SAVANT

Lighting and Keypad Programming Guide

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This document outlines the software-side programming process for Savant Lighting products using the RacePoint Blueprint Lighting and Keypad Manager. The Lighting and Keypad Manager interface has been fully redesigned as of the da Vinci 9.0 runtime software release.

Details covered in this Programming Guide include:

- General information on network discovery and binding for keypads and other SavantLighting components (refer to the relevant Product documentation for device-specific deployment information, available via the Product page on the Savant Store, or on the Savant Customer Community Knowledge Base).
- Programming settings for loads and lighting scenes.
- Programming keypad buttons for control of lighting or other services.
- Configuring Smart Groups for Bluetooth Low Energy (BLE) Smart Bulbs and LED Strips, and DMX/0-10V lighting.

To access the Lighting and Keypad Manager within Blueprint, navigate to: **Tools > Savant Lighting and Keypads**, or select the **Manage Lighting** option from the main toolbar by clicking the icon shown at left.

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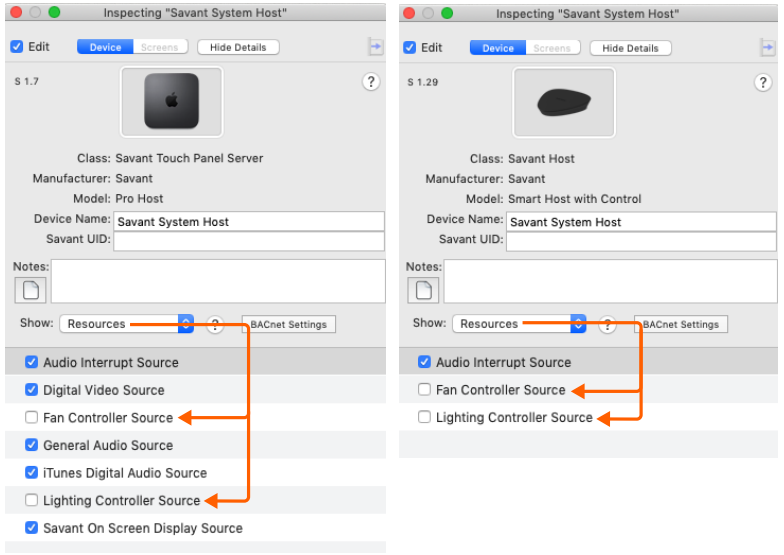
1. RacePoint Blueprint (Preliminary Setup)

The sections below show initial steps required within RacePoint Blueprint prior to adding and configuring lighting devices.

1.1 Enable Lighting Controller Function on Host

For the Savant Host to function as a lighting and/or fan controller, the resource for the appropriate controller functionality must be enabled. By default, this functionality is disabled. Follow the steps below to enable the resources on the Host.

1. Open the Smart or Pro Host Inspector (Double-click the Host in RacePoint Blueprint).
2. Select **Resources** from the **Show:** drop-down menu as shown below.
3. Click the checkboxes to enable the **Lighting Controller Source** and/or **Fan Controller Source** resources.
4. Close the Inspector window.



NOTE - The example shows the Resources to enable on the SVR-5100S Pro Host and SHC-2000 Smart Host with Control. The resources and their locations are the same for other Host types not shown here.

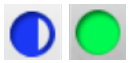
1.2 Enable Access to the Lighting and Keypad Manager

In order for the Lighting and Keypad Manager to be accessible, a valid Lighting Control Service must be generated for the configuration with the Savant Host as the source. Ensure that the Savant Host and a Generic Network Switch have been added to the layout window and a connection has been made between the Host ethernet port and a port on the switch. With the Lighting Controller Source resource enabled as shown in the section above, select the Generate Services icon from the RacePoint Blueprint toolbar to generate a Lighting Control Service.

The color of the State icon in the RacePoint Blueprint toolbar displays the current state of services as shown below:

The Manage Lighting icon will be grayed out and Lighting and Keypad Manager cannot be accessed.

- There are either no valid service paths connected within the configuration to generate a service or,
- Services must be regenerated due to a change in the configuration.



The Manage Lighting icon will be selectable, given that the resource has been enabled on the Savant Host.

- Services have been generated and are up to date with the current configuration.

2. Lighting and Keypad Manager Overview

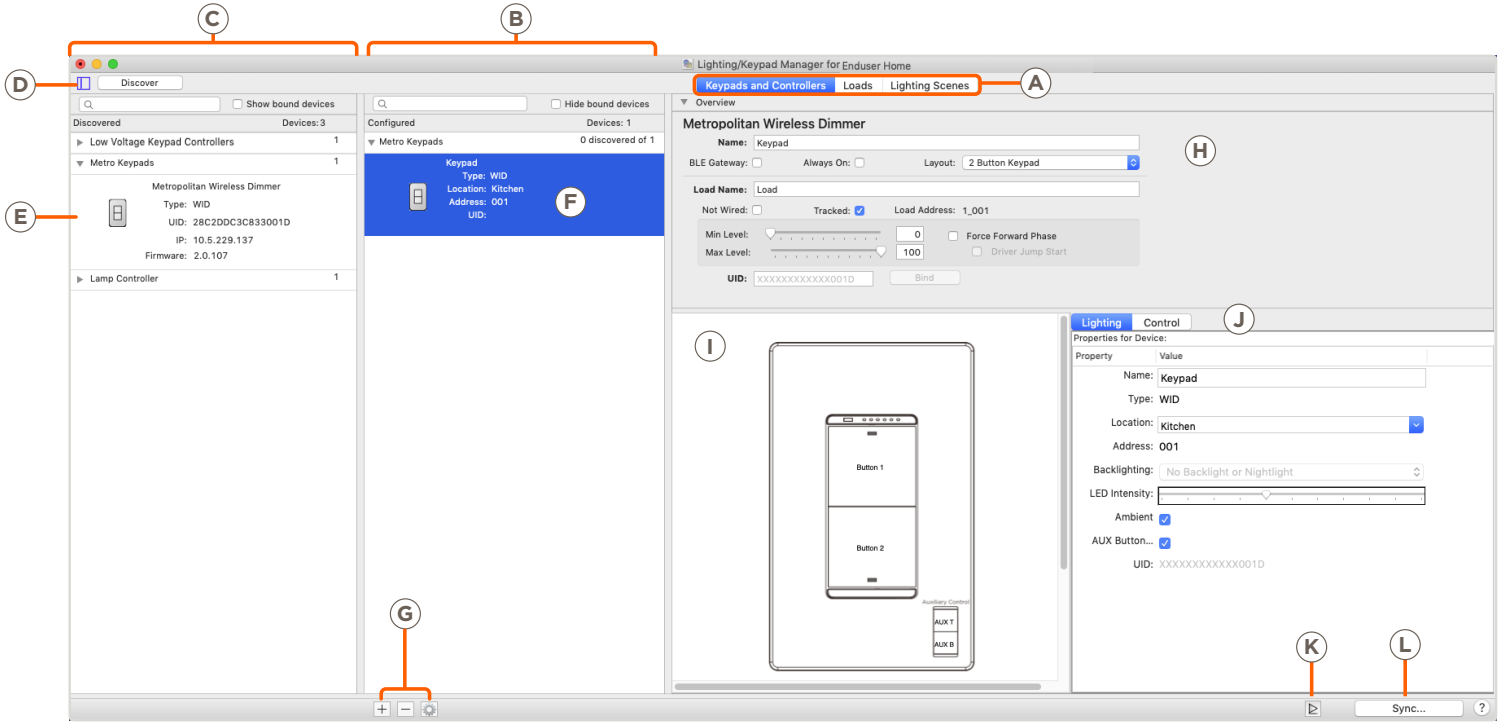
The Savant Lighting and Keypad Manager within RacePoint Blueprint allows the installer to discover Savant Lighting devices on the local network, add devices to the configuration, bind them to specific device UIDs, and program their behavior. Configured lighting devices and settings can then be exported to the Lighting Data Table for the configuration, and represented within Savant user interfaces such as the Pro App, Pro Remote, or Touch Panel. The diagrams and tables in the subsections below show a high-level overview of the main features of the Lighting and Keypad Manager.

2.1 Search Fields

All search fields within the Lighting and Keypad Manager allow for dynamic filtering based on an array of variables relevant to the tab or frame. For example, configured devices can be filtered by location, device type, name, or UID. See details on specific search features within relevant sections below.

2.2 Keypads and Controllers Tab

The Keypads and Controllers tab is the main tab used within the Lighting and Keypad Manager for adding lighting devices to the configuration and setting names, groupings, and programming, in addition to other device specific settings. This subsection provides a simple overview of the tab. Specific workflows for adding and programming devices in full detail can be found in the later sections of this document.

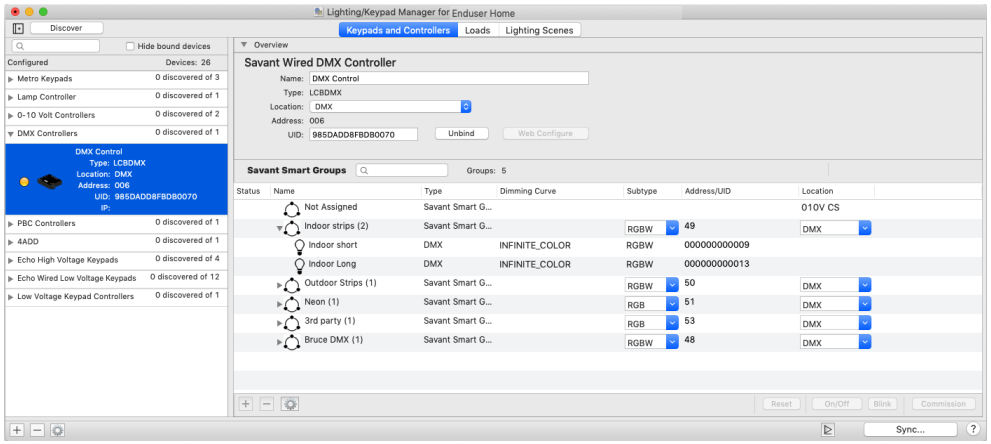


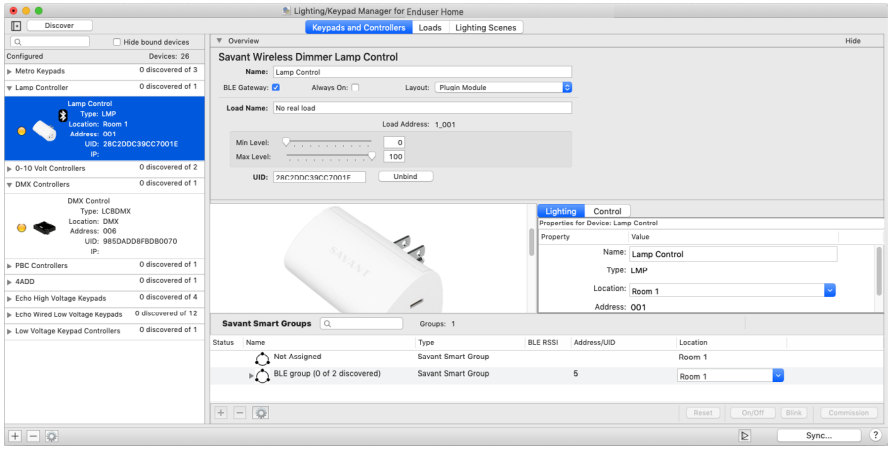
A	Main tab selector - click to toggle between **Keypads and Controllers** (shown in example above), **Loads**, and **Lighting Scenes**.
B	Configured Devices frame - shows lighting devices that have been added to the configuration, either manually or via network discovery.

