

# Configurator Training Guide

Version 6.2





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## Your Resources at ELAN

In addition to the information in this Training Guide, be sure to check out ELAN's website at <u>www.elanhomesystems.com</u>. The website provides access to a wealth of documentation including *Integration Notes* for detailed information on specific systems with which the g! software integrates.

Our **Technical Support** staff can assist you Monday through Friday from 9:00 a.m. to 7:00 p.m. EST and 6:00 a.m.to 4 p.m. Pacific at **800-622-3526**.

Email: elantechsupport@theavcgroup.com

# Lesson 1 Training Setup

g!

### Overview

This lesson prepares your computer for the training lessons to follow.

You will:

- Install g!Tools, which allows you to manage Viewer and Configurator connections for your customers, and also includes documentation, firmware, IR & Serial Database, and a TV/Radio icon library.
- Demo onto your computer, which allows your computer to simulate a controller.
- Check the installation of the g! software.
- Use g!Tools to access the Key Manager to add keys to the controller to enable a Pro App or additional third-party Viewer licenses.

### Requirements

- A computer running Windows<sup>®</sup> XP, Windows Vista, or Windows 7
- Access to the g!Tools Installer
- Access to the g!Demo Installer

(These can be found on your Training Resource CD)

## Exercise 1: Install g!Tools

Overview The g!Tools program is a valuable resource for the dealer setting up a g! system. The **My Systems** list provides a dashboard for all the systems you have installed. This screen displays information that will assist you with troubleshooting, as well as an entry point into each selected system so that you can access its Viewer or Configurator remotely. Use the **Key Manager** to configure software licenses for the g! apps that are installed on each system's controller.

g!Tools is also a repository of technical information and files that are needed to set up g!Connect for your customer, such as:

- Manuals, Integration Notes and other documentation
- IR codes and Serial codes
- Language files for localizing the user interface
- TV Channel icons

How-to

• Firmware for ELAN equipment

g!Tools is not only a resource tool, but is also the storage area for icons and codes used in the g! Configurator. When g!Tools is installed on your PC, Configurator takes you to the correct directory where the necessary files are stored.

This software automatically updates with the latest files from ELAN and the files are stored locally, so they are available to you without an internet connection.

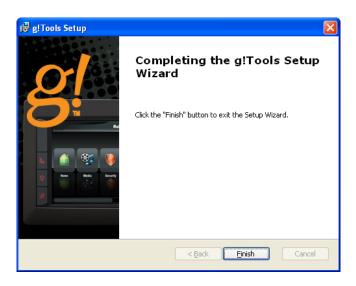
 Navigate to the g!Tools installer (on your training CD). Double-click the installer to begin the installation.

**Note:** If you are using Windows Vista, right-click the installer and select Run as Administrator.

2. Follow the on-screen instructions to accept the license agreement and install the library files and program.







3. Once the installation is complete, launch the application from the desktop icon to access g!Tools. *The welcome screen displays for a moment, and then g!Tools opens with the My Systems page displayed.* 





3. From within g!Tools, you can manage client systems, and also browse or update documentation and databases stored on your PC.

Note: See the g!Tools User Guide for information on how to use this software.

## Exercise 2: Install g!Demo

*Overview* The g!Demo system is a limited build of controller software for installation on a workstation or laptop. This software is the same software that runs on controllers such as the HC Series or the legacy HomeBrick/MultiBrick controllers, but does not actually communicate with sub-systems.

As a result, the g!Demo is ideal for training and demonstrations. You can run the software on your laptop at any location without the need for a controller or any other hardware.

The g!Demo software installed during this exercise runs "behind the scenes" to enable your computer to behave as an g! system controller such as a HC/HomeBrick/MultiBrick controllers. It is *not* the interface that you will use to set up and configure the systems.

**Note:** The installation files that used in this class are provided in the Training Resource CD that your instructor will give you.

How-to

**Important Note:** Verify that your PC does not have any previous versions of g! or g! Demo software installed. If it does, you must uninstall the previous version(s) before continuing with this exercise.

- 1. Locate the g!Demo Installer on the training resource CD.
- 2. Start the Installation Wizard.
  - a. If you are running Windows XP, double-click the Installer to start the installation wizard.
  - b. If you are using Windows Vista or Windows 7, right-click the installer and select **Run as Administrator**.

🕼 g!Demo Setup	X
Ð	Welcome to g!Demo Setup Wizard The Setup Wizard will install g!Demo on your computer. Click Next to continue or Cancel to exit the Setup Wizard.
	< Back Next > Cancel

3. Click Next> to proceed through the installation, and accept default

settings where applicable. When the installation is complete the g!Demo icon displays on your desktop



- 4. To start the controller software, double-click the **g!Demo** icon, when the controller software starts, you can minimize to the Task Bar.
- 5. Locate and click the **g!Demo** on the taskbar. *The g!Demo window opens.*

⊒∯g!Demo		- 🗆 🗵
TraceServer ErrorLogger GATEWAY.EXE version Build Date Build Time Base Port *** DEMO MODE ***	: 5.0 Build 594.0 Rel : Mar 29 2010 : 19:09:11 : 80	<u>^</u>
Press F12 to exit	a a le d	
FileSystem Updated/Ch SystemLayout EventServer	eckeu	
IP Server LockServer		
FontServer Tablet FTPServer		
CalendarServer UserServer		
>> SYSFAM->HVAC Contr	evice Controllers COMP->Virtual Lighting Device Con ollers COMP->Thermostat:ID1 ollers COMP->Thermostat:ID2	troller

6. Minimize the g!Demo to clear the desktop and keep the g!Demo running.

**Note:** g!Demo is the software that runs on your computer to emulate a g! system controller. Be sure to leave this window open and minimized during the training session. The GATEWAY.EXE version may differ from the one shown in the image above.

# Exercise 3: Check the Installation and Start the Configurator

*Overview* Before you begin Exercise 3, you must have g!Demo and g!Tools installed on your computer. This exercise walks you through the steps to start both the Viewer and Configurator software.

**Note:** You may want to have both the Viewer and Configurator running at the same time. The Viewer updates in real-time, making it a useful tool for checking your configuration settings.

How-to

 Check to see if g!Demo is running. If it is running, it is located on the taskbar. Otherwise, double-click the g!Demo icon on your desktop to start it.

**Note:** If you are using Windows Vista, right-click the g!Demo icon and select Run as Administrator.

- 2. Double-click the **g!Tools** icon on your desktop.
- 3. Select the **Demo** system from the **My Systems** list, and then click the **Configurator** button. *The configurator for the Demo system opens.*

System Name	System Description	LastPost	Remote Address : Port	Local Address : Port	Version	Connection	Port
Demo		*)	24.34.178.239.2198		6.0 Build 24.0 Rel		
ELAN BACK			24. 34 178 239 443		5.0 Build 687.0 Rel		
ev-hc6				-			3
nager gl Demo ( This com	çutar)	4		127. 0. 0. 1.80	6.2 Build 73.0 Rel		
	-40-08-AD Peach-Extender	4.5	24. 34.178.239.2198		6.0 Build 211.0 Rel		
HC Series 00-14-20	-40.1CB1		24.34.178.239.2198		6.0 Build 95.0 Rel		
HC Series 00-14-20	0-40-25-80 Cheil Alex	12	24. 34.178.239.2198		6.1 Build 35.0 Rel		
HLOffice			24.34178239443	10. 11. 80. 23:80	4.0 Build 1638.0 Rel		
LocalHost		10					
Miler 1							
iRecy IR Irial Iguage Icon							
IR							
al age n			-				
al 3000 10 10 10 10 10 10 10 10 10 10 10 10					Vapor		Q Wide
al 3000 10 10 10 10 10 10 10 10 10 10 10 10			System Name di De	mo (This computer)			
al 3000 10 10 10 10 10 10 10 10 10 10 10 10			System Name gl De Possword	me (This computer)			

	Basic Information	
System	🕒 System Time	
	🙀 CPU Usage	
Security	🚼 Language	
	E System Modes	
Climate	Main Tabs	
	Module Configuration	
Lighting	Active Client Connections	
	🗏 🔲 System Logs	
Content	Exceptions	
	Connections	
Media	👖 System	
Video		
Messaging		
rrigation		
Pool Control		
JPS		
nterface		
nput/Output		
Event Mapper		

4. In the g!Tools **My Systems** list, verify that the **Demo** system is still selected, and then click the **Viewer** button. *The Viewer interface will display.* 

g!	H	lome			Ligh	38 nt Rain a	8° and Bre	ezy 📆
Forecast	: ▶			Febr	uary	2013	3	
Wednesday <sub>Snow</sub>	33° / 41°	S						
Thursday <sub>Snow</sub>	32° / 36°	3		5				2
Friday Snow Likely	28° / 41°	10	11	12	13	14	15	16
Saturday Mostly Sunny	28° / <b>40</b> °	17	18	19	20	21	22	23
Sunday Mostly Cloudy	33° / 42°	24	25	26	27	28		
Monday	35° / <b>45°</b>		Hom	е			Awa	y
≶ SHOUTcast R	dio							
	Wednesday, Ma	rch 6, 201	3 9:49	AM				

### Exercise 4: Add Licenses to the g! System Controller Using Key Manager

*Overview* All g! system controllers ship with built-in basic functionality for all sub-systems, and include one Viewer license to support one, third-party user interface such as a PC or iPhone. Included functionality allows control of most supported subsystems in small configurations, with no additional cost beyond the controller. g! system controllers are then upgraded with Pro Apps for installations requiring the added features that Pro Apps deliver. Controllers may also be upgraded with additional viewer seats for more Viewer clients; bearing in mind that ELAN user interfaces such as the TS7, HR2, TS2 and so on do not require a Viewer license.

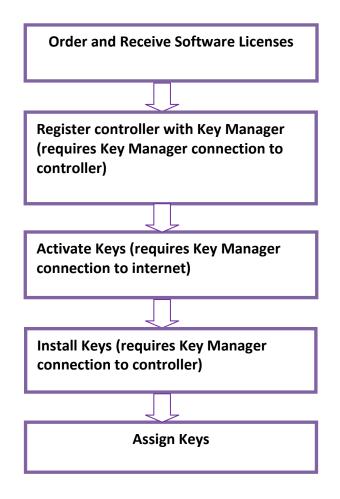
Additional licenses, when ordered, arrive in the mail as a 4"x4" card with a unique license code printed on it. These license codes are used with the Key Manager application installed with g!Tools to activate the codes and unlock functionality on the Controller. When you order additional Pro Apps or Viewers, there are two simple part numbers to use.

- **GPASL**: The GPASL license is a generic Pro App key. Activating and Installing a GPASL on a g! system controller allows you to activate *any* one Pro App on the g! system controller, and once installed it is easy to change which Pro App you have activated. The GPASL allows you to activate one Pro App per code. Key codes can only be used once on one system.
- GVSL: The GVSL license is a Viewer seat, which increases the number of simultaneous connections from Third-Party Viewers that the g! system controller will accept. Each GVSL adds one Viewer to the system controller. Third-party Viewers include any local or remote Viewer connection to the system controller that is not from an ELAN touch screen, including PC's, iPhones or tablets. Note that Viewers are not locked to any one device, and only limit the number of simultaneous Viewer connections. Key codes can only be used once on one system.

If you need to activate a Pro App, but you have not received your card in the mail, Configurator allows you to turn on a one-time 30-day trial of the license and start programming right away. The 30-day trial feature is also useful for gaining immediate functionality on sites without internet access, or even for doing a demo of control features beyond what you've sold to your client.

In Exercise 5, you will install keys on the g! system controller for Pro Apps and Viewer seating licenses. For further information on details of expanded functionality for each Pro App, see the table on the *g*!*Tools User Guide* on the ELAN website, ELANHomeSystems.com.

KeyManager is designed to support installations where internet access is not available to activate the license, and as you will note in the following diagram, you can easily register a system with your computer on site, activate licenses off site (at the office or a local Wi-Fi hotspot), and then return to the controller to install your Pro Apps or Viewers. The process for implementing the keys is explained in the following diagram.



*How-to* Once you receive your keys, you can proceed with key activation.

**Note:** These steps are presented as a reference for when you are out in the field. You will not be able to perform this exercise with g!Demo. Actual license keys and a real g! system controller are required to use KeyManager.

1. Open g!Tools, select the customer system you want to work with on the MySystems list, then click the **Key Manager** button. *The Key Manager program opens for the selected system*.

**Note:** If you did not register at the time of g!Tools installation, you are prompted to register. Registration is required to use KeyManager, and you must have Internet access to perform this step.

stem I script	Name: HC Series 00-14-2D-40-10 ion: New (1) Activated (0) Installe		12:80)			Activate New Install Activated
	Product Key	Licence Type	Status	Date Activated	Date Installed	Comment
	01-003040-3546	Pro App	New			

The KeyManager connects to the g! system controller and presents the Key Activation and Installation screen. *If you do not have Internet access, a message will display indicating that key activation is disabled.* 

**Note:** You must connect to the g! system controller when on-site and register the system with your computer in order to activate keys. If you have no internet access on site, make sure that you perform Step 1prior to leaving the site to activate keys!

2. Activate the keys from the Manage Keys window for the current system.

The information displayed on the lower left of the KeyManager window indicates the current state of KeyManager such as "Ready" or "Activation Disabled." *Activation verifies that the keys have authentic and unused licenses. Always double-check that you are activating keys on the correct system.* 

Note: Internet connection is required for Step 2.

- a. Click the New tab to access the entry fields.
- b. Type the Product Key number, for each license that you want to activate, in the entry fields. *Be sure to enter the number exactly as shown on the Key Card.*

			Version 5.1.47
stem Name: HC Series 00-14-2D-40-08-63 (10.11.80.205.80) scriptop		Activate New	Install Activated
Product Key	License Type	Comment	
0 🗉			
* 🔼			
	1		
- <b>-</b>			

c. Press **Enter** and the key(s) are verified. *Pro App or Viewer is* displayed in the **License Type** column and the **Comment** column is highlighted if you want to add comments.

			Version 5.1.471.0
System Name: HC Series 00-14-2D-40-08-63 (10.11.80 205.80) Description: All (4) New (1) Activated (1)   Installed (2)		Activate New	Install Activated
Product Key           ✓         01-003040-3564           ※	License Type Pro App	Comment	
	$\bigcirc$		
itatus: Ready			

- d. When you are finished entering key codes, verify that the boxes are checked for all Pro App and Viewer keys.
- e. Click the Activate New button.

KeyManager connects to ELAN's licensing server and verifies that the keys have not been used. The keys are then registered in the Elan server database. The keys are activated and advanced to the **Activated** tab.

3. Install the keys from the Manage Keys window for the current system. The status on the lower left of the KeyManager window indicates the current state of KeyManager, such as "Ready" or "Installation Disabled." *All the activated product keys are installed on the system controller in this step and require connection from the KeyManager to the Controller.* 

- a. Click the Activated tab to see the active product keys listed.
- b. Select all your keys, if they are not already selected, and click **Install Activated**.

scription:		0.205:80)		Activate New all Activate
(2) New (0)	Activated (2) Installed (0) Product Key	License Type	Date Activated	Comment
0	01-003020-3489	Pro App	1/20/2011	Demoted
	01-003039-4245	Pro App	4/12/2011	

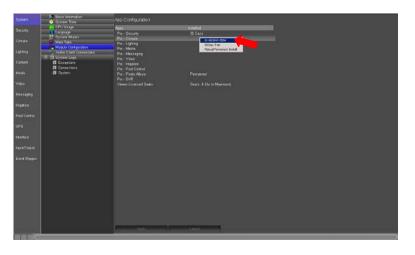
The Product Key(s) are advanced to the **Installed** tab.

ription:	00-14-2D-40-08-63 (10.11.8)	0.205-80		Activate New	Install Activated
the second s	Product Key	License Type	Date	Comment	
	01-003039-4245	Pro App	4/12/2011		

- 4. Once all the keys are activated and installed onto the controller, you can assign the keys in the Configurator.
  - a. In g!Tools, select the appropriate system from the MySystems list, and then enter a Password (if needed) and click the Configurator button at the bottom of the screen. The Configurator for the selected system opens.
  - b. Click the **System** tab.
  - c. Click **Module Configuration** from the System Tree to display the App Configuration properties in the right pane of the Configurator.

System	Basic Information	App Configuration	
Security	CPU Usage Language	Apps Pro - Security Pro - Climate	Installed
Climate	Main Tabs Module Configuration	Pro - Lighting Pro - Media	
Lighting	Active Client Connections	Pro - Messaging Pro - Video	
Content	Exceptions     Connections	Pro - Irrigation Pro - Pool Control	
Media	n System	Pro - Photo Album Pro - DVR	Permanent
Video Messaging		Viewer Licensed Seats	Seats: 10 (Up to Maximum)
Impation			
Pool Control			
UPS			
Interface			
Input/Output			
Event Mapper			
		Apply	Cancel

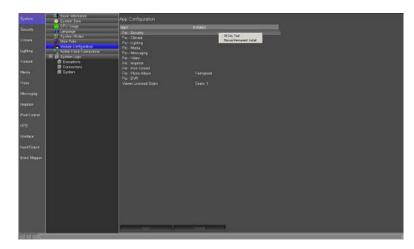
d. Right-click the appropriate app under the **Installed** column and select a key from the pop-up menu.



e. Click **Apply** to add the key to that App. *The Configurator will configure the Pro App functionality.* 

**Note:** If you do not yet have your product keys and your customer wants enhanced functionality installed, you can select a 30 day trial period.

- 5. To select a 30 day trial:
  - a. Right-click an App under the **Installed** column.
  - a. Select 30 day Trial from the list.
  - L



6. Click Apply.

**Note:** If you require functionality beyond the 30 days a valid key must be purchased and the key serial number added to the App Configuration before the 30 days have expired. If the trial period ends and a key serial number has not been added, the Pro functionality will expire and all of your configuration will be lost.

### Notes:


# Lesson 2 Configurator Overview

8

### Overview

This lesson provides an overview of the Configurator tool that sets up the g! system controller, and the Viewer.

In this lesson you will:

- Learn how the Configurator window is organized.
- Check basic system information, such as the software version.
- Check System Modes and Main Tab configuration.
- See the settings pages in the Viewer that are used to set up users, touch screens and wireless door locks settings.
- Use the Viewer to set up a new user.
- Change the language of the Viewer from English to a supported foreign language.
- Perform a Backup of your configuration.

### Requirements

• A PC running g!Demo and g!Tools.

-or-

• g! system controller and g!Tools.

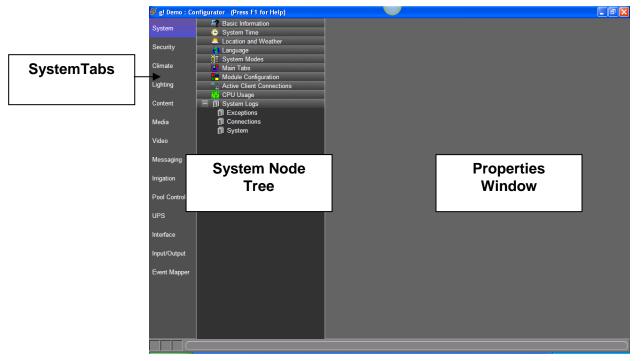
## About the Configurator Window

*Overview* The **Configurator** software tool sets up and manages the g! system. The Configurator adds and configures devices such as thermostats, lighting devices, audio components, and others.

The Configurator has a simple point and click interface to allow you to make changes easily to the g! system controller. Like the Viewer, the Configurator is an interface to the g! system, controller where you can make real-time changes to the system. The Configurator cannot be used for off-line system configuration.

Navigating the Configurator

- The Configurator is comprised of three sections:
  - **System Tabs**: Main sections of the Configurator containing sub-system pertinent information.
  - **System Node Tree**: The list of configuration options and devices for the selected System Tab.
  - **Properties Window**: Detailed information and settings for the currently selected node in the System Node Tree.



Information flows from left to right across the screen. When you click a system tab on the left, the System Node Tree displays information pertinent to that tab—devices that are set up for specific sub-systems, or appropriate groups of information for global settings. When you select an item in the System Node Tree, its parameters display in the properties window.

Durata na	System Tabs
System	The System tabs on the left of the screen are your primary navigation elements. System Tabs include the following:
Security Climate	<ul> <li>System: includes overall system settings, software version, date and time, user configuration, and system modes. This lesson contains further information on the System Tab.</li> </ul>
Lighting Content	• <b>Security:</b> configuration and status of devices, zones and partitions for integrated Security Panels and door locks. See Lesson 3, <i>Configuring Security Systems</i> for more information.
Media	• <b>Climate:</b> configuration and status of devices, global climate settings, and scheduling for integrated climate control systems. See Lesson 4, <i>Configuring Climate Systems</i> for more information.
Video Messaging	• <b>Lighting:</b> configuration and status of devices, scheduling, and custom interfaces pertinent to integrated lighting and shade systems. See Lesson 5, <i>Configuring Lighting Systems</i> for more information.
Irrigation	<ul> <li>Content: options for editing and adding favorite TV channel icons, adding music and photo share folders, and web pictures.</li> </ul>
Pool Control UPS	• <b>Media:</b> configuration and status of zone controllers, receivers, 2-way sources and other interfaces pertinent to audio and home theater control. See Lessons 6 through 8, <i>Configuring Distributed AV &amp; Home Theater Systems</i> for more information.
Interface	<ul> <li>Video: configuration and status of video cameras and IP video servers, DVR and custom interfaces. See Lesson 11, <i>Configuring Video Cameras</i> for more information.</li> </ul>
Input/Output Event Mapper	<ul> <li>Messaging: configuration of the modem for answering service/dial-in system control, voice mail boxes, email and text-to-speech alert messages. See Lesson 12, <i>Messaging</i> for more information.</li> </ul>
	<ul> <li>Irrigation: device, zone, schedule and group configuration of integrated irrigation controllers. See Lesson 13, <i>Irrigation</i> for more information</li> </ul>
	• <b>Pool Control:</b> configuration and status of devices and circuits for integrated Pool/Spa controllers. See Lesson 14, <i>Configuring Pool Systems</i> for more information.

- **UPS:** configuration and status of integrated Uninterruptable Power Supplies.
- **Interface:** adjusts user interface settings for individual touch screens and keypads. See Lesson 15, *Interfaces* for more information.
- **Input/Output:** configuration and status for input/output devices such as IR devices, one-way serial drivers, contact closures, sense inputs, and other system objects. See Lessons 6 through 10 for more information.
- Event Mapper: custom macro programming, such as turning lights on when a door is opened. See Lesson 16, *Event Mapper* for more information.

#### System Node Tree

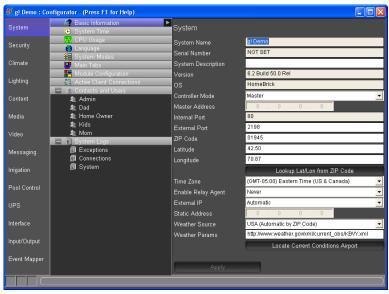


The **System Node Tree** in the middle of the screen displays a listing of sub-system devices or option groupings that can be selected for editing within a particular System Tab.

Items in the System Node Tree that have an arrow next to them when selected (highlighted) have additional options or actions that can be configured. Either right-click on the item, or click on the arrow box to display a pop-up menu containing the additional options or actions.

System	Basic Information	Configure IP Info
	Ge System Time	Backup HC Configuration to File
Security	Language	Backup Complete HC System Version AND Configuration to File Restore HC Configuration or Complete HC System Version & Configuration from File
Climate	Hain Tabs	Restart Target System (Software Only)
Lighting	Module Configuration	Reboot Target System (Hardware) Reset to Factory Configuration
		······································

#### **Properties Window**



The **Properties** window at right shows details of the node selected in the System Node Tree. The properties window is typically used for specific device configuration, such as selecting a COM port, or editing the options for a device; but can include non-editable reference information as well. Custom interfaces and home pages are also created in the properties window.

#### **Online Help**

Press the **F1** key on your keyboard at anytime to display Help for the Properties window that is currently open.

- Use the Contents on the left to navigate through the g! online help system.
- Use the Search tab to search for a specific phrase, such as a field name.
- The Glossary includes the terms from this Training Guide.

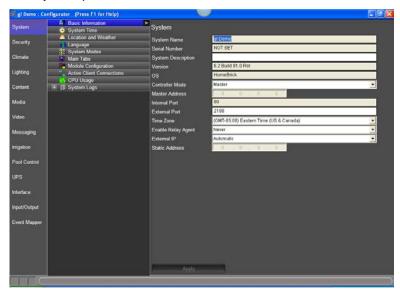
💕 g! Configurator Help		X
19 (고 🦛 🗗 - Hide Back Print Options		
Contents       Search       Glossary         Image: Configurator Diverview       Configurator Diverview         Configurator Diverview       Security         Security       Climate         Content account       Security         Climate       Gate         Media       Messaging         Video       Inigation         Pool Control       Input/Output         UPS       Event Mapper         Content       Content	System General Settings         Left-click the System tab to display and edit basic system settings such as remote connectivity settings and area information (such as zip code) needed for astronomical data. Right-click to create backups, edit IP information, or restart the system.         When you right-click System in the System Tree, the following options are available:         • Configure IP Information         • Backup System Configuration to File         • Restore System Configuration         • Restort Target System (Hardware)	3

# Exercise 1: Software Version and General Settings

- *Overview* Exercise 1 demonstrates the System tab and explains several general parameters used in a g! system.
- How-to
   1. From the Configurator, click the System tab on the left side of the window if it is not active already. The window will open as follows, showing the System Node Tree in the middle section.



2. Click the **Basic Information** node in the System Node Tree to display the general system parameters.



Quick Reference: System Settings				
System Name	The remote login name. You cannot change this name, but the name can be changed by ELAN.			
Version	The software version number, also known as the Core Module, of the controller to which you are currently connected.			
Controller Mode	Select whether ths controller is the Master controller , or an Extender controller. Master is selected by default.			
Time Zone	Select the appropriate time zone for the system.			

See the Configurator Reference Guide for a description of all the System Settings.

3. Click the **Weather and Location** node to display its settings. Complete this page for the location where the controller is installed.

😹 g! Demo : Co	nfigurator (Press F1 for Help)	U U		_ a 🗙
System	Basic Information	Location and Weathe		
Security	Location and Weather	Location Type Zip Code	Zip Code 01945	•
Climate	System Modes Main Tabs Module Configuration		Locate preferable Weather Station (optional) Alrport KBVV - Beverly, MA	-
Lighting	Active Client Connections	Weather Station (optional)	Lookup Lat/Lon from Location	
Content		Latitude Longitude	42.50 -70.86	-
Media				
Video				
Messaging				
Irrigation				
Pool Control				
UPS Interface				
Input/Output				
mpanonaqua				
Event Mapper				
		Apply		
				$ \rightarrow $

Quick Reference: Location and Weather				
Location Type	Select one from the list. The other settings on this page will differ depending on the selected Location Type.			
	<ul> <li>ZIP Code. Recommended for US locations.</li> <li>Country/City. Recommened for non-US cities. Type the name of the Country, and then click the Locate City button to populate the City list.</li> </ul>			
	Latitude/Longitude. Manually enter the exact latitude/longitude for the location.			
Weather Station (optional)	Select the desired weather station for the system. The temperature and current weather conditions from this station are displayed on the Viewer Home page.			
Latitude/Longitude	The latitude and longitude for the location.			

- 4. Enter a ZIP code and click the **Lookup Lat/Lon from Location** button. If you have internet access, after a moment the correct Latitude and Longitude should populate.
- 5. Click the **Locate preferable Weather Station** button. Select the weather station to use for "current conditions" information (usually the closest airport) and click **OK.** Click **Apply** to save the settings.

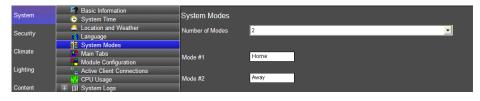
**Note:** Correct ZIP code, latitude/longitude, time zone and airport must be entered for astronomical settings such as sunset/sunrise scheduling, weather icons, current weather conditions, and outside temperature to be effective.

# Exercise 2: Check System Modes, Main Tabs and Modules (Apps)

Overview Exercise 2 explains the current system settings.

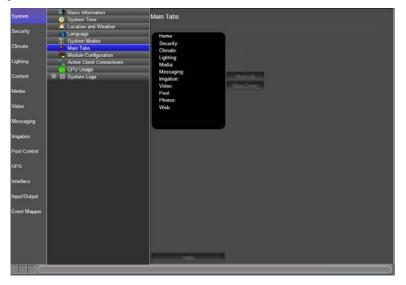
*Terms* The following terms are important to know for this exercise:

- System Modes: Different states that the system can be set to; for example, "Home" when the homeowner is present and "Away" for when the house is empty. System Modes are primarily used to set up schedules for lighting and climate control, but you can add additional functions through the Event Mapper. System Modes allow the homeowner one-touch control of the behavior of several sub-systems. Although most installations use the default number of two modes, up to ten can be configured through the System tab.
- **Main Tabs:** Allows for changing the order of the icons that appear on the main menu page of the Viewer interface to provide access to an App. You can change the order of the icons, and change the text that appears above each icon. This legacy term is only used in the Configurator.
- **Module Configuration:** Allows enabling the Pro App feature set of a subsystem, such as security, irrigation, lighting, etc. Pro App features require a GPASL for each sub-system. GPASL's are managed in g!Tools using the g!Key Manager.
- How-to1. Click System Modes in the System Node Tree as shown below. In this screen, notice that the system is set up with 2 modes, Home and Away.



**Notes:** From this screen you can add up to 8 more modes for a total of 10 house modes. For each mode you will need to configure a button to display on the Home page in the Viewer to select and indicate the currently active mode.

2. Click the **Main Tabs** node in the System Node Tree to display the Main Tab settings.



**Note**: When you click on a specific system in the list you can change the order that the systems are displayed in the Viewer.

3. Click the **Module Configuration** node in the System Node Tree to display the software licenses (the Apps) which have been enabled on your controller.

Media DEMO Pro - Proto Atom DEMO Pro - Proto	g! Demo : Co	nfigurator (Press F1 for Help)			- C 🛛
Scurity Scurity Schwarz Scurity DEMO Pro - Scurity	System	😐 System Time	App Configuration		
Clemate  Man Tabo DEMO Po - Clamato DEMO Po - Liptang DEMO Po - Liptang DEMO Po - Liptang DEMO Po - Liptang DEMO Po - Menia Addo Configuration DEMO Po - Menia	Security	Language		Installed	
Lighting     *** Actory       Centert     *** Disconcision       OPD Program     DEMO Program       DEMO Program     Seats 200 (Up to Maxomum)       DEMO Program     DEMO Program       Demostripped	Climate	Main Tabs	DEMO: Pro - Climate		
Centerit III System Logs DEMO Ptro Inigation DEMO Ptro - Pard Centrol DEMO Ptro - Pard Centrol DEMO Ptro - Pard Atum DEMO Ptro - Par	Lighting	Active Client Connections	DEMO: Pro - Messaging		
Mdia DEMO Pio - Photo Album DEMO Pio - OVR DEMO Pio - OVR DEMO: Viewer Licensed Seats Seats: 200 (Up to Maximum) Messaging registion Pool Control UPS Interface registion Pool Control UPS Interface registion Apply/Clanced	Content		DEMO: Pro - Irrigation		
Video DEMO: Viewer Licensed Seats Seats 200 (Up to Muximum) Messaging regation Proof Control UPS Reference Reput/Output Event Mapper Apply Concel	Media		DEMO: Pro - Photo Album		
regation Prod Control UPS Interface ImpediOutput Event Mapper Acody Cancel	Video			Seats: 200 (Up to Maximum)	
Pool Control UPS Herline hpublichupt Event Mapper Acoly Cancel	Messaging				
UPS Interface Byent Mapper Event Mapper	Irrigation				
Nenface Input/Output Event Mapper	Pool Control				
hpadOutput Event Mapper	UPS				
Event Mapper	Interface				
Apply Cancel	input/Output				
	Event Mapper				
( ())			Apply	Cancel	
		(2) Park			

## Exercise 3: User Settings in the Viewer

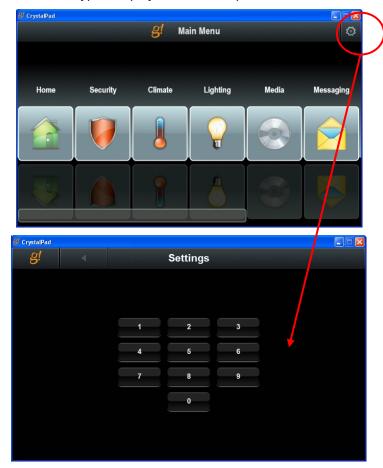
*Overview* Certain settings that enable specialized functionality within the g! software can only be set up in the Viewer. This provides the homeowner with a sense of privacy and control over pass codes that are used to access the Viewer, and wireless locks for their home.

The following information is set up or changed using the Viewer:

- Settings passcode
- User Access
- Door locks access
- Touch Screen Settings

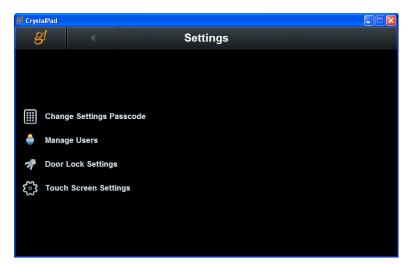
#### *How-to* **To manage settings in the Viewer**:

1. From the main menu, click the User Settings icon in the upper right corner of the screen. A keypad displays to enter the passcode.



2. Click 1234 on the keypad. The main Settings page displays.

**Note:** 1234 is the default pass code for entering the Settings area. Use the Change Settings Passcode option described below to change this pass code to something more unique.



See the sections below for instructions for each settings option.

#### **Change Passcode Settings**

To change the passcode used to access the settings page:

1. Click **Change Settings Passcode** on the Settings main page. The Change Settings Passcode page displays.

<i>ទី</i> / CrystalPad				
<u>g!</u>	•	Change Se	ttings Passcode	
1	2	3	Enter New Passcode	
			Enter New Passcoue	
4	5	6		
7	8	9	Confirm Passcode	
	0			

2. Click numbers on the on-screen keypad to enter a new passcode, then click the "check" button next the passcode field.

Note: The new passcode must be 4 numbers.

rystalPad				
g!	•	Change Se	ettings Passcode	
1	2	3	Freter New Dessed	
-			Enter New Passcode	
4	5	6		
-				
7	8	9	Confirm Passcode	
	0			

3. Re-enter the passcode in the **Confirm Passcode** field, and click the button next to the field to confirm the new passcode. The passcode is changed and the main Settings page displays.



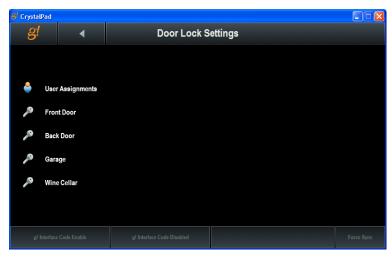
**Note:** If a passcode is lost or forgotten, please contact Technical Support for assistance with resetting the passcode.

#### Manage Users

The Manage Users page is used to set up the g! system users for the home, and specifies the features each user can control. See Exercise 4, Setting Up Users for more information.

#### **Door Lock Settings**

The Door Lock Settings page lists all the wireless locks that have been configured for the system, and the system users. Use this page to map the users to a lock slot, and indicate the locks that the user is allowed to access. See Exercise 5 in Lesson 3, *Security* for more information.



#### **Touch Screen Settings**

The Touch Screen Settings page lists each touch screen panel that has been configured for the system, and provides for the setup of secured access to each screen for each user. See Exercise 5, Working with Touch Screen Settings for more information.

