

Chapter 9

Visual Scheduler

So far you've created a design with some devices and schedules. Now you may want to see another way to create schedules for your home.

The Visual Scheduler is a graphical way to add, modify, or delete entries in a schedule in the Home Control Assistant. It can be used to quickly create schedule entries and also to look at multiple devices to see how their schedules compare. Although it is very powerful, it does not take the place of the Schedule Entry Wizard in constructing the schedules for your home.

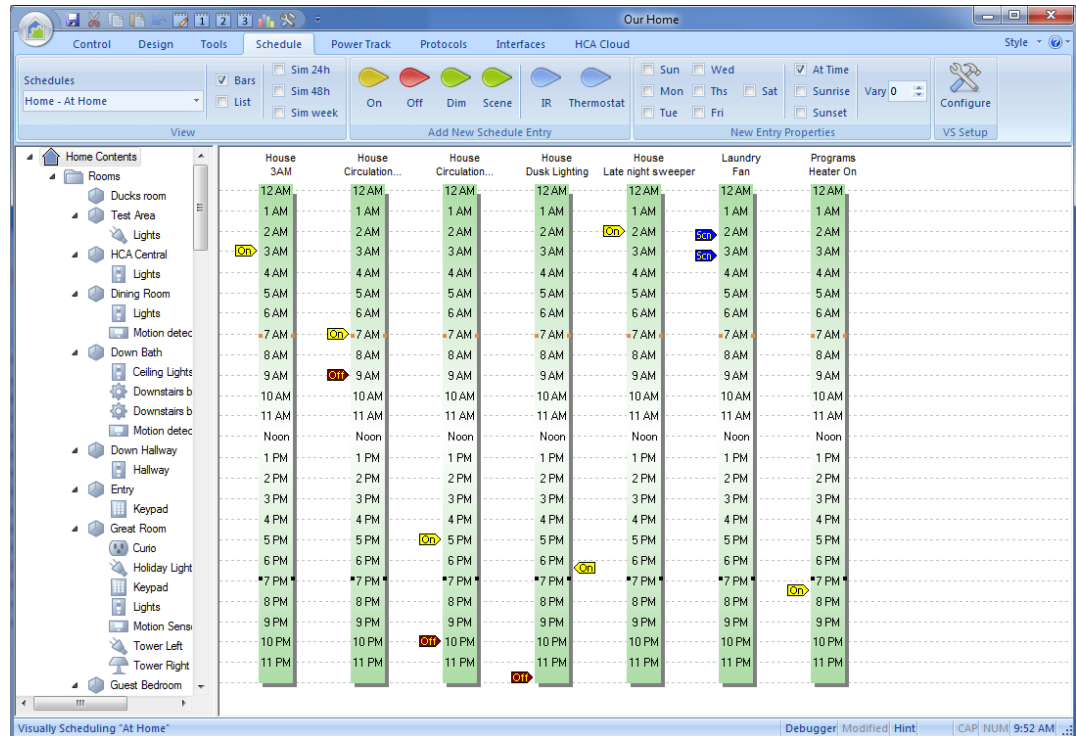
This chapter discusses the Visual Scheduler, including topics on:

- Starting the Visual Scheduler
- Looking at the Visual Scheduler
- Using the Visual Scheduler
 - Creating new schedule entries
 - Modifying existing schedule entries
 - Deleting existing schedule entries
- Additional features of the Visual Scheduler
 - Sun-relative times
 - Every day and not-every day schedule entries
- Characteristics of the Visual Scheduler
- The Visual Scheduler and the Schedule Entry Wizard

Starting the Visual Scheduler

Before you can start the Visual Scheduler, you must already have one or more schedules in your home design.

To start the Visual Scheduler, choose the *Schedule* category in the ribbon. The Visual Schedule appears as:



All the tools necessary to work with the Visual Scheduler are in the ribbon.

The schedule you are viewing is named in the dropdown at the left end of the ribbon. In this example, the “At Home” schedule is being seen.

