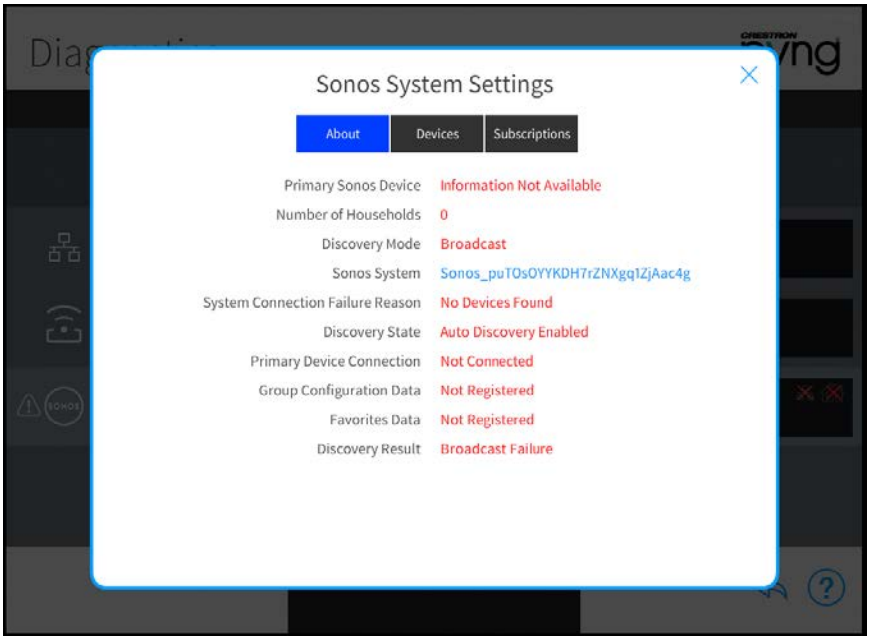
If no devices are discovered during the first stage, a second multicast message is sent out on the network. If no Sonos devices respond within 30 seconds, a "No Devices Found" error is raised. The Crestron Pyng system provides a notification of this issue on the **Diagnostics** screen.

Diagnostics Screen - No Devices Found



Tap the gear icon next to the **Sonos System** gateway to view the **Sonos System Settings** page with the **About** tab open by default. A "Household Not Found" status is indicated for **System Connection Failure Reason**.

Sonos System Settings Screen - No Devices Found



Solution

1. Connect a PC that is wired to the same network switch as the CP4-R.
2. Open the Sonos app on the PC.
3. Verify that the Sonos devices are listed in the Sonos app.
4. If no devices are listed, the Sonos household must be reconfigured until the Sonos devices are discovered. For more information, refer to the Sonos support pages at www.sonos.com/support.

No Online Devices Found

This issue occurs when the discovered Sonos devices do not report as online.

Issue(s)

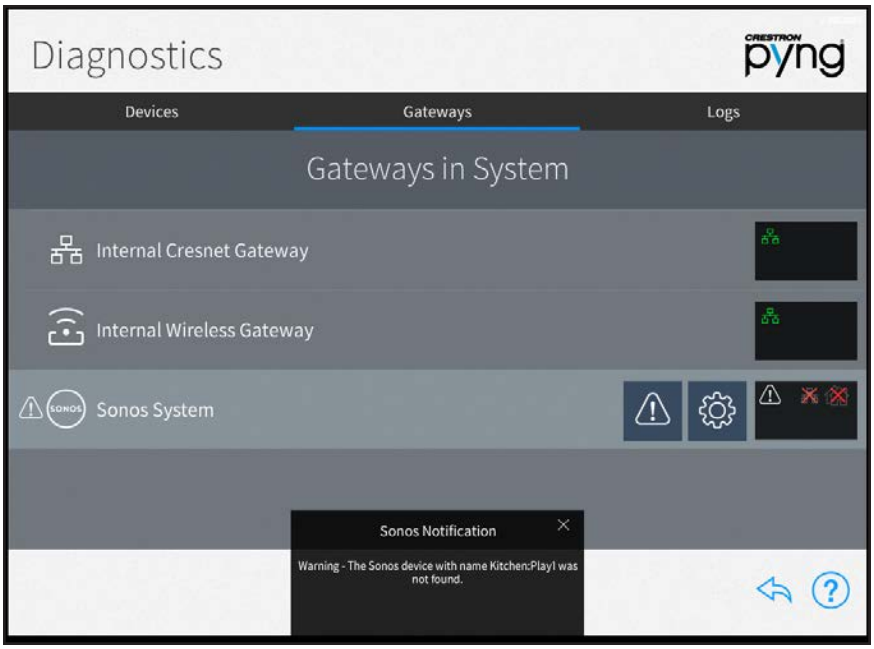
The Crestron Pyng system was able to discover Sonos devices but is unable connect to any of the devices for setup.

Explanation

After a successful Sonos discovery scan, the Crestron Pyng system selects one of the Sonos devices as the primary device. The system then connects to the device and subscribes for the Favorites event (used to retrieve and update the Favorites list) and the Group Configuration event (used to retrieve and update the group and player configuration).

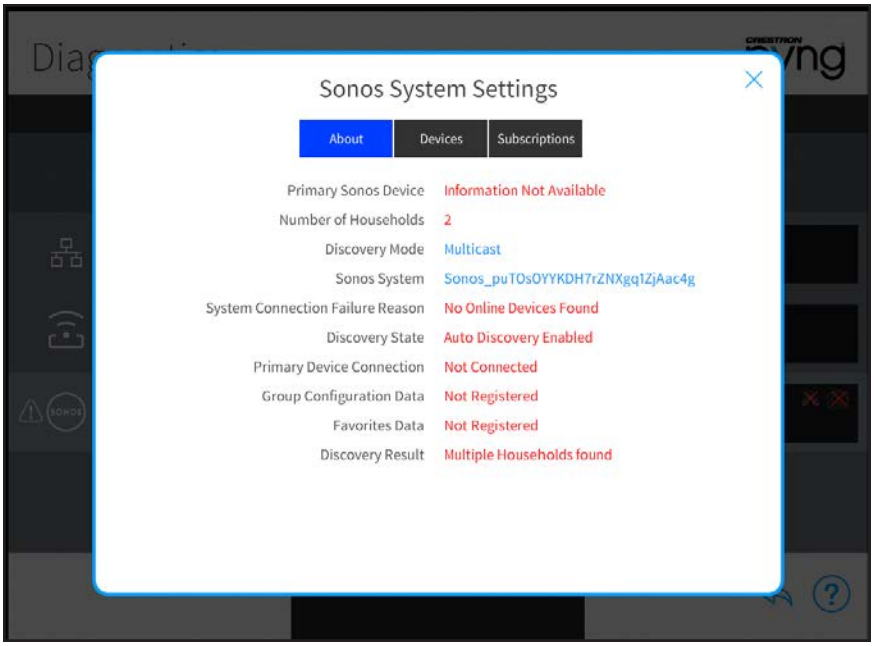
If one of these three processes fails, the Crestron Pyng system assumes that the device is offline and moves to the next Sonos device that was discovered. If one of these three processes fails for all discovered Sonos devices, the Sonos system cannot be created, and a "No Online Devices Found" error is raised. The Crestron Pyng system provides a notification of this issue on the **Diagnostics** screen.

Diagnostics Screen - No Online Devices Found



Tap the gear icon next to the Sonos System gateway to view the **Sonos System Settings** page with the **About** tab open by default. A "No Online Devices Found" status is indicated for **System Connection Failure Reason**.

Sonos System Settings Screen - No Devices Found



Solution

Depending on the issue, multiple solutions may be attempted:

- In the Sonos app, ungroup all devices, and then start a new Sonos discovery scan.
- Remove all Sonos devices in the Crestron Pyng system, and then add one new device to the system.
- For a "Favorites Event Subscription Timeout" or "Favorites Event Subscription Failed" message, select the **Subscriptions** tab in the **Sonos System Settings** page, and then press the **Refresh** button for the Favorites event.
- For a "Group Configuration Event Subscription Timeout" or "Group Configuration Event Subscription Failed" message, select the **Subscriptions** tab in the **Sonos System Settings** page, and then press the **Refresh** button for the Group Configuration event.

If the above solutions do not fix the issue:

- Power cycle the Sonos devices, and wait until they are discovered in the Sonos app.

  NOTE: Close the Sonos app after powering down a Sonos device.

- Power cycle the CP4-R.

Speaker Pairs

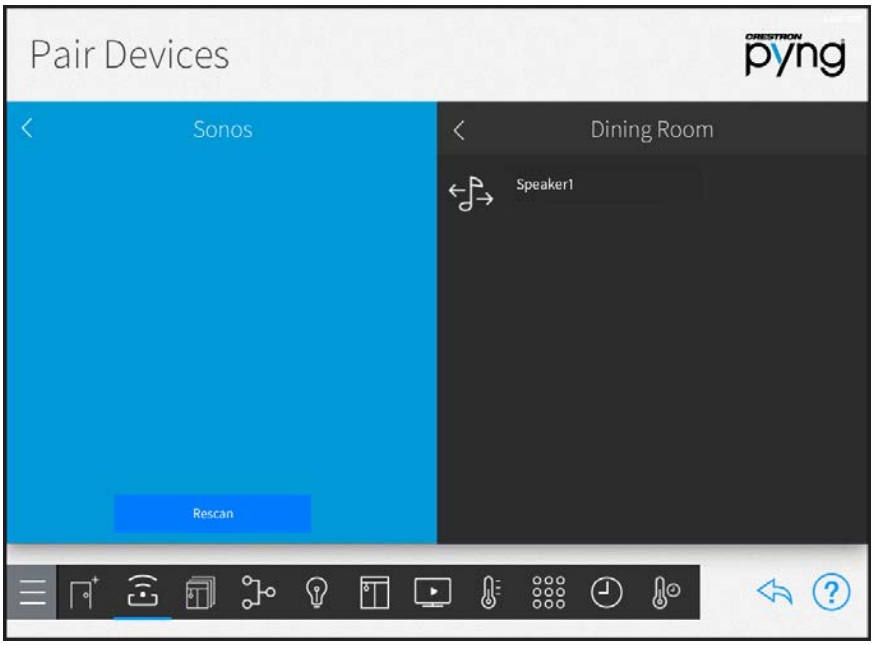
In the Sonos app, it is possible to pair two PLAY:1, PLAY:3, PLAY:5, or CONNECT:AMP speaker devices. When two of these speakers are paired, both speakers act as a single Sonos device in the Sonos app.

When a speaker pair is created in the Sonos app, the user is asked to assign one of the paired speakers as the left speaker. The speaker assigned as the left speaker becomes the master, and, from that point forward, is used to represent both speakers in the pair.

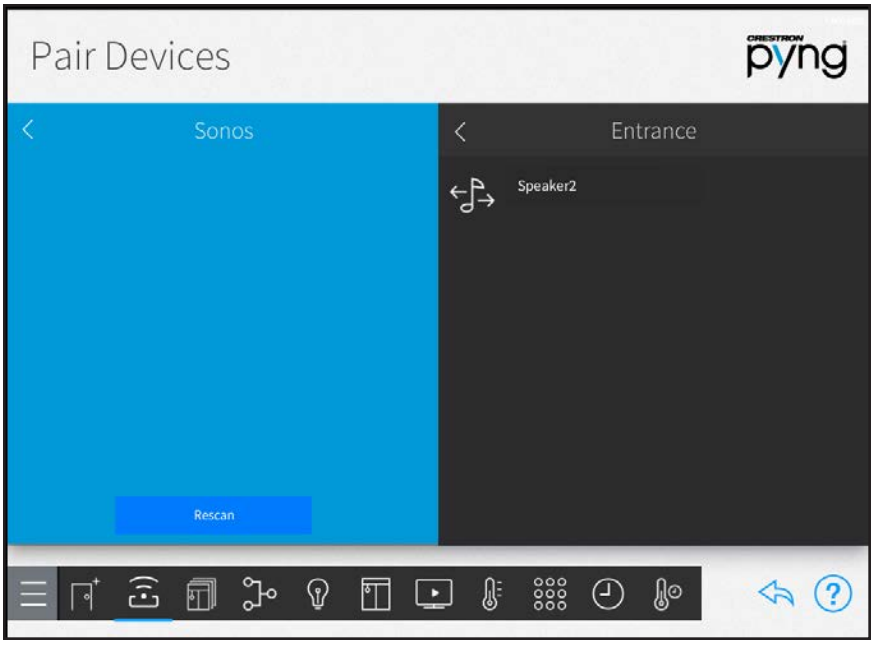
The speaker pair is named after the speaker that was used to start the speaker pair configuration. If this speaker is not chosen as the left (master) speaker, the left speaker is renamed automatically.

In the following images, "Speaker1" in the Dining Room and "Speaker2" in the Entrance will be used to create a speaker pair.

Pair Devices Screen - Sonos (Speaker1)



Pair Devices Screen - Sonos (Speaker2)

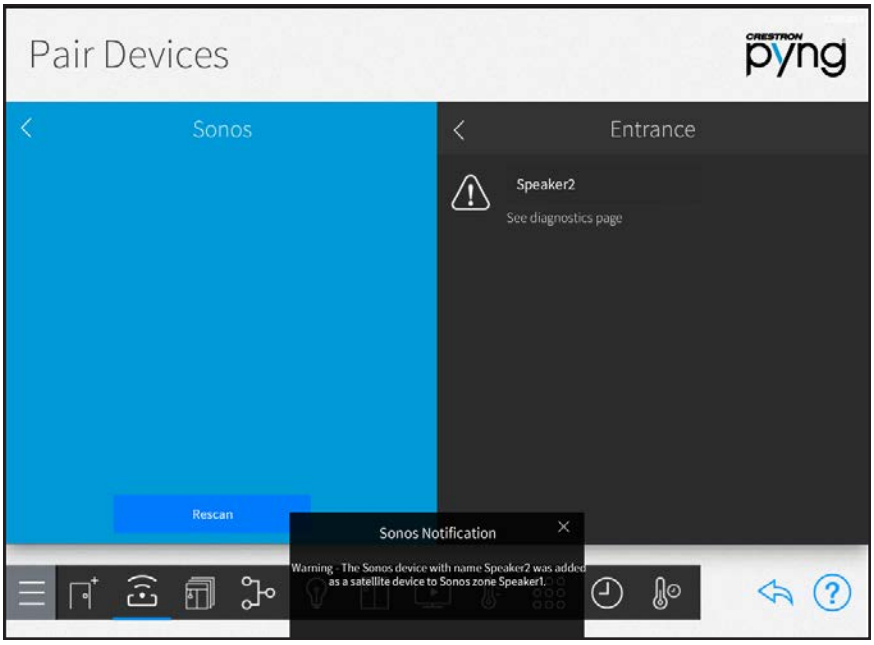


To select Speaker1 as the left (master) speaker:

1. Open the Sonos app.
2. Select **Speaker1**, and then select **Settings** > **Create Speaker Pair**.
3. Create a pair between Speaker1 and Speaker2 by following the in-app instructions.
4. Assign **Speaker1** as the left speaker.

Speaker2 is hidden, and the resulting speaker pair is named Speaker1. The Crestron Pyng system will be able to discover only Speaker1. If Speaker2 was assigned in the Crestron Pyng system, it will report as offline, and a pop-up dialog is displayed stating that Speaker2 was added as a satellite device to Speaker1.

Pair Devices Screen - Sonos (Speaker2 Offline)

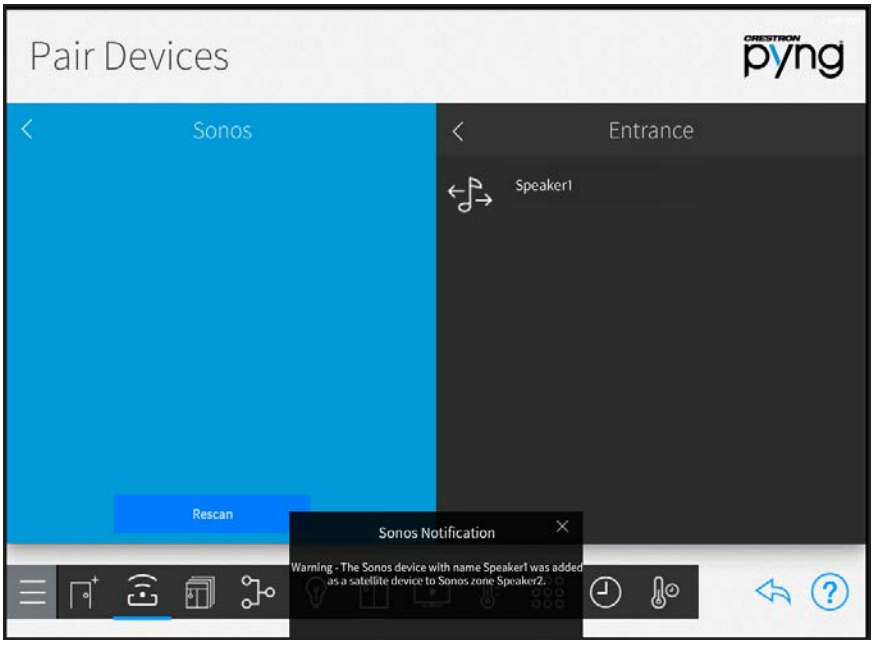


To select Speaker2 as the left (master) speaker:

1. Open the Sonos app.
2. Select **Speaker1**, and then select **Settings** > **Create Speaker Pair**.
3. Create a pair between Speaker1 and Speaker2 by following the in-app instructions.
4. Assign **Speaker2** as the left speaker.

Speaker1 is hidden, and the resulting speaker pair is named Speaker1. The Crestron Pyng system will be able to discover only Speaker2 (renamed to Speaker1). If Speaker1 was assigned in the Crestron Pyng system, it will report as offline, and a pop-up dialog is displayed stating that Speaker1 was added as a satellite device to Speaker2.

Pair Devices Screen - Sonos (Speaker1 Pair)



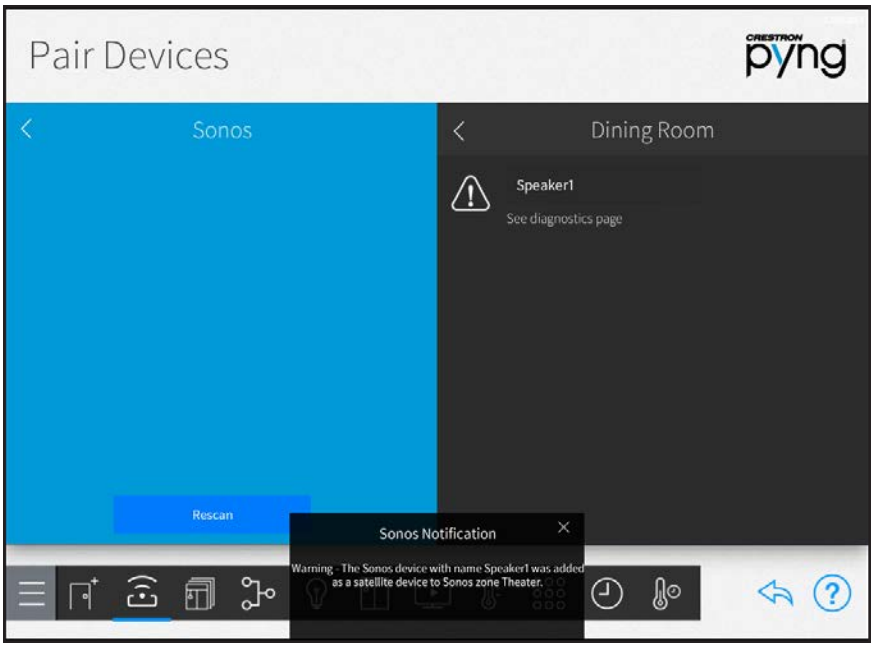
Surround Speakers

In the Sonos app, it is possible to assign two PLAY:1, PLAY:3, or PLAY:5 speaker devices as surround speakers for a Beam, PLAYBAR, or PLAYBASE device.

