

Composer HE User Guide

Contents

Contents	2
Introduction	8
Scope	8
Related documents and resources	8
Composer HE overview	
Setting up the Control4 system—overview	9
Composer HE system requirements	10
Computer software and hardware	10
Home computer network	10
Control4 home automation network	11
Installing the hardware and software	12
Installing and connecting the hardware	12
Installing Composer HE software	13
Exploring Composer HE features	15
First page	15
Composer HE startup options	15
Start Composer HE	15
Exit Composer HE	17
Composer HE views	17
Available views	17
Monitoring view	
Monitoring pane	
Project tree search and filter	
Device Control window	23
Properties pane	23
Room Properties	
Device Properties	
List View pane	
Information tab	
Media view	
Possible buttons	
Right-click options	
Agents view	
Programming view	40
Composer HE menu options	42
File menu	42

Media menu	44
Tools menu	45
System Diagnostics	
Account Services	49
Help menu	50
Basic Composer HE tasks	50
Accessing the List view from the project tree	50
Removing items from the project tree	51
Clearing a project	51
Exiting Composer HE	
Getting project configuration information from a controller	
Loading a project's configuration from a computer to a controller	52
Backing up a Composer HE project	
Backing up and loading from a virtual to a local or remote Director	54
Backing up a project's configuration and media	54
Composer HE Version Independence	
Connecting Composer HE to a Virtual, Local, or Remote System	
Virtual System	57
Local System	
Remote System	
Composer HE makes new decisions when connecting	
Connecting to a Virtual System with versioned APIs	58
Connecting to a Local or Remote System with versioned APIs	58
Connecting to a Director	61
Connecting Composer Pro to a Virtual, Local, or Remote System	
Virtual System	62
Local System	
Remote System	62
Connecting to a Director on a local network	63
Setting up Remote Access	63
Connecting to a Director using Remote Access	64
Requirements	64
Connecting using Remote Access	65
Ensuring that Director and Composer are compatible	
System Compatibility Check	
Registering the Control4 system	
Register the system at customer.control4.com	
Register the controller from Composer HE	68
Setting up a 4Sight subscription	

Where to go from here	
Other resources	
Basics	
Monitoring the system	
Check the Device Status in List View	
Change Project Properties	
Configuring device properties	
Help for device properties	
Examples	
Example: Use the Access agent	
Example: Use the Advanced Lighting agent	
Setting up media	
Media types	
Overview of media management	
Media Manager	
New scans	
Scans where content is in the media database	
Other Media Manager considerations	
Media storage	
Media lookup service	
Setting up media auto-scan	
Disc changer	
Scanning media in a disc changer	
Automatically scan media	
Searching media in a disc changer	
Edit CD or DVD information	
Adding a DVD or CD	
Setting up videos for a media player	
Setting up media for radio stations	
Setting up media for television stations	
Setting up Internet radio stations	109
Importing a DVD list from a file	
Using external storage devices	
Attach and scan external storage devices	
Access and scan network storage devices	
Creating a playlist	
Testing the media connection	
Editing media information	
Editing CD information	

Editing DVD information	120
Using and Programming with Agents	
Agent types	
Using the Announcements agent	
Using the Communication agent	126
Add new Intercom group	128
Local Devices tab	
External Devices tab	
Using the Custom Buttons agent	129
Guidelines	
Using the Email Notification agent	
Using the Light Properties agent	
Using the Macros agent	
Using the Media Scenes agent	
Guidelines	
Using the Color agent	140
Quick Configuration	140
Presets	141
Add Preset	141
Edit Preset	142
Preset Order	142
Import/Export Presets	142
Advanced Properties	142
Using the Media Sessions agent	144
Configuring the Master Volume Slider	145
Using the MultiDisplay Manager agent	145
Using the Scheduler agent	149
Using the Screen Saver agent	151
Using the Timer agent	
Using the UI Configuration agent	
Using the Variables agent	
Using the Wake/Sleep agent	
Programming	
Programming basics	
Event-driven programming	164
Programming elements	
Programming with commands	
Programming with conditionals	173
Programming with Delay, Stop, Break, Or, And, and Else commands	175

Delay command	175
Stop command	
Break command	
Else command	
And command	
Or command	
Programming with a While statement	
Programming using digital audio and rooms	
Program a button to play media or a playlist	
Program a button to turn up the volume	
Program a button to add a room to another room's music session	
Set the default for a room's music volume	
Examples: programming with variables	
Example: Using room variables	
Variable handling	
Example: Using custom Boolean variables in an agent	
Example: Using a custom number variable in an agent	
Example: Using a custom string variable in an agent	
Other programming tasks	
Using Programming Comments	
Using Find and Replace	
Using Copy and Paste	
Customizing Navigators	
Overview	
Setting up screen savers	
Setting up the photo screen saver	
Setting up a custom screen saver	
Programming the screen saver sleep mode	
Changing the time on a Navigator screen saver	
Hiding device availability	
Viewing device availability in navigators	
Troubleshooting	
Guidelines for troubleshooting	
Troubleshooting controllers	
Rebooting the Control4 system	
Resetting the Control4 system	
Troubleshooting a Director connection	
Troubleshooting media	
Troubleshooting device control	

Troubleshooting dimmers, switches, and keypads	233
Diagnosing trouble spots	233
System Diagnostics tool	233
System Diagnostics uses	233
Viewing controller performance information	234
Using the controller networking information	235
Using system information	237
Logging diagnostics information	237
Glossary	
Index	245

Introduction

This document gives you comprehensive information, tips, best practices, and examples about how to use Composer Home Edition (HE) for Control4 Operating System (OS) Release 3.3.1 (OS 3.3.1). Use Composer Home Edition (Composer HE) Monitoring, Media, Agents, and Programming views to modify your system.

The purpose of this document is to give you instructions and examples about how to use the Composer HE application to monitor your system, set up your media, program the system, use agents, and other useful Composer HE tasks.

Scope

This Control4 Composer HE User Guide, which was formerly separated into two parts, is now compiled into a single manual. The User Guide covers these topics:

- What's new in this release
- Configuring properties
- Customizing the Navigators
- Setting up the media
- Programming the system

For information about what's new in this release, see What's new in this release.

Related documents and resources

Document Title Control4LocationSystem User GuideWeb: ctrl4.co/userguide

Composer HE overview

This document is for homeowners who want to learn how to use Composer HE in the Control4 Smart Home OS 3.3.1 (OS 3.3.1) or later.

The Control4 system is a combination of Control4 and third-party controllable devices, for example, HDTVs, DVDs, CD players, speakers, home theaters, lights (and so on) that communicate with one another via TCP/IP, infrared (IR), serial, contact, or relay connections.

Composer Home Edition (ComposerHE) is the software application for homeowners to modify, properties, programming and media in their Control4 system. The software runs on either a Windows 7, 8, 10, or Windows Vista computer, and provides a powerful graphical interface for object-based programming. When connected to a Control4 controller, the project's information is then communicated to Director on the controller. Director, in turn, uses the configuration information and device drivers to communicate to the devices in the home automation system.

Note: Composer HE 3.3.1 is not compatible with Windows XP

Setting up the Control4 system—overview

Setting up a fully functional Control4 system includes the following major procedures.

For best results, Control4 recommends that you follow the procedures in this order:

- 1. **Install and connect the hardware**—When deploying a Control4 system, install and connect the essential devices:
 - A Control4 controller (for example, an EA-3)
 - A Windows-based computer to set up and configure the home automation system using Composer HE
 - The device to be controlled (for example, touch screen, DVD player, speakers, lights, Dock for iPod, etc.)
 - A controller and PC connection to the home network
- 2. **Purchase the required licenses**—To use Composer HE for your company or your employees, you'll need to purchase and assign licenses. See the document Managing Dealer Accounts on My.Control4.Com for details.
- 3. Install the Composer HE software–Use the Composer HE installation software to install Composer on a PC and activate it using your my.control4.com dealer user account.
- 4. **Connect to a Director** Each time you start Composer on your PC, you either connect to Director running on a local or remote controller (live connection) or a virtual Director running on your PC (virtual connection). Director is the software on a controller that stores the Control4 system configuration and manages the control of each subsystem and device in the Control4 system.
 - Live connection: To make changes to a Control4 system in real time, connect to the Director through either *Local System* (over the home network) or *Remote System* (over the Internet).

Note: Remote Access must be configured locally before using a remote connection to the controller. See "Setting up Remote Access."

- Virtual connection: Alternatively, to create or edit the system configuration offline and save the project file, connect to Director through *Virtual System*. The saved .c4p project file can be loaded later into a controller through a local connection to ensure that Director has the updated system configuration.
- 5. **Plan and design the system**. [This step must be done by a Control4 Dealer using Composer Pro] To design a system in Composer Pro, you first create a project in the form of a project tree that represents the hierarchy of locations for the devices to be automated in the home-automation system (site > building > floors > rooms > devices) and the devices that reside in each room.
 - Create a plan. Creating a plan before you start your project in Composer Pro will help make your system design go much more smoothly.
 - **Design the system using System Design view**: Use the System Design view where you can view the project tree as you build the design.

Composer HE User Guide

- 6. **Make and test the connections**. [This step must be done by a Control4 Dealer using Composer Pro] In the Composer Pro project, you must define all of the physical connections of the devices to the system: control (IR and serial)and AV (audio, video). You must also define other connections: room control and network connections. You can use Composer Connections view to complete the connections.
- 7. **Register the system**. Control4 recommends that you register each system you install at customer.control4.com to maintain the system software through software updates and critical system patches.

Important: Only registered systems can use all of the media services available. System registration is one of the essential steps that lets you access the system remotely (remote access) for repairs, updates, and additions.

Composer HE system requirements

Computer software and hardware

- Microsoft.NET 4 (the Composer install is launched automatically from the Control4 website).
- Microsoft operating systems supported (Windows 10, 8, 7, or Vista). Mac support when used with a Windows virtual machine such as Parallels or VMWare Fusion for Mac.
- 500 MHz or higher processor
- 256 MB RAM
- 90 MB available hard disk space
- Video card and monitor supporting a resolution of 1024x768 or higher
- Keyboard
- Mouse
- 1 to 2 Ethernet (CAT5 or CAT6) cables

Home computer network

- Wireless access point (WAP) or wireless router that supports 802.11 b/g/n (optional)
- TCP/IP-based (Ethernet) home network. This usually includes a network gateway, router or switch.
- 1–2 Ethernet (CAT5 or CAT6) cables
- A broadband Internet connection. During initial setup, a broadband Internet connection is required to update the Control4 system and retrieve the media's cover art. Also, a broadband Internet connection is required to support remote access to the system.

Control4 home automation network

- A Control4 controller (for example, an EA-3).
- Control4 Composer Home Edition (Composer HE) software, version 3.0.0.
- Note: A Control4 controller is set by default as a DHCP client. If the home network has a DHCP server in place (for example, a router that provides DHCP services), then the controller automatically receives a valid IP address.

Note: Control4 recommends that you update to the latest software release.

- A wireless access point (WAP) that supports 802.11b/g/n (required to use a Control4 wireless touch screen).
- A valid electronic license to run Composer HE. Control4 now requires activation using a my.control4.com account with a license to run Composer HE. Re-activation is required every 30 days. See Managing Dealer Accounts on My.Control4.com on the Control4 dealer website or Knowledgebase to learn how to add and manage licenses from my.control4.com.

Installing the hardware and software

This section provides guidelines to install the devices and Composer HE.

Installing and connecting the hardware

Before you can set up a Control4 home automation system in Composer HE, all of the devices to be used in the system need to be installed and connected to the home network. Additional devices can be added and identified to the Composer HE project if you install or replace devices in the future.

Follow these guidelines to get started:

- 1. Create a system specification, and refer to it so you can answer these questions.
- 1. What does the home have?
 - Any there any outer buildings, for example a detached garage, that will be automated? All buildings to be automated must be included in the project.
 - How many floors are there in each building? For example, the house has three floors and a basement; the garage has one floor.
 - What rooms are on each floor? For example, the third floor of the house has one Master Bedroom and two other bedrooms. The third floor also has one Master Bath and one Main Bath.
- 2. Which Control4 devices are or will be installed in each room (include manufacturers and model numbers)?
- 3. Which third-party devices are or will be installed in each room (include manufacturers and model numbers)?
- 4. If any of these devices has a choice of power sources, indicate how the device will be powered: AC, DC, or batteries.
- 5. If any of these devices has communication options, indicate how each device will communicate with the controller (how the device will be controlled): Ethernet, Power Over Ethernet (POE), Wi-Fi, Zigbee[®] Pro, IR, serial, contact, or relay.
- 2. Install and connect the Control4 devices as described in the installation or setup guide that ships with each device.

Tip: See also "Related documents and resources" in this guide for document locations.

- 3. Install and connect all third-party devices, for example, audio-video devices, door contacts, and security panels, as described in the installation guide that ships with each device.
- 4. Connect the Control4 controller and your PC to the home network. Initial setup of the controller requires a hard-wired (Ethernet) connection to the network, and an Ethernet connection is always recommended. A simple Control4 system and home network are shown below.



- Use the RJ-45 jack labeled 'Ethernet' on the back of the controller to connect it to the home network. If successful, the amber LED turns on and the green LED blinks. Read the controller's installation guide to learn how the LEDs work.
- Use either a wireless access point (WAP) or Ethernet cable to connect the PC to the home network.
- 5. Confirm that the Control4 devices are getting network addresses from the gateway, router, or switch. See the Composer HE User Guide for details.

Installing Composer HE software

Follow these steps to install your Control4 Composer HE software for the first time. If you are upgrading from a version earlier than OS 2.9.1, you must first upgrade to OS 2.9.1 to continue. Please refer to the specific version of this document for further information.

Note: An Internet connection is required to perform this installation.

To install the Composer HE software:

1. Obtain the Composer HE Installation software (available as web download from customer.control4.com.

Note: Windows 7 or later and an Internet connection are required to perform this installation.

- 2. Start the Composer HE installation, and follow the on-screen instructions.
- 3. During the installation process, click Continue Anyway to allow the installation to proceed.

4. The next screen asks for your Control4 account login and password. This assumes that you already have an account on customer.control4.com. If you don't have an account, click **Register**.

Exploring Composer HE features

The Control4 Composer HE interface (views) and wizards are designed to help you simplify the process of designing the system, identifying and configuring the devices, making the connections, and then customizing the system through programming. How you set up the devices in Composer HE determines how they function in the system.

First page

When you start Composer HE and connect to a Director, a similar screen like the following Monitoring view appears:

lonitoring	List View		List View Properties
stem	Residence > Home > House > Main > Fam	ily Room	
~ ^ v	Digital Media	Internet Radio	Front Room HC800
Residence ^	Name: Denon Receiver	Name: HD Radio	Name: iPod_USB
⇔ House ⊕ Tamiy Room ⊕ Samiy Room	Name: Favorites	Name: Internet Radio 2	Name: Media Server
Digital Media	Name: Flickr	Name: Pandora	Name: SiriusXM
	Name: Spotify	eSATA File Storage	dan-pc-e
dan-pc-e	Name: Control4 Thermostat Temp: 69 F Mode: Heat		Name: Chromecast
- Tunein 	Wireless Outlet Switch V2	Name: Vizio TV	Name: xbox one
Wireless Outlet Swite Wizio TV	Napster	Name: Google Chromecast	Christmas Tree Outlet Switch
Napster Soogle Chromecast	Name: Christmas Tree	Name: Holiday Lights Level:	My Music
Christmas Tree Outle Christmas Tree Christmas Tree Holiday Lights	My Movies	Stations	Channels
- Wy Music	DLNA Music	Pandora	System Remote Control SR260
Stations	Name: Amazon Fire TV	Amazon Fire App Switcher	T3 7" Tabletop Touch Screen
Monitoring	Intercom 2	Name: Family Room Light Level:	Family Room KP
Media	Name: Family Reading Light Level:	Family Reading KP	Name: Family Room Level:
🔢 Agents	5 EA-5	UIDevice	Remote with batteries
🐉 Programming	USB Disk 2.0 partition1	Family Room control	Remote Finder Pro

The Composer HE interface contains menus, panes, a project tree, tabs, and objects. These components are explained in this document.

Composer HE startup options

Start Composer HE

You can start the Control4 Composer HE application two ways:

• Double-click the **Composer** icon on your desktop (easiest way).



• Click Start > Control4 > Composer Home Edition 3.2.4.

Tip: For your convenience, in Composer 2.5 and later the Start menu also displays your projects, logs, and drivers.

When you start Composer HE, the Composer startup screen displays:

Control (COMPOSER HOME EDITION 21.1569711+res	
Local System Remote System	
Check for Updates	
Exit Composer	

This screen presents the following Director-connection options. Click one of the options to access the Composer HE project and project tree (Monitoring view).

- Local System—Click this option if you have a direct connection to the home network (inside the firewall). This option gives you all the capabilities of the application: set up and design a project, connect the devices to the network, configure the media, and program the system.
- **Remote System**—Click this option to work from a remote location by establishing an Internet connection to the home network (outside the firewall). You can perform the same tasks as if you were connected using the *Local System* option.

This Directors dialog appears when you click **Local System**. In this case, you select the network address associated with the controller, and then

click Connect.

Z Directors			×
Host Name ea1-000FFF19859E	Address 10.21.1.20	Version 3.0.0.562645-res	Connect
			Add Remove Refresh

- **Connect**—Lets you connect to the Director that resides on the controller attached to the local network.
- **Cancel**—Cancels and closes the *Directors* dialog box.
- **Add...**—Lets you add the Director's address of the controller to which you are trying to connect.
- **Remove**—Lets you remove the selected Director from the list.
- **Refresh**—Lets you update the Directors list to display recently-added Directors.

Exit Composer HE

You can exit Composer two ways:

- Startup window (where you start Director):click Exit Composer.
- File menu (in the Composer project): select Exit.

As you exit, Composer HE prompts you to back up your project and media information to your local computer. This is not required except when using a *Virtual System* connection, but Control4 highly recommends that you back up your project every time you close Composer HE.

Composer HE views

Available views

The Control4 Composer HE application has five main views (buttons are located in the bottom left pane). When you select a view (see the figures below) the appearance, functionality, and configuration change for that view.

Also note the status bar at the bottom of the screen, which indicates the Director's network IP address and Director status.

Tip: Collapse the views by clicking the dotted bar just above the views so you have more room to view the project tree.

Main menu:

Composer Home Edition 3.1.1 / OS Man	agement 3.1.1 - Residence (Remote)		- 🗆 ×
File Tools Help			
Monitoring	List View		List View Properties
System	Residence > Home > House > Main > Famil	ly Room	^
~~~ 7	Digital Media	Internet Radio	Front Room HC800
Acsidence	Name: Denon Receiver	Name: HD Radio	Name: iPod_USB
Main	Name: Favorites	Name: Internet Radio 2	Name: Media Server
Digital Media	Name: Flickr	Name: Pandora	Name: SiriusXM
Front Room HC800	Name: Spotify	eSATA File Storage	dan-pc-e
dan-pc-e	Name: Control4 Thermostat Temp: 69 F Mode: Heat	Tuneln	Name: Chromecast
Chromecast	Wireless Outlet Switch V2	Name: Vizio TV	Name: xbox one
Wilees Ould Switt	Napster	Name: Google Chromecast	Christmas Tree Outlet Switch
Napster     Google Chromecast	Name: Christmas Tree	Name: Holiday Lights Level:	My Music
Christmas Tree Outle     Christmas Tree     Christmas Tree     Christmas Tree     Christmas Tree	My Movies	Stations	Channels
- II) My Music - II) My Movies	DLNA Music	Pandora	System Remote Control SR260
Stations	Name: Amazon Fire TV	Amazon Fire App Switcher	T3 7" Tabletop Touch Screen
Monitoring	Intercom 2	Name: Family Room Light Level:	Family Room KP
Media	Name: Family Reading Light Level:	Family Reading KP	Name: Family Room Level:
Agents	5 EA-5	UIDevice	Remote with batteries
🥸 Programming	USB Disk 2.0 partition1	Family Room control	Remote Finder Pro
			MILE
lirector Status: Idle			Connected to 10.158.1.187 (SSL)

Composer view buttons:

Monitoring
💮 Media
🔢 Agents
😵 Programming
Director Status: Idle

Click one of these buttons for the desired view.

- Monitoring—View devices and define device properties.
- Media—Add and scan stored or broadcast media.
- **Agents**—Set up an agent for use in the system and in programming. Agent types: Lighting Scenes, Wakeup, Scheduler, Variables, etc.

• **Programming**—Program events and actions to automate the system. Using predefined events and user-defined agents.

### Monitoring view

Use the Control4 Composer HE Monitoring view (the default view when you start Composer HE) to define the Control4 system project for a customer.

This view lets you view devices and define properties

- The location of the devices in the project (building).
- The device you want to include in the project (device objects).
- The location of each device by room (room).

### To access the Monitoring view:

1. Start Composer.

Take note of the three large panes in the screen below (Monitoring, Properties, and Items):

nitoring	List View		List View Propert
lem	Residence > Home > House > Main > Fam	ily Room	
Consider the second secon	Residence > Home > House > Main > Fan Digital Media Warre: Denon Receiver Name: Flickr Name: Flickr Name: Spothy Name: Control4 Thermostat Marre: 69 F Mode: Heat Wireless Outlet Switch V2	Name: Hadio Name: HD Radio Name: Internet Radio 2 Name: Internet Radio 2 Name: Pandora Second Radio 2 Second Ra	Front Room HC800  The server  The server The server The server  The server  The server  The server  The server The server The server The server The server The server The serv
- ■ Vico TV - ☆ Joox one ■ Napster - ☆ Google Otromecast - ☆ Christmas Tree Outle - ☆ Christmas Tree - ↔ Holday Lights - ☆ My Music	Napster Name: Christmas Tree Level: My Movies DLNA Music	Vene: Google Linomecesi Value: Holiday Lights Level:  Pandora Pandora	Christmas Tree Outlet Switch  My Music  Channels  System Remote Control SR260
My Movies Stations Monitoring	Name: Amazon Fire TV	Amazon Fire App Switcher	T3 7" Tabletop Touch Screen
Media Agents	Name: Family Reading Light Level:	Family Reading KP	Name: Family Room
Programming	USB Disk 2.0 partition1	Family Room control	Remote Finder Pro

- Monitoring (left pane)—Contains the project tree where you view locations and device drivers.
- **Properties (right pane)**—Contains the Properties of the object you select from the project tree when you want to check or modify a device, project, and room. Refer to the sections below to view more information about the *Properties* pane.
- "Project Properties"

- "Room Properties"
- "Device Properties"

### Monitoring pane

The Monitoring pane in the Monitoring view displays the project tree. You can view the project's floors, rooms, and devices.

### To access the Monitoring pane:

## 1. Start Composer.

Note: The example project tree below shows the project name (Main), site (Home), building (House), floors (Main), rooms (Family, etc.), and the devices already added to the project.



Right-click on a device, room, or other item in the project tree to bring up additional options for that item.

Rename F2
Collapse Rooms
Collapse Devices
Expand All
Edit Driver
Export Driver
Update Driver
Info
Delete

Project tree search and filter

To make it easier to find and manage devices in large projects, the project tree has search and filter controls.



- **Search**—Type the device name to search for here. Click the **Find Next** button to jump to the next device of that name. Click the down arrow on the right side of the search box to select from previously used search terms.
- **Filters**—Use filters to hide or show only certain types of items in the project tree. Click the **Filters** button, then set filters by **Device Type** or **Category**. The *Device Type* list contains only device types already included in your project. Setting a filter under *Device Type* will clear any filters already set in *Category*, and vice versa. To clear all filters, click **Clear All Filters**.

Filter off		<b>Y</b> = Filter on	
	*	Clear All Filters	
light_v2		Filter By Device Type 🔹 🕨	
media_service     tv		Filter By Category 🔓 🕨	Audio/Video     Broadcast Networks     Controllers     hidden     Lighting     Motorization     Storage     User Interface
	light_v2 media_service tv	iight,v2 media_service	light_v2       media_service       tv

#### Device Control window

The Device Control window in Monitoring lets you test and control a physical device in Composer HE to make sure it works in the system.

Example: To use the Device Control for a dimmer, you click a button in the Device Control window to turn the dimmer on or off and change the light level. If the physical light changes also, you know the dimmer driver is added and the basic connections are made correctly.

#### To access the Device Control window:

1. Start Composer. The Monitoring view appears.

Double-click the device in the project tree to access the Device Control window (see below) for that device.



This window lets you change the configuration parameters (temporarily) and control a device. Later, you can set the parameters permanently in the Properties pane or Programming view.

Example: You can adjust and test the ramp rate of a dimmer to determine the desired ramp rate to set during programming.

### Properties pane

In the Monitoring view, click the project name in the project tree to view the *Properties* pane (center pane).

	Properties List View	Bennett
Monitoring		Properties
System	Properties	
~ ~ ~	Project Settings Information Lighting Defaults Allowed Networks ZigBee Configuration Z-Wave Configuration	í l
A Residence		
Home	Project Name: Residence Set	
🖻 🔁 Main	· · · · · · · · · · · · · · · · · · ·	
E S Family Room	Location: Orem, UT, USA Lookup	
- Digital Media - 🔯 Internet Radio	Latitude: 40.31478 Set	
Front Room HC800		
E Denon Receiver	Longitude: -111.6947	
HD Radio	Country: USA	
Favorites		
- internet Radio 2		
- Media Server 	Date: 12/19/2019 Display time using a 24-hour clock	
Pandora	Time: 11:13:49 AM	
- Sirius XM	Timezone: US/Mountain Edit	
Spotfy		
eSATA File Storage		
Control4 Thermostat	Push Settings from Project	
- In Tuneln		
- Chromecast - Wireless Outlet Switz	Change Password	
- Wizio TV		
<	Locale: English (United States) V Set	
Monitoring		
阙 Media		
	Temperature:	
etts Agents	Fahrenheit	
Programming	○ Celsius	
💥 Programming	() Celsius	

The project Properties appear when you first start Composer HE, or any time you select the project name (or root node) in the project tree. Different properties appear depending on the item you select.

Project Settings	Information	Lighting Defaults	Allowed Networks	Zigbee Configuration
Status LEDs		On Color	Off Color	
	T	Un Color	Off Color	
	Top/Scene			
	Bottom			
	Toggle			
	Backlight			
Style				
		Room On		
		Activity I		
		Movie I		
		Relax I	Lights	
		Room Off		
Bu	tton Style	Traditional	~	
Engraving	Alignment	Center	$\sim$	
Engra	ving Size	Large	$\sim$	
Butt	on Finish	lvory	$\sim$	
		[	Apply To	
Centralized				
Nomin	nal Voltage	120	~	
		Centralized Mo	dules in Control4 Pa	anel
		Centralized Mo	dules Use Arc Faul	Breaker

This option lets you enter project-specific information; for example, the project name, location, and ZIP Code. Composer Pro automatically enters the latitude/longitude and date/time information after you provide the location and ZIP Code.

#### **Properties Pane**

Project Settings tab

Category

Boxes or Buttons

N/A

**Project Name**—Lets you enter/edit the name of the project.

**Location**—Lets you look up a location's latitude and longitude based on city, state, country, etc.

**Date and Time**—Lets you set a date, time, and time zone for the Control4 system. By changing the time here and refreshing Navigators (File > Refresh Navigators), you reset the time on the entire system. However, Control4 systems with access to the Internet automatically synchronize the system clock Latitude/Longitude—Lets the system calculate from the entered ZIP Code, the local latitude and longitude coordinate information. Knowing location information lets the system calculate local sunrise and sunset times. This is useful for programming lights to turn on at dusk and off at dawn. Using a ZIP Code to find the coordinates only provides a close estimate of latitude and longitude. If you want to enter exact coordinates, the fields can be edited. Also used for outside temperature on the touch screens.

**Country**—Lets you select the country in which the project is located.

**Lookup Button**—Lets you enter/edit the ZIP Code which identifies to the system the local cable, satellite, and broadcast channel programming. It also automatically provides latitude and longitude coordinate location.

**Timezone**—Lets you set the appropriate time zone by clicking **Edit**. Changing the time zone causes the controller to reboot.

**Display time using a 24-hour clock**—If checked, lets you use the 24-hour clock (0 to 2400 hours) rather than 12 am to 12 pm.

# **Properties Pane**

using Network Time Protocol (NTP).

<b>Project Settings Control</b> —Lets you set a device in Composer that does not allow the setting to be overridden at the device.	<b>Push Settings From Project</b> —Check the box for devices to receive settings from the Composer project only. New settings in the Composer project override any settings at the device.
<b>System Security</b> —If set, all Navigators (Release 2.0 or later) must connect through a secure connection.	Properties Pane: Information tab
<b>Localization</b> —Lets you set the locale and character set for countries outside the United States.	<b>Locale</b> —Use the down arrow to change the locale.
Scale—Lets you select the temperature type.	Fahrenheit or Celsius.
Information tab	
Category	Boxes or Buttons
System Owner	Name, Address, Phone, and Email—Enter homeowner information into these fields.
Dealer Information	Name, Address, Phone, Email, Primary Contact, Lead Installer, Original Install Date, and Date of Last Update—Enter dealer information and project update dates into these fields.
Project Notes	Any notes the dealer wants to add can be stored here.

# Composer HE User Guide

# Lighting Defaults tab

Category	Boxes or Buttons
Lighting Defaults—Lets you set default LED colors for switches, dimmers, and keypads as well as certain default parameters for Centralized Lighting. You can still modify these settings for individual devices in the device properties. Also lets you set basic parameters for Centralized Lighting.	<ul> <li>On Color/Off Color—Set the default On and Off color for each LED in the project.</li> <li>Centralized Modules in Control4 Panel—Select this box to indicate that the Centralized Lighting modules will be installed in Control4 2-Slot or 5-Slot Panels. If the modules will be installed in off-the-shelf DIN Rail panels, leave this box unchecked.</li> <li>Centralized Modules Use Arc Fault Breaker—Select this box if the majority of Centralized Lighting modules will be connected to an arc-fault breaker (AFCI).</li> </ul>
	<b>Nominal Voltage</b> —Select the default voltage that will be used by the Centralized lighting modules.
Lighting Defaults tab	
Category	Boxes or Buttons
Subnets	By default, it is not possible to identify a device that resides on a different network (e.g., subnet) because Director actively excludes identification broadcasts received from devices on a different network.
	You can expand the list of allowed networks by adding one, or more, CIDR network specifications to the following list.
	For example: 192.168.2.0/24
	For more examples see: https://en.wikipedia.org/wiki/Classless_Inter-

# Lighting Defaults tab

Domain	Routing

Zigbee Configuration tab	
Category	Boxes or Buttons
Edit Zigbee Configuration	HE cannot be used to define, edit, and move Zigbee mesh configurations.
Refresh	Click on this link to refresh the Zigbee status view below.
Zigbee Network Status	Use this view to see the status of the Zigbee mesh (es) in your project.
	<b>Name</b> —Name of the device configured in the Zigbee mesh.
	<b>Controller Status</b> —The colored icon shows an at- a-glance status of the Zigbee network. Green for online, Yellow for offline, Red for error.
	<b>Zigbee Server</b> —The controller defined as the Zigbee Server will say "Enabled".
	<b>Zigbee Status</b> —Shows the status of the Zigbee Server. "Running" means the Zigbee Server is configured and running.
	<b>Channel</b> —The current channel of the Zigbee mesh.
	<b>ZAP Status</b> —A controller configured as a ZAP will show as "Coordinator" or "Enabled".
Z-Wave Configuration tab	
Category	Boxes or Buttons
Advanced	HE cannot be used to Learn, Network Update, Reset Defaults, and Send Node Info. These buttons are disabled.

#### **Room Properties**

The room *Properties* (Monitoring > Room > Properties) appear when you select a room in the Monitoring project tree.

Monitoring	Properties	List View Proper
ivstem	Properties	
~ ^ ~	Audio Video Devices Navigator Miscellaneous	
- 🥝 Residence	▲	
🗄 😽 Home	Available Audio Sources	
🗄 🏠 House	Device Location	^
E Samiy Room		
E Family Room	Internet Radio Family Room     Torneln Family Room	
- Internet Radio	In Family Noom	
Front Boom HC8		
Denon Receiver	start from	
HD Radio	Napster Family Room	
- iPod_USB	Google Chromecast Family Room	
- W Favorites	Denon Receiver Family Room	
- Winternet Radio	2 ADD Radio Family Room	~
	2 DJ Ballo Parrie Boom	
Media Server		
- 🗱 Flickr	Audio Volume: Family Room->Vizio TV	
- Rickr - Rickr		
- Wiele Flickr - Wiele Pandora - Wiele Sirius XM	Audio Volume: Family Room->Vizio TV	
Pandora SirlusXM Spotify	Audio Volume: Family Room->Vizio TV Audio Endpoint: Family Room->Vizio TV	
Flickr Pandora SirtusXM Spotfy Scata File Stora	Audio Volume: Family Room->Vizio TV Audio Endpoint: Family Room->Vizio TV	
Pickr Pandora SirlusXM Spotify	Audio Volume: Family Room->Vizio TV Audio Endpoint: Family Room->Vizio TV Available Video Sources	<u> </u>
Flickr Pandora SitusXM Sotfy Sotf Flickr Struskov Sanpce	Audio Volume: Family Room->Vizio TV Audio Endpoint: Family Room->Vizio TV Available Video Sources	^
Flickr Pandora StiusXM Spotty danpce danpce Control4 Themos Tunein Control4 Themos	Audio Volume: Family Room->V/zio TV Audio Endpoint: Family Room->V/zio TV Available Video Sources tet Device Location Audio Path Witzio TV Family Room yes Subdox one Family Room yes	^
Padora SitusXM Sotty SATA File Store Control4 Themos Tuneh Wretes Outel S	Audio Volume: Family Room->V/zio TV Audio Endpoint: Family Room->V/zio TV Available Video Sources Device Location Audio Path Wolo TV Family Room yes Social Consection Family Room yes Social Consection Family Room yes	^
Parker Pandora SinaxXM SinaxXM Sarka Sina Corrol Timeh Corrol Timeh Corrol Timeh Corrol Timeh Weters Outer S Weters Outer S	Audio Volume: Family Room->V/zio TV Audio Endpoint: Family Room->V/zio TV Available Video Sources Device Location Audio Path Witco TV Family Room yes Source Family Room yes Socio Chromecast Family Room yes	^
Pandora     Pandora     Pandora     SnauXM     SofutXM     SofutXM     SofutY     Construct     Turneh     Connocat     Was TV     SofutY     SofutY	Audio Volume: Femily Room->//zio TV Audio Endpoint: Femily Room->//zio TV Available Video Sources Device Location Audio Path Wite Coogle Oromecast Femily Room yes Sciptoco core Femily Room yes Device Femily Room yes Device Femily Room yes Device Femily Room yes	^
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Pandora ShauXM ShauXM ShauXM ShauXM Shark Pierson Shark Pi	Audio Volume: Femily Room->//zio TV Audio Endpoint: Femily Room->//zio TV Available Video Sources Device Location Audio Path Wito TV Femily Room yes Eductor Femily Room yes Cocogle Oromecast Femily Room yes Denon Receiver Femily Room yes Denon Receiver Femily Room yes	×
Pandora ShauXM ShauXM ShauXM ShauXM Shark Pierson Shark Pi	Audio Volume: Femily Room->//zio TV Audio Endpoint: Femily Room->//zio TV Available Video Sources Device Location Audo Path Vido TV Femily Room yes Social Coogle Oronecast Femily Room yes Denon Roceiver Femily Room yes Denon Roceiver Femily Room yes Ferrorites Femily Room yes Ferrorites Femily Room yes Ferrorites Femily Room yes	
Pandora SnauXM Spatry Garpoce Garpoce Ordroid Themas Turch Wates Quite Varies Quite Varies Quite Varies Quite Varies Quite Varies Quite	Audio Volume: Family Room->V/zio TV Audio Endpoint: Family Room->V/zio TV Available Video Sources Device Location Audio Path Woo TV Family Room yes Social Social Family Room yes Device Family Room yes Down Rocover Family Room yes Prod_UISB Family Room yes Family Room yes	

The room *Properties* pane lets you view room-specific device and media information (for example, the iPod located in the Office is an available audio source in the Family room), and helps you troubleshoot any incorrect room connections.

The **Audio/Video Devices** tablets you view the devices configured for each end point device and the devices that are available in the room.

Example: If you can't play movies from a Disc Changer in a particular room, you can view the room's Properties to see if the disc changer shows up in the List view. If it does not, you are probably missing AV bindings in the path to the device.

### **Properties Pane—Room Properties**

room?

Category

Box or Button

Audio Video Devices tab—

Provides information that lets you view all audio and video devices and control connections in a selected room.

**Audio Volume**—The device that is configured to control the audio volume in the room.

Audio Endpoint—The device that is

configured to play audio in the room.

Tip: Which device needs to turn on and

off to listen to any source of audio in the

Tip: Which device do you need to send volume commands to in order to control the audio volume in the room?

**Video Endpoint**—The device in the room that is configured to display the video in the room.

Tip: Which video display device is in the room, or where does the video end up?

**Navigator tab**—Lets you hide and re-order device visibility for all Navigators (in Watch, Listen, etc.). **Modify**—Lets you move the order of devices up or down, and hide or show them. Select the device in the *Menu* list.

**Miscellaneous view**—Lets you set the default audio and video volume for the room, for example, what the room will revert to after a power cycle. This is also where you set the IR Mask for the room. **Enable Default Volume**—Select and use the up or down arrows to change the audio and video volume.

**Mute When Paused**—Select this option to send a mute command when media is the room is paused.

### **Device Properties**

The device *Properties* (Monitoring > device > Properties) are visible when you select a device in the project tree. This option lets you modify the available (if any) user options for the selected device.

Composer Home Edition 3.1.1 / OS Manag	ment 3.1.1 - Residence (Remote)		- 0	×
File Tools Help				
Monitoring	Properties		List View Prope	erties
System	Properties		Appl	y to
		ed: N/A watthours		erties
Director Status: Idle		Conr	nected to 10.158.1.187 (SSL)	

Properties Pane: Device Properties

### Category

**Properties**—Lets you modify options (if available) that are common to all devices of that type.

Advanced Properties—Lets you modify advanced options (if available) on some devices.

### List View pane

Use the Control4 He List View pane in Monitoring to view all of the devices in a room.

When you select a room or any device in a room in the project tree, and then click **List View**, all of the devices installed in that room display; for example, notice all of the devices installed in the Family room (shown below).

**Note**: The List View shows all the devices in a given area and the current state of contact inputs or other devices. When selecting the site, building, floor, or room, all of the devices associated in that area are visible. If a single device is selected in the project tree, List View shows all devices that are in the same room.

lonitoring	List View		List View Propertie
/stem	Family Room		
~ ^ •	Digital Media	Internet Radio	Front Room HC800
Gesidence	Name: Denon Receiver	Name: HD Radio	Name: iPod_USB
E Thouse	Name: Favorites	Name: Internet Radio 2	Name: Media Server
- 😰 Digital Media - 😺 Internet Radio	Name: Flickr	Name: Pandora	Name: SiriusXM
Front Room HC800	Name: Spotify	eSATA File Storage	dan-pc-e
- Pod_USB	Name: Control4 Thermostat Temp: 66 F Mode: Heat	Tuneln	Name: Chromecast
Media Server	Wireless Outlet Switch V2	Name: Vizio TV	Name: xbox one
Flickr Pandora SirlusXM	Napster	Name: Google Chromecast	Christmas Tree Outlet Switch
Spotify	Name: Christmas Tree	Name: Holiday Lights Level:	My Music
dan-pc-e Control4 Thermostat	My Movies	Stations	Channels
Chromecast	DLNA Music	Pandora	System Remote Control SR260
Vizio TV	Name: Amazon Fire TV	Amazon Fire App Switcher	T3 7" Tabletop Touch Screen
Monitoring	Intercom 2	Name: Family Room Light Level:	Family Room KP
Media	Name: Family Reading Light Level:	Family Reading KP	Name: Family Room Level:
👬 Agents	5 EA-5	UIDevice	Remote with batteries
🐉 Programming	USB Disk 2.0 partition1	Family Room control	Remote Finder Pro

#### To access the List View pane:

- 1. Start Composer.
- 2. In the project tree, click any object.
- 3. In the *Properties* pane, click the List View tab.
- 4. You can double-click a device in the List View pane to display its Device Control window.

#### Information tab

Use the Info pane in Monitoring to view information about the system owner and Control4 dealer.

Nonitoring	Properties		List View	Propert	ies
ystem	Properties		_		_
~~~ 7	Project Settings Information Lighting Defaults Allowed Networks ZigBee Configura	tion Z-Wave Configuration			^
G Besidence	System Owner Dealer Information Project Notes				
e desidence	Name:				
House	Address:				
🖻 🚾 Main					
Eamily Room					
- Winternet Radio					
Front Room HC800					
Denon Receiver					
HD Radio					
Favorites	Phone:				
Internet Radio 2					
Media Server	Email:				
Pandora					
SirtusXM					
Spotfy					
eSATA File Storage					
Control4 Thermostat					
Tupeln					
Chromecast					
- Wireless Outlet Swit:					
Vizio TV					
c >					
Monitoring					
Media					
Agents					
🖉 Programming					

To access the Info pane:

- 1. In *Monitoring* > Properties, click the **Information** tab.
- 2. View, add or change existing information about the system owner or dealer in each box.
- 3. Check and change the data periodically as needed.

