Chapter 15
Insteon Visual Scene Editor (VSE)

The Visual Scene Editor (VSE) is a way to program Insteon devices so that they can initiate or respond to a *scene*. A *Scene* is a collection of devices that respond together when the scene is activated or deactivated. Devices in a scene control themselves to a specific level at a specified rate according to how that scene has been programmed. The advantage of a scene is that scenes are activated and deactivated with one command regardless of how many devices participate in the scene. This can make a lot of devices respond simultaneously after only a single command is sent.

Inside each device is an area of memory called the *linking table*. This table contains one or more entries for each scene and how that device participates in the scene. It's the VSE's job to update the linking tables in your devices are scenes are added, deleted, and modified.

The VSE is a simple, yet powerful way to create and visualize a scene. At a glance you can see which devices are transmitters and which devices are receivers. Using a simple drag and drop mechanism you can add or remove devices from the scene.

It is important to note that you can use HCA to program scenes that HCA will never activate. For example, suppose you want a KeypadLinc button to control a lamp module. You can set this scene up as described in the KeypadLinc and LampLinc documentation – with all those "press and hold" and "press the set button" directions. But by using the VSE you can create and program that scene without getting out of your chair. In this case what the VSE writes to the device's linking tables is exactly the same as you would have created with the manual method. This can make programming a whole house full of Insteon devices a simpler and not quite as arduous a task.

The VSE is only used with Insteon devices. It can't be used with X10, UPB, or IR devices.

Using the VSE: The basics

Before describing all the details on starting the VSE and creating scenes, let's just jump into using the VSE so you can see in general how it works. All the details on creating scenes and starting the VSE are covered in detail in later sections.

For now, let's focus on one start method. Right click on an Insteon device and select VSE from the popup menu. The display pane of HCA is used for the VSE.
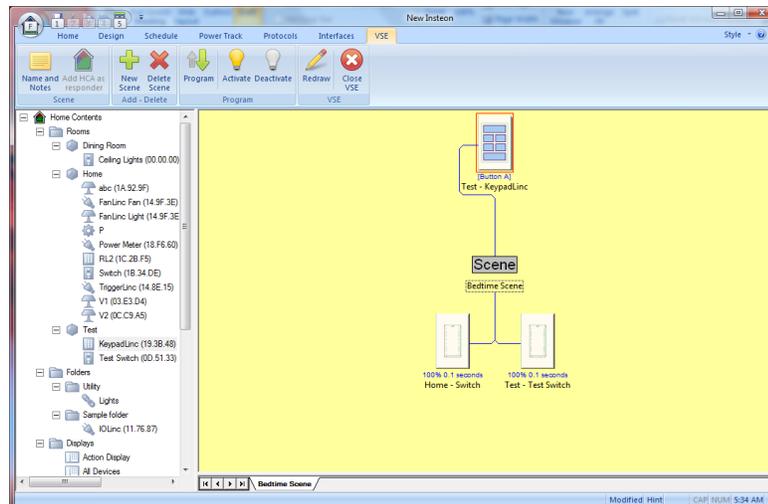
Note these elements of the VSE display:

- When the Visual Scene Editor is open, an extra category appears in the ribbon with commands used to control the VSE.

- What displays above the gray "scene" box is the initiator of the scene. In this example, a KeypadLinc.

- What displays below the "scene" box are responders to the scene.

- The name of the scene – either one that you entered or one that HCA made up – displays below the "scene" box and on the tab at the bottom of the display pane. In this example the scene name is "Bedtime Scene".

- The lines drawn from all the responders to the scene name and from the scene name to the scene controller are there to help you visualize that all these devices are connected together.

- You may need to drag the HCA window larger to see the entire scene. When you change the HCA window size you can ask that the VSE display be redrawn. Press the Redraw button in the ribbon.

- Below each responder is text showing the level the device is controlled to and the rate at which that control happens. For example, the "Home - Switch" goes on to 100% with a ramp rate of .1 seconds. This text displays in blue if the device has been previously programmed and red if the programming has not yet been made.

- You can right-click on a device and a popup menu displays.

- There could be one or more tabs at the bottom of the display pane. Depending upon how you started the VSE, you may see one or more than one tab. More on this in a later section.