The two speakers that are selected as surround speakers are hidden in the Sonos app and may no longer be controlled.

If any of the surround speakers were assigned in the Crestron Pyng system, and a pop-up dialog is displayed stating the Sonos device was added as a satellite device to the Beam, PLAYBAR, or PLAYBASE device.

Pair Devices Screen - Sonos (Speaker1 Offline)



Line-Out Configuration

For a Sonos CONNECT device, the line-out settings may be set as **Variable** or **Fixed**:

- **Variable:** The volume level of the line-out output may be controlled.
- **Fixed:** The volume level of the line-out output is set to 100% and may not be controlled.

Depending on the device type that was chosen when assigning a Sonos device in the Crestron Pyng system, observe the following points:

- Source
  - A source device type is used for a CONNECT device that is connected as an input to an audio receiver.
  - The line-out setting for source devices should always be set to **Fixed**, as the audio receiver is used for volume control.

    - A notification is displayed if the line-out setting for a CONNECT device with a source device type was set to **Variable**.
- Speaker
    - A speaker device type is added to a room in the Crestron Pyng system as an audio endpoint.
    - The line-out setting for speaker devices should always be set to **Variable**, as the Sonos device is used for volume control.
    - A notification is displayed if the line-out setting for a CONNECT device with a speaker device type was set to **Fixed**.

Best Practices

Refer to the following best practices when integrating Sonos devices with the Crestron Pyng system.

- When adding a Sonos device to an existing Sonos household, the device must be reset to factory settings to ensure that it begins using the system ID assigned to the existing Sonos system.
- Multiple Sonos households cannot be placed on the same network. Each Sonos household has a unique system ID, and Crestron Pyng only allows Sonos devices to be assigned that are part of the Sonos household stored in the Crestron Pyng configuration files.
- Set up the Sonos device(s) through the Sonos app before attempting a discovery with Crestron Pyng. If the Sonos device is not assigned to a room in the Sonos app, it cannot be discovered by Crestron Pyng.
- To rename a Sonos device in Crestron Pyng, change the name of the Sonos room that the device is assigned to using the Sonos app. The device name automatically updates in the Crestron Pyng system.
- Do not group Sonos devices together in the Sonos app, as this can lead to Crestron Pyng only being able to control one Sonos device instead of all of them individually.
- Crestron Pyng uses multicast to discover Sonos devices. Some network switches do not route these discovery packets correctly, and, as a result, Crestron Pyng does not discover any Sonos devices.
- The Autoplay option must be turned on in the Sonos app when adding a PLAY:5, CONNECT:AMP, Beam, PLAYBAR, or PLAYBASE.

Appendix B: Restore a CP4-R to Factory Settings

If the CP4-R is no longer communicating with Crestron Toolbox via USB or Ethernet, use the following procedure to restore the device to its factory default settings.

CAUTION: All configured settings and device pairings are lost following a factory restore.

1. Use a small, pointed object (such as the tip of a pen) to press and release the **HW-R** button on the front of the CP4-R.
2. Use a small, pointed object (such as the tip of a pen) to quickly press the **SW-R** button on the front of the CP4-R five times, with under a 1-second gap between each press.
3. Wait up to 15 minutes for the self-recovery process to complete.
4. Attempt to make a connection to Crestron Toolbox via USB. (USB is the only valid connection type.)
5. Once the device has been discovered, use the Text Console tool in Crestron Toolbox to check for a prompt. The standard device prompt should display.

   NOTE: Repeat steps 1–5 if the first attempt does not correct the issue. If the CP4-R is still unresponsive, contact Technical Support for assistance.

6. The restore process may enable SSL (Secure Sockets Layer) on the CP4-R. After communication returns following the restore, issue the ssl off command using the Text Console tool to disable SSL.

   NOTE: If a connection cannot be established using the Text Console tool, change the connection type from **Auto Detect** to **SSL** in the **Edit Connections** dialogue.

7. Reload the Crestron Pyng firmware via the Package Update Tool in Crestron Toolbox to ensure that any touch screen projects are also reloaded to the CP4-R.

If the CP4-R is still communicating with Crestron Toolbox via USB or Ethernet, or if the `initialize` command was issued to the CP4-R as part of a troubleshooting procedure, issue the restore command using the Text Console tool, and then follow the post-restore process (steps 6–7 in the above procedure).

Appendix C: Create and Upload a Custom Device Driver

Custom device drivers expand the functionality of the Crestron Pyng system by allowing additional third party devices to be paired with the system. Use the Device Learner tool in Crestron Toolbox to create driver files that may be loaded directly into the CP4-R. Device controls are mapped from the driver file to buttons on Crestron remote controls and user interface control pages.

Device Learner Tool - Remote Buttons Tab

NOTE: For more information on using the Device Learner tool to create device drivers, refer to the embedded Crestron Toolbox help file.

Refer to the following tables for each supported device class when mapping buttons to device controls.

Each button mapping table (except for remote controls) includes the following information:

- **Button:** A button used by the device class that may be mapped to a command
- **Pyng Command:** The command that is sent from the Crestron Pyng system to the device when the button is activated
- **Driver Command:** The command that is sent from the device driver to the device when the button is activated

- **Standard Command:** The standard command that is associated with the button in the Device Learner tool

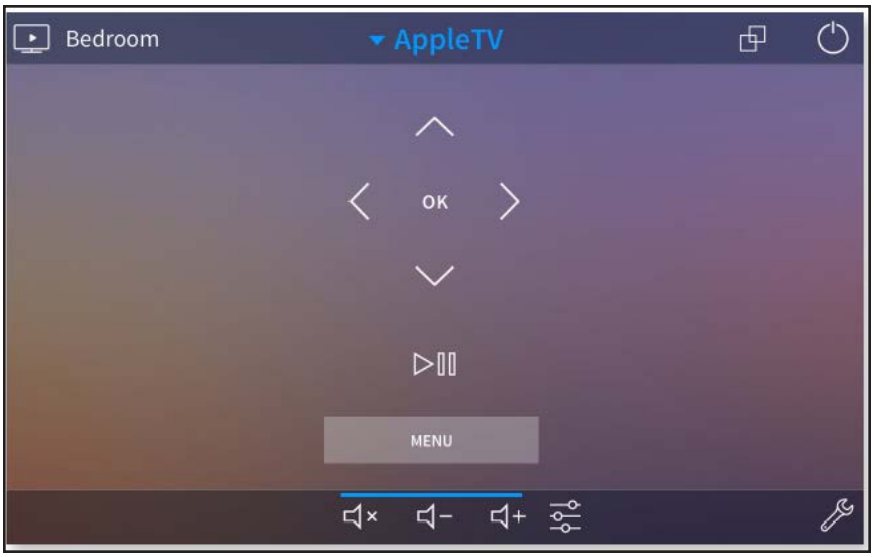
A standard command table is also provided for each device class that includes the following information:

- **Standard Command:** The name of the standard command in the Device Learner tool
- **Aliased Command List:** A list of aliased commands for the standard command

  Aliasing is used when a command does not exist for a certain device. In this scenario, the driver moves to the next command in the list, and repeats the process for each subsequent command that does not exist.
- **Required/Optional:** Indicates whether the command is required or optional (**Required** commands must be included to build the driver package file.)

Apple TV Digital Media Extender Button Mapping

Apple TV® User Interface Buttons



Apple TV Button Mapping

Button	Pyng Command	Driver Command	Standard Command
▷II	FirstPlayPause[1]	Not supported	Play_Pause
MENU	Menu	Menu	Menu
^	Up	Up	Up_Arrow
>	Right	Right	Right_Arrow
v	Down	Down	Dn_Arrow
<	Left	Left	Left_Arrow
OK	Select	Select	Select

[1] If this command does not exist for the device, this button is mapped to the **Play** command instead.

Apple TV Standard Commands

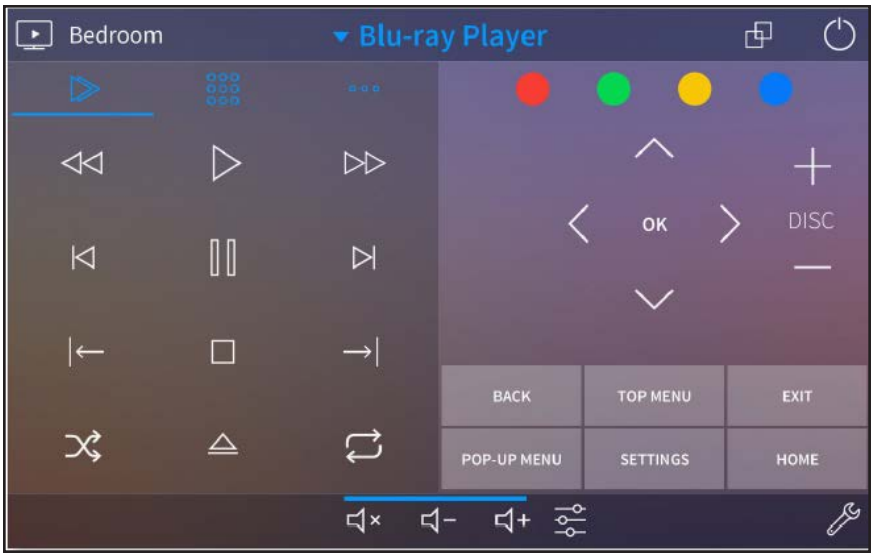
Standard Command	Aliased Command List	Required/Optional
Play_Pause		**Required**
Dn_Arrow	Down, DN, Dw_Arrow, Navigation_Down, Menu_ Down, Cursor_Down, v, -, tilt_down, tilt_dn, tilt-down, tilt-dn, tiltdown	**Required**
Left_Arrow	Left, Navigation_Left, Menu_Left, Cursor_Left, <, Track-, pan_left, pan_lt, l, LT, panleft	**Required**
Right_Arrow	Right, Navigation_Right, Menu_Right, Menu_RT, Cursor_Right, >, pan_right, pan_rt, pan-right, pan-rt, rt,	**Required**

Apple TV Standard Commands

Standard Command	Aliased Command List	Required/Optional
	panright	
Up_Arrow	Up, Navigation_Up, Menu_Up, Cursor_Up, ^, +, tilt_up, tilt-up	**Required**
Select	OK, Navigation_Select, Select	**Required**
Menu	Root_Menu, Disc_Menu, DiscMenu/List, DVD_Menu, DVD-Menu, DVDMenu	**Required**

Blu-ray Disc Player Device Button Mapping

Blu-ray Disc Player User Interface Buttons



Blu-ray Disc Player Button Mapping

Blu-ray Disc Player Button Mapping

Button	Pyng Command	Driver Command	Standard Command
	Rewind	ReverseScan	Rscan
	Play	Play	Play
	FastForward	ForwardScan	Fscan
	PreviousTrack	ReverseSkip	Track-
	Pause	Pause	Pause
	NextTrack	ForwardSkip	Track+
	Not supported	Not supported	R_Step
	Stop	Stop	Stop
	Not supported	Not supported	F_Step
	ToggleShuffle	Not supported	Shuffle
	Eject	Eject	Eject

Blu-ray Disc Player Button Mapping

Button	Pyng Command	Driver Command	Standard Command
	ToggleRepeat	Repeat	Repeat_1
BACK	Back	Back	Back
TOP MENU	TopMenu	TopMenu	TopMenu
EXIT	Exit	Exit	Exit
POP-UP MENU	PopUpMenu	PopUpMenu	PopUpMenu
SETTINGS	Settings	Options	Options
HOME	Home	Home	Home
	NextDisc	Not supported	Disc+
	PreviousDisc	Not supported	Disc-
	Up	Up	Up_Arrow
	Right	Right	Right_Arrow
	Down	Down	Dn_Arrow
	Left	Left	Left_arrow
	Select	Select	Select
	Red	Red	Red
	Green	Green	Green
	Yellow	Yellow	Yellow
	Blue	Blue	Blue

Blu-ray Disc Player User Interface Buttons - Numbers

Blu-ray Disc Player Button Mapping - Numbers

Button	Pyng Command	Driver Command	Standard Command
1	Digit1	Digit1	1
2	Digit2	Digit2	2
3	Digit3	Digit3	3
4	Digit4	Digit4	4
5	Digit5	Digit5	5
6	Digit6	Digit6	6
7	Digit7	Digit7	7
8	Digit8	Digit8	8
9	Digit9	Digit9	9
0	Digit0	Digit0	0
ENTER	Enter	Enter	Enter
CLEAR	Clear	Not supported	Not supported

Blu-ray Disc Player Standard Commands

Standard Command	Aliased Command List	Required /Optional
Rscan	Rscan, Rew, Rewind, Review, Reverse_Scan, Rewind_Scan, Previous_ Scan, Prev_Scan, R_Srch, Rsrch, Scan-, <<, &Rscan, A_Rew, ReverseScan	**Required**
Play	Play_Pause, Play/Pause, A_PLAY, >, PLAY/SLOW, VOD-PLAY, PLAY_MODE	**Required**
Fscan	FFWD, F_SCAN, SCAN, FF, >>, F_Srch, FSRCH, FFW, Forward, Fast_Forward, SCAN+, SEARCH, A_FFWD, SEARCH>>, SEARCH_ MODE, &Fscan	**Required**

Blu-ray Disc Player Standard Commands

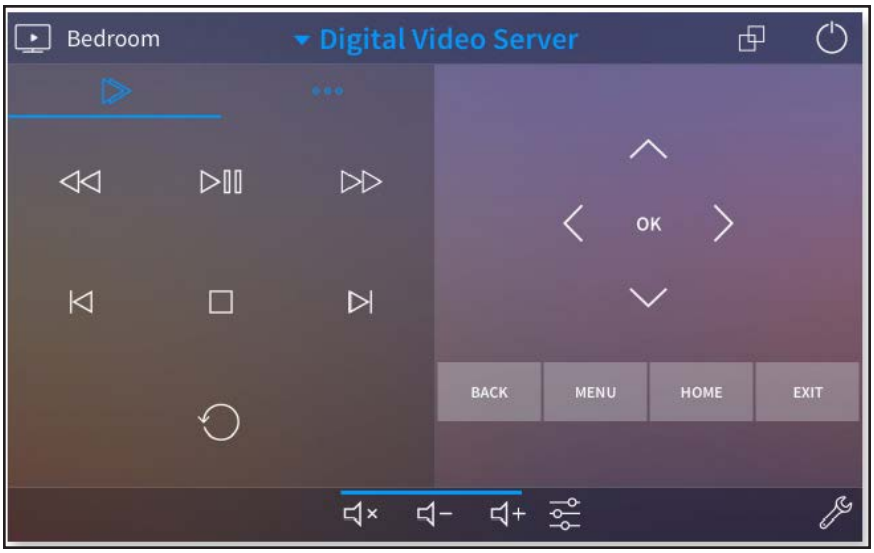
Standard Command	Aliased Command List	Required /Optional
Pause	A_PAUSE, Pse, PAUSE_STEP, VOD-PAUSE, Play_Pause, Play/Pause	**Required**
Dn_Arrow	Down, DN, Dw_Arrow, Navigation_Down, Menu_Down, Cursor_ Down, v, -, tilt_down, tilt_dn, tilt-down, tilt-dn, tiltdown	**Required**
Left_Arrow	Left, Navigation_Left, Menu_Left, Cursor_Left, <, Track-, pan_left, pan_lt, l, LT, panleft	**Required**
Right_ Arrow	Right, Navigation_Right, Menu_Right, Menu_RT, Cursor_Right, >, pan_ right, pan_rt, pan-right, pan-rt, rt, panright	**Required**
Up_Arrow	Up, Navigation_Up, Menu_Up, Cursor_Up, ^, +, tilt_up, tilt-up	**Required**
Select	OK, Navigation_Select, Select	**Required**
TopMenu	Top, Top_Menu, Tmenu	**Required**
Exit	ESC, CANCEL/OSD, CANCEL, Navigation_MenuBack_F11	**Required**
Track+	Track/Chapter_+, Advance, Jump, Skip_Fwd, Chapter/Track_Fwd, Next, F_Srch/Skip, FF, NextTrack, TRK+, Track_+, NEXT_TRK, F_TRK, F_TRACK, NEXT_SCENE, SCENE+, >>|, F_Scene, FTRK, >>	**Required**
Track-	Track/Chapter_-, Chapter/Track_Rev, Skip_Rev, Previous, PreviousTrack, TRK-, Track_-, PREV_TRK, R_TRK, R_TRACK, PREV_ SCENE, SCENE-, |<<, R_Scene	**Required**
Back		**Required**
Disc+	Disc_+, Disc_Skip+, NEXT_DISC_ F_DISC	Optional
Disc-	Disc_-, Disc_Skip-, PREV_DISC, R_DISC	Optional
PopUpMenu	PopUp_Menu	Optional
0	Disc_Key_0, Direct_Channel_Entry_0, 0_Space, Number_0_or_ Number_10, Keyboard_0, NUM_0, kpd_0, kpd-0, key_0, key-0, Dial_ 0, Dial0, Key0	Optional
1	Disc_Key_1, Direct_Channel_Entry_1, Number_1, Keyboard_1, NUM_1, kpd_1, kpd-1, key_1, key-1, Dial_1, Dial1, Key1	Optional
2	Disc_Key_2, Direct_Channel_Entry_2, 2_ABC, Number_2, Keyboard_ 2, NUM_2, kpd_2, kpd-2, key_2, key-2, Dial_2, Dial2, Key2	Optional
3	Disc_Key_3, Direct_Channel_Entry_3, 3_DEF, Number_3, Keyboard_ 3, NUM_3, kpd_3, kpd-3, key_3, key-3, Dial_3, Dial3, Key3	Optional
4	Disc_Key_4, Direct_Channel_Entry_4, 4_GHI, Number_4, Keyboard_4, NUM_4, kpd_4, kpd-4, key_4, key-4, Dial_4, Dial4, Key4	Optional
5	Disc_Key_5, Direct_Channel_Entry_5, 5_JKL, Number_5, Keyboard_5, NUM_5, kpd_5, kpd-5, key_5, key-5, Dial_5, Dial5, Key5	Optional
6	Disc_Key_6, Direct_Channel_Entry_6, 6_MNO, Number_6, Keyboard_ 6, NUM_6, kpd_6, kpd-6, key_6, key-6, Dial_6, Dial6, Key6	Optional
7	Disc_Key_7, Direct_Channel_Entry_7, 7_PQRS, Number_7, Keyboard_ 7, NUM_7, kpd_7, kpd-7, key_7, key-7, Dial_7, Dial7, Key7	Optional

Blu-ray Disc Player Standard Commands

Standard Command	Aliased Command List	Required /Optional
8	Disc_Key_8, Direct_Channel_Entry_8, 8_TUV, Number_8, Keyboard_8, NUM_8, kpd_8, kpd-8, key_8, key-8, Dial_8, Dial8, Key8	Optional
9	Disc_Key_9, Direct_Channel_Entry_9, 9_WXYZ, Number_9, Keyboard_9, NUM_9, kpd_9, kpd-9, key_9, key-9, Dial_9, Dial9, Key9	Optional
Stop	A_STOP, [], VOD-STOP, Stop_Presenting, StopPresenting	Optional
F_Step	NEXT, NEXT_STEP, FORWARD, FWD, STEP, SLOW, ||>, STEP_FORWARD, FRAME_FORWARD, FRAME_+, FRAME+	Optional
R_Step	Prev, PREV_STEP, REVERSE, REV, STEP_BACK, STEP_<, <||, FRAME_BACK, FRAME_-, FRAME-	Optional
Replay	REPLAY_GUIDE, INSTANT_REPLAY, REPLAY/BACK, REPLAY_ZONES	Optional
Enter	#, Disc_Key, Enter, Direct_Channel, Enter, #_Enter, Partition_1_Keypad_Enter, Keyboard_Enter, ENT	Optional
Eject	OPEN, OPEN/CLOSE	Optional
Blue	F1_Blue	Optional
Green	F3_Green	Optional
Red	F2_Red	Optional
Yellow	F4_Yellow	Optional
Options		Optional
Repeat_1	REPEAT, RPT, RPT_A, RPT_1, LOOP, A-B, AB	Optional
Shuffle		Optional

Digital Video Server Button Mapping

Digital Video Server User Interface Buttons



Digital Video Server Button Mapping

Button	Pyng Command	Driver Command	Standard Command
	Rewind	ReverseScan	Rscan
	FirstPlayPause[1]	Not supported	Play
	FastForward	ForwardScan	Fscan
	PreviousTrack	ReverseSkip	R_Step
	Pause	Pause	Pause
	NextTrack	ForwardSkip	F_Step
	Replay	Replay	Replay
HOME	Home	Home	Home
MENU	Menu	Menu	Menu
BACK	Back	Back	Back
EXIT	Exit	Exit	Exit
	Up	Up	Up_Arrow
	Right	Right	Right_Arrow
	Down	Down	Down_Arrow

Digital Video Server Button Mapping

Button	Pyng Command	Driver Command	Standard Command
	Left	Left	Left_Arrow
	Select	Select	Select

[1] If this command does not exist for the device, this button is mapped to the Play command instead.