Table Continued on next page

C	Discovered Devices frame - shows lighting devices that have been discovered on the network by the Lighting and Keypad Manager application. Must be on the same subnet as the SDE running RacePoint Blueprint.
D	Discovery controls - Select the frame icon to toggle the Discovery frame open or closed, (minimizing when not running active Discovery will improve usability and UI space). Select **Discover** to begin scanning for Savant Lighting devices on the local network.
E	Discovered devices visible on the local network are displayed in this frame by Product Category. Use the disclosure triangle next to the category name to show or hide devices of that category.
F	Configured devices display in this frame using the same product category headings as the Discovery panel. Devices in this frame have been added to the configuration. It is possible for a device to be Discovered but not Configured, or vice versa. See Section 3 below for more details.
G	Configured Devices options: ⊞ - Select to manually add a new lighting device to the configuration. ⊟ - Select with a configured device highlighted to remove that device from the configuration. ⚙ - Select to view further options for configured devices - Expand All, Collapse All, Unbind All, Remove All, or group by device type, Location, or by Zone Grouping (must be configured).
H	Overview panel for selected configured device - The content and options displayed here will vary depending on the device selected. This pane deals with general device settings such as minimum/maximum dimmer level settings, whether a keypad is wired, tracked, or acting as a BLE gateway, or whether a Panel Bridge Controller load is energy-only.
I	Programming overview graphical UI (Keypad Only) - the content displayed in this area will vary depending on the type of configured device selected. In the example image above, a keypad is selected, and the graphical frame here displays an overview of the button layout. Click a button to select and define the programmed effects (see item J below).
J	The content displayed in this area will vary depending on the type of selected configured device. In the example above, a keypad is selected and this frame allows for programming of the button or dial selected in item I above. The drop-down menus can be used to configure the effects of each button.
K	Select this button to open the Services Requests States (SRS) window. This allows a state or service request to be assigned to the selected field or button by dragging and dropping.
L	Select the Sync button once all Lighting and Keypad Manager programming is complete to sync data and settings to the Lighting Data Table automatically. See Section 8 below for further detail.

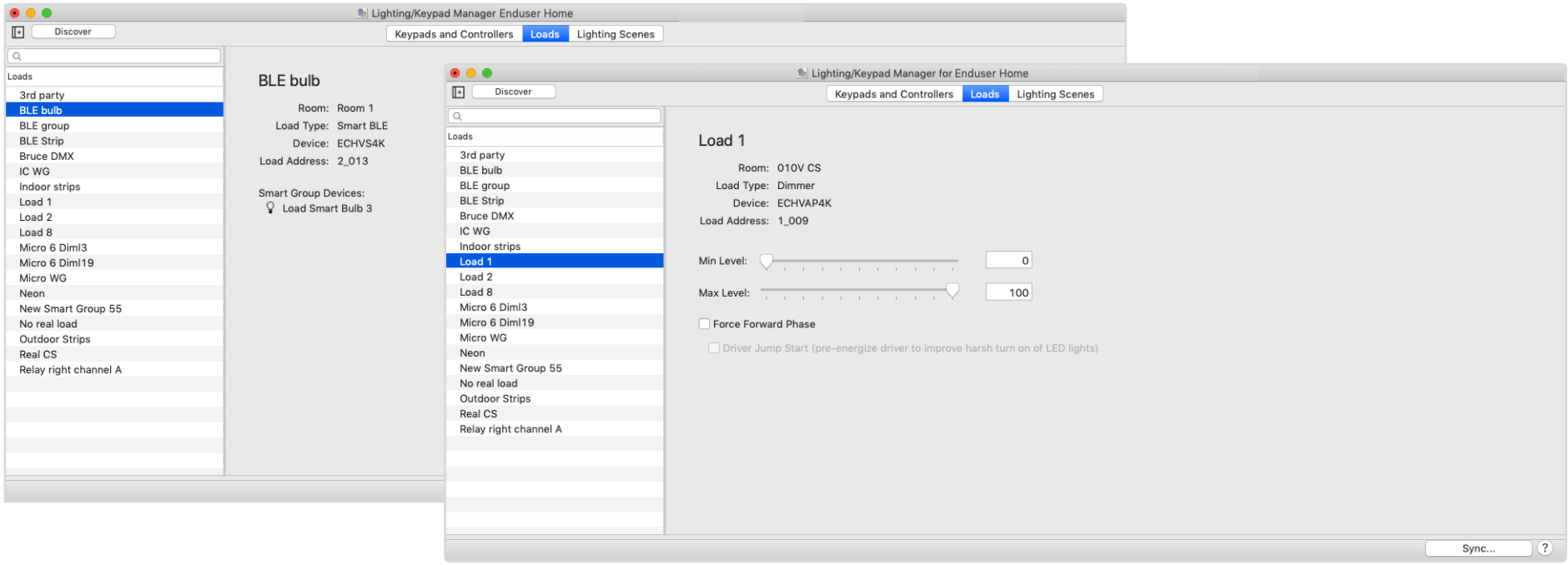
The images below show the frames described in items I and J above with a DMX Controller and a Lamp Controller (BLE Gateway) selected, respectively. DMX, 0-10V, BLE, and Panel Bridge controllers will all display Smart Grouping options for the loads they control, while programmable devices like Keypads or Lamp Controllers being used as BLE Gateways will display both a graphical/programming interface and a BLE Smart Group frame. For details on the process for adding and grouping lights with a BLE, DMX, or 0-10V controller, see Section 6 below.





2.3 Loads Tab

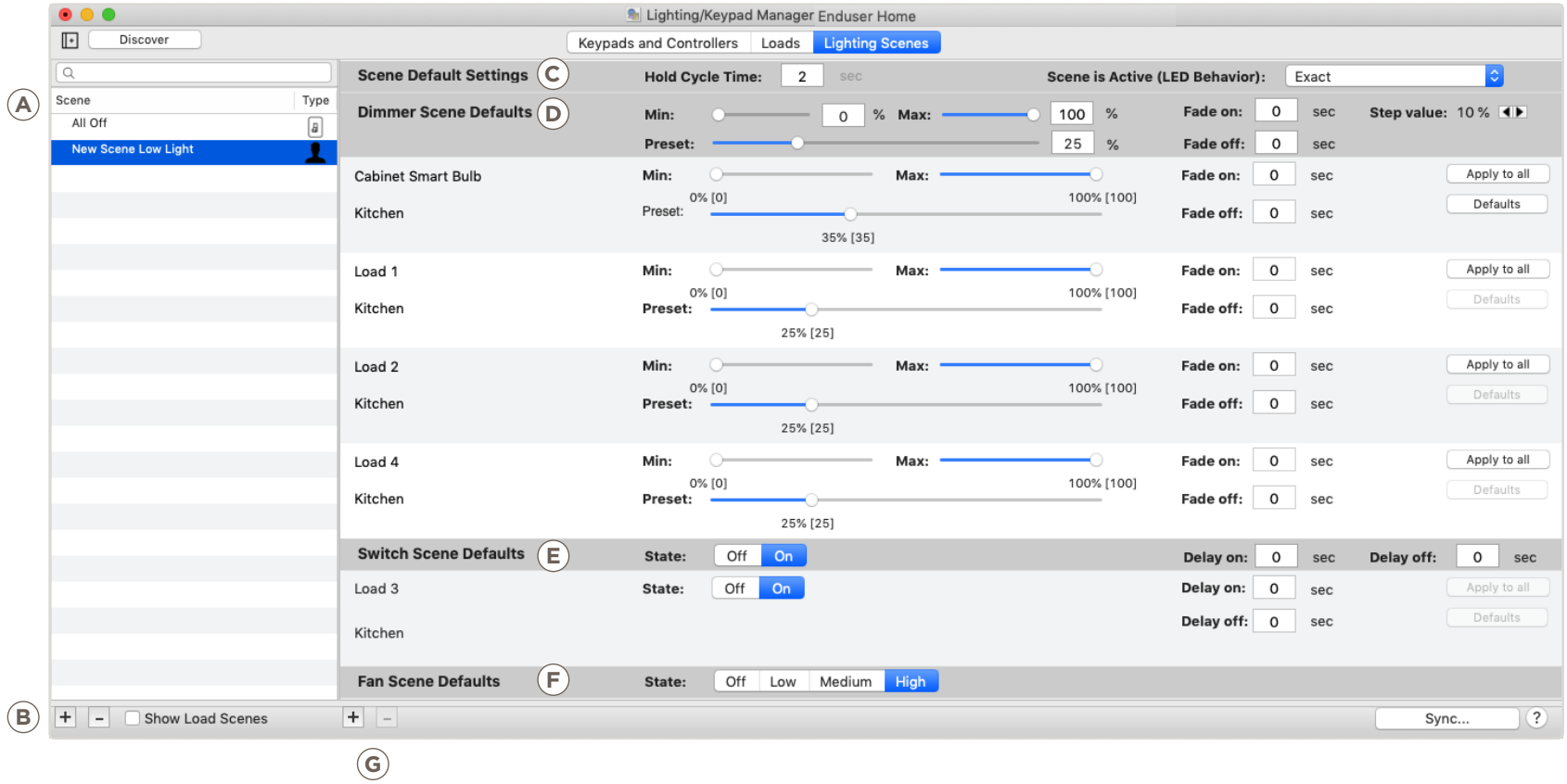
The Loads Tab provides a high level view of all configured dimmable lighting loads (simple On/Off switched loads will not display here), as well as information on their groupings, and options for any available settings. The specific settings displayed will vary based on the type of load and its controller. Load settings that can be changed from this tab, such as Minimum and Maximum dimmer values or the Force Forward Phase and Driver Jump Start options for supported loads can also be changed from the Keypads and Controllers tab. Smart Groups displayed for supported load types are set within the Keypads and Controllers tab. For details on specific keypad-based load settings, see Section 4 below. For details on Smart Groups for DMX, 0-10V, and BLE lighting, refer to Section 6 below.