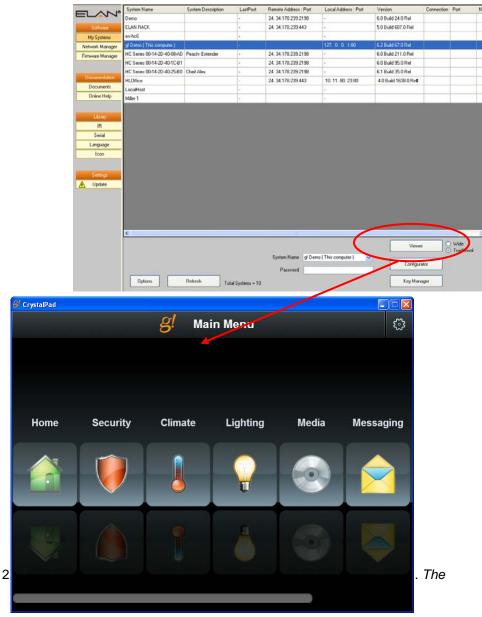


## Exercise 4: Setting Up Users

*Overview* Users are set up in the Viewer. By default, one user – Admin— is set up, with the default passcode of 1234. Admin has access to both the Configurator and the Viewer, and can therefore make changes to the system.

In Exercise 3, you will change the passcode for **Admin** to prevent the end user from accidentally changing important settings. Then, you will add a new user that only has access to the Viewer (but not the Configurator).

How-to1. In g!Tools select the g!Demo system in the My Systems list, and then click the Viewer button at the bottom of the screen.

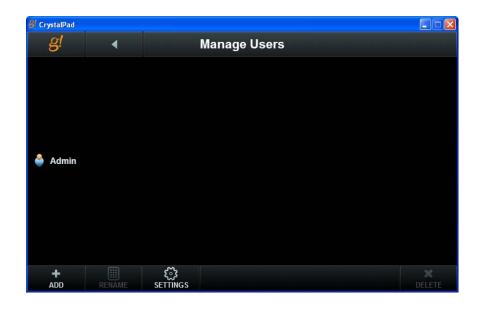


<u>g!</u> <				
		Settings		
	1	2	3	
	4	5	6	
	7	8	9	
		0		

3. Click 1234 on the keypad. The main Settings page displays.

<mark>g</mark> CrystalPad	
g! < Settings	
Change Settings Passcode	
Search Manage Users	
Poor Lock Settings	
న్సి Touch Screen Settings	

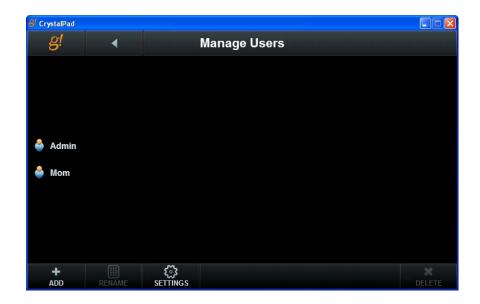
4. Select **Manage Users** to display the Manage Users screen.



5. Click the Add button to add a new user to the list. The Add New User screen displays a keyboard. Enter the name of the new user, and then click OK.

StrystalPad	Add New User	*
1 2 3 q w e a s ▲ z x	المراجع	

B CrystalPad	*
Mom	
1 2 3 4 5 6 7 8 9 0 - =	•
qwertyuiop[/ł	
asdfghjkl; <mark>(</mark>	ок
🔺 z x c v b n m , . /	



Select the new user (Mom) and then click the **Settings** button.

gl Cryst	talPad								
Ę	<u>g!</u>	-		Manage	Users				
🚔 A	dmin			g/ CrystalPad					
🐣 M	lom			g!	•	Settings	: Mom		
				Pemote Acce	ess Password			Passw0rd1	Set
	<b>∔</b> DD	RENAME	र्िंट्र settings	Local Access	s Passcode			1111	Set
				Email Addres	s			email123@	Set
				Phone Numb	er			178155512.5	Set
				Remote Acce	ess			VIEWER	

Setting	Description		
Remote Access	Click the Set button to set an alphanumeric password for		
Password	the user to enter when accessing the Viewer from a		
	remote location.		
Local Access	Click the Set button to enter a four digit PIN code for the		
Password	user to access a local Viewer.		
Email Address	Enter an email address that can be used for system		
	alerts.		
Remote Access	Click the arrow and then select one from the list:		
	None- user has no access.		
	<ul> <li>Viewer- user has access to Viewer.</li> </ul>		
	<ul> <li>Programming- user has access to Configurator.</li> </ul>		
	All- use has access to both Viewer and Configurator.		
Messaging PRO App	users will see two additional fields:		
Phone Number	Enter a phone number that can be used for system alerts.		
	Enter the phone number as it should be dialed, including		
	any prefix or area code information. Do not use		
	punctuation such as dashes or parentheses.		
	Prompts for the contact to acknowledge receipt, so the		
Acknowledge Stops Alert Calls	Controller will stop attempting calls for this alert. Select		
	Yes or No.		
Number of Call	Set the number of times that the Controller should attempt		
Attempt	to call this contact with the alert message.		

## Exercise 5: Working with Touch Screen Settings

- *Overview* The Touch Screen Settings page is used to setup secure access by user for each of the touch screen Viewer interfaces—such as the TS7, TS10 and Valet 10—that are configured for the system. On this page, enable or disable the secure access function, and allow or deny access to each touch screen by user.
- How-to
   1. From the Settings page in the Viewer, select Touch Screen Settings. The Touch Screen Settings page displays a list of the touch screens that have been configured for the system.

**Note:** Be sure to name the touch screens something descriptive so they are easy to distinguish in the Viewer. This is done on the Interface tab, Interface Devices node.



2. Use the table below to set the security for each touch screen in the system.

📕 CrystalPad				
<u>g!</u> ∢	Touch Scre	en Settings		
Touc	ch Screens		Users	
		Admin	Denied	
Living Room TS7	Ω	Dad	Allowed	~
Living Room 157		Kids	Allowed	
		Mom	Allowed	
Enable Security	Disable Security		On Sleep	•

Touch Screen Settings Quick Reference			
Touch Screens	This column lists the touch screen panels that have been configured for the system.		
Users	This column lists the users that have been set up for the system. For each touch screen/user, click the arrow and select one:		
	Denied- user cannot use the selected touch screen.		
	<b>Allowed</b> - user will enter their Local Access PIN to use the selected touch screen. Each user that is given secured access to a screen MUST have a Local Access Code set up on their User Settings page.		
	<b>Note:</b> If no users are allowed or no users with an access code are allowed, there's not going to be any way to unlock the screen.		
Enable Security	Select to "turn on" the security settings specified in the touch screen/user columns. Appears as grayed out when selected.		
Disable Security	Select to "turn off" the security settings. Anyone will be able to access the touch screens without entering a Local Access PIN code.		
Lockout Timer	Select the duration of time after which the touch screen should lock. "On Sleep" will cause the touchscreen to lock when it goes into screen-saver mode, or the screen is powered off. This is the default setting.		

## Exercise 6: Localization (Translating the Viewer)

*Overview* In Exercise 4, you will import an XML-based language file to change the language version of the Viewer from English to the language appropriate for your customer, with custom editing of the Configurator. The language of the Configurator does not change from English, and the dealer should be comfortable using an English language-based Configurator.

After you import the language file and open the Viewer, the majority of the text fields will be translated. However, some text that is copied from outside sources such as the Internet, any metadata, or third party sources may not be translated. For those areas that are not translated, or the translated words are not correct for that country (for example, Canada and France may use different French words for the same English word), you can custom edit lines of text within the Configurator. If you do any custom editing, then you must export the language file before closing the App to save those changes. You can save the file to a local directory on your PC.

The **Reset (English)** button reverts the language settings to the default, and any custom edits are lost unless the language file is exported before selecting **Reset (English)**.

See the Language library in g!Tools for the list of pre-translated language files that are currently available.

**Note:** Importing a language file and any language edits should be done early in the configuration process. Certain functions such as custom tabs or lighting keypads are translated as they are added to the Configurator and will not be translated if they are added prior to importing the language file. Be sure to export any changes to g!Tools to save them.

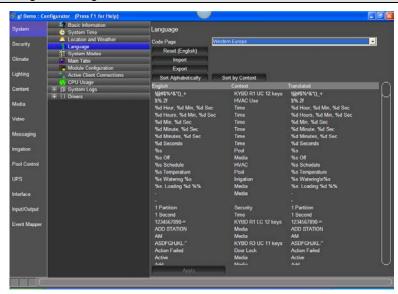
#### How-to

1. Navigate to the **System** tab, and then select **Language** in the System Node Tree.

Custom	💐 Basic Information
System	🕒 System Time
<b>a</b>	🐣 Location and Weather
Security	👔 Language
	System Modes
Climate	🗜 Main Tabs
	Hodule Configuration
Lighting	Active Client Connections
	极 CPU Usage
Content	+ 🗐 System Logs

- 2. Click the Import button to open the g!Tools language library folder.
- 3. Select a language from the list of XML files such as **g\_french.xml** and click **Open**. *The text under the Translated column of the Configurator converts to French*. Click **Apply**.

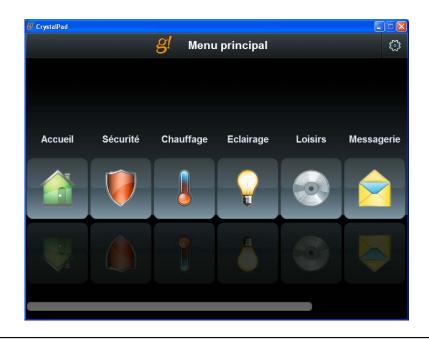
**Note:** If your version of g!Tools does not include the language files you can find some samples that were installed with the g!Demo software in C:\HomeLogic\Training Files.



Language Feature Quick Reference				
Code Page	Typically, this field will automatically select the correct setting following the import of a language file. If it does not, then select the correct character font base for the touchscreen. Verify that the character set matches the language being used.			
Reset (English) button	Click to reset the translated text to English.			
	<b>Note:</b> Any changes to the Configurator that are not exported are lost.			
Import button	Click to launch the file explorer program to locate a language XML file to import. Any changes to the Configurator that are not exported will be lost.			
Export button	Click to launch the file explorer program to export any changes to the Configurator as an XML file. You must export the XML file to save any changes made to the language file. The exported file can be imported into any compatible g! system.			
Sort Alphabetically button	Click to sort the columns alphabetically. The column sorts based on the English-language column.			
Sort by Context button	Click to sort the columns alphabetically by context based on the English-language column.			

Language Editor Reference				
English (non-editable field)	The default English text shown in the Viewer and Configurator.			
Context (non-editable field)	The default English text shown in the Viewer and Configurator for subsystems or area.			
Translated (editable field)	The translated text shown in the Viewer and Configurator. The Translated column can be customized. Click the field to select the text and enter any changes. Note that special characters in this column may be important and should not be edited.			
	<b>Note:</b> Any changes to the Configurator that are not exported will be lost.			
Special Characters in the	Language Editor			
Variable characters	Some lines of text include special characters in the g! software. These characters, typically a percent symbol (%) followed by a single letter, are dynamic data (for example, the current temperature reading), and will be inserted automatically in that location. In all cases, these variable characters and their spacing must be preserved for proper function.			
	Example: %s			
New Line	Certain text may have a new line shortcut or break inserted to move the text following this character to the next line.			
\n	Remove or insert these characters in the editor as needed. Do not insert a space following the \n for proper function.			
	Example: Actual\nTemp			
	Viewer Display: Actual Temp			

- 1. To edit a line of text, select the line you want to edit, and revise the text under the Translated column.
- 2. Click Apply.
- 3. Open the Viewer and the text will display in the imported language. The following example shows the new screen when the translation is complete.
  - The Viewer translated into French.



**Note:** Some items are translated outside the language file line such as zone and source names, and system modes.

- 4. To export the XML language file, follow these steps:
  - a. Click the Export button located on the Language tab in the Configurator.

Language		
Code Page	Western Europe	•
Reset (English)		
Import	)	
Export		
Sort Alphabetically	Sort by Context	

b. Rename the file and save it to a local directory.

**Note:** Be sure to retain the .xml extension on the file; it is required when you reimport the file into the Configurator.

### Exercise 7: Backing up the System

*Overview* In Exercise 7, you will create a backup of the current configuration, and learn when to use the different types of backup. Backup files can be created on-site or remotely; but on-site is recommended. Remote backups take significantly longer, and are more likely to be interrupted due to connection problems. Keep in mind that performing any backup operation essentially shuts down the system so that it can copy files that might otherwise be in use. This might interrupt customer use of the system.

**Note:** Many of the components can be backed up individually. Right-click on items in the Configurator to display the Import/Export function which is available for components such as Custom Tabs, Display Settings, TV Channel Favorites and IR Devices. Import/export can be very useful for copying and backing up the settings of devices or settings you use frequently.

How-to

- 1. Click the **System** tab in Configurator, if you are not already on it.
  - 2. Right-click the **Basic Information** node at the top of the System Node Tree. *A* selection menu appears.

System	Basic Information	Configure IP Info
Security	Location and Weathe Language	Backup HC Configuration to File Backup Complete HC System Version AND Configuration to File Restore HC Configuration or Complete HC System Version & Configuration from File
Climate	System Modes Main Tabs Module Configuration	Restart Target System (Software Only)
Lighting	Active Client Connect	Reboot Target System (Hardware) Reset to Factory Configuration

Quick Reference							
Configure IP Info	View/edit the current IP Settings of the ELAN Controller.						
	<b>Note:</b> clicking OK in the IP Settings dialog ALWAYS results in a hardware reboot. If you make no changes remember to click Cancel.						
Backup HC Configuration to File	Create an <b>HC Configuration</b> backup file that contains all relevant system configuration data. This type of backup file is used to restore the original system or another system; which is important in the unlikely event of controller failure. This type of backup does not change the software version on the g! System Controller and can be used on the same version or newer.						
	Note: The backup will not include pictures.						

Quick Reference, continue	Quick Reference, continued					
Backup Complete HC System Version AND Configuration to File	Create a System Version and Configuration backup file to back up the current HC System Version and Configurator Configuration data files.					
	<b>Note:</b> This complete backup occurs automatically during the update process when using g! version 6.2 or higher. It is offered as a menu item for cases when you want to back up the full system without updating to a newer version. For example, if the user has made numerous configuration changes and wants to capture a complete backup of the new state of the system. For g! versions below 6.2, only configuration information is backed up.					
Restore HC Configuration or Complete HC System Version and Configuration from File	Restore a previously created HC Configuration or HC System Version and Configuration backup to the g! System Controller.					
Restart Target System (Software Only)	Restart the g! software on an ELAN Controller.					
Reboot Target System (Hardware)	Perform a full hardware reboot of the ELAN Controller.					
Reset to Factory Configuration	Remove all configuration and software updates.					

3. HC Configuration Backup: Select Backup HC Configuration to File... You will be prompted to choose a save location and file name.

Save As					? 🔀
Savejn:	🗀 Temp		•	🗢 🗈 💣 🏢	
My Recent Documents Desktop My Documents My Computer					
My Network Places	File <u>n</u> ame: Save as <u>t</u> ype:	Demo_62 ELAN Config Files (*.EBK)		•	<u>S</u> ave Cancel

#### Notes about Backup Files:

The backup file name should be descriptive, and should include the system name and version.

ELAN recommends that you create a new file for each backup, rather than continuously overwriting the same file.

4. Navigate to a directory for the backup, enter a name for the backup file, and click **Save**. The system will now open a Backup/Restore window and should quickly populate the list of files to backup. A red bar will also draw across the bottom of the Configurator window indicating System Exit progress.

System	Basic Information	E	Company.						
opposite .	System Time		System						
Security	Location and Weat Language		System Name	g! Dem	0			-	
	System Modes	BACKUP HC Cont	liguration						
Climate	Main Tabs Module Configurat	File Name ALIDIO.DAT				File Size 228 bytes	Max File 228 butes	~	
Lighting	Active Client Conn	ALDIO_INT.DAT				12 bytes 1923 bytes	12 bytes 1923 bytes		
Content	🖷 🗍 System Logs	AVTPLATE.DAT ADCTLR00003022.0 A2CTLR00003130.0				171832 bytes 44 bytes 80 bytes	171832 b 44 bytes 60 bytes		2
Media		A2CTLR00007226-0 A2CTLR00007366-0 A2CTLR00007400-0	DAT DAT DAT			224 bytes 44 bytes 44 bytes	224 bytes 44 bytes 44 bytes		
Video		A2CTLR00007463.0 A2CTLR00007497.0 A2CTLR00007575.0	DAT			44 bytes 44 bytes 224 bytes	44 bytes 44 bytes 224 bytes		2
Messaging		A2CTLR00009128.0 A2CTLR000091262.0	DAT DAT			44 bytes 44 bytes	44 bytes 44 bytes		•
Ingation		A2CTLR00009199.1 A2CTLR00009321.1 A2CTLR00009321.1 A2CTLR00009392.1	DAT			44 bytes 44 bytes 296 bytes 44 bytes	44 bytes 44 bytes 296 bytes 44 bytes		
Peol Control		Pie Name Crightid					(india)		
				System Version	62.81.0				
Interface				Pile Version	penn			-	
Input/Output		Ready To Start					Start		
	4		1					_	
Event Mapper									
				ex					

- 5. When the data gathering process is complete and files have fully populated the Backup/Restore window (usually a few seconds), click **Start**.
- 6. Wait a moment while the backup completes. During backup, you will see the files color as they are completed and blue progress bar will draw along the bottom indicating the progress of each file. When file backup is complete, verify that the status line on the bottom indicates **Backup Successful**.

File Name			File Size	Max File	~
50UNDS\click4.wav			9948 bytes	9948 bytes	
50UNDS\click5.wav			28196 bytes	28196 by	
50UNDS\click6.wav			2420 bytes	2420 bytes	
50UNDS\click7.wav			88364 bytes	88364 by	
50UNDS\click8.wav			88364 bytes	88364 by	
50UNDS\click9.wav			22094 bytes	22094 by	
50UNDS\connect.wav			36636 bytes	36636 by	
50UNDS\DefaultTransition.wav			13060 bytes	13060 by	
50UNDS\disconnect.wav			36538 bytes	36538 by	
50UNDS\GreetingBeep.wav			16142 bytes	16142 by	
50UNDS\Laser.wav			19040 bytes	19040 by	
50UNDS\Military call (trumpet).wav			77336 bytes	77336 by	
50UNDS\RecordOutOfTime.wav			26158 bytes	26158 by	
rEXTURES\HD11P.png			229992 bytes	229992 b	
FEXTURES\HD11P_800600.png			130193 bytes	130193 b	
rEXTURES\HD12P.png			135349 bytes	135349 b	
rEXTURES\HD15P.png			119504 bytes	119504 b	
TEXTURES\TOPBAR_LG.PNG			65147 bytes	65147 by	~
e Name C:\Documents and Settings\All I	Jsers\Application Data	a\ELAN Home	•		
	System Version	6.2.73.0			_
	File Version	6.2.73.0			_
	THE VEISION				

7. Click **Done** to exit the *backup* dialog.

## Notes:

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## Notes:

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## Lesson 3 Configuring Security Systems



#### Overview

In this lesson, you will configure a security system.

You will:

- Learn how security systems are organized in the Configurator.
- Use the Configurator to set up communication for the panel, add the panel in the configurator, and detect partitions and zones for the security system.
- Check the Viewer to confirm proper configuration.
- Understand the various features available in the Viewer.
- Use the Configurator to set up wireless door locks.
- Use the Viewer to manage users and permissions for the wireless locks.
- Use the Viewer to operate the wireless locks.

#### **Sample House**

Our sample house and attached garage will be configured as two partitions, and feature 4 wireless door locks:

- House containing four zones.
- Garage containing two zones.
- 4 wireless door locks

#### Requirements

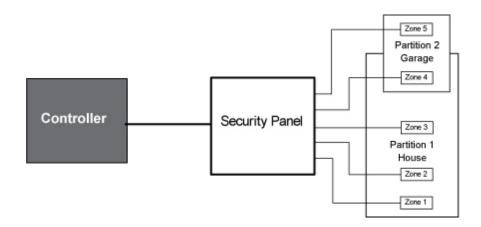
• A PC running g!Demo and g!Tools.

-or-

• g! system controller and g!Tools.

## Security Integration Overview

*Overview* The following diagram shows the sample house security system schematically, illustrating the components that are important to the g! system controller.



Integrating the security panel with g! software provides the homeowner access to their security system through the g! Viewer. For each security partition in their home, they can:

- Arm and Disarm the system.
- View partition and zone status and optionally bypass faulted zones.
- Review zone fault and armed status history.
- Use security panels and sensors with the g! Event Mapper to provide additional automated functionality.

#### *Terms* The following terms are used in the Configurator:

- **Communication Device:** The method the g! software uses to communicate with an external device, including information about the connection type and protocol. In the overview diagram, the communication device is one of the built-in COM ports on the ELAN controller.
- Security Panel: The actual security controller.
- **Partition (Area):** A group of zones in a security panel. Typical partitions include **Whole House** and **Garage**, as in the previous example. Note that some zones (like a door from the house into the garage) may appear in two different partitions.
- Zone: An individual sensor in the system, such as Front Door, First Floor Motion, etc.

*How-to* To integrate a security system:

- Add the **Communication Device**
- Add the Security Panel
- Discover Devices installed on the security panel
- Check the Viewer interface

Once the security panel is added, the g! software can (in most cases) import all the zone and partition information from the panel. This occurs in the Configurator using the **Discover Devices** feature on the security panel's Properties window. In those cases, the security system configuration is complete once you verify that zone and partition information appears in the system tree.

# Exercise 1: Add the Communication Device

*Overview* In this exercise you will add a **Communication Device**, which is the bridge between the g! software and the Security Panel; and where you specify how the systems are physically connected and what communication protocol should be used.

**Note:** Actual system setup may be different depending upon which Security panel is installed on site. Refer to the *Integration Notes* for the particular panel for details.

How-to

1. Start the Configurator, click the **Security** tab at left, and then click **Communication Devices**.



2. Right-click **Communication Device** and select **Add New Communication Device**. In the dialog box, configure the settings as shown for a standard serial port, and click **OK**.

Add New Communicati	on Device	×
Device Name	Security	
Туре	Serial Port	•
Device		-
Communication Type	Standard Connection	•
🔲 Show Unsupported E	Devices	
	Cancel OK	

Quick Reference: Add New Communication Device						
Device Name	Enter a name for the external device. This can be any name, but should be descriptive so that you can identify this specific device in the Configurator. DO NOT leave this field set to "New Device".					
Туре	The type of connection you are using, such as serial port or Ethernet.					
Device	This field will populate only if needed, depending on the selected Type.					
Communication Type	This is the protocol of the communication. See the <i>Integration Note</i> for the specific security panel for more information.					
Show unsupported devices	Select this checkbox to display legacy devices on the Device dropdown list. Legacy devices have not been tested with the current version of g! and are no longer supported by ELAN. If you choose to install an unsupported device, a message will display to warn that the device is not supported by ELAN technical support.					

- System
   Communication Device: Security

   Sociality
   Communication Device: Security

   Name
   Security

   Clinate
   Costent

   Liphing
   Ended

   Content
   Shamp Port

   Content
   Content

   Vide
   Flow Costent

   Messaging
   Band Rate

   Indeface
   Sipp Date

   Vide
   Flow Costent

   Video
   Flow Costent

   UPS
   Sisp Bits

   Interface
   Sisp Bits

   Interface
   Apply

   Interface
   Apply
- 3. Select the Security device in the system tree.

4. In the properties window at right, select the desired COM port (COM1 in the screen below).

**Note:** The drop-down menu only shows the ports that are available. If you are running **g!Demo** on your laptop you will only see available ports on the laptop. Leave the selection set to **NONE** if you are using **g!Demo**.



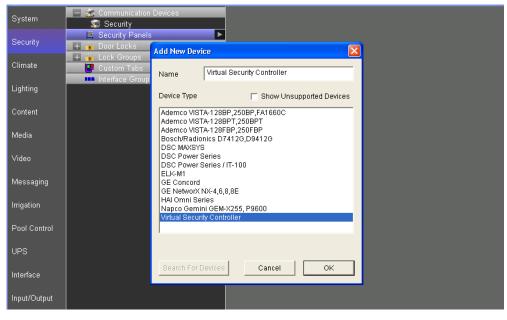
## Exercise 2: Add the Security Panel

*Overview* At this point the **Communication Device** is configured, and the security panel can be added.

**Note:** Actual system setup may be different depending upon which Security panel is installed on site. Refer to the *Integration Notes* for the particular panel for details.

- How-to
- 1. In the Configurator, right-click **Security Panels**, then click **Add New Device**.
- 2. In the Add New Device dialog box, select Virtual Security Controller, and then click OK.

This adds a new security panel, and also automatically connects the panel to the Communication Device added in the last exercise.



3. Select the new security panel in the Configurator. *The properties for that panel display on the right.* 

<mark>8/</mark> g! Demo : Co	nfigurator (Press F1 for Help)						
System	Communication Devices Security	Device	: Virtual Secur	rity Contr	oller		
Security	E Security Panels	Name System #	Ł	Virtual Sec 22256	urity Controll	er	
Climate	E Partitions Zones	Device Ty	pe		urity Controll	er	
Lighting	Security Panel Log     H     Door Locks     Lock Groups	Communi	cation Device	Security			<b>_</b>
Content	Custom Tabs	Mode Disarm	Name Disarm		Show Mode Yes 🗸	Auto-Arm	Key Entry Code+Enter 💌
Media		Mode 1 Mode 2	Stay Away		Yes 🔻	No 💌	Code+Enter 💌
Video		Iviode 2	Away		Tes	No 💌	
Messaging							
Irrigation							
Pool Control							
UPS							
Interface							
Input/Output			Apply	C	Discove	er Devices	
per per							

4. Click the **Discover Devices** button at the bottom of the window.

The Configurator queries the security panel to read the partitions and zones from the hardware. This configuration is then displayed in the system tree. The virtual Security simulates a response.

Quick Reference: Security Controller Properties						
Mode	A "state" that the security system can be in. Typically each mode will provide a different level of security.					
Name	A name for the mode, such as "disarm" or "away". This is the name that will appear on the mode's button in the Viewer.					
Show Mode	Select Yes or No to display or hide a button for this mode in the Viewer.					
Auto-Arm	Select whether this mode is "auto-armed"- that is, the panel is armed without entering a security code when this mode is selected.					
Key Entry	The format for entering the security code on the Viewer keypad.					

In the following screen, the two partitions -House and Garage- were discovered. Each partition has zones associated with it. When you click on a partition, its zones are highlighted in blue.

🛿 g! Demo : Configurator (Press F1 for Help)					
System	<ul> <li>Security</li> </ul>	Security Partition : Ho	buse		
Security	Security Panels Virtual Security Controller	Name	House 22257		
Climate	Partitions	System # Partition #	1		
Lighting	📴 Garage 🚍 🋅 Zones	Entry Delay Sound Entry Sound Repeat Count	< NONE >	•	
Content	Front Door		·		
Media	1st Floor Motion				
Video	Garage Door				
Messaging	Lock Groups      Custom Tabs				
Irrigation	Interface Groups				
Pool Control					
UPS					
Interface					
Input/Output		Apply			
n i i i per					

## Exercise 3: Check the Viewer

- *Overview* At this point the security panel has been added and set to communicate with the g! system controller. You should now check the **Viewer** to verify that the setup displays properly.
- How-to
- 1. Minimize the Configurator so that the Windows desktop is visible.
- 2. From the g!Tools **My Systems** screen, click the **Viewer** button. The viewer starts and displays the Home page.
- 3. Click the g! icon to access the main menu then click the Security icon to display the configured security partitions.

<i>ទី</i> ! g! Demo			
g!	Ŵ	All Security	
	House	Garage	
		$\bigtriangledown$	
	Disarmed	Disarmed	
	Ready	Ready	
	Ready	Ready	

Note: On this screen you can view the status of all the visible partitions.

- 4. Click on the House partition icon to access House partition screen. In the example below, you can see:
  - The system is Ready to Arm.
  - There are no System Faults (such as low battery)
  - There are no Bypassed Zones.
  - The "House" partition is displayed in the top center of the screen.

g!	V		🚽 Hou	se 🕨		<b>E</b> Status	ZONES	ЦЦ.) HISTORY
Ready to Arm								
	Zone	Status			System	Faults		
All Zones Ready					No Syste	m Fault	S	
		Disarm	Sta	у	Away			

5. Try to Arm the system. Click **Away**, then click **1**, **2**, **3**, **4** and **Enter** in order (this is the default security code for the Virtual Security device). *After a short delay, the display will show* **Armed**.



6. Click on the **History** button at top right. The Viewer will display the system history tab.

**Note:** Keep in mind that a newly added security panel will have no history to display.

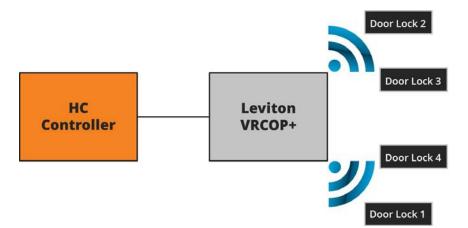
Example

The screen below shows the Security History from a real system.



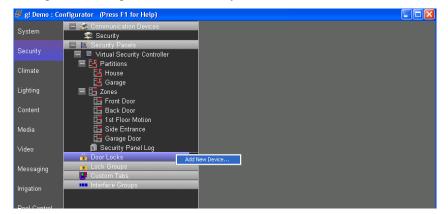
## Exercise 4: Configure Wireless Locks

Overvie The g! software supports Z-Wave wireless door locks, allowing the homeowner to secure and unsecure their home, check the status of their locks and automate securing/unsecuring based on the house mode. Integrating the locks with g! also allows for event-based configuration using event maps.



Setup of the wireless door locks using the Z-Wave setup software (http://www.leviton.com/OA\_HTML/SectionDisplay.jsp?section=38971&minisite=102 51) and the USB to Z-Wave adaptor, VRUSB, must be done prior to adding the compatible door locks into the g! system. Setting up the wireless locks in the g! Configurator occurs in two places; first, in Exercise 4, you will add the locks to Configurator and make them available for display on the Viewer. Second, in Exercise 5, you will finish setting up the door locks in the g! Viewer. In this exercise you will configure several locks, and create a lock group to control multiple locks at one time in the g! Configurator. Exercise 6 will show you how to use the Viewer to secure and unsecure the locks and lock groups.

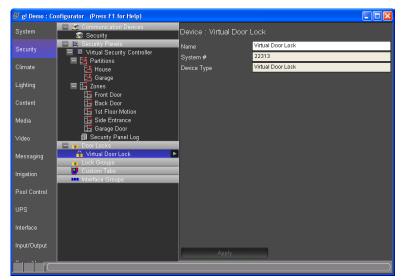
#### *How-to* 1. In Configurator, navigate to the **Security** tab.



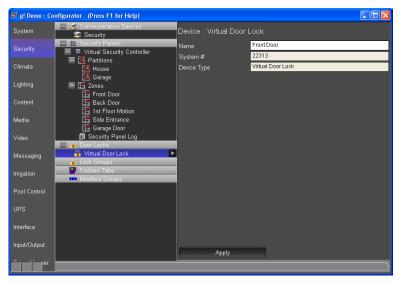
2. Click **Door Locks**, and then click **Add New Device...** The New Device window displays.

\dd New Devi	ce Virtual Doo		X
Name	virtual Doo	r Luck	
Device Type		🔲 Show Uns	upported Devices
Virtual Door L Z-Wave Door			
2.1.070 2001	2000		
1			
Search For D	)evices	Cancel	OK
Search For D	)evices	Cancel	ОК

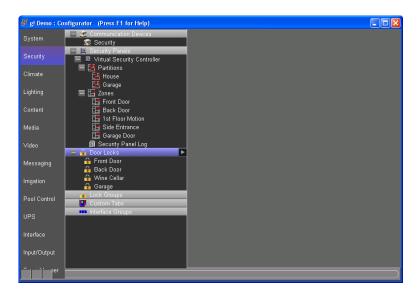
3. Select Virtual Door Lock, and then click OK. The virtual lock is added to the list.



4. Select the virtual lock and rename it to "Front Door" by entering a new name in the Name field in the right pane, and then click Apply.



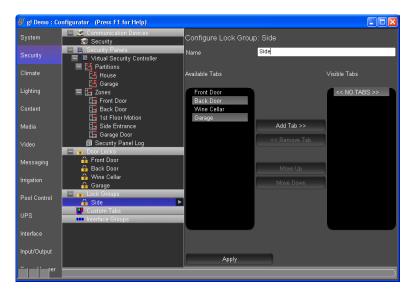
5. Add three more virtual locks, and name them Back Door, Garage, and Wine Cellar.



6. Right-click Lock Groups, and select **Add New Lock Group...** Name the group "Side" and select OK. "Side" is added as a Lock Group, and the properties pane displays Available Tabs and Visible Tabs columns.

<mark>81</mark> g! Demo : Co	nfigurator (Press F1 for Help)	_ 🗆 🗙
System	- 🛣 Communication Devices	
Security	E Security Panels	
Climate	ES Partitions ES House ES Garage	
Lighting	E Cons E Zones E Front Door	
Content	E Back Door 1 st Floor Motion	
Media	🗄 Side Entrance Add New Lock Group 🔀	
Video	I Security Panel Log Name Side Side	
Messaging	A Front Door Back Door Cancel OK	
Irrigation	Wine Cellar     Garage     Garage	
Pool Control	Lock Groups     Custom Tabs     Interface Groups	
UPS		
Interface		
Input/Output		
per per		

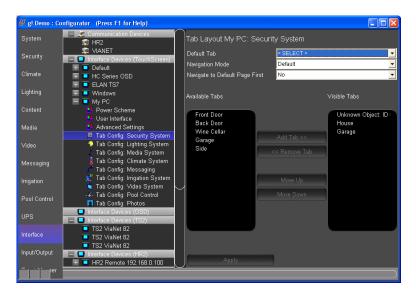
7. Select **Back Door** and **Garage** from the Available Tabs list, then click the **Add Tab>>** button to add these locks to the Visible Tabs list.



8. Click Apply.

<mark>8/</mark> g! Demo : Co	nfigurator (Press F1 for Help)			
System	Communication Devices Security	Configure Lock Grou	o: Side	
Security	Security Panels Virtual Security Controller	Name	Side	
Climate	E- Partitions E- House E- Garaαe	Available Tabs		Visible Tabs
Lighting	Front Door	Front Door Wine Cellar		Back Door Garage
Content	Back Door	White Ochian		Curuge
Media	iii Ist Hool Motori III Side Entrance III Garage Door		Add Tab >>	
Video	Galage Door     Galage Do		<< Remove Tab	9
Messaging	Front Door     Back Door		Move Up	1
Irrigation			Move Down	
Pool Control	Lock Groups			
UPS	Custom Tabs	-		
Interface				
Input/Output				
		Apply		)

9. To make the locks visible in the Viewer, go to the **Interface** tab, and expand the desired interface (in this case, My PC).



10. Select **Tab Config: Security System**. From the Available Tabs list, select Front Door, Wine Cellar and Side, then click **Add Tab>>** to move these to the Visible Tabs list.