Digital Video Server Standard Commands

Standard Command	Aliased Command List	Required/Optional
Rscan	Rscan, Rew, Rewind, Review, Reverse_Scan, Rewind_Scan, Previous_Scan, Prev_Scan, R_Srch, Rsrch, Scan-, <<, &Rscan, A_Rew, ReverseScan	Required
Play_Pause	Play_Pause, Play/Pause, A_PLAY, >, PLAY/SLOW, VOD-PLAY, PLAY_MODE	Required
Fscan	FFWD, F_SCAN, SCAN, FF, >>, F_Srch, FSRCH, FFW, Forward, Fast_Forward, SCAN+, SEARCH, A_FFWD, SEARCH>>, SEARCH_MODE, &Fscan	Required
Pause	A_PAUSE, Pse, PAUSE_STEP, VOD-PAUSE, Play_Pause, Play/Pause	Required
Dn_Arrow	Down, DN, Dw_Arrow, Navigation_Down, Menu_Down, Cursor_Down, v, -, tilt_down, tilt_dn, tilt-down, tilt-dn, tiltdown	Required
Left_Arrow	Left, Navigation_Left, Menu_Left, Cursor_Left, <, Track-, pan_left, pan_lt, l, LT, panleft	Required
Right_Arrow	Right, Navigation_Right, Menu_Right, Menu_RT, Cursor_Right, >, pan_right, pan_rt, pan-right, pan-rt, rt, panright	Required
Up_Arrow	Up, Navigation_Up, Menu_Up, Cursor_Up, ^, +, tilt_up, tilt-up	Required
Select	OK, Navigation_Select, Select	Required
Menu	Root_Menu, Disc_Menu, DiscMenu/List, DVD_Menu, DVD-Menu, DVDMenu	Required
Back		Required
Stop	A_STOP, [], VOD-STOP, Stop_Presenting	Optional
F_Step	NEXT, NEXT_STEP, FORWARD, FWD, STEP, SLOW, ||>, STEP_FORWARD, FRAME_FORWARD, FRAME_+, FRAME+	Optional
R_Step	Prev, PREV_STEP, REVERSE, REV, STEP_BACK, STEP_<, <||, FRAME_BACK, FRAME_-, FRAME-	Optional
Replay	REPLAY_GUIDE, INSTANT_REPLAY, REPLAY/BACK, REPLAY_ZONES	Optional
Exit	ESC, CANCEL/OSD, CANCEL, Navigation_MenuBack_F11	Optional

DVR and AVR Button Mapping

DVR and AVR User Interface Buttons

DVR and AVR Button Mapping

Button	Pyng Command	Driver Command	Standard Command
	Rewind	ReverseScan	Rscan
	Play	Play	Play
	FastForward	ForwardScan	Fscan
	PreviousTrack	ReverseSkip	Track-
	Pause	Pause	Pause
	Stop	Stop	Stop
	Replay	Replay	Replay
	Record	Record	Record
	PageUp	PageUp	Page_Up
	PageDown	PageDown	Page_Down
	ChannelUp	ChannelUp	CH+

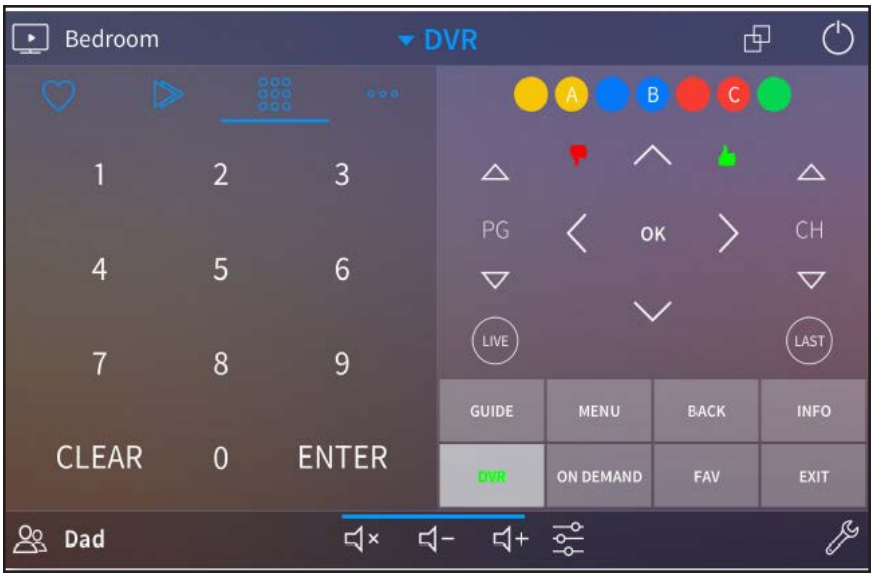
DVR and AVR Button Mapping

Button	Pyng Command	Driver Command	Standard Command
	ChannelDn	ChannelDn	CH-
GUIDE	Guide	Guide	Guide
MENU	Menu	Menu	Menu
BACK	Back	Back	Back
INFO	Info	Info	Info
ON DEMAND	OnDemand	Not supported	On_Demand
FAV	ToggleFavorite	Not supported	Favorite
EXIT	Exit	Exit	Exit
	Up	Up	Up_Arrow
	Right	Right	Right_Arrow
	Down	Down	Down_Arrow
	Left	Left	Left_Arrow
	Select	Select	Select
	Red	Red	Red
	Green	Green	Green
	Yellow	Yellow	Yellow
	Blue	Blue	Blue
	LetterA	A	A
	LetterB	B	B
	LetterC	C	C
	UserFeedbackNegative	ThumbsDown	Thumbs_Down
	UserFeedbackPositve	ThumbsUp	Thumbs_Up

DVR and AVR Button Mapping

Button	Pyng Command	Driver Command	Standard Command
	LastChannel	Last	Last
	Live	Live	Live

DVR and AVR User Interface Buttons - Numbers



DVR and AVR Button Mapping - Numbers

Button	Pyng Command	Driver Command	Standard Command
1	Digit1	Digit1	1
2	Digit2	Digit2	2
3	Digit3	Digit3	3
4	Digit4	Digit4	4
5	Digit5	Digit5	5
6	Digit6	Digit6	6
7	Digit7	Digit7	7
8	Digit8	Digit8	8
9	Digit9	Digit9	9
0	Digit0	Digit0	0
ENTER	Enter	Enter	Enter

DVR and AVR Standard Commands

Standard Command	Aliased Command List	Required/Optional
Rscan	Rscan, Rew, Rewind, Review, Reverse_Scan, Rewind_Scan, Previous_Scan, Prev_Scan, R_Srch, Rsrch, Scan-, <<, &Rscan, A_Rew, ReverseScan	Required
Play	Play_Pause, Play/Pause, A_PLAY, >, PLAY/SLOW, VOD-PLAY, PLAY_MODE	Required
Fscan	FFWD, F_SCAN, SCAN, FF, >>, F_Srch, FSRCH, FFW, Forward, Fast_Forward, SCAN+, SEARCH, A_FFWD, SEARCH>>, SEARCH_MODE, &Fscan	Required
Pause	A_PAUSE, Pse, PAUSE_STEP, VOD-PAUSE, Play_Pause, Play/Pause	Required
Dn_Arrow	Down, DN, Dw_Arrow, Navigation_Down, Menu_Down, Cursor_Down, v, -, tilt_down, tilt_dn, tilt-down, tilt-dn, tiltdown	Required
Left_Arrow	Left, Navigation_Left, Menu_Left, Cursor_Left, <, Track-, pan_left, pan_lt, l, LT, panleft	Required
Right_Arrow	Right, Navigation_Right, Menu_Right, Menu_RT, Cursor_Right, >, pan_right, pan_rt, pan-right, pan-rt, rt, panright	Required
Up_Arrow	Up, Navigation_Up, Menu_Up, Cursor_Up, ^, +, tilt_up, tilt-up	Required
Select	OK, Navigation_Select, Select	Required
Menu	Root_Menu, Disc_Menu, DiscMenu/List, DVD_Menu, DVD-Menu, DVDMenu	Required
CH+	CH_+, CHANNEL+, Channel_Up, CHAN_UP, CHAN+, CHAN-UP, CH_UP, CH-UP, TUNE+	Required
CH-	CH_-, Channel_Down, CHAN_DOWN, CHAN-, CHANNEL_DN, CHAN_DN, CHANNEL-, CHAN-DOWN, CHAN-DN, CH_DN, CH-DN, TUNE-	Required
Back		Required
Last	RECENT, JUMP, LC, PC	Required
Guide	Channel_Guide, Electronic_Program_Guide	Required
Info		Required
0	Disc_Key_0, Direct_Channel_Entry_0, 0_Space, Number_0_or_Number_10, Keyboard_0, NUM_0, kpd_0, kpd-0, key_0, key-0, Dial_0, Dial0, Key0	Required
1	Disc_Key_1, Direct_Channel_Entry_1, Number_1, Keyboard_1, NUM_1, kpd_1, kpd-1, key_1, key-1, Dial_1, Dial1, Key1	Required

DVR and AVR Standard Commands

Standard Command	Aliased Command List	Required/Optional
2	Disc_Key_2, Direct_Channel_Entry_2, 2_ABC, Number_2, Keyboard_2, NUM_2, kpd_2, kpd-2, key_2, key-2, Dial_2, Dial2, Key2	Required
3	Disc_Key_3, Direct_Channel_Entry_3, 3_DEF, Number_3, Keyboard_3, NUM_3, kpd_3, kpd-3, key_3, key-3, Dial_3, Dial3, Key3	Required
4	Disc_Key_4, Direct_Channel_Entry_4, 4_GHI, Number_4, Keyboard_4, NUM_4, kpd_4, kpd-4, key_4, key-4, Dial_4, Dial4, Key4	Required
5	Disc_Key_5, Direct_Channel_Entry_5, 5_JKL, Number_5, Keyboard_5, NUM_5, kpd_5, kpd-5, key_5, key-5, Dial_5, Dial5, Key5	Required
6	Disc_Key_6, Direct_Channel_Entry_6, 6_MNO, Number_6, Keyboard_6, NUM_6, kpd_6, kpd-6, key_6, key-6, Dial_6, Dial6, Key6	Required
7	Disc_Key_7, Direct_Channel_Entry_7, 7_PQRS, Number_7, Keyboard_7, NUM_7, kpd_7, kpd-7, key_7, key-7, Dial_7, Dial7, Key7	Required
8	Disc_Key_8, Direct_Channel_Entry_8, 8_TUV, Number_8, Keyboard_8, NUM_8, kpd_8, kpd-8, key_8, key-8, Dial_8, Dial8, Key8	Required
9	Disc_Key_9, Direct_Channel_Entry_9, 9_WXYZ, Number_9, Keyboard_9, NUM_9, kpd_9, kpd-9, key_9, key-9, Dial_9, Dial9, Key9	Required
Record	REC, A_RECORD, O	Required
Stop	A_STOP, [], VOD-STOP, Stop_Presenting, StopPresenting	Optional
F_Step	NEXT, NEXT_STEP, FORWARD, FWD, STEP, SLOW, ||>, STEP_FORWARD, FRAME_FORWARD, FRAME_+, FRAME+	Optional
R_Step	Prev, PREV_STEP, REVERSE, REV, STEP_BACK, STEP_<, <||, FRAME_BACK, FRAME_-, FRAME-	Optional
R_Skip		Optional
Enter	#, Disc_Key, Enter, Direct_Channel, Enter, #_Enter, Partition_1_Keypad_Enter, Keyboard_Enter, ENT	Optional
Track+	Track/Chapter_+, Advance, Jump, Skip_Fwd, Chapter/Track_Fwd, Next, F_Srch/Skip, FF, NextTrack, TRK+, Track_+, NEXT_TRK, F_TRK, F_TRACK, NEXT_SCENE, SCENE+, >>|, F_Scene, FTRK, >>	Optional

DVR and AVR Standard Commands

Standard Command	Aliased Command List	Required/Optional
Track-	Track/Chapter_-, Chapter/Track_Rev, Skip_Rev, Previous, PreviousTrack, TRK-, Track_-, PREV_TRK, R_TRK, R_TRACK, PREV_SCENE, SCENE-, I<<, R_ Scene	Optional
Blue	F1_Blue	Optional
Green	F3_Green	Optional
Red	F2_Red	Optional
Yellow	F4_Yellow	Optional
Replay	REPLAY_GUIDE, INSTANT_REPLAY, REPLAY/BACK, REPLAY_ZONES	Optional
Page_Up	PGUP, PREV_PAGE, PAGE+, Page_+	Optional
Page_Down	PGDN, NEXT_PAGE, PAGE-, PAGE_ND, Page_-	Optional
Thumbs_Down	Th_down, Thumb_DN	Optional
Thumbs_Up	Th_up, Thumb_Up	Optional
Live	RETURN_TO_LIVE	Optional
A		Optional
B		Optional
C		Optional
D		Optional
Exit	ESC, CANCEL/OSD, CANCEL, Navigation_ MenuBack_F11	Optional
Favorite	FAV	Optional
On_Demand	OnDemand	Optional
List		Optional
Tivo		Optional
DVR	List, TIVO, TV-DVR, TV/DVR	Optional

Remote Control Button Mapping

Remote Control Button Mapping

Button	Pyng Command	Driver Command	TSR-310 Support	HR-310 Support	HR-150 Support	HR-100 Support
0	Digit0	Digit0	Yes	No	Yes	No
1	Digit1	Digit1	Yes	Nuo	Yes	No
2	Digit2	Digit2	Yes	No	Yes	No
3	Digit3	Digit3	Yes	No	Yes	No
4	Digit4	Digit4	Yes	No	Yes	No
5	Digit5	Digit5	Yes	No	Yes	No
6	Digit6	Digit6	Yes	No	Yes	No
7	Digit7	Digit7	Yes	No	Yes	No
8	Digit8	Digit8	Yes	No	Yes	No
9	Digit9	Digit9	Yes	No	Yes	No
	Clear	Not Supported	Yes	Yes	Yes	Yes
ENTER	Enter	Enter	Yes	Yes	Yes	Yes
	TogglePower	PowerToggle	Yes	Yes	Yes	Yes
	(Turns on the remote's keypad backlight)	Not applicable	No	No	Yes	Yes
	NextFavorite (for all devices except for Roku)For Roku, acts the same as the Menu button	Not applicable	Yes	No	No	No
	The first of these available commands for the device: Home, Menu, TopMenu	Home, Menu, TopMenu	Yes	Yes	No	No
	VolumeUp	VolumeUp	Yes	Yes	Yes	Yes
	ToggleMute	Mute	Yes	Yes	No	No
MUTE	ToggleMute	Mute	No	No	Yes	Yes
	VolumeDown	VolumeDown	Yes	Yes	Yes	Yes
	ChannelUp	ChannelUp	Yes	Yes	Yes	Yes
	Info	Info	Yes	Yes	No	No
INFO	Info	Info	No	No	Yes	Yes

Remote Control Button Mapping

Button	Pyng Command	Driver Command	TSR-310 Support	HR-310 Support	HR-150 Support	HR-100 Support
	ChannelDown	ChannelDown	Yes	Yes	Yes	Yes
MENU	The first of these available commands for the device: Menu, Home, TopMenu	Home, Menu, TopMenu	Yes	Yes	Yes	Yes
GUIDE	The first of these available commands for the device: Guide, Home, TopMenu	Guide, Home, TopMenu	Yes	Yes	Yes	Yes
Directional pad, normal (non-color button) mode	Up, Right, Down, Left	Up, Right, Down, Left	Yes	Yes	Yes	Yes
Directional pad, color button mode	Green, Red, Yellow, Blue	Green, Red, Yellow, Blue	Yes	Yes	No	No
Directional pad, center button	Select	Select	Yes	Yes	No	No
Directional pad, SELECT	Select	Select	No	No	Yes	Yes
EXIT	The first of these available commands for the device: Exit, Back	Exit, Back	Yes	Yes	Yes	Yes
	(Turns on the directional pad's color button mode)	Not applicable	Yes	Yes	No	No
LAST	The first of these available commands for the device: LastChannel, Back	Last, Back	Yes	Yes	Yes	Yes
	Rewind	ReverseScan	Yes	Yes	Yes	Yes