2.4 Lighting Scenes Tab

The Lighting Scenes tab allows for the creation, removal, and settings configuration of Lighting Scenes. Different from Savant Pro App Scenes, Lighting Scenes must be programmed and configured by the installer within RacePoint Blueprint. This subsection will provide a high-level overview of the tab within the Lighting and Keypad Manager. For a detailed description of the recommended process for adding and configuring Lighting Scenes, refer to Section 7 of this document.

HELPFUL INFORMATION: Hover over the text of any field for tool tips on its usage,



A	Lighting Scene list - displays all currently configured Lighting Scenes. The Scene column shows the name given to each, and the Type column displays an icon which indicates whether this is a default load scene, or a user created scene ("All Off" and "New Scene Low Light" respectively in the example above).
B	+ - Select to add a new scene − - With an existing scene highlighted, select to remove the scene. **Show Load Scenes -** Click this checkbox to include the default Lighting Scene for each individual load. Load Scene settings define the general behavior of the given lighting load, and are not altered from the default settings in most cases.

Table Continued on next page

C	**Scene Default Settings -** this row defines values for Hold Cycle Time and LED Behavior applied to all lights within the selected scene. • Hold Cycle Time - the amount of time (in seconds) for a light to go from min to max (or max to min) when tied to a button with this function. • LED Behavior - Defines the way the scene will toggle when used with a touch panel.
D	**Dimmer Scene Defaults -** Defines the default settings for all dimmable lights added to the scene. All settings aside from Step Value can be defined individually for each dimmer within the Scene. • **Min / Max %** - Defines the lower and upper limits for dimmer value, 0 being off and 100 being full power. For example with the minimum set to 25% and maximum set to 75%, the default dimming range for the scene or light would be only the middle half of the possible range for the fixture. This adjusts the range covered during one Hold Cycle when using that function. • **Preset** - The default dimmer level that light(s) will be set to when the scene is made active. • **Fade On / Fade Off** - Time in seconds the light(s) will take to fade on or off when the scene is activated or deactivated. • **Step Value** (Scene Defaults only) - Default percentage change in dimmer value from a single button press up or down when the raise or lower functions are assigned. • **Apply to All / Defaults** (single load only) - these options are enabled only when the settings for at least one load included in the scene deviate from the scene defaults.
E	**Switch Scene Defaults** - Define values for any switched loads (On/Off only) included in the scene. • **State** - Defines whether the load will be on or off when the scene is made active • **Delay On / Delay Off** - Delay in seconds before the light(s) switch on or off when the scene is activated or deactivated.
F	**Fan Scene Defaults** - Default settings for any fan control loads included in the scene. State the Fan controller will set the load to when scene is made active.
G	Add or remove loads from the selected Scene. ⊞ - Select to add a load (open list of available loads by Location). ⊟ - With an existing load highlighted, select to remove from the scene.

3. Adding, Configuring, and Binding Lighting Devices

The following section describes the processes related to adding lighting devices to the RacePoint Blueprint configuration via the Lighting/Keypad Manager, including a general overview of Discovery and Configuration. For product-specific information, including details on Product-specific Discovery, Binding, and basic configuration, refer to the corresponding product's documentation, available via the Savant Customer Community.

With the updated Lighting and Keypad Manager (da Vinci 9.0 and higher Savant runtime software releases) there are now two possible workflows for discovery, configuration, programming, and binding of Savant Lighting devices, each outlined in one of the subsections below.

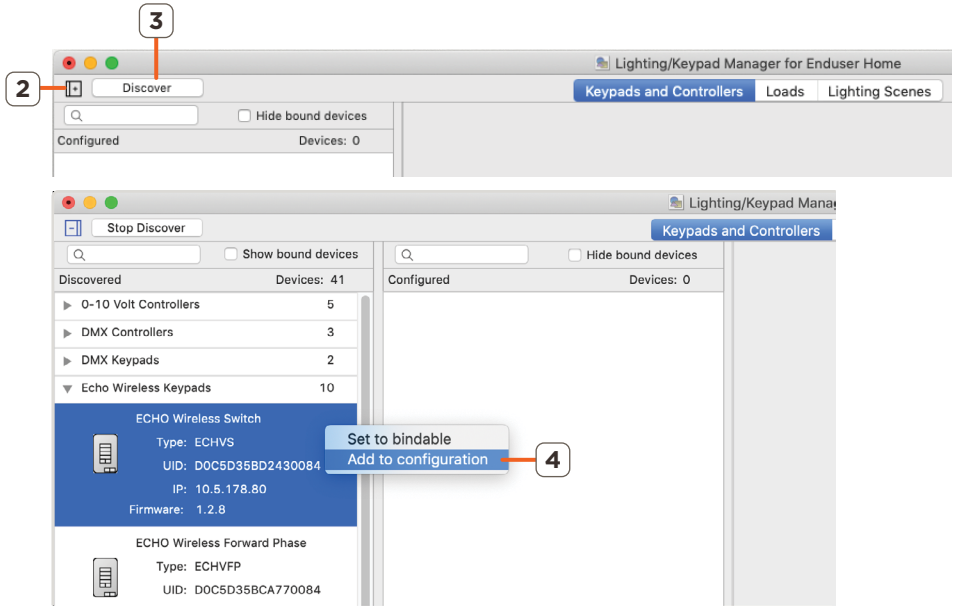
- **On-Site Configuration** - All RacePoint Blueprint configuration of Savant Lighting components is completed on-site, after physical deployment and network provisioning of the relevant devices (follow product Deployment Guides and/or Quick Reference Guides available on the Savant Customer Community).
- **Pre-Configuration** - Lighting devices are added to the Blueprint configuration manually before on-site deployment. Once physical installation and network provisioning are complete, devices can be discovered on the network and bound to the corresponding pre-configured components.

3.1 Adding Lighting Devices via Network Discovery (Configure On-Site)

Follow the steps below to configure lighting components in Blueprint on-site after physical deployment is complete, and all components are connected to the local network.

1. Within the RacePoint Blueprint configuration for the site, access the Lighting and Keypad Manager by navigating to **Tools > Savant Lighting and Keypads** from the main menu, or by selecting the **Manage Lighting** icon from the quick access toolbar.
2. Expand the Discovery panel by selecting the icon at the upper left corner of the window (see example image).
3. Click the Discover button to begin the network discovery process. This may take up to several minutes to complete.
4. Once a component has been discovered on the network and populates in the Discovered frame, right click (command+click) then select **Add to Configuration**. The component will then appear in the Configured frame with its UID bound.
5. Stop Discovery and proceed to any programming of keypad functions or Smart Groups.

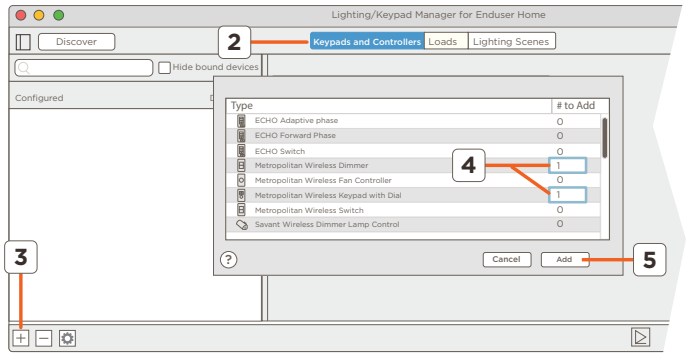
HELPFUL INFORMATION - For module controlled Low Voltage Keypads, click on the Control Module in the Discovered frame and select the disclosure triangle to view keypads and add to configuration.



3.2 Adding Lighting Devices Manually (Pre-Configure and Discover/Bind On-Site)

To add devices manually, follow the steps outlined below. This can be useful for pre-configuring components before being physically on site. It is recommended in this case to complete the binding process to save UIDs to the configuration when on site with physically deployed components.

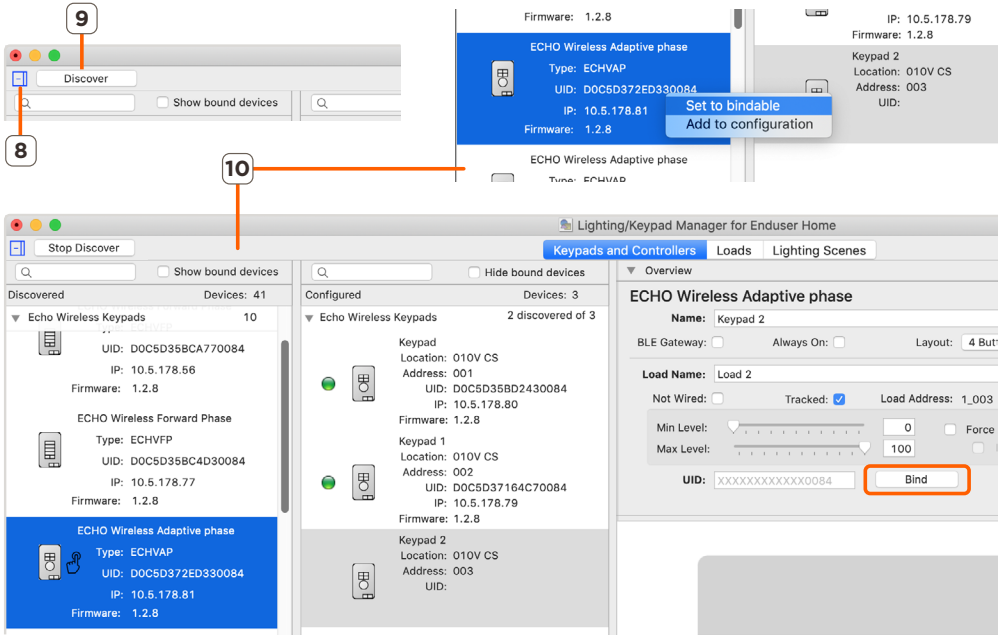
1. From the open RacePoint Blueprint configuration file, access the Lighting and Keypad Manager by navigating to Tools > Savant Lighting and Keypads, or by selecting the Manage Lighting Icon shown below. If the Lighting and Keypad Manager is not accessible, refer to Section 1 above.
2. Ensure that the **Keypads and Controllers** tab is selected, (this should be the default when Lighting and Keypad Manager is opened).
3. To add lighting devices manually, select the [+] icon at the lower left corner of the Configured Devices frame. This will bring up the device selection window.
4. Scroll through the list of available lighting devices. For each device type being added to the configuration, double-click the # To Add field and enter the number of each device type.
5. Once all devices have been selected and the appropriate numbers populated, select Add at the lower right corner of the window to return to the main Keypads and Controllers tab.
6. Confirm that all selected devices have been added to the Configured frame.
7. Proceed with any further off-site programming such as keypad button configuration, etc.