<mark>8</mark> / g! Demo : Co	nfigurator (Press F1 for Help)					
System	Communication Devices	ſ	Tab Layout My PC: S	ecurit	ty System	
Security	VIANET  Interface Devices (TouchScreen)		Default Tab		< SELECT >	<b>_</b> _
Climate	∓ ■ Default ∓ ■ HC Series OSD		Navigation Mode Navigate to Default Page F		Default No	• •
Lighting	F ELAN TS7		Available Tabs			Visible Tabs
Content	My PC Power Scheme User Interface		Back Door			Unknown Object: ID :
Media	<ul> <li>Oser intenace</li> <li>Advanced Settings</li> <li>Tab Config: Security System</li> </ul>		Garage	-	A 11 T 1	House Garage
Video	Tab Config: Decently System Tab Config: Lighting System Tab Config: Media System				Add Tab >> << Remove Tab	Front Door Wine Cellar
Messaging	I Tab Config: Climate System			shinininini		Side
Irrigation	💒 Tab Config: Irrigation System 🐚 Tab Config: Video System				Move Up	
Pool Control						5
UPS	<ul> <li>Interface Devices (OSD)</li> <li>Interface Devices (TS2)</li> </ul>					
Interface	TS2 ViaNet 82 TS2 ViaNet 82					
Input/Output	<ul> <li>TS2 ViaNet 82</li> <li>Interface Devices (HR2)</li> <li>HR2 Remote 192.168.0.100</li> </ul>		Apply		1	
<b>n i i i i e</b> r	🖶 🗖 AR2 Remote 192, 168.0, 100	C			,	

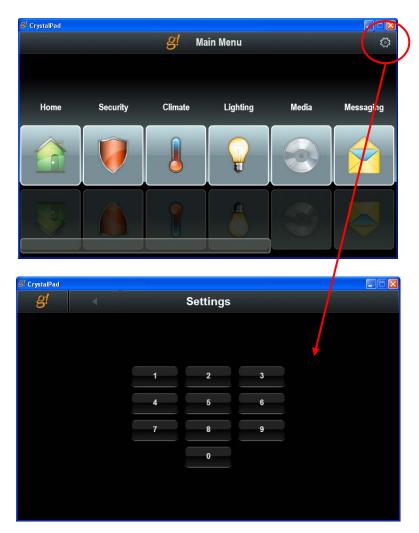
11. Click Apply.

## Exercise 5: Configure Door Lock Settings in the Viewer

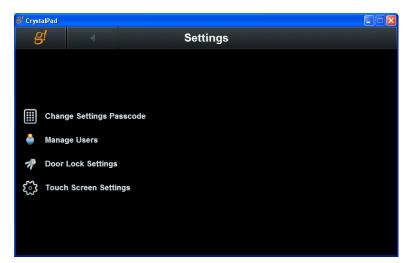
*Overview* The Door Lock Settings page lists all the wireless locks that have been configured for the system, and the system users. Use this page to map the users to a lock slot, and indicate the locks that the user is allowed to access. Then, for each slot/user combination, indicate the permission granted to each lock.

How-to

- 1. Minimize Configurator and open the Viewer.
- 2. From the main menu, click the User Settings icon in the upper right corner of the screen. A keypad displays to enter the passcode.



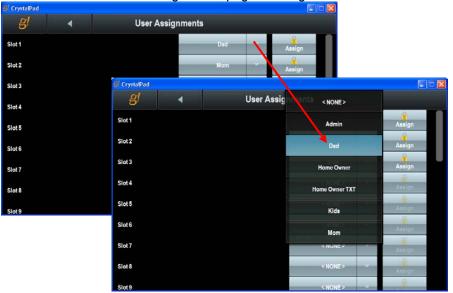
3. Click **1234** on the keypad. The main User Settings page displays.



4. Click **Door Locks** on the User Settings main page to display the Door Lock Settings page.



5. Click **User Assignments** to display a list of slots for the door lock system. Note that the slots remain the same for each lock within the system. You will use the User Assignments page to assign each user to a slot number.



- Click the <NONE> button for Slot 1 to display the list of users. Select a user from this list to assign to Slot 1. Repeat to assign the remaining users to slots.
- 7. Set Permissions for each slot/user. Click the **Lock icon/Assign** button next to your Slot 1/user assignment (Slot 1/Dad in the screens below) to see the permissions details for that slot. Notice that each lock is displayed on this page.

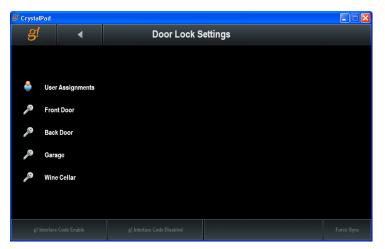
<i>ទី</i> ! CrystalPad						
g!	•	Dad	Lock Perr	nissions		
Front Door					Enabled	. <b>.</b>
Back Door					Enabled	
Back Door					Enabled	
Garage					Enabled	
Wine Cellar					Enabled	-
					Enable All	Disable All

8. For each lock on the Permissions detail page, indicate if the user has permission to access the lock (Enabled) or not (Disabled). Use the buttons at the bottom of the screen to enable or disable all the locks for this user.

This example shows how the "Kids" user was given access to some locks, but not others.

<b>g</b> CrystalPad			
<u>g</u> !	Kids Lock Permissions		
Front Door		Enabled	<b>V</b>
Back Door		Enabled	I
Garage		Disable	i
Wine Cellar		Disable	d
		Enable All	Disable All

9. Go back to the Door Lock Settings main page.



10. Select the **Front Door** lock to highlight the lock and the buttons at the bottom of the screen.

g CrystalPad		
g!	Door Lock Settings	
💧 User Assignments		
Front Door		
🔎 🛛 Back Door		
🔎 Garage		
🔎 Wine Cellar		
g! Interface Code Enable	g! Interface Code Disable	Force Sync

The following options are available for each lock in the system:

- **g! Interface Code Enable**. Select this option to require each user with access to the lock to enter their pass code to unsecure the lock.
- **g! Interface Code Disable**. Select this option to allow the lock to be unsecured without a pass code.
- Force Sync. Changes code slots are automatically synchronized in the background. Select this button sync all 30 codes at once.

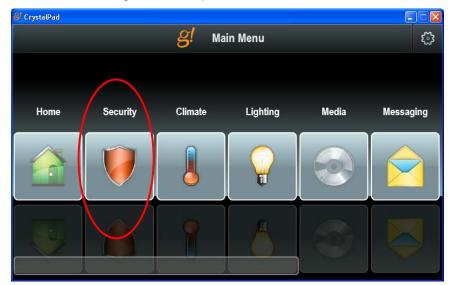
## Exercise 6: Use the Viewer to Secure and Unsecure Wireless Locks

*Overview* This exercise discusses how to use the Viewer to secure and unsecure the wireless locks that were configured in the previous exercises. The system will allow any user to *secure* the locks; however, a pass code can be optionally be required to unsecure any lock or lock group. See Exercise 5 for information on setting up users and pass codes in the Viewer.

**Note:** When a pass code is required for any locks within a lock group, the Unsecure All feature for that group will be disabled.

How-to

#### 1. Minimize Configurator and open the Viewer.



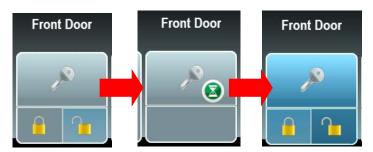
 Click the Security icon to view the All Security page. In the screen below, notice that the security partition and wireless locks are all displayed together. It is important to keep in mind that these two systems are not integrated; for example, disarming the security on a door does not unlock it.

Also notice:

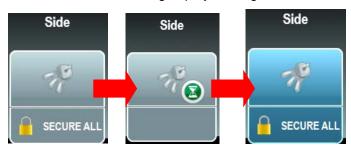
- a. Single locks display one key, and an open and closed padlock to secure/unsecure that lock.
- b. Lock groups display a ring of 3 keys, and Secure All padlock to secure all the locks in that group.



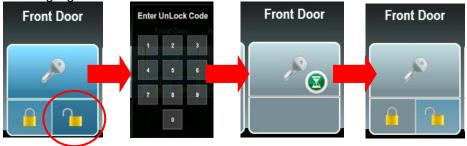
3. Click the closed padlock symbol on the **Front Door** to secure the door. *The* system will indicate that it is working, and then the icon will turn blue.



4. Secure the locks in the "Side" group by clicking Secure All in the icon.



- 5. To unlock the **Front Door**, click the unlocked padlock icon. *A keypad displays for the user to enter their pass code.*
- 6. Enter 1234. The Front Door icon turns gray and the unlocked padlock is highlighted to indicate this lock is unlocked.



- 📕 CrystalPad \_ **D** \_ X ■ STATUS ✓ Side 山山 HISTORY g! Battery 100% Back Door 0 0 Battery 100% Garage 0 2 Side -710 0 All All SECURE AL
- 7. To unsecure the Side lock group, click the keys in the icon to open the group.

- 8. Click the **Unsecure** button for the **Back Door** lock. *The keypad displays to enter your pass code.*
- 9. Click 1234 on the keypad.
- 10. Repeat steps 8 and 9 for the Garage lock.

**Note:** Only locks within the group that do not require a g! pass code will operate with the Unsecure All operation. Locks that require a g! pass code to unlock may only be unlocked individually.

## Exercise 7: View the Event Log for Wireless Locks

*Overview* The Viewer provides an Event Log for each configured lock. This log displays the date and time of activity for the lock including secure and unsecure, jams, low battery and other warnings. This exercise discusses how to use the Viewer to access the event log for wireless locks.

How-to

1. To view the event log for a single lock, navigate to the Security page, and click the key in the icon for the lock you want to view. *The details for the lock display.* 



On the details page, you can:

- Secure or unsecure the lock
- See the battery level for the lock
- View the log of events for the lock

<sup>3'</sup> CrystalPad	<b>V</b>		Front Door 🕨
P			100%
			Event Log
Wednesday	3/6	10:38:13 AM	Unsecured by Dad
Wednesday	3/6	10:35:13 AM	Secured by Controller
Thursday	2/28	1:27:14 PM	Unsecured by Mom
Thursday	2/28	1:26:45 PM	Secured by Controller

2. To view the event log for a group of locks, navigate to the Security page, and click the keys in the icon for the lock group you want to view. *The details for the lock group display*.

B <sup>l</sup> CrystalPad B <sup>l</sup> V	Side		■ STATUS	
🔎 Back Door	100%			
🔎 Garage	100%		<u> </u>	
	AII (	All		

On this detail page, you will a separate line for each lock within the group. For each lock you can:

100%	See the battery status
	Secure or unsecure the lock
	<ul> <li>Click the Event Log button to view the log for the selected lock.</li> </ul>
AI 🦳 AI	• Use the buttons at the bottom of the page to <b>Secure All</b> or <b>Unsecure All</b> locks within the group with one click. Note that if a lock within the group requires a pass code, the <b>Unsecure All</b> function is not available.

#### Notes:

## Lesson 4

## **Configuring Climate Systems**



#### Overview

This lesson shows you how to configure a climate control system.

You will:

- Learn how climate control systems are organized in the Configurator.
- Use the Configurator to setup communication for the thermostats and setup the equipment
- Learn how to set up schedules for the heating and cooling systems.
- Check the Viewer interface to confirm proper configuration
- Understand the various features available in the Viewer.

#### Sample House

Our sample house and attached garage will be configured with two heating and cooling zones:

- Living Room
- Bedroom

#### Requirements

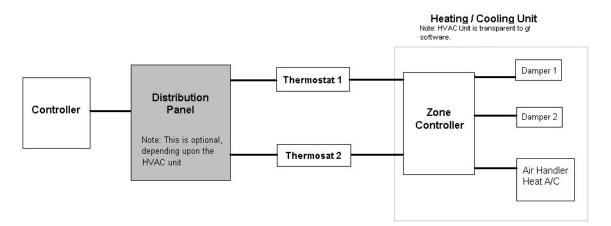
• A PC running g!Demo and g!Tools.

-or-

• g! system controller and g!Tools.

## **Climate Integration Overview**

*Overview* The following diagram shows the equipment in a typical climate system schematically, illustrating the components that are important to the g! system controller.



Integrating a climate system with the g! software provides the homeowner access to their climate system through the g! Viewer. For each thermostat in their home, they can:

- Turn on and off the heating and cooling system
- Adjust the heating and cooling set points
- Adjust the heating and cooling schedule
- View the heating and cooling history
- Control fans

- *Terms* The following terms are used in the **Configurator** to describe the equipment in a climate system:
  - **Communication Device:** The method the g! software uses to communicate with an external device, including information about the connection type and protocol. In the overview diagram, the communication device uses one of the built-in COM ports on the ELAN controller.
  - **Thermostat:** The physical thermostat which can control heating, cooling, or fans.
  - Heating/Cooling (HVAC) Unit: The HVAC equipment as seen by the thermostat. From the g! software's perspective, there are only three aspects of the Heating /Cooling Unit that are important:
    - Heating control
    - Cooling control
    - Fan control
- *How-to* To integrate a climate system:
  - Add the **Communication Device**
  - Add and configure Heating/Cooling Units
  - Discover and configure the **Thermostats**
  - Configure Schedules (optional)

Once you add the Communication Device, The g! software will (in most cases) automatically import all the thermostats using the **Discover Devices** feature on the Communication Device's Property window.

## Exercise 1: Add a Communication Device

*Overview* In this exercise, you will add a **Communication Device** to communicate with the thermostats. The **Communication Device** is the bridge between the g! software and the thermostats, and is where you specify how the systems are physically connected and what communication protocol is used.

**Note:** Actual system setup may be different depending upon which thermostats are installed on site. Refer to the *Integration Notes* for the thermostats you are working with for more detailed information.

How-to

1. Start the **Configurator**, click the **Climate** tab at left, then click **Communication Devices**, as shown below:



- 2. Right-click **Communication Device** and select **Add New Communication Device**. In the dialog box:
  - a. Select Serial Port in the Type drop-down box
  - b. Select Virtual HVAC Network in the Communication Type dropdown box.
  - c. Enter "Climate" as the Device Name.
  - d. Click OK.

Add New Communication Device 🛛 🛛 🗙				
Device Name	Climate			
Туре	Serial Port			
Device				
Communication Type	Virtual HVAC Network			
Show Unsupported Devices				
	Cancel OK			

Quick Reference: Add New Communication Device			
Device Name	Enter a name for the external device. This can be any name, but should be descriptive so that you can identify this specific device in the Configurator. DO NOT leave this field set to "New Device".		
Туре	The type of connection you are using, such as serial port or Ethernet.		
Device	This field will populate only if needed, depending on the selected Type.		
Communication Type	This is the protocol of the communication. See the <i>Integration</i> <i>Note</i> for the specific thermostat for more information.		
Show Unsupported Devices	Select this checkbox to display legacy devices on the Device dropdown list. Legacy devices have not been tested with the current version of g! and are no longer supported by ELAN. If you choose to install an unsupported device, a message will display to warn that the device is not supported by ELAN technical support.		

- 3. Select the **Communication Device** in the system tree as shown below.
- 4. In the Property window at right, select the desired port (COM2 in the example below), then click **Apply**.

**Note:** The drop-down menu shows the COM ports and indicates if devices are connected. Leave the selection set to **NONE** if you are using **g!Demo**.

System	🚰 Global Options 📃 🕱 Communication Devices	Communication Devic	ce: Climate	1
Security	Inermostats	Name System #	Climate 22342	
Climate	Heating/Cooling Units Custom Tabs	Device Type	Serial Port / Virtual HVAC Network	
Lighting	Interface Groups	Location Enable Sharing	< SELECT >	
Content		Sharing Port	0 Communications Port (COM2) (Climate)	
Media		Protocol	R\$232	${}$
Video		Baud Rate Flow Control	300 🔽	
Messaging		Parity Data Bits	None 🔽	
Irrigation		Stop Bits	8 V 1 V	
Pool Control				
UPS				
Interface				
Input/Output		Apply	Discover Devices	
per per			)	

## Exercise 2: Add the Heating/Cooling Equipment

*Overview* After configuring the Communication Device, we will add in the Heating/Cooling Unit(s) prior to adding the Thermostats.

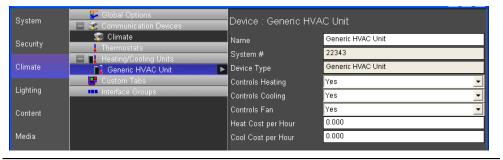
In a typical installation, the specifics of the heating and cooling systems are transparent to the g! software. The software communicates with the thermostat to change modes and set temperatures, and the thermostat itself turns the heating and cooling units on or off, depending on the chosen set points.

While the particulars of the HVAC equipment are not required, the g! software needs to know the types of equipment the thermostat controls so it can display the proper modes in the Viewer and track system usage appropriately in the History tab.

In the steps below, we will add an HVAC Unit and have the opportunity to choose the types of systems it controls: Heating, Cooling, or Fans.

How-to

- 1. In the **Configurator**, right-click **Heating/Cooling Units**, then click **Add New Device**.
- 2. In the **Add New Device** dialog box, select **Generic HVAC Unit** as shown below, and then click **OK**.
- Select the new Generic HVAC Unit in the system tree as shown below. Note that by default this unit controls Heating, Cooling and Fan(s), so these options are set to **Yes**. This will result in buttons displaying on the **Viewer** to allow the homeowner to set heating and cooling set points, as well as control the fans.



**Note:** In an actual system, you will need to set up a Generic HVAC Unit in the Configurator for each physical unit in the home. If you are setting up multiple systems, be sure to assign a unique name to each unit to make it easier to identify if you need to troubleshoot later on.

## Exercise 3: Discover and Configure Thermostats

*Overview* Before beginning this exercise, be sure that you have completed Exercise 2, *Add the Heating/Cooling Equipment.* You will associate the HVAC unit with the system thermostats in this exercise.

In a typical installation, the system can often detect how many thermostats are present and automatically add them to the System Tree. Once the thermostats are recognized by the g! software, you will name each one and assign its **Heating and Cooling Units.** 

**Note:** Actual system setup may be different depending upon which HVAC Unit is installed on site. Refer to the *Integration Notes* for the particular thermostat for details.

How-to

- 1. In the **Configurator**, navigate to the properties window for the Communication Device you set up in Exercise 1.
- 2. Click **Discover Devices** at the bottom of the screen. After a slight pause, the thermostats will be displayed in the System Tree.
- 3. Select the first thermostat, **Thermostat: ID1**, in the System Tree and do the following:
  - a. Change the Name to "Living Room."
  - b. Set the **Heating Unit** and the **Cooling Unit** to the **Generic HVAC Unit** you set up in Exercise 2.
  - c. Click Apply.

ຢ gl Demo : Configurator (Press F1 for Help)				
System	👺 Global Options 📃 🐲 Communication Devices	Thermostat : Thermos	stat:ID1	
Security	Climate	Name System #	Living Room	
Climate	<b>∓ ∓ ∓ ∓ ↓ ↓</b>	Device Type	Virtual HVAC Thermostat	
Lighting	Heating/Cooling Units	Communication Device Thermostat ID	Climate	<u> </u>
Content	<ul> <li>Interface Groups</li> </ul>	Heating Unit Cooling Unit	Generic HVAC Unit Generic HVAC Unit	•
Media		Show Usage in History	No	•
Video		Show History For Addition	Add State	
Messaging		Edit Input	Edit State	
Irrigation		Remove Input	Remove State	
Pool Control				
UPS				
Interface				
Input/Output		Apply		
per per				

- 4. Select the next thermostat in the System Tree and do the following:
  - a. Change the Name to "Bedroom."
  - b. Set the **Heating Unit** and **Cooling Unit** to the **Generic HVAC Unit** that you set up in Exercise 2.
  - c. Click Apply.

<mark>8</mark> / g! Demo : Co	nfigurator (Press F1 for Help)		
System	Figure Global Options	Thermostat : Thermostat:ID2	
Security	Climate	Name	Bedroom
	Internitostats     I Living Room	System #	22385
Climate	🕂 🚶 Bedroom 🕨 🕨	Device Type	Virtual HVAC Thermostat
I fachtin a	🔚 📕 Heating/Cooling Units	Communication Device	Climate 🔽
Lighting	Generic HVAC Unit	Thermostat ID	2
Content	Interface Groups	Heating Unit	Generic HVAC Unit
		Cooling Unit	Generic HVAC Unit
Media		Show Usage in History	No 💌
Video		Show History For Additiona Add Input	Add State
Messaging Irrigation		Edit Input Remove Input	Edit State Remove State
Pool Control			
UPS			
Interface			
Input/Output			
		Apply	

At this point the equipment is added and you can set up **Schedules**.

## Climate Scheduling Overview

*Overview* The g! software can set up different schedules for the home thermostats to turn on heating and/or cooling automatically at different times of the day, according to the homeowner's preferences.

The g! software uses the following concepts for schedule management:

- **Mode**. A unique schedule can be configured for each house mode (Home, Away, etc.) so that when the home owner changes house modes, the climate schedules automatically change too.
- Weekly Program. The days of the week that you want this schedule to be in effect for the selected Mode. An example is to set up one schedule for week days and a different schedule for weekends.
- **Period**. A period is a portion of the day for which you want a specific heating/cooling range to be in effect. In the g! software, you can configure up to four periods in a day.

**Note:** Each thermostat in the Configurator System Tree is tied to its own schedule. Making changes to the schedule on one thermostat does not change the settings on any other thermostat.

Schedules are set up and managed in two steps:

- 1. The **Configurator** is used to perform initial setup to create, name and provide the basic structure for schedules.
- 2. The **Viewer** is then used to change the actual start times and the set points and work with schedules on a regular basis.

*Example* In the following exercises, you will configure the system to:

for Training

- Use the two house modes Home and Away.
- Set up different schedules for each thermostat: Living Room and Bedroom.

Home Mode:

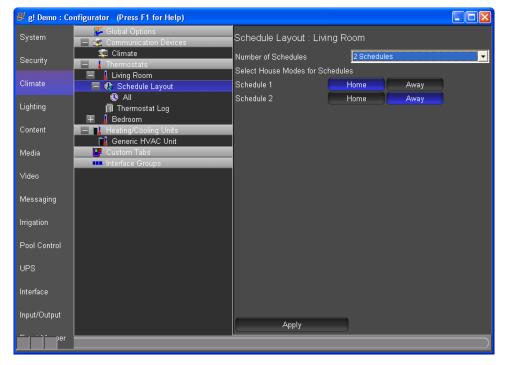
- Living Room will have two weekly programs, one for weekdays and one for weekends. Each program will have two periods.
- Bedroom will also have two weekly programs, one for weekdays and one for weekends. Each program will have four periods.

Away Mode:

 Living Room and Bedroom will both have one weekly program with one period per day.

#### Exercise 4: Set Schedules

- *Overview* In this exercise, you will set up the thermostats so they have weekday and weekend schedules, as in the previous example using two periods per day for the Living Room and four periods per day for the Bedroom. Both the Living Room and Bedroom will be set up so that when the home owner is away there is one set point for the whole week with just one period for the whole day.
- How-to
   1. In the Configurator, expand the Living Room thermostat and select
   Schedule Layout. The Schedule Layout properties display on the right.
  - 2. In this screen:
    - a. Change the **Number of Schedules** to 2. A second line, Schedule 2, displays on the screen.
    - b. Select **Home** for Schedule 1, and Away for Schedule 2.



c. Click **Apply**. The screen should match the following:

3. Click the **Home** schedule in the System Tree at left. *The weekly program for the Home mode displays on the right.* 

- 4. Set the Home schedule properties:
  - a. Change the **Periods per Day** to 2
  - b. Set the Number of Weekly Programs to 2
  - c. Click on **Program 2** for Saturday and Sunday; click **Program 1** for all other days.
  - d. Click **Apply**. The screen will look like the one shown below.

<mark>8/</mark> g! Demo : Co	mfigurator (Press F1 for Help)				
System	🚰 Global Options 🖃 💥 Communication Devices	Schedule Layout : Horr	ıe		
Security	😴 Climate	Periods per Day	2 Periods per Da		-
Climate	<ul> <li>Living Room</li> <li>Schedule Layout</li> </ul>	Number of Weekly Programs Select Days for each Weekly	<u>.</u>	ns	
Lighting	🚯 Home	Monday Tuesday	Program 1 Program 1	Program 2 Program 2	
Content	I Thermostat Log	Wednesday	Program 1	Program 2	
Media	Heating/Cooling Units      Generic HVAC Unit      Custom Tabs	Thursday Friday	Program 1 Program 1	Program 2 Program 2	
Video	Interface Groups	Saturday Sunday	Program 1 Program 1	Program 2 Program 2	
Messaging		Contray	rogram	r rogram z	
Irrigation					
Pool Control					
UPS					
Interface					
Input/Output		Apply			
per per					

5. Select the Living Room **Away** schedule in the System Tree. *The weekly program for the Away mode displays on the right.* 

- 6. Set the Away schedule properties:
  - a. Set Periods per Day to 1
  - b. Set Number of Weekly Programs to 1
  - c. Click **Apply**. The screen will look like the one shown below.

<mark>8</mark> / g! Demo : Co	nfigurator (Press F1 for Help)		
System	Global Options	Schedule Layout : Awa	ay
Security	😴 Climate 📃 📘 Intermostats	Periods per Day	1 Period for whole Day
Climate	💻 👃 Living Room 💻 🦚 Schedule Layout	Number of Weekly Program Select Days for each Week	
Lighting	Home     Away	Monday Tuesday	Program 1 Program 1
Content	I Thermostat Log	Wednesday	Program 1
Media	Ideating/Cooling Units     Ideating/Cooling Units     Ideating/Cooling Units	Thursday Friday	Program 1 Program 1
Video	Custom Tabs	Saturday Sunday	Program 1 Program 1
Messaging		Sunday	Program I
Irrigation			
Pool Control			
UPS			
Interface			
Input/Output			
per per		Apply	

- 7. In the System Tree, select Schedule Layout for the Bedroom thermostat.
- 8. Set Number of Schedules to 2, Home and Away. Click Apply.

- 9. Set up the Bedroom **Home** schedule as follows:
  - a. Set Periods per Day to 4
  - b. Set the Number of Weekly Programs to 2
  - c. Click on **Program 2** for Saturday and Sunday; click **Program 1** for all other days.
  - d. Click **Apply**. *The screen will look like the one shown below.*

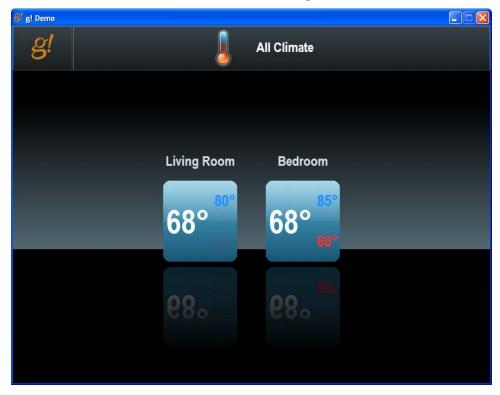
<mark>8</mark> g! Demo : Co	onfigurator (Press F1 for Help)			
System	Global Options	Schedule Layout : Hon	ne	
Security	Climate	Periods per Day Number of Weekly Programs	4 Periods per Day s 2 Weekly Program	
Climate	🔲 📕 Living Room 🔲 🚯 Schedule Layout	Select Days for each Weekl		
Lighting	🚯 Home 🚯 Away	Monday Tuesday	Program 1 Program 1	Program 2 Program 2
Content	I Thermostat Log ■ ↓ Bedroom ■ ♠ Schedule Layout	Wednesday Thursday	Program 1 Program 1	Program 2 Program 2
Media	Schedule Layout     Home     Away	Friday	Program 1 Program 1	Program 2 Program 2
Video	Thermostat Log	Saturday Sunday	Program 1 Program 1	Program 2 Program 2
Messaging	■ Generic HVAC Unit ■ Custom Tabs			
Irrigation	Interface Groups			
Pool Control				
UPS				
Interface				
Input/Output		Apply		
per per				

- 10. Select the Bedroom **Away** schedule in the System Tree, and set the properties as follows:
  - a. Set Periods per Day to 1
  - b. Set the Number of Weekly Programs to 1.
  - c. Click Apply.

<mark>8/</mark> g! Demo : Co	onfigurator (Press F1 for Help)		
System	Global Options	Schedule Layout : Awa	ау
Security	Climate	Periods per Day Number of Weekly Program	1 Period for whole Day       s       1 Program For Whole Week
Climate	<ul> <li>Living Room</li> <li>Schedule Layout</li> </ul>	Select Days for each Week	ly Program
Lighting		Monday Tuesday	Program 1 Program 1
Content	■ ↓ Bedroom ■ ♠ Schedule Layout	Wednesday Thursday	Program 1 Program 1
Media	Open State Stat	Friday	Program 1
Video	Thermostat Log     Heating/Cooling Units	Saturday Sunday	Program 1 Program 1
Messaging	☐ Generic HVAC Unit ☐ Custom Tabs		
Irrigation	Interface Groups		
Pool Control			
UPS			
Interface			
Input/Output		Apply	
per per			

#### Exercise 5: Check the Viewer

- *Overview* In exercises 1-4, you used the Configurator to set up the Climate app. In exercises 5 and 6, you will check your configuration in the Viewer and use the Viewer to set the heating and cooling set points for each period in each thermostat's schedule.
- How-to 1
  - 1. From the g!Tools MySystems screen, click the **Viewer** button. The Viewer interface displays the Home page.
  - 2. Click the g! icon to access the main menu then select the **Climate** icon to show the available climate zones. Select the **Living Room** zone.



📕 CrystalPad					
g!	👃 🚽 🚽 Living Roo	m 🕨	၂ TEMP		山 HISTORY
			Cool		
	Room Temp	8	<b>0°</b>		
	65°		Heat		
		6	<b>0°</b>		
	Fan: Auto 🔻	Mode	: Auto	•	

On this screen notice:

- The Heating setpoint and buttons to make adjustments are shown in lower right part of the screen in red
- The Cooling setpoint and buttons to make adjustments are shown in the upper right part of the screen in blue
- The current Room Temperature is shown left of center in white
- The thermostat and fan are running in Auto Mode
- Buttons at the bottom indicate and provide control for Fan state and Thermostat mode.
- Access is provided at the top to view the Schedules and History

3. Click the Up arrow next to the Heating Set Point to change the setting to 70 degrees.

🖉 CrystalPad						
g!		🚽 Living	g Room 🕨	) ТЕМР	SCHEDULE	山 HISTORY
				Coo	)I	
		oom Temp		8 <b>0</b> °		
	6	55°		Hea	t	
			-	70°		
		Fan: Auto		lode: Auto		

- After a short pause the heat Set Point begins to blink indicating that it is actively heating.
- 4. Click the arrow next to the Mode: button to display the selection list. Select the **Heat** mode from the list.



# Exercise 6: Check the Schedule tabs in the Viewer

*Overview* In this exercise you will check the Living Room and Bedroom schedules that configured in the previous exercises and adjust the period start times and set points.

How-to

1. Click the **Schedule** button at the top right of the screen. This brings up the schedule controls where the homeowner can adjust times and temperature for the thermostat schedule.

S <sup>I</sup> CrystalPad					n	<u>^</u>	
<u>g!</u>	-	L	iving Roon	n 🕨	၂ TEMP		屾 HISTORY
Home Schedule	Time		Heat		Cool	Fai	n Mode
	7:00 A	M	<mark>68°</mark>		76°		Auto
	9:00 A	M	<mark>60°</mark>		85°		Auto
Away	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Schedule							
Run Prog	jram 💌						

Note on this page

- The button on the bottom left displays the current program status. Click the arrow to the right of the button to select from the list: Run Program, Permanent Hold, Timed Hold, or Temporary Hold.
- 2. Click the **Home Schedule** tab then click **Mon, Tue, Wed, Thu** or **Fri** tab at the bottom to bring up the Home Schedule for the Living Room weekday settings as shown below.

g!	1	🚽 Livii	ng Room	•	J	Ø	<b>ت ا</b> لله الله
					TEMP	SCHEDULE	HISTORY
Home Schedule							
nome acheune	Time 7:00 AM	_	Heat		Cool		Mode uto
	12:00 AM		60°		78°	AL	uto
Away Schedule	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Run Prog	iram 💌						
CrowtalDad							
CrystalPad	1		ıg Room	• 🕨	) TEMP	SCHEDULE	L 山 HISTOR
	1	<ul> <li>Livin</li> </ul>	ıg Room	• •	ТЕМР	SCHEDULE	ىلىن
g! Home		<ul> <li>Livin</li> </ul>		• •	TEMP		山 HISTOR
g! Home	Time	Livin	Heat	• •	Cool		ші HISTOR an Mode
g!		Livin	Heat 68°		Cool		山 HISTOR
g! Home	Time		Heat		Cool		ші HISTOR an Mode
Home Schedule	Time 7:00 AM 9:00 AM	Livin	Heat 68°	Thu	Cool		шініstor an Mode Auto
g! Home	Time 7:00 AM 9:00 AM		Heat 68° 60°		Cool 76° 85°	Fa	an Mode Auto Auto
<b>B</b> Home Schedule	Time 7:00 AM 9:00 AM		Heat 68° 60°		Cool 76° 85°	Fa	шіл HISTOR Anto Auto

Notice that for each period, Day and Night you can adjust:

- Start Time
- Cool Set Point
- Heat Set Point
- Fan State
- 3. Use the arrows to change the settings to those below. Use the mouse to click the arrow; click and hold to quickly scroll through the times.
  - Day starts at 7:30am
  - Night starts at 10:00pm.
  - Day Cool setting is 74.

• Fan is ON (will run all day).

These are settings for Monday - Friday. Your screen should look like the one shown below.

g!	l	< Liv	ving Roon	n 🕨	ТЕМР	SCHEDULE	ніstory
Home Schedule	Time		Heat		Cool	Far	1 Mode
	7:30	M	68°		-74°		On
	10:00	PM	60°	Ē	78°		Auto
Away	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Schedule							

4. Click the **Sat** or **Sun** button to display the weekend schedule. Change the settings so that:

b.	Nigh	t starts	at <b>11:00 P</b>	М.			
CrystalPad							
g!	J	🚽 Li	ving Room		၂ TEMP	SCHEDULE	ШЛ HISTORY
Home							
Schedule	Time		Heat		Cool	Far	n Mode
	8:00 A	M	<mark>68°</mark>		<b>-76°</b>		Auto
	11:00 F	M	<mark>60°</mark>	E	<b>85°</b>		Auto
Away	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Schedule							
Run Progr	ram 🔻						

Day starts at 8:00 AM a.

- 5. Click the Away Schedule tab to display the Living Room schedule for when the house mode is set to Away.
- 6. Note that there is just one Heating set point and one Cooling set point, and that all the days are the same. Click the arrows to set the Heating to 55 and the **Cooling** to **90**. Your screen should look like the one shown below.

CrystalPad			X	1	0	
<u>g!</u>	<	Living Room		ე темр		山山 HISTORY
Home Schedule						
	Heat		Cool		Fan Mo	de
E	55°		90°		Auto	
Away Schedule						
Run Program	n 💌					

7. Click the Thermostat icon at the top of the screen (circled above) to view all climate zones, and then select the Bedroom icon to switch to the **Bedroom** thermostat.

B <sup>l</sup> CrystaPad	â A	Il Climate
	Living Room	Bedroom
	62° 🕬	85° 67°
	62° 88°	85° 85°

8. Click the **Schedule** button and select the Home schedule. Note that here there are four periods per day, with **Monday-Friday** the same, and then **Saturday** and **Sunday** the same.

g!			Bedroom		л темр	SCHEDULE	لللل HISTOR
Home Schedule	Time		Heat		Cool	Fai	n Mode
	7:00 AM		68°		<b>76°</b>		Auto
	9:00 AI	v	60°		85°		Auto
Away	5:00 PM		<mark>68°</mark>		<b>76°</b>		Auto
	10:00 PM		64°		72°		Auto
Schedule	Mon	Tue	Wed	Thu	Fri	Sat	Sun

**Note:** For more information about working with system modes, please refer to the *Common Applications Guide*.

# Exercise 7: Check the History in the Viewer

Example

Screen

*Overview* The **History** in the **Viewer** tracks historical information so that homeowner can see what has been happening with their system. Because the g!Demo has not been running for long, your history will be minimal.

