Control4
Better. Together.

Composer Pro User Guide
Part 1

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Part Number: 200-00005, Part 1 of 2

Composer Professional Edition User Guide, OS 2.2

Contents

1. Introduction

Composer Professional Edition (Composer Pro) is a Control4® software application that Control4 Dealers and Installers use to set up and configure Control4 and third-party devices to communicate with each other in the Control4 Home-Automation System.

1.1 Purpose

The purpose of this document is to provide steps, tips, and examples about how to use the Composer Pro software for the Control4 Operating System (OS 2.2) and later.

Words that appear in red are either listed in the Glossary, or are tips, examples, and other important information.

1.2 Scope

This Control4® *Composer Pro User Guide* is divided into Basic and Advanced sections.

The Basics sections provide information and instructions about:

- Installing devices
- What's new in this release
- Configuring properties
- Configuring devices
- Customizing the Navigators
- Updating Composer and Director
- Example projects
- Troubleshooting the system
- Information about older releases

The Advanced sections provide information and instructions about:

- Setting up the network configuration
- Creating device drivers
- Connecting and verifying devices
- Setting up the media
- Programming the system

If you've never used Composer Pro before, we suggest that you start by reading either *Composer Pro Getting Started* available in the Composer Pro application's Help menu or on the Control4 website in PDF. If you're already familiar with Composer Pro, you can skip through the *Composer Pro Getting Started*, and continue with the sections in this document.

1.3 Related Documents and Resources

Document Title	Location
Composer Pro Getting Started (200-00168)	Application Help: Available in the Composer Pro Help menu PDF: http://www.control4.com/dealer/products/documentation/
Control4 System Quick Start Guide (200-00153)	PDF Only: http://www.control4.com/residential/products/resources/#documentation/
Control4 System User Guide (200-00001)	Web Help: http://www.control4.com/documentation/System_User_Guide/ PDF: http://www.control4.com/residential/products/resources/#documentation/
Control4 Operating System Release Version 2.0.1 Release Notes (TechDoc00031)	PDF Only: Included with software package on the Control4 Dealer website. Also available on the Control4 Knowledgebase.
Composer Pro Software Release Update Instructions - Release 1.7.4 to OS 2.0 (TechDoc00024)	PDF Only: Control4 Knowledgebase
Managing Dealer Accounts on My.Control4.Com (TechDoc00025)	PDF Only: Control4 Knowledgebase
Control4 MyHome Setup Guide (DOC-00003)	PDF Only: http://www.control4.com/dealer/products/documentation/

1.4 What's New in this Release?

The Control4® system Composer Pro software for OS 2.0 and later contains new features and functions:

1.4.1 OS 2.2

1.4.1.1 Hardware and Software Support

- Added the SNMP Configuration Agent. You can now manage Control4 home networks remotely. See "About SNMP" in the Composer Pro Getting Started for information.
- Added support for a new 7" Portable Touch Screen with Camera (C4-TSMC7-EN-BL) and audio/video Intercom.
- Added support for a new HC-800 Home Controller (C4-HC800-BL).
- Added support for a new Intercom (used for Intercom with audio in the new 5" In-Wall Touch Screen or 7" In-Wall Touch Screen and audio/video Intercom in the new 7" Portable Touch Screen with Camera).

- UI improvements to the Intercom feature for the 5” In-Wall Touch Screen and 7" In-Wall Touch Screen.
- You can now use Shift+Click or Ctrl+Click to specify device availability and display order for the Navigators.

1.4.1.2 New or Updated Topics

- A new SNMP Configuration Agent has been added. Six (6) related SNMP topics have been added also. See "Configuring the SNMP Configuration Agent" for details.
- A new "Configure a 7" Portable Touch Screen with Camera" topic has been added. **Note**: This is a new product that will replace the existing 7" Portable Touch Screen (C4-TSM7-G) and 7" Tabletop Touch Screen (C4-TST7-EG and C4-TSTR7-EG) products.
- Changed the name of "Configure Home Controller HC-200, HC-300, or HC-1000" to "Configure an HC-Class Home Controller." Added new information for HC-800 Home Controller (C4-HC800-BL).
- "Configure an HC-Class Controller." Updated Step 8 with information about the ZigBee Network Settings dialog box. Also added a new Properties page.

1.4.2 OS 2.1.0

1.4.2.1 Hardware and Software Support

- Added the Apps container to the default Control4 home page; 4Store is now in the Apps container. This means that there are currently seven (7) containers on the fully-populated default Control4 Home page (Watch, Listen, Lights, Security, Comfort, Apps, and More).
- When there is only a single Thermostat in the project, selecting Comfort from the Home page automatically loads the Thermostat control UI.
- Added the ability to turn off the Ambient Light Sensor on the SR-250 (V2) from the remote’s LCD menu.
- Added a new 4Store agent.
- Added the ability to create custom buttons for the Navigator screens.
- Photo Screen Saver agent can now serve a single image on all connected graphical Navigators.
- Added the ability to create new Themes using the Themes SDK. See the Control4 SDK program for details.
- Added the ability to create a USB Install from the Control4 folder. Can now perform a USB install on systems not connected to the Internet.
- MyHome apps now supported for mobile and PC/Tablet devices. See *Control4 MyHome Setup Guide for Dealers* or *Control4 System Quick Start Guide* for details.
- New Detective Suite in Composer Pro.
- Support for Internet radio stations.
- Support for a Wireless Puck Dimmer Module or a Wireless Puck Switch Module.

1.4.2.2 New or Updated Sections

- The Composer Pro User Guide PDF version is now divided into two parts. Part 1 includes basic information; Part 2 includes programming and advanced tasks.

- Added Control4 Detective Suite (programming, binding, performance, etc.). Requires .NET Framework 4 (installed with Composer Pro for OS 2.1). Can be accessed through the Tools menu or as a standalone application.
- Added the ability to change visibility and display the order of Thermostats (System Design > Properties > Navigator).
- You can now hide the Thermostat as other Navigator devices through Composer menu settings.
- Added a new section, “Configure Mobile Devices or PCs/Tablets as Navigators” and references to MyHome apps.
- Replaced most screens with new Control4 logos.
- Added a note in “Example: Using the Custom Buttons Agent.”
- Added a new “Custom Buttons” section.
- Added a new “Internet Radio” section.
- Added a New “Configure a Wireless Puck Dimmer or Switch Module.”
- Added information about EQ settings in “Configure a 4-Zone Amplifier” and “Configure a Multi Channel Amplifier.”

1.4.2.3 Hardware and Software No Longer Supported

- No update is provided for legacy Navigators (Mini Touch Screen, 10.5” Wireless Touch Screen V1, 10.5” In-Wall Touch Screen). These devices will continue to work in compatibility mode.
- The Mobile Navigator has been replaced by the MyHome apps.
- End of life: After OS 2.0.6, no update will be provided for the PoE LCD Keypad.
- End of life: After OS 2.1, no updates will be provided for the Wireless LCD Keypad, WiFi Mini Touch Screen, and Sony Component Video Switcher.

1.4.3 OS 2.0.5

- New Control4 logos
- Support for Intercom Agent. See the Agents section in this document for details.
- Support for HC-200B as a Primary Controller (functionality included in software update)
- 5” Mini Touch Screen end of life. Replaced by the 5” In-Wall Touch Screen.

1.4.4 OS 2.0.1

- New Media Player V2 (C4-MP2-E).
- Updates to HC-200B (C4-HC200B-E-B-NR-1) and HC-300C (C4-HC300C-E-B).
- Updates to HC-1000 V3 (C4-HC1000-V2-E-B). Support for rollback to Release 1.7.4 and 1.8.2 using a USB drive.
- Update to System Remote Control SR-250 (enhancements).
- New 5" and 7" In-Wall Touch Screens (C4-TSWMC5-EG-xx and C4-TSWMC7-EG-xx) with Intercom feature.
- Support for Android in Mobile Navigator.
- Removed SRC V1 and V2 from documentation.
- End of Life: 7" Wall-Mount Touch Screen (replaced by a new 7" In-Wall Touch Screen).

1.4.4.1 Hardware and Software No Longer Supported or Partially Supported

- End of Life: 7" Wall-Mount Touch Screen (replaced by a new 7" In-Wall Touch Screen).

1.4.4.2 New Media and Hardware

- New Media Player V2 (C4-MP2-E).
- Updates to HC-200B (C4-HC200B-E-B-NR-1) and HC-300C (C4-HC300C-E-B).
- Updates to HC-1000 V3 (C4-HC1000-V2-E-B). Support for rollback to Release 1.7.4 and 1.8.2 using a USB drive.
- Update to System Remote Control SR-250 (enhancements).
- New 5" and 7" In-Wall Touch Screens (C4-TSWMC5-EG-xx and C4-TSWMC7-EG-xx) with Intercom feature.
- Support for Android in Mobile Navigator.

1.4.4.3 New or Updated Sections

- Configuring HVAC Systems
- Configuring Controllers
- Configuring AV Devices
- Configuring Navigators
- Configure an 5” and 7” In-Wall Touch Screen
- Examples: Programming with Agents
- Index

1.4.4.4 Sections No Longer Supported

- Configuring Navigators > Configure System Remote Control – Versions 1 and 2
- Configuring Navigators > Program System Remote Control Programmable Buttons (Version 2 Only)
- Renamed section on 7” Tabletop and 7” Wall-Mount Touch Screens to “Configure a 7” Tabletop Touch Screen.” Removed references to 7” Wall-Mount Touch Screen.

1.4.5 OS 2.0

Electronic Licensing. New Dealer licensing and activation has been added. 4Sight and an Internet connection is required for activation. After activation, Composer can run without an Internet connection. There’s also a new feature to allow Dealers to assign licenses for their associates. This is set up during installation and registration. See TechDoc00024 *Managing Dealer Accounts on My.Control4.Com* on the Control4 Knowledgebase for details.

- **Installation**. New Composer installation.
- **Flash Navigators**.
  - New Flash user interface for current Controllers and Navigators (not including the Mini Touch Screens or 10.5" Touch Screens).
  - Easier navigation on the Navigators via Media Dashboard, views, bread crumbs, etc.
  - Ability to change backgrounds.
  - Customizable (change wallpaper; add new Custom Home pages; create Favorites; change buttons; create Custom Home pages; purchase applications from the 4Store; use

4store applications in My Apps), easy to use (intuitive, fewer steps, consistent), and elegant (3-dimensional, translucent, simple).

- Support for SSL configurations for tighter security.
- Ability to edit DVDs via Disc Changer.
- Whole-home views; room browse.
- Uses a secure network connection to Director via SSL by default. **Note**: If you configure the system to accept only secure connections, the older Navigators (Legacy Navigators) will not work, as they use an insecure connection to Director.
- The Flash player does not support HTML markups. Dealers who have programmed popups that rely on HTML formatted text will need to change their programming scripts.

- **Customization**. Improved use of the *Control4 system* for users by providing: whole-home status and control functionality; and information delivery relevant to the homeowner.
- **Web Navigator**. New and improved Web Navigator. Now you can view the system in Flash (same interface as on the Touch Screens and On-Screen Navigator). See the *Control4 System User Guide* for details.
- **Mobile Navigator**. New and improved Mobile Navigator that supports Apple iPod, iPod touch, iPhone, and iPad. See the *Mobile Navigator License Activation and Setup Guide, 200-00099* on the Dealer portal.
- **List Navigator**. Support for analog sources in Zones.
- **Devices**.
  - Support for new devices (Home Controller HC-1000 V3, IO Extender, and Black and Decker KwikSet SmartCode door locks).
  - Ability to change the System Remote Control's backlight, sleep mode, check battery levels, and more from the device's Properties pane in Composer Pro.
  - New accessories (7" Portable Touch Screen: battery pack and stand).
  - Disc Changer. New option in the Properties pane, "Ignore Unexpected Play, Stop, or Pause." This option should be checked if you are configuring a system with lighting, for example, when the movie starts playing, and the lights in the room dim. By nature, Disc Players typically use Play, Stop and Pause functions during movie viewing.
- **Wireless Networks**. WPA is now supported on HC-class Controllers, 7" Touch Screens and the 10.5" V2 Touch Screen.
- **Platform**. Support for Windows 7.
- **Localization**. Support for internationalization. New Localization option in project > Properties. **Note**: Control4 is not internationalizing:
  - Composer
  - New UI
  - *System Remote* Control V1 and V2 (**Note**: SR-250 will be internationalized for OS 2.0.)
  - LCD Keypad
  - System functions (splash screens or diagnostics and logging)
- **Composer Pro**.
  - New Macros agent.
  - Lighting Scenes. New Execute On and Execute Off buttons to turn Lighting Scene lighting on and off. Can change the order of Lighting Scenes and lights. Support for Lighting

Scenes in the room's Properties > Navigator view. Hide or show and change the order of lights and Lighting Scenes.

- Media menu. New option 'Tag media files.'
- Menu bar. New 'Go' menu to all views (System Design, Connections, etc.).
- New System Design and Media view tab changes in Composer Pro.
- Wireless Thermostat scheduling and options changes.
- DriverWorks. Ability to add and replace drivers.
- Lua engine.
- Improved Media Management and performance
    - Improved performance.
    - Improved scalability.
    - Improved functionality.
    - Media Manager now runs on the Primary Home Controller's Director.
    - Formatting changes in the Media Database.
        - Third-party Media Management software now works more efficiently.
    - Composer Pro does not need to be connected when scanning files.
    - Storage locations are not available in the Navigators until the media device is scanned.
    - Additional audio codecs.
    - *FLAC* support (currently in Release 1.8).
    - *AAC* support (unencrypted, non-DRM).
- *ZigBee* Pro now benefits the broader market.
- *Director*. All Director interfaces will be preserved so that the legacy platforms continue to work using the older UI without a change in the system when updated to OS 2.0. New functionality may not be accessible, however, but older functionality still behaves the same way.
- **Security**. Improved system security:
    - Composer Pro implements license activation.
    - Dealers can now create their own licenses for their Installers. With this license, Installers will not have to be connected to the Internet to use Composer, but a valid 4Sight license is required. See *Managing Dealer Account on My.Control4.Com* for details.
    - Secure *device* to device communications.
- **Documentation**. Improved documentation:
    - *Composer Pro Getting Started*, Basics and some Advanced Help topics. Getting Started Help is available in the Composer Pro application or on the Control4 Dealer website. The Getting Started document links to the *Composer Pro User Guide* (this document) which is available on the Web (includes Basic and Advanced topics) or in PDF.
    - *Composer HE and ME*. Updated and restructured documents for Composer HE and ME are now available in the Composer HE and ME applications. More detailed Help and a PDF for Composer HE are available on the Control4 website (*Composer HE User Guide*). Composer ME is available in the application help (*Composer ME User Guide*) or as PDF on the Control4 website.

- *Control4 System User Guide*. A new *Control4 System Quick Start Guide* (Rev A) is available in PDF format on the Control4 website. More detailed online Help (*Control4 System User Guide*) is available on the Control4 website or on the Dealer portal in PDF.
- Product documents are still available on the Control4 Dealer website under Support > Product Information, but they will no longer be available in the box in printed form or on CD.
- The consumer-facing documents (for example, *Control4 System User Guide* and *Control4 System Quick Start Guide*) are available on the Control4 website (see the *Control4 System Quick Start Guide* for details).

- **Network**. The Network Status tab in Tools has been changed to Network Tools (Release 1.8.0 and later).

1.4.5.1 Hardware and Software No Longer Supported or Partially Supported

- Home Theater Controller (functions as a Secondary Controller, but not as a Primary Controller; On-Screen Navigator continues to use the legacy interface – prior to OS 2.0).
- Media Controller (functions as a Secondary Controller, but not as a Primary Controller; On-Screen Navigator continues to use the legacy interface – prior to OS 2.0).
- Home Controller HC-1000 V1 (no longer sold by Control4 but fully supported with OS 2.0).
- Home Controller HC-500 (no longer sold by Control4 but fully supported with OS 2.0).
- 10" Wall Mount Touch Screen (will be updated to OS 2.0, but continues to use the Navigators prior to OS 2.0. This is the last planned update for this device; future support will be limited to compatibility mode).
- 10.5" Wireless Touch Screen V1 (will be updated to OS 2.0, but continues to use the Navigators prior to OS 2.0. This is the last planned update for this device; future support will be limited to compatibility mode).
- Mini Touch Screen V1 and V2 (will be updated to OS 2.0, but continues to use the Navigators prior to OS 2.0. This is the last planned update for this device; future support will be limited to compatibility mode).
- System Remote Control V1 and V2 do not support ZigBee® Pro (these remotes need to be replaced with SR-150 or SR-250 if used with OS 2.0).
- Contact Relay Extender (does not support ZigBee Pro). Use an IP connection for OS 2.0.
- Audio products (do not support ZigBee Pro). Use an IP connection for OS 2.0.
- Easy Setup.
- Easy Importer.
- Pool Controller. The Flash-based Navigator UI for pool control is not completed in OS 2.0, although the drivers and proxies remain in place in Composer Pro. If this is important, keep at least one of the Legacy Navigators for this purpose.
- USB Restore or USB Install. Because an Internet connection is required, these USB utilities are not supported in OS 2.0. Use the 1.7.x or 1.8.2 versions of these utilities. After a restore, you can update to OS 2.0 from 1.7.4 and 1.8.2 to OS 2.0.
- Web Navigator. Rhapsody and 4Store cannot be accessed from the Web Navigator. Use the Touch Screens or On-Screen Navigators.

For more information, see the *Control4 Operating System Release Version 2.0 Release Notes*.

1.4.5.2 New Media and Hardware

The Control4® system *Composer Pro* now supports the following media and hardware:

- A new Navigator interface has replaced the interface used in Release 1.8.x and earlier. This interface appears on all of the Touch Screens and On-Screen Navigators except for the Mini Touch Screen and 10" Touch Screens. See the *Control4 System Quick Start Guide* and *Control4 System User Guide* for details about how to use this interface.
- A new IO Extender has been added to the Control4 product line.
- A new Home Controller HC-1000 V3 has been added to the Control4 product line.
- Support for a network-attached storage (NAS) device for auto-discovery of AAC music format.
- The AMG lookup service has been switched to Gracenote®. The Sony 777 Disc Changer uses Gracenote, but the Media Controller can no longer access album, title, or artist information from AMG. CDs, however, can be imported and will appear in the Media Database with a date and time stamp.
- Other Media Manager: You can use other media managers, for example, iTunes, Windows Media Player, and Media Monkey to create MP3s. You can still use Composer ME and HE to add music files to Control4.

1.4.5.3 New or Updated Sections

These are the Control4® system *Composer Pro User Guide* (Getting Started, Basics, and Advanced sections) basic changes for OS 2.0. See the *Control4 System Software Release Version 2.0 Release Notes* for system details:

- The Composer Pro and Composer Pro-related documents have been updated, sections have been rewritten, and the documents have been restructured for Composer Pro OS 2.0 and later to make it easier for you to get the information you need more quickly. Most sections are available in HTML and application Help in the Composer Pro application and on the Control4 website (see "Related Documents and Resources").
- All sections have been restructured, re-ordered, and enhanced with:
  - A new and updated look.
  - New screen displays have been added.
  - New links have been added to the Help topics.
  - Text has been pared down or combined for ease of use and readability.
  - Back and Forward buttons have been added back in to the Help topics.
  - Glossary terms and definitions have been added 'in text' in the Help topics. A Glossary has been added to the PDF version also.
- The *Composer Pro User Guide* for OS 2.0 has been broken up and restructured into:
  - *Composer Pro Getting Started* (application help and PDF). The Help files show you how to get set up in Composer Pro and are included in the Composer Pro software with links to the *Composer Pro User Guide* Web Help. Click the **Help** button in Composer Pro to launch the Getting Started Help. The PDF version of this document is located on the Dealer portal. See "Related Documents and Resources" for details.
  - *Composer Pro User Guide* (Web Help and PDF). The Help files and PDF version provide Basic and Advanced topics. The Help files are available on the Control4 website; the PDF is available in the Dealer portal. See "Related Documents and Resources."
- New sections have been added for these devices: IO Extender and Home Controller HC-1000 V3.

- New sections: “Editing DVD Information” and “Programming the Control4 Thermostat Schedule” have been added.
- Most references to Contact/Relay Extender, 10" Wireless Touch Screen, and Home Controller HC-500 have been removed. These products are either no longer sold or do not support the Flash-based interface.
- General network information has been removed. You can get that information from the Control4 training materials and courses.
- Third-party products may be mentioned, but specific details about how to set them up may or may not be included. Refer to the product documentation shipped with the product.
- Release information for releases prior to OS 2.0 that apply to Composer Pro has been added to “Information About Older Releases.”

1.4.5.4 Sections No Longer Supported

The following Control4® system *Composer* Pro sections have been moved or are no longer mentioned in this document (as they were in previous releases):

- Third-party product configurations. With some exceptions, configuring devices for third-party Thermostats, Pool Controllers and Security systems are no longer provided in the *Composer Pro User Guide*.
- Networking Basics. These sections are now included in Control4's Networking training classes.
- Products no longer supported or partially supported in OS 2.0: Contact/Relay Extender, 10" Wireless Touch Screen, Home Controller HC-500, Home Controller HC-1000 V1, Media Controller, Home Theater Controller, Easy Importer, and Easy Setup. See versions of this document earlier than OS 2.0 for information about these products.
- References to older releases of Control4 products. These references have been moved into “Information about Older Releases.”

2. Composer Pro Basics

If you are a new user, start by using the application Help in Control4® *Composer* Pro (*Composer Pro Getting Started*). These sections assume that you are familiar with Composer Pro. This product runs on the Control4 Operating System (OS) Release 2.0 (OS 2.0) and later.

Use the subsections in this *Composer Pro User Guide* "Basics" section to:

- Learn how to install devices
- Learn how to reboot or reset your *Control4 system*
- Find out what's new in this release
- Learn how to configure Composer properties
- Learn how to configure the devices
- Learn how to connect everything
- Learn how to customize the Navigators
- Learn how to update Composer and *Director*
- Learn how to troubleshoot problems
- Find out about specific details about older releases
- Learn how to create a sample project using the Interviewer wizard or Composer views

To learn about the advanced features of Composer Pro (*programming*, setting up networks, *device* drivers, etc.) see “Advanced Topics.”

2.1 Installing Devices

Use the Control4® Dealer website at http://www.control4.com to access PDFs of all current and past product installation and setup guides, and then install and set up your Control4 system devices according to these guides. These are the same guides that are included with the hardware, for example, a *Controller* or *Touch Screen*.

If you're installing devices that are not owned by Control4, you may need to edit an existing driver or create a new one. See “Creating Device Drivers.”

To access the installation, setup, and user documents in PDF format:

1. Go to http://www.control4.com/dealer/products/documentation/
2. Log in to the Dealer Login site using your Dealer username and password.
3. If the list of documents doesn’t appear, click the **Products** link, and then select **Documentation**.
4. View the list and click the link for the document you want to view or print.

2.2 Rebooting the Control4 System

At one time or another you may have configured the Control4® system incorrectly, or the *connection* to the network is not behaving the way it should be. In this case, you can reboot or reset the system. You don't have to do anything in *Composer* Pro for this procedure other than check that the *device* is on the network.

To reboot a *Controller*:

1. Disconnect the power cord from the Controller.
2. Plug the power cord back in to the Controller.
3. Verify that the Controller comes back on the network in Composer Pro. See “Connecting a Device to the Network” for details.

2.3 Resetting the Control4 System

Use the Control4® system *Composer* Pro to reset a *Controller*. You reset a Controller to reset it back to the factory defaults.

To reset a Controller connected to a TV:

1. Connect the yellow **Composite** video cable connectors to the **Controller** and **TV**.
2. Connect one end to **Composite** on the **Controller** and the other end to a **TV**.
3. Disconnect the **power cord** from the Controller.
4. Turn on the **TV** and go to **Video 1** or **AUX**.
5. Connect the **power cord** back in to the **Controller**.
6. Press and hold the **ID** button on the **Controller** to reset the Controller.

7. Keep pressing the **ID** button for several minutes. The TV displays the Control4 information, and will display a message similar to “Release to reset the network configuration...” when the reset has completed.
8. Release the **ID** button on the **Controller**. Wait several minutes. A message appears “loading, please wait...” After a few minutes, the TV screen may go blank.
9. Continue to wait until the **Control4 logo** appears on the screen, at which point you can start **Composer** and connect to ***Director*** using the new IP address that appears (if you are using *DHCP*).
10. Refresh the **Navigators**.
11. Disconnect the **Composite** video connectors from the **TV** and **Controller**.

2.4 Configuring Properties

Use the Control4® *Composer* Pro Properties pane in System Design to change *device* properties. The Properties pane lets you make configuration changes to a project, room, or device.

In the *Control4 system*, you have a choice of configuration options using these properties:

- **Project Properties**—Lets you set project-specific configuration options.
- **Room Properties**—Lets you set room-specific configuration options.
- **List View Properties**—Lets you set device properties listed by location, such as room, floor, house, etc.
- **Device Properties**—Lets you set device-specific configuration options.

2.4.1 Procedure

To configure properties:

1. Start Composer and connect to a Director.
2. Click **System Design**.
3. Select one of the following property types:
   - **Project**—Select the root node in the *project tree*, for example the project name (such as Franklin Smith Home) to access the project properties and modify the:
     - Project name
     - Zip code
     - Latitude/longitude
     - Date
     - Time
     - Time zone

   For more information, see “Composer Pro Properties” in *Composer Pro Getting Started.*
   - **Room**—Select the room in the project tree, for example, **Theater**; the Properties tab is visible (default).

     Room properties let you:

     - View room-specific devices
     - View media information
     - Help you troubleshoot any incorrect room connections

   For more information, see “Room Properties” in the *Composer Pro Getting Started.*

- **List View**—Select a room, and then select the **List View** tab. This option lets you view and maybe modify the devices in the room. For more information, see “Device Properties” in the *Composer Pro Getting Started.*
- **Device**—Select the device to modify the available user options. For more information, see “Device Properties” in *Composer Pro Getting Started*.

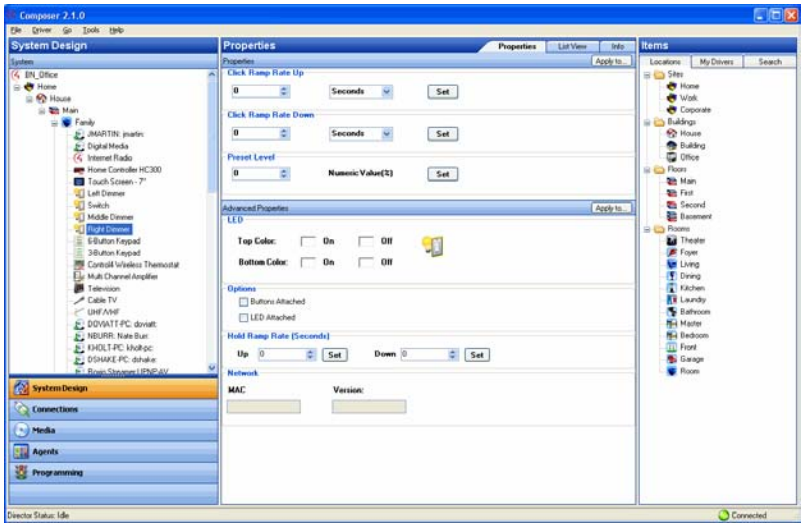
2.4.2 Example of Device Properties Configurations

Use the Control4® Composer Pro System Design view to check the properties of devices, rooms and projects. The properties in these examples, of course, will vary from product to product.

2.4.2.1 Wireless Dimmer or Wireless Switch Properties

When selecting a lighting product, for example, Wireless Dimmer or a Wireless *Switch* in System Design, the Properties and Advanced Properties are displayed. These properties let you customize the configuration of the Dimmer or Switch.

Example Properties pane:



2.4.2.1.1 Properties

These properties are available only on the Wireless Dimmer.

- **Click *Ramp Rate* Up**—The rate in seconds at which the light ramps from Off to On.
- **Click Ramp Rate Down**—The rate in seconds at which the light ramps from On to Off.
- **Preset Level**—The percentage of the load to which the Dimmer ramps when turned On.

2.4.2.1.2 Advanced Properties

- **LED**
  - **Top Color On**—The LED color for the top LED when the LED state is On.
  - **Top Color Off**—The LED color for the top LED when the LED state is Off.
  - **Bottom Color On**—The LED color for the bottom LED when the LED state is On.
  - **Bottom Color Off**—The LED color for the bottom LED when the LED state is Off.
- **Options**

- **Top LED Link**—If checked, swap the On and Off state and color on the top LED.
- **Bottom LED Link**—If checked, swap the On and Off state and color on the bottom LED.
- **Buttons Attached**—If checked, pressing the buttons on the Dimmer or Switch directly controls the connected load.
- **LED Attached**—If checked, the LED state is controlled by the button presses. If unchecked, the LED state and colors can be controlled by custom *programming*.

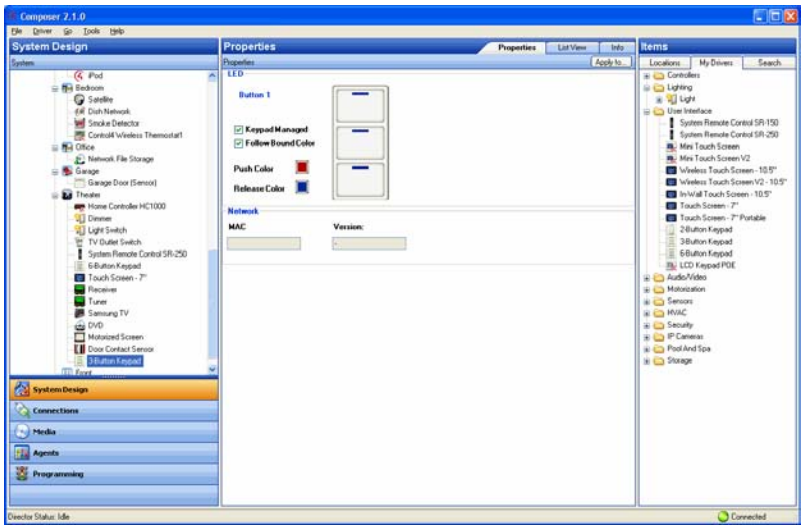
- **Hold Ramp Rate Up**—The rate in seconds at which the load is increased when the top button is held down.
- **Hold Ramp Rate Down**—The rate in seconds at which the load is decreased when the bottom button is held down.
- **Network**—The current channel, *gateway*, MAC address and firmware version of the selected Dimmer or Switch. These boxes cannot be edited.

2.4.2.1.3 Wireless Keypad Properties

When selecting a Wireless 2, 3 or 6 Button Keypad in System Design, the Properties pane appears. This pane allows custom configuration of the Keypad.

To configure a 3-Way Switch, see “Configuring Lights for 3-Way.”

Keypad Properties:



- **LED**—(button displayed when each button is selected in the Properties pane):
  - **Keypad Managed**—If checked, the LED state is controlled by pressing the buttons on the Keypad.
    - **Push Color**—Indicates the LED color when the button is pushed.
    - **Release Color**—Indicates the LED color when a pressed button is released. If unchecked, the LED state can be controlled by custom programming.
    - **On Color**—The button LED color when its state is On.
    - **Off Color**—The button LED color when its state is Off.

- **Network**—The current channel, gateway, MAC address and firmware version of the selected Dimmer or Switch. These boxes are not editable. To configure a 3-way Switch, see "Configuring Lights for 3-Way."

2.5 Configuring Devices

The following sections provide steps for configuring Control4® devices. Configuration can mean anything from identifying the device to the network to configuring an option in the device.

2.5.1 Guidelines for Configuring Devices

Using the Interviewer method or Composer Pro, you can add a Control4-supported device driver or a third-party driver to an existing project any time. See "Using the *Interviewer Wizard* to Build a Project" or "Using Composer Views to Build a Project" in the *Composer Pro Getting Started*.

Note: Some devices also require a free app from the Control4 4Store; for example, to take full advantage of Black & Decker KwikSet SmartCode lock management in a Touch Screen, MyHome app, or On-Screen Navigator, you can download their free app. See the 4Store sections in the *Control4 System User Guide* for details.

For general guidelines about adding devices using the My Drivers tab, the Search tab, or the Online Database, see the following sections.

2.5.2 Configuring Third-Party Devices

Use the Control4® Composer Pro System Design and Connections views to configure third-party devices using third-party device drivers.

Samples of third-party drivers and products have been described in previous releases of the *Composer Pro User Guide*. Due to the difficulty of upkeep, however, Control4 is no longer documenting detailed information about these devices and drivers, although they are still supported in a Control4 system. Go to the products' websites for details.

Refer to previous versions of the documentation (Release 1.8 and earlier) for some third-party instructions; for example, Thermostats, Pool Controllers and security systems. The same basic steps apply to third-party drivers as with Control4 devices.

To configure a third-party *device*:

1. Start Composer and connect to a Director.
2. Click **System Design**.
3. Locate and add the device to the project tree as described in "Using My Drivers or Search Tabs" or "Using the Online Database to Search for Drivers."
4. Identify the device to the Control4 system.

2.5.3 Using My Drivers or Search Tabs

Use the Control4® Composer Pro System Design view, My Drivers or Search tabs to locate and add device drivers to the project tree.

Prerequisites

1. Read “Purpose of Device Drivers” and “Adding Items to the Project Tree” in *Composer Pro Getting Started* first to understand how to create a project tree for your project.
2. Install and connect the physical devices that need to be added to the Composer Pro project.

To add devices:

1. Start Composer and connect to a Director.
2. Click **System Design**.
3. Click the object in the project tree where you want the device to reside; for example, you want to add a Controller to the Theater.
4. In the Items pane, click either the **My Drivers** or **Search** tab.
5. Double-click or drag the device to the System Design pane's project tree.

   Tip: To ensure that you’ve got the correct device driver (SKU) in your project tree, after you’ve added it to the tree, hover over it. The SKU appears.
6. Make the necessary control, network or *AV* connections. See “Connecting a Device to the Network,” or “Connecting and Managing Control and AV Devices” in this document or “Connecting Devices” and “Testing the Device Connections” in the *Composer Pro Getting Started* for information.
7. Set any necessary device properties by selecting the device (see “Properties Pane” in *Composer Pro Getting Started*). If any properties are available for a device, they will display in the Properties pane.
8. If you are adding *WiFi* devices, refer to the Control4 training courses on the Control4 Dealer website to learn how to install and configure WiFi.

2.5.4 Using the Online Database to Search for Drivers

Use the Control4® Composer Pro **System Design** view > **Online Database** tab to add devices to the project tree. Thousands of third-party device drivers are supported in the Control4 Device Driver Database. Drivers that are not in the Local Database can be found here if they exist.

Notes: Due to the large quantity of drivers in the database, Control4 has not validated every device driver provided. If you experience limited functionality using any device driver provided by Control4, please report the limitations to Control4 Technical Support. To report defects or enhancements, please contact Control4 (phone: 1-888-400-4072 or email: support@control4.com).

On the other hand, some device drivers have been certified. Look for the certification icon to the right of the driver in the list. Certified drivers appear at the top of the list if you search under **manufacturer** > **all certified**.

Prerequisites

1. Read through “Purpose of Device Drivers” and “Adding Items to the Project Tree” in *Composer Pro Getting Started* to understand how to create a project tree for your project.
2. Install the devices that need to be added to the project.

To search for device drivers in the Online Database:

1. Start Composer and connect to a Director.

2. Click **System Design**.
3. In System Design in the Items pane, click the **Search** tab.
4. Select the **Online Database** radio button.
5. To get a device, use the pull-down menus and select **Device Type**, then **Manufacturer** or **All Manufacturers**.
6. Select the **room** in the project tree, and **double-click** or **drag** the device to the project tree.
7. Configure the device by setting up the connections (Network and/or Control/AV tabs). See "Connecting and Managing Control and AV Connections" and "Connecting and Verifying Devices" for details.

2.5.5 Configuring Controllers

Use the Control4® Composer Pro System Design view to add and identify a Controller to the network connection. Refer to the sections below for the Controller type you want to configure. This section also covers other Controller-related tasks.

Note: Home Theater Controller, Home Controller HC-500, and Media Controller are no longer sold. See "What's New in This Release" for details.

2.5.5.1 Configure an HC-Class Home Controller

Use the Control4® Composer Pro System Design view to add and configure the 'HC' line of Home Controllers. These steps are basically the same for every supported Controller, however, the Properties may vary.

Note: Emphasis is placed on the most recent Controllers.

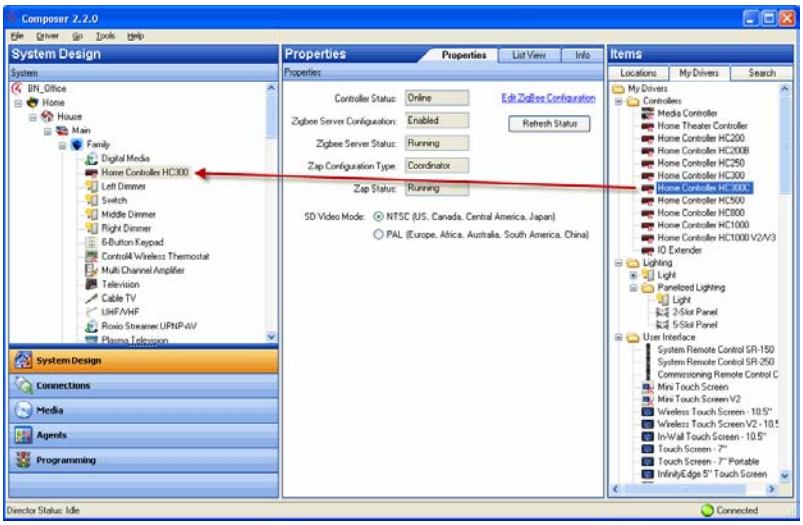
Prerequisites

Ensure that the Home Controller is installed as directed in the *Control4 Home Controller Installation Guide* for your Controller available on the Control4 Dealer website.

To add and configure a Home Controller HC-*x*00 or HC-*x*000 (for example, HC-300):

1. Start Composer and connect to a Director.
2. Click **System Design**.
3. In the System Design view on the project tree, select the **room** where the Home Controller resides. In the Items pane > My Drivers tab > Controllers > double-click **Home Controller** (including the HC version you want to add, for example, **Home Controller HC300**) to add the object to the project tree. The Digital Media object is added automatically also.

Notes: Home Controller HC-1000 V2 and HC-1000 V3 use the same driver, e.g., HC1000V2/V3. Release 1.7.3 and later use these driver versions. For OS 2.0.1, the HC-200 (C4-HC200B-E-B-NR-1) and HC-300 (C4-HC300C-E-B) have been updated. For OS 2.2, the HC-800 (C4-HC800-E-B) has been added.



Note: If a Controller is not listed in My Drivers, right-click in **My Drivers** and select **Restore Default List**. This action updates the list. See "Using My Drivers or Search Tabs."

4. In the Connections view, use the **Network** tab to make the necessary network *connections*. To do this, select the **Home Controller** object, and click the **Identify** button.
5. In Identify mode, go to the physical Home Controller, and press the specified button (listed below) on the device to identify the Controller to the Control4 system.
   - **HC-200 only**: Press the **LINKS** button on the **Front** of the device.
   - **HC-300 and HC-800 only**: Press the **ID** button on the **Back** of the device.
   - **HC-1000 only**: Press the **ID** button on the **Front** of the device.

   Note: The HC-1000 V3 has a Reset button on the front of the unit also, which differs from HC-1000 V1 and V2.

   Example Home Controller (HC200) identification screen in the Theater:

6. Click **Close** to exit the wizard.
7. To establish a *WiFi* network connection to this Controller, configure a *USB* WiFi Adapter for Home Controllers (sold separately). To do so, see “Configuring a WiFi Connection” or “Configure a USB WiFi Adapter for HC-300.” Check with your Control4 Sales representative for details.
8. (Optional) For additional Home Controller setup, configure the Properties.
   a. In the System Design view project tree, select the **Home Controller** object.
   b. Modify the properties in the Properties pane:

- **Controller Status**—Shows whether the Controller is Online or Offline.
- ***ZigBee*** **Server Configuration**—Lets you view, enable and disable the Zserver. Edit ZigBee Configuration opens the ZigBee Network Settings dialog.

  Note: The ZigBee Network Settings box shows which ZAPs are configured, identified, or enabled. See also **Tools** > **Network Tools** and select the **ZigBee Network** tab.

  - **ZigBee Server Status**—Shows whether the Controller as ZigBee Server is Running or Not Running. Older Controllers show Not Supported.
  - **ZAP Configuration Type**—Shows whether the Controller is the Coordinator or ZAP. Older Controllers show Not Supported.
  - **ZAP Status**—Shows whether the Controller as ZAP is Running or Not Running. Older Controllers show Not Supported.
- **SD Video Mode** (HC-200 and HC-300 only)—Lets you set the Standard Definition video format that the Controller handles. **NTSC** mode is used in the U.S. Canada, Central America, and Japan; **PAL** mode is generally used in Europe, Africa, Australia, South America, and China. (Release 1.8 and earlier: This option is called Video Mode.)
- **For Video Connection** (HC-800 only)—Choose **component** or **HDMI**, change the Video **Resolution**, and then click **Set Resolution**. This will cause the Controller to set the configuration and restart. Select **HDMI** only for video, as it won't stream audio. **Note**: This does not reflect what is set in the Connections view for video output.
- **Video Resolution** (HC-800 only)—If your video doesn’t display properly, use the drop-down to select your correct video resolution.
- **Current Resolution** (HC-800 only)—Displays what hardware resolution is currently configured.
- **I/O Firmware Version** (HC-800 only)—Lists the current firmware version of this Controller.

2.5.5.2 Configure a USB WiFi Adapter for Home Controller HC-300

Use the Control4® Composer Pro Tools menu and Connections > Network tab to configure a *USB WiFi* adapter (sold separately).

USB WiFi Adapter for Home Controller HC-300 lets the Home Controller HC-300 communicate with system devices via a WiFi (wireless) network. These steps can apply to the HC-500 also.

Notes: The USB WiFi Adapter should be used for Secondary Controllers. Control4 recommends that the USB WiFi Adapter not be used in a Primary Controller for a large system or a Controller that is streaming digital audio to other *end points* on the network. Those usage scenarios will be better served by an *Ethernet connection* to the Primary Controller.

To connect and set up the USB WiFi Adapter for a Home Controller HC-300:

1. Connect the Home Controller HC-300 to the Ethernet network using an Ethernet CAT5 cable (this is a temporary connection to support set-up activities).
2. Plug the adapter to the USB port on the Controller.
3. Start **Composer** and connect to **Director on Local Network**.
   a. In the Tools menu, select **System Manager**.
   b. In the Devices pane, select the **network address** of the device where you want to set up the network configuration, and click **Connect**.
      - If the device's network address is not on this list, click **Refresh**.
      - If it still does not appear, click **Add** to enter it manually.
      - If you do not know the network address, find it at the **Connections** view > **Network** tab.
   c. Click the **Network** tab, and click **Configure**.
4. Click **Next** when a Network Configuration wizard dialog appears.
   a. Continue through the wizard screens, and provide the following information appropriate for your system. Much of this information has to match that of your *Wireless Access Point* (WAP).
   b. Enter the new device name, but do not include spaces in the new name.
   c. Indicate the network type: **Wireless (WiFi) network**.
   d. Indicate the method for obtaining the DNS server address: **DHCP** or **Static IP**. Control4 recommends *DHCP* (automatically selected).
   e. Enter the **SSID**.
   f. Enter the **WEP** key (if any).
   g. Enter the encryption type (64 or 128).
   h. Click on a Key type (**hex** or **ascii**).
   i. Click **Finish** to complete the wizard and reboot the adapter to apply the network configuration changes.
5. Disconnect the Ethernet CAT5 cable from the Controller.

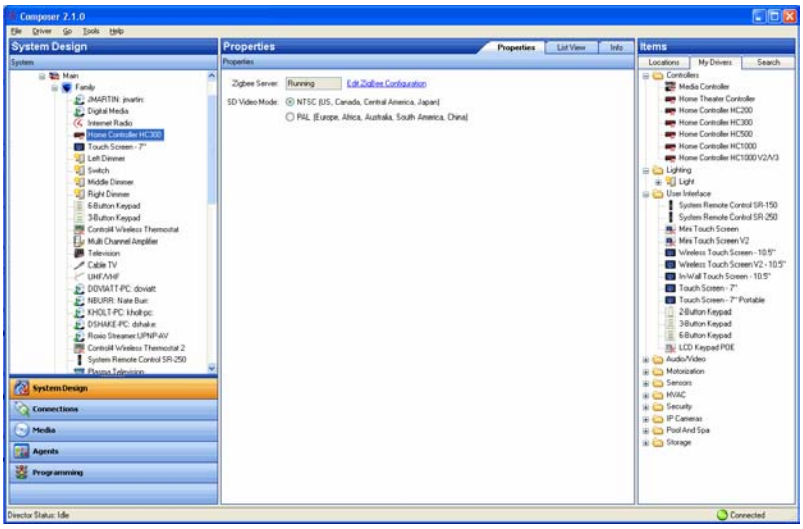
2.5.5.3 Ensure that ZigBee Server Is Running

Use the Control4® Composer Pro System Design view to check the Controller's properties and ensure that *ZigBee* server is running on a Controller.

Note: This does not apply to Home Controller HC-1000.

To ensure the Controller properties are set correctly:

1. Start Composer and connect to a Director.
2. Click **System Design**.
3. In the project tree, select the **Controller** object for the properties to appear.
4. Ensure that the ZigBee server is running. If not, see "Example: Verify the Network Connections" in this document.

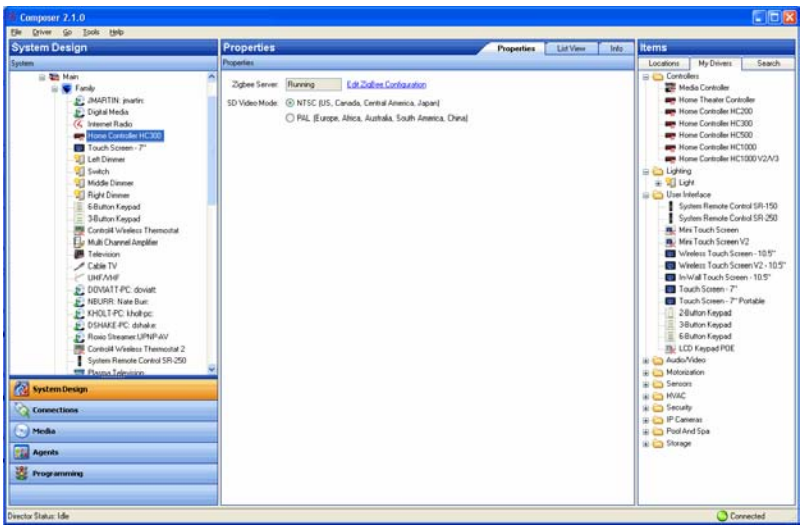


2.5.5.4 Ensure That Video Mode Is Set Correctly

Use the Control4® Composer Pro System Design view to check the Controller's properties and ensure that video mode is set correctly on a Controller. Video Mode lets you set the video format that the Home Controller handles.

To ensure the Controller properties are set correctly:

1. Start Composer and connect to a Director.
2. Click **System Design**.
3. In the project tree, select the **Controller** object for the properties to appear.
4. Ensure that the video format is set correctly. NTSC mode is used in the U.S. and PAL mode is generally used in Europe.

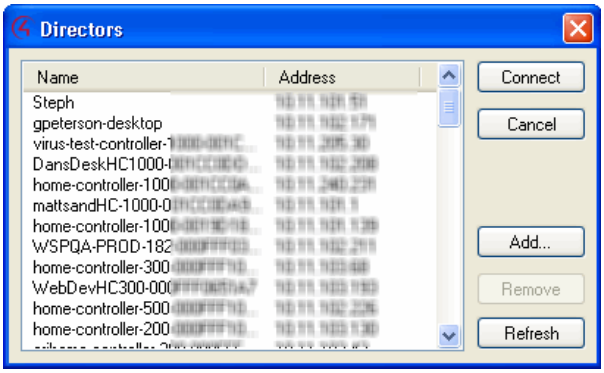


2.5.5.5 Configure Multiple Controllers

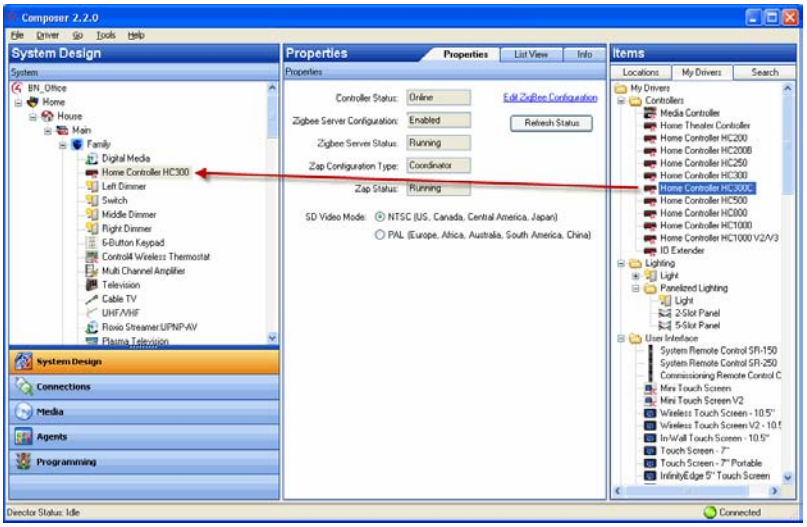
Use the Control4® Composer Pro System Design view and **Connections** > **Network** tab to configure multiple Controller. If you have more than one (1) Controller in your Control4 system, you must designate one of them as the Primary Controller. The others will be Secondary Controllers.