You can’t work on multiple schedules at one time. To work on another schedule, use the dropdown in the ribbon to change schedules.

To close the Visual Scheduler, chose another category in the ribbon.

Looking at the Visual Scheduler

When you first open the Visual Scheduler, you might want to take note of its main features.

- The Visual Scheduler uses a time bar to represent each device, group, program, and room in your design. This bar is a vertical column with 12 a.m. (midnight) at the top and 11:59 p.m. (almost midnight) at the bottom.

HCA uses the times for sunrise and sunset (for the current day) to mark the sunrise and sunset times with small black blocks. If you look at the Visual Scheduler during the summer, the location of the sunrise marks is different than what shows when you open the Visual Scheduler in the winter.

- Above each bar is the name of the device, program, group, or room that the schedule bar represents.

Attached to the bars are time markers representing schedule entries. For example, in the above image there is an On marker in the bar for “Circulation Pump” at about 7 a.m. In the “Dusk Lighting” bar there is a marker at about 30 minutes before sunset. Remember, specific times are shown by markers on the left side of the bar, times relative to sunrise and sunset are on the right.

Each schedule entry has a date component – the days of the week, and a time – either a set time or a time plus or minus sunset or sunrise, and the number of minutes to vary each day. When a new schedule entry is created, the current settings in the ribbon are used for that new schedule entry.

- At the bottom of the display pane is a scroll bar. If you have so many devices, programs, and groups in your design that the display pane cannot show all the time bars at one time, you can use the scroll bar to display the rest of the time bars. It operates as you would expect, and can scroll the Visual Scheduler left and right to see the other time bars.
- In the ribbon are a number of tools for creating new schedule entries as well as changing how the Visual Scheduler appears.

Each schedule entry – represented by time marker on a bar - has a date component – the days of the week, the time – either a set time or a time plus or minus sunset or sunrise, and the number of minutes to vary each day. When a new schedule entry is created, the current settings in the ribbon are used for that new schedule entry.

Also in this ribbon are the markers themselves – on, off, dim, scene, thermostat, or IR. To add a new schedule entry, click on the marker picture and then move the mouse to where it should be and click again to drop it. As you move the mouse the marker “clicks” onto the nearest bar.

Hint: Remember that 12:00 p.m. = noon, and 12:00 a.m. = midnight.

Using the Visual Scheduler

Now that you are familiar with the basic look of the Visual Scheduler, you probably want to know what you can do with it. The next sections describe how to

- Add time bars
- Create new schedule entries
- Modify existing schedule entries
- Delete existing schedule entries

The following sections discuss these operations.

Add time bars

In order to schedule a device, program, group, or room, there must first be a time bar for it. Select the name of device, program, group, or room in the design pane and drag it onto the Visual Programmer and drop it. A new time bar is created.

The Visual Programmer normally only shows time bars for those devices, programs, groups, and rooms that have schedule entries in the current schedule. This behavior can be modified. See the section below on Configuring the Visual Scheduler.

Creating new schedule entries

To create a new schedule entry, you must first decide two things:

- Do you want to set a new schedule entry with a specific time or with a sun-relative time (based upon sunrise or sunset)?

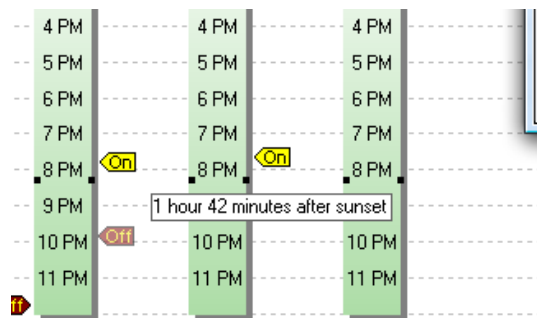
Suppose you want a lamp to come on every day of the year at 6 p.m. In this case, you want a specific time—6 p.m. This might be what you want, but remember that in the summer the light will come on when it is still light outside, and during the winter the light will come on well after dark. In this instance, you may want to create a sun-relative time, say at 15 minutes before sunset.