😽 CrystalPad LLL HISTORY ) темр SCHEDULE g! 1 Bedroom Room Outside Heat Cool 90° 80° 70° 60° 50° 40° Coo 4 > 11:00 a 11:30 a 12:00 p 12:30 p 10:30 a 1:00 p February 19, 2013

#### Notes:

\_ \_ \_ \_ \_ \_ \_

# Lesson 5 Configuring Lighting Systems



#### Overview

This lesson shows you how to configure a lighting system.

You will:

- Learn how lighting systems are organized in the Configurator.
- Use the Configurator to setup the Communication and Lighting Interfaces that represent the basic lighting hardware.
- Learn how to create a custom keypad for the Viewer interface and add scenes.
- Learn how to create a custom interface layout for the Viewer interface.

#### Sample House

Our Sample House and attached garage will be configured with ten lighting loads and one physical keypad. The loads will be distributed as follows:

- Main House- Four dimmers and a physical keypad
- Theater- Three Dimmers
- Garage and Outside- Three Dimmers

#### **Requirements**

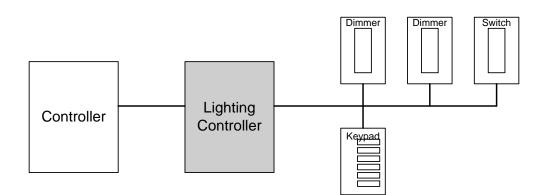
• A PC running g!Demo and g!Tools.

-OR-

• g! system controller and g!Tools.

#### Lighting Integration Overview

*Overview* The following diagram shows the equipment in a typical lighting system schematically, illustrating the components that are important to the g! system controller. The lines drawn between the lighting controller and the dimmers, switch and keypad represent the communication link between the controller and these devices. These links can be created using low-voltage cables, RF signals or the power lines themselves, depending upon the lighting system.



Integrating a lighting system with the g! software will provide the homeowner access to their system through the Viewer. This will enable them to:

- Turn loads on and off
- Set the brightness of loads controlled by dimmers
- Actuate pre-programmed scenes
- Set up a lighting schedule
- View status of the loads in the lighting system

- *Terms* The following terms are used in the Configurator to describe the equipment in a lighting system:
  - **Communication Device:** The method the g! software uses to communicate with an external device, including information about the connection type and protocol. In the overview diagram, the communication device uses one of the built-in COM ports on the ELAN controller.
  - Lighting Interface: The lighting controller or interface module.
  - **Switch / Dimmer:** The device that switches the load (turns lights on, off, or dim/brighten).
  - **Keypad:** Typically a wall-mounted controller with several **Scene** buttons. In some cases, a keypad can also switch a load.
  - **Virtual Keypad:** A software representation of the wall-mounted keypad that can also be used to control lighting loads.
  - **Custom Keypad:** A software keypad that is configured to provide a more personalized experience for the user such as access to user-preferred controls, or preferred buttons, etc.
  - **Custom Tab.** A custom interface page that can optionally be added to the lighting Viewer interface. The custom interface can be configured with any of the available controls.
  - **Scene.** A group of switches and dimmers that turn on to a specific level or turn off from a single command.
- *How-To* To integrate a lighting system with g!:
  - Add the Communication Device.
  - Add the Lighting Interface
  - Discover Devices to add the lighting loads and keypads.
  - Organize the Viewer interface with the desired keypads, custom interfaces, and custom controls.

Once the lighting interface has been added, the g! software is able (in most cases) to automatically import all of the lighting loads and keypads. This is accomplished by using the **Discover Devices** or **Read Config File** feature in the lighting interface.

## Exercise 1: Add Communication Device

*Overview* In this exercise, you will add a Communication Device to communicate with the lighting system. The communication device is the bridge between the g! software and the light switches, and is where you specify how the system is physically connected and what communication protocol should be used.

**Note:** Actual system setup may be different depending upon which lighting system is installed on site. Refer to the *Integration Notes* for the particular lighting systems for details.

How-To

 Start the Configurator, click the Lighting tab at left, then click Communication Devices, as shown below:

Sustam	Second Communication Devices
System	Lighting Interfaces
0	Keypad Interfaces
Security	Customizable Scenes
	🕂 🧧 Keypad Templates
Climate	Schedule
	🗜 Custom Tabs
Lighting	Interface Groups

- 2. Right-click **Communication Device** and select **Add New Communication Device**. In the dialog box:
  - a. Select Serial Port in the Type drop-down box
  - b. Select **Standard Connection** in the Communication Type dropdown box.
  - c. Enter "Lighting" as the Device Name.
  - d. Click OK.

Add New Communication Device									
Device Name	Lighting								
Туре	Serial Port	•							
Device		-							
Communication Type	Standard Connection	•							
Show Unsupported Devices									
	Cancel OK								

Quick Reference	e: Add New Communication Device
Device Name	Enter a name for the external device. This can be any name, but should be descriptive so that you can identify this specific device in the Configurator. DO NOT leave this field set to "New Device".
Туре	The type of connection you are using, such as serial port or Ethernet.
Device	This field will populate only if needed, depending on the selected Type.
Communication Type	This is the protocol of the communication. See the <i>Integration</i> <i>Note</i> for the specific lighting system for more information.
Show Unsupported Devices	Select this checkbox to display legacy devices on the Device dropdown list. Legacy devices have not been tested with the current version of g! and are no longer supported by ELAN. If you choose to install an unsupported device, a message will display to warn that the device is not supported by ELAN technical support.

- 3. Select the **Communication Device** in the system tree as shown below.
- 4. In the properties window at right, select the desired **COM Port** (NONE in the example below), then click **Apply**.

**Note:** The drop-down menu a list of all COM ports and display whether they are in use. Leave the selection set to **NONE** if you are using **g!Demo**.

<mark>8/</mark> g! Demo : Co	mfigurator (Press F1 for Help)			
System	Communication Devices	Communication D	Device: Lighting	
Security	<ul> <li>Lighting Interfaces</li> <li>Keypad Interfaces</li> <li>Customizable Scenes</li> </ul>	Name System #	Lighting 22426	
Climate	+ Keypad Templates - 🚯 Schedule	Device Type Location	Serial Port / Standard Connection SELECT >	•
Lighting Content	<ul> <li>Home</li> <li>Away</li> <li>Custom Tabs</li> </ul>	Enable Sharing Sharing Port	No D	-
Media	Interface Groups	COM Port Protocol	NONE	
Video		Baud Rate Flow Control	9600 None	- -
Messaging		Parity Data Bits	None	
Irrigation		Stop Bits	1	-
Pool Control				
UPS Interface				
Interface				
		Apply		

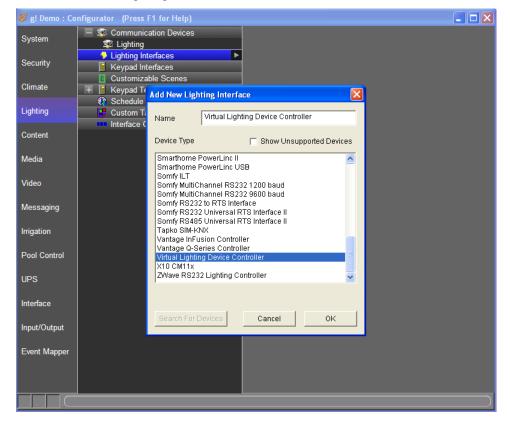
## Exercise 2: Add the Lighting System and Discover Devices

*Overview* Before beginning this exercise, be sure that you have completed Exercise 1, *Add the Communication Device.* You will need to associate the communication device with the lighting device in this exercise. For most lighting systems, the names of the devices will be populated automatically.

**Note:** Actual system setup may be different depending upon which lighting system is installed on site. Refer to the *Integration Notes* for the particular lighting system for more details.

How-To

1. On the Lighting tab, right-click Lighting Interfaces and select Add New Lighting Interface.



2. Select Virtual Lighting Device Controller, and then click OK

<mark>81</mark> g! Demo : Co	onfigurator (Press F1 for Help)		
System	Communication Devices Solution Lighting	Lighting Interface : V	irtual Lighting Device Controller
Security	📃 🌻 Lighting Interfaces 📃 🗣 🍤 Virtual Lighting Device Controller 🕨	Name	Virtual Lighting Device Controller 22427
Climate	Lighting Devices (None) Keypad Interfaces	System # Device Type	Virtual Lighting Device Controller
Lighting	Customizable Scenes	Communication Device	Lighting
Content	Chedule     Schedule     S		
Media	Custom Tabs		
Video			
Messaging			
Irrigation			
Pool Control			
UPS			
Interface			
Input/Output		Apply	Discover Devices
<b>per</b>		C Obba	

3. Verify that the Communication Device is set to Lighting.

 Click **Discover Devices** at the bottom of the screen. After a slight pause, the lighting loads and keypads will be displayed in the System Tree.

Once the Discover Devices process is complete, there will be ten dimmers and one keypad in the configuration.



When you have finished the configuration, check your work in the Viewer.

the Viewer Interface

Check

- 1. From the g!Tools MySystems screen, click the Viewer button.
- 2. From the homepage click the **g!** icon to access the main menu then click the **Lighting** icon.
- 3. You will see the "Master" keypad listed in the Configurator.

<i>ទី</i> / CrystalPad				
g!	<b>_</b>	•	Master	
		-	On	
			Scene A	
			Scene B	
			Scene C	
			Scene D	
			Off	

**Note:** The Configurator adds Viewer interface pages for each keypad by default. Note that individual loads (switches and dimmers) don't automatically display in the interface.

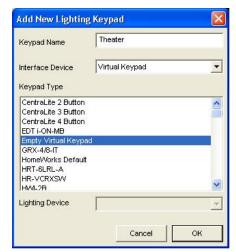
**Note:** The names of the buttons that display in the virtual keypad can be edited. See Exercise 3, *Create a Custom Keypad* for more information on editing the button text.

### Exercise 3: Create a Custom Keypad

*Overview* Before beginning this exercise, be sure that you have completed Exercise 2, *Add the Lighting System and Discover Devices.* 

In this exercise, we will create the graphic layout for a simple three-button keypad to control lighting scenes in the theater.

- How-To1. In the Configurator Lighting tab, right-click Keypad Interfaces in the System Tree.
  - 2. Click Add New Keypad. The Add New Lighting Keypad window displays.
    - a. Type "Theater" in the Keypad Name box.
    - b. Select Virtual Keypad from the Interface Device drop-down list.
    - c. Select Empty Virtual Keypad as the Keypad Type.



- d. Click **OK**. An empty custom keypad bezel displays in the properties window. This keypad is now part if the system and can be seen in the Viewer.
- In the properties window, click on the new keypad bezel once to select it notice that the keypad is outlined in yellow. Click the blank keypad again and notice that the yellow outline turns to red. A red outline indicates that the keypad can be moved or resized.

4. Move the mouse over the red line on the left side of the keypad. The cursor turns into a double-headed arrow to indicate that you can click and drag to resize the selected object. Click and hold your left mouse button, then move your mouse to the right to enlarge the blank keypad bezel until it occupies about half of the black background:



5. Right-click inside the empty keypad at (or near) the spot where you want to add a button and select **Add New Control** from the pop up menu. *A new control appears on the keypad*.



- 6. Click the New Control to select it. *The Lighting Keypad Button properties window displays.*
- 7. Type House Lights in the Text field.

ighting Keypad Butto ext House Lights	Radiu	is ——	-1
ype Scene	•		
Button Press Commands	Adi	i Command	Delete Command
Interface Device	Sub-Device	Action	
Interface Device		Action	Delete Command

8. Repeat steps 3 and 4, adding two more buttons for a total of three. Name these buttons **Show Movie** and **All Off**.

- 9. Resize the House Lights button.
  - a. Click the House Lights button. *It will be surrounded by a yellow line, indicating that it is the selected object.*
  - b. Move the mouse over the yellow line on the left or right hand side.

The cursor will become a double headed arrow.

- c. Click and hold the mouse button. *The yellow line will turn red, indicating that the button can be resized.*
- d. Stretch the button horizontally until you

can read all of the words "House Lights". 10. Center the House Lights button in the keypad.

a. Place the cursor to the center of the button.

The double headed arrow will become a four way arrow.

- b. Click and drag the button so that it is centered left and right, and in the top third of the keypad.
- 11. Align the buttons on the keypad.
  - a. Click the All Off button to select it, then hold the CTRL keyboard key and click the Show Movie and House Lights buttons to select them. *Individual* selected button will be highlighted in yellow, and all three will be surrounded by a green box.
  - b. Right-click the **All Off** button and select **Align Left Edges**. *All of the buttons will line up with the left side edge of the House Lights button. Since the House Lights button was the last one selected in the group it will be the master that the other controls will reference in the following steps*.
  - c. Right-click the **All Off** button and select **Make Same Width**. *All of the buttons will become the same width as the House Lights button.*
  - d. Right-click the All Off button and select **Make Same Height**. *All of the buttons will become the same height as the House Lights button.*
  - e. Right-click the All Off button and select **Space Evenly (Y)**. This will space the buttons evenly on the Y-axis (vertically).

Your keypad should now look similar to this:

(	House Lights
0	44444444444
C	Show Movie
6	All Off

## A few notes about working with the keypad control:

- The last keypad control selected is the "master" for right-click options such as resizing and centering.
- The keypad itself is resizable.
- To move a control, click and drag it to its new location.
- To resize a control, click the red border and drag it in the desired direction.
- Use the radius slide control to make the control more or less round.
- Selected item(s) can be moved "bumped" a pixel at a time using the keyboard arrows.

Lighting Key	pad Button Properties Reference
Text	The word(s) that will appear on the button in the user interface.
Туре	Selects the button action. Choices are:
	<b>Toggle</b> - Changes the load or scene from one state to another (on/off)
	<b>Momentary</b> - Typically used for dimming, this allows configuration of a lighting action based on press and release, such as begin/end dim.
	<b>Scene</b> - Activates a group of lighting devices to a pre-configured level. In contrast to the toggle button, pressing a scene button a second time reissues the same scene command.
Radius	Click and drag the slide control to the right to make the corners of the button rounder; to the left to make them squarer.
Button Press Commands	Action to be executed upon button press. Only applies to Momentary button type.
Button Release Commands	Action to be executed upon button release.

### Exercise 4: Add Scenes to Keypad Buttons

*Overview* Before beginning this exercise, be sure that you have completed Exercise 2, *Add the Lighting System and Discover Devices* and Exercise 3, *Add a Custom Keypad.* You will need to associate the lighting loads added in Exercise 2 with the keypad buttons added in Exercise 3.

In this exercise, you will assign lighting loads to turn on at specified levels when buttons on the Custom Keypad are pressed.

- *How-To* 1. In the Configurator, Lighting tab, under **Keypad Interfaces**, select the **Theater** keypad interface.
  - 2. Click the **House Lights** button on the keypad. *The Lighting Keypad Button window opens.*

ighting Keypad Buttor ext House Lights	n Radiu	IS	_]
ype Scene	•		
Outton Press Commands	Ad	d Command	Delete Command
Interface Device	Sub-Device	Action	
Button Release Commands	s Adı	d Command	Delete Command

- 3. Create a scene for the House Lights button.
  - a. Verify the **Type** is set to **Scene**.
  - b. Click the Add Command... button in the Button Release Commands section. The Add Component Lighting Scene window opens.
  - c. From the Lighting Device column, select Overhead Lights, then from the Action column, select Set Level to 100% and click OK.

ighting Device	Action	
Garage	Off	^
Guest Bedroom	Set Level to 100 %	
Kitchen	Set Level to 99 %	
Living Room	Set Level to 98 %	
Master Bedroom	Set Level to 97 %	
Outside Lights	Set Level to 96 %	
Overhead Lights	Set Level to 95 %	
Porch	Set Level to 94 %	
Rope Lights	Set Level to 93 %	
Sconces	Set Level to 92 %	
	Set Level to 91 %	
	Set Level to 90 %	
	Set Level to 89 %	~

- d. Click the **Add Command...** again. Select **Sconces** in the Lighting Devices column and set the sconce level to 100%. Do the same for **Rope Lights**.
- e. Close the Lighting Keypad Button properties window.

ext House Lights	Radius		-]
ype Scene 💌	]		
Button Press Commands	Add	Sommand	Delete Command
N		1	N 43
Interface Device	Sub-Device	Action	
Button Release Commands	[Add1	Command	Delete Command
	<u></u>	1	
Button Release Commands Interface Device	Add i Sub-Device	Command	100 %

- 4. Select the **Show Movie** button, and create a scene for this button as follows:
  - a. Set the Overhead and Sconces to "Off"
  - b. Set the Rope Lights to 30%.
  - c. Close the Lighting Keypad Button properties window.
- 5. Select the **All Off** button. For this scene, set all three loads to "Off". Close the Lighting Keypad Button properties window.

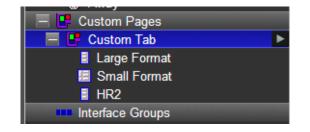
## Exercise 5: Create a Custom Interface

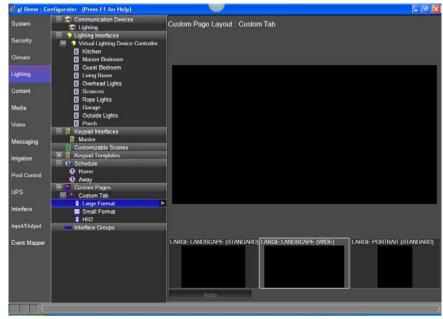
*Overview* Before beginning this exercise, be sure that you have completed Exercise 2, *Add the Lighting System and Discover Devices,* Exercise 3, *Add a Custom Keypad,* and Exercise 4, *Add Scenes to Keypad Buttons.* 

In this exercise, you will create a custom user interface that includes a keypad and some individual lighting controls.

When creating custom User interfaces for a homeowner, it is important to note that you need to create a separate layout for each interface that the homeowner will be using to access their system, such as an in-wall touch screen and an iPhone.

- How-To1. From the Configurator, Lighting tab, right-click Custom Pages in the System Tree, then select Add New Custom Page.
  - 2. Type "Custom Tab" in the **Name** field.
  - 3. Click the + sign next to **Custom Tab**, select **Large Format**, then select Large Landscape(Wide) from the properties pane on the right.





- 4. Add the Custom Keypad created in previous exercises to the custom tab.
  - a. In the blank area in the properties window, right-click and select Add New Control. The Add New Control window opens.
  - b. Select Lighting Keypad from the Control Type list, and then click OK. A preview box labeled Lighting Keypad will appear on the page.

Control Type Intercom Control ( Light Dimmer Control Light Preset Contro Light Rocker Contro Light Rocker Contro Light Scene Buttor Light Scene Buttor	rol ol rol rol (One-Way) n (Customizable)	^
Light Dimmer Contr Light Preset Contro Light Rocker Contro Light Rocker Contro Light Scene Buttor Light Scene Buttor	rol ol rol rol (One-Way) n (Customizable)	^
Light Switch Contr Light Toggle Contr Lighting Global Co	rol ol	
Lighting Keypad Numeric Text Output Momentary Output Toggle Butt Picture from Intern Dicture from Shore	ton et	~

- c. Select the box to display the Lighting Keypad Properties window.
- d. Select **Theater** from the **Connect To** drop-down list. This associates the Theater keypad you created in Exercise 3 with the keypad control on the custom page.

Lighting Ke	eypad Prope	rties				×
Name	Lighting Ke	ypad			Picture	e
Text Color	🔽 Default					
Face Color	🔽 Default					
Radius	🔽 Default					
Shading	🔽 Default					
Shading	🔽 Default					
Style			- E	Jorder		-
Text Size	🔽 Default		Ļ	Align		-
Options				Iniversal Junction		-
Connect To		Theater				-

e. Close the Lighting Keypad Properties window, and click Apply.

f. Click the small control again and resize it so that it fills most of the height of the screen. Move it to the left side as shown.

**Note:** See Exercise 3, *Add a Custom Keypad* for instructions on resizing and moving custom controls.

🥮 g! Demo : (	Configurator (Press F1 for Help)	
System	Communication Devices	Custom Page Layout : Custom Tab
Security	<ul> <li>Lighting Interfaces</li> <li>Virtual Lighting Device Controller</li> </ul>	
Climate	E Kitchen E Master Bedroom	
Lighting	Guest Bedroom	
Content	Overhead Lights     Sconces     Rope Lights	
Media	Garage Outside Lights	
Video	Porch	Lipping Appass
Messaging	Customizable Scenes	
Irrigation	Schedule	
Pool Control	🚯 Away	
UPS		>
Interface	Small Format	
Input/Output	Interface Groups	
Event Mapper		LARGE LANDSCAPE (STANDARD) LARGE LANDSCAPE (WIDE) LARGE PORTRAIT (STANDA
		Apply

- 5. Add buttons for the Garage, Porch, and Outside Lights to the interface to turn these lights on and off.
  - a. Right-click in the open area to the right of the keypad control you just created, and select **Add New Control**.
  - b. Select Light Toggle Control, and then click OK.

Name	Light Toggle Contr	ol
Control Type		
Light Switch	provide a second s	^
Light Toggle	California (C. 1977)	
Lighting Glob		
Lighting Key Numeric Tex		
	ι entarγ Button	
Output Mon		
Picture from		
Picture from		
Pool Circuit S		
Pool System		
Region (Rais		
Region (Sun		
Security Par		
Shade 3 But	ion	
Chada Draa	4	<u> </u>

- c. Select the Light Toggle Control and when it is highlighted in yellow, do the following:
  - Move the control to the right of the Keypad, and move it up to align with the top of the keypad.
  - Name the control "Garage Lights".
  - Select Garage in the Connect To drop-down list.

Light Toggle	Control Prop	erties			
Name	Garage Lights			Pic	ture
Text Color		Select	t Color	Use	e Default
Face Color		Select	t Color	🔽 Use	e Default
🖵 Transpar	ent (Requires B	ackground Tex	ture)		
Radius					Default
Shade In	Ī				Default
Shade Out	Ī			_	Default
Style		Border			Y
Text Size	12 pt	✓ Align			<b>*</b>
Text Quality		Funct.			Y
Connect To	Garage				•

- d. Add two more Light Toggle Controls underneath the Garage Lights button one for Porch Lights and one for Outside Lights. Connect each to the appropriate load.
- e. Right-click to align the left edge of the buttons and space them evenly on the Y-axis. *At this point, the Custom interface should look something like the example below.*

Custom Tab Layout : Custom Tab	
	Garaje Ligi te
	Porca Ligits
	01818-1318
Lighting Keypad	

6. Add three Light Dimmer Controls to the Custom interface to control the rope lights, sconces and overhead lights.

- a. Right-click the open area below the toggle controls and select Add New Control. *The Add New Control window opens*.
- b. Select Light Dimmer Control from the list, and then click OK.

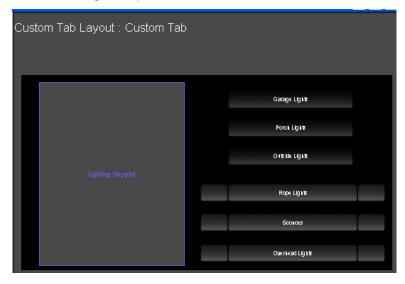
Add New C	ontrol	
Name Control Type	Light Dimmer Control	
Light Dimme Light Prese Light Rocke Light Rocke Light Scene Light Switc Light Toggle Lighting Glo Lighting Ke Numeric Te	t Control er Control er Control (One-Way) e Button (Customizable) e Button (From Keypad) h Control e Control ibal Control ypad xt nentary Button gle Button	
Disture from		ок

- c. Select the Light Dimmer Control highlighted in yellow, and in the Light Dimmer Properties window:
  - Name the control "Rope Lights"
  - Select Rope Lights from the Connect To drop-down list.

Light Dimn	ner Control Pi	operties			X	3
Name	Rope Lights				Picture	1
Text Color	🔽 Default					
Face Color	🔽 Default					
Radius	🔽 Default					
Shading	🔽 Default					
Style		Hz/Arrows	•	Border	-	
Text Size	🔽 Default			Align	~	(
Options			-	Universal Function	Ŧ	(
Connect To					•	1
🔽 Default	Behavior					

Add two additional dimmer controls below the Rope Lights dimmer
 — one connected to the Sconces, and the other connected to the Overhead Lights.

e. Use the right-click menu to resize and align the three dimmer controls along the left edge and space them evenly on the Y-axis. At this point, the Custom interface should look something like the following example.



When you've finished creating the custom interface, check your work in the Viewer.

the Viewer Interface

Check

 Start the Viewer, from the homepage click the g! icon to access the main menu then click the lighting icon to access the available lighting interfaces. There should be 3 interfaces shown.



2. Click the **Theater** icon. You should see the three button keypad in the center.

🖁 CrystalPad			
<u>g!</u>	<b></b>	Theater	
	finner		
		House Lights	
		Show Movie	
		All Off	

3. Click the light bulb to return to the available lighting interfaces then click the **Custom Tab**. You should see the Theater Keypad on the left, the toggle controls on the upper right, and the dimmer controls on the lower right. Click the buttons on the Theater Keypad and verify that the controls associated with each button move to their intended position.

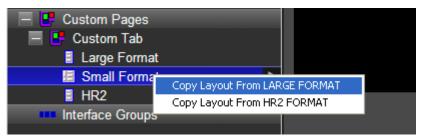
<i>🕙</i> CrystalPad						
g!	<b>Q</b>		Cust	om Tab 🕨	>	
					Garage Lights	
	House	Lights			Porch Lights	
					Outside Lights	
	Show I	Novie				
					Rope Lights	
	All C	Off			Sconces	
					Overhead Lights	

# Exercise 6: Copy the Custom Tab to a Different Resolution

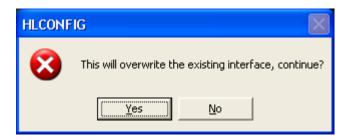
*Overview* Before beginning this exercise, be sure that you have completed Exercise 5, *Create a Custom Tab.* In this exercise, you will copy that interface to a new resolution for use on a different type of interface device, an iPhone for example.

When creating custom user interfaces for a homeowner, it is important to note that you need to create a layout for each interface that the homeowner will be using to access their system, such as an in-wall touch screen and an iPhone.

- How-To
- 1. From the Configurator, Lighting tab, select the Custom Tab created in the previous exercise. Expand the resolution options for this tab if not already expanded.
- 2. Click the **Small Format** (iPhone/iPod Touch Layout) and select **Copy** Layout from LARGE FORMAT.



3. Select Yes in the warning message that displays. *There currently is no existing interface for the Small Format, so it's OK to overwrite it.* 



4. The custom tab displays in the Small Format resolution.

**Note:** The custom keypad, buttons, and dimmers are all present, and are already configured as they were for the Large Format resolution but since this interface is smaller some adjustments may be required, particularly when going from landscape to portrait.

Custom Tab Layout : Custom Tab		Custom Tab Layout : (	Custom Tab	
	Garage Lights Porch Lights		Garage Lights	
Lighting Kaypad	Outside Lights		Lighting Keypad	
	Sconces Overhead Lights		Rope Lights Sconces	
			Overhead Lights	
SMALL LANDSCAPE SMALL F	ORTRAIT	ihting Keypi	SMALL PORTRAT	

5. Use any of the methods described in the previous exercises to rearrange the interface to be more usable for the homeowner.

For example:

- Shorten button names
- Resize the buttons
- Move the buttons and/or keypad

# Exercise 7: Set up a Schedule in the Viewer

*Overview* The lighting schedule is set up in two parts. First, you create a framework or foundation for the lighting schedules in the Configurator. Then the actual scheduling is set in the Viewer, based on the framework created in the Configurator.

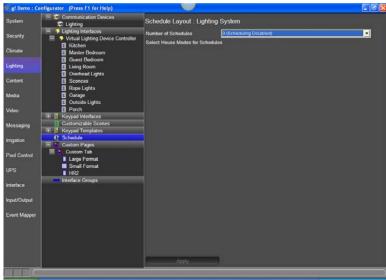
**Note:** You may choose to hide or show the Lighting Schedule interface from certain touch screens using the Interface Devices options on the Interface tab in the Configurator. See steps below for details.

Lighting schedule framework is based on House Modes, such as Home or Away. You may choose to create a schedule for each mode individually; create one schedule for all modes; create a specific number of schedules where more than one House Mode shares certain settings, or disable scheduling entirely.

Lighting Periods are then defined by name in the Configurator to provide different times of the day that Lighting schedule changes are executed. Finally, in the Viewer you will define the time of day for each Lighting Period and add lighting commands to be issued at that time.

In the following example we will setup the system to use two different schedules, one for when the system is in Home mode and the second for when it is in Away mode. For each schedule we will configure three lighting periods.

*How-To* To configure the number of Schedules to build your framework around:



1. Navigate to the Lighting tab in the Configurator and select Schedule in the System Tree.

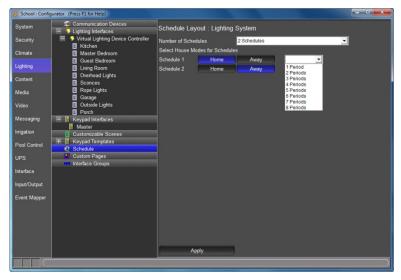
2. To edit the number of schedules, click the **Number of Schedules** field. Select **2 Schedules**.

Schedule Layout : Lighting System						
Number of Schedules	0 (Scheduling Disabled) 📃 🚽					
Select House Modes for Schedule:	0 (Scheduling Disabled) 1 (One Schedule for all Modes) 2 Schedules					

- If some schedules will be shared by more than 1 House Mode, select the appropriate number of schedules.
   If you want to set a unique schedule for each House Mode, select the same number of schedules as you have House Modes.
   (In the above example, we would choose 2 Schedules)
- To use one Schedule for all House Modes, select 1 Schedule.
- To disable Scheduling on the Lighting tab, select 0 schedules.
- 3. Select Home for schedule 1 and Away for schedule 2 then click Apply.

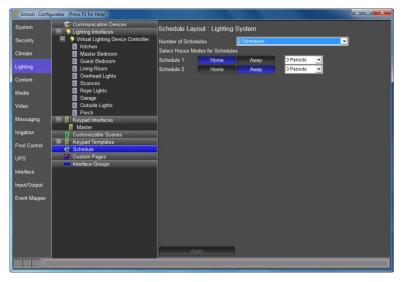
Schedule Lay	out : Lighting	System		
Number of Sched	ules	2 Schedules		•
Select House Mo	des for Schedul	es		
Schedule 1	Home	Away	-	
Schedule 2	Home	Away	-	

- In this example, the Home mode will use Schedule 1, and the Away mode will use Schedule 2.
- 4. Click on the drop down box to the right of **Schedule 1 Home** and select **3 Periods** to add to the **Home** schedule.



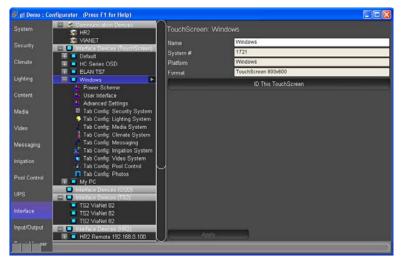
• Each schedule may have up to 8 periods. Note that this setting only creates the framework for schedule periods. The setup for time of day etc. will occur in the g!Viewer.

5. Add 3 periods to **Schedule 2 Away** by repeating step 4. When finished your screen should look as shown.



Now that the framework for the Lighting Scheduler is complete, you will configure which screens have access to edit, and view the lighting schedule user interface.

6. Click the Interface tab to access the Interface Devices (TouchScreen) options, then click the + next to the Windows touch screen in the list.

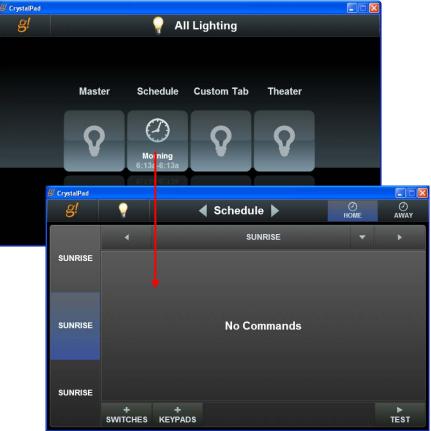


- 7. Click on the **Tab Config Lighting System** in the system tree to configure the visible lighting devices for your PC.
- 8. Select the **Builtin: Schedule** item listed in the Available Tabs section then click **Add Tab** and click **Apply** to activate the schedule user interface.

	Communication Devices	Tab Layout Windows: Ligh	iting System	
		- Default Tab	SELECT>	
Security	🔚 🔲 Interface Devices (TouchScreen)	Navigation Mode	Default	
Climate	🔳 🗖 Default			
Calmane	I OSD	Navigate to Default Page First	No	2
Lighting	🗄 📮 ELAN TS7			
Lignung	🗏 📮 Windows	Available Tabs		Visible Tabs
Content	Power Scheme			
Content	Advanced Settings			KEYPAD: Master
Media	Tab Config: Security System			KEYPAD: Theater
meula	Tab Config: Lighting System		Add Tub >>	INTERFACE: Custom Ta
Video	Tab Config. Media System			BUILTIN: Schedule
VIGEO	Tab Config: Climate System			
Messaging	Tab Config. Messaging	6		
nessaying	🗶 Tab Config: Irrigation System			
Irrigation	🚺 Tab Config: Video System		Move Up	
ingation	🐝 Tab Config: Pool Control			=
Pool Control	🚺 Tab Config: Photos			
- uur cuntrur	🗐 🔲 My PC			
UPS	Interface Devices (0:SD)			
	🔚 📮 Interface Devices (FS2)			
nterface	TS2 ViaNet 82			
	TS2 ViaNet 82			
nput/Output	TS2 ViaNet 82			
ubon contraction		Apply	1	

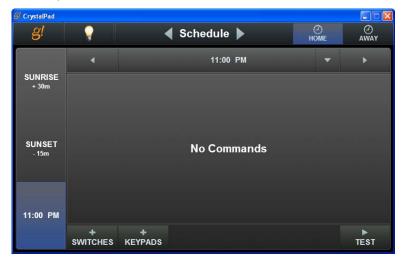
In the following steps, you use the Viewer Lighting Scheduler user interface to configure the lighting commands and the times when they are executed.

- 9. Start the Viewer, click the **g!** icon to access the main menu, then click the lighting icon to access the available lighting zones.
- 10. Click the **Schedule** icon to access the Lighting Schedule page.



• Notice at the top right you can select to view or edit either configured schedule, with the name depicting the House Modes using that schedule.

- In the main window below that is an area for each scheduled period showing its name and the time it is set to run. By default, all schedules are set to **Sunrise**.
- For each Period there are controls to adjust the time type, time, add commands to the period, and test the schedule.
- 11. Configure the start times for each period for the Home Mode. Set the Morning period to be 30 minutes after sunrise, the Evening to be 15 minutes before sunset, and the Late Night to be at 11:00pm.
  - a. For the Morning period, since Sunrise is already selected, click the right arrow (later) twice to set the morning period 30 minutes after sunrise.
  - b. For the Evening and Late Night periods, first select the type of time by clicking the time type in the top center of the period, and then select "Sunset" or "Clock." Then click the left or right arrows to adjust the increments as desired. For this exercise, set the Evening period to be 15 minutes before sunset and the Late Night to use the clock at 11:00pm. Your screen should look like the one shown below.



- 12. Click on the Morning period then click the **+ Switches** button at the bottom of the screen to open the **Add Commands** page.
- 13. Select the Device **Porch** light, the Command **Off**, and then click **+** to configure the porch light to turn off in the morning period.