To add and configure multiple Controllers:

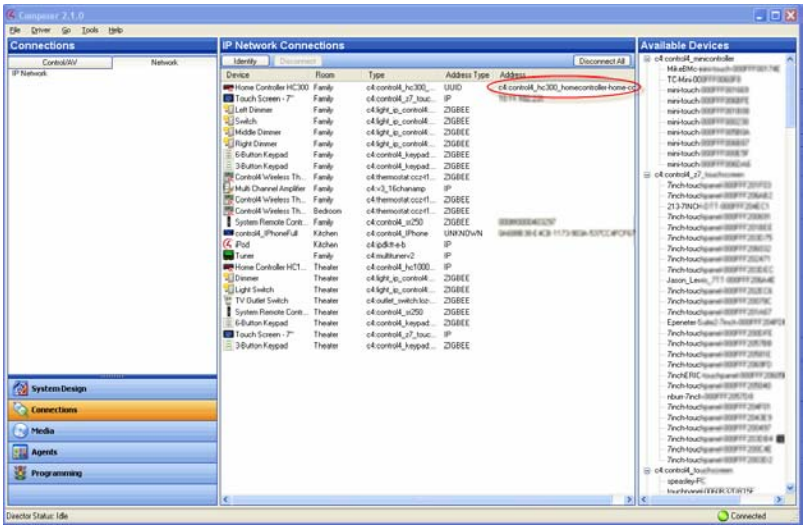
1. Start Composer and connect to a **Director on Local Network**.
2. From the Directors dialog that appears, choose the Director's **network address** of the Primary Controller hardware you are setting up, and click **Connect**.
3. If you have multiple Controllers in the system, then when you make this selection, you are defining the Primary Controller to the system. The next time you launch Composer Pro, only the network address of the Director of the Primary Controller appears on this screen. If the correct address is not listed, click **Add** to add the address manually.



4. Click **System Design**.
5. In the System Design view, add the **room** where Controller resides.
6. While selecting a room, click the **My Drivers** tab under the Controller, and double-click **Controller** to add it to the system. Do the same for all the Controllers you plan to add to the system.



7. Click the **Connections** view.
8. In the Connections view, select the **Network** tab.
9. Select the first Controller listed, and click **Identify**.
10. On the dialog that appears, follow the on-screen instructions, and click **Next** to continue to identify the other Controllers you have added to the system.
11. When you finish identifying all of the Controllers and any other devices in your project, click **Close** to return to the Network tab in the Connections view.
12. In the IP Network Connections pane under Address make sure that all the devices in your project have an address on the list.



2.5.5.6 Configure an IO Extender

Use the Control4® Composer Pro System Design view to add and configure the IO Extender.

The Control4 IO Extender opens up a whole world of options in the Control4 system to control home theaters, distributed audio systems, video devices, motion sensors, and other devices that use infrared (IR), serial, contact, and relay connections and has digital and analog audio outputs. This device serves as a great companion to the Home Controller HC-1000 to expand output capability.

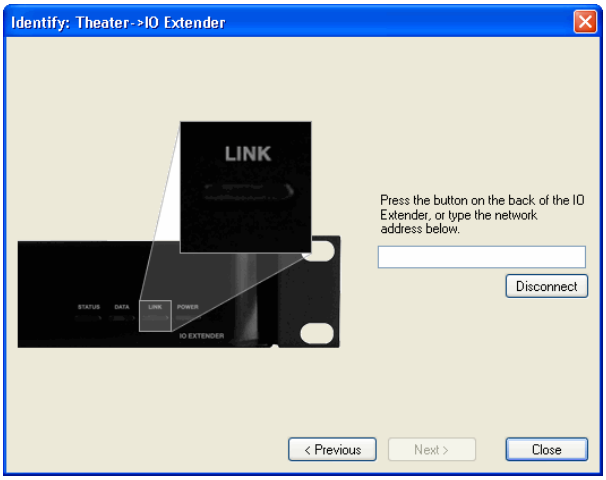
Prerequisites

Ensure that the IO Extender is installed and set up as directed in the *Control4 IO Extender Installation Guide* available on the Control4 Dealer website.

To add and configure an IO Extender:

1. Start Composer and connect to a Director.
2. Click **System Design**.

3. In the System Design view on the project tree, select the **room** where the IO Extender is installed. In the Items pane > My Drivers tab > Controllers, double-click **IO Extender** to add the object to the project tree.
4. In the Connections view, use the **Network** tab to make the necessary network connection. To do this, select the **IO Extender** object, and click the **Identify** button.
5. In Identify mode, go to the physical IO Extender, and press the same button highlighted in the Composer Pro illustration of the physical device to identify it to the Control4 system.



6. Click **Close** to exit the wizard.
7. (Optional) For additional IO Extender setup, you can adjust the volume for three (3) outputs.
   a. In the System Design view project tree, double-click the **IO Extender** object.
   b. Use the slider bar to adjust the Stereo Volume *x* as needed.

2.5.6 Configuring AV Devices

Configuring audio-video (AV) devices means that you want to 'identify' or make the device *connection* to the Control4® system so the devices communicate with the Controller and other devices in the system. Use the Control4 Composer Pro System Design and Connections views to configure audio-video devices.

These sections provide information about the specific AV devices.

“Configure an Audio Matrix Switch”
“Configure an Audio or AV Switch”
“Configure a Dock for iPod”
“Configure a 4-Zone Amplifier”
“Configure a Multi Channel Amplifier”
“Configure a Multi Tuner”
“Configure a Speaker Point”
“Configure a Media Player”

2.5.6.1 Configure an Audio Matrix Switch

Use the Control4® *Composer* Pro System Design and Connections views to identify an Audio Matrix Switch to the Control4 system. This device switches up to 16 input sources and up to 16 simultaneous zones.

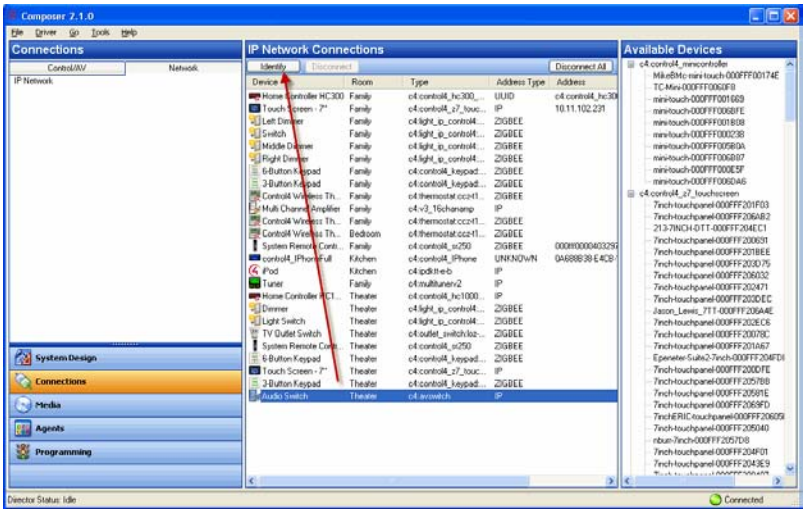
Prerequisites

Ensure that the Home Controller is installed as directed in the *Control4 Audio Matrix Switch Installation Guide* on the Control4 Dealer website.

To add and configure an Audio Matrix Switch:

1. Start Composer and connect to a Director.
2. Click **System Design**.
3. In the Composer Pro, System Design view on the project tree, select the **room** where the Audio Matrix Switch - 16 resides.
4. In the Items pane > My Drivers tab > Audio/Video > Audio Switch double-click **Audio Matrix Switch - 16** to add the object to the project tree.
5. In the Connections view, click the **Network** tab to make the necessary network connection. To do this, select the **Audio Switch** object, and click the **Identify** button.

   IMPORTANT: The Audio Switch can be identified by IP or *ZigBee*. The Audio Switch can communicate with the Control4 system either using the TCP/IP network or via the ZigBee network. Identify it to the network you want to use for communications. Do not identify it on both the IP and the ZigBee networks.



   Note: If using a TCP/IP network and the latest shipping version of this device, you can set this device to either *DHCP Client* (default) or a client that uses Static IP. To change this setting, see the *LCD* screen menu on the device.

6. In Identify mode, go to the physical Audio Matrix Switch - 16, and press the **Top** button to identify it to the Control4 system.

7. Click **Close** to exit the wizard.

2.5.6.2 Configure an Audio or AV Switch

Use the Control4® Composer Pro System Design and Connections view to set up an audio or audio/video switch.

You can access the AV switch drivers from the System Design view in the Items pane by clicking the **Search** tab > **Device Type: A/V Switch or Audio Switch** > Manufacturer: **All Manufacturers**. Use the Driver Wizard for additional support for your audio or AV switch.

Prerequisites

Install the Audio or AV Switch according to the manufacturer's instructions.

To add and configure an Audio or Audio/Video Switch:

1. Install and set up the audio or audio/video switch and any associated hardware.
2. Add the audio or audio/video switch to your project from the System Design view. To locate the driver, click the **Search** tab > Device Type: **Audio Switch** or **A/V Switch** > Manufacturer: **All manufacturers**.

   Example: To add the applicable Knox AV switch (RS-232) driver, in the System Design view, click the **Search** tab > Device Type: **A/V Switch** > Manufacturer: **All manufacturers**.

3. Select the **Audio Video** or **AV Switch** object in the *project tree* to view the device properties for that object and make configuration changes if applicable.

   Example: The Knox AV Switch has no properties to modify, but other switches have properties, such as the Control4 Audio Switch.

4. Make any necessary network or control/AV connections as necessary for your configuration. See "Connecting and Managing Control and AV Connections" for details.

5. Modify any room connections as needed for your configuration.

2.5.6.3 Configure a Dock for iPod

Use the Control4® Composer Pro System Design view to configure the Dock for iPod. The Dock for iPod is a dock in which your iPod sits. With your iPod connected to the dock and the Control4 system, you can enjoy music throughout the home.

Prerequisites

Configure the Dock for iPod as directed in the *Control4 Dock for iPod Tabletop Kit Setup Guide* available on the Control4 Dealer website.

To add and configure Dock for iPod:

1. Start Composer and connect to a Director.
2. Click **System Design**.
3. In the System Design view select the **room** where the Dock for iPod resides.
4. On the My Drivers tab or Search tab, double-click **iPod** to add it to the project.
5. Identify the Dock for iPod. In the Connections view:
   a. Click the **Network** tab, select **iPod** in the list, and then click **Identify** in the IP Network Connections tab.
   b. Enter the **IP address** assigned to your Dock for iPod in the DriverWorks box that appears.

6. Connect the Dock for iPod.
   a. Click the **Control/ AV** tab.
   b. Select **iPod** in the project tree.
   c. Define the correct video and audio connections.
7. Check the properties. In the System Design view, select **iPod**.
8. In the Properties pane, click the **Properties** tab. View and change the properties as needed:
   - **Cover Art**: Select the delay or Off.
   - **Now Playing Timer**: Select when to play.
   - **Room Off**: Select whether to stop the iPod from playing or pause it when Room Off is pressed on the System Remote Control.

- **Debug Mode**: Use the drop-down list to select an option to log or print in this mode. Select from Print, Log, or Print and Log. This option is tied to the output options in the Lua tab (Step 9).
- **Firmware Version**: Shows the version number for the firmware.

9. (Optional) See the **Documentation** tab for more information.
10. Click the **Lua** tab to view logging output.

2.5.6.4 Configure a 4-Zone Amplifier

Use the Control4® Composer Pro System Design and Connections views to add and configure a 4-Zone Amplifier. This device lets you enjoy up to four (4) zones (rooms) of music in the home.

Prerequisites

Ensure that the 4-Zone Amplifier is installed as directed in the *Control4 4-Zone Amplifier Installation Guide* available on the Control4 Dealer website.

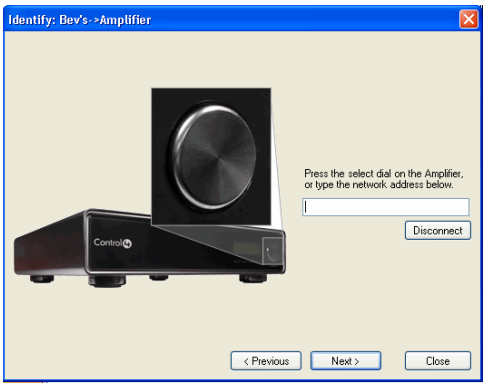
To add and configure a 4-Zone Amplifier:

1. Start Composer and connect to a Director.
2. Click **System Design**.
3. In the Composer Pro, System Design view, select the **room** where the 4-Zone Amplifier resides.
4. In the My Drivers tab under Audio/Video > Amplifier, double-click **Multi Channel Amplifier 4 Zone** to add the object to the project tree.
5. Click **Connections**.
6. In the Connections view, use the **Network** tab to make the necessary network connection. To do this, select the **Amplifier** object, and then click the **Identify** button.

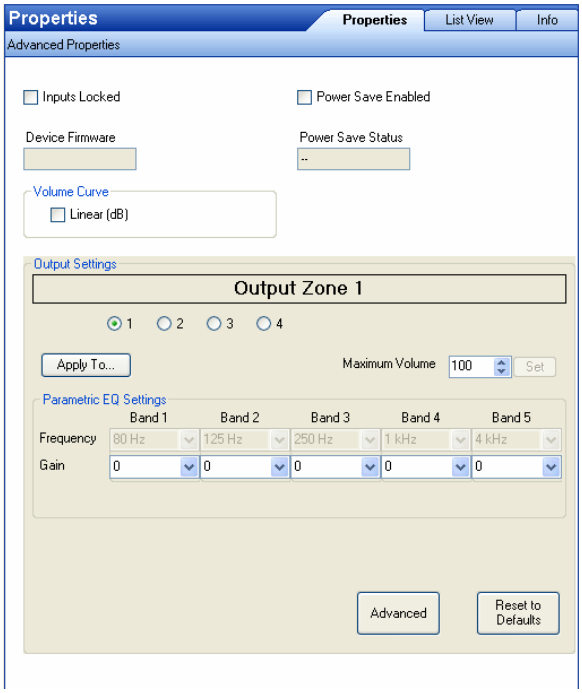
   IMPORTANT: The Amplifier can be identified by IP only. The Amplifier can communicate with the Control4 system using the TCP/IP network.

   Note: If you are using a TCP/IP network and the latest shipping version of this device, you can set this device to either *DHCP Client* (default) or a client that uses Static IP. To change this setting, see the *LCD* screen menu on the device.

7. In Identify mode, go to the physical 4-Zone Amplifier, and press the **Select** dial to identify the 4-Zone Amplifier to the Control4 system. Click **Close**.



8. (Optional) Configure additional 4-Zone Amplifier properties.
   a. In the System Design view on the project tree, select the **Amplifier** object.
   b. Modify the properties in the Properties pane:



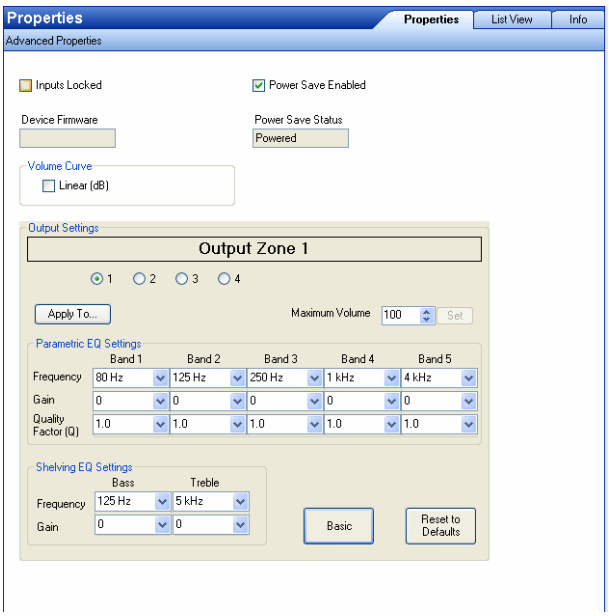
Modifiable properties include:

- **Inputs Locked**—This locks Audio Inputs to set Audio Outputs. You can have one (1) Audio Input with several Audio Outputs, but an Audio Output may only have one Audio Input.
- **Power Save Enabled**—Check to save power.
- **Device Firmware**—This displays the firmware version.
- **Power Save Status**—This displays that power save is enabled.
- **Volume Curve**—
- **Output Settings**:

Output Zones—Select zones 1 through 8.

Maximum Volume—Use the drop-down menu to select the volume up to 100. Click **Set**.

Advanced properties:



- **Parametric EQ Settings**
  - Frequency—Center frequency to be adjusted.
  - Gain—Set from -24dB (cut) to +6dB (boost) for the center frequency.
  - Quality Factor (Q)—Width of the EQ boost/cut settable from 0.5 to 1.0 in 0.1 steps and 1.0 to 10.0 in 1 step (there are no units for Q).
- **Shelving EQ Settings**
  - Frequency—Center frequency to be adjusted.
  - Gain—Set from -24dB (cut) to +6dB (boost) for the center frequency.

Notes on EQ settings: The *Q* setting on the EQ setting determines the bandwidth of the boosted frequency (or cut frequency).

The *Quality Factor* is the center frequency divided by the bandwidth (Q=Center Frequency/Bandwidth), where bandwidth is determined by the frequency points are either side of the center frequency are -3dB from the center frequency. A setting of 1kHz with a Q of 1 means that the boosted frequencies affected are from 500Hz to 1.5kHz (1kHz wide to the -3dB points centered at 1kHz).

Example: If the Q is increased to 10 with the same 1kHz center frequency, then the bandwidth must decrease by the same ratio. Mathematically:

Q = Freq/BW

10 = 1kHz/BW

BW = 100Hz

Affected frequencies are Center Frequency +/- ½ (BW)

1kHz +/- ½ (100Hz)

1kHz +/- 50Hz = 950Hz to 1,050Hz

The higher the Q setting the narrower the frequency range affected by the gain setting, while a lower Q setting increases the frequency range affected by the gain setting at each EQ frequency.

The frequency response can be visualized as a tall, skinny building with a high Q value or a tall, wide (or pyramid shaped) building with a low Q value. The peak (or height of the building) at the center frequency is set by the Gain setting.

2.5.6.5 Configure a Multi-Channel Amplifier

Use the Control4® Composer Pro System Design and Connections views to add and configure a Multi Channel Amplifier. This device provides eight (8) stereo inputs and outputs with full audio switching.

Note: In Release 1.8 and later, the Multi-Channel Amplifier does not work with *ZigBee* Pro. Configure this device with Ethernet.

Prerequisites

Ensure that the Multi Channel Amplifier is installed as directed in the *Control4 Multi Channel Amplifier Installation Guide* available on the Control4 Dealer website.

To add and configure a Multi Channel Amplifier:

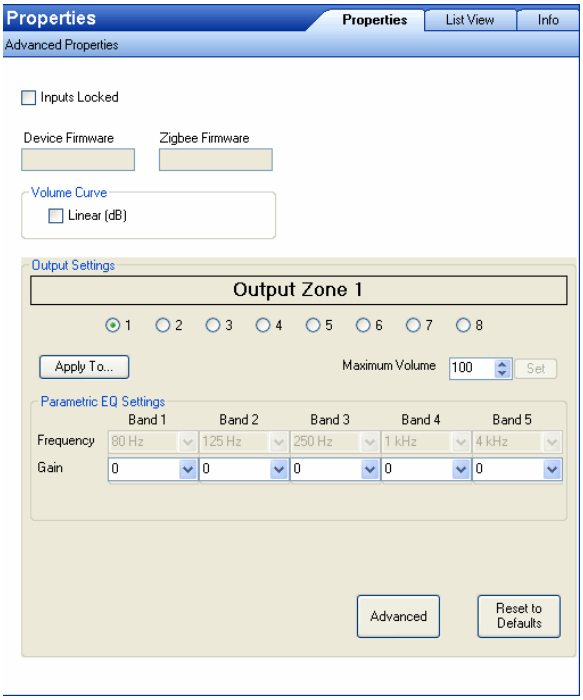
1. Start Composer and connect to a Director.
2. Click **System Design**.
3. In the Composer Pro, System Design view on the project tree, select the **room** where the Multi Channel Amplifier resides.
4. In the Items pane > My Drivers tab > Audio/Video > Amplifier > double-click **Multi Channel Amplifier - 16** to add the object to the project tree.
5. In the Connections view, click the **Network** tab to make the necessary network *connection*. To do this, select the Amplifier object, and then click the **Identify** button.

   IMPORTANT: Two (2) amplifier objects appear for identification. The amplifier can be identified either by IP or by ZigBee. The amplifier can communicate with the Control4 system either using the TCP/IP network or via the ZigBee network. Identify it on the network you want to use for communications. Do not identify it on both the IP and the ZigBee networks.

   Note: If using a TCP/IP network and the latest shipping version of this device, you can set this device to either *DHCP Client* (default) or a client that uses Static IP. To change this setting, see the *LCD* screen menu on the device.

6. In Identify mode, go to the physical Multi Channel Amplifier, and press the **Select** dial to identify the Multi Channel Amplifier to the Control4 system. After the device is identified, click **Close**.

7. (Optional) Configure additional Multi Channel Amplifier properties.
   a. In the System Design view on the project tree, select the **Amplifier** object.
   b. Modify the properties in the Properties pane:



Modifiable properties include:

- **Inputs Locked**—This locks Audio Inputs to set Audio Outputs. You can have one Audio Input with several Audio Outputs, but an Audio Output may only have one Audio Input.
- **Device Firmware**—This displays the version of firmware.
- **ZigBee Firmware**—This displays the version of firmware.
- Volume Curve—
- **Output Settings**:

  Output Zones—Select zones 1 through 8.

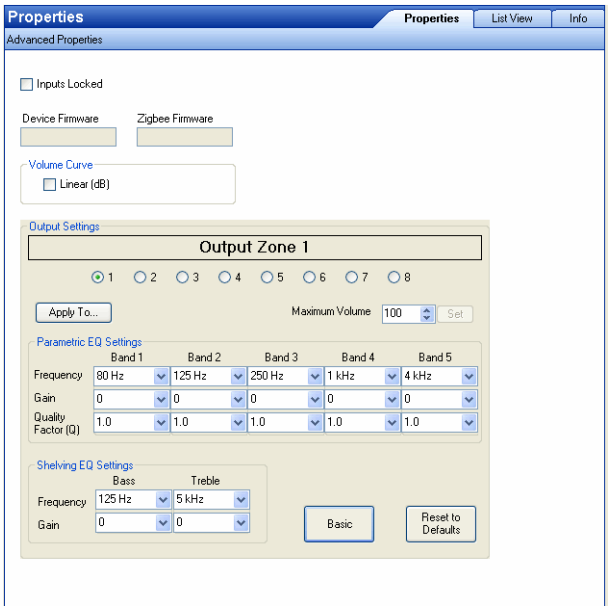
Maximum Volume—Use the drop-down menu to select the volume up to 100. Click **Set**.

- **Parametric EQ Settings:**

Frequency— Center frequency to be adjusted.

Gain— Set from -24dB (cut) to +6dB (boost) for the center frequency.

Advanced Properties:



- **Parametric EQ Settings**
  - Frequency—Center frequency to be adjusted.
  - Gain—Set from -24dB (cut) to +6dB (boost) for the center frequency.
  - Quality Factor (Q)—Width of the EQ boost/cut settable from 0.5 to 1.0 in 0.1 steps and 1.0 to 10.0 in 1 step (there are no units for Q).
- **Shelving EQ Settings**
  - Frequency—Center frequency to be adjusted.
  - Gain—Set from -24dB (cut) to +6dB (boost) for the center frequency.

Notes on EQ settings: The *Q* setting on the EQ setting determines the bandwidth of the boosted frequency (or cut frequency).

The *Quality Factor* is the center frequency divided by the bandwidth (Q=Center Frequency/Bandwidth), where bandwidth is determined by the frequency points are either side of the center frequency are -3dB from the center frequency. A setting of 1kHz with a Q of 1 means that the boosted frequencies affected are from 500Hz to 1.5kHz (1kHz wide to the -3dB points centered at 1kHz).

Example: If the Q is increased to 10 with the same 1kHz center frequency, then the bandwidth must decrease by the same ratio. Mathematically:

Q = Freq/BW

10 = 1kHz/BW

BW = 100Hz

Affected frequencies are Center Frequency +/- ½ (BW)

1kHz +/- ½ (100Hz)

1kHz +/- 50Hz = 950Hz to 1,050Hz

The higher the Q setting the narrower the frequency range affected by the gain setting, while a lower Q setting increases the frequency range affected by the gain setting at each EQ frequency.

The frequency response can be visualized as a tall, skinny building with a high Q value or a tall, wide (or pyramid shaped) building with a low Q value. The peak (or height of the building) at the center frequency is set by the Gain setting.

2.5.6.6 Configure a Multi Tuner – Versions 1 and 2

Use the Control4® Composer Pro System Design view to add and configure a Multi Tuner for Versions 1 and 2. This device provides up to three (3) audio signals and an optional satellite radio signal for multi-zone versatility.

Notes: (1.) Refer to the *Control4 XM Module for Multi Tuner V2 Installation Guide* available on the Control4 Dealer website for instructions about how to add and configure the XM Module that is compatible with Multi Tuner V2. (2.) If you are installing C4-TUN2-E-B or C4-TUN2-E-B_with_C4-XMOD, refer to Version 2 notes. (3.) In Release 1.8 and later, the Multi-Tuner, Version 1 does not work with ZigBee Pro.

2.5.6.6.1 Installation Scenarios

There are several possible installation scenarios for the Multi Tuner products exist, depending on the version.

Version 1:

- Model AVM-TUN1-B (AM/FM tuner): Use the Multi Tuner in the My Drivers tab.
- Model AVM-TUN1X-B (AM/FM/XM tuner): Use the Multi Tuner w/XM in the My Drivers tab.
- XM module being added to an existing AVM-TUN1-B: Remove the original Multi-Tuner driver (AVM-TUN1-B) and replace it with Multi Tuner w/XM (AVM-TUN1X-B), then re-create the connections.

Version 2:

- Model C4-TUN2-E-B: Adding a C4-Multi Tuner V2 (with AM/FM tuners).
- Model C4-TUN2-E-B_with_C4-XMOD: Adding a Multi Tuner V2 (with AM/FM tuners) that also has the XM module installed.
- To add an XM Module to a tuner already installed, you must (1) delete the original tuners in the project tree, Tuner and Tuner 2 (which were added for C4-TUN2-E-B), (2) replace them with C4-TUN2-E-B_with_C4-XMOD (which adds Tuner, Tuner 2, and TunerXM to the tree), and (3) re-create the connections.

See the following sections as applicable to configure the tuner:

"Activate the XM Satellite Radio Service"

"Configure the Multi Tuner"

"Set Up Radio Stations"

Prerequisites

Ensure that the Multi Tuner, Version 1 or 2, is installed as directed in the *Control4 Multi Tuner Installation Guide*.

2.5.6.6.1.1 Activate the XM® Satellite Radio Service

Notes:

- **Version 1**: Model # AVM-TUN1X-B or tuners upgraded with the XM Module Kit require a monthly subscription to the XM Satellite Radio service to receive XM radio channels.
- **Version 2**: Model # C4-TUN2-E-B_with_C4-XMOD or tuners upgraded with the XM Module Kit require a monthly subscription to the XM Satellite Radio service to receive XM radio channels.

To subscribe and activate these services:

1. Use the **Select** dial to tune the XM tuner to channel **0** and record the XM Radio ID (SDARS ID) that displays in the *LCD* window.
2. Contact XM Satellite Radio Inc., to subscribe to the XM radio service. Go to http://www.xmradio.com or call XM's Listener Care at 1-800-XMRADIO (800-967-2346), which requires your SDARS ID.
3. When instructed to do so by XM Satellite Radio Inc., tune the XM tuner to Channel **1** for about 20 minutes. When the tuner begins receiving XM stations, the LCD screen is enriched with station-specific information.
4. If the XM tuner is not receiving XM stations after 20 minutes:
   a. Move your antenna to a new location.
   b. Go to http://www.xmradio.com/refresh/.
   c. Tune to Channel **1** again, and wait approximately 20 minutes for the LCD screen to refresh.

2.5.6.6.1.2 Configure the Multi Tuner

Notes: (1.) If you are installing C4-TUN2-E-B or C4-TUN2-E-B_with_C4-XMOD, refer to the Version 2 notes. (2.) If you are installing models AVM-TUN1-B or AVM-TUN1X-B, refer to Version 1 notes.

To add and configure the Multi Tuner V1 to an existing system:

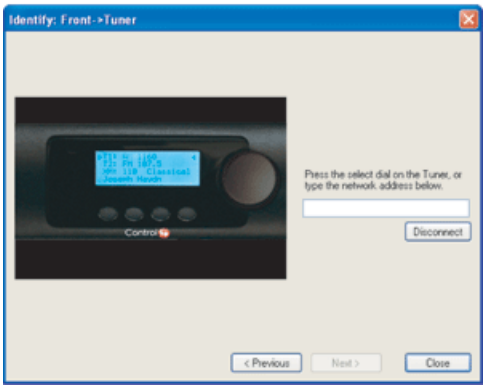
1. Start **Composer** and connect to a **Local** or **Remote Director**.
2. Click **System Design**.
3. In the System Design view, select the **room** in the tree where the Multi Tuner will reside.
4. In the My Drivers tab, go to Audio/Video > Tuner and double-click **Tuner**.
5. In the list displayed, double-click the applicable Control4 Multi Tuner model:
   - **Version 1**: Multi Tuner for the AVM-TUN1-B model.

- **Version 1**: Multi Tuner w/XM for the AVM-TUN1X-B model or if adding the XM Module to the AVM-TUN1-B model.
- **Version 2**: C4-TUN2-E-B or C4-TUN2-E-B_with_C4-XMOD if the XM Module upgrade kit [sold separately] is being used with an C4-TUN2-E-B model.

6. Set the *AV* and Network connections:
   a. In the Connections view, click the **Control/AV** tab.
   b. For each tuner object in the *project tree* —such as Tuner, Tuner 2, and Tuner XM (XM Models only)—select each one, and ensure it is connected to a radio.
   c. For each tuner object in the project tree, select each **Audio Video Output**, and then drag them one-by-one onto an item in the Input Devices list below. The association displays in both lists.
   d. Click the **Network** tab, right-click on the tuner with the appropriate address type: **IP** or **ZigBee**, and then choose **Identify**.

   IMPORTANT: **(Version 1 only)** Two (2) Tuner objects appear for identification. The Tuner can be identified either by IP or by ZigBee. The Multi-Tuner, V1 can communicate with the Control4 system either using the TCP/IP network or via the ZigBee network. Identify it on the network you want to use for communications. Do not identify it on both the IP and the ZigBee networks.

7. Press the **Select** dial on the Multi Tuner front panel to identify this *device* to the system. After a brief delay, the network address for this Multi Tuner is added to the Device list.



8. Verify that Multi Tuner is an accessible device. In the System Design view, select the **room**, and then click the **Properties** tab and **Audio Video Devices** tab to view the Available Audio Sources list for that room.
9. Go to the next section.

2.5.6.6.1.3 Set Up Radio Stations

To provide users easy access to radio stations throughout the system and to enrich the graphical interfaces, use Composer Pro to search for radio broadcasts and refresh your Navigators.

1. Start Composer and connect to **Director on Local Network**.
2. Click **Media**.
3. Select a radio in the Media list (on the left): XM Radio, FM Radio, or AM Radio, and then click Search.
4. When the dialog box appears, enter your zip code in the box, and then click **Search**. The available stations display in the Search Results list.
5. In the Search Results list, select the stations to add to the Navigators (On-Screen Navigator, Touch Screen, MyHome, and System Remote Control). Select them individually or click **Select All**.
6. Click **OK**. The selected stations populate the XM, FM, or AM Radio pane.
7. Repeat Steps 3 through 6 for the remaining radios.
8. Refresh the Navigators (see *Composer Pro Getting Started* for details). Each radio station you select is now available in the Navigators.

For XM Tuner models:

1. Click **System Design**, and select **Tuner XM** in the project tree.
2. In the Properties tab, ensure that the tuner has a good signal and that the SDARS ID matches the Radio ID listed on Channel 0 of the tuner.

2.5.6.6.1.4 Configure an XM Module for Multi Tuner V2

Refer to the Control4 *XM Module for Multi Tuner V2 Installation Guide* on the Control4 Dealer website for instructions about how to add and configure this module.

2.5.6.7 Configure Speaker Point – Ethernet or Wireless

Use the Control4® Composer Pro System Design and Connections views to add and configure Speaker Point. This device provides output to multiple speakers while connected to a Control4 system.

Prerequisites

1. Ensure that the Speaker Point device is installed as directed in the *Control4 Speaker Point Installation Guide* available on the Control4 Dealer website.
2. Connect the Speaker Point device to an Ethernet CAT5 cable to set up the Ethernet or wireless connection.

IMPORTANT TIP: The Speaker Point device requires an Ethernet connection for initial setup.

The following procedures teach you to configure:

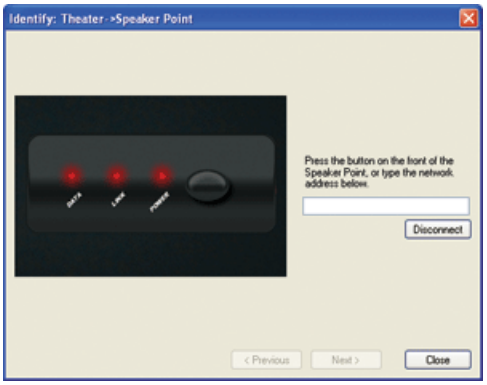
- Speaker Point for Ethernet use, or
- Speaker Point for WiFi use.

2.5.6.7.1.1 Configure Speaker Point for Ethernet Use

To add and configure an Ethernet Speaker Point to a Control4 project:

Note: By default, Speaker Point is configured for Ethernet use. If you are using *WiFi*, however, also follow the instructions in the section, "Configure Speaker Point for WiFi Use" later in this section.

1. Start Composer and connect to a Director.
2. Click **System Design**.
3. In System Design on the project tree, select the **room** where the Speaker Point resides.
4. In the My Drivers tab, go to Audio/Video > Speaker Point, and then double-click to add the **Speaker Point** object to the project tree.
5. In the Connections view, use the **Network** tab to make the necessary network connection. To do this, select the **Speaker Point** object, and click **Identify**.
6. In Identify mode, go to the physical Speaker Point, and press the **front panel** button to identify the Speaker Point to the Control4 system. Click **Close**.



7. Ensure that the room connections are set correctly for the room.

   Note: When you add a Speaker Point, Audio or AV switch to a room, by default the Audio *End Point* is assigned by the first device added to the room. When you add a Receiver to a room, it is automatically set or reset as the Audio End Point.

   a. To get to Room Connections, go to **Connections** and select the **room**.
   b. Verify that the Audio End Point setting matches the intended setup of your Control4 system. The Room Connections appear in the center pane. If you are setting up a custom configuration, adjust the Room Connections accordingly. For more information about Room Connections, see ”Connecting Rooms.”

8. Preset Treble, Bass, and Balance. In either the System Design or Connections view, double-click the **Speaker Point** object in the project tree to bring up its on-screen controls, and then click to make the adjustments for Treble, Bass, and Balance (supported values are 0 - 100).

9. (Optional) Configure the Speaker Point properties.

   Modifiable properties include:

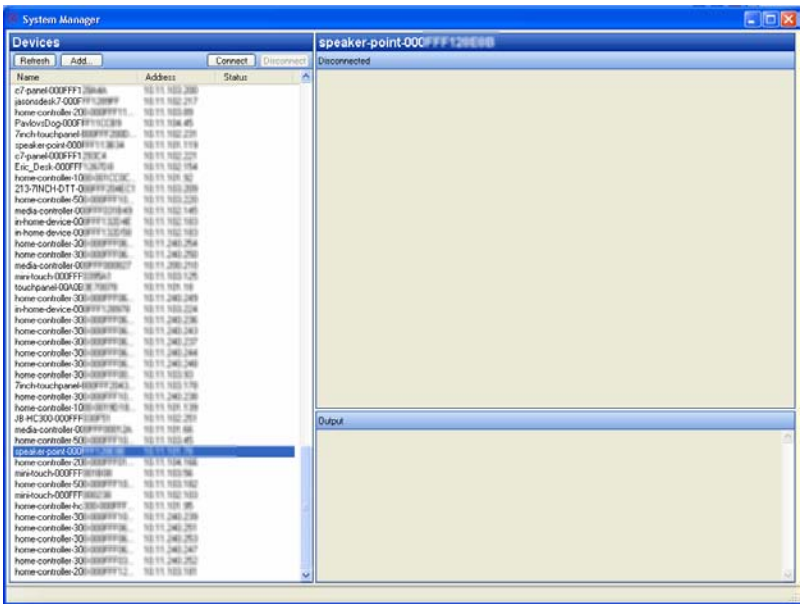
   - **Local Amp Mode** not checked (default). When the box is *not* checked, the Speaker Point streams the analog input through the Control4 audio distribution system, making the source digitized and available to other audio zones throughout the house.
   - **Local Amp Mode** checked. When the box *is* checked, it sets the Speaker Point in Local Amp Mode, enabling a local input source outputs directly, is not digitized and provides audio and video in one room. This enables devices that provide audio and video, such as a *DVD*, VCR, or Satellite Receiver to send output to the amplified audio outputs: the Right and Left Speakers in the room. If Local Amp Mode is not checked and you try to watch video in the room, the video or audio sound will be out of sync with the video.

10. Now configure the system for WiFi. By default, the Speaker Point is configured for Ethernet use. If you are using WiFi, follow the instructions next.

2.5.6.7.1.2 Configure Speaker Point for WiFi Use

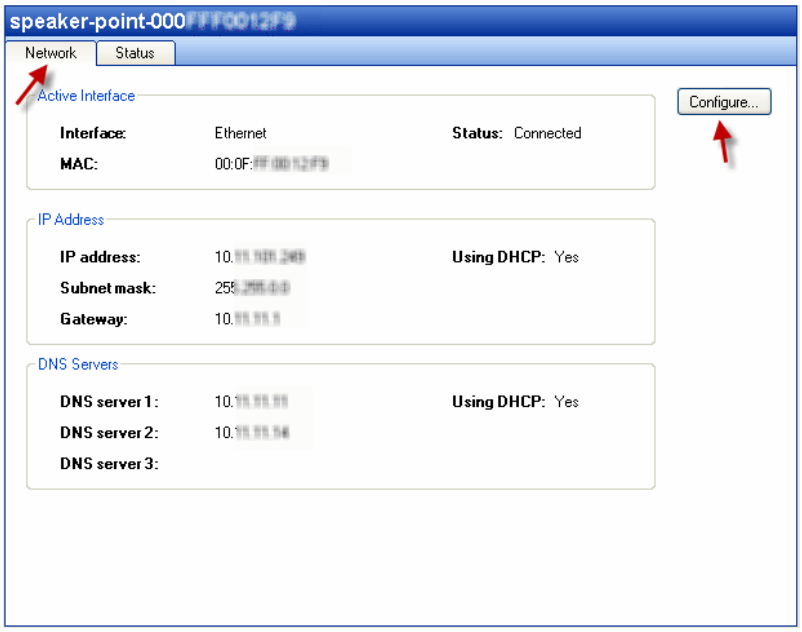
To configure Speaker Point for WiFi use:

1. Start Composer and connect to **Director on Local Network**.
2. In the Tools menu, select **System Manager**.
3. In the Devices pane, select the **network address** of the device you want to configure, and click **Connect**.



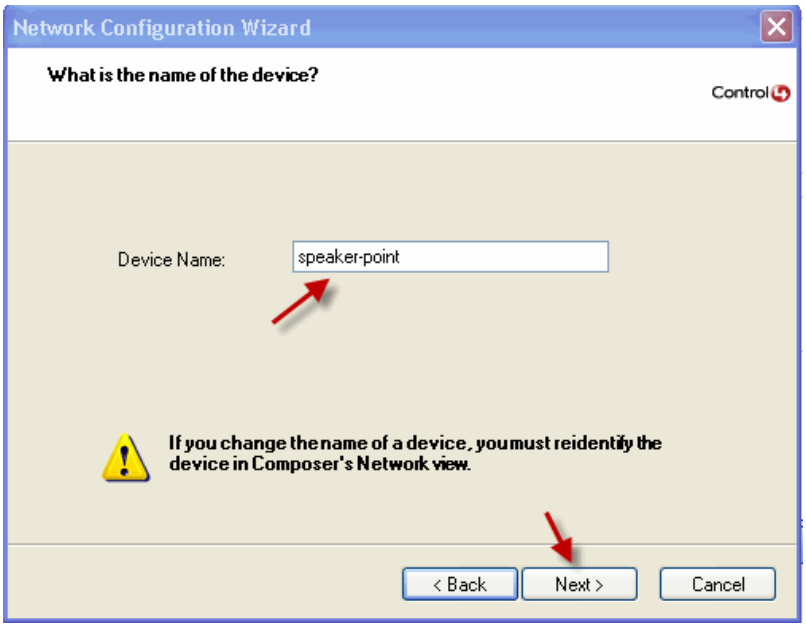
Tip: If the device's network address is not on this list, click **Refresh**. If it still does not appear, click **Add** to enter it manually. If you don't know the network address, look in the **Tools** menu > **Network Tools**.

4. Click the **Network** tab, and click **Configure**.



5. Click **Next** when a Network Configuration wizard dialog appears.
6. If desired, enter a new name for the device, and click **Next**.

IMPORTANT TIP: If the device has already been identified on the Control4 system, and you change the name (on this wizard screen), identify the device again. Until it is identified again, the Controller cannot recognize the name and will not be able to communicate with the device.



7. Select the type of network you want the device to be a part of, and click **Next**.

   Example: Wireless network.

8. Select the method to obtain an IP address, such as **DHCP** (first option) or **Status IP** (second option) distribution, and click **Next**.

   Example: Obtain an IP address automatically using *DHCP*.

9. Select the method to obtain the DNS server address automatically, and click **Next**.

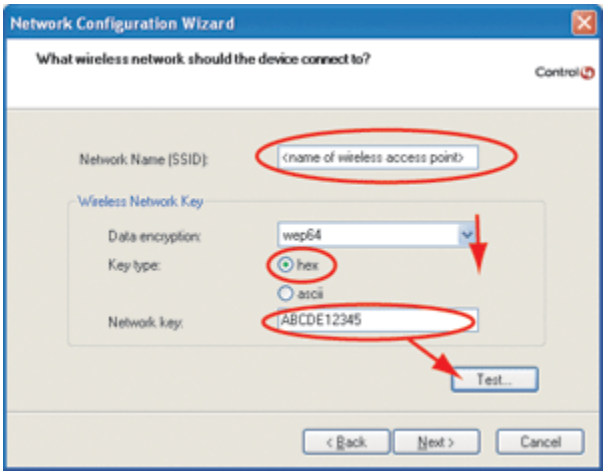
   Example: Obtain the DNS server address automatically.

10. Enter the **Network Name** (SSID) of your *wireless access point*.
11. Use the pull-down menu to indicate your Data encryption preference (**64** or **128** bit).
12. Select the Key type (**hex** or **ASCII**).
13. Enter your **Network Key** (WEP Key), and click **Test**.

- **Hex**: 64 bit (10 digits) or 128 bit (26 digits)—acceptable values 0 - 9, A- F
- **ASCII**: 64 bit (5 digits) or 128 bit (13 digits)—acceptable values ASCII characters

Example:

- **Network Name** (SSID): <name of wireless access point>
- **Data encryption**: wep64
- **Key Type**: hex
- **Network Key** (in hex): ABCDE12345.



Note: If the hex Network Key you insert is not valid, a screen with a red exclamation point comes up. In this case, enter your key again.

14. Click **Test** to test your network connection. If it fails, follow the on-screen instructions.
15. Click **Finish** when you come to the "Congratulations! You have successfully changed your network configuration" screen.
16. At this time, the system reboots. Do not disconnect any temporary Ethernet cables until the device has successfully rebooted and is powered on.
17. If you are using the WiFi to communicate to your Control4 Controller, disconnect the Ethernet CAT5 cable.

2.5.6.8 Configure a Media Player

Use the Control4® Composer Pro System Design and Connections views to add and configure a Media Player. This device auto-scans videos. A Media Player (such as Netgear EVA8000) lets you play media that is stored on a network drive or available through the Internet to a TV.

The Media Player driver lets the Control4 system interact with the Media Player hardware through one of the Control4 System Remote Controls. The driver also supports the video playback functionality of the hardware, allowing the Control4 Navigators to be used to select a video title.

Note: In Release 1.8, the Media Player (V1) does not work with ZigBee Pro. Use Media Player V2. The Media Player V2 driver is C4-MP2-E, located in the driver database.

Prerequisites

Ensure that your Media Player is installed as directed in the *Media Player Installation Guide* and *Media Player User Guide* shipped with the hardware or available on the Control4 Dealer website.

To configure a Media Player in your system:

1. Add a **Network File Storage** driver to your Composer Pro project (available on the My Drivers tab), then configure the properties including browsing to the network location. For information on adding and configuring network file storage, see “Using External Storage Devices.” The network location must be an open share location (no password required). The Network File Storage driver supports both audio and video content.
2. Start Composer and connect to a Director.
3. Click **System Design**.
4. In the System Design view, select the **room** where the Media Player resides.
5. On the My Drivers tab or Search tab, double-click the **Media Player** model (such as Media Player EVA8000) to add it to the project.
6. Identify the Media Player. In the Connections view:
   a. Click the **Network** tab, select **Media Player** in the list, and then click **Identify** in the IP Network Connections tab.
   b. Enter the **IP address** assigned to your Media Player in the box provided.

7. Connect the Media Player.
   a. Click the **Control/AV** tab.
   b. Select **Media Player** in the project tree.
   c. Define the correct **video and audio connections**.
8. Do one of the following:
   - Scan the videos. In the Media view, **scan** the videos that are in video_ts format:
     - Select **Video Media** under the network file share where you want to add the videos.
     - Click **Scan**. The scan operation identifies the video_ts format video files, adds them to the media database, and automatically associates the video metadata including cover art. When the scan completes, the videos in video_ts format are available for playback from the Navigators.
   - Manually add the videos. In the Media view, manually add videos that are in formats other than video_ts. Video formats other than video_ts that are supported by your Media Player can be added to the media database in Composer Pro manually.
     - Select **Video Media** under the network file share where you want to add the videos.

- Click **New**, and then choose the **Browse** option next to the Location text box in the pop-up window. A new pop-up window will appear.
- In the pop-up window, select the drop-down menu for Files of type, and then select the ***.*** option.
- Select the file format you want to add to the database.

When the videos in alternative video formats are added to the system manually, those videos become available for playback from the Navigators.

Note: When using a System Remote Control Version 2, the Cancel button is mapped to the EVA8000 Back button and the DVR button toggles between aspect ratios.

9. Check the properties. In the System Design view, select the **Media Player**.
10. In the Properties pane, click the **Properties** tab.

    Modifiable properties include:

    - **Debug Mode**: Use the drop-down list to select an option to log or print in this mode. Select from Print, Log, or Print and Log. This option is tied to the output options in the Lua tab (see Step 13).
    - **Resolution**: Use the drop-down list to select the video output screen resolution. Auto indicates that the device negotiates over HDMI.
    - **Current Resolution**: Indicates the current video output screen resolution. If you know the highest resolution allowed for this device, set it to that resolution for best results.
    - **Background Image URL**: Indicates the background image.
    - **Screen Saver Image URL**: Indicates the screen saver image.
    - **Firmware Version**: Indicates the device's firmware version.
    - **Update Status**: Indicates status of current update if being updated. This status box is used with the Actions tab. See Step 12.
    - **Last Error**: Displays error messages if found.
    - **Update URL**: Indicates the URL for the updates.
    - **Switchable Resolutions**: Use all of the boxes below this box with the System Remote Control Pg up and Pg down buttons. If set to True, the option can be changed on the remote.
11. Click the **Documentation** tab for more information about this device.
12. To update this device, in the Properties pane, click the **Actions** tab, and then click **Start Update** to update this device. **Note**: Updates to this device occur separately from Update Manager updates.
13. To view logging output, in the Properties pane, click the **Lua** tab.

2.5.7 Configuring Lighting and Keypads

Use the Control4® Composer Pro System Design and Connections views to configure Dimmers, Switches and Keypads.

Tip: Double- and triple-tap events apply to the Control4 Dimmers, Switches, and Keypads. When you tap a button consecutively two (2) or three (3) times for about one-half of one second the events fire. You can use these events for programming without requiring the more complex programming logic tied to timers and button 'Press/Release' events.

Note: When programming using double and triple-tap events, be aware that Press and Release events also occur when double and triple-tap events occur. Plan your programming using these events so that they don't conflict with the intended outcome. In most cases, when using double and triple-tap programming events, don't program on the Press and Release events.

These sections provide information about how to configure the lights or Keypads types for your Control4 system.

"Configure a 2, 3 or 6-Button Keypad"
"Configure a Wireless Switch or Dimmer or an Inline Dimmer"
"Configure a Wireless Outlet Dimmer"
"Configure a Wireless Outlet Switch"
"Configure a Wireless Outlet Switch for Power Sensing AV Devices"
"Configure a Wireless Puck Dimmer or Switch Module"

2.5.7.1 Configure a 2-, 3-, or 6-Button Keypad

Use the Control4® Composer Pro System Design and Connections views to configure Keypads.

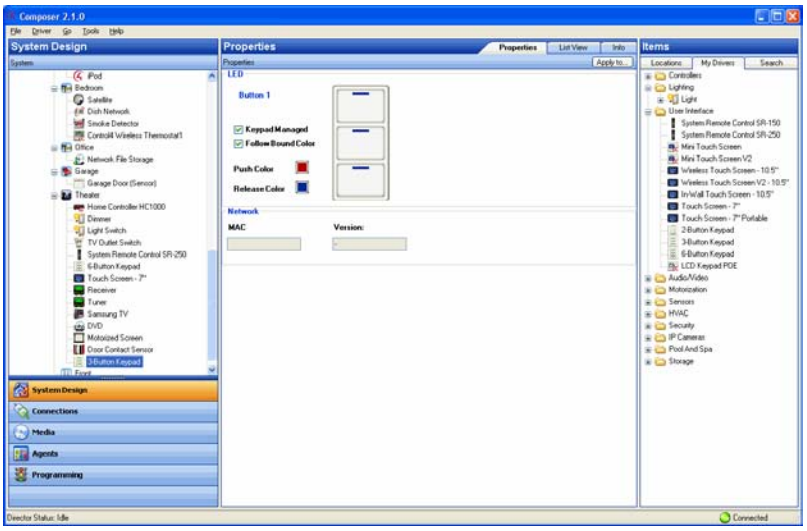
Note: To configure a 2, 3, or 6-Button Keypad for a 3-way switch, see "Configuring Lights for 3-Way," "Configuring a 2-Button Keypad as a 3-Way Light," or "Configuring a 3-Button Keypad to Control a 3-Way Light."