Remote Control Button Mapping

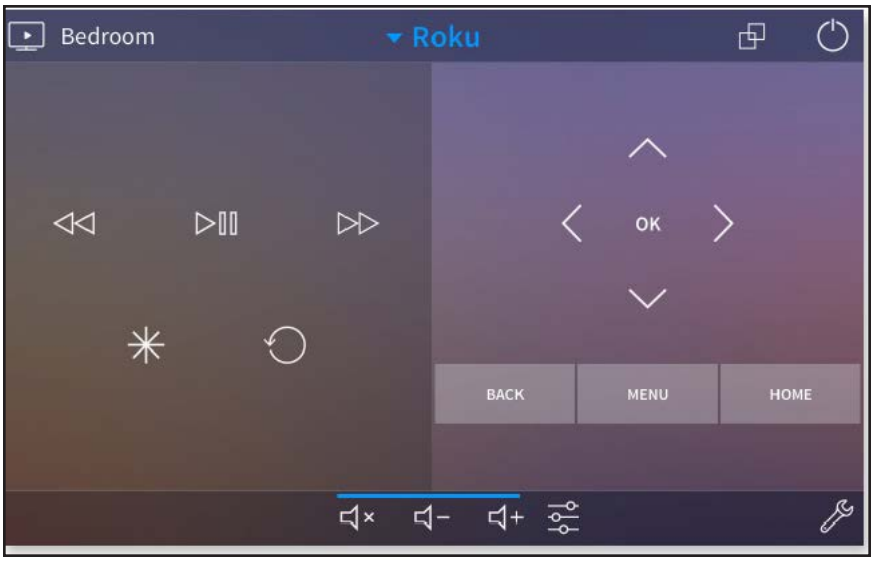
Button	Pyng Command	Driver Command	TSR-310 Support	HR-310 Support	HR-150 Support	HR-100 Support
	Play (if available)Otherwise, sends TogglePlayPause	Play, PlayPause	Yes	Yes	Yes	Yes
	FastForward	ForwardScan	Yes	Yes	Yes	Yes
	The first of these available commands for the device: PreviousTrack, Replay, PreviousTunerPreset, PreviousDisc	ReverseSkip, Replay, Not supported, PreviousDisc	Yes	Yes	No	No
	The first of these available commands for the device: PreviousTrack, Replay, PreviousTunerPreset, PreviousDisc	ReverseSkip, Replay, Not supported, PreviousDisc	No	No	Yes	Yes
	Pause (if available)Otherwise, sends TogglePlayPause	Pause, PlayPause	Yes	Yes	Yes	Yes
	The first of these available commands for the device: NextTrack, Advance, NextTunerPreset, NextFavoriteChannel, PreviousDisc	ForwardSkip, ForwardSkip, Not supported, Not supported, Not supported	Yes	Yes	No	No
	The first of these available commands for the device: NextTrack, Advance, NextTunerPreset, NextFavoriteChannel, PreviousDisc	ForwardSkip, ForwardSkip, Not supported, Not supported, Not supported	No	No	Yes	Yes
	Stop	Stop	Yes	Yes	Yes	Yes
DVR	RecordingMenu	Not applicable	Yes	Yes	Yes	Yes
	ToggleRecord	Record	Yes	Yes	Yes	Yes

Remote Control Button Mapping

Button	Pyng Command	Driver Command	TSR-310 Support	HR-310 Support	HR-150 Support	HR-100 Support
	Press and hold button while speaking to issue a voice command	Not applicable	Yes	No	No	No

Roku Streaming Player Button Mapping

Roku® Streaming Player User Interface Buttons



Roku Button Mapping

Button	Pyng Command	Driver Command	Standard Command
	Rewind	ReverseScan	Rscan
	FirstPlayPause[1]	Not supported	Play_Pause
	FastForward	ForwardScan	Fscan
	Asterisk	Asterisk	*
	Replay	Replay	Replay
HOME	Home	Home	Home
MENU	Menu	Menu	Menu
BACK	Back	Back	Back
	Up	Up	Up_Arrow
	Right	Right	Right_Arrow
	Down	Down	Down_Arrow
	Left	Left	Left_Arrow
	Select	Select	Select

[1] If this command does not exist for the device, this button is mapped to the Play command instead.

Roku Standard Commands

Standard Command	Aliased Command List	Required/Optional
Rscan	Rscan, Rew, Rewind, Review, Reverse_Scan, Rewind_ Scan, Previous_Scan, Prev_Scan, R_Srch, Rsrch, Scan-, <<, &Rscan, A_Rew, ReverseScan	Required
Play_Pause	Play_Pause, Play/Pause, A_PLAY, >, PLAY/SLOW, VOD-PLAY, PLAY_MODE	Required
Fscan	FFWD, F_SCAN, SCAN, FF, >>, F_Srch, FSRCH, FFW, Forward, Fast_Forward, SCAN+, SEARCH, A_FFWD, SEARCH>>, SEARCH_MODE, &Fscan	Required
Dn_Arrow	Down, DN, Dw_Arrow, Navigation_Down, Menu_ Down, Cursor_Down, v, -, tilt_down, tilt_dn, tilt-down, tilt-dn, tiltdown	Required
Left_Arrow	Left, Navigation_Left, Menu_Left, Cursor_Left, <, Track-, pan_left, pan_lt, l, LT, panleft	Required
Right_Arrow	Right, Navigation_Right, Menu_Right, Menu_RT, Cursor_Right, >, pan_right, pan_rt, pan-right, pan-rt, rt, panright	Required
Up_Arrow	Up, Navigation_Up, Menu_Up, Cursor_Up, ^, +, tilt_up, tilt-up	Required
Select	OK, Navigation_Select, Select	Required
Menu	Root_Menu, Disc_Menu, DiscMenu/List, DVD_Menu, DVD-Menu, DVDMenu	Required
Back		Required
Replay	REPLAY_GUIDE, INSTANT_REPLAY, REPLAY/BACK, REPLAY_ZONES	Required
Home	Tivo, Options	Required
*	Kpd-*, key_*, key-*, Dial_*, Dial*, Dial_Star, DialStar, Key*, Asterisk	Required

Load Device Driver Files

To side load a custom device driver file into the CP4-R:

1. Connect to the CP4-R over FTP or by using the File Manager tool in Crestron Toolbox.
2. Upload the custom driver package file or IR file into the CP4-R's \User\ThirdPartyDrivers\Import directory.
3. Navigate to the driver using the **Third Party Devices** menu in **the Pair Devices** screen. The screen refreshes automatically to display the driver after it has been loaded into the system.
4. Add the custom third party device to a room. For more information, refer to "Pair Third Party Devices" on page 28.

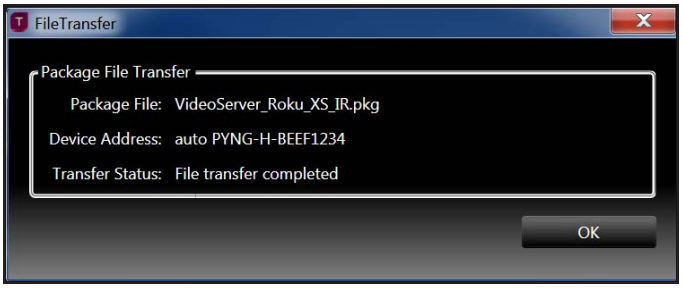
Additionally, device drivers may be loaded directly to the CP4-R via the Device Learner tool:

1. Navigate to **File** > **Send .PKG to Device**.
2. Save the driver package file to the User Database.
3. Select the CP4-R using the **Address Book** tool, and then click **OK**.

Once the transfer is complete, a pop-up dialog is displayed showing the package file, the device hostname/IP address, and the transfer status.

NOTE: If a device driver is loaded into the CP4-R that shares the same ID (manufacturer, model name, and communication type) as an existing driver, the latest file will overwrite the existing entry.

FileTransfer Dialog



Delete Device Driver Files

To delete a custom device driver file from the CP4-R:

NOTE: Drivers may be deleted to reclaim disk space, to remove a known bad version of an existing driver, to allow the cloud to download the latest version of a Crestron Certified Driver, or to remove a test driver.

1. Connect to the CP4-R over FTP or by using the File Manager tool in Crestron Toolbox.
2. Navigate to the CP4-R's \User\ThirdPartyDrivers\Storage\Rad directory.
3. Delete the appropriate driver file(s) from the directory.

Mapping Virtual Sources

Certain A/V receivers use virtual sources, which require mapping on the A/V receiver itself (and not through the Crestron Pyng system) to map switching commands to connectors. For these A/V receivers, the source selections on the handheld remote are mapped to a physical connection on the back of the receiver using the receiver's web-based or on-screen configuration interface.

Receivers that use virtual mapping behave in the Crestron Pyng system as follows:

- The source selections in the Crestron Pyng system mimic the selections on the handheld remote.
- The receiver's physical connectors (such as HDMI) will always be labeled as "GenericAV" in the Crestron Pyng interface. This is done to allow the mapping in the receiver to be changed without requiring an update to the Crestron Pyng interface.

For example, if a Blu-ray Disc player source is mapped to the Component 1 input, and the mapping was changed to use the HDMI 1 input instead, the Blu-ray Disc player is still selected as the source in the Crestron Pyng interface. The connection label will show GenericAV even though the connector has been changed to HDMI 1.

Additionally, if a Sonos CONNECT is mapped to the Audio In 5 (CD) input, and the mapping was changed to use the Optical 1 (CD) input instead, the Sonos CONNECT is still selected as the audio source in the Crestron Pyng interface. The connection label will show GenericAV even though the connector has been changed to Optical 1 (CD).

Appendix D: Source Routing Behavior for Media Sources

When a media source is routed to a room from the media screen in user control mode, the behavior of the media source varies depending on the device type and the routing action that is performed.

This appendix describes the expected source routing behavior for various media sources within the Crestron Pyng system.

When a media source is routed to a room:

- For audio-only media devices (such as the CEN-NSP-1, Autonomic streaming devices, and CEN-TRACK devices), if the device is not yet playing, it should begin to play automatically.
- A Sonos device does not begin to play when the "Sonos Favorites" source is selected. The Sonos device begins to play once a specific favorites channel is selected from inside the channel's user interface.
- The Crestron Pyng system does not attempt to start devices automatically unless the device supports automatic play functionality.

When a room is turned off a new media source is routed to a room:

- For the CEN-NSP-1, Autonomic streaming devices, and CEN-TRACK devices, a discrete pause command is executed. If this command is not available, no command is executed.
- For DVD players, a discrete pause command is executed. If this command is not available, no command is executed.
- For streaming devices (such as Amazon Fire® streaming devices or Apple TV digital media extenders), a discrete pause command is executed. If this command is not available, no command is executed.
- For cable boxes, no action is attempted.
- If the existing media source is still playing, no action is attempted.

> **NOTE:** The Crestron Pyng system does not execute a discrete pause command when switching between sources that are part of the same device and part of the same audio output channel (such as the Autonomic MMS-2A) and when switching between sources that are part of the same device that has single audio output channel (such as the CEN-NSP-1).

The Crestron Pyng system also supports a "Device No Longer Used" feature. When a source is no longer being used by the Crestron Pyng system, a power off command is sent to the device after one minute.

Media endpoints (such as speakers and displays) are powered off immediately.

Appendix E: Enable Remote System Access

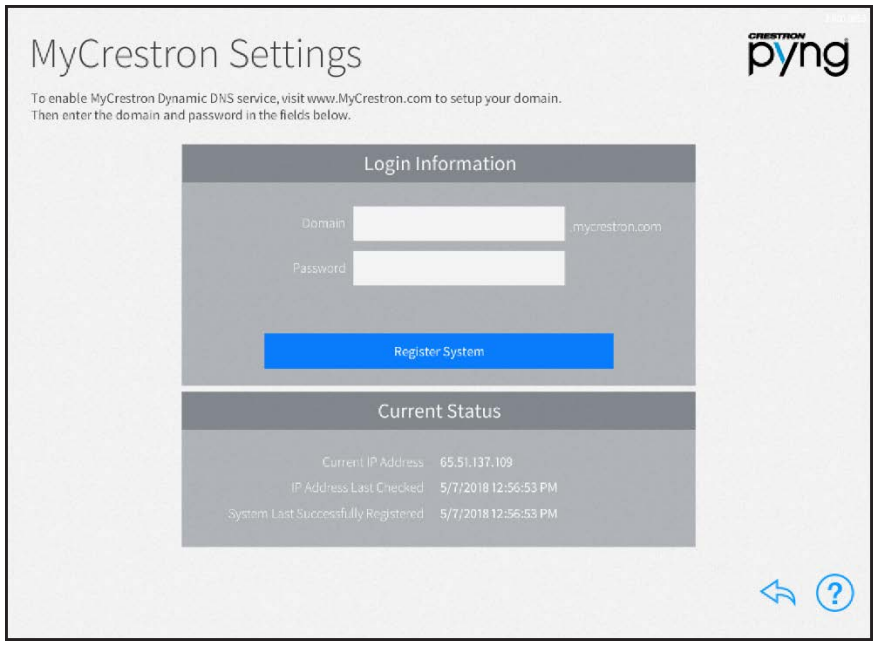
The Crestron Pyng system may be monitored remotely using the MyCrestron Dynamic DNS service. Use the following procedures to enable remote system access via MyCrestron.

Register the System with MyCrestron

To register the Crestron Pyng system with a MyCrestron account:

1. Tap **MyCrestron Dynamic DNS Service** on the **Installer Settings - System Control Options** screen to display the **MyCrestron Settings** screen.

   MyCrestron Settings Screen



   NOTE: A MyCrestron domain name must be registered at www.mycrestron.com prior to registering the system with MyCrestron.

2. Enter the domain name of the MyCrestron account in the **Domain** text box.
3. Enter the password for the MyCrestron account in the **Password** field.
4. Tap **Register System**.

If the registration is successful, a success message is displayed, and the **System Last Successfully Registered** date updates in the **Current Status** panel.

Configure Port Mapping on a Router

Many routers do not allow for direct port forwarding of common ports, including 80, 443, 23, and others. Port mapping is ideal in this scenario, as an arbitrary external port is forwarded to the internal port being used.

For example, port 80 (internal) to port 80 (external) may be blocked, but mapping from port 8080 to port 80 or port 8081 to port 80 is allowed.

Map the below ports to have their respective functionalities work remotely.

NOTE: Only map ports that are required for the necessary functions.

- **41794 (CIP):** Used for system control and communication
- **41795 (CTP):** Used for connecting to the processor in Crestron Toolbox
- **843 (Web XPanel Interface):** Used for an Adobe® software Flash Policy Server request. For more information, refer to OLH article 5793 at https://support.crestron.com.
- **80 (HTTP):** Used for serving files from the \HTTP\ folder on the processor (Crestron Pyng web XPanel interface, app manifest file, and so forth).

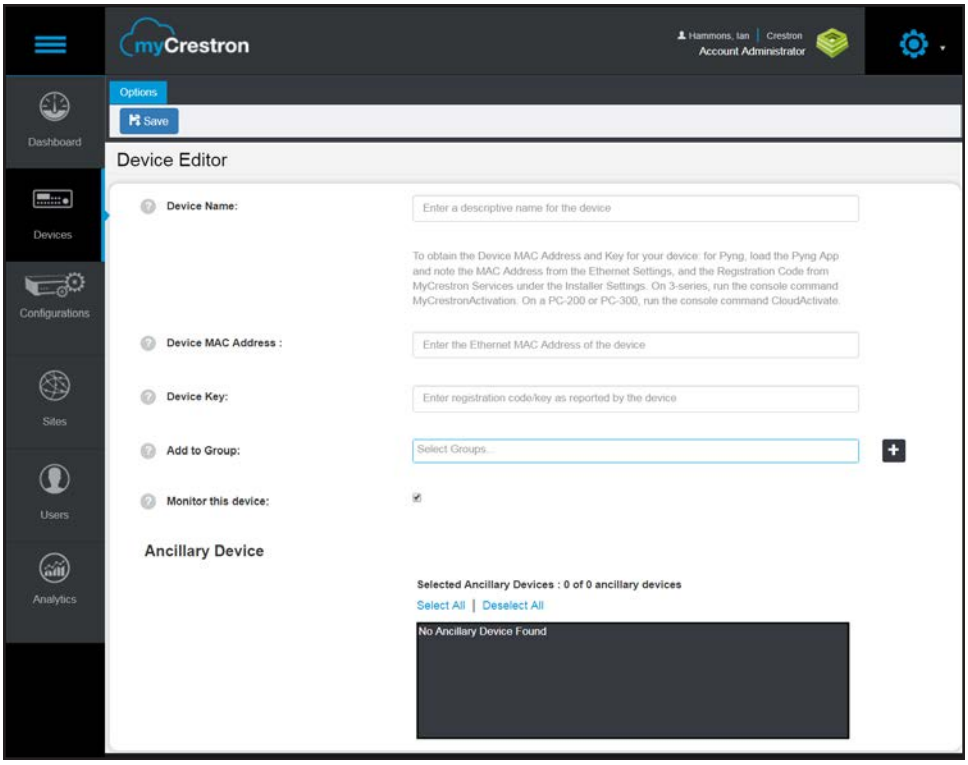
  NOTE: the webport command may be issued using the Text Console tool in Crestron Toolbox to change the processor's HTTP port (if the router is not capable of port mapping).

Add the CP4-R to MyCrestron

To add the CP4-R to a MyCrestron account for remote monitoring:

1. Log into https://portal.my.crestron.com using the MyCrestron.com subdomain that is paired with the system.
2. Click the **Devices** tab.
3. Click **Add Device** from the menu at the top of the screen. The **Device Editor** panel is displayed.

   Device Editor Panel



4. Enter the following information in the appropriate fields:
    - **Device Name:** Enter a descriptive name for the CP4-R.
    - **Device MAC Address:** Enter the device MAC address, which is found by navigating to **Installer Settings > System Configuration > Ethernet Settings**.
    - **Device Key:** Enter the device registration key, which is found by navigating to **Installer Settings > System Configuration > MyCrestron Monitoring** Service.
    - **Add to Group:** If desired, add the CP4-R to a MyCrestron device group.
    - **Monitor the device:** Click the checkbox to enable or disable remote monitoring for the PYNG-HUB. A filled checkbox indicates that the device will be monitored.
    - **Ancillary Device:** If desired, select any ancillary devices that are connected to the CP4-R.
5. Click **Save**. The CP4-R is added to the MyCrestron account.

Appendix F: Create and Upload a Custom Television Provider

When a third-party cable box device is added to the Crestron Pyng system, the system prompts the user to select a television provider from the available options. After a television provider is selected, the appropriate channel names and icons are made available to the media controls for the cable box.

However, the Crestron Pyng system does not provide native support for all television providers in all regions. As a workaround, a custom television provider file must be created and uploaded to the Crestron Pyng system. The television provider file obtains the channel names and icons from files that are hosted on an external web server.

Use the following procedures to create and upload a custom television provider into the Crestron Pyng system.

Create a Channel JSON File

The television provider file obtains channel data from an externally hosted JSON file. To create a custom channel JSON file:

1. Open a text editor or code editing program.
2. Create the channel list file schema as shown below. The value for the `lastUpdated` parameter should be set to the current date (for example, "071618").

```
{
  "lastUpdated": "Date",
  "data": [

  ]
}
```

3. For each channel, create a child object within the data array that contains the following parameters. Refer to the example on the following page.
   - **name:** The channel name (string)
   - **channel:** The channel number (string)
   - **index:** An index identifier that increments for each successive channel in the JSON file (integer)
   - **id:** The unique ID of the channel (string)

- **imageId:** The unique ID of the channel icon PNG image file, which is uploaded along with the provider file (string)

```
{
  "lastUpdated": "Date",
  "data": [{
    "name": "WPIO",
    "channel": "1.1",
    "index": 1,
    "id": "wpio",
    "imageId": "wpio"
  },
  {    "name": "WPII",    "channel": "2.1",    "index": 2,
"id": "wpii",    "imageId": "wpii"  }]}
```

2. Save the file with a JSON file extension (for example, "customChannels1.json").

   NOTE: Crestron recommends that the filename of the JSON file matches the actual name of the television provider.

Create Channel Icon Image Files

The television provider file obtains channel icon data from externally hosted PNG files. Any PNG image may be used that represents the channel logo; this image is displayed when its associated channel is selected with the Crestron Pyng media controls.

Note the following when creating custom channel icon files:

- The image must be in PNG format.
- The channel icon filename must exactly match the imageId parameter value for the associated channel. (For example, to use a channel icon file with a "wpii.png" filename, the `imageId` parameter value for the associated channel must be "wpii".)
- Images with dimensions less than 150 x 150 pixels are not resized. Images with dimensions larger than 150 x 150 pixels are scaled down with an aspect ratio kept to a maximum of 150 pixels (length or height, depending on which is greater).

