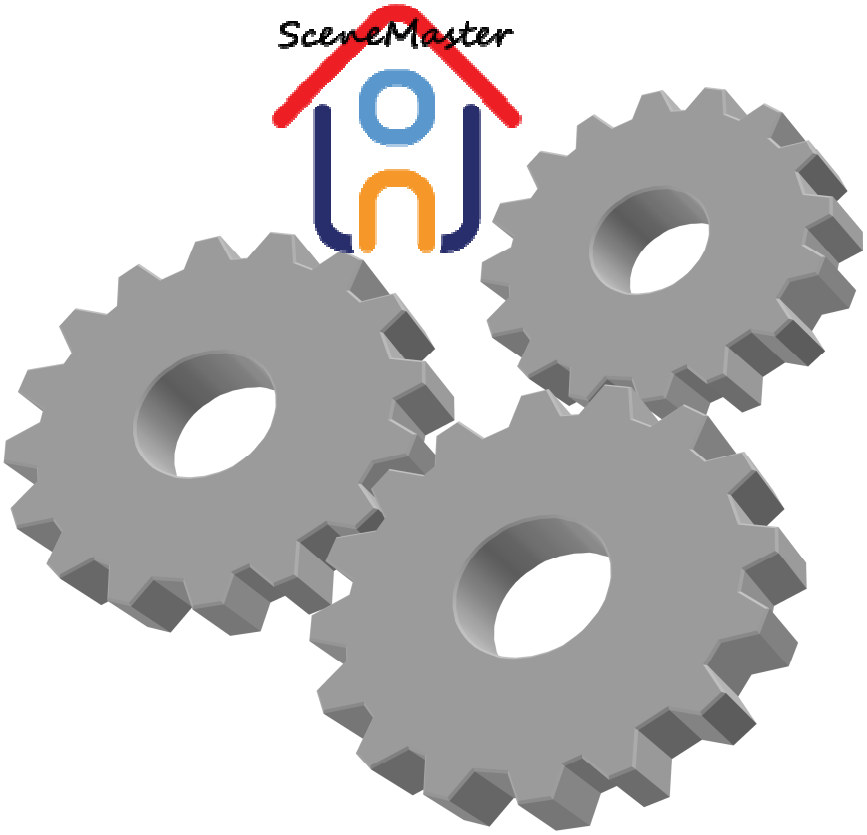

[SceneMaster Plug-In User Guide]

Guide for creating and using SceneMaster scene control Plug-In

Revision History

Version	Date	Revision Description
0.2	9/30/2015	Initial Version
1.2	10/16/2015	Updated for version 1.2.0.0 - Add animated dim - Add log level control

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1. Introduction

SceneMaster provides flexible scene control of existing HomeSeer devices. It can be used to make setting up scenes less cumbersome and more friendly. One common problem in setting up scenes is that after they are setup you often need to tweak the dim levels of certain lights, etc. By providing a 'Learn' button, SceneMaster automates this process and makes it possible for everyone in the home to enjoy and make the most use of the home automation system you have invested in.

Main Features

- Group devices into a 'scene', Create multiple 'profiles' for each scene (group of devices)
    - Each profile exposes a HomeSeer device to activate/deactivate that profile
    - Each profile can have a custom dim control to dim all the devices in the profile according to a pre-calculated or user-specified per-device curve. *(To accommodate different lighting technologies such as Incandescent, LED, etc. that do not dim at the same rate)*
    - Plugin monitors external control of devices and will change the state of the scene profile device if the scene members' values match a profile
        - For example: If you have some scene control outside this plugin (UPB link, etc.) that sets devices to a specific state, the plugin will monitor this and set the HS profile device to active. (For UPB this can be desirable as sending individual commands to multiple devices can be slow).
        - Since the Scene Profile is a HS device that gets 'on'/'off' values when the profile is active, this can be setup in HS event engine to easily trigger other events when a profile match occurs.
- Easy integration into HSTouch by exposing a 'learn' button per profile to set the current state as the values of devices for the profile.
- Allows for easy reconfiguration of profile settings without using Web UI
- Scenes can have specified enable times where commands to control the scene are only valid at specific hours.
- Scene timer function