Prerequisites

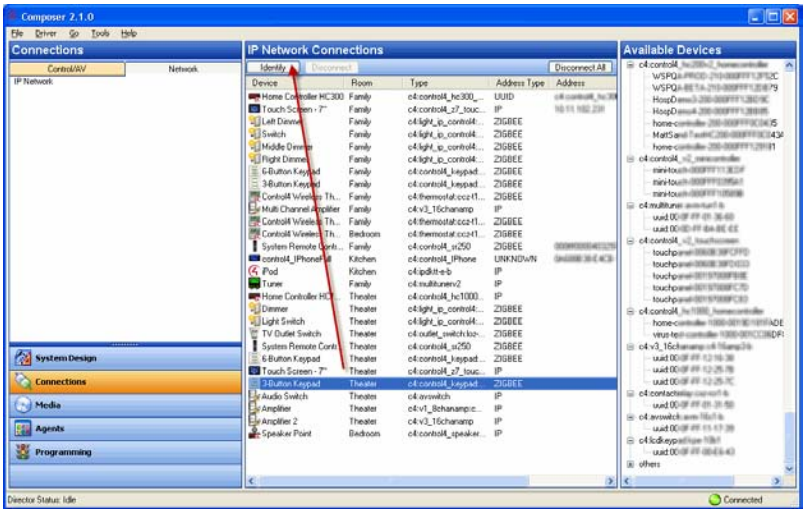
Ensure that the Keypad is installed as directed in the *Control4 Wireless 2, 3, or 6-Button Keypad Installation Guide* available on the Control4 Dealer website.

To add and configure a 2, 3, or 6-Button Keypad:

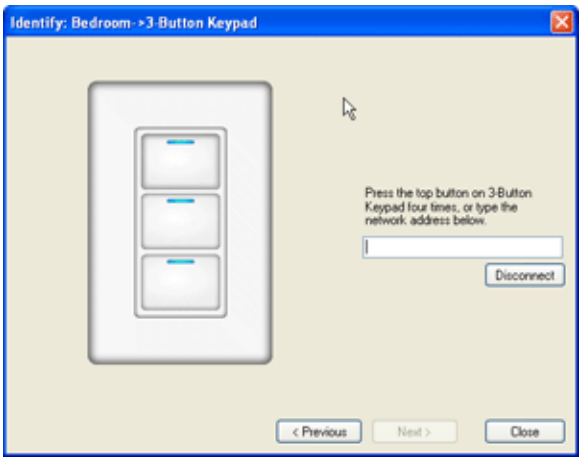
1. Start Composer and connect to a Director.
2. Click **System Design**.
3. In the project tree, select the **room** where the 2, 3, or 6-Button Keypad resides.
4. In the Items pane > My Drivers tab > User Interface > double-click **2, 3, or 6 Button Keypad** to add the object to the project tree.



5. Click **Connections**.
6. Click the **Network** tab to make the necessary network *connection*. To do this, select the 2, 3, or 6 Button Keypad object, and click the **Identify** button.



7. In Identify mode, go to the physical **2, 3, or 6-Button Keypad**, and press the **Top** button to identify the Keypad to the Control4 system.



8. Click **Close** to exit the wizard.
9. (Optional) To configure the properties, click **System Design**. In the project tree, select the **2, 3, or 6 Button Keypad** object for the properties to appear.

   Modifiable properties include (depending on the device selected):

   - **LED**

   Keypad Managed. The LED state is controlled by pressing the buttons on the Keypad. This is the factory default for the Keypad.

   If you uncheck Keypad Managed, the following buttons can be activated.

   - **Set LED State ON**—Ensures that the LED state is ON with the selected color.
   - **Set LED State OFF**—Ensures that the LED state is OFF with the selected color.
   - **Set LED Color**—Color when LED is ON or OFF. You can change the color in conjunction with the ON state and OFF state (Set LED State ON and Set LED State OFF).

   Follow Bound Color. If checked, the Keypad LED colors are set based on the device to which they are bound using the *button-link binding*s. This lets the Installer specify the On/Off colors for the Keypad LEDs independently of the device to which they are linked.

   Example: a 3-way Dimmer or Switch can be set to use the same colors for On and Off for the two (2) physical Dimmers if requested by the customer.

   Push Color—Indicates the LED color when the button is pushed.

   Release Color—Indicates the LED color when a pressed button is released.

   If Keypad Managed is unchecked, the LED state can be controlled by custom programming.

On Color—LED color when button is pressed to ON.

Off Color—LED color when button is pressed to OFF.

- **Network**

MAC—Lets you view the device's MAC address.
Version—Lets you view the version of the firmware you are running.

2.5.7.2 Configure a Wireless Switch or Dimmer or an Inline Dimmer

Use the Control4® Composer Pro System Design and Connections views to configure Switches and Dimmers.

Prerequisites

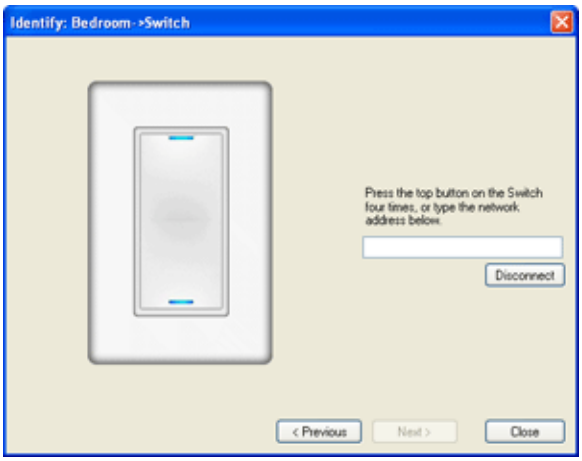
Ensure that the Wireless Switch or Dimmer or Inline Dimmer is installed as directed in the *Control4 Wireless Switch Installation Guide*, *Control4 Wireless Dimmer Installation Guide* or *Control4 Inline Dimmer Installation Guide* available on the Control4 Dealer website.

To add and configure a Wireless Switch or Dimmer or an Inline Dimmer:

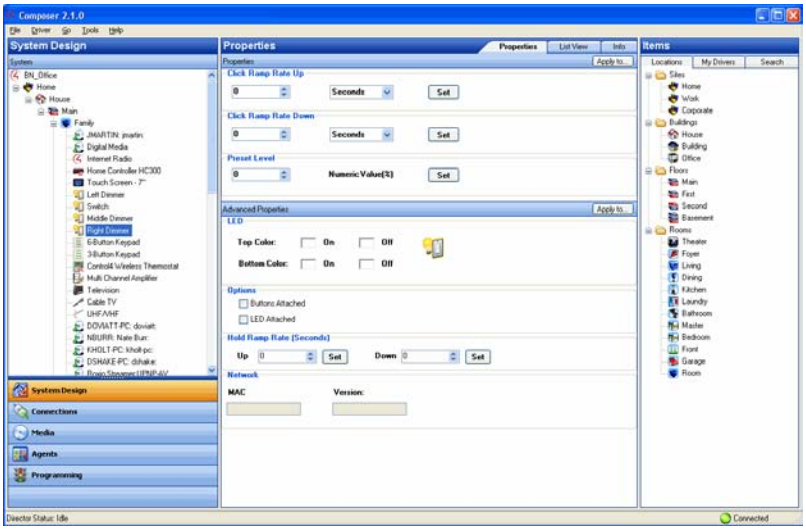
1. Start Composer and connect to a Director.
2. Click **System Design**.
3. In the project tree, select the **room** where the Wireless Switch, Wireless Dimmer or Inline Dimmer resides.
4. In the Items pane > My Drivers tab > Lighting > Light > double-click **Wireless Switch**, **Wireless Dimmer** or **Control4 LCZ-IL51-B** (Inline Dimmer; search under Local Database) to add the object to the project tree.

   Note: The Wireless ELV Dimmer uses the same driver as the Wireless Dimmer.

5. When the device shows up in the project tree, you can rename it to **Switch** or **Dimmer** (or whichever name works the best).
6. Click **Connections**.
7. Click the **Network** tab to make the necessary network connection. To do this, select the Wireless Switch, Wireless Dimmer or Inline Dimmer object, and click the **Identify** button as shown below.
8. In Identify mode, go to the physical Switch or Dimmer, and press the **Top** button to identify the Switch or Dimmer to the Control4 system. The network address appears in the IP Network Connections pane.



9. Click **Close** to exit the wizard.
10. (Optional) To configure the properties, click **System Design**. In the project tree, select the **Switch** or **Dimmer** object for the properties to appear as shown below.



Modifiable properties include:

Properties (these properties are available only on the Wireless Dimmer and the Inline Dimmer)

- **Click *Ramp Rate* Up**—The rate in seconds when the light ramps from OFF to ON.
- **Click Ramp Rate Down**—The rate in seconds when the light ramps from ON to OFF.
- **Preset Level**—The percentage of the load to which the Dimmer ramps when turned on.

Advanced Properties

LED

- **Top Color On**—The LED color for the top LED when the LED state is ON.
- **Top Color Off**—The LED color for the top LED when the LED state is OFF.
- **Bottom Color On**—The LED color for the bottom LED when the LED state is ON.

- **Bottom Color Off**—The LED color for the bottom LED when the LED state is OFF.

Options

- **Top LED Link**—If checked, swap on and off the state and color on the top LED.
- **Bottom LED Link**—If checked, swap the on and off state and color on the bottom LED.
- **Buttons Attached**—If checked, pressing the buttons on the Dimmer or Switch directly controls the connected load.
- **LED Attached**—If checked, the LED state is controlled by the button presses. If unchecked, the LED state and colors can be controlled by custom *programming*.

Hold Ramp Rate

- **Up**—The rate in seconds when the load increases when the Top button is held down.
- **Down**—The rate in seconds when the load decreases if the Bottom button is held down.

Network—The current MAC address and firmware version of the selected Dimmer or Switch. These fields are not editable.

The following properties apply to the **Wireless Dimmer** only.

Load Profile—The minimum and maximum load settings for light output which includes the Cold Start Level and time. Test the settings to determine what fits best with your bulb type. Click **Set** to save your changes.

Note: The Navigators show 0% to 100% even though the settings may be set at Minimum On Level percent at 25%, and the Max On Level percent at 80%.

Minimum On Level (%)—Use the drop-down box to select the minimum % in 1% increments. The default is 0. The minimum level can vary, depending on the light type (incandescent, flourescent, LED, etc.).

This is especially important in compact fluorescent (CLF) and LED lighting that sometimes have a minimum threshold for producing visible light that could be anywhere from the 10 – 40% range. Some loads will flicker or pulse right at their minimum threshold.

Example: A bulb doesn't produce visible light until it reaches 20%. The minimum On to 25% will ensure a clean On transition.

Cold Start Level (%)—Use the drop-down box to select the start level in 1% increments. The default is 0. This level is set above the Minimum on level % setting.

This setting is mainly applicable to CFL loads. Switching from an Off state to On sometimes exhibits a higher visible light threshold than after the CFLs have been on and have warmed up. If a Cold Start % is set (above the Minimum On %), the Dimmer cleanly jumps to that level from Off to On. However, when the Dimmer has been on for the time period designated by the Cold Start timer, the Dimmer can ramp below the Cold Start On % to the minimum On%.

Example: Fluorescent lights go on, warm up, and then will dim down to the Minimum On Level % setting. Tapping the keypad on a 2-button Dimmer sets the light to its preset level. If you press and hold the button, the light checks the Minimum On Level % setting.

Cold Start Time (milliseconds)—Use the drop-down box to select the time in milliseconds. The default is 0. This is the length of time a light takes to warm up before it dims down to the Cold Start Level setting.

Max On Level (%)—Use the drop-down box to select the maximum % light level in 1% increments. The default is 100. This is the level set for maximum light output, such as 100%. This setting enables capping of the light level for a given load below 100%, either to enhance bulb life or better match the light level in a given living space. This is an absolute maximum level rather than the Preset On level, which can be bypassed.

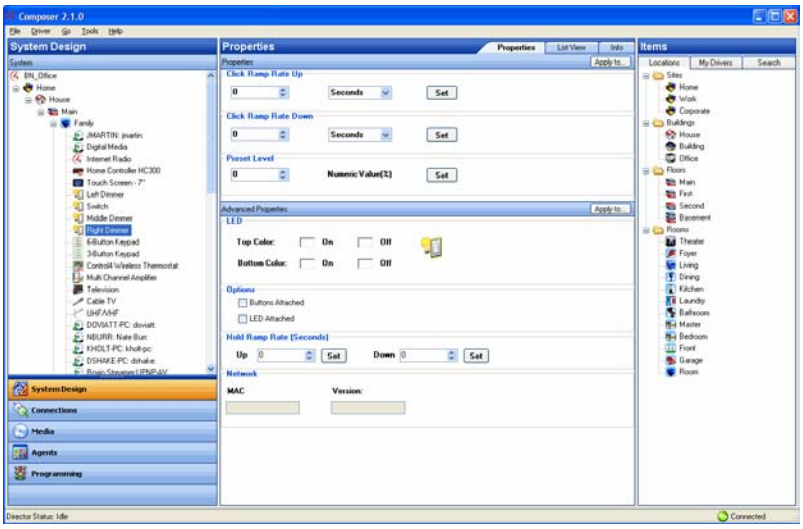
11. To apply the changed settings on the Properties tab, click the **Apply to**... button and select the room's **Dimmer** or **Switch**.
12. Click **OK**.

2.5.7.3 Changing LED Colors on a Switch or Dimmer

After you verify that your connections are correct in Control4® Composer Pro, you can set the properties and configure the system to meet the home control needs.

To change the LED colors on a *Switch* or Dimmer:

1. Start Composer and connect to a Director.
2. Click **System Design**. In the project tree, select the **Switch** or **Dimmer** object for the properties to appear.



3. For each LED light (Top and Bottom), click the color box to set a different color for the On and Off states.

- **Top Color**: On. The LED color for the Top LED when the LED state is On.
- **Top Color**: Off. The LED color for the Top LED when the LED state is Off.
- **Bottom Color**: On. The LED color for the Bottom LED when the LED state is On.

- **Bottom Color**: Off. The LED color for the Bottom LED when the LED state is Off.

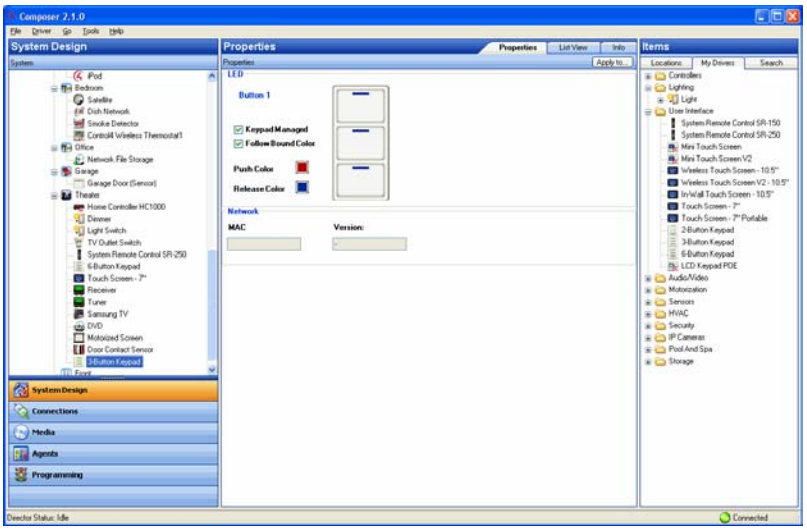
Tip: You can change the LED lights based on programming. See the Programming view > Switch or Dimmer objects for the events available. Also, see the actions available for both Switch and Dimmer.

2.5.7.4 Changing LEDs on 2-, 3-, or 6-Button Keypads

Use the Control4® Composer Pro System Design view to change Keypad button LEDs.

To change the LED colors on the Keypad:

1. Start Composer and Connect to a Director.
2. Click **System Design**.
3. In the project tree, select a **2, 3, or 6 Button Keypad** object for the properties to appear.



4. To change the LED color when the button is pushed and released, check **Keypad Managed**.
   - If Keypad Managed is *checked*, the LED state is controlled by pressing the buttons on the keypad.
   - If Keypad Managed is *unchecked*, the LED state can be controlled by custom programming.

Tip: You can change the LED lights based on programming. See the Programming view > 2 Button Keypad, 3 Button Keypad, or 6 Button Keypad objects for the events available. Also, see the actions available for the Keypads.

5. Select the Push and Release colors:
   a. Click the **color box** next to Push Color for a color dialog to appear where you can select the color. The Push Color indicates the LED color when the button is pushed.
   b. Click the **color box** next to Release Color for a color dialog to appear where you can select the color. The Release Color indicates the LED color when a pressed button is released.

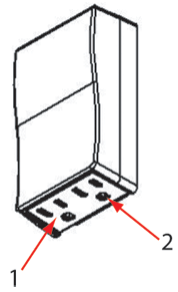
2.5.7.5 Configure a Wireless Outlet Switch

Use the Control4® Composer Pro System Design and Connections views to configure a Wireless Outlet Switch.

Configure and use the Wireless Outlet Switch and its plugged-in device to:

- Control a plugged-in audio/video component (such as a DVD player or VCR) or other electrical equipment controlled by *IR*.
- Control power to a plugged-in *relay* device (such as a pump) or other household appliances.
- Switch a plugged-in lamp On or Off.

Each Wireless Outlet Switch has two (2) outlets: Outlet 1 and Outlet 2. When the Wireless Outlet Switch is plugged into the wall, Outlet 1 is on the left and Outlet 2 is on the right.



Prerequisites

1. Ensure that the Wireless Outlet Switch is installed as directed in the *Control4 Wireless Outlet Switch Installation Guide* available on the Control4 Dealer website.
2. Ensure that your project has a Control4 Controller added and identified in the Control4 system.

To add and configure a Wireless Outlet Switch:

IMPORTANT TIP: When configuring the Wireless Outlet Switch, add two (2) drivers: one for the Wireless Outlet Switch and one for the plugged-in device. In addition, define the connection between these two (2) devices In the Connections view > Control/AV tab.

1. Start Composer and connect to a Director.
2. Click **System Design**.
3. Select the **My Drivers** tab > **Lighting** > **Light**, and double-click the **Wireless Outlet Switch** object to add it to the project tree.
4. Identify the **Wireless Outlet Switch** on the network.
5. Click **Connections**.
6. From the IP Network Connections pane, select the **Wireless Outlet Switch**, and click **Identify**.
7. When the Identify screen appears, go to the physical **Wireless Outlet Switch**, and press the **top right** button four (4) times to identify the Wireless Outlet Switch to the network.
8. Add a driver for the device you want to plug into the Wireless Outlet Switch as appropriate for your use (power sensing, power controlling, or switching lamps on and off).

Power Sensing (*Contact*)—Using the Wireless Outlet Switch, the system can sense the power state of the plugged-in device, and the Controller can send the appropriate control commands based on the power state.

For a plugged-in device:

a. Add the appropriate driver.
b. (For an AV device only, such as a DVD Player) Edit the driver to change the power management option in the driver for the correct connection to appear in the Connections view. To do this, see the "Change Power Management Options." For other devices, it is not necessary to edit the driver.
c. Before you can use power sensing for the plugged-in device, perform Power Learning on the Wireless Outlet Switch for the plugged-in device on the appropriate outlet. For information about Power Learning when using the Wireless Outlet Switch power sensing, see “Perform Power Learning” later in this section.

Power Control (Relay)—For a plugged-in device, add the appropriate driver.

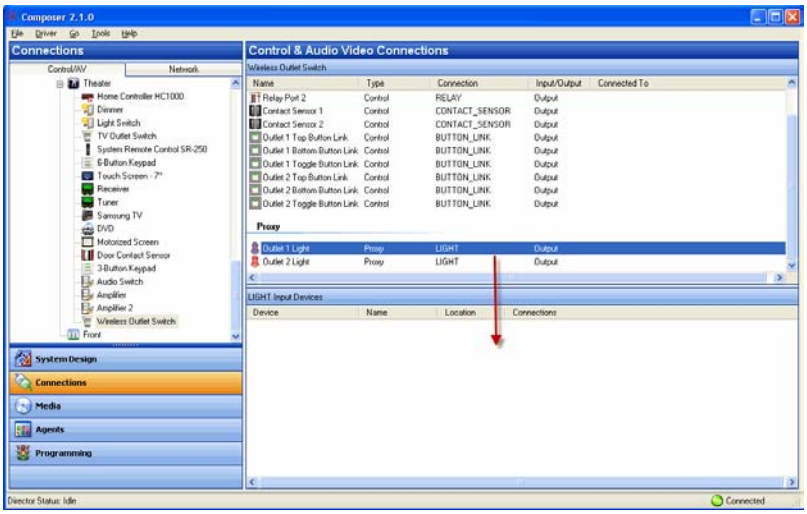
Example: Add a relay device by selecting a **Pump** to the project. Go to the **System Design** view in the Items pane, select the **My Drivers** tab > **Motorization**, and double-click the **Pump** object.

Lighting—For a lamp, add an Outlet Light to the project. Go to the **System Design** view in the Items pane. Select the **My Drivers** tab > **Lighting** > **Light**, and double-click the **Outlet Light** object.

Note: This is the Outlet Light object, and not the regular Wireless Outlet Switch object.

9. **Define** the connection between the Wireless Outlet Switch and the plugged-in device.
   a. Click the **Control/AV** tab.
   b. Make a connection between the **Wireless Outlet Switch** and the device that is plugged into the Wireless Outlet Switch. Make this connection for any of these three (3) possible uses: power sensing (contact), power control (relay), and switching a lamp On or Off.
   c. In the Connections view, select the **device** that is plugged into the Wireless Outlet Switch.
   d. From the top screen, **drag** the appropriate connection to the Wireless Outlet Switch connection on the bottom screen.

Example: Connection between the Wireless Outlet Switch and the Light Outlet.



2.5.7.5.1 Perform Power Learning

To enable use of the power-sensing features, configure your Wireless Outlet Switch to read the power state of the devices that you plug into it.

To perform Power Learning:

1. Follow the steps in the previous section.
2. **Turn Off** the device plugged into the Wireless Outlet Switch.
3. **Push** and **hold** the button on the Top panel of the Wireless Outlet Switch until the two (2) LEDs toggle Orange On/Off, alternating back and forth.
4. **Choose** an outlet to configure (Outlet 1 or 2) by releasing the button when the LED that corresponds to that outlet number lights up.

   Example: If a device is plugged into Outlet 1, release the button when LED 1 lights up. Upon doing so, the LED you chose flashes orange, indicating that the Wireless Outlet Switch is learning a steady state of the device (such as On or Off). When the LED turns solid orange, the Wireless Outlet Switch has learned the steady state, but has not yet determined whether the state is On or Off.

5. With the LED now solid orange, turn the device plugged into the Wireless Outlet Switch to an **On** state. The LED again flashes orange while the Wireless Outlet Switch is learning the On state of the device. When learning completes, the LED glows solid orange again to indicate the Wireless Outlet Switch has learned the steady state.
6. With the LED now solid orange again, turn the device **Off**. The LED flashes orange to indicate the Wireless Outlet Switch is waiting for a steady state. When the device reaches a steady state, the LED glows red to indicate the Wireless Outlet Switch has learned the Off state.
7. With the LED now solid red, turn the device **On** again. The LED flashes orange to indicate it is waiting for a steady state. When the device reaches a steady state, the LED glows green to indicate the Wireless Outlet Switch has learned the On state.
8. With the LED now solid green, press the **button** on the Wireless Outlet Switch one time to save and exit the Power Learning mode.

IMPORTANT TIP: You can use a quick button press during any step of this process prior to the LEDs turning solid Red or Green to exit the Learning mode without saving.

9. Repeat the steps to configure the other outlet (Outlet 1or 2) as needed for any additional plugged-in device.

Note: To unlearn a device, press the **button** nine (9) times, but use with care; this will reset both outlets.

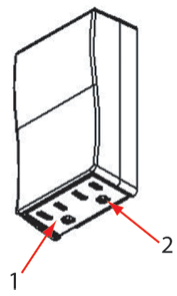
2.5.7.6 Configure a Wireless Outlet Switch for Power Sensing AV Devices

Use the Control4® Wireless Outlet Switch and its plugged-in device to:

- **Control** a plugged-in audio/video component (such as a DVD player or VCR) or other electrical equipment controlled by *IR*.
- **Control** power to a plugged-in *relay* device (such as a pump) or other household appliances.
- **Switch** a plugged-in lamp On or Off.

The instructions below describe how to configure an Outlet Switch in Composer Pro for a Samsung television. For instructions about how to configure the other actions, see Configure a Wireless Outlet Switch.

Each Wireless Outlet Switch has two (2) outlets: Outlet 1 and Outlet 2. When the Wireless Outlet Switch is plugged in to the wall, Outlet 1 is on the left and Outlet 2 is on the right.



IMPORTANT: When configuring the Wireless Outlet Switch, you need to add two (2) drivers:

- One (1) for the Wireless Outlet Switch
- One (1) for the plugged-in device.

In addition, define the *connection* between these two (2) devices in the **Connections** view > **Control/AV** tab.

Prerequisites

1. Ensure that your project has a Control4 Controller added and identified on the Control4 system.
2. Ensure that the Wireless Outlet Switch object is added to the project tree, and is identified on the Control4 system.

3. Ensure that the AV device, such as the Samsung Television object, is added and configured for the device.

To configure a Wireless Outlet Switch to use an AV device, do the following:

Select the Power Codes

1. Start **Composer** and connect to a **Director**.
2. Click **System Design**.
3. In the project tree, right-click the **Samsung Television** and select **Edit Driver**. The Driver Wizard opens.
4. In the Driver Wizard, check **Has power feedback**.
5. Change the Power Management option to **Contact sensor**; ensure that the **Send toggle code** is selected.
6. Click **Codes**.
   a. In Codes under Default Commands, make sure **Power On** and **Power Off**, or **Power Toggle** items are *not* checked. If they are, any programming you do in conjunction with power using the Wireless Outlet Switch and the television is invalid.
   b. Click **Finish**.
   c. Click **next** to close the window.

IMPORTANT: Don't click back to check if the selection was saved because it refreshes the screen; in that case, you will need to redefine what you just defined.

Define the Connection

7. Define the connection between the Wireless Outlet Switch and the plugged-in device (Samsung Television).

8. To do this, in the **Connection** > **Control & Audio Video Connections** pane select the Samsung Television that is plugged into the Wireless Outlet Switch.
9. From the top screen drag the **Contact Sensor** connection to the correct sensor on the Wireless Outlet Switch in the bottom screen.
10. Before you can use power sensing for the plugged-in device, perform **Power Learning** on the Wireless Outlet Switch for that plugged-in device on the appropriate outlet. Those steps are explained next.
    a. Turn off the **device** plugged into the Wireless Outlet Switch.
    b. Push and hold the **button** on the top panel of the Wireless Outlet Switch until the two (2) LEDs toggle orange On/Off, alternating back and forth.
    c. Choose an outlet to configure (Outlet 1 or 2) by releasing the **button** when the LED that corresponds to that outlet number lights up.

    Example: If a device is plugged into Outlet 1, release the button when LED 1 lights up. The LED you chose flashes orange, indicating that the Wireless Outlet Switch is learning a steady state of the device (such as On or Off). When the LED turns solid orange, the Wireless Outlet Switch has learned the steady state, but has not yet determined whether the state is On or Off.

    d. With the LED now solid orange, turn the device plugged into the Wireless Outlet Switch **On**. The LED again flashes orange while the Wireless Outlet Switch is learning the On state. When the learning completes, the LED glows solid orange again to indicate the Wireless Outlet Switch has learned the steady state.
    e. With the LED now solid orange again, turn the device **Off**. The LED flashes orange to indicate the Wireless Outlet Switch is waiting for a steady state. When the device reaches a steady state, the LED glows red to indicate that the Wireless Outlet Switch has learned the Off state.
    f. With the LED now solid red, turn the device **On** again. The LED flashes orange to indicate it is waiting for a steady state. When the device reaches a steady state, the LED glows green to indicate the Wireless Outlet Switch has learned the On state.
    g. With the LED now solid green, **press** the button on the Wireless Outlet Switch **one time** to save and exit the Power Learning mode.

    Tip: Use a quick-button press during any step prior to the LEDs turning solid red or green to exit the Power Learning mode without saving.

11. Repeat these steps to configure the other outlet (Outlet 1or 2) as needed for any additional plugged-in device.
12. To unlearn a device, press the button nine (9) times, but use with care; as this will reset both outlets.

2.5.7.7 Configure a Wireless Outlet Dimmer

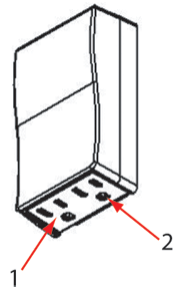
Use the Control4® Composer Pro System Design and Connections views to configure a Wireless Outlet Dimmer. Configure the Wireless Outlet Dimmer to control and dim lamps.

Prerequisites

1. Ensure that the Wireless Outlet Dimmer is installed and set up as directed in the *Control4 Wireless Outlet Dimmer Installation Guide* available on the Control4 Dealer website.
2. Ensure that your project has a Control4 Controller added and identified on the Control4 system.

To add and configure a Wireless Outlet Dimmer:

Note: Each Wireless Outlet Dimmer has two (2) outlets: Outlet 1 and Outlet 2. When the Wireless Outlet Dimmer is plugged into a wall, Outlet 1 is on the left and Outlet 2 is on the right.



1. Start Composer and connect to a Director.
2. Click **System Design**.
3. In the Items pane > My Drivers tab > Lighting > Light double-click the **Wireless Outlet Dimmer** object driver to add to the project.
4. Double-click the **Outlet Light** twice to add one for each outlet.
5. Ensure that three (3) objects are added to the project tree:
   - One (1) for the Wireless Outlet Dimmer
   - Two (2) other objects representing Outlet 1 and Outlet 2 (Light 1 and Light 2)
6. In the Connections view, use the **Network** tab to make the necessary network connection. To do this, select the **Wireless Outlet Dimmer** object, and click the **Identify** button.
7. In Identify mode, go to the physical **Wireless Outlet Dimmer** and press the **Button** four (4) times to identify the device to the network. The address appears in the box.
8. Click **Close** to exit the wizard.
9. To configure the properties, click **System Design**. In the project tree, select the **Wireless Outlet Dimmer** object to view the device properties.
   - **LEDs**—Enabled/Disabled radio buttons—Lets you enable or disable the LED lights on the Wireless Outlet Dimmer.
   - **Networking**

     Channel—Lets you view the channel that the device is using to communicate on the network.

     Gateway —Lets you view the Gateway that the Wireless Outlet Dimmer is using on the network.

     MAC—Lets you view the MAC address that the Wireless Outlet Dimmer is using on the network.

     Version—Lets you view the Wireless Outlet Dimmer version.

2.5.7.8 Configuring Lights for 3-Way

Rather than creating programming to tie lighting variables and Control4® 3-way lights together, you can use a simplified lighting configuration to set up lighting control. In the Connections view, you can

configure global changes in Composer Pro Properties, and configure 3-way lights by dragging the lighting and control connections.

The Push and Release features available on the Keypads let you dim lights like a Dimmer.

Tip: To find out how to configure global changes for lights and other devices, see "Accessing Properties from the Project Tree" in *Composer Pro Getting Started*.

2.5.7.8.1 Configuring a 2-Button Keypad as a 3-Way Light

Use the Control4® Composer Pro Connections view to configure a 3-way light using a 2-button Keypad.

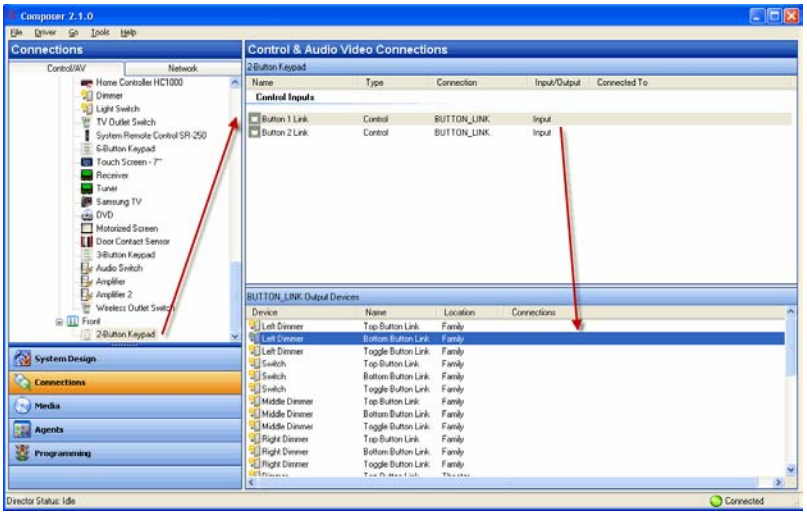
Example: Configure a 2-Button Keypad to turn On (Top button) and turn Off (Bottom button) a Dimmer, and to use the Push/Release function available on the 2-Button Keypad to dim a light.

Prerequisites

1. Ensure that your Controller hardware is added and identified to the Control4 system.
2. Ensure that you have a 2-Button Keypad and Dimmer (or Switch) added and identified to the project.

To configure a 2-Button Keypad as a 3-way light:

1. Start Composer and connect to a Director.
2. Click **Connections**.
3. Select the **2-Button Keypad** in the project tree.
4. In the Control & Audio Video Connections pane under Control Inputs, click the **Button 1 Link** connection, and drag it to the Dimmers's **Top Button Link** in the bottom pane.
5. Click the **Button 2 Link** connection, and drag it to the Dimmer's **Bottom Button Link** in the bottom pane.



6. Test to ensure that the 2-Button Keypad turns the light on and off, and that the Push/Release functions dim the light.

2.5.7.8.2 Configuring a 3-Button Keypad to Control a 3-Way Light

Use the Control4® Composer Pro Connections view to configure a 3-Button Keypad to use a toggle for a 3-way light.

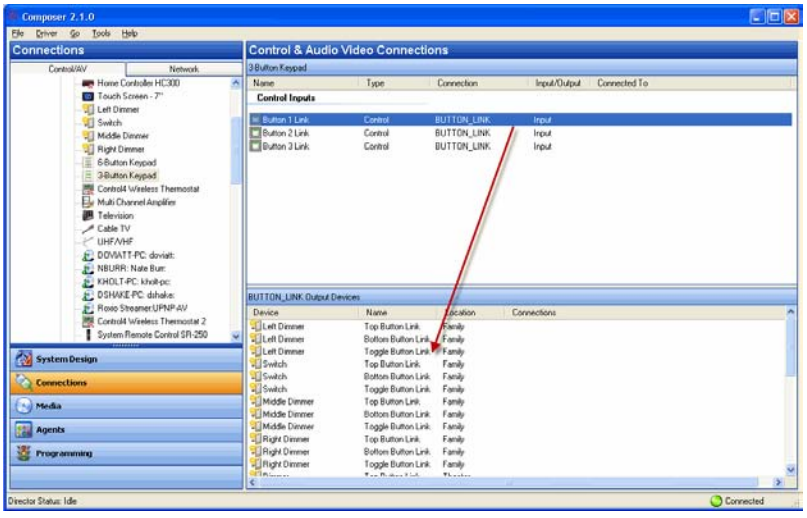
Example: Configure a 3-Button Keypad to toggle the light On and Off. Use Push and Release to dim and brighten the light as desired.

Prerequisites

1. Ensure that your Controller hardware is configured properly, and that the 3-Button Keypad and Dimmer (or Switch) are added to the project and identified.
2. Ensure that you have a 3-Button Keypad added and identified to the project.

To configure a button on a 3-Button Keypad to control a 3-way light:

1. Start Composer and connect to a Director.
2. Click **Connections**.
3. In the project tree, select the **3-Button Keypad**.
4. In the Control & Audio Video Connections pane, drag the **Button 1 Link** *connection* from the top list over the light's **Toggle Button Link** in the bottom list.



5. Test to ensure that the 3-Button Keypad turns the light On and Off, and that the Push/Release functions dim the light.

2.5.7.9 Configure a Wireless Puck Dimmer or Switch Module

Use the Control4® Composer Pro System Design and Connections views to configure Wireless Puck Dimmer or Switch modules.

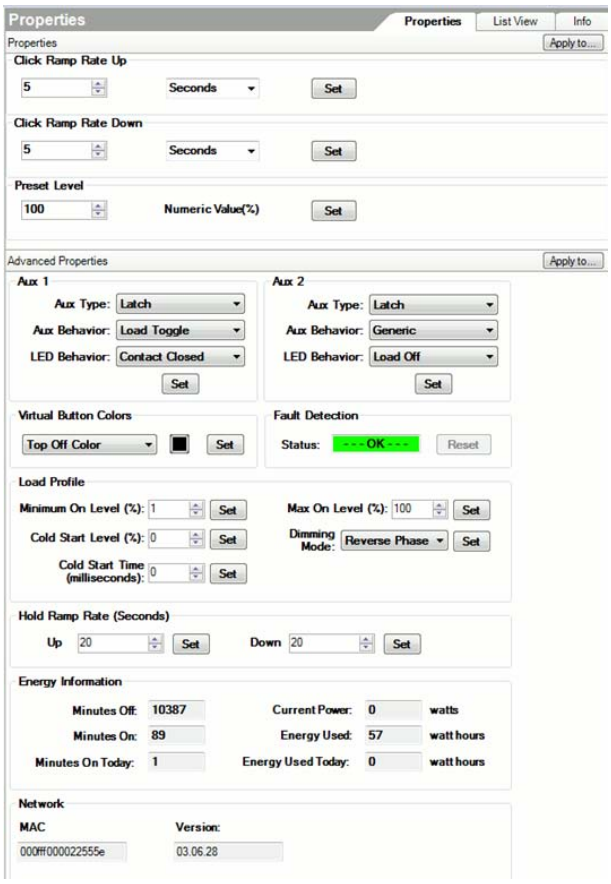
Prerequisites

Ensure that either the Puck Switch Module or Puck Dimmer Module is installed as directed in the *Control4 Wireless Puck Dimmer or Switch Module Installation Guide* available on the Control4 Dealer website.

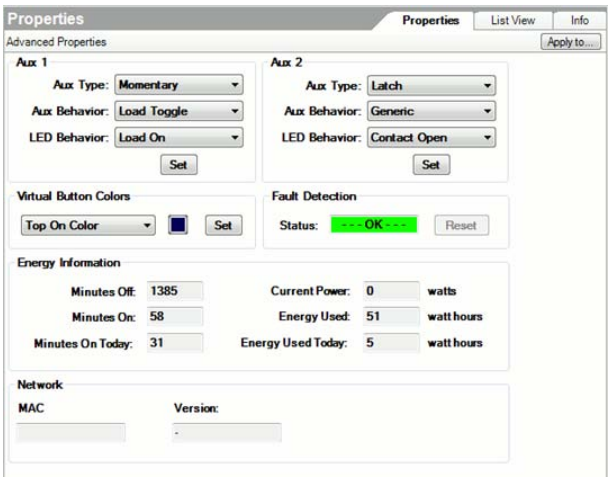
To add and configure a Wireless Puck Dimmer or Switch Module:

1. Start Composer and connect to a Director.
2. Click **System Design**.
3. In the project tree, select the **room** where the Wireless Puck Switch Module or Wireless Puck Dimmer Module resides.
4. In the Items pane > Search tab > Device Type: Light > Manufacturer: Control4 double-click the Wireless Puck Dimmer Module: **C4-DM201-Z** or the Wireless Puck Switch Module: **C4-SM201-Z** to add the object to the project tree.
5. When the device shows up in the project tree, you can rename it to whatever name works the best for you or your customer.
6. Click **Connections**.
7. Click the **Network** tab to make the necessary network connection. To do this, select the Wireless Puck Switch Module or Wireless Puck Dimmer Module, and click the **Identify** button shown below.
8. In Identify mode, go to the physical Puck Switch or Puck Dimmer, and press four (4) times the button on the puck or the button that is connected to Contact 1 on the puck to identify the Switch or Dimmer to the Control4 system. The network address appears in the IP Network Connections pane.
9. Click **Close** to exit the wizard.
10. (Optional) To configure the properties, click **System Design**. In the project tree, select the **Puck Switch** or **Puck Dimmer** object for the properties to appear as shown below. Click **Set** to save your changes.

Puck Dimmer Properties:



Puck Switch Properties:



Modifiable properties for the Wireless Puck Dimmer Module or Wireless Puck Switch Module include:

Properties (Wireless Puck Dimmer Module Only)

- **Click *Ramp Rate* Up**—The rate the light ramps from off to on when the button is clicked.
- **Click Ramp Rate Down**—The rate the light ramps from on to off when the button is clicked.
- **Preset Level**—The percentage of the load to which the Puck Dimmer Module ramps when turned on.

Advanced Properties

Aux 1 or Aux 2 Properties

Set these properties when you want to control the Puck module with a switch connected to the auxiliary terminals.

- **Aux Type**—From the drop down select the type of auxiliary switch connected to the terminal.
  - **Momentary**—A momentary switch only closes the circuit when the button is pressed. Momentary switches typically have a “spring-back” action that returns the button to its original position after it is released.
  - **Latch**—A latching switch typically takes the form of a toggle or rocker button and opens or closes the circuit depending upon the position of the switch. When using a latching switch with the Puck Module, the Puck reacts to each transition of the switch from on-to-off or off-to on. It does not react to the actual on/off state of the switch. Each transition is treated as a “click.” **Note**: It is not possible to perform a press-and-hold with a latching switch.
- **Aux Behavior**—From the drop down select the desired behavior that will occur when a momentary button is pressed or a latching switch is toggled.
  - **Load On**—The load is set to on (not available with latching switches).
  - **Load Off**—The load is set to off (not available with latching switches).
  - **Load Toggle**—The load is toggled between on and off.
  - **Generic**—The button/switch is not tied to the load and can be programmed as desired.
- **LED Behavior**—From the drop down select the desired behavior for the associated LED.
  - **Load On**—The LED is on when the load is on.
  - **Load Off**—The LED is on when the load is off.

- **Contact Open**—The LED is on when the auxiliary contact is in the Open position.
- **Contact Closed**—The LED is on when the auxiliary contact is in the Closed position.
- **Unmanaged**—The LED is not tied to the contact or load and can be controlled using the Programming view.

Virtual Button Colors
The virtual button color defines the LED color that will appear on a keypad button that is bound to the Puck module when that keypad button is set to **Follow Bound Color**.

Select a virtual button LED from the drop-down list, choose the LED color and then click the **Set** button. (**Note**: the Set button must be clicked before selecting a different virtual button LED from the drop-down list or the previous selection will be lost.)

Fault Detection
The status field indicates whether the Puck Module is in a fault state. Fault conditions can be caused by a short circuit, overloading the module, or potentially an incandescent bulb blowing.

To reset the device, click the **Reset** button. Alternatively, the button on the Puck or the button attached to Contact 1 can be clicked 15 times to reset the device.

If the device returns to a fault state after reset, verify the wiring and and/or the total wattage of loads connected to the device.

Load Profile (Wireless Puck Dimmer Module Only)
These are the minimum and maximum load settings for light output which includes the Cold Start Level and time. Test the settings to determine what fits best with your bulb type.

Note: The Navigators show 0% to 100% even though the settings may be set at Minimum On Level percent at 25%, and the Max On Level percent at 80%.

Minimum On Level (%)—Use the arrows selection box to select the minimum % in 1% increments. The default is 0. The minimum level can vary, depending on the light type (incandescent, fluorescent, LED, etc.).

This is especially important in compact fluorescent (CLF) and LED lighting that sometimes have a minimum threshold for producing visible light that could be anywhere from the 10 – 40% range. Some loads will flicker or pulse right at their minimum threshold.

Example: A bulb doesn't produce visible light until it reaches 20%. The minimum On to 25% will ensure a clean On transition.

Cold Start Level (%)—Use the arrows selection box to select the start level in 1% increments. The default is 0. This level is set above the Minimum on level % setting.

This setting is mainly applicable to CFL loads. Switching from an Off state to On sometimes exhibits a higher visible light threshold than after the CFLs have been on and have warmed up. If a Cold Start % is set (above the Minimum On %), the Dimmer cleanly jumps to that level from Off to On. However, when the Dimmer has been on for the time period designated by the Cold Start timer, the Dimmer can ramp below the Cold Start On % to the minimum On%.

Example: Fluorescent lights go on, warm up, and then will dim down to the Minimum On Level % setting.

Cold Start Time (milliseconds)—Use the arrows selection box to select the time in milliseconds. The default is 0. This is the length of time a light takes to warm up before it dims down to the Cold Start Level setting.

Max On Level (%)—Use the arrows selection box to select the maximum % light level in 1% increments. The default is 100. This is the level set for maximum light output, such as 100%. This setting enables capping of the light level for a given load below 100%, either to enhance bulb life or better match the light level in a given living space. This is an absolute maximum level rather than the Preset On level, which can be bypassed.

Dimming Mode

- **Autodetect**—Automatically detects the load type and determines whether the Dimmer should use Forward or Reverse Phase dimming. This is the default and should not be changed unless the load is not dimming properly.
- ***Forward Phase***—Forces the Dimmer Module to use Forward Phase dimming. Should only be used with magnetic transformers.
- ***Reverse Phase***—Forces the Dimmer Module to use Reverse Phase dimming.

Hold Ramp Rate (Wireless Puck Dimmer Module Only)

- **Up**—The time, in seconds, it takes the load to ramp to 100% when a button controlling the load is pressed and held.
- **Down**—The time, in seconds, it takes the load to fade to 0% when a button controlling the load is pressed and held.

Energy Information

- **Minutes Off**—The number of minutes that the load has been off since the Puck Module was last reset.
- **Minutes On**—The number of minutes that the load has been on since the Puck Module was last reset.
- **Minutes On Today**—The number of minutes that the load has been on today.
- **Current Power**—The current power being used by the load (in watts).
- **Energy Used**—The total number of watt hours used by the load since the device was last reset.
- **Energy Used Today**—The total number of watt hours used by the load from 12:00 AM until 11:59 PM today.

Network

This is the current MAC address and firmware version of the selected Puck Dimmer or Switch. These fields are not editable.

11. To apply the changed settings on the Properties tab to another Puck Module, click the **Apply to**... button and select the **Puck Dimmers** or **Puck Switches** to which the settings should be applied.
12. Click **OK**.

2.5.7.10 Examples of Lighting Configurations

This section provides examples about how to change various Switch, Dimmer and Keypad settings in the Control4® system.

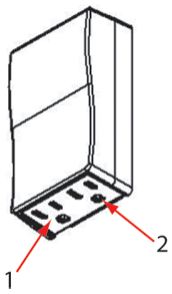
2.5.7.10.1 Configure a Wireless Outlet Switch for Power Sensing AV Devices

Use the Control4® Wireless Outlet Switch and its plugged-in device to:

- **Control** a plugged-in audio/video component (such as a DVD player or VCR) or other electrical equipment controlled by *IR*.
- **Control** power to a plugged-in *relay* device (such as a pump) or other household appliances.
- **Switch** a plugged-in lamp On or Off.

The instructions below describe how to configure an Outlet Switch in Composer Pro for a Samsung television. For instructions about how to configure the other actions, see "Configure a Wireless Outlet Switch."

Each Wireless Outlet Switch has two (2) outlets: Outlet 1 and Outlet 2. When the Wireless Outlet Switch is plugged in to the wall, Outlet 1 is on the left and Outlet 2 is on the right.



IMPORTANT: When configuring the Wireless Outlet Switch, you need to add two (2) drivers:

- One (1) for the Wireless Outlet Switch
- One (1) for the plugged-in device.

In addition, define the *connection* between these two (2) devices in the **Connections** view > **Control/AV** tab.

Prerequisites

1. Ensure that your project has a Control4 Controller added and identified on the Control4 system.
2. Ensure that the Wireless Outlet Switch object is added to the project tree, and is identified on the Control4 system.
3. Ensure that the AV device, such as the Samsung Television object, is added and configured for the device.

To configure a Wireless Outlet Switch to use an AV device:

Select the Power Codes

1. Start **Composer** and connect to a **Director**.

2. Click **System Design**.
3. In the project tree, right-click the **Samsung Television** and select **Edit Driver**. The Driver Wizard opens.
4. In the Driver Wizard, check **Has power feedback**.
5. Change the Power Management option to ***Contact*** **sensor**; ensure that the **Send toggle code** is selected.
6. Click **Codes**.
   a. In Codes under Default Commands, make sure **Power On** and **Power Off**, or **Power Toggle** items are *not* checked. If they are, any programming you do in conjunction with power using the Wireless Outlet Switch and the television is invalid.
   b. Click **Finish**.
   c. Click **next** to close the window.

IMPORTANT: Don't click back to check if the selection was saved because it refreshes the screen; in that case, you will need to redefine what you just defined.

Define the Connection

7. Define the connection between the Wireless Outlet Switch and the plugged-in device (Samsung Television).
8. To do this, in the **Connection** > **Control & Audio Video Connections** pane select the Samsung Television that is plugged into the Wireless Outlet Switch.
9. From the top screen drag the **Contact Sensor** connection to the correct sensor on the Wireless Outlet Switch in the bottom screen.
10. Before you can use power sensing for the plugged-in device, perform **Power Learning** on the Wireless Outlet Switch for that plugged-in device on the appropriate outlet.
    a. Turn off the **device** plugged into the Wireless Outlet Switch.

b. Push and hold the **button** on the top panel of the Wireless Outlet Switch until the two (2) LEDs toggle orange On/Off, alternating back and forth.
c. Choose an outlet to configure (Outlet 1 or 2) by releasing the **button** when the LED that corresponds to that outlet number lights up.