- Do you want to turn something on, off, change its illumination level – dim or brighten, or activate a scene?

Once you know the type of schedule entry you want, it is easy to create the entry. As an example, let's create an *On* entry for 6 p.m that happens on Saturday and Sunday only.

1. Locate the time bar for the device you want.
2. Make the settings you want in the ribbon. For this example, make sure that Saturday and Sunday are checked and the other days are not. Also make sure that the *Clock Time* option is selected.
3. In the ribbon click the *On* marker. The cursor of the mouse changes to an *On* marker. Move the cursor to where you want to drop the marker and click again to add that time marker to the bar. Since the new marker is set for a clock time, the marker will “click” onto the left side of the bar. Had the new marker options been set for a sun relative time, the marker with “click” onto the right side of the time bar. If you drag an IR or thermostat marker they will only “click” onto a time bar for the appropriate type of device.

As you drag the marker, a small popup window shows the time you are pointing at. For example, in this case an *Off* marker is being dragged and is currently at 1 hour and 42 minutes after sunset.



Hint: Time markers on the left side of the bar always represent the same time and appear at the same place regardless of what day you use the Visual Scheduler. Time markers on the right represent times relative to today's sunrise and sunset and these positions vary throughout the year. Suppose you have a schedule entry that is for sunset. If in May you open the visual scheduler, that schedule entry marker will appear pointing to 7pm. If you open the Visual Scheduler again in December, that same schedule entry would appear but now pointing at 4pm. Still sunset in both cases just that the Visual Scheduler shows it at a different place.

If you drag a Dim, Scene, IR, or thermostat markers, once you drop the marker a dialog opens that allows you to select its properties. More on this later.

As you drag time markers around, you may see that you can't quite get the exact time you want. You want to get something to happen at 10:15, but no matter how carefully you drag, you can get 10:13 or 10:16, but not 10:15.

This is due to the fact that the Visual Scheduler translates the position of the pointer on the time bar into a percentage of 24 hours. Since the pointer moves only in single pixel increments, this percentage calculation may not always yield schedule entries to the exact minute. You will need to use the Schedule Entry Properties for this device to set the time exactly should you need to the minute operation.

Hint: If you can't see the all of the time bar details and all the time markers, make the HCA window bigger or maximize it.

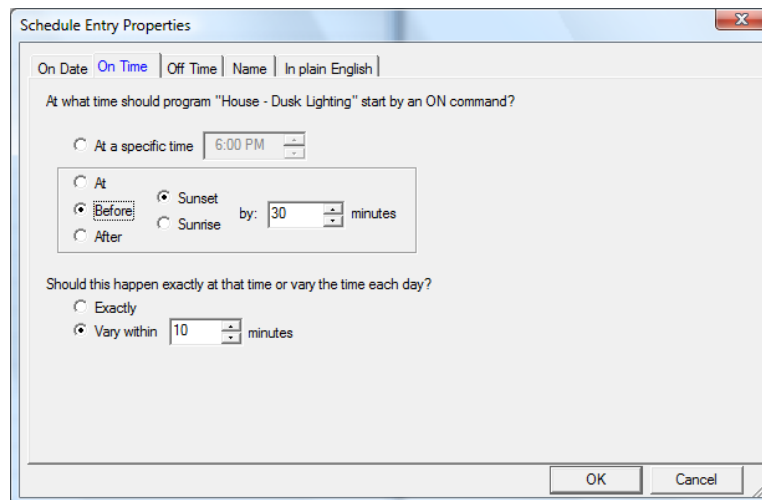
One final point about using the Visual Scheduler: When creating schedule entries that control **programs**, you may be able to drag On markers and have them “click” onto the time bar for the program but not Off markers. As the chapter on the Visual Programmer describes, programs can be started by a lot of different trigger types. Using the Visual Programmer you can only start programs using simple ON and OFF triggers.