When on site, with physical installation and network provisioning of all devices complete:

8. Expand the Discovery panel by selecting the [+] icon at the upper left corner of the window (see example image).
9. Click the Discover button to begin the network discovery process. This may take up to several minutes to complete.
10. Discovered devices will populate in the Discovered frame. To associate these with the corresponding Configured components and bind their UIDs, there are two possible workflows:

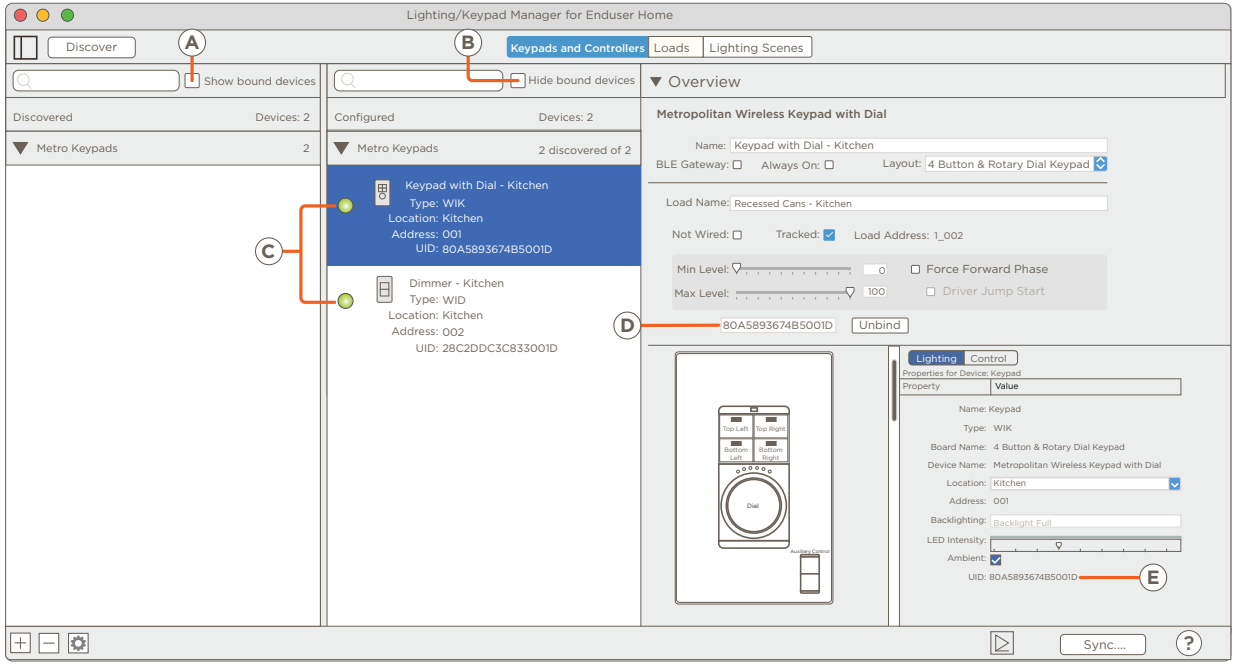
    - With Discovery running, press a physical button on any keypad. A button press icon will appear on the device in the Discovered list (see example image). Select the corresponding pre-configured device from the Configured list. Select Bind within the Overview panel to populate the UID and pair the Discovered and Configured keypad.
    - To Bind components without a physical button press, right-click (command+click) the Discovered device and select **Set to Bindable**. This option simulates a physical button press - the button press icon will appear on the device in the Discovered frame. Select the corresponding Configured device and click Bind in the Overview frame to populate the UID.



4. Discovery and Binding Status Indicators

The process of binding lighting devices within Lighting and Keypad Manager refers to saving the device Unique Identifier (UID) within the RacePoint Blueprint configuration. A general overview of the two main recommended methods of binding are described in the previous section of this document. The specific steps of this process may vary depending on the individual lighting device type, and are covered in detail within the relevant product documentation (Product Deployment Guides, available via the Savant Customer Community). Binding a device ensures that when the configuration is uploaded to the Savant Host, the Host is able to locate and communicate with the bound device on the local network. This section will briefly describe how to recognize a Bound vs. Unbound device within Lighting and Keypad Manager.

A	Enable checkbox to show Bound devices within Discovery frame.
B	Enable checkbox to hide Bound devices within Configured frame.
C	UID field will be populated for Bound devices. LED icon indicator shows Binding/network discovery status: • None - Not Bound (no UID assigned). • Green - Bound and Discovered. • Yellow - Bound, but Discovery not yet run. • Red - Bound, not Discovered with Discovery process completed.
D	The device UID will display here for Bound devices with the option to Unbind with the button to right. Manually add a UID or populate via Discovery and select same button to Bind.
E	UID will also display here within Keypad Properties frame for Bound devices.



5. Programming Savant Keypads

Once lighting devices have been added to the Configured list, assigning actions to keypad buttons can be completed at any point prior to syncing the Lighting Data Table and uploading the configuration to the Savant Host. This section provides an overview of general keypad programming within the Lighting and Keypad Manager. For simple, device-specific instructions on how to assign a lighting scene to a keypad button, refer to the Deployment Guide for the relevant device, available on the Savant Customer Community:

- 009-1807-xx Wireless Lighting Deployment Guide
- 009-1731-xx Low-Voltage Keypad Deployment Guide

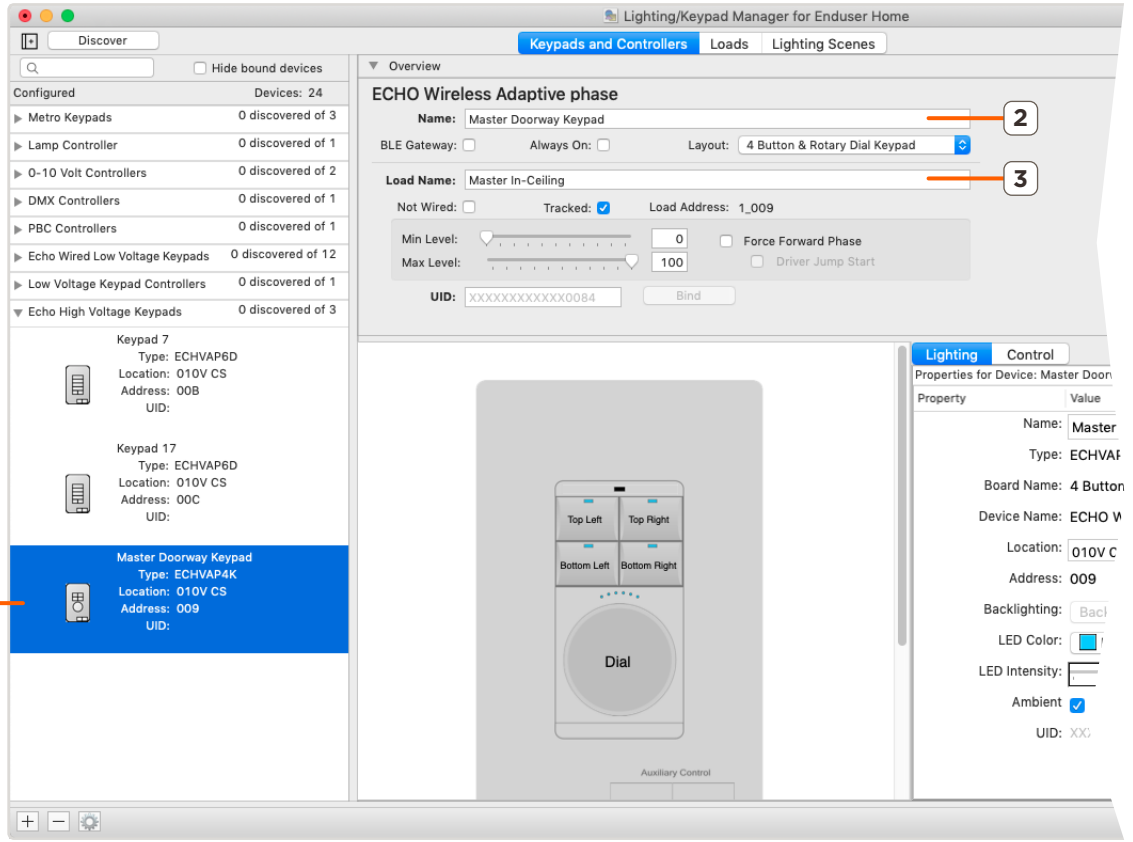
To add a programmed action to a button, dial, or other interface component for a configured programmable lighting device, refer to the diagrams and follow the steps outlined below.

NOTE: Depending on the action being assigned to a button, it may be necessary to refer to later sections of this document, or to complete other steps outlined in Product-specific documentation first in order to create or configure the action.

5.1 Name Keypad and Load

The example here shows an Echo Wireless Keypad being programmed. While certain options or settings may vary slightly across devices, the general programming process is the same.

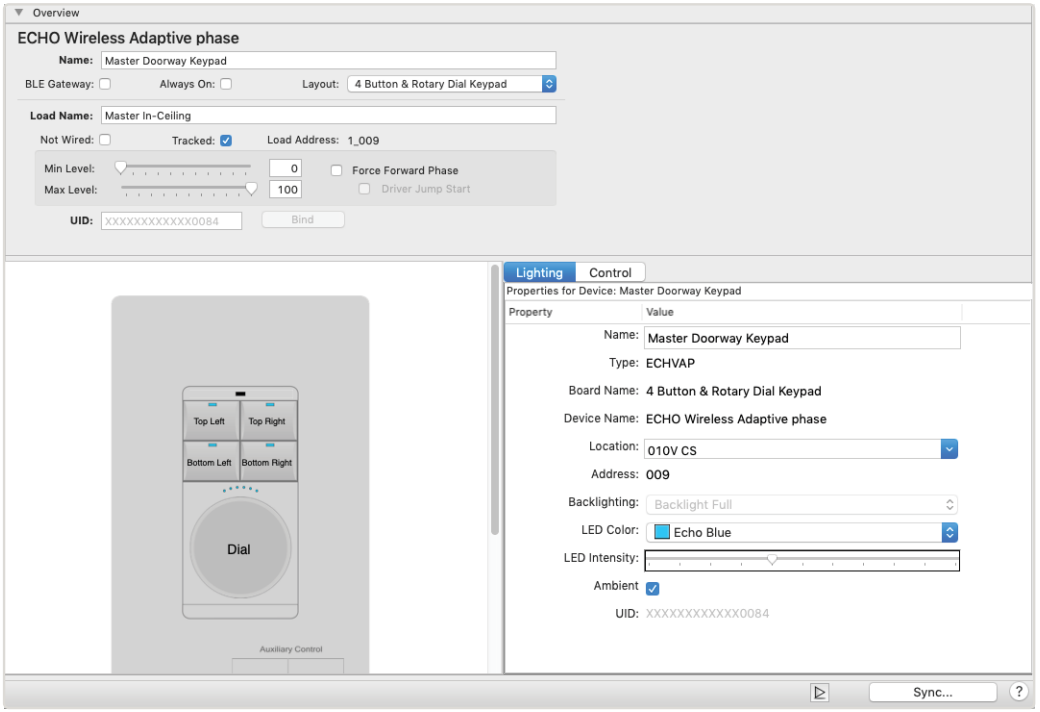
1. Select a keypad or controller from the Configured list.
2. Double-click the Name field and edit the default assigned name. Savant recommends using a naming scheme which identifies the physical location of the keypad.
3. Double-click the Load Name field and edit the name of the lighting load attached to the keypad.
    - If there is no physically wired load attached to the keypad, check the option for Not Wired. This will disable load-based settings for the device.