Adding responders to a scene

Using the VSE is very similar to many other HCA tools. To add a new device to a scene all you need do is to drag it from the design pane and drop it into the scene. At that point in time a popup dialog allows you to set the properties of that device in the scene. For example, dragging a LampLinc or SwitchLinc displays this dialog:
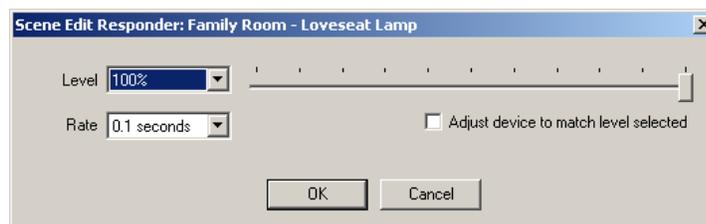
In the dialog you specify the level and the rate. If you want to see what that level looks like, you can check the "Adjust device to match level selected" box. This causes HCA to send dim/bright commands to the device as you change the level. You may not want to do this if you are building a scene late at night and you don't want to disturb family members.

If you drag and drop a KeypadLinc this dialog appears:
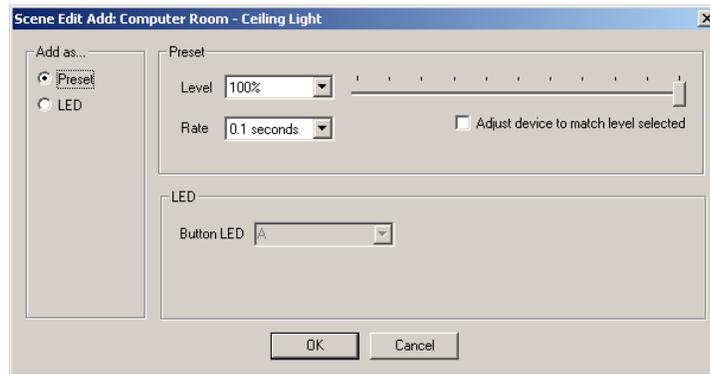
A scene can control the KeypadLinc's load or just control one of the button LEDs. This dialog lets you select the one you want and its properties.

If you want to add HCA as a scene responder press the *Add HCA as Responder* button in the ribbon.

The VSE will not let you drag and drop a device into a scene that the VSE doesn't support, nor will it let you add the same device more than once unless it has more than one sub-device.

Modifying a device's scene properties

When you added a device to a scene using drag-and-drop, the popup dialog let you set the device's properties. You can change them any time by a right-click on the device.
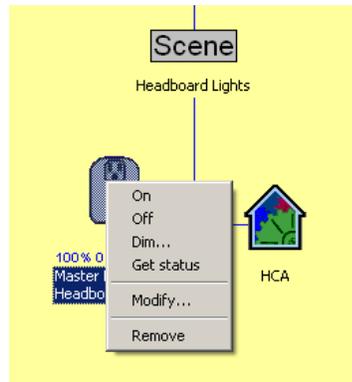
The first four choices in this popup menu are just provided for your convenience and perform the same actions on the device as they do when you right-click on the device in other places in HCA.

The *Modify* option opens a similar dialog as when you added the device. You can change the level and ramp rate, or if a KeypadLinc LED, which indicator is used.

Removing responders from a scene

To remove a component from a scene, right-click on it as described in the last section and select "Remove". You can't undo this action but you could abandon the scene changes if you discover you really didn't want to remove that scene component.

Changing the scene name

To change the scene name, double-click on the scene name and a dialog appears that lets you name the scene. You can also press the *Name and Notes* button in the ribbon to get to the same dialog.

Note: If a scene has HCA as the controller, you must give the scene a name.

Testing a scene

To test a scene, press the *Activate* or *Deactivate* buttons in the ribbon. Activate controls all the scene devices to their level at the specified rates. Deactivate turns all the scene devices off.

There are some limitations of the Activate option and these will be described later.

Programming a scene

Programming a scene is very simple. Select *Program* from the ribbon. HCA uses the same dialog in many places when remote communication is being performed with Insteon devices. This checklist dialog shows each operation to be done and proceeds down the checklist operating on each device in turn.
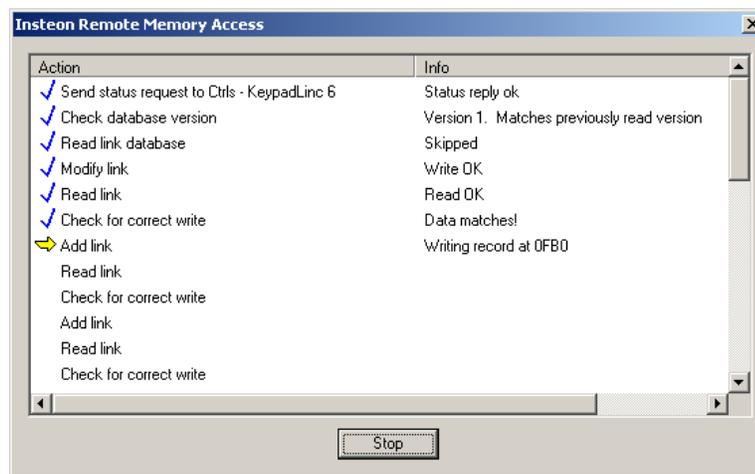
Actions that complete without error are checked off when done. The current action is shown with the yellow arrow, and operations that fail show with a red X.

