Using Lighting "Scenes" with HomeVision

Some of the newer X-10 devices, like X-10's LM14A lamp module and Leviton's 6381 wall switch, support "scenes". A scene is a group of X-10 modules that can all be set to predetermined levels with a single command. By using these with HomeVision, homeowners can create complex lighting scenes that function similarly to much more expensive dedicated lighting systems. This article describes how scenes work and how to implement them with HomeVision. Note that this requires the recently released 2.62 version of the software, which is available free from our web site.

What are Scenes?

A scene is a group of X-10 modules that can be set to predetermined levels simultaneously with a single command. For example, assume you'd like to have four different lighting scenes like this:

"Evening": The main family room lights are turned on at full brightness, accent lights throughout the house are dimmed to 70%, and all other lights are left unchanged.

"Theater": A few lights in the TV area are dimmed to 20%, others in the TV area are turned off, and other lights in the house are left unchanged.

"Dinner": Dining room lights are turned on full brightness, the kitchen to 30%, the family room to 20%, and others are left unchanged.

"Off": All lights are turned off.

Once you configure the modules for these scenes, you can send a single X-10 command to initiate the scene. All the lights will go to their appropriate levels simultaneously! There's no need to send multiple dim or bright commands to each module individually.

Some Important Details

First, you should be aware that different manufacturers implement the scene capability differently. The following description applies to the X-10 LM14A lamp module and the Leviton 6381 wall switches, which we've tested with HomeVision. Other devices are available that supports, and they may or may not work the same way. In fact, the X-10 and Leviton documentation show that, while they implement some features the same way, the X-10 devices support additional features that the Leviton 6381's don't. This article focuses on the common features; the unique X-10 features will have to wait for another day.

Scenes work within a single house code. That is, any lights you want put in a scene must be in the same house code. You can have up to four scenes in each of the 16 house codes. Any X-10 module can be included in all, some, or none of the scenes for its house code. Since an X-10 module has only one house code, each module can belong to a maximum of four scenes. A module in a scene still responds to the standard X-10 On, Off, Bright, Dim, and "Direct to Level ##" (described later) commands.

There are two basic steps to using scenes:

1) Create the scene
2) Execute the scene

Creating scenes is typically a one-time process. It involves telling each module which (if any) scene(s) it should belong to, and what brightness level it should be at for that scene. With HomeVision, you create scenes by using the X-10 Control Screen in the PC software to send X-10 commands to configure the modules.

Executing a scene means sending an X-10 command that tells the modules to go to the specified scene. This is the cool part. A single X-10 command tells all the modules on that house code to enter the scene at the same time. If you have 16 lights in the scene, all 16 will simultaneously go to their appropriate levels. Each light can go to a different level. For example, 4 lights may go to full brightness, 3 may go to 30%, 2 go completely off, etc.. And it all happens at the same time with a single command!

To our knowledge, all devices that supports scenes also support what we call **"Direct to Level ##"** commands. This is a relatively new feature that allows a module to go directly to a level with a single command without going on to full brightness first. The "Direct to Level ##" commands and the scene commands all use X-10 "extended codes". If you haven't already done so, I suggest you test whether your devices support the "Direct to Level ##" command, even if you have no plans to use scenes. The "Direct to Level ##" command is vastly superior to using On, Off, Dim, and Bright commands. You can test this with the X-10 Control Screen in the HomeVision software. Look for the "X-10 device directly to level ##" command in the "custom commands" section of the screen, near the

bottom of the command list. If your device does not work with the "Direct to Level ##" commands, it probably does not support scenes either.

Note that the light levels for all these commands range from 0 to 63 (as opposed to the 16 or 17 levels using the standard X-10 commands). Level 63 goes to full brightness immediately, while level 62 also goes to full brightness, but ramps there over a period of several seconds. Level 0 is off. Note that unlike the standard X-10 commands where "Off" is <u>not</u> the same as dimmed to level 0, they <u>are</u> the same here. Since these new commands go directly to a level without turning the light on at full brightness first, there's no need to use the old trick of dimming a light to level 0 instead of turning it off.

You should also note that X-10 extended codes used by both "Direct to Level ##" commands and scenes are not compatible with older X-10 repeaters (amplifiers). Both Leviton and ACT have redesigned their repeaters to support these X-10 signals. I do not know the exact date the changes were made, but repeaters more than a year old probably do not work with these signals.

Using Scenes

There are two steps to using scenes:

1) Create the scene
2) Execute the scene

You create scenes by using the X-10 Control Screen in the PC software. You can execute a scene from this same screen or within your schedule. You cannot create scenes in a schedule (there should be no need to do this, as it's just a one-time setup process).

Creating Scenes

To create scenes, open the X-10 Control Screen in the PC software. The HomeVision controller must be connected to the PC. You will use the following two "custom commands" located near the bottom of the custom command list box:

1) Include in scene # at level XX (of 63)
2) Remove from scene #

As an example, assume you want to create these two scenes using modules A-1, A-2, and A-3:

Scene 1:   A-1 on at level 10
A-2 on at level 15
A-3 on at level 20

Scene 2:   A-1 off (level 0)
A-2 on at level 50
A-3 on at level 63

Here's how you'd create these scenes:

1) Select house code "A" and unit code "1".
2) Select the custom command "Include in scene # at level XX".
3) Enter "1" in the scene number text box.
4) Enter "10" in the light level text box.
5) Click the "Perform Command" button. This will send an X-10 command to module A-1 telling it to include itself in scene 1 at level 10.
6) Select unit code "2" and level "15" and click the "Perform Command" button to put A-2 in the scene.
7) Select unit code "3" and level "20" and click the "Perform Command" button to put A-3 in the scene. Scene 1 is now complete!
8) Change the scene number to "2". Repeat the above steps using the desired levels for scene 2.

The above steps send the necessary commands to the X-10 modules to put them in the two house code "A" scenes. The modules will retain this information through power failures, so you only need to do this setup once.

If you decide you don't want a particular module to be in a scene, use the "Remove from scene #" command to remove it. To change it's level for a scene, execute the "Include in scene # at level XX" command using the new level. To test whether the scene works, transmit the "Execute scene #" command, as described in the next section.

Executing Scenes

"Executing" a scene means sending an X-10 signal to command the modules to go to the desired scene. You can execute a scene either from the X-10 Control Screen in the PC software or within a schedule.

To execute a scene from the PC, open the X-10 Control Screen. Then:

1) Select the desired house code (the unit code doesn't matter here, as scenes apply to the entire house code).
2) Select the custom command "Execute scene #".
3) Enter the desired scene number (1 through 4) in the scene number text box.

4) Click the "Perform Command" button. This will send an X-10 command to the house code and all the lights in the scene should respond.

To execute a scene within your schedule, use the X-10 command "Execute scene #" in the Actions Entry Screen. This command is located with all the other X-10 commands, near the bottom of the command list. Select the desired house code from the house code list box, and enter the desired scene number.

Conclusion

The scene feature is a vast improvement over standard X-10 commands. Inexpensive devices like lamp modules now have capabilities previously found only in high-end devices. Using these in conjunction with HomeVision, users can create complex lighting scenes that function similarly to much more expensive dedicated lighting systems.