    - Activate a scene profile for a specified duration
    - Re-triggering a scene timer resets the timer
    - On expire devices will be returned to the previous state (great for motion triggers)
    - Option to cancel the timer if any device in the scene is changed outside the plugin (for example pressing the light switch on)
    - Upon scene activate, options to change device values always, when current value is lower, and when current value is higher than the value specified by the scene profile.
- Scene Dim Animation
    - Create a control to dim a scene from/to specified values at a given step size and user defined interval .1 Sec -> 24Hrs

Usage Scenarios

Simple scene control

Set lights/devices to certain values when activated and restore them to their previous state when deactivated

Control dimming of lights in a group

Setup a scene with multiple devices; define specific curves for a dim slider so your LED lights don't go to full bright when the incandescent are still dim

Motion events

Many motion event scenarios by combining time schedule, change if higher/lower, and cancel on scene member device change

Example – Bathroom light

Turn on the bathroom light to 20% at night only if it is < 20% currently; retrigger on each motion event; cancel timer if light switch hit (so it does not expire when you are in there!)

Say you have your garage lights set on a schedule to 50% to come on at night; Setup a timer based on motion trigger that sets them to 100% at night; when the timer expires, they will go to the previous state (50%).

2. Configuration

Terminology

The terminology used by the plugin may be confusing, so a description is provided:

- "Scene"
  - A scene is a group of devices that are controlled together
- "Scene Profile"
  - A scene profile is a specific set of device values for the member devices.
- "Member Device"
  - A HomeSeer device that is controlled by SceneMaster

There is no limit to the number of scenes, or member devices. Member devices can be present in multiple scenes – this can allow for some nice options when controlling scenes large spaces where rooms are open to other rooms

Creating a New Scene

Creating a new scene is relatively straightforward. Navigate to the Plug-In menu and open the SceneMaster Scene Config page.

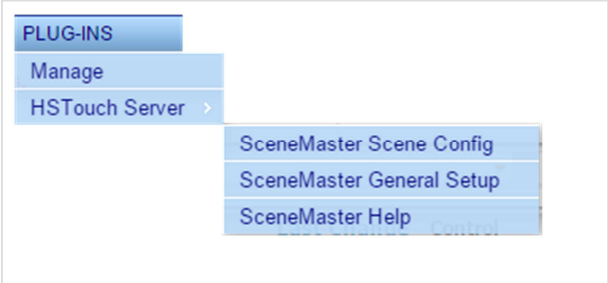

Figure 1 - Plug-In Menu

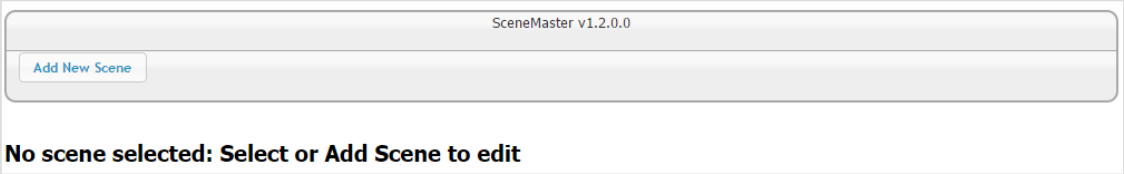

Figure 2 – No Scenes Present

After an initial installation with no scenes present, the management interface will look as it does in Figure 2.

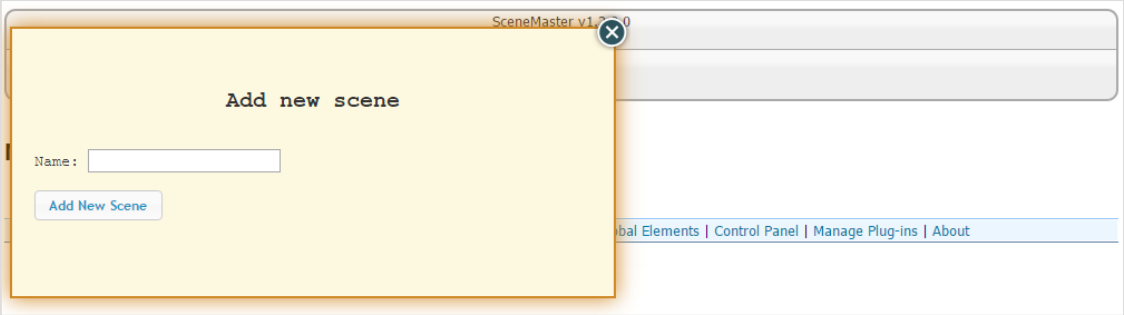

Figure 3 - Add Scene

After pressing “Add New Scene”, a dialog will appear as in Figure 3. Name your new scene, and press the “Add New Scene” button.