Once all channel icons have been created, package all of the files together into a separate .zip file.

Upload the Channel JSON and Icon Files to a Web Server

Once the channel list JSON file and all channel icon files are created, upload the JSON files and the zipped channel icon files to a location on a web server. The television provider file must be able to access this location to obtain channel and icon data.

NOTE: The JSON and channel icon files may be used to service any customers using the exact same provider.

Create and Upload a Television Provider File

To create and upload a custom television provider file:

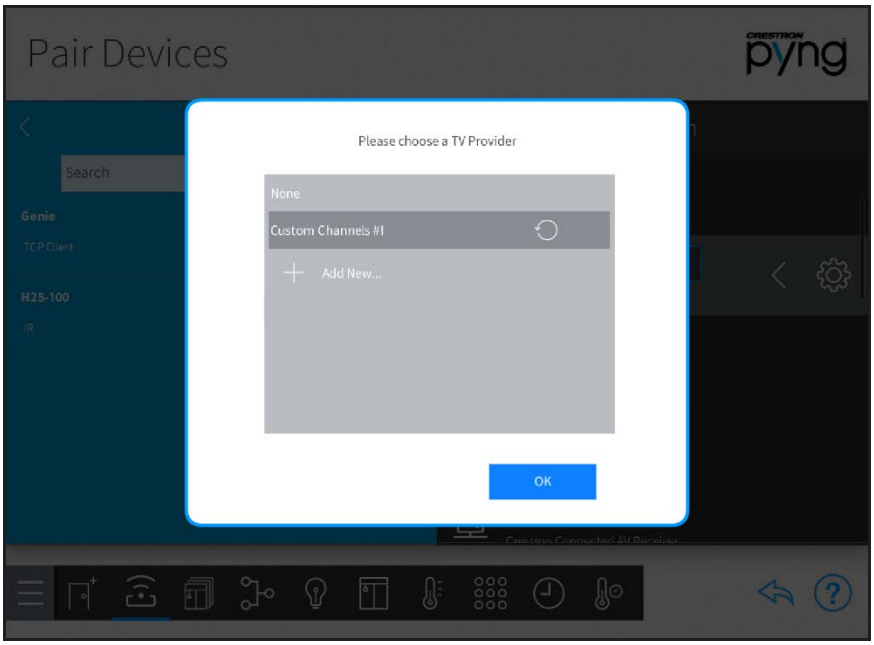
1. Open a text editor or code editing program.
2. Create the television provider file schema with the following parameters. Refer to the example below.
   - **id:** The unique ID of the custom television provider file (string)
   - **name:** The name of the custom television provider that is displayed in the Crestron Pyng system (string)
   - **eTag:** The value set for lastUpdated in the channels JSON file, which is populated automatically from the JSON file (Enter a "null" value when first adding this parameter.) (string)
   - **channelsLastUpdated:** Not used for custom television provider files (Enter a "null" value when first adding this parameter.) (string)
   - **custom:** Indicates whether the television provider file is custom (Boolean)
   - **channelFile:** The URL of the channels JSON file on the external web server (string)
   - **imageFile:** The URL of the channel icons .zip file on the external web server (string)

   ```
   {
     "id": "custom1",
     "name":
    "Custom Channels #1",
     "eTag": null,
     "channelsLastUpdated": null,
     "custom": "true",
     "channelFile": "http://yourdomain.com/customchannels1.json",
     "imageFile": "http://yourdomain.com/customimages1.zip"
   }
   ```
3. Save the file with an .exprovider file extension (for example, "custom1.exprovider").
4. Connect to the CP4-R over FTP or by using the File Manager tool in Crestron Toolbox.
5. Upload the custom television provider file into the CP4-R's \User\TvProviders\Import directory.

6. In the Crestron Pyng application, use the **Third Party Devices** menu in the **Pair Devices** screen to add a new cable box or to edit the television provider settings for an existing cable box.

   When prompted to select a television provider, the custom television provider is displayed in the list of providers.

   Pair Devices Screen - Custom Television Provider



7. Select the custom cable provider, and then tap **OK**.

If the channel lineup for the cable provider changes, the channels JSON file and channel icon .zip file must be updated and uploaded to the web server. To update the channel provider data in the Crestron Pyng application:

1. Make the necessary changes to the channels JSON file and channel icons .zip file.

   NOTE: Ensure that the lastUpdated parameter has been updated in the channels JSON file to the current date. The channel provider data will update automatically when an updated .exprovider is imported into the system.

2. Overwrite the existing channels JSON file and the channel icons .zip file on the web server.

   NOTE: Overwriting the existing files on the web server updates the channel data for all customers that are using the associated custom television provider file.

3. In the Crestron Pyng application, navigate to any cable box in the system.
4. Tap the gear button next to the cable box name.
5. Click the **Provider** tab to edit the cable provider settings. Refer to the image above.
6. Tap the refresh button next to the custom television provider name. The channel lineup and icons update in real time.

If the provider name must be edited, update the name parameter in the .exprovider file. Ensure that the id field is not changed. Then, import the updated .exprovider file into the CP4-R as described in the "Create and Upload a Custom Television Provider" section on the previous page.

Appendix G: Update Crestron Certified Drivers

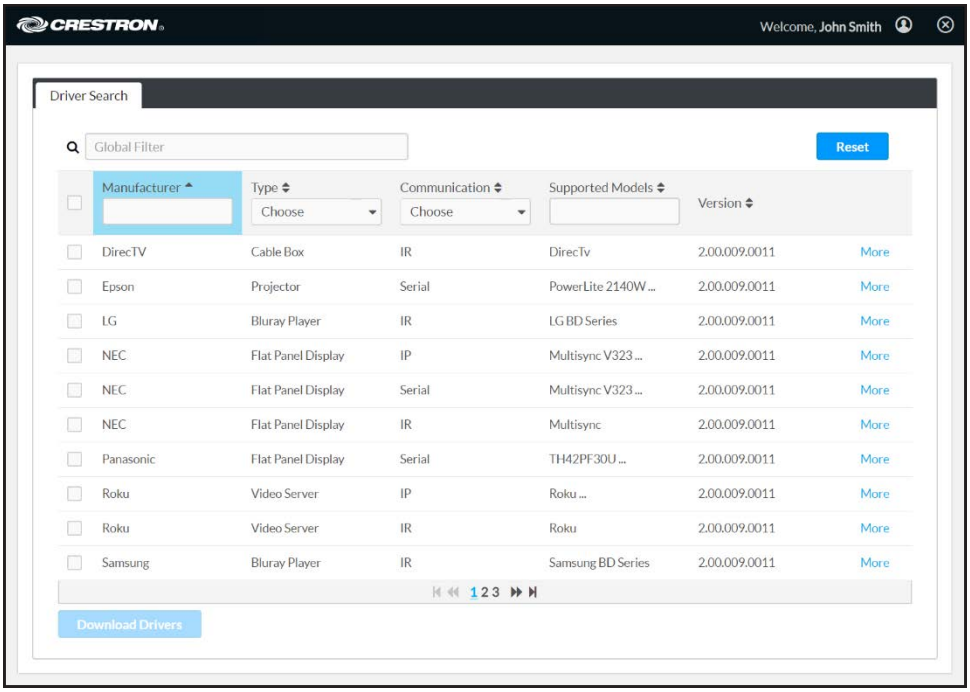
When a third-party device is added to the Crestron Pyng system using a Crestron Certified device driver, a copy of the driver PKG file is stored in the CP4-R file structure. However, the PKG file is not updated automatically in the system when an updated version of the driver is made available in the cloud.

To update a Crestron Certified device driver:

1. Log in to the Crestron Certified Drivers web portal at https://drivers.crestron.io. The **Driver Search** page is displayed.

   NOTE: New users to the Crestron Certified Drivers web portal must create an account in order to search for and download device drivers.

   Crestron Certified Drivers Portal - Driver Search Page



2. Navigate to the desired device driver(s) in the web portal. Use the **Version** tab to confirm the version of the device driver(s).
3. Select the device driver(s) by clicking the check box to the left of a driver name.
4. Once all drivers have been selected, click **Download Drivers** to download the drivers to the host computer. All selected drivers download as PKG files within a single zipped file.
5. Connect to the CP4-R over FTP or by using the File Manager tool in Crestron Toolbox.

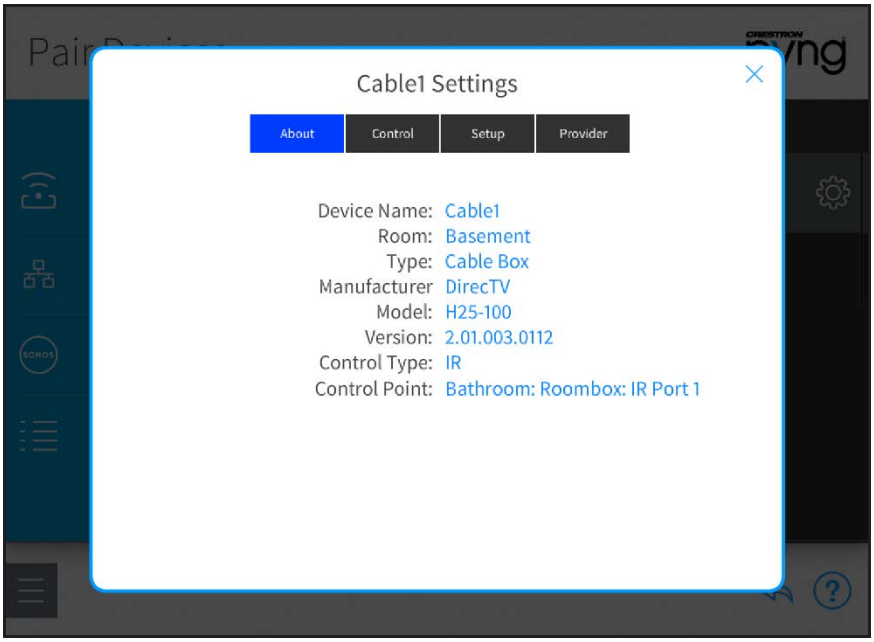
6. Upload the updated device driver files into the CP4-R's \User\ThirdPartyDrivers\Import directory.

After the updated device driver files have been imported into the CP4-R, apply the updated driver to its associated third party device as follows:

- For IR devices, add the device(s) to the system after the updated driver file is uploaded. Existing IR devices that were added using an older version of the driver must be deleted and added back to the system.
- For Serial and TCP/IP devices (or any other DLL-based devices), delete all devices that were added using the older firmware. Wait 60 seconds without making any other changes to the system configuration, and then reboot the CP4-R. After the CP4-R has rebooted, add the device(s) back to the system.

To confirm that the device was added with the updated device driver file, tap the gear button next to the device name. The driver version is shown next to **Version** in the **About** section of the device settings dialog box.

Cable1 Settings Dialog Box



Appendix H: Connect to a 2N Door Station

A 2N door station may be integrated with the Crestron Pyng system and controlled from a supported Crestron touch screen (TSW-560, TSW-760, TSW-1060, or TSW-560P).

NOTE: The minimum TSW-x60 firmware version required to connect to a 2N door station is 2.003.0036. The minimum 2N door station firmware version required is 2.25.0.

For more information on configuring the touch screen for 2N door station support, refer to the TSW-560/TSW-760/TSW-1060 Supplemental Guide (Doc. 7927) at www.crestron.com/manuals.

Crestron Pyng supports a connection to the following 2N door station models:

- 2N IP Audio Kit
- 2N IP Audio Kit Lite
- 2N IP Base
- 2N IP Force
- 2N IP Safety
- 2N IP Solo
- 2N IP Uni
- 2N IP Vario
- 2N IP Verso
- 2N IP Video Kit

Use the procedures in this appendix to integrate a 2N door station with the Crestron Pyng system.

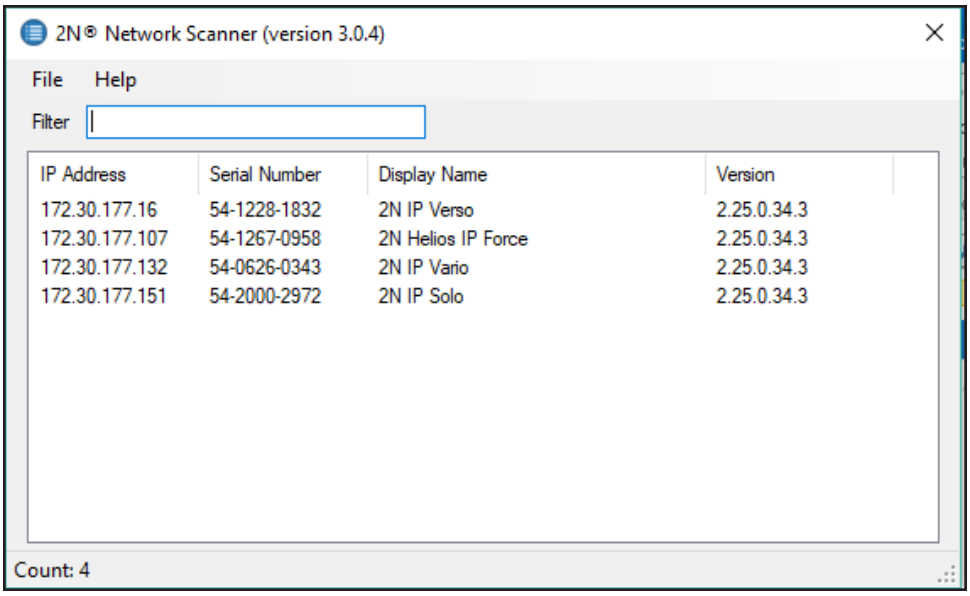
NOTE: The following procedures assume that the 2N door station has been installed completely and is discoverable on the network. For more information, refer to the 2N device documentation.

Discover the 2N Device

To discover the 2N device on the network:

1. Download and install the 2N Network Scanner application from https://www.2nusa.com/en_US/products/2n-network-scanner.
2. Open the application. All discovered 2N door stations on the network are displayed.

2N Network Scanner



Configure 2N Device Settings

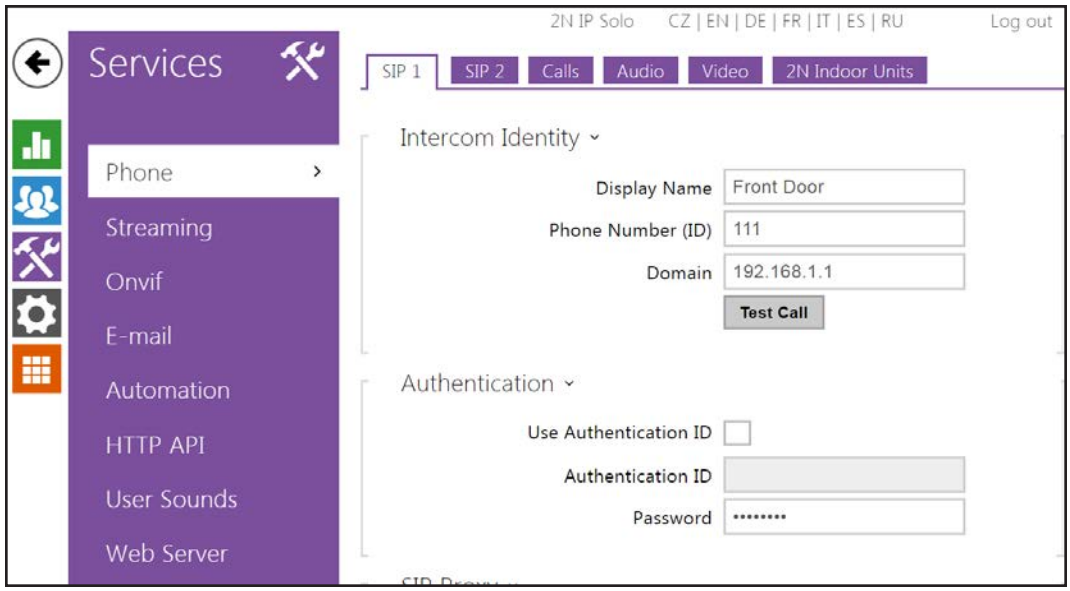
Use the following procedures to configure the 2N device for integration with the Crestron Pyng system.

Services Settings

1. Launch the web configuration utility for the appropriate 2N device by entering its IP address into a web browser. For more information on the 2N web configuration utility, refer to the 2N device documentation.
2. Click the purple tool icon to display the **Services** menu.
3. Navigate to **Phone** > **SIP 1**, and enter the following information under Intercom Identity:
   - Enter a name for the door station in the **Display Name** text field. This name will be shown on the touch screen to identify the door station when a call is received.
   - If configuring the door station to support Rava® SIP intercom calls, enter the Rava extension for the door station in the **Phone Number (ID)** text field.

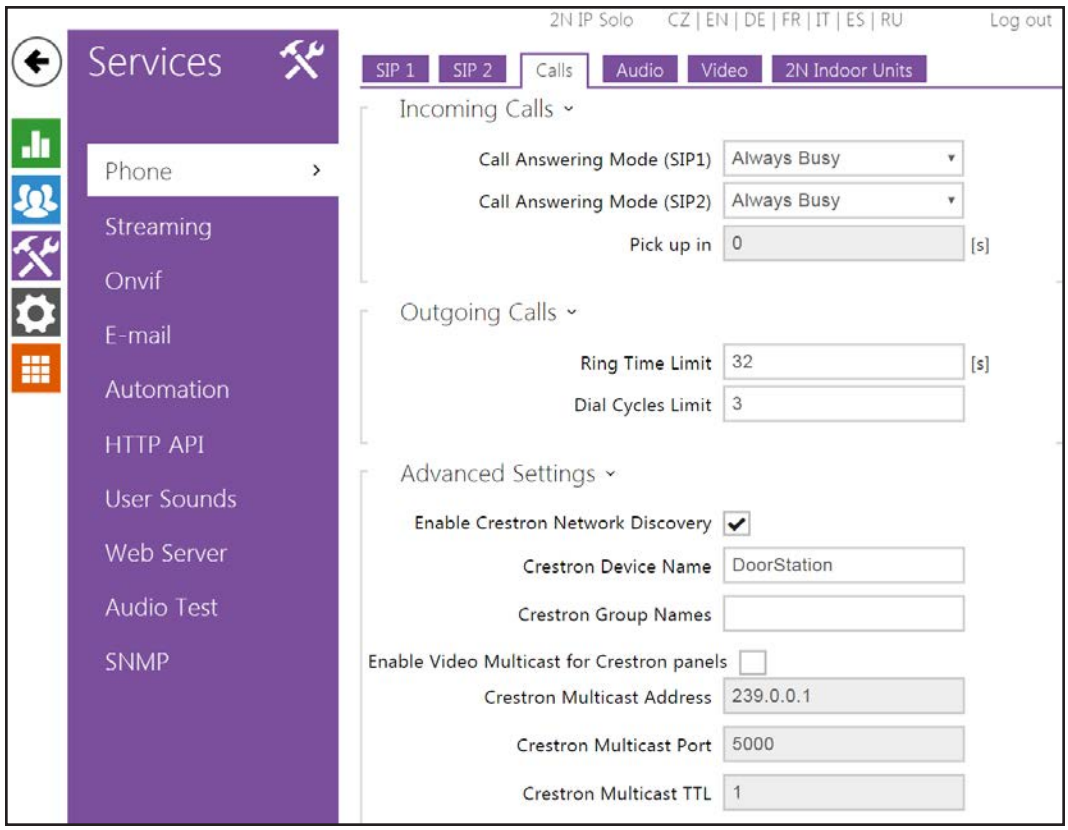
     NOTE: If there are multiple door stations on site, each door station will have a unique extension number.