5.2 Define Keypad Settings

Refer to the image and table below for descriptions of the available fields and settings for Savant keypad programming. The settings detailed below apply to the keypad as a whole, rather than a particular button.

BLE Gateway	Check this option if the keypad (or lamp controller) will be used as a gateway for BLE devices (see Section 6).
Always On	Check this option for components for which the associated load should always stay powered such as with BLE lighting. This should be set at deployment and not changed if possible, Altering this setting too often can damage hardware.
Layout	This field is available for Echo keypads only - select the button layout for the particular keypad from the drop-down menu.
Not Wired	Check this option for keypads not connected to a load. Keypads without a load operate as Control-only devices, and can have any service request (including AV or lighting) assigned via the Control tab.
Load Address	Set automatically when devices are added, this is the logical address for associated load. Not editable.
Min / Max Level	Adjust sliders or text fields to set dimming range for supported loads.



HELPFUL INFORMATION: Hover over the title text of any field for tool tips on its usage,

Force Forward Phase	Check this option with Adaptive Phase keypads to force the use of forward phase.
Driver Jumpstart	Requires Force Forward Phase to be enabled. Check this option in cases where the minimum dimmer level does not provide sufficient power to engage the driver for the lighting load. This setting ensures that the minimum voltage needed to power the driver (as defined by driver firmware) is sent for any dimmer setting above Off.
UID	Bound devices will display UID here, and button to right of field will show option to Unbind. For un-bound devices, enter UID manually and select Bind, or refer Product-specific documentation for Binding information.
Name	Keypad/component name, set in Section 4.1 above.
Type **Board Name** **Device Name**	Non-editable fields, information-only. Set based on configured keypad and Layout type.
Location	Zone within the configuration that corresponds to the keypad's physical location on site. Select a Zone from the drop-down menu.
Address	Logical keypad address, shown for relevant devices, not editable.
Backlighting	Set button backlighting options. By default, this field is greyed-out and not editable. The Ambient checkbox must be unchecked in order to edit Backlight settings (see Ambient entry below).

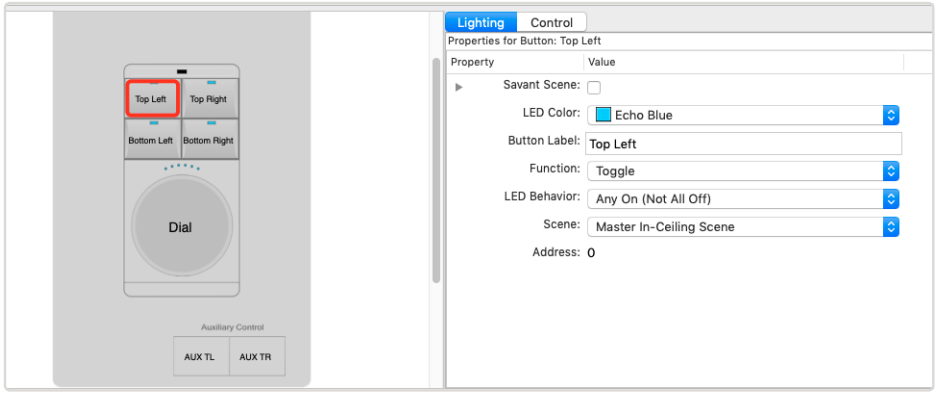
LED Color	Displays LED color setting options for supported devices. For Echo keypads, the LED color on the button display preview will change with new selection.
LED Intensity	Set LED brightness level using slider
Ambient	Checked by default. With setting enabled, keypad uses onboard ambient lighting sensor to adjust LED brightness. NOTE - This setting must be unchecked in order to change Backlighting settings. Uncheck, set Backlighting, re-check if desired.

⚠ **IMPORTANT NOTE** - To configure any keypad button to send a control command of any type, the Function field within the Lighting tab for the button must be set to None. Configured Lighting actions will always be prioritized over Control commands.

5.3 Configuring Button Actions

Once settings for the keypad have been configured, actions and settings can be assigned to buttons as desired. The following section describes the relevant fields within the Lighting and Keypad Manager.

- With all keypad settings defined (see previous section), click to select a button from the graphical display as shown in the example at right.
- By default, the Lighting tab is selected and displayed within the button properties frame.
- Keypads wired to a load (for which the Not Wired option described in the Keypad Settings section above has not been checked) will have all buttons assigned to control the corresponding lighting load scene by default (see Section 7 for detailed information on lighting scenes, including load scenes).



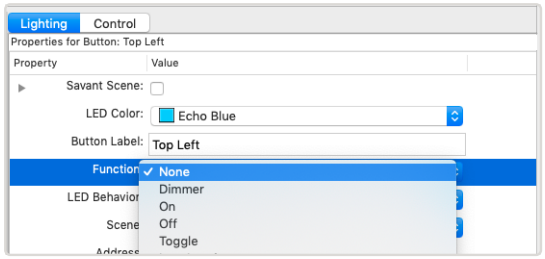
HELPFUL INFORMATION: Hover over title text of any field for tool tips on usage.

Savant Scene	Check this option to allow Savant Pro App Scenes to be assigned to the selected button. Scenes must be assigned using the mobile app, and the keypad must be bound within the configuration before assignment can be completed. For steps on how to assign a Pro App Scene to a configured button, refer to Adding a Scene to a Button - Application Note on the Savant Customer Community.
LED Color	Select one of the options from the dropdown menu to set the LED color for the selected button. Option will appear only for supported keypads.
Button Label	Click the text field to input a label for the selected button. This will be used to identify the button within the Savant Pro App UI for configured devices
Function	Select an option from the dropdown list to define the way the selected button will function when pressed. Mouse over (hover on) any of the options in the list for details on the setting. ⚠ **IMPORTANT** - This field must be set to **None** in order to configure control actions for the selected button.
LED Behavior	Set to **Any On (Not All Off)** by default (LED will be active as long as at least one light in the assigned Scene is On). Select an option from the dropdown list to define the conditions under which the LED for the button will be on or off. This setting also affects the CurrentLEDStatus and LEDIsOn states within Savant State Center, which may be used within State Triggers.

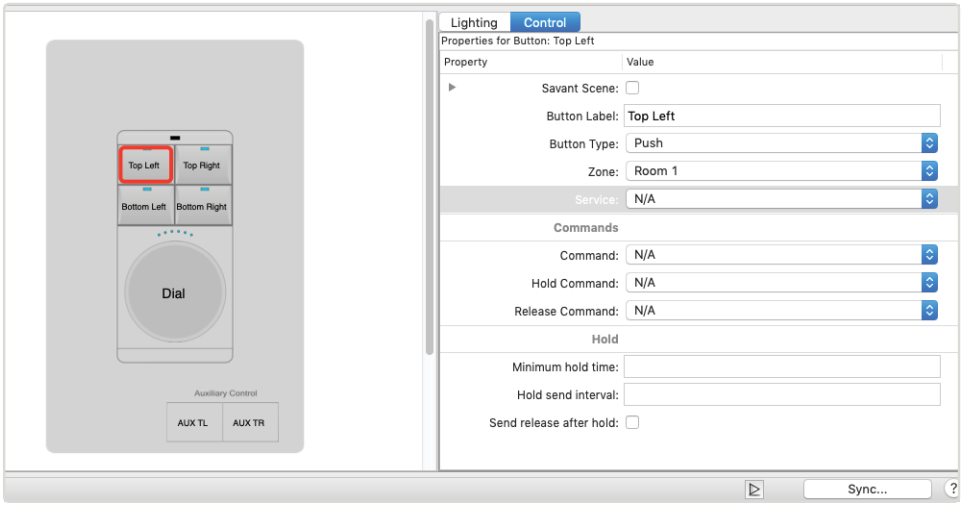
Scene	Set to the load scene associated with the selected keypad by default. Select an option from the dropdown to assign a lighting scene to the selected button. Different from Savant Pro App Scenes, lighting scenes can be configured and edited under the Lighting Scenes tab within the Lighting/Keypad Manager. See Section 7 for details.
Address	Not editable. This field displays the logical button address for the selected button. Assigned automatically.

HELPFUL INFORMATION! The options displayed vary based on the type of Keypad and button selected. The example image and table above show the Lighting tab for an Echo 4-Button and Rotary Dial keypad with the top left button selected. The example image and table shown below display the available options under the Control tab for the same button.

With the Lighting Function set to **None**, select the Control tab at the top of the Button Properties frame to set control command actions for the button.



Savant Scene	Check to enable a Savant Pro App Scene to be assigned to the button via the mobile app. Note that assigning a Scene to a button will clear any other button settings programmed.
Button Label	Enter a button label used to identify the button within the Pro App UI for configured devices.
Button Type	Select an option from the dropdown list to define the way the button will function: **Push** - Sends the configured command when pressed. **Toggle** - Sends one of two configured commands, depending on the current button state.
Zone	Defined by the Location set for the keypad by default, with unbound keypads defaulting to N/A. Select a Zone from the dropdown list to define the location and service options for the button.
Service	This field will update automatically when an action is assigned to a Command field. A Service can be selected manually from the dropdown list if desired.