Depending upon the complexity of the scene, there may be a few actions or many.

When the programming is complete the *Stop* button changes to *Close*.

Closing the VSE

To close the VSE, press the *Close* button in the ribbon. If there are changes not yet programmed, a warning appears and you can either cancel out those changes or remain in the VSE.

Using the VSE: Starting, stopping, and creating scenes

The VSE was designed to facilitate creating and editing scenes in two different manners. You can focus on a scene or your can focus on a device within the scenes – possibly multiple scenes - it participates in.

Working in a "by scene" manner

To start the VSE select from the ribbon press *the Visual Scene Editor* button in the *Insteon* panel of the *Protocols* category. This dialog appears:
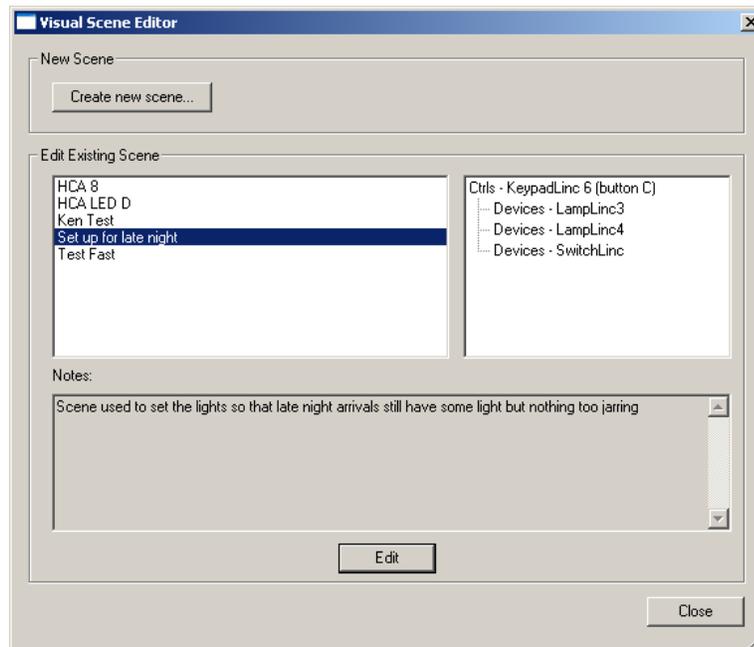
The left-hand list shows all the scenes you have explicitly given names to. The right-hand window displays, in a shorthand manner – what devices participate in the scene. Below are any notes you have saved for this scene.

Hint: In even a small Insteon installation you can wind up with many scenes. Some of these are important ones that you will spend time creating and modifying. Others are simple "press this button and control that device" type of scenes. Give names to the scenes that you expect to be working with over time but it is not necessary to name every scene.

In this dialog, to edit a scene all you need do is to select its name and press the edit button.

To create a new scene, press the Create button. This dialog appears:
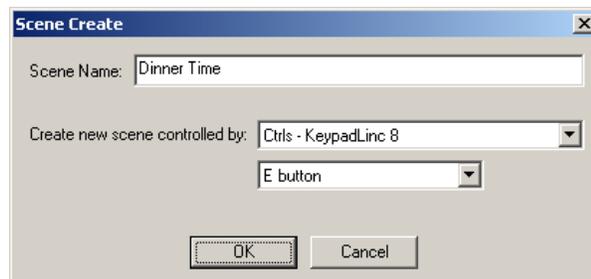
Enter a scene name, and what device controls the scene. The controller can be any device that has a button or rocker. Also you can create HCA controlled scenes by choosing HCA in the *controlled by* list. In the list for the device you select are all the transmit components available and if they are currently being used by a scene or not. In this example, the KeypadLinc E button will be the scene controller.

When you close the create dialog, the VSE opens with the new scene displayed. The VSE helpfully adds HCA to all new scenes as a responder but you can remove that if not needed.