2N Configuration Utility - Phone > SIP 1 Settings



4. Select the **Calls** tab.
5. Click the check box to display a check mark next to **Enable Crestron Network Discovery** under **Advanced Settings**. The 2N device is now discoverable in Crestron Toolbox.

2N Configuration Utility - Phone > Calls Settings

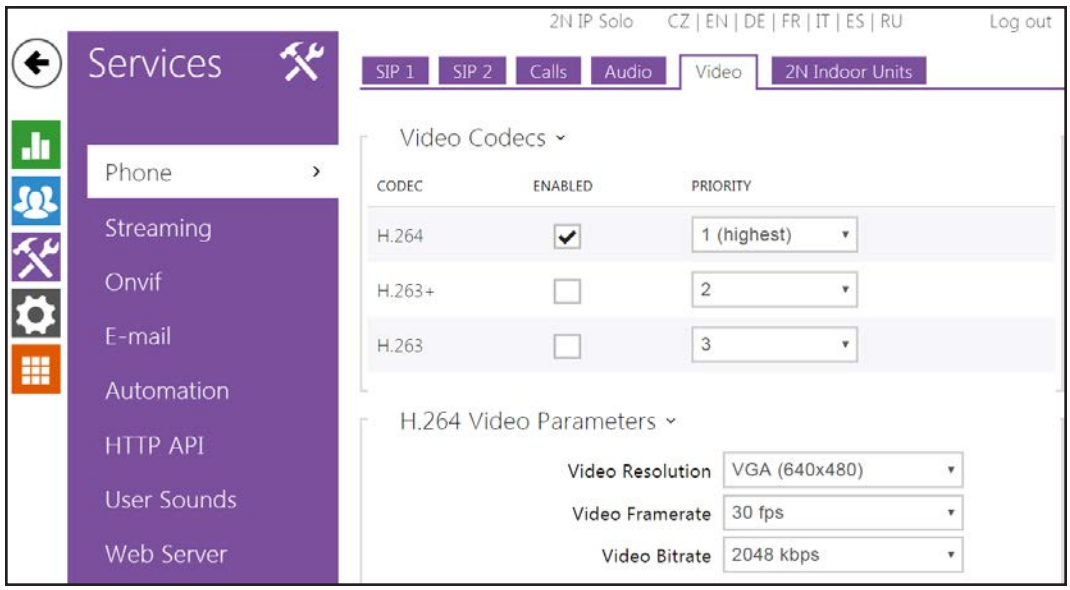


NOTES:

- Video unicast may be used if three or fewer Rava-enabled touch screens will be used with the 2N device. Otherwise, click the checkbox to display a check mark next to **Enable Video Multicast for Crestron panels**, and enter the Crestron multicast settings in the appropriate text fields.
- If multicast is used and there are multiple 2N door stations on site, specify the unique multicast address for each door station.
- Multicast may not be supported if it is used with an SIP server.

6. Select the **Video** tab, and enter the following settings:
   - Click the check box to display a check mark next to **H.264**.
   - Select **VGA (640x480)** from the Video Resolution drop-down menu.
   - Select **30 fps** from the **Video Framerate** drop-down menu.
   - Select **2048 kbps** from the **Video Bitrate** drop-down menu.

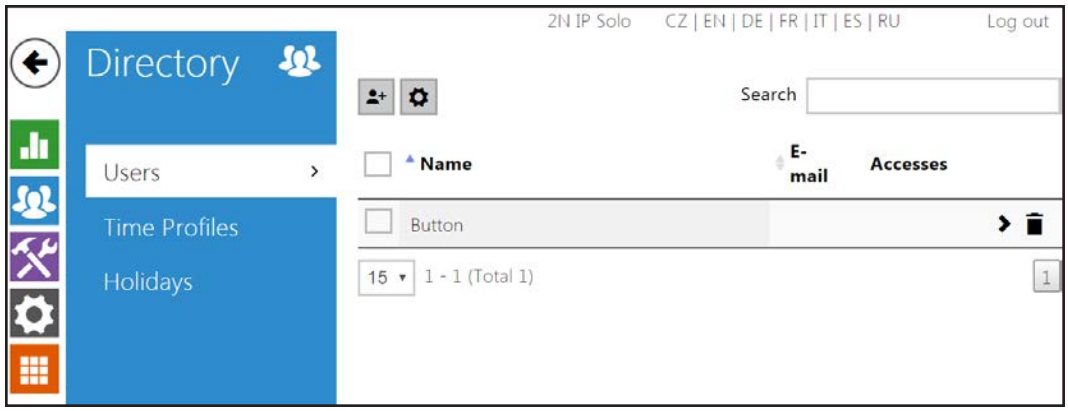
2N Configuration Utility - Phone > Video Settings



Directory Settings

1. In the web configuration utility, click the blue users icon to display the **Directory** menu.
2. Navigate to **Users**, and click the add user button to create a new user.

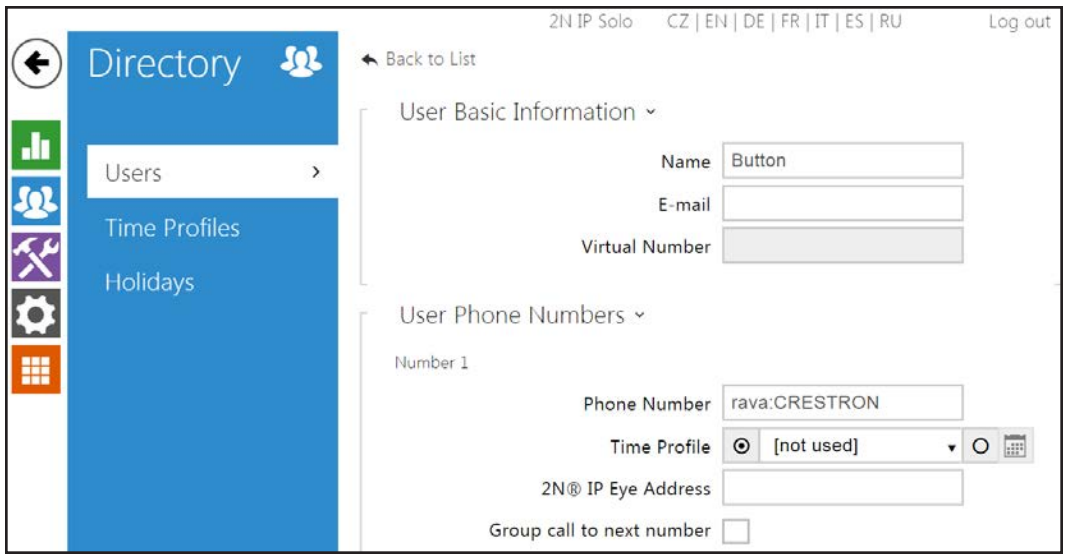
   2N Configuration Utility - Users Settings



   NOTE: 2N devices also refer to users as "buttons," as this refers to the buttons on the 2N door station that are used to dial specific dwellings or ring groups.

3. Enter "rava:CRESTRON" in the **Phone Number** text field.

2N Configuration Utility - User Information



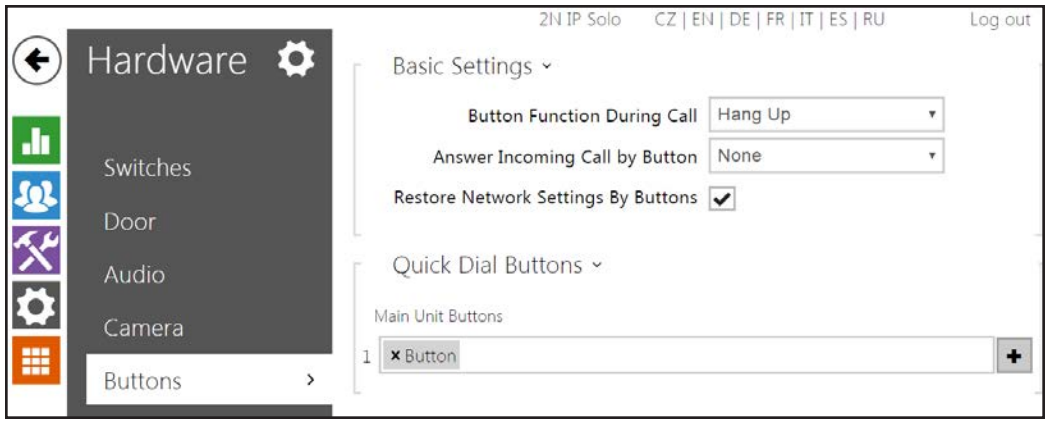
NOTE: CRESTRON is the default ring groups for all shipping TSW-x60 touch screens. To use a different group name, issue the `SIPPAGEGROUP [GROUPNAME]` command to the touch screen using the Text Console tool in Crestron Toolbox, where `[GROUPNAME]` is the desired group name (all capital letters with no spaces). Then, enter "rava:[GROUPNAME]" in the **Phone Number** text field.

For example, if a `SIPPAGEGROUP FIRSTFLOORGROUP` command was issued to the touch screen, enter "rava:FIRSTFLOORGROUP" in the **Phone Number** text field.

Hardware Settings

1. In the web configuration utility, click the gray gear icon to display the **Hardware** menu.
2. Navigate to **Buttons**.
3. Add the button (user) created in the previous procedure to the **Main Unit Buttons** menu by clicking the plus button next to the menu.

2N Configuration Utility - Buttons Settings



Advanced Configuration

If the 2N door station has been configured to send calls to a mobile device via the 2N Mobile Video app, calls may be sent to both the mobile device and the Crestron Pyng touch screen by configuring two phone numbers for the 2N device.

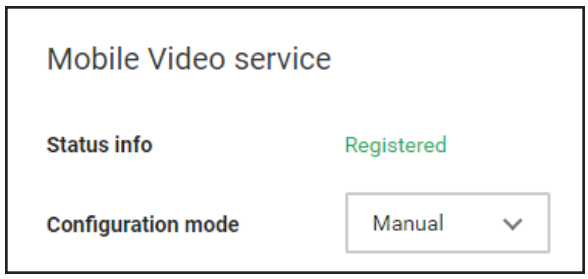
All 2N Mobile Video app settings must be configured and propagated to the door station before configuring the 2N device for call forwarding. For more information on configuring the mobile app, refer to www.my2n.com.

To configure the 2N door station for use with the app and the touch screen:

NOTE: The 2N door station must be configured to support a connection to the touch screen(s) prior to attempting this procedure. For more information, refer to "Configure 2N Device Settings" on page 252.

1. Open the **DEVICE DETAIL** tab for the configured 2N door station in the 2N Mobile Video web configuration interface.
2. Under **Mobile Video service**, select **Manual** from the **Configuration mode** drop-down menu.

Mobile Video service - Configuration mode



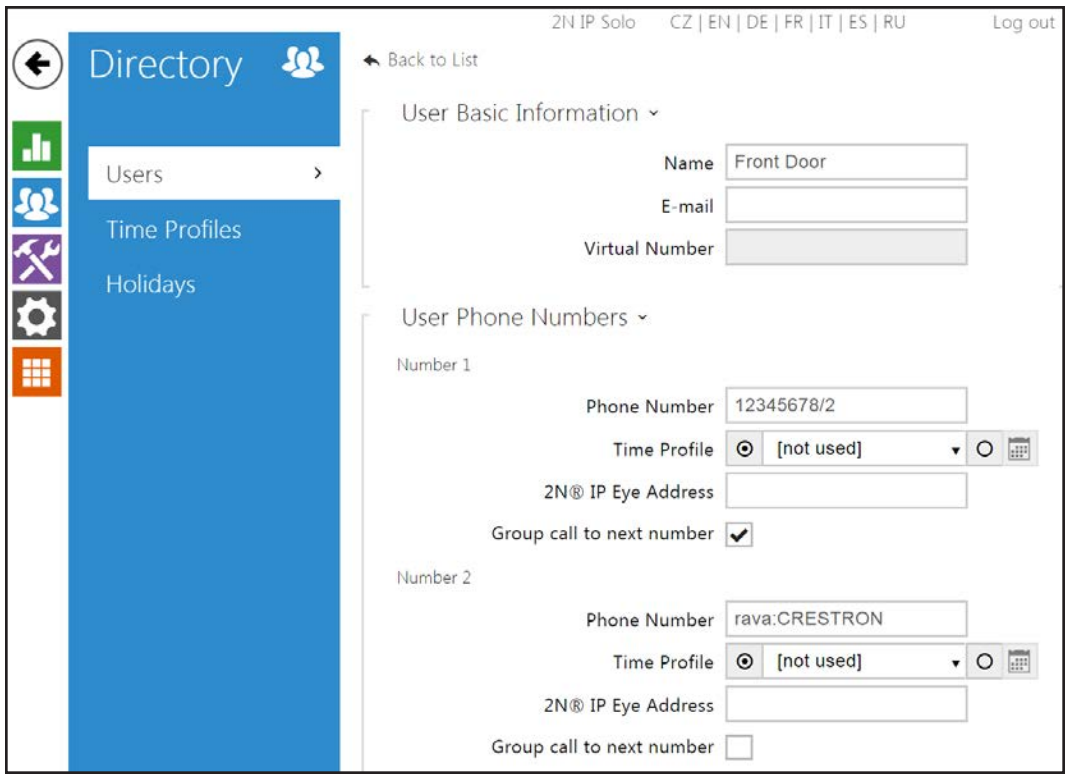
NOTE: If Configuration mode is set to automatic, the mobile app may overwrite the existing 2N IP intercom settings, including the touch screen connection.

3. In the 2N device web configuration utility, click the blue users icon to display the **Directory** menu.
4. Navigate to **Users**, and click the desired user to edit user settings.
5. Enter the following information under **User Phone Numbers**:

   NOTE: The phone number for the mobile device is entered automatically in the Phone Number text field for Number 1 if the mobile device has been configured using the 2N Mobile Video app.

   - For **Number 1**, click the check box to display a check mark next to **Group call to next number**.
   - For **Number 2**, enter "rava: [GROUPNAME]" in the **Phone Number** text field, where [GROUPNAME] is the desired ring group name. For more information, refer to "Directory Settings" on page 254.

2N Configuration Utility - Users Settings



Appendix I: Transfer Data between Hardware

Pyng OS 2 data can be transferred between hardware that that is running Pyng OS 2. Data can be transferred using a deployment code (recommended), copied from the CP3-R or CP4-R, or using a Golden configuration.

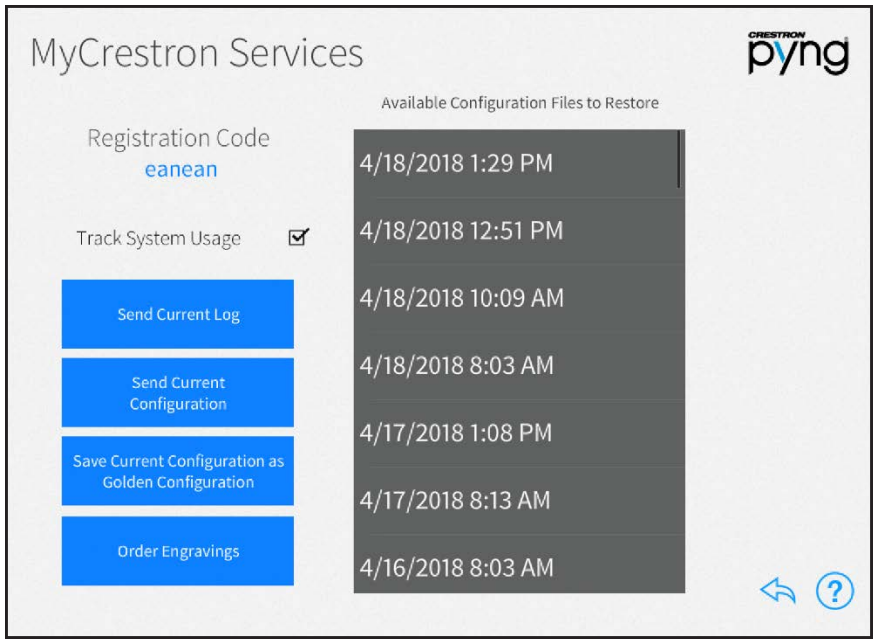
Method 1: Use a Deployment Code (Recommended)

Using the deploy code allows you to transfer data from a CP3-R to a CP4-R, or between different CP4-R devices.

Generate a Deploy Code

1. Tap the gear button on the bottom right of the **Setup** screen to display the Installer **Settings** screen.
2. Tap System Configuration on the Installer **Settings** screen to display the **Installer Settings - System Configuration** screen.
3. Tap **MyCrestron Monitoring Services** on the **Installer Settings - System Configuration** screen to display the **MyCrestron Services** screen.

   MyCrestron Services Screen



4. Tap **Save Current Configuration as Golden Configuration** to save the current configuration as a golden configuration. Tap **OK** in the dialog box that is displayed to save the current configuration or tap **Cancel** to cancel saving the configuration. The

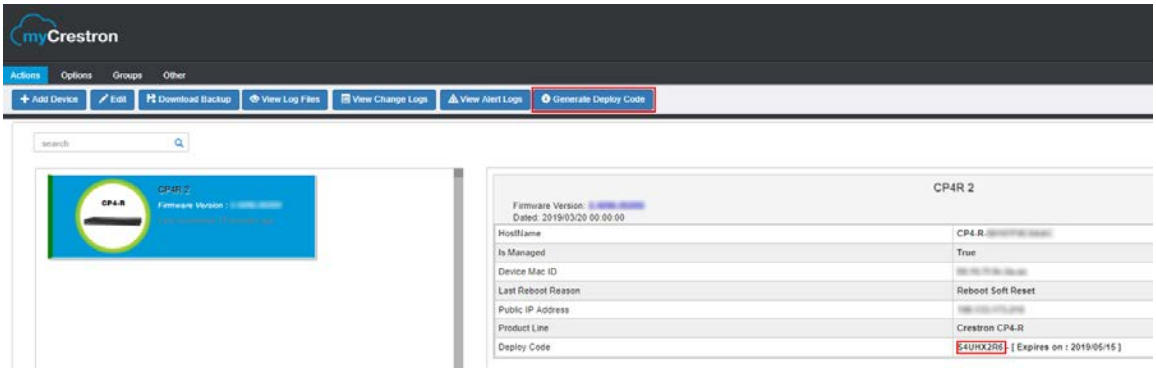
Golden Configuration is automatically uploaded and available at https://portal.my.crestron.com.

NOTE: Golden configurations represent known, working system states that may always be restored safely, and are indicated by a star icon in the Available Configuration Files to Restore menu.

5. Log into https://portal.my.crestron.com using the MyCrestron.com subdomain that is paired with the system.
6. Select the CP3-R or CP4-R from the device list.
7. Click **Generate Deploy Code** The deploy code is displayed in the main window. Write down the code.

NOTE: The deploy code expires after 14 days.