The Information tab lists:

System Owner information

- Name
- Address
- Phone
- Email address
- Dealer information
- Name
- Address
- Phone
- Email address
- Primary Contact
- Lead Installer
- Original Install Date
- Date of Last Update
- **Project Notes**—Use the *Project Notes* box to add any relevant details about a particular installation.

Media view

Use the *Media* view to select the stored or broadcast media on touch screens, Control4 apps, and on-screen Navigators. The Media view lets you add media selections to the Control4 system: stored music and media collections from a network-attached storage device (NAS) or other devices, for example, a Dock for iPod, DVD player or disc changer, broadcasts, channels, and stations.

To view and select the media from the Navigators, you first need to add and scan the media to the Control4 controller (for example, an EA-3 controller). With MP3, WMA, FLAC, or AAC files that you add and scan, you can create playlists saved to the controller (if it has a hard drive) in the media database. See the Composer HE User Guide for details.

Other Media Managers: You can use other media managers, for example, iTunes, Windows Media Player, and Media Monkey to stream MP3s, WMAs, or MP4s. And your customers can use Composer Media Edition (Composer ME) or Composer Home Edition (Composer HE) to add media files to Control4.

le Media Tools Help ledia	Madia Caspuing		
	Media Scanning		
edia Media Scanning Options	Storage Space Status		_
Stored	Used Space for Media Graphics - 4 / 1000 MB 1000 MB		
ABox			
eSATA File Storage	Total Used Space (All Data) - 2611 / 5920 MB		
	5920 MB		
USB Disk 2.0 partition 1	NOTE: Exceeding the maximum storage values listed above could lead to problems with system updates and project modifications.		
Audio Media	Options		
Video Media	Scanning Schedule		
Broadcast	Never		
~ ∰ Hemet Rado ⊘ Playlats	O Every 1 ≑ Days ∨		
	On the following days:		
	Sunday Monday Tuesday Wednesday		
	Thursday Friday Saturday		
	At: 03:00 AM		
	Files To Scan		
	Devices: Extensions:		
	GATA File Storage MP3 (Audio) Add WAV (Audio) WAV (Audio)		
	dan-pc-e DVD (Video)		
	ISO (Video) AVI (Video)		
	WMV (Video)		
🕺 Monitoring	MPG (Video) MP4 (Video)		
Nedia	Use Online Media Lookup to improve scan results		
	Replace Saved Image with Lookup Image		
Agents	Remove media from the database if files no longer exist		
🐉 Programming	Update media database if file tags have changed		
	Enable MQA		

To access the Media view:

- 1. Click Media at the bottom of the Monitoring pane.
- 2. In the *Media* pane, view the media devices. In the *Media* view, the left-side selections change the right-side views.

The system can access and use several types of media and supports various Media Scanning options:

- Stored media (e.g., DVDs) includes the possible media types that store media:
- **Controller**—Lets you store MP3s, WMAs, or MP4s in the digital audio database of the controller (if you have a controller with a hard drive).
- **CD**—Lets you store CD cover art, albums, artist ratings, and genre (Rock, Jazz, Country, etc.).
- **DVD Player** or **Disc Changer**—Lets you store DVD and CD (when DVD supports CD) selections by viewing cover art, title, info, results, media, and disc list.
- MP3s on Digital Audio Player—Lets you store MP3 HDD music cover art, album, artist rating, and genre (Rock, Jazz, Country, etc.).
- External or Network File Storage Devices—Lets you store MP3, WMA, MP4, FLAC, or AAC formats on an external hard drive, USB drive, or server.
- Screen Saver—Lets you store the custom images to be used as screen savers on the Navigators.
- Internet radio—Lets you assign a particular Internet radio station with cover art.
- Broadcast media (for example, Cable/Satellite) includes the possible media types:
- **Direct TV**—Lets you view DIRECTV channel options, including station ID, genre, rating and music channel.
- **Dish Network**—Lets you view Dish Network channel options, including station ID, genre, rating, and music channel.
- Cable TV—Lets you view Cable channel options, including station ID, genre, rating, and music channel.
- UHF/VHF—Lets you view the UHF channel options, including station ID, genre, rating, and HDTV.
- AM/FM/XM—Lets you scan AM, FM, and XM radio stations.
- **Playlists** includes the possible media types:
- MP3 on Digital Audio Player—Lets you play and view MP3 or MP4 HDD music cover art, album, artist rating, and genre (Rock, Jazz, Country, etc.).
- **CD**—Lets you play and view CD cover art, albums, the artist ratings, and genre (Rock, Jazz, Country, etc.).
- **Controller**—Lets you play MP3, WMA, MP4, FLAC, or AAC formats from the controller (if supported).
- External or Network File Storage Devices—Lets you play MP3, WMA, MP4, FLAC, or AAC formats from an external hard drive, USB drive, or server.
- **DVD Player or Disc Changer**—Lets you play DVD and CD (when DVD supports CD) selections and view cover art, title, info, results, media, and disc list.

Possible buttons

One or more of these buttons may appear in the center pane depending on which category you select:

• Edit—Lets you edit the information for an existing album or movie.

- **New**—A dialog box opens. You can add information for a new album or movie, etc.
- Delete—Lets you remove an existing item from the list.
- **Add**—Lets you add media to your system, for example, MP3, WMA, MP4, FLAC, or AAC files.
- **Scan**—Lets you scan the selected media type or storage location for music or media information
- **Configure**—Lets you select the storage device on which the media you're configuring resides.

Right-click options

Right-click on a device in *Stored* media or *Broadcast* media to bring up various options:

- **Clear Media List**—Use *Clear Media List* with caution because it clears all media from the device—and for a controller, you will have to start over by adding each album again.
- **Export Media List and Export Playlists**—Lets you save an XML file of your lists; if you ever clear your project you won't have to rebuild the lists.
- Import Media List and Import Playlists—Lets you recover your media lists after you've cleared your project.
- Import DVD List from File—Lets you import an Excel list of DVD titles for a Disc Changer.
- **New Playlist**—Lets you create a playlist which appears in the Playlists type.
- Delete Playlist—Lets you delete an existing playlist.
- **Rename Playlist**—Lets you rename an existing playlist.

Right-click on **Playlists** to display New Playlist.

Right-click on **a playlist name** to display these options:

- Export Playlists
- Import Playlists
- New Playlist
- Delete Playlist
- Rename Playlist

Right-click on the individual **songs** in the window below the albums to edit song information or delete individual songs.

Agents view

Use the Agents view to perform more complex programming by module.

Note: See Programming with agents for help configuring and using these agents.

Composer Home Edition 3.1.1 / OS Management 3.1.1 - Residence (Remote)	-	
ile Tools Help		
Agents		
Agents Add Remove		
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lackup Iommunication		
Custom Buttons		
Email Notification		
dentity Y		
🔯 Monitoring		
Media		
Rents		
💥 Programming		
w royonning		
	-	
ector Status: Idle	Connected to 10.158.1.187 (SSL)	

To access the Agents view:

- 1. Click **Agents** at the bottom of the Monitoring pane.
- 2. In the Agents pane, view the list of agents and their variables.

Available agents include:

- Access
- Advanced Lighting Scenes
- Announcements
- Backup
- Communication
- Custom Buttons
- Email Notification
- Guest Services
- History

- Identity
- Light Properties
- Lighting Scenes
- Macros
- Media Scenes
- Media Sessions
- Navigator
- Push Notification
- Scheduler
- Screen Saver
- Timer
- Variables
- UI Configuration
- Wakeup/Goodnight

Example: The Scheduler agent lets you program using dates and times. See Using the Scheduler agent for examples.

Common buttons available on some agents in the Agents view:

- Add—Lets you add agents to your system.
- **Remove**—Lets you remove agents from your system.
- **New**—Lets you create a new instance for customizing the selected agent in the *Agents* pane. For each specific instance of the agent, you provide a unique name and customize it according to your needs.
- **Delete**—Lets you remove an existing instance of the selected agent in the *Agents* pane.
- **Save**—Lets you save the agent-specific information. Not all agents require a manual save option. In most cases, the agent information saves automatically.

Programming view

Use the *Programming* view to have the Control4 system control devices by identifying to the system any device behavior or configuration options that you want to occur automatically. The Programming view lets you create a program script using the drag-and-drop method.

Note: Programming is an advanced feature in Composer HE. Detailed information about programming is explained later in the Composer HE User Guide. This section discusses some basics.

All programming is based on events in the Control4 system. For example, a door that opens is an event. When an event occurs in the system, it can trigger other programmed actions to run.

Example: When the Bathroom door opens (event occurs), program the Bathroom light to turn on (action taken).

Another example is shown in the figure below. Note the text in the *Script* pane (center pane). The event is "When the Family > Left Dimmer top button is pushed," and the action is "Open the Garage > Garage Door (Sensor)." The event came from the *Events* pane, and the action came from the *Actions* pane.

Composer Home Edition 3.1.1 / OS Mana	gement 3.1.1 - Residence (Remote)	- 🗆 X
File Tools Help		
Programming	Script	Actions
Device Events	Script Execute	Device Actions
Programming		
Serogramming		
Director Status: Idle		Connected to 10.158.1.187 (SSL)

To access the Programming view:

- 1. Click **Programming** at the bottom of the Monitoring pane.
- 2. In the Programming pane, view the list of Device Events (see below) and events for the object selected.

The Programming view consists of several panes:

- Programming:
- Device Events (left pane)—Displays all devices that have associated events in the project tree.
- **<Device> or <Room> Events (left pane)**—Displays the available events for the currently selected device or room in the *Device Events* project tree. If there are no events for that device or room, none are displayed.

- Script (center pane)—Displays the script associated with the currently-selected event from the *Device Events* pane. You drag-and-drop an action from the *<Project Title> Actions* pane to arrange the order of actions and nest them in the *Script* pane.
- Actions:
- **Device Actions (right pane)**—Displays all available device options with associated actions you can use to write your script.
- **<Project Title>** Actions (right pane)—Displays the *Command*, *Conditionals*, and *Loops* tabs. You move commands, conditionals, and loops into the *Script* pane from this pane.

To add an action to the script:

- 1. Select the device in the Device Action project tree (right pane).
- 2. Select the type of action you want in the Actions pane.
- 3. Click the green arrow.
- 4. Drag and drop the action to the *Script* pane.
 - **Commands tab**—Use this tab to select commands (delete, add, etc.) to use for your script.
 - **Conditionals tab**—Use this tab to select conditionals ('if' statements) to use for your script.
 - Loops tab—Use this tab to select loops ('while' statements, etc.) to use for your script.

Composer HE menu options

When you start Composer HE and connect to Director, the menu bar appears at the top of the Composer screen.

File Tools Help

The menu bar provides the following menu items:

- **File**—Lets you perform typical file management tasks, clear or load projects, connect or disconnect to the local Director, update both the Composer and Navigator software, and exit Composer.
- **Media**—(only appears when the Media view is selected)—Lets you perform tasks regarding music and media lists.
- Tools—Lets you view System Diagnostics and Account Services.
- Help—Lets you view this document in help form plus version information.

File menu

Access the *File* menu from the menu bar on any Composer screen.

Load Project	Ctrl+O
Cloud Management	
Backup to Cloud	
Connect to Director	
Disconnect from Director	
Backup	Ctrl+S
Backup As	
Refresh	F5
Refresh Navigators	Shift+F5
Exit	

From the File menu, you can perform project file management tasks:

- Manage the project (load, back up, etc.).
- Manage cloud backups.
- Connect to Director.
- Refresh Composer HE.
- Refresh the Navigators: touch screens, Control4 apps, or on-screen Navigator.

The file management options apply to the files you back up on your computer called *project files* (project name plus a .c4p extension). Project files are saved by default to the My Documents directory under Control4/Projects.

When you set up a Control4 system, you create project configuration information. This information is created live on the controller hardware, or backed up to a project file on a computer that lets you save specific information about each system, including devices, connections, configuration, programming information, and media. The project configuration is automatically stored on the controller hardware to which you are connected from your computer.

Backing up the project lets you save a copy of the project on your computer which is always recommended whenever you make changes in Composer HE or update the system.

The following options are available:

- Load Project—Loads a selected project into the currently-connected controller. Composer HE prompts you for a backup before it clears the project configuration information, and replaces it with a selected project you can browse to and load.
- **Cloud Management**—Manage online backups saved from the registered system. You can load a cloud project to the controller, delete a cloud project, add a project to the cloud, show a history of cloud backups for this project, and save a cloud project to your local computer.

- **Backup to Cloud**—Creates a backup of the project and saves it to Control4 online services. Requires a valid 4Sight subscription.
- **Connect to Director**—Connects you to a Director residing on the controller. When you connect, project configuration information from the controller is presented to the screen in Composer HE.
- **Disconnect from Director**—Disconnects you from a Director. Composer prompts you to back up your project before disconnecting you from the currently-connected Director. This option is available when connected to a Director.
- **Back up**—Backs up the current project to your computer. The first time you back up your project, Composer prompts you for a filename. It also prompts you to back up any media information. If you select this option, the current project becomes an option in the File > Load Project list.
- **Back up As**—Backs up the current project, and prompts you to enter the name of the file. It also prompts you to back up any media information. If you select this option, the current project becomes an option in the File > Load Project list.
- **Refresh**—Refreshes the current Composer HE project.
- **Refresh Navigators**—Refreshes the Navigators connected to the system. Note: Control4 for PCs and tablets must be updated in that app. Control4 for iPhone, iPod touch, iPads, and Androids will update if online.

Media menu

Access the Media menu from the menu bar in the Media view.

Note: The Media menu becomes available when the Media tab is selected (on the left menu).

Clear Media List
Export Media List
Import Media List
Export Playlists
Import Playlists
Import DVD List from File
New Playlist
Delete Playlist
Rename Playlist

From the *Media* menu, you can create, delete, and rename playlists. You can also clear, export, and import media lists. A Media List is the list of media information associated with the selected device, for example, all DVDs with associated cover art, title, notes, etc., for each DVD in a disc changer.

The media has been scanned or manually added to the media database. After you add an item to the media database, the cover art and information about the media can be viewed and selected from any of the Navigators (touch screens, Control4 apps, and on-screen navigators, etc.).

The following options are available:

- **Clear Media List**—Clears the media list of the selected device from the media database.
- **Export Media List**—Exports a media list for the selected device from the controller to a PC.
- Import Media List—Imports a media list from the PC to the controller.
- Export Playlists—Exports a playlist from a controller to a PC.
- Import Playlists—Imports a playlist from the PC to a controller.
- Import DVD List from File—Imports an Excel list of DVD titles for a Disc Changer.
- New Playlist—Creates a new playlist from a controller to a PC.
- Delete Playlist—Removes a playlist.
- Rename Playlist—Renames a playlist.
- **Tag media files**—Used for OS 2.0 or later conversion of media files so all media players can see the same tags.

Other options

• **Sort**—Lets you sort and find drivers by column and by *Device Type, Name, Manufacturer, Model, Creator, Created Date,* and *Modified Date.* Click the **top** of each column to sort accordingly. Click on the column **head** to sort the column.

Tools menu

Access the *Tools* menu from the menu bar on any Composer HE screen.

Account Services System Diagnostics

From the Tools menu, you can access tools for checking the device connection status.

The following options are available:

• **System Diagnostics**—Assists you in gathering system information to help you determine if any issues encountered are configuration problems,

performance issues, or potential defects. The System Diagnostics tool is valuable also for logging information and sending email to Control4 Technical Support. See "System Diagnostics."

• Account Services—Facilitates system registration which is required for software updates and to use the media services throughout the Control4 system. It is also required in conjunction with a customer account to enable Remote Access, which allows secure access to your system via the Internet. See "Account Services."

System Diagnostics

From the *Tools* menu, click **System Diagnostics**. Use these screens to help you diagnose system problems and activity.

• **Controller Performance tab**—Lets you view controller performance information, including CPU and memory usage. Process data is listed in the bottom pane.



• History button—Lets you view the history of CPU and memory performance.

C Director Message History 6:13:54 PM - Idle	-	×
C-12-54 DM - Idle		
0.13.34 FM - Idle		
6:13:58 PM - Idle		
6:14:03 PM - Idle		
6:14:08 PM - Idle		
6:14:13 PM - Idle		
6:14:18 PM - Idle		
6:14:23 PM - Idle		
6:14:28 PM - Idle		
6:14:33 PM - Idle		
6:14:38 PM - Idle 6:14:43 PM - Idle		
6:14:48 PM - Idle		
6:14:53 PM - Idle		
6:14:58 PM - Idle		
6:15:03 PM - Idle		
6:15:08 PM - Idle		
6:15:13 PM - Getting project items		
6:15:13 PM - Getting Items		
6:15:13 PM - Getting project items		
6:15:13 PM - Getting Items		

• **Controller Networking tab**—Lets you view controller networking information, including network type, connection status, MAC address, IP address, Subnet mask, Gateway, DHCP status, and DNS server information.

了 Sy	stem Diagnostics						-		\times
File	View								
Contr	roller Performance	Controller Networking	System Info	Logging					
	Active Interface								
	Interface:	Ethernet			Status: Conn	ected			
	MAC:	00:0F:FF:1B:	4A:C1						
-I	IP Address								
	IP address:				Using DHCP:	No			
	Subnet mask:								
	Gateway:								
	DNS Servers								
	DNS server 1:	8.8.8.8			Using DHCP:	No			
	DNS server 2:								
	DNS server 3:								
							Test Internet (Connection	

• **Test Internet Connection button**—Lets you test the current Internet connection. After viewing, click **Close** to exit the dialog box.

Test Internet Connection		×
Test Complete		
Host	Status	
Media Web Service	SUCCESS	
Updates Web Service	SUCCESS	
		~
		Close

• **System Info tab**—Lets you view system information in a tree view. Click **Save To File** to save this information.

ontroller Performance Controller Netw	orking System Info Logging					
 Chitchen->Pedestal Triad One My Home->Soundbar Triad One Mreater->FA-5 Theater->Front Door T3 10" Glidfree hosts if config kernel memory mounts netstat packages procnetdev uname usb wireless theater->T3 10" Tabletop Touch 	Filesystem /dev /mrt/secure /mrt/sec /mrt/obb /system /cache /metadata /data /mrt/internal_sd	427.3M 1007.9M 1007.9M 3.9M 2.5G	0.0K 0.0K 0.0K 594.3M 810.0M 32.0K 283.9M	427.3M 427.3M 427.3M 427.3M 413.6M 197.9M 3.8M 2.2G	4096 4096 4096 4096 4096 4096 4096	
< >	<					>

• Logging tab—Lets you log system problems.

System Diagnostics	_		×
File View			
Controller Performance Controller Networking System Info Logging			
Logger Time Device Message adau_dsp Log Level debug Start Tail Stop Tail Open Log View Destination			
Auto Scroll Output	Save Outp	out To File	>

This logging feature lets you:

• Change the logging level of any of the program loggers on the operating system. Select from **fatal**, **error**, **warning**, **info**, **debug**, **trace**, and **default**.

Log Level	
debug	-
fatal	
error	
waming info	
debug	
trace default	

- View the selected log in real time ("Tail"). To start the tail, select the log, then click **Start Tail**. To stop the tail, click **Stop Tail**.
- Open the current log file of the selected program logger. To open the log, select the logger, then click **Open Log**.
- View all the logs available on the device at that location.
- Click Auto Scroll Output to scroll through the log entries, or click Clear Output to clear all entries.

Account Services

From the *Tools* menu, select **Account Services** to set up a customer.control4.com account and register a controller, remove a controller from registration, or check

in for a service connection. To register the controller, see <u>Registering the Control4</u> system.

You can also check the current account status and service level. Select the **Status** tab. You can view:

- Account Status
- Customer Account
- Customer Email
- Service Level
- VPN Status

Help menu

From the *Help* menu, you can:

- Access this Composer HE User Guide.
- Check the Composer HE and Director versions.

Getting Started Guide User Guide Documentation Library About Composer Home Edition

The following options are available:

- Getting Started Guide—Displays this Getting Started Guide.
- User Guide—Opens a link to the Composer HE User Guide.
- **Documentation Library**—Opens a link to the documentation for homeowners.
- About Composer—Displays the Composer and Director versions.

Basic Composer HE tasks

You can perform simple but important tasks in Control4 Composer HE (see below), or you can take a deeper dive into intermediate or more advanced tasks (the Composer HE User Guide will show you how).

Accessing the List view from the project tree

Use the *List View* tab to view the devices in your project (by room). Ensure that the devices are added and identified to the project.

To view the list:

- 1. Click Monitoring.
- 2. Select a **room** in the project tree.

lonitoring	List View		List View Properti
/stem	Family Room		
~ ^ ~	Digital Media	Internet Radio	Front Room HC800
Gesidence ^	Name: Denon Receiver	Name: HD Radio	Name: iPod_USB
Ause	Name: Favorites	Name: Internet Radio 2	Name: Media Server
- 😰 Digital Media - 😺 Internet Radio	Name: Flickr	Name: Pandora	Name: SiriusXM
Front Room HC800	Name: Spotify	eSATA File Storage	dan-pc-e
- Pod_USB Favorites	Name: Control4 Thermostat Temp: 66 F Mode: Heat	Tuneln	Name: Chromecast
Media Server	Wireless Outlet Switch V2	Name: Vizio TV	Name: xbox one
Pandora SirlusXM	Napster	Name: Google Chromecast	Christmas Tree Outlet Switch
Spotify	Name: Christmas Tree	Name: Holiday Lights Level:	My Music
Control4 Thermostat	My Movies	Stations	Channels
Chromecast	DLNA Music	Pandora	System Remote Control SR260
Vizio TV	Name: Amazon Fire TV	Amazon Fire App Switcher	T3 7" Tabletop Touch Screen
Monitoring	Intercom 2	Name: Family Room Light Level:	Family Room KP
Media	Name: Family Reading Light Level:	Family Reading KP	Name: Family Room Level:
🔢 Agents	5 EA-5	UIDevice	Remote with batteries
8 Programming	USB Disk 2.0 partition1	Family Room control	Remote Finder Pro

3. Click the **List View** tab; the status of each device associated with that room displays in the *List View* pane.

Removing items from the project tree

Use the project tree in *Monitoring* to remove devices, rooms, buildings, etc.

To remove items from the project tree or other lists in a Composer project:

- 1. Right-click the item to remove in the project tree, and then select Delete.
- 2. Click Yes to confirm.

Clearing a project

To erase all project configuration information, use the Clear Project menu option.

Note: Control4 recommends that you create a backup file of your project first before you use this function. To back up the project, go to the File menu, and then select **Back Up**. Give the project a filename; the file saves to the My Documents folder by default.

To clear out a project:

1. From the File menu, select **Clear Project** to erase the project configuration information.

Exiting Composer HE

Use the **Exit** command to close Composer HE.

To exit Composer:

1. From the File menu, select Exit.

2. Composer asks you if you want to back up your configuration information.

Note: Control4 recommends that you always save a backup copy of your configuration.

Getting project configuration information from a controller Use the *Connect to Director* link to view configuration information.

To get existing project configuration data from a controller:

- 1. Verify that your PC and the controller are connected to the same network.
- From the Composer Startup screen, click Local System or from menu bar, click File > Connect to Director (see below). The project configuration appears unless it is a new project.



Loading a project's configuration from a computer to a controller Use Connect to Director to load configuration information.

To load the project configuration from a computer to the controller hardware:

1. Verify that your PC and the controller are connected to the same network.

2. From the startup screen, click Local System, or from menu bar, click File > Connect to Director (see below).



- 3. From the *File* menu, select Load Project.
- 4. Click Yes when prompted to back up the project. Browse and select the project file.

Example: SmithProject.c4p

5. When you see the new project displayed in the *Monitoring* view, the project is loaded to the controller, and you are connected.



Backing up a Composer HE project

Use the *File* menu to back up your project. Control4 recommends that you do this whenever you change anything in a project or if you update the software.

The File menu in the Composer screens provides the following options for backups:

- **Back Up**—Backs up the current project to your PC. The first time you back up, it prompts you for a filename. It also prompts you to back up any media information. If you select this option, the current project becomes an option in the File > Load Project list.
- **Back Up As**—Backs up the current project, and prompts you to enter the name of the file. It also prompts you to back up any media information. If you select this option, the current project becomes an option in the File > Load Project list.

Any time you exit Composer by clicking **File > Exit**, Composer HE asks you if you want to back up your project. If you've made changes, it's a good idea to do so.

Backing up and loading from a virtual to a local or remote Director

Use the Connect to Director option to back up a Director.

To back up and load configuration information from a virtual Director to a local Director:

- 1. From the Composer *File* menu, select **Connect to Director**.
- 2. When prompted, click **Yes** or **No** if you want to back up the media information.
- 3. A *Directors* dialog box appears listing the available Director IP addresses. Select the address of the controller to which you are connecting.

2 Directors		×
Host Name HC800-BoardRoom-000FFF TrainingRoom2-RedCliffs-00	Version 2.10.6.558226+es 3.0.0.561999+es	Connect
		Add Remove Refresh

4. Click **Connect**. You are now connected to a local Director.

Backing up a project's configuration and media

Use Composer HE to back up project information. When connected to the controller, changes are immediate.

To save a project configuration to your computer, and then use the Back Up and Back Up As options:

- 1. From the File menu, select **Back Up**.
- 2. Type a filename to back up the project, or use the same name, if you prefer.
- 3. When prompted, click to select the options to back up media information and personal information, then click **Save**.

Composer HE Version Independence

With the release of Composer HE 3.1, Composer HE now connects to Director running on the primary controller through a set of versioned APIs. The change allows Composer HE to connect to any controller running OS 3 or newer. But most importantly, Composer HE can now be released independently from Control4 OS releases which clears the path to accelerated enhancements, features, and fixes to Composer software.

Prior to this release, Composer HE, Control4 OS updates, and Drivers and Agents were all released at the same time. When a revision to one of these components was published, they were all updated together. This was necessary because these components communicated with each another through conventional Application Programming Interfaces, or APIs. When any API was added, changed, removed, or in some cases just used differently, all other components had to be revised to match. Here's a simplified view of the prior relationships among these components:



With the release of Composer HE 3.1, communication between Composer HE and Drivers and Agents were made part of a versioned API. Now, new features can be added to Composer software while still allowing Composer to communicate to Drivers and Agents through a versioned API.

Here's what things look like now:



For systems running Control4 OS 3 or higher, versioned APIs between Composer HE and Drivers and Agents allow the two components to be version-mismatched. In other words, Composer HE is now version-independent of Drivers and Agents, which in turn makes it version-independent of Director.

Note: While Composer HE and Drivers and Agents communicate through a versioned API, the OS's built-in Drivers and Agents communicate with Director through conventional APIs. This means that for the time being, Drivers and Agents must continue to be version-matched with Director. APIs for Control4 and 3rd-party drivers that are based on the Driver Wizard or the DriverWorks SDK are

independent of the OS version. Developers of drivers which use the DriverWorks SDK APIs may designate a minimum-OS version.

Connecting Composer HE to a Virtual, Local, or Remote System

Composer HE gives users three connection options at startup. The same three options are presented after disconnecting:



Virtual System

Virtual System, also known as Virtual Director, is a software emulation of the software that runs on the primary Control4 controller (Director). Selecting Virtual System will connect Composer to a Virtual Director running on the same PC. There's no need to be connected to the local network (LAN) or to the internet to establish this connection.

Local System

Selecting Local System allows Composer to connect to a Control4 controller running Director on the same LAN as the host PC. Neither the PC running Composer or the controller have to be connected to the internet to establish this connection.

Remote System

Selecting Remote System allows Composer to connect to a Control4 controller running Director—that is also registered to Control4 account—located on a different LAN than the host PC. The PC running Composer and the controller both need to be connected to the internet.

Composer HE makes new decisions when connecting

When connecting Composer HE to a Virtual, Local, or Remote System, Composer HE now connects through a set of versioned APIs, if applicable, and allows you to manage those APIs when you connect.

Connecting to a Virtual System with versioned APIs

Each release of Composer HE comes with the latest set of Drivers and Agents and Virtual Director. Connecting to Virtual System is straightforward for any version of Composer HE, and as long as the user has not uninstalled its Drivers and Agents, the matched set of components will always be available.

Connecting to a Local or Remote System with versioned APIs

When connecting to a Local System or Remote System, the user must select the controller on the LAN or WAN to connect to. The Connect to Project (formerly, the Directors) screen presents a list of controllers to choose from, along with their IP addresses and OS version numbers.

In prior releases, if the user selected a controller with an incompatible version, Composer would alert the user and then open the project in a read-only "compatibility mode."

With Composer HE 3.1, the following changes have been made to the way the Connect To Project selection screen works:

- 1. If the major component of the OS version number (for example, the '3' in version number '3.1.0') of the controller matches that of Composer HE:
 - If the minor and revision components of the version number also match that of the Drivers and Agents installed on the PC, Composer HE will display "Ready to connect" in the Status column for the controller, and a single action button labeled "Connect":

Host Name	Address	Version	Status	Connect
a5-000FFF91A1AE	10.161.1.24	3.1.0.563630-res	Ready to connect	
a5-000FFF91A1AE	10.141.1.12	3.0.0.563630-res	Requires OS management package 3.0.0	
a3-000GGG91A1AE	10.161.1.20	2.10.0.563630-res	Ready to connect to view or update	
a3-000GGG91A1AE	10.161.1.20	2.10.6.563630-res	Ready to connect to view or update	

 If the minor and revision components of the version number DO NOT match that of the Drivers and Agents installed on the PC, Composer HE displays "Requires OS management package [version#]" in the Status column, and a single action button labeled "Install and Connect". If the PC is connected to the internet, Composer HE will download and install the correct drivers before connecting to this instance of Director. If the PC is not connected to the internet, Composer HE will use the OS management package that matches itself and connect to the project in compatibility mode.

Connect to Project				×
Host Name	Address	Version	Status	Install and Connect
ea5-000FFF91A1AE	10.161.1.24	3.1.0.563630-res	Ready to connect	
ea5-000FFF91A1AE	10.141.1.12	3.0.0.563630-res	Requires OS management package 3.0.0	
ea3-000GGG91A1AE	10.161.1.20	2.10.0.563630-res	Ready to connect to view or update	
ea3-000GGG91A1AE	10.161.1.20	2.10.6.563630-res	Ready to connect to view or update	
Add Remove	Refresh]	More info on manag	ing multliple project versions

If the major component of the version number (for example, the '2' in the OS version number '2.10.0') of the controller DOES NOT MATCH that of Composer HE (for example, '3.1.0'), Composer HE displays "Ready to connect to view or update" in the Status column. Composer HE displays an action button labeled "Connect", which when clicked, connects to the project in compatibility mode. In addition,

• If version 2.10.0 of Composer HE is already installed on the PC, Composer HE displays an additional action button, "Launch and Connect Composer 2.10.0", which launches Composer 2.10.0 and connects to the project in full access mode.

Connect to Project				×
Host Name ea5-000FFF91A1AE	Address 10.161.1.24	Version 3.1.0.563630-res	Status Ready to connect	Connect
ea5-000FFF91A1AE ea3-000GGG91A1AE	10.141.1.12 10.161.1.20	3.0.0.563630-res 2.10.0.563630-res	Requires OS management package 3.0.0 Ready to connect to view or update	Launch and Connect Composer 2.10.0
ea3-000GGG91A1AE	10.161.1.20	2.10.6.563630-res	Ready to connect to view or update	
Add Remove	Refresh]	More info on mana	ging multliple project versions

 If version 2.10.0 of Composer HE is NOT installed on the PC, Composer HE displays an additional action button, "Install and Connect Composer 2.10.0", which downloads and installs Composer 2.10.0 before launching it and connecting to the project in full access mode.

Connect to Project	t			\times
Host Name ea5-000FFF91A1AE ea5-000FFF91A1AE ea3-000GGG91A1AE ea3-000GGG91A1AE	Address 10.161.1.24 10.141.1.12 10.161.1.20 10.161.1.20	Version 3.1.0.563630-res 3.0.0.563630-res 2.10.0.563630-res 2.10.6.563630-res	Status Ready to connect Requires OS management package 3.0.0 Ready to connect to view or update Ready to connect to view or update	Connect Install and Launch Composer 2.10.6
Add Remove	e Refresh]	More info on mana	ging multliple project versions

Connecting to a Director

Each Control4 controller (for example, an EA-3) ships with pre-installed Director software. The Director communicates with Control4 and third-party products to enable home automation so devices can communicate with each other and Director.

Connecting Composer Pro to a Virtual, Local, or Remote System

Composer Pro gives users three connection options at startup. The same three options are presented after disconnecting:



Virtual System

Virtual System, also known as Virtual Director, is a software emulation of the software that runs on the primary Control4 controller (Director). Selecting Virtual System will connect Composer to a Virtual Director running on the same PC. There's no need to be connected to the local network (LAN) or to the internet to establish this connection.

Local System

Selecting Local System allows Composer to connect to a Control4 controller running Director on the same LAN as the host PC. Neither the PC running Composer or the controller have to be connected to the internet to establish this connection.

Remote System

Selecting Remote System allows Composer to connect to a Control4 controller running Director—that is also registered to Control4 account—located on a different LAN than the host PC. The PC running Composer and the controller both need to be connected to the internet.

Connecting to a Director on a local network

When you connect to a Local Director, you are making 'live' changes on the controller. Every time you connect to the Director on that controller, your project opens.

Tip: You also have the option to make a backup of the project on your computer by using the **Back Up As** or **Back Up** option from the File menu to save the project file. When you back up a project file, it is backed up by default to the My Documents directory on your computer.

To connect to a Director locally:

- 1. From the desktop, double-click the **Composer** icon.
- 2. At the Composer startup screen, click **Local System**. Local Director connects you to the home network while working in Composer Pro.



- 3. From the Director dialog box, select the Director's network address for the controller you are setting up, and then click **Connect**.
- 4. Make a note of the network's IP address. Composer Pro opens to the Composer Monitoring view.

System	Properties						
Graper System						Locations Discovered My Drive	rs Search
🖮 😍 Control4		Lighting Defaults Allowed Networks		ion Z-Wave C	Configuration	- 😻 Home - 🏘 Work	
⊖ Sulding 2 ⊕ Shifting 2	Project Name:	Draper System	Set			Corporate ⊖	
Family Room Electrony BRAVIA		Draper, UT, USA	Lookup				
		40.52000046	Set			⊟- 🛅 Roors 🖼 Main	
Vudu 	Country:						
-10 Wall Lights -10 Accent Lights -10 Front Door -10 Front Door			Display time us	sing a 24-hour o	lock		
Family Left - ∰Family Right ⊕ ₩ 13 10° Tabletop Touch Screen 2		11:52:35 AM \$	Edit			Ver Living Ver Dining Ver Kitchen	
Garage Door Right Garage		Push Settings from Project				Bathroom Master	
UDevice		Change Password				[]] Front 🕵 Garage	
System Design	Locale:	~	Set			- 😨 Room	
Connections							
(in the second s		Temperature:			_		
Agents		Fahrenheit					
🕉 Programming		○ Celsius			~		

Setting up Remote Access

Use a Control4 Navigator to enable or disable Remote Access. This feature lets you access your Control4 system for updates using the Internet from a remote

location. Note: You can also set up Remote Access when you create an account at customer.control4.com.