Example: If a device is plugged into Outlet 1, release the button when LED 1 lights up. The LED you chose flashes orange, indicating that the Wireless Outlet Switch is learning a steady state of the device (such as On or Off). When the LED turns solid orange, the Wireless Outlet Switch has learned the steady state, but has not yet determined whether the state is On or Off.

d. With the LED now solid orange, turn the device plugged into the Wireless Outlet Switch **On**. The LED again flashes orange while the Wireless Outlet Switch is learning the On state. When the learning completes, the LED glows solid orange again to indicate the Wireless Outlet Switch has learned the steady state.
e. With the LED now solid orange again, turn the device **Off**. The LED flashes orange to indicate the Wireless Outlet Switch is waiting for a steady state. When the device reaches a steady state, the LED glows red to indicate that the Wireless Outlet Switch has learned the Off state.
f. With the LED now solid red, turn the device **On** again. The LED flashes orange to indicate it is waiting for a steady state. When the device reaches a steady state, the LED glows green to indicate the Wireless Outlet Switch has learned the On state.
g. With the LED now solid green, **press** the button on the Wireless Outlet Switch **one time** to save and exit the Power Learning mode.

Tip: Use a quick-button press during any step prior to the LEDs turning solid red or green to exit the Power Learning mode without saving.

11. Repeat the steps to configure the other outlet (Outlet 1or 2) as needed for any additional plugged-in device.
12. To unlearn a device, press the **button** nine (9) times, but use with care; as this will reset both outlets.

2.5.8 Configuring Navigators

Use the Control4® Composer Pro System Design and Connections views to configure Navigators for the Control4 system.

Note: You may have noticed a "Commissioning Remote Control SR-250" driver in the Online Database; this driver is not used for residential customers.

These subsections provide information about configuring System Remote Controls and Touch Screens:

“Configure System Remote Control SR-150B”
“Configure System Remote Control Version 3, SR-250”
“Configure a 7-inch Portable Touch Screen”
“Configure a 7-inch Tabletop or Wall-Mounted Touch Screen”
“Configure a 5” or 7” In-Wall Touch Screen”

"Configure Mobile Devices or PCs/Tablets as Navigators"

2.5.8.1 Configure System Remote Control SR-150B

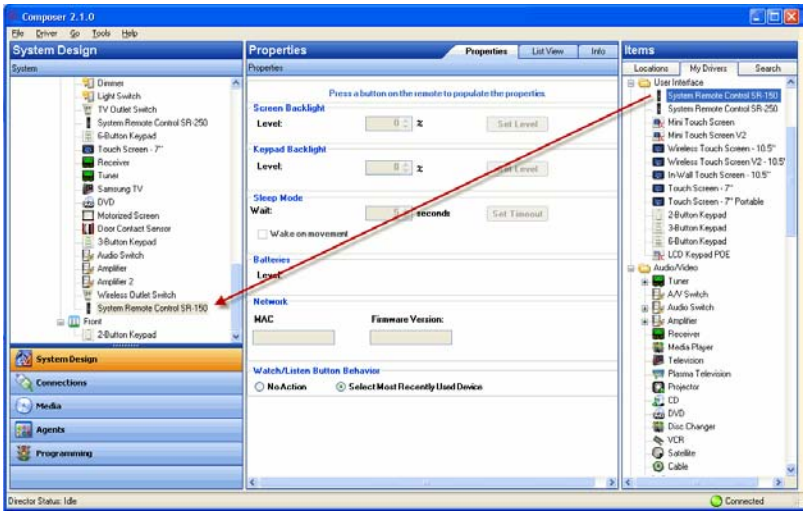
Use the Control4® Composer Pro System Design and Connections views to add and identify this device.

Prerequisites

Ensure that the SR-150B is installed as directed in the *Control4 System Remote Control System Remote Control SR-150B Setup Guide*.

To add and configure an SR-150B:

1. Start Composer and connect to a *Director*.
2. Click **System Design**.
3. In the project tree, select the **room** where the System Remote Control resides. In the Items pane > My Drivers tab > User Interface > double-click **System Remote Control SR-150** to add the object to the project tree.



4. Click **Connections**.
5. In the Connections view, click the **Network** tab to make the necessary network *connection*.
6. Select the **System Remote Control SR-150** object, and click the **Identify** button.
7. In Identify mode, go to the physical System Remote Control, and press the Red **4** button to identify the System Remote Control to the Control4 system.

Note: To complete the identification process, the System Remote Control must be on the same ZigBee channel as the Controller, and the Controller must have Zserver enabled. To change the ZigBee channel on the remote, see Step 12.

8. When the MAC address appears in the window, click **Close**.
9. (Optional) To configure the properties, click **System Design**.
10. In the project tree, select the **System Remote Control** object.
11. View and change the properties in the Properties pane.

    Note: Press any button on the System Remote Control to display the configurable property values in the Properties pane. Because the SR-150B has no window, some of the options below are not supported in the SR-150B.

    Modifiable properties include:

    - **Screen Backlight**—Not used.
    - **Keypad Backlight**—Lets you set the light level of the backlight. The default is 0%. Click **Set Level**.
    - **Sleep Mode**—Lets you configure sleep mode settings. The default is five (5) seconds, but can be extended to 60 seconds. Select **Wake on Movement** if you want the SRC to wake up when moved.
    - **Batteries**—Lets you view the battery level on your System Remote Control.
    - **Network**—Lets you view the System Remote Control's ZigBee channel, *gateway*, MAC address and firmware version.
        - **MAC**—Displays the remotes own MAC address.
        - **Firmware Version**—Displays the current firmware version of the remote.
    - **Watch/Listen Button** Behavior—If you select one of the options below, the following *action* occurs when you press the **Watch** button.
        - **No Action—**When you press the **Watch** button, nothing happens. This option can be tied to *programming* a button (see the section below).
        - **Select Most Recently Used Device**—Lists the last three (3) devices; e.g., DVD player, Media Player, Television, etc.
12. Change the System Remote Control settings as needed at the physical System Remote Control SR-150B using the applicable button-press sequence:

- **Check ZigBee Channel**—To determine the current ZigBee channel, press **Room Off, 0, 0, 3** (or **Room Off, 7, 4, 7**) (in that order), and then count the blinks of Room Off. The number of blinks corresponds with the channel number.
- **Reset to Factory Defaults**—To reset all settings to the factory defaults (including ZigBee channel), press **Room Off, 9, 9, 9**.

2.5.8.1.1 Program the System Remote Control SR-150B Programmable Buttons

On the System Remote Control SR-150, you can program six (6) buttons (Red, Green, Yellow, Blue, *, and #) to perform programmed activities. The buttons can be programmed to execute any of the AV device's macros or IR codes or be programmed by room.

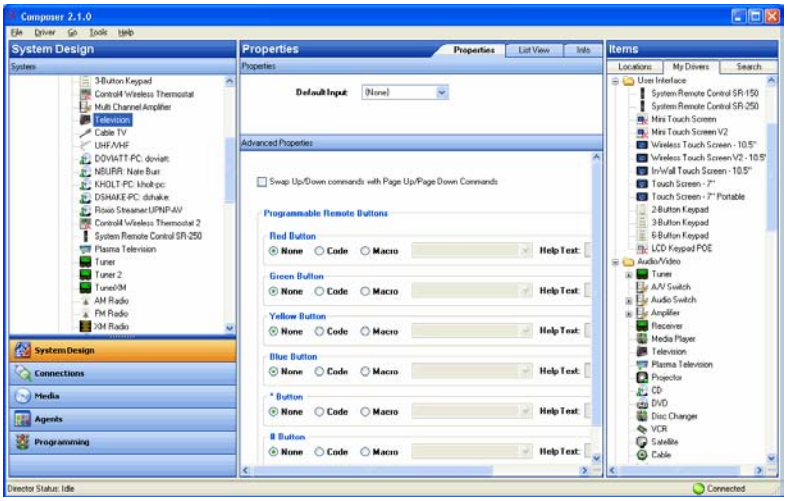
To program the buttons:

1. Start **Composer** and connect to a **Director**.
2. Click **System Design**.
3. Ensure that you have the following devices in your project:
   - Controller
   - System Remote Control SR-150B
   - An AV device to be controlled
4. Click **Connections**.
5. Click the **Network** tab. Ensure that the Controller and the System Remote Control are both network identified.
6. Program the programmable buttons (Red, Green, Yellow, Blue, *, or #) either based on the selected AV device or the selected room.

   Based on AV Device:

   a. Click **System Design**.

   b. Select an **AV device** to display the device's Properties page.



   c. On the device's Properties page, choose **Code** or **Macro** for the button you want to program, and then choose a code or macro from the drop-down list.

d. Edit the **Help** text as needed, and then choose **Set**.

Note: Help text describes custom programming to users in the House option in any of the Navigators.

Example: (1) In System Design, select **Disc Changer**. (2) In the Red button, choose **Code**. (3) From the drop-down list, choose **Subtitle**. (4) Choose the **Set** button to create a **Subtitle** button.

Based on Room:

a. Click **Programming**.
b. Select a **room** in the Device Events pane.
c. Select the **Commands** radio button in the <Room> Events pane.
d. Use the drop-down menu to select a ***command*** or **button** (example, **Blue Button**).
e. In the Actions pane, build the script using the items to program the actions in the selected room when the selected command or button is used.

2.5.8.2 Configure System Remote Control SR-250

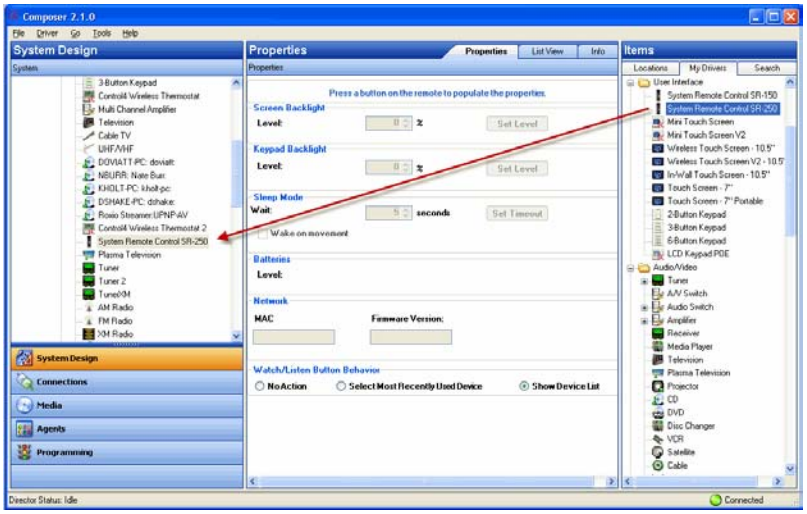
Use the Control4® Composer Pro System Pro Design and Connections views to add and identify this device.

Prerequisites

Ensure that the System Remote Control SR-250 is installed as directed in the *Control4 System Remote Control SR-250 Setup Guide* available on the Control4 Dealer website.

To add and configure an SR-250:

1. Start Composer and connect to a Director.
2. Click **System Design**.
3. In the project tree, select the **room** where the System Remote Control resides. In the Items pane > My Drivers tab > User Interface > double-click **System Remote Control SR-250** to add the object to the project tree.



4. Click **Connections**.
5. In the Connections view, click the **Network** tab to make the necessary network connection.
6. Select the **System Remote Control SR-250** object, and click the **Identify** button.
7. In Identify mode, go to the physical System Remote Control, and press the Red **4** button to identify the System Remote Control to the Control4 system.

Note: To complete the identification process, the System Remote Control must be on the same *ZigBee* channel as the Controller, and the Controller must have *Zserver* enabled. To change the ZigBee channel on the remote, see Step 12.

8. When the MAC address appears in the window, click **Close**.
9. (Optional) To configure the properties, click **System Design**.
10. In the project tree, select the **System Remote Control** object.
11. View and change the properties in the Properties pane.

Note: Press any button on the SR-250 to display the configurable property values in the Properties pane.

Tip: You can also change most of these settings on the SR-250 using **Info** > **Config**.

Modifiable properties include:

- **Screen Backlight**—Lets you set the light level of the screen's backlight. Choose a percentage from 0 (Off) to 100 (full brightness). The default is 100%. Click **Set Level**.
- **Keypad Backlight**—Lets you set the light level of the keypad's backlight. Choose a percentage from 0 (Off) to 100 (full brightness). The default is 100%. Click **Set Level**.
- **Sleep Mode**—Lets you set how long the System Remote Control stays awake after no activity. The default setting is five (5) seconds, but can be extended to 60 seconds. Select **Wake on movement** to wake the SR-250 up when moved.
- **Batteries**—Lets you view the battery level (strength in %) of your System Remote Control.
- **Network**—Lets you view the System Remote Control's ZigBee channel, *gateway*, MAC address and firmware version.
    - **Channel**—Displays your ZigBee channel (1-15), which should match the ZigBee channel set for the Controller.

- **Gateway**—Displays the MAC address of the ZigBee server (usually your Controller unless you specify otherwise).
- **MAC**—Displays the System Remote Control's own MAC address.
- **Firmware Version**—Displays the current firmware version of the System Remote Control.

- **Watch/Listen Button Behavior**—If you select one of the options below, the following *action* occurs when you press the **Watch** button.
  - **No Action—**If you select this option and you press the **Watch** button, nothing happens. This option can be tied to programming a button (see the section below).
  - **Select Most Recently Used Device**—Lists the last three (3) devices; e.g., DVD player, Media Player, Television, etc.
  - **Show Device List**—Lists the source device of the selection.

12. (Conditional) Change ZigBee Channel: If you need to change the ZigBee channel to match the Controller's channel or to improve reception, do the following at the System Remote Control SR-250.

If the System Remote Control is NOT identified, follow these steps:

a. Press buttons **2, 4, 8, 6, #, ***, and then press the **List** button (in that order) to get into Edit mode.
b. Use the **up** or **down** arrows to pick the ZigBee channel.
c. Press **Select** to change the ZigBee channel.
d. Press **CNCL** to exit Edit mode.

If the System Remote Control IS identified, follow these steps:

a. Press the **List** button once or twice to display the menu options.
b. Press buttons **2, 4, 8, 6, #, *** and then press the **List** button (in that order) to get into Edit mode.
c. Use the **up** or **down** arrows to pick a ZigBee channel.
d. Press **Select** to change the ZigBee channel.
e. Press **CNCL** to exit Edit mode.

2.5.8.2.1 Program the SR-250 Programmable Buttons

On the System Remote Control SR-250, you can program six (6) buttons (Red, Green, Yellow, Blue, *, and #) to perform programmed activities. You can program these buttons to execute any of the AV device's macros or IR codes or they can be programmed by room.

To program the SR-250 programmable buttons:

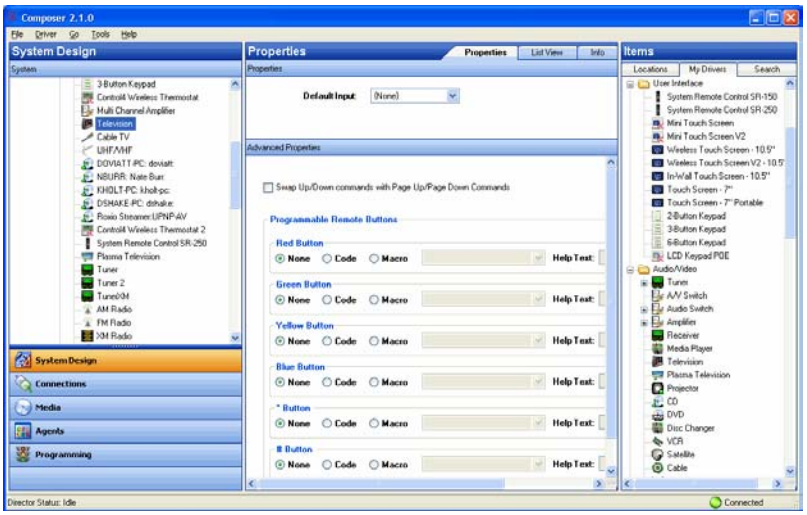
1. Start Composer and connect to a Director.
2. Click **System Design**.
3. Ensure that you have the following devices in your project:
   - Controller
   - System Remote Control SR-250
   - An AV device to be controlled

4. Click **Connections**.
5. Click the **Network** tab. Ensure that the Controller and the System Remote Control are both network identified.
6. Program the programmable buttons (Red, Green, Yellow, Blue, *, or #) either based on the selected AV device or the selected room.

Based on AV Device:

a. Click **System Design**.

b. Select an **AV device** to display the device's Properties page.



c. On the device's Properties page, choose **Code** or **Macro** for the button you want to program, and then choose a code or macro from the drop-down list.

d. Edit the **Help** text as needed, and then choose **Set**.

Note: Help text describes custom programming to users in the House option in any of the Navigators.

Example: (1) In System Design view, select **Disc Changer**. (2) In the Red button, choose **Code**. (3) From the drop-down list, choose **Subtitle**. (4) Choose the **Set** button to create a **Subtitle** button.

Based on Room:

a. Click **Programming**.

b. Select a **room** in the Device Events pane.

c. Select the **Commands** radio button in the <Room> Events pane.

d. Use the drop-down menu to select a ***command*** or **button** (example, **Blue Button**).

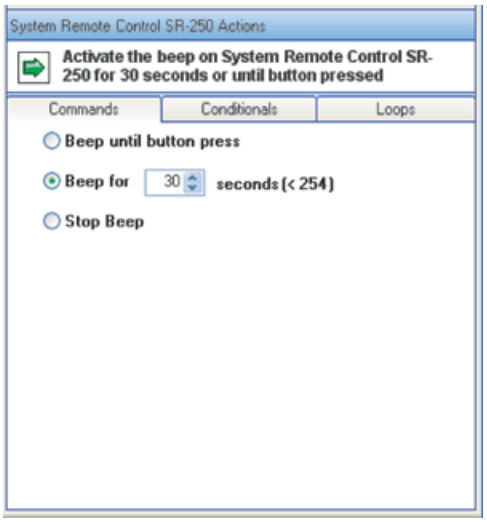
e. In the Actions pane, build the script using the items to program the actions in the selected room when the selected command or button is used.

2.5.8.2.2 Program the SR-250 Paging Feature

Configure the Beep paging feature for this System Remote Control version through programming. Use this feature to page a lost System Remote Control. You can program a Keypad or a custom button to cause the System Remote Control to beep when pressed.

To program the paging feature for this System Remote Control:

1. Start Composer and connect to a Director.
2. Click **Programming**.
3. Select the *Event* that you want to use to start the page. **Example**: To select a Keypad button press, first select the **Keypad** in the Device Event pane, and then select the button in Events.
4. In the Actions list, select **System Remote Control SR-250**.
5. In the Commands list, choose an action below for the System Remote Control, and then drag the **green** arrow to the Script pane.



- **Beep until button press**—The System Remote Control beeps until you press one of its buttons.
- **Beep for X seconds (<254)**—The System Remote Control beeps until X seconds have elapsed or you press one of its buttons.
- **Stop Beep**—The System Remote Control stops beeping.

6. Click **Execute**.

2.5.8.2.3 Change the Order of Watch/Listen Sources

To change the order of your customer's sources when they press Watch/Listen:

1. In Composer Pro, click **System Design**.
2. In the project tree, click the **room** to control.
3. Click the **Navigator** tab.
4. From the Menu (left side), select the function to change; for example, **Watch** or **Listen**.
5. Select the item in 'Device Visibility and Display Order,' and then click **Modify**.
6. Change to the desired order, and then click **OK**.

2.5.8.3 Configure a 7” Portable Touch Screen (C4-TSM7)

Use the Control4® Composer Pro System Design and Connections views to add and configure this device. **Note**: If you want to use the new 7” Portable Touch Screen with Camera, released with OS 2.2, see the next section.

Prerequisites

1. Ensure that the 7" Portable Touch Screen (C4-TSM7-G-B) is installed as directed in the *Control4 7" Portable Touch Screen Installation Guide* available on the Control4 Dealer website.
2. Ensure that your project has a Control4 Controller added and identified in the Control4 system.

To add and configure a 7" Portable Touch Screen:

1. Start Composer and connect to a Director.
2. Click **System Design**.
3. In the project tree, select the **room** where the Touch Screen resides. In the Items pane > My Drivers tab > User Interface > double-click **Touch Screen - 7" Portable** to add the object to the project tree.
4. Click **Connections**.
5. In the Connections view, click the **Network** tab to make the necessary network connection.

   Note: If this Touch Screen will be providing audio output, the Touch Screen needs to be identified as an Audio *end point* for the room.

6. Select the **Touch Screen - 7" Portable** object, and click the **Identify** button.
7. In Identify mode notice the Touch Screen button highlighted in the Composer Pro pane. Go to the physical 7" Portable Touch Screen, and press the button indicated in Composer Pro to identify the Touch Screen to the Control4 system.
8. When the address appears on the Composer Pro screen, click **Close**.
9. (Optional) To configure the properties, click **System Design**.
10. In the project tree, select the **Touch Screen - 7" Portable** object.
11. View and change the properties in the Properties pane.

    Modifiable properties include:
    Backlight Level—Use the **up** or **down** arrows to set the light level of the backlight. You can change the brightness of the backlight with this option by percentage, so 100% is On at full brightness and 0% is Off.
    Backlight Preset Level—Lets you set the default backlight level. If you ever restart or power the Mini Touch Screen again, this is the backlight level it would go to.
    Button Animation Enabled—Lets you select a button to glow.
    Volume Control Follows Selected—Lets you select other rooms aside from the one that contains the Touch Screen, and change its volume when leaving the room.
    Wake on motion—Select to wake up the Touch Screen when it is moved.

2.5.8.4 Configuring a 7” Portable Touch Screen with Camera (C4-TSMC7)

Use the Control4® Composer Pro System Design and Connections views to add and configure this device.

Prerequisites

1. Ensure that the 7" Portable Touch Screen with Camera (C4-TSMC7-EN) is installed as directed in the *Control4 7" Portable Touch Screen with Camera Setup Guide* available on the Control4 Dealer website. **Note**: If you want to install the new 7" Portable Touch Screen with Camera, ensure that the part number says "C4-TSMC7-EN" when you add the driver.
2. Ensure that your project has a Control4 Controller added and identified in the Control4 system.

To add and configure a 7" Portable Touch Screen with Camera:

1. Start Composer and connect to a Director.
2. Click **System Design**.
3. In the project tree, select the **room** where the Touch Screen resides. In the Items pane > My Drivers tab > User Interface > double-click **Touch Screen - 7" Portable** to add the object to the project tree.
4. Click **Connections**.
5. In the Connections view, click the **Network** tab to make the necessary network connection.

   Note: If this Touch Screen will be providing audio output, the Touch Screen needs to be identified as an Audio *end point* for the room.

6. Select the **Portable 7” Touch Screen V2** object, and click the **Identify** button.
7. In Identify mode notice the Touch Screen button highlighted in the Composer Pro pane. Go to the physical 7" Portable Touch Screen with Camera, and press the button indicated in Composer Pro to identify the Touch Screen to the Control4 system.
8. When the address appears on the Composer Pro screen, click **Close**.
9. (Optional) To configure the properties, click **System Design**.
10. In the project tree, select the **Portable 7” Touch Screen V2** object.
11. View and change the properties in the Properties pane.

    Modifiable properties include:
    Backlight Level—Use the **up** or **down** arrows to set the light level of the backlight. You can change the brightness of the backlight with this option by percentage, so 100% is On at full brightness and 0% is Off. Click **Set** to save.
    Backlight Preset Level—Lets you set the default backlight level. If you ever restart or power the Touch Screen again, this is the backlight level it would go to. Click **Set** to save.
    WiFi Signal Strength—If using WiFi, shows you the strength of your wireless signal.
    Enable Camera—Check to use the camera with this device for video intercom.

2.5.8.5 Configure a 7” Tabletop Touch Screen

Use the Control4® Composer Pro System Design and Connections views to add and configure this device.

Prerequisites

1. Ensure that the 7" Tabletop Touch Screen (C4-TST7-EG-B or C4-TSTR7-EG-B) is installed and on (not in Sleep Mode) as directed in the *Control4 7" Tabletop Touch Screen Installation Guide*.
2. Ensure that your project has a Control4 Controller added and identified in the Control4 system.

To add and configure a 7" Tabletop Touch Screen:

1. Start Composer and connect to a Director.
2. Click **System Design**.
3. In the project tree, select the **room** where the Touch Screen resides. In the Items pane > My Drivers tab > User Interface > double-click **Touch Screen - 7"** to add the object to the project tree.
4. Click **Connections**.
5. In the Connections view, click the **Network** tab to make the necessary network connection.
6. Select the **Touch Screen - 7"** object, and click the **Identify** button.
7. In Identify mode, notice the Touch Screen button highlighted in the Composer Pro pane, go to the physical 7" Touch Screen, and press the button indicated in Composer Pro to identify the Touch Screen to the Control4 system.
8. When the address appears on the Composer Pro screen, click **Close**.
9. (Optional) To configure the properties, click **System Design**.
10. In the project tree, select the **Touch Screen - 7"** object.
11. View and change the properties in the Properties pane.

Modifiable properties include:
Backlight Level—Use the **up** or **down** arrows to set the light level of the backlight, and then click **Set**. You can change the brightness of the backlight with this option by percentage, so 100% is On at full brightness and 0% is Off.
Backlight Preset Level—Lets you set the default backlight level. If you ever restart or power the Touch Screen again, this is the backlight level it would go to. Click **Set** to save your changes.
Button Animation Enabled—Lets you enable animated buttons for a 3D effect.
Wake on proximity—Lets you set the Touch Screen to wake up when someone approaches within four (4) feet of the device.
Detect Ambient Light Levels—Lets you set the options according to how much light is in the room. You can use this option in programming also.
Set Threshold—Threshold settings from 0 to 100; 0 means no light; 100 means full light.
Current Light Level—Shows current light level.

2.5.8.6 Configure an 5” or 7” In-Wall Touch Screen

Use the Control4® Composer Pro System Design and Connections views to add and configure this device.

Note: This Touch Screen includes full duplex point-to-point Intercom sessions, broadcast support to multiple Touch Screens, and monitoring from the interface. An Intercom driver and agent must be added and configured in the Composer project. See this section, the *Control4 System User Guide*, and “Example: Program Using the Intercom Agent” for details.

Also, you must purchase, assign, and check in an Intercom license for consumers who want this feature. See *Managing Dealer Accounts on My.Control4.Com* for information about how to purchase and assign an Intercom license.

2.5.8.6.1 Scenarios

1. **User wants to have full-duplex, room-to-room calling**. In this case, the Control4 system must have at least two (2) 5" or 7" In-Wall Touch Screens installed.
2. **User wants to broadcast a message without a response**. In this case, the Control4 system must have at least one (1) 5" or 7" In-Wall Touch Screen installed.
3. **User wants to broadcast a message with a response**. In this case, the Control4 system must have at least two (2) 5" or 7" In-Wall Touch Screens installed.
4. **User wants to monitor the sounds in another room**. In this case, the Control4 system must have at least two (2) 5" or 7" In-Wall Touch Screens installed.

Prerequisites

1. Ensure that the 5" In-Wall Touch Screen (C4-TSWMC5) or 7" In-Wall Touch Screen (C4-TSWMC7) is installed as directed in the *Control4 5" and 7" In-Wall Touch Screen Installation Guide* available on the Control4 Dealer website.
2. Ensure that your project has a Control4 Controller added and identified in the Control4 system.

To add and configure a 5" or 7" In-Wall Touch Screen:

1. Start Composer and connect to a Director.
2. Click **System Design**.
3. In the project tree, select the room where the Touch Screen resides. In the Items pane > My Drivers tab > User Interface > double-click to add the 5" or 7" driver, **C4-TSWMC5-EG** or **C4-TSWMC7-EG**, to the project tree.
4. Click **Connections**.
5. In the Connections view, click the **Network** tab to make the necessary network connection.

   Note: If this Touch Screen will be providing audio output, the Touch Screen needs to be identified as an Audio end point for the room.

6. Select the **IE 5" Touch Screen** or **IE 7" Touch Screen** object, and click the **Identify** button.
7. In Identify mode, notice the Touch Screen button highlighted in the Composer pane, go to the physical 5" or 7" In-Wall Touch Screen, and press the button indicated in Composer to identify the Touch Screen to the Control4 system.
8. When the address appears on the Composer screen, click **Close**.
9. (Optional) To configure the properties, click **System Design**.
10. In the project tree, select the **IE 5" Touch Screen** or **IE 7" Touch Screen** object.
11. View and change the properties in the Properties pane as needed.

    Modifiable properties include:

    Backlight Level—Use the up or down arrows to set the light level of the backlight. You can change the brightness of the backlight with this option by percentage, so 100% is On at full brightness and 0% is Off.

Backlight Preset Level—Lets you set the default backlight level. If you ever restart or power the Touch Screen again, this is the backlight level it would go to. Click Set to save your changes.
Button Animation Enabled—Lets you enable animated buttons for a 3D effect.
Volume Control Follows Selected—Lets you select other rooms aside from the one that contains the Touch Screen, and change its volume when leaving the room.

2.5.8.6.2 Configure Mobile Devices or PCs/Tablets as Navigators

Use the Control4® MyHome apps to configure an iPod Touch, iPad, iPhone, Android, or PC device for use as a Touch Screen in a Control4 system.

Prerequisites

Ensure that the license and correct apps are installed as indicated in the *Control4 MyHome Setup Guide for Dealers* or *Control4 MyHome Setup Guide* for homeowners. These documents are located on the Control4 website.

Follow the instructions in the documents mentioned previously to set up the apps for these devices. You don't need to do anything in Composer Pro.

2.5.9 Configuring Contacts and Relays

Use the Control4® Composer Pro System Design and Connections views to add and configure contacts and relays.

These sections provide information about specific contacts and relays.

"Configure a Gas Fireplace Relay"
"Configure a Wireless Fireplace Switch"
"Configure Pulse Single Relay Support"
"Configure Single Contact Relay Support"

2.5.9.1 Configure a Gas Fireplace Relay

Use the Control4® Composer Pro System Design and Connections views to configure a Gas Fireplace *Relay*.

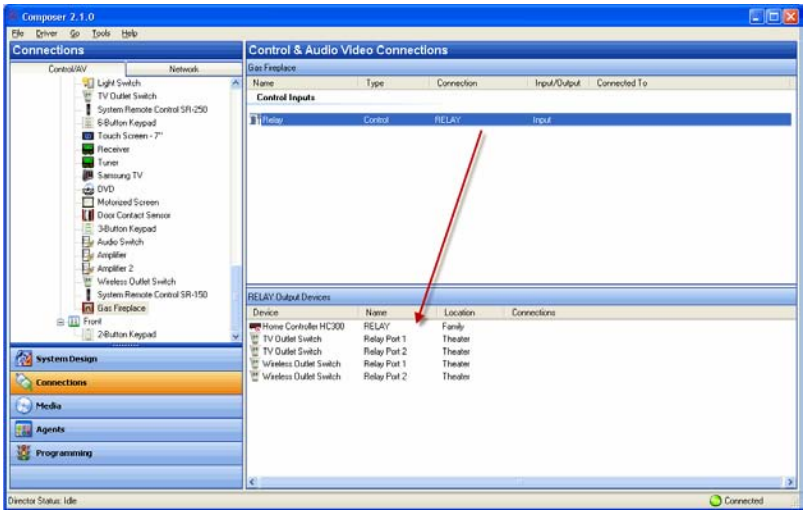
Prerequisites

Ensure that the Wireless Fireplace Switch is installed as directed in the *Control4 Wireless Fireplace Switch Installation Guide* available on the Control4 Dealer website. The Gas Fireplace Relay installs with the Wireless Fireplace Switch.

To add and configure a Gas Fireplace Relay:

1. Start Composer and connect to a Director.
2. Click **System Design**.
3. In the project tree, select the **room** where the gas fireplace resides. In the Items pane > My Drivers tab > Motorization > double-click **Gas Fireplace** to add the relay object to the project tree.
4. Click **Connections**.

5. In the Connections view, click the **Control/AV** tab to make the necessary connection to the Relay Output Device.
   a. Select the **Gas Fireplace** object in the Gas Fireplace pane under Control & Audio Video Connections.
   b. Drag the Relay to the device you choose in the Relay Output Devices pane, for example, Home Controller HC300.



6. (Optional) To configure the properties, click **System Design**.
7. In the project tree, select the **Gas Fireplace** object.
8. View and change the properties in the Properties pane.

Modifiable properties include:

Invert Relay: Normally, the relay is open when the switch is off. If you check this option, the switch's off position closes the relay.

Radio Buttons:
Toggle Type. Select if the fireplace needs two (2) wires always touching to stay on.

Pulse Type. Select if two (2) fireplace wires only need to touch momentarily to turn the fireplace on or off.

Pulse length is **x** milliseconds. Add the desired value here.

2.5.9.2 Configure a Wireless Fireplace Switch

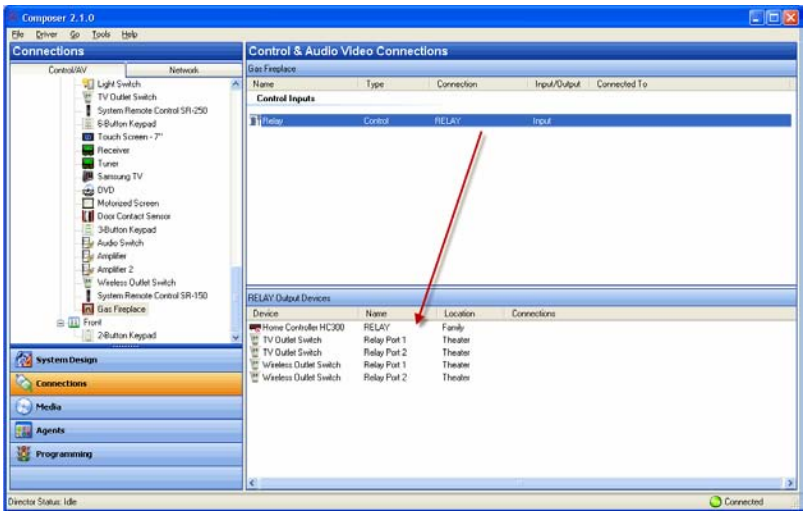
Use the Control4® Composer Pro System Design and Connections views to configure a Wireless Fireplace Switch.

Prerequisites

Ensure that the Wireless Fireplace Switch is installed as directed in the *Control4 Wireless Fireplace Switch Installation Guide* available on the Control4 Dealer website. The Gas Fireplace Relay installs with the Wireless Fireplace Switch.

To add and configure a Wireless Fireplace Switch:

1. Start Composer and connect to a Director.
2. Click **System Design**.
3. In the project tree, select the **room** where the gas fireplace resides. In the Items pane > My Drivers tab > Motorization > double-click **Fireplace Switch** to add the *relay* object to the project tree.
4. Click **Connections**.
5. In the Connections view, click the **Control/AV** tab to make the necessary connections to the Output Device.
   a. Select the **Fireplace Switch** object in the Fireplace Switch pane under Control & Audio Video Connections.
   b. Drag the desired Button Links to the device you choose in the bottom pane, for example, **Home Controller HC300**.



6. (Optional) To configure the properties, click **System Design**.
7. In the project tree, select the **Fireplace Switch** object.
8. View and change the properties in the Properties pane.

Modifiable properties include:

Properties:

Invert Relay—If checked, the relay that appears as normally open becomes a closed circuit. The default is open.

Advanced Properties:

LED

Top Color

- On. The LED color for the Top LED when the LED state is On.
- Off. The LED color for the Top LED when the LED state is Off.

Bottom Color

- On. The LED color for the Top LED when the LED state is On.
- Off. The LED color for the Top LED when the LED state is Off.

Options

Top LED Link—Select to enable. If *checked*, swap on and off the state and color on the top LED.

Bottom LED Link—Select to enable. If *checked*, swap the on and off state and color on the bottom LED.

Buttons Attached—Select to enable. If *checked*, pressing the buttons on the Switch directly controls the connected load.

LED Attached—If *checked*, the LED state is controlled by the button presses. If *unchecked*, the LED state and colors can be controlled by custom *programming*.

Hold Ramp Rate (Seconds)

Up—The rate in seconds when the load increases when the top button is held down.

Down—The rate in seconds when the load decreases if the bottom button is held down.

Network—The network information is added automatically (Channel, Gateway, MAC, and Version).

2.5.9.3 Configure Pulse Single Relay Support

Use the Control4® Composer Pro System Design view to check and change *relay* properties.

When using a Pulse Type Relay in your project, you can add a single relay device, and then choose to configure it as a “Pulse Type” relay rather than having to program anything to provide the pulse functionality. This option is in the System Design Properties pane when you select a relay.

To view relay properties:

1. Start Composer and connect to a Director.
2. Click **System Design**.
3. Select the **relay** object from the project tree. View its properties in the Properties pane.

Modifiable properties include:

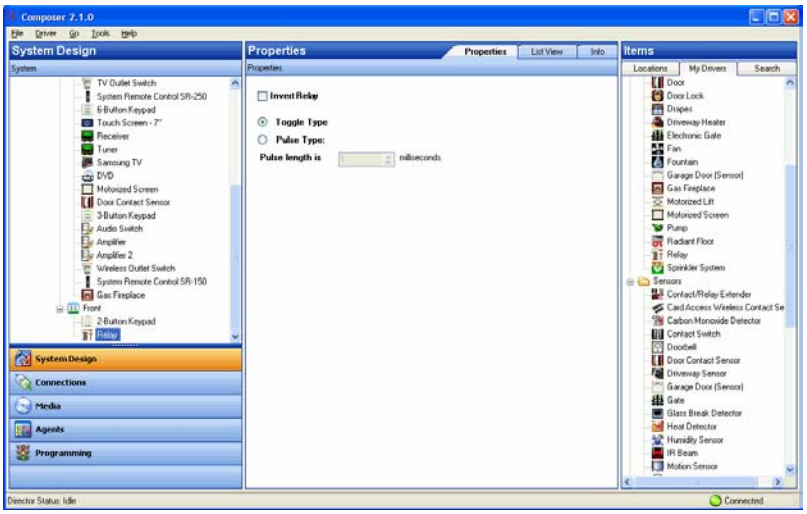
Invert Relay: Normally, the relay is open when the switch is off. If you check this option, the switch's off position closes the relay.

Radio Buttons:

- **Toggle Type**. Select if the device needs two (2) wires always touching to stay on.
- **Pulse Type**. Select if two (2) wires only need to touch momentarily to turn the device on or off.

Pulse length is **x** milliseconds. Add the value here.

4. To use this option, select the **Pulse Type** radio button, and select the **Pulse Length is *x* milliseconds** for the relay pulse (the default is 500 milliseconds).



2.5.9.4 Configure Single Contact Relay Support

Use the Control4® Composer Pro System Design view to check and change Single Contact Trigger support for contacts.

When using a contact in your project, the physical change of the contact's state might not always result in a single open-to-close or close-to-open state change, but rather bounce between states multiple times before the final state is reached.

To eliminate false notification of the contact state to the Control4 system, you can configure a 'Debounce Timer' to allow the system to see only a single state change.

In the System Design view, you can set this option in the Properties pane when you select a contact.

To set this option:

1. Start Composer and connect to a Director.
2. Click **System Design**.
3. Select the **contact** object from the project tree. View its properties in the Properties pane.

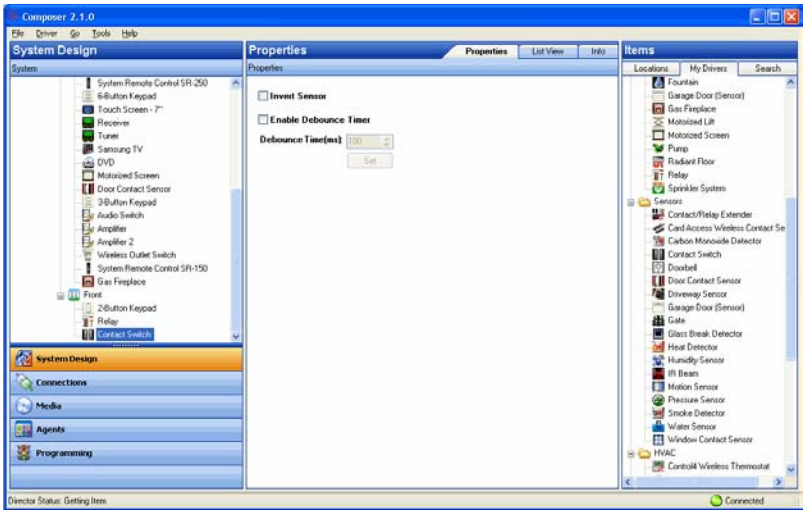
Modifiable properties include:

Invert Sensor: Depending on the sensor type, the Controller sends a small amount of voltage through the sensor to close it, if for example when a door is closed with feedback indicating such. You use Invert Sensor if you want to feedback to be the opposite.

Enable Debounce Timer: Sets an amount of time that lapses before the sensor triggers to on.

Debounce Time(ms): The amount of time in milliseconds before the sensor state changes to on.

4. Check the **Enable Debounce Timer** box.
5. In the Debounce Time(ms) (in milliseconds) drop-down menu, select to delay notification of the contact state (the default is 100 milliseconds).



2.5.10 Configuring HVAC Systems

Use the Control4® Composer Pro System Design and Connections views to configure a Control4 Wireless Thermostat. Control4 also supports multiple third-party thermostat models.

Note: Previous releases of Composer Pro documentation included instructions about how to configure third-party products and older versions of the Wireless Thermostat. Starting with OS 2.0, third-party device configurations are no longer included in the documentation, although they are still supported in the drivers list (for example, EnviraZone and Aprilaire RS232). Refer to previous releases of the *Composer Pro User Guide* for information about these third-party drivers and examples of older Thermostat models.

These sections provide information about the Wireless Thermostat.

2.5.10.1 Setting Up a Wireless Thermostat

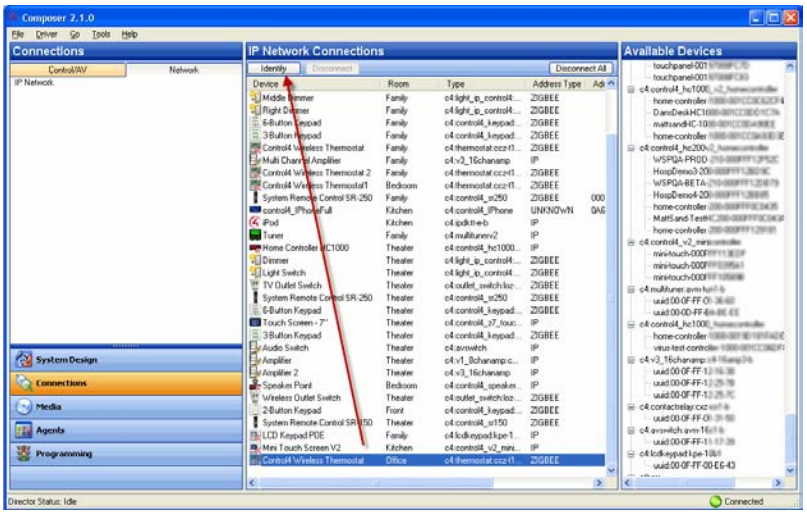
Use the Control4® Composer Pro System Design and Connections views to set up a Control4 Wireless Thermostat.

Prerequisites

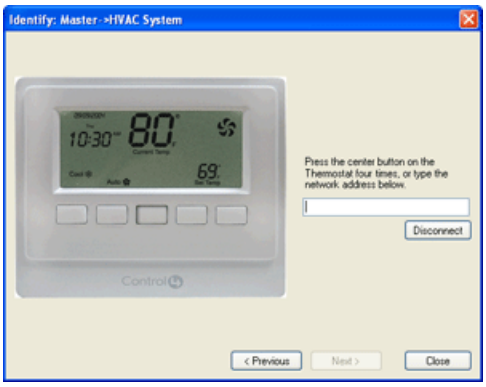
1. Ensure that your project has a Control4 Controller added to the project tree and is identified on the Control4 system.
2. Ensure that the Thermostat is installed at the wall as directed in the *Control4 Wireless Thermostat Installation Guide* available on the Control4 Dealer website.
3. Ensure that the Control4 Wireless Thermostat is added to the project tree.

To configure a Wireless Thermostat for the Control4 system:

1. Start Composer and connect to a Director.
2. Click **System Design**.
3. Verify that the Wireless Thermostat is in the project tree.
4. To identify the device, click **Connections**.
5. Click the **Network** tab.
6. Make the network connection. To do this, select the **Control4 Wireless Thermostat** object in the IP Network Connections pane, and click **Identify**.



7. In Identify mode, go to the physical Control4 Thermostat, and press the center button **four** (4) times. This identifies the Thermostat's network address to the Controller, and identifies the device to the Control4 system. The device's address appears in the following dialog and in the IP Network Connections pane.



8. Click **Close** to exit the wizard.
    - To program the schedule, see “Programming the Control4 Thermostat Schedule.”
    - To set up advanced properties, see “Using the Wireless Thermostat Advanced Properties.”

2.5.10.2 Programming the Control4 Thermostat Schedule

Use the Control4® Composer Pro System Design view to set a heating and cooling schedule for your Control4 Wireless Thermostat (model number: Control4-CCZ-T1-x for OS 2.0 and later). The Control4 Wireless Thermostat works with your heating and cooling system to maintain a consistent temperature called a ‘set point.’ Using the Control4 Wireless Thermostat, you can specify separate heating and cooling set points.

Tip: New in OS 2.0 and later, you can set the heating and cooling schedule from a Touch Screen or On-Screen Navigator. See the *Control4 System User Guide* for details.

The Control4 Wireless Thermostat automatically engages the appropriate heating or cooling system until the room reaches the desired temperature. In Composer Pro, you can set up a Heat Point and a Cool point for six (6) possible Program Events in a day time period.

Program Events include:

- **Awake**—Sets the wakeup time and related Heat/Cool Points.
- **Leave**—Sets the away time and related Heat/Cool Points.
- **Return**—Sets for return time and related Heat/Cool Points.
- **Sleep**—Sets for sleep time and related Heat/Cool Points.
- **Custom 1**—Sets a specified time and related Heat/Cool Points.
- **Custom 2**—Sets a specified time and related Heat/Cool Points.

You can enable these Program Events for weekdays, weekends, or individual days to match activity in the home.

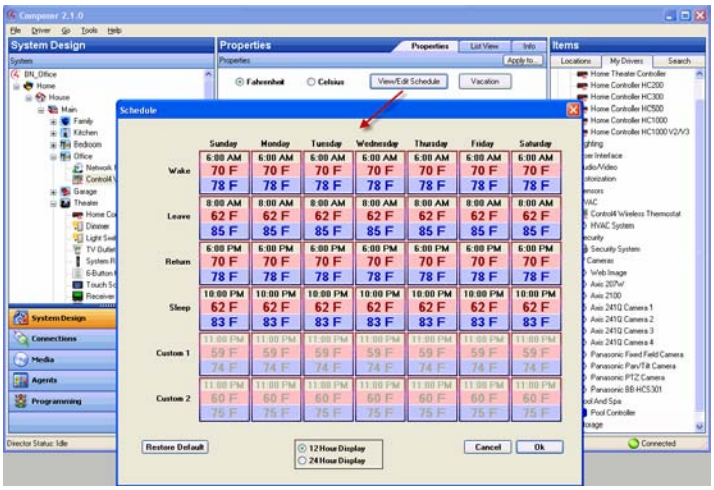
Prerequisites

Ensure that the Thermostat is installed as directed in the *Control4 Wireless Thermostat Installation Guide* available on the Control4 Dealer website.

To program the Wireless Thermostat Schedule:

1. Start Composer and connect to a Director.
2. Click **System Design**.
3. In the System Design view, select the **Control4 Wireless Thermostat** object.
4. The Properties appear in the center pane. Fahrenheit is selected by default; select Celsius as needed.
5. In the Properties tab, select **View/Edit Schedule**. The Schedule dialog appears with the currently programmed schedule for Monday through Sunday.

   Note: You can schedule the Thermostat either in Composer Pro or in the Control4 Touch Screens, MyHome apps, or On-Screen Navigators. See the *Control4 Wireless Thermostat User Guide* or the *Control4 System User Guide* for information about scheduling a Wireless Thermostat from a Navigator.



   Tip: To return to the original settings, click the **Restore Default** button.

6. For each line item: Awake, Leave, Return, Sleep, Custom 1, and Custom 2, use the **up** and **down** arrows to set the day and temperature Heat and Cool set points.

   Notes: (1) You can view the schedule by selecting the **12 Hour Display** or the **24 Hour Display**. (2) The Cool and Heat Points stay two (2) degrees apart. **Example**: If you set the Heat Point to **72** degrees, the lowest you can set the Cool Set Point is **74** degrees. This keeps your furnace and your air conditioner from competing with each other.

7. When you are finished, click **Ok**. Your updated schedule displays. You may then set the modifiable properties. See “Using the Wireless Thermostat Advanced Properties.”

2.5.10.3 Using the Wireless Thermostat Advanced Properties

Use the Control4® Composer Pro System Design view to view and change the Wireless Thermostat properties. Set the Properties to create a schedule and the Advanced Properties to modify the Thermostat’s configuration.