Note: the name of the scene is only used to create the HomeSeer device. You can edit later by editing the name of the device using HomeSeer device editor if you wish.

Scene Options

After the scene is created, the new scene properties will appear. When more scenes are added, the scene to be edited can be selected with the drop box.

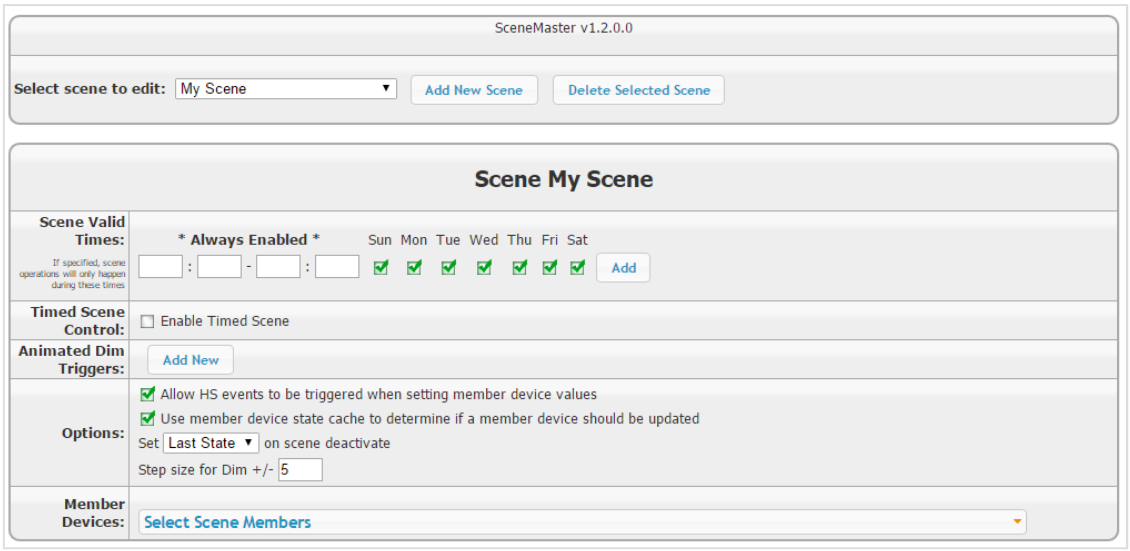

Figure 4 - Newly Created Scene

Figure 4 shows a newly created scene. The properties are described below.

Item	Description
Scene Valid Times	Times/Days when the current scene is operational. Actions on the scene will only be performed during the valid period. The default value (with no valid times listed is to be enabled all of the time) *Note: If external control of the member devices results in a profile to become active, the profile device will change state* Click 'Add' to add a time period; multiple time periods can be added to create any schedule you desire
Timed Scene Control	Clicking 'enable timed scene' creates a HomeSeer device that will be used to trigger the scene. See below for more details
Animated Dim Triggers	Adds HS devices to start controlling the scene dim with a specified interval

Allow HS Events to be triggered	When SceneMaster controls a device, this specifies if HS events that are set to fire on the device changing are triggered
Use member device state cache	SceneMaster will monitor all devices status changes and keep a cached version for performance. It is recommended to keep this option selected.
Action on Deactivate	When a scene profile is deactivated, this specifies the action to take; either to turn all devices 'off', or to set to the state that they were when the scene was activated.
Dim +/- step size	The dimming control exposes a slider control, but also exposes dim+ and dim- buttons. These can be useful to dim a scene based on some button press (for example a Z-Wave FOB)
Member Devices	This is where devices are added or removed from a scene.

Below, Figure 5 shows the configuration options when the timed scene option is enabled.

Figure 5 - Timed Scene Setup

Item	Description
Time Value	When the trigger is activated; the scene will turn on for the duration specified here. If the trigger happens while a timer is running, the timer is reset.
Scene Profile	When triggered, this profile is activated

When a timed scene is enabled, a device is created in HomeSeer that allows the timer to be activated and canceled.