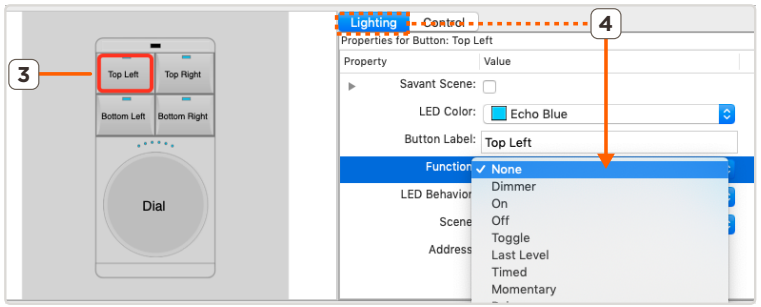
Command	Action that will be sent when the button is pressed. Any desired Service Request can be selected from the dropdown list, or dragged and dropped into the field from the Service Requests States (SRS) window, which can be accessed by selecting the icon at the lower right corner of the window. Refer to Section 4.4 below for a step by step example of how to configure a command via the SRS window.
Hold Command	Action sent when the button state reads as Hold within Savant State Center. See Minimum Hold Time and Hold Interval definitions below for information on when this button state will be set. Hold Commands are programmed in the same manner as standard Commands (described above).
Release Command	Action sent when the button state reads as Release within Savant State Center. In general, for simple Push button types, either a Command or a Release Command should be set and not both.
Toggle Commands	(Not shown in example image) - With the Toggle option selected under Button Type, fields for Toggle Command, Toggle Hold Command, and Toggle Release Command will be displayed. Toggle Commands will be sent when the button's LED state is On.
Minimum Hold Time	Enter a number (in seconds) to define the length of time a button must stay pressed for to change its state to Hold (and send any configured Hold Command).
Hold Send Interval	Enter a number (in seconds) to define the length of time after which the Hold Command will be repeated if the button state is still Hold.

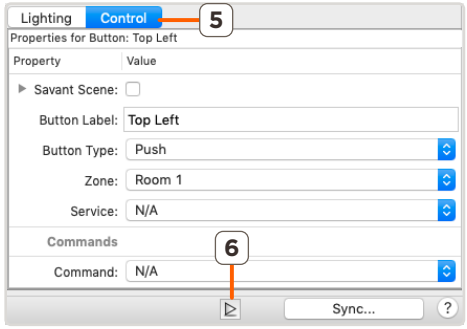
Send Release After Hold	Enable this checkbox to send any configured Release Command when a held button is released.

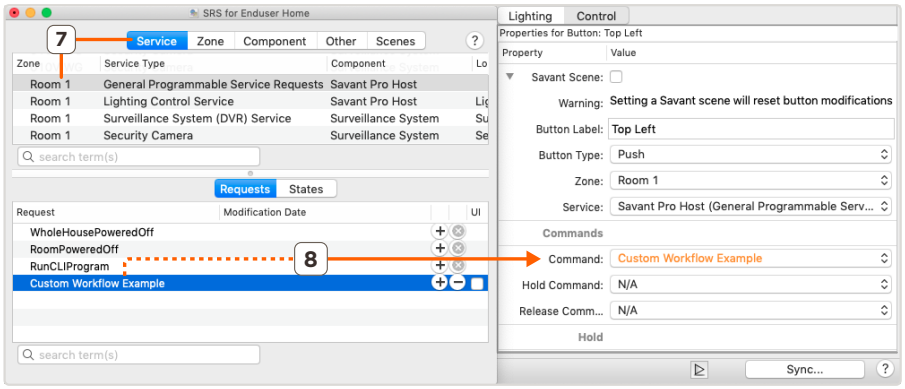
5.4 Use Case Example - Assigning a Custom Workflow to a Keypad Button

This subsection provides a step by step example of the process for assigning a Custom Workflow to a keypad button. The steps below assume that the keypad has been added and configured within Lighting and Keypad Manager, and that the custom workflow has already been configured under General Programmable Service Requests. For information on configuring Custom Workflows using Automator, refer to the Custom Workflow Development - RacePoint Blueprint Programming Guide on the Savant Customer Community.

1. Open the RacePoint Blueprint configuration and navigate to the Lighting and Keypad Manager by selecting **Tools > Savant Lighting and Keypads** from the main menu, or selecting the **Manage Lighting** icon from the quick access menu.
2. Select the target keypad from the Configured Devices list.
3. Select the target button from the keypad's graphical display.
4. With the Lighting Tab highlighted under Keypad Properties, set the Function field to None.
5. Select the Control tab of the Keypad Properties frame.
6. Open the SRS Window by selecting the  icon at the lower right of the window.
7. Within the SRS Window, navigate to the Service where the target workflow is configured. Refer to the Services Requests States (SRS) Overview on the Savant Customer Community for details on this window.
8. Drag and drop the custom workflow (or other service request) into the target Command field. Zone and Service fields will be populated automatically.
9. Sync the Lighting Data Table and upload configuration to Host to test button.







6. Discovery and Smart Grouping for BLE, DMX, and 0-10V Lighting

The following section describes the general process of scanning and discovery for BLE (Smart Bulbs and LED Strips), as well as DMX and 0-10V lighting loads and then organizing those loads into Smart Groups.

- A **Smart Group** can contain one light or many lights, and will function for the end user as a group. For example, a Kitchen ceiling with 8 DMX

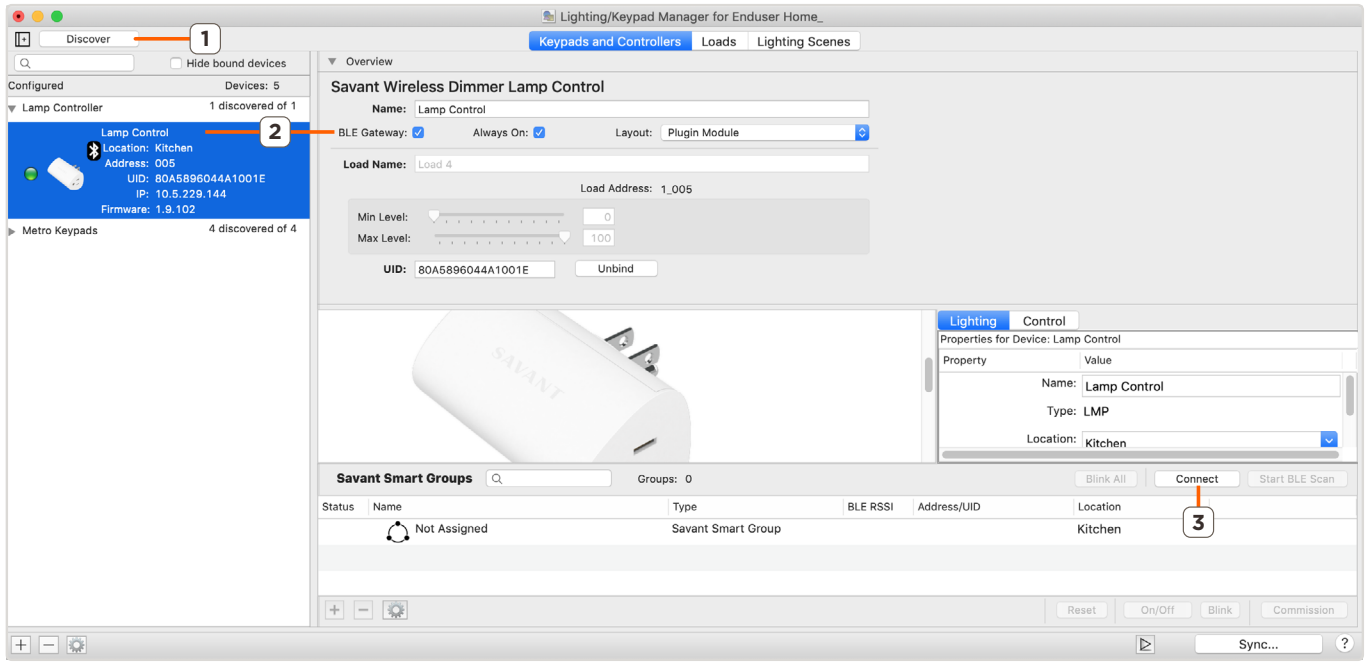
controlled lights all grouped within the same Smart Group will be controlled in unison, turning on/off and dimming all together. A Smart Group will be presented within the user interface as a single light with shared control.

The following subsections briefly describe the separate process of connecting to controllers, creating Smart Groups, discovering lights, and adding lights to groups for BLE Smart Bulbs and Strips, followed by DMX and 0-10V lighting. As always, product-specific documentation should be reviewed and followed where available.

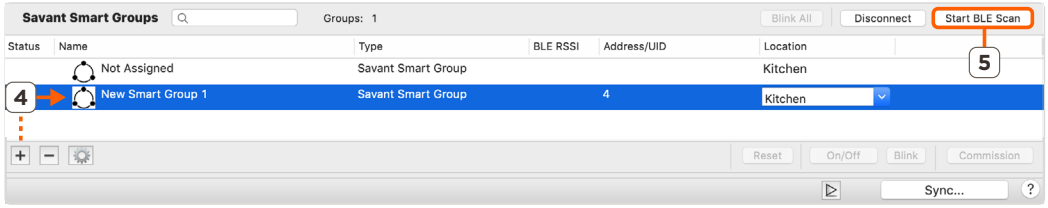
6.1 Discovery and Smart Grouping for Bluetooth Low Energy (BLE) Bulbs and Strips

The process for connecting to a BLE gateway device and scanning for lights is described below. The steps in this section assume that the relevant BLE Gateway device has been added and configured, and that BLE bulbs and strips have been installed and are powered on.

1. If Discovery has not yet been run, select the Discovery button at the upper left corner of the Keypads and Controllers tab.
2. Stop Discovery, and select the controller from the Configured Devices list. For BLE lighting, the BLE Gateway checkbox must be enabled. A Bluetooth icon will display on the device within the Configured frame.
3. Select **Connect** to establish communication between Lighting Manager and the gateway device.
4. Within the Smart Groups frame which will appear for all group-able lighting, select the + icon to add and name one or more Smart Groups. Names entered will be used to identify the group(s) within the Savant Pro App and other user interfaces.



