Getting Started with HCA and Checkbox Control

This Getting Started Guide continues from the previous Getting Started guides that covered installation and adding devices. This guide assumes that you have reviewed those.

In this guide, these topics are covered.

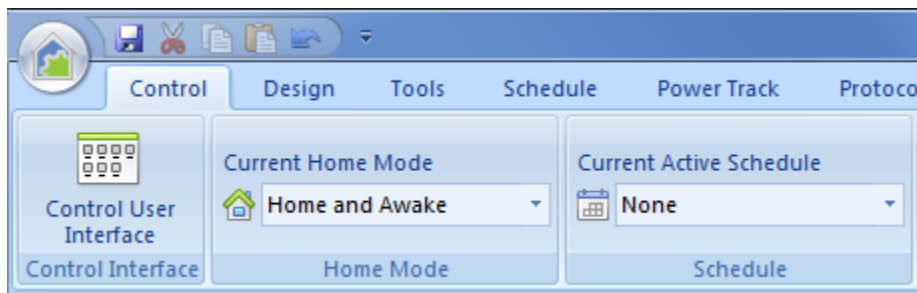- Home modes
- Device Auto Off
- Room and device interactions

If you have not already purchased HCA and you are looking to test drive this software, you can download a free 30-day trial of HCA Plus from the HCA support website at www.HomeControlAssistant.com

Home Modes

HCA has the concept of a "home mode" that reflects how you are using your home at any given time. These modes that are added to each new design: "Away", "At Home and Asleep", and "At Home and Awake". These are hopefully consistent with how you occupy your home.

Each HCA design you create has these three modes with those names, but you can change the names and usage of any of these modes. There is also a 4th mode that is undefined in new files and some users have found that using the 4th mode as a "Vacation" mode can be useful.

You can see the current home mode anytime by looking at the dropdown in the Control ribbon category. It shows the current mode and you change to another mode by making a new selection in the dropdown.

Any device can be configured to respond when a home mode is changed. There are different actions for when a new mode is entered and what happens to that device while in that mode. To configure these actions, open the device properties and look on the "Green" tab.

Green mode settings for this device.

Mode	Action when entering mode	Response while in mode
Home & Awake	Do nothing	Behave normally
Home & Asleep	Do nothing	Behave normally
Away	Go Off	Suspend all actions

Listed in this section of the tab are the home modes and what action to take when entering the mode and the response of the device while in that mode. The choices when entering the mode are:

- Do Nothing
- Go Off
- Go On

Without going any further, let's do an example to show how useful a feature this is. Imagine a "Go to bed" button you press on the way to bed. You want that button to turn off anything that you don't want left on all night. In the HCA Home Modes dialog, you can configure a trigger for a mode change and in this example you would use that keypad and button as the trigger.

After that, then all you need do is to set the properties of each device to be turned off when you go to bed as:

Home & Asleep	Go Off	Behave normally

When the home mode becomes "Home & Asleep" then all devices configured like that go off. That could be one device or 50 devices it all works the same.

Another example is that you might want some devices to come on when you arrive home (entering the "Home and Awake" mode) or when you get up in the morning. The settings for that are:

Home & Awake	Go On	Behave normally

The key point is that each device specifies how it wants to respond. To change the action of the device for how it responses when entering a new mode, all you need do is to change the configuration of the device.

The second column of this dialog section is "Response while in mode" has these options:

- Behave Normally
- Suspend all actions

The best way to explain this is by an example. Suppose that you have a light that you want to control to ON at dusk. This is an interior light, so it doesn't make much sense for it to come on when you are not at home. While there are many ways to do this – different schedules, a program that tests conditions before controlling the light – but the simplest method is to schedule the light to come on at dusk <u>every</u> day. Then configure that device so that when in the "Away" mode the device suspends all actions. "All actions" in this case means that the device isn't controlled by a schedule or programs.

Note that there is still a schedule and in that schedule there is an entry for this device to turn on at dusk. And that schedule could be the current schedule. But when the home is in the "Away" mode, then at dusk when the schedule entry is executed nothing happens because the home is in "Away" mode. This is much simpler than creating a different schedule or a program that tests conditions before controlling the light.