When you start the VSE in this manner – by selecting from the *menu Insteon – Visual Scene Editor*, you are focusing on a specific scene. The VSE shows only one tab and that tab shows the scene.

Working in a "by device" manner

The other way to work with the VSE is to focus on a specific device and the scenes that device participates in. In this manner, the VSE shows a tab for each scene that the device is in.

To start the VSE in this way, right-click on a device in the design or display pane and select VSE from the popup menu.
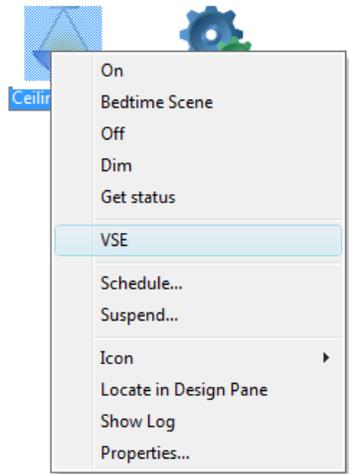
This opens the VSE with a tab for each scene.
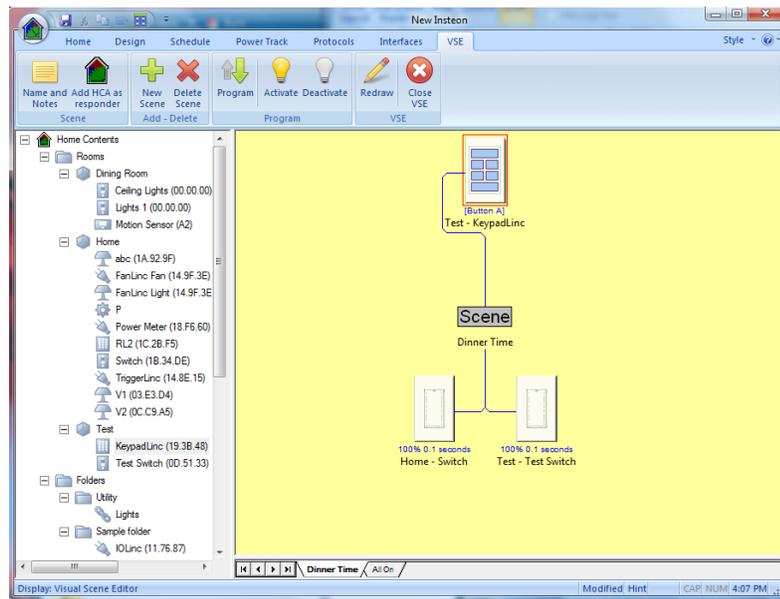
Note the red box drawn around the device. This helps show you the device you are focusing on – the device you right-clicked on and chose VSE from the popup menu. In this scene the device is used as a controller. Here is another tab:
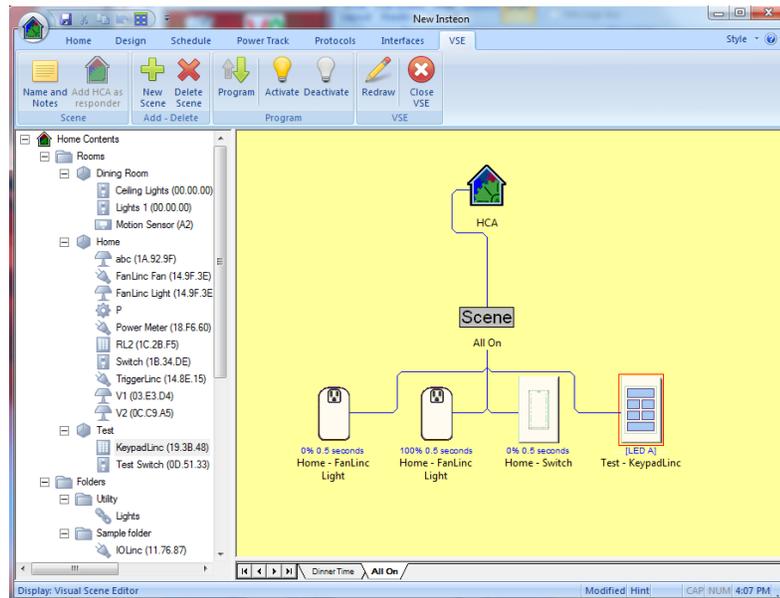
In this scene the device is used as a receiver.

You can click though the tabs and see each scene that the device participates in.