Modifying existing schedule entries

It is very easy to change an existing schedule entry using the Visual Scheduler:

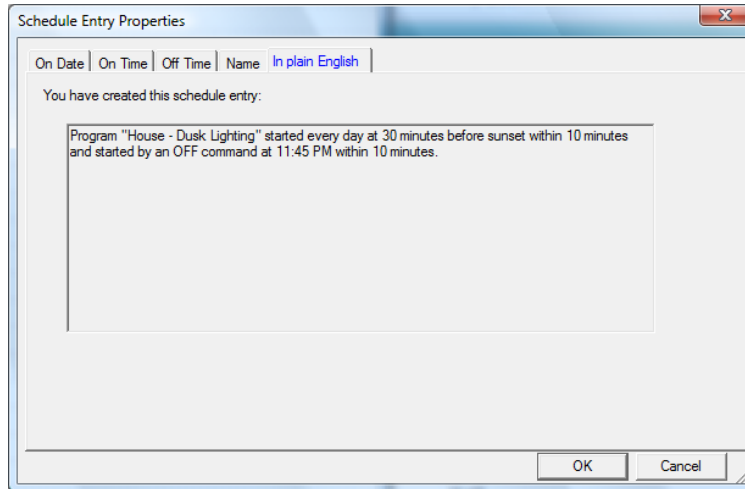
1. Move the mouse pointer to the time marker for the schedule entry.
As soon as the pointer is over an existing time marker, the status bar displays the corresponding schedule entry.
2. Click the marker and drag it to another location.
When you complete the drag, the schedule entry updates to reflect the new position.

This only changes the time. To change the date or the vary amount, right-click on the time marker and select Properties from the popup menu.



Using this dialog you can change all aspects of the schedule entry: Its date, time, action and name.

The last tab shows you what the schedule entry does in a simple text statement. With all the options available, this is a good way to check your work.

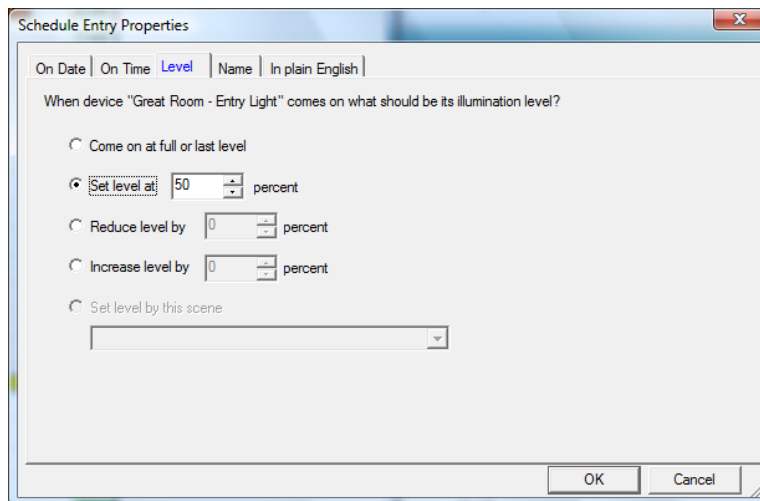


Deleting existing schedule entries

There may be times when you want to remove an existing schedule entry from a time bar. To do so right click on the marker and select Delete from the popup menu.

Dim and scene schedule entries

When creating entries for a device that supports dim or supports scenes, the Dim markers are dragged and dropped. When dropped, the schedule entry properties opens:

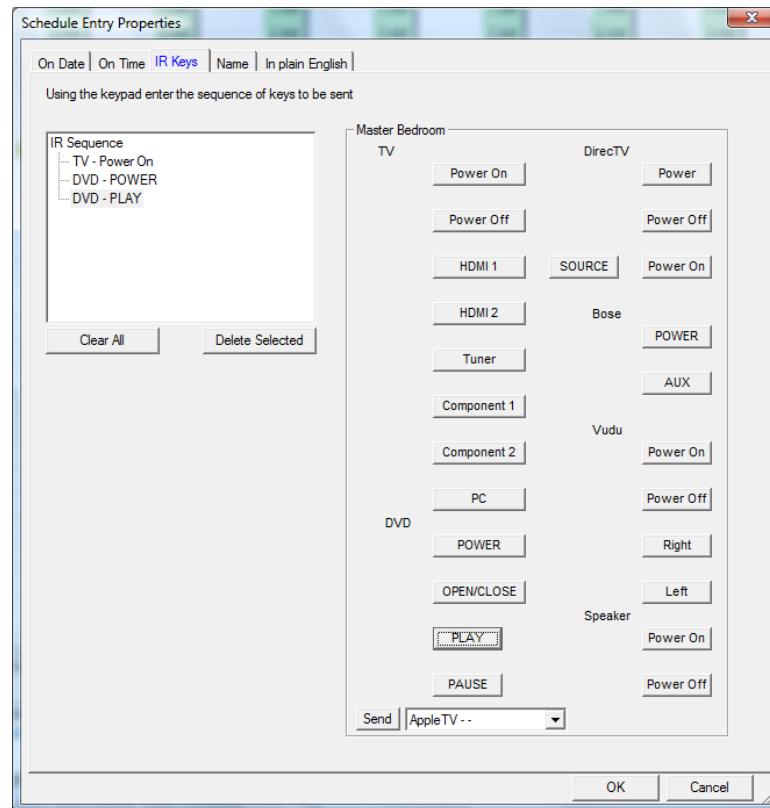


In this example, the device doesn't have any stored scenes but if it did those would be listed in the dropdown.

For devices that support dim, you can select the illumination level to go to, to increase to, or to decrease to.

IR schedule entries

When creating schedule entries for an IR device the marker at the bottom of the time bar says “IR”. When this marker is dragged and dropped someplace on the time bar this dialog opens.

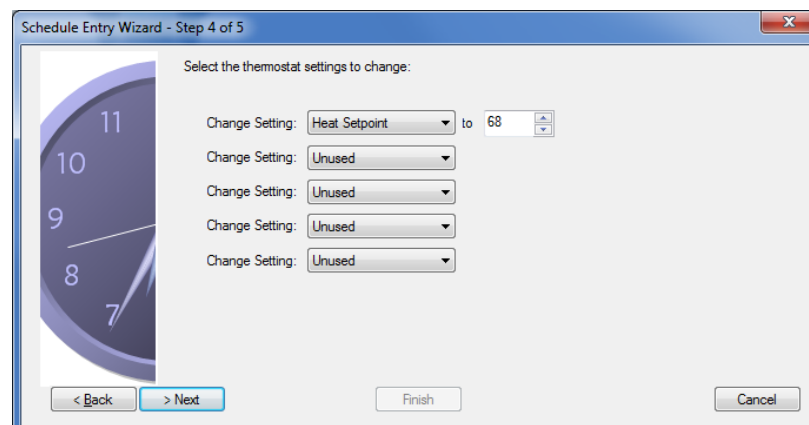


The contents of the dialog depend on the keypad used by the IR device. In this case a custom keypad for this television was created with the keypad builder. The keycodes sent when this schedule entry happens are shown in the box at the left side of the dialog

Hint: You may have to drag the dialog larger to see your whole keypad.

Thermostat schedule entries

When a time marker for a thermostat is dragged and dropped this dialog opens:

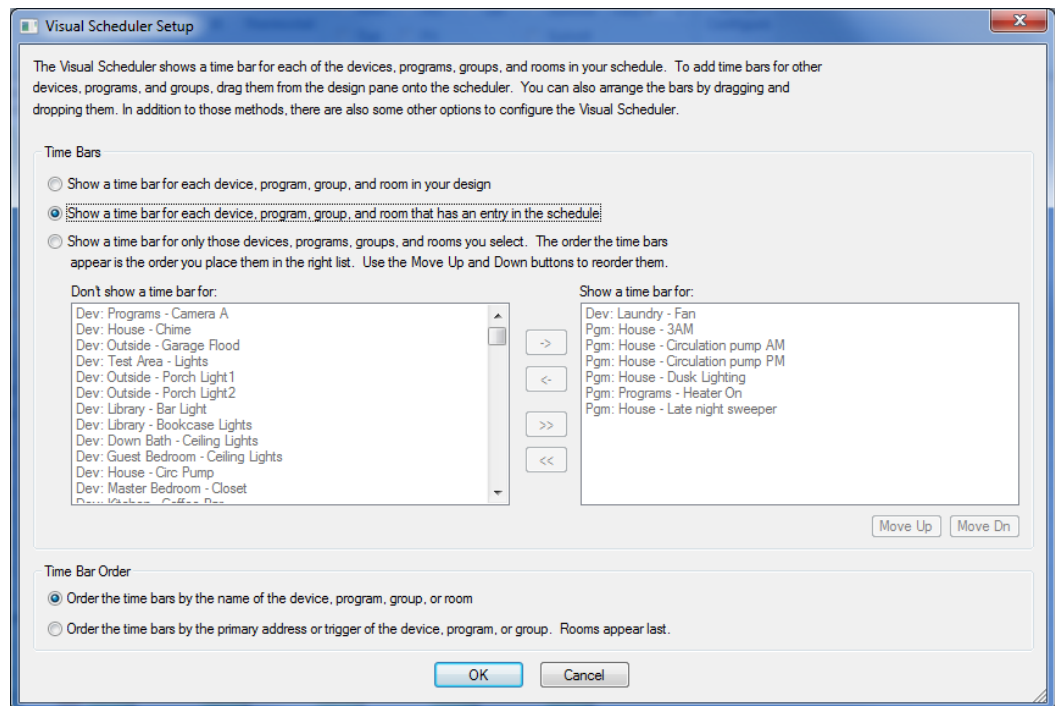


Depending upon the model thermostat in use the options may be different. To change the setpoint drag the thumb of the slider to the desired setpoint. To change the other options enable the option with the checkbox and select the option value from the dropdown.

Configuring the Visual Scheduler

One of the best features of the Visual Scheduler is that you can visualize a schedule by looking at the markers on the time bars. By having two bars next to each other you can see how they both are affected over time. The problem comes if you have a lot of devices. HCA gives you quite a few ways to help you control which times bars you see and in what order.

To open the configuration dialog press the *Configure* button in the ribbon.



As you can see from this dialog you can choose to have the Visual Scheduler show time bars for only those devices you have in the schedule, or you can have it show a selected set of devices. In addition, there are options for controlling the order you see the bars.

Regardless of which display you choose, you can always add a time bar for a device you want to add to the schedule. There are two ways to do that.

First, and the simplest way, is to select the device's name in the design pane and drag it on to the Visual Scheduler. Drop it on or before the bar to want it to appear before.

The other method is to use the VS setup dialog – shown above - and use the second display option to select the devices you want to see and the order they should appear in.

Finally, if you use the display option where you pick the bars and their order, you can reorder the bars by drag and drop within the VS. Click on a bar and drag it on or before the bar you want it to appear before.

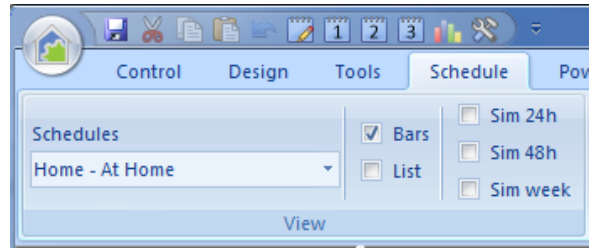
Other Views of your schedule

In addition to the time bar view of your schedule, you can also view it in a tabular format and in a simulation.

The tabular view shows the schedule entries in a form that may be easier to see if you have many schedule entries.

The simulation view shows what the schedule does in the order that it will happen for today, tomorrow, and this week.