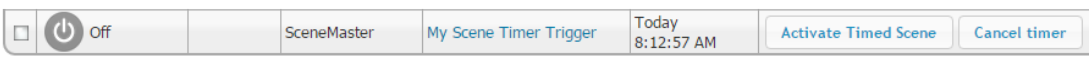

Figure 6 - Timed Scene HS Device

Scene Member Devices

A scene is useless without adding any member devices. Member devices are HomeSeer devices that will be controlled as part of a scene. To add member devices, click on the mutli-select list “Select Scene Members” (See Figure 7). From here, select HomeSeer devices to be included in the scene. To complete the selection process, Click the top part of the control “Select Scene Members” and the page will update with the member devices.

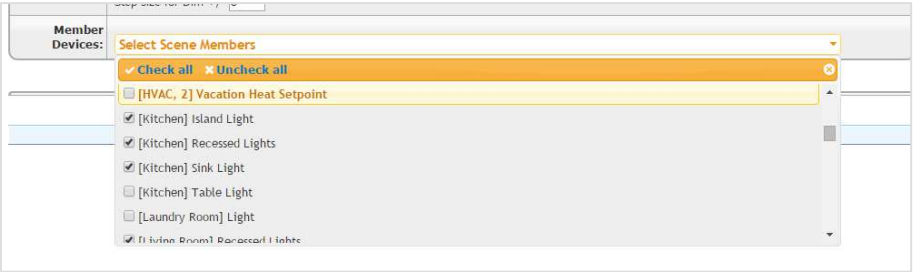

Figure 7 - Select Scene Members

After scene members are added, the “Member Devices” section is updated with all of the members of the scene. Adding and removing devices can be done at any time by the same process. Figure 8 below shows the web interface after some devices have been selected.

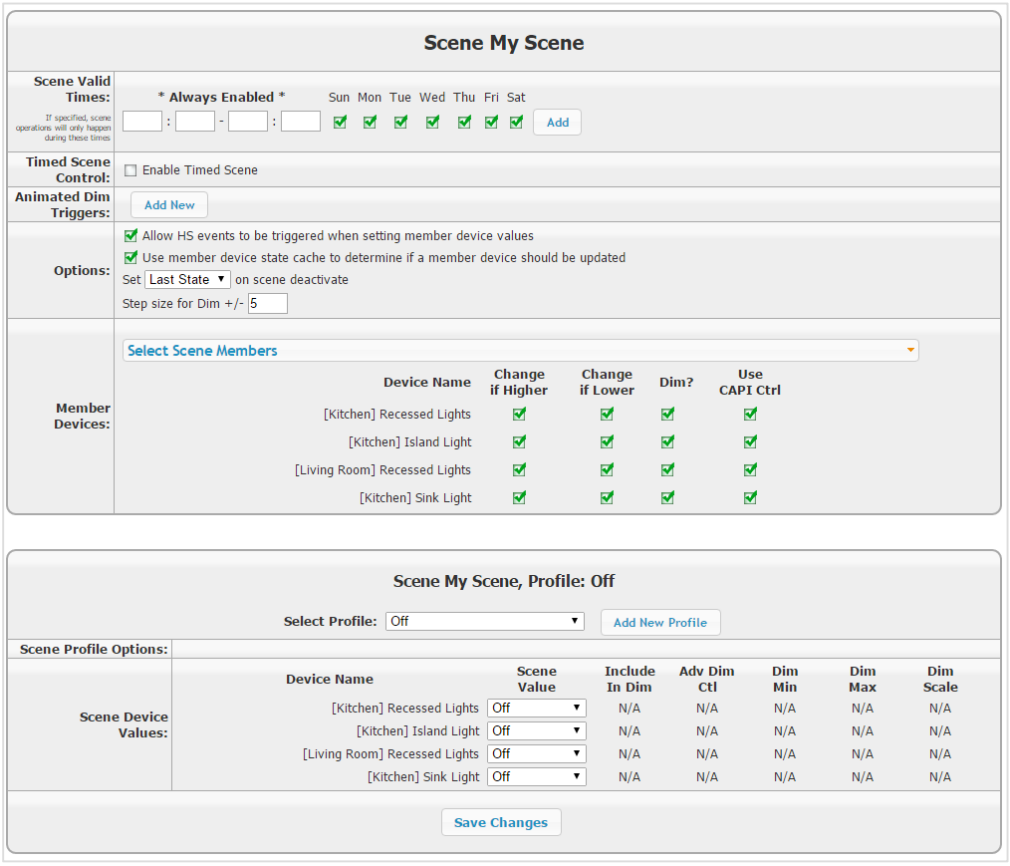

Figure 8 - Full Scene

There are several options that control the way that SceneMaster will handle controlling each device, and they are summarized below.