Prerequisites

• Register the system at customer.control4.com. This process can be completed by the installer or homeowner as long as the system a Navigator, touch screen or on-screen configured in the system.

To set up Remote Access for OS 2.6 or later:

- 1. At one of the touch screens or on-screen Navigators, select Settings > Service Connection.
- 2. Select Yes under Remote Service.

Notes:

After you enable remote access, if the user has a 4Sight subscription for this system, then the user can enter their email address and password and securely log in to their Control4 home network from any Internet connection in the world.

When the user logs in, the homeowner can use the Web Navigator to monitor and control their lights, change their temperature (warm or cool the home remotely), or check whether any doors or windows were left open. You or the user can refer to this Internet information in the Control4 System User Guide.

If this system and controller are registered on customer.control4.com, the system is accessible for remote access (without a 4Sight subscription) after a request by the Control4 Installer or Control4 Technical Support representative has been made to access the system. After OS 2.4.0, this check-in is no longer required to initiate a remote service connection.

Connecting to a Director using Remote Access

If you connect to a Remote System, you are making "live" changes to a remote system controller, where changes are communicated over an Internet connection rather than a local network connection. This type of connection is not available, however, until the initial configuration and registration are completed.

Note: The customer may revoke access rights through my.control.com at any time, but this is not recommended as it interferes with routine Control4 updates.

Requirements

• The customer must be registered at customer.control4.com and remote access must be enabled. (See "<u>Registering the Control4 system</u>" or "<u>Register</u> the controller from a Navigator.")

• A PC with Composer initially installed must be in the same local network as the controller when remote access is set up.

Before you can use the Remote System option, you must configure the system to support remote access (see "Registering the Control4 system").

Connecting using Remote Access

To connect to a Remote Director:

- 1. Using a PC with Composer HE installed, verify that the PC has an Internet connection.
- 2. From the desktop, start Composer.
- 3. At the Composer startup screen, click **Remote System**. Remote Director connects you to the home network while working in Composer from a remote location.



- 4. Enter your Email Address and Password in the *Account Name* dialog box. This should be the login information from your account on your dealer my.control4.com account.
- 5. When the *Select Remote Account* dialog box appears, select the account you want to access, and click **Connect**.

Select Remote Accoun	t				×
Using Account Login:	training-slctr2primary@control4.co	om		Edit	Connect
Name Education Salt Lak	e	Service Level	OS Version	Allows Support	Cancel
					Add Edit Remove

If the account name doesn't appear under *Name*, click **Add** to add the account name, and Username (Email address) and Password if they are different from your dealer account login credentials, and click **OK** in the dialog box that appears. This is the Account Name you created during registration at customer.control4.com. After you do this, select the account from the *Select remote account* dialog box, and click **Connect**.

Composer HE User Guide

	×
	~
	(Optional)
	(Optional)
OK	Cancel
	ОК

The next screen shows that your account, the User Email Address, and the Password are being verified. This may take several minutes to complete as it is accesses a remote connection.

When authenticated and connected through the Remote Access service, a list of Directors available for connection appears.

6. Select the Director you want to connect to, and then click Connect.

When connected, Composer opens and the main Composer view connects to the controller remotely. Composer functions normally as if you were connected to Local Director, allowing you to configure, program, and troubleshoot the Control4 system.

Ensuring that Director and Composer are compatible

Verify that the Control4 controller software (Director) and the Composer software are on the same version before beginning to design a project, or any time you use Composer to ensure the best communication between the two.

To check compatibility:

- 1. In the Composer menu bar, click Help > About Composer.
- From the dialog that appears, compare the Composer and Director version numbers. For the Control4 system to run properly, these numbers must match. If they don't match, update Composer and/or Director to get to the same version. See the Composer HE User Guide for information about updating your system, or see "Update Manager."

Example:

Composer version: 3.0.0.562742

Director version: 3.0.0.562742

Note that the two versions in the screen below are the same.



System Compatibility Check

When connecting to a system, Composer HE performs a capability check to ensure that the Composer version and OS version are compatible. Use the System Compatibility Check to review which version of Composer must be used to modify your system.

System Compatibility Check

G System Compatibility Check	×
Compatibility Alert:	
The controller you are connected to is running Control4 OS 2.10.6. This version of Composer ONLY supports: - Read-only access of this system. - Updating the system to Control4 OS 3.0.0.	
To start an update : Go to the Tools Menu, select Update Manager. Note: To make changes to this system you MUST use Composer 2.10.6.	
Ok	

Registering the Control4 system

Every system must be registered at customer.control4.com to maintain the system software through online downloads, and to use all of the media features in the system (for example, the Control4 online media database for scanning music). System registration is also one of the essential first steps in enabling remote access to the system.

After you complete the initial Control4 system setup (adding devices to a project, identifying them automatically for devices released with OS 2.3.0 or later, and making software connections for each device), you are ready to register the system and set up the media. "Setting Up the Media" is discussed in the Composer HE User Guide.

You can register the system either from Composer or by using a Navigator. See the sections below.

Register the system at customer.control4.com

Control4 recommends that you register each Control4 system you install at customer.control4.com to maintain the system software easily through online downloads. Only registered systems can use all of the media services available.

System registration, which includes setting up a customer.control4.com account, is required to use most of the media services that are available in the Control4 system, for example, scanning media into the system (so that you don't need to manually add individual music files).

You can register the system now through Composer, or later through a Navigator if you customize the Navigator. You may have already registered the system in Composer to set up media. If not, you can register the system using any Internet connection and one of the Navigators that is connected and identified.

Register the controller from Composer HE

Composer HE lets you register the controller to a customer account without having to log in to the customer's account. You can now create a new account and register the controller in one step, register to an existing account found under your dealer of record, or manually register the controller using the 10-digit code from the customer's account page under *Controller registration*.

To set up a new customer.control4.com account and register this Control4 system:

- 1. In Composer HE, go to **Tools** > **Account Services**.
- 2. Click the **Add New Account** tab to create a customer.control4.com account and start the registration process for the user.

atus Select Account Add	d New Account	Manual Registra	tion		
Account Information:					
Account Name:					
First Name:					
Last Name:					
Email Address:					
Confirm Email:					
				Add Accou	unt

- 3. Complete the *Account Information* form for the user, and then record the Account Name and Email Address for the user's future reference.
- 4. Click Add Account to create an account for this Control4 system and register the controller to the new account.

To register the system to an existing customer account:

1. In Composer HE, go to **Tools > Account Services.**

2. Click Select Account and select the existing account you wish to register to in the list of Customer Accounts.

tus Select Account	Add New Account	Manual Registra	tion		
Customer Accounts:					
					•
Account Name:			Enabled:		
Allows Support:					
Created:					
Last Checked In:					
Modified:					
Controller Informa	tion				
Registere	d:				
Name					
Control4 Versio	n:				
					gister

Note: If the existing customer account does not show up in the Customer Accounts list, have the customer log in to their account and verify their dealer of record is pointing to your dealer account.

To manually register the system to an existing customer account:

1. In Composer HE, go to Tools > Account Services.

2. Click Manual Registration.

ing dealer login:	ount Add New Acc	ount Manual Regis	tration	Edit L	ogin Check In
Many features of y		n are enabled throug	h services provided by	my.control4.com	. Follow these
Register your cont Enter the 10-digit r	registration code:	4.com			
Press: Regist	er				
					Close

- From the customer.control4.com account page, copy the 10-digit registration code found under My Devices > Controller Registration > Register New Controller. This code is time sensitive and must be used within 10 minutes. It provides a temporary code used to exchange the security parameters and create a secure connection between customer.control4.com and the controller.
- 4. On the Account Services page, click the text box and paste the 10-digit registration code in the box.
- 5. Click the **Register** button on the Account Services page in Composer (now enabled) to complete the registration. The Current Status changes to 'Registered.'

Setting up a 4Sight subscription

Use the Internet to set up a 4Sight subscription. This feature enables a Control4 system user to log in to the Internet and manage their Control4 system on the web. Consumers will need 4Sight to use Anywhere Access also.

Note: 4Sight subscriptions are sold separately.

Prerequisites

- 1. Design and set up the project.
- 2. Register the Control4 controller and the system owner.

When a 4Sight subscription has been obtained for the Control4 system, this setup can be done by the homeowner or installer. The installer or a Control4 representative should be able to provide information about how the homeowner can set up a customer account. The Control4 System User Guide or Account Setup provides that information for the homeowner.

To set up a 4Sight subscription at customer.control4.com:

- 1. Obtain a 4Sight subscription code for the system (sold separately).
- 2. Log in to customer.control4.com using the homeowner/user email address and password.
- 3. From the My Account tab, select the **Subscriptions** view.
- 4. Enter the **4Sight subscription code** provided by your Control4 representative, and then click **Activate**.

Tip: Scroll down and view Account Subscriptions to see which subscriptions you already have.
Where to go from here

This Control4 Composer HE Getting Started guide gave you:

- An overview of Composer: how to install and start it, how to access a Director, and includes a preview of the Composer interface (views, menus, properties, panes, etc.).
- An overview of how to start designing your project with suggested tools.
- An overview about connections and how to test devices.
- How to register the Control4 system.
- How to set up a 4Sight subscription.
- How to set up Remote Access.

More detailed and advanced sections (Composer Pro User Guide) are outside the scope of this document but you can find them on the Dealer Portal.

The advanced sections give you specific details about:

- Setting Up Media
- Creating Device Drivers
- Making Connections
- Verifying Connections
- Configuring Devices
- Configuring Properties
- Basic Programming
- Advanced Programming
- Customizing Navigators
- Installing Devices
- Troubleshooting the System

Other resources

Also check out the Control4 Forums or Knowledgebase.

Basics

Composer HE basics

Use this chapter to learn how to:

- Install and configure devices
- Configure Composer HE properties

Monitoring the system

The Composer HE Monitoring view is designed to help you view your system, rooms, and devices. To access the *Monitoring* view, start Composer HE. When you choose the **Monitoring** view (highlighted in the lower left pane), you have two tabs to choose from: *List View* and *Properties*.

Monitoring view:

Composer Home Edition 3.1.1 / OS Mana File Tools Help	agement 3.1.1 - Residence (Remote)		- 🗆 X
Monitoring	List View		List View Properties
System	Residence > Home > House > Main > Fami	ly Room	^
· · · · 9	Digital Media	Internet Radio	Front Room HC800
Residence ^	Name: Denon Receiver	Name: HD Radio	Name: iPod_USB
⊡ 🏠 House ⊡ 🔁 Main ⊖ 🐨 Family Room	Name: Favorites	Name: Internet Radio 2	Name: Media Server
- 😥 Digital Media - 🐻 Internet Radio	Name: Flickr	Name: Pandora	Name: SiriusXM
	Name: Spotify	eSATA File Storage	dan-pc-e
dan-pc-e	Name: Control4 Thermostat Temp: 69 F Mode: Heat	Tuneln	Name: Chromecast
- Truneln - Chromecast - Wireless Outlet Switc	Wireless Outlet Switch V2	Name: Vizio TV	Name: xbox one
- Vizio TV	Napster	Name: Google Chromecast	Christmas Tree Outlet Switch
Napster Google Chromecast	Name: Christmas Tree	Name: Holiday Lights Level:	My Music
- W Christmas Tree Outle - Christmas Tree - M Holiday Ughts	My Movies	Stations	Channels
Wy Music	DLNA Music	Pandora	System Remote Control SR260
Stations	Name: Amazon Fire TV	Amazon Fire App Switcher	T3 7" Tabletop Touch Screen
Monitoring	Intercom 2	Name: Family Room Light Level:	Family Room KP
Media	Name: Family Reading Light Level:	Family Reading KP	Name: Family Room Level:
Agents	5 EA-5	UIDevice	Remote with batteries
line and the second sec	USB Disk 2.0 partition1	Family Room control	Remote Finder Pro
Director Status: Idle			Connected to 10.158.1.187 (SSL)

Check the Device Status in List View

The default page in the Monitoring view is *List View* (first tab, top right) which lets you view all the devices in your Control4 system and their current state.

List View groups devices under the rooms to which they're assigned. In the example above, all of the devices are located in the Living Room because the Living Room is selected in the project tree (Monitoring pane).

Monitor Status—You can monitor the status of devices in the system. In List View, double-click on the
device's icon to bring up the device's controls. Light levels are indicated with slider bars and buttons for
on or off state. Each device has a different set of controls.

Device Controls—You can access the device's controls by double-clicking on any device icon in either the project tree or the List View tab.



Try this: Double-click on any device with an On/Off option to access the device's controls, for example, a switch. Turn the device on or off; some devices have a color change on the icon in the Device Control and in the List View. See also "Checking the Device Status."

Change Project Properties

The main Composer HE view shows the *Properties* pane. Click the **Properties** tab to view the properties of the project, room, or device.

le Tools Help Ionitoring	Properties List View	w Propertie
ystem	Properties	- ·
Image: Second constraints Image: Second constraints	Project Settings Information Lighting Defaults Allowed Networks ZgBee Configuration Z-Wave Configuration Project Name: Reaidence Set Location: Orem, UT, USA Lookup Latitude: 40.31478 Set	
e Rotit Hootin Hoodo	Longitude: -111.6947 Country: USA	
Tuneh Tuneh Tornecast Wreess Outlet Switc Wisco TV Tornecast Was TV Tornecast Societ Chromecast	Date: 12/18/2019 Display time using a 24-hour clock. Time: 3.34.17 PM Image: State	
Christmas Tree Outle	Push Settings from Project Chance Password	
My Movies	Locale English (Unted States) V Set	
Media	Temperature:	
Agents Programming	Fahrenheit Celsius Celsius	

The *Properties* pane displays the following elements:

•

Project Properties—This lets you change general information about the project according to the location of the Control4 system. In the project tree, click the **project name** (BN Office is the example above).

Use the project *Properties* pane to do the following:

- Change the name of the project
- Change/enter the ZIP Code of the location where the Control4 system resides
- Change the date and time
- Change the project settings
- Enable SSL and password for security purposes
- Change localization options
 - Room Properties-In the project tree, click a room to view its Properties.

This lets you edit Room Properties in the following tabs:

- Audio Video Devices—Shows your available audio and video devices, where your audio and video end points are, and what is controlling the volume. If a device does not appear in this window and you think it should, check the connections. The connections may not be mapped properly.
- **Navigator**—Lets you hide/re-order the device's visibility and display order in a room, including lighting scenes.
- Miscellaneous–Lets you enable the default audio or video volume for a room, and assign an IP mask to the room for programming a third-party remote.

Device Properties—Click on a device from the project tree to see its editable properties. For example, you can set the one-click ramp up and ramp down rates on a Wireless Dimmer. You can also edit the LED colors for all of your switches, keypads, and dimmers.

Control4 recommends that you look over the properties of each device to see how you can change them.

See also "Checking the Device Status" (next) or "Changing project properties" later in this document.

Configuring device properties

Use the Composer Properties pane 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 property types:

- 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, for example, room, floor, house, etc.
- Device Properties–Lets you set device-specific configuration options.

To configure properties:

- 1. Start Composer and connect to a Director.
- 2. Click Monitoring.
- 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 (12-hour and 24-hour clocks)
 - Time zone
 - Lighting Defaults
 - Project Settings Control
 - System Security
 - Localization

• Scale (Temperature)

For more information, see "Composer Pro properties".

• **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".

- List View—Select a room, and then select the List View tab. View and/or modify the devices in the room. For more information, see "<u>Device</u> <u>Properties</u>".
- **Device**—Select the device to modify the available user options. For more information, see "<u>Device Properties</u>".

Help for device properties

Device properties vary by type of device. Changes made to the properties of most devices are immediately applied to the system. Changes made to Navigators may not be noticeable until you refresh the Navigators using Composer HE's File > Refresh Navigators command (Shift+F5).

For the most up-to-date device properties information, click the Documentation tab in the Properties window (available only on select devices) or the Help button on the proxy.



Examples

Use this chapter to see examples of how to:

- Set up a project using the Composer Views method
- Manage apps with the 4Store agent
- Use the Access agent
- Use the Advanced Lighting agent

Example: Use the Access agent

Use the Control4 Access agent view to allow or deny access or hide parts of the user interface on supported touch screens and on-screen TV interfaces. The Access agent is ideal for commercial applications including hotels, bars, or board rooms where settings need to be locked or hidden to restrict their use by unauthorized personnel. By adding this agent to a project, an access code is required to gain access to selected functions of the Status Bar or the More and Settings modules. When enabled, the **Access** agent settings apply to profiles created in the **Identity** agent and each profile can be applied to any number of touch screens and on-screen TV interfaces in the system using the **UI Configuration** agent..



The Access agent provides these key features:

- User–Select a profile and define the Access restrictions for that profile. After you apply the settings to a profile, use the UI Configuration agent to apply the profile to a user interface.
- Current Access Code—The programmer can establish a four-digit access code to restrict access to user interface elements globally.
- Access Agent-Enable or Disable the Access agent for the selected user profile.
- Hide Digits—Hide or show numbers on the user interface when entering the Access Code on a user interface.

Navigation

- Experience Menu–Lock the Experience Menu (C4 icon). If locked, you can only see the favorites in the Room Menu and must enter the Access Code to see the Experience Menu.
- Return To Room–Lock the Return to Room icon (Room icon in the top left that replaces the Experience Menu icon after you select a device). When locked, you must enter the Access Code to return to the Room Menu.
- Back Button–Lock the Back button in the Status bar after you select a menu. For example, with the Back button locked, if you navigate to a camera view, you must enter the Access Code to return to the Cameras Menu.
- Room Selector-Lock or Hide the Room Selector in the Status bar.
- Room/All Filter–Lock or Hide the Filter icon on menus that support filtering like Lighting and Shades. If you lock or hide the filter, you can only see items in the current room unless you change the filter to All.

Media

• Sessions–Lock or Hide the Sessions interface. With the Sessions interface locked or hidden, you must enter the Access Code to control Sessions in other rooms.

• **Media Sharing**–Lock or Hide the Media Sharing option in the Sessions interface. With Media Sharing locked, you must enter the **Access Code** to share media with another room.

Other

- Settings–Lock the Settings icon. With Settings locked, to access Settings like Wallpaper or Screensaver options, you must enter the Access Code.
- Edit Lighting Scenes–Lock or Hide the Edit icon on Lighting Scenes.
- Favorites–Lock or Hide the option to add an item as a Favorite.
- Intercom–Lock the Intercom icon.
- Lock Screen–Set to Unlocked, Auto, or Manual to configure a lock screen for the interface. For Auto, configure the Screen Lock Timeout below the Lock Screen option. For Manual, long-press on the C4 icon (or long-press to activate the lock screen.

Prerequisites

- Create a user profile in the Identify agent if you want to apply the Access agent settings to a selected group of interfaces or use the default profile.
- Figure out which Status Bar or other functionality you want to restrict or hide from unauthorized users. For example, do you want to lock the Room Selector? Keep others from getting into Settings? Hide the Favorites button?
- Establish an access code.

To create a profile in the Identity agent:

- 1. Start Composer HE and connect to a Director.
- 2. Click Agents.
- 3. Select the Identity agent.
- 4. Click Add User.
- 5. In the **Create New User** window, enter a **Username**, **Password**, and **Confirm Password**. The password must contain 8 digits, 1 capital letter, 1 number, and 1 special character.

To enable the Access agent:

- 1. Click Agents.
- 2. (First time only) Click Add to add the Access agent to the project.
- 3. Double-click on the Access agent to add it into the project.
- 4. Enter a four-digit access code on the numeric keypad.
- 5. Click Set Access Code. The new access code appears in 'Current Access Code' window.

6. Select Enabled in the Access Agent option.

User		Current Access C	ode
default	~	1234	
Access Agent	Enabled ~	123	• •
Hide Digits	Enabled V	123	94
lavigation			
xperience Menu	Unlocked \sim	1 2	3
leturn To Room	Locked V		
lack Button	Unlocked \sim	4 5	6
Room Selector	Unlocked V	7 8	9
Room/All Filter	Unlocked V		-
Media		0	
iessions	Unlocked \sim		
Media Sharing	Unlocked 👘 🗸	Set Access	Code
ther			
ettings	Unlocked \sim		
dit Lighting Scenes	Unlocked \sim		
avorites	Unlocked ~		
ntercom	Unlocked \sim		
ook Soreen	Manual ~		

To apply a user profile in the UI Configuration agent:

- 1. Click Agents.
- 2. Select the UI Configuration agent.
- 3. Select the User tab.

UI Conf	iguration						
Wallpaper	Screen Saver	Device	Settings	User	Favorites		
Assign	user to Touch S	Screen:	touchscr	eens			\sim
						Apply To)
Family	n/T3 10" Tablet Room/UIDevice nent/T3 10" Tab	e - Assig	ned User:	default			ens
<							>

- 4. Select the user profile in Assign user to Touch Screen and click Apply To
- 5. Select the user interfaces or rooms to apply the profile to and click **OK**.



As a reminder, the Access agent enables the programmer to restrict certain features and settings from all users on touch screens and on-screen TV interfaces. Any changes to Access Codes or these settings can only be made using Composer software. If the Access Code is lost or forgotten, it can be recovered only using Composer.

Example: Use the Advanced Lighting agent

Use the Control4 Composer HE Agents and Programming views to program this agent. (For OS 2.3.0 or later, this agent supports the Panelized Lighting product line with full functionality. Older lighting products are also supported, but with limited functionality.) This agent provides more advanced features than the Lighting Scenes agent. See also "Example: Program Using the Lighting Scenes Agent" in this document.

The Advanced Lighting (Scenes) agent provides these features:

- LED tracking for Lighting Scenes
- Toggle Lighting Scenes
- Ramp and fade Lighting Scenes
- Set delays within Lighting Scenes
- Scene sequencing
- Flash lights in Lighting Scenes

To use the Advanced Lighting agent:

- 1. Start Composer HE and connect to a Director.
- 2. Click Agents.
- 3. (First time only) Click **Add** to add the Advanced Lighting agent to the project. **Note**: You must add the Advanced Lighting agent to the project before your customers can edit Lighting Scenes on a Navigator.
- 4. Select Advanced Lighting, and then click OK.
- 5. In the Agents pane, select Advanced Lighting and then click New.
- 6. Enter a name on the dialog that appears (for example, Party Lights).
- 7. Click **Create**. Notice that you have more options than if you were using the Lighting Scenes agent. Note: You can click the **Rename** button to rename a scene.
- 8. Adjust the scene as desired.
 - Show flash option—Select this option to add a Flash checkmark in the list of lighting devices below. When Flash is checked, lights can flash on and off at set intervals. Use this option with the Delay option. For example, this option works well in a situation where you want to alert someone so you can set a porch light to flash in case of an emergency or to get someone's attention. Note: For older lighting devices (earlier than OS 2.3.0), flashing is not supported.
 - Activate Scene—Click this button to activate the scene immediately. Note: The Execute On and Execute Off buttons do not appear in the Advanced Lighting agent. Use the Activate Scene button.
 - Sync This Scene—Click this button to synchronize this scene with other scenes. This option isn't really needed for Panelized Lighting unless there seems to be a

problem.

- **Sync All Scenes**—Click this button to synchronize this scene with all scenes created. This option isn't really needed for Panelized Lighting unless there seems to be a problem.
- **Colors**—This is the keypad color. Click the **Active** or **Inactive** colored boxes to select another color.
- **Tracking**—Click **All Loads** to track a dimmer or switch by name, tracking status, delay, rate, level %; and all loads must match their tracking condition before the scene will be considered active. Click **Any Load** and only a single load needs to match their tracking condition before the scene will be considered active.
- Hold Rates (sec) —Use the up or down arrows to select the Up hold ramp rate or Down hold ramp rate. At the keypad, press and hold for a set period of time in seconds. This action behaves the same as hold rates for dimmers.
- **Toggle Scene**—This pull-down allows you to select which scene to activate when the current scene is prompted to deactivate. This applies to all scenes except for the current one selected. Here, you can toggle scenes on or off.

Example: Create an Advanced Lighting Scene called "Dining." Notice the number of switches and dimmers in the Advanced Lighting pane and their values.

Agents		1	Advanced Light	ting Scenes										
Igents	Add	Remove	Dining						E Show fi	ash option	Activate Scene	s Sync This	Scene	Sync All Scenes
Name			Colors	Tracking	Hold Rates (se	ic)	Toggle Scene		Current State					
Variables			Active	All Loads	Up 5	0	- None -	-	Inactive					
Advanced Lighting							·							
Rhapsody			Inactive	Any Load	Down 5		Create D	fault	Add/Remove L	oad				
		[Name	Track	ing	De	elay		Rate	Level	(%)			
ighting Scenes New	Copy Rename	Delete	Dimmers Dm1	Don't Track	- 0	0	sec 💌	5	sec 💌	80	00	Apply To	📄 Ignore	Scene Ramp/Fade
Name Dining														
Credy .			Dimmers Dm2	Don't Track	• 0	0	sec •	5	sec 💌	80	2 🕄	Apply To	E Ignore	Scene Ramp/Fade
			Switches SW1	Don't Track	- 4	0	sec 💌	0	sec v	On	• 🕹 🗘	Apply To	🔄 Ignore	Scene Ramp/Fade
		. IF									_			
			Switches SW2	Don't Track	• 4	¢	- sec •	0	BBC Y	On	• 8 8	Apply To	[] Ignore	: Scene Ramp/Fade
		Ē					sec •	0	50C ¥	On	• • •	Apply To	Ignore	Scene Ramp/Fade
		-	SW2			2	80C •	3	1 SBC V		5	Apply To	Ignore	Scene Ramp/Fade
		-	SW2	le 1 v seco	d(s)		986 •					Apply To		Scene Ramp/Fade
		-	SW2 Graph Sca Dimmers	le 1 v seco	d(s)		880 -					Арріу То		Scene Ramp/Fade
System Design		-	Siv/2 Graph Sca Dimmers Dm1 Dimmers	le 1 v seco	d(s)		■ BBC ▼					Арру То		Scene RampiFade
🔯 System Design		-	Si/2 Graph Sca Dimmers Dm1 Dimmers Dm2 Switches	le 1 v seco	d(s)		4 BBC •					Арріу То		Scene Ramp/Fade
🛃 System Design		-	Siv2 Graph Sca Dimmers Dm1 Dimmers Dm2	le 1 v seco	d(s)		(100 •)							Scene Ramp/Fad
🔯 System Design			Si/2 Graph Sca Dimmers Dm1 Dimmers Dm2 Switches	le 1 v seco	d(s)		(pec •)					(Apply To)		Scene RampiFad

1. Create a Dining 'Toggle' scene. Notice the difference in switches and dimmers and their values from the previous screen.

Agents			Advanced Lighti	ng Scenes										
	Add	Remove	Dining (Toggle)						Show fla	shortion	Activate Scen	e Sync This	Scene	Sync All Scene
Name	100	(Institution)		Tracking	Hold Rate:	4.3	Toggle Scene				Theorem Coccin		00010	Office All Occurs
Variables			Colors						Current State					
Advanced Lighting			Active	All Loads	Up 5	÷	- None -	•	Inactive					
Rhapsody			Inactive	Any Load	Down 5	÷	Create Def	aut	Add/Remove Los	ed De				
										alancij				
			Name	Tracki	ing	0	elay		Rate	Level	(%)			
ighting Scenes New Cop	y Rena	me Delete	Dimmers	At Scene Fin	all as a	0	÷ sec •	1	🗧 sec 💌	0	800	Apply To	I laner	e Scene Ramp/Fade
Name			Dm1	A SOURCE HE	ai Lev 🔹	0	- sec •		🗧 sec 🔻	v	🖸 🔮 🕤	Appry to	E gron	s Scelle Nallipir au
Dining			Dimmers											
Dining (Toggle)			Dm2	At Scene Fin	nal Lev 💌	0	\$ sec •	1	🔹 sec 💌	0	🗄 😮 😜	Apply To	Ignore	e Scene Ramp/Fad
			Switches	Is Off	•	500		0		(-	e Scene Ramp/Fad
			SW1	IS OT	•	500	🗧 ms 🔹	U	sec v	Off	- 😮 😳	Apply To	ignore	e ocene nampinace
			Granh Scale	1 7 1000	d(e)									
			Graph Scale Dimmers Dm1	0 second	d(s)									
			Dimmers											
System Design			Dimmers Dm1 Dimmers Dm2											
			Dimmers Dm1											
Connections			Dimmers Dm1 Dimmers Dm2											
10			Dimmers Dm1 Dimmers Dm2											

2. Now click the **Connections** view to connect the keypad bindings on a 3-Button Keypad.

File Driver Go Tools Help						
Connections	Control & Audio Vi	deo Connectio	ons			ł
Control/AV Network	3-Button Keypad					
G mintbox trunk	Name	Type	Connection	Input/Output	Connected To	1
🗄 🔶 Home	Control Inputs					
E 😚 House	Button 1 Link	Control	BUTTON LINK	hout	Advanced Lighting-Scene Dining Toggle Button Link	
😑 🔁 Main	Button 2 Link	Control	BUTTON LINK	Input	The second synamic recent change reggie better time	
B-😈 Other	Button 3 Link	Control	BUTTON LINK	Input		
B Dimmers						
B-Switches						
⊕- 🐨 kop ⊕-Stage Basement						
Basement Gld Dev						
- Ma Left IE						
- Bight IE						
- Si Old Dimmer						
- E 3-Button Keypad						
- E 6-Button Keypad						
SR-250						
- Wireless Outlet Dimmer						
- 🗊 Light 2						
- 🐨 Touchscreens						
- O Door Station						
- 📴 In-Wall 7" Touch Screen V2						
- Portable 7" Touch Screen V2						
911211						
- Control						
- Digital Media						
- C Internet Hadio						
- Ing HCSUU						
🔯 System Design	BUTTON LINK Output Devic	65				
Q Connections	Device	Name		Location	Connections	
Media	G Advanced Lighting	Scene Dining Top I				
meas .	Advanced Lighting	Scene Dining Botto				
Agents	Advanced Lighting	Scene Dining Togg			3-Button Keypad->Button 1 Link	
	Advanced Lighting		e) Top Button Link			
🦉 Programming	Advanced Lighting		e) Bottom Button Link			al.
	Advanced Lighting	Top Button Link	gle) Toggle Button Link	Switches		1
	SW2	For Button Link Rottom Button Link		Switches		-

When you toggle the 3-Button Keypad in the Dining room, various lights go on or off at various levels. For more information about connections, see "."

Now go back to the Agents view.

• **Toggle Scene/Create Default**—Click **Create Default** to create a toggle scene as a copy of the selected scene. From the copied scene, you can rename the new scene and adjust the values on some of the dimmers or switches in that scene.

- **Current State**—Shows 'Active' when the conditions are met to consider the scene Active or Inactive if the conditions have not been met.
- Add/Remove Load—Click to add or remove specific dimmers or switches to the scene. Check the lighting loads that you want to add, and then click OK. This can be a single light, a single room, all lighting loads in an entire house, or any combination of these options.
- 9. Assign the settings for each load:
 - Dimmer and Switch Options:
 - **Name**—The top line is the room, and the bottom line is the name you assigned to the dimmer or switch.
 - **Tracking**—This lets you track the lights in the system. Use the **down** arrow to select one of these options.
 - Don't Track—Tracking is ignored.
 - Is Off—Track when the dimmer or switch is off.
 - Is On (Any Level)—The text displays only if the light is a dimmer. Switches just indicate 'Is On.'.
 - On At Level (%)—Track when the dimmer is on at a specific level.
 - At Scene Final Level—Track at the final level of the last sequence. For example, if someone changes the level on a Navigator, this might be the final level.
 - Delay—Use the up or down arrows or type the delay value in seconds.

Tip: If you have several dimmers in a long hall, and you want to set up sequencing, you can use this option with the green + buttons and increase the delay of each dimmer in a row by two seconds.

• **Rate**—Lets you set the ramp rate, which is the speed the load ramps to for the specified lighting level. Use the **up** or **down** arrows to set the milliseconds (**ms**), seconds (**sec**), or minutes (**min**) of the ramp rate. Then set the amount of time the device takes to change the level.

Example: Set the time to 1 second for both the Bedroom Dimmer and the Theater Dimmer.

Level (%)—Lets you set a target lighting level as appropriate by using the pull-down menu, for example, 50 percent for the Bedroom Dimmer and 20 percent for the Theater Dimmer. The green + gives you the ability to add 'paths' to a scene. Each row in the path uses single delay/rate/level settings. Use the green + to add another step, click the red x to delete a step, or you don't need to have any steps. Note: Older lighting devices (prior to OS 2.3.0) only allow 0 or 1 steps.

- Apply To—Click this option to allow other lights to use the same scene.
- **Ignore Scene Ramp/Fade**—Check this option to have the light ignore commands to ramp or fade a scene.
- **Graph**—Shows in graphical form (red lines) the settings for each dimmer or switch. Dimmers will show ramp rates, delays, and levels as angled, horizontal, or vertical lines.
- 10. Now click **Programming**. To program a scene, follow the basic steps in "Programming Basics for Control4 Systems."

Note: In the Programming view, the Advanced Lighting Scene has variables, conditionals, and loops that do not exist in the Lighting Scenes agent. This agent also has 'read-only' variables for the length of each scene.

Example: Note the screens below. The Events and Actions panes use different options than the Lighting Scenes agent (Activate, Deactivate, etc.).

Event: (Is Invoked, Becomes Active, Becomes Inactive)

- Is invoked—This event fires when the scene has been explicitly told to activate. If the scene is already activated, and it is told to activate again, this event will still fire.
- **Becomes Active**—This event fires when the scene transitions from the Inactive state to the Active state.
- **Becomes Inactive**—This event fires when the scene transitions from the Active state to the Inactive state.



• Actions— (Activate, Deactivate)

File Driver Go Tools Help		
Programming	Script	Actions
Device Events	Script Execute	Device Actions
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Advanced Lighting Events		Advanced Lighting Actions
Scene: Dining •		? If Lighting Scene "Dining" is Active
 Is Invoked Becomes Active 		Commands Conditionals Loops
Becomes Active Becomes Inactive		Scene: Dining •
System Design		® b Ache
Connections		
Media		
Agents		
👹 Programming		

A programming example for use with the Advanced Lighting agent might be where, if the front door opens and it's past 9 PM at night, all the lights turn on in the home at various levels.

Setting up media

Use this chapter to learn how to:

- Scan your network for media files
- Access media from disc changers
- Play AV from television stations
- Play audio from radio stations
- Add a switch
- Create a playlist
- Test a media connection
- Edit media information

Media types

To take full advantage of media lookup services by Gracenote, your customers must have an account at customer.control4.com and their system must be registered to the account. See Composer HE Getting Started for details.

To add and scan songs and albums for playlists, they must be available in MP3, WMA, M4A/AAC, or FLAC format on an external USB drive, eSATA drive , or network share.

To add Internet radio stations, the Internet radio driver must be bound to the controller. See "<u>Setting up</u> Internet radio stations" in this document.

Tip: In OS 2.4 and later, you can use the TuneIn app to stream radio, news, sports and more from Internet stations worldwide. See the TuneIn Setup Guide or TuneIn User Guide for details.

You can set up your customer's audio and video media in a Control4 system for:

- Controllers
- Disc changers
- Media players
- Dock for iPod (iPods, iPhones, etc.)
- Television broadcast channels
- Radio broadcast stations
- Internet radio
- Satellite broadcast channels or music stations
- Other external storage devices: USB flash drives and shared network drives

You can also:

- Add CDs and DVDs
- Add individual songs
- Add cover art, titles, albums, etc.
- Create playlists
- Use the auto-scan feature to scan movies or music
- · Add and scan supported files from third-party media managers, for example, iTunes
- Edit media information for DVDs, CDs, etc.

To view and select the media from the Navigators, including wireless touch screens, on-screen, Control4 apps, and System Remote Control devices, you first need to add and scan the media to the Control4 controller.

For the MP3, WMA, M4A/AAC, or FLAC files stored on an external hard drive or network location that you add and scan, you can create playlists saved to the Control4 controller's hard drive in the media database.

Note: Speaker Point does not support M4P/AAC. Play songs through Speaker Point using MP3.

Note: Internet radio supports only MP3, WMA, and MP4 streaming radio stations.

Tip: The Control4 system must be functioning correctly before performing any of the tasks mentioned in this section. For example, if a disc changer does not appear in the project tree and is not identified and connected to the system, media cannot be added to it.

Overview of media management

Media configuration and media management are controlled in the Composer (Pro, HE, and ME) software. The primary controller that runs Director always runs Media Manager and the media database (SQLite 3.1).

- Media Database–Migrating from pre-OS 2.0 to OS 2.0 and later requires a media database conversion and schema changes; consequently, the media databases in OS 2.0 are smaller.
- Media Manager–All scans are performed by the Media Manager running Director on the primary controller. Note: Composer HE configures scanning only, and does not scan the media.
- Media Lookup Service-This service now runs either in Composer HE or Media Manager.
- **Composer New/Edit Search**—For media metadata lookup when media has not been scanned properly. The information retrieved can be edited and written to the media database, and/or the metadata can be written to the tags.
- **Media Manager**—Uses online media lookup. IMPORTANT! Controller registration is required on MyControl4 to use this service for versions later than Release 1.6.

Other Media Managers: You can use other media managers, for example, iTunes, Windows Media Player, and Media Monkey to create or manage MP3s and WMAs. You can still use Composer Pro, Composer ME and Composer HE to configure media files for a Control4 system.

Media Manager

New scans

- Scans Id3 tags that are embedded in the file.
- The title, album and artist names are extracted from the file system folder and filenames.
- The metadata lookup based on title searches comes from Gracenote.
- In OS 2.0 and later, scans are now much faster.
- Press F5 to refresh after new scans.
- Scans can be tied to events, button presses, etc.

Scans where content is in the media database

- Scans for any updated Id3 tags in the file, or you can synchronize the media database based on the configuration.
- If no metadata is in the media database, the metadata lookup is based on title searches from Gracenote.

Other Media Manager considerations

- Media Manager scans only one device at a time. If several devices are configured and are in the queue, they will be scanned sequentially.
- Composer HE does NOT need to be connected when Media Manager is performing a scan.
- Scans can be performed manually in Composer HE as an event or in an automated schedule.