<u>Taking advantage of this feature</u>

To take advantage of this feature you should consider how HCA knows when to transition the home from one mode to another. There are many ways to do this:

- A keypad button can cause a mode change by configuring the Home Mode triggers. In the Getting Started guide about devices there was a section on creating a program that was triggered on a keypad button press. That same technique can be used here, but instead of controlling lighting, the "Set Mode" element is used instead to change home modes.

- Using the "Network Devices" tool that can keep track of mobile devices when they connect and disconnect from your home WiFi to figure out when anyone or no one is at home. "Network Devices" is a tool that you can configure and is described in a User Guide chapter.

- If you use the iOS tablet or phone mobile applications, you can configure Geo Fences that start programs that change the home mode. There is a technical note on Geo Fences available from the support web site.

All you need do is to think about how you interact with your home and configure the devices as needed. When creating schedules keep the home mode concept in mind, and you may find that only a single schedule is needed rather than a different schedule for when you are home and

another when away. The "Response when in mode" device setting suppressing schedule entries when their actions are not appropriate.

Auto Off

The Auto Off feature is like having a timer built into each device so that it is controlled to a different level – probably to OFF - after "n" minutes of being controlled to ON. But since HCA implements the timer and not the device, the timer is very smart!

The Auto Off settings for a device are also on the device properties dialog "Green" tab.

There are three parts to configuring an auto off specification to answer these questions:

- When does the auto off specification apply?
- What should the auto off do?
- How is the auto off countdown timer managed?

You can supply up to three answers for the first two points. Each of the three buttons opens a dialog where you specify <u>when</u> the auto off should happen.

In the above example, there is a different specification for during the day – "When light" – and at night – "When dark".

There are many options for the "when" specification. Press one of the three "when" buttons – the wide ones - in the Auto Off section and this dialog opens:
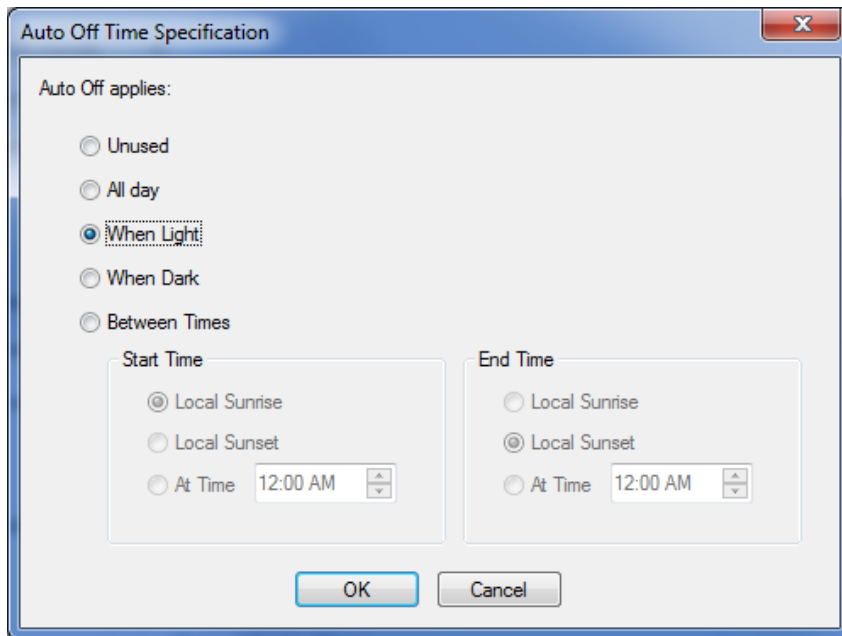
The condition for <u>when</u> an auto off applies are specified here. Choices are:

- At any time
- By light and dark
- By time

In this way, you can create a different auto off timer that happens during the day, and others at night or only at certain hours.

Once you have set the condition for <u>when</u> the auto off applies, next is to specify <u>what</u> happens. This is in the device properties "Green" tab where you set the number of minutes the countdown timer runs and the level to go to when it reaches zero.

Back in this example – see the image at the start of this section - these are auto off specifications:

- During the day, go completely off 10 minutes after going on
- At night, go to 20 percent 5 minutes after going on

Note: While this feature is called "Auto off" it really doesn't have to be that. It could just as easily be an "Auto On". You could configure it so that after 10 minutes, for example, that the light goes to 100%.