Item	Description
Change if Higher	When activating a scene, only change this member device's value if the current value is higher than the value to be set
Change if Lower	When activating a scene, only change this member device's value if the current value is lower than the value to be set
Dim?	Specifies if the member device supports dimming. SceneMaster will attempt to determine this automatically, so only change this if it guessed wrong.
Use CAPI Control	The default way to control a device. Keep this checked unless the device does not respond.

Scene Profiles

A scene profile can be thought of as a 'setting' of the devices in a scene. At least one scene profile must be created to make SceneMaster useful. There is one 'built-in' profile named "Off" that is created when the scene is created. The Off profile should not be edited unless the device values that SceneMaster "guessed' for the off state of all devices are incorrect. This just provides a way to deal with non-standard HomeSeer devices that may have some other state or device value to indicate "Off"

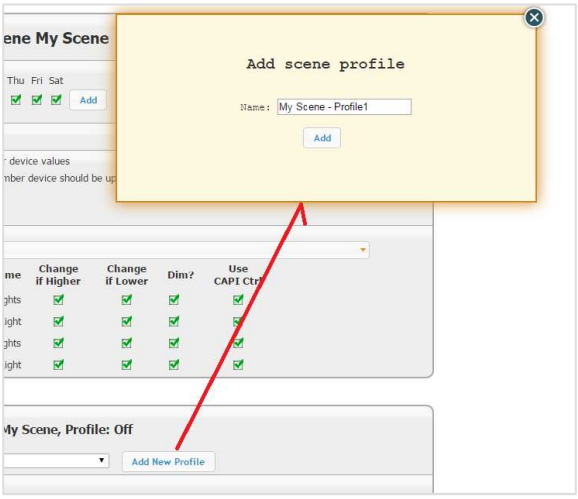

Figure 9 - Add Profile

To add a new profile, click "Add New Profile" and provide a name. SceneMaster will automatically prefix the profile with the scene name. As with scenes, this name can be edited later using HomeSeer device editor. It is useful to keep the Scene name as it will help in identifying the profile.

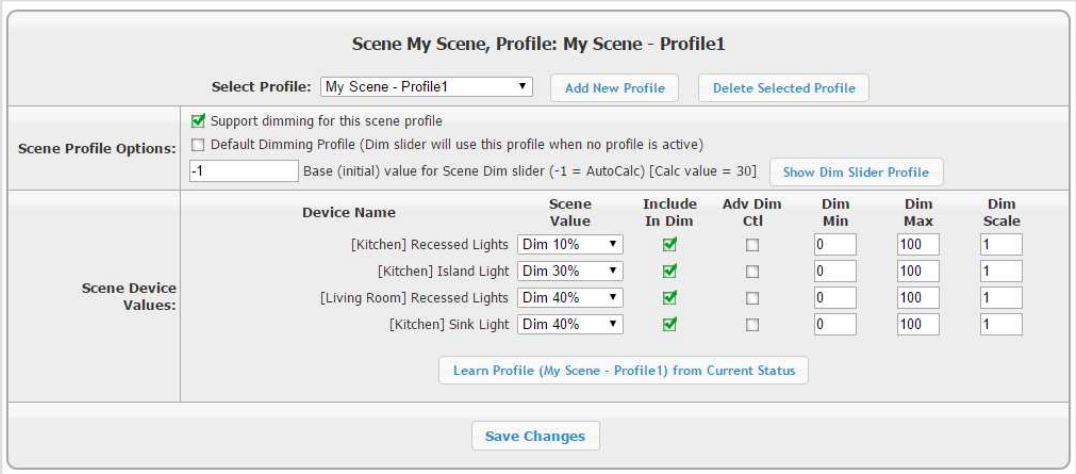

Figure 10 - Scene Profile

After a new profile is added, device values can be specified. It is also possible to learn the profile values from the current device state by clicking the “Learn Profile” button.