- If the path becomes disconnected, the metadata will not be deleted.
- If devices are modified, the tags will update.
- If you are using a third-party Media Manager, synchronization will occur if set.

Media storage

Audio and video files can be stored on one or more of the following devices:

- USB-attached storage-Both audio and video can be stored on these devices, although Control4 does not recommend doing so due to poor performance.
- Network-attached storage (Samba-mounted)—Control4 recommends this solution for audio and video files due to better performance and backup/recovery capabilities.

As with previous releases, all media storage devices must be added and configured in the Composer Pro project. Composer HE does not automatically discover new media storage devices. The storage locations are not available in the Navigators until the device is scanned.

Media lookup service

- Control4 uses Gracenote for its lookup services.
- Media lookup is optional. See the Media view in Composer HE Getting Started to disable lookup (set to Never in scheduling).
- Media lookup requires that the controller be registered at customer.control4.com.

Setting up media auto-scan

Use the auto-scan feature in Composer HE to scan media automatically. This section applies to disc changers, media players, network-attached storage, and USB drives.

Note: Composer HE does not need to be open to scan media. If you started a scan in Composer, you can close the program while the scan finishes. Also, scheduled scans can run automatically or be started through programming.

Prerequisites

- Ensure that the video device is installed as directed in the Control4 Installation and Setup Guide for the device.
- Ensure that the Network File Storage driver is added to the room in the Composer HE project.

To schedule a regular scan of media:

- 1. From the Media view, select Media Scanning Options. To scan your media now (and not set up a scheduled scan), click **Scan Now** and skip the Scanning Schedule in Step 2.
- 2. In the Options pane, set the schedule as follows:
 - Scanning Schedule—Select one:
 - **Never**—Select if you never want to schedule an automatic scan.
 - Every x Days or Weeks (up to 10)—Select the frequency to scan.
 - On the following days—Select Sunday through Saturday.
 - At <time>—Use the up and down arrows to select the time. Highlight AM or PM and type the value: AM or PM.
 - Files To Scan—Select a device and extension.
 - **Network File Storage**—Select if you have a NAS (network attached storage) device you want to scan.
 - **USB Drive**—The manufacturer's USB drive appears here. Select if you have a USB drive you want to scan.
 - **Extensions**—Use the up and down arrows to choose which file types to add or remove. To add a file extension (if it doesn't appear in the list), use the down arrow to select the extension, select Video or Audio, and then click Add. Click Remove to remove that file type from the list.
 - Use Online Media Lookup to improve scan results—Check if you want the scan to access the Internet to search for missing metadata information (title, cover art, genre, tracks, or other information).

Tip: To update existing media with high-resolution cover art after updating your system to OS 2.8+, check this box and scan the media files.

• **Remove media from the database if the files no longer exist**—Check to remove database information when a media file has been deleted.

Important: If you disconnect a USB drive with media on it and run a scan with this option selected, the media database entries will be deleted, and you may not want to delete them if you use the drive again.

- Update media database if file tags have changed—Check to have the database updated if the metadata changes.
- **Enable MQA**—Check to enable MQA Audio in the project. See ctrl4.co/mqa for more information.
- 3. Click Apply.
- 4. Click **Scan Now** to start the scan immediately or **Stop Scan** if you've started the scan and want to stop it.

Disc changer

This section applies to a Sony CX777ES Disc Changer. The benefits of running a disc changer with bidirectional communications (RS-232), such as the Sony CX777ES, is that you can scan your DVDs/CDs stored in the disc changer to identify and index media, and automatically apply cover art and information about the media.

You can configure your system in Composer Pro to scan media on the associated disc changer either automatically or manually when the **Auto Scan** option is selected in the Monitoring Properties pane for the disc changer. The default is to scan media manually (Auto Scan: Off).

When the **Auto Scan Enabled** option is checked on the Disc Changer Properties page, the Auto Scan feature automatically detects when a disc is added to an empty slot or when a disc is removed. The Navigators are automatically updated with the change. The Auto-scan feature does not detect when a disc is replaced or swapped.

Note: If a DVD/CD is scanned and the media is not recognized, it is titled 'unknown.' You can edit the information about the DVD/CD, and manually provide this information from either Composer Pro or the Navigators. If this DVD/CD is then moved to a different slot, the system applies this same information.

To auto-scan added media to a disc changer:

- 1. Start Composer Pro and connect to a Director.
- 2. Click Monitoring.
- 3. In the project tree, select the device, for example, **Disc Changer** with a serial connection (RS-232) to the controller, for example, the Sony CX 777ES Disc Changer.

4. In the device's Properties pane, ensure that the Auto Scan Enabled option is checked.



- 5. Open the disc changer drive, and add or remove the DVD/CD.
- 6. Close the drive to begin the auto-scan. The information for the added DVD/CD is automatically made available on the Navigators. See also "."

Scanning media in a disc changer

The following sections describe how to add media to the media database using the options listed above.

To scan media loaded in a disc changer to add it to the media database:

- 1. Click Monitoring.
- 2. Ensure the disc changer shows in the list view.
- 3. Click Media.
- 4. Select Disc Changer.
- 5. In the Disc Changer pane, click Scan > OK to Scan all.



Note: If the following error message displays, "Your system has not been registered on MyControl4," you can click **Yes** to continue scanning music without registering, but the music scans based only on the current metadata stored in the music files. You will need to enter any missing information manually for each disc.

Example: If no cover art is found in the file's metadata, then no cover art is associated with the music unless the system is registered in 4Sight, and you can go to the online media lookup (Media view > Edit > Name > Search > Select > Next) to obtain the cover art for the music.

Automatically scan media

The following steps use the Sony CX777ES Disc Changer as an example.

To auto-scan added media:

- 1. From the project tree, click the **Sony CX 777ES Disc Changer**. The device Properties pane appears for this device.
- 2. Ensure that the Auto Scan Enabled box is checked.

When you select the **Auto Scan Enabled** option from the device's Properties page in Composer HE, an automatic scan of the disc(s) is available if you add a new disc to an empty slot, or if a disc is removed. In those cases, the disc changer automatically recognizes the change, and the Navigators automatically update the changes. The disc changer recognizes the changes in its slot when its door closes to perform the auto-scan. The Auto-scan feature does not detect when a disc is replaced or swapped.

Note: Control4 recommends that you check the **Ignore Unexpected Play, Stop, or Pause** option. 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. Normally, you can use the Play, Stop and Pause functions on the disc changer during the course of a movie being played. By checking the option, these functions are ignored by the system.

- 3. Open the disc changer drive's bay, and change the existing DVD or CD.
- 4. Close the bay.
- 5. The auto-scan begins automatically when the disc changer door closes, and the information for the new DVD or CD is available in the Navigators.

Searching media in a disc changer

To search media loaded in the disc changer to add it to the media database:

- 1. Click Media.
- 2. Select the Controller in the project tree.
- 3. In the Disc Changer pane, click **Search**.

Media	DISC Changer
Meda	Discs Edt., New DVD., New CD., Delote Search., Scan.,
Stored	Art II Type Title Artic(s)
Media	DISC Changer
leáa	Disce Ed., New DVD., New CD., Delete Search., Scan.
G Stored - & VOI - & CISE Charge	Art B Type Title Articlo
Media	DISC Changer
leda	Discs Ed. New DVD New CD. Delete Search. Scan.
Stored + VOR - DISC Changer	A A Addal

4. Type the **DVD** name in the blank box. The possible DVD titles from the Web database appear in the Search Results window. Use the **scrollbar** to find the appropriate DVD title

Example: "A Beautiful Mind"

Select the appropriate DVD title, drag it over the empty line item, and then select it again.

Raising Arizona	Title 🖌 Se	arch	
Search Results			
Title	Artist	Genre	^
Raising Arizona			
Raising Arizona / Fargo			
No. of Concession, State of Co			~

- 5. Repeat the previous steps for each of the DVDs/CDs in the disc changer you want to add to the media database.
- 6. Click Finished.



To edit a scanned DVD or CD:

1. Select the CD or DVD to edit.

- 2. Click Edit.
- 3. Change the Title, Director or Artist, Album or Movie, Studio, Genre, etc. You can also change the location, locate the cover art (Find Art File), and so on.
- 4. Click **OK**.

	hicks Ready To Run Fly	Search
Director.		Run Time:
Studio:		Released
Genre:		Rating
Location: \\10.11.10	11.2\public\Audio	
	dixie_chicks_ready_to_run_fly.m	p4
- Art		Find Art File
	No Artwork Available	Paste From Clipboard
		Remove Art

Adding a DVD or CD

To add a DVD or CD:

- 1. Click Media.
- 2. Select **Disc Changer** in the Media pane.
- 3. Select the empty box for the New DVD and New CD buttons to appear.

Composer HE User Guide

Media	DISC Changer
Meda	Discs Edt., New DVD., New CD., Delete Search., Scan.
Stored	Art I Type Title Atio(s)
Media	DISC Changer
Media	Dice Ed., New DVD., New CD., Delete Search., Scan.
Gi Stored - 속 VOI - 슌 Otsic Change	Art II Type Title Artic(s) 1 empty 2 empty 2 empty 2 empty
Media	DISC Changer
leda	Discs Edt. New DVD New CD. Delete Search. Scan.
Stored - & VCR 	Ar II Tope Tile Adddal

- 4. Click either New DVD or New CD as appropriate. The New Movie or New Album dialog appears.
- 5. In the Title box, enter the DVD you want to play.

Example: "A Beautiful Mind"

6. Click Search.

irecto	ε ful Mind	Run Time:
tudio:		Released
ienre:		Rating
Ar		Find Art File
	No Artwork Available	Paste From Clipboard
		Remove Art

- 7. When the Search dialog appears, use the scrollbar to find the appropriate cover art, and select it.
- 8. Change the search criteria, and search again if needed. The possible matches from the web database appear in the Search Results window.
- 9. Click Next.
- 10. (Optional) Customize the DVD/CD information before adding it to the media database

by editing the text in the box.

		Art	✓ Cast
Raising Arizona		RAISING	Trey Wilson; John Goodman; William Forsythe; Holly Hunter; Sam mcMurray; Randall " Tex" Cobb; Nicolas Cage; Frances McDormand
Joel Coen Studio:			
FOX Genre			
Comedy		T CONTENTION OF	
Run Time:	Released:	Rating:	
0	1987	PG-13	*
Synopsis			
Coen brothers' madca pregnant. Nicolas Cag the wants a baby, she and William Forsythe a riends, and Randall & consistently funny film	p romp RAISING ARIZONA. H ge is her husband, H.I., an ex- s's going to have a baby, one sa crazy cousins who have jus quot; Tex" Cobb as a mo . Carter Burwell's score, replet dalogue is the brothers' most nakers.	folly Hunter stars as Ed, a cop con who wants nothing more t way or another. Heading up t t busted out of prison, Sam M torcycle madman hired to resce with infectious yodeling, is re	won't mind if they steal one of the bables. Thus begins the who is devasted when she learns that she cannot get han to make his wife the happiest woman in the wold. So if e supporting cast of bizare characters are John Goodman JMurry and Frances McDommand as Ed and H.1's swinging use he baby, RAISING ARIZONA is the Coen brothers' most leritless, Barry Sonnerfield's cinematography is beauffully r the ears and the eyes, a one-of-a-kind sensation from a

- 11. Click Finished.
- 12. Click OK.

Setting up videos for a media player

Use the Media view to identify the videos that you want the media player to play.

Prerequisites

- Ensure that the media player is installed and added to the project.
- Ensure that the network-attached storage contains the videos that will play on the media player, and that the NAS is added to your project.

Setting up media for radio stations

Use the Media view to set up radio stations for a Control4 system.

To set up media for radio broadcast stations:

- 1. Start Composer HE and connect to a Director.
- 2. Click Media.
- 3. Select the broadcast media type (AM Radio, Dish Network, etc.).
- 4. Click Search.
- 5. In the **Zip** box, type the ZIP Code of where the Control4 system is located.
- 6. Click **Search**, and use the pull-down menu to select the listings. The available stations are populated in the Search Results window.
- 7. Check the individual boxes of stations that you want to make available in the Navigators; or click **Select All**, and then click **OK**.

	4010 Search	Provi	der: FM Broadcast Stations			`
Searc	ch Results					
Name		Channel #	Description	Genre	Audio Only	^
⊠ ĸ	KBEE	98.7 FM	Salt Lake City, UT	Hot AC	True	
⊠ ĸ	KBER	101.1 FM	Ogden, UT	Rock	True	
🗹 ==== K	KBYU	89.1 FM	Provo, UT	Classical	True	
K K	KBZN	97.9 FM	Ogden, UT	Smooth Jazz	True	
⊠ ĸ	KCPW	88.3 FM	Salt Lake City, UT	Public Radio	True	
K K	KDUT	102.3 FM	Randolph, UT	Spanish	True	
∠ ĸ	KEGA	101.5 FM	Oakley, UT	Country	True	
	KEGH	100.7 FM	Brigham City, UT	Country	True	
	KENZ	107.5 FM	Orem, UT	Adult Album Alt	True	
⊠ ĸ	КНТВ	94.9 FM	Provo, UT	Rock	True	
	KJMY	99.5 FM	Bountiful, UT	Hot AC	True	
🖂 к	KJQN	103.1 FM	Coalville, UT	Alternative	True	
K K	KNYN	99.1 FM	Fort Bridger, WY	Hot AC	True	
⊠ ĸ	KODJ	94.1 FM	Salt Lake City, UT	Oldies	True	
K K	KOSY	106.5 FM	Spanish Fork, UT	Adult Contempo	True	
M K	KPCW	91.9 FM	Park City, UT	Public Radio	True	
∠ ĸ	KPQP	101.9 FM	Ogden, UT	Top-40	True	
	KQMB	102.7 FM	Midvale, UT	Hot AC	True	
м к			Brigham City, LIT	Hin Han	True	~

The selected stations populate the media source channel list (such as the FM Radio list shown next).

Media	FM	FM Radio								
Media	Chan	Channels Edit New Searc						Delete		
👩 Media Scanning Options	Art	Channel #	Name	Des	cription			Genre	1	
J Stored		98 7 FM	KBEE			шт		Hot AC		
- 🔬 Sony Blu-ray		101 1 FM	KBER	Salt Lake City, UT Ogden, UT				Rock		
	who	89.1 FM	KBYU	-	vo. UT			Classica		
G Screen Saver		97.9 FM	KBTO		den, UT			Smooth		
Broadcast UHF_VHF Cable TV AM Radio		88.3 FM	KCPW		Lake City	шт		Public Radio		
		102.3 FM KDUT Randolph, UT			Spanish					
		102.3 FM	KEGA		dey, UT			Country		
- X FM Radio		100.7 FM	KEGH		ham Citv.	UT.		Country		
dist Dish Network		100.7 FM	KENZ		mann City, m. UT	01		Adult Al		
2 Playlists		94.9 FM	KHTB		vo. UT			Rock		
Hipster Lounge		99.5 FM	KJMY		vo, UT intiful, UT			Hot AC		
Thipater Edunge		103.1 FM	KJQN		alville, UT			Alternati		
		99.1 FM	KNYN		Bridger, V			Hot AC	ve	
		99.1 FM	KODJ					Oldies		
System Design		106.5 FM	KODJ		: Lake City anish Fork.			Adult Co		
		106.0 FM	NUST	spa	inish Fork,	01		Adult Co		
Connections		< >							>	
		Selected Channel								
(Media										
agents		No Artwork								
💥 Programming		Available								
- rogramming		Availabi	6							

8. Repeat the previous steps for each additional media source, e.g., cable, satellite, or AM radio. (Each of these services must be set up separately.)

Setting up media for television stations

Use the Media view to set up television channels for the Control4 system.

To set up media for television broadcast channels:

- 1. Start Composer HE and connect to a Director.
- 2. Click Media.
- 3. Select the broadcast media type (UHF/VHF, satellite, cable, etc.).
- 4. Click Search. When the dialog appears, type the ZIP Code for the Control4 system's location in the box.
- 5. Click **Search**, and use the pull-down menu to select **Local Broadcast Listings**. The available channels are populated in the Search Results window.
- 6. Check the individual boxes of channels that you want to make available in the Navigators, or click **Select All**, and then click **OK**.

Genre Audio Only False False False False	^
False False False False	^
False False False	1
False False	
False	
False	
False	V
	False False False False False False False False False

The selected channels populate the media source channel list (such as the UHF/VHF

channel list shown next).

Media	Cat	ole TV				
Media	Chan	nels		Edit New	Search	Delete
Media Scanning Options Stored	Art	Channel #	Name	Description	Genre	^
Sony Blu-ray		14	KJZZ-DT	KJZZ-DT Channel 14		
Generic Mass Storage RED		11 16	KBYUHD KUPX-TV	KBYUHD Channel 11 KUPX-TV Channel 16		
G Screen Saver		33	KUFA-TV KUTH-DT2	KUTH-DT2 Channel 33		
👩 Broadcast		108	TNT	TNT Channel 108		
UHF_VHF		42	KSTUDT2	KSTUDT2 Channel 42		
Cable TV		42	KSTUDT3	KSTUDT3 Channel 43		
- The Hadio		147	MAVTV	MAVTV Channel 147		
dist Dish Network		101	PPVIN	PPVIN Channel 101		
2 Playlists		10	KULX-HD	KUI X-HD Channel 10		
Hipster Lounge		92	INTERACT	INTERACT Channel 92		
		104	OLYU	OLYU Channel 104		
	-	28	ESPN	ESPN Channel 28		
······		90	INTERACT	INTERACT Channel 90		
🛃 System Design		167	A&E-W	A&E-W Channel 167		~
Connections	<					>
		ted Channel				
() Media						
Agents			-			
💥 Programming		No Artwork Available				
-						
lirector Status: Idle				Connected to 192.16	102 5 (001)	

7. Repeat the previous steps for each additional media source, e.g., cable, satellite, AM radio, or FM radio. (Each of these services must be set up separately.)
Setting up Internet radio stations

Use the Media view to add Internet radio stations that you can play from touch screens, Control4 apps, or on-screen Navigators.

Prerequisites

- Ensure that the controller is installed and identified as directed in the controller's installation guide.
- Ensure that the Internet radio stations you add are in MP3 or WMA format. You'll need to create a new form for each station you add.

To configure Internet radio:

- 1. Start Composer HE and connect to a Director.
- 2. Click the Media view.
- 3. From the media list, click Internet Radio.
- 4. In the Internet Radio pane, click **New**.

Ble Media Driver Go Iools Help			
Media	Internet Radio		
4edia	Channels	Edk New	Delete
Auto Moda Vise Moda	At Downel II Name Description New Broadcast Froatcast Froatcast Description Name: Description Anne: Description Name: Description Name: Description Name: Description Name: Description Name: Name: Name	Geree	

- 5. Fill out the form:
- 1. Name-Add the name of the station.
- 2. Description-Add a description that's meaningful.
- 3. Channel-Add the URL for the channel. Note: Locate the URL of the MP3/WMA stream that starts with http://... Note: Ensure that Audio Only is checked.
- 4. Genre-Add a genre if appropriate.
- 5. Check Audio Only for listening.
- 6. Cover Art–If you'd like, you can copy the radio station art to your list. In a browser, go to the link and click Images. Click Find Art File to locate an image, copy it to your clipboard and then click Paste from Clipboard.

7. Click OK.



6. Go to the touch screen, Control4 app, or on-screen Navigator and select the Listen > Station. Note: If you have several sources, Internet Radio appears under Sources.

Importing a DVD list from a file

Use the Media view to populate DVD metadata stored on a disc changer.

To import a DVD list:

- 1. Start Composer HE and connect to a Director.
- 2. Click Media view.
- 3. Right-click on the **Disc Changer**, and select **Import DVD List from File**. Composer HE automatically populates 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. You can create this file 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

Using external storage devices

You can access digital music from an external storage device in your Control4 system. External storage devices include USB flash drives, USB external hard drives, or a shared network storage area (for example, a computer's hard drive).

The following applies when setting up an external storage device:

- USB flash drives or USB external hard drives must be formatted as FAT32 devices.
- Shared drives on a Windows system cannot contain a space in the directory/pathname.

Set up the external storage device or networked file storage as described in this section.

Note: When you disconnect the external drive (USB, network, etc.) from the system, the music is no longer available. Reconnecting the external drive makes the media available again.

Attach and scan external storage devices

To attach and scan external storage devices using a USB connection:

Note: External storage devices must have media stored in unprotected MP3/WMA format.

- 1. Power up the external storage device.
- 2. As appropriate, use the documentation provided with your Control4 controller to attach the external hard drive using the USB port.
- 3. Start Composer HE and connect to a Director.
- 4. Click Media.
- 5. In the project tree, select the external device.
- 6. Click Scan in the device's pane.

You can add media from the external storage device when it is connected to the controller. However, it is recommended that you connect your external drive directly to the PC where you want to copy the media. When scanning, the media appears on the device.

Access and scan network storage devices

To access and scan network storage devices:

Note: The network location must be an open share location (no password required).

1. As appropriate, use the documentation provided with your operating system to create a shared network drive.

Example: Using Windows XP to make a local C:/ Drive directory available on the network, right-click the folder and select **Sharing and Security**. Click the **Share this folder** button.

- 2. Click Monitoring.
- 3. Highlight **Network File Storage** in the project tree, and configure the username, password, and workgroup (or domain) for the network file share, and then browse to its network location.

Composer Home Edition 3.1.1 / OS Mana	igement 3.1.1 - Residence (Remote)	- 🗆 X
File Tools Help		
Monitoring	Properties	List View Properties
System	Properties	
~ ^ ~ 9	Information	
Residence	Username: dan Password:	
🖻 🔁 Main	Workgroup:	
Family Room	Location:	
- litemet Radio - Internet Radio	\\192.158.1.10\ze	
Denon Receiver	Connect	
HO Hadia Hold (USB) Herrier (USB) Herrier Rada 2 Media Server Ferrier Rada 2 Media Server Fold: Stub XM Softing Control 4 Themostat Gromecast Wash Server Wash Server Wash Server Wash Server Softing	Status: Offine	
<		
Monitoring		
💮 Media		
Agents		
Service Programming		
Director Status: Idle		Connected to 10.158.1.187 (SSL)

This information varies between types. Contact your System Administrator or Control4 Technical Support if you need help with this information.

- 4. Click Media.
- 5. In Network File Storage, notice the options: Audio Media and Video Media.

/ledia	dan-pc-e		
ledia	Media	Delete	Scan.
Meda Scanning Options Sond Sond	At Type Abum		
Monitoring	Available		
Media			
🚻 Agents			
🕺 Programming			

6. To add or scan audio files, in the media list select Audio Media, and then click New or Scan.

Notes:

- When adding music to Network File Storage from the desktop, the music folder must reside in My Network Places so components can access the music files. A mapped network drive is not applicable in this situation.
- Audio files must be in one of the following formats to be scanned and played by the Control4 system: MP3, WMA, or FLAC. If you connect an iPod or another audio device, the Control4 system can play back the files supported on that device; but only MP3 files can be decoded.
- 7. To scan video files, in the media list select Video Media, and then click Scan.

Notes:

- Video files must be in one of the following formats to be scanned by the Control4 system: .avi, DVD, .iso, .m4a, mpeg, .mpg, or .wmv. These video files can only be played using a media player.
- Video playback is not supported from files stored on a USB drive, so the Video Media option is not displayed in the list under a USB drive.

Creating a playlist

Use Composer HE to create a playlist from digital media.

You can create playlists from the touch screens, Control4 apps, or on-screen Navigators also. See the Control4 System User Guide for details.

To create a playlist:

- 1. Start Composer HE and connect to a Director.
- 2. Click Media.
- 3. In the Media view, go to the Media menu, and select New Playlist.
- 4. Name the playlist.

Tip: You can rename it any time by right-clicking the playlist, selecting **Rename Playlist**, and then typing a new name.

- 5. Select the controller or other media on which the songs are stored, and ensure that you have scanned the media from the storage to make the media known to the controller.
- 6. Drag the list of songs to the playlist.
- 7. Drag every album or song you want to add to the playlist onto the playlist name.



- 8. After adding at least one album or song, select the playlist to view the contents.
- 9. (Optional) Remove songs:
 - To remove a song, right-click and select Delete.
 - To remove multiple songs, press and hold the **Shift** key. Select the songs, rightclick anywhere in the selected list, and select **Delete**.
 - To remove selected songs, press and hold the **Ctrl** key. Select the songs to delete, and select **Delete**.

Composer HE User Guide

Media	Playlist: Hipster Loung	je	
Media	Songs		Delete
Media Scanning Options	Name	Album Title	Artist
Stored	The Ocean	Led Zeppelin IV [Boxed Set]	Led Zeppe
Sony Blu-ray	Heart-Shaped Box	In Utero - 20th Anniversary Remaster	Nirvana
Generic Mass Storage RED	Give Life Back to Music	Random Access Memories	Daft Punk
Broadcast	Lady '95	Greatest Hits	Styx
UHF VHF	The Best Of Times	Greatest Hits	Styx
Cable TV	Lorelei	Greatest Hits	Styx
AM Radio	Too Much Time On My Hands	Greatest Hits	Styx
FM Radio	Babe	Greatest Hits Delete	Styx
Jish Network	Fooling Yourself (The Angry Youn	Greatest Hits	Styx
Playlists	Show Me The Way	Greatest Hits	Styx
	Renegade	Greatest Hits	Styx
	Come Sail Away	Greatest Hits	Styx
	Blue Collar Man (Long Nights)	Greatest Hits	Styx
System Design	The Grand Illusion	Greatest Hits	Styx
Jystem besign	Crystal Ball	Greatest Hits	Styx
Connections	Suite Madame Blue	Greatest Hits	Styx
M	Miss America	Greatest Hits	Styx
🔄 Media	Mr. Roboto	Greatest Hits	Styx
	Don't Let It End	Greatest Hits	Styx
👬 Agents			
😻 Programming			
	<		>

The playlist can now be played from or edited in the Navigators.

Testing the media connection

To test control of media through the Control4 Navigators (System Remote Control, on-screen Navigator, or any of the other Navigators or touch screens), use the steps outlined in the Control4 System User Guide.

Suggested test items:

- Play an album
- Add an album or track to the Now Playing queue
- Play a playlist created in Composer HE
- · Create a playlist on a touch screen or on-screen Navigator
- Play multiple streams of music (play different music in different rooms)
- Play a movie on the television

Editing media information

Use the Media view to edit the media information for 'unknown' DVDs or CDs. You can edit the media information in the Navigators: on-screen, touch screen, or Control4 app.

Editing CD information

Use the Media view to edit CD album names, artists, genre, or cover art for a Control4 system.

To edit information about a CD:

- 1. Start Composer Pro and connect to a Director.
- 2. Click Media.
- 3. In the project tree, double-click the **CD storage** device on which you want to edit CD information; for example, CD, disc changer, or controller.
- 4. Select an album and click the Edit button, or double-click the album title.
- 5. In the Album tab, edit the Album Name, Artist, Label, Genre, or Art. Make text changes as applicable.
- 6. Click **OK**, or use the additional features outlined below.

Name:	
The Best Of The Allman Brothers Band	Search
Artist:	
The Allman Brothers Band	
Label:	Year:
Genre:	
Rock	
Art	
20 THE ALLMAN BROTHERS BAND	Find Art File
	Paste From Clipboard
- Vistoria	Remove Art

7. Search on a Name or Artist to search the database for similar entries.

Album Tracks Notes	<u>\</u>
Name:	×
The Best Of The Allman Brothers Band	Search
Artist:	
The Allman Brothers Band	
Label:	Year:
Genre:	
Rock	
Art	Find Art File Paste From Clipboard Remove Art
	OK Cancel

8. Select a search result. Double-click to select an album title, and click Next.

Search Results			
Title		Artist	Genre
The Best Of The Allman Brothers	: Band	The Allman Brothers Band	Blues, Boogie &
The Best of the Allman Brothers	Band	The Allman Brothers Band	Blues, Boogie &
Best Of The Allman Brothers Bar	nd	The Allman Brothers Band	Blues, Boogie &
The Best Of The Allman Brothers	8 Band	The Allman Brothers Band	Blues, Boogie &

- 9. View or edit the information about the album: Name, Artist/Composer, Label, Genre, Year, Art, and Notes.
- 10. Change the information as needed, and then click **Finished** to save your changes.

Name	✓ Art ✓ Notes	
The Best of the Allman Brothers Band Artist/Composer The Allman Brothers Band	Froling's Gone (22/17/0, p.22) - Aduot Brothers' are a white group who've to schooling to produce a volatile blues energy, rispiration and loveconsist subtle, honest, and moving "j	anscended their rock sound of pure
Label	Powered by Gracenote(R)	
Polydor		
Genre	Vear Vear	
Blues, Boogie & Southern Rock	1981	
	<u></u>	
Current Track Number and Title	Vew Track Number and Title	
1. Whipping Post	11. Whipping Post	
01 Whipping Post.mp3		
1. Whipping Post	11. Whipping Post	~
01 Whipping Post.mp3		
2. Dreams		~
02 Dreams.mp3		
2. Dreams		~
02 Dreams.mp3		
3. Revival	3. Revival	~
03 Revival.mp3		
03 Revival.mp3		

- 11. Select the Track tab, and edit or remove tracks as needed.
- 12. Select the Notes tab, and edit as needed for future reference.

Editing DVD information

Use the Media view to edit DVD title, director, studio, genre, runtime, release date or rating in a Control4 system.

Tip: New in OS 2.0 and later, you can edit DVD and video titles on the touch screens and on-screen Navigators.

To edit information about a DVD:

- 1. Start Composer HE and connect to a Director.
- 2. Click Media.
- 3. In the project tree, double-click the Disc Changer or DVD.
- 4. Select a movie and click the Edit button, or double-click under Discs.
- 5. In the Movie dialog under the Movie tab, edit the DVD title, director, studio, genre, runtime, release date or rating information as needed.

6. Click OK, or use the additional features outlined below.

20,000 Leagues Under The Sea	Search.
Director	Bun Time:
	74
Studio:	Released
Dic Entertainment	2002
Genre:	Bating
Adventure	NB
	Find Art File Paste From Clipboard

- 7. Click Search to present similar entries.
- 8. In the results list, double-click a DVD.
- 9. Edit the DVD information.

		Art	✓ Cast
Raising Arizona		DATO NOLLY BUTTO	Trey Wilson; John Goodman; William Forsythe; Holly Hunter; Sam mcMurray; Randall &guot Tex&guot Cobb;
Director		AHSING	Nicolas Cage; Frances McDormand
Joel Coen		HELONA	
Studio:			
FOX			
Genre		TERENTERINE	
Comedy			
Run Time:	Released:	Rating:	
0	1987	PG-13	
Synopsis			
A childless couple una			won't mind if they steal one of the babies. Thus begins the
A childless couple unal Joen brothers' madcag regnant. Nicolas Cag he wants a baby, she and William Forsythe a iends, and Randall & consistently funny film.	oromp RAISING ARIZONA. I is is her husband, H.I., an ex- is going to have a baby, one s crazy cousins who have jus quot; Tex" Cobb as a mo Carter Burwell's score, replet dialogue is the brothers' most akers.	Holly Hunter stars as Ed, a cop con who wants nothing more the way or another. Heading up th t busted out of prison, Sam Mic torcycle madman hired to resc with infectious yodeling, is re	wont mind if they steal one of the babies. Thus begins the who is devastated when she learns that she cannot get han to make his wife the happiest woman in the world. So if e supporting cast of bizare characters are John Goodman Murray and Frances McDormand as Ed and H.1's swinging ue the baby. RAISING ARIZONA is the Coen brothers' most leritless, Barry Sonnerfield's cinematography is beautifully r the ears and the eyes, a one-of-a-kind sensation from a

- 10. Replace the cover art using one of the options provided.
- 11. Click the Cast and Synopsis tab to edit text displays as needed.
- 12. Click Finished to save your changes.

Using and Programming with Agents

Use the Agents and Programming views to program agents.

When you program with agents, you typically use these general steps:

- 1. In Agents, define an instance of a type of agent.
- 2. In *Programming*, use the instance of the agent to program event actions.

Example: In the Agent view, you can create an instance of a Custom Button where you identify all the buttons you want to program. In Programming, you program the Custom Buttons.

Note: Agents vary greatly in functionality and flexibility.

Agent types

- Access-Lets you hide elements of the user interface on a Navigator and use a pin code to change the settings for the Navigator.
- Advanced Lighting Scenes–Lets you change the lighting state, toggle lights, ramp/fade lights, delay on/off, use scene sequencing, flash lights, and so on.
- Announcements—Plays a pre-recorded .WAV file, or displays a text message whenever a given event occurs. You can play an audio announcement on any audio output device with a supporting text message that displays on selected Navigators.
- **Backup**—Configure settings for automatic project backups to Control4 online services. Requires a 4Sight subscription.
- **Communication**–Replaces the Intercom agent for systems running OS 2.7 and above. Provides the ability to set up Intercom device groups on the T3 series touch screens–audio and video, and Door Stations (DS2 and DS2 Mini–audio and video) See "Using the Communication agent".
- Custom Buttons–Lets you make user interface buttons for specialized devices on the Navigators. See
 "Using the Custom Buttons agent."
- Email Notification—Lets you send an email message to your email address when specified events occur as defined in programming. See "Using the Email Notification agent."

Notes: (1) 4Sight is required to use the Email Notification and Push Notification agents. (2) Avoid setting up email notifications for events that occur frequently (e.g., when a Motion Sensor detects motion). If the email notification trigger event occurs too often, it will cause the system to become sluggish.

- **Guest Services**—An agent used to interface a local Control4 system to a Guest Services system within a multi-dwelling or hospitality project.
- **History**–Enables a history tab in drivers built for the History agent, for example, new security drivers built for OS 2.8.+. You can configure settings and view history data from the agent.
- Identity–Provides the ability to change the password for When >> Then automation.

Light Properties—Manage light properties for Control4 Centralized Lighting modules and loads.

• Macros-Macros agents associate programming with events.

Example: You can create one macro to use in several different programming events or to use on a touch screen when creating Favorites. See "<u>Using the</u> Macros agent."

- Media Scenes–Creates a media scene that plays music in selected rooms on your system. See <u>"Using</u> the Media Scenes agent."
- **Navigation**—Add this agent to the system to enable navigation commands in the *Programming* view for T3 and EA On-Screen Navigators.
- **Push Notification**—Lets you define a push notification to be sent to your mobile devices as defined in programming.
- Scheduler–Defines conditionals of time to the system, and adds the ability to have scheduled events. See "Using the Scheduler agent."
- Screen Saver–Lets you set up a Screen Saver agent so you can create various Screen Savers. See "Using the Screen Saver agent."
- **SNMP Configuration**–Lets you set up and configure devices to monitor via SNMP. Requires knowledge of SNMP and network management. See Example: Program using the SNMP Configuration agent.
- Timer–Starts, stops, or repeats a timer based on a given event and action.

Example: If a Motion Sensor in the system turns on a light when it detects motion, you can use a timer to turn off the light after 15 minutes. Alternatively, you can set a timer to repeat an action whenever the timer expires. See "Using the Timer agent."

- **UI Configuration**—Upload custom wallpaper images and apply wallpapers from both the default set of images and custom images to multiple touch screens and on-screen navigators at once. Supported on T3 touch screens and EA controllers in OS 2.9.0. See "Using the UI Configuration agent".
- Variables–Create Boolean, string, and number variables. Review "<u>Examples</u>: programming with <u>variables</u>" for information about creating Variable agents.
- Wakeup–Initiates a pre-specified wakeup time in the Navigators. This agent lets you play music, turn on lights, and change temperatures. See "Using the Wake/Sleep agent."
- Wakeup/Goodnight–Updated version of the Wakeup agent adding the ability to control shades with a Wakeup scene.

The agent examples listed in the following sections will guide you through the programming steps for each agent type.

Using the Announcements agent

Use the Agents and Programming views to program this agent.

You can create announcements that:

- Display a text-message or Web page on any of the Navigators (on-screen Navigator or touch screens)
- Play an audio announcement through any audio end point or T3 touch screen

• Combine the two mentioned above

Note: The Control4 system allows up to 10 MB of files for the Announcement agent, and plays a maximum of 15 seconds per announcement. The Announcements agent supports the same audio playback file types as the EA and HC controllers support under My Music.

Example: This example demonstrates how to create a 'Dinner is Ready' announcement that is activated when the family chef (or dad) presses a custom-programmed button. When the button is pressed, the text message, 'Come to Dinner!,' displays on all of the Navigators in the home, and an audio file of a dinner bell ringing plays.

Prerequisites

The following devices are added and identified (with a network address) in the project:

- Controller
- Audio output device (television or connected speakers)
- Navigator with a screen (touch screen or television)
- Any device involved in the triggering event (doorbell contact, keypad, etc.)

To set up an Announcements agent:

- 1. Start Composer HE and connect to a Director.
- 2. Click Agents.
- 3. (First time only) Click Add to add the Announcements agent to the project.
- 4. Select **Announcements**, and then click **OK** to add Announcements to the agent types list in the project. The next time you want to create an announcement, just select the **Announcements** item in the Agents pane and click **New**.
- 5. With Announcements selected in the left pane, click New.
- 6. Name the new announcement, and click Create. Example: Come to Dinner!
- 7. Set up the Navigator text message you want to display.

Agents			Announcement
gents	Add	Remove	Lunch Alert Execute
gents Market utginting Market works Market utginting Market works Market utginting Market Utgint	Add		Lunch Aet Popo, Arrownoment Display Navigabor Tool / Image Repap For / Image Message Edit Tool / Image Repap For Iona 1 / Image Repape For Iona 1 / Iona 1 / Image Repape For Iona 1 / Iona
System Design			discrete volume control.

- 1. Check the Display Navigator Text/Image Popup box.
- 2. Click Edit Text/Image.
- 3. Type a text message, a URL, or browse to an image (JPG, GIF, or PNG) to display.

The text box accepts any HTML code. While certain links and scripts won't be handled, when the announcement is triggered, for example, if you put this text in an announcement, it will show up just as if it were a web page. For example, the following HTML text will display the latest snapshot of a web page:

<HTML><BODY><IMG

SRC="http://tbn0.google.com/images?q=tbn:1uOhCnlc3zbQgM:http://www.inkycircus.c om/jargon/images/mountain.jpg" ALT="pumpkin">Visit W3Schools!</BODY></HTML>

Note: A static image file (JPG, GIF, or PNG) only has to be added to your project once because it is copied to the controller. When added, it is available in the Text Message drop-down menu for use in any additional announcements created.