MyCrestron Portal – Generate Deploy Code



8. Write down the Hostname of the CP3-R or CP4-R.
9. If necessary, unregister the CP3-R or CP4-R from the Amazon® software Alexa™ voice services account or the Google® software Google Assistant™ voice services account. For more information, refer to "Voice Control Settings" on page 120.
    - If the existing Crestron Pyng system is still available, tap **Voice Control Settings** on the **Installer Settings - System Control Options** screen to display the **Voice Control Settings** screen and then click **Unregister**.
    - If the existing Crestron Pyng system is no longer available, navigate to https://echoadminportal.crestronfusion.com/#/. Ensure that the control system ID shown in the portal matches the MAC address of the CP3-R or CP4-R and then click **Unregister**.

NOTE: The homeowner's Amazon or Google credentials may need to be entered to unregister the CP3-R or CP4-R.

10. Disconnect the CP3-R or CP4-R from the network.
11. Set up the new system. Refer to "Set Up the Crestron Pyng System using a Deployment Code" on the facing page.

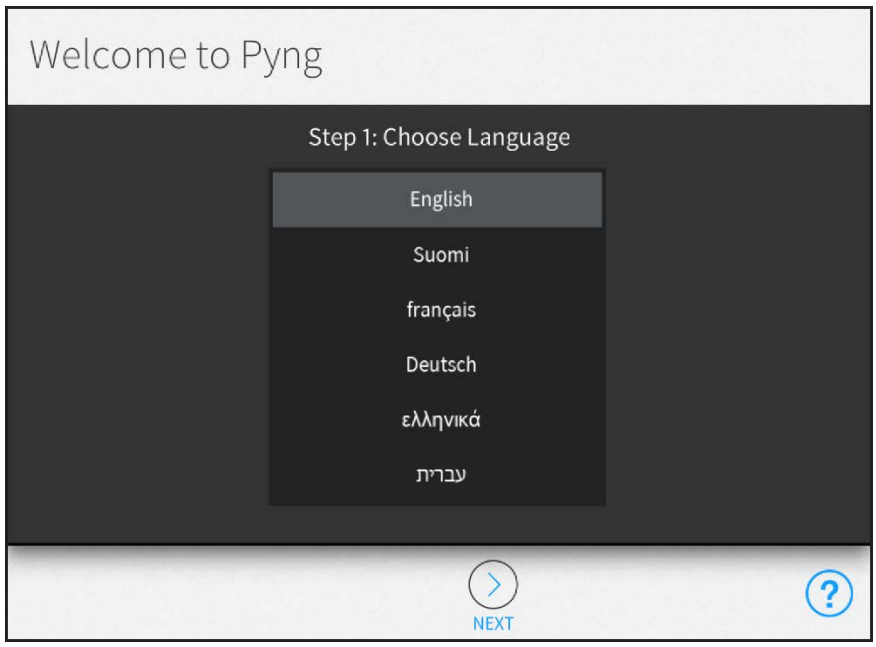
Set Up the Crestron Pyng System using a Deployment Code

1. Tap the Crestron Pyng app icon on the iPad device home screen.
2. The Crestron Pyng app connects to the CP4-R automatically, and a splash screen is displayed.

   Crestron Pyng Splash Screen

   NOTE: If the Crestron Pyng app does not connect to the CP4-R automatically, enter the CP4-R's hostname and tap **Connect**. The default hostname for a CP4-R is "CP4-R-xxxxxxxx," where xxxxxxxx is the last eight digits of the device's MAC address (excluding punctuation). The MAC address label is located on the bottom or rear of the device.
3. Tap the **Tap Here to Begin** text. The **Step 1: Choose Language** screen is displayed.

Step 1: Choose Language Screen

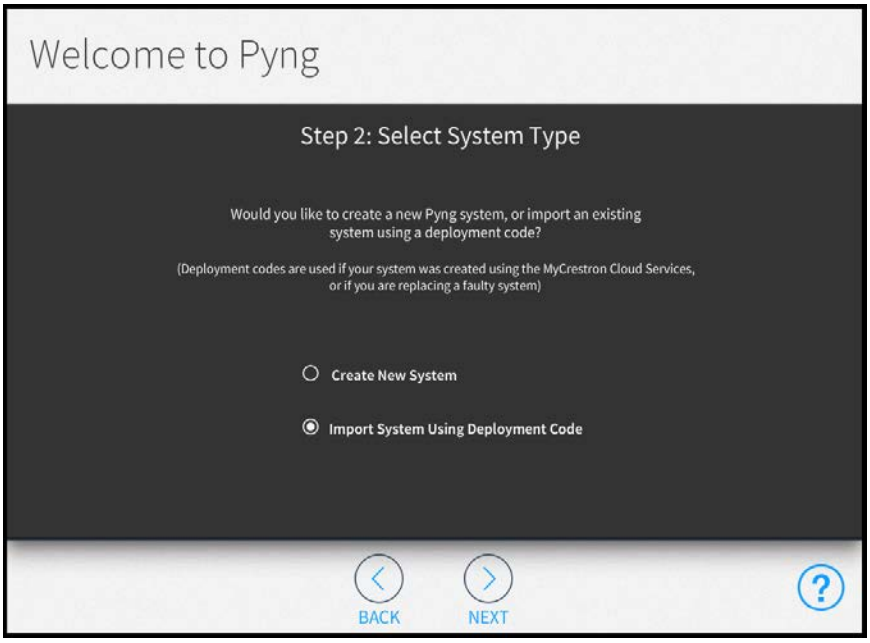


NOTES:

- Tap the help button (?) at any time to display help screens that explain the functions and features of each setup screen and provide instructional videos. The iPad device or setup device must be connected to the network to access videos.
- Tap the **BACK** button (**<**) at any point during the setup process to return to the previous screen.

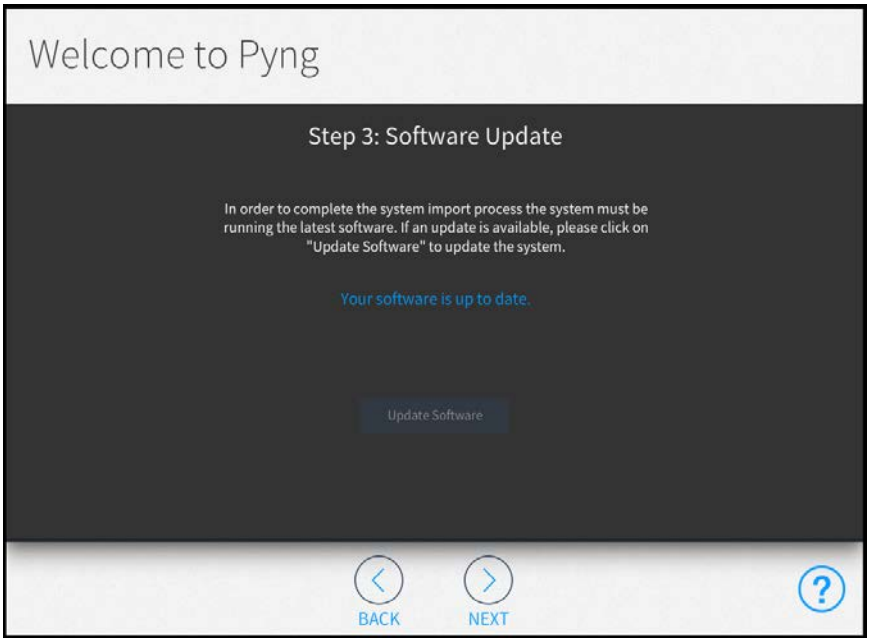
4. Swipe through the provided options to select a language that will be displayed by the system.
5. Tap the **NEXT** button (**>**). The **Step 2: Select System Type** screen is displayed.

Step 2: Select System Type Screen



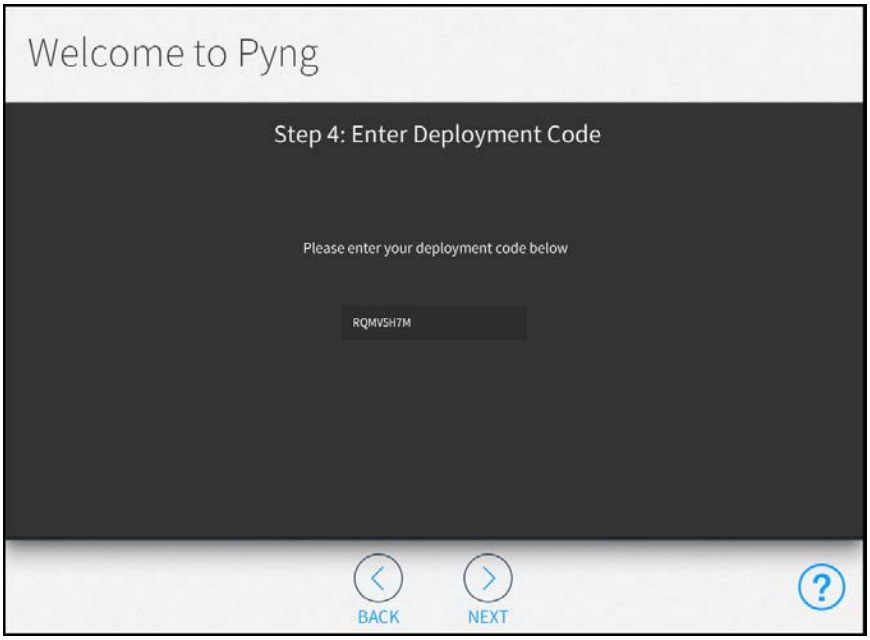
6. Tap the **Import System using Deployment Code** radio button and then tap the **NEXT** button (**>**). The **Step 3: Software Update** screen is displayed.

Step 3: Software Update Screen



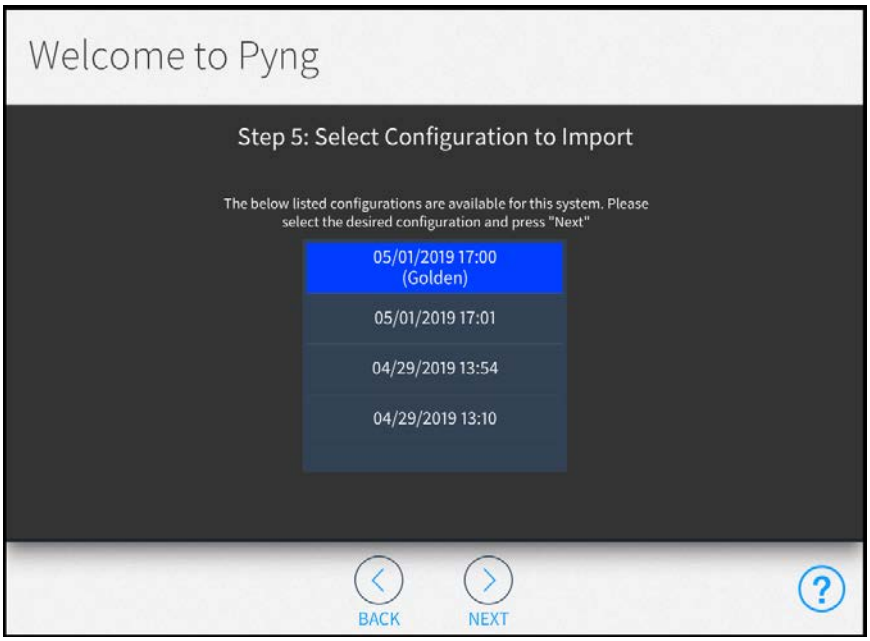
7. The Pyng software must be up to date to use a deployment code. If necessary, tap the **Update Software** button to update the software.
8. Tap the **NEXT** button (**>**). The **Step 4: Enter Deployment Code** screen is displayed.

Step 4: Enter Deployment Code



9. Enter the deployment code that was generated in ""Generate a Deploy Code" on page 259" "Generate a Deploy Code" on page 259.
10. Tap the **NEXT** button (**>**). The deployment code is validated and then the **Step 5: Select Configuration to Import** screen is displayed.

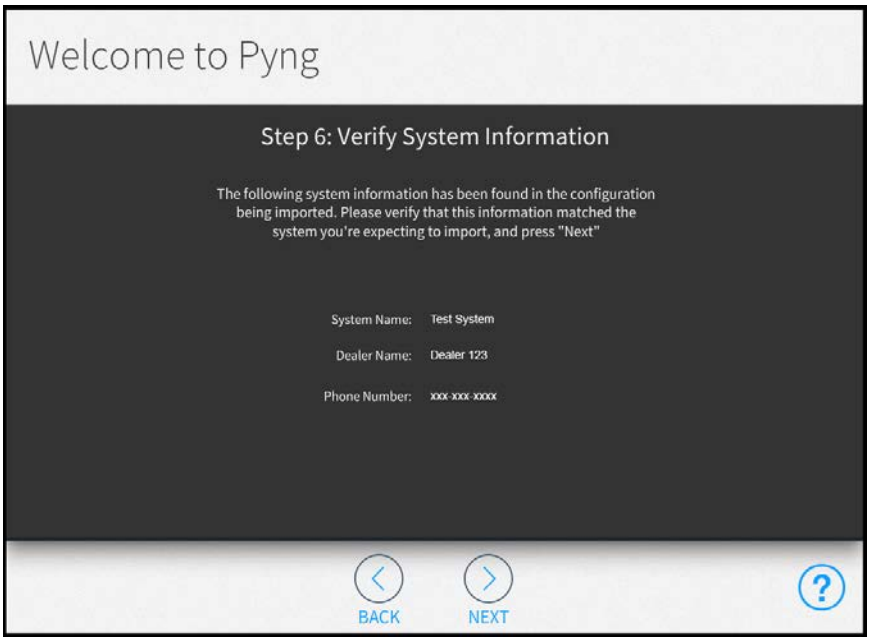
Step 5: Select Configuration to Import Screen



11. Tap the configuration that you wish to import. The configuration is downloaded from MyCrestron.

12. Tap the **NEXT** button (**>**). The **Step 6: Verify System Information** screen is displayed.

Step 6: Verify System Information Screen



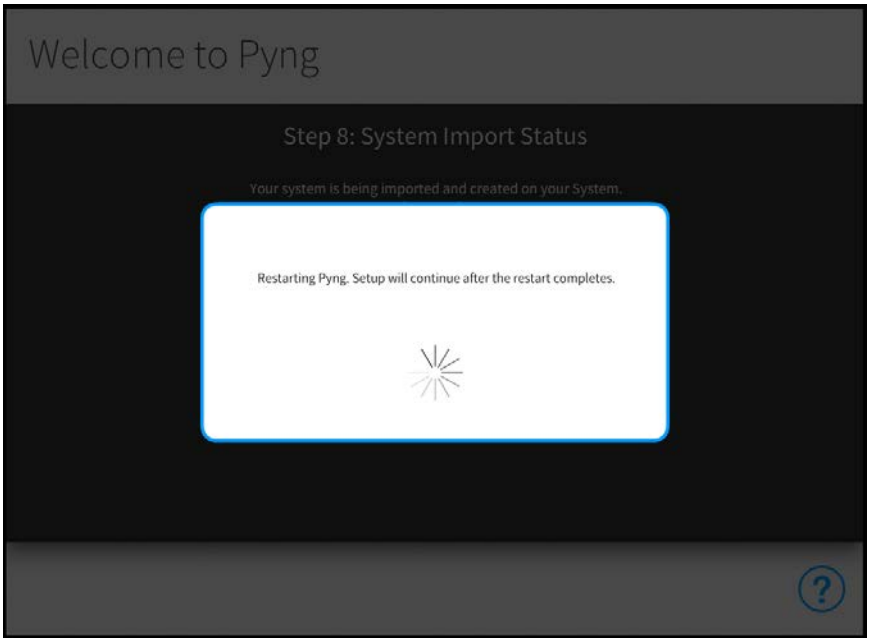
CAUTION: The imported system configuration will replace the configuration that is currently on the system. All information on the device will be lost if it is not backed up on MyCrestron. This process cannot be undone.

13. Tap the **NEXT** button (**>**) to confirm that you want to import the system configuration. The **Step 7: Loading System Information** screen is displayed while the system information is loaded onto the device.

NOTE: The system information is typically loaded to the system very quickly. The Loading System Information screen may be visible for a very short period of time.

14. The **Step 8: System Import Status** screen is displayed and the device restarts.

Step 8: System Import Status



15. If necessary, register the CP4-R with an Amazon® software Alexa™ voice services account or a Google® software Google Assistant™ voice services account. For more information, refer to "Voice Control Settings" on page 120.
16. Update the hostname of the CP4-R.

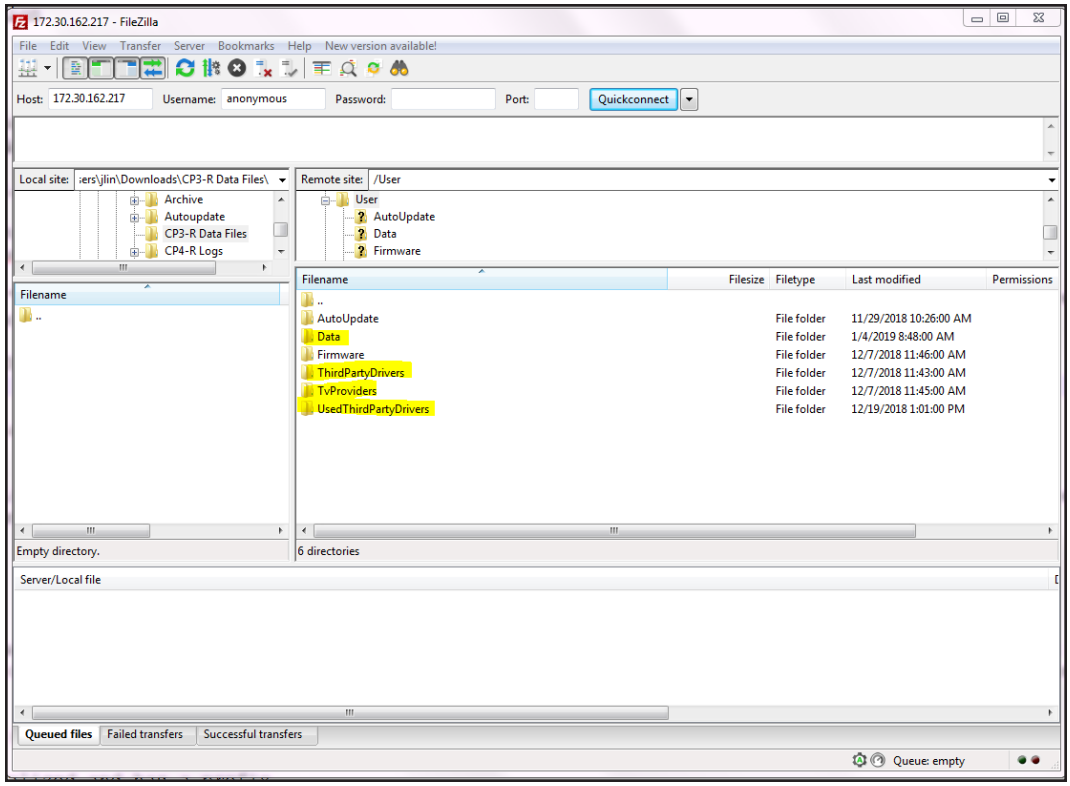
    The hostname on the CP4-R must match the hostname on the CP3-R or CP4-R that was written down during the "Generate a Deploy Code" on page 259.

    a. Tap **Ethernet Settings** on the **Installer Settings - System Configuration** screen to display the **Ethernet Settings** screen.
    b. Enter the hostname.
    c. Tap **Apply**. A dialog box is displayed to confirm the changes.
    d. Tap **OK** to save the changes and to reboot the device using the new Ethernet settings.
17. Reboot the router to restart the DNS server.