By default, if the scene contains any devices that are capable of dimming, the “Support dimming” option is enabled. The “Base (initial) value for Dim Slider” will be discussed later under the Dimming section.
The option “Default Dimming Profile” makes this scene’s dim control active when no other scene profile is active. Only one profile can be marked the default dimming profile. If no scenes have this option set then the dimming for the scene is not enabled unless a profile is activated .

To set the value of the scene, adjust the values for each device under “Scene Value”. After changing any values, make sure to click “Save Changes”. Below is a summary of the options for each device.

Item	Description
Scene Value	When the scene is activated, the device is set to this value
Include in Dim	If checked, when the profile is active and a dimming event occurs, this device will participate in dimming.
Advanced Dim Control	Enables the entry of a user-specified profile for the device control. See Dimming section for more detail
Dim Min	Used for the auto-calculation of Dim profile -- see Dimming

Dim Max	section for more detail
Dim Scale	

Dimming

SceneMaster gives you complete control over the dimming of member devices in a scene. Since all devices are combined into a single dimming control it can be challenging to have a single slider control all of the device. Using the paramaters given, SceneMaster will attempt to caluclate the best dimming curve.

Basic Dimming

By default, most devices support dimming values between 0 and 100 percent. The profile member device options give the possibliy to limit the dim range of certain devices.

When a scene profile is activated, the dimming control is enabled (if the profile is marked as dimmable). The initial postiion of the dim control slider is then set to the base value (initial position) of the dim control slider. This value can be specified or auto-calculated.

When auto-calculating a dim profile, SceneMaster takes into consideration the dim min, dim max, dim scale, as well as the scene values to determine a dim profile that will best suit the scene.

If the auto-calculated profile is not exactly what is wanted, it is possible to manually specefiy the dim values for each device in the scene.

Dimming Profile Graph

To help visualize how the dimming slider will control each device in the scene profile, an option is given to show a graph of the dimming profile. By clicking on the button "Show Dim Slider Profile" a graph (like the one in Figure 11 below) is displayed.

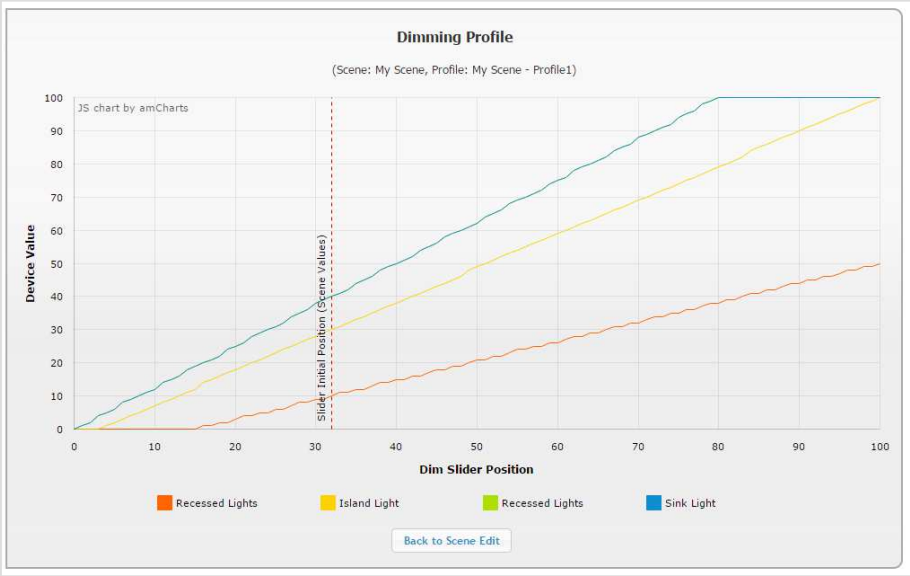

Figure 11 - Dim Slider Profile

Looking at the diming profile graph, on the x-axis is the position of the slider, and the y-axis shows the value for each member device. The dashed vertical line shows the initial slider position – the y-axis values at this point correspond to the device value selected for this scene profile.

Adjusting the Dim Profiles

The diming profiles can be adjusted in the auto calculation mode by changing the dim min, dim max, and dim scale. The dim scale is a floating point value that controls the slope of the dimming curve; a higher number (e.g. 1.25) will be a steeper slope. The min and max values are obvious in that they control the bounds of the dim control for that device.