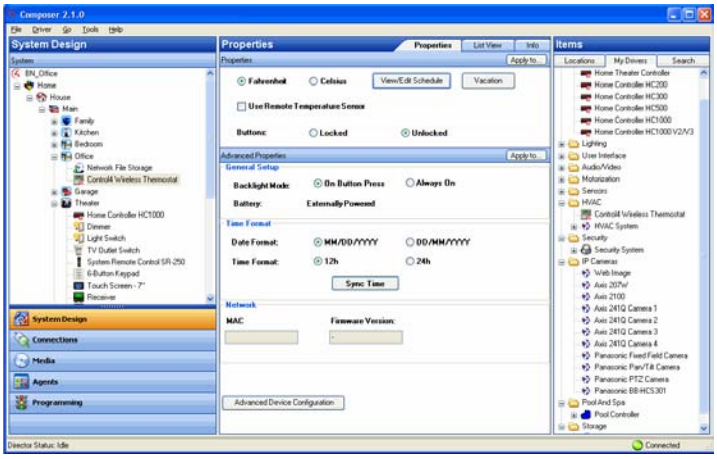
Prerequisites

Ensure that the Control4 Wireless Thermostat (model number: Control4-CCZ-T1-x for OS 2.0 and later) is installed as directed in the *Control4 Wireless Thermostat Installation Guide* available on the Control4 Dealer website.

To use the Thermostat Advanced Properties:

1. Start Composer and connect to a Director.
2. Click **System Design**.
3. Select the **Control4 Wireless Thermostat** in the project tree.
4. Click the **Properties** tab to view the list below.

Note: Different properties may appear, depending on the Thermostat model. The properties below apply to the Control4 Wireless Thermostat for OS 2.1.

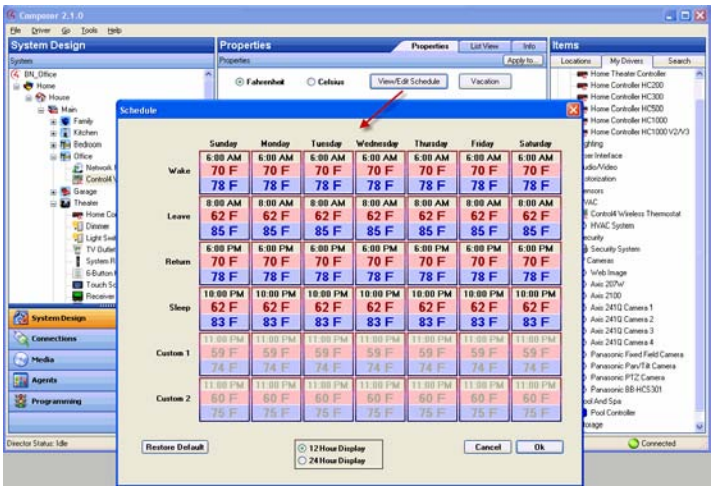


Modifiable Advanced Properties include:

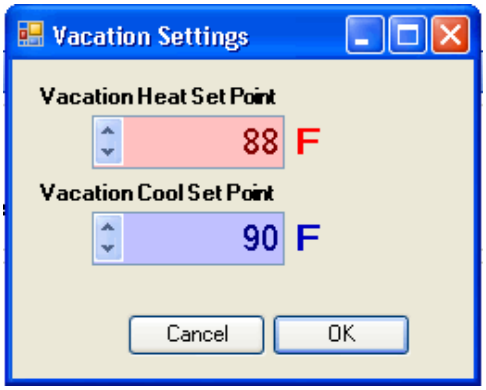
Properties

Fahrenheit or **Celsius**—Sets the temperature display in Fahrenheit or Celsius.

View/Edit Schedule—Brings up the schedule page to set heat and cool set points for auto mode (see below). In the mode (Awake, Leave, Return, etc.), set the day and temperature set points. Click **OK** to close the window. **Note**: You can view the schedule by selecting the **12 Hour Display** or the **24 Hour Display**.



Vacation—Lets you set the Heat Set Point and Cool Set Point when the homeowner is on vacation. Use the **up** or **down** arrows to set the heat and cool set points, and then click **OK**.



Use Remote Temperature Sensor—Sets the Thermostat to use either the on-board Local temperature sensor (default) or an optional Remote temperature sensor to control the HVAC system by selecting the **Use Remote Temperature Sensor** radio button.

Buttons— Locks local buttons to prevent unwanted changes to Thermostat settings. Select the **Locked** and **Unlocked** radio buttons. **Note**: If buttons are disabled, they will be re-enabled when the Thermostat power cycles. This is a safety mechanism to prevent a Thermostat from becoming completely inoperable if it were removed from a project while the buttons were disabled.

Advanced Properties

General Setup

Backlight Mode—Lets you select your preferences for the backlight. Select **On Button Press** to light the backlight for ten (10) seconds when any button is pressed. Select

Always On to keep the backlight on constantly. When using batteries for power with power stealing enabled, the Always On option is not recommended.

Battery—Shows the power source or battery level; e.g., "Externally Powered."

Time Format (Date and Time)—Lets you set preferences regarding Date Format (MM/DD/YYYY or DD/MM/YYY) and Time Format (12 h or 24 h). Click the **Sync Time** button under Time Format to update the time on your Thermostat manually to the Controller. (The Thermostat also updates automatically at 3:00 AM each morning.)

Network—Displays informational boxes that provide ZigBee networking information (MAC and Firmware Version).

Select **Apply to**... to apply the current properties to the selected Wireless Thermostats.

Advanced Device Configuration

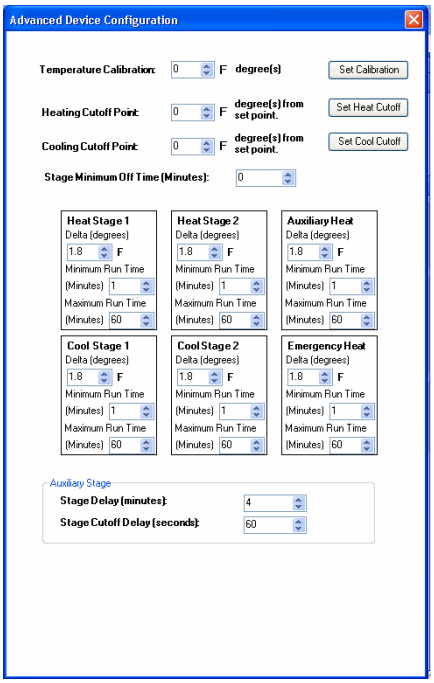
Control4 has enhanced the available Thermostat settings to allow users and installers to modify engage and cutoff temperature deltas as well as maximum and minimum run time, off, and delay times so that the Thermostat can be configured to run optimally with any HVAC system.

Note: Allowing such fine tuning of all settings can result in setting improper values and combination of values to cause the HVAC system to run less than optimal. To prevent thrashing the cool and heating engage (constant heat, then cool, engagement), cutoff and set points are enforced to have at least a one (1) degree difference for engage temperatures.

The formula for the dependency of these values is:

Heat/cool engage delta—Opposite stage (if heat engage, then cool cutoff and visa versa) cutoff delta + set points delta (cool set point – heat set point) >=1

The screen below shows the Advanced Device Configuration properties.



Temperature Calibration—Use the **up** or **down** arrows to set *x* degree(s), and then click **Set Calibration**. This lets you fine tune the current temperature reported by the Thermostat by +/- 5 degrees. **Example**: If your Thermostat reads **72** degrees Fahrenheit, and you determine that the current temperature should be **70** degrees Fahrenheit, press the **down** button two times to lower the Thermostat's reading to 70 degrees Fahrenheit. Click **Set Calibration**.

Note: No changes to calibration should be made within 20 minutes of powering on the Thermostat. The Thermostat generates a small amount of heat which affects the calibration. After 20 minutes of continuous operation, this will stabilize allowing proper calibration.

Heating Cutoff Point—Use the **up** or **down** arrows to set *x* degree(s) from the set point, and then click **Set Heat Cutoff**. This sets how far over the setpoint you want the heating system to remain engaged before shutting off. **Example**: If the heat set point is set to **68** degrees Fahrenheit and the cutoff point is set to **2** degrees Fahrenheit, the heating system will engage until reaching **70** degrees.

Cooling Cutoff Point—Use the **up** or **down** arrows to set *x* degree(s) from the set point, and then click **Set Cool Cutoff**. This sets how far under the setpoint you want the cooling system to remain engaged before shutting off. **Example**: If the cool setpoint is set to **68** degrees Fahrenheit and the cutoff point is set to **2** degrees Fahrenheit, the cooling system will engage until reaching **66** degrees.

Stage Minimum Off Time (Minutes)—Use the **up** or **down** arrows to set the minimum off time in minutes. **Note**: This setting takes effect as soon as the Advanced Device Configuration box is closed.

This is the minimum amount of time that the heating or cooling will remain off before initiating again. **Example**: If while cooling, the temperature does not reach the designated cutoff point before the maximum run time is reached, the cooling system will shut off and not initiate cooling again until the Minimum Off Time is reached. **Note**: Some HVAC

systems automatically enforce a Minimum Off Time. In this case, the heating or cooling will remain off for the higher of the two settings (Thermostat or HVAC system).

Stage Configuration (Heat Stage 1, 2; Cool Stage 1, 2; Auxiliary; Emergency)
The stage configuration boxes allows for setting the engage delta, minimum run time and maximum run time for each stage.

Note: These settings take effect as soon as the Advanced Device Configuration box is closed.

Delta (degrees)—Use the **up** or **down** arrows to set the stage engage temperature delta. This sets how many degrees the current temperature will reach beyond the setpoint before the stage engages.

Example:

For heat, if the heat setpoint is **70** degrees Fahrenheit and the engage delta is **2** degrees Fahrenheit, the heat stage will engage when temperature reaches **68** degrees.

Note: For multi-stage systems, the deltas for the first and second stages are cumulative. If the first stage delta is set at **2** degrees Fahrenheit and the second stage delta is set at **2** degrees Fahrenheit, the second stage will not engage until the current temperature has passed the stage setpoint by **4** degrees Fahrenheit. However, the Auxiliary Heat and Emergency Heat deltas are NOT cumulative.

Minimum Run Time—Use the **up** or **down** arrows to set the stage *x* minimum run time in minutes. . The minimum run time is one (1) minute. This sets the minimum time the heating and cooling will run before shutting off. **Example**: If while cooling or heating, the temperature reaches the designated Cutoff Point before the Minimum Run Time is reached, the system will not shut off until the Minimum Run Time is reached. Also, if heat or cool is engaged and shut off manually, the system will not shut off until the Minimum Run Time is reached. **Note**: Some HVAC systems have built-in Minimum Run Times that may be greater than that set on the Thermostat.

Maximum Run Time—Use the **up** or **down** arrows to set the Heat Stage *x* maximum run time in minutes. The maximum run time is 255 minutes. This sets the maximum time the heating or cooling will run before turning off. **Example**: If heating or cooling is engaged, but does not reach the Cutoff Point before the Maximum Run Time is reached, the cooling system will turn off. Note: The Maximum and Minimum Run Times are not per stage, but for cooling and heating run times regardless of first or second stage transitions.

Auxiliary Stage
The Auxiliary and Emergency Heat stages are specifically for heat pump systems. The switches on the back of the Thermostat allow the Thermostat to operate a heat pump system.

Note: These settings take effect as soon as the Advanced Device Configuration box is closed.

Stage Delay (Minutes)—Use the **up** or **down** arrows to set the stage delay for *x* minutes. This sets the allotted time the main heat pump system will run without reaching the desired heat setpoint goal before the Auxiliary stage engages. **Note**: If set to the maximum time allowed, the auxiliary system will be disabled and never engage.

Stage Cutoff Delay (seconds)—Use the **up** or **down** arrows to set the stage cutoff delay in seconds. This sets how much of a delay before the main heat pump cuts off, leaving the

Auxiliary heating stage to run on its own. **Note**: If set to the maximum time allowed, the main heat pump stage and the Auxiliary heat stage will run together indefinitely.

IMPORTANT!
Starting with OS 2.0, the new Thermostat driver and firmware use a different temperature scale. Due to this, existing programming which evaluates temperature values will not work correctly and must be deleted and re-done. Also, any Thermostat variables used for the Email Notification Agent must be changed to use the new V1 variables for the temperatures to be displayed correctly.

2.5.11 Configuring an IP Camera or Web Image

Use the Control4® Composer Pro System Design and Connections views to configure this device. Internet Protocol (IP) Security Cameras, including on-screen controls in Navigators, such as Pan, Tilt, Zoom, and preset settings are supported along with HTTP control and JPEG or MJPEG images.

Prerequisites

1. Ensure that your project has a Control4 Controller added to the project tree and is identified on the Control4 system.
2. Ensure that the IP Security Camera is installed at the wall as directed in the manufacturer's installation guide.

To add and configure an IP Security Camera or Web JPEG image:

1. Start Composer and connect to a Director.
2. Click **System Design**.
3. In the System Design view, click the **My Drivers** tab > **IP Cameras** and locate the IP Camera model.
4. Double-click the **IP Camera** model to add its driver to the project tree.
5. In the Properties pane, do the following:
   - For an IP Security camera, configure the IP Address, port, and authentication information (if applicable).
   - For Web JPEG Image only, enter the URL and authentication user name and password (if a secure HTTP address), select the refresh rate in minutes, and tests.
   - Click **Test HTTP Connection** to test it.

2.5.12 Configuring Black & Decker Locks

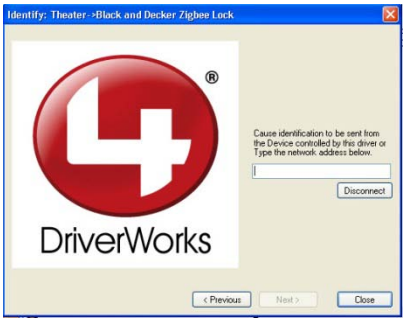
Use the Control4® Composer Pro System Design view to add and configure Black & Decker Kwikset® SmartCode® with Home Connect™ Technology ZigBee Deadbolt locks. In general, these instructions can be used to add and configure lock drivers for other lock products compatible with Control4 systems.

Prerequisites

Ensure that the Black & Decker locks are installed as directed in the Black & Decker Installation instructions shipped with the product.

To add and configure Black & Decker locks:

1. Start Composer and connect to a Director.
2. Click **System Design**.
3. In the System Design view on the project tree, select the **rooms** where the Black & Decker locks are installed. In the Items pane, click the **Search** tab and search for Black and Decker in the Manufacturer box.
4. Double-click **Black and Decker SmartLock RF ZigBee** to add the object to the project tree.
   Tip: If you are adding several locks in a home, it might be useful to give each lock a unique name.
5. For each lock you add to the project, add a **Relay** to the project tree also. See "Configuring Contacts and Relays."
6. To identify the device, click the **Connections** view and **Network** tab. Select the **Black and Decker ZigBee Lock** object, and click the **Identify** button. When prompted, press the **Join Network** button four (4) times. For more information, see the table in "Example: Verify the Network Connections."



7. Click the **Connections** view.
8. In the Connections view, use the **Control & Audio Video Connections** tab to make the necessary control connection.
9. Under Control Outputs, select the **Lock State** and drag it down to the **Relay** in the RELAY Input Devices pane.
10. (Optional) For additional Black and Decker ZigBee Lock setup, configure the Properties.
    a. In the System Design view project tree, select the **Black and Decker ZigBee Lock** object.
    b. Modify the properties in the Properties pane, and then click **Set** (if applicable).

       Debug Mode: Use the drop-down menu to select logging and printing.

       Lock Sleep Timer: Use the drop-down menu to select how long the lock is in sleep mode (in seconds).

       Last Status. Last change made in Debug Mode.

       Instructions. See the Documentation tab.

       Name, Code *x*: Enter the lock name and code here. You can enter up to 32 code entries.

c. Click the **Documentation** tab for additional information about setting the properties, user codes, and actions for the locks.

Properties

Debug Mode. Set to **On** or **Off** if using to debug a problem.

Lock Sleep Timer. The default is 7 seconds. Set to the amount of time the lock sleeps before sending out a request for lock status.

# of Log Items. Use the **up** or **down** arrows to set the number of items to log.

Last Status. Indicates the last action on the lock.

Firmware Version. Indicates the ZigBee firmware version for the lock.

Instructions. Details about how to set the user codes.

Name, Code 1. Set up the user codes here. Type the user's name, then a comma (,), and then add the numeric code (4 to 8 characters allowed). Example: Bob, 12345. Up to 30 codes can be entered. **Tip**: The codes can be entered also on the Touch Screen or On-Screen Navigator if you download the Black & Decker application from 4Store.

Documentation. Describes how to use the locks and events.

Actions

Get Battery Status. Click to show the status of the battery on the lock.

Show User Codes. Click to show all of the user codes assigned to this lock. The user codes appear in the Properties tab.

Hide User Codes. Click to hide all user codes assigned to this lock. The user codes appear as x's in the Properties tab.

Delete All Codes. Click to delete all user codes assigned to this lock.

Note: You can set the user codes either from Composer Pro, or from the Touch Screen or On-Screen Navigator in My Apps (downloaded from 4Store). The priority for setting user codes and Actions is whoever set the codes or actions last, whether it was in Composer Pro or on a Touch Screen or On-Screen Navigator, will be the valid codes or actions used. See the *Black & Decker Kwikset® SmartCode® with HomeConnect™ Locks User Guide* on the Control4 website for details.

2.6 Configuring SNMP

2.6.1 Installing the SNMP MIBs

The following SNMP MIBs are required to use SNMP to manage a Control4 network remotely:

- **Control4 MIBs**. CONTROL4-DIRECTOR-MIB, CONTROL4-GLOBAL-REG, and CONTROL4-TEST MIB. These MIBs are installed by default when you install Composer 2.2. They appear in Program>Files>Control4>Composer 2.2>SNMP>MIBs/ on the computer where Composer resides.

- **SNMP MIBs**. Make sure the NMS console you use has the following SNMP MIBs: SNMPV2-SMI, SNMPV2-TC, SNMPV2-CONF, and INET-ADDRESS-MIB. The Control4 MIBs reference these MIBs.

These sections provide information about how to set up and use the SNMP Configuration Agent. Refer to this document and *Composer Pro User Guide*, *Part 2* for details.

“Programming with Agents”

“Example: Program Using the SNMP Configuration Agent”

“Configuring the SNMP Configuration Agent”

“SNMP Configuration Agent Properties”

“SNMP Configuration Agent System Variables”

“SNMP Configuration Agent User Variables”

2.6.2 Configuring the SNMP Configuration Agent

Use the Control4® Composer Pro Agents view to use and manage SNMP devices, including; adding trap targets; setting up route information; enabling SNMP; configuring SNMP settings; setting up SNMP system and user variables, and more.

You can change the SNMP Configuration Agent settings either using Director or Virtual Director. **Note**: If you use Virtual Director, even though you click **Apply** to save your changes, they will not take effect until the project displays and the SNMP-enabled devices are online.

Note: If you use SSH and VI at the command line to edit a configuration file, and later change any settings in the Agents view, your changes in Composer will overwrite those made at the command line.

Prerequisites

To use SNMP in a Control4 system, you need:

1. An NMS console or an installed MIB browser and the three (3) Control4 MIBs (installed by default with Composer 2.2): CONTROL4-DIRECTOR-MIB, CONTROL4-GLOBAL-REG, and CONTROL4-TEST-MIB. These MIBs are located in Program>Files>Control4>Composer 2.2>SNMP>MIBs/ on the computer where Composer resides.
2. SNMP MIBs. Make sure the NMS console you use has the following SNMP MIBs: SNMPV2-SMI, SNMPV2-TC, SNMPV2-CONF, and INET-ADDRESS-MIB (Dave to provide links). The Control4 MIBs reference these MIBs.
3. SNMP Configuration Agent. To configure SNMP in a Control4 system you must add the SNMP Configuration Agent in the Composer Pro Agents view. See Example: Program Using the SNMP Configuration Agent to add the agent.

Procedure

1. Start Composer and connect to a Director.
2. Click **Agents**.
3. In Agents, select the **SNMP Configuration** Agent, or add it if it's not already in the list.
4. When you are finished with your changes, click **Apply** at the top of the page.

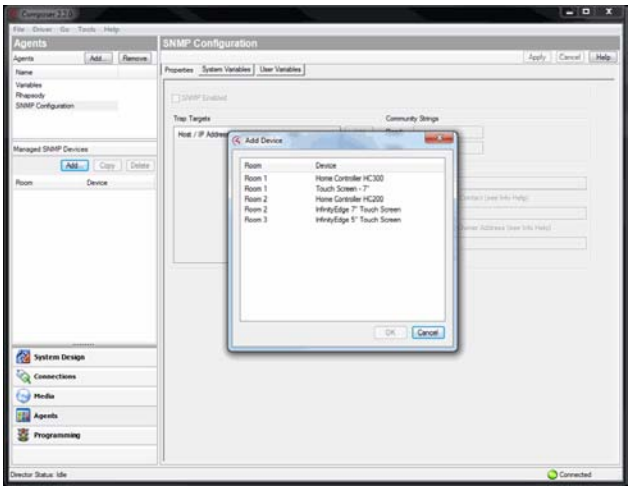
To configure SNMP settings in the Properties pane:

1. In the SNMP Configuration pane, click **Properties**.
2. If they are SNMP-enabled, all of your Controllers, IO Extenders, and Touch Screens in the project will appear in the Managed SNMP Devices pane. If you've updated the system to OS 2.2, those devices appear automatically.
3. Use the Properties pane to disable SNMP from the project, add traps, set community strings, and change contact information.
   - **SNMP Enabled**. By default SNMP is enabled if Controllers, IO Extenders, and Touch Screens have been updated to OS 2.2. Uncheck to disable a selected device.
   - **Trap Targets**. Use to add the IP address for the NMS console or MIB browser to send traps to. See "To add trap targets" below.
   - **Community Strings**. The default is Read: Public, Write: Private. Use the MIB browser and this Properties tab to change these settings for Get and Set commands. The strings must match in the MIB browser and in this page. **Example**: Read: Public must be the same in the MIB and in the Properties tab.
   - **Contact Information**.
   - **sysContact**. Check **Use Project Primary Contact** to populate this text box with information from the Info tab in the System Design view, or uncheck and type a contact name here.
   - **sysLocation**. Check **Use Project System Owner Address** to populate this text box with information from the Info tab in the System Design view, or uncheck and type the owner's address and city here.
   - **sysName**. Check **Use Room** to populate this text box with information from the room name that the device is in (appears automatically), or uncheck and type another value, for example, a hotel room number.

To add one or more devices:

Add devices that you want to manage using SNMP in the Properties pane.

1. In the Managed SNMP Devices pane, click **Add** or right click and select **Add Device**.
2. In Add Device, select the device to add. To add several devices use **CTRL** or **SHIFT** and select the devices.
3. Click **OK**. The device(s) appear in the Managed SNMP Devices pane.



Note: If you select multiple devices and their properties are different, a red warning message appears, and Composer attempts to notify you of the conflict.

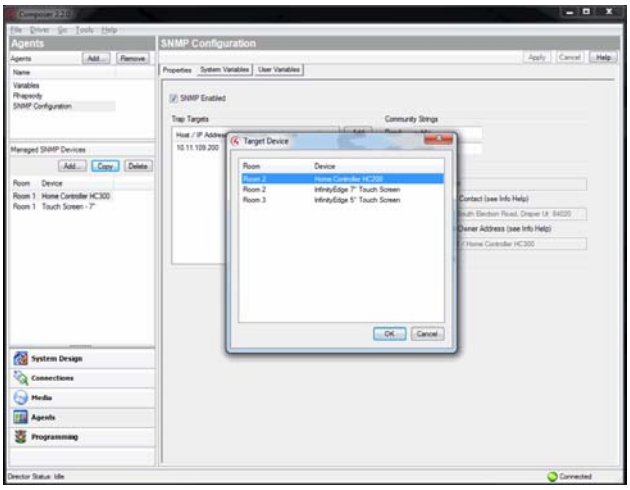
Tip: You can configure one device and then copy it to other devices to save the properties you've defined. See the next steps for details.

To copy a device:

Copy a device to other devices if you want to use the device's properties.

Note: You cannot copy a device to another device that's already been identified in Composer.

1. In the Managed SNMP Devices pane, click **Copy** or right click and select **Copy Device**.
2. In Target Device, select the device to copy.
3. Click **OK**. The device appears in the Managed SNMP Devices pane.
4. In the Managed SNMP Devices pane, select the devices to copy to.



To delete a device:

Remove a device from the managed list in the Properties pane.

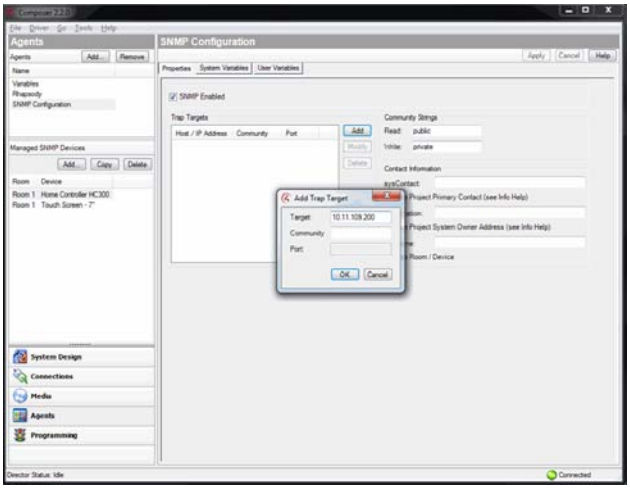
1. In the Managed SNMP Devices pane, click **Delete** or right click and select **Delete Device**.
2. In Target Device, select the device to delete. To delete several devices use **CTRL** or **SHIFT** and select the devices.
3. Click **OK**. The device(s) disappear from the Managed SNMP Devices pane.

Notes: (1) Deleting a device removes it from the list, but the properties are saved.
(2) You can add the device back into the project with the last saved SNMP settings.

To add trap targets:

Add the IP address or host name of the NMS console to send trap targets to in the Properties pane.

1. In the Managed SNMP Devices pane, select the device to manage.
2. In the Trap Targets pane, click **Add**.
3. In Add Trap Target, type the following:
   - **Target**. IP address of the console that will receive the traps.
   - **Community**. (Optional) Information will be taken from the Community Strings boxes.
   - **Port**. (Optional) The default is 162.
4. Click **OK**. The information will be added to the Trap Targets pane.



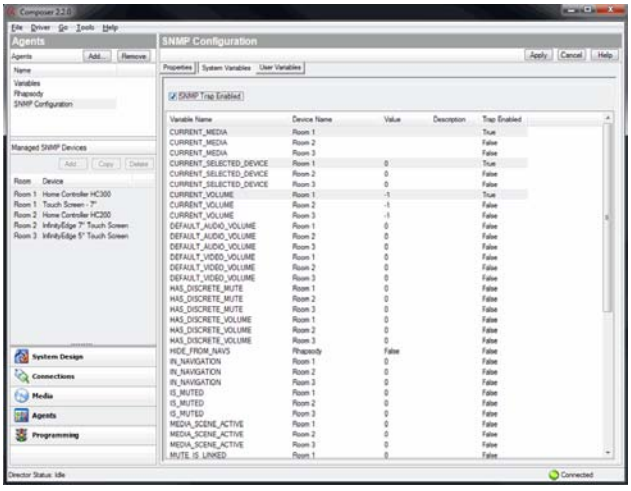
Tip: If you click the **System Variables** tab, and check **SNMP Trap Enabled**, the traps will be enabled for the selected variable.

Note: You may have conflicts if the Trap Enabled values in System Variables are different (some True, some False).

To change the 'Trap Enabled' system variables in the System Variables pane:

Change the 'Trap Enabled' status in the System Variables pane when you want traps sent to the NMS console you set up (see the previous steps) for the selected variable(s) agents or in programming. **Example**: You can set a 'Trap Enabled' status to 'True' for the CURRENT_SELECTED_DEVICE variable in Room 100.

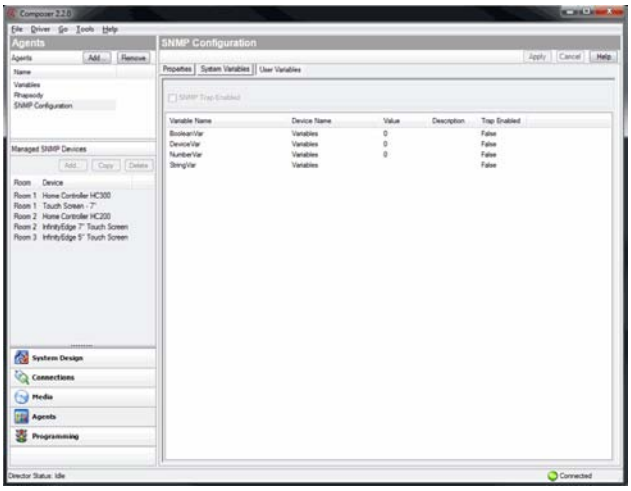
1. In SNMP Configuration, click the System Variables tab.
2. Select the Variables to change. Select all that apply.
3. Check or uncheck SNMP Trap Enabled or right click and select Enable Trap or Disable Trap in System Variables. The 'Trap Enabled' column changes from 'False' to 'True' or vice versa for those selections.



To change the 'Trap Enabled' user variables in the User Variables pane:

Change the 'Trap Enabled' status in the User Variables pane when you want traps sent to the NMS console you set up (see the previous steps) for the selected variable(s) agents or in programming. Example: You can set a 'Trap Enabled' status to 'True' for 'Boolean Var.'

1. In SNMP Configuration, click the User Variables tab.
2. Select the Variables to change. Select all that apply.
3. Check or uncheck SNMP Trap Enabled or right click and select Enable Trap or Disable Trap in System Variables. The 'Trap Enabled' column changes from False to True or True to False for those selections.



2.7 Customizing the Navigators

Use the Control4® system Navigator interface on your Navigator to make adjustments to the Navigator you're using.

Tip: You or your customer can customize pages in the Touch Screens, MyHome apps, or On-Screen Navigators also. See the *Control4 System User Guide* for information.

These sections provide information about how to customize Navigators.

“Setting Up the Photo Screen Saver Option”
“Setting Up Custom Screen Saver”
“Programming the Screen Saver Sleep Mode or Other”
“Changing the Time on a Navigator Screen Saver”
“Hiding Device Availability”
Viewing Device Availability in Navigators

2.7.1 Setting Up the Photo Screen Saver Option

Use the Control4® Composer Pro Agent and Media views to set up a photo Screen Saver agent to view photos from the Touch Screens, MyHome apps, or On-Screen Navigators. With OS 2.1, you can now use a single photo to display on all of your Navigators. If you change the interval on one Navigator, it will change all of them.

Prerequisites

Have one of the following storage types available before you copy the photos. You will need to set up one or more of them later when you add your photos.

Note: In some cases, the Control4 system may take a few minutes to recognize the device.

- **Controller** —If the Controller has no storage, add and connect a device that contains storage for your photos; for example a *USB* drive or Network File Share (see Step 6 in the next section).
- **USB Drive**—Ensure that the USB drive is attached to the Controller. When you insert the USB drive, it will appear in the project tree in the same room as the Controller.
- **Network File Share**—Ensure that the Network File Share object is added to the project tree and connected (see the steps to do this later in this procedure). Ensure that you have access to the Network File Share, that you have a valid Username, Password, and Workgroup, and that you can identify the network location (you will need to add the path).

To set up the Photo Screen Saver option to display photos on the Navigators:

1. Start Composer and connect to a Director.
2. Click **Agents**.
3. (First time only.) From the Agents view > Agents pane, click **Add** to add the agent to the project.
4. From the Available Agents dialog, choose the **Screen Saver** agent, and click **OK**.

   Note: If Screen Saver already appears in the Agents pane, it has already been added. Go to the next step. If not, see "Example: Program Using the Screen Saver Agent."

5. In the Agents pane, select **Screen Saver**.
6. From the storage location list, use the drop-down menu to choose the location where you will save your photos for use on the Navigators (Controller, CBM Flash Disk: USB drive, or Network File Storage, etc.).

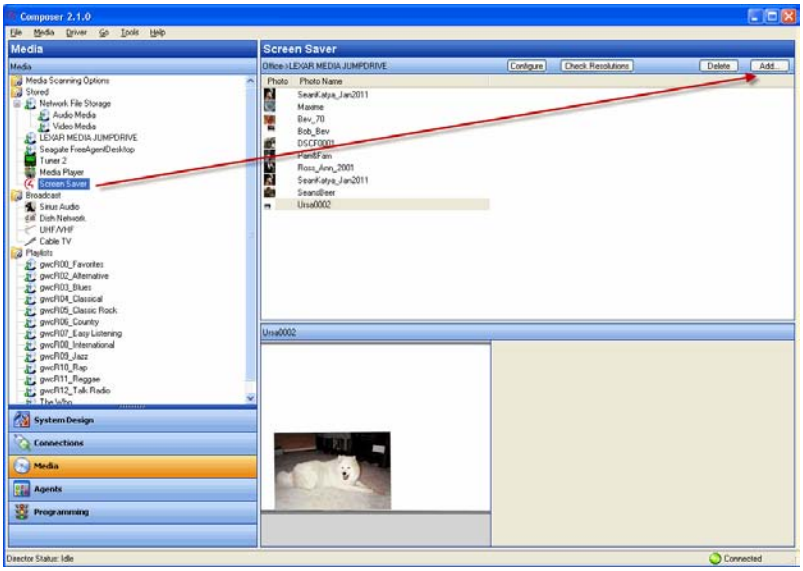
   Notes:
   (1) If the storage option that you want does not appear in the list, disconnect from Director and reconnect.
   (2) At any given time, only one storage location can be set as the photo Screen Saver source.

   - **Controller**—If you have a Controller with disk space (for example, Home Controller HC-500 or HC-1000), an option appears in the list (for example, Home Controller HC1000).
   - **CBM Flash Disk** (USB drive)—If you inserted the USB drive in the Controller earlier, the CBM Flash Disk option appears in the list.
   - **Network File Storage**—If you select **Network File Storage**, specify where the Control4 system needs to go to copy the files. Click **System Design** and select the **Network File Storage** icon in the project tree (you will have to add it from the Items pane). In the Properties pane, type the Username, Password, Workgroup and then browse to the network location. Click **Connect**.
7. Click the **Media** view, and select **Screen Saver**.
8. Click **Configure** in the Screen Saver pane, set the location to copy the files to (for display in the Navigators), and click **OK**.

   Note: If you didn't choose a storage location in Step 6, an error message appears. Click **OK**, and then click **Configure** to set the location.

9. In the Screen Saver pane, click **Add**. In the My Pictures dialog, **browse** to the photos you want to copy to the storage location, select them, and click **Open**. The files will be copied to the storage location you specified in Step 8, and a folder may be created for you using the Control4 name (**Example**: Control4 pictures).

   Note: When media is added (copied) to the storage device, it is pre-scaled to the resolution for all of the Navigators. Control4 preserves the aspect ratio of the original image, and boxes the extra space with bars for any given screen size.



10. In Composer Pro, click **Tools** > **Refresh the Navigators** to display the copied photos.
11. To activate the Screen Saver in each Navigator (On-Screen, Touch Screen, or MyHome app), do the following:
    a. Go to **Info** > **Config** > **Screen Saver** (on System Remote Controls) or **More** > **Settings** > **Screen Saver**.
    b. Enable the Custom option, and then choose the Photo Screen Saver option along with any other Screen Saver option you want to include. For photos only, check the Photo option. See "Setting Up a Custom Screen Saver" to display the photos on the Navigator or see the *Control4 System User Guide*.

2.7.2 Setting Up a Custom Screen Saver

Use the Control4® Navigator to create a custom screen saver to view on Touch Screens, MyHome apps, or On-Screen Navigators.

Note: This task must be completed on a Navigator. Either the Installer or homeowner can set this up. The Custom Screen Saver option lets users mix and match available screen saver options, including the option to use stored photos.

Prerequisites

Before setting up a custom screen saver, photos must be available for viewing from the Navigator. See “Setting Up the Photo Screen Saver Option.”

To set up a custom screen saver:

1. From the main menu on an On-Screen Navigator, MyHome app, or Touch Screen press **More** > **Settings** > **Screen Saver** or **Info** > **Config** > **Screen Saver** from a System Remote Control.
2. In Screen Saver, press the drop-down arrow, and press **Custom**.
3. In **Turn on**, press the drop-down arrow, and press an option to enable the Screen Saver.
4. Press **Settings**.
5. Press to select one or more of the following options:
   - Media
   - Time
   - Date
   - Temp
   - Photo
   - Shuffle
6. Press **Done**.
7. (Optional) Press **Preview** to test the settings.

To set up a custom screen saver in the Touch Screens, MyHome apps, or On-Screen Navigators for OS 2.0 and later, see the *Control4 System User Guide* for details.

2.7.3 Programming the Screen Saver Sleep Mode or Other

Use the Control4® Composer Programming view to schedule a Screen Saver mode change, such as a ‘Go To Bed’ mode during sleep hours.

1. In Programming, select **Navigator actions**.
2. Create a **Scheduled *Event*** (such as ‘Go To Bed’). See “Programming with Agents” in Part 2 of this document for details.
3. Add the following script:

“Set the screen saver mode on the [graphical navigator device] to Blank.”
“Turn the screen saver on after [time interval] on the [graphical navigator device].”

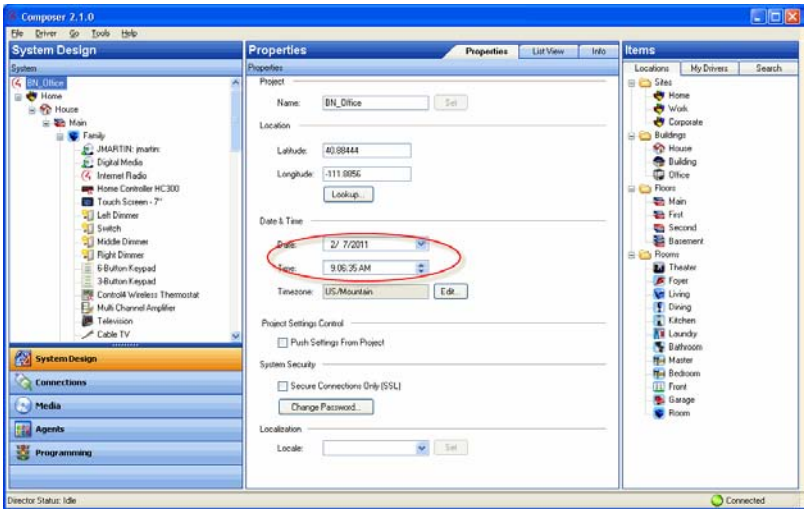
2.7.4 Changing the Time on a Navigator Screen Saver

Use the Control4® Composer Pro System Design view to change screen saver date, time or time zone.

To change the time on a *Navigator* screen saver:

1. Start Composer and connect to a Director.
2. Click **System Design**.
3. In System Design, click the **Properties** tab.
4. Use the **Date & Time** drop-down boxes to modify the time and date.

Date: To change the **Date** (month, date, or year), click the drop-down arrow for a calendar to appear. Click the **left** or **right** arrows to select the month, and then select the day.
Time: To change **Time** (hour, minute, second), click the **up** or **down** arrows to the appropriate time in hours, minutes, or seconds.



Tip: An easy way to change the hour, minute, or second is to highlight the hour, minute, or second number, and then type the new number over the old one.

Time zone: To change the **Time Zone**, at the Timezone box, click **Edit**. Choose the time zone from the drop-down menu, and click **OK**.

2.7.5 Hiding Device Availability

Use the Control4® Composer Pro System Design view to hide a device from view in a Navigator.

Example: Set availability so that the Touch Screen in the Bedroom cannot control music in the Theater.

Prerequisites

Ensure that the following devices are added and identified to the network:

- Controller
- Digital Audio
- Navigator

To hide a device so others cannot see it:

1. Start Composer and connect to a Director.
2. Click **System Design**.

3. In System Design and in the project tree, select **Bedroom**.
4. Go to the **Navigator** tab in the Properties tab.
5. Select **Music** in the Menu box, and then click **Modify**.
6. Select **Digital Audio** in the Theater, click **Hide**, and then click **OK**.

2.7.6 Viewing Device Availability in Navigators

Use the Control4® Composer Pro System Design view to change the order of devices to view. This task is useful if you have a lot of media devices, and some are used more frequently than others.

Example: Change the order of a Tuner to appear in a Navigator before the Receiver.

Tip: In OS 2.2 and later, you can use Shift+Click or Ctrl+Click to add or remove devices.

Prerequisites

Ensure that the following devices are added and identified to the network:

- Controller
- Digital Audio
- Navigator

To enable a *device* to be viewed in a specific order in a Navigator:

1. Start Composer and connect to a Director.
2. Click **System Design**.
3. In System Design, select **Theater**.
4. Go to the **Navigator** tab in the Properties tab.
5. Select **Radio** under Menu, and then click **Modify**.
6. Click **Tuner**, and then click **Move Up**.
7. Click **OK**.

2.8 Updating Composer and Director

Use the Control4® Composer Pro software to update Composer Pro and Director.

IMPORTANT: Before you begin any update, check the Control4 website for any Release Notes or upgrade documents associated with the update, especially if it's a major update such as up to Release 1.8.2 or OS 2.0. Read those documents first.

Tip: The Release Notes for Release 1.8.2 provides a table of all of the releases that Control4 has delivered and their dates. See *Composer Pro Software Release Update Instructions – 1.7.4 to 1.8.2* for details.

Depending on the type of upgrade you need to perform, the following tools and website may need to be used.

- Control4 website
- Update Manager
- Network Status
- System Manager

2.8.1 Control4 Website

Composer Pro updates (software releases) are available on the Control4 Dealer website at http://www.control4.com/dealer/products/software/. You will need a Dealer login and password to access this site.

Prerequisites

Ensure that Release 1.8.2 and Composer Pro 2.0 are installed before you begin a subsequent update. See *Composer Pro Getting Started* for details. If you have an earlier release, see the update instructions for that release. You must update first to Release 1.7.4 and then 1.8.2 before updating to OS 2.0 and later.

Activate your licenses. See "Purchasing and Setting Up Dealer Licenses" in *Composer Pro Getting Started* or *Managing Dealer Accounts on my.control4.com* on the Control4 Knowledgebase for details.

To access the software updates:

1. Log in and go to: http://www.control4.com/dealer/products/software/.
2. Under Software Updates select the software version to download and install.

The following software releases are available on the Control4 website:

- Composer 1.2.5
- Composer 1.3.2
- Composer 1.6.0
- Composer 1.7.4
- Composer 1.8.2
- Composer 2.0.4
- Composer 2.0.5
- Composer 2.0.6
- Composer 2.1.0
- Composer 2.1.1
- Composer 2.2.0

Other software utilities are available for download also at the Dealer software download site.

IMPORTANT: For new installations, it is always a best practice to use the latest version of the released software.

2.8.2 Update Manager

Update Manager in Composer Pro automatically updates Director and all of the IP-connected devices that are available in your project (identified and online), allowing you to update all the devices in the project configuration also. You can use Update Manager to update from all previous releases.

To support multiple releases, the release (for example, 1.7.x) installs in a Composer Pro directory (for example, Composer17x), which differs from previous releases that were installed in the Composer Pro directory. You do not need to uninstall previous releases to install a new release, but you must install Composer 2.0 or later before you begin the update to the latest release.

The update to OS 2.0 does the following:

- Converts the Media Database for better Screen Saver resolution.
- Converts metadata to id3 tags. **Note**: If your customer is using iTunes or another media manager, you may not want to convert the metadata tags. See the OS 2.0 or later Release Notes and upgrade instructions for details.
- Recalibrates to Flash on the Navigators. You will need to refresh your Navigators. **Note**: If you don't want to use Flash on some Navigators, you can choose not to update that device. Also, not all Navigators support Flash. See the OS 2.0 or later Release Notes for details.
- Updates ZigBee firmware.
- For internationalization, locale changes are reflected in the update.

To access Update Manager:

1. Start Composer and connect to a Director.
2. From the Tools menu, click **Update Manager**.

2.8.3 Network Tools

Composer Pro Release 1.7.3 and later use this option.

To access Network Tools:

1. Start Composer and connect to a Director.
2. From the Tools menu, click **Network Tools**.
3. Network Tools has three (3) tabs (Release 1.8.0 and later). Use these tabs as required by the software:
   - IP Network
   - ZigBee Network
   - EmberNet Upgrade

2.8.4 System Manager

System Manager provides some of the functionality as in previous releases, but it does not perform the update functionality. Use System Manager to add, refresh, connect, or disconnect devices.

2.8.5 Updating Firmware

Sometimes you'll get devices that aren't on the same firmware version. For all devices to be able to communicate, they do need to be on the same firmware version.

2.8.5.1 ZigBee Devices

ZigBee devices update automatically to the current firmware version when they are installed and identified to the system.

2.8.5.2 IP Devices

To update IP devices, run **Update Manager**. You can check the firmware version either in System Design > Properties pane (for the device), or in Tools > Network Tools > ZigBee tab for ZigBee devices.

2.8.5.3 Black & Decker Locks

Note: Ensure you're running a current version of Composer Pro and Director on the system. Without the current version, the latest firmware will not be available.

To force a firmware update on the lock:

1. Remove the batteries from the lock (press a key or two to eliminate any charge in the lock).
2. Put the batteries back in.
3. Press the **top left** button four (4) times.
4. Press the **top right** button four (4) times.

The firmware should start updating. If it does not, ensure that your batteries are fresh. If you cannot manually start the firmware update, the lock should automatically check in for an update after the first check-in of the lock, at 3 AM.

2.8.6 Guidelines for Updating a Control4 System

Use these Control4® guidelines to update a Control4 system.

IMPORTANT: Before you begin any update, check the Control4 Dealer website for any Release Notes, Read This First, or upgrade documents associated with the update and the release. Read those documents first.

Note: The update behavior and steps for various releases differs. Make sure you review any documentation associated with the release before you begin your updates.

Follow these important guidelines for updating Composer Pro:

1. **Back Up Your Project**. If you have a project in an earlier version of Composer, back it up before you update.
2. **Verify the Network Connections**. Update Manager requires an active network connection to function properly. Ensure that the network connection is up and working prior to performing the upgrade.

3. **Update Errors**. If you notice any errors during the update process in the Update Manager's output pane, take note of the error message, and follow instructions provided at "Troubleshooting the Upgrade Process."

   IMPORTANT: You cannot have both connection methods identified on the system. Remove the network connection to *Zigbee* and identify it again using the *Ethernet* connection.

4. **Power On**. Ensure that the power state of all devices is **On**. You can verify that all devices are online from the Network Tools page.
5. **Know When the Update is Completed**. When upgrading the Control4 Controller running Director, you are disconnected from Composer Pro and streaming audio stops.
   a. After this occurs, restart Composer and reconnect.
   b. Go to **Tools** > **Update Manager** and watch the update process.
   c. Also, go to **Tools** > **Network** to ensure that everything is connected. If it is not connected, it cannot update that firmware.
   d. After Update Manager indicates that it is completed (you may see a message like "Finished site update attempt," all the IP devices on the system are now updated. This does not include ZigBee devices or hybrid devices (containing both IP and Zigbee).
   e. Go to **Tools** > **Network Tools** to view the firmware versions to ensure they are updated to this release.

2.8.7 Guidelines for Updating Specific Devices

- **Primary Controller**. The Primary Controller holds a new firmware image file, which is transferred and reflashed when an Ethernet network connection is present. After the update, disconnect the IP identification and identify again using Zigbee.
- **ZigBee Devices**. When upgrading a Controller associated with ZigBee devices, such as Dimmers, Switches, and Keypads, these are also upgraded. As these devices upgrade, the device's LEDs and the associated lighting loads may flicker. This is normal behavior.
- **ZigBee Pro Devices**. Follow the instructions in *Composer Pro Software Release Update Instructions - 1.7.3 to 1.8.0* for details about ZigBee Pro updates.
- **Home Theater Controller and Speaker Point**. During the update, the LEDs flash, indicating the upgrade process is in a critical mode.

Note: For OS 2.0 and later, Speaker Point does not support the M4P/AAC format. Use MP3.

WARNING: Do not stop the update or disconnect the network during an update.

- **Audio Matrix Switch** or **Multi Channel Amplifier**. If you are updating an Audio Matrix Switch or Multi Channel Amplifier that is using a ZigBee connection, you must temporarily connect these devices to an Ethernet connection before updating for the firmware update to occur.

2.8.8 Estimating Control4 System Update Times

Use Control4® Composer Pro to update the Control4 system.

2.8.8.1 Estimating Update Times per Device Type

The update time is dependent on the size of the Control4 system, the available network bandwidth, and the types of devices you are updating.

There are three (3) types of devices: IP devices that communicate solely by TCP/IP, *ZigBee*, ZigBee Pro devices that communicate via ZigBee or ZigBee Pro, and hybrid devices that use both TCP/IP and ZigBee for communication.

Depending on the device type, some devices, such as the IP devices update in parallel; other ZigBee or hybrid devices are updated sequentially, one after another. Generally, the IP devices are updated in parallel immediately after the Primary Controller updates. After that, the ZigBee devices update in sequence starting with the System Remote Control, and then followed by the hybrid devices which update in sequential order. The System Remote Control is the first ZigBee device to update if it is in Wake mode. During or after the update, if the System Remote Control was in Sleep mode, it updates immediately after it wakes up.

The following list identifies some typical Control4 devices and update time estimates.

- **IP Devices** (updated in parallel immediately after the Primary Controller):
  - Controllers (Home Controllers—20 to 40 minutes
  - 7” Touch Screens—15 to 20 minutes
  - Speaker Point—10 to 15 minutes
- **ZigBee Devices** (updated sequentially):
  - System Remote Control—3 to 5 minutes (updated as the first ZigBee device if awake)
  - Dimmer/Keypad/Switches—3 to 5 minutes
  - Thermostat—10 minutes
- **Hybrid Devices** (both Zigbee and IP - updated sequentially):
  - Multi Channel Amplifier -16—5 minutes
  - Contact / Relay Extender—5 minutes
  - Audio Matrix Switch—5 minutes
  - Multi Tuner V1 and V2—5 minutes
  - XM Module—5 minutes
  - Dock for iPod—5 minutes
  - Media Player—5 minutes
  - IO Extender—5 minutes

Note: An update from Release 1.7.4 to Release 1.8.2 may take longer.

Example: a total of

- 20 devices may take 110 minutes or longer
- 30 devices may take 150 minutes or longer
- 60 devices may take 300 minutes or longer

to complete the process. Dimmers and Switches do not need to be updated.