To change the Visual Scheduler view, tick one of the view checkboxes in the ribbon.



In the List View the schedule is broken down into target, on date, on time, off date, off time, and action columns.

One nice feature of the List view is that you can sort the columns using the standard list view column header click method. This may make it simpler to focus in on a part of your schedule.

Target	On Date	On Time	Off Date	Off Time	Command	Name
House - 3AM	Every day	3:00 AM			On	
Programs - Heater On	Every day	7:30 PM			On	Heater Schedule
Laundry - Fan	Every day	3:13 AM			Deactivate scene "Laundry Fan"	
Laundry - Fan	Every day	2:13 AM			Activate scene "Laundry Fan"	
House - Circulation pump PM	Every day	5:00 PM	Every day	10:00 PM	On	
House - Circulation pump AM	Every day	7:00 AM	Every day	9:00 AM	On	
House - Dusk Lighting	Every day	30 minutes before sunset	Every day	11:45 PM	On	
House - Late night sweeper	Every day	2:00 AM			On	

The List View isn't a static representation of the schedule. You can delete or modify any entry as well as add new schedule entries. To delete the schedule entry right-click on the entry and select Delete from the popup menu. There is also a Modify option on that popup menu.

The Simulation View shows the schedule sorted by when entries happen and what happens at that time.

Time	Target	Action
Today at 2:00 AM	House - Late night sweeper	2:00 AM,On House - Late night sweeper
Today at 2:13 AM	Laundry - Fan	2:13 AM,Scene On Laundry - Fan
Today at 3:00 AM	House - 3AM	3:00 AM,On House - 3AM
Today at 3:13 AM	Laundry - Fan	3:13 AM,Scene Off Laundry - Fan
Today at 3:15 AM	Motion - Battery Check	3:15 AM,On Motion - Battery Check
Today at 7:00 AM	House - Circulation pump AM	7:00 AM,On House - Circulation pump AM
Today at 7:38 AM	Outside - Light and Dark sensor	7:38 AM,Off Outside - Light and Dark sensor
Today at 9:00 AM	House - Circulation pump AM	9:00 AM,Off House - Circulation pump AM
Today at 5:00 PM	House - Circulation pump PM	5:00 PM,On House - Circulation pump PM
Today at 6:23 PM	House - Dusk Lighting	6:23 PM,On House - Dusk Lighting
Today at 6:25 PM	Outside - Light and Dark sensor	6:25 PM,On Outside - Light and Dark sensor
Today at 7:30 PM	Programs - Heater On	7:30 PM,On Programs - Heater On (Currently suspended)
Today at 10:00 PM	House - Circulation pump PM	10:00 PM,Off House - Circulation pump PM
Today at 11:46 PM	House - Dusk Lighting	11:46 PM,Off House - Dusk Lighting

You can change what the period that the simulation shows, choose one of the three simulation option checkboxes in the ribbon.

The Visual Scheduler and the Schedule Entry Wizard

The last topic to discuss is not exactly about the Visual Scheduler alone, but rather how the Visual Scheduler interacts with the Schedule Entry Wizard. While the Visual Scheduler is active, you still have access to all HCA commands. You can use the wizard to create new schedule entries. If the entries you create with the wizard are for the schedule that the Visual Scheduler is displaying, new time markers appear when the wizard is finished. You can create new devices, and new time bars appear. If you delete schedule entries, devices, programs, or groups, time bars may disappear.

Example

Suppose you are using the Visual Scheduler to look at schedule entries that happen every day.

1. You use the Schedule Entry Wizard to create a new schedule entry for a device that has a time bar shown in the Visual Scheduler. (Remember that you do have access to all the HCA commands while using the Visual Scheduler.)
2. Using the wizard, you select Every Day for the date part of the new entry.

When you complete the wizard, a new time marker is drawn on the device's time bar at the location that corresponds to the time in the schedule entry you created. If you created an On-Off entry, two new time markers are drawn.