The best way to adjust the dim values is to tinker with the numbers and use the dimming profile graph to see the results

Advanced Dim Profile Control

Since the built-in algorithm for calculating the dim profiles is not perfect and cannot accommodate every situation, it is possible to have direct control over the values.

Clicking on the “Adv Dim Ctl” checkbox will expose a list of values to be used for control that device. Figure 12 shows the advanced control data.

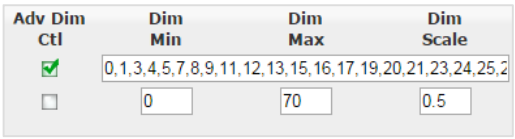

Figure 12 - Advanced Dim Control

The text box exposes a comma separated list of 101 values corresponding to positions 0-100 of the dim slider. These values can be easily cut&paste into text file named as *.csv and imported to excel to graph and edit.

> *Note: When the profile is activated, the dim slider will be set to the “Base (initial) value” specified, so for the scene to dim properly, the dim value corresponding to that slider position should equal the value to be set when the scene is activated.*

Animated Dim Control

Creating an animated dim control adds a HS device that will control the scene’s dim slider according to the parameters specified. This can be used to make a slow ramp on/off, among other things. Since this controls the Scene’s dim slider the slider values will update and be tracked by HSTouch.

Multiple animated dim triggers can be created per scene. To add a new one, press the “Add New” button as shown in Figure 13.

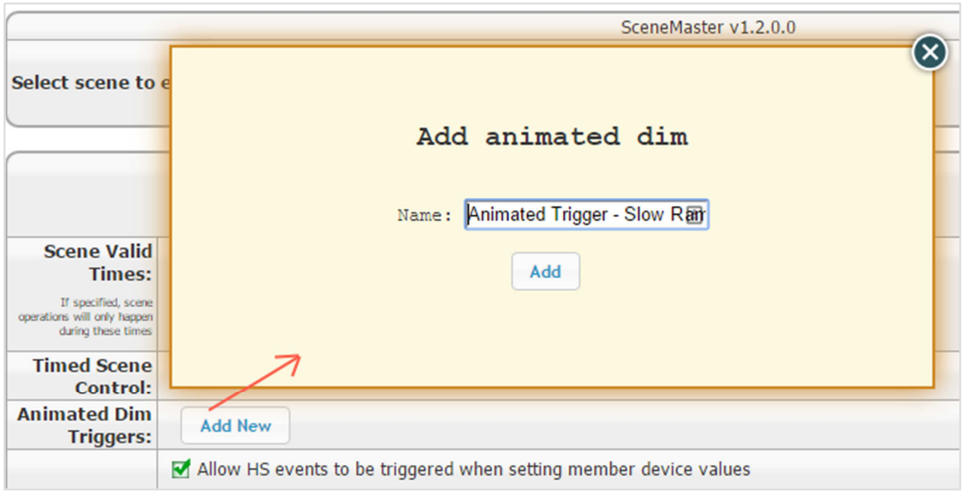

Figure 13 - Add Animated Dim

After adding the control, it shows up in the list and a HomeSeer device is created to activate it.

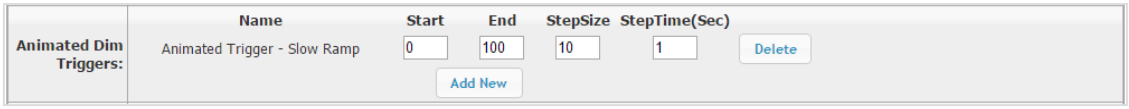

Figure 14 - Animated Dim Detail

Item	Description
Start	Starting dim slider position (0-100) (Start must be < End)
End	Ending dim slider position (0-100) (End must be < Start)
StepSize	Starting at slider position Start, increment this amount every StepTime until reaching End.
StepTime(Sec)	Step time in seconds. Minimum value is 0.1, max is 86,400 (24Hrs)
Delete	Delete this control and the corresponding HS device.

Once there are animated dim sequences added, a new scene option is available:

This option causes the sequence to abort if a scene member changes state. This is useful to avoid having an automated process clash with a user's desire.

Note: The animated dim controls the scene dim slider, and will only have an effect when the scene dim slider is active. If it is desired to have this always active make sure to enable one profile as the default dimming profile for the scene.

