Appendix 2
X10

This appendix describes the features of X10 support and covers these topics:

- CM11 features and capabilities
- SmartHome 2413 model PowerLinc configuration for X10
- X10 tools

CM11 features

The CM11 is an X10 interface made by the X10 corporation. It is sometime seen with a model number of CM11A, HD11A, and CK11A. For the purposes of HCA, they are all the same.

The CM11 has a place for a battery. This battery is used to keep its real time clock correct in the event of power failures. If you are not using the CM11 for schedule execution, that is, you have not and do not intend to download a schedule into to it; we recommend you do not install the battery.

This interface is connected to a serial port on your computer and plugged into the powerline. Because it connects directly to the powerline it is capable of sending X10 extended codes. These codes are used by the LM14 style modules and some Leviton switches.

This interface does not report X10 collisions or reception problems so the Log Setup features for reporting these conditions have no effect.

There is HCA support for downloading schedules into the CM11. While the CM11 does have the capability to execute programs in response to X10 events, HCA doesn't support this due to the extremely limited memory in the CM11 for this.

More information on downloading schedules to the CM11 is contained in the Appendix on Downloading.

CM11 menu selections

There are menu selections associated with the CM11 and they are reached by selecting the menu below the CM11 icon in the ribbon *Interfaces* category. These menu selections are:

- CM11 Download
- CM11 Clear memory
- CM11 set clock

The Clear Memory selection is used to remove any downloaded programs and / or schedule from the memory contained in the CM11.

The Download Schedule selection is used to select, translate, and download one of the schedules in your design to the CM11 memory. It is described in the appendix on downloading.

The Set date and item selection sets the CM11 clock to the same date and time as your computer. You need only do this if you are using downloaded schedules.

SmartHome 2413 model PowerLinc

The SmartHome 2413 PowerLinc models 2413U and 2413S can send and receive X10 commands. As it can also send and receive Insteon signals, you can have a mix of older X10 and newer Insteon devices in your installation.

To configure the 2413 for X10 support, on the hardware setup tab of HCA Options, press the Configure button in the PowerLinc setup.
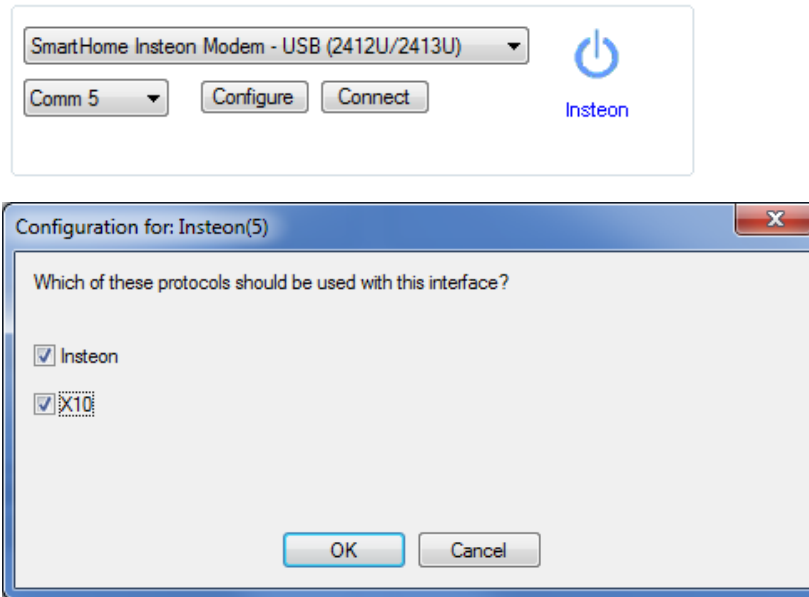
The X10 House and Unit Code Inventory

You need to think carefully before setting the house codes and unit codes for modules in your home, because the way you assign codes can make it harder or easier to work with your design. It is smart to assign the same house code to items in the same room, or with similar functions (such as outdoor lights), and easier to control your home if you choose sequential numbers for devices that are located or used together. The logical codes and sequential listings are easier to remember, and easier to control.