- 4. Select the **time** you want the text message to display using the **Close after** drop-down menu (supported display times are from five seconds to 10 minutes).
- 5. Click Add/Remove and check the Navigators that will display the message. Click OK.
- 8. Audio file—Add an audio file, and set up the audio file to be played.
- 1. Check the Play Audio File box.
- 2. (One time per audio file) Click Add and browse to the audio file to add it to the drop-down menu.

Note: An audio file only has to be added to your project one time because it is copied to the controller. When added, it is available in the Audio File drop-down menu for use in any additional announcements created.

- 3. Select the audio file from the drop-down menu.
- 4. Click Add/Remove... and check the rooms where the audio file will play. Click OK.

- 5. Click Add/Remove... and check the T3 touch screens where the audio file will play. Click OK.
- 6. Set the volume of the audio play for each room and touch screen.

Note: The volume for an announcement only can be set on devices with discrete volume control.

Agents	Announcement
Agents Add Remo	e Come to Dinner Execute
Alone Access Lipfon Access Lipfon Access Lipfon Access Lipfon Access Lipfon Biology Commented Biology Commented Access Lipfon Access Lipfon Hospital Methy Heat Access Lipfon Access Lip	Pape Announcement
Connections Connec	Display 13.7 Tabletop Touch Sore. A Set Volume Set Volume Image: Control of the set of the

- 9. Click Programming.
- 10. Verify that the new Announcements agent displays in the Actions list (bottom of list).
- 1. Select Announcements.
- 2. Make sure the 'Come to Dinner!' message displays in the Announcement Actions pane and that the command is there (green arrow).
- 11. Program the announcement to play or display with a triggering event.

Example: Program a button-press event (left pane) to trigger the Announcements agent to run 'Come to Dinner!' (right pane).

Using the Communication agent

The Communication agent lets you configure the 5" or 7" In-Wall Touch Screens (supports audio intercom only), the 7" Portable Touch Screen with Camera, the Door Station, the 7" In-Wall Touch Screen with Camera, or the 7" In-Wall, 10" In-Wall, and 7" Tabletop T3 Touch Screens (supports audio and video intercom) so that the Control4 system acknowledges the Intercom system and can communicate with it.

The Control4 Intercom app requires that the Communication agent is added into the system.

Note: The Control4 Intercom app is currently in a beta testing state.

Important: See Communication Agent Wizard and Migration Process on the Knowledgebase before using this agent to see if additional steps are required to add and use the Communication agent. Note: This agent also lets you configure the intercom to allow third-party devices (External Devices) for multi-dwelling units (MDUs). This functionality requires additional training and hardware not covered in this document.

With the Communication agent, you can send calls to multiple touch screens, monitor a room, and other controls.

Examples:

- If you have an elderly parent living in their own home, you can create a macro and assign it to a keypad button. If your family member is in stress, they simply press the keypad button to notify you that something is wrong.
- Create a "Good Night" setting where all touch screens in the house can be set to "Do Not Disturb" when it's time to go to sleep.
- Monitor your kids' rooms after they've gone to bed to ensure that they're going to sleep when they should.
- Receive calls from the door station to your Control4 Intercom app.
- Call from the Control4 Intercom app to the touch screen to speak to your kids at home.

Notes: (1) Broadcasting does not work in a room that's being monitored if that room is in Monitor Mode. When in Monitor Mode, you will not want the person in that room to be disturbed, for example, a sleeping child. (2) Before you use Intercom with touch screens connected over Wi-Fi, make sure your Wi-Fi router is set to allow multicasting. Some routers do not allow multicasting.

Prerequisites

- Controller
- 7" In-Wall Touch Screens
- Communication agent (see below)

Note: Use of the Control4 Intercom app requires an active 4Sight license.

To set up the Communication agent:

- 1. Click the Agents view.
- 2. In the *Agents* pane, select **Communication**. If the Communication has not been added already, click **Add**, highlight Communication in the list, and click **OK**.

File Tools Help					
Agents	Local Devices	s External Devices			
Agents Add Remove	Group	Properties			
Variables 4Store					
Advanced Lighting Scheduler	Available	e Devices Location		Devices in Group	Location
Scheduler Communication	/wandow	C Devices Ecolution	Add >>	Portable 7" Touch Scr	
Commonication			Add //	dansphone	Boom
			<< Remove		
Intercom Groups					
New Rename Delete					
			ОК		
Groups Al			Cancel		
AL			Cancer		
	Device	Properties			
	Device	Toperues			
	Apph	y Changes Move Do	wn Move Up	Manual Answer T (10 seconds	imeout 20 🗮
	Apph	Name	Room	Manual Answer T (10 seconds State	imeout 20 👘
	ID 14	Name Portable 7" Touch Screen	Room	(10 seconds State 1: Idle	imeout 20 👘
	ID 14 41	Name Portable 7" Touch Screen dansphone	Room Room Room	(10 seconds State 1: Idle 1: Idle	imeout 20 📥
	ID 14	Name Portable 7" Touch Screen	Room	(10 seconds State 1: Idle	imeout 20 🚖
	ID 14 41	Name Portable 7" Touch Screen dansphone	Room Room Room	(10 seconds State 1: Idle 1: Idle	imeout 20 🛬
	ID 14 41	Name Portable 7" Touch Screen dansphone	Room Room Room	(10 seconds State 1: Idle 1: Idle	imeout 20 🚖
Monitoring	ID 14 41	Name Portable 7" Touch Screen dansphone	Room Room Room	(10 seconds State 1: Idle 1: Idle	imeout 20 (meout) 20 (meout) (
Monitoring	ID 14 41	Name Portable 7" Touch Screen dansphone	Room Room Room	(10 seconds State 1: Idle 1: Idle	imeout 20 🛬
	ID 14 41	Name Portable 7" Touch Screen dansphone	Room Room Room	(10 seconds State 1: Idle 1: Idle	imeout 20 🛬
Monitoring Media	ID 14 41	Name Portable 7" Touch Screen dansphone	Room Room Room	(10 seconds State 1: Idle 1: Idle	imeout 20 1
Monitoring Media	ID 14 41	Name Portable 7" Touch Screen dansphone	Room Room Room	(10 seconds State 1: Idle 1: Idle	imeout 20 (1)
Monitoring Media	ID 14 41	Name Portable 7" Touch Screen dansphone	Room Room Room	(10 seconds State 1: Idle 1: Idle	imeout 20 🛬
Monitoring Media	ID 14 41	Name Portable 7" Touch Screen dansphone	Room Room Room	(10 seconds State 1: Idle 1: Idle	imeout 20 1

Add new Intercom group

An Intercom group is a set of Intercom-supported touch screens identified by a specific group name. This saves time when you want to send a call to a group of people.

To add an Intercom group:

- 1. Select **Communication** in the *Agents* pane. Then in the *Intercom Groups* pane, click **New**.
- 2. Name the Intercom group, and click Add. Example: "John's Group."
- 3. Add the devices to the new group (see "Local Devices Tab" below).

Local Devices tab

Group properties:

You can add devices to an existing group of 5" or 7" In-Wall Touch Screens, 7" In-Wall Touch Screen with Camera, 7" Portable Touch Screen with Camera, Door Station, or 7" In-Wall, 10" In-Wall, and 7" Tabletop T3 Touch Screens. This lets the caller from one touch screen send out a call to the group of devices.

To add or remove devices in a group:

- Add: Select the device in the Local Devices tab, and then click Add. Click OK.
 - OR -
- **Remove**: Select the device in the right box of the Local Devices tab, and then click **Remove**. Click **OK**.

Device Properties:

To change device properties for the touch screens in the Intercom Group:

- 1. Use the Local Devices tab to change the settings for all supported touch screens in the Intercom Group.
 - Manual Answer Timeout (seconds)—Use the up or down arrow keys or enter how much time is allowed to answer an incoming call.

- You can set the intercom device order by selecting the device and clicking the **Move Down** or **Move Up** buttons.
- 2. Click Apply Changes when you're finished.

External Devices tab

The External Devices tab can be used to add external devices that can communicate with the intercom system, for example in an MDU solution. Mobile devices using the Control4 Intercom app also show up as an external device. The Control4 Intercom app is still in a beta state. This functionality requires additional training and hardware not covered in this document.

Using the Custom Buttons agent

Use the Control4 Composer Pro Custom Buttons agent to create up to four custom menus to display on the Navigators (including touch screens, Control4 apps, and on-screen). Custom Buttons Menus can be accessed from the Room Menu in Navigators or added as a favorite to the Room Screen.

Example: If you have a heated driveway or some other specialty device, you can set up a screen with custom buttons to operate the heated driveway from the Navigators.



To set up the Custom Buttons agent:

1. Start Composer Pro and connect to a Director.

2. Click Agents.

Composer Pro 3.0.0 - (Remote)			-	×
File Driver Go Tools Help				
Agents	Custom Buttons			
	Living			
Advanced Lighting Backup Custom Buttons	Gate (All Rooms)	Living TV		
Email Notification	Button 1: Open	Button 1: Power		
Identity Media Sessions Push Notification	Button 2: Close	Button 2: Input		
Scheduler	Button 3:	Button 3: Mute		
Screen Saver Timer UI Configuration	Button 4:	Button 4:		
Variables	Button 5:	Button 5:		
	Button 6:	Button 6:		
	Remove Edit	Remove Edit		
	Menu 3	Menu 4		
Rooms				
Name				
M All Rooms				
Vie Living				
Poten	Add Edt	Add Edt		
System Design				
Connections				
💮 Media				
🔢 Agents				
🦉 Programming				
Director Status: Idle				

3. (First time only) Click Add to add the Timer agent to the project.

Custom button menus can be defined for a single room or for all the rooms in the project.

To set up a Custom Buttons menu for a single room:

- 1. Select the **room** in the *Rooms* pane on the left side of Composer.
- 2. Click Add... and enter the Menu Name and Button 1-6 names as desired.
- 3. Click OK.

To set up a Custom Buttons menu for all rooms:

- 1. Select All Rooms in the Rooms pane on the left side of Composer.
- 2. Click Add... and enter the Menu Name and Button 1-6 names as desired.
- 3. Click OK.

Guidelines

- You can access each screen on the Navigators from the Control4 main menu or for a room from four available tabs. Example: The heated driveway screen is accessed from a custom tab on the main menu. You can configure the tab to be viewed system-wide on all screens, or to view in one room only.
- The Navigators allow up to four tabs per room to access custom screens with custom buttons. Each screen can provide up to six custom buttons for a total of 24 custom buttons. The four tabs in each room can be allocated as either room or as global tabs.
- On the Navigators, you can set up a room or global tabs. The example shows the creation of custom tabs that appear in the Front Room and access a custom screen.

Note: If you want to create a Custom tab to appear globally, check the Global box next to the Screen Name. Because only four screens are available for each room, if a Global button is added and another room already has four screens, the Global button replaces the first screen in that room.

Prerequisites

The following devices are added and identified (with a network address) in the project:

- Controller
- Electronic Gate (In the Control & Audio Video Connections tab, ensure that the Electronic Gate is connected to controller relay Port 4.)

To set up a Custom Buttons agent:

- 1. Start Composer HE and connect to a Director.
- 2. Click Agents.
- 3. (First time only) Click Add to add the Custom Buttons agent to the project.
- 4. When the dialog appears, from the list, select **Custom Buttons**.
- 5. Click OK.
- 6. Select the Custom Buttons agent.
- 7. From the list that appears in the left pane, select the room for the custom button; for example, select **Family**.

File Direr Go Tools Help Agents Custom Buttons Agents Add Tools Add max and turbers Bently, Roam Battan S. Bently, Roam Max and turbers Bently, Roam Bently, Roam <td< th=""><th>Composer Pro 3.0.0 - Draper System (Local)</th><th></th><th>- 🗆 X</th></td<>	Composer Pro 3.0.0 - Draper System (Local)		- 🗆 X
Access Add_ Remove Access data Batten 1: Sereo Batten 2: Strondd Batten 2: Strondd Batten 3: Sereo Batten 1: Sereo Batten 4: Batten 2: Strondd Batten 2: Strondd Batten 5: Eris Highs Batten 1: Sereo Batten 6: Eris Highs Batten 1: Sereo Batten 6: Eris Highs Batten 1: Sereo Batten 7: Strondd Batten 1: Sereo Batten 6: Eris Highs Batten 1: Sereo Batten 7: Strondd Batten 6: Eris Highs Batten 7: Strondd Batten 6: Eris Highs Batten 7: Strondd Batten 7: Congle Weater Codenigt Meru 4 Meru 4 Batten 7: Congle Batten 7: Congle Batten 8: Sereo Marcu 5 Batten 8: Sereo Batten 7: Congle Batten 9: Congle Meru 4 Batten 9: Congle Meru 4 Batten 9: Congle Marcu 5 Batten 9: Congle Marcu 6 Congle Marcu 7 Off Cancel Marcu 8 Marcu 7 Off Cancel Marcu 8 Marcu 8 Cancel Marcu 9 Off Cancel Marcu 8 Marcu 9 Marcu 9	File Driver Go Tools Help		
Access Access Access Access Access Access Access Access Access Access Access Access Access Access Access Access Access Access Access Button 1: Stareo Button 2: Across Button 2: Across Button 4: Exts Bass Button 5: Exts Bass Button 5: Exts Bass Button 5: Exts Bass Button 6: Exts Button 4: Exts Bass Button 4: Exts Bass Button 4: Exts Bass Button 4: Exts Bass Button 4: Exts Button 4: Exts Button 5: Concel Button 4: Exts Button 6: Concel Add Menu Access Button 5: Concel Button 4: Exts Button 4: Exts Add Button 5: Concel Button 4: Exts Button 5: Concel Cotx Add Menu Add Menu Add Button 5: Concel Button 5: Concel Add Button 6: Concel Button 6: Concel Bu	Agents	Custom Buttons	
Advanced Upding Amanced Communition Communiton Communition Communition Communition Communition Communition Co		Family Room	
Image: Agents Image: Programming	Access Averaged Lything	Cutotion Buttons Button 1: Stereo Button 2: Surrourd Button 2: Surrourd Button 4: Extr: Bass Button 6: Filat Meru 4 Meru 4 Button 4: Dation 5: Button 6: Difference OK Cancel	
Director Status: Idle OC Connected to 192.168.102.5 (SSL)	Disartor Status: Idla		Connected to 192 168 102 5 (SSI)

- 8. When the Custom Buttons interface appears, in the Screen 1 area, click **Add**. Note: In the Navigator, Screen 1 appears in the top left corner; Screen 2 appears in the lower left corner, Screen 3 appears in the top right corner, and Screen 4 appears in the lower right corner.
- 9. Enter the name of the buttons to appear on the Navigator screen.
- 10. Enter the relevant information for the device.

The Screen Name is the name that appears on the access tab to enter the custom screen. The buttons are the names that appear on the custom buttons.

Example: For the Garage Door, enter the following:

- Screen Name: Garage Door
- Button 1: Toggle
- 11. Click **OK**.

- 12. Click the **Programming** view to program your Custom Buttons.
- 13. In the Device Events pane, scroll down to the agents and select the Custom Buttons agent.
- 14. In the Custom Buttons Events pane, ensure that **Family-Garage Door** is selected under the Event Screen next to Toggle, and then select the **Press** radio button. When custom button 'Toggle' on screen 'Garage Door' in Family is pressed, it appears at the top of the Script pane.

File Driver Go Tools Help		
Programming	Script	Actions
Device Events	Script Execute	Device Actions
	When custom item 'Toggle' on button 'Garage Door' in Family Room is pressed	~~~ ?
⊕ Below INV5 5 Zone Power Angelt ← Conser INV5 5 Zone Power Angelt ← Conser INV5 6 Zone Power Angelt ← Conservation ← Conservation	Copyramming Controls Image: Controls Image	
Custom Buttons Events Menu: Family Room - Garage Door		Garage Actions
Toggle Press Release Open Press Release Close Press Release		Open the Garage Door (Sensor) Colore the Garage Door (Sensor) Colore the Garage Door (Sensor)
Press Release		Toggle the Garage Door (Sensor)
System Design		
Connections		
agents		
line Programming		

- 15. In the Actions pane, select Garage Door.
- 16. From the Command tab, select the **Toggle the Garage Door** radio button. The action command appears in the Actions pane.
- 17. Drag the green arrow to the Script pane.
- 18. Select File > Refresh Navigators.

Using the Email Notification agent

IMPORTANT! An active 4Sight Internet Service subscription is required for Email Notification to work. See Composer HE Getting Started or the Control4 System User Guide.

Use the Control4 Composer HE Email Notification agent to have an email sent to an email address automatically when specific events occur as defined in programming.

Example: If you want to know when the basement door opens, you can set up an Email Notification agent to send an email to your email application's Inbox when the Basement door opens.

- The Email Notification is a Control4 service. To use Email Notification agent, remote access is required to facilitate a secure connection between the controller and the Control4 service.
- The Email Notification agent uses templates to enhance usability. You can use a template to define a To, Subject, or Body for use when creating instances of the Email Notification agent. See "<u>Connecting to</u> a Director using Remote Access" in Composer HE Getting Started.
- Use the Programming view to define the individual instance that triggers an email and completes the definition.

Example: A security threat to the house notified you of broken windows, doors opening, and motion detected in Away mode. In the template, you define Subject: Security Alert and To: fsmith@myemail.com. In the Programming view, you might define the zone. Examples of other incidents to use E-mail Notification include: Basement Door Opened, Front Gate Opened, Water Sensor detection, Carbon Monoxide Sensor detection, Motion Sensor detection, Sprinklers On/Off, etc.

Tip: When setting up an E-mail Notification agent, note the frequency that an event can happen; because if it is too frequent, it can slow down the system. For example, if an email is sent when a Motion Sensor detects motion, the frequent email messages could cause sluggishness.

Prerequisites

The following example devices are added and identified (with a network address) in the project:

- Controller
- Door Contact Sensor

To set up an Email Notification:

- 1. Start Composer HE and connect to a Director.
- 2. Click Agents.
- 3. (First time only) In the Agents view, click Add to add the Email Notification agent to the project.

- 4. When the dialog appears, select Email Notification.
- 5. Click OK.
- 6. Select Email Notification, and click Add in the pane that follows. The New Template Name dialog appears.

Tip: Control4 now includes Control4 system and user-defined variables in the templates created using this agent. To use this function, you can create or modify email templates using Composer HE > Agents > E-Mail Notification, and then use the **Add Variable** option.

- 7. Enter a name on the dialog that appears, for example, 'Security Alert.'
- 8. Click Create.
- 9. In Email Notification Template Name, select Security Alert for the Composer HE email screen to appear.
- 10. Fill out the information for the email you want sent to you when an event occurs.

Example:

To: fsmith@myemail.com

Subject: Security Alert

Body: The security of the Franklin Smith House may have been compromised.

Agents			Email Notification		
Agents	Add	Remove	Security Alert	Send Email	
Acces Acces Backup Gormunication Backup Communication Bank Notification Bently Uget Photes Uget Photes Meda Scenes Meda Senes Meda S	Add	Delete	Subject Sec	th@myenal.com unty.Alet security of the F. Smith home may have been compromised.	^
System Design					
-			<		>
💮 Media			Ad	d Variable	Save Reset
agents					and the state of t
Programming				Email Notifications require that the controller be customer control4.com to an account with a cu subscription. Verify controller registration and se "Account Services" dalog under the Tools me your Email Notifications will work.	ment 4Sight stylice level using the

- 11. Do the following as needed:
- 1. Click Send Email to test and see if you receive and email to your email address.
- 2. Click Add Variable if you've created a variable agent. Scroll down the list to locate the variable, and then click OK.
- 3. Click Save to exit and go to the Programming view to set up the programming.
- 4. Click Reset to clear the To, Subject, and Body of the email to start again.
- 12. With the Agent template created, you can create one instance of the Security Alert for each security zone (or object). When you've saved the template, click **Programming**.
- 13. In Programming under Theater, select Door Contact Sensor.
- 14. In Door Contact Sensor Events, select When Door Contact Sensor opens.

- 15. In the Actions pane, scroll down and select **Email Notification**.
- 16. Make any changes to the email as necessary.
- 17. Drag the green arrow to the Script pane.
- 18. In the File menu, click **Refresh**.
- 19. Test the Email Notification agent by going to the door and opening it. An email is sent to your Inbox with the Security Alert as a subject.

Using the Light Properties agent

Use the *Agents* and *Monitoring* views to add and configure dimmable, non-dimmable, and 0-10V lights for Panelized Lighting devices.

Use this agent to make it easy to set up load and wattage information in the Panelized Lighting Properties pages for a project.

To use the Light Properties agent:

- 1. Start Composer HE and connect to a Director.
- 2. Click Agents.
- 3. (First time only) Click Add to add the Light Properties agent to the project.
- 4. Select Light Properties, and then click OK.

In the Light Properties pane, change the columns for each light in the Panelized Lighting system.

Note: Ensure that the Panelized Lighting module is added and identified to the system. After you do, the name of the device will display in this agent's Light Properties pane. See the Panelized Lighting Quick Start Guide for details.

These options are editable.

- Name—The name of the module you identified in the system.
- Load Number—Assign a load number for each module in the system.
- Watts—Assign the wattage for each module in the system.

Using the Macros agent

Use the *Agents* and Programming views to program this agent. Macros agents are routines that associate programming with events.

Examples: You can create and name a macro to use in several different programming events.

The macro can be called from a particular program in the *Programming Actions* pane or you can create a custom button on your touch screens or on-screen Navigator to call a Macro.

You can create Macros:

- To use in various programmed events
- To use in Custom pages
- To use from custom buttons in the Navigators

Prerequisites

The following devices are added and identified (with a network address) in the project:

- Controller
- Light Switch
- Navigator with a screen (touch screen, Control4 app, TV screen, etc.)
- Any device involved in the triggering event (doorbell contact, keypad, etc.)

To set up the Macros agent:

- 1. Start Composer HE and connect to a Director.
- 2. Click Agents.
- 3. (First time only) Click Add to add the Macros agent to the project.
- 4. Select Macros, and then click OK.

To create a new Macro:

- 1. Select Macros in the Agents pane, and click New.
- 2. Name the new macro, for example, **Bob**, and then click **Create**.

To add commands to the macro's programming script:

In this example script, you will select the **Family Room Switch** which is on, and then turn off everything in the Living Room.

- 1. Click the **Programming** view.
- 2. In the *Device Events* pane, scroll down to Macros and select **Bob**. "When Screen Saver On is executed" appears in the Script pane.
- 3. In the Device Actions pane, select Family Room and the Wall Lights.
- 4. Under *Light*, select **On**.
- 5. Drag the green arrow 'Turn on the Family >Wall Lights' to the *Script* pane.
- 6. Under Light, select Off.
- 7. Drag the green arrow 'Turn off the Family > Wall Lights' to the Script pane.

File Driver Go Tools Help		
Programming	Script	Actions
Device Events	Script Execute	Device Actions
· · · · •	When Bob is executed	
A conserver of the second	When Bob is executed Programming Controls Ease And or Break Stop Delay # Ease And or Break Stop Delay # Comment Sorip-Actions Stop To Photos Stop Stop Stop Stop Stop Stop If day of the week is ~ Sunday or Saturday Stop Stop	Vall Lights Actors Vall Lights Commands Conditionals Loops Light Commands Conditionals Loops Light Commands Com

8. You can add the Macros agent to many programs that you create if you want to perform similar tasks, or you can program the agent for a specific device. For example, you can assign this agent to a button on a keypad to run the program when executed.

Note: A unique Macro cannot be edited or copied; only created or deleted. If you want to create a new Macro based on another one, you must create a new one.

Using the Media Scenes agent

Use the Media Scenes agent to allow simpler multi-zone audio control. Media Scenes link source, volume, and room-off commands. With Media Scenes, you can configure one or more rooms in a system to play the same music at the same volume.

Example: A Media Scene for the entire house can include all the rooms in the Control4 system. Another Media Scene can include only the Master Bedroom and Bath. You can create any number of Media Scenes containing any number of rooms.

Guidelines

- To successfully activate a Media Scene (with the rooms being controlled simultaneously), activate the Media Scenes agent before starting any music playback.
- Media scenes are persistent; when activated, a Media Scene remains active until deactivated or until the controller is powered down. If a Media Scene is deactivated while music is playing, the music continues to play in the associated rooms, but the rooms are no longer controlled in unison. Therefore, music can be stopped in one room while it continues to play in another room.
- You can set up a Media Scene one time, and activate it when desired. Then play the music.

To create a Media Scenes agent:

- 1. Start Composer HE and connect to a Director.
- 2. (First time only) In the Agents view, click Add to add the Media Scenes agent to the project.
- 3. On the dialog that appears, click Media Scenes, and then click OK.
- 4. In the Agents pane, select Media Scenes, and click Add.
- 5. Enter a name for your new Media Scene. Example: Party Music.

6. In the Agents pane, select Party Music, and then click Add Room in the Media Scenes pane.

Agents			Media Scenes				
Agents	Add	Remove	Party Music	Scene Always Act	tive Add Room	Activate Scene	Deactivate Scene
Access Lighting Anounce Lighting Anounce Lighting Anounce Lighting Anounce Lighting Light Program Mode Seesons Hangadon Schedular Schedular Schedular Schedular Schedular Mede Schemes Wakey, Goodhigt Mede Schemes Rahe Speeder Demo Party Music 3	Add Co	opy Delete	Discrete Volume Volume Volume Volume 0 0 0 0 0 0	Chock the norms you would like in the scene. Check the norms you w			
🙀 System Design							
Connections							
💮 Media							
agents							
3 Programming							

7. In the dialog box is a list of rooms in your system. Check the **rooms** where you want to play your Party Music, and then click **OK**. Example: **Theater** and **Family**.

Tips: To remove a room from a scene, click **Remove Room**. To create another Media Scene, return to Step 1.

Family Room		Theater	
	Track Source Selection ✓ Volume ✓ Mute Mute Off	✓ Initial Volume	Track Source Selection ✓ Volume ✓ Mute Mute Off
50 🌩	ve Room	75 🜩	ve Room

Tip: You can add all rooms on a floor by clicking, for example, **Main**. This automatically selects all other rooms in that category. You can also include all rooms in your entire system in the Media Scene by clicking **House**.

gents			Media Sc	Media Scenes								
ents	Add	Remove	Speaker Demo		Scene Alwa	ys Active A	dd Room	Activate Scen	e Dead	tivate Scene		
cess vanced Lighting			Disc	rete	Bass		C4 Q3		Edge 7		IQ3	
nouncements ckup mmunication stom Buttons all Notification			Initial Volume	Current Volume	Unitial Volume	Track Source Selection	Initial Volume	Track Source Selection	□ Initial □ Volume	Track Source Selection	lnitial Volume	Track Source Selection
tity t Properties ros dia Scenes				1		Volume		Volume		Volume		Volume
dia Sessions vigation sh Notification heduler reen Saver						⊡ Off	0 🗢	⊡ Off	0	C Off		C Room Off
reen Saver ter Configuration tiables skeup/Goodnight			0¢	0	Remo	ve Room	Remo	we Room	Sonance	re Room	Rem	ove Room
dia Scenes	Add Co	py Delete	Initial Volume	Track Source Selection	Initial Volum	e Track Source Selection	Initial Volum	e Source	Initial Volume	• Track Source Selection	,	
ame beaker Demo arty Music				Volume		Volume		Volume		Volume		
				Mute		☐ Mute		☐ Mute		☐ Mute		
System Design			0 🌩	ve Room	0 Be	+ move Room	0 Be	temove Room	0 ;	move Room	-	
Media												
Agents												

The rooms you selected appear in the new Media scene 'Party Music.'

- 8. To activate the scene, click Activate Scene at the top of the screen.
- 9. To deactivate, click the **Deactivate Scene** button.
- 10. You can program a button for your Media Scene. Do this by creating a new Custom Button.
- 1. In the *Agents* view, click **Custom Buttons**, and then below, click a **room**. In the Custom Buttons pane, click **Add**.
- In the Add Screen dialog that appears, enter the name of the Custom Button, and then click OK.
 Example: Click Theater and call the Screen name Media Scene. Name Button 1: On/Off and click OK.

The custom button name appears in the pane.

- 11. Click the Programming View.
- 12. In the Device Events pane, scroll down and click **Custom Buttons**. In the pane below, Custom Button Events, select the screen you want to program, and then select the **Press** radio button.

Example: Select the screen Kitchen - Media Scene, and select the Press radio button.

- 13. In the Actions pane, select Kitchen.
- 14. In the *Kitchen Actions* pane under Conditionals, press the **Media Scene Active** button which also selects True.
- 15. Drag the blue question mark to the Script pane.
- 16. In the Actions pane, scroll down and select Media Scenes.
- 17. In the *Media Scenes Actions* pane under Commands, press the **Deactivate** button, and then select **Party Music**.
- 18. Drag the green arrow on top of the blue question mark in the Script pane.
- 19. In the *Actions* pane, scroll up and select **Kitchen**. In the Kitchen Actions pane and in Conditionals, press the **Media Scene Active** button, and then the **False** button.
- 20. Drag the **blue question** mark to the **Script** pane.
- 21. In the *Actions* pane, scroll down and select **Media Scenes**. In the Media Scenes Actions pane and in Commands, press the **Activate** button, and then select **Party Music**.
- 22. Drag the green arrow icon on top of the blue question mark in the Script pane.

File Driver Go Tools Help				
Programming	Script		Actions	
Device Events	Script	Execute	Device Actions	
	When the project Draper System is loaded			~ ~ ?
Chapter System Constant State Constant	Programming Cretrols Else And Or Break Stop Comment Script Actions Activate scene 'Speaker Demo' based on Bass			
O When Media Scanning Starts				fitionals Loops
O When Media Scanning Completes			Based on Last Selected Room	~
🔯 System Design			Media Scenes Speaker Demo	
Connections			Party Music	
💮 Media				
Agents				
Separate Programming				

The Script pane now reads, 'When custom button 'On/Off' on screen 'Media Scene' in Kitchen is pressed...Activate scene 'Party Music.''

23. To execute the scene, click Execute.

Using the Color agent

The Control4 Color agent enables the creation and editing of color and tunable white lighting presets. Presets allow for quick selection of a specific color (chromaticity) or tunable white (CCT) on bulbs and lighting strips that support color and/or tunable white. Presets only contain information about the color or CCT value. Brightness is not included with the preset definition. Brightness does affect the perceived color. Brightness can be set manually using the user interface and can also be set programatically using Advanced Lighting Scenes, Brightness Presets, and custom programming.

Minimum required OS version: OS 3.3.0

Quick Configuration

The Control4 Color agent is automatically added to any project installed on or updated to OS 3.3.0. You should not attempt to delete this agent. If you do, it will be added back into the project when the controller is restarted.

The Color agent includes a selection of default presets for various color selections and tunable white selections. Users may also create their own presets using the customer application. You may add system-wide presets as well. All presets can be edited and deleted. You can also change the order which will be used to display these preset selections. Note that individual lights may not be able to display all chromacity or CCT levels. The Color agent doesn't attempt to enforce this. But, when the Control4 user interface is used to set the color/temperature for the device, it will only show the available presets. In other words, the available presets will be limited based on the device's defined capabilities.

Presets

	esets gure color and color temperature presets		(P) IMPORT PRESETS	
ORDER	PRESET NAME	COLOR/COLOR TEMPERATURE	CREATED BY	ACTIONS
::	Energize	Temp: 6280K	Default	1 🗵
:	Focus	Temp: 4240K	Default	
:	Warm White	Temp: 3100K	Default	
::	Read	Temp: 2890K	Default	
:	Relax	Temp: 2240K	Default	
::	Nightlight	Temp: 2000K	Default	
:	Aqua Morning	H: 178, S: 100	Default	
:	Sunset	H: 21, S: 81	Default	
:	Twilight	H: 281, S: 39	Default	
:	Blue Bonnet	H: 226, S: 83	Default	
	Coral	🔲 x: 0.4357, y: 0.2814	Default	/ x

There are three categories of presets:

Default—These are the default presets provided on initial installation of the Color agent.

Dealer—These are the presets created by the Control4 Installer using the Color agent.

Customer—These are the presets created by the user through the Control4 application.

Add Preset

Name—Name each Preset. Names must be unique.

Category —The category field is read-only. All presets created by the Installer are in the Dealer category.

Preset Type —Color presets are defined by chromaticity and stored either using xy values or hue & saturation values. Color Temperature presets are defined by a color correlated temperature (CCT) value in Kelvins.

Definition—You may use the color wheel or the entry fields to specify the desired color/temperature.

Hue and Saturation — Chromaticity is specified using hue (0-359 degrees) and saturation (1-100%).

xy Chromaticity —Chromaticity is specified using the xy scale. This gives you the broadest selection of colors.

RGB—Color may be specified as an RGB value. The RGB specification combines both chromaticity and brightness. When you provide RGB values, Control4 will convert the chromaticity to xy.

Test Light—You may select one or more lights. The selected light(s) will follow the color / temperature selections so that you can visually verify the color while you are creating or editing the preset.

Edit Preset

Conception Concepti Conception Conception Conception Conception Conception Co		
Details		
PRESET NAME FOCUS		
Color and Temperature		ø
Color Color Temperature COLOR CORRELATED TEMPERATURE		
Test Light ①	÷	

Preset Order

You can easily change the order of the presets by dragging a preset higher or lower on the preset list.

Import/Export Presets

Exporting the preset list allows you to save the preset definition to an xml data file. This can be very helpful for restoring the presets to a known good configuration. As with other areas of Composer Pro, the Color agent doesn't have an 'Undo' function. If you make changes, and aren't happy with them, you will save a lot of time by restoring a known good configuration. If a preset with the same name is imported, it will overwrite the preset in the project. Exporting and Importing presets can also be helpful if you want to provide a standard base set of presets in all of your customer installations.

Advanced Properties

Log Settings

Log Level—This property allows to filter which message types display in the Lua Output window. Options 0 —5 correspond to Fatal through Trace levels, increasing in level of verbosity.

Log Mode—Activates logging of diagnostic information. The log level is set in the above property. Options include Off, Print (to the window), Log (to the Director Log), and Print and Log (both). Default is Off.

General Information

Device ID—Displays agent device ID.

Agent Version—Displays current agent/driver version.

OS Version Status—Displays whether current OS version fulfills min requirements for Color agent.

Actions

This section lists and defines the Actions that the agent provides and are available through ComposerPro. These Actions are primarily for advanced troubleshooting. You should not need to use them for normal configuration.

List Presets—Prints all defined color presets in table format to the Lua output window.

Add Preset HS—Adds color preset in the HS color format. Parameters are:

NAME — Preset name (mandatory field)

CATEGORY — Preset category differentiated by who created the preset.

HUE — Hue component of HSV/HSB/HSL color space (range [0.0, 360.0])

SATURATION —Saturation component of HSV/HSB/HSL color space (range [0.0, 100.0])

Add Preset XY—Adds color preset in the xy color format. Parameters are:

NAME — Preset name (mandatory field)

CATEGORY — Preset category differentiated by who created the preset.

COLOR_X —x component of xyY color space (range [0.0, 1.0])

COLOR_Y —y component of xyY color space (range [0.0, 1.0])

Add Preset RGB—Adds color preset in the RGB color format. Parameters are:

NAME — Preset name (mandatory field)

CATEGORY—Preset category differentiated by who created the preset.

RGB—RGB color information.

Add Preset CCT—Adds color correlated temperature preset. Parameters are:

NAME — Preset name (mandatory field)

CATEGORY — Preset category differentiated by who created the preset.

COLOR_TEMPERATURE — Color temperature in Kelvins (range [1000.0, 20000.0])

Edit Preset Name—Changes name of the preset with the given ID. Parameters are:

ID—ID of the preset that is being modified.

NAME —New preset name.

CATEGORY—Category from which the preset is being edited.

Edit Preset HS—Changes HS color information of the preset with the given ID. Parameters are:

ID—ID of the preset that is being modified.

HUE — Hue component of HSV/HSB/HSL color space (range [0.0, 360.0]).

SATURATION —Saturation component of HSV/HSB/HSL color space (range [0.0, 100.0]).

CATEGORY—Category from which the preset is being edited.

Edit Preset XY—Changes xyY color information of the preset with the given ID. Parameters are:

ID—ID of the preset that is being modified.

COLOR_X —x component of xyY color space (range [0.0, 1.0])

COLOR_Y —y component of xyY color space (range [0.0, 1.0])

CATEGORY—Category from which the preset is being edited.

Edit Preset HS—Changes RGB color information of the preset with the given ID. Parameters are:

ID—ID of the preset that is being modified.

RGB—RGB color information.

CATEGORY—Category from which the preset is being edited.

Edit Preset CCT—Changes color correlated temperature of the preset with the given ID. Parameters are:

ID—ID of the preset that is being modified.

COLOR_TEMPERATURE — Color temperature in Kelvins (range [1000.0, 20000.0])

CATEGORY—Category from which the preset is being edited.

Delete Preset—Deletes preset with the given ID. Parameters are:

ID—ID of the preset that is being deleted.

CATEGORY—Category from which the preset is being deleted.

Reorder Presets by IDs—Changes the order in which presets are displayed. Provided argument is a comma-separated list of IDs which represents their new order. If the list is partial, only mentioned presets will change their positions, while the other presets will retain their current positions.

IDS —Comma-separated list of preset IDs that represent their new order relative to each other.

Reorder Presets by Names—Changes the order in which presets are displayed. Provided argument is a comma-separated list of preset names which represents their new order. If the list is partial, only mentioned presets will change their positions, while the other presets will retain their current positions.

NAMES —Comma-separated list of preset names that represent their new order relative to each other.

Using the Media Sessions agent

Use the Media Sessions agent to view and have limited control over active audio sessions in the project. Media Sessions agent cannot be used to provide any programming assistance, but can be use to control volume and mute settings for active zones.
Example: A media session was creating using the Control4 app. You can use the Media Session agent to control volume and mute in any of the rooms in the media session.