3. Using SceneMaster

Basic Controls

When a scene is created, several HomeSeer devices are created. To see all of the devices, make sure that you have turned on the view of all SceneMaster device types. Newly created HomeSeer devices will be created with Room = “SceneMaster” and Floor as unset. These can be changed as desired. The scene control devices created can be seen in Figure 15 below.

Figure 15 - SceneMaster HomeSeer Devices

Root Scene Device

The Root scene device is the master device for the scene and is named based on the Scene Name entered when creating the scene and has two controls. The status text shows the basic state of the scene.

Item	Description
Control: Deactivate	Turns the scene off. The action on deactivate depends on the option set under scene options
Control: All Off	Turns all devices in the scene to the values in the “Off” profile
Status: Off	Displayed when all members devices match the “Off” profile
Status: “Profile Active”	Displayed when all members devices match one of the profiles. See Figure 16 for an example.
Status: “On (No	Displayed when the member devices don’t match any of the

Profile)”	selected profiles. See Figure 17 for an example.

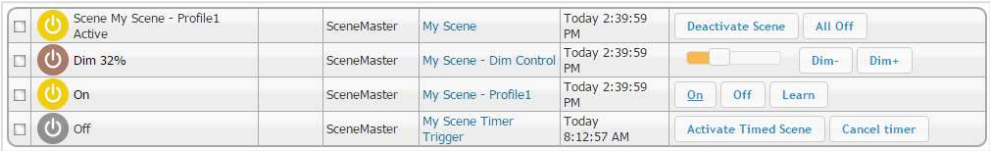

Figure 16 - SceneMaster HomeSeer Devices (Example 1)

Figure 17 - SceneMaster HomeSeer Devices (Example 2)

Dim Control Device

The scene dim control exposes a slider and two buttons and dims the group of devices in the scene. The Dim- and Dim+ step sizes can be set under the scene options section on the configuration page.

Note: Since different profiles can have different dim configurations, the dim controls are only active when a profile is set as active. When a dim action is performed, the scene state will change to “On (No Profile)” since the current device state no longer matches the profile. In this case, the dimming remains active until the scene is deactivated.

Scene Profile Device

Whenever a profile is added (excluding the built-in “Off” profile), a HomeSeer device is created to control that profile. Each scene profile will have a separate HS device and each device has the following controls and statuses:

Item	Description
Control: On	Activates the scene profile.
Control: Off	Deactivates the scene profile. Action on deactivate is determined by the scene configuration options.
Control: Learn	Learn the current device state into this scene
Status: On	The current status of the member devices match the device

	values set for this scene profile
Status: Off	The current status of the member devices do not match the device values set for this scene profile

Timer Trigger Device

If the scene has “Enable timed scene” checked, then a timer trigger device will exist for the scene.

Item	Description
Control: Activate Timed Scene	Activates the timed scene. The profile set in the scene configuration is activated for the time value specified in the configuration. If the timer is currently active, the timer is reset and continues to count down.
Control: Cancel timer	Cancels an active timer.
Status: Off	The timer is not active
Status: Active; nn Sec remaining	The timer is active, and will expire in nn seconds

In Figure 18 is an example of the device status where the timer is configured to activate “My Scene - Profile1”, and the timer is active.

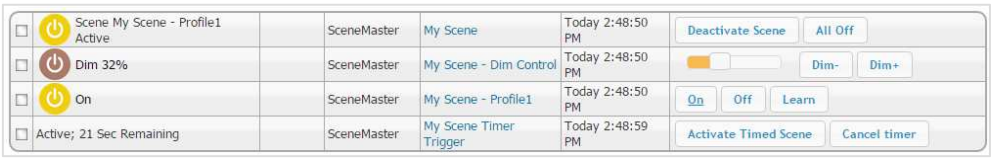

Figure 18 - Timer Active Example

Animated Trigger

If an animated trigger was added, a HS device will be created to control it.

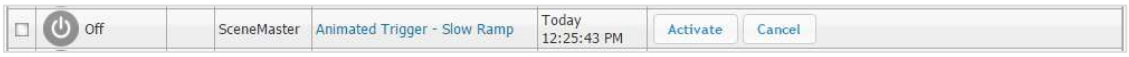

Figure 19 - Animated Tigger

When activated, the device status will be updated showing the progress.

Figure 20 - Animated Trigger Active