CrystalPad					
<b>D</b> .		Schedule Home			AWAY
		Add Commands To M	orning (SUNRISE + 30m)		~
	Devid	e	Cor	nmand	
Overhead Ligh	te		Off		+
Sconces Rope Lights		On (Last Level)			
					On Full
		Garage			Go to 90 %
		Go to 80 %			
Outside Lights					
Porch			Go to 70 %		

- 14. Click the check mark with the top right to exit the Add Commands page.
- 15. Repeat the above steps to add the **Porch Lights-On Full** and the **Outside Lights-Go to 70%** to the **Evening** period.

<b>8</b> CrystalPad						
g!	<b>Q</b>	-	Schedul	e 🕨	Юме	Ø
SUNRISE + 30m	•		SUNS	ET - 15m	•	•
SUNSET - 15m	Outside Ligh Porch	ts		Go to 70 % On Full		
11:00 PM	+ switches	+ KEYPADS				► TEST

16. Repeat the steps above to add the **Outside Lights – Turn Off** to the **Late Night** period. Your Home Schedule should now look like the screen below.

🖉 CrystalPad			
g!	<b></b>	Schedule	Ø away
		11:00 PM 🔫	•
SUNRISE + 30m			
SUNSET + 30m	Outside Ligh	ts Off	
11:00 PM			
	+ SWITCHES	+ KEYPADS	TEST

Repeat the steps above to add the **Away** schedule as follows.

- Morning: Sunrise +30 min: Porch Off
- Dusk: Sunset -15 min: Porch On Full, Outside Lights Go to 70%
- Evening: 8:15 pm: Living Room, Kitchen, Master Bedroom all On Full
- Late Night: 11:30pm: Living Room, Kitchen, Master Bedroom, Outside Lights – Turn Off

📕 CrystalPad					
g!	<b>?</b>	•	Schedule 🕨	(2) Номе	() AWAY
SUNRISE + 30m	•		11:30 PM	•	+
SUNSET - 15m	Living Room Kitchen		Off Off		an a
8:15 PM	Master Bedro Outside Light		O <del>ff</del> O <del>f</del> f		
11:30 PM	+ switches	+ KEYPADS	da ku kunda ku da na da ku da na		TEST

## Notes:


## Lesson 6

## Distributed A/V Systems: Part 1



#### Overview

This lesson shows you how to set up a distributed A/V system with four music sources distributed to 2 listening zones.

You will:

- Learn how a multi-zone audio system is organized in the Configurator.
- Configure a zone controller for six zones and add sources.
- Configure the zones.
- Check the Viewer interface to confirm proper configuration.
- Understand the various features available in the Viewer.

#### **Sample House**

Our sample house will be configured with two distributed A/V zones:

- Living Room
- Bedroom

#### **Requirements**

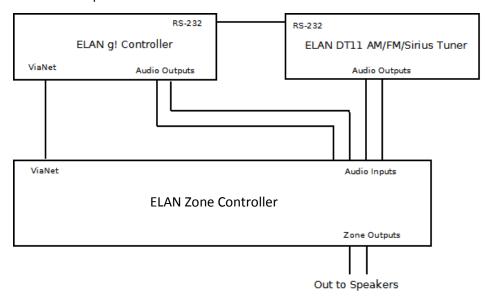
• A PC running g!Demo and g!Tools.

-or-

• g! system controller and g!Tools.

## Distributed A/V Integration Overview

*Overview* The following diagram shows the equipment in a four source / two zone distributed Audio system schematically, illustrating the components that are important to the g! system controller. In our example we will be using a g! system controller to control, its two audio outputs and an ELAN DT11 dual tuner for sources as shown below.



Integrating a distributed Audio system with g! will provide the homeowner control of their audio system through the g! Viewer. For each audio zone in their home, they can:

- Turn the zone on and off
- Select and control a source for the zone
- Adjust the audio volume in the zone
- Change the zone settings, such as bass and treble

- *Terms* The following terms are used in the Configurator to describe the equipment in an audio system:
  - **Communication Device:** The method the g! software will use to communicate with an external device, including information about the connection type and protocol.
  - Audio Zone Controller: The device used to distribute audio throughout the home.
  - **Keypads and Interfaces:** A custom defined interface for controlling audio source components.
- *How-to* Integrating a distributed audio system with g! consists of the following steps:
  - Add and Configure **Sources**.
  - Add the **Communication Device**
  - Add the Zone Controller for the distributed audio
  - Configure the Audio Sources and Zones in the audio zone controller.

## Exercise 1: Setup the Content Tab

OverviewIn Exercise 1, you will set up a music library to use with the Internal Player. This<br/>source is used to play digital music (MP3 or WAV files) through the g! system<br/>controller audio outputs as a source to an audio zone controller.<br/>Please refer to the HC Internal Player Integration Note for more detailed<br/>information.

#### How-to 1. Digital Music Library Setup (non-iTunes)

When setting up a library of music to use with the internal player, it is best to setup files as follows:

File Structure	File Structure is expected to be: "Artist Name\Album Name\Music files".
	In other words, make directories for each artist. Within each artist directory, place folders for each album. Within the album folders, place the music tracks for that album. Though ID3 info is read and used to sort tracks, keeping files in this structure makes the files much easier to browse on their own, and ensures that correct artwork will be used.
	Note that file structure is very important for WAV files, as WAV files do not contain any ID3 information and g! will populate the Artist/Album/Track information from the folder names when the folders are arranged in this format
MP3 Tags	Files should be appropriately tagged with ID3 information for Artist, Album, Track, and Track number. Other information such as composer or embedded album art is not used at this time, but may be included if desired.
Album Art	Album art should be placed in the Album folder (if available). Note that the expected art format is JPEG, and the largest JPEG image in the folder will be used by default. File name is not important, though typically "folder.jpg" is used.
	If no art is available in the folder, g! will automatically look up art from internet sources based on the ID3 information. Note that art found on the internet may not be correct, and can vary in quality so populating art prior to integrating your music library as explained above is preferred. See Common Mistakes below for tips on correcting any issues.
Additional Files	Some music libraries may contain additional files, such as lyrics or guitar tabs in the folder. These files will not be used and may be omitted.
WAV Files	WAV files must be uncompressed.

#### 2. Add digital music to an HC Hard Drive.

HC's with internal Hard Drives (such as the HC-12) may have music copied to them over the network and accessed as local files. This may be advantageous not only for speed, but reliability; as NAS or network computers may have issues that prevent file

access. Be sure to scan shares when finished adding music or after any music library change.

- a. To copy files to an HC with an internal hard drive open Windows Explorer or "My Computer" ("Computer" in Win7/Vista)
- b. Type in the network path for the HC music folder (\\hcxx\music)
- c. Files may be copied and pasted directly into this folder.

**Note:** You may also map the HC share folder as a network share to remember the location for future access from the toolbar while in My Computer.

#### 3. Add Network Shares to an HC Controller

Network shares can be added to an HC as music sources. Network shares should either be on a computer that is on 24 hours a day, or better yet, on a NAS drive. It is recommended to use a NAS drive installed by the dealer, as this drive will only be used for network storage for the HC, will be on 24 hours a day, and is a part the installer may be familiar with and in control of. NAS drives or network shares must be available on the same subnet as the HC controller, and must be configured without authentication (username/password) for access. Be sure to scan shares when finished adding music; see **Scanning Shares** below.

- a. To add new music network share folders (not iTunes) click on the Content tab of Configurator.
- b. Right-click "Audio Share Folders" and "Add New Audio Share Folder".
- c. For music stored on a NAS drive, enter the information as below:

Add Audio Share	Folder 🛛 🔀	
Name	NAS Share	
Path - Music files	\\NAS_DRIVE_NAME\SHAREFOLDER	
Path - iTunes XML		
User Name		
Password		
	Cancel OK	

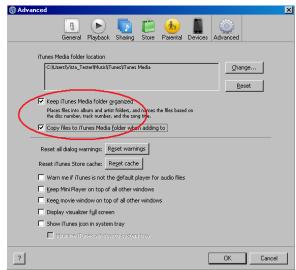
Name	Enter a name for your reference, or duplicate the path.	
Path- Music Files	Enter the network path. Typically this is formatted like \\computername\sharefoldername.	
Path- iTunes XML	Leave Blank for non-iTunes libraries. (see iTunes below for iTunes libraries)	
Username	This is an unsupported feature. Use open shares.	
Password	This is an unsupported feature. Use open shares.	

d. Scan the share folder.

#### 4. Add iTunes Music.

**Note:** The following is the **ONLY** supported iTunes setup. The iTunes folder contains a file named "iTunes Music Library.xml" that is generated and maintained by iTunes and contains the meta data and location information for all files and playlists in the iTunes library. The g! software will use this file for indexing the g! music library with iTunes. Network shares should be on a computer that is on and available 24 hours a day, 7 days a week.

- a. Install iTunes on a computer on the network. Use the default iTunes settings.
  - CHANGING THE DEFAULT LOCATION OF THE ITUNES LIBRARY IS NOT SUPPORTED.
  - The library MUST be located in the iTunes folder on the computer for g! to correctly index the music and playlists.
- The computer must remain on and connected to the network 24/7.
- b. Set the iTunes folder to an open share.
  - Using Windows Explorer, navigate to the iTunes folder and right click it to enable sharing.
  - In Windows XP, the path to the folder should be: C:\Documents and Settings\username \My Documents\My Music\iTunes\
  - In Windows Vista, the path should be: C:\Users\username \Music\iTunes\
  - In Windows 7, the path should be: C:\Users\username \My Music\iTunes\
  - The computer used to host iTunes music to the HC-Controller must be always present and powered on 24/7.
- c. It is recommended to use iTunes library organization when integrating with g! to help keep a consistent folder structure. From the iTunes Edit menu select Preferences then the advanced tab.



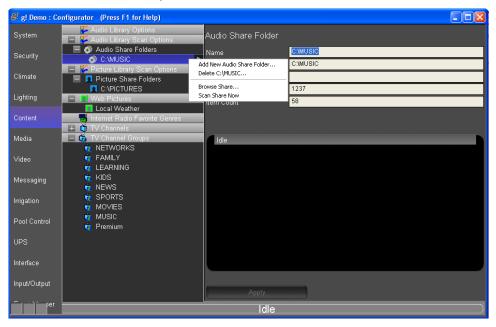
- d. In the Configurator, go to the Content tab and add a new Audio Library Share Folder:
  - Set the name to "iTunes".
  - Set the "Path- Music Files" field to point to the iTunes Media folder within iTunes using the following format: \\computername\sharename\iTunes Media, where "computername" is the UNC network name of the computer upon which iTunes resides, and "sharename" is the name

given to the iTunes folder when it was shared.

- Set the "Path- iTunes XML" field to point to the root of the share you created above, \\computername\sharename, as this is where the iTunes Library.xml file should reside in a default installation.
- The username and password authentication feature is unsupported.
   Protected shares SHOULD NOT BE USED and are not supported at this time.
- See Adding Network Shares To An HC Controller above for more details on adding a network share and specific network share requirements, such as 24/7 access.

Add Audio Share	Folder
Name	iTunes
Path - Music files	\\iTUNES_PC_NAME\SHAREFOLDER_NAME\Tunes Media
Path - iTunes XML	\\itunes_pc_name\sharefolder_name
User Name	
Password	
	Cancel OK

- e. Scan the share folder. See step 5.
- 5. Scan library.
  - a. Navigate to the **Content** tab in the Configurator. In the System Tree, locate **Audio Library Scan Options, Audio Share Folders**.
  - b. Right-click on the **\Hard Disk\Music** directory and select **Scan Share Now**. The Configurator scans the sample music in this directory to build a library for the Internal Player.



**Note:** The g!Demo installer will add sample music to the C:\Music directory to provide a sample library for the Viewer during training class. If you are not running the g!Demo you may need to add music to have the system find it. Shared drives on the local network may also be used as music libraries.

6. Once the scan is complete, verify that there are files in the audio share folder.

	Audio Library Options	Audio Share Folder	
1	📄 🧭 Audio Share Folders	Name	CIMUSIC
	C:MUSIC Picture Library Coarr Options	Fath - Music files	CAMUSIC
		Path - iTunes XML file	
	C:\PICTURES	System #	1237
	📃 📕 Web Pictures	Item Count	58
	Local Weather		

## Exercise 2: Configure the Internal Player

- *Overview* In Exercise 2, you will configure the Internal Player and add music files. This source is used to play digital music (MP3 or WAV files) through the g! system controller audio outputs as a source to an audio zone controller. This source includes a built-in two-way driver and built-in interface. Since this source is internal to the ELAN Controller we only need to add the source device. Both the COM device and interface are built-in.
- *How-to* 1. Configure the first MP3 Player.
  - a. Internal MP3 players are pre-configured in the training software and the HC-series hardware. Navigating to the Media tab will reveal the internal players under the heading of "Two-way Drivers". In the Training software or on an HC12 Controller, there will be two HC12 Audio Outputs, labeled 1 and 2 respectively. On an HC12, they will be labeled HC12 Audio Output 1 and 2.



b. Select the **HC12 Audio Output 1** from the tree. *The MP3 Player* properties will appear on the right as shown below.

MP3 Player : HC12 Audio Output 1				
Name	HC12 Audio Output 1			
System #	7534			
Device Type	Internal Player			
WAV Out Device Microsoft RDP Audio Driver				

Note that only the Name field of the device can be changed. The rest of the fields are read-only, and properly configured out of the box. WAV Out device may vary based on your computer.

2. Scan the library as described in Exercise 1. .

# Exercise 3: Add an RS-232 Source with a Built-in Driver & Interface

*Overview* In Exercise 3, you will configure an ELAN DT11 Dual Tuner. This device is an example of a source with a built-in two-way driver and a built-in interface. This means that the g! software includes the necessary serial commands to control the tuner and has a built-in interface with all control and feedback automatically configured. Just add the device and you are done—there is no need to create an interface.

**Note:** For a complete listing of supported devices with built-in drivers, refer to the ELAN website for a listing for all supported devices and links to *Integration Notes* for each.

*How-to* 1. Add the communication device.

- a. Start the Configurator, click the **Media** tab, and then right-click **Communication Devices**.
- b. Select Add New Communication Device. In the dialog box:
  - Enter "DT11" as the **Device Name**.
  - Select Serial Port in the Type drop-down box.
  - Select ELAN DT11/DT22 Tuner (RS-232) in the Communication Type drop-down box.
  - Click OK.

Add New Communication Device			
Device Name	DT11		
Туре	Serial Port	•	
Device		-	
Communication Type	Elan DT11/DT22 Tuner (RS-232) Devices	•	
	Cancel OK		

- 3. Set the COM port.
  - a. Select the DT11 communication device on the System Tree. The properties for this device display to the right.

<mark>8/</mark> g! Demo : Co	nfigurator (Press F1 for Help)			
System	Communication Devices DT11	Communication D	evice: DT11	
Security	+ C Two-Way Drivers	Name System #	DT11 22631	
Climate	+ Interface Groups	Device Type	Serial Port / Elan DT11/DT22 Tuner (RS-232)	
Lighting	🚥 Home 🚥 Bar	Location Enable Sharing	< SELECT >	•
Content		Sharing Port COM Port	0 NONE	
Media		Protocol	RS232	▼ ▼
Video		Baud Rate Flow Control	115200 None	•
Messaging		Parity	None	
Irrigation		Data Bits Stop Bits	8 1	- - -
Pool Control				
UPS				
Interface				
Input/Output				
per per		Apply		

b. Select the desired COM Port in the properties window.

**Note:** The drop-down menu shows all COM ports and indicates if a port is in use. Leave the selection set to **NONE** if you are using **g!Demo**.

- 4. Add the ELAN DT11. Since there are two tuners in this device, we will add two tuners to our system configuration.
  - a. On the System Tree, right-click **Two-Way Drivers**. Select **Add New Tuner** from the menu. *The Add New Tuners window opens.*

Add New Tun	er	×			
Name	Elan DT11/DT22 AM/FM Tuner	_			
Device Type	🔲 Show Unsupported Device	es			
Denon AVR I	nternal AM/FM Tuner nternal FM Only Tuner nternal HD Tuner	^			
Denon AVR I Denon AVR I	nternal Sirius Tuner nternal XM Tuner	=			
Elan DT11/D	Denon AVR-xxxxCl Internal AM/FM Tuner Elan DT11/DT22 AM/FM Euro Tuner Elan DT11/DT22 AM/FM Tuner				
	Elan DT11/DT22 Sirius Tuner Elan DTNR AM/FM Tuner				
Generic AM/F Integra 3.7 Al	M Tuner	~			
J					
Search For [	Devices Cancel OK				

- b. Select ELAN DT11/DT22 AM/FM Tuner, and click OK to add the tuner. The tuner is added to the System Tree and automatically connects to the COM Device.
- 5. Select the **Tuner** in the System Tree. In the properties window:
  - Change the name to AM/FM Tuner
  - Set the Tuner ID to 1
  - Click Apply to save.

System	Communication Devices	Tuner : Elan DT11/DT	22 AM/FM Tuner
Security	Two-Way Drivers HC12 Audio Output 1	Name	Elan DT11/DT22 AM/FM Tuner
	HC12 Audio Output 2	System #	22632
Climate		Device Type	Elan DT11/DT22 AM/FM Tuner
	🚭 One-Way Drivers	Communication Device	DT11
Lighting	💻 Media Controllers	Tuner ID	< SELECT >
	Interface Groups	Settings	Use Global Presets
Content		Settings	
Media			

6. Repeat Step 3 to add the **ELAN DT11/DT22 Sirius Tuner**. *The tuner is added to the System Tree and automatically connects to the COM Device.* 

System	Communication Devices	Tuner : Elan DT11/DT	22 Sirius Tuner
Security	Two-Way Drivers HC12 Audio Output 1 HC12 Audio Output 2	Name System #	Elan DT11/DT22 Sirius Tuner 22642
Climate	Elan DT11/DT22 AM/FM Tuner	Device Type	Elan DT11/DT22 Sirius Tuner
	📼 Elan DT11/DT22 Sirius Tuner 🛛 🕨	Communication Device	DT11
Lighting	Cone-Way Drivers	Tuner ID	< SELECT >
Content	Media Controllers Interface Groups	Settings	Use Global Presets
Media			

**Note:** The Dual Tuner configuration is now complete. Since this device has a builtin interface, it can be directly configured as a source in a zone controller. In the following lessons you will add this device as a source to a zone controller and be able to see it in the Viewer.

### Exercise 4: Add the Audio Zone Controller

*Overview* In Exercise 4, you will add an Audio Zone Controller. For this training, we will add an ELAN M86A (6 Zone) Audio Zone Controller. The M86A communicates with the controller using the pre-configured VIANET Communications Device, so you will not need to add a Communications Device on the Media tab. You simply need to add in the Audio Zone Controller before adding the sources and configuring the zones.

In a distributed A/V installation, the zone controller is the heart of the whole house audio system.

**Note:** The main **Media icon will not appear** in the Viewer until a zone controller has been added in the Configurator Media tab, and at least one zone has been added in the **Interface tab** (Interface Devices> Tab Config: Media System).

In the steps below, you will add an ELAN M86A (6 Zone) multi-room audio system to the Configurator.

**Note:** Actual system setup may be different based on the audio equipment installed on site. Refer to the *Integration Notes* for the particular details for your system.

How-to

- 1. In the Configurator, right-click **Media Controllers**, then click **Add New Audio Zone Controller**. *The Add New Audio Zone Controller window opens*.
- 2. Select ELAN M86A (6 Zones) as shown, and then click OK.

System	📄 🚣 Communication Devices	
Security	Two-Way Drivers HC12 Audio Output 1 HC12 Audio Output 2	Add New Audio Zone Controller
Climate	Elan DT11/DT22 AM/FM Elan DT11/DT22 Sirius Tu	Name ELAN M868 (6 Zone)
Lighting	Cone-Way Drivers Media Controllers	Device Type 🔽 Show Unsupported Devices
Content	Interface Groups	Denon AVR-5308CI Denon AVR-5805
Media		ELAN M66A (12 Zones) ELAN M66A (12 Zones) ELAN M66A (24 Zones)
Video		ELAN M86A (6 Zone) ELAN S1616A (Dual Chassis Mode)
Messaging		ELAN S1616A (Single Chassis Mode) ELAN S8.6 AV ELAN S8.6 AV (12 Zones)
Irrigation		ELAN S8.6 AV (18 Zones) ELAN S8.6 AV (24 Zones) ELAN System12 (16 Zones)
Pool Control		ELAN System12 (24 Zones)
UPS		
Interface		Search For Devices Cancel OK
Input/Output		

3. Select the **ELAN M86A** audio zone controller in the System Tree and verify the communication device in the properties window. *The VIANET Communication Device should automatically be selected for the Zone Controller.* 

System	<ul> <li>Media System</li> <li></li></ul>	Audio Zone Controller	: ELAN M86A (6 Zone)
Interface	Second Communication Devices      Second Communication      Secon	Name System #	ELAN M86A (6 Zone) 2155
Security		Device Type	ELAN M86A (6 Zone)
Climate	HC12 Audio Output 1     Im No Audio Services     Im HC12 Audio Output 2	Communication Device	VIANET 🗾
Lighting	☐ ☐ ☐ No Audio Services ☐ ☐ ☐ Tuners		
Media	 ☐              Sirius Tuner ☐		
Messaging	OVD Players ■ Video Displays		
Video	☐ Keypad Controllers ☐ ■ Audio Zone Controllers		
Irrigation	ELAN M86A (6 Zone)		
Pool Control	Cones     Keypads and Interfaces		
Input/Output	E Zone Headers     E Interface Templates     Generation Groups		
UPS			
Event Mapper			
Content			
Floor Plan		Apply	
			)

#### Exercise 5: M86A Source Settings

*Overview* Exercise 5 describes how to set up the Source Volume and IR routing settings on an ELAN M86A.

Source Volume settings are used to equalize the sound levels for each selected source to prevent the user from needing to adjust the volume up or down for each source selected. The IR routing table defines how IR will pass thru the M8 chassis.

Note: The settings described in this exercise are only available for ELAN equipment.

1. Start the **Configurator** and click the **Media** tab at the left.

How-to

- 2. Select **Sources** under the **ELAN M86A (6 Zones)**. *The Source Setting Matrix is shown on the right.* 
  - Right click the values in the Audio Input column to change the volume level for the selected input.
- g! Demo : Configurator (Press F1 for Help) Communication Devices Sources 😨 VIANET 😨 DT11 IR 2 IR 4 IR 5 IR 6 Audio Inp 🚭 Two-Way Drivers HC12 Audio Output 1 HC12 Audio Output 2 Climate Elan DT11/DT22 AM/FM Tune Elan DT11/DT22 Sirius Tuner ighting Way Drivers Conten Cable Basic Favorites ELAN M86A (6 Zone Media Video ource 01) rce 02) e 03 Messaging ce 04 Irrigatio Pool Control Interface Input/Output Event Mappe Import Settings from Device
- Click in the IR routing table to change the IR routing in the chassis.

Quick Reference: M86A Source Settings			
Source Name	The names of the sources. See the source exercise below for more details.		
IR 1-8 IR routing matrix. This matrix allows configuration of IR routi through the M8 chassis.			
Note: These setting have no effect on IR outputs from Global Cach or the HC series controllers.			
	Select the IR output jack for each source. An "X" indicates that IR received by the chassis zone input will be passed to that port when the selected source is active. In the screen above, for example, if IR is received to control source 2, AM/FM, the IR will be routed to IR output 2.		
Audio Input	The source volume level. Use these adjustments (+ / –) on each source to maintain equivalent source volumes throughout the system.		
Import Settings from Device	(Optional) If the chassis has already been configured, click this button to read in the existing settings from the device.		

## Exercise 6: Add Sources to the Zone Controller

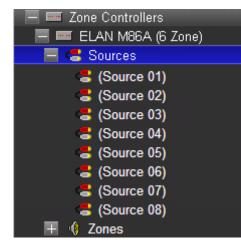
*Overview* In a typical installation, sources are assigned to specific inputs on the zone controller. The g! software needs to know which sources are assigned to each input so that the correct signals can be sent to the zone controller based on user input in the Viewer interface. This procedure is the same for most supported Audio Zone Controllers.

For Exercise 6, you will configure the four audio sources added in Exercises 2 and 3.

- Sources 1 and 2 will be the Internal Players.
- Sources 3 and 4 will be the two audio feeds from the ELAN DT11.

How-to

1. In the **Media** tab System Tree, click the plus (+) sign next to **Sources** to expand the Source List for the ELAN M86A zone controller added in Exercise 2.



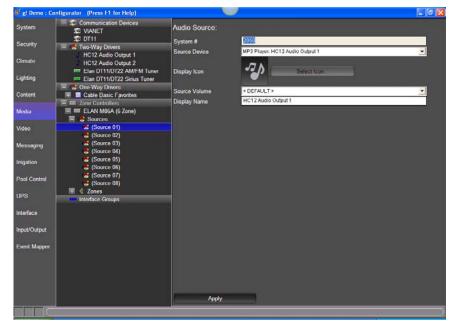
**Note:** The names shown for sources should match the input names printed on the back of the zone controller

2. Select (Source 1) from the list of available sources. The properties for (Source 1) display in the window on the right.

Audio Source:		
System #	2868	
Source Device	< NONE >	•
Display Icon	Select Icon	
Source Volume	< DEFAULT >	-
Display Name	Source 01	

3. Select MP3 Player: HC12 Audio Output 1 from the Source Device drop-

down list as the source device for (Source 1), then click **Apply.** *The (Source 1) entry in the System Tree changes to show its association with the MP3 Player, and the Player itself is highlighted to indicate that it is the device referenced by the source.* 



**Note:** To ensure proper control, the source devices must be connected to the same physical input that is specified in the Configurator.

- 4. In the properties window, click the **Select Icon** button. *The Select Icon window opens.*
- Click the plus (+) sign next to the lcons folder, then select the Media subfolder. Use one of the icons that display in the window, or navigate to the Color or Gray folders to see more options. Select the icon you wish to use for the source and click OK.



6. Change the Display Name entry to something more user-friendly, like "MP3

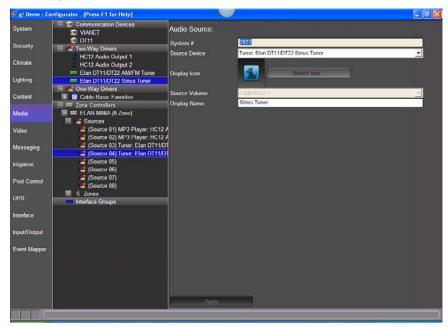
	ligurator (Press F1 for Help)			-0
System	Communication Devices	Audio Source:		
Security	😨 DT11 🗏 🕿 Two-Way Drivers	System # Source Device	2868 MP3 Player: HC12 Audio Output 1	-
Climate	HC12 Audio Output 1 HC12 Audio Output 2			
ighting	Elan DT11/DT22 AM/FM Tuner Elan DT11/DT22 Sirius Tuner	Display Icon	Sninet Ican	
Content	Cone-Way Drivers     Cable Basic Favorites	Source Volume	< DEFAULT >	<u>.</u>
Media	E Zone Controllers E ELAN M86A (6 Zone)	Display Name	MP3 Player 1	
Video	Source 01) MP3 Player: HC12 / Source 02)			
lessaging	Source 03) Source 04)			
rrigation	불 (Source 05) 🚭 (Source 06)			
Pool Control	(Source 07) (Source 08)			
IPS	Cones     Interface Groups			
nterface				
iput/Output				
Event Mapper				
		Apply		

Player 1". The Display Name is what will appear in the Viewer.

- 7. Repeat steps 2 through 6 to add the second HC12 Audio Output to Source 2.
- 8. Select Source 3 on the M86A to add the DT11 AM/FM Tuner.
  - a. From the Source Device drop-down, choose "Tuner: Elan DT11/DT22 AM/FM Tuner"
  - b. Assign the Tuner an appropriate icon
  - c. Change the Display Name of the Tuner, if desired.
  - d. Click Apply.

🖉 g! Demo : Co	nfigurator (Press F1 for Help)			- 6 1
System		Audio Source: Tu System #	ner: Elan DT11/DT22 AM/FM Tuner	
Security	Two-Way Drivers	Source Device	Tuner, Elan DTI 1/DT22 AM/FM Tuner	
Climate	HC12 Audio Output 2	Display Icon	Select Icon	
Lighting	Elan DT11/DT22 Sinus Tuner			
Content	🗮 🔳 Cable Basic Favorites	Source Volume Display Name	< DONT CHANGE > AM/FM Tuner	-
Media	ELAN M86A (6 Zone)			
Video	(Source 01) MP3 Player: HC12 A Source 02) MP3 Player: HC12 A Source 02) MP3 Player: HC12 A			
Messaging	Source 03) Tuner: Elan DT11/DT (Source 04)			
Irrigation	Source 05) (Source 06)			
Pool Control	Source 07)			
UPS	Cones     Interface Groups			
Interface				
Input/Output				
Event Mapper				
		Apply		

9. Repeat step 8 to add the DT11 Sirius Tuner as Source 4. Give the tuner a descriptive name, such as "Sirius Tuner."



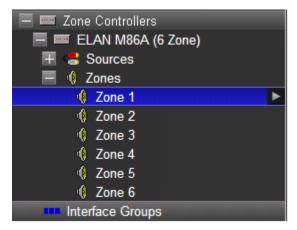
## Exercise 7: Configure Zones

*Overview* In Exercise 7, you will set up the Zone Names and Settings pages for the Audio Zone Controller, and remove unused zones from the Viewer interface.

Giving the zones user-friendly names, such as "Living Room" and "Bedroom" for our sample house, will provide the homeowner with an intuitive interface for controlling the audio in their home.

The optional settings interface gives the user access to less commonly used functions, such as bass, treble, Whole House Audio, Do Not Disturb, and loudness.

How-to
 1. In the Media tab System Tree click the plus (+) sign next to Zones to expand the Zone List for the ELAN M86A zone controller added in Exercise 4.

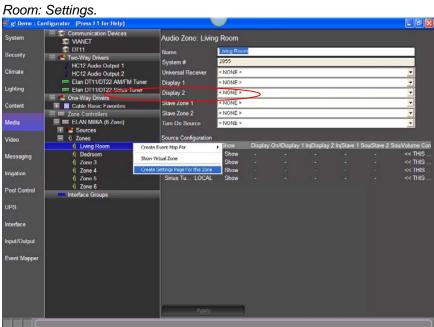


- 2. Click on **Zone 1** in the zone list to display its properties on the right.
  - a. In the **Name** field, type the name of the first zone in our Sample House, "Living Room", and click **Apply**. *The label of the zone will change in the Zone List to reflect the new name.*
  - b. Repeat Step 2 for Zone 2, to change the name to "Bedroom", your screen should look as below.

	📃 😴 Communication Devices	a service a service and service							
System	S VIANET	Audio Zone: Zone	2						
Security	😨 DT11	Name	Bedroom						
Security	🔚 🥌 Two-Way Drivers	System #	2057						_
Climate	HC12 Audio Output 1	Universal Receiver	< NONE >	_	_		_		-
Ginnate	HC12 Audio Output 2								-
Lighting	Elan DT11/DT22 AM/FM Tuner Elan DT11/DT22 Sirius Tuner	Display 1	< NONE >						-
Crynong	- S One-Way Drivers	Display 2	< NONE >						-
Content	The Cable Basic Favorites	Slave Zone 1	< NONE >						+
Gontein	Zone Controllers	Slave Zone 2	< NONE >						•
Media	ELAN M86A (6 Zone)	Tum On Source	< NONE >						-
	T Sources	Tum on Source	- NONE -						<u></u>
Video	= 0 Zones	Source Configuration							
	Living Room	Source DispFrom Zon	e Show	Display	On//Display	1 In(Display	2 InpStave 1	SouiSlave 2	Sou/Volume (
Messaging	Bedroom	MP3 Pla LOCAL	Show						<< THIS
	Cone 3	MP3 Pla LOCAL	Show						<< THIS
Irrigation	Cone 4	AM/FM T., LOCAL	Show						<< THIS
	Cone 5	Sirius Tu LOCAL	Show						<< THIS
Pool Control	🚯 Zone 6								
	Interface Groups								
UPS									
Interface									
Input/Output									
Event Mapper									
		Apply							
		- NOM-							

To add the optional Zone Settings page, right-click the Living Room zone and select **Create Settings Page for this Zone**.

A new entry is added the Living Room zone in the System Tree called Living Room: Settings.



- 3. Click the plus (+) sign to the left of Living Room: Settings to expand the list.
  - a. Select Large Format, and then select Large Landscape(Standard) to display a representation of the settings pages for this zone.

gi nemo : Co	nfigurator (Press F1 for Help)		- 2 🛛
System	Communication Devices	Interface Layout : Living Room: Settings	
Security	🔲 🥌 Two-Way Drivers		
Climate	HC12 Audio Output 1 HC12 Audio Output 2 HC12 Audio Output 2		
Lighting	Elan DT11/DT22 Sinus Tuner		
	🚍 🥶 One-Way Drivers		
Content	Cable Basic Favorites     Zone Controllers		
Media	E ELAN M86A (6 Zone)		
Video	Cones		
Messaging			
Irrigation	Small Format HR2  Bedroom	Laurent White House Made	
Pool Control	C Dedroom C Zone 3 C Zone 4		
UPS	0 Zone 5 6 Zone 6		
Interface	Interface Groups		
Input/Output			
Event Mapper			TANDARD)
		Apply	

- b. Select **Loudness** on the lower left of the Interface Layout. *The control is highlighted in yellow and the Audio Mode Control Properties window opens.*
- c. Note the following in the Audio Mode Control Properties window:
  - The **Name** field is set to "Loudness". This corresponds to the label on the control.
  - The Style drop-down is set to Loudness.
  - The **Connect To** drop-down is set to "Living Room", indicating that this is the zone the toggle controls:

Audio Mod	e Control P	roperties				×
Name	Loudness					Picture
Text Color	🔽 Default					
Face Color	🔽 Default					
Radius	🔲 Default					
Shading	🔲 Default					
Shading	🔲 Default					
Style		Loudness	•	Border		<b>v</b>
Text Size	🔲 Default	12 pt	-	Align		-
Options			-	Universal Function	<u> </u>	
Connect To		Living Room		ranction	,	
		Jerring room				
🔽 Default	Behavior					

**Note:** The Settings page is fully customizable and any of the objects on this page can be moved and resized so that controls can be added if needed.

#### Exercise 8: M86A Zone Settings

*Overview* Exercise 8 guides you through setting up the default behavior for individual zone volumes and paging behavior on an ELAN M86A.

There are five volume settings for each zone on the M86A- Max Volume, Min Vol Turn On, Max Vol Turn On, DB Volume, and Page Volume.

The ELAN M86A includes paging functionality that can be used in conjunction with a C2 (COM2) Communications Controller for doorbell and intercom Communication throughout the home.

There are also controls to adjust balance, and toggle zone enrollment in Whole House Music and Doorbell functions.

Each of these settings will be discussed in more detail below.