Composer Pro 3.0.0 - Res	idence (Loca	si)		-	×
File Driver Go Tools H	lelp				
Agents			This page provides a limited 'Sessions View' for viewing the active media sessions in the project. Volume and mute state can also be controlled.		0
Agents	Add	Remove			~
Access Advanced Lighting Arrougements Communication Custom Buttons Earl Wolfcatton Hard Wolfcatton Hard Sciences Uptime Sciences Hard Sciences Public Sciences Scheduler Scheduler Uncertgatton Variables			xbox one Room: Fenily Room volume		
Properties Session Manager	Debug				
System Design					
Connections					
💮 Hedia					
🔢 Agents					
💥 Programming					
Director Status: Idle					

Configuring the Master Volume Slider

The Media Sessions agent can help avoid potentially damaging high volume levels when using the Master Volume Slider in the Sessions page of the user interfaces by configuring an upper threshold for the Master Volume Slider. Volume won't ramp above the upper threshold until all rooms are at the threshold to avoid a single room ramping above the level when the Master Volume Slider in a user interface.

In the **Properties** tab of the *Media Sessions* agent, use the arrows or enter a volume for the Session Master Volume Slider upper threshold.



Using the MultiDisplay Manager agent

Use the MultiDisplay Manager agent to control multiple displays in a commercial, retail, hospitality, or residential project. You can control multiple displays and audio sources from a single interface, a Control4 touchscreen or Control4 app on Android or iPad.

To set up a video wall to be controlled by the MultiDisplay Manager agent:

1. Add your televisions (displays) to the desired room in the project.



2. On the Connections tab after selecting the room where the TVs reside, make sure your video and audio bindings are done. You must have one of the TVs assigned as a Video Endpoint. The MultiDisplay Manager is setup by using the Video Endpoint and Additional Video Endpoint bindings. Connect your first TV to the Video Endpoint and your other TVs using the Additional Video Endpoints. The Additional Video Endpoint only shows up one at a time. As soon as the as you bind the first Additional Video Endpoint, the next one will appear. Due to a new one appearing, you will always have one unbound Additional Video Endpoint. Once the bindings are made you are ready to create a MultiDisplay Manager. If you do not have all your video and audio end points setup and configured there is no point moving on to the video wall agent until you do because these will be required during the setup.

Room Control				
Video End-Point	RoomControl	VIDEO_SELECTION	Input	TV 1->Room Control
Audio End-Point 1	RoomControl	AUDIO_SELECTION	Input	Triad PAMP8->Zone 7 Audio End-Point
Video's Audio End-Point 1	RoomControl	AUDIO_SELECTION	Input	Triad PAMP8->Zone 7 Audio End-Point
Video Volume 1	RoomControl	AUDIO_VOLUME	Input	Triad 24x24 AMS->Room Selection 7
Audio Volume 1	RoomControl	AUDIO_VOLUME	Input	Triad 24x24 AMS->Room Selection 7
On-Screen Device	RoomControl	ONSCREEN_SELECTI	Input	
Video Volume 2	RoomControl	AUDIO_VOLUME	Input	
Audio Volume 2	RoomControl	AUDIO_VOLUME	Input	
Temperature	RoomControl	TEMPERATURE	Input	Foyer C4-Therm->Room Selection
Temperature Control	RoomControl	TEMPERATURE_CON	Input	Foyer C4-Therm->Room Selection
Security System	RoomControl	SECURITY_SYSTEM	Input	Partition 1-1->Room Selection Partition 1
Audio End-Point 2	RoomControl	AUDIO_SELECTION	Input	
Video's Audio End-Point 2	RoomControl	AUDIO_SELECTION	Input	
Additional Video End-Point	RoomControl	VIDEO_SELECTION	Input	TV 2->Room Control
Additional Video End-Point	RoomControl	VIDEO_SELECTION	Input	TV 3->Room Control
Additional Video End-Point	RoomControl	VIDEO_SELECTION	Input	TV 4->Room Control
Additional Video End-Point	RoomControl	VIDEO_SELECTION	Input	TV 5->Room Control
Additional Video End-Point	RoomControl	VIDEO_SELECTION	Input	TV 6->Room Control
Additional Video End-Point	RoomControl	VIDEO_SELECTION	Input	TV 7->Room Control
Additional Video End-Point	RoomControl	VIDEO_SELECTION	Input	TV 8->Room Control
Additional Video End-Point	RoomControl	VIDEO_SELECTION	Input	

3. Add the MultiDisplay Manager agent to the project within Composer. Go to Agents > Add and select the MultiDisplay Manager agent.

4. After theagent has been added, click on **Add Wall** and select the Audio Zone (room) where the video wall is to reside.

DASHBOARD	PRESETS	
ADD W	ALL	
	LG Wall Video Wall	
LG Wall		•
Select Room		P

5. After the Audio Zone (room where the MultiDisplay Manager resides) has been selected, click on the button to finish the setup. Within the details of the configuration, you will need to provide a Wall Name, select an Audio Zone, and select a default Audio Source (optional).

Details			
WALL NAME	AUDIO ZONE		AUDIO SOURCE
LG Wall	LG Wall	*	90s on 9 [SiriusXM]
	Select Room		

6. Within the second section of the MultiDisplay Manager, you will need to choose the number of columns and rows for your video wall layout. The max size a video wall can be is 3 rows by 6 columns due to the size limit on the navigators. Once done press the **Get Started** button.

	ULTIPLE VIDEO ENDPOI HE NUMBER OF ROWS			
ENTERT	TE NUMBER OF RUNS /	IND COLUMNS	IV BEUR.	
ROWS	COLUMNS			
2	4	٥	GET STARTED	

Note: When you press get started you will see the TVs in a layout. The up, down, left, right buttons are currently not functional and will be coming in a future release of the agent. These are not needed for testing of the MultiDisplay Manager and just allow for slight visual adjustments of the TVs on the screen.

7. After saving the layout section, the Sources and End-Points section will be populated with drop down sections for selecting video endpoints and their default sources. Set your Video Endpoint, Default Source and if desired, the Default Channel for each television. Press Save to retain the configuration.

Sourc	es And End-Points					
1	VIDEO ENDPOINT		DEFAULT SOURCE			
	TV 1	*	Amazon Fire TV	*		
2	VIDEO ENDPOINT		DEFAULT SOURCE		DEFAULT CHANNEL	
	TV 2	*	DirecTV	*	DTV-KUTV-CBS	¥
3	VIDEO ENDPOINT		DEFAULT SOURCE			
	TV 3	*	Dish Hopper	*		
4	VIDEO ENDPOINT		DEFAULT SOURCE			
	TV 4	*	Roku	*		
5	VIDEO ENDPOINT		DEFAULT SOURCE			
	TV 5	*	Comcast Xfinity	*		
6	VIDEO ENDPOINT		DEFAULT SOURCE			
	TV 6	-	Samsung Blu-ray	*		
7	VIDEO ENDPOINT		DEFAULT SOURCE			
	TV 7	-	Sony Blu-ray	-		
8	VIDEO ENDPOINT		DEFAULT SOURCE			
	TV 8	-	Apple TV	*		

8. After your wall is configured you will need to make sure that it is visible. Go to the room level where this should be visible. Make sure you are on the System Design tab. On the Properties page go to the Navigator tab and select MultiDisplay Manager in the Submenu Filters section. If they are hidden, click on the modify button, select the wall you want to show and press the Show button to make them visible.

	ide Room's Thermostat			
Device Visib	ility and Display Order			Modify
Visibility	Device	Location		
Visible	LG Wall	LG Wall		
	Vsbity		Visibility Device Location	Vability Device Location

You should now have a MultiDisplay Manager icon within the Watch section on your touch screen. You can favorite that to the main screen if desired by doing a long press on the icon.

Note: The MultiDisplay Manager only works on tablets and touch screens. It will not work on mobile phones or remotes due to the amount of space needed to show everything on the screen.

Using the Scheduler agent

Use the Agents and Programming views to program this agent. The Scheduler agent lets you schedule time on the Control4 system to trigger specific events to occur. You can program a specific one-time event or multiple events to re-occur daily, weekly, monthly, yearly, etc.

Example: Schedule an event to play dad's favorite song at 7:30 AM on his birthday.

Prerequisites

The following devices are added and identified (with a network address) in the project:

- Controller
- Keypad

To set up the Scheduler agent:

- 1. Start Composer HE and connect to a Director.
- 2. Click Agents.
- 3. (First time only) In the Agents pane, click Add to add the Scheduler agent to the project.
- 4. Select Scheduler in the Agents list, and click OK.

5. In the *Agents* pane, select **Scheduler**. The Scheduler panes appear.

Agents	Scheduler							
gents Add Remove	List 1 Day 7 Week 31 Month							
ccess dvanced Lighting nnouncements Jackup jommunication	Name Area Off Area Off Again	Time 8:00 PM 9:00 PM	Start Date 6/1/2017 6/1/2017	Repeats Every day Every day	End Date None None	Next Occurrence Wednesday, May 22, 2019 8:00 PM Wednesday, May 22, 2019 9:00 PM		
ustom Buttons mail Notification lentity	New Entry				>	 Wednesday, May 22, 2019 10:00 PM Thursday, May 23, 2019 8:30 AM Wednesday, May 22, 2019 6:30 PM 		
ight Properties Macros Media Scenes	Enabled	talk day.				Thursday, May 23, 2019 7:52 AM Thursday, May 23, 2019 7:52 AM		
ledia Sessions lavigation 'ush Notification	Name: Dads B	innday						
icheduler icreen Saver imer I Configuration		:59 PM ≑				· · · · · · · · · · · · · · · · · · ·		
(ariables Vakeup/Goodnight	O Sunrise / S		~					
icheduler Today Add ^	Start Date	time by +/- 15	minutes(s).					
May 2019	Start Date	8/ 1/2025	•					
5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	O Start on the	First \vee S	unday 🗸 🗸	May 🌲 20	19 🔹	-		
June 2019	Repeats							
SMTWTFS 1 2345678	O Daily	Every 1	year(s)					
System Design	Monthly • Yearly							
Connections	Stop Date							
Media	Stop On	5/22/2500	¥					
Rgents	-			ок	Cancel			

- 6. In the Scheduler pane, click Add.
- 7. In the New Event dialog, enter the relevant information for this Scheduler instance:
- 1. In Name: type Dads Birthday.
- 2. In Time, add the following:
 - Select the **Time** radio button.
 - Highlight the hour: **07**, minutes: **30**, and **AM**. Use the drop-down menu to select each time separately, or
 - Select **Sunrise/Sunset**, and select **Sunrise** from the drop-down menu.
- 3. In Randomize time by +/-, keep the default of 15 minutes. This executes the Scheduler either 15 minutes before or 15 minutes after the actual time you assigned. This is useful when you go on vacation and you want your lights to go on at different times so outsiders think someone is home.
- 4. In Start Date, select one of the following:
 - Select the **Start** on radio button. Use the drop-down menu and select today's date.
 - Select the **Start** on the radio button to select an exact day, month, and year. Use the drop-down menus to make your selections.
- 5. Select Repeats.
 - Select Yearly.

Example: You want dad's favorite song to play at 7:30 AM. This dialog lets you schedule one-time events and recurring events.

- Select **Stop on**, and use the drop-down menu to select a month and year to stop this agent.
- 6. Click **OK**. The event is now added to the list of events.
- 7. To delete an event, select the event in the list, and click **Delete**.
- 8. Click Programming.
- 9. In the Device Events pane, select the Scheduler object at the bottom of the list.
- 10. In Scheduler Events, click Dads Birthday event. The Script pane shows Dads Birthday event.
- 11. Select the device actions to initiate in the Actions panes.
- 12. Drag the actions to the Script pane. These scripted actions execute when the Dad's Birthday event executes.
- 13. You can use the Scheduler agent in programming also to add conditionals or loops to your scripts.
- 14. In the project tree, select **3 Button Keypad**.
- 1. In the Actions pane, scroll down and select the Scheduler agent.
- 2. Click the Conditionals tab, select Time, and Within 5 minute(s) Before Sunset.
- 3. Drag the **blue question** mark to the Script pane.
- 4. In the project tree, select the light.
- 5. In the **Commands** tab, select **turn the room on**, and drag the **green arrow** on top of the **blue question** mark in the Script pane.

Results: When the top button on the 3-Button Keypad is pressed, if it is within five minutes before sunrise, the light comes on. The Scheduler agent lets you define one-time events and recurring events.

Using the Screen Saver agent

Use the Agents view to set up the Screen Saver agent.

Prerequisites

Ensure that the devices you will use to set up a screen saver and store your photos (for example, a networkattached storage device) are attached to the Control4 system are attached to the primary controller. If you use a USB device, ensure that it is formatted to FAT 32.

To set up the Screen Saver agent:

- 1. Start Composer HE and connect to a Director.
- 2. Click Agents.
- 3. (First time only) Click Add to add the Screen Saver agent to the project.
- 4. Select Screen Saver, and then click OK. The next time you want to create a Screen Saver, click the Screen Saver item in the Agents pane, and then click New.

5. From the drop-down menu, select the **File Storage Location**.

Agents Add Remove Agents Add Remove Access Advanced Liphing Please select from the configured File Storage Locations: Announcements Backup Please select from the configured File Storage Locations: Communication Countembuttors Please select from the configured File Storage Locations: Custom Buttons Time Please select the photo interval: Imin ✓ Wate dases Scones Media Scones Media Scones Media Scones Wedia Scones Timer UI Configuration Yest Natification Variables System Design Variables System Design Variables Agents Variables Agents Variables Pregramming	Agents Add Remove Access Advanced Lighting Advanced Lighting Backup Communication Please select from the configured File Storage Locations: Theater:>Generic Mass Storage RED	File Driver Go Tools Help	
Access Access Advanced Lighting Announcements Backup Communication Custom Buttons Each Notification Light Properties Macros Media Seesions Media Metrication Media Metrication Metrication Metrication Metrication Metrication Metrication Metrication Metrication Metrication Metrication Metrication Metrication Metrication Metrication Metricat	Access Advanced Lighting Announcements Backup Communication Please select from the configured File Storage Locations: Theater->Generic Mass Storage RED	Agents	Screen Saver
Advanced Lighting Amouncements Backup Communication Custom Battons Email Notification Identity Light Properties Macros Media Scenes Media Scenes Need Scenes Variables Valor NetWork Circent Saver Timer UI Configuration Variables	Advanced Lighting Please select from the configured File Storage Locations: Announcements Backup Communication Theater->Generic Mass Storage RED		/e
	Email Notification Ught Properties Macros Media Scenes Scheduler Scheduler Scheduler Scheduler Wakeup/Goodnight Wakeup/Goodnight Wakeup/Goodnight Wakeup System Design System Design Wakeup Wedia Wateup Media Media <td< td=""><td>Access Advanced Lighting Advanced Lighting Advanced Lighting Advanced Lighting Custom Buttons Backup Custom Buttons Usitom Backup Custom Buttons Backup Custom Buttons Backup Custom Buttons Custom Buttons Custom Buttons Custom Subtom Custom Subtom Custom Custom</td><td>Please select from the configured File Storage Locations: Theater->Genetic Mass Storage RED Please select the photo interval: Imin VUS Background for Letterbox The Screen Saver agent can be configured to use any of the available storage devices in this project, including: And drive of a controller VUSB-attached storage device VUSB-attached storage device Vhile multiple storage locations can be configured for the Screen Saver, only one storage location will be used at any given time. After configuring the storage location, use the Media tab to Add photographs to the system for use by the Screen Saver.</td></td<>	Access Advanced Lighting Advanced Lighting Advanced Lighting Advanced Lighting Custom Buttons Backup Custom Buttons Usitom Backup Custom Buttons Backup Custom Buttons Backup Custom Buttons Custom Buttons Custom Buttons Custom Subtom Custom Subtom Custom	Please select from the configured File Storage Locations: Theater->Genetic Mass Storage RED Please select the photo interval: Imin VUS Background for Letterbox The Screen Saver agent can be configured to use any of the available storage devices in this project, including: And drive of a controller VUSB-attached storage device VUSB-attached storage device Vhile multiple storage locations can be configured for the Screen Saver, only one storage location will be used at any given time. After configuring the storage location, use the Media tab to Add photographs to the system for use by the Screen Saver.

- 6. Click the Media view.
- 7. Click Screen Saver in the Media pane.
- 8. Click **Add** to scan and add new photos to the Screen Saver pane from the device you selected in the Network Storage Location box.
- 9. To set up a custom screen saver on the Navigators, see also:
 - "Setting up the photo screen saver"
 - "Setting up a custom screen saver"
 - Control4 System User Guide

Using the Timer agent

Use the *Agents* and Programming views to program this agent. The Timer agent lets you start, stop, or repeat a timer based on a given event and action.

Example: A Motion Sensor turns on a light when it detects motion; use a timer to turn off the light after 15 minutes. Alternatively, you can set a timer to repeat an action whenever the timer expires, such as a Bathroom fan that restarts each time the Bathroom light turns on.

Prerequisites

The following devices are added and identified (with a network address) in the project:

- Controller
- Any device involved in the triggering event (for example, a Motion Sensor)

To set up the Timer agent:

- 1. Start Composer HE and connect to a Director.
- 2. Click Agents.

-		
Composer Pro 3.0.0 - (Remote)	- 0	Х
File Driver Go Tools Help		_
Agents	Timers	
Agents Add Remove	Bathroom Fan	
Advanced Lighting	Interval: 00:00:05 🔄 h:m:s	
Backup Custom Buttons	niterval, bood-os 💌 nites	
Email Notification dentity	Repeating	
Media Sessions	Status: 🌑 Stopped	
Push Notification Scheduler		
Screen Saver	Start Stop Restart Reset Pause Resume	
Unifer UI Configuration		
Variables	Timer Agent Command Notes	
	START	
	(if stopped): Starts the timer and fires the 'started' event. New timer state: Running	
	(if running): Starts the timer over and fires the 'reset' event. Timer state: Running	
	 (if paused): Starts the timer over and fires the 'started' event. New timer state: Running 	
	STOP	
	(if stopped): Has no effect Timer state: Stopped	
	 (if running): Stops the timer and fires the 'stopped' event. The timer cannot be resumed. New timer state: Stopped (if paused): Stops the timer and fires the 'stopped' event. The timer cannot be resumed. New timer state: Stopped 	
imers Add Copy Delete	(if paused). Stops the timer and tires the stopped event. The timer cannot be resumed, New timer state. Stopped	
Name	RESTART	
Name Bathroom Fan	 (if stopped): Starts the timer and fires the 'started' event. New timer state: Running 	
Bathroom Fan	 (if running): Starts the timer over and fires the 'stopped', 'reset', and 'started' events. Timer state: Running (if paused): Starts the timer over and fires the 'stopped', 'reset', and 'started' events. New timer state: Running 	
	RESET	
	 (if stopped): Has no effect. Timer state: Stopped (if running): Starts the timer over and fires the 'reset' event. Timer state: Running 	
	 (if paused): Sets the remaining time back to the timer's interval and fires the 'reset' event. Timer state: Paused 	
	PAUSE	
	 (if stopped): Has no effect. Timer state: Stopped (if running): Stops the timer, preserves the remaining timer duration, and fires the 'paused' event. New timer state: Paused 	
	(if paused): Has no effect Timer State: Paused	
	250.045	
	 RESUME (if stopped): Has no effect. Timer state: Stopped 	
	(if supped). It is no effect. Timer state: Supped (if numped). It is no effect. Timer state: Running	
	 (if paused): Continues the timer from when it was paused and fires the 'resumed' event. New timer state: Running 	
	Clear Log	
🔯 System Design		
	10:19:07 (5): Stopped	
Connections		
💮 Media		
Agents		
X Programming		
	4	
	×	
rector Status: Idle	Connected to 192.168.1.18 (SSL)	

- 3. (First time only) Click Add to add the Timer agent to the project.
- 4. Select Timer, and then click New.
- 5. Type the name of the new timer (for example, Bathroom Fan), and click Create.
- 6. In Interval, use the drop-down menu to set the timer in seconds, minutes, or hours (hh:mm:ss), and click OK.
- 7. Click Start to start the timer.
- 8. Click Programming.
- 9. Select the **Timer Action** in the Actions pane, and ensure the new timer options display in the Commands tab (Start, Stop, Reset, and Change).
- 10. Start, Stop, Restart, Reset, Resume, or Change the timer as needed.

The following table outlines how the timer behaves depending on the state of the timer when a command

is executed.

Command executed is	Timer is	Then event(s) triggered	Effect on Timer
Start	Running	Reset	Restarts timer
	Stopped	Start	Starts timer
	Paused	Start	Restarts timer
Stop	Running	Stop	Stops timer
	Stopped	none	none
	Paused	Stop	Stops timer
Restart	Running	Stop, Reset, Start	Restarts timer
	Stopped	Reset, Start	Restarts timer
	Paused	Stop, Reset, Start	Restarts timer
Reset	Running	Reset	Restarts timer
	Stopped	Reset, Start	Restarts timer
	Paused	Reset	Reset timer value
Pause	Running	Puase	Pauses timer
	Not running	none	none
	Paused	none	none
Resume	Running	none	none
	Stopped	none	none
	Paused	Resume	Resumes timer

11. Program to connect the timer to an event and action, and choose to **Start**, **Restart**, or **Stop** the timer.

See the example programming screens that follow. Notice how the timer is first used as an action, and then as an event.

Event screen:

Programming
Device Events
~ ^ v Ø 9
Programming Control Push Notification Push Notification Scheduler Scheduler System Diagnostics Ul Configuration Update Manager Variables Z-Wave
Timer V
Timer Events Select Timer: Bathroom Fan V
 When Timer 'Bathroom Fan' expires When Timer 'Bathroom Fan' has been started When Timer 'Bathroom Fan' has been stopped When Timer 'Bathroom Fan' has been reset When Timer 'Bathroom Fan' has been paused When Timer 'Bathroom Fan' has been resumed
Status: Stopped Note: See the Timer Agent page for details on event execution.

Action screen:

Composer Pro 3.0.0 - (Remote)		- 🗆 ×
File Driver Go Tools Help		
Programming	Script	Actions
Device Events	Script Execute	Device Actions
· · · · • • •	K When Timer 'Bathroom Fan' expires	· · · · ?
G Programming Control	Ywnen Timer Bathroom Fan' expires	Media Sessions
Generation	Programming Controls	Control
C Remote Access		Generation Generation
G Scheduler	🕆 Else 🐍 And 🚺 Or 🗰 Break 📫 Stop 📫 Delay 5 seconds 🗸	B Scheduler
Green Saver System Diagnostics	# Comment	B G Screen Saver
Gentiguration		General System Diagnostics
C Update Manager	Script Actions	G UI Configuration
		G Update Manager G Variables
G Timer v		B G Z-Wave
< >		Timer v
Timer Events		Timer Actions
Select Timer: Bathroom Fan		Start Timer 'Bathroom Fan'
		Commands Conditionals Loops
When Timer 'Bathroom Fan' expires		Commands Conditionalis Loops
O When Timer 'Bathroom Fan' has been started		Select Timer: Bathroom Fan V
When Timer 'Bathroom Fan' has been stopped		Start Timer 'Bathroom Fan'
O When Timer 'Bathroom Fan' has been reset		O Stop Timer 'Bathroom Fan'
O When Timer 'Bathroom Fan' has been paused		Restart Timer 'Bathroom Fan'
O When Timer 'Bathroom Fan' has been resumed		Reset Timer 'Bathroom Fan'
Status: 🥥 Stopped		Pause Timer 'Bathroom Fan'
Note: See the Timer Agent page for		Resume Timer 'Bathroom Fan'
details on event execution.		Change 'Bathroom Fan' Interval
		Interval: 00.00.00 0 hmcs
🚳 System Design		Note: To use a new interval for an already
Connections		running timer, it must be reset or restarted. Note: See the Timer Agent page for
🛞 Media		details on timer commands.
🔢 Agents		
💥 Programming		
Director Status: Idle		Connected to 192.168.1.18 (SSL)

Using the UI Configuration agent

Use the UI Configuration agent to manage wallpaper settings and upload wallpapers, to manage screen saver settings for T3 touch screens and EA On-Screen Navigators, to configure the return to home setting for T3 touch screens and EA On-Screen Navigators, and to add favorites for all navigators in the project.

To configure wallpaper with the UI Configuration agent:

- 1. In the Agents view, select the **UI Configuration** agent, then click on the **Wallpaper** tab.
- 2. To configure the wallpaper in a single room, select the desired room in the Location pane.



- 3. Select from the default images listed, or click Add Dealer Image to add a custom image. Wallpaper images should be JPG files in a 16:9 format with a resolution of 1920 pixels wide by 1080 pixels high for best results. Images with different resolutions may be scaled or trimmed to fit and may produce undesirable results. Up to 10 dealer images can be added and configured to any rom.
- 4. Click **Apply** to set the wallpaper to the room or click **Apply To** ... to select the rooms to be configured with the wallpaper.

The homeowner can also add a custom image (up to one for each room) using the Control4 app. For information on how to add images with the Control4 app, see the *Control4 System User Guide* (ctrl4.co/userguide). After a custom wallpaper image has been configured, you can use the UI Configuration agent to configure rooms to use the image.

- 1. To configure the custom wallpaper in a single room, select the desired room in the *Location* pane. Select the image from the images listed and click **Apply** to set the wallpaper to the room or click **Apply To** ... to select the rooms to be configured with the wallpaper.
- 2. To clear the custom wallpaper image, select the custom image and click Clear Customer Image.

You can also choose to include or not include the Control4 logo on any wallpaper images. Click the box next to **Include Control4 Logo** to include the Control4 logo, and then continue the process of configuring a wallpaper image.

To configure screen saver settings with the UI Configuration agent:

1. In the Agents view, select the UI Configuration agent, then click on the Screen Saver tab.

nfiguration er Screen Saver	Home Screen Favorites		
Mode:			
Begin After:			
	Brightness Control		
[Animate Text		
	Apply To		

- 2. Choose the screen saver mode. Available options include:
 - None
 - Blank

- Date and Time
- Current Media
- Photos
- Custom
- 3. Depending on your chosen screen saver mode, configure any additional options that appear.
- 4. Configure the *Begin After* option. The value selected is the period of time the touch screen will wait after detecting inactivity until it turns on the screen saver.
- 5. Check the box next to Brightness Control to add a brightness control icon to the screen saver.
- 6. Check the box next to Animate Text to apply a small movement to the text to avoid screen burn-in.
- 7. Click **Apply To** ... to select the navigators to be configured with the screen saver settings.

To configure return to home settings with the UI Configuration agent:

1. In the Agents view, select the UI Configuration agent, then click on the Screen Saver tab.

JI Configuration	
Wallpaper Screen Saver	Home Screen Favorites
Return to Home After:	
	Apply To

2. Configure when the Navigator will return to the home screen by choosing the time in the *Return to Home After:* menu.

To configure favorites with the UI Configuration agent:

1. In the Agents view, select the UI Configuration agent, then click on the Favorites tab.

	guration Screen Saver	Home Screen	Favorites
	Favorites elect All	Clear Favor	
_		Clear	
🗌 Lig			
Sł	ades		
	omfort		
Se	curity		
🗌 Int	ercom		
	akeup		
	odnight		
G	uest Services		
	ustom Buttons		
	Add		
	Auu		

- 2. To add favorites to all Room Screen, click the box next to the favorites you want to add in the Add Favorites pane.
- 3. Click Add, and then click OK to add the selected favorites to all applicable Room Screens.

To clear all configured favorites and reset to the default favorites, click Clear Favorites.

Using the Variables agent

Use the Agents view to set up the Variables agent. Ensure that the devices you want to use for variables are added and identified to the system.

These sections provide information about how to create the type of variable that you want to use in programming.

- "Example: Using room variables"
- "Example: Using a custom number variable in an agent"
- "Example: Using a custom string variable in an agent"
- "Example: Using custom Boolean variables in an agent"

Using the Wake/Sleep agent

Use the *Agents* view to program this agent. The Wake/Sleep agent lets you set wake times, sleep timers, lighting, music, and so on.

Note: Wake times set in Composer HE synchronize with the user interfaces. Likewise, wake times changed on the interfaces will synchronize with Composer.

Example: At a user-specified time, start playing music in the Master, open the blinds, and ramp the light on over two minutes.

Prerequisites

The following devices are added and identified (with a network address) in the project:

- Controller
- Digital Audio (ensure that you can play music in the project)
- Bedroom Dimmer
- Blinds

To configure the Wake/Sleep agent:

- 1. Start Composer HE and connect to a Director.
- 2. Click Monitoring.
- 3. Make sure the rooms and devices show in the List view.
- 4. Click Agents.
- 5. (First time only) Click Add... to add the agent to the project.
- 6. Select Wake/Sleep, and then click OK.
- 7. In the Agents pane, select Wake/Sleep. The Wake/Sleep interface panes appear.

8. In the Wake/Sleep Rooms pane, click Add....

Choose System Items	Х
Select the room you would like to configure with Wakeup Goodnight settings.	
Residence Home House Main Family Room Kitchen Babies' Room Master Outdoor Lights Sasement Garage	
<	>
OK Cancel	

- 9. Select the room to enable the Wake/Sleep scene in and click OK.
- 10. Configure the Wake/Sleep scene for the room:

Wakeup/Goo	dnight
Default Master Setti	ngs
Time	
Wake-up Time:	06:30:AM
Goodnight Timer	: 15 🔄 minutes
Lights	
Visible	Current Light: All
Enabled	Light Selection: Al Ramp Rate: 300 💠 seconds
Media	
Visible	Use TV as the only media source
Enabled	Source. V Station: '70s Hits V
Curtains	
Visible	Current Curtain: All
Enabled	Curtain Selection: All
Active Days	
Sunday	🗹 Monday 🗹 Tuesday 🗹 Wednesday 🗹 Thursday 🗹 Friday 🖉 Saturday
Save Changes	

- **Time**—Select the default Wake time by selecting the time in the *Wake Time* field. Select the default Sleep timer length by selecting it in the *Sleep Timer* field. These times can be adjusted by the user in the Wake and Sleep sections on a T3 touch screen or the Control4 app.
- Lights—Select if Lights are visible in the Wake and Sleep sections on a T3 touch screen or the Control4 app by selecting Visible. Select which lights to control with the Wake and Sleep scenes by clicking on Light Selection or click All. Configure how fast lights turn on with the Wake scene by entering the desired rate into the Ramp Rate field. Enable lights in the current Wake and Sleep scenes for the room by selecting Enabled.
- Media—Select if Media is visible in the Wake and Sleep sections on a T3 touch screen or the Control4 app by selecting Visible. Select the default Media Source by clicking on Source (example: Pandora) and select the Station or select Use TV as the only media source and click on Channel to select a TV channel. Enable media in the current Wake and Sleep scenes for the room by selecting Enabled.
- **Curtains**—Select if curtains are visible in the Wake and Sleep sections on a T3 touch screen or the Control4 app by selecting **Visible**. Select which curtains to control with the Wake and Sleep scenes by clicking on **Curtain Selection** or click **All**. Enable curtains in the current Wake and Sleep scenes for the room by selecting **Enabled**.
- Active Days—Select the default days for the Wake scene to be active.
- 11. Click **Save Changes** to sync the changes to the Wake and Sleep scenes for the room:

Note: Users can schedule the wake times for the Wake scenes, enable or disable items from the Wake scenes, and choose from the lights or curtains in the Wake scene from their T3 touch screens or Control4 app. See the product documentation or the Control4 System User Guide for more information about how to schedule the wake time.

Note: Users can select the behavior of the Sleep scene (for example: decide whether to turn off media, turn off lights, and close blinds) in the Options menu in the Sleep scene from their T3 touch screens or Control4 app..

Programming

Use the Composer HE Programming view to program the Control4 system. This section assumes that you have a general understanding about how to use Composer HE to add and identify devices, and that you are now familiar with the Composer HE interface. If not, read "Basics" sections or refer to Composer HE Getting Started.

Use this chapter to learn:

- Programming basics
- Programming with commands
- Programming with conditionals
- Programming using rooms
- Programming using variables
- Programming with agents
- And more

Programming basics

Use the Programming view to program events and other actions that affect Control4 system devices.

Tip: A useful tool for helping you keep track of your programming scripts is called Programming Detective which is part of the Detective Suite, in **Tools** > **Detective Suite**. See the Composer HE Getting Started guide for details.

To get to the Programming view:

- 1. Start Composer HE and connect to a Director.
- 2. Click Programming. In the Programming view, you can perform basic programming tasks.

Event-driven programming

Programming is based on events. When an event is triggered, other actions can take place.

Example: If you program to lower the projector screen in the Theater by pressing a keypad button. You can program the receiver, DVD player, and projector to power up and start playing a DVD also. Programming the system is where the true value of Composer HE becomes a reality.

To program the system using Composer HE, you drag and drop Events and Actions that you create for corresponding devices to a programming Script pane. The sections below show these panes.

Events (Programming pane)

Select an event (left side of the window):

Programming
Device Events
~ ^ v Ø 9
Push Notification
⊕ G Remote Access
⊕ 🤆 Scheduler
⊕ 🥝 System Diagnostics
G UI Configuration G Update Manager
H G Z-Wave
v
< >
Timer Events
Select Timer: Bathroom Fan V
When Timer 'Bathroom Fan' expires
◯ When Timer 'Bathroom Fan' has been started
O When Timer 'Bathroom Fan' has been stopped
○ When Timer 'Bathroom Fan' has been reset
○ When Timer 'Bathroom Fan' has been paused
○ When Timer 'Bathroom Fan' has been resumed
Status: 🌑 Stopped
Note: See the Timer Agent page for details on event execution.
System Design
Connections
Media
🔢 Agents
🐉 Programming

Actions (Actions pane)

Select the action(s) (right side of the window):

Actions
Device Actions
~ ^ ~
Email Notification
History
E G Lighting Scenes
G Media Scenes G Media Sessions
G Programming Control
G Push Notification
E G Remote Access
🕀 🌀 Scheduler
⊕ 🥰 System Diagnostics
G UI Configuration G Update Manager
⊕ G Z-Wave ✓
Timer Actions
Start Timer 'Bathroom Fan'
Commands Conditionals Loops
Select Timer: Bathroom Fan V
Start Timer 'Bathroom Fan'
◯ Stop Timer 'Bathroom Fan'
○ Restart Timer 'Bathroom Fan'
◯ Reset Timer 'Bathroom Fan'
○ Pause Timer 'Bathroom Fan'
○ Resume Timer 'Bathroom Fan'
◯ Change 'Bathroom Fan' Interval
Interval: 00:00:00 🜩 h:m:s
Note: To use a new interval for an already running timer, it must be reset or restarted.
Note: See the Timer Agent page for details on timer commands.

Script (Script pane)

After you select the Event, Drag the Actions commands to the Script pane (middle pane):

Script	
Script	Execute
When Master->Bathroom light turns on	
Programming Controls	
Else & And Or Break Stop Delay 5 seconds	~
# Comment	
Script Actions	
Restart Timer 'Bathroom Fan'	

The next table describes events, actions, and the script.

Programming Item	Description
Events	 All programming begins with events. An event is a "when" statement. An event is the trigger report that something happened that results in an automation. Events happen instantaneously. On a keypad, pushing a button is one event. Actions all occur under Events. Examples of events include: When the door opens When it is 7:00 AM When it is sunrise
Actions	After the event identifies to the system that something occurred, it sends actions. The following are the methods that are used by the system to define actions:
	• Commands. The Commands tab displays all available commands for a selected item in the Action Device Tree. A command is a "do" statement. Commands are actions the Director tells the device to do. Examples of commands include:
	Light: on, off
	Blu-ray player: play, stop, pause
	Security device: arm, disarm
	TV device: Power on/off, change channel
	• Conditionals. The Conditionals tab displays all available conditionals for a selected item in the Action Device tree. A conditional is an "if" statement. An "if" statement asks a true/false question to the device. Examples of conditionals include:
	If door is open
	If after 5 PM
	If light is greater than 50 percent

• Loops. The Loops tab displays all available loops for a selected item in the Action Device tree. A loop is another type of conditional. A conditional loop is a "while" statement. It is something that is ongoing. Examples of conditional loops:

While the sprinklers are on

While the motion detector detects movement

While a doorbell switch is being pressed

Warning: Using loops (*WHILE* statements) can potentially overwhelm the controller's CPU. Use loops sparingly.

• Delays. A delay stalls a program from running to ensure actions that occur at the right time.

Script The linking of events and actions is defined in the script.

Tip: To configure or program devices, you can use properties, agents and variables also. These are considered advanced configuration and programming tasks. See "<u>Using and Programming with Agents</u>" or "Examples: programming with variables."

Programming elements

Basic programming consists of two parts:

- 1. Identify a device's events to trigger actions.
- 2. Define a device's actions to trigger when an event fires.

The following steps introduce the basic programming flow and script creation:

1. Select the device--Bathroom Fan--in the *Device Events* pane and select the event--When the Bathroom Fan is turned on. Notice that it appears in the *Script* pane.



- 2. Define the device's actions--Under Timer, select the **Bathroom Fan** timer and select the **Start Timer** action--in the *Actions* pane.
- 3. Drag the actions to the script (Script pane).
- 4. To test the programming command, in the Script pane, click Execute.

Note: Programming can make use of agents also, where you can include preprogrammed system functionality, such as scheduling, delays, or setting up Lighting Scenes. Example: To program around sunrise and sunset, use the Scheduler agent.

See "Using and Programming with Agents" for more information about using agents in programming.

See the next section or Composer HE Getting Started for example programs you can create.

Programming with commands

A Command for a Control4 system is a "do" statement. Commands are actions that tell a device what to do.

Example: The example in this section shows you how to program a keypad button to turn on the sprinkler system. This example assumes the keypad and sprinkler system are already set up.

To program a keypad button to toggle sprinklers on and off:

- 1. Start Composer HE and connect to a Director.
- 2. Click Programming.
- 3. In the *Device Events* pane project tree, select the **keypad**.
- 4. In the *keypad Events* pane, select the button that you want to program—**Zone 1**. This automatically identifies the Press event for programming the button on the keypad. The event appears at the top of the Script pane.

Composer Pro 3.0.0 - Residence (Local)			- 🗆 ×	
File Driver Go Tools Help				
Programming	Script		Actions	
Device Events	Script	Execute	Device Actions	
Programming Device Events Concernent Concern		Execute		
Hedia Agents Programming				
Director Status: Idle			🕗 Connected to 192.168.1.104 (SSL) 👲 19 🚊	

- 5. In the Actions pane, select the device--Sprinkler Zone 1.
- 6. In the *device's Actions* tab, select **Toggle the Sprinkler Zone 1**. The command you chose is displayed in the Sprinkler System Actions pane with a green arrow.