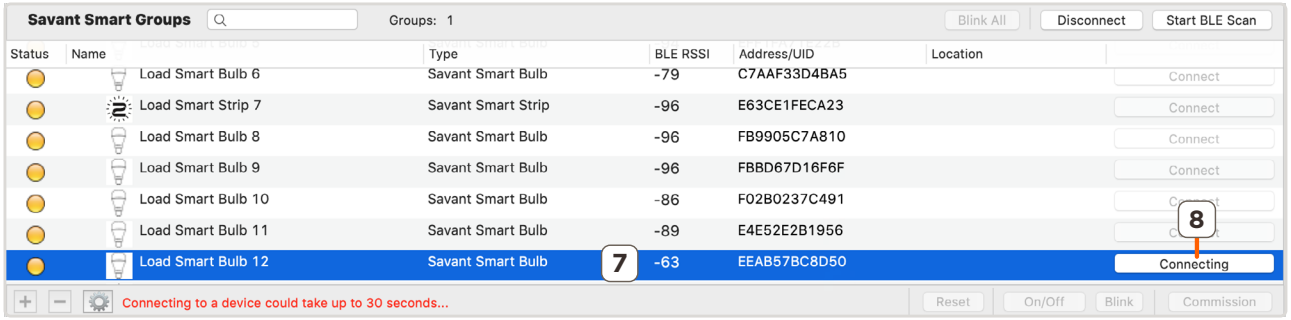
5. Select Start BLE Scan to begin discovery of lighting devices (bulbs and strips).
6. As BLE Scan runs, number of lights in the Not Assigned group will rise as they are located. When scan is complete, select Stop BLE Scan before continuing.



7. Expand disclosure triangle to view lights in groups. Locate and select the light with the highest BLE RSSI Value, (for example, -65 would be preferable to -91). Choose the Blink option to flash the light red to confirm its physical location.
8. Select the Connect option for the selected light. This will be the BLE Proxy device, used to relay communication from the Gateway to any other BLE lights in the group. Connecting may take up to 30 seconds.

9. Once connected to the Proxy light, begin moving lights into the Smart Group(s) created in step 4 above by dragging and dropping. Select a light and use the **Blink** option at the lower right of the frame to confirm its physical location if needed.
10. Once all desired lights are placed in Smart Groups, maintain the connection to the proxy light and select one of the other grouped lights and choose Commission. Wait for the process to complete and repeat for all lights in the group, Commissioning the Proxy light last. The status

NOTE: All lights must be added to a Smart Group for functional control. It is possible to create a Smart Group containing only a single light if desired.



indicator icon will turn green for each light when successfully Commissioned.

11. Once the Proxy light is Commissioned (last), the Smart Group is complete. The changes must be synced with the Lighting Data Table and the Blueprint configuration file uploaded to the Savant Host before Smart Group control is fully functional. See Section 8 below for more info.

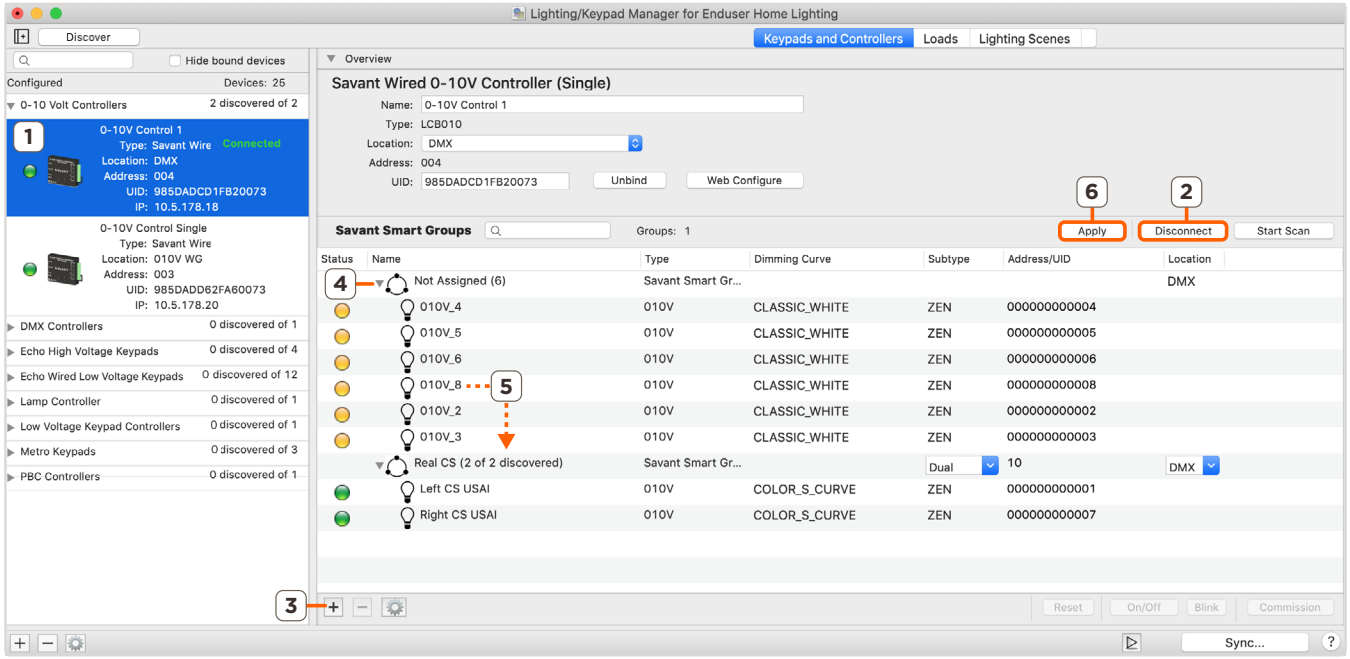
6.2 Smart Grouping for DMX and 0-10V Lighting

The process for creating Smart Groups and assigning DMX or 0-10V controlled lights is detailed in the DMX and 0-10V Lighting Deployment Guide, available on the Savant Customer Community. This section will briefly outline the process. This section assumes that the controller has been added, configured, Discovered, and Bound, and that the SDE/MacBook running Lighting and Keypad Manager is connected to the same local network.

1. Open the Lighting and Keypad Manager and Select the DMX or 0-10V controller from the Configured devices list.
2. Select the Connect option. Note that in the example image, the controller is already connected so button text shows Disconnect option.
3. Within the **Savant Smart Groups** frame, select the **+** icon to add and name one or more Smart Groups to which lights will be assigned for the controller. The name entered will be used to identify the group within the Savant Pro App and other user interfaces.
4. Lighting loads associated with the selected controller will appear under the **Not Assigned** group by default. Expand the disclosure triangle to view loads.
5. Drag and drop loads into the desired Smart Group(s). All loads should be added to a group. Any load left in Not Assigned will not be controllable from the UI. It is possible to create a Smart Group containing only a single load if desired.
6. Select Apply to save Smart Grouping changes.

HELPFUL INFORMATION!

- Hover over title text for any setting to view any available tool tips on usage.
- Once lighting Smart Groups have been configured, it is necessary to sync the Lighting Data Table, then save and upload the configuration file for control functionality (see Section 8 below for more info).



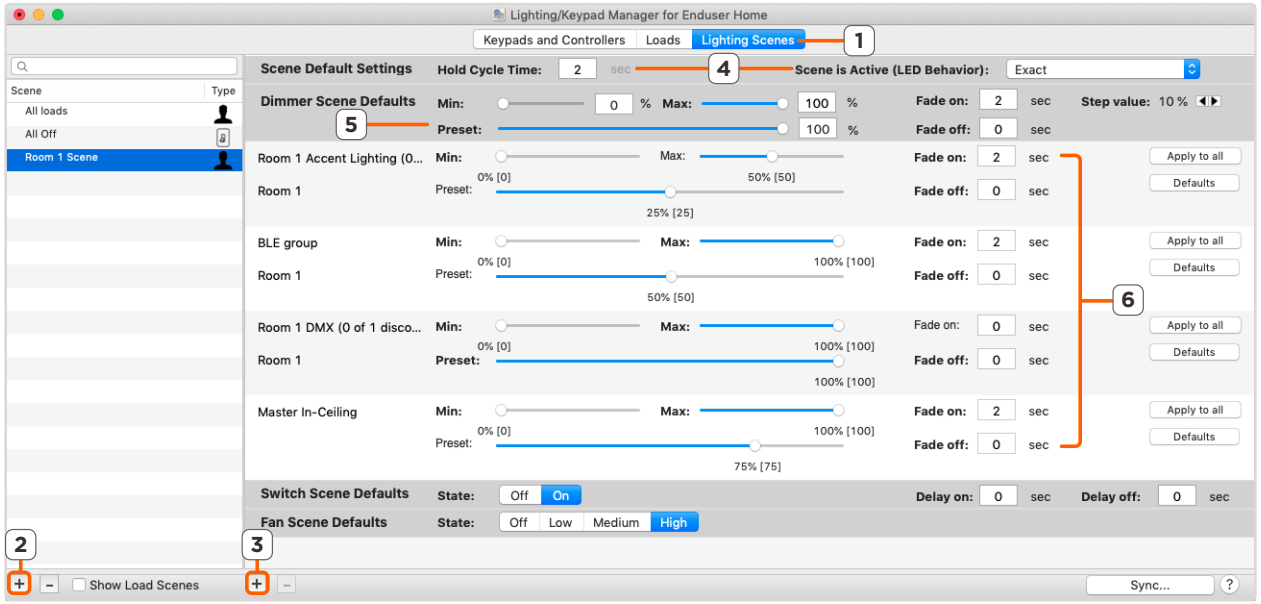
7. Configuring Lighting Scenes

Section 2.3 above gives an overview of the layout and functions of the Lighting Scenes tab within the RacePoint Blueprint Lighting and Keypad Manager. This section outlines the process for adding and configuring lighting scenes in more detail. The steps below assume that all relevant lighting devices have been added and configured. Refer back to Section 2.3 for setting definitions as needed.

1. With all Lighting components added and configured, and Smart Groups created where relevant, open the Lighting Scenes tab of the Lighting and Keypad Manager.
2. Select a lighting scene to modify (by default, an All Off scene will already be added), or select the **+** icon at the lower left corner of the window to add a scene to the list and name it. In the example image, Room 1 Scene has been added.
3. With the newly added scene selected, click the + icon for the center frame to open the Load Chooser dialogue (see Section 7.1 below for details). Select and add lighting components to include in the scene. As components (loads or Smart Groups) are added to the Scene, they will populate within this frame under the category matching their type (Dimmer, Switch, or Fan).
4. Adjust the Scene Default settings for Hold Time and LED Behavior. These will affect all lighting entities added to the scene.
5. Adjust load type/category defaults for any categories with populated lights. In the example below, the Dimmer Scene Defaults have been altered to add a 2 second Fade On time.
6. Adjust the settings for individual lighting entities within each category. In the example image, the following changes have been made:
   - Max dimmer level for the Room 1 Accent Lighting group has been reduced to 50%
   - Preset levels have been adjusted for Room 1 Accent Lighting (25%, or 50% of Max Dimmer Value), BLE Group (50%), and Master In-Ceiling (75%).
   - The Room 1 DMX group has had the 2 second Fade On time imposed by Dimmer Scene Defaults removed and set back to 0.