Keeping track of all your devices, groups, and programs can be a daunting task. You could walk around and check each device and its codes, writing each on a master list, or you could use the device, program, and group properties dialogs to construct a list of all house and unit codes.

However, HCA makes it easy, and does this for you. The House Code and Unit Code Inventory is a fast and efficient way to check the codes that you have used in your home design. It shows you which device, group, or program you have assigned each code to. It also gives you a way to change the codes as you review them.

There are several reasons that this tool can be a helpful for you.

- You may find that after installing new devices in your home for the first time, your choices need to be changed—perhaps more than once.

- If you later add a new device to your home, it is important that you don't choose settings that conflict with another module.

The inventory dialog provides easy access to all the codes. To open this tool, select *Unit Code Inventory* from the *X10 Tools* button menu in the *Protocols* category.
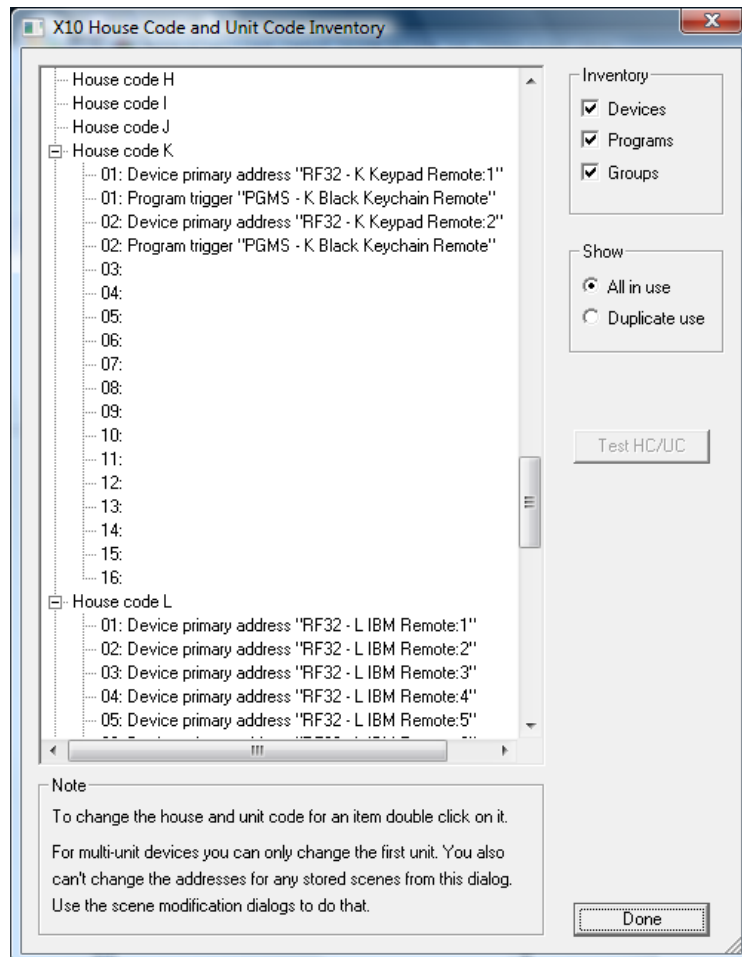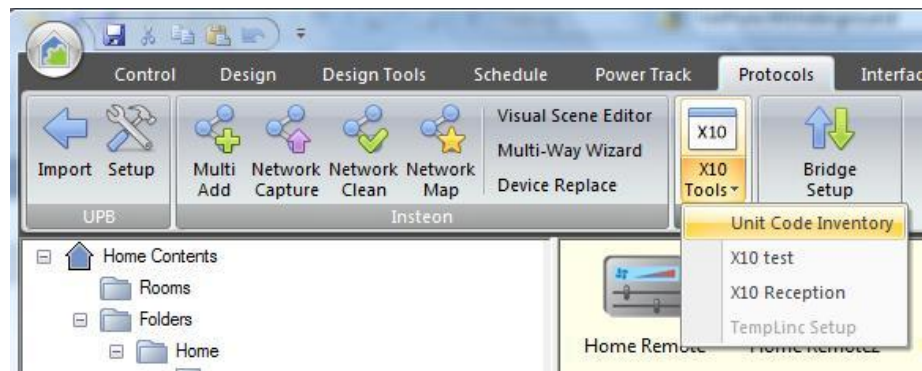
Since there are many ways that a House and Unit code can be used in your design, the Inventory displays not on the name of the item but how it is used. The possibilities are:

- Device primary address. This is what is assigned to the device on the X10 address tab.
- Device trigger. A device retransmission trigger.
- Program trigger. An X10 trigger for a program.
- Group trigger. A retransmission trigger for a group.
- Device scene. The X10 address of a scene stored in a device.

In the case of a multi-unit device, the name is suffixed with a colon and the unit number.

Viewing settings

The **display area** on the left of the dialog box lists each of the 16 house codes. Each house code that you have already used is marked with a minus sign (-) indicating that it has unit codes already assigned.

Beneath each house code, you will see its 16 unit codes. Each unit code that is used by a device, program, or group in your design, shows the name of the item it is assigned to.

You can expand or contract the house codes to hide or view the assigned unit codes.

On the right side of the dialog box are some useful controls:

- The Inventory checkboxes allow you to only show those types of items that are checked off.

- The show checkboxes allow you to show all house and unit code assignments or just ones that are assigned to more than one item. This may show you a problem in your design.

- A Test button sends an ON then and OFF command to the house and unit code selected. This may help you determine if you have the correct house and unit code selected in the module or switch. You do this by using the Test button and seeing if the light or appliance goes on.

- A Done button that closes the dialog box.

Changing settings

The House Code and Unit Code Inventory dialog box not only displays X10 settings for devices, programs, and groups, but also lets you change them.

To change a setting

1. Select the object in the tree and double-click the left mouse button.

   The New X10 Settings dialog box appears.
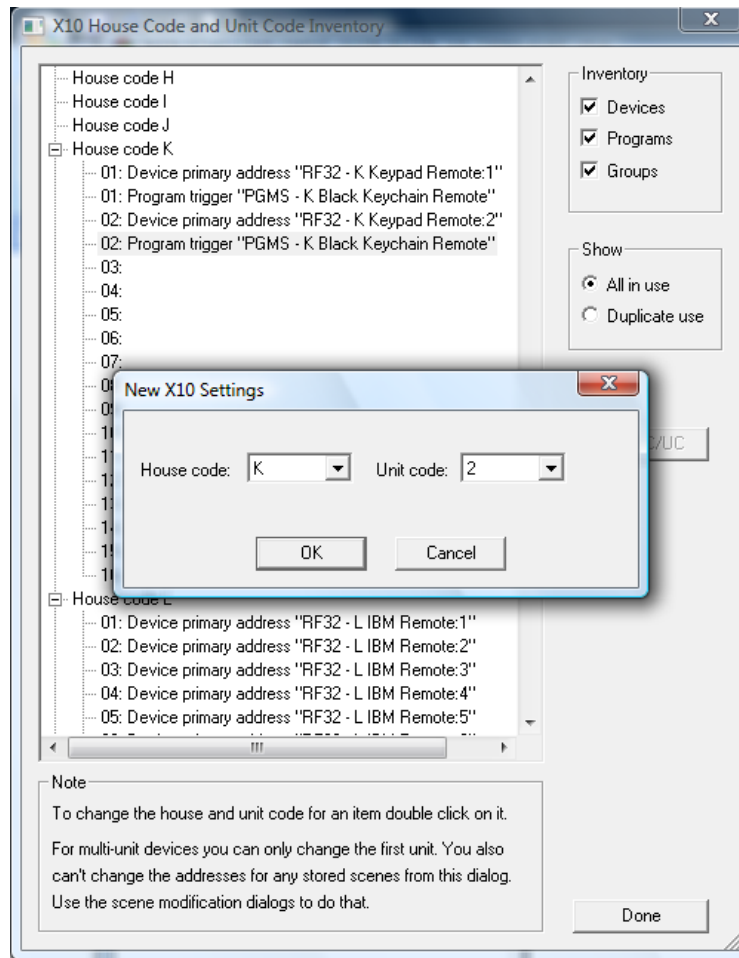
The dialog box shows the house and unit code for the device, program, or group you selected. You can change the setting with the *House code* and *Unit code* lists.