You may want to practice on your own Control4 system first before upgrading a customer's home; for example, an update to Release 1.8.2 is not trivial.

2.8.9 Best Practices for Updating a Control4 System

These sections will help you understand the best practices to follow when performing a Control4® update in Composer Pro. If you follow these sections in order until your system updates successfully, you may avoid some unnecessary pitfalls.

2.8.9.1 General Procedure

To update your system and software:

1. Back up the current project and media.
2. Check that you have a good network connection.
3. Check the currently-installed Composer Pro and Director versions.
4. Update Composer Pro software and drivers.
5. Update Control4 products using Update Manager.
6. If you have problems, see “Troubleshoot the Upgrade Process” or contact Control4 Technical Support.

Tip: The update process is highly dependent on valid network configurations and Internet connection availability and bandwidth. Please confirm that the devices on your network have a valid connection to the Internet. If you are using *DHCP*, confirm that your DHCP is active and can issue valid IP addresses to clients on the network.

IMPORTANT: Do not use a previous release of Composer Pro to modify a 2.0 system. Likewise, do not use a 2.0 version of Composer Pro to modify a previous release of the Control4 system.

2.8.9.2 Back Up the Current Project and Media

To back up your current project and media:

1. Back up your current project file from a previous release by using **File** > **Backup As**. Give it a filename that clearly identifies it as the backup.
2. (Optional) Back up your media. Copy all directories to your computer's hard drive or other storage media from the media storage location on your Control4 Controller at: **\\<ip address of Control4 controller>\media\audio**.
3. Continue to the next section.

2.8.9.3 Check the Currently-Installed Composer Version

It is helpful to check the currently-installed Composer Pro version before installing the update to make any necessary project adjustments.

To check currently installed Composer Pro version:

1. In Composer Pro, click **Help** > **About Composer**.
2. From the dialog that appears, write down the Composer Pro and Director versions.

Example: Composer, version 2.2.0.190 and Director version: 2.2.0.190.

To ensure that the Control4 system is working properly, the Composer Pro and Director version should always be consistent and have the same version number.

Note: You do not need to be on a certain version, however, to update. Update Manager updates the Control4 system from all previous releases. The only reason you need to know this information is to determine when your project was set up. Control4 always recommends that you write down these versions in case this information is needed later.

3. Continue to the next section.

2.8.9.4 Update Composer Software and Drivers

The Composer Pro software download consists of Composer Pro software and new or updated device drivers to support Control4 hardware and other third-party products. The following steps outline how to launch the software executable and ensure that you have the latest drivers.

Note: The Inspector utility can be used to verify each package after installation. Inspector reads all of the md5sums in the /var/lib/dpkg/info directory, and runs a new md5sum against them. Any missing files or files where the md5sums have changed are reported in /tmp/Inspection.$timestamp.

To install a released Composer Pro software version:

The following steps are an example of a software installation. Refer to the Release Notes associated with the software release for specific instructions.

1. Download the software package from the Internet at www.control4.com.
2. Install the current Composer Pro software, for example, Composer Pro 2.2.0.
3. Follow the on-screen instructions to complete the installation.
4. During the installation process, click the **Continue Anyway** button for the installation to proceed.
5. Continue to the section, "Update Control4 Products Using Update Manager."

(Optional) To ensure the driver database is updated:

1. From the Driver menu, select **Manage Drivers**. In the utility, you can see the creation and modification dates for all drivers in the local database residing on your computer.
2. Click **Add** to search the Online Database, and compare the modified dates to determine if a new driver is available.
3. If a newer driver is available and you want to download it, **check** the box next to the device model number, and click **OK** to download the newer associated driver.

Tip: When Composer Pro is first installed, the My Drivers tab is pre-populated with a list of drivers. The My Drivers tab provides shortcuts to commonly-used drivers. You can add, remove, and re-order items to the My Drivers tab as needed. Removing drivers from My Drivers tab only removes the driver from the list. It still exists in the Local Database. To get back to the default My Drivers tab list and to include newly-added Control4 devices, right-click any **device** and click **Restore Default List**. This action does not affect the Local Database in any way. Also, right-click the **My Drivers** tab, select **Add Driver**, and then select all the Control4 devices not currently in the list.

2.8.9.5 Update Control4 Products Using Update Manager

Refer to the following sections to guide you through the update process:

- Update from older releases. See “Information About Older Releases.”
- Update from Release 1.7.4 to 1.8.2. See “Update from Release 1.7.4 to 1.8.2.”
- Update from Release 1.8.2 to 2.0. See “Update to Release 1.8” or “Update to Release 2.0.”
- Refer to the Release Notes in subsequent releases for additional update instructions.

2.8.10 Update from Release 1.7.4 to 1.8.2

Use Control4® Composer Pro to update your system from Release 1.7.4 to Release 1.8.2. Detailed instructions about how to update from Composer Pro Release 1.7.4 to 1.8.2 are not included in this document. For those instructions, refer to the *Composer Pro Software Update Instructions - Release 1.7.4 to 1.8.2* on the Control4 Knowledgebase. The document provides general steps, terms and concepts, and what to prepare for prior to performing the update. It then describes the steps for the update.

Ensure that Composer Pro and Director are using the same version of 1.7.4, and that all devices are identified on the network before starting this update.

2.8.10.1 What’s New in the Update?

Release 1.8.x introduces support for *ZigBee* Pro 1.1. During the update from 1.7.4 to 1.8.2 all ZigBee devices will be updated to run on the ZigBee Pro stack which requires a complete replacement of the firmware on all devices. This enhancement allows Control4 to operate with other ZigBee Pro-compliant devices which opens up a whole world of new devices that are compatible with the Control4 system.

2.8.10.2 Highlights of the Update

1. New terms such as ZigBee Access Point (ZAP), ZigBee Pro, MiniApp, and EmberNet are introduced and described.
2. Two (2) stages of upgrade occur for MiniApps (Dimmers, Switches, Keypads, and outlet modules): the ZigBee Pro stack is installed, and then all the devices must be joined to the network. When updating the MiniApps, special LEDs on the devices indicate their status.
3. Products not supported with ZigBee Pro at this time:
   - System Remote Control V1 and V2
   - *LCD* Keypad (use *Ethernet*)
   - Contact/Relay Extender (use Ethernet)
   - Audio products (Audio Matrix Switch, Multi-Channel Amplifier, and Multi-Tuner). Use Ethernet.
4. The Network Tools screen (formerly Network Status) has a new tab for EmberNet Upgrade. This shows all of the devices on the current network that haven’t been updated to ZigBee Pro.

2.8.11 Update to Release 1.8.2

Use the Control4® Composer Pro Update Manager to update to Release 1.8.2.

IMPORTANT: To update to Release 1.8.2, the Control4 system first must be updated to Release 1.7.4. After that, follow the instructions in the *Composer Pro Software Release Update Instructions - Release 1.7.4 to 1.8.2* on the Control4 Knowledgebase.

2.8.12 Update to Release 2.0 and Later

Use the Control4® Composer Pro software to update to OS 2.0.

Note: Before you begin the update, ensure that the Control4 system has been updated first to Release 1.7.4 and then to 1.8.2. Also, ensure that you have installed Composer Pro 2.0.

For update instructions, refer to

- *Composer Pro Software Release Update Instructions - Release 1.7.4 to 1.8.2*
- *Control4 System Software Release Version 2.0 Release Notes*

on the Control4 Dealer website or on the Control4 Knowledgebase. These documents provide important terms and concepts that you must understand, and what to prepare for prior to performing the update. It then describes the steps to follow to complete the update.

To install updates later than OS 2.0, follow the instructions in “Updating Composer and Director.”

2.8.13 Updating with a USB Device (USB Stick Creator)

2.8.13.1 Create an Install on a USB Device

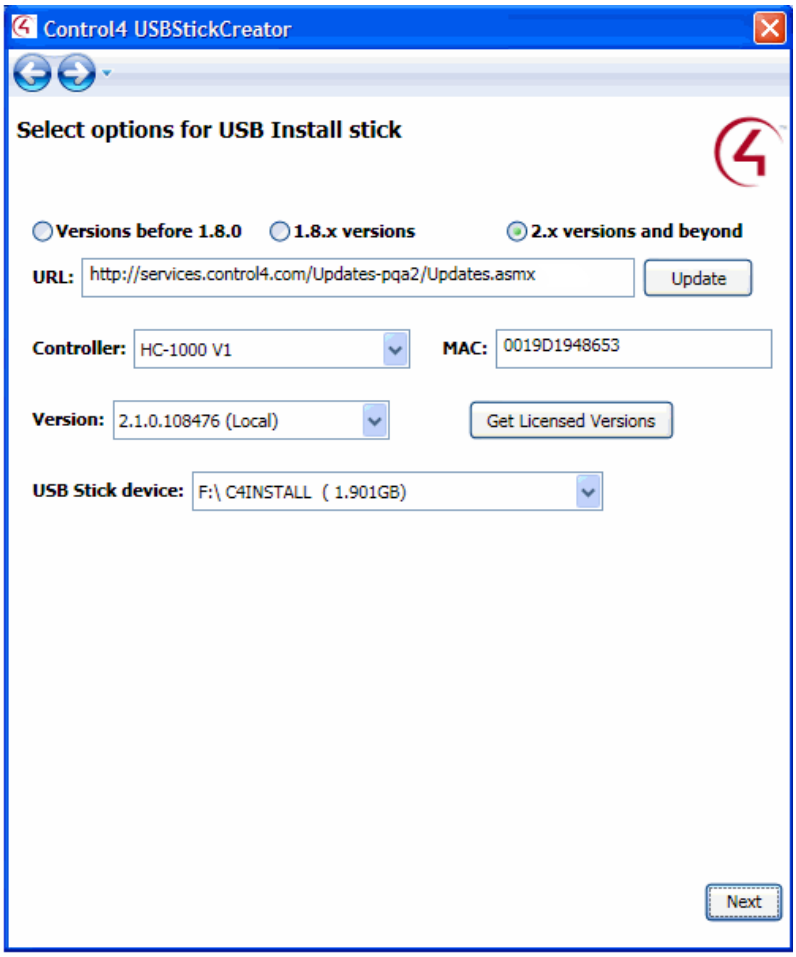
These steps show you how to create an install to a USB device attached to your computer’s hard drive and use the same USB device to install your customer’s system without an Internet connection.

Prerequisites

- Have a USB device handy, formatted for FAT32 with at least 2GB total available disk space.
- Only installs for OS 1.7.4, 1.8.2, or 2.1 and later can be created using this procedure. **Note**: This particular creation procedure does not work on OS 2.0.*x* releases. If you are creating an install using an older software version, refer to *USB Update Stick User Instructions* (200-00149, Rev. B) to create the install.
- A valid license on the Controller to be updated.

To copy an install to a USB device:

1. On your C: drive, open the **Control4** Programs folder.
2. Select the **USB Stick Creator** program.
3. Select the version of the install to create: Before 1.8.x, 1.8.x, or 2.x and later (see next figure). **Tip**: You can update an OS 1.7.4 or 1.8.2 system to OS 2.1 or later offline, but you must be connected to the Internet to update an OS 2.0 system to OS 2.1 or later.



4. Use the default URL.
5. Click **Update**.
6. Select the **Controller** model.
7. Type the **MAC** address. The version will populate automatically. **Tip:** You can obtain this address from the product packaging, or you can obtain it from the Identify window.
8. You can add or remove any number of Controllers. Click **Get Licensed Versions** to add or remove them.
9. Click **Next**. The installation is copied to the USB device.
10. Connect to your customer's system using Composer Pro, and then follow the next section.

2.8.13.2 Update a System Using the USB Device

These steps show you how to update your customer's Control4 system from a USB device. You do not have to be connected to the Internet to perform these steps.

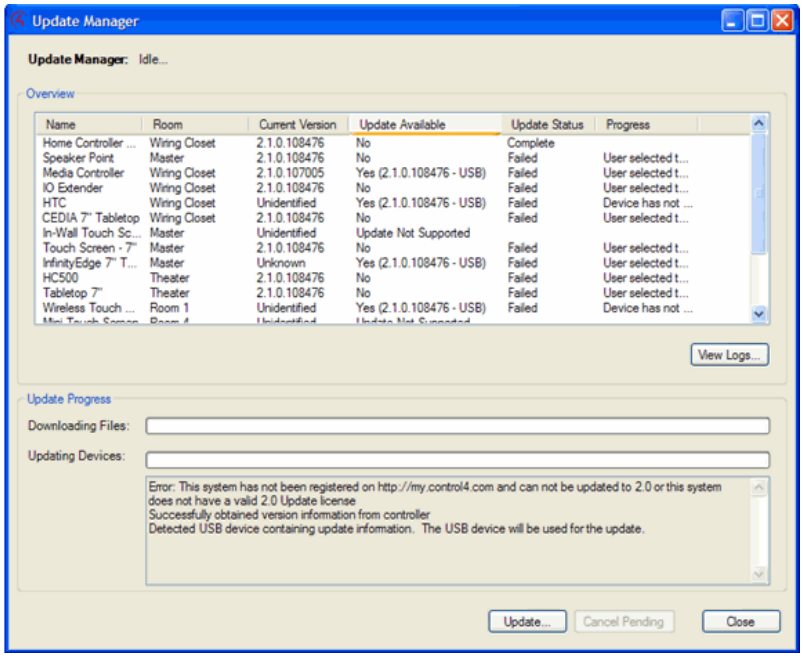
Prerequisite

A USB device with the customer's license and the appropriate USB Install version on it.

To install the software:

1. Use the USB device with the required install and insert it in the USB port on the Primary Controller of the customer's project.
2. Start Composer and connect to a Local Director.
3. In the menu bar, click **Tools** > **Update Manager**.
4. Click **Update**. A "Detected USB device…" message appears in the message box.

   The Update Manager screen shows the entries that are being updated from the USB device in the Update Available column (example: "Yes 2.1.0.108476 -USB"). See the next figure.



5. When the update completes, click **Close**.

2.9 Example Projects

Refer to the sections below to use Control4® Composer Pro Interviewer or Composer Pro views to help you understand how to add and identify devices for a Control4 system.

2.9.1 Example Smith Home: Interviewer Method

The following sample project sections step you through the creation of a Control4® project using *Interviewer wizard* in Composer Pro. Alternatively, you can create a new project using the Composer Pro views in Composer Pro. See *Composer Pro Getting Started* for details.

To use the Interviewer wizard:

1. Start Composer and connect to a Director.
2. Click **System Design**.
3. From the File menu, select **Run Interview**.

Refer to the following sections to use the Interviewer wizard:

"Example: System Specifications"

"Example: Design and Create the Project"

"Example: Define Devices in Each Room"

"Example: Identify the Devices on the Network"

"Example: Define the Audio/Video Connections"

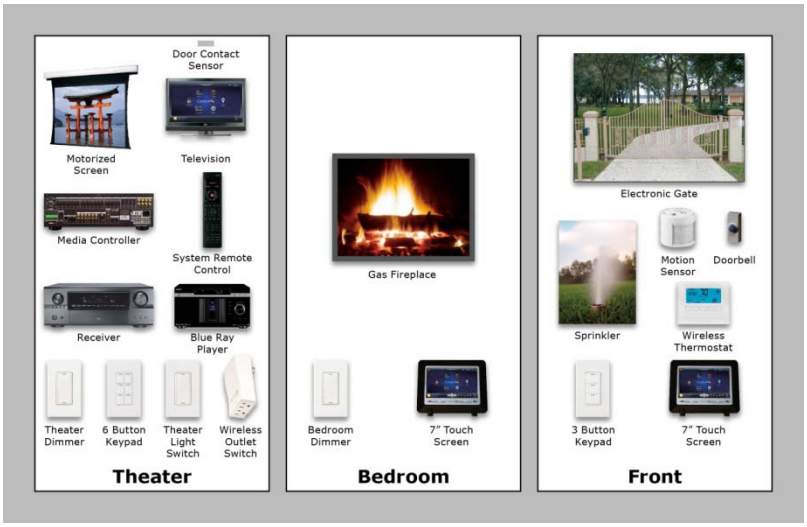
"Example: Define the Control Connections"

2.9.1.1 Example: System Specifications

Use either the Control4® Composer Pro views or the Interviewer wizard to create a project.

First start by reviewing these system specifications to understand what is in three (3) rooms of the home and which Control4 devices are used in each room. The example scenario sets up home control for a Theater, a Bedroom, and the Front of the home. Follow the sections in order.

2.9.1.1.1 Devices by Room



This project includes the following rooms and Control4 devices in those rooms:

- Theater
  - Controller
  - Theater Dimmer
  - Theater Light Switch
  - Wireless Outlet Switch
  - System Remote Control
  - 6 Button Keypad
  - Receiver
  - Television
  - DVD player or Sony CX 777ES DISC Changer
  - Motorized Screen
  - Door Contact Sensor
- Bedroom
  - Touch Screen
  - Bedroom Dimmer
  - Gas Fireplace
  - Gas Fireplace Relay
- Front
  - 3 Button Keypad or 6 Button Keypad
  - Thermostat
  - Electronic Gate
  - Sprinklers, Doorbell
  - Motion Sensor

2.9.1.1.2 Hardware Connections

The following tables detail the connections that need to be made for the devices to be automated. Refer to these tables as you move through the project creation process.

Table 1. Output to Input

Connect From Output Device:	Connect To Input Device:
Controller	
Video Out 1 (Video—COMPOSITE)	Receiver (INPUT VIDEO 1—Theater)
Stereo 1(Audio—STEREO)	Receiver (INPUT VIDEO 1—Theater)
Contact Sensor 1 (Control—CONTACT_SENSOR)	Motion Sensor (Contact Sensor—Front)
Contact Sensor 2 (Control—CONTACT_SENSOR)	Doorbell (Contact Sensor—Front)
Contact Sensor 3 (Control—CONTACT_SENSOR)	Door Contact Sensor (Contact Sensor—Theater)
IR Output 1 (Control—IR_OUT)	Television (IR Sensor—Theater)

Connect From Output Device:	Connect To Input Device:
IR Output 2 (Control—IR_OUT)	Receiver (IR Sensor—Theater)
IR Output 3 (Control—IR_OUT)	DVD (IR Sensor—Theater)
Relay Port 1 (Control—RELAY)	Gas Fireplace (Relay—Bedroom)
Relay Port 2 (Control—RELAY)	Sprinklers (Relay—Front)
Relay Port 3 (Control—RELAY)	Motorized Screen (Relay—Theater)
Relay Port 4 (Control—RELAY)	Electronic Gate (Relay—Front)
Receiver - Tuner — Harman Kardon AVR 230	
Output (Video—COMPOSITE)	Television (AV In — Theater)
Output (Audio—STEREO)	Television (AV in —Theater)
DVD Player — Samsung HD841	
Video Out (Video—COMPOSITE)	Receiver (INPUT DVD—Theater)
Mixed Audio Out (Audio—STEREO)	Receiver (INPUT DVD—Theater)

Table 2. Input to Output

Connect from Input Device:	Connect to Output Device:
Receiver — Harman Kardon AVR 230	
INPUT VIDEO 1(Video—COMPOSITE)	Controller (Video Out 1— Theater)
INPUT DVD (Video—COMPOSITE)	DVD (Output—Theater)
INPUT VIDEO 1(Audio—STEREO)	Controller (Stereo 1—Theater)
INPUT DVD (Audio—STEREO)	DVD (Output—Theater)
IR Sensor (Control—IR_OUT)	Controller (IR Output 2—Theater)
Television — Samsung TX-P1430	
Input Side (Video—COMPOSITE)	Receiver (Output—Theater)
Input Side (Audio—STEREO)	Receiver (Output—Theater)
IR Sensor (Control—IR_OUT)	Controller (IR Output 1—Theater)
Contact Sensor (Control—Contact_Sensor)	Television
DVD Player — Samsung HD841	
IR Sensor (Control—IR_OUT)	Controller (IR Output 3—Theater)
Motorized Screen	
Relay (Control—RELAY)	Controller (Relay Port 3—Theater)
Door Contact Sensor	
Contact Sensor (Control—CONTACT_SENSOR)	Controller (Contact Sensor 3—Theater)
Gas Fireplace	
Relay (Control—RELAY)	Controller (Relay Port 1—Theater)
Electronic Gate	
Relay (Control—RELAY)	Controller (Relay Port 4—Theater)
Sprinklers	

Relay (Control—RELAY)	Controller (Relay Port 2—Theater)
Doorbell	
Contact Sensor (Control—CONTACT_SENSOR)	Controller (Contact Sensor 2—Theater)
Motion Sensor	
Contact Sensor (Control—CONTACT_SENSOR)	Controller (Contact Sensor 1—Theater)

Refer to “Example: Design and Create the Project” to go to the next example steps.

2.9.1.2 Example: Define Devices in Each Room

This section discusses using Control4® Interviewer wizard in Composer Pro to define devices in each room.

Note: This procedure follows “Example: Design and Create the Project.” If you have not read that section, go there first before you review this section.

You are now in the Rooms section of Interviewer. In this section, Interviewer asks you a series of questions about each room to find out what devices you want to control there, and it asks questions about the selected room before moving to the next room.

To define devices in the Theater:

1. Check the boxes to indicate the types of devices in this room.

   Example: For the Theater room: De-select Multi-Room Audio. Check Controllers, User Interface, AV Components, Lighting, Motorization, and Sensors.

2. Click **next**.

3. Add the **Controllers** that reside in the room.

   The Digital Audio and Controller objects appear in the 'Devices in the Room' pane. The Digital Audio object represents the audio that exists on the Control4 Controller. Only one (1) Digital object added per project, so if you tried to add another Controller, a second Digital Audio object would not be added to the project tree.

   Note: When you click **next** and return to this screen, the object no longer appears on the screen. However, if you look in Composer Pro project tree, it still appears.

   Example: Add the **Controller** to the **Theater**. The Digital Audio and Controller objects appear.

4. Click **next**.
5. Add the objects for the devices to this room. Double-click a device (or select it and click **Add**) to move the devices from the 'Available Devices' list to the 'Devices in Room' list.

   Example: Double-click **6 Button Keypad** and System Remote **Control** to add them to the Theater room (If you do not have a 6 Button Keypad, add a 3 Button Keypad).

   Note: If you have access to a **Wireless Touch Screen**, add it to your project now.

6. Click **next**.
7. Add all **AV** component devices in this room. For example, if a DVD player, a receiver, and a television are in this room, add them as described in the following sub-steps.

   Tip: To add AV components, double-click the **device**; from the dialog that appears, choose a manufacturer (from the drop-down list), and double-click the model.

   a. Add **DVD** to the 'Devices in Room' list from the Online Database.

      Example: Add the **DVD Player**, choose **Online Database**, choose the manufacturer **Samsung**, and then double-click the model **DVD-HD841 [IR]** model from the Online Database. If you can access the Sony CX 777ES Disc Changer, add this instead. Instructions about how to scan this bi-directional Disc Changer is described later in this section.

      Double-click to add a DVD to the project. On the dialog that appears, click the Online Database radio button, then use the scroll-down menu in Manufacturer to select Samsung.

      Double-click to add the model to the Devices in the Room list.

b. Add the **Receiver** to the Devices in Room list using the Online Database.

Example: Add the **Receiver**, select the **Online Database**, choose the manufacturer **Harmon Kardon**, and then double-click the model **AVR 230[IR]** from the list.

c. Add the **Television** to the 'Devices in Room' list using the Online Database.

Example: Double-click **Television**, select **Online Database**, choose the manufacturer **Samsung**, and then double-click the model **TX-P1430**. This adds the device driver for cable TV and UHF/VHF.

d. Click **next**.

8. Add the **Dimmers**, **Switches**, and **Outlet Switches** to the Devices in Room list, and give each a descriptive name (edit immediately after adding while still in edit mode, or right-click later).

   Example: Use the previous examples to

   Add a **Wireless Dimmer**, and rename it **Dimmer**.
   Add a **Wireless Switch**, and rename it **Light Switch**.
   Add a **Wireless Outlet Switch**, and rename it **Television Outlet Switch**.

9. Click **next**.
10. Add the **Sensors** and **Contacts** to the Devices in Room list, and give each a descriptive name.

    Example: Add a **Door Contact Sensor** for the door to the Theater.

11. Click **next**.
12. Add the **Motorized Device**s to the Devices in Room list.

    Example: Add a **Motorized Screen** to the Theater.

13. You have just completed the setup for the Theater. Click **next** to move to the Bedroom.

To define devices in the Bedroom:

1. Notice that the selected room on the left is now **Bedroom**. For the selected room, check the appropriate boxes to indicate the devices used in this room.

   Example: For the Bedroom: De-select AV Components and Sensors. Check User Interface, Multi-Room Audio, Lighting, and Motorization.

2. Click **next**.
3. Add the devices to this room. Double-click a **device** to move the devices from the Available Devices list to the Devices in Room list.

   Example: Add a **Touch Screen** to the Bedroom.

4. Click **next**.
5. Choose how the digital audio is received in this room.

   Example: Audio is sent digitally to the Touch Screen. Choose **Through a Touch Screen**.

6. Click **next**.
7. Add the **Dimmers**, **Switches**, and **Outlet Switches** to the Devices in Room list, and give each a descriptive name (edit immediately after adding while still in edit mode, or right-click later).

   Example: Add a Wireless Dimmer and rename it Dimmer.

8. Click **next**.
9. Add the **Motorized Devices** to the Devices in the Room list.

   Example: Add the **Gas Fireplace** to the Bedroom.

10. You have just completed the setup for the Bedroom. Click **next** to move on to the Front of the house.

To define devices in the Front Room:

1. Notice that the selected room on the left is now Front Room. For the selected room (Front Room), check to identify the types of devices you have in that room, and then click **next**.

   Example: De-select AV Components, Multi-Room Audio, and Lighting. Check User Interface, Motorization, and Sensors.

2. Click **next**.

3. Identify which Navigators are included in each room by selecting the Navigator, and then clicking the double-arrow button.

   Example: Add the **3 Button Keypad** for the Navigator in the Front Room.

4. Click **next**.
5. Add the **Sensors** to the Devices in the Room list.

   Example: Add the **Doorbell** and **Motion Sensor** to the Front Room.

6. Click **next**.
7. Add the **Motorized** devices to the Devices in the Room list.

   Example: Add the following: Electronic Gate and Sprinklers.

If you have a Thermostat, add it in Composer Pro after you exit Interviewer. See “Configuring HVAC Systems.”

You have just completed defining the devices in each room. Click **next** to continue to the next section to identify the network connections.

2.9.1.3 Example: Identify the Devices on the Network

This section discusses using Control4® Interviewer wizard in Composer Pro to identify the devices you've added in the project to the network.

Note: This process follows “Example: Define Devices in Each Room.”

You are now ready to set up the network connections in the **Network** section of Interviewer. In this section, you identify the physical device to its network address so the devices can communicate with the Controller.

Follow the on-screen instructions specific to the selected device to identify it on the network. The first item is selected by default automatically. When selected, the device is placed in 'Identify' mode. Devices that use network connections and associated instructions are found in “Example: Make and Verify the Connections.”

Note: To program lighting and Keypad buttons, see “Programming the System.” To set up Lighting Scenes, see “Program with the Lighting Scenes Agent.”

To identify devices on the network, go to the physical device and follow these instructions.

The diagram for the device indicates which button to press.

1. Go to the Controller hardware, and press the **Select** dial to identify the device. When the address appears, click **next**.

2. Pick up the **System Remote Control**, and press the **4** button to identify the device. You may need to press it repeatedly until the address appears. When the address appears, click **next**.
3. Go to the **6 Button Keypad**, and press the **top left** button **four** (4) times in rapid succession to identify the device. When the address appears, click **next**.
4. Go to the **Theater Dimmer**, and press the **top** button **four** (4) times to identify the device. When the address appears, click **next**.
5. Go to the **Theater Light Switch**, and press the **top** button **four** (4) times to identify the device. When the address appears, click **next**.
6. Go to the **Theater Outlet Switch**, and press the button **four** (4) times to identify the device. When the address appears, click **next**.
7. Go to the **Touch Screen**, and identify the device. When the address appears, click **next**.

8. Go to the **Bedroom Dimmer**, and press the **top** button **four** (4) times to identify the device. When the address appears, click **next**.
9. Go to the **3-Button Keypad**, and press the **top** button **four** (4) times in rapid succession to identify the device. When the address appears, click **next**.
10. Click **next** to continue to the next section to define Audio/Video connections.

2.9.1.4 Example: Define the Audio/Video Connections

This section discusses using Control4® Interviewer wizard in Composer Pro to define the audio and video connections. You set up the software for audio and video connections that directly correspond to your hardware connections between your devices.

Note: This process follows “Example: Identify the Devices on the Network.”

You are now in the Audio/Video section of Interviewer. In this section you identify any devices and their connections that carry audio and/or video signals. Using the Smith Home example project (a Controller project), complete the following steps.

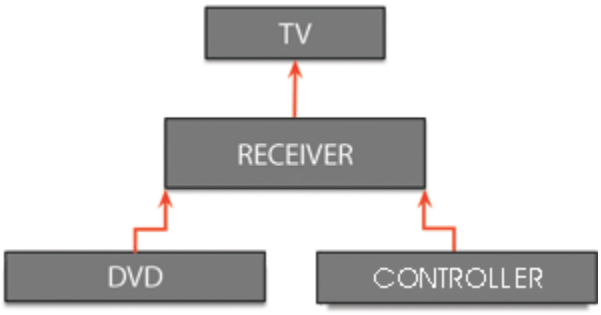
To define audio/video connections:

1. Choose the device(s) to which the specified Controller sends audio and video signals.

   Example: The Controller in the Theater Room sends audio and video to the Receiver. Add **Theater** > **Receiver** to the **Connected Devices** list.

2. Click **next**.

The **Receiver** is the only device connected to the **Television**. Both the **DVD** player and the **Controller** route their audio and video signals through the **Receiver** to get to the **Television**.



3. Choose how the Controller Stereo Outputs connect to the Receiver.

    a. Choose how the Controller Stereo 1 Output connects to the Receiver.

        Example: In Audio Connections, check **INPUT VIDEO 1** and check **STEREO**.

    b. Click **next**.
    c. Choose how the **Controller Stereo 2 Output** connects to the **Receiver**.

        Example: Ensure that none is checked (Controller Stereo 2 does not connect to the Receiver).

    d. Click **next**.
    e. Choose how the **Controller Stereo 3 Output** connects to the **Receiver**.

        Example: Ensure that none is checked (Controller Stereo 3 does not connect to the Receiver).

4. Click **next**.
5. Choose how the **Controller Video Out Outputs** connect to the **Receiver**

    a. Choose how the Controller Video Out 1 Output connects to the Receiver.

        Example: In Video Connections, check **INPUT VIDEO 1**, and then check **COMPOSITE**.

    b. Click **next**.

6. Choose the device(s) to which the **DVD** sends audio and video signals.

   Example: In the Audio/Video list on the left, check **DVD**, and then double-click **Theater > Receiver** to add it to the **Connected Devices** list.

   a. Click **next**.
   b. Choose how the **Theater DVD Output** connects to the **Receiver**.

      Example: In Audio Connections, check **INPUT DVD**, and then check **STEREO**. In Video Connections, check **INPUT DVD**, and then check **COMPOSITE**.

   c. Click **next**.

7. Choose the device to which the **Theater Receiver** sends audio and/or video.

   Example: Double-click **Theater > Television** to add it to the 'Connected Devices' list.

   a. Click **next**.
   b. Choose how the **Theater Receiver Output** connects to the **Television**, and then click **next**.

      Example: In Audio Connections, check **INPUT AV1**, and then check **STEREO**. In Video Connections, check **INPUT AV1**, and then check **COMPOSITE**.

   c. Click **next**.
   d. If applicable, choose the device(s) to which the **Theater Tuner** sends audio and/or video signals. Make connections only to stand-alone tuners. A tuner that is a built-in component to another AV device, such as **Receiver**, uses the host's connections.

      Example: The Tuner in this project is a built-in tuner to the Receiver, and therefore, uses the same AV Connections set up previously for the Receiver.

   e. Click **next**.

8. Choose how the **Bedroom Touch Screen** sends audio and/or video signals.

   Example: The Touch Screen does not send audio to any of these devices. It only sends audio to the powered speakers, which are not shown in Composer Pro projects. Ensure that nothing is selected.

9. You have just completed defining audio/video connections. Click **next** to continue to the next section to define Control connections.

2.9.1.5 Example: Define the Control Connections

This section discusses using Control4® Interviewer wizard in Composer Pro to define the Control connections.

Note: This process follows “Example: Define the Audio/Video Connections.”

You are now in the Control section of Interviewer. In this section, you identify all Control connections in the system.

Tip: To complete this section, refer to the control connection tables shown in the "Hardware Connections" section "From Output to Input" in “Example: System Specifications.”

Using the Smith Home example project (a Controller project), complete the following steps.

To define Control connections:

1. Define the **IR OUT** port connections on the **Controller**.
   a. Choose **IR OUT 1** to **Television IR Sensor**, and then click **next**.

   b. Choose **IR OUT 2** for the **Receiver IR Sensor**, and then click **next**.
   c. Choose **IR OUT 3** for the **DVD IR Sensor**, and then click **next**.

Tip: If you prefer to set up a video or contact sense *loop* instead of using a macro, see “Changing Power Management Options.” After you add a video sense loop connection to the DVD player driver, add a **control connection** between the Controller and DVD player.

2. Define the **Contact and Relay** connections on the **Controller**.
   a. Choose **Contact 3** for the **Theater Door Contact Sensor**, and then click **next**.
   b. Choose **Relay 3** for the **Theater Motorized Screen**, and then click **next**.
   c. Choose **Relay 1** for **Bedroom Gas Fireplace**, and then click **next**.
   d. Choose **Contact 2** for the **Motion Sensor**, and then click **next**.
   e. Choose **Contact 1** for the **Motion Sensor**, and then click **next**.
   f. Choose **Relay 4** for the **Electronic Gate**, and then click **next**.
   g. Choose **Relay 2** for the **Sprinkler**, and then click **next**.

3. You have completed the setup of the system. Click **next** to exit the system.

After you have completed setting up the system using Interviewer, you may want to do one of the following:

- If you followed the "Example" instructions exactly and have completed all the Interviewer screens, you are ready to verify your connections and test the device control on the system. For instructions about how to do this, see "Connecting Devices."
- If you want to learn how to set up the same example project using the Composer Pro screens rather than Interviewer, you can clear your sample project, and go to "Example Smith Home: Composer Views Method."
- If you understand what occurred in the previous procedure and you are ready to create your own project, go the *Composer Pro Getting Started* for planning and design steps.

2.9.2 Example Smith Home: Composer Views Method

The following sample project sections step you through the creation of a Control4® project using the Composer Pro views. Alternatively, you can create a new project using the Interviewer wizard in Composer Pro.

To use Composer Pro views:

1. Start Composer and connect to a Director.
2. Click **System Design**.

Follow these sections in the order shown to use the Composer Pro views:

"Example: System Specifications"
"Example: Design and Create the Project"
"Example: Make and Verify the Connections"
"Example: Verify the Network Connections"
"Example: Define the Control and Audio/Video Connections"

2.9.2.1 Example: Design and Create the Project

There are two (2) ways you can design and create a project. Use the Control4® Composer Pro views or Interviewer wizard in Composer Pro to design and create a project.

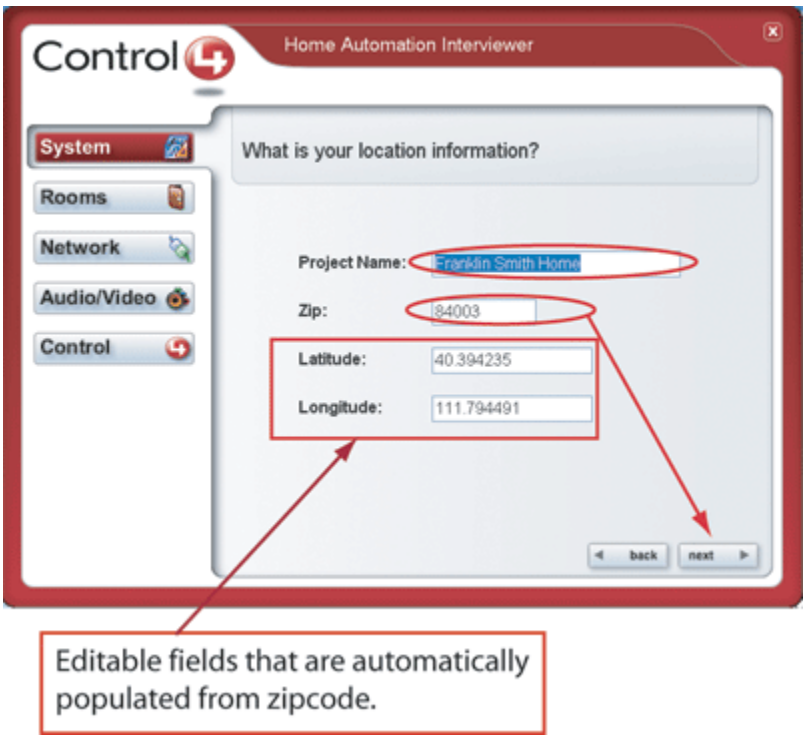
2.9.2.1.1 Interviewer Wizard

You begin the Interview with the System section. In this section, Interviewer asks you questions regarding the entire system, including types of devices, the rooms that contain devices, etc.

To define system information:

1. Start **Interviewer**.
2. Type the Project Name: **Franklin Smith Home**.
3. Type a valid zip code to automatically populate the appropriate latitude and longitude coordinates, and then click **next**. These coordinates are editable if necessary. The Control4 system uses these coordinates to identify the local sunrise and sunset times (to be used in future programming calculations).

   Example: Enter Zip code: **84003**



4. Check the boxes to indicate which types of devices you are adding to the system.

   Example: Check AV Components, Multi-Room Audio, Lighting, Motorization, Temperature Control, and Sensors.

5. Click **next**.

Tip: Temperature control is not fully implemented in Interviewer. If you have a Thermostat, you need to add it and identify it to the system outside of Interviewer. For instructions on how to do this, see “Configuring HVAC Systems” for more information.

6. Add rooms by double-clicking a room or selecting a room, and clicking the **double-arrow** button.

   Example: Add Theater, Bedroom, and Front.

7. When you’ve added the rooms, click **next**.

8. Choose the method that distributes multi-room audio. Multi-room audio choices include:
   - **Digitally**—Set up a multi-room audio system utilizing the network as an audio distribution system with digital-end points.
   - **Audio Switch** —Install and set up a multi-room audio system, utilizing a traditional analog audio switch and amplifiers.
   - **Receivers**—Install and set up a multi-room audio system, utilizing a receiver in each room to distribute audio.

   Example: Audio is streamed (through *Ethernet*) to the Touch Screen to the Bedroom, so you would choose **Digitally**.

9. You have just completed your System setup. Click **next** to continue to the next section to complete Rooms setup.

2.9.2.1.2 Composer Views

In this view, you create the foundation of the Control4 system by building the project tree.

To design the Smith Home project:

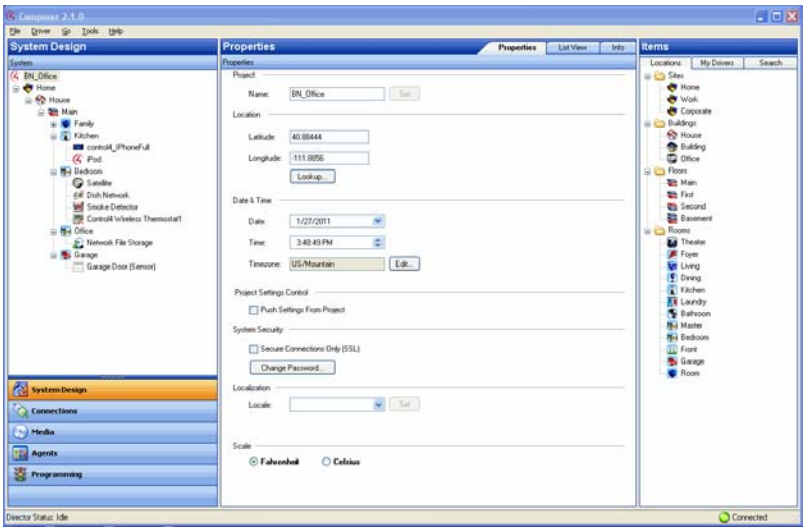
1. Start Composer and connect to a Director on a Local Network.
2. Enter the Project Properties for the Smith Home.
   - **Name**: Franklin Smith Home.
   - **Zip Code**: 84003 or enter a Latitude and Longitude manually.
   - **Date & Time**: Use the drop-down menu to change these as desired.
   - **Time Zone**: Use the drop-down menu to select the appropriate zone.
3. Add rooms to the project tree.
   a. In the Locations tab, double-click on a **room** to add it to the project tree.
   b. Continue to add **rooms** until you have included all rooms you want in the house (rooms that will have automated devices). You can also drag these items to an object in the project tree.

   Example: Add three (3) rooms.

   - Theater
   - Bedroom
   - Front

   Tips: To build the system design, define the project configuration in the project tree. You do not have to add all the items in the project tree manually, such as Site > Building > Floor > Room because Composer Pro automatically adds the required infrastructure.

   Also, you can rename the objects as desired; for example, Franklin Smith Home > Home > House > Main >Theater. For more information, see *Composer Pro Getting Started*.



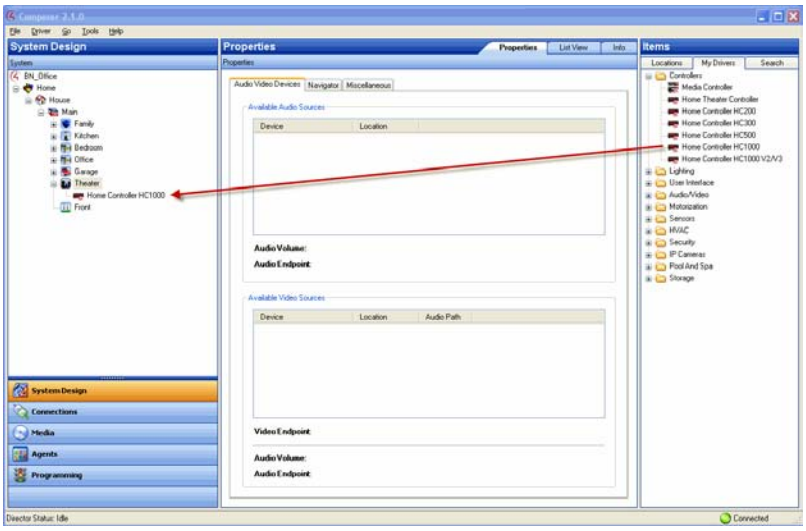
To add the devices:

1. Add the **Controller** to a **room** in the project tree.
   a. When setting up a system, first add the Controller driver to the list. In the project tree, choose the room where you want the Controller to reside. In the **Items** pane > **My Drivers** tab, double-click a **Controller** to move it to the room. See the example below.

   Note: If you installed this version of Composer Pro on a computer with an older version of Composer Pro, right-click in the **My Driver** tab, and choose **Restore Default List**. This will update the My Driver list.

   Example: Add a Controller to the Theater Room:

   b. From the project tree, select **Theater**. In the **Items** pane > **My Drivers** tab under Controllers, double-click **Controller** or drag it to the room where it resides—in this case, Theater. The Controller and Digital Audio appear in the project tree. The Digital Audio object resides on the Controller, but shows up as a separate object in the project tree. The Digital Audio provides the functionality to play media.



2. Add the **Lighting** and **Navigators** to the applicable **rooms**. The example below shows some devices you can add.

   Example: Select **Theater** in the project tree. In the **My Drivers** tab, do the following:

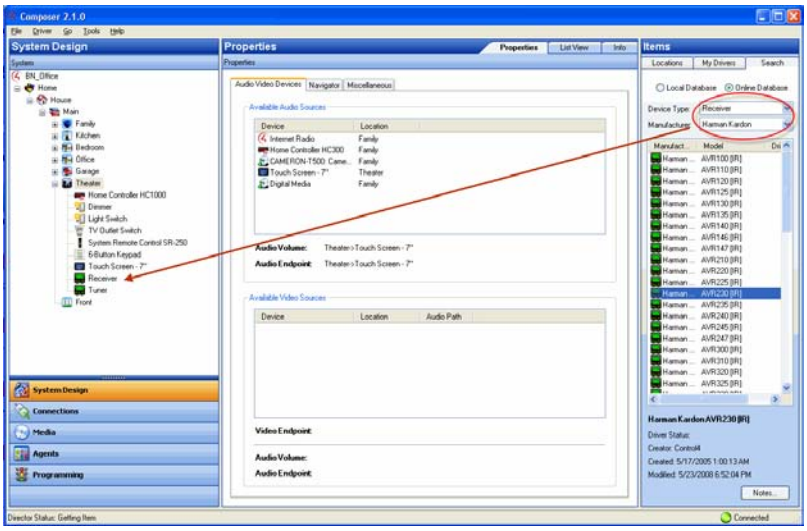
   a. In Lighting > Light, double-click **Wireless Dimmer**, and then rename to **Dimmer**.
   b. In Lighting > Light, double-click **Wireless Switch,** and then rename to **Light Switch**.
   c. In Lighting > Light, double-click **Wireless Outlet Switch**, and then rename to **Television Outlet Switch**.
   d. In User Interface, double-click **System Remote Control**.
   e. In User Interface, double-click **6 Button Keypad**.

   Tip: Use a descriptive name. When adding devices to the home, right-click and choose **Rename** to rename them with a descriptive name. For example, if you have two (1) Dimmers in a room, give them a descriptive name such as “Wall Dimmer” or “East Dimmer.” This helps you identify the specific Dimmer later when identifying connections. If there's only one Dimmer or Switch in a room, however, you can keep the generic title "Dimmer" or "Switch."

3. Add a **Receiver** to the applicable **room**.

   Example: Add a **Receiver** to the **Theater**. To add, select **Theater** in the project tree. From the **My Drivers** tab, do the following:

   a. In Audio/Video, double-click **Receiver**.
   b. In the dialog box that appears, choose **Online Database**, choose the manufacturer **Harmon Kardon**, and then double-click **AVR146[IR]** to add the Receiver to the project tree.

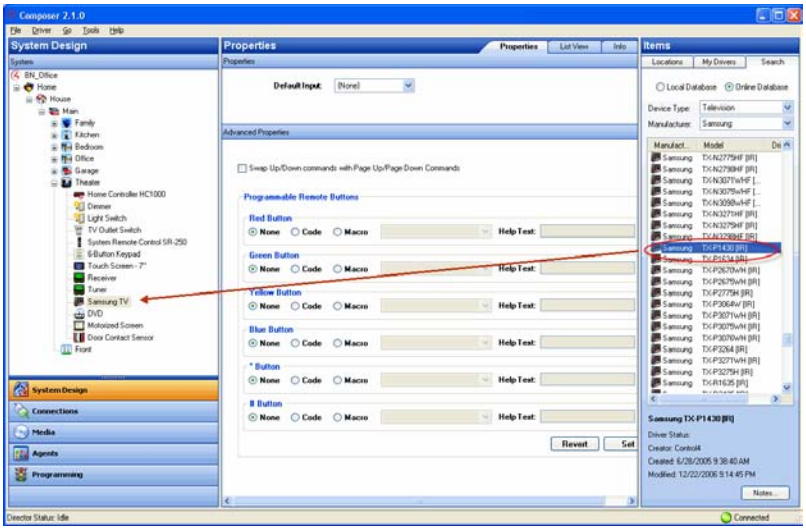


4. Add a **Television** to the applicable **room**. This will probably be the same room where the Controller is.

   Example: Add the **Television** to the **Theater**. To add, select **Theater** in the project tree. From the **My Drivers** tab, do the following:

   a. In Audio/Video, double-click **Television**.
   b. In the dialog box that appears, choose **Online Database**, choose the manufacturer **Samsung**, and then double-click **HC-J655W[IR]**.

   The UHF/VHF object may be added to enable you to scan for UHF/VHF broadcast channels.



5. Add additional **Audio/Video** devices to the **room**.

Example: Add the DVD **Player** to the **Theater**. To add, select **Theater** in the project tree. From the **My Drivers** tab, do the following:

a. In Audio/Video, double-click **DVD**.
b. In the dialog box that appears, choose **Online Database**, choose the manufacturer **Samsung**, and then double-click **DVD HD841[IR]**.

Note: If you can access a Wireless Touch Screen, add it now to your project. If you previously had a Wireless Touch screen on your system prior to Release 1.3, follow the special update instructions in "Information About Older Releases."

6. Add a **motorized** device or **sensor** to the applicable room.

Example: From the My Drivers tab, add a **Motorized** screen and a **Door Contact Sensor** to the Theater room from the Online Database. To add, select **Theater** in the project tree. In the **My Drivers** tab, do the following:

a. In Motorization, double-click Motorized Screen.
b. In Sensors, double-click Door Contact Sensor.

7. Repeat Steps 2 through 6 as needed to add more devices to the applicable rooms.

Example: To finish creating the project tree for the example project, add devices to the **Bedroom** and **Front Room** as follows.

Bedroom:

Select **Bedroom** in the project tree. In the My Drivers tab, do the following:

- In Lighting > Light, double-click **Wireless Dimmer**, and then rename it to **Bedroom Dimmer**.
- In User Interface, double-click **Touch Screen**.
- In Motorization, double-click **Gas Fireplace**.

Front Room:

Select **Front Room** in the project tree. From the My Drivers tab, do the following:

- In User Interface, double-click **3 Button Keypad**.
- In Motorization, double-click **Electronic Gate**.
- In Motorization, double-click **Sprinklers**.
- In Sensors, double-click **Doorbell**.
- In Sensors, double-click **Motion Sensor**.
- In HVAC, double-click **Wireless Thermostat**.

2.9.2.2 Example: Make and Verify the Connections

This section discusses using Control4® Composer Pro views to make and verify the connections.

Note: This process follows Example: Design and Create the Project.