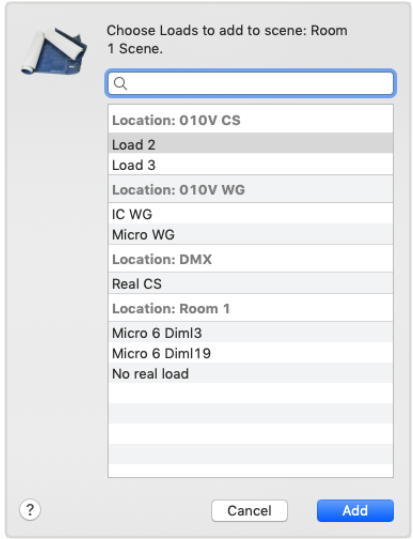
HELPFUL INFORMATION!

- Hover over title text for any setting to view tool tips on usage.
- Once lighting scenes have been configured, it is necessary to sync the Lighting Data Table, then save and upload the configuration file for control functionality (see Section 8 below for more info).
- When any lighting entity added to a scene has settings different from the category defaults, the options to Apply to All or reset to Defaults become active and selectable.
- Lighting Scenes can be assigned easily to a keypad button for control of the full scene from a single button (see Section 4 above for details).



7.1 Load Chooser Dialogue

When adding loads to a lighting scene as described in Section 7 step 3 above, selecting the + icon will open the load chooser dialogue as shown in the example image:



- Select any load from the list, or select multiple loads using Command+Click, and choose Add to include in the selected Scene.
- Use search field to filter displayed loads by name or location.

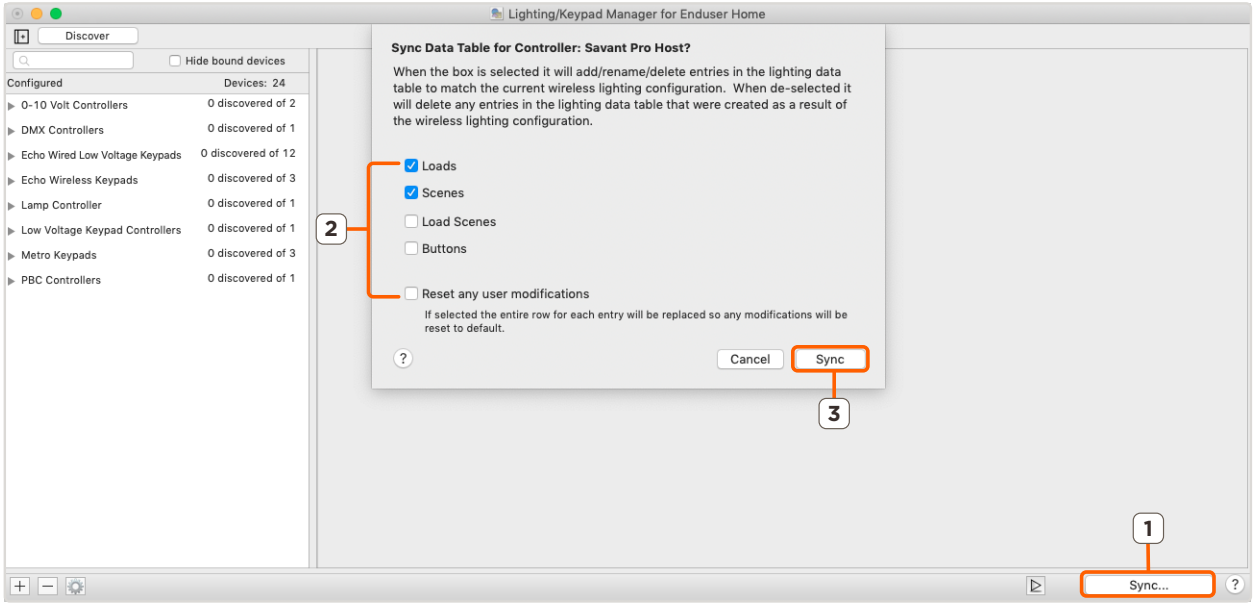
8. Syncing the Lighting Data Table

Once all configuration and programming for lighting devices within the Lighting and Keypad Manager has been completed, all changes must be synced with the Lighting Data Table, and services for the configuration must be re-generated before saving the configuration file and uploading to the Savant Host.

The Lighting Data Table defines the way in which lighting controls are presented within Savant UIs (including the Pro App, Pro Remotes, Touch Panels, and TrueControl II interfaces). Configured settings or actions not added to the Lighting Data table will still be executable via other means, for example using state triggers or keypad buttons when programmed, but will not generate a control screen within the user interface.

Follow the steps below to sync the Lighting and Keypad Manager with the Lighting Data Table.

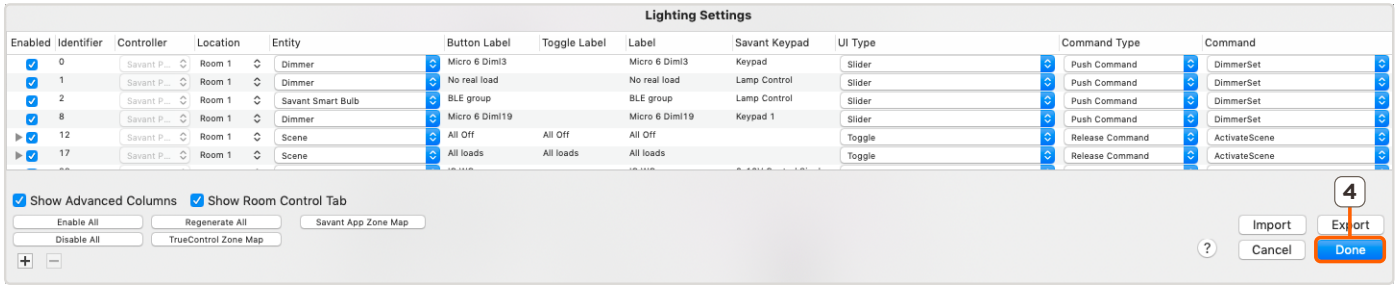
1. From any tab within the completed Lighting and Keypad Manager, select the Sync button at the lower right corner of the window.
2. Select the data to sync to the Lighting Data Table using the checkboxes in the dialogue window. By default, only Loads and Scenes will be added. Syncing Load Scenes and Buttons is not needed in most deployments, and may result in an overly cluttered or confusing user experience.
3. With sync settings adjusted as desired, select the Sync option inside the dialogue box to apply changes to the data table.
4. The Lighting Data Table will be automatically opened when step 3 above is completed. Review the data table settings, make any needed adjustments, and select Done at the bottom right corner to save when complete.



NOTES:

Refer to the Lighting Data Table Overview via the Savant Customer Community for details on the Lighting Data Table.

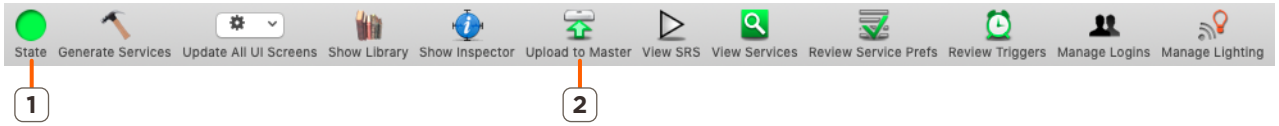
Services will need to be re-generated for the configuration to apply data table changes.



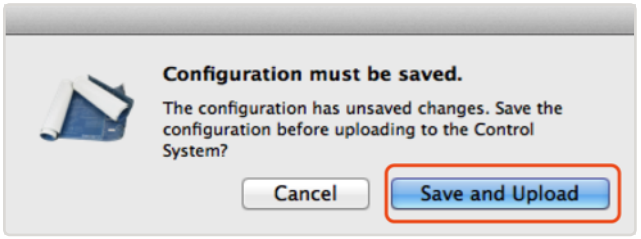
9. System Monitor - Upload Configuration File to Host

With the programming and configuration of lighting components complete, the Lighting Data Table synced to Lighting and Keypad Manager changes, and services regenerated, the Blueprint configuration must be saved and uploaded to the Savant Host on site.

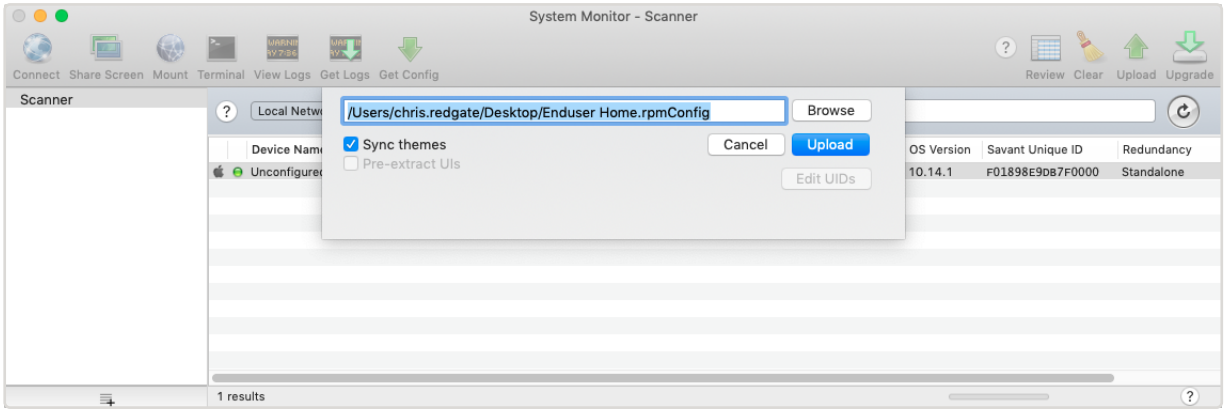
1. Ensure that the State icon shows a green indicator, meaning that services are up to date. If needed (TrueControl II interfaces in configuration,) Select the option to Update All UI Screens > Sync with Services.
2. To upload the rpmConfig file to the Savant Host, select the Upload to Master option from the quick access toolbar as shown below:



3. If there are unsaved changes in the configuration file, a prompt will appear indicating the config must be saved before uploading. Select the Save and Upload option, or select Cancel to back out and then File > Save As from the main menu if the configuration should be saved as a separate revision.



4. Once the Upload selection has been confirmed for an up-to-date configuration file, the System Monitor application will open automatically. Review the prompt and confirm that the configuration filepath and selected Host are correct. System Monitor will automatically select any Savant Host found on the local network matching the UID entered for the Host within the configuration file. Select Upload again to continue. The configuration will upload and Host runtime software will restart.



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