**Note:** The settings described in this exercise are only available for ELAN equipment.

#### How-to

- 1. In the Configurator, go to the **Media** tab.
- 2. In the System Tree, locate the **ELAN M86A (6 Zones)** under Media Controllers and click on **Zones.** *The Zones volume and paging settings are displayed in the properties window on the right:*

Zones								
Name	Max Vol	On Min	On Max	Page Vol	WHM	Bal	DB	DB Vol
Living Ro	100		100	75	Х		Х	75
Bedroom	100	0	100	75	Х	0	Х	75
Zone 3	100	0	100	75	Х	0	Х	75
Zone 4	100	0	100	75	Х	0	Х	75
Zone 5	100	0	100	75	Х	0	Х	75
Zone 6	100	0	100	75	Х	0	Х	75
		Default Pa	aging	Group Pagir	20			
				Group Fayi	iy			
WH Page 1	ype.	х		-				
Name		WH Pa	ige (	$\cap$				
Living Room		Х						
Bedroom		Х		$\neg$				
Zone 3		Х	· (					
				<u> </u>				

Quick Reference	: M86A Zone Volume Settings
Volume Control	
Max Vol	The Maximum volume allowed for a zone. Use this setting to prevent unpleasant volume levels or speaker damage in a zone.
On Min	The minimum volume level for a zone when it is turned on. If the zone is turned off with the volume below this point, it will return to this level when reactivated.
On Max	The maximum volume level for a zone when it is turned on. If the zone is turned off with the volume above this point, it will return to this level when reactivated.
Page Vol	The default volume for paging. Can be set from 0% (Off) to 100%. Default is 75%.
WHM	An "X" in this column designates that the zone participates in the Whole House Music functionality of the zone controller.
Bal	Adjust the default Left channel/Right channel balance for the zone output.
DB	An "X" in this column designates that the zone participates in the Doorbell functionality of the zone controller.
DB Vol	If DB is enabled in the previous column, set the default volume for doorbell. Can be set from 0% (Off) to 100%. Default is 75%.
Paging Preferen	ces
WH Page Type	<b>Default Paging</b> . When Default Paging is selected, all zones on the M8 will switch to paging mode when a page is received. Default is On (X).
	<b>Group Paging</b> . If Group Paging is selected, zones can be grouped to respond to pages differently. Default is Off (-).
Pg Group 1 – Pg Group 8	These columns display when Group Paging is selected as the WH Page Type. Eight paging groups are provided for paging customization. Each zone can be set to be a member of a group. By default, zones are only members of the WH (whole house) group.
WH Page	Select zones to participate in paging functionality. By default, all zones are selected for paging.

**Note:** Clicking the "Import Settings from Device" button will read in the current settings stored in the zone controller. If you are running g! Demo, do not click this button as there is no equipment connected.

- 3. Right-click the **Living Room Max Vol** and set the value to 75 to prevent the living room zone from exceeding 75% volume. Note that when this setting is changed, the Max Vol Turn On setting changes to reflect the new Max Volume settings.
- 4. Right-click the **Living Room On Min** and set the value to 15. This tells the M86A to set the volume to at least 15% when the zone is activated.

- 5. Right-click the **Living Room On Max** and set the value to 25. This will ensure that when the zone is activated, the volume will be between 15 and 25%.
- 6. Set the values to 50, 10, and 15 for **Max Vol**, **On Min**, and **On Max** respectively for the Bedroom zone.
- Click the "X" in the WHM column for zones 3 through 6 (the X will turn to a -). This will prevent these unused zones from turning on when Whole House Music is selected.
- 8. Right-click the **Page Vol** for the Living Room zone and set it to 50. This will set the paging volume to 50%.
- 9. Right-click the Page Vol for the Bedroom zone and set it to 25.
- 10. Click the **Apply**. Since this lesson is not using an actual M86A, click OK to close and ignore and warnings that may popup. When this is complete, your zone settings should look like the screen shown below.

ame	Max Vol	On Min	On Max	Page Vol	WHM	Bal	DB	DB Vol
Living Ro		15	25	50	Х	0	Х	75
Bedroom	50			25	Х		Х	75
Zone 3	100	0	100	75	Х	0	Х	75
Zone 4	100	0	100	75	Х	0	Х	75
Zone 5	100	0	100	75	Х	0	Х	75
Zone 6	100	0	100	75	X	0	х	75
		Default Pa	aging	Group Pagir	ng			
WH Page 1	Гуре:	х		-				
ame		WH Pa	age (					
Living Roon		X						
Bedroom		X						
Zone 3		X		J				

## Exercise 9: Configure Zones in the Viewer

- *Overview* At this point, you have added in a Zone Controller with a total of 6 zones. However, only two of those zones will actually be used—the Living Room and the Bedroom. The next step is to remove the unused zones from the Viewer so that the homeowner sees an uncluttered and intuitive interface.
- *How-to* To remove the unused zones from the Viewer interface:
  - 1. Select the **Interface** tab in the Configurator.
  - 2. Under Interface Devices (TouchScreen) near the top of the System Tree, click the plus (+) sign to the left of the Windows option to expand the list.
  - 3. Select **Tab Config: Media System**. The list of available/visible zones for the media system display in the properties window on the right.

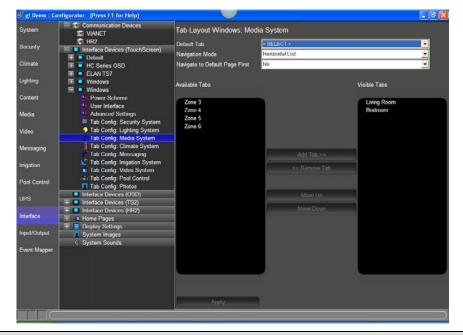
🖉 g! Demo : Co	nfigurator (Press F1 for Help)			
System Secunty	Scommunication Devices VIANET HR2	Tab Layout Windows: Me	dia System	<u> </u>
Security	Interface Devices (TouchScreen)     Default	Navigation Mode	Horizontal List	
Climate	HC Series OSD     ELAN TS7	Navigate to Default Page First	No	
Lighting	III I Windows	Available Tabs		Visible Tabs
Content	Power Scheme	Living Room Bedroom		<< NO TABS >>
Media	Advanced Settings Tab Config: Security System	Zone 3 Zone 4		
Video	Tab Config: Lighting System	Zone 5 Zone 6		
Messaging	Tab Config: Climate System Tab Config: Messaging	Luie	Add Tab >>	
Irrigation	💒 Tab Config: Irrigation System 💗 Tab Config: Video System		<< Remove Tab	
Pool Control	<ul> <li>Tab Config: Pool Control</li> <li>Tab Config: Photos</li> </ul>			
UPS	Interface Devices (OSD)     Interface Devices (TS2)		Move Up Move Down	-
Interface	Interface Devices (HR2)       Image: The second		wave Down	
Input/Output	Display Settings     System Images     System Sounds			
Event Mapper	<ul> <li>System Sounds</li> </ul>			
		f Apply		
				)

**Visible Tabs**= zones that appear in the Viewer for the homeowner to use. **Available Tabs**= zones that are not currently displayed in the Viewer.

Since the Living Room and Bedroom zones are active in our Sample House, we need these zones to be in the **Visible Tabs** list. All of the remaining zones including the video outputs can be put in the Available tabs column hiding them from the viewer interface.

4. In the **Available Tabs** list, select **Living Room**, then press and hold your keyboard shift button for multi-select and click Bedroom to select all zones to be added.

 Click the Add Tab >> buttons then click Apply. Your screen should look as below.



#### Notes about adding and removing tabs:

- Working with tabs on the Interface tab in the Configurator only adds/removes the zone from the Viewer on a per-screen basis. The zone is not deleted and can be added back into the Viewer at any time if the homeowner would like to expand their system.
- Multiple zones can be added or removed at one time. Press and hold the CTRL key on your keyboard and click to select the desired zones then click the add or remove button.
- 3) Each touch screen must be configured separately. In an actual system, each touch screen will have its own listing beneath the Default listing, and zones will need to be removed from each one individually. See the later lesson, *GUI and Interfaces* for more information.

#### Exercise 10: Check the Viewer

- *Overview* In the previous lessons and exercises you used the Configurator to set up the ELAN Media system and interfaces. In this exercise you will finally check your configuration in the Viewer.
- How-to

1. Click the Restore button in the upper-right corner of the Configurator window to exit Full Screen Mode.



- 2. On the **Media** tab, right-click the **Living Room** zone on the **M86A** and select **Show Virtual Zone**. *The Living Room Virtual Zone will be displayed.*
- 3. From the g!Tools My Systems screen, click the **Viewer** button. The Viewer interface displays the **Home** page.
- 4. Click the **g!** button in the upper right to access the main systems menu, then click **Media** to view the available media zones.



5. Click the **Living Room** icon to view the Living Room user interface, click Source at the bottom of the screen to display the sources.



6. Arrange the Viewer and the Virtual Zone on your desktop so that both are visible at the same time:

Living Room 🔀	💋 CrystalPad						X
Power Off On	g!	<b>I</b>	🚽 Living	, Room	Þ		\$
Source Source 1	🗒 Sour	ce					
Source 2 Source 3							
Source 4							
Source 5							
Source 6 Source 7				<b></b>			
Source 8						4 J	
			and the second s				
		MP3 Player 1	MP3 Player 2	AM/FM	Tuner Siri	us Tuner	
	OFF		SOURCE	-	X	$\nabla$	Δ

On this screen notice:

- The Sources are listed in the center of the Viewer.
- The Source Names and Icons match those selected in previous exercises.

7. Click the **MP3 Player 1** source button. The built-in MP3 player interface displays.

Notice that the icon selected for the source indicates that this source is selected in this zone. Also note that the Living Room Virtual Zone switches to "On".



8. Click the **Source** button at the bottom, select the **AM/FM Tuner** source. The AM/FM Tuner interface displays, the Living Room Virtual Zone changes to "Source 3", and the source indicator (icon and name) to the right of the Living Room heading changes.



9. Click the **Source** button at the bottom, select the **Sirius Tuner** source. *The Sirius Tuner interface displays, the Living Room Virtual Zone changes to* "Source 4", and the source indicator (icon and name) for the Living Room changes.

Living Room 🛛 🛛	el CrystalPad				
Power Off On	g! 💿		Living Room		\$
Source					$\textcircled{\begin{tabular}{c} \hline \hline$
Source 2 Source 3 Source 4			Si	rius Categories	;
Source 5 Source 6	1 2	3	My Stations		
Source 7 Source 8	4 5	6	Canadian		
	7 8	9	Classical		
	0		Comedy		
			Country		
	OFF 🚺 Siriu	ıs Tuner	▶	X V	Δ

10. Click the **Settings** button The settings interface opens, providing access to Bass, Treble, Loudness, Whole House Mode, and Do Not Disturb functionality.

🔗 CrystalPad				
<u>g!</u> 💿	🚽 Living Room	Þ		5
🖏 Settings				
	Bass			
	Treble			
Loudness	Whole House Mode	9 6	Do Not Dis	turb
i Lette Weiner in Weiner in Steam (die		<u> Postal</u> a		-Bietell
OFF 🚮 Sirius Tuner	-	X	$\nabla$	Δ

11. Click the **Settings** button again to return to the Living Room Theater page.

#### Notes:

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## Lesson 7

## Configuring Distributed A/V: Part 2



#### Overview

In this lesson you will build onto the distributed A/V system that you created in the previous lesson. You will first add a video source, then video displays, and finally configure a video switch to route video sources to the system.

You will:

- Learn the basic procedure for adding an IR controlled source (Note: Advanced IR topics will be covered in a later lesson).
- Learn how to add a source with a built-in two way driver and a customizable interface.
- Learn how Video Displays are configured in the system.
- Configure a video switch to route video for the two zones in our sample system.
- Configure the video switch to follow the audio (Zone Slaving).
- Add Video Displays to a zone and configure their power and input functions.
- Check the Viewer interface to confirm proper configuration.
- Understand the various features available in the Viewer.

#### Sample House

Our sample house is configured with two distributed A/V zones:

- Living Room
- Bedroom

#### Requirements

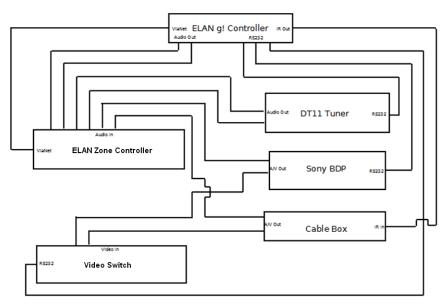
• A PC running g!Demo and g!Tools.

-or-

• g! system controller and g!Tools.

## Distributed A/V Integration Overview

*Overview* The following diagram shows the equipment in a six source / two zone distributed A/V system schematically, illustrating the components that are important to the g! system controller.



Integrating a distributed A/V system with ELAN provides the homeowner control of their audio system through the g! Viewer. For each A/V zone in their home, they can:

- Turn the zone on and off
- Select and control a source for the zone
- Adjust the audio volume in the zone
- Change the zone settings, such as bass and treble

- *Terms* The following terms are used in the Configurator to describe the equipment in an A/V system:
  - **Communication Device:** The method the g! software uses to communicate with an external device, including information about the connection type and protocol.
  - Audio Zone Controller: The device used to distribute A/V throughout the home.
  - **Keypads and Interfaces:** A custom defined interface for controlling A/V source components.
- *How-to* Integrating a distributed A/V system with ELAN consists of the following steps:
  - Add and configure **Sources**.
  - Add the Communication Device
  - Add the **Zone Controller** for the distributed audio
  - Configure the Audio Sources and Zones in the audio zone controller.

## Exercise 1: Add an IR Cable TV Set Top Box

Overvie w In Exercise 1, you will configure an IR-controlled cable TV set top box. This source device is an example of a source for which you can either import or build a one-way IR driver with a customizable user interface. This means that you define the necessary IR commands to control the device, and then choose from a set of user interface templates for the Viewer control.

Once a template is connected to the device, the IR commands are automatically mapped to the buttons on the template. The template also provides the ability to customize — add, remove, or change controls as needed, In this exercise you will add an IR-controlled cable TV box as a video source to the system. Adding an IR source is done in a few basic steps.

- Add an IR Device. This is the placeholder for all of the IR data and routing information.
- Import the IR data from the Common Resource Library to build the oneway IR driver.
- Select a User Interface to connect to the IR driver. This is the interface that shows in the Viewer for control of the device.

The result of this exercise is an interface configured for IR control that you add as a video source to the system in a later exercise.

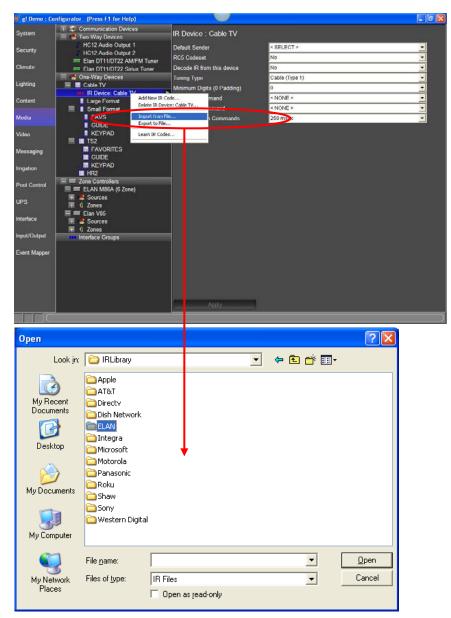
**Note:** This lesson will only cover basic IR-controlled source configuration. See the advanced IR lesson for further information.

- How-To
   1. On the Configurator Media tab, right-click One-Way Devices in the System Node Tree, then select Add New Source. The Add New Interface window opens.
  - a. Type Cable TV in the Interface Name field.
  - b. Select Cable Basic Favorites from the Create From Template drop-down menu. Select <NONE> from the Create New IR Device drop-down menu.

Add New Interface	
Interface Name Copy Layout from template	Cable TV Cable Basic Favorites
Connect to Existing Device     Create New IR Device	< NONE >
C Create New Serial Device	
	Cancel OK

c. Click **OK** to add the new interface.

- 2. Import the IR code data set.
  - a. Right-click the **Cable TV** IR Device in the System Node Tree One-Way Devices node, and select **Import from File**. *The Open File dialog box opens the IRLibrary folder from the Common Resource Library*.



b. Browse to ELAN\Motorola\Cable then select the **RNG150N.HIR** file and click **Open** to import the selected file. *After a moment, the Configurator will refresh, and the imported codes will appear under Cable TV.* 

	🗐 🐨 Communication Devices	$\cap$		
System	= 🗧 Two-Way Devices	IR Device : Cable TV		
Security	HC12 Audio Output 1	Default Sender	IR Output 01	•
security	HC12 Audio Output 2	RC5 Codeset	No	
Climate	Elan DT11/DT22 AM/FM Tuner Elan DT11/DT22 Sirius Tuner	Decode IR from this device	No	
	= S One Way Devices	Tuning Type	Cable (Type 1)	
.ighting	E Cable TV	Minimum Digits (0 Padding)	0	
	🚍 🗰 IR Device: Cable TV 🛛 🕨	Pre-Tune Command	< NONE >	· ·
Content	Power On			
	Power Off	Post-Tune Command	< NONE >	•
Vedia	IIII Play	Delay Between Commands	250 msec	•
	Stop			
Video	Pause     Rewind			
	Fast Forward			
Messaging	Digit 0	М		
	Digit 1			
Irrigation	Digit 2			
	Digit 3			
Pool Control	Digit 4			
	Digit 5			
UPS	Digit 6			
	Digit 7			
Interface	Digit 8			
	BH Digit 9			
Input/Output	and Left			
	Right			
Event Mapper	= Up			
	Down			
	Select			
	Select			
	Select     Channel Up     Channel Down			
	Select	Apply		

- c. Configure the IR output for the IR device. The following steps define the IR port on the back of the HC controller to which the IR is routed.
  - In the **Default Sender** field, select **IR Output 01**, and then click **Apply**.
- 3. Check the interface.
  - a. In the System Node Tree One-Way Devices node, select Cable TV System and verify that the default device, Cable TV, is selected. The default device drop down list allows selection of any configured IR device, serial device, or built-in driver. The selected device's commands will be mapped to the buttons on the interface via the Universal Function assignments.

Source : Cable TV		
Name	Cable TV	
System #	9241	
TouchScreen Behavior	Enable Interface	•
HR2 Behavior	Enable Interface	•
OSD Behavior	Source Select Page	-
Default Device	Cable TV	•

b. Select the Large Format, Large Landscape (Standard) resolution to view its button layout.



The interface for the Cable TV is fully customizable. Controls can be added, resized, or deleted.

# Exercise 2: Add a RS-232 Source with a Built-in Two-way Driver

Overview In Exercise 2, you will configure a Sony CX7000ES Blu-ray DVD changer. This source device is a built-in two-way driver with a customizable user interface. This means that the g! software includes the necessary serial commands to control the changer and provides a set of interface templates that have the commands pre-mapped to the buttons.

Once a template is connected to the device, the control is automatically configured. The template also provides the ability to customize – add, remove, or change controls as needed. In this exercise you will add the DVD Changer and the interface, and verify that the mapping is correct.

- *How-To* 1. Add the communication device.
  - a. In the Configurator, click the **Media** tab, and then right-click **Communication Devices**.
  - b. Select Add New Communication Device. In the dialog box:
    - Enter Sony CX7000ES as the Device Name.
    - Select Serial Port in the Type drop-down box.
    - Select Standard Connection in the Communication Type drop-down box.
    - Click OK.

Add New Communication Device				
Device Name	SonyCX7000ES			
Туре	Serial Port			
Device				
Communication Type	Standard Connection			
Show Unsupported Devices				
	Cancel OK			

- 2. Set the COM Port.
  - a. Select the Sony CX7000ES communication device on the System Node Tree. The properties for this device display to the right.

Communication Device: SonyCX7000ES		
Name	SonyCX7000ES	
System #	4860	
Device Type	Serial Port / Standard Connection	
Location	< SELECT >	•
Enable Sharing	No	•
Sharing Port	0	
COM Port	NONE	•
Protocol	RS232	~
Baud Rate	9600	-
Flow Control	None	-
Parity	None	-
Data Bits	8	-
Stop Bits	1	~

b. Select the desired COM Port in the properties window.

**Note:** The drop-down menu shows a list of all the COM ports and indicates if a port is in use. Leave the selection set to **NONE** if you are using **g!Demo**.

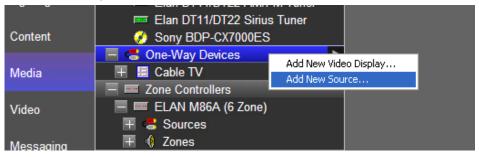
- 3. Add the Sony CX7000ES DVD Player.
  - a. On the System Node Tree, right-click **Two-Way Devices**. Select **Add New DVD Player...** from the menu. *The Add New DVD Player window opens.*

			Add New DVD	Player	$\mathbf{X}$
			Name	Sony BDP-CX7000ES	
			Device Type	🔲 Show Unsupported Device	s
stem			Generic DVD Integra DPC- Integra DPC- Integra DPS- Marantz DV4 Marantz DV4	NDeck 2 Deck 3,4 1940Cl 3310,5910 3310,7910 P Layer 7. 4,7.5,8.5 (RS-232) -7.5 (RI System) 10.5 (RS-232) 001,DV6001,DV7001 600,9500	
mate	SonyCX7000ES	Add New MP3 Player	Sony BDP-C Sony DVP-C		~
hting	HC12 Audio Output 1 HC12 Audio Output 2 Elan DT11/DT22 AM/FM	Add New Tuner Add New DAD Player Add New Keypad Controller Add New Video Display			
ntent dia	Elan DT11/DT22 Sirius T E Cone-Way Devices E Living Room Video: Settim Cable TV		Search For I	Devices Cancel OK	

b. Select the **Sony BDP-CX7000ES**, and click **OK** to add the DVD changer. The DVD changer is added to the System Node Tree, and the SonyCX7000ES Communication Device is automatically configured.

System	Communication Devices	DVD Player : Sony B	DP-CX7000ES
Security	S VIANET S ELAN V85	Name	Sony BDP-CX7000ES
Climate	Sony CX7000ES	System #	23378
	- 🖌 Two-Way Devices	Device Type	Sony BDP-CX7000ES
Lighting	HC12 Audio Output 1	Communication Device	Sony CX7000ES 📃
Content	HC12 Audio Output 2 Elan DT11/DT22 AM/FM Tuner	Device ID	1
Media	📼 Elan DT11/DT22 Sirius Tuner		
	Sony BDP-CX7000ES		

- 4. Add the User Interface.
  - a. On the Configurator **Media** tab, right-click **One-Way Devices** in the System Node Tree, then select **Add New Source**. *The Add New Interface window opens.*



- b. Type Blu-Ray Changer in the Interface Name field.
- c. Select **Sony BDP-CX7000ES** from the **Copy Layout from Template** drop-down menu. *This step selects the user interface template from the available templates. These can be previewed by browsing the templates in the Configurator under Interface Templates.*
- d. Select **Sony BDP-CX7000ES** from the **Connect To Existing Device** drop-down list. *This step defines the Sony as the default device for this interface and in turn assigns the buttons on the Viewer Interface to the proper commands on the DVD Changer.*

Add New Interface	
Interface Name	Blu-Ray Changer
Copy Layout from template	Sony BDP-CX7000ES
Connect to Existing Device	Sony BDP-CX7000ES
C Create New IR Device	< NONE >
C Create New Serial Device	
	Cancel OK

- e. Click **OK** to add the new user interface.
- 5. Check the interface.

a. Click the plus sign (+) next to **Blu-Ray Changer** interface in the System Node Tree One-Way Devices node to expand it.

System	Communication Devices	Source : Blu-Ray Cl	hanger		
			Blu-Ray Changer		
Security	Sony CX7000ES	Name			
	- S Two-Way Devices	System #	23954		
Climate	HC12 Audio Output 1	TouchScreen Behavior	Enable Interface		•
	HC12 Audio Output 2	HR2 Behavior	Enable Interface		•
Lighting	Elan DT11/DT22 AM/FM Tuner	OSD Behavior	Source Select Page	5	•
	Elan DT11/DT22 Sirius Tuner	Default Device	Sony BDP-CX7000		
Content	Sony BDP-CX7000ES	Delault Device	SOUN BDI-CX1000	53	<u> </u>
	🗏 🥌 One-Way Devices				
Media	🔳 🖪 Cable TV	Remote Control Buttons			
	E Blu-Ray Changer		Behavior	Output Device	Output Code/Command
Video	E Large Format	Incoming Button			
	COVER VIEW	Up	Default Default	Sony BDP-CX7000ES	Up
Messaging	ON-SCREEN	Down		Sony BDP-CX7000ES	Down
	Small Format	Left	Default	Sony BDP-CX7000ES	Left
Irrigation	COVERS	Right	Default	Sony BDP-CX7000ES	Right
	MENU	Select	Default	Sony BDP-CX7000ES	Select
Pool Control	CTRLS	OSD/GI	Read Only		
	KEYPAD	Play	Default	Sony BDP-CX7000ES	Play
UPS	🗏 🔲 TS2	Add	Default		
0.0	MENU	Digit 0	Default	Sony BDP-CX7000ES	Digit 0
Interface	CONTROLS	Digit 1	Default	Sony BDP-CX7000ES	Digit 1
intenace	📕 KEYPAD	Digit 2	Default	Sony BDP-CX7000ES	Digit 2
	HR2	Digit 3	Default	Sony BDP-CX7000ES	Digit 3
input/Output	E E Zone Controllers	Digit 4	Default	Sony BDP-CX7000ES	Digit 4
	🗏 💳 ELAN M86A (6 Zone)	Digit 5	Default	Sony BDP-CX7000ES	Digit 5
Event Mapper	🔠 😤 Sources	Digit 6	Default	Sony BDP-CX7000ES	Digit 6
	🗰 🌒 Zones	Digit 7	Default	Sony BDP-CX7000ES	Digit 7
	Interface Groups	Digit 8	Default	Sony BDP-CX7000ES	Digit 8
		Digit 9	Default	Sony BDP-CX7000ES	Digit 9
		Volume Up	Read Only		
		Volume Down	Read Only		
		Apply			

- b. Verify the Sony BDP-CX7000ES driver is selected as the **Default Device**.
- c. Select the resolution Cover View to view its button layout.
- d. Click the Play button to display the Audio Button Properties dialog box.
- e. Verify the **Funct.** (Universal Function) field is set to **Play**, and that the Default Behavior field says DVD COMMAND: Play. *This means that when this button is pressed in the Viewer, the Play command will be issued to the default device assigned to this interface.*

System	+ 😴 Communication Devices + 🔐 Two-Way Devices	Page Layout : Blu-Ray Changer
Security	🗏 🛓 One-Way Devices	Page Name COVER VIEW
Climate	📄 🔚 Blu-Ray Changer	Audio Button Properties
Lighting	Large Format     COVER VIEW	Name Icon
Content	ON-SCREEN Small Format	Face Color 🔽 Default
Media	COVERS	Radius 🔽 Default
Video	CTRLS	Shade In 🔽 Default
Messaging	🗏 🖪 TS2	Shade Out 🔽 Default
Irrigation	MENU CONTROLS	Style Play V Border
Pool Control	🔚 KEYPAD 🔚 HR2	Text Size
UPS	+ 📼 Zone Controllers	Options Universal Play
Interface	Interface Groups	Connect To
Input/Output		Default Behavior     DVD COMMAND: Play
Event Mapper		
		LARGE LANDSCAPE (STANDARD) LARGE LANDSCAPE (WIDE) LARGE PORTRAIT (STANDARD)
		Apply

**Note:** If the Default Behavior and Universal Function fields don't match, the button will display with a purple outline to indicate that the button will not work. This can be resolved by re-mapping the Universal Function, or de-selecting the Default Behavior check box and manually adding a button command.

	H	me						
	Pop U	p Menu			×		Ш	₩
	Rent	al Slot			+			*
Audio Butt	on Propertie	25				E	X	+1
Name	Rental Slot					lcon		
Text Color	🔽 Default							
Face Color	🔽 Default						2	3
Radius	🔽 Default						5	6
Shade In	🔽 Default						1000000	
Shade Out	🔽 Default						8	9
Ohda		. TD(T .		Davidari			0	Enter
Style Text Size		< TEXT >	_	Border Align	Defend	<u> </u>		
	🔽 Default			Universal	Default	-	7	
Options				Function	Rental Slot	• •		RAIT (STANI

# Exercise 3: Add Video Sources to the Zone Controller

- *Overview* In this exercise, you will use the Configurator to assign and configure the video sources added in the previous exercises to the M86A Audio Zone Controller added in the previous lesson. These steps will make the sources available in the Viewer.
- *How-To* 1. In the Configurator, go to the **Media** tab.
  - 2. Expand the source list under the **M86A** and select the **Source 5**. *The Source Properties display on the right.* 
    - a. From the **Source** drop-down, select **Interface: Blu-Ray Changer**. *This* selects the Blu-Ray interface as source 5 in the M86A.
    - b. Click the **Select Icon** button then navigate to the **Media** folder and select an appropriate icon for the Blu-Ray Changer. *This is the icon that will be displayed in the Viewer.*
    - c. Verify the **Display Name** is **Blu-Ray Changer**. This is the name that will be displayed in the Viewer.

Security     Image: Control     System #     2872       Cirrate     Source Device     Interface: Blue-Ray Changer     Image: Control       Lighting     HC12 Audio Output 1     Display Icon     Select Icon       Lighting     HC12 Audio Output 2     Display Icon     Select Icon       Content     Elan D111/DT22 AM/FM Tuner     Source Volume     Display Icon       Media     Image: One-Way Devices     Source Volume     Display Name       Video     Image: Controllers     Display Name     Blue-Ray Changer       Video     Image: Controllers     Source 011HC12 Audio Output 1     Display Name       Messaging     Image: Controllers     Source 021HC12 Audio Output 1       Irigation     Cource 021HC12 Audio Output 1     Cource 03 Elan D111/DT22 Amir       Pool Control     Cource 03 Elan D111/DT22 Amir     Source Volume
Climate Two-Way Devices Lighting HC12 Audio Output 1 HC12 Audio Output 2 Content Elan DT11/DT22 AM/FM Tuner Content Elan DT11/DT22 Sirus Tuner Source Volume Display Icon Select Icon Source Volume Display Name Blue-Ray Changer Blue-Ray Changer Blue-Ray Changer Blue-Ray Changer Blue-Ray Changer Blue-Ray Changer Source 02) HC12 Audio Output Source
Lighting HC12 Audio Output 2 Elan DT11/DT22 AM/FM Tuner Content Sony BDP-CX7000ES Media Sony BDP-CX7000ES Media Sony BDP-CX7000ES Messaging Sony BDP-CX7000ES Messaging Sony BDP-CX7000ES Messaging Sony BDP-CX7000ES Source Valume Display Name Blue-Ray Changer Source Valume Display Name Blue-Ray Changer Blue-Ray Changer Source Valume Display Name Blue-Ray Changer Blue-Ray Changer Blue-Ray Changer Blue-Ray Changer Blue-Ray Changer
Content     Elan DT11/DT22 Sirius Tuner     Source Volume     FONT CHARGE >     >       Media     Image: Source So
Media     Sony DDP-2A/0002S       Fill Cable TV       Vídeo       Fill Cable TV       Vídeo       Fill Blue-Ray Changer       Fill Cable TV       Messaging       Fill ELAN MB6A (6 Zone)       Fill Source 02) HC12 Audio Output       Sources       Irrigation       Source 02) HC12 Audio Output       Source 02) HC12 Audio Output       Source 03) Elan DT11/DT22 AM
Vídeo     Image: Cable TV       Vídeo     Image: Cable TV       Image: Cable TV     Image: Cable TV       Vídeo     Image: Cable TV       Image: Cable TV     Image: Cable TV       Image: Cable TV     Image: Cable TV       Irrigation     Image: Cable TV       Image: Cable TV
Video     F is Blue-Ray Changer       E Zone Controllers       Messaging       I = E LAN M86A (6 Zone)       I = Sources       Irrigation       I (Source 02) HC12 Audio Output       I (Source 02) ECI 2 Audio Output :       Peol Centrel
Irrigation Source 01) HC12 Audio Output (Source 02) HC12 Audio Output Source 02) HC12 Audio Output Courted Source 03) Elan D111/DT22 AM
Regardin      Source 02) HC12 Audio Output :     Source 03) Elan DT11/DT22 AM
UPS Cource 05) Interface: Blue-Ray ( Cource 06)
Interface Source 07)
Input/Output Voltput Interface Groups
Event Mapper
Apply

d. Click Apply.

- 3. Repeat the steps above to configure the **Cable TV** box as **Source 6**. Select Source 6 under the **M86A**. *The Source Properties will be displayed to the right.* 
  - a. From the Source drop-down, select Interface: Cable TV.
  - b. Click the **Select Icon** button then navigate to the media folder and select an appropriate icon for the Cable TV.
  - c. Verify the **Display Name** is **Cable TV**.

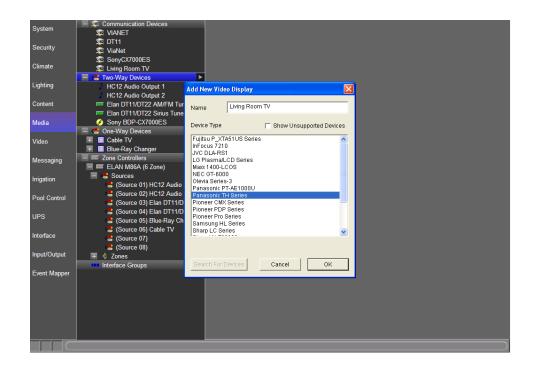
• <b>5</b> . 5 mm - 55	(, , , , , , , , , , , , , , , , , , ,		
System	Communication Devices	Audio Source:	
Security	S DT11 S ViaNet SonyCX7000ES	System # Source Device	2873 Interface: Cable TV
Climate	🗏 🍯 Two-Way Devices		
Lighting	HC12 Audio Output 1 HC12 Audio Output 2	Display Icon	Select Icon
Content	<ul> <li>Elan DT11/DT22 AM/FM Tuner</li> <li>Elan DT11/DT22 Sirius Tuner</li> </ul>	Source Volume	< DEFAULT >
Media	Sony BDP-CX7000ES  Cone-Way Devices  Cone-Way D	Display Name	
Video	Cable IV     Elue-Ray Changer     Zone Controllers		
Messaging	ELAN M86A (6 Zone)		
Irrigation	<ul> <li>(Source 01) HC12 Audio Output</li> <li>(Source 02) HC12 Audio Output</li> </ul>		
Pool Control	(Source 03) Elan DT11/DT22 AM Source 04) Elan DT11/DT22 Siri		
UPS	<ul> <li>(Source 05) Interface: Blue-Ray</li> <li>(Source 06) Interface: Cable TV</li> </ul>	¢	
Interface	(Source 07) (Source 08)		
Input/Output	Cones     Interface Groups		
Event Mapper			
		Apply	

# Exercise 4: Add RS-232 Video Displays with Built-in Drivers

- *Overview* In Exercise 4, you will add two video displays with built-in drivers to the Configurator. "Built-in" means that the g! software includes the necessary serial commands to control the video displays. In a later lesson, you will configure the displays for a zone and define how they should react based on the source changes in the zone controller.
- How-To
   1. In the Configurator, on the Media tab, right-click Communication Devices in the System Node Tree and select "Add New Communication Device". The Add New Communication Device window opens.
  - a. Change the name of the device to Living Room TV.
  - b. Set the Type to Serial Port.
  - c. Set the Communication Type to Standard Connection.
  - d. Click OK.

Add New Communication Device						
Device Name	Living Room TV					
Туре	Serial Port	•				
Device		~				
Communication Type	Standard Connection	•				
🔲 Show Unsupported 🛛	Devices					
	Cancel O	К				

- 2. Right-click **Two-Way Devices** in the System Node Tree, and select **Add New Video Display**. *The Add New Video Display window opens*.
- 3. Select **Panasonic TH Series** from the list of supported displays then change the **Name** field to **Living Room TV** and click **OK**. A Panasonic TH Series Video Display will be added to the System Node Tree, and the Properties window for the device will open.



- 4. Repeat steps 1-3 above to add a second display. Name the second display and its communication device "**Bedroom TV**."
- 5. Your screen should now look like below.