In the Connections view, you can:

- Identify Control4 devices to establish a Network connection
- Check all Network connections
- Define AV connections
- Define Control connections

Note: When only one appropriate connection is available in a room for a given connection type, Composer Pro assumes the connection (example: if a TV is the only Audio Output device in a room, the system assumes that the Audio Output connection is routed to the TV). This feature adds value to Composer Pro, but increases the need to verify every connection.

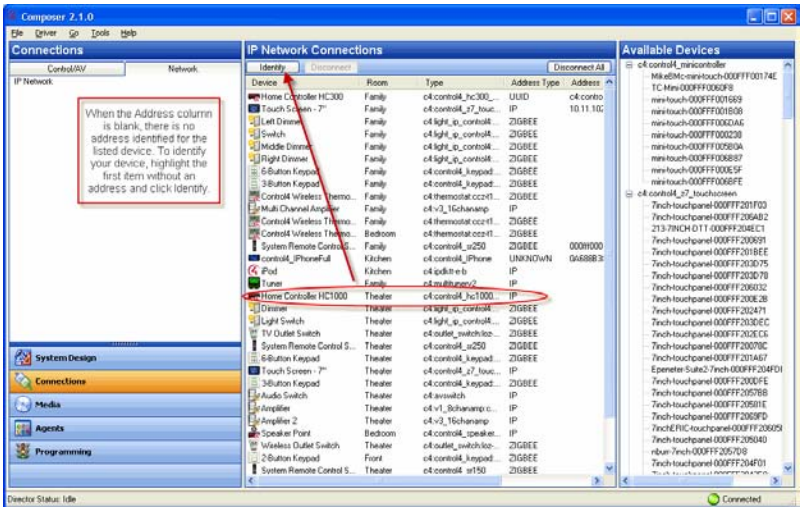
Note: To remove a connection, right-click on the connection and choose **Disconnect**.

To make connections:

1. In Composer Pro, click the **Connections** view.
2. Identify the Control4 devices that connect to the Controller through the network. Go to each physical device and press the button indicated on the Composer Pro screen.

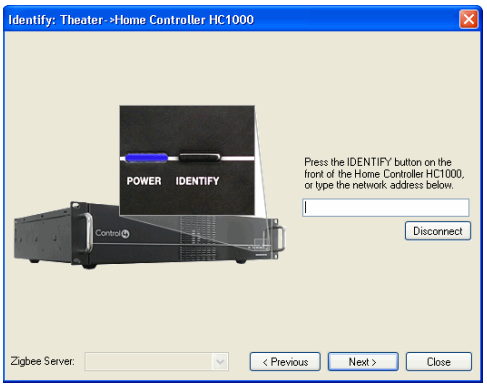
   a. Click the **Network** tab > **IP Network**.

   Notice the devices that do not have an address listed under the Address column.

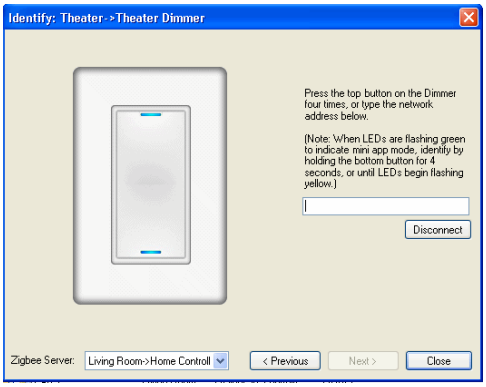


b. Select the **Controller**, and then click **Identify**. The screen to identify the Controller appears (in this example, the HC1000).

c. At the physical Controller, press the **Identification** button. This identifies the Controller with a unique address in the system. When the address appears on the screen, click **Next**.



d. Select **Dimmer**, and then click **Identify**. The screen to identify the Dimmer appears. Press the top Dimmer button **four** (4) times. This identifies this specific Dimmer with a distinctive address to the system. When the address appears, click **Next**.



e. When the Light Switch identification screen appears, press the **top** button four (4) times. When the address appears, click **Next**.

f. When the System Remote Control identification screen appears, holding the physical System Remote Control press the red **4** button once. When the address appears in the box, click **Next** to continue.

g. If you have a Touch Screen in your project, press the **Enter** button on the front of the Touch Screen. When the address appears in the box, click **Next** to continue.

h. When the Outlet Switch identification screen appears, press the **button** on the module **four** (4) times.

i. When the 6 Button Keypad identification screen appears, press the **top** left button four (4) times. When the address appears, click **Next**.

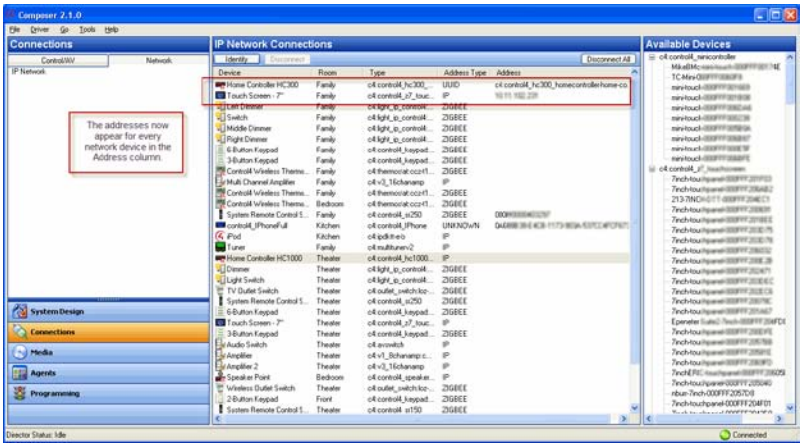
j. When the Dimmer identification screen appears, press the **top** button four (4) times. When the address appears, click **Next**.

k. When the Touch Screen identify screen appears, press the indicated button as shown. When the address appears, click **Next**.

l. When the 3 Button Keypad identification screen appears, press the **top** button **four** (4) times. When the address appears in the box, click **Next**.

m. When the Control4 Wireless Thermostat identification screen appears, press the **middle** button four (4) times. When the address appears in the box, click **Close** to exit Identify mode.

n. When you finish identifying the devices, notice that the Address column now has an address for every network device.

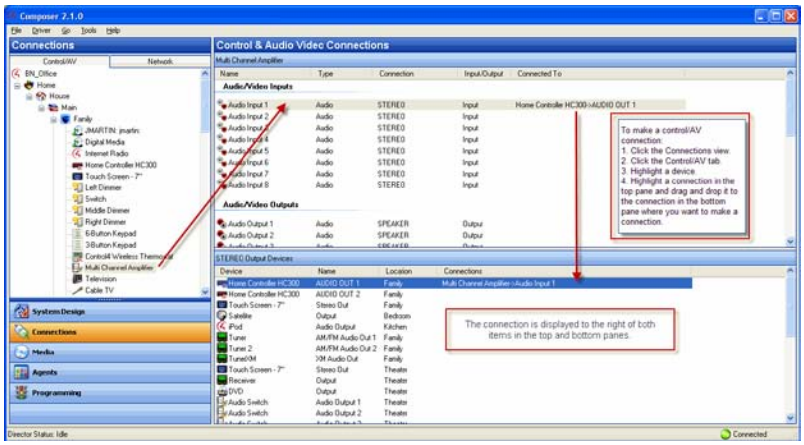


3. Define the AV and Control connections.

Control and AV connections for a device are visible when you click the **Connections** view > **Control/AV** tab, and then select the device. To make a connection between inputs and outputs, from the top pane drag a device's input (or output) to the output (or input) in the bottom pane.

For each device, define the following when applicable:

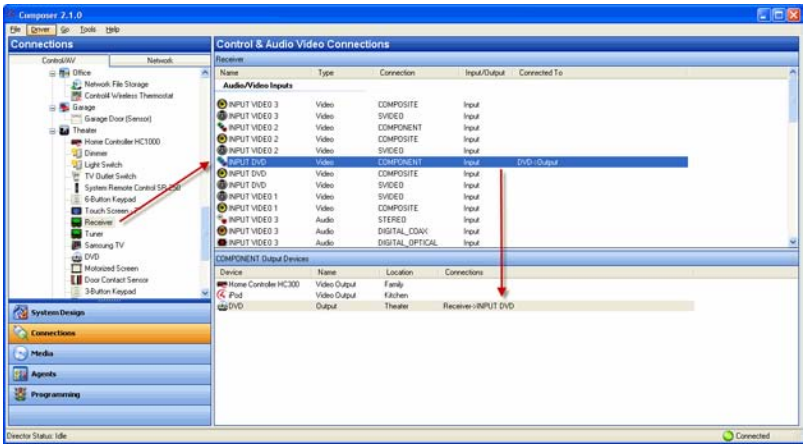
- Video connections (path of video signals)
- Audio connections (path of audio signals)
- Control connections (how the Controller communicates with the device)



a. Define the **AV** connections for the **Receiver**.

Example: In the Connections view under Theater, click **Receiver**. The right top pane displays all the inputs and output on the back of the Receiver. For Receiver, from the top pane in Audio Video Inputs, make the following connections:

- Click INPUT DVD (Video—COMPOSITE), and drag it to DVD (Output—Theater) in the bottom pane.
- Click INPUT VIDEO 1 (Video—COMPOSITE), and drag it to Home Controller HC300(Video Out 1— Family) in the bottom pane. This connects the Receiver Video 1 input to the Controller Video 1 output.
- Click INPUT DVD (Audio—STEREO), and drag to DVD (Output—Theater) in the bottom pane.

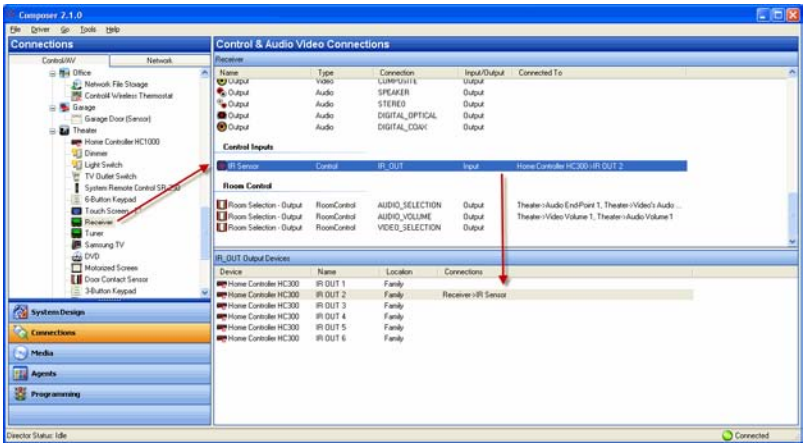


b. Define the **Control** connection for the **Receiver** to the **Controller**.

Example: In the Connections view under Theater, click **Receiver**. The right top pane displays all the inputs and output on the back of the Receiver.

For Receiver, from the top pane under Control Inputs, make the following connections:

- Click **IR** Sensor (Control—IR_OUT), and drag it to Controller (IR Output 2—Theater) in the bottom pane.



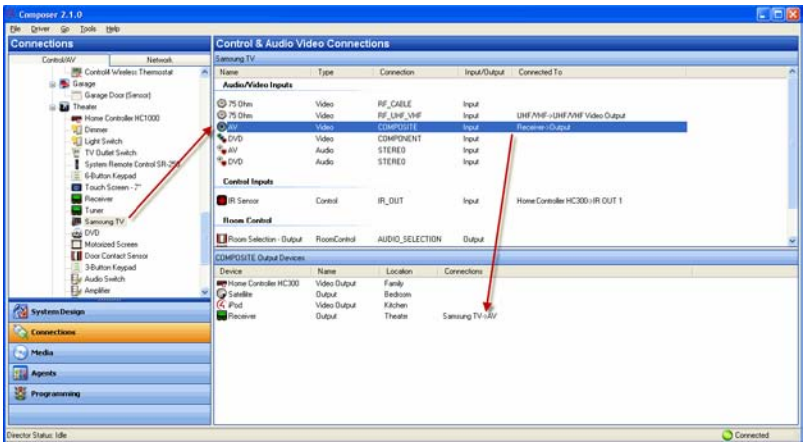
c. Define **AV** and **Control** connections for the **Television**.

Example: In the Connections view under Theater, click **Television**. The right top pane displays all the inputs and outputs on the back of the Television. For Television, from the top pane do the following:

In Audio Video Inputs:

- Click AV (Video—COMPOSITE), and drag it to Receiver (Output—Theater) in the bottom pane.
- Click AV (Audio—STEREO), and drag it to Receiver (Output —Theater) in the bottom pane.

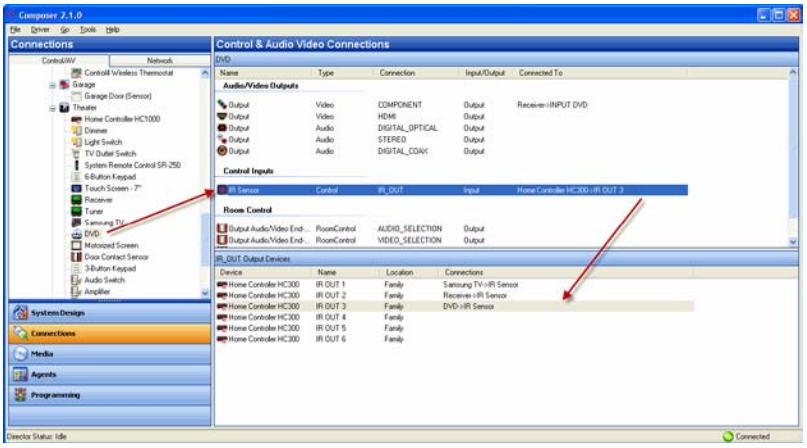
In Control Inputs, click **IR Sensor (Control—IR_OUT)**, and drag it to **Controller (IR Output 1—Family)** in the bottom pane.



d. Define the **Control** connections for the **DVD playe**r to the **Controller**.

Example: In the Connections view under Theater, click **DVD**. The right top pane displays all the inputs and outputs on the back of the DVD. From the top pane, do the following:

In Control Inputs, click **IR Sensor (Control—IR_OUT)** and drag it to **Controller (IR Output 3—Family)** in the bottom pane.

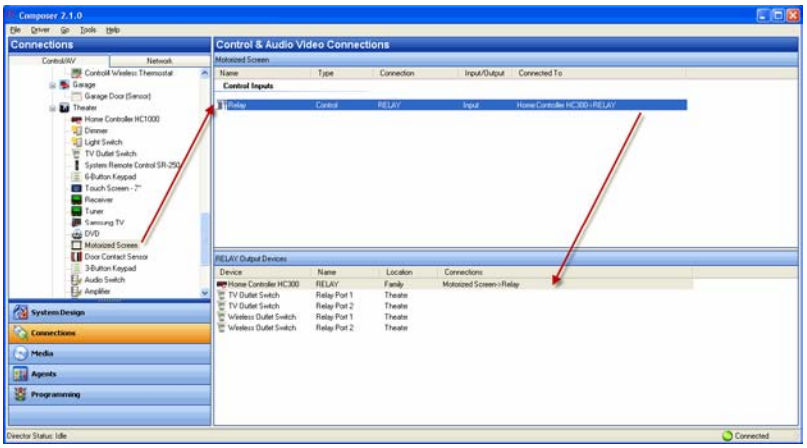


Tip: If you prefer to set up a video sense *loop* instead of using a macro, see “Changing Power Management Options.” After you add a video sense loop connection to the DVD player driver, add a control connection between the Controller and the DVD player.

e. Define the **Control** connections for the **Motorized Screen** to the **Controller**.

Example: In the Connections view under Theater, click **Motorized Screen**. The top right pane displays all the inputs and outputs on for the screen.

In the top pane under Control Inputs, click ***Relay*** **(Control—RELAY)**, and drag to **Controller (Relay Port 3—Family)** in the bottom pane.



f. Define the **Control** connections for the **Door Contact Sensor** to the **Controller**.

Example: In the Connections view under Theater, click **Door Contact Sensor**. The top right pane displays all the inputs and outputs for the Door Contact Sensor.

In the top pane under Control Inputs, click **Contact Sensor (Control—CONTACT_SENSOR)**, and drag it to **Controller (Contact Port 1—Family)** in the bottom pane.

g. Define the **Control** connections for the **Gas Fireplace** to the **Controller**.

Example: In the Connections view under Bedroom, click **Gas Fireplace**. The top right pane displays all the inputs and outputs for the Gas Fireplace.

In the top pane under Control Inputs, click **Relay (Control—RELAY)**, and drag it to **Controller (Relay Port 1—Family)** in the bottom pane.

h. Define the **Control** connections for the **Electronic Gate** to the **Controller**.

Example: In the Connections view under Front, click **Electronic Gate**. The top right pane displays all the inputs and outputs for the Electronic Gate.

In the top pane under Control Inputs, click **Relay (Control—RELAY)**, and drag it to **Controller (Relay Port 4—Theater)** in the bottom pane.

i. Define the **Control** connections for the **Sprinklers** to the **Controller**.

Example: In the Connections view under Front, click **Sprinklers**. The top right pane displays all the inputs and outputs for the Sprinklers.

In the top pane under Control Inputs, click **Relay (Control—RELAY)**, and drag it to **Controller (Relay Port 2—Theater)** in the bottom pane.

j. Define the **Control** connections for the **Contact Sensor** to the **Controller**.

Example: In the Connections view under Front, click **Doorbell**. The top right pane displays all the inputs and outputs for the Doorbell.

In the top pane under Control Inputs, click **Contact Sensor (Control—CONTACT_SENSOR)**, and drag it to **Controller (Contact Sensor 2—Theater)** in the bottom pane.

k. Define the **Control** connections for the **Motion Sensor** to the **Controller**.

Example: In the Connections view under Front, click **Motion Sensor**. The top right pane displays all the inputs and outputs for the Motion Sensor.

In the top pane under Control Inputs, click **Motion Sensor (Control—CONTACT_SENSOR)**, and drag it to **Controller (Contact Sensor 1—Theater)** in the bottom pane.

4. Go to the next section, “Example: Verify the Network Connections.”

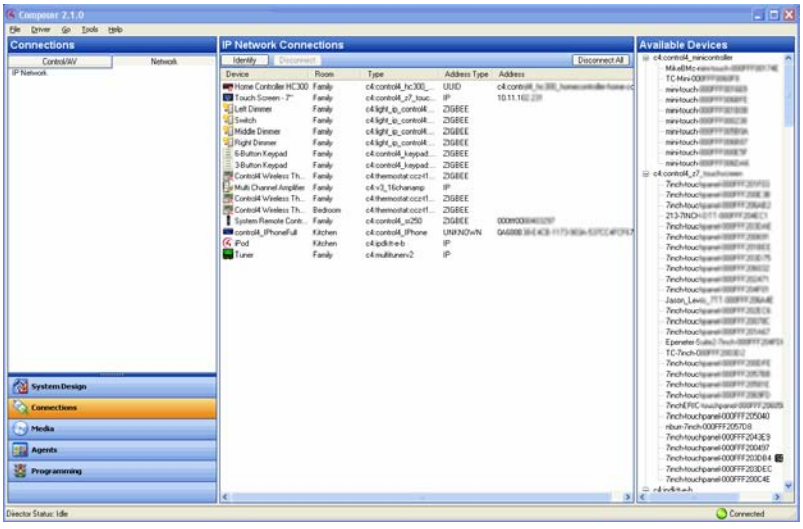
2.9.2.3 Example: Verify the Network Connections

This section discusses using Control4® Composer Pro views to verify the network connections.

Note: This process follows “Example: Make and Verify the Connections.”

There are two (2) places to verify network connections:

1. The Network tab (shown below)
2. The Tools menu



Follow the instructions below to check your connections in both locations.

To check your connections from both locations:

1. From the Connections view > **Network** tab, verify that every device that communicates to the Controller using TCP/IP, WiFi, and/or *ZigBee* has a network address. If a device doesn't have a network address, the device needs to be identified.
2. To identify a device from this location, **right-click** on the **device** and choose **Identify** (or click the **Identify** button). Follow the on-screen instructions provided for each device, such as those listed in the following table.

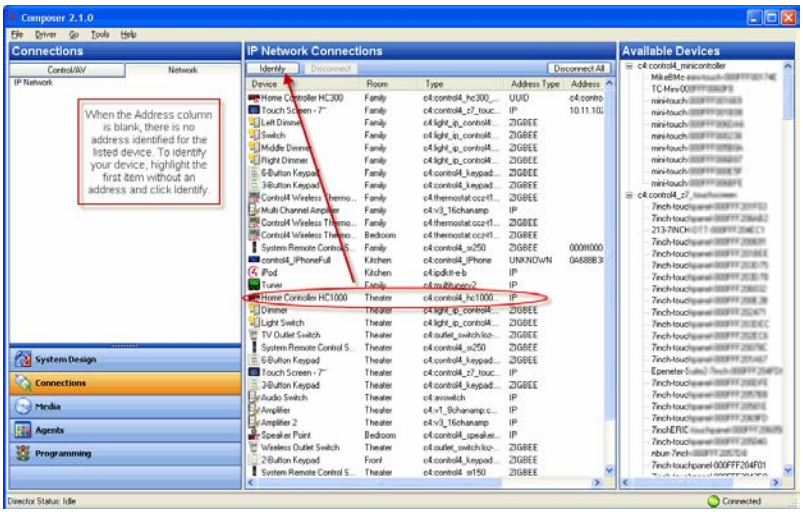
After identifying the network connection, the device's address appears in the list.

Device	Instructions to Identify a Device to the Control4 System
Controllers	Press the **Identification** button on the Controller.
Lights and Keypads	Press **top** button **4** times (6 Button Keypad — press top left button). For Release 1.8 and later, press any button 4 times. MiniApp mode: press bottom left or bottom button 4 times.
System Remote Controls	Press the red **4** button on the remote control.
Speaker Point	Press button **1** time.
Multi Tuners	Press button **1** time.
16 Channel Amps	Press button **1** time.
Thermostats	Press center button **4** times.
Wireless Outlet Switches	Press button **4** times.
Wireless Touch Screens	Press the **Enter** button on the front of the Touch Screen **1** time.
Black & Decker Kwikset Locks	Press the **Top Left** button on the top of the board (remove the lock's cover first) **4** times. To disconnect, press the **Top Right** button on the top circuit board **9** times.
1-Button Products	Release 1.8 and later, press **4** times.
IO Extenders	Press the Link button on the back of the IO Extender.
Media Players	Press the Link LED button on the front of the Media Player.
Touch Screens	Press the button indicated on the diagram of the device in Composer Pro.

2.9.2.3.1 Using the Network Tab

To ensure all devices have been identified from the Network tab:

1. Click **Connections** > **Network tab** > **IP Network**.
2. In the Address column, check if there is an address for every line item.



2.9.2.3.2 Using Network Tools

To ensure all network connections exist and are active from Network Tools:

1. From the Tools menu, select **Network Tools**.
2. Check both the **IP Network** and **Zigbee Network** tabs for Green, Yellow, and Red connection icons. The colors indicate the following:
   - **Green**—An address is identified, and the device is online (communicating).

     Example: The Dimmer is identified and communicating to the system.

   - **Yellow**—An address is identified, and the device is offline (not communicating).

     Example: If the System Remote Control goes to sleep, the status turns Yellow. This indicates that the System Remote Control has been identified, but is offline (not communicating). Make the device active so it can communicate to the system.

   - **Red**—A device is not identified. Go to the **Connections** view > **Network** tab, and identify the device to the system or see “Example: Make and Verify the Connections.”

3. If you find Yellow or Red icons, do the following:
   - **Yellow Icons**—Go to the device, and activate it according to its documentation.
   - **Red icons**—Go to the Connections view > Network tab, and identify the device to the system.

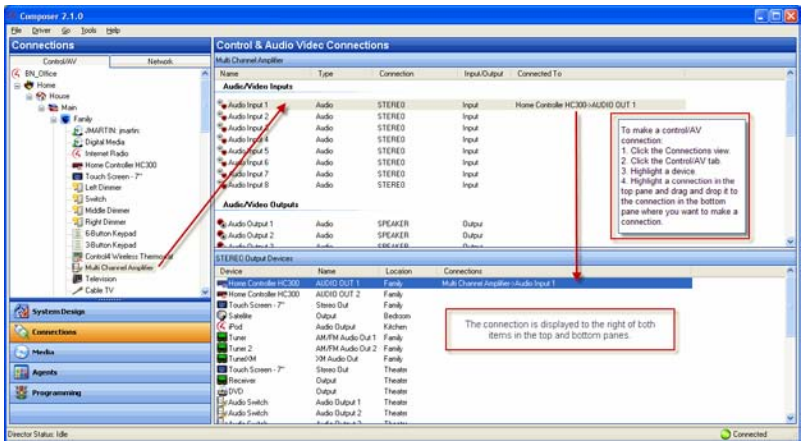
   Example: At this point in your example project, the System Remote Control should be yellow (or the only device not green). The System Remote Control turns green as soon as you wake up the System Remote Control. To wake up the System Remote Control, press the red Control4 **4** button.

2.9.2.4 Example: Define the Control and Audio/Video Connections

This section discusses using Control4® Composer Pro views to define AV connections.

Note: This process follows “Verifying the Network Connections.”

Control/AV connections are visible when you select the **Control/AV** tab in the Connections view. The Control/AV tab lets you define the physical connections between the Controller or other devices, including AV signals, IRs, relays, contacts, and/or serial connections.



Tip: If connections do not appear as needed, edit the driver to create the needed connections. See “Editing a Driver Using the Driver Wizard.”

The following steps are described in the next sections:

“Verify that all Control and AV Connections use Room Properties”
“Disconnect/Remove Control/AV Connections”
“Re-assign Control/AV Connections”
“Update Connections in the project if you change locations”

2.9.2.4.1 Verify that all Control and AV Connections Use Room Properties

To verify all Control and AV connections by checking room properties:

1. Click the **System Design** view.
2. Select a **room**.
3. On the default tab Audio Video Devices, see if your **AV** devices are accessible in the room. If an AV device is not there, see “Make and Verify Connections.”

2.9.2.4.2 Disconnect/Remove Control/AV Connections

To disconnect or remove a control/A/V *connection*:

1. Click the **Connections** view.
2. Select the **Control/AV** tab.
3. In the Control/AV project tree, select a **device** for the device's control and AV connections to appear.
4. In the Control and AV Connections pane, right-click an **input** (or output) connection and choose **Disconnect**.

2.9.2.4.3 Re-assign Control/AV Connections

To reassign Control/AV connections:

1. Click the **Connections** view > **Control/AV** tab.
2. In the project tree, select a **device** for the device's control and AV connections to appear.
3. In the Control and AV Connections pane, **drag** an input from the top pane to a different output on the bottom pane. The connection is moved to the specified output.

2.9.2.4.4 Update Connections in the Project if You Change Locations

If you use the same project but you change locations, you have to update all of the connection information.

To update the connection information in an existing project:

1. Click the **Connections** view.
2. Click the **Control/AV** tab, and **review** your connections to ensure that they are updated in the current control and AV topology.
3. Click the **Network** tab and **disconnect** all connections by **right-clicking** and selecting **Disconnect**.

2.10 Troubleshooting the System

These sections provide some information about troubleshooting a Control4® system.

"Guidelines for Troubleshooting"
"Troubleshooting a Director Connection"
"Troubleshooting Controllers"
"Troubleshooting Device Control"
"Troubleshooting Dimmers, Switches and Keypads"
"Troubleshooting Driver Creation"
"Troubleshooting Media"
"Troubleshooting Navigators"
"Troubleshooting the System"
"Cannot Identify the Device to the Network"
"Troubleshooting the Upgrade Process"

2.10.1 Guidelines for Troubleshooting

This section outlines general troubleshooting guidelines to check first if you are having problems with a Control4® system.

The following table lists the main areas typically found to resolve some issues on the Control4 system.

Guideline	Where To Go
Check room connections	Composer Pro automatically sets room connections when you set up a system. These settings are default settings, and may not necessarily match your physical connection. Ensure that the room connections are set to match your specific system. If you move a device to another room, move it in the project tree also, and then identify it again to make sure it's connected properly. For more information, see: “Connecting Rooms” “Testing Device Controls”
Check Control/AV connections	The Control and AV connections identify the physical connections to the system. When these are defined, the system is completely automated and programmable. However, if one of the connections is not correctly identified, it can cause the system not to run properly. Ensure that the control and AV connections match the physical configuration. For more information, see: “Control/AV Tab” (see *Composer Pro Getting Started*) “Control and Audio Video Connections” (see "Control/AV Tab" in *Composer Pro Getting Started*)
Check network connections	If a device is not using a control connection to communicate to the Control4 Controller, it uses a network connection: a type of connection that uses a network address such as TCP/IP (Ethernet), ZigBee, ZigBee Pro and WiFi. 1. Ensure that the network connections viewable in the Connections view > Network tab all have a network address associated with the device. If not, identify the device again. 2. Ensure that the Control4 Controller, such Home Controller HC-300, has a network address. If the address is not appearing, identify the device again. From the Tools menu, select **Network Tools**. This lets you see all of the ZigBee and IP network addresses on the network. It shows whether the device has an address, and if it has an active connection to the network (status is online). For more information, see: “Network Tab” (see *Composer Pro Getting Started*) “Network Tools Dialog” (see "Tools Menu" and "Network Tools Dialog" in *Composer Pro Getting Started*) Connecting a Device to the Network (see “Connecting Devices”)

Guideline	Where To Go
	"Cannot Identify the Device to the Network" "Verifying the Network Connections"
Ensure Navigators are connected to Director	From any of the Navigators, press **Info** > **Director** (for releases prior to 2.0) or **More** > **Settings** > **Network** (OS 2.0 and later) to ensure that you are connected to the Control4 Controller's network address. You can find out the Control4 Controller's network address from the Connections view > Network tab. For more information, see "Customizing Navigators."
Ensure music is added and scanned	In Composer Pro, ensure that your music is available (added to the Controller) and is scanned into the system. 1. Make sure the stored or broadcast media is added or scanned. 2. Check the Room Properties page to see if the media was added. 3. Ensure that Navigators were refreshed after scanning media. 4. If the Controller reboots, re-scan the media. For more information, see: "Items Pane" (see *Composer Pro Getting Started*) "Setting Up Media Stored on a Controller" "Setting Up Media Stored in a Disc Changer" "Setting Up Media for Television Channels" "Setting Up Media for Radio Stations" "Using External Storage Devices" "Adding an Audio Switch or Audio/Video Switch" "Creating a Playlist" "Editing Media Information" "Testing Media Control"
Refresh Navigators	Whenever you update or scan music, or update devices or device information, from the File menu, select **Refresh Navigators**.

2.10.2 Troubleshooting Controllers

The following table lists troubleshooting problems on Control4 system Controllers.

Symptom	Possible Problems and Solutions
The Controller has N/A for IP address	1. The Controller has no network connection. Plug in your Ethernet cable. After a few moments, the addresses should appear. 2. The power cable is not plugged in. Plug in your power cable. 3. No DHCP on the network. Ensure that DHCP is operational.
The Controller has a blank front display	1. Either your cables are unplugged, or they are not connected. If both are connected, unplug them and connect the Ethernet cable before connecting the power cord. 2. The Controller is not connected to a cable/modem/switch/ using DHCP. 3. Ensure that the Reset button is not jammed behind the plastic cover.
The Controller doesn't come back up after a power outage	To receive a notification of the Controller going down and coming back up, set up an Email Notification agent to alert you when the project is loaded and the Controller comes back up. When you create the alert, place the alert on the project (Device Events top level). See Example: “Program Using the E-Mail Notification Agent.”

2.10.3 Troubleshooting a Director Connection

The following table lists troubleshooting problems connecting to a Director.

Symptom	Possible Problems and Solutions
Cannot see the Network Address of Director in the Director’s dialog	1. In Tools > System Manager, click **Refresh** several times to see if the network address appears. 2. If not, choose **Add** and enter the name and network address. 3. Make sure Director is enabled on the controlling device. a. At a command line, enter **telnet [controller IP address]**. b. Enter the **root username** and **password**. c. Enter **sysman status**. d. If Director is not enabled, enter **sysman enable director**. e. Enter **sysman status** and verify the Director is now enabled. f. Enter **exit**.

2.10.4 Troubleshooting Media

The following table lists troubleshooting problems with Control4 system media.

Symptom	Possible Problems and Solutions
DVDs not showing up in the Disc Changer	Ensure that you have a serial Disc Changer. Only bi-directionally-controlled serial Disc Changers can scan media. If you have a serial Disc Changer, see the following: 1. Ensure that music is added and scanned 2. Check these sections: “Setting Up Media Stored in a Disc Changer” “Connecting Rooms” “Checking Control/AV Connections” “Connecting a Device to the Network”
Cannot play music or music channels not appearing in the Navigators	If music is not running, see the following: 1. Ensure that the Navigator is connected to the Director. See *Composer Pro Getting Started*. 2. Ensure that a room is appearing on the Navigator. If not, click the room and change the room to one that can play music. 3. Ensure that music is added and scanned. 4. See “Connecting Rooms.” 5. See “Checking Control/AV Connections.” 6. See “Connecting a Device to the Network.” 7. Refresh the Navigators. See the *Composer Pro Getting Started*.

2.10.5 Troubleshooting Device Control

The following table lists some control problems on Control4 system devices.

Symptom	Possible Problems and Solutions
The Device is not Controllable from a Navigator	If the device, such as a Dimmer, is not controllable from the Device Control window (double-click the device from the project tree); no connection exists. Refer to the following sections: “Connecting Rooms” “Checking Control/AV Connections” “Connecting a Device to the Network”

2.10.6 Troubleshooting Navigators

The following table lists troubleshooting problems with Control4 Navigators.

Symptom	Possible Problems and Solutions
Not seeing Room Location on the Navigators	From a Navigator (On Screen or Touch Screen), ensure that the device is connected to Director. See “Connecting Rooms.” Check the connections: 1. For an On-Screen Navigator, see “Checking Control/AV Connections.” 2. For Touch Screens, see “Connecting a Device to the Network.”

2.10.7 Troubleshooting Driver Creation

The following table lists troubleshooting problems when creating Control4 drivers.

Symptom	Possible Problems and Solutions
IR Learning is not working	1. A Controller must exist in the project to run IR Learning. Add a Controller. 2. The process of capturing IR codes is very sensitive to lights, such as sunlight, fluorescent lights. If it is not working properly, turn off the lights or cover the physical hardware so that the light cannot interrupt the code capture. For a complete list of IR capturing guidelines, see “Guidelines for Capturing IR Codes.”

2.10.8 Troubleshooting Dimmers, Switches, and Keypads

The following table lists troubleshooting problems with Control4® system Dimmers, Switches, and Keypads.

Symptom	Possible Problems and Solutions
Dimmers, Switches, or Keypads are not behaving correctly	1. **Reboot**. Try rebooting the device by tapping the **top** button 15 times. On the 6-Button Keypad, this is the top left button. This action reboots the device, but does not clear programming associated with the device. 2. **Reset**. a. Tap the **top** button 5 times. b. Tap the **bottom** button 5 times. c. Tap the **top** button again 5 times. If you are using the 6-Button Keypad, this is the top left and bottom left button. This clears all your network connections. d. Go back into the **Connections** view > **Network** tab, and identify the device again after resetting.

2.10.9 Cannot Identify the Device to the Network

This section provides troubleshooting instructions to identify a Control4® system device on the network.

If you cannot identify a device on the network, follow these steps until the problem is resolved:

1. Make sure the Control4 Controller is identified in Composer Pro. In the Connections > Network tab, see the line item for the Control4 Controller. Is there a network address for the Controller?
2. (Controller only) In System Design, select the Controller object to check the *Zserver* status. Is the Zserver running? If not, click **Enable**.
3. If the Control4 Controller is identified and Zserver is running, check whether any other devices identify. Do they?
   - If **yes**, a problem exists with the individual device. On Switches, Dimmers, and Keypads, if you tap the top of the button **9** times, the bottom **9** times, and the top **9** times again (pause for a breath in between each 9 count), this will reset the device. Doing the same thing with 7, 4, and 7 will make the device's LED flash the channel it's on (if it's on channel 14, it will flash 14 times). If the channel doesn't match the one for your System Remote Control and Controller, the channel will need to be changed. Call Control4 Technical Support.

     Note: For Release 1.8 and later, *ZigBee* Pro devices choose one (1) channel. Control4 recommends that you not change the channel; Zserver determines which channel to use automatically based on the available frequency space. Refer to the *Composer Pro Software Release Update Instructions - 1.7.4 to 1.8.2* on the Control4 Knowledgebase or on the Dealer website for details.
   - If **no**, some other devices in the house may be causing interference. Power down any 2.4 GHz devices, such as microwaves and cordless phones. Continue to the next step.
4. Will the devices identify now?
   - If **yes**, something in the house is causing interference. Replace whatever it is, or reset the channel on all of your devices. You cannot reset the channel on Wireless Dimmers, Switches, etc., at this time. Call Control4 Technical Support.
   - If **no**, a problem exists with the Controller's radio transmitter. Call Control4 Technical Support.

2.10.10 Troubleshooting the Upgrade Process

Follow these guidelines if you are experiencing Control4® upgrade or update problems.

2.10.10.1 Basic Troubleshooting Guidelines

1. Reset the device's network settings. See "Resetting the Control4 System."
2. Attempt to have the update successfully downloaded while connected to a different network or by using a USB drive update (see "Information About Older Releases").
3. Allow the device to retry downloading the update as it automatically restarts and retries it.
4. Is the defect install/update related to an ongoing system operation?
5. Media not available? If it is a USB drive or network file share, make sure it is mounted (use the System Design view). If the media is on USB drive connected to a Secondary Controller, re-scan the media for that device.
6. Navigator not connected to Director? Reconnect Navigator to Director.

7. Are strange things happening to the devices?
   - Make sure all *ZigBee* devices are updated to the latest firmware.
   - Make sure Director and Composer Pro are using the same version.
   - Disconnect and identify any problematic devices again.
   - Powercycle all IP devices.
   - Be patient.
8. Turn on Diagnostic Logging (in Composer Pro, **Tools** > **System Diagnostics** > **Logging** > **Start**). Use the Logging tool to determine what was happening on the system. Can you duplicate it, and is there a workaround? For details, see "Logging Diagnostics Information."

Tip: Report any problems during the update process to:

Control4 Technical Support: http://www.control4.com/residential/products/resources/#techsupport
Email: support@control4.com
Telephone: 1-888-400-4072

Status Message	Description	Resolution
1. Device IP address detected with a different version — update needed.	The Director discovered a device that is a different version than the Director box.	Perform update.
2. Device IP address indicated it needs to be updated.	The device sent a status message to the Director that says it needs to be updated.	Perform update.
3. Finished update attempt.	Current update is completed. A separate message notifies you of how many devices succeeded or failed.	(Status message only) No action is required.
4. Update information was missing or invalid. Reinstall the files for the USB drive, and attempt the update again. If the problem persists, contact Technical Support.	A Director could not find the matching update information for a device retrieved from the USB drive. This would be the case if files were deleted from the USB drive.	Re-install the files for the USB drive, and attempt the update again. If the problem persists, contact Technical Support.
5. Update information was missing or invalid. Contact Technical Support.	The Director could not find the matching update information for a device retrieved from the Web. The database contains invalid data.	Contact Technical Support.
6. Director device is not yet identified. Please identify the Director device and attempt the update again.	The system has not yet discovered the Director device.	Identify the Director device, and perform the update again.
7. Starting update to version <targetVersion>. Director version is <version of Director>.	An update has started.	(Status message only) No action is required.
8. Detected USB device containing update information. The USB device will be used for the update.	The system has detected a USB drive.	(Status message only) See "Update from 1.3.x Release with a USB Stick" in "Information About Older Releases" for information about

Status Message	Description	Resolution
		updating with a USB drive.
9. Device <ipaddress>: <Status data received from the device>	The system received data from the device.	(Status message only) No action is required.
10. Updated: <number of updated devices> Failed: <number of failed devices>	Follows the message “Finished update attempt” (number 3) to provide specific details.	Reconnect, re-identify, and restart the update.
11. Device <ipaddress> failed to update.	Provides the specific IP address of any device that failed to update. Follows the message number 10 when applicable.	Try to identify the device again, and try the update again. If not successful, contact Technical Support.
12. Failed email results to <entered email address>”. Error was: <error number>. Verify that the VPN is correctly setup and functioning on your Director box and that a valid mail address was entered. Contact Technical Support if this problem persists.	This is called if an error is returned when trying to send the summary via email.	Verify that the VPN is correctly set up and functioning on your Director box, and that a valid mail address was entered. Contact Technical Support if this problem persists.
13. Unable to obtain update version information from the Web interface at URL <url used for getting the version, i.e., http://webdev-1.control4.com/...>. Verify that Internet access is available from Director.	System has not received the version information back from the database.	1. Ensure that you can communicate to the Internet to the Website from your computer. Use a prompt box to ping the address. 2. Ensure that you can connect to the Control4 Controller through the Local Area Network. 3. Ensure that a firewall is not blocking the update. 4. If you still cannot update, use a USB drive for the installation.
14. Detected devices that still need to be updated. Restarting the update process.	To allow an update to propagate throughout the system, the system waits 5 minutes after the start of the update before checking the status of connected devices. If outdated devices are still detected, this message is sent, and the system restarts the update process.	(Status message only). No action is required.
15. The information on the USB drive is invalid. Reinstall the update on the USB drive and attempt the update again.	The system cannot parse the update-info.html file on the USB drive. The file is not valid xml.	Re-install the update on the USB drive, and attempt the update again.
16. Not enough free space on file system to store update information. Disk free = <amount of free space> needed = <space needed>. Remove stored media, log files, etc., and attempt the update again.	There is not enough free space on the box running Director to store the largest set of packages for a device type.	Remove the stored media, log files, etc., and attempt the update again.
17. Unable to access the directory for update information. Please	System cannot access the /packages directory. Either the disk has a serious problem, or the	1. Ensure that you can communicate to the Internet to the Website from your computer. Use a

Status Message	Description	Resolution
contact Technical Support.	mounts didn't work right.	prompt box to ping the address. 2. Ensure that you can connect to the Control4 Controller through the Local Area Network. 3. Ensure that a firewall is not blocking the update. 4. If you still cannot update, use a USB drive for the installation.
18. Out of file space for packages.	Ran out of disk space while downloading the software packages. The update fails, then restarts after 5 minutes, and the "Not enough free space" message (number 16) displays.	Remove the stored media, log files, etc., and attempt the update again.
19. Device <ipaddress> failed because it reported a status of <reported device status>.	The device reported that it failed to update.	Try to identify the device again, and restart the update. If it fails again, contact Technical Support.
20. Touch Screen device at <IP address> must be docked before upgrading. Please dock the Touch Screen and restart the update.	A Wireless Touch Screen was not properly seated in its dock when the update started.	Please dock the Touch Screen, and restart the update.

2.10.10.2 Diagnosing Trouble Spots

Use the Control4® System Diagnostics tool in Composer Pro to view, monitor, and troubleshoot a Control4 system.

These sections provide information about system diagnostics.

"System Diagnostics Tool"

"System Diagnostics Interface"

"Viewing Controller Performance Information"

"Using the Controller Networking Information"

"Using System Information"

"Logging Diagnostics Information"

2.10.10.2.1 System Diagnostics Tool

Use the Control4® Composer Pro System Diagnostics tool to view, monitor, and troubleshoot a Control4 system.

To access the System Diagnostics tool:

1. Start Composer and connect to a Director.
2. From the Tools menu, select **System Diagnostics**. The tool is available over a LAN connection using remote access.
3. Use the tool to diagnose problems on your own, or capture and send information to Control4 Technical Support.

The diagnostics information is organized into four (4) tabs:

1. Controller Performance
2. Controller Networking
3. System Info
4. Logging

The Control4 system includes many devices running embedded operating systems communicating over a wired or wireless network. During installation, configuration, and troubleshooting, the ability to look at the overall status of the components becomes very useful.

The System Diagnostics tool lets you gather system information to help you determine if any issues encountered are configuration problems, performance issues, or potential defects.

2.10.10.2.1.1 System Diagnostics Uses

Possible uses of the System Diagnostic tool include:

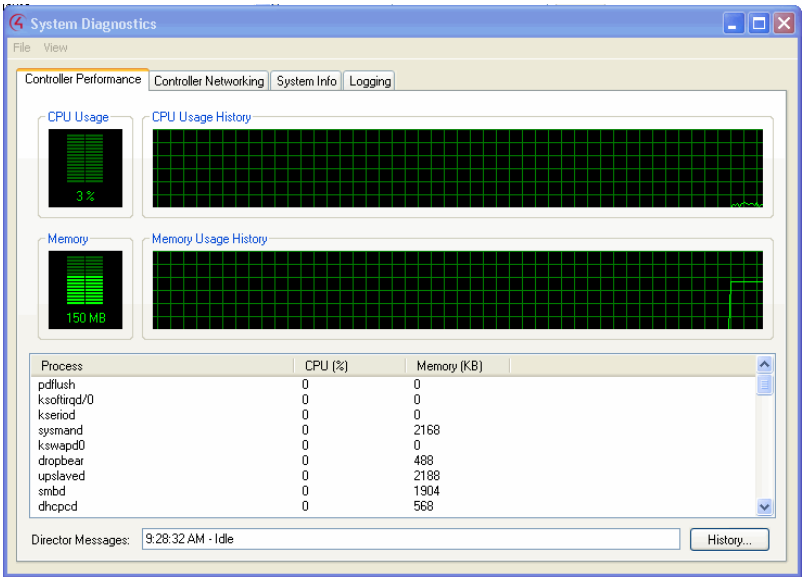
- Viewing Controller Performance information:
  - CPU usage
  - CPU usage history
  - Memory usage
  - Memory usage history
  - Processes running
- Viewing Controller Networking information:
  - Network type
  - Connection status
  - MAC address
  - IP address
  - Subnet mask
  - Gateway
  - DHCP status
  - DNS server information
  - View system information
- Viewing System Information:
  - Detailed lower-level information about the devices listed
- Viewing Logging information:
  - When troubleshooting a problem that is reproducible, use the System Diagnostics tool to capture logged information while reproducing the problem to email to Control4 Technical Support.
  - When troubleshooting a problem that is not reproducible, connect the Controller, enable logging, and allow the logging to continue running for a specified period of time to capture the problem. The logs are then captured and emailed to Control4 Technical Support.

2.10.10.2.2 System Diagnostics Interface

Use the Control4® System Diagnostics tool in Composer Pro (**Tools** menu > **System Diagnostics**) to view the interface and these tabs: Controller Performance, Controller Networking, System Info, and Logging.

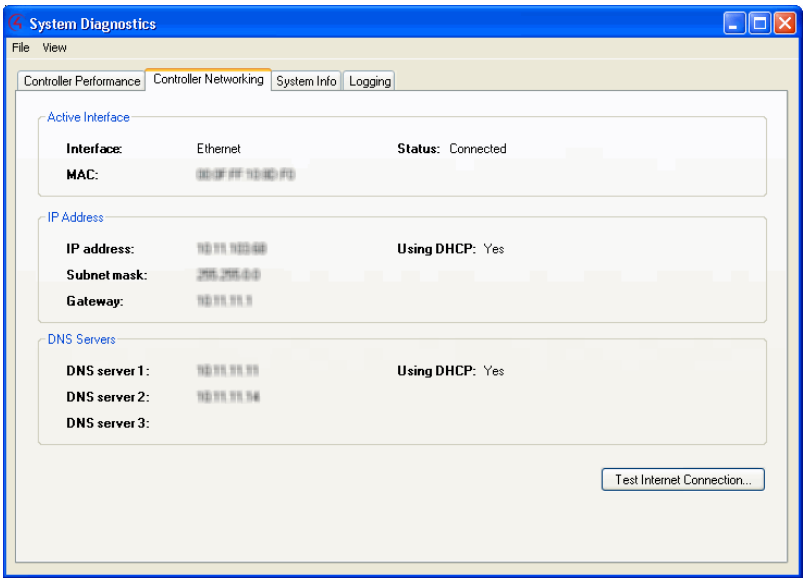
- **Controller Performance**—Lets you view Controller performance information, including CPU and memory usage.

1. Click the **History** button to view the history of the CPU and memory performance.



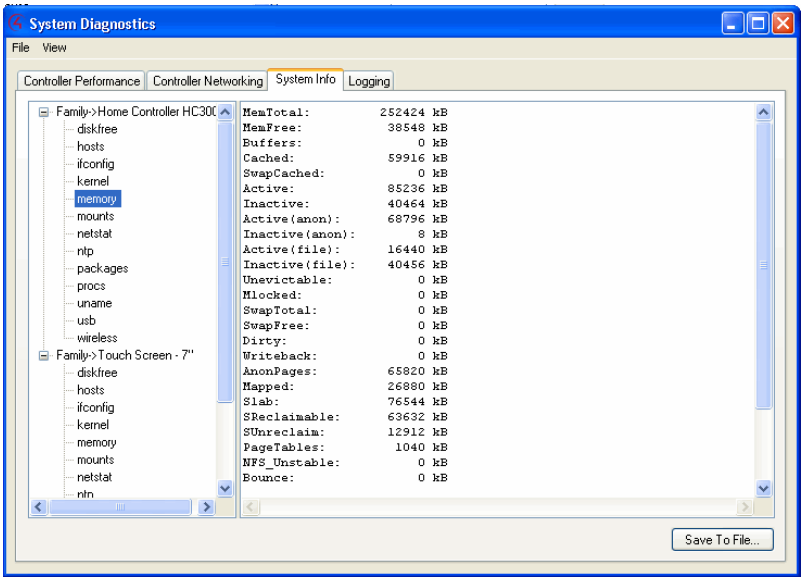
- **Controller Networking**—View Controller networking information, including network type, connection status, MAC address, IP address, Subnet mask, *Gateway*, *DHCP* status, and DNS server information.