Method 2: Copy Data from the CP3-R

1. Connect to the CP3-R using an FTP client (such as FileZilla).
2. Copy the following folders (highlighted in the image below) from the CP3-R to a location on the computer.
   - User\Data
   - User\ThirdPartyDrivers
   - User\TvProviders
   - User\UsedThirdPartyDrivers

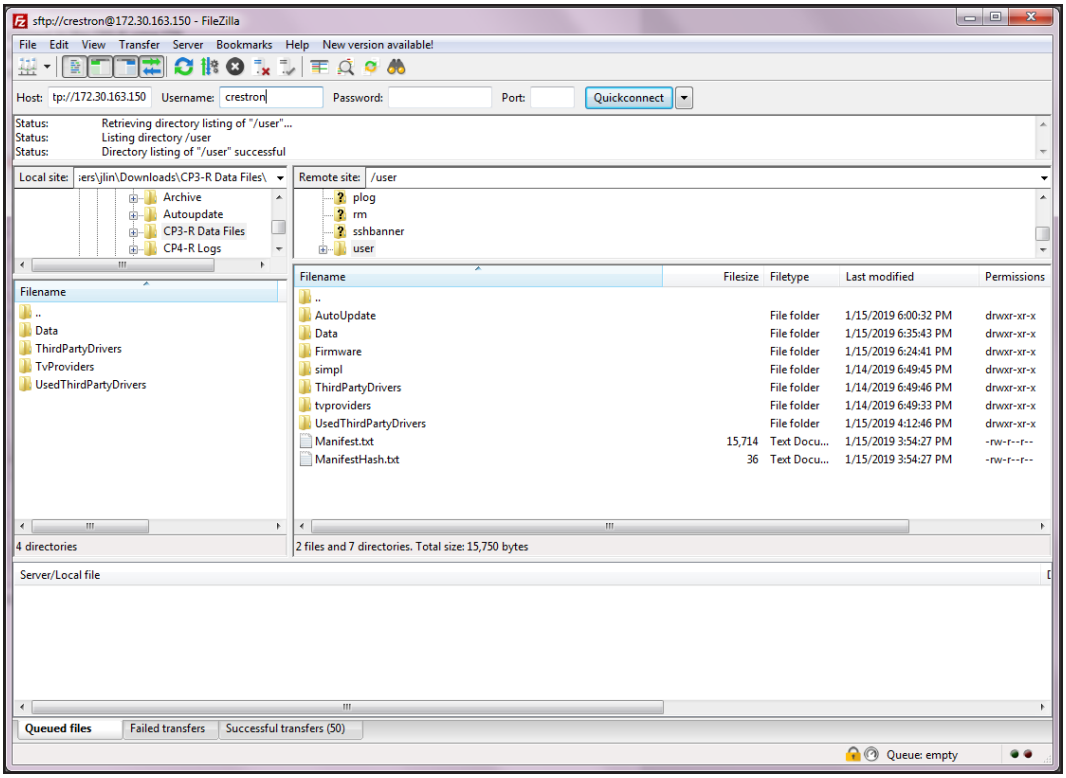
   CP3-R User Directory



3. Connect to the CP4-R console using the Text Console tool in Crestron Toolbox.
4. Issue the following console commands to stop the Crestron Pyng program:
   - `Enableprogramcmd`
   - `Stopprog -p:0`
5. Connect to the CP4-R over SFTP (Simple File Transfer Protocol) using the device login credentials.

   NOTE: The default username is "crestron" and there is no default password.

CP4-R Connection over SFTP



a. Delete all folders in the "User" directory except for "AutoUpdate."

b. Copy the User folders saved in step 2 from the computer to the CP4-R "User" directory.

6. Connect to the CP4-R console and issue the `hostname [hostname]` command to change the CP4-R hostname to match what was used for the CP3-R.

7. If necessary, unregister the CP3-R from the Amazon® software Alexa™ voice services account or the Google® software Google Assistant™ voice services account. For more information, refer to "Voice Control Settings" on page 120.

   - If the existing Crestron Pyng system is still available, tap **Voice Control Settings** on the **Installer Settings - System Control Options** screen to display the **Voice Control Settings** screen and then click **Unregister**.
   - If the existing Crestron Pyng system is no longer available, navigate to https://echoadminportal.crestronfusion.com/#/. Ensure that the control system ID shown in the portal matches the MAC address of the CP3-R and then click **Unregister**.

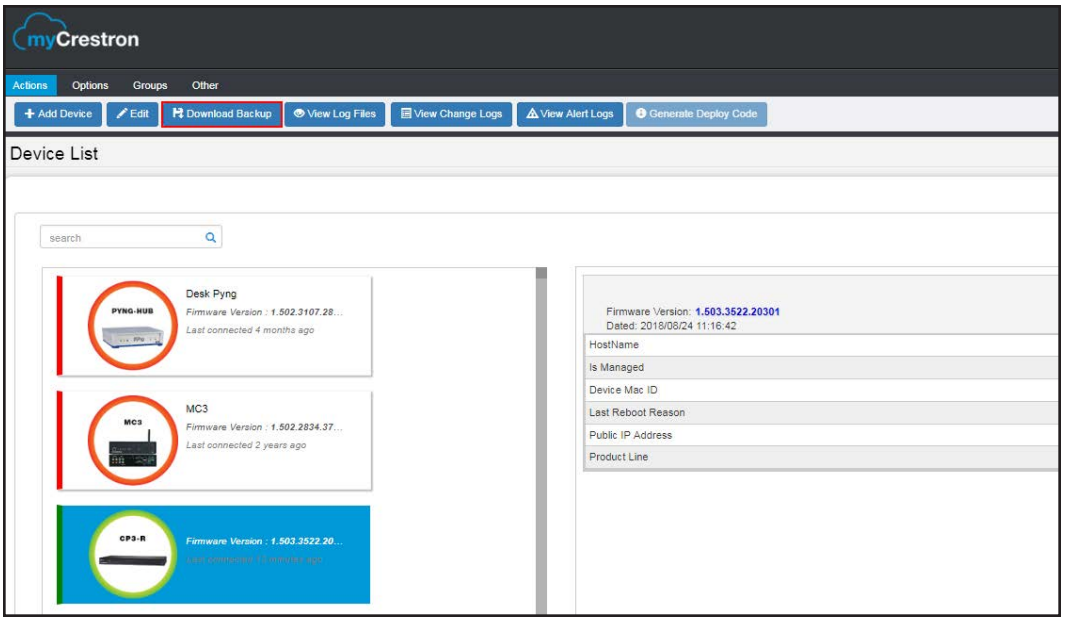
NOTE: The homeowner's Amazon or Google credentials may need to be entered to unregister the CP3-R .

8. Reboot the appropriate components:
    - Reboot the CP4-R by issuing the `reboot` command in the console.
    - Restart the DNS server. In most cases, this is accomplished by rebooting the router.
    - Reboot all connected touch screens and Ethernet devices.
9. Register Alexa to the CP4-R. For more information, refer to "Voice Control Settings" on page 120.
10. Reconfigure the MyCrestron DNS service (if applicable). For more information, refer to "Reconfigure MyCrestron DDNS" on page 274.

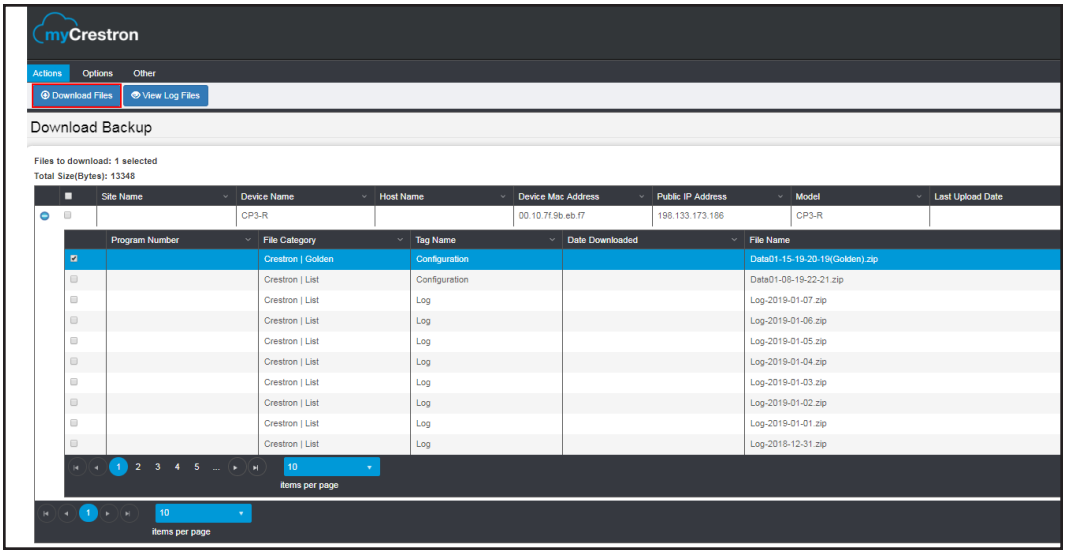
Method 3: Use a CP3-R Golden Configuration

1. Log into https://portal.my.crestron.com using the MyCrestron.com subdomain that is paired with the system.
2. Select the CP3-R from the device list.
3. Click **Download Backup**.

   MyCrestron Portal - Download Backup

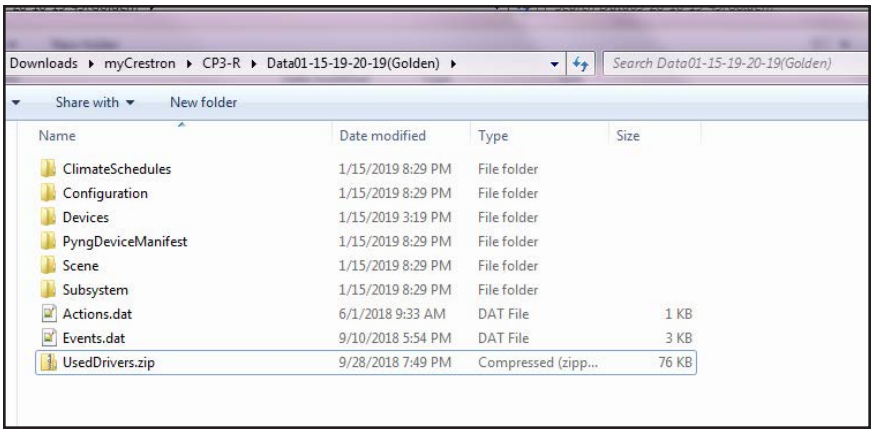


4. Expand the file list for the CP3-R and select the golden configuration. The file category for this configuration is "Golden" and the Tag Name is "Configuration."
5. Click **Download Files** and confirm to download the backup.



6. Extract the "data[MM-DD-YY-HH-MM](Golden).zip" file inside the myCrestron.zip file to the computer.

   Golden Configuration ZIP File

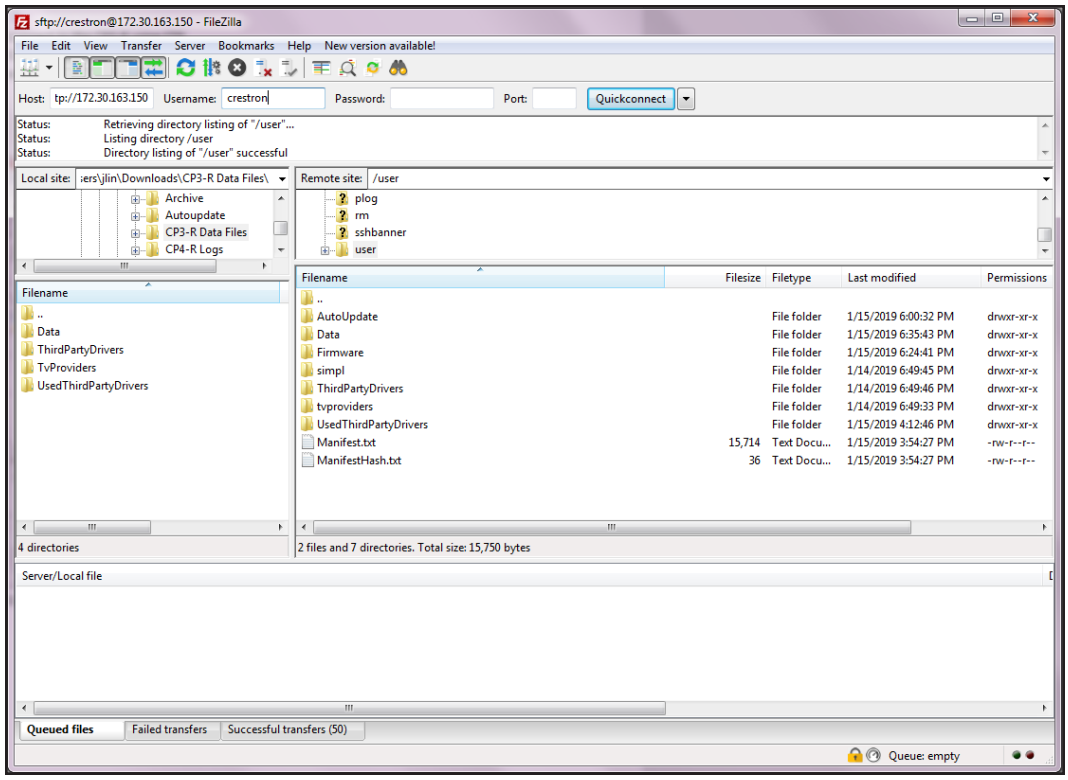


7. Connect to the CP4-R console using the Text Console tool in Crestron Toolbox.
8. Issue the following console commands to stop the Crestron Pyng program:
   - `Enableprogramcmd`
   - `Stopprog -p:0`

9. Connect to the CP4-R over SFTP (Simple File Transfer Protocol) using the device login credentials.

   NOTE: The default username is "crestron" and there is no default password.

   CP4-R Connection over SFTP



   a. Delete all folders in the "User" directory except for "AutoUpdate."

   b. Copy the content of the extracted "data[MM-DD-YY-HH-MM](Golden).zip" file from the computer to the "User" directory.

10. Connect to the CP4-R console and issue the `hostname [hostname]` command to change the CP4-R hostname to match what was used for the CP3-R.

11. If necessary, unregister the CP3-R or CP4-R from the Amazon® software Alexa™ voice services account or the Google® software Google Assistant™ voice services account. For more information, refer to "Voice Control Settings" on page 120.

    - If the existing Crestron Pyng system is still available, tap **Voice Control Settings** on the **Installer Settings - System Control Options** screen to display the **Voice Control Settings** screen and then click **Unregister**.
    - If the existing Crestron Pyng system is no longer available, navigate to https://echoadminportal.crestronfusion.com/#/. Ensure that the control system ID shown in the portal matches the MAC address of the CP3-R or CP4-R and then click **Unregister**.

NOTE: The homeowner's Amazon or Google credentials may need to be entered to unregister the CP3-R or CP4-R.

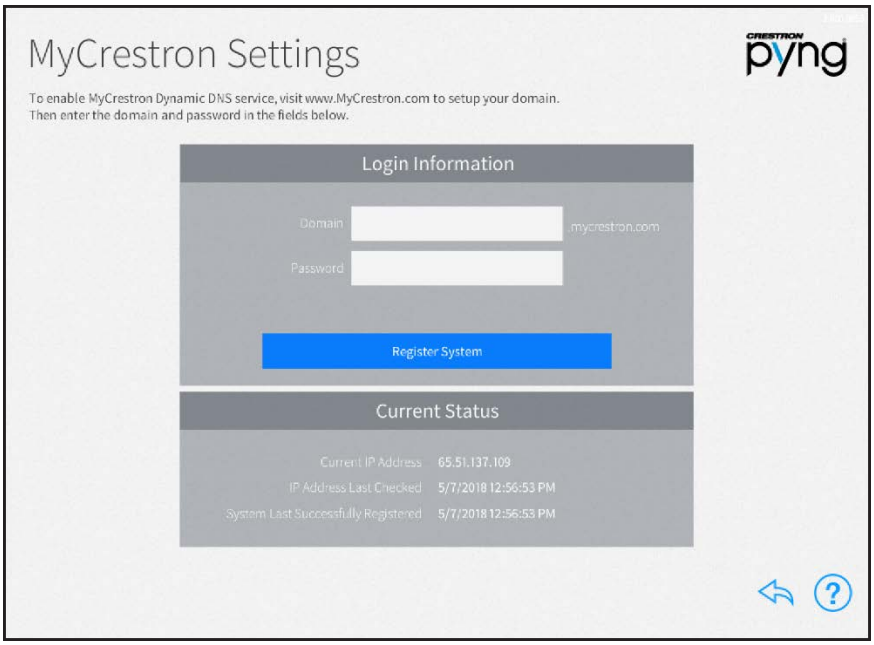
12. Reboot the appropriate components:
    a. Reboot the CP4-R by issuing the reboot command in the console.
    b. Restart the DNS server. In most cases, this is accomplished by rebooting the router.
    c. Reboot all connected touch screens and Ethernet devices.
13. Register Alexa to the CP4-R. For more information, refer to "Voice Control Settings" on page 120.
14. Reconfigure the MyCrestron DNS service (if applicable). For more information, refer to "Reconfigure MyCrestron DDNS" on the next page.

Reconfigure MyCrestron DDNS

To reconfigure MyCrestron DDNS using the Crestron Pyng configuration utility:

1. In the CP3-R configuration utility, tap the gear button on the bottom right of the Setup screen to display the **Installer Settings** screen.
2. Navigate to **System Control Options** > **MyCrestron Dynamic DNS** to display the **MyCrestron Settings** screen.
3. Record the domain and password shown for the CP3-R.

   MyCrestron Settings Screen



4. Disconnect the CP3-R from the network.
5. Dissociate the CP3-R MAC address from the MyCrestron account:
   a. Navigate to https://www.crestron.com/Support/Tools/Applications/MyCrestron-Dynamic-DNS-Service.
   b. Find and select the domain that was associated with the CP3-R.
   c. Scroll to the "Utilities" section at the bottom of the page.
   d. Click **Clear Mac Address**. The CP3-R MAC address will be dissociated from the domain.
6. In the CP4-R configuration utility, tap the gear button on the bottom right of the **Setup** screen to display the Installer **Settings** screen.
7. Navigate to **System Control Options** > **MyCrestron Dynamic DNS** to display the **MyCrestron Settings** screen.
   a. Enter the domain and password previously used for the CP3-R.
   b. Click **Register System** to register the CP4-R with MyCrestron.

To reconfigure MyCrestron DDNS using console commands (via the Text Console tool in Crestron Toolbox):

1. Connect to the CP3-R with the Text Console tool.
2. Issue the `mycrestron` command.
3. Record the domain and password that are returned by the command.
4. Disconnect the CP3-R from the network.
5. Dissociate the CP3-R MAC address from the MyCrestron account:
    a. Navigate to https://www.crestron.com/Support/Tools/Applications/MyCrestron-Dynamic-DNS-Service.
    b. Find and select the domain that was associated with the CP3-R.
    c. Scroll to the "Utilities" section at the bottom of the page.
    d. Click **Clear Mac Address**. The CP3-R MAC address will be dissociated from the domain.
6. Connect to the CP4-R with the Text Console tool.
7. Issue the `mycrestron [domain] [password]` command, where `[domain]` and `[password]` are the CP3-R values returned in step 3. The CP4-R should register with MyCrestron within a minute.
8. Issue the `mycrestron` command to confirm the correct settings.

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