Concession of the International Concession of the Internationa				
System	Communication Devices	Video Display : Beo	droom TV	
Security	😨 DT11 😨 SonyCX7000ES 😒 Living Room TV	Name System #	Bedroom TV 10228	
Climate	😨 Bedroom TV	Device Type	Panasonic TH Series	
Lighting	Two-Way Devices     If HC12 Audio Output 1     HC12 Audio Output 2	Communication Device	< SELECT >	•
Content	📼 Elan DT11/DT22 AM/FM Tuner	On Off Control Type	Discrete Verify (Always Send)	-
Media	Elan DT11/DT22 Sirius Tuner Sony BDP-CX7000ES Living Room TV	Source Control Type Delay After On/Off	Discrete Verify (Always Send) 100 msec	•
Video	Edition TV     Edition TV     Edition TV     Edition TV     Edition TV	Delay After Source Controller Commands	100 msec	•
Messaging	田	Up Power On		
Irrigation	Zone Controllers     E   ELAN M86A (6 Zone)	Power Off Slot 1		
Pool Control		Slot 2 Slot 3		
UPS	Interface Groups	Add Input	Delete Input.	
Interface		Add Input	Delete Input	
Input/Output				
Event Mapper				
		Apply		

# Exercise 5: Configure the Video Displays for the Zones

*Overview* In Exercise 5, you will use the Configurator to assign and configure the video displays added in the previous exercises. You will define the behavior for the displays in each zone on a source-by-source basis.

How-to

- 1. In the Configurator, go to the **Media** tab.
- 2. Expand the zone list on the **M86A** and select the **Living Room** zone. *The Zone Properties will be displayed to the right.*
- 3. From the **Display 1** drop-down, select **Living Room TV**. The Living Room TV will be added as the display for this zone, and the Display On/Off and Display 1 Input columns will populate with the words "Don't Change":

Name	Living Roor	n					
System #	2855						
Jniversal Receiver	< NONE >						-
Display 1	Living Roor	n TV					-
Display 2	< NONE >						-
Slave Zone 1	< NONE >						-
Slave Zone 2	< NONE >						-
Turn On Source	< NONE >						-
Source Configuration							
Source DispFrom Zone	e Show	Display On/0	Display 1 Ind	Display 2	InpSlave 1	SourSlave 2	Sou/Volume (
MP3 Pla LOCAL	Show	Don't Ch	Don't Ch				<< THIS
MP3 Pla LOCAL	Show	Don't Ch	Don't Ch				<< THIS
AM/FM T LOCAL	Show	Don't Ch	Don't Ch				<< THIS
Sirius Tu LOCAL	Show	Don't Ch	Don't Ch				<< THIS
Blu-Ray LOCAL	Show	Don't Ch	Don't Ch				<< THIS
Cable TV LOCAL	Show	Don't Ch	Don't Ch				<< THIS

- 4. Configure the behavior of the display for each source listed in the **Input Name** column. In a typical system the display is shut off for audio only sources, and turned on for sources with a video feed.
  - a. The **Internal Player** is an audio only source. In the **Display On/Off** column under Source Configuration, right-click **Don't Change** to pop up a menu with other options. Select **Turn Off** from the list.
  - b. Repeat step 4a for the other audio-only sources, to set the display to turn off when they are selected.
  - c. Source 5 (Blu-Ray Changer) and Source 6 (Cable TV) are A/V sources, so set the Display On/Off value to Turn On for both.
  - d. Click Apply.

Audio Zone: Living	g Room						
Name	Living Room						
System #	2855						
Universal Receiver	< NONE >						-
Display 1	Living Room 1	īv.					•
Display 2	< NONE >						
Slave Zone 1	< NONE >						- -
Slave Zone 2	< NONE >						-
Turn On Source	< NONE >						-
Source Configuration Source DispFrom Zone	Show	Display On/	'Oisolav 1 Ind	Display 2 In	Slave 1 Sou	uSlave 2 So	uVolume Con
MP3 Pla LOCAL	Show	Turn Off	Don't Ch		-	-	<< THIS
MP3 Pla LOCAL	Show	Turn Off	Don't Ch				<< THIS
AM/FM T LOCAL	Show	Turn Off	Don't Ch				<< THIS
Sirius Tu LOCAL	Show	Turn Off	Don't Ch				<< THIS
Blu-Ray LOCAL	Show	Turn On	Don't Ch				<< THIS
Cable TV LOCAL	Show	Don't 📑 T	urn On	1			<< THIS
		Т	urn Off				
Apply							

**Note:** In the following exercises you will add a video switch to the Configurator, so we assume here that all video sources will use the same input on their displays. If there is no video switch in your actual setup, you can change the input of the display in the **Display Input** column. Right-click the column and select a different input from the popup list.

Name	Living Roon	n			
System #	2855				
Universal Receiver	< NONE >				-
Display 1	Living Room	n TV			-
Display 2	< NONE >				•
Slave Zone 1	< NONE >				•
Slave Zone 2	< NONE >				•
Turn On Source	< NONE >				-
MP3 Pla LOCAL MP3 Pla LOCAL AM/FM T LOCAL Sirius Tu LOCAL Blu-Ray LOCAL Cable TV LOCAL	Show Show Show Show Show Show	Turn Off Turn Off Turn Off Turn Off Turn On Turn On	Don't Ch Don't Ch Don't Ch Don't Ch Don't Ch Don't Ch		T >> T >> T >> T >> T >> T >>
	Choir		Slot 1 Slot 2 Slot 3 PC V Don't Chan	ge	

5. Select the **Bedroom** zone on the **M86A**. Select **Bedroom TV** as the display for the bedroom, and then follow the steps above to assign the power states for each source:

<mark>8</mark> / g! Demo : Co	nfigurator (Press F1 for Help)								- ×
System	Communication Devices	Audio Zone: Bedi	oom						
Security	室 DT11 愛 SonyCX7000ES 愛 Living Room TV	Name System #	Bedroom 2857						
Climate	Section TV	Universal Receiver	< NONE >					-	
	🗏 🖶 Two-Way Devices	Display 1	Bedroom T	V				-	
Lighting	HC12 Audio Output 1 HC12 Audio Output 2	Display 2	< NONE >					•	
Content	Elan DT11/DT22 AM/FM Tuner	Slave Zone 1	< SELECT	>				•	
	📼 Elan DT11/DT22 Sirius Tuner	Slave Zone 2	< NONE >					•	
Media	Sony BDP-CX7000ES	Turn On Source	< NONE >					-	
Video	<ul> <li>Living Room TV</li> <li>Bedroom TV</li> </ul>	Source Configuration							
VIGEO	E Scaloun Pu	Source DispFrom Zon	e Show	Display On	/Display 1 In(Display	/ 2 InjSlave 1	SouiSlave 2 S	SouiVolume	e Con
Messaging	🕂 🧮 Cable TV	MP3 Pla LOCAL	Show	Turn Off	Don't Ch				HIS
	🕂 🧾 Blue-Ray Changer	MP3 Pla LOCAL	Show	Turn Off	Don't Ch				HIS
Irrigation	Zone Controllers ELAN M86A (6 Zone)	AM/FM T LOCAL Sirius Tu LOCAL	Show Show	Turn Off Turn Off	Don't Ch Don't Ch				HIS HIS
	F Sources	Blue-Ray LOCAL	Show	Turn On	Don't Ch				HIS
Pool Control	Zones	Cable TV LOCAL	Show	Turn On	Don't Ch				HIS
UPS	🗄 🌗 Living Room								
UPS	Bedroom								
Interface	Cone 3 Cone 4								
	0 Zone 4								
Input/Output	Cone 6								
	Interface Groups								
Event Mapper									
		Apply							

# Exercise 6: Add the Video Switch and Configure Sources and Zones

- *Overview* In Exercise 6, you will use the Configurator to add an Atlona AT-HD-V44M HDMI Video Switch to the system. The g! software considers any media switching device to be a Zone Controller, so the AT-HD-V44M is added as such. The Atlona AT-HD-V44M has a built-in two-way driver in the g! software.
- How-to
   1. In the Configurator, on the Media tab, right-click Communication Devices in the System Node Tree and select Add New Communication Device. The Add New Communication Device window opens.
  - a. Change the name of the device to Atlona HDMI Switch.
  - b. Set the **Type** to **Serial Port** and the **Communication Type** to **Standard Connection**, then click **OK**.

Add New Communication Device						
Device Name	Atlona HDMI Switch					
Туре	Serial Port	•				
Device		-				
Communication Type	Standard Connection	•				
🔲 Show Unsupported De	avices					
	Cancel OK					

2. Right-click **Zone Controllers** in the System Node Tree and select **Add New Zone Controller**. *The Add New Zone Controller window opens*.

Add New Zone	e Controller 🛛 🔀
Name	Atlona AT-H2H-44M (4x4 HDMI)
Device Type	Show Unsupported Devices
ADA Suite 16 ADA Suite 16	(16 video zones) (16 zone) (32 video zones) (32 zone) (48 zone) (64 zone) (96 zone)
Ationa AT-H2 Ationa AT-HD	00 H-44M (4x4 HDMI) H-88M (8x8 HDMI) V1616M (16x16 HDMI) V44M (4x4 HDMI)
Search For	r Devices
Import D	Driver Cancel OK

3. Select Atlona AT-HD-V44M (4x4 HDMI) as the Device Type, then click OK. The Atlona Video Switch is added to the Configurator.

System	🗏 😴 Communication Devices	Zone Controller : Atlo	na AT-HD-V44M (4x4 HDMI)
Security	STANET SE ELAN V85	Name	Atlona AT-HD-V44M (4x4 HDMI)
Climate	👳 DVD	System #	26502 Ationa AT-HD-V44M (4x4 HDMI)
Lighting	😨 Sony CX7000ES 😨 Sunfire	Device Type Communication Device	Ationa HDMI Switch
Content	Atlona HDMI Switch		
Media	Signature TV Signature Room TV Signature Room TV		
Video	👳 Projector		
Messaging	Seneric DVD T Wo-Way Devices		
Irrigation	🛓 One-Way Devices 🚍 🎫 Zone Controllers		
Pool Control	🚍 📼 ELAN M86A (6 Zone) 🕂 🥞 Sources		
UPS	\Xi 🌗 Zones		
Interface	E		
Input/Output	🕂 🗘 Zones — 🚥 Interface Groups		
Event Mapper	COD Downstairs		
Event mapper	Master		
		Apply	

- 4. Expand the list of sources on the AT-HD-V44M .
  - a. Only add the Display Name for reference purposes to the selected source. A Source Device should not be added to a video switch source when the video switch is used in Zone Slaving with an Audio Zone Controller. Click **Apply.**

System	🖃 🧊 Communication Devices	Audio Source: Cable	TV
Security	I VIANET I Atlona HDMI Switch	System #	26507
Climate	H I Two-Way Devices	Source Device	Interface: Cable TV
Lighting	☐ ▲ One-Way Devices ☐ ☑ Cable TV	Display Icon	Select Icon
Content	🕂 🧮 Blu-Raγ Changer — 📼 Zone Controllers	Source Volume	
Media	ELAN M86A (6 Zone)	Display Name	Cable TV
Video	₩ 🖶 Sources ₩ 🍕 Zones		
Messaging			
Irrigation	E Sources		
Pool Control	불 (Source 02) Blu-Ray Changer 😤 (Source 03)		
UPS	Source 04) ■ ① Zones		

**Note:** A video switch generally has no power commands and undesired actions can occur when a Source Device is assigned to a compatible video switch being used with Slave Zoning. You do not need to select an icon for the sources on a video switcher—all of the zones on this device will be hidden from the Viewer and its switching will be automated based on the sources selected on the M86A. See the following exercise on 'slaving' for details.

- 5. Expand the Zones list for the AT-HD-V44M .
  - a. Select Output 1 and name it "Living Room Video", and click Apply.
  - b. Select Output 2 and name it "Bedroom Video", and click Apply.

**Note:** ELAN recommends that you rename all video zones with descriptive names to make them easier to identify and differentiate between the audio zones.

System		Audio Zone: Living	g Room Vi	deo			
Security	🕂 🛔 One-Way Devices	Name	Living Room	Video			
Climate	📄 📼 Zone Controllers 📄 📼 ELAN M86A (6 Zone)	System #	26503				
	F Sources	Universal Receiver	< NONE >		-		
Lighting	Ŧ 🍕 Zones	Display 1	Living Room	TV	•		
Content	E I Atlona AT-HD-V44M (4x4 HDMI)	Display 2	< NONE >		•		
Media	Sources (Source D1) Cable TV	Slave Zone 1	< NONE >		-		
Media	🗧 (Source 02) Blu-Ray Changer	Slave Zone 2	< NONE >		•		
Video	(Source 03)	Turn On Source	< NONE >		•		
Messaging	Source 04)	Source Configuration					
	Cones     G Living Room Video	Source DispFrom Zone	Show	Display On/Display 1 In;Displ	lay 2 In;Slave 1 S	ouiSlave 2 Sc	ouiVolume Con
Irrigation	🕴 Bedroom Video	Cable TV LOCAL	Show	Don't Ch Don't Ch			<< THIS
Pool Control	🗕 🚥 Interface Groups	Blu-Ray LOCAL	Show	Don't Ch Don't Ch			<< THIS
UPS	Downstairs						
UF3	Master						
Interface							
Input/Output							
E							
Event Mapper							
		Apply					

# Exercise 7: Configure the Video Switch to Follow Audio Zones (Slaving)

*Overview* The g! software uses the concept of *slave zones* to sync the video sources from the video switch with the audio sources from the audio zone controller without needing to write complex macros.

A slave zone is assigned to an audio zone via a drop-down list in the master zone's properties. Then, in the Auxiliary Source Function matrix, you can specify the source to which the slave zone should change when a particular audio source is selected. This allows you to hide the video switch's zone by removing it from the Viewer, and yet maintain full switching functionality.

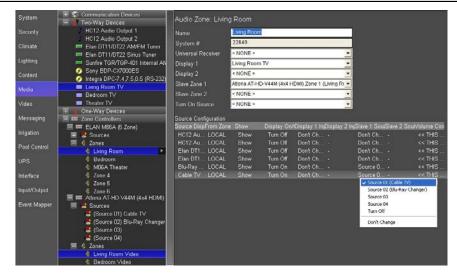
**Note:** Although it is possible to slave any zone in the system to any other, typical configurations will have the audio zone act as the "master" and the video zone as the "slave." Controlling the audio zone automatically selects the appropriate video source, and also provides volume control.

- *How-to* 1. In the Configurator, go to the **Media** tab.
  - a. From the Zone list on the M86A, select the Living Room zone.
  - b. Select Atlona AT-HD-V44M Zone 1 (Living Room Video) from the Slave Zone 1 drop-down in the properties window. *The Slave 1 Source column in Source Configuration populates with the words "Don't Change" for each of the available sources:*

System	🐨 Communication Devices 🖃 🚛 Two-Way Devices	Audio Zone: Livin	g Room			
Security	HC12 Audio Output 1	Name	Living Roon	î		
Climate	↓ HC12 Audio Output 2	System #	22649			
ommato	Elan DT11/DT22 Sirius Tuner	Universal Receiver	< NONE >			-
Lighting	📼 Sunfire TGR/TGP-401 Internal AN	Display 1	Living Room	n TV		-
Content	Sony BDP-CX7000ES	Display 2	< NONE >			-
	Integra DPC-7.4,7.5,8.5 (RS-232) Living Room TV	Slave Zone 1	Atlona AT-H	D-V44M (4x4 H	DMI) Zone 1 (Living R	-
Media	Bedroom TV	Slave Zone 2	< NONE >			-
Video	Theater TV	Turn On Source	< NONE >			-
	🕂 🧯 One-Way Devices				-	
Messaging	E E Zone Controllers	Source Configuration Source DispFrom Zon	Chau	Dianlau On(	Display 1 In;Display 2	) Incloue 1 Secolor
Irrigation	🚍 📼 ELAN M86A (6 Zone) 🕂 🚭 Sources	HC12 Au LOCAL	show	Turn Off	Don't Ch	Don't Ch
	- 1 Zones	HC12 Au LOCAL	Show	Turn Off	Don't Ch	Don't Ch
Pool Control	Living Room	Elan DT1 LOCAL	Show	Turn Off	Don't Ch	Don't Ch
UPS	Bedroom	Elan DT1 LOCAL	Show	Turn Off	Don't Ch	Don't Ch
	🌗 M86A Theater	Blu-Ray LOCAL	Show	Turn On	Don't Ch	Don't Ch
Interface	🔞 Zone 4	Cable TV LOCAL	Show	Turn On	Don't Ch	Don't Ch
Input/Output	Ø Zone 5 Ø Zone 6	Satellite LOCAL	Show	Don't Ch	Don't Ch	Don't Ch
mpanoatpat	viv ∠one 6 ■ ■ Ationa AT-HD-V44M (4x4 HDMi)					
Event Mapper						
	📕 🧲 (Source 01) Cable TV					
	📇 (Source 02) Blu-Ray Changer					
	🗧 (Source O3)					
	Source 04)					
	I Zones I Living Room Video					
	Bedroom Video					

- 2. Next, configure the behavior of the Atlona AT-HD-V44M for each source listed in the Source Display **Name** column.
  - a. The two Internal Players are audio only sources. In the Slave 1
     Source column, under Source Configuration, leave these selections set to Don't Change.
  - b. Do the same for the other two audio only sources, the two feeds from the Elan DT11/22 Tuner.
  - c. Source 5 (Blu-Ray Changer) and Source 6 (Cable TV) are A/V sources. For these, right-click Don't Change in the Slave 1 Source column to popup the list of sources on the AT-HD-V44M. Select the appropriate source from the list.

**Note:** The available sources shown for the AT-HD-V44M will only be listed as Source 1, Source 2, Source 3, etc.

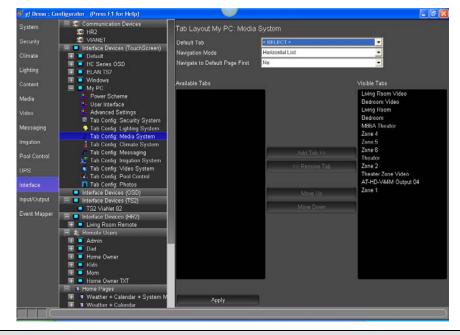


#### d. Repeat step 2 for the Bedroom zone.

System	🗄 🤹 Communication Devices	Audio Zone: Be	droom				
Security	HC12 Audio Output 1		Redroom				
Security	HC12 Audio Output 2	Name	22651				
Climate	💳 Elan DT11/DT22 AM/FM Tuner	System #				_	
TOTAL C	🛲 Elan DT11/DT22 Sinus Tuner	Universal Receiver	< NONE >			<u> </u>	
Lighting	Sunfire TGR/TGP-401 Internal AN	Display 1	Bedroom T	٧		<u>•</u>	
Content	<ul> <li>Sony BDP-CX7000ES</li> <li>Integra DPC-7 4,7 5,8 5 (RS-232)</li> </ul>	Display 2	< NONE >			•	
and an	Living Room TV	Slave Zone 1	Ationa AT-H	HD-V44M (4x4 F	HDMI) Zone 2 (Bedrooi	-	
Media	Bedroom TV	Slave Zone 2	< NONE >				
Video	■ Theater TV	Turn On Source	< NONE >			•	
	Ŧ 🛔 One-Way Devices						
Messaging	🚍 📼 Zone Controllers	Source Configuration					
Irrigation	🗏 📼 ELAN M86A (6 Zone)	Source DispFrom 2				2 InpSlave 1 SouGlave 2	
ingation	🗄 🍮 Sources	HC12 Au., LOCA		Turn Off	Don't Ch	Don't Ch	<< THIS
Pool Control	📕 🕻 Zones	HC12 Au LOCA		Tum Off	Don't Ch	Don't Ch	<< THIS
	C Living Room	Elan DT1 LOCA		Turn Off	Don't Ch	Don't Ch	<< THIS
UPS	🕴 Bedroom 🕒	Elan DT1 LOCA		Turn Off	Don't Ch	Don't Ch	<< THIS
	I M86A Theater	Blu-Ray LOC/		Turn On	Don't Ch	Source 0	<< THIS
Interface	0 Zone 4	Cable TV LOCA	AL Show	Tum On	Don't Ch	Source 0	<< THIS
	🕴 Zone 5						
Input/Output	€ = Ó Zone 6 Atlons AT-HD-∨44M (4x4 HDMI)						
Event Mapper	E Sources						
	🔮 (Source 01) Cable TV						
	😸 (Source 02) Blu-Ray Changer						
	📕 (Source 03)						
	(Source 04)						
	E C Zones						
	Ching Room Video						
	Bedroom Video						

# Exercise 8: Configure Zones in the Viewer

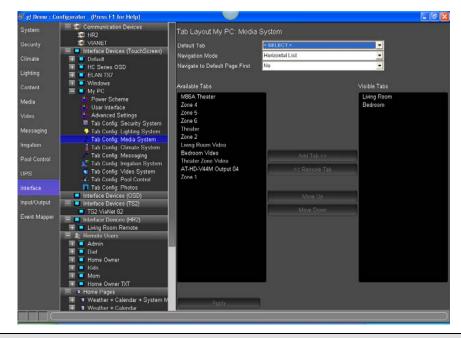
- *Overview* In the previous exercises, you added an Atlona At-HD-V44M Video Zone Controller with a total of four zones. However, none of the video zones' interfaces are required in the Viewer. The next step is to remove these unused zones from the Viewer interface to present a clean interface and reduce confusion for the homeowner.
- *How-to* To remove the unused zones from the Viewer interface:
  - 1. Select the Interface tab in the Configurator.
  - 2. Under Interface Devices (TouchScreen) near the top of the System Node Tree, click the plus (+) sign to the left of the Windows option to expand the list.
  - 3. Select **Tab Config: Media System**. The list of available/visible zones for the media system display in the properties window on the right.



**Visible Tabs** = zones that appear in the Viewer for the homeowner to use. **Available Tabs** = zones that are not currently displayed in the Viewer.

Since the **Living Room** and **Bedroom** zones are active in our Sample House, we need these zones to be in the **Visible Tabs** list. All of the remaining zones including the video outputs can be put in the Available tabs column, hiding them from the Viewer interface.

 In the Visible Tabs list, select all zones except for Living Room and Bedroom, click the <<Remove Tab buttons, and then click Apply. Your screen should look as below.



#### Notes about adding and removing tabs:

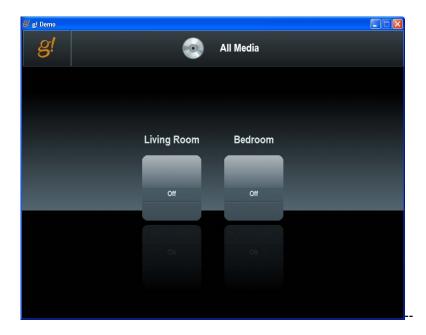
- Working with tabs on the Interface tab in the Configurator only adds/removes the zone from the Viewer on a per-screen basis. The zone is not deleted and can be added back into the Viewer at any time if the homeowner would like to expand their system.
- Multiple zones can be added or removed at one time. Press and hold the keyboard CTRL key and click to individually select the desired zones, then click the Add Tab>> or <<Remove Tab button. Press and hold the keyboard SHIFT button to multi-select all zones to be removed.
- 3) Each touch screen must be configured separately. In an actual system, each touch screen will have its own listing beneath the Default listing, and zones will need to be removed from each one individually. See the lesson on *GUI and Interfaces* for more information.

## Exercise 9: Check the Viewer

- *Overview* In the previous lessons and exercises you used the Configurator to set up the ELAN Media system and interfaces. In this exercise you will finally check your configuration in the Viewer.
- *How-to* 1. Click the Restore button in the upper-right corner of the Configurator window to exit Full Screen Mode.



- 2. On the **Media** tab, right-click the **Living Room** zone on the **M86A** and select **Show Virtual Zone**. *The Living Room Virtual Zone will be displayed.*
- 3. Right-click the Living Room Video zone on the AT-HD-V44M and select Show Virtual Zone. *The Living Room Video Virtual Zone will be displayed.*
- 4. Right-click the Living Room TV display and select Show Virtual Display. *The Living Room Virtual Display will be shown.*
- 5. Start the Viewer from the g!Tools My Systems screen. The Viewer interface displays the **Home** page.
- 6. Click the **g!** button in the upper right to access the main systems menu, then click **Media** to view the available media zones.



7. Click the **Living Room** icon and then click the **Source** button at the bottom of the screen.



8. Arrange the Viewer and the Virtual Displays on your desktop so that all are visible at the same time:

	🖉 CrystalParl					Living Room Video 🛛 🔀
Off On	<u>g!</u>	🚽 Living	Room 🕨		ŵ	Power Off On
Source 1 Source 2 Source 2 Source 3 Source 4 Source 5 Source 6 Source 7 Source 7	E Source					Source 1 Source 2 Source 3 Source 3 Source 4 Source 5 Source 6 Source 0
	MP3 Player 1 MP3 Player		Sirius Tuner	Blu-Ray Changer	Cable TV	Living Room TV (2) Power Off On Source Star 1 Stot 2
	OFF	SOURCE	· · · )	v v	Δ	Slot 3 PC

On this screen notice:

- The Source Names and Icons match those selected in the training exercises.
- The Living Room Virtual Zone shows that the zone is off
- The Living Room TV Virtual Display shows that the display is off.

9. Click the MP3 Player 1 source button in the Viewer interface. The built-in MP3

player interface displays.

Notice that the icon selected for the source indicates that this source is selected in this zone. Also note that the Living Room Virtual Zone switches to "On", but since this is an audio only source, the Television and Video zone do not change.

Living Room 🛛 📓	🖉 CrystaPad	💶 🛛 🗙 iving Room Video 🛛 🖻
Power Off On	g! 💿 🚽 Living Room 🕨	Power Off On
Source 1 Source 2 Source 3 Source 4 Source 6 Source 6 Source 7 Source 8	Home My Artists My Albums My Tracks	Source 1 Source 1 Source 3 Source 3 Source 3 Source 3 Source 3 Source 6 Source 6 Source 7 Source 0 Viring Backin TV (8 Power Off (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)
	My Playlists	Source Slot 1 Slot 2
	OFF 🌒 MP3 Player 1 👻 💢 🖓	A Skt 3 PC

- 10. Click the **Source** button on the bottom and select the **Blu-Ray Changer** source. Notice:
  - The Blu-Ray Changer interface displays,
  - Living Room TV Virtual Display changes to "On",
  - Living Room Video zone selects "Source 1",
  - Living Room Virtual Zone changes to "Source 5",
  - Source indicator (icon and name) to the right of the Living Room heading changes.



- 11. Click the **Source** button on the bottom and select the **Cable TV** source. Notice:
  - Cable TV Custom interface displays,
  - Living Room TV Virtual Display remains "On",
  - Living Room Virtual Zone changes to "Source 6",
  - Living Room Video Virtual Zone changes to "Source 2",
  - Source indicator (icon and name) for the Living Room changes.



## Notes:

\_ \_ \_ \_ \_ \_ \_ \_

# Notes:


# Lesson 8

# Configuring Home Theater Systems



### Overview

This lesson shows you how to set up a basic Home Theater receiver.

You will:

- Learn how a home theater system is organized in the Configurator.
- Configure a receiver for the home theater.
- Add the internal tuner as a source.
- Configure sources for the home theater receiver, including the pre-out from another zone controller.
- Add the Video Display to the home theater and configure its behavior.
- Check the Viewer interface to confirm proper configuration.
- Understand the various features available in the Viewer.

### Sample House

Our sample house will be configured with one home theater zone that includes 1 AVR, 1 Video Display, and three sources.

### Requirements

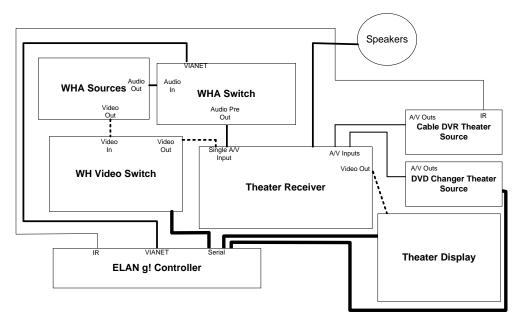
• A PC running g!Demo and g!Tools.

-or-

• g! system controller and g!Tools.

### Home Theater Integration Overview

*Overview* The following diagram shows the equipment in a home theater system schematically, illustrating the components that are important to the g! system controller.



Integrating a home theater system with the g! Software provides the homeowner with control of their home theater system through the g! Viewer, they can:

- Turn the zone on and off
- Select and control a source for the zone
- Adjust the audio volume in the zone
- Change the zone settings, such as bass and treble
- Change the listening modes on supported receivers

- *Terms* The following terms are used in the **Configurator** to describe the equipment in a home theater system:
  - **Communication Device:** The method the g! software will use to communicate with an external device, including information about the connection type and protocol.
  - Audio Zone Controller: The surround sound receiver
  - **One-Way Device:** A custom interface for controlling A/V components.

*How-to* This lesson consists of the following steps:

- Add and Configure **Sources**.
- Add the Communication Device.
- Add the **Zone Controller**.
- Add the video **Displays**.
- Configure the **Sources** and **Zones** in the Zone Controller.
- Configure a WHA zone output as a Source on the Receiver.
- Check for proper operation in the g! Viewer.

## Exercise 1: Add an IR Device and Import Codes from the Common Resource Library

Overview **g!Tools** includes an IR database that can be imported directly into the g! software. (ELAN .IRF files saved from other projects can also be imported). Importing files from the g!Tools IR library is an alternative to learning codes manually.

When using .IRF files, it is important to pay close attention to the Universal Functions in the commands. The g! software will try to choose the Universal Function based on code names.

In Exercise 1, you will create a new IR device for a Cable Box, import the codes from an .IRF file, and then check the codes.

- *How-to* The IR Device will include all the details for the device being controlled, including settings such as the emitter port on a Global Cache, repeat counts, toggle bits (if needed), and the IR Codes themselves.
  - 1. In the Configurator, go to the Media tab.
  - 2. Right-click the **One-Way Devices** heading in the system node tree and select **Add New Source...** The Add New Interface Window will open.

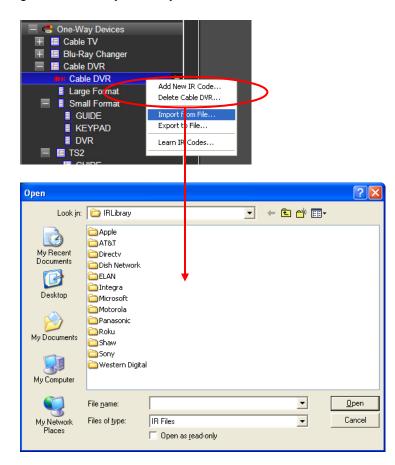
Add New Interface	
Interface Name	Cable DVR
Copy Layout from template	Cable Basic DVR
Connect to Existing Device	< NONE >
Create New IR Device	< NONE >
C Create New Serial Device	
	Cancel OK

- a. Change the Interface Name to "Cable DVR"
- b. Select Cable Basic DVR from the Copy Layout from template list.
- c. Select Create New IR Device, and leave < NONE > selected as the default code set. Typically you will not select any code set template when importing codes- doing so may cause duplicate code entries that do not contain IR data.

d. Click OK. A new IR Device named "Cable DVR" is added.

System	Communication Devices	IR Device : Cable DVR		
Security	S VIANET ELAN V85 Sony CX7000ES	Default Sender RC5 Codeset	< SELECT >	•
Climate	Striving Room TV	Decode IR from this device Tuning Type	No Cable (Type 1)	-
Lighting	Grow-Way Devices     HC12 Audio Output 1	Minimum Digits (0 Padding)	0	-
Content	HC12 Audio Output 2 Elan DT11/DT22 AM/FM Tuner	Pre-Tune Command Post-Tune Command	< NONE >	-
Media	Elan DT11/DT22 Sirius Tuner	Delay Between Commands	250 msec	•
Video	Living Room TV     Bedroom TV			
Messaging	🖃 🥌 One-Way Devices 표 🔚 Cable TV			
Irrigation	🕂 🧮 Blu-Ray Changer 🚍 📕 Cable DVR			
Pool Control	IR Device: Cable DVR			
line	🔲 🚦 Small Format			

- 3. In the properties window of the Cable DVR IR device, select **IR Output 2** as the **Default Sender.**
- 4. Click **Apply**. This tells the controller that the emitter for the Cable DVR is connected to IR Output Port 2 on the HC Controller.
- 5. Under the One-Way Devices node, right-click the **Cable DVR** IR Device and select **Import From File...** The Windows File Open window opens to the g!Tools IRLibrary directory.

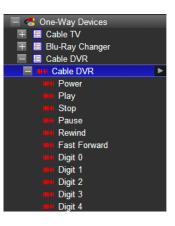


6. Navigate to Motorola\Cable and select RNG200N.HIR:

Open					? 🛛
Look jn:	Cable		•	🗢 🗈 💣 💷 •	
My Recent Documents Desktop My Documents	RNG150N.HIR				
My Computer					
	File <u>n</u> ame:	RNG200N.HIR		•	<u>O</u> pen
My Network Places	Files of <u>type</u> :	IR Files Open as read-only		•	Cancel

7. Select the file, and then click the **Open** button. *After a moment, the Configurator will refresh, and the imported codes will appear under Cable DVR*:

If necessary expand the list in the System tree for the **Cable DVR** IR Device by clicking on the "+" sign next to the device to display the imported commands.



# Exercise 2: Add an RS-232 Source with a Built-in Driver & Customizable Interface

- Overview In Exercise 2, you will configure an Integra DVD Changer. This source device is an example of a source with a built-in two-way driver and a customizable interface. This means that the g! software includes the necessary serial commands to control the changer and provides a set of interface templates that have the commands pre-mapped. Once a template is connected to the device, the control is automatically configured. The template also provides the ability to customize – add, remove, or change— controls as needed. In this exercise you will add the DVD Changer and the interface, and verify that the mapping is correct.
- *How-To* 1. Add the communication device.
  - a. Start the Configurator; click the **Media** tab, and then right-click **Communication Devices**.
  - b. Select Add New Communication Device. In the dialog box:
    - Enter "DVD" as the Device Name.
    - Select Serial Port in the Type drop-down box.
    - Select Standard Connection in the Communication Type dropdown box.
    - Click OK.

Add New Communication Device					
Device Name	DVD				
Туре	Serial Port				
Device					
Communication Type	Standard Connection				
Show Unsupported Devices					
	Cancel OK				

- 2. Set the COM Port.
  - a. Select the **DVD** communication device on the System Node Tree. The properties for this device display to the right.

Communication Device: DVD					
Name	DVD				
System #	6253				
Device Type	Serial Port / Standard Connection				
Location	< SELECT >	-			
Enable Sharing	No	-			
Sharing Port	0				
COM Port	NONE	•			
Protocol	RS232	*			
Baud Rate	9600	7			
Flow Control	None	*			
Parity	None	*			
Data Bits	8	7			
Stop Bits	1	v			

b. Select the desired COM Port in the properties window.

**Note:** The drop-down menu shows a list of all COM ports and indicates if a port is in use. Leave the selection set to **NONE** if you are using **g!Demo**.

- 3. Add the Integra DVD Player.
  - a. On the System Node Tree, right-click Two-Way Devices, and then select Add New DVD Player from the menu. *The Add New DVD Player window opens.*

Add New DVD F	Player						×
Name	Integra DPC-	7.4	,7.5,8.5	(RS-2	32)		
Device Type			Showl	Jnsup	porte	d Devic	es:
Arcam DV29							^
Axonix MediaD							
Axonix MediaD							
Denon DVD-3							
Escient Fireba							
Generic DVD F							
Integra DPC-7			32)				
Integra DPC-7							
Integra DPS-10.5 (RS-232) Marantz DV4001,DV6001,DV7001							
Marantz DV76							
Sony BDP-CX	7000ES						
Sony DVP-CX7	77ES						~
Search For D	evices		Cancel			ОK	

b. Select **Integra DPC-7.4,7.5,8.5 (RS-232)**, and click **OK** to add the DVD Player. *The DVD Player is added to the System Node Tree.* 

- c. Select the DVD Player in the System Node Tree. In the properties window:
  - Select the Communication Device **DVD** from the drop-down list.
  - Click Apply.