1. Simply click the arrow, and select the new house or unit code that you want assigned to the object you have selected.

2. Click the OK button to close this dialog box.
   HCA updates the properties of the chosen device, program, or group, and the inventory dialog box reflects these changes.

Hint: Remember that changing the X10 settings for a device only changes your design as managed by HCA. You still need to make the corresponding changes on the module itself.

X10 Reception

The X10 reception tool provides an alternative view of information that appears in the log. To open this tool, select *X10 Reception* from the *X10 Tools* button menu in the *Protocols* category.
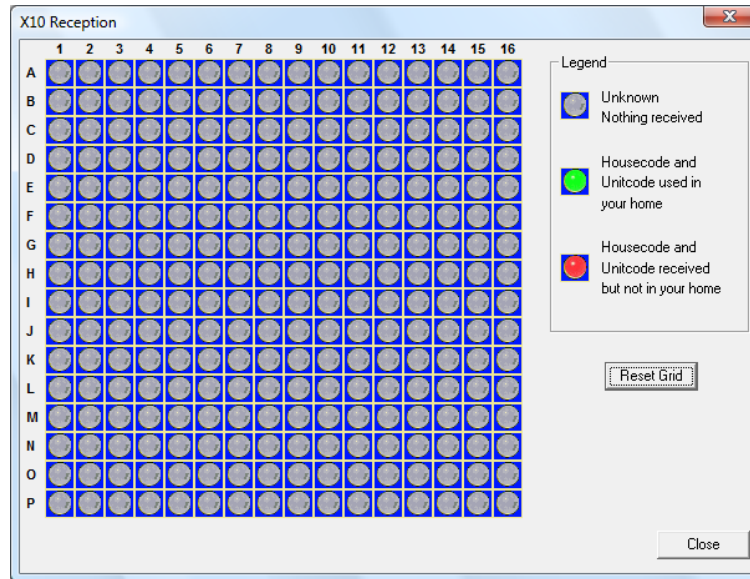
The large grid that appears in this tab shows, for each housecode and unitcode, if any X10 commands have been received by HCA and when. This could have been an ON, OFF, DIM or Status command.

The color coding tells you at a glance if the code has been received or not. If no command has been received for a housecode-unitcode, then the corresponding cell is gray. However, if a command for a housecode-unitcode has been received, the corresponding cell is green if that device is in your home design or red if it is not in your design.

To see the time when the last command was received, move the mouse over any of the 256 cells in the grid and a popup window shows the date and time of that reception. If you right click on a cell, a popup menu allows you to send an On, Off, or Status Request command to the house and unit code for that cell.

Why is this important?

This can be a useful tool to make sure that some controller in your home is not sending signals that you have not planned for. If X10 commands are being received by HCA and they don't correspond to a device, program, or group in your design, they have no effect. This may not be what you intended.

To reset the grid and have all cells show as Unknown (gray), press the *Reset Grid* button.

NOTE: This grid only shows receptions and not transmissions from HCA.

X10 Test

The X10 test dialog is lets you send continuous X10 commands on to the power line for test purposes. To open this tool, select *X10 Test* from the *X10 Tools* button menu in the *Protocols* category.

As it says in the dialog, the purpose of this dialog is to send X10 commands using your X10 interface in an effort to assess how X10 communications are working in your home.

This tool can be particularly useful if you are attempting to diagnose x10 signal strength throughout your home with an X10 signal meter. The x10 test pattern will continue to operate until you click the *Done* button.