To create a new scene, press the New Scene button in the ribbon. This dialog appears:
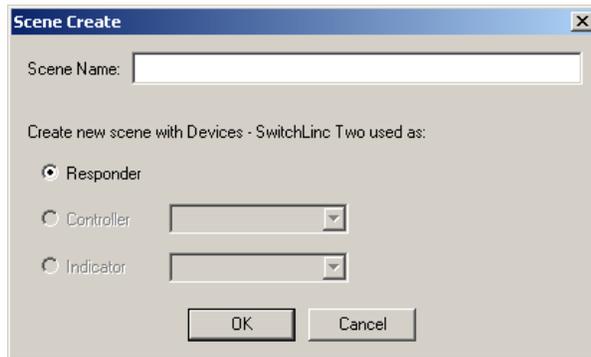
Note that since you are focusing on a specific device you are not asked to choose a device, only to enter a scene name and choose how the device will participate in the new scene – as a controller or responder.

Deleting scenes

Regardless of how you start the VSE, if you decide that you have a scene you no longer need it is simple to have HCA remove it. Press the ribbon *Delete Scene* button. The same dialog that appears when programming a scene is used to remove the programming from all devices in that scene.

Scenes initiated by HCA and by other devices

Insteon scenes have a number of features that are best understood in order to get full use out of them.

The key fact about Insteon scenes is that each scene has a controller – the device that initiates it – and only that controller can initiate the scene. Let's try an example.

Suppose you have two KeypadLincs and three LampLincs. Also suppose that you create a scene so that when you press the B button on the first KeypadLinc the three LampLincs go to 50% in 2 seconds. Let's call that Scene One.

Suppose you want the second KeypadLinc B button to do exactly the same thing with the three LampLincs. But there is no simple way to do that in the Insteon world. There is no command that the second KeypadLinc can send that will cause the LampLincs to respond. The second KeypadLinc can't "pretend" to be the first KeypadLinc and have the LampLincs respond.

You can create a new scene – let's call that Scene Two – that also is initiated by the second KeypadLinc B button and controls the LampLincs in the same way. So even though both scenes have the same effect on their responders, Scene One is not the same as Scene Two and that is important to remember.

> **Note for UPB users**: If you are familiar with the Universal Powerline Bus (UPB) linking model this probably all sounds confusing. In the UPB world once the receivers are programmed, any controller can send the link number and the responders will respond. This isn't the way that Insteon works. In the Insteon world the responders only respond when the link is sent by the controller they were programmed for.

Is this just an obscure point? How does it affect you?

From the example above, suppose you want HCA to initiate Scene One. You want HCA to do the same thing that pressing the KeypadLinc button does. Can HCA do that? No it can't. Just like the second KeypadLinc as described above can't initiate the scene, neither can HCA. And just like the above example, you would have to create a new scene with HCA as the controller and the LampLincs as the responder. Now we have three scenes that have the same effects – all three LampLincs go to 50% in 2 seconds - but all three scenes are not the same scene.

In many ways this is annoying as you have to create a lot of "duplicate" scenes. You may have many controllers that all want to do the exact same thing and you have to program each of them to do that. Good thing you have the VSE!

This also affects the ability in the VSE to test a scene. If you are creating a scene that is not initiated by HCA, when you use the Activate and Deactivate VSE right-click menu picks HCA can't control the scene with a simple scene command. It has to simulate the scene by sending each responder commands to adjust them to what would have happened to them had the scene controller initiated the scene. HCA will have varying degrees of success in doing this.

VSE, the linking tabs, and the multi-way wizard

There are several other methods in HCA that create scenes. One of these is the Multi-Way Wizard – described in the Insteon appendix – and the linking tabs on the device property dialog.

Like the VSE these tools update the linking table stored in the devices. So their effects can be seen in the VSE after they have performed what they do. That is, if you link HCA to a KeypadLinc button using the property tab, next time you open the VSE on that KeypadLinc you will see a scene where the KeypadLinc is the controller and HCA the responder.

In this way the VSE is the "tool above them all" in that it can do whatever the linking tabs and the Multi-Way wizard do. But those tools may be more convenient to use as they were created to handle specific common tasks so don't forget them!

Using scenes

Using the VSE you can create scenes. But what to do with them? If they are scenes controlled by one of your Insteon devices – a KeypadLinc button or SwitchLinc paddle for example – you use them by pressing the button or tapping the paddle.

If the scene is one that HCA initiates, you can use the Visual Programmer Scene element to cause HCA to send the commands to initiate the scene. You an also use the Visual Scheduler to schedule the scene activation or deactivation as part of your schedule.

For more information, see the User Guide chapters on Schedules and Programs.