You may note at this point that you can create conflicting specifications. The first specification could be for "when light" and the second for "when dark" and the third for something else. Clearly the third case doesn't matter as it is either light or dark so one of the first two always applies. HCA looks at the conditions top to bottom and the first one that is valid for the current conditions is used.

The final step is to decide how the countdown timer should be managed. This is in the bottom section of the dialog.

When receive ON/DIM from device during auto off countdown ...	When receive OFF from device during auto off countdown ...
○ Does not effect auto off timer	○ Does not effect auto off timer
◉ Restarts auto off timer	○ Restarts auto off timer
○ Cancels auto off timer	◉ Cancels auto off timer

This configuration section is only useful if HCA "knows" when the device is locally controlled – that is, someone taps the switch paddle or presses a keypad button if it is a keypad load dimmer. If this is the case, then you can use this configuration to make the timer behave differently.

An example is the best way to show the utility of this.

Suppose you have a switch in a room. Someone walks in and taps the switch to turn the light on. Since you have configured it to go off in 10 minutes it would be nice if you had a way to make that <u>not</u> happen. It is very annoying when a light goes out unexpectedly.

To continue this example: suppose that after a few minutes the person taps the paddle again. In that case you might want to cancel the auto off timer or restart the timer to provide for a fresh 10 minutes. Both of those possibilities can be configured. You can also specify different actions if an OFF or ON is received from the switch.

In this example, if an ON is received from the device – someone taps the switch paddle top – then the timer is restarted for the full time as specified. If an OFF is received from the device – someone taps the switch paddle bottom – the timer is cancelled.

There is one more feature in this configuration. You can specify that 'n' minutes before the countdown timer expires that the device is controlled to a level. This is typically used to dim the device down one or two minutes before the timer expires to warn the person that the lights are about to go off. This is specified in the checkbox below the "when" buttons and when set applies to all the "when" specifications.

Taking Advantage of this feature

Auto off, like home mode control, is specified on a device by device basis. With the level of configuration for the auto off – when it happens, what happens, and how the countdown timer is controlled – you should be able to express the different scenarios needed for devices in your home.

If you have noticed the "Light" and "Dark" options and are wondering how HCA knows if it is daytime or nighttime, then you should look in the Home Properties dialog. Press the

"Properties" button in the "Home Configuration" panel, in the "Design" ribbon category and look on the "Light" and "Dark" tabs. Light and Dark can be determined in many ways using time, light sensors, and astronomical computations of sunrise and sunset based upon your location.

As a final note on auto off, and even though we are avoiding talking in this note about HCA programs and schedules, if a device auto off exists then regardless of how the device was turned on the auto off happens. The control of the device could have happened by a program, schedule, or even you interacting with the HCA UI or a mobile client application. It's all the same. This can make creating programs that control a device simpler. The program can use the ON element to turn it on and the auto off controls it OFF when needed.

Rooms

Rooms are a concept HCA uses to both contain devices and to define how the room and the devices interact. Some of the devices in the room can be designated as participating in determining the state of the room – is the room ON? or is the room OFF? While other devices can be configured to "follow" the room – when the room becomes ON these devices go ON and when the room goes OFF, then these devices go OFF as well.

The configuration for how a device interacts with the room it is in is specified in the "Room" tab of a device's properties.

This dialog looks complex as there are many settings contained within it but don't panic. For this guide, only the top section will be used. The lower section is for how devices and rooms interact with what is know as a "room auto off". That's a powerful feature that is a bit too advanced for this guide. But when you are ready to dig deeper, you should review this technical note:

http://www.hcatech.com/download/V14/Doc/TechNotes/TechNote_102_CheckboxControl.pdf
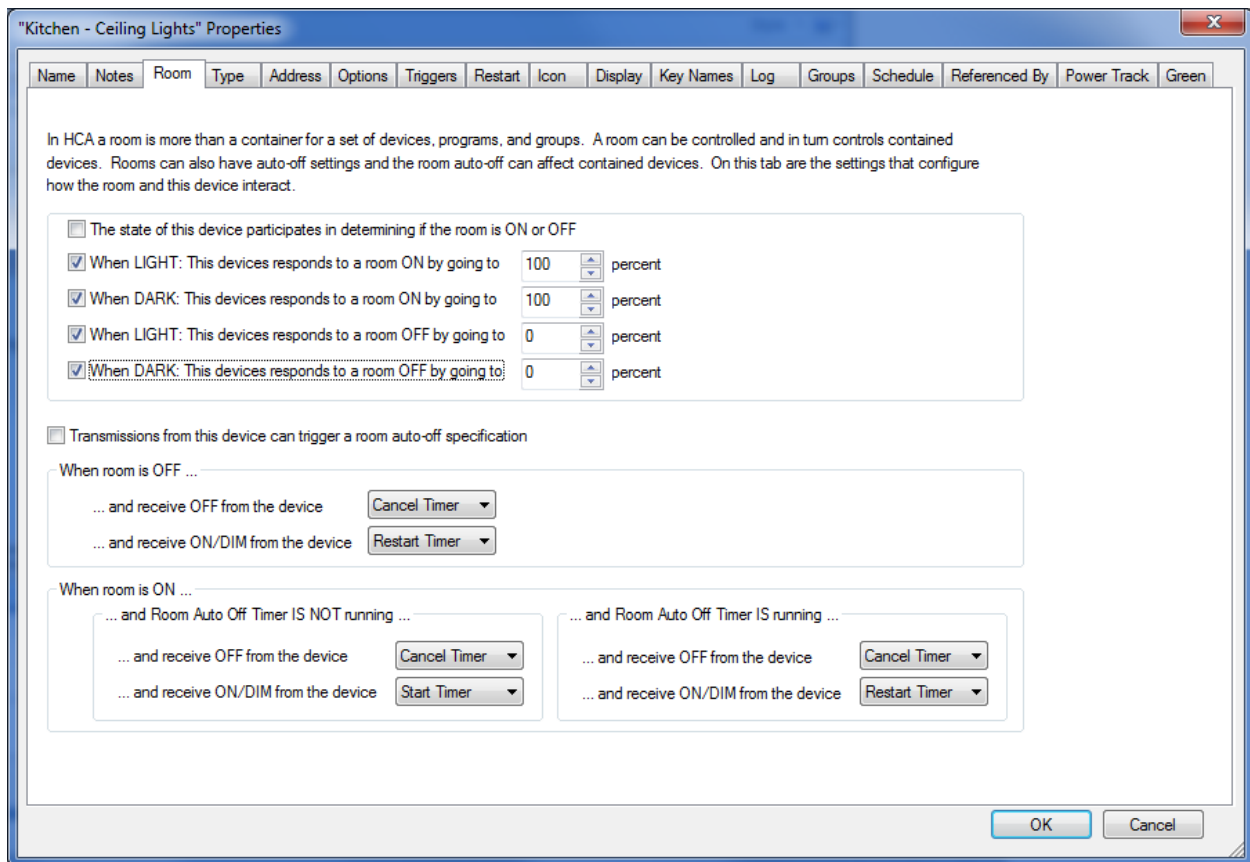
The first checkbox of the first section of this dialog answers the "does this device participate in determining the state of the room" question. There may be more than one device in the room that participates in determining its state. If so, then these rules apply:

- If <u>any</u> device that participates in determining the room state is ON, then the room is ON.
- If <u>all</u> devices that participate in determining the room state are OFF, then the room is OFF.

The other checkboxes in this section determine how the device responds to the change in state of the room. There are four states to configure:

- When the room goes ON and it is during the day
- When the room goes OFF and it is during the day
- When the room goes ON and it is at night
- When the room goes OFF and it is at night

At this point an example may help clarify all these settings:

Suppose you have a room with a motion sensor and one or more lights. The motion sensor can determine the state of the room and the lights can follow the state of the room. In the simplest

case, when the motion sensor sees motion, the lights come on. When the motion sensor stops seeing motion, the room goes off and the lights go off as well.

That sounds simple – and it is! And you could achieve exactly this same behavior with a program, a UPB scene, or an Insteon link. But using the Room configuration you can achieve different effects during the day and at night. Even more importantly, you can choose to only handle the ON from the motion sensor and not the OFF. You can't do any of that with a simple scene or link.

OK, got it. What's next?

Now that you explored some of the easier configuration for devices, what's next? If you would like to start with mobile applications and voice control, then you next stop will be to learn about using HCA in client-server mode by reading "Getting Started with HCA and Client Server".

If you aren't interested in that then you can explore additional HCA features in the "HCA 101" course on the HCA YouTube channel and the Frequently Asked Question list on the HCA web site. And, of course, the complete user guide as well.

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