2. Click the **Test Internet Connection** button to test the current Internet connection.



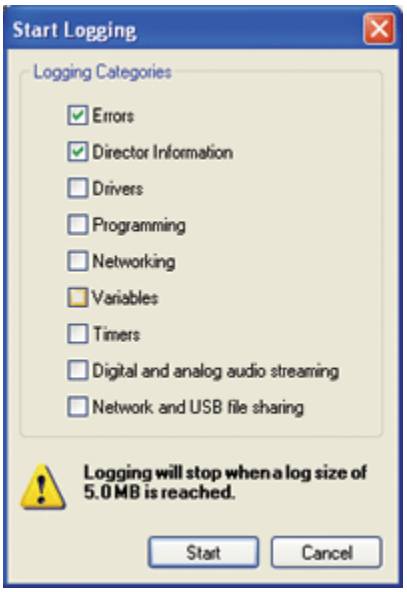
- **System Info**—View detailed System information.

3. Click the **Save to File** button to specify the location and filename for a text-file version of the output.



- **Logging**—Log system problems.

4. Click the **Start Logging** button to indicate what type of logging you want displayed, and then allows you to “Start” the logging process.



5. Click the **Stop Logging** button to stop the tool from logging information.
6. Click **Open Controller Log** to view the logged information in a file.

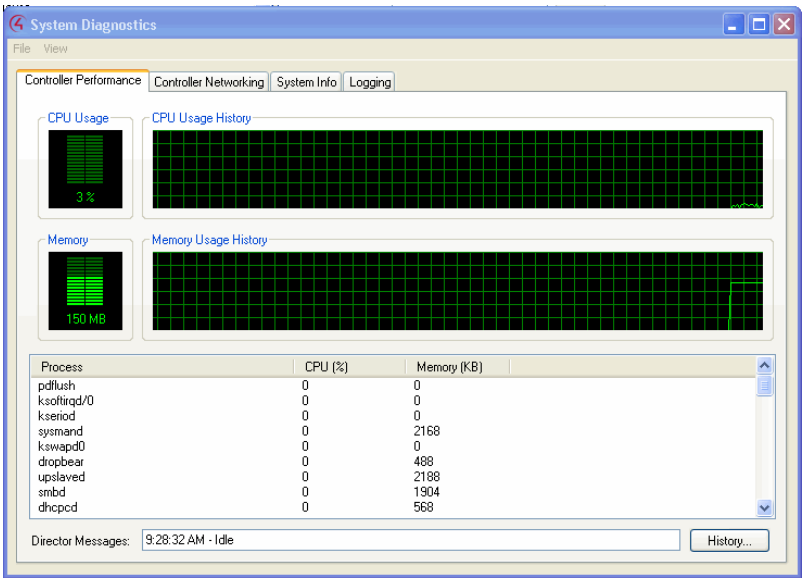
2.10.10.2.3 Viewing Controller Performance Information

Use the Control4® Composer Pro System Diagnostics tool (**Tools** menu > **System Diagnostics**) to view Controller performance.

The Controller Performance tab contains information regarding CPU and memory utilization for the Primary Controller of the project. Asynchronous messages from the Director regarding its current state are also displayed.

To view Controller Performance information, including CPU and memory usage:

1. Start Composer and connect to a Director.
2. From the Tools menu, select **System Diagnostics**. The Controller Performance tab is viewable by default.
3. View information displayed on the Controller Performance tab:
   - **CPU Usage**—Shows a graphical form of current CPU usage and CPU usage history for the Primary Controller, which is the Control4 Controller used to control the system if multiple controllers exist on a system.
   - **Memory Usage**—Shows in graphical form the current memory usage and memory history for the Primary Controller.
   - **CPU and Memory Usage by Component**—Shows percentages of CPU and memory use per component.



4. Refresh the screen or update the speed. To do this, from the View menu you can:
   - **Refresh Now**—Restart the real-time display of CPU and Memory usage.
   - **Update Speed**—Change the speed to High, Normal, Low, or Paused.
5. View the Directory messages by clicking the **History** button.

2.10.10.2.4 Using the Controller Networking Information

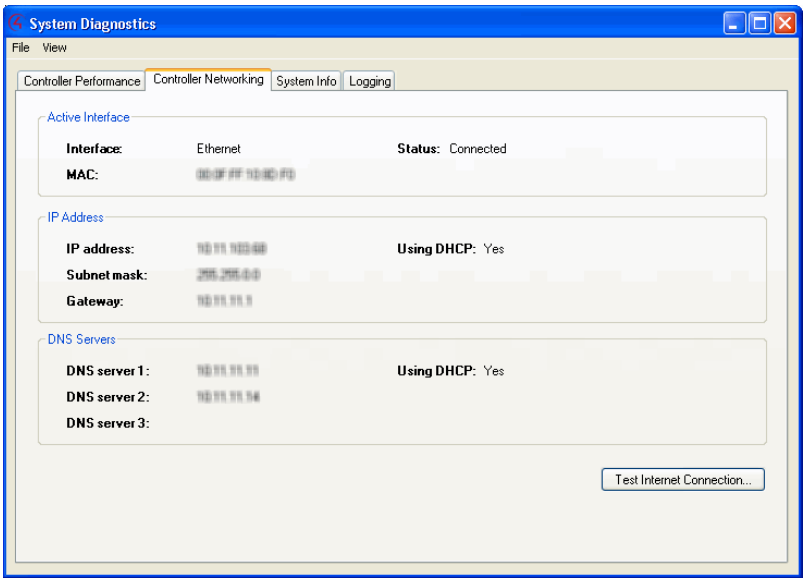
Use the Control4® Composer Pro System Diagnostics tool (**Tools** menu > **System Diagnostics**) to use Controller networking information.

View the information, including:

- Network type
- Connection status
- MAC address
- IP address
- Subnet mask
- Gateway
- DHCP status
- DNS server information

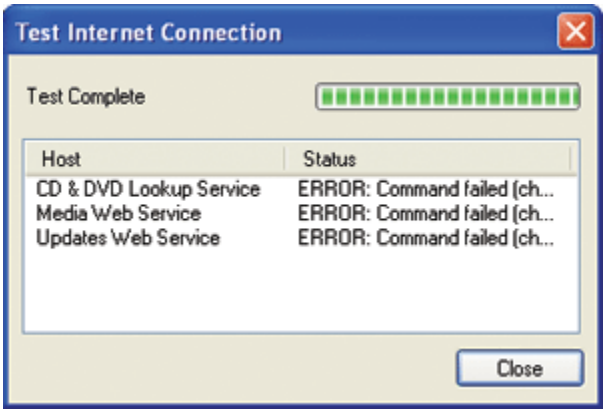
To use Controller Networking information:

1. Start Composer and connect to a Director.
2. From the Tools menu, select **System Diagnostics**, and then click the **Controller Networking** tab.
3. Ensure that the network information shown is reflective of your network.



4. To test your Internet connection, click the **Test Internet Connection** button. The screen displays the current status of networking services, including the CD & DVD Lookup Service, Media Web Service, and Updates Web Service.

   This screens shows that the example services failed.



5. Click **Close** to exit the dialog box.

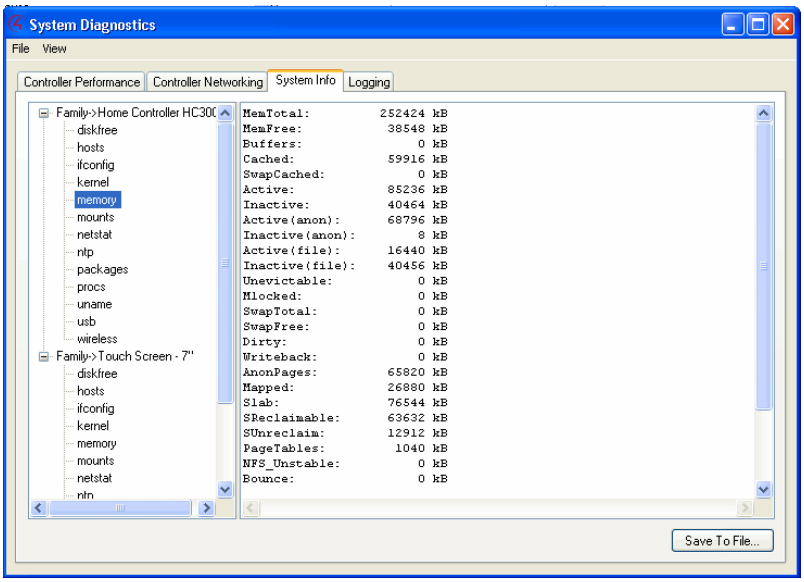
2.10.10.2.5 Using System Information

Use the Control4® system Composer Pro System Diagnostics tool (**Tools** menu > **System Diagnostics**) to use system information.

View System Info current configuration settings, state of the Primary Controller and any other Control4 device in the Control4 system's current project. The information displayed is a summary of several commands.

To use system information:

1. Start Composer and connect to a Director.
2. From the Tools menu, select **System Diagnostics**, and then click the **System Info** tab.
3. Select a **device** or **sub-category** (expanding the list as needed) in the left pane to display the system configuration information in the right pane.



4. To save the displayed information to a file, click **Save to File** and specify the location and name for the file.

2.10.10.2.6 Logging Diagnostics Information

Use the Control4® system Composer Pro System Diagnostics tool (**Tools** menu > **System Diagnostics**) to use the logging feature and log files.

View Logging to configure, start, stop, and schedule diagnostic logging of the Control4 system.

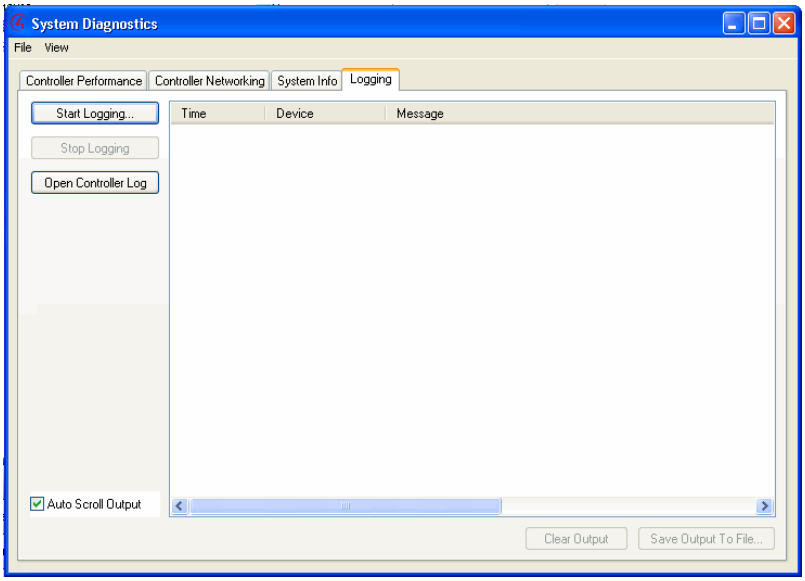
- **Capturing Information While Reproducing a Problem**—When troubleshooting a problem that is reproducible, use the System Diagnostics tool to capture logged information while reproducing the problem to email to Control4 Technical Support.
- **Enabling Logging for Debugging**—When troubleshooting a problem that is not reproducible, connect to the Controller, enable logging, and allow the logging to continue

running for a specified period of time to capture the problem. The logs are then captured and emailed to Control4 Technical Support.

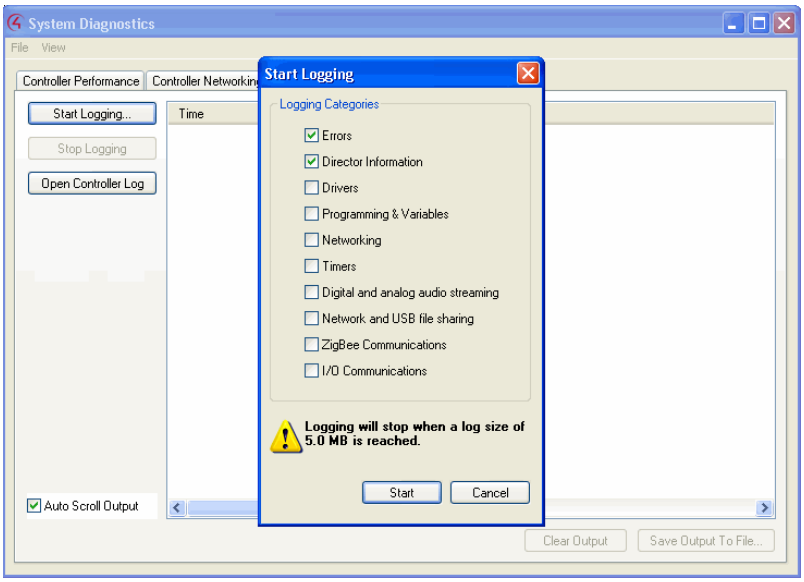
- ***ZigBee*** **and I/O Communications**—These items are available for logging in System Diagnostics.
- **DirectorState.corrupt**—If for any reason Director is unable to load a project file, it is saved to DirectorState.corrupt prior to loading a clean project file (Tools > System Diagnostics > Logging).

To use system logging:

1. Start Composer and connect to a Director.
2. From the Tools menu, select **System Diagnostics**, and then click the **Logging** tab.



3. To enable logging, click **Start Logging**, and then choose whether to save the information currently displayed (if any).
4. Select the logging categories, and then click **Start**. The results are displayed.



5. (Optional) To save the log, but continue logging the results, click **Clear Output**. The logging feature remains enabled, but a Save As dialog box lets you specify the location and name of the text version of the log.
6. (Optional) To save the log and disable the logging process, click **Stop Logging**. The logging feature is disabled, but a Save As dialog box lets you specify the location and name of the text version of the log.
7. To view the Controller Log, click **Open Controller Log**.

2.11 Information about Older Releases

Some Composer Pro tasks may refer to older software releases (prior to OS 2.0) for the Control4® system. See the sections below (Release 1.3 and earlier and Release 1.8 and earlier) or refer to the Release Notes for a particular release.

2.11.1 Release 1.8.x and 1.7.x

2.11.1.1 Release 1.8.2

- **Navigators**. Resolved focus issues which were fixed in Release 1.7.4 but not included in Release 1.8.2.56194 due to release timing.
- **Dock for iPod**. Resolved a problem where the Control4 Dock for iPod would prematurely stop playing music when it was being used in a multiple room session and rooms left the session.
- **Rhapsody**. Resolved the problem with the Rhapsody agent always being re-enabled (if it had been disabled) when Director loads the project.
- **Composer**. Fixed the issue with the 'Project is Locked' message which would occasionally occur even if the Controller was not being updated.
- **ZigBee Server**. Fixed a problem where the ZigBee Server would not talk to the ZAP if its IP address changed. Other minor fixes to improve ZigBee Server are also included.
- **Thermostat Firmware/Driver**.

- The minimum separation between the Heating/Cooling Engage and Cutoff points has been reduced from two (2) degrees to one (1) degree Fahrenheit.
- Improvements to the Control4 Thermostat's ability to control residential heat pump systems.
- New Advanced Properties: Disabling The Call For Auxiliary Heat—Setting the Auxiliary Heat Stage Delay to 255 will prevent the Thermostat from making a call for auxiliary heat. Values in the range of 0 to 254 will be the number of minutes the Thermostat engages the heat pump before calling for auxiliary heat.
- New Advanced Properties: Heat Pump and Auxiliary Heat Overlap—The Auxiliary Heat Cutoff Delay is the length of time in seconds that the Thermostat allows concurrent operation of the heat pump and auxiliary heat. A value of 255 will cause them to run together indefinitely (subject to maximum run times and/or achieving the goal temperature).

- **Card Access**. Updated Card Access firmware for the Wireless Contact Relay and Heavy Duty Power Switch devices that enables them to support parenting functionality. This change will benefit installations with sparse meshes that are using these Card Access devices to extend the mesh.
- **Black & Decker Smart Code Door Locks**.
  - Improvements were made to the Black & Decker Door Lock driver and firmware (01.05.00).
  - The Black & Decker door lock doesn't update until after 3 AM; a message "update failed" will appear until the update takes place. The following functionality does not work until the locks have been completely updated:
    - Email notifications
    - Incorrect status feedback – UI and Composer Pro
    - Is controllable from Composer Pro and bound to a keypad
    - Message "Unknown response from lock" appears in the last status message dialog box in Composer Pro
    - Firmware Version will state "Not Connected"
- **Media**. Changed the media lookup service to c4lookup.
- **Security**. Added a check to the SSL server certificate creation to detect a malformed certificate. If detected, the server certificate will be recreated automatically when the Controller is rebooted. This corrects the occasional occurrence of "project locked" when not being updated.

2.11.1.2 Release 1.8.0

- **Agents**
  - The Composer Pro Timer agent interface has been updated to allow for specification of timer duration in a more flexible way. Timer selection is now in the format hh:mm:ss.
  - Now include Control4 system and user-defined variables in the templates created using the E-mail Notification agent. To use this new capability, the Installer can create or modify email templates using Composer Pro, Agents, E-mail Notification, and then use the 'Add Variable' option.
  - Deleting the Timer agent doesn't remove the programming.

- **Audio**
  - Fixed a problem where using the Apply To button to set parametric equalizer settings on the Amplifier settings were not getting set correctly.
- **Channels**
  - In Control4 Software Release 1.7.0 and previous versions, Dealers used multiple ZigBee Servers running on different channels to enable more responsive and higher node count (or distributed) EmberNet networks. With ZigBee Pro, only one channel is used for the entire system. The channel is selected automatically based on an RF energy scan at the time that the ZigBee Pro network is established; but it can be changed manually. Multi-ZAP configurations automatically and seamlessly provide the benefits that used to be realized by multiple Zserver and channels.

    Prior versions of Control4 systems used Channels 1-14. With ZigBee Pro, the channel numbering now uses Channels 11-26 in order to comply with the channel numbering specified in the ZigBee Pro standard. The actual channel frequencies are the same throughout. The new channels are the same as the old channel number + 11. Example: The default channel was 14 on which all EmberNet devices were shipped.

    In ZigBee Pro, it is now channel 25 (14+11=25). The ZigBee channel number can be changed any time as long as the Control4 system is not being updated. All ZigBee Pro devices on the mesh network automatically move to the new channel.
- **Controllers**
  - Fixed a problem where the Announcement agent was not showing the Home Controller HC-200 as a video end point.
- **Diagnostics**
  - Corrected the 'Test Internet Connection' feature in System Diagnostics so that it doesn't return invalid failure notices.
- **Drivers**
  - Added a driver for Black & Decker locks.
- **Keypads**
  - When programming a conditional on a Keypad, we now include the Keypad name in the programming script.
- **Lighting**
  - Implemented multicast Lighting Scenes in conjunction with the ZigBee Pro firmware. Each device stores information about its defined behavior in up to 32 different Lighting Scenes. When you execute a scene, a multicast is sent to all devices on the mesh. Devices immediately respond based on their defined behavior, eliminating "popcorn" lighting.
  - Added an option to the Properties page of the 2-button, 3-button, and 6-button Keypads to 'Follow Bound Color.' This is the default configuration, and has been the only option in previous releases. In this configuration, the Keypad LED colors are set based on the device to which they are bound using button-link connections. New with Release 1.8.0, Installers can uncheck this option. This lets the Installer specify the on/off colors for the Keypad LEDs independently of the device to which they are linked.
  - Added double- and triple-tap events to the Control4 Dimmers, Switches, and Keypads. When you tap a button consecutively two (2) or three (3) times for about one-half of a second, these events fire. Now you can use these events for programming without

requiring the more complex programming logic tied to timers and button Press / Release events.

Note: When programming using double and triple-tap events, be aware that Press and Release events also occur when double and triple-tap events occur. Plan your programming using these events so that they don't conflict with the intended outcome. In most cases, when using double and triple-tap programming events, don't program on the Press and Release events.

- **Network**
  - Added a new Network Tools menu. We replaced the Network Status menu with enhanced functionality including tree views.
- **System Remote Control**. Added programming events to the System Remote Control SR-150 and SR-250 'Watch' and 'Listen' button presses. This lets the Installer use Control4 programming to define room-specific behavior when the Watch / Listen buttons are pressed. The Watch / Listen button options now include: 'No Action' (new – used for programming your own behavior), 'Select Most Recently Used Device,' and 'Show Device List.' You can select the desired behavior using the Composer Pro System Design view. Programming triggered by the Watch and Listen buttons is performed using the room events.
- **Thermostat**
  - Undershoot/overshoot configuration now applies to both heat and cool. With the updated Thermostat firmware, the 'undershoot' and 'overshoot' settings are now used to determine when the Thermostat will call for heating and cooling.

Previously, the overshoot setting was only used for determining when to disengage the heat, and the undershoot setting was only used for determining when to disengage the air conditioning.

With Release 1.8.0, the undershoot setting determines when both the heating and cooling systems are engaged, and the overshoot setting determines the cutoff for when the heating and cooling systems are disengaged.

Examples:

Heating – Set point set to 72. With an undershoot of 1, the heater will engage at 71 degrees. With an overshoot of 1, the heater will cut off at 73 degrees.

Cooling – Set point set at 78. With an undershoot of 1, the cooler will engage at 79 degrees. With an overshoot of 3, the cooler will cut off at 75 degrees.

- **Third-Party devices**. The following third-party devices are no longer documented in Control4 documentation. Refer to Release 1.8 and earlier about configuration information for these devices.
  - VLinx Serial Server. Appendix C: Configuring Devices, "Add a VLinx Serial Server to Expand Serial Control" has been removed from the *Composer Pro User Guide* and online Help.
  - HVAC devices.

2.11.1.3 Release 1.7.3

- Updated firmware for the 4-Zone Amplifier, with the following changes:
- Better fan speed control (less fan “noise”)
- Input gain control from front panel
- Power save enable/disable from front panel
- Balance control from front panel
- Shorted output detect

2.11.1.4 Release 1.7.2

- **Polling**. Removal of “polling” functionality from Director: With the introduction of Control4’s 1.6 system software, functionality was added to the system for polling dimmers to determine their current light level. Now, with the 1.7.2 release, Control4 has removed polling functionality from Director. Each time the Dimmer light level changes, the system is automatically notified. This improves graphical navigator tracking of light levels and linked keypad LED tracking.
- **Drivers**. A new security driver for the GE Networx NX8-587E virtual keypad interface (added to the Online Database for drivers).
- **Commands**. Added a device-specific programming command to the Control4 Dock for iPod driver which allows the LED on the dock to be turned on/off using programming. Please note that the LED will automatically turn on when the Identify button is pressed.
- **Dimmers**. In conjunction with the support for the new Control4 Wireless ELV Dimmer, on all Control4 Dimmers you now have the ability to configure a load profile. While the load profile settings are primarily intended for the Wireless ELV Dimmer, they also work on the standard Dimmer. Specifically, you can use Minimum On Level (%) for Dimmers that have a dimmable fluorescent (or CFL) load. This changes the dimming range so that the 0-100% seen by the user starts at the Minimum On Level %.
- **Touch Screens**. Resolved problem where the 7” Touch Screen buttons would stop working if the Touch Screen was rebooted or lost, and regained its network connection while the system was still running.
- **Zones**.
  - Resolved problem where phantom audio zones would remain displayed on the Zones page of a Touch Screen if a network message wasn’t received.
  - Resolved a problem with the zone feedback from an HAI OmniPro security panel incorrectly displaying off by 1.
- **Thermostat**. Resolved a problem whereby using Composer HE or Composer Pro’s device control for a Control4 Thermostat would set the mode to Off.
- **Screen Saver**. Enabled photo Screen Saver for Home Controller HC-200, HC-300, and HC-500 operating in PAL display mode.
- **IP Cameras**. Resolved problem which prevented IP Cameras from being hidden or re-ordered using Composer Pro.

2.11.1.5 Release 1.7.1

- Support for the Control4 Dock for iPod hardware release.
- Support for the 7" Wall-Mount Touch Screen.
- Support for ISO file scanning using the Video Media interface on network file storage devices.

- Improved functionality for the Watch / Listen buttons on the System Remote Control SR-250. With the 1.7.1 release, you can choose between two modes of operation for the Watch / Listen buttons on the SR-250. You can select either the toggle most recently used mode or the new device list mode of operation. This configuration is selected using the Composer properties page of the SR-250. If you choose to utilize the device list mode of operation, use the Navigator tab (in Composer Pro, System Design) for the room you are controlling to configure the device visibility and display order for these menus.
- Support within Composer Pro and driver Web service to enable the downloading of DriverWorks drivers from the online driver service.
- Support for inter-command delay in one-way serial drivers.
- Fixed bug that didn't allow the debounce timer in the sensors drivers to be enabled.
- Fixed bug that caused the sunrise/sunset "next occurrence" values to be incorrectly set on a new project after the previous project was cleared.
- Fixed bug that prevented the selection of playlists after a media scene was deactivated.

2.11.1.6 Release 1.7.0

- **Media Player** and digital video file support. The 1.7.0 release introduces support for Media Player devices and the ability to select digital video files from Navigator for playback through Media Player devices. The Media Player devices can be found under the A/V section of My Drivers in Composer Pro's System Design view. The Media Player device type encompasses A/V devices that have the ability to playback or decode digital video files for playback through standard A/V equipment. Release 1.7.0 includes support for the Netgear EVA8000 as a Media Player. Digital video files can be stored on a Network File Storage device in a Control4® system, configured with associated meta-data in Composer Pro's Media view and can be selected from Navigator's Video menu.
- **Import DVD List from File**. In Composer Pro's Media view, any Disc Changer can now quickly and easily be populated with all of the meta-data associated with the DVDs stored in the Disc Changer. By right-clicking on the Disc Changer in the Media view and selecting, the "Import DVD List from File" option, Composer Pro will automatically populate the slots of the Disc Changer with the DVDs stored in each slot as listed in the file that is imported. The imported file must be a CSV (comma separated value) file listing the slots and the titles of the DVDs, one per line. This file can be created using a simple text editor or spreadsheet program by exporting a spreadsheet file in a CSV formatted file. This new feature provides a simple and easy way to quickly configure all of the DVDs in any manufacturer's Disc Changer.

  Example formatting for CSV file:

  1, Toy Story

  2, The Incredibles

  3, The Perfect Storm

- **Composer**.
  - Composer Pro support for 64-bit edition of Windows Vista.
  - Composer Pro may not automatically reconnect during update – During the update to 1.7.0, Composer Pro may not automatically reconnect to the controller. If this is encountered, disconnecting and reconnecting to the controller will allow you to resume

monitoring the update status. It is not required to be connected for the update to proceed.

- **Info Tab**.
  - All important information relative to a customer's project can now be stored in the project in Composer Pro's Info tab.
  - When viewing the System Design view, you will find the Info tab next to the Properties and List View tabs in the middle pane of the window.
  - Information about the system owner, the dealer, installer, all relative contact information and specific notes regarding the system's configuration can all be saved in the project when entered in Composer Pro's new Info section.
- **Touch Screens**.
  - Programmatically changing backlight levels on a Touch Screen when in screen saver mode now executes as programmed.
  - Mini Touch Screen waking up from screen saver may incorrectly display top buttons – If a Mini Touch Screen is configured to wake up from the screen saver and go to a default view that is other than the main view such as the lighting or music view, the top row of buttons along the top of the Mini Touch Screen's display may be displayed incorrectly. Going back to the home screen will reset this display.
- **LED Colors**. Custom colors are now persistent in the custom color list for Dimmer, Switch and Keypad LED color configuration.
- **Agents**.
  - Several configurations of announcements or deselecting the "Show OK" button in Composer Pro's Announcement Agent view could cause Composer Pro to crash in 1.6.0. This issue is now resolved.
  - Images used in the Announcement Agent and in the web images from the camera driver should be no larger than 300 KB – The display of images in the Announcement Agent and the display of web images through the web images camera driver is designed to work with small images commonly used on websites or in graphical user interfaces. The recommended size for these images is 300 KB or less. Larger images will be scaled to the required size for Navigator but this scaling process for very large images can cause a Mini Touch to restart.
  - Deleting an agent configuration may not delete all associated programming – When deleting an agent, please confirm that all associated programming is also deleted. It may be required to manually delete some elements of associated programming.
- **Events**.
  - Using a randomized time for a scheduled event start time now properly uses a randomized time value.
  - In the 1.6 version of Composer Pro, the issue of seeing Scheduler events duplicated in the Scheduler Agent view has been resolved.
- **Variables**.
  - Container variables in Media Scenes or connection outputs on an Amplifier now function as configured. An issue was discovered with this type of configuration in 1.6.0.
  - Use of random numbers is programming variables has been improved.
  - Container variables and lights – As with previous releases, we recommend that you not utilize container variables for lighting. The 2-way feedback from the individual lights can

cause undesired light level oscillation when a light level is adjusted and multiple light loads are included in a container variable.

- **Blinds**. The Somfy blinds' Stop option was incorrectly grayed out in Composer Pro. This function is now available and functional.
- **Thermostat**. Selecting the "Locked" radio button on the Control4 Thermostat properties page did not work properly. It now reflects the state properly.
- **Media Scenes**.
  - In some configurations, Composer Pro may lock up and/or crash when selecting Media Scenes in previous releases. This issue has been resolved.
  - Controlling volume for whole session using zones page with Media Scene will cause volume control problems – When using a Media Scene with volume control tracking enabled will create volume control problems if trying to control volume from the session controls in the Zones page. This configuration should be avoided in situations where the zones page is used and volume tracking is enabled.
- **Wakeups**. An error not allowing a Wakeup to be executed during the hour of 12 PM has been fixed. Attempts to configure this in 1.6 would revert to 12 AM instead of 12 PM.
- **Audio Matrix Switch**. The Audio Matrix Switch no longer increments by 8 when increasing the volume in a room with the Audio Matrix Switch configured as its audio endpoint.
- **Conditionals**. Programming conditional "If time is day time" or "night time" may not execute correctly within one minute after sunset – If programming exists that is triggered at sunset or sunrise and then other programming exists that is triggered immediately upon this change that executes the conditional on day time or night time, the change may not be immediately recognized. It may take up to a minute for this programming to execute correctly on the change from night to day or from day to night.
- **Home Theater Controllers**
  - Home Theater Controllers with 128 MB of internal storage should not be used as primary controllers in multi-controller projects – Home Theater Controllers produced earlier than December 2005 had 128 MB of internal storage. Home Theater Controllers produced subsequent to that date have 256 MB of internal storage (use System Diagnostics, System Info, HTC, disk free to check disk space) in the Home Theater Controller. Using a Home Theater Controller with 128 MB of internal storage as a primary controller in a multi-controller system is not recommended. There is insufficient internal storage to allow Update Manager to update the entire system. There is no problem using an HTC with 128 MB of storage as a secondary controller.
  - Using multiple audio outputs simultaneously on a Home Theater Controller or Media Controller when Navigator is running simultaneously may cause audio playback to skip – In systems with multiple audio zones with the HTC or MC used as audio endpoints, it is recommended that these controllers do not run Navigator simultaneously.
  - Home Theater Controller may take a long time to update – In some projects, we have found that the Home Theater Controller may take up to two hours to complete the update. If you suspect a problem, please let the controller continue to attempt to update for at least two hours. If the issue persists, please attempt to recover the controller using the USB Recovery Utility.
- **ZigBee**. ZigBee firmware update when using an HC-300 as Zserver may not successfully finish the ZigBee firmware update – Some of the early HC-300s may exhibit a slow or halted ZigBee firmware update. If you encounter these issues, please contact technical support for additional assistance.

- **Analog**. Streaming an analog source from audio input on a Controller to a WiFi audio endpoint is limited to one stream – Audio signals that are processed through the analog input on a controller are processed as a PCM stream and require much more bandwidth than streaming an MP3 stream to a WiFi audio endpoint. In this configuration, Control4 recommends that only one stream be used at any one time.
- **Hybrid Devices**. Firmware on hybrid devices didn't update? – The Multi Channel Amplifier, Audio Matrix Switch, Multi Tuner, and Contact Relay Extender can be configured using IP or ZigBee. However, in order to receive a firmware update, they must be configured and connected via IP only. If they show up in the Connections->Network Identification screen as being identified as both IP and ZigBee, then the ZigBee connection needs to be disconnected. If they were previously configured as ZigBee and have been changed to IP, but are still not updating, you may need to restart Director (use System Manager to Disable and then Enable).
- **USB stick**. Scanning a large USB hard drive appears to hang Composer Pro – If you attach a large capacity USB hard drive (230 GB of MP3s used in this example) to an HC-300 and scan that drive, Composer Pro will appear to lock up and the system will appear to become unresponsive. This is not true. Though the system appears to be locked up, it is processing the data necessary to perform the scan. After you press the Scan button, this scenario will play out as follows:
  - Preparing to scan, Director Status: Idle, Connected for a second then:
  - Preparing to scan, Director Status: Idle, Disconnected for about 60 seconds then:
  - Preparing to scan, Director Status: Comparing Files with Database for about 10 or more MINUTES then:
  - Scanning, Director Status: Idle, Connected for another couple of minutes then you will finally see albums populating in the list.
- **Audio Endpoint**. Static on Audio Output? – As a reminder, occasionally, when using the Home Theater Controller, Media Controller, Mini Touch Screen or Speaker Point as an audio endpoint, occasionally the devices will output static from one or both of the audio outputs when music is being played. This can be resolved by power cycling the device. The Mini Touch Screen's click sound may also play very loudly, and sound very harsh. This is caused by the same root problem and power cycling the device will resolve it. Note: the devices need to be completely unplugged and not just rebooted for the audio device to reset properly.
- **Controller**. Cannot register a controller with a "." in the name – Due to network device naming conventions, it is not possible to successfully register a controller that has been configured with a "." in the name of the controller. Control4 advises dealers to avoid this configuration.
- **Zones**. Hidden rooms show up as a blank line in Zones page – The hidden rooms that are used for audio distribution by Media Scenes show up in the Zones page on a blank line. This does not affect functionality.

2.11.1.7 Release 1.3 and Earlier

- **Wireless Touch Screens**. From the printed version of Composer Pro User Guide, Chapter 3, "Build a Project in System Design:" Previously, it was not necessary to add the Wireless Touch Screen in the Composer Pro project; however, this is now a requirement for versions 1.3 and above. If you previously had a Wireless Touch screen on your system, follow the special update instructions at "Update the Wireless Touch Screen from Pre-1.3 Release."
- Connecting Rooms: In the 1.3 Release, the method to assign the volume control in the room is using the priority End Points rather than the volume, as with earlier releases. With the 1.3 Release, the use of Volume 1 and 2 for Volume management only when the Volume

management is different from the End Point as might be the case in different configurations, such as when a switch is part of the audio or *AV* path. To use the priority 1 or 2 feature (*End Point* or Volume), configure the highest-priority volume provider as the device that is least likely to be in the path. For example, a Television is always in the path, but a Receiver is not in the path unless one is added. Therefore, set the Receiver as the first device (Video Volume 1).

- **Audio End Points 1 and 2**: With the 1.3 Release, the Audio End Points 1 and 2 also define the first and second device that handles Volume control for audio in the room.
- **Video End Points 1 and 2**: Prior to the 1.3 Release, this option was the only way to manage video volume.
- **Video Audio End Point**: With the 1.3 Release, the Video Audio End Point 1 and 2 also define the first and second device that handles Volume control for audio when watching video in the room.
- **Audio Volume 1 and 2**: Prior to the 1.3 Release, this option was the only way to manage audio volume. Note that legacy projects might still contain Volume 3; however, this is no longer available in the 1.3 Release.

- **Latitude and Longitude**. In the 1.3 Release, the longitude changed to make it consistent with worldwide conventions. Western hemisphere longitudes are now registered as a negative value rather than positive (they were all positive in prior releases). When your system is updated from 1.2.x to 1.3, this is automatically converted. However, if for any reason you load a backup project created with a prior release, this conversion does not take place. Your scheduled sunrise/sunset-based events still happen, but based on times appropriate for somewhere in the Eastern hemisphere. If it does not happen automatically, enter your zip code again to automatically correct your longitude value.
- **Media Scenes *Agent***: Prior to the 1.3 Release, if you wanted to put audio in multiple rooms, you needed to start a session, start a party, and add rooms. Do this each time you want to play music in multiple rooms.
  - Prior to Release 1.3.2, the following features were not supported:
    - Media Scene Status added —Shows activated, deactivated, or changed).
    - Discrete Volume setting available for a Scene—Used primarily with the Control4 Multi Channel Amplifier. Works well with Tracking. Overrides Initial Volume. The source selections do not change the volume in a room.
    - *Command* “Last Selected Room” added—Activate a Media Scene based on the most recent room selected instead of the Last Source Selected default.
    - *Event* “When Scene changes” added.
    - Conditionals “If Activated” and “If Deactivated” added.

2.11.1.7.1 Updates Earlier than Release 1.2.0

For projects created prior to 1.2.0.91 (which was released on 9/21/2005), Control4 recommends that you re-create your project configuration.

2.11.1.7.2 Update from Release 1.3 to 1.7.x from the Internet

To update from 1.3.x to 1.7.x:

1. Ensure that the existing installed Composer Pro version is 1.7.x.
2. From the Tools menu, select **Update Manager**.
3. Ensure that all devices that you want to update have been identified in your project before starting. The Update Manager dialog appears.

Possible states of the Update Manager:

Idle—No upgrading is occurring.
Updating—Upgrading of a device(s) is occurring.
Update Pending—Upgrading of a device is stalled. See “Troubleshooting the Upgrade Process.”

4. To begin the update, select **Update**.
5. The Update System dialog appears. Click **Begin Update**. To cancel the upgrade, click **Cancel**. During the update, Director will disconnect from Composer Pro.
6. A screen appears with status messages about the update. The status screen closes and Update Manager opens where you can check the update progress. The current update shows “Complete” in the Update Status column when each device has been updated. Devices that were not recognized as connected show as “Failed.”
7. Wait for Update Manager to complete the full update process for all devices.
8. Update Manager is done when the current version is correct for all devices—the status will show as Idle. Zserver updates continue for some time for all *ZigBee* devices.
9. Reconnect to **Director** after the Controller restarts.
10. Ensure that Director and Composer Pro are the same version.

To update from Release 1.3.x using a USB drive:

To use the USB drive install, first download from the Internet the USB install onto a computer, and then move it to a USB drive. A computer with at least 120 MG of free disk space that is formatted as FAT32 is required.

The USB Install supports updates from version 1.3.0 to later versions. It does not support updates from versions prior to 1.3 (such as 1.2.5).

To update using a USB drive:

1. Download the **USB Install** to a local computer.
2. Insert the USB drive into the computer.
3. Run the file by double-clicking it for a wizard to appear.
4. After the wizard is finished, insert the USB drive into the USB port on the Controller.
5. Launch the USB Install in Composer Pro by going to **Tools** > **Update Manager** and selecting **Update**. The Update Manager detects the USB Install and indicates that it is using the USB Install for the update.

To update the Wireless Touch Screen from a release prior to 1.3:

Prior to Release 1.3, the Wireless Touch Screen — 10.5” was not part of the project. It is now a requirement to add the Wireless Touch Screen to the project so the update can update every device.

1. On the Wireless Touch Screen, go to Info > About and write down the IP address of
2. this device.
3. Ensure you have successfully updated your system to 1.7.x.

4. In the System Design > My Drivers tab, double-click to add the appropriate Wireless Touch Screen to your project:
   - Mini Touch Screen
   - Touch Screen - 7” Wall Mount
   - Touch Screen - 7” Portable
   - Touch Screen - 7” Table Top
   - Wireless Touch Screen - 10.5”
   - Wireless Touch Screen V2 - 10.5”
   - In-Wall Touch Screen - 10.5”
5. In the Connections view > Network tab, identify the device to the Control4 system. To do this, select the Wireless Touch Screen, and click Identify. When the Identify dialog appears, type in the IP address that you wrote down previously.
6. On the Identify dialog, click **Close**.
7. Launch the update to 1.7 (Tools > Update Manager) again to update the Wireless Touch Screen to Release 1.7. When the update is completed, the Wireless Touch Screen is updated each time you run the update for the Control4 system.
8. After the Wireless Touch Screen is updated, identify the device again by following the instructions in Step 3 and pressing the button.

   Note: After you have completed the initial update of performing the special steps for the Wireless Touch Screen, you do not need to perform any additional steps; the Wireless Touch Screen is now part of the project and will receive updates automatically.

3. Glossary

4

4Sight: An Internet service that provides a connection to the Home-Automation System any time and from any place worldwide.

A

AAC: Advanced Audio Coding. A successor to the MP3 format. A standard, lossy compression and encoding scheme for digital audio. Touts better sound quality.

action: An activity that occurs when an event prompts it to do so.

agent: In Control4 programming, agents provide the ability to perform complex programming by using functional modules. There are various types of agents; for example, Announcements, Email Notifications, Scheduler, Lighting Scenes, Wakeup, etc.

AV: Audio Video

B

Boolean: The computer logic used to determine if a statement is 'True' or 'False.'

button-link binding: The LED colors used based on the device; the Installer can set these colors independently from the device to which the colors are bound.

C

CD: (Compact Disc) - An optical disc that stores digital data. This format is compatible with Control4 products.

client: A software or hardware device that communicates to a server for feedback from the server via an application for the user.

Command: A 'do' statement; actions the Director communicates to a device.

Composer: The Control4 software used to design and define a Control4 Home-Automation System.

Composer Pro: Composer is used to set up and configure Control4 devices to communicate with each other in a Home-Automation System.

conditional: An 'if' statement that asks a true/false questions which are acted upon in Composer programming.

configuration worksheet: Used in Composer software training to design and configure a project in Composer.

connection: Binding or linking devices together in Composer so they can communicate with each other.

contact: Contacts are generally used to monitor the status of something (door, window, water sensor, etc.) and can be hooked up through a security panel or directly using a Control4 Controller or Contact/Relay Extender. Contacts connected to a Control4 Controller or Contact/Relay Extender can be configured either as NC (normally closed) or NO (normally open).

Control4 system: A Home-Automation System designed and developed by Control4.

Controller: The main device that makes Home Automation possible. There may be multiple Controllers within a Control4 system. The Controller that runs Director is referred to as the Primary Controller.

Cover Art: An illustration of the cover of a DVD or CD album that displays in the Graphical or On-Screen Navigators when playing music or watching videos.

CSV: comma-separated value. Can be used when adding media to a Control4 system.

D

device: A component that requires a device driver; code that is used to allow the Control4 system to work with that device.

device driver: Every device in the Control4 system needs a corresponding device driver to control the device.

DHCP: DHCP (Dynamic Host Configuration Protocol) - A protocol used between a network client and a DHCP server (usually a router or access point) that dynamically assigns IP addresses from a pre-defined list to clients on a network.

Director: Each Control4 Controller (such as a Home Controller HC-500) ships with pre-installed Director software (Linux based) embedded in the device. The Director communicates with Control4 products and third-party products to enable Home Automation and interaction of individual devices. Director runs the Control4 devices. Composer Pro is the software used to connect to and program a system Director that resides on a Controller.

DriverWorks: The DriverWorks SDK is used to create two-way drivers for audio video (AV) and non-AV devices.

DVD: (Digital Versatile Disc) – A media format for video and data storage.

E

end point: The end point is the final point (device) on the defined path over which audio and/or video content is routed to a room. An example of this would be a TV or Receiver.

Ethernet: Uses Ethernet category 5 (CAT5 or CAT5e) wiring to transfer data. Ethernet uses a star network topology that allows multiple points to communicate to a single point. The Speaker Point® and Mini Touch Screens use Ethernet to communicate to the Control4 Controller.

event: An action; used to trigger Composer programming when programming Control4 devices.

F

Forward-Phase Dimming (also known as Leading Edge Dimming): A type of phase-cut dimming in which the load is dimmed by cutting off the leading edge of each electrical cycle. This type of dimming must be used with magnetic transformers (magnetic low-voltage loads) and works well for many other load types including incandescent and cold cathode. It should not be used with electronic transformers (electronic low-voltage loads) unless the transformer specifications specifically state that Forward Phase dimming is allowed.

file format: A format used by applications to store/read files.

FLAC: Supported by Control4 for software release 1.8, this is a free, open source, lossless audio codec format that supports tagging, cover art and fast seeking. Audio is compressed with no loss in quality.

full duplex: The simultaneous transfer of data in both directions. For example, on a 5” or 7” In-Wall Touch Screen the caller can send out a call and the receiver on the other end of the call can answer via his or her 5” or 7” In-Wall Touch Screen and then respond.

G

gateway: (router)- Provides a means of communicating between two separate networks.

H

home network: A network installed in the customer’s home that provides an Ethernet or wireless connection so that Control4 devices can communicate with each other.

Home-Automation System: The Control4 system: a line of Home Automation products that communicate with each other over Ethernet, WiFi, or ZigBee for a total Home Automation experience.

I

Intercom: A two-way audio and/or video communication among supported Control4 Touch Screens.

Interviewer Wizard: An automated setup program in Composer that builds a project for Home Automation.

IR: A device controlled using a wireless remote control device. Commands are sent via pulses of infrared light to the device.

K

keypad managed: On a Keypad, the LED state is controlled by the buttons on the Keypad.

keypad unmanaged: On a Keypad, the LED state of the buttons is controlled through programming rather than from the Keypad buttons.

L

LCD: (Lighted Crystal Display) - A display used with some Control4 interfaces.

LCD Navigator: An LCD device used to control lighting, music, videos, etc., on an LCD screen.

Linux: An operating system used by several Control4 devices.

List Navigator: A System Remote Control device uses a Navigator that lists the options.

Live Connection: A term used in Composer Pro to indicate an actual connection to the network.

Loop: A type of conditional in programming; a 'while' statement; for example, "while the sprinklers are on…"

M

Media Manager: Media information is stored in the Media Manager database, which will permit users to view the media information from the Navigators.

MP3: A music format that makes streaming audio available.

N

Navigator: A Control4 Navigator used with the Control4 system to control lights, music, videos, etc. Navigator is software that the customer interacts with using a Universal Remote Control, On-Screen Navigator, Touch Screen, or LCD Screen.

O

On-Screen Device: Allows you to select the controller (Media Controller or Home Theater Controller) in the room that controls the source for the on-screen display.

P

playlist: A list of songs compiled in a list. The list can be compiled by songwriter, album, song type, or any combination.

Power Over Ethernet (POE): A Control4 device that is Ethernet controlled.

programming: A machine-readable artificial language used to express computations that can be performed by a device.

project tree: A tree view in Composer where the project is layered by the larger branches (Home, Office, etc.) and then the lower branches (floor, rooms, etc.), and finally to the leaf level (drivers).

R

ramp rate: The rate that a Dimmer ramps up its voltage.

relay: An electrical switch that opens and closes. A relay is controlled by another electrical circuit.

remote access: The ability to access a device from a remote location.

Remote Director: Connects you to the home network while working in Composer from a remote location.

retrofit: The ability to set up a Home-Automation System in an existing structure or home. Compare this with new building construction.

Reverse-Phase Dimming (also known as Trailing Edge Dimming): A type of phase-cut dimming in which the load is dimmed by cutting off the trailing edge of each electrical cycle. This type of dimming must be used with electronic transformers (electronic low-voltage loads), and works well for many other load types including incandescent; some types of dimmable fluorescent and compact fluorescent; and some LED power supplies. It should never be used with magnetic transformers (magnetic low-voltage loads).

RJ-45 jack: An eight-pin jack used to connect CAT5e network cables to devices through Ethernet signals.

router: See gateway. Functions similar to an AP but with additional functionality for controlling the network; for example, coordinating traffic between different networks.

S

serial-controlled device: Serial-controlled devices with an RS-232 interface and control protocol often have a higher level of controllability than IR-controlled devices. Examples of serial-controlled devices are projectors, multi-disc DVD changers, etc.

switch: An extension of a router that adds more Ethernet ports to support additional devices or clients on the local network.

system event: An action that causes another action; for example, if a projector turns on, it enables the other devices in the system that work with the projector.

system remote: System Remote Control

System Remote Control: A Control4 System Remote Control is a universal solution that replaces System Remote Control devices from other manufacturers, and includes programmable buttons. This System Remote Control can access on-screen (Graphical) Navigators.

T

Touch Screen: A Touch Screen is a Home-Automation System Navigator that controls the home's lighting, music, videos, and other devices on the Home-Automation System.

U

UI (user interface): The preferred term is Navigator. The Control4 interface used with Control4 devices to control Home Automation, such as Touch Screens, MyHome apps, or On-Screen Navigators.

universal remote: Universal remote control. A third-party remote control that can be programmed to replace other remotes in the home so that only one remote is needed, replacing all others. Control4 System Remote Control devices are a type of universal remote control.

USB: Universal Serial Bus) - A format used with USB sticks that plug in to a USB port on Control4 devices.

V

Virtual Connection: A term used in Composer Pro to indicate a connection outside the network.

Virtual Director: A connection to a virtual Controller only (a PC is the Director host rather than the Controller). Projects created or edited here are benign until the saved project is loaded onto a Controller.

W

WAP: Wireless Access Protocol. The protocol used to enable wireless access of Control4 devices.

WiFi: Uses bi-directional wireless technology to transfer data. WiFi (wireless fidelity) devices "connect" to each other by transmitting and receiving signals on a specific frequency of the radio band using a wireless access point. This technology uses the star network topology. WiFi uses high bandwidth 802.11.

wired network: Uses Ethernet Category 5 (CAT5) wiring to send and receive data between devices connected to a network.

wireless access point: A router extension with an antenna that communicates with WiFi devices and clients in the home. A wireless hub that connects to the wired network, and distributes the wireless signal.

Wireless Switch: Uses the ZigBee. UL listed dimmer. Single or multi-gang. Has an air gap to cut power.

WLAN: Wireless local area network.

WMA: (Windows Media Audio) – Audio data compression technology developed at Microsoft; an audio file format that competes with MP3.

Z

ZigBee: A wireless network that uses bi-directional wireless mesh network technology to transfer messages from one device to another. Unlike a star network topology where devices can only send messages to each other by sending them first to a single central device (which then delivers the message to the recipient device), a mesh network topology allows the devices to forward messages from one device to another, thereby extending the effective range of the network. Uses low bandwidth 802.15.4. 250 devices are allowed per controller but Control4 recommends 125.

ZigBee Pro: The 1.1 version of ZigBee that provides improvements in standardization by: allowing more interoperability with other Control4 devices, support for home automation profiles, and improves the scalability of multiple ZigBee access points.

Zserver: A ZigBee server that contains software which runs on a Control4 HC-class Controller.

Index