Note: The title of this pane varies depending on the device you select.

7. Click the green arrow, and drag it to the Script pane (center pane).

Composer Pro 3.0.0 - Residence (Local)		- 🗆 ×
File Driver Go Tools Help		
Programming	Script	Actions
Device Events	Script Execute	Device Actions
	When Outdoor Lights->Sprinklers Zone 1 button is pushed	Ktchen Entrance KP
Kitchen Entrance KP String Lights	Programming Controls	B Sprinklers
Gr Sprinklers	🔧 Else 🐍 And 📘 Or 🗰 Break 📫 Stop 📫 Delay 5 seconds 🗸	🕀 😽 Sprinkler Zone 1
Sprinkler Zone 1 Sprinkler Zone 2	# Comment	 Sprinkler Zone 2 Sprinkler Zone 3
Sprinkler Zone 3 Sprinkler Zone 4	Scriet Actions	Sprinkler Zone 4
B Spinkler Zone 5		B Sprinkler Zone 6
🗄 🔯 Sprinkler Zone 6	Toggle the Outdoor Lights-> Sprinkler Zone 1	G Room Variables
Basement		Hoom Vanables Toshiba TV
🕀 💹 Toshiba TV		🕀 👍 XBox
🖶 🤧 XBox 🕀 🚦 System Remote Control SR-250 🗸		System Remote Control SR-250
System Plemote Control SH-250		Advanced Lighting
Sprinklers Events		Sprinkler Zone 1 Actions
Keypad Events		Toggle the Outdoor Lights->Sprinkler Zone 1
Events For: Zone 1 V		
Pressed		Commands Conditionals Loops
O Released		Turn the Outdoor Lights->Sprinkler Zone 1 off
🔾 Single Tap		Tum the Outdoor Lights->Sprinkler Zone 1 on
O Double Tap		~
◯ Triple Tap		Toggle the Outdoor Lights >Sprinkler Zone 1
🔯 System Design		
Connections		
🕞 Hedia		
Agents		
🖉 Programming		
Director Status: Idle		Connected to 192.168.1.104 (SSL) 👱 19

- 8. To test, click **Execute** in the *Script* pane to turn on the sprinklers.
- 9. Click **Execute** again to turn off the sprinklers.

Results: The top button of the keypad now toggles the sprinklers on and off.

Programming with conditionals

A conditional is an 'If' statement in Composer HE that asks a true or false question to the device.

- A 'Break' command used in an 'If' statement should jump to the *first* statement after the 'If'. See "Programming with Delay, Stop and Break Commands" for details. Note: A 'Break' command in an 'If' statement won't behave as a 'Stop' command, but will move to the next level in the script.
- A break *not* in a 'While' or 'If' statement should behave like a 'Stop' command (jumps to the *first* statement after the function).

Example: The example in this section shows how to use conditionals in programming. If a light is off when the doorbell is pressed, the light is programmed to turn on. Conditionals also use When statements (events). When the doorbell is pressed, if the light is off, program the light to turn on.

To program a conditional that turns on the light when the doorbell is pressed and the light is off:

- 1. Make sure that the doorbell and light switch are configured in the project.
- 2. Click Programming.
- 3. In the Device Events pane project tree, select the Doorbell.
- 4. Select the **When the Doorbell is pressed** event. The event appears at the top of the *Script* pane.

Composer Pro 3.0.0 - Residence (Remoti	e)		- 🗆 ×
File Driver Go Tools Help			
Programming	Script		Actions
Device Events	Script Ex	ecute	Device Actions
Device Events	Script Exe Ment the Outdoor Lights->Doorbell is pressed Programming Controls Controls # Comment Script Actions Script Actions Scrip	~	Device Actions Image: Actions
Image: System Design Image: System Design Image: Connections Image: System Design Image: Operation Design Image: Operatio			Blint Den Cose Cose Sope Sop 2 C
Director Status: Idle			Connected to 10.158.0.78 (SSL)

- 5. In the *Device Actions* pane, select the **Front Door Light**. Notice that the light switch actions that can be programmed for this device appear in the Light Switch Actions pane below the Device Actions project tree.
- 6. Click the **Conditionals** tab, and select **Is Off**. Composer HE displays the conditional you chose in the *Front Door Light Actions* pane: **? If <room>->Front Door Light is off**.

7. Drag the **blue question mark** icon to the *Script* pane.

Composer Pro 3.0.0 - Residence (Remote)		- 🗆 X
File Driver Go Tools Help			
Programming	Script		Actions
Device Events	Script E	xecute	Device Actions
		xecute	
System Design			100%, O Level is: 23 0 50%, 0%,
😏 Media			Virtual Button Tests
Agents			✓ ○ Is Pressed
💥 Programming) is Released
			O LED Color Equals
Director Status: Idle			Connected to 10.158.0.78 (SSL)

- 8. Click the **Commands** tab, and select **On**.
- 9. Drag the **green arrow** to the **blue question mark** in the *Script* pane to make it a child under the "If" statement (nest the command under the "If" statement).

Tip: If you drag the action to the text, or you drag the action under the text to the open space, it places the action as an equal above the conditional. If you drag the action to the question mark, it becomes a subset of the conditional. Notice the direction of the arrow to place the action as a peer or a subset under the statement.

🐻 Composer Pro 3.0.0 - Residence (Remote)	– – ×
File Driver Go Tools Help	
Programming Script	Actions
Device Events Script Execute	
When the Outdoor Lights->Doorbell is pressed	Master Binds
Sprinkler Zone 2 Programming Controls	Outdoor Lights
🕂 Sprinkler Zone 3 💦 Else 🐍 And 📔 Or 📫 Break 📫 Stop 📫 Delay 5 seconds 🗸	- Backvard
Bythkler Zone 5	Front Door Light
Comment	Cutdoor Kitchen Light String Lights
Series Script Actions	B Sprinklers
Room Variables P If Outdoor Lights → Front Door Light is off	E Carlo Sprinkler Zone 1
Tortiba TV Tortiba TV Turn on the Outdoor Lights-Front Door Light	Sprinkler Zone 2 Sorinkler Zone 3
< >	🕀 💆 Sprinkler Zone 4 🗸 🗸
Doorbell Events	Front Door Light Actions
When the Doothell is released	Turn on the Outdoor Lights->Front Door Light
	Commands Conditionals Loops
When the Doorbell is pressed	Light Commands
	On 🖲 搅 Off 🖓 Toggle 🔿
	◯ Set Level: 100 🐑 0
🔯 System Design	◯ Ramp to Level:
Connections	O Ramp to Preset:
🚱 Media	Virtual LED Commands O Set All LED Colors
Agents	Set LED Colors
3 Programming	SetLED On SetLED Off
	Set LED Current
	U SetLED Current v
Director Status: Ide	Connected to 10.158.0.78 (SSL)

10. Click **Execute**. With the Front Door Light off, press the doorbell; the light should come on.

Programming with Delay, Stop, Break, Or, And, and Else commands

When programming in Composer, you have the following Programming Controls available to create advanced programming:

- Delay-Lets you delay an action from taking place.
- Stop-Lets you stop the programming script.
- **Break**—Lets you break out of a 'While' or loop or 'If' statement when a specified condition is met and returns to the programming outside of the loop.
- Or-Lets you group conditionals together with an 'or' logical grouping. If any of the conditionals is true, the programming continues.
- And-Lets you group conditionals together with an 'and' logical grouping. If all of the conditionals are true, the programming continues.
- Else-Lets you program an alternate set of programming for a conditional. If the conditional succeeds, the programming continues under the 'if' statement. If the conditional fails, the programming continues under the 'else' statement.

Delay command

To use the Delay command during programming, see this example using a Motorized Screen and a *Blu-ray* player:

- 1. Start Composer HE and connect to a Director.
- 2. Click Programming.
- 3. Select the Motorized Screen in the project tree.
- 4. Select the event When the Motorized Screen is put down. Notice the string that appears in the Script pane.



5. To use the Delay command, in the *Programming Controls* section in the top of the *Script* pane, enter **5** next to **Delay**.

6. Drag the green arrow Delay command to the *Script* pane.

Composer Pro 3.0.0 - Residence (Local)		- 0 ×	
File Driver Go Tools Help			
Programming	Script	Actions	
Device Events	Script Execute	Device Actions	
V V V V	When the Theater->Motorized Screen is put down	Spinkler Zone 1	
🕀 🔯 Sprinkler Zone 6	Programming Controls	Sprinkler Zone 2	
Basement	🛰 Else 🐍 And 📔 Or 📫 Break 📫 Stop 📫 Delay 5 seconds 🗸	Sprinkler Zone 3	
🕀 💯 Toshiba TV		Sprinkler Zone 5	
System Remote Control SR-250	# Comment	Sprinkler Zone 6 Sessent	
System Remote Control SR-250	Script Actions	Basement Bosement Bosement Bosement	
Room Variables	delay 5 seconds	🕀 💭 Toshiba TV	
Motorized Screen		Box System Remote Control SR-250	
Access		Deater	
B K Advanced Lighting		C Room Variables	
Announcements G Backup V		Motorized Screen Motorized Screen	
<		Access V	
Motorized Screen Events		Panasonic Blu-ray Player Actions	
Hen the Motorized Screen is put up			
When the Motorized Screen is put down		Commands Conditionals Loops	
		On Off	
		Power: 🔾 🚡 🖉 🍙 Eject/Close	
		Skip Scan Play Pause Stop Scan Skip Reverse Forward	
A			
System Design		Menu Dp	
Connections		Let (Enter) Right	
💮 Hedia		Down	
III Agents			
💥 Programming		Keypad	
		Go To Chapter 1 🗘	
Dredor Status: Ide 🖉 Connected to 192 168.1.104 (SSL) 👱 19 🚽			

- 9. In the *Device Actions* pane, find and select the **blu-ray player**.
- 10. Click the **Commands** tab, and click **Power > On**.
- 11. Drag the **green arrow** 'Turn on the <room's> <blu-ray player>' to the *Script* pane.

Composer Pro 3.0.0 - Residence (Local)		- 🗆 ×
File Driver Go Tools Help		
Programming	Script	Actions
Device Events	Script Execute	Device Actions
~ ^ v Ø 9	When the Theater->Motorized Screen is put down	· · · · ·
System Deciga System Deciga	When the Theater->Motorized Screen is put down Pagarming Cardols Cardol Ca	Constant Loop Constant Constant
Director Status: Idle		Connected to 192.168.1.104 (SSL) 👲 19

Stop command

This example uses a Stop command to not close the garage door if the garage light is on. If the light is off, the garage door closes.

To use the Stop command during programming, see this example using a keypad, a garage door, and a dimmer:

1. In the keypad *Events* pane, select the **Garage Door button** and select the **Pressed** event for the Garage keypad button. 'When <room> -> <keypad name> Garage button is pushed' appears at the top of the *Script* pane.

Composer Pro 3.0.0 - Residence (Remote)	- 🗆 X
File Driver Go Tools Help		
Programming	Script	Actions
Device Events	Script Execute	Device Actions
	When Garage->Hall Keypad Garage button is pushed	Room Variables
🗈 📱 System Remote Corr	Programming Controls	🕀 🚇 Toshiba TV
Theater Boom Variables	Selse & And Or Break Stop Delay 5 seconds	Box System Remote Control SR-250
Motorized Screen		Theater Goom Variables
🕀 🅁 Panasonic Blu-ray Pl 🕀 🥵 Garage	# Comment	Motorized Screen
Garage Light	Script Actions	B Grage Garage
Garage Light		Room Variables
😐 🗄 Hall Keypad 🗸 🗸		Garage Light
< >		Garage Door (Sensor) v
Hall Keypad Events		Garage Light Actions
Keypad Events		
Events For: Garage ~		Commands Conditionals Loops
Pressed		Load Tests
◯ Released		ls On 🔿 📢 🛛 Is Off 🔿 📢
◯ Single Tap		
O Double Tap		100%
◯ Triple Tap		◯ Level is: v 23 ÷
System Design		50%
Connections		
~ 1		0%
💮 Hedia		Virtual Button Tests
🔢 Agents		✓ ○ Is Pressed
💥 Programming) Is Released
		O LED Color Equals
Director Status: Idle		Connected to 10.158.0.78 (SSL)

- 2. In the Garage Light Actions pane, click the Conditionals tab, and then click Is On.
- 3. Click the **blue question mark** next to 'If the <room>->Garage Light is on,' and drag it to the Script pane.
- 4. In *Programming Controls*, and click the **Stop** command and drag it into the *Script* pane.
- 5. Drag the green arrow 'Stop' over the blue question mark in the Script pane to nest it below "If <room>->Garage Light is on".

Composer Pro 3.0.0 - Residence (Remote)	- 🗆 X
File Driver Go Tools Help	
Programming Script	Actions
Device Events Script Execute	Device Actions
⊖ Single Tup ⊖ Double Tap ⊖ Turbu Tur	Close the Garage->Garage Door (Sensor) Toggle the Garage->Garage Door (Sensor)
C Tribe Tap System Design C Sonections C Media Programming Programming	() (type is dauge cauge too (Loter)

- 6. In the *Device Actions* pane, select the **Garage Door**.
- 7. Click the **Commands** tab, and select **Close the <room>->Garage Door**.

8. Drag the green arrow 'Close the <room>->Garage Door' below the Stop command.



Break command

Here are some rules about using the Break command (see example script below).

- A break in a 'While' loop jumps to the first statement after the While statement.
- A break in an 'If' statement (nested in a 'While' statement) jumps to the first statement after the 'If.'
- A break not in a 'While' or an 'If' statement should behave like a Stop command (jumps to the *first* statement after the function).

Note the 'Break' command in the statement below. If the 'While' statement above the 'Break' command (in an 'If' statement) is met (True), then the program continues to the next 'While' statement. Otherwise it skips to the next command (green arrow) statements at the bottom of the script.

1 When Theater->Theater Dimmer level changes
C While Theater ->Theater Dimmer is on
Set LED: 3 current color to Green on Theater->6-Button Keypad
📫 delay 500 milliseconds
📫 Set LED: 3 current color to Navy on Theater->6-Button Keypad
🖨 delay 500 milliseconds
➡ Set LED: 3 current color to Yellow on Theater->6-Button Keypad
📫 delay 500 milliseconds
🖨 Set LED: 3 current color to Red on Theater.>6.Button Keypad
🖨 delay 500 milliseconds
If Variables->Break is True
🖨 Break
🕲 While Variables->Break is True
Set LED: 6 current color to Green on Theater->6-Button Keypad
🖨 delay 500 milliseconds
i Set LED: 6 current color to Navy on Theater->6-Button Keypad
🖨 delay 500 milliseconds
🖨 Set LED: 6 current color to Yellow on Theater.>6-Button Keypad
🖨 delay 500 milliseconds
🖨 Set LED: 6 current color to Red on Theater->6-Button Keypad
🖨 delay 500 milliseconds
Show the Popup Message 'Break Programming Completed' on the In-Wall Touch Screen - 10.5" Show OK Button (Clear popup after 30 seconds)
Furn off the Theater->Theater Dimmer

See "Programming with a While statement" or "Programming with conditionals" for details.

Else command

You can use an Else command to create alternate programming to an If conditional. This example will program a button to open the blinds if it's day time and close the blinds if it's night time.

To program the blinds with an Else command:

- 1. Start Composer HE and connect to a Director.
- 2. Click Programming.
- 3. In the *Device Events* pane project tree, select the keypad.
- 4. In the *keypad Events* pane, select the button that you want to program–**Blinds** This automatically identifies the Press event for programming the button on the keypad. The event appears at the top of the *Script* pane.

Composer Pro 3.0.0 - Residence (Remote)	- 🗆 X
File Driver Go Tools Help		
Programming	Script	Actions
Device Events	Script Execute	Device Actions
	When Master->Blinds Blinds button is pushed	
🕀 🍋 Master	Programming Controls	🕀 📢 Hall Light
Room Variables Master	🔧 Else 🐍 And 🚺 Or 🗰 Break 📫 Stop 📫 Delay 5 seconds 🗸	E Babies' Room
Bathroom		🕀 🍋 Master
Bathroom Fan	# Comment	Room Variables
Haster Binds	Script Actions	Bathroom
Cutdoor Lights		Bathroom Fan Binds
Room Variables Sackyard		Blinds
< >		Outdoor Lights V
Blinds Events		Master Blinds Actions Home->House->Main->Outdo
Keypad Events		Set the blind target level Room ID: 290 Blinds to 2
Events For: Blinds ~		Commands Conditionals Loops
Pressed		Blind:
O Released		
◯ Single Tap		O 🏥 Open
O Double Tap		Close
⊖ Triple Tap		🔿 🔝 Toggle
System Design		🔿 🕱 Stop
Connections		2 ‡ Target
Media		
Agents		
💥 Programming		
Director Status: Getting AV Devices		Connected to 10.158.0.78 (SSL)

- 5. In *Device Actions*, select **Scheduler** and click on **Conditionals**.
- 6. Click **Time** and click **Day time**.
- 7. Drag the **blue question** 'If time is day time' conditional to the *Script* pane.
- 8. Select the Master Blinds in *Device Actions*, click on Open, and drag the 'Set the blind target level on <room>->Master Blinds to Open' command to nest it below the conditional.

Composer Pro 3.0.0 - Residence (Remote)	– 🗆 X
File Driver Go Tools Help		
Programming	Script	Actions
Device Events	Script Execute	Device Actions
Constant of the second o	Sorget Ubecare	Image: Constraint of the second se
Blinds Events		Master Blinds Actions
Keypad Events		Set the blind target level on Master.>Master Blinds to Open
Events For: Blinds ~		Commands Conditionals Loops
Pressed		Blind
O Released		Open
⊖ Single Tap		
O Double Tap		Close
◯ Triple Tap		○ III Toggle
System Design		O 🐹 Stop
Connections		2 Target
💮 Media		
agents		
line of the second seco		
Director Status: Idle		Connected to 10.158.0.78 (SSL)

- 9. In Programming Controls, click on Else and drag the Else icon on top of the conditional in the Script pane. The mouse icon changes to indicate you can place the Else command below the If command (and link them logically).
- 10. Select the Master Blinds in *Device Actions*, click on Close, and drag the 'Set the blind target level on <room>->Master Blinds to Close' command to nest it below the Else conditional.

Rite Driver Go Tools Help Programming Sorial Sectors Sorial Sectors Programming Controls Programming Controls Programming Co			
Programming Script Actions Device Events Event Actions Device Actions Image: Series Image: Series Image: Series Device Actions Image: Series Image: Series Image: Series Image: Series Image: Series Image: Series Image: Se	Composer Pro 3.0.0 - Residence (Remote)		- 🗆 ×
Sorgit Beaded Image: Sorgit Beaded Image: Sorgit Image: Sorgit Image: Sorgit Image	File Driver Go Tools Help		
Image: Sector Point Po	Programming	Script	Actions
Image: Sector Read Image: Read Events I	Device Events	Script Execute	
	Periode Events	Script Execute Script Execute When Master->Blinds Blinds button is pushed Programming Catnols Script Actions Script Actions Y times is day time Broak the blind target level on Master->Master Blinds to Open Script Actions Script Act	Price Actions
Derector Status: Ide Official Connected to 10 158 0.78 (SSL)			
	Director Status: Idle		Connected to 10.158.0.78 (SSL)

See "Programming with a While statement" or "Programming with conditionals" for details.

And command

You can use an And command to create additional conditionals to an If conditional. Both the If conditional and the other conditional(s) must be true or programming won't continue.
Example: The example in this section shows how to use conditionals and an And command in programming. If a light is off when the doorbell is pressed and it's night time, the light is programmed to turn on.

To program a conditional with an And command:

1. Follow the example in "Programming with conditionals". These next steps start after that example.

<continued from the steps in "Programming with conditionals">

11. To add an And command, in *Programming Controls*, click **And** and drag it on top of the conditional in the *Script* window. The *Expression Builder* opens to help you build your complex conditional statement.



- 12. In the *Device Actions* pane project tree, select the **Scheduler**.
- 13. Click Time and Night time.
- 14. Drag the conditional 'If time is night time' to the Script pane below the AND symbol.



15. Click **Finish** to close the *Expression Builder*. The complex condition now reads '**If <room>->Front Door Light** is off AND If time is night time'.

Composer Pro 3.0.0 - Residence (Remote	1		- 🗆 X
File Driver Go Tools Help			
Programming	Script		Actions
Device Events	Script	Execute	Device Actions
- · · · • • •	When the Outdoor Lights >Doorbell is proceed		× ^ v 9
	When the Outdoor Lights->Doorbell is pressed Programming Controls • Else • Comment Soript Actions • If Outdoor Lights->Front Door Lights and MAD If time is night time • Turm on the Outdoor Lights->Front Door Light		Cherribida Conservibida Con
Director Status: Idle			Connected to 10.158.0.241 (SSL)

When the doorbell is pressed, the Front Door Light will turn on if the light is off AND if it is night time.

Or command

You can use an Or command to allow multiple conditionals to activate programming. If any conditional grouped with an Or command is true, the programming continues.

Example: The example in this section shows how to use conditionals and an Or command in programming. If a light is off when the doorbell is pressed and it's night time, the light is programmed to turn on.

To program a conditional with an Or command:

1. Follow the example in "Programming with conditionals". These next steps start after that example.

<continued from the steps in "Programming with conditionals">

11. To add an And command, in *Programming Controls*, click **Or** and drag it on top of the conditional in the *Script* window. The *Expression Builder* opens to help you build your complex conditional statement.

Expression Builder				
You are about to enter the Expression Builder. This will allow you to edit the current expression.				
All operators of the expression must all be of the same type (AND / OR).				
Once you have completed building the expression, press the Finish button to return to Script Actions.				
Do not show this message again.	ОК			

- 12. In the *Device Actions* pane project tree, select the **Scheduler**.
- 13. Click Time and Night time.

14. Drag the conditional '**If time is night time**' to the *Script* pane below the *OR* symbol.

Composer Pro 3.0.0 - Residence (Local)			- 🗆 X
File Driver Go Tools Help			
Programming	Script		Actions
Device Events	Script	Execute	Device Actions
Device Events	Script When the Outdoor Lights>Doorbell is pressed Programming Control Else And 0 IP Break IP Delay 5 second Egrenation Builder	Finish	Device Actions
Director Status: Adding Code Item			Connected to 192:168.1.104 (SSL)

15. Click **Finish** to close the *Expression Builder*. The complex condition now reads '**If <room>->Front Door Light** is off OR If time is night time'.

Composer Pro 3.0.0 - Residence (Local)		- 🗆 X
File Driver Go Tools Help		
Programming Script		Actions
Device Events Script	Execute	Device Actions
Procee Events Soriet Image: Soriet of the sories of the	Excute	
Apents Brogramming		SetLED On SetLED Off SetLED Current
Director Status: Ide		Connected to 192.168.1.104 (SSL)

When the doorbell is pressed, the Front Door Light will turn on if the light is off OR if it is night time.

Programming with a While statement

A 'While' statement runs continuously in a loop until the evaluation is shown to be False (Boolean value). 'While' statements can be repeating 'if' statements also.

Caution: When programming with WHILE statements, the script **must** incorporate delays, or the script will run so fast that it will consume all available CPU resources and decrease system performance.

This example shows how to program a system to keep the air conditioning off while a window is open.

To program a While statement, follow this example:

- 1. Make sure the thermostat and window contact sensor are configured in Composer.
- 2. Click Programming.
- 3. In the project tree, select Kitchen Window Contact Sensor to trigger an event.
- 4. Select the When the Kitchen Window opens event. The event appears at the top of the Script pane.

Composer Pro 3.0.0 - Residence (Remote	0		- 🗆 ×
File Driver Go Tools Help			
Programming	Script		Actions
Device Events	Script Exec	oute	Device Actions
Device Events	Sorget December 2014		Device Actions Periode Actions Image: Space Namedol Image: Space Namedol Image: Space Namedol Image: Space Named
Director Status: Idle			Connected to 10.158.0.78 (SSL)

- 5. In the Device Actions pane, select Kitchen Window Contact Sensor and click on Loops.
- 6. Select the the Kitchen Window is open loop.
- 7. Click the loop icon next to 'While the <room>->Kitchen Window is open' and drag it into the *Script* pane.
- 8. In *Programming Controls*, enter **5 seconds** next to *Delay* and drag the Delay green arrow below the while loop in the *Script* pane to nest the delay below the while statement.
- 9. In Device Actions, select the thermostat and click on Commands.
- 10. Select Off in the Set HVAC Mode to selection.
- 11. Click on the green arrow next to 'Set the system mode on <room>->Control4 Thermostat to Off' and drag

the green arrow below the while statement to nest it below the delay.

Composer Pro 3.0.0 - Residence (Remote)	- 🗆 X
File Driver Go Tools Help		
Programming	Script	Actions
Device Events	Script Execute	Device Actions
	When the Kitchen->Kitchen Window opens	
⊕ 🧭 Auto Update	Programming Controls	E Family Room
⊖-10 Hall Light ⊕ G Device Variables	🔧 Else 🐍 And 🚺 Or 🗰 Break 📫 Stop 📫 Delay 5 seconds 🗸	- Room Variables
Hall KP	# Comment	Boom HC800
B H Babies' Room		Denon Receiver
He Master	Script Actions	e £ eSATA File Storage ⊕ £ dan pc-e
🕀 📢 Master	While the Kitchen->Kitchen Window is open belay 5 seconds	E Control4 Thermostat
⊕- <u>¶</u> Bathroom ∨	Set the system mode on Family Room.>Control4 Thermostat to Off	e ∰ Tunein e ∰ Chromecast ✓
Kitchen Window Events		Control4 Wireless Thermostat Actions
Kitchen Window Events		
When the Kitchen Window opens	Thermostat to Off	
		Commands Conditionals Loops
When the Kitchen Window closes		◯ Set Scale to
		O Set Heat Setpoint to 66 🗣 F
		Set Cool Setpoint to 69 🜩 F
		Set Single Setpoint to 0 🗘 F
System Design		● Set HVAC Mode to 0ff ✓
10		⊖ Set Fan Mode to Auto ~
Connections		⊖ Set Hold Mode to Off ~
💮 Media		O Set Buttons Lock to ● ON O OFF
🔢 Agents		○ Set Vacation Mode to ● ON ○ OFF
le Programming		O Increment Heat Setzoint
		O Decrement Heat Setpoint
Director Status: Idle		Connected to 10.158.0.78 (SSL)

Programming using digital audio and rooms

You can program a Control4 system using the Digital Audio and Room objects in Composer HE. You can use digital audio events when a session starts or stops. A session is when a song or playlist begins and ends. A list of songs can be compiled into a playlist. You can compile the list by songwriter, album, song type, or any combination. Room events include turning the room off and on, when media sessions begin and end, etc.

Program a button to play media or a playlist

Use the Control4 Composer HE Programming view to program a button on a keypad to play an album or playlist.

Example: The example in this section uses a 6-Button Keypad for the Theater room. When you press Button 1, music or a movie plays in the Theater room.

Prerequisites

- Ensure that a 2, 3, or 6-Button Keypad is installed as directed in the Control4 2, 3, or 6 Button Keypad Installation Guide.
- Ensure that your project has an audio end point, such as Speaker Point, added and identified on the network.

To program a button on a 6-Button Keypad to play music:

- 1. Start Composer HE and connect to a Director.
- 2. Click Programming.
- 3. In Programming in the Device Events pane, select the 6-Button Keypad.
- 4. In the 6-Button Keypad Events pane, press Button 1, and select the Press radio button.
- 5. In the Device Actions pane, select the **Theater** room.
- 6. Click the **Commands** tab, and press the **Select Media** radio button.
- 7. In the new window, select the media type to play, such as Playlist.
- 8. Select the movie, playlist, etc.
- 9. Click OK.
- 10. In the Actions pane, drag the green arrow to the Script pane.

11. Click **Execute** in the Script pane.



Program a button to turn up the volume

Use the Programming view to let you use a keypad button to turn up the volume in a room.

Example: The example in this section uses a 6-Button Keypad for the Theater room. When you press Button 2 the volume increases in the Theater room.

Prerequisites

- Ensure that a 2, 3, or 6-Button Keypad is installed as directed in the Control4 2, 3, or 6 Button Keypad Installation Guide.
- Ensure that your project has an audio end point, such as a Speaker Point, added and identified on the network.

To program a button to turn up the volume:

- 1. Start Composer HE and connect to a Director.
- 2. Click Programming.
- 3. In Programming on the Device Events pane, select the 6-Button Keypad.
- 4. In the 6-Button Keypad Events pane, press Button 2, and then select the Press radio button.
- 5. In the Device Actions pane, select the **Receiver**.
- 6. Click the Commands tab. In Sound, select Volume > Start > Up.
- 7. Drag the green arrow in the Receiver Actions pane to the Script pane.
- 8. Click Execute.

Program a button to add a room to another room's music session

Use the Programming view to use a keypad button to play music in additional rooms.

Example: The example in this section uses a 6-Button Keypad for the Theater room. When you press Button 3, music starts playing in the Bedroom as well as the Theater room.

Prerequisites

- Ensure that a 2, 3, or 6-Button Keypad is installed as directed in the Control4 2, 3, or 6 Button Keypad Installation Guide.
- Ensure that your project has an audio end point, such as Speaker Point, added and identified on the network.

To program a button to add another room's music session:

- 1. Start Composer HE and connect to a Director.
- 2. Click Programming.
- 3. In Programming on the Device Events pane, select the 6-Button Keypad.
- 4. In the 6-Button Keypad Events pane, press Button 3, and then select the Press radio button.
- 5. In the Device Actions pane, select **Digital Media**.
- 6. Click the Commands tab.
- 7. Use the pull-down menu to select the **Theater** room as the Selected Room. Select the **Add Rooms** radio button.
- 8. Check the box next to Bedroom to indicate that this is the room that is going to join the music session.
- 9. Drag the green arrow in the Digital Audio Actions pane to the Script pane.
- 10. Click **Execute**.

Set the default for a room's music volume

Use the Monitoring view to set the default music or media volume for a room.

Example: The example in this section uses the Theater room. When you set the default, the volume stays at a certain level for the Theater room until you change it. You can change the volume for every room that uses music or media.

Prerequisites

- Ensure that the controller is added and identified on the network..
- Ensure that your project has an audio end point, such as Speaker Point, added and identified on the network.

To set the default volume for a room:

- 1. Start Composer HE and connect to a Director.
- 2. Click Monitoring.
- 3. In the project tree, click a room.
- 4. In the Properties pane, click the Miscellaneous tab.
- 5. In the Miscellaneous tab, check the **Enable Default Volume** box. Adjust the Audio Volume and Video Volume as desired for the room. The default volumes are enabled immediately. Repeat these steps for each room in the Control4 system.

Examples: programming with variables

Use the Programming view to program the Control4 system using configuration, properties, variables, delays and agents.

Variables provide other programming options not available using commands, conditionals or loops.

There are three types of variables you can use:

- Room Variables–Provide you with additional programming options not available in the Room object programming. Use Room object programming as a preference to room variables whenever possible. See "Example: Using room variables."
- Custom Variables-Let you define additional programming options using:
- **Boolean**—Provides a True/False option. For example, the light is on or off. If the light is on, it is True; if the light is off, it is False.
- Device—Provides a list of device options.
- Number—Provides a value option. For example, the light level is 70 percent.
- **String**—Provides the option to enter a string.

To program using a custom variable, in the Agent view select Variable and click New to set up a new variable.

Example: Use one keypad button to toggle between turning on the Theater Dimmer and the Theater Switch.

Container Variables–Provides the ability to connect two or more devices together by using the device variables. A variable is a representation of information about the controlled devices, for example, a power state or current level of the device. It works much like a Media Scenes agent (see "Using and Programming with Agents" for details). Container variables are available in the Agent view by selecting Variables.

Note: Container variables are provided only for backward capability in Release 1.3 and later. Issues with various implementations have been found. The use of Container variables for future implementations is not recommended. Where possible, replace existing implementations with alternate programming.

The sections below provide examples you can follow when you use variables.

Example: Using room variables

Control4 room variables provide greater flexibility in programming, letting you program using events and actions at the room level.

Note: Most of the functions in Room Variables are available by selecting the Room object which is the recommended method for programming the room. Whenever possible, use the Room object rather than Room Variables.

To use room variables:

- 1. Start Composer HE and connect to a Director.
- 2. Click Programming. In this view listed under every room in the project tree is a Room Variables object.
- 3. Click to expand the **Room Variables** options. Room variables are available as events and actions.



The room variables are described in the following table:

Events/Actions	Description
CURRENT_SELECTED_ DEVICE	Lets you do programming when any device changes in the room.
CURRENT_MEDIA	Lets you do programming when any media changes in the room.
POWER_STATE	Lets you do programming when any device's power state changes from True to False in the room (read only). A device in the room is required to detect the power state.
CURRENT_VOLUME	Lets you do programming when the volume of the currently selected audio path changes in the room (requires discrete volume). Use conditional programming.
HAS DISCRETE_VOLUME	Lets you do programming when any devices changes in the room (requires discrete volume). Use command programming.
HAS_DISCRETE_MUTE	Lets you do programming when Mute state is known (MUTE_ON or MUTE_OFF).
IS_MUTED	Lets you do programming when in Mute state (MUTE_ON).
IN_NAVIGATION	Lets you do programming when On-screen is available.
USE_DEFAULT_ VOLUMES	Lets you do programming any time a selection changes to reset the default volume. For example, when changing from viewing a DVD to listening to music, the volume is reset to the default discrete set volume.
DEFAULT_AUDIO_ VOLUME	Lets you program the default Audio volume.

Events/Actions	Description
DEFAULT_VIDEO_ VOLUME	Lets you program the default Video Audio volume.
VOLUME_IS_LINKED	Lets you set programming not to affect already linked volume.
MUTE_IS_LINKED	Lets you set programming not to affect already linked mute state.
ROOMOFF_IS_LINKED	Lets you set programming not to affect already linked room off state.
SELECTIONS_LINKED	Lets you set programming not to affect already linked selections.
ROOM_HIDDEN	Lets you set programming to hide rooms from appearing on the navigation device.
MEDIA_SCENE_ACTIVE	Lets you set programming to set a media scene as active.

Variable handling

In programming, variables are easier to define than conditional loops.

Variable handling enhancements:

- Preserve user-defined variables—Preserves the user-defined variable values (for example, the current dimmer light level) across a normal system restart. It may not preserve them if the system shuts down abnormally.
- **Program a system startup** event –Initializes variables or performs other programming at system startup with a system startup event (in Programming, select the **root** of the project, and then select the event **When the project is loaded**).
- **Define one variable to equal another**—Defines one variable to equal another variable. This can be used to save and restore variable values.

Example: The level of a light or the volume of music in a room.

After this value is saved to the variable, you can restore the system variable to the value stored in the user variable. The system can then compare the two variables and determine if it needs to reset one of them.

• Create the event "When a System reboots"-Sends an email notification to the Control4 dealer that a customer's system rebooted, helping the dealer monitor the system's performance.

Example: Using custom Boolean variables in an agent

Use the Programming view to create custom variables in an agent using a Boolean value.

In this example, when someone is at the door:

- Program to activate the Media Scene 'Someone is at the door,' and turn on the porch light.
- Program to play a song in the Bedroom and the Theater.
- When the Motion Sensor stops sensing motion at the door, program to turn the music and porch light off.

Prerequisites

The following devices are added and identified in the project:

- Controller
- Porch Light Switch
- Bedroom music
- Theater music
- Motion Sensor

To program using a custom Boolean variable in an agent:

- 1. Start Composer HE and connect to a Director.
- 2. Click Monitoring.
- 3. Make sure the connections are correct.

Note: Ensure that the contact sensor shows in the list view.

4. Ensure that the controller and Porch Light have a network address.

Create a new variable

- 5. Click Agents.
- 6. Select Variable. The Variables view appears.
- 7. Click New.
- 8. On the dialog that appears, do the following:
- 1. Click New Variable.
- 2. In the drop-down menu, select Boolean.

3. Name the Variable Power State and click **OK**. The default value is false.



Create a media scene 'Someone is at the door'

- 9. Select Media Scenes, and click New.
- 10. Name the Media Scene Someone is at the door. Click OK.

Composer 2.1.0	
Ele Driver Go Tools Help	
Agents	Media Scenes
Agents Add Remove	Someone is at the door Add Room Activate Scene Deactivate Scene
Name	Discrete Family Kitchen
Variables	
4Store Announcements	
Media Scenes	Initial Current Volume Source Selecton
Custom Buttons	Volume Volume
Email Notification	Volume Volume
Intercom 🖌 🗸	Mute Mute
Media Scenes 🖌 New Copy Delete	
Name	Boom Boom
Someone is at the door	
	0 0 0 Remove Room Remove Room
	-
🙀 System Design	
P.	
Connections	
(Media	
<u> </u>	
Agents	
W Programming	
S Programming	Note: Discrete volume settings are only applicable to sources that support discrete volumes. If Selections are linked between rooms any room that is part
	of the scene but can not select the source will be issued a Room Off command.
	Linking volumes of different device types may result in undesired behavior.
Director Status: Idle	Connected

Add the bedroom and theater room

11. Click Add Room, and add the Theater and the Bedroom (see above).

🔇 Choose System Items 🛛 🔀
Check the rooms you would like in the scene.
G BN_Office G BN_Office G BN_Office G Garage G Garage G Garage G Bront Front Front Bathroom
OK Cancel

12. Set the volume in the Bedroom to 50, and the volume in the Theater to 75.

🕻 Composer 2.1.0						
Elle Driver Go Lools Help						
Agents	Media Scenes					
Agents Add Remove	Someone is at the door	Add Room Ac	ivate Scene	Deactivate Scene		
Name /	Discrete	Family	Kitchen			
4Store	Discrete Volume	Volume	✓ Initial Volume	Track		
Announcements Media Scenes	Initial Current Volume Volume	Volume Source Selectio	voiume	Source Selection		
Custom Buttons Email Notification	volume volume	Volume		Volume		
Email Notification	1 1			_		
Media Scenes New Copy Delete		- Mute		Mute		
Name		Room	1	Poom Off		
Someone is at the door		50 \$	75 🗘			
		Remove Room		ove Room		
		Remove Room	- Neille	ove Room		
All cuture During						
System Design						
Connections						
🕞 Media						
Agents						
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-	Note: Discrete volume set	tings are only applicable to s elect the source will be issued	a Boom Off comm	t discrete volumes. If	Selections are linked between ro	oms any room that is part
	Linking volumes of differen	t device types may result in u	ndesired behavior.	nut ha		
Director Status: Idle						Connected .:

- 13. Click Programming.
- 14. In the project tree and the Device Events pane, click to expand Variables, and select **Power State**.
- 15. In the project tree and in the Device Actions pane, click to expand Variables, and select Power State.

Add the conditionals and commands

- 16. Follow the previous programming steps to create a script with Conditionals.
- 17. Click the **Conditionals** tab.
- 18. In the Conditionals tab, click **Is False**, and drag the **blue question mark** to the **Script** pane.



- 19. Click the Commands tab.
- 20. In the Commands tab, click **Set to True**, and drag the **green arrow** on top of the **blue question mark** in the **Script** pane to make it the first subset item of the first conditional.
- 21. In the Device Actions pane, select Light Switch.
- 22. Click the Commands tab.
- 23. In the Commands tab, click **On**, and drag the **green arrow** on top of the **blue question mark** in the **Script** pane to make it the *second* subset item of the *first* conditional.



- 24. In the project tree and in the Device Actions pane, select Media Scenes.
- 25. Click the **Commands** tab.

- 26. Click **Activate** in the Commands tab, and drag the **green arrow** on top of the **blue question mark** in the **Script** pane to make it *third* subset item of the *first* conditional.
- 27. In the project tree and in the Device Actions pane under Variables, select Power State.
- 28. Click the Conditionals tab.
- 29. In the Conditionals tab, click Is True, and drag the blue question mark to the Script pane.
- 30. Click the Commands tab.
- 31. In the Commands tab, click **Set to False**, and drag the **green arrow** on top of the **blue question mark** in the **Script** pane to make it the *first* subset item of the *second* conditional.
- 32. In the project tree and in the Device Actions pane, select Light Switch.
- 33. Click the Commands tab.
- 34. In the Commands tab, click **Off**, and drag the **green arrow** on top of the **blue question mark** in the **Script** pane to make it the *second* subset item of the *second* conditional.
- 35. In the project tree and in the Device Actions pane, select Media Scenes.
- 36. In the Commands tab, click **Deactivate**, and drag the **green arrow** on top of the **blue question mark** in the **Script** pane to make it the *third* subset item of the *second* conditional.



- 37. In the project tree and in the Device Events pane, select **Media Scenes** and select the event **Someone is at the Door**.
- 38. In the project tree and in the Device Actions pane, select the **Bedroom** object. (Repeat the next four steps for the Theater.)
- 39. Click the Commands tab.
- 40. In the Commands tab, click Select Media.



- 41. In the dialogue that appears, select the album and song that you want to play when **Someone is at the Door** executes. In this example, Rhapsody's '50s Hits' is used. Click **OK**.
- 42. Drag the green arrow to the Script pane.
- 43. Repeat steps 37-41 for the Theater.
- 44. In the project tree and in the Device Events pane, select **Motion Sensor** under **Front**, and select the event **When the Motion Sensor senses motion**.

Add the Boolean Values

- 45. In the project tree and in the Device Actions pane, click to expand Variables, and select Power State.
- 46. In the Conditionals tab, click **Is False**, and drag the **blue question mark** to the **Script** pane (this is the *third* conditional).
- 47. In the Commands tab, click **Set to True**, and drag the **green arrow** on top of the **blue question mark** to make it the *first* subset of the *third* conditional.
- 48. In the project tree and in the Device Events pane, select the event When the Motion Sensor stops sensing motion.
- 49. In the project tree and in the Device Actions pane, click to expand Variables, and select Power State.
- 50. In the Conditionals tab, click **Is True**, and drag the **blue question mark** to the **Script** pane.
- 51. In the Commands tab, click **Set to False**, and drag the **green arrow** on top of the **blue question mark** to make it the *second* subset of the *third* conditional.
- 52. Click Execute.

Results: The porch light turns on and plays a song in the bedroom and theater whenever the motion sensor senses motion at the front door.

Example: Using a custom number variable in an agent

Use the Programming view to create custom variables in an agent using a numeric value.

In this example, program one keypad button to toggle between turning on the Theater Dimmer and the Theater Switch.

Prerequisites

The following devices are added and identified in the project:

- Controller
- Dimmer (Theater)
- Light Switch (Theater)
- 6-Button Keypad

To program using a custom variable agent number:

- 1. Start Composer HE and connect to a Director.
- 2. Click Monitoring. Make sure the project has the correct devices and rooms.

Add a new variable

- 3. Click Agents.
- 4. Select Variables. The Variable Agents view appears.
- 5. Click New.
- 6. On the dialog that appears, do the following:
- 1. Select New Variable.
- 2. Name the variable Keypad releases.
- 3. Use the Variable Type pull-down and select Number.

4. Click OK.

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- 7. In the Variables pane, select the variable **Keypad_releases**. The available variables for your devices appear in the right pane.
- 8. Enter the value as **0** (zero).

Create an event

- 9. Click Programming.
- 10. In the project tree and in the Device Events pane, select 6 Button Keypad.
- 11. Click Button 1 on the 6 Button Keypad.
- 12. Select Press for the event. The event appears at the top of the Script pane.

Create the actions

- 13. In the Actions pane, scroll down to view the agents.
- 14. Click to expand Variables.
- 15. Select Keypad_releases.
- 16. In the Commands tab, select the following to add 1 to the present value:
- 1. Select the radio button by the plus (+) sign.
- 2. Ensure the plus sign is selected.
- 3. Select 1 (one).

The action appears in the Actions pane.

17. Drag the green arrow icon to the Script pane.

Create the conditionals

- 18. Click the Conditionals tab.
- 1. Select the Is radio button option.
- 2. Select the equals (=) sign.

- 3. Select 1 (one).
- 19. Drag the **blue question mark** below the previous command in the **Script** pane. This places the conditional Action parallel to the previous Action command.
- 20. In the Actions pane, select Theater Dimmer.
- 21. In the Command tab, select On. The action command appears in the Actions pane.
- 22. Drag the green arrow to the blue question mark in the Script pane to make it a subset of this conditional item.
- 23. In the Actions pane, scroll down to Variables and select Keypad_presses.
- 24. Click the Conditional tab.
- 1. Select the **Is** radio button option.
- 2. Select equals (=) sign.
- 3. Select 2 (two).
- 25. Drag the **blue question mark** to the blank space under the previous Action command. This places the conditional Action parallel to the previous Action conditional.
- 26. In the Actions pane, select Light Switch.
- 27. In the Command tab, select On. The action command appears in the Actions pane.
- 28. Drag the **green arrow** to the **blue question mark** in the **Script** pane to make it a subset of the conditional item.

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- 29. In the Actions pane, scroll down to the agents.
- 30. In the Variable agent, select the Keypad_presses variable.
- 31. In the Commands tab, select the following:
- 1. Select the Set to Value radio button.
- 2. Set the value to **0** (zero). The Action command appears in the Actions pane.

- 33. Drag the **green arrow** icon to the **blue question mark** icon in the **Script** pane to make it a *second* subset of the conditional.
- 34. Click Execute.

Results: Press **Button 1** on the 6-Button Keypad to toggle between turning on the Theater dimmer and the light switch.

Example: Using a custom string variable in an

agent

Use the Programming view to create custom variables in an agent using a numeric value. The steps in this section are for more advanced users of Composer HE.

In this example, program Button 4 on a Keypad to toggle through four playlists.

Note: This procedure is relatively complicated to create. Review the steps first to understand how the conditionals work.

Prerequisites

The following items are added and identified in the project:

- Controller
- 6-Button Keypad
- 4 Playlists: Mom's Favorites, Dad's Favorites, Choral Music, and Kid's Music

To program using a custom variable agent string:

- 1. Start Composer HE and connect to a Director.
- 2. Click Monitoring. Make sure the project has the correct devices and rooms.
- 3. Make sure the devices are online.

Note: In the Monitoring view, ensure that the controller and the 6-Button Keypad show online.

Add a new variable

- 1. Click Agents.
- 2. Select Variables. The Variables agent list appears.
- 3. Click New.
- 4. On the dialog that appears, do the following:
- 3. Select New Variable, and name the variable My Playlists.

4. In Variable Type, use the pull-down menu to select String, and click OK.



Set up a 'Mom's Favorites' playlist in the theater

- 1. Click Programming.
- 2. In Programming select the 6 Button Keypad in the Theater from the Device Events pane.
- 3. In 6-Button Keypad Events, click Button 4 on the Keypad.
- 4. In the Device Actions pane, scroll down and click to expand Variables.
- 5. Select My Playlists.
- 6. In the My Playlists Actions pane, click the Conditionals tab, and enter the name of a playlist; for example, Mom's Favorites.

7. Drag the first blue question mark to the Script pane.



- 8. In Device Actions, select the Theater room object.
- 9. In Theater Actions, select Select Media.
- 10. In the window that pops up, select Playlists, Mom's Favorites, and then click OK.
- 11. Drag the green arrow icon on top of the first blue question mark in the Script pane to make it the first subset of the first conditional.



- 12. In Device Actions, select Variables > My Playlists.
- 13. In the Commands tab under My Playlists, enter the name of the next playlist that you'd like to play; for example, Dad's Favorites.

14. Drag the green arrow on top of the first blue question mark to the Script pane to make it a second subset of the first conditional.

The next time the button on the keypad is pressed, the value of the variable will be Dad's Favorites, and will then cue that playlist in the Theater.



- 15. In Device Actions, scroll up and select the 6 Button Keypad in the Theater.
- 16. In 6 Button Keypad Actions, click Button 4.
- 17. Under Color Settings select LED On.
- 18. Click the square of color to select the color you want Button 4's LED to be when Mom's Favorites plays. Select the color in the menu that pops up (in this example: green), and click OK.

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19. Drag the green arrow on top of the first blue question mark in the Script pane to make it a third subset of the first conditional.



- 20. In Device Actions, scroll down and select Programming Control.
- 21. In the Programming Control Actions, select the Stop radio button.
- 22. Drag the green arrow on top of the first blue question mark in the Script pane to make it a fourth subset of the first conditional.

Note: It is important to add a Stop command here so that when the conditional is fulfilled, the programming will not continue. Because of the way this programming is set up when it's finished, without the stop, the button on the Keypad will always select the

last playlist in the script.



Set up a 'Dad's Favorites' playlist

- 1. In Device Actions, select My Playlists again.
- 2. In the Conditionals tab, next to 'Is' enter Dad's Favorites in the text box.
- 3. Drag the second blue question mark to the Script pane.
- 4. In Device Actions, select the Theater.
- 5. In Theater Actions, select Select Media.
- 6. In the window that pops up, select Playlists, Dad's Favorites, and then click OK.
- 7. Drag the green arrow on top of the second blue question mark in the Script pane to make it the first subset of the second conditional.

Set up a 'Kid's Room' playlist

- 1. In Device Actions, select My Playlists.
- 2. In the Commands tab under My Playlist Actions, enter the name of the next playlist that you'd like to play; for example, Kid's Music.
- 3. Drag the green arrow on top of the second blue question mark in the Script pane to make it a second subset of the second conditional.
- 4. In Device Actions, select the 6 Button Keypad in the Theater.
- In 6 Button Keypad Actions, click on Button 4. Click the square of color to select the color you want Button 4's LED to be when Kid's Music plays. Select the color in the menu that pops up (in this example: purple), and click OK.
- 6. Drag the green arrow on top of the second blue question mark in the Script pane to make it a third subset of the second conditional.
- 7. In Device Actions, select Programming Control.
- 8. In the Programming Control Actions pane, select Stop.

- 9. Drag the green arrow on top of the second blue question mark to make it a fourth subset of the second conditional.
- 10. In Device Actions, select My Playlists again.
- 11. In the Conditionals tab, enter Kid's Music.
- 12. Drag the blue question mark to the Script pane to make it the third conditional.
- 13. In Device Actions, select the Theater room object.
- 14. In Theater Actions, select Select Media.
- 15. In the window that pops up, select Playlists, Kid's Music, and then click OK.
- 16. Drag the green arrow on top of the third blue question mark in the Script pane to make it the first subset of the third conditional.

Set up a 'Choral Music' playlist

- 1. In Device Actions, select My Playlists.
- 2. In the Commands tab under My Playlists, enter the name of the next playlist that you'd like to play; for example, Choral Music.
- 3. Drag the green arrow on top of the third blue question mark to make it a second subset item of the third conditional.
- 4. In Device Actions, select the 6 Button Keypad in the Theater.
- In 6 Button Keypad Actions, click on Button 4. Click the square of color to select the color you want button 4's LED to be when Kid's Music plays. Select the color in the menu that pops up (in this example: red), and click OK.
- 6. Drag the green arrow on top of the third blue question mark in the Script pane to make it the third subset of the third conditional.
- 7. In Device Actions, select Programming Control.
- 8. In the Programming Control Actions, select the Stop radio button.
- 9. Drag the green arrow on top of the third blue question mark in the Script pane to make it a fourth subset of the third conditional.
- 10. In Device Actions, select My Playlists again.
- 11. In the Conditionals tab, enter Choral Music.
- 12. Drag the fourth blue question mark to the Script pane.
- 13. In Device Actions, select the Theater room object.
- 14. In Theater Actions, select the Select Media radio button.
- 15. In the window that pops up, select Playlists, Choral Music, and then click OK.
- 16. Drag the green arrow on top of the fourth blue question mark in the Script pane to make it the first subset of the fourth conditional.
- 17. In Device Actions, select My Playlists.
- 18. In the Commands tab under My Playlists, enter the name of the next playlist that you'd like to play; for example, Mom's Favorites.
- 19. Drag the green arrow on top of the fourth blue question mark in the Script pane to make it a second subset of the fourth conditional.
- 20. In Device Actions, select the 6 Button Keypad in the Theater.
- 21. In 6 Button Keypad Actions, click on Button 4.

- 22. Click the square of color to select the color you want Button 4's LED to be when Choral Music plays. Select the color in the menu that pops up (in this example: yellow), and click OK.
- 23. Drag the green arrow on top of the fourth blue question mark to make it a third subset of the fourth conditional.
- 24. In Device Actions, select Programming Control.
- 25. In the Programming Control Actions, select the Stop radio button.
- 26. Drag the green arrow on top of the fourth blue question mark to make it a fourth subset of the fourth conditional.
- 27. In Device Actions, select the Theater room.
- 28. In Theater Actions, select Media.
- 29. In the window that pops up, select Playlists, Mom's Favorites, and then click OK.

Note: You do this is because the first time the button on the Keypad is pushed, the string variable does not have a value, and nothing happens. This last command is created when none of the conditionals are fulfilled, something will play; each time the button is pushed thereafter, a conditional is fulfilled.

- 30. Drag the green arrow below the previous Stop command in the Script pane. It is not a subset of the previous conditionals, but a command on its own.
- 31. In Device Actions, select My Playlists.
- 32. In the Commands tab under My Playlists, enter the name of the next playlist that you'd like to play; for example, Dad's Favorites.
- 33. Drag the green arrow below the previous command in the Script pane.
- 34. In Device Actions, select the 6 Button Keypad in the Theater.
- 35. In 6 Button Keypad Actions, click on **Button 4**. Click the **square of color** to select the color you want Button 4's LED to be when **Mom's Favorites** plays. Select the color in the menu that pops up (in this example: green), and click **OK**.
- 36. Drag the green arrow below the previous command in the Script pane. You do not need a stop at this point, because the programming automatically stops at the end of the script.

Results: Press Button 4 on a 6-Button Keypad repeatedly to toggle through four playlists.

Other programming tasks

Other special programming functions can be accessed by right-clicking on an item in the Script pane.

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Move Down	Ctrl+D
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Disable Item	Ctrl+E
Insert Comment	
Copy All	Ctrl+C
Copy Selected	
Paste	Ctrl+V
Find and Replace	Ctrl+R
Delete	Del
Delete All	
Change to Customer	

- Move Up/Down–Lets you move a script item up or down in the script, changing the order that the commands execute..
- **Disable/Enable Event**—Lets you disable the event and the entire programming script without having to delete the script. If the event is disabled, the text is grayed out and the only menu item is Enable Event.
- **Disable/Enable Item**—Lets you disable a single item in the script. Other items execute normally. If the item is disabled, the line of text is grayed out and the line's icon has a red x on it.
- Insert Comment–Lets you insert a comment into the script. See also Using Programming Comments.
- Copy All-Lets you copy an entire script.
- Copy Selected-Lets you copy selected items in a script.
- Paste-Lets you paste copied items into the current script.
- Find and Replace–Lets you find and replace elements within the script item with similar items. See Using Find and Replace.
- Delete-Lets you delete the selected script items. You can also delete items by pressing the Delete key.
- Delete All-Lets you delete the entire script.
- Change to Customer–Lets you change programming items to be accessible or locked out from When
 >> Then programming by the customer. By default, programming entered with Composer cannot be modified by the customer in When >> Then. Select Change to Customer to allow the customer to modify the programming in When >> Then.
- Change to Dealer-If the customer has entered programming in When >> Then and you want to lock out that
 programming from being modified in When >> Then, select Change to Dealer to lock the programming to
 Composer only.

Note: Selecting Change to Dealer does not lock out programming from Composer HE

Using Programming Comments

The Comments programming feature lets you add comments inline with your programming to document your programming. This is useful when using advanced programming, using variables, and when multiple technicians may need to work on the project.

Example: You have a variable that is changed by a button press. You can add a comment in the code to know where the variable is being changed from..

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To add a comment in programming:

- 1. Click Programming and select the event in the Device Events pane.
- 2. In *Programming Controls* in the *Script* pane, enter the comment in the field next to Comment.
- 3. Click on **Comment** and drag the comment below into the *Script* pane. Place it anywhere in the programming script. A comment does not affect the programming.

Using Find and Replace

The Find and Replace programming feature lets you find one device already programmed and replace it with another.

Example: You want a button on your **Configurable Keypad** to turn on all the outside dimmers in your Control4 system. Currently, the button is programmed to turn on all the lights in your garage. Use the **Find and Replace** programming option to replace the lights with outdoor lights in your programming.

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To program using the Find and Replace feature:

- 1. Start Composer HE and connect to a Director.
- 2. Click Programming.
- 3. In the *Script* pane, right-click and select **Find and Replace**. A *Find and Replace* dialog appears.

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4. Replace the programming device object with the one you want.

Find: Family > Left Dimmer

Replace with: Theater > Theater Dimmer

5. Click **Replace**. The statement in the Script pane changes to the replacement script.



6. Repeat for each line in the Script pane.

Find: Family > Middle Dimmer

Replace with: Bedroom > Bedroom Dimmer

Find: Family > Right Dimmer

Replace with: Front > Front Dimmer

When you complete this process, the script reflects that you have changed all the lights in your Control4 system to dimmers.

Using Copy and Paste

The copy and paste programming feature lets you copy the programming you configure from one device and paste it to another device. By creating the same command, loop, or conditional for a device, you can copy it for use in another programming script.

Example: You want all of the lights in the Control4 system to turn on by pressing **Button 1** on the **6-button keypad**. When you press **Button 4**, you want to turn all the lights on in the system except in the **Bedroom**. In this example, you can copy the first set of actions into the second set and not include the Master Bedroom.



To program the 6-button keypad:

- 1. Start Composer HE and connect to a Director.
- 2. Click Monitoring.
- 3. Ensure that you have the following devices added and connected to the Control4 system:
 - Controller
 - Bedroom Dimmer
 - 6-Button Keypad
- 4. Click Programming.
- 5. Select 6-Button Keypad in the project tree of the Device Events pane.
- 6. In 6-Button Keypad Events, push **Button 1**, and select the **Press** radio button.
- 7. In the Device Actions pane, scroll down and select Dimmer.
- 8. In the Dimmer Actions pane, click the **Commands** tab, and click the **On** radio button.
- 9. Drag the Dimmer Action green arrow to the Script pane.
- 10. Repeat Steps 1 through 9 for all the lights in your system. This includes the Light Switch and Dimmer in the Theater and the Dimmer in the Bedroom.
- 11. Move to the Script pane, right-click, then select Copy from the options. This

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automatically copies all arrow statements in the pane.

- 12. Click **Button 4** in the 6-Button Keypad Events pane, and then select the **Press** radio button.
- 13. Right-click in the Script pane, and select **Paste**. The programming of the lights shows up in the Script pane for Button 4.

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You have completed Copy and Paste Programming. Now you can edit the Button 4 Script as needed.

Example: You can remove the Bedroom Dimmer from the Button 4 Script, so when you push Button 1 all the lights in the system come on; and when you push Button 4, all the lights come on except for the dimmer in the bedroom.

Tip: This feature is very useful when programming complex loops and conditionals.
Customizing Navigators

Use this chapter to learn how to:

- Set up screen savers
- Hide and view device availability

Overview

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, Control4 apps, or on-screen Navigators also. See the Control4 System User Guide for information.

Setting up screen savers

Setting up the photo screen saver

Use the Agent and Media views to set up a photo Screen Saver agent to view photos from the touch screens, Control4 apps, or on-screen Navigators. In OS 2.1 and later, you can 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 display photos as screen savers on the Navigators:

- 1. Start Composer Pro 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, select 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 select 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:

- If the storage option that you want does not appear in the list, disconnect from Director and reconnect.
- At any given time, only one storage location can be set as the photo Screen Saver source.
- **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 Monitoring 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, and 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 select 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 Control4 app), do the following:
- 1. Go to Info > Config > Screen Saver (on the system remote control) or More > Settings > Screen Saver.
- 2. Enable the **Custom** option, and then select the **Photo Screen Saver** option along with any other screen saver option you want to include. For photos only, check the **Photo** option. See "<u>Setting up a custom screen</u> <u>saver</u>" to display the photos on the Navigator or see the Control4 System User Guide.

Setting up a custom screen saver

Use the Control4 Navigator to create a custom screen saver to view on touch screens, Control4 apps, or onscreen 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."

To set up a custom screen saver:

- From the main menu on an on-screen Navigator, Control4 app, or touch screen press More > Settings > Screen Saver or Info > Config > Screen Saver on 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, Control4 apps, or on-screen Navigators for OS 2.0 and later, see the Control4 System User Guide for details.

Programming the screen saver sleep mode

Use the Programming view to schedule a Screen Saver mode change, for example, 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 "Using and Programming with Agents" 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]."

Changing the time on a Navigator screen saver

Use the Control4 Composer HE Monitoring view to change screen saver date, time or time zone.

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

- 1. Start Composer HE and connect to a Director.
- 2. Click Monitoring.
- 3. In Monitoring, 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.

operties				Properties	Summary	List Vie	w
operties							_
Project Settings	Information	Lighting Defaults	Allowed Networks	ZigBee Configuration	Z-Wave Config	guration	
F	Project Name:	Draper System		Set			
	Location:	Draper, UT, US/	A	Lookup			
	Latitude:	40.52000046		Set			
	Longitude:	-111.86000061					
	Country:	USA					
	Date: Time:	5/21 7:45:39 PM	•	Display time using	a 24-hour clock	1	
	Timezone:	US/Mountain		Edit			
		Push Settings					
	Locale:		~	Set			
						3	

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. Select the time zone from the drop-down menu, and click OK.

Hiding device availability

Use the Monitoring view to hide a device from view in a Navigator. In OS 2.3.0 or later, you may find the Access agent useful for device availability. See "Using and Programming with Agents" for details.

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 HE and connect to a Director.

- 2. Click Monitoring.
- 3. In Monitoring 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.

Viewing device availability in navigators

Use the Monitoring 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.

Tips: (1) In OS 2.2 and later, you can use **Shift+Click** or **Ctrl+Click** to add or remove devices. (2) In OS 2.3.0 or later, you may find the Access agent useful for device availability. See <u>"Using and Programming with Agents</u>" for details.

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 HE and connect to a Director.
- 2. Click Monitoring.
- 3. In Monitoring, 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.

Troubleshooting

Use this chapter to learn how to:

- Follow general guidelines for troubleshooting
- Troubleshoot controllers
- Troubleshoot a Director connection
- Troubleshoot media
- Troubleshoot devices
- Troubleshoot the upgrade process

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.
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.
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 Wi-Fi.
	1. Ensure that devices show online in the <i>Monitoring</i> view.
	2. If devices are offline, contact your Control4 Dealer for assistance.
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 or later) to ensure that you are connected to the Control4 controller's network address.
	For more information, see "Customizing Navigators."
Ensure music is added and scanned	In Composer HE, 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

Guideline

Where to go

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:

"Setting up media for television stations"

"Setting up media for radio stations"

"Using external storage devices"

"Configure an audio or AV switch"

"Creating a playlist"

"Editing media information"

Refresh Navigators Whenever you update the system, scan music, or update devices or device information, from the File menu, select **Refresh Navigators**.

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 (older controllers only).
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 " <u>Using the</u> <u>Email Notification agent</u> ."

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. In this case, you can reboot or reset the system. You don't have to do anything in Composer HE other than check that the device you reboot is on the network.

To reboot a controller.

- 1. Disconnect the power cord from the controller.
- 2. Plug the power cord back into the controller.
- 3. Verify that the controller comes back on the network in Composer HE.

Resetting the Control4 system

Refer to your controller's installation guide for reset and factory restore instructions.

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	 Click Refresh several times to see if the network address appears. If not, select Add and enter the name and network address.

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
Cannot play music or music channels	If music is not running, see the following:
not appearing in the Navigators	1. Ensure that a room is appearing on the Navigator. If not, click the room and change the room to one that can play music.
	2. Ensure that music is added and scanned. See:
	3. Refresh the Navigators.

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.

Contact your Control4 Dealer for assistance in connecting devices.

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	 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. Reset. Tap the top button 5 times. Tap the bottom button 5 times. 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.

Diagnosing trouble spots

Use the System Diagnostics tool in Composer HE to view, monitor, and troubleshoot a Control4 system.

System Diagnostics tool

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.

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.

Use the Control4 Composer HE System Diagnostics tool to view, monitor, and troubleshoot a Control4 system. The diagnostics information is organized into four tabs:

- Controller Performance
- Controller Networking
- System Info
- Logging

To access the System Diagnostics tool:

- 1. Start Composer HE and connect to a Director.
- 2. On the menu bar, click **Tools** menu, then click **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.

Viewing controller performance information

Use the 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 HE 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.

Using the controller networking information

Use the 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 HE 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.

ontroller Performance	Controller Networking	System Info	Logging			
Active Interface						
Interface:	Ethernet		S	tatus: Connected		
MAC:	00:0F:FF:1B:	4A:C1				
IP Address						
IP address:	92.168.102.5		U	sing DHCP: No		
Subnet mask:	55.255.255.0					
Gateway:	92.168.102.1					
DNS Servers						
DNS server 1:	8.8.8.8		U	sing DHCP: No		
DNS server 2:						
DNS server 3:						

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.

Test Internet Connection		×
Test Complete		
Host Media Web Service Updates Web Service	Status SUCCESS SUCCESS	
		Close

5. Click Close to exit the dialog box.

Using system information

Use the 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 HE 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.

e View						
Controller Performance Controller Netwo	orking System Info Logging	1				
	Filesystem	Size	Used	Free	Blksize	^
My Home->Soundbar Triad One	/dev	427.3M	140.0K		4096	
	/sys/fs/cgroup	427.3M				
Theater->Front Door T3 10"	/mnt/secure	427.3M				
	/mnt/asec	427.3M			4096	
hosts	/mnt/obb	427.3M				
ifconfig	/system		594.3M			
- kemel	/cache /metadata	1007.9M		197.9M		
			32.0K			
memory	/data		283.9M 84.0K		4096 4096	
mounts	/mnt/internal_sd	2.76	84.UK	2.76	4096	
netstat						
packages						
procnetdev						
procs						
usb						
wireless						
Theater->13 TU Tabletop Touch						
< >	<					5
· /						1

4. To save the displayed information to a file, click Save to File and specify the location and name for the file.

Logging diagnostics information

Use the 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 HE and connect to a Director.
- 2. From the Tools menu, select System Diagnostics, and then click the Logging tab.

System Diagnostics	_		×
Controller Performance Controller Networking System Info			_
Logger Time Device Message adau_dsp V			
Log Level debug ~			
Start Tail			
Stop Tail Open Log			
View Destination			
Auto Scroll Output			>
Advanced logging and configuration can be done in System Manager. Clear Output	Save Out	put To File	9

- 3. To enable logging, select the logging categories and click Start Tail
- 4. The results are displayed.

System Diagnostics	_	
Controller Performance Controller Networking System Info Logging		
Logger Time Device Message adau_dsp Log Level debug Start Tail Stop Tail Open Log View Destination		
Auto Scroll Output		>
Advanced logging and configuration can be done in System Manager.	Output Save Ou	utput To File

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**.

Glossary

4

4Sight: An Internet service that provides a connection to the home automation system any time and from any place worldwide.

А

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.

Anywhere Access: Lets users access and control their Control4 systems remotely using a mobile device or tablet anywhere in the world.

AV: Audio Video

В

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.

С

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 App: A Control4 graphical Navigator that runs on mobile devices or a PC or tablet.

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

Detective Suite: A set of tools that perform diagnostics tests on the Control4

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.

Е

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.

Н

Composer HE User Guide

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, Wi-Fi, or Zigbee for a total home automation experience.

L

intercom: A two-way audio and/or video communication among supported Control4 touch screens.

IR: A device controlled using a wireless remote control device. Commands are sent via pulses of infrared light to the device.

Κ

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: (Liquid 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.

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..."

Μ

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.

MP4: An audio and video format. Can also store images and subtitles.

Ν

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.

Ο

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.

Ρ

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): Network cabling that provides Ethernet connectivity and device power over a single cable for Control4 devices.

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

SDDP (Simple Device Discovery Protocol): A protocol developed by Control4 to allow devices to be easily added to a control system. It has the ability to leverage other protocols and work on almost any physical layer. SDDP offers four primary functions:

- Enable devices to use Dynamic Host Configuration Protocol (DHCP) while still being able to identify them uniquely.
- Enable Director to discover devices residing within the Control4 system.
- Enable Director to identify devices residing within the Control4 system.
- Enable automatic installation of drivers for discovered devices.

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.

Т

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

Composer HE User Guide

UI (user interface): The preferred term is *Navigator*. The Control4 interface used with Control4 devices to control home automation, such as touch screens, Control4 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.

Wi-Fi: Uses bi-directional wireless technology to transfer data. Wi-Fi (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. Wi-Fi 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 Wi-Fi 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.

Ζ

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.

1

Index

10-digit registration code 71 4 4Sight setup 71 Α AAC 37 Account Services, Tools menu 49 Action, programming, example 41 Actions pane programming 165 Actual playlist options 38 Advanced Lighting agent 122 Agent Access 81 Advanced Lighting 85 Announcements 123 Custom Buttons 129 E-Mail Notification 133 Light Properties 135

Scheduler 149 Screen Saver 151 Timer 152 Variables 159 Wakeup 159

Macro 135

Media Scenes 137, 144-145

Agents

options 40

pane 40

program 122

view 18, 39 AM/FM/XM 37 And command 180 Announcement agent 122 Audio end point 32 devices 32 Audio Video, Room Properties 77 Audio volume 32

В

Back up Composer 17 Back up, media information 54 Backup 44, 53 project 51 Backup As 44, 54 Backup to Cloud 43 Basic tasks 50 Boolean variable 190 Break command 175, 178 Broadcast media types 37

С

Cable TV 37 CBM Flash Disk and Photo Screen Saver 219 CD 36-37 add 101 edit 118 CD information edit 100 Change localization options 77 Change project date, time 77 Change project name 77 Change project settings 77 Change ZIP Code 77 Clear Media List 38, 45 Clear Project 51 Cloud Management 43 Command tab 42 Commands programming 171 using Delay, Stop, Break 175 Communication agent External Devices 129 program with 126 Communication options, installation 12 Composer back up 17 exit program 17 same version as Director 66 startup screen 16 views 18 Composer HE 36 interface 15 Composer HE, main view 76 Composer ME 36 Composer Pro activation 11 basic tasks 74 defined 8 Conditional program 173 Conditionals tab 42 Configuration information load 52 Connect to Director 44, 61 Contact connection 8 Container variables 190 Control4 apps 240 Control4 System 8

controller 8 digital audio 36 playlists 37 registration 10 Controller troubleshoot 228 controller networking 235 Controller performance view 234 CPU Usage 235 Create script programming 169 Custom Buttons agent 122 Custom variables 190

D

Dealer information 35 Delay command 175 Delete playlist 45 Device Actions pane 42 Device connection status, Tools menu 45 Device Control window 23 Device controls 75 Device driver 8 Device Events pane 41 Device properties 78 Device Properties 33,77 example 79 Devices change order in Navigator 223 hide 222 install 74,91 troubleshoot 232 view 223 DHCP 11

DHCP status 47 Digital audio 36 Dimmer troubleshoot 233 Director 8 connect to 61 Director on local network 63 live connection 9 load configuration 52 on local network 16 remote connection 9 same version as Composer 66 troubleshoot 230 virtual connection 9 Directors dialog 16 DIRECTV 37 disc changer add media 98 auto-scan media 99 search media 99 Disc changer 36-37 Disconnect from Director option 44 Dish Network 37 DNS server information 47 Document scope 8 Driver Sort button 45 DVD 36 add 101 edit 120 DVD changer 36 **DVD** information edit 100 DVD player 37

Е

E-mail Notification agent 122 Else command 179 Endpoints 31 Ethernet connection 12 Event, programming, example 41 Events pane programming 164 Exit Composer 51 Export media list 38, 45 Export playlist 38, 45 Expression Builder 181-182 External storage device using 112

F

File management options 43 File menu 42, 53 filter 22 FLAC 37 FM 37

G

Gateway 13, 47

Н

Hard disk space 10 Hardware, install 12 Help menu 42 Help options 50 Home network requirements 10

Import DVD list from file 45

I

Import media list 38, 45 Import playlist 38, 45 Information tab 34 Install hardware 12 Installation Composer Pro 13 guidelines 12 notes 35 software 13 Internet connection 10 Internet radio set up 109 IP address 11, 47 IP addresses, Directors dialog box 54 IR 8 iTunes 36

Κ

Keypad troubleshoot 233 Knowledgebase 11

L

LEDs, controllers 13 License 11 List view 75 List View pane 33 tab 50 List View properties 78 Load Project option 43, 53 Locale 27 Localization 27 Logging 237 Longitude/Latitude 26 Loop 178 Loops tab 42

Μ

MAC address 47 Macro agent 123 Media Auto-scan 96 Disc Changer 97 edit 118 radio station 105 set up 92 storage 95 television station 107 test connection 117 troubleshoot 231 media database 94 Media database 36, 45 Media Lookup Service 94 media management 94 Media Manager 36 Media menu 42, 44 Media Monkey 36 Media pane 36 media player set up videos 104 Media Scenes agent 123 Media types 36 Media view 18, 36 Media, select from Navigators 36 Memory usage 235 Menu options 42 Monitor system status 75 Monitoring pane 19,36

view 18 Monitoring view 75 Movies, can't play 31 MP3 37 MP4 37 MQA 97 my.control4.com 11

Ν

Navigator set up Photo Screen Saver 218 Navigator tab 32 Navigator, Room Properties 77 Network address 13 Network connection 9 Network requirements 10 New playlist 45 New Playlist 38 New Project icon 20 NTP 26

Number variable 190

0

Or command 182 Overview of 8

Ρ

Password 77 Photo Screen Saver setup 218 Physical connection 9 Playlist create 115 Playlist, types 37 Power sources, and installation 12 Programming add a room to play music 188 agents 122 basics 164 button to play music 186 button to turn up volume 187 commands 171 Conditionals 173 Copy and Paste 214 digital audio 186 elements of 169 Find and Replace 212 rooms 186 set default music volume 188 Programming and Communication agent 126 Programming view 18, 40 Programming, actions and events 41 Project configuration information 43 Project configuration, back up 54 Project properties 25, 77-78 Project settings 27 project tree filter 22 search 22 sync 22 Project tree 9 Project, back up 53 Project, clear 51 Properties pane 19, 23, 75-76, 78 Push Settings from Project 27

R

Reboot Control4 system 228 Reboot controller 228 Refresh Navigators 44 Refresh option 44 Register Composer 13 Register system 10 Related documents 8 Relay connection 8 Remote Access 10 add account 65 requirements 64 setup 63 Remote connection to Director 64 Remote Director 16 connect to 65 Remove items from project tree 51 Rename playlist 45 RJ-45 jack 13 Room properties 78 Room Properties 77 Room Properties pane 31 Room variables 190 Router 11, 13

S

Same version, Composer and Director 66 Scan media from network 112 new 94 Scan songs 92 Scheduler agent 123 Scheduler agent, example 40 Screen saver 37 Screen Saver change time 221 program 221 set up custom 220 Screen Saver agent 123 Script pane 42 programming 166 search 22 Serial 8 SNMP Configuration agent 123 Songs 38 Songs, options 37 SSL 77 Start Composer Pro 16 Stop command 175-176 Storage devices, external 37 String variable 190 Switch 13 troubleshoot 233 sync 22 System Compatibility Check 67 System design 9 System Design view, create project 9 system diagnostics 233 System Diagnostics Controller Networking tab 47 Controller Performance History button 47 Controller Performance tab 46 Logging tab 49 System Info tab 48 Test Internet Connection button 47 System information 237 System Owner information 35 System registration 10 System security 27

System setup 9

Т

Tag media files 45

TCP/IP 8, 10 Third-party devices, install 12 Timer agent 123 Timezone 26 Tools menu 42, 45 Troubleshooting guidelines 225

U

UHF/VHF 37 USB drive 37 and Photo Screen Saver 219 User interface 8

V

Variable handling 193 room example 190 room, variable options 191 using Boolean 194 using custom variable agent number 200 using custom variable agent string 203 Variables use in programming 190 Variables agent 123 Video end point 32 Video resolution 10

W

Wakeup agent 123 WAP 11 While statement 178, 183 Windows 7 8 Windows Media Player 36 Windows Vista 8 Windows XP 9 Wireless Access Protocol 11 WMA 37



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