System	Communication Devices	DVD Player : Integra	DPC-7.4,7.5,8.5 (RS-232)	
Security	S VIANET ELAN V85	Name System #	Integra DPC-7.4,7.5,8.5 (RS-232) 25731	
Climate	Sony CX7000ES	Device Type	Integra DPC-7.4,7.5,8.5 (RS-232)	
Lighting	Living Room TV Bedroom TV	Communication Device	DVD	l
Content	<ul> <li>() My Drivers</li> <li>Stress</li> <li>Stress</li> </ul>			
Media	HC12 Audio Output 1 HC12 Audio Output 2 Elan DT11/DT22 AM/FM Tuner			
Video	Elan DT11/DT22 Sirius Tuner Sony BDP-CX7000ES			
Messaging	Integra DPC-7.4,7.5,8.5 (RS-► ■ Living Room TV			
Indiana di sua	Bedroom TV			

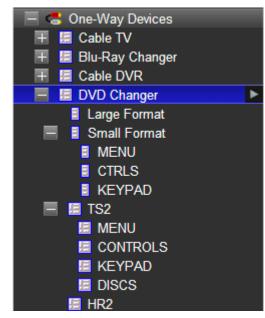
- 4. Add the Interface.
  - a. On the Configurator **Media** tab, right-click **One-Way Devices** in the System Node Tree, then select **Add New Source**. *The Add New Interface window opens.*
  - b. Type DVD Changer in the Interface Name field.
  - c. Select **DVD 6-Disc** from the **Copy Layout from template** drop-down menu.
  - d. Select **Integra DPC-7.4,7.5,8.5 (RS-232)** from the **Connect To Device** drop-down list. *This step defines the Integra DVD as the default device for this interface and in turn, assigns the buttons on the Viewer Interface to the proper commands on the DVD Changer.*

Add New Interface	
Interface Name Copy Layout from template	DVD Changer DVD 6-Disc
<ul> <li>Connect to Existing Device</li> <li>Create New IR Device</li> </ul>	Integra DPC-7.4,7.5,8.5 (RS-232) ▼ < NONE > ▼
C Create New Serial Device	Cancel OK

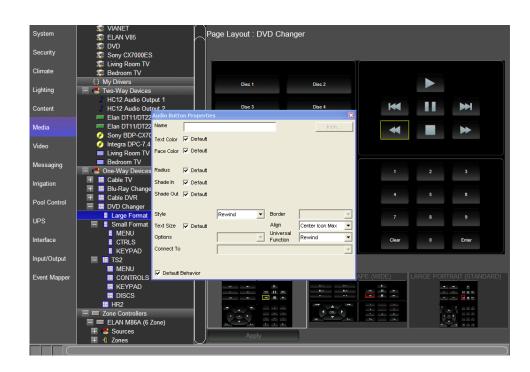
- e. Click **OK** to add the new interface.
- 5. Check the interface.
  - a. Select the DVD Changer to view its properties on the right. Verify the Integra driver is selected as the **Default Device**.

Source : DVD Changer				
Name	DVD Changer			
System #	26109			
TouchScreen Behavior	Enable Interface 📃			
HR2 Behavior	Enable Interface 📃			
OSD Behavior	Source Select Page 📃			
Default Device	Integra DPC-7.4,7.5,8.5 (RS-232)			

b. Click the plus sign (+) next to the **DVD Changer** interface in the System Node Tree to expand it.



- c. Select Large Format, and then select Large Landscape(Standard) to view its button layout.
- d. Click the **Rewind** button to display the **Audio Button Properties** dialog box. Verify the Funct. (Universal Fuction) is set to Rewind. *This means that when this button is pressed in the Viewer the Rewind command will be issued to the default device assigned to this interface.*



# Exercise 3: Add a Communication Device and Receiver

*Overview* In the following steps you will add a communication device to communicate with the home theater system, a Sunfire TGR-401 in our example. The communication device is the bridge between the g! software and the receiver, and is where you will specify how the systems are physically connected and what communication protocol should be used.

In a typical installation, the receiver is the heart of the home theater system. Note that the g! software considers the receiver to be an Audio Zone Controller, and so that is how you will add it to the Configurator.

**Note:** Actual system setup may be different depending upon which receiver is installed on site. Refer to the *Integration Notes* for the particular receiver for details.

### *How-to* 1. Start the **Configurator** and click the **Media** tab on the left.

- 2. Right-click **Communication Device** and select **Add New Communication Device**. In the dialog box:
  - a. Enter "Sunfire" as the Device Name.
  - b. Select Serial Port in the Type drop-down box
  - c. Select **Sunfire TGR-401, TGP-401** in the Communication Type dropdown box.
  - d. Click OK.

Add New Communication Device			
Device Name	Sunfire		
Туре	Serial Port	•	
Device		-	
Communication Type	Sunfire TGR-401, TGP-401	•	
🗖 Show Unsupported E	Devices		
	Cancel OK		

3. Select the Sunfire Communication Device in the System Node Tree.

4. In the properties window at right, select the port that the device is connected to, then click **Apply**.

ation Devices 😨 Commu System Communicat DT11 VIANET ELAN V85 DVD Communication Device: Sunfire Sunfire Name Security 26431 System # Sony CX7000ES Sony CX7000ES Sunfire Living Room TV Bedroom TV Serial Port / Sunfire TGR-401, TGP-401 Climate Device Type Q < SELECT > Lighting Enable Sharing No • Sharing Port Content {} My Drivers Two-Way Devices
HC12 Audio Output 1 COM Port NONE Media Protocol HC12 Audio Output 2 Baud Rate Elan DT11/DT22 AM/FM Tuner Flow Control Elan DT11/DT22 Sirius Tuner Sony BDP-CX7000ES Messaging 🧞 Integra DPC-7.4,7.5,8.5 (RS-232 Data Bits Living Room TV rrigation Stop Bits Bedroom TV - 😫 One-Way Devices Pool Control

**Note:** The drop-down menu shows a list of all COM ports and indicates if a port is in use. Leave the selection set to **NONE** if you are using **g!Demo**.

In the steps below, you will add a Sunfire TGR-401 to the Configurator.

- 5. In the Configurator on the **Media** tab, right-click **Zone Controllers**, then click **New Zone Controller**. *The Add New Zone Controller dialog box opens.*
- 6. Select Sunfire TGR-401, TGP-401 as shown below, and then click OK.

Add New Zone	Controller			×
Name	Sunfire TGR-	401, TGP-401		_
Device Type		🗖 Show Uns	upported Devices	3
SpeakerCraft SpeakerCraft SpeakerCraft SpeakerCraft SpeakerCraft Sunfire TGR-3	MZC-88 MZC-88 (16 z MZC-88 (24 z MZC-88 (32 z 3, TGP-5	one) one)	2	•
Sunfire TGR-4 Vaux Lattis (s Video Storm ( Video Storm (	erial) CMX1616A CMX1616V			
Video Storm ( Video Storm ( Video Storm ( Video Storm (	CMX84 CMX86			•
Search For D	ovince	Cancel	ок	-
Beartin Für D	evices	Canter		

7. Check the properties window. The Sunfire Communication Device (added in the previous exercise) should automatically be selected for the Zone Controller.

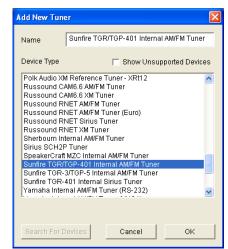
System	🧟 DT11	Zone Controller : Sur	nfire TGR-401, TGP-401
Security		Name	Sunfire TGR-401, TGP-401
Security	ELAN V85	System #	26432
Climate	🖉 DVD	Device Type	Sunfire TGR-401, TGP-401
Giimate	Sony CX7000ES		
Lighting	Sunfire	Communication Device	Sunfire
Lighting	Section TV		
Content	Bedroom IV     Orivers		
Content	My Drivers     Two-Way Devices		
	+ S Iwo-way Devices		
Media	- Zone Controllers		
	ELAN M86A (6 Zone)		
Video	The sources		
	+ 1 Zones		
Messaging	ELAN V85		
	= Sources		
Irrigation	Source 01) Blu-Ray Changer		
	Source 02) Cable TV		
Pool Control	(Source 03)		
	(Source 04)		
UPS	(Source 05)		
	(Source 06)		
Interface	Source 07)		
	(Source 08)		
Input/Output	🔳 🌖 Zones		
	📃 📼 Sunfire TGR-401, TGP-401 🔹 🕨		
Event Mapper	🕂 📇 Sources		
	🕂 🚯 Zones		
	Interface Groups		
		Apply	

#### Exercise 4: Add the Internal Tuner Source

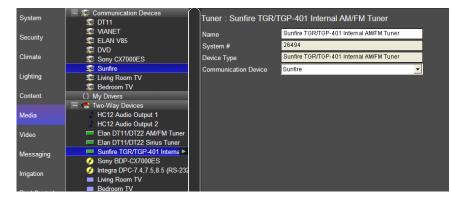
*Overview* In Exercise 5, you will add the Sunfire TGR-401, TGP-401 internal tuner to the Configurator.

Many surround sound receivers have AM/FM tuners built in. The g! software can control those tuners using our built-in AM/FM tuner interface; simply add the tuner and connect it as a source to the zone controller. Because the tuner is a part of the receiver, you do not need a separate communication device, it will share the Sunfire communication device. Be sure you have completed Exercise 4 before beginning this exercise.

*How-to* 1. On the **Media** tab, right click the Two-Way Devices node, and select **Add New Tuner**. *The Add New Tuner dialog box opens.* 



- 2. Scroll through the list and select **Sunfire TGR/TGP-401 Internal AM/FM Tuner**, then click **OK**.
- 3. Check the settings for the tuner in the properties window. The Communication Device should be automatically set to Sunfire.



**Note:** The Sunfire Communication Device added in exercise 4 is highlighted, indicating that the tuner was automatically associated with that Communication Device.

#### **Exercise 5: Configure Sources**

*Overview* Before beginning Exercise 5, be sure that you have added sources, the Receiver and Internal Tuner. In this exercise you will associate the sources with the appropriate inputs on the receiver.

In a typical installation, sources are assigned to specific inputs on the receiver. The g! software needs to know which sources are assigned to each input so that the correct signals can be sent to the receiver based on user input in the Viewer interface. This procedure is the same for most supported receivers.

For our Sample House, you will configure the sources added in previous exercises.

How-to

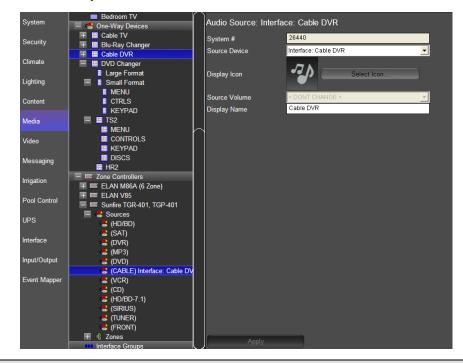
 In the Configurator on the Media tab, Zone Controllers node, click the plus sign (+) to expand the Source List for the Sunfire TGR-401, TGP-401 receiver.

**Note:** The names shown for sources should match the input names printed on the back of the receiver.

2. Select **(CABLE)** from the list of available sources. The properties for (CABLE) will be displayed in the window on the right.

System	😴 DVD	$\cap$	Audio Source:	
System	😨 Sony CX7000ES		Audio Source.	
Constitution of the second sec	😨 Sunfire		System #	26440
Security	🔹 Living Room TV	$\sim$	Source Device	< NONE >
01	🔹 Bedroom TV		Source Device	
Climate	{.} My Drivers			JA Select loop
	📃 🧲 Two-Way Devices		Display Icon	Select Icon
Lighting	HC12 Audio Output 1			and a second
-	HC12 Audio Output 2		Source Volume	< DEFAULT >
Content	Elan DT11/DT22 AM/FM Tuner			
	Elan DT11/DT22 Sirius Tuner		Display Name	
Media	Sunfire TGR/TGP-401 Internal A			
	Sony BDP-CX7000ES			
Video	Integra DPC-7.4,7.5,8.5 (RS-232 Living Room TV			
	Bedroom TV			
Messaging	+ Cone-Way Devices			
	- Zone Controllers			
Irrigation	+ ELAN M86A (6 Zone)			
	F = ELAN V85			
Pool Control	Sunfire TGR-401, TGP-401			
	Sources			
UPS	(HD/BD)			
	🗧 (SAT)			
Interface				
	🖶 (MP3)			
Input/Output	📑 (DVD)			
	distribution (CABLE)			
Event Mapper	📇 (VCR)			
	📇 (CD)			
	📇 (HD/BD-7.1)			
	arrie (SIRIUS)			
	a (TUNER)			
	🖶 (FRONT)			

3. From the **Source Device** drop-down list, select **Interface: Cable DVR** as the source device for (CABLE), then click **Apply.** The (CABLE) entry in the System Node Tree changes to reflect its association with the Cable DVR Interface. The interface itself is also highlighted to indicate that it is the device referenced by the source.

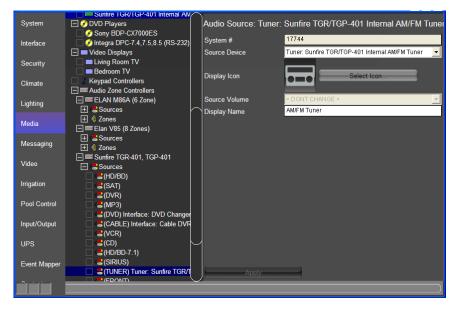


**Note:** To ensure proper control, the source devices must be connected to the same physical input as is specified in the Configurator.

- 4. In the properties window, click the **Select Icon** button. *The Select Icon window will open.* 
  - a. Click the plus (+) sign next to the lcons folder, then select the Media subfolder. Use one of the icons that display in the window, or navigate to the Color or Gray folders to see more options. Select the icon you wish to use for the source and click OK.



- 5. Check the **Display Name** entry. The name should be user friendly, like "Cable DVR". *The Display Name is what will appear in the Viewer*.
- 6. Add the remaining sources, DVD Changer and Internal Tuner as follows
  - a. Select the (DVD) source. From the Source Device drop-down list, select Interface:DVD Changer, select an icon and check the display name, then click Apply.
  - b. Select the **(TUNER)** source. From the Source Device drop-down list, select **Tuner: Sunfire TGR/TGP-401 Internal AM/FM Tuner**, select an icon and check the display name, then click **Apply**.
  - c. The Home Theater Receiver should now show sources assigned to the Source inputs, similar to the example shown below.

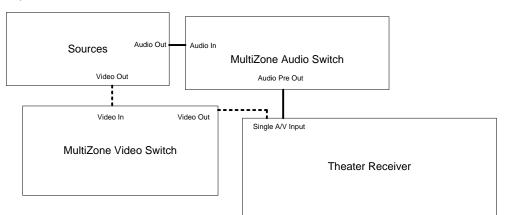


#### Exercise 6: Output from Zone

*Overview* In many installations, customers want to be able to play the Whole House Audio (WHA) through another device, such as a surround sound receiver in a theater or bedroom. ELAN uses the concept of **Output From (zone)** to accomplish this without needing to write complex macros.

In this setup, a zone pre-out from the whole house audio equipment is wired to a single input on the rear of a receiver in the home theater. In addition, an output from the whole house video equipment is also wired to the Receiver in order to provide video as well as audio in the Theater zone.

In the Configurator, an output zone from the WHA system is assigned as a *source* on the receiver. The Viewer then populates the available audio sources from the WHA zone controller in the zone (or zones) for the surround receiver. If a source from the WHA is selected in the Viewer, ELAN sends a signal to the WHA system to switch to that source. Any local sources on the receiver will still function as expected.



The following example describes how to set up an ELAN M86A and Atlona AT-HD-V44M with a zone output to a Sunfire TGR-401 Surround Sound receiver.

How-to

- 1. Add the Atlona AT-HD-V44M Zone Controller. Remember to add a Communication Device first.
- 2. To send video along with the audio from the Multi Zone M86A/AT-HD-V44M, configure the AT-HD-V44M zone prior to configuring zone slaving:
  - a. On the Media tab, locate the Atlona under Zone Controllers. Click the plus "+" sign next to Zones to expand the Zone list, and select AT-HD-V44M Output 3.
  - b. In the Zone Properties pane on the right, select the name "AT-HD-V44M
     Output 3" at the top and enter "Theater Zone Video" to rename this zone. Naming the zone clearly will help us keep track of the various when configuring Slave and "Output" relationships between zone controllers.

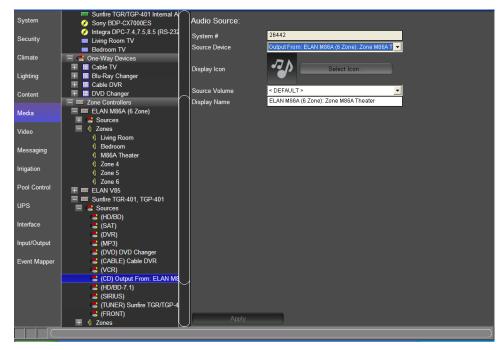
#### c. Click Apply.

	😒 Sunfire	$\cap$								
ystem	👳 Atlona		Audio Zone: Thea	ter Zone V	/ideo					
ecurity	😒 Living Room TV		Name	Theater Zor	ne Video					
ecunty	😨 Bedroom TV		Svstem #	26505						
limate	() My Drivers		Universal Receiver	< NONE >				_		
imate	🗏 🥌 Two-Way Devices	ΪÌ								
ghting	HC12 Audio Output 1 HC12 Audio Output 2		Display 1	< NONE >				-		
gnung	Elan DT11/DT22 AM/FM Tuner		Display 2	< NONE >				-		
ontent	Elan DT11/DT22 Sirius Tuner		Slave Zone 1	< NONE >				-		
ontent	Sunfire TGR/TGP-401 Internal A		Slave Zone 2	< NONE >				•		
ledia	Sony BDP-CX7000ES		Turn On Source	< NONE >				-		
eula	Integra DPC-7.4,7.5,8.5 (RS-232)		rum on Source	IS NONE 2						
ideo	Living Room TV		Source Configuration							
ueu	Bedroom TV		Source DispFrom Zon	e Show	Display (	On/Display	1 In¡Display 2	2 IngSlave 1	SouiSlave 2	SouiVolume
essaging	💻 🧲 One-Way Devices		Cable TV LOCAL	Show						<< THI
cooling	🕂 🧮 Cable TV		Blu-Ray LOCAL	Show						<< TH
igation	🧮 📕 Blu-Ray Changer									
igation	🗐 🧮 Cable DVR									
ool Control	🕂 🔚 DVD Changer									
	🔚 📟 Zone Controllers									
PS	ELAN M86A (6 Zone)									
. 0	🕂 🖶 Sources									
terface	🕂 () Zones									
tenace										
put/Output	Sunfire TGR-401, TGP-401									
puroutput	+ Sources									
vent Mapper	Ationa AT-HD-V44M (4x4 HDMI)									
vent wapper	The sources									
	- Ources									
	Living Room Video									
	Bedroom Video									
	Theater Zone Video									
	AT-HD-V44M Output 04									
	Interface Groups		Apply							

- 3. Configure the M86A "source" zone to send audio and video to the Theater Receiver by setting up the Atlona zone as a slave on the M86A zone.
  - a. Click the "+" next to **Zones** under the **ELAN M86A** Zone Controller to expand the zone list, and then select **Zone 3**.
  - b. In the Zone Properties pane on the right, select the name "**Zone 3**" at the top and enter "**M86A Theater**".
  - c. Select Atlona AT-HD-V44M Zone 3 (Theater Zone Video) from the Slave Zone 1 drop-down list. This will link the AT-HD-V44M Theater zone to the M86A Theater zone. The Slave 1 Source column in Source Configuration matrix populates with the words "Don't Change" for each of the available sources.
  - d. Source 5 (Blu-Ray Changer) and Source 6 (Cable TV) are A/V sources. For these, right-click Don't Change in the Slave 1 Source column to popup the list of sources on the AT-HD-V44M. Select the desired source from the list. Leave the audio only sources as "Don't Change".

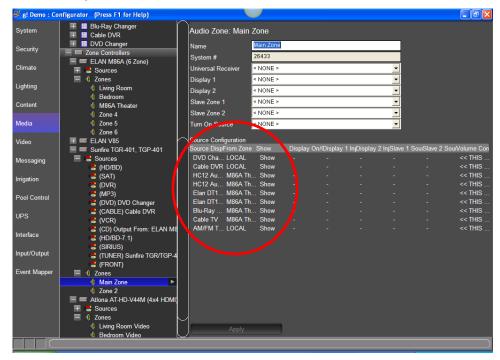
System	😨 Sunfire	Audio Zone: Zone	<u> </u>					
ystem	😨 Atlona	Audio Zone. Zone	50					
Security	🕵 Living Room TV 🕱 Bedroom TV	Name	M86A Thea	ter				
	Bedroom IV () My Drivers	System #	22653					
limate	Two-Way Devices	Universal Receiver	< NONE >				<b>.</b>	
	HC12 Audio Output 1	Display 1	< NONE >				-	
ighting	HC12 Audio Output 2							
	Elan DT11/DT22 AM/FM Tuner	Display 2	< NONE >				<u> </u>	
Content	Elan DT11/DT22 Sirius Tuner	Slave Zone 1	Ationa AT-H	ID-V44M (4»	4 HDMI) Zon	e 3 (Theater)	Zone 💌	
	📼 Sunfire TGR/TGP-401 Internal A	Slave Zone 2	< NONE >				•	
/ledia	Sony BDP-CX7000ES	Turn On Source	< NONE >				-	
	🤣 Integra DPC-7.4,7.5,8.5 (RS-232							
/ideo	Living Room TV	Source Configuration						
	Bedroom TV	Source DispFrom Zor	ne Show	Display	On/Display	1 In(Display	2 InjSlave 1 SouiSlave 2	
lessaging	🚍 🥌 One-Way Devices	HC12 Au LOCAL	Show				Don't Ch	<< THIS
	🕂 📃 Cable TV	HC12 Au LOCAL	Show				Don't Ch	<< THIS
rigation	\pm 🧧 Blu-Ray Changer	Elan DT1 LOCAL					Don't Ch	<< THIS
	🕂 🧮 Cable DVR	Elan DT1 LOCAL	Show				Don't Ch	<< THIS
Pool Control	∓ 🧮 DVD Changer	Blu-Ray LOCAL					Source 0	<< THIS
	- Zone Controllers	Cable TV LOCAL	Show				Source 0	<< THIS
IPS	E ELAN M86A (6 Zone)							
	+ 🖶 Sources - 🌗 Zones							
terface	U Zones Living Room							
	Bedroom							
nput/Output	M86A Theater							
	© Zone 4							
vent Mapper	d Zone 5							
terre mapper	C Zone 6							
	+ = ELAN V85							
	= Sunfire TGR-401, TGP-401	$\checkmark$						
	+ Sources							
	T Q Zones							
	Atlona AT-HD-V44M (4x4 HDMI							
	I Sources	Apply						

- e. When finished, click **Apply.** *The desired video sources will now switch with M86A Audio zone.*
- 4. Assign the M86A Theater Zone Output as a source to the Home Theater Receiver:
  - a. Navigate to the CD source on the Sunfire TGR-401. In the Source Device drop-down, select Output From: ELAN M86A (6 Zones): Zone M86A Theater:



**Note:** It is important to enter a name or select an icon, as this information is not displayed in the Viewer. The source names and icons will carry through from the M86A "source" zone.

- b. Click Apply.
- c. Check the Zone properties for Main Zone on the Sunfire Receiver. At the bottom of the page under Source Configuration, notice that all the sources added to the M86A display in addition to the sources on the Sunfire. The M86A zone will turn on and select sources automatically when they are activated from the Sunfire Zone. The Sunfire will maintain the single input selection and provide all volume control locally when "Output From..." sources are selected.



#### Exercise 7: Add the Display

*Overview* In Exercise 7, you will add a Display with a two-way driver to the Configurator.

In the g! software, displays are set up independently in the Configurator, and then assigned to a zone. For displays with two-way drivers, the g! software has pre-configured the commands.

- How-To
   1. In the Configurator, on the Media tab, right-click Communication Devices in the System Node Tree and select "Add New Communication Device". The Add New Communication Device window opens.
  - a. Change the name of the device to Theater TV.
  - b. Set the **Type** to **Serial Port** and the **Communication Type** to **Standard Connection**, and then click **OK**.

Add New Communicat	ion Device 🛛 🔀
Device Name	Theater TV
Туре	Serial Port
Device	V
Communication Type	Standard Connection
🔲 Show Unsupported I	Devices
	Cancel OK

- 2. Right-click **Two-Way Devices** in the System Node Tree, and select **Add New Video Display**. *The Add New Video Display window opens*.
- Select Panasonic TH Series from the list of supported displays and click OK. A Panasonic TH Series Video Display will be added to the System Node Tree, and the Properties window for the device will open.

Add New Video Disp	lay 🛛 🔀
Name Panas	sonic TH Series
, Device Type	C Show Unsupported Devices
Fujitsu P_XTA51US InFocus 7210 JVC DLA-RS1 LG Plasma/LCD Ser Maxx 1400-LCOS NEC GT-6000 Olevia Series-3 Panasonic TT-AE10 Panasonic TT-Series Pioneer CMX Series Pioneer Pro Series Samsung HL Series Sharp LC Series	ries 00U S
Search For Devices	Cancel OK

4. Change the Name field in the properties window to Theater TV.

5. Select **Theater TV** from the **Communication Device** drop-down list, then click **Apply**. *The name of the display will change in the System Node Tree.* 

🗧 g! Demo : Co	onfigurator (Press F1 for Help)				
System	Communication Devices	ſ	Video Display : Thea	ter TV	
Security	Se VIANET Se Elan V85		Name	Theater TV 26565	
Climate	DVD Sony CX7000ES		System # Device Type	26565 Panasonic TH Series	
Lighting	sunfire		Communication Device	Theater TV 💽	
	Se Atlona Se Theater TV				
Content	Section Sectio				
Media	<ul> <li>My Drivers</li> <li>Two-Way Devices</li> </ul>				
Video	HC12 Audio Output 1 HC12 Audio Output 2				
Messaging	Elan DT11/DT22 AM/FM Tuner Elan DT11/DT22 Sirius Tuner				
Irrigation	Sunfire TGR/TGP-401 Internal A				
Pool Control	<ul> <li>Integra DPC-7.4,7.5,8.5 (RS-232</li> <li>Living Room TV</li> </ul>	$\vdash$	,		
UPS	Bedroom TV     Theater TV				
Interface					
Input/Output	Blu-Ray Changer     E Blu-Ray Changer     E Cable DVR     DVD Changer				
Event Mapper	ELAN M86A (6 Zone)				
	🕂 🔮 Sources				
	🗐 🔞 Zones 🌵 Living Room				
	Bedroom     M86A Theater		Apply		
	Cone 4		, Apply		

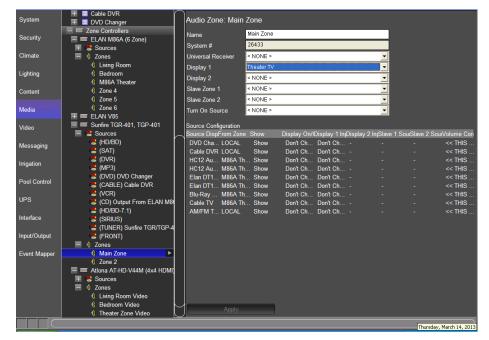
Your screen should now look like the one shown below.

## Exercise 8: Assign a Display to a Zone

*Overview* In Exercise 8, you will set up the Theater zone to use a display. Before beginning, be sure that you have completed the previous exercises from this lesson.

Assigning a display to a zone provides the ability to send power and input commands to the display, based on which source is selected.

- *How-To* 1. In the Configurator, on the **Media** tab Zone Controller node, click the plus (+) sign to expand the zone list for the Sunfire TGR-401, TGP-401 receiver.
  - 2. Click **Main Zone** in the Zones list. *The Main Zone properties display in the window to the right.*
  - 3. From the **Display 1** drop-down list, select the **Theater TV** and click **Apply**. *The Source Configuration matrix will change to reflect the available display commands for each source.*



Quick Reference	ce: Source Configuration
Name	Editable field used to name the zone.
System #	Unique, read-only number assigned by the <b>g!</b> software for internal use.
Universal Receiver	Zone IR Receiver assignment.
Settings Interface	Drop-down field used to select the Settings interface for the zone.
Display 1	Drop-down field used to select the first television display assigned to the zone.
Slave Zone 1	Drop-down field used to assign a slave zone to Display 1.
Display 2	Drop-down field used to select the second television display assigned to the zone.
Slave Zone 2	Drop-down field used to assign a video slave zone to Display 2.
Turn On Source	Drop-down field used to select a source to be selected when the zone is turned on with a "Zone On" command.
Source Configuration Matrix	Matrix view of the sources in this zone. To change any of the settings in the matrix, right-click the setting you want to work with to display a popup menu of options. Select the appropriate option from the list.
	Use the matrix to configure the following:
	<b>Source Display Name</b> . Lists the name for the source as it will display in the Viewer. Right-click the source name to move it up and down in the list, which will change the order the sources are shown in the Viewer.
	From Zone. The name of the zone the source is directly connected to.
	<b>Show Source</b> . This Yes/No option controls whether (or not) this source will be displayed in the Viewer.
	<b>Display On/Off</b> . This On/Off option controls the behavior of video display(s) when this source is selected.
	<b>Display 1 Input</b> . Select the input that Display 1 should switch to for the selected source device. This column will only be available when a display is selected in the Display 1 field described above.
	<b>Display 2 Input</b> . Select the input that Display 2 should switch to for the selected source device. This column will only be available when a display is selected in the Display 2 field described above.
	<b>Slave 1 Source</b> . Map the appropriate source from the video switcher to show on Display 1 when this "Source Display Name" is selected. This will only be available when a selection is made in the Slave Zone 1 field above.
	<b>Slave 2 Source</b> . Map the appropriate source from the video switcher to show on Display 2 when this "Source Display Name" is selected. This will only be available when a selection is made in the Slave Zone 2 field above.
	<b>Volume Control</b> . Map each source to the appropriate audio zone controller/audio zone for volume control. This is only necessary when there is more than one audio source in a single zone.

- 4. For this example, we will assume that the Receiver is acting as a video switcher and that there is a single video connection from the receiver to the connection "Slot 1" in the display. For each source, we need to specify the displays power state and which input the display should use.
  - a. In the Source Configuration matrix, configure the display settings for the **CABLE (Cable DVR)** input. This source is for a Cable box, so the display for the zone should be turned on when this source is selected.
  - b. Right-click **Don't Change** in the **Display On/Off** column directly to the right of the Input Name, Cable TV. *A popup window will appear showing your options:*

ource Display I	From Zone	Show Source	Display On/Off	Display 1 Input	Display 2 Input	Slave 1 Source	Slave 2 Source	Volume Control
DVD Changer	LOCAL	Yes	Don't Change	Don't Change				<< THIS ZON.
Cable DVR	LOCAL	Yes	Turn On	Don't Change	-	-	-	<< THIS ZON
MP3 Player 1	M86A Theater	Yes	Don't Chang					<< THIS ZON
MP3 Player 2	M86A Theater	Yes	Don't Chang	Turn Off				<< THIS ZON
AM/FM Tuner	M86A Theater	Yes	Don't Chang	Don't Change				<< THIS ZON
Sirius Tuner	M86A Theater	Yes	Don't Change	Don't Change				<< THIS ZON
Blu-Ray Cha	M86A Theater	Yes	Don't Change	Don't Change				<< THIS ZON
Cable TV	M86A Theater	Yes	Don't Change	Don't Change				<< THIS ZON
AM/FM Tuner	LOCAL	Yes	Don't Change	Don't Change				<< THIS ZON
A	pply							

- c. Select **Turn On** for this source. *The entry in the Display On/Off column will update to reflect your choice.*
- d. Set the input by right-clicking in the **Display Input** column directly to the right of the Cable DVR to display the choices. Select **Slot 1**.
- e. Repeat the steps above to set the **DVD (DVD Changer)** to **Turn On** and select **Slot 1** input.
- Scroll down the list of sources if necessary to locate TUNER (Sunfire TGR/TGP-401). This is an audio-only source, so we need to turn off the display when it is selected. Right click Don't Change in the Display On/Off column and select Turn Off from the popup menu. Your screen should now look like below.

System	Video Displays	Audio Zone: Ma	ain Zone							
Interface	Bedroom TV	Name	Main Zon					12		
intertace	Theater TV	System #	17732							
Security	Keypad Controllers	Universal Receiver	< NONE >					-		
	Audio Zone Controllers     ELAN M96A (6 Zone)	Settings Interface	< NONE >	6						
Climate	(+) == Elan V85 (8 Zones)	Display 1	Theater T	v						
Lighting	E Suntre TGR-401, TGP-401	Display 2	< NONE >	0						
Cogning	Sources	Slave Zone 1	< NONE >					•		
Media	(HD/80)	Slave Zone 2	< NONE >	8						
	(OVR)	Turn On Source	< NONE >	02				•		
Messaging	(MP3)		and <sup>the</sup>							
Video	CVD) DVD Changer	Source Configuration		Show Source	Display On/Off	Display 1 Input	Display 2 loost	Slave 1 Source	Slan 2 Source	Volume Contr
YNCO	CABLE) Cable DVR	DVD Changer 1		Yes	Turn On	Slot 1	contract of the second	-	-	<< THIS ZO
Inigation	CD) Output From ELAN M854		OCAL	Yes	Tum On	Slot 1				<< THIS ZO
	(HD/BD-7.1)	MP3 Player 1 N	186A Theater	Yes	Don't Change	Don't Change				<< THIS ZO
Pool Control	(ISIRIUS)	MP3 Player 2 N	185A Theater	Yes	Don't Change	Don't Change				<< THIS ZO
Fuurcularu	(TUNER) Surfire TGR/TGP-40	AM/FM Tuner N	196A Theater		Don't Change	Don't Change				<< THIS ZO
Input/Output	(FRONT)	Sirius Tuner M	186A Theater	Yes	Don't Change	Don't Change				<< THIS ZO
inpus cospos	0 Zones	Blu-Ray Cha N	105A Theater	Yes	Don't Change	Don't Change				<< THIS ZO
UPS	4 Man Zone	Cable TV N	196A Theater	Yes	Don't Change	Don't Change				<< THIS ZO
UPS	d Zone 2	AM/FM Tuner L	OCAL	Yes	Turn Off	Don't Change				<< THIS ZO
Event Mapper	Keypads and Interfaces     Zone Headers									
Content	Interface Templates     Interface Groups									
Floor Plan	Home Bar	Appl	y	a						

- 6. Since there are both A/V and Audio-only sources being sent from the M86A Theater zone, leave CD (Output from ELAN M86A Zone M86A Theater) set to Don't Change. To configure individual actions for the display on an "Output From" Source, we will configure these settings on the Source Zone (M86A Theater).
  - a. Click the "+" next to **Zones** under the **ELAN M86A** Zone Controller to expand the zone list, and select **M86A Theater**
  - b. Select **Theater TV** from the **Display 1** drop-down list. This will link the Theater TV with the **M86A Theater** zone. *The Display On/Off and Display Source columns in Source Configuration matrix populates with the words "Don't Change" for each of the available sources.*
- Source 5 (Blu-Ray Changer) and Source 6 (Cable TV) are A/V sources. For these, right-click Don't Change in the Display On/Off column to popup the power selection and choose "Turn On". This will ensure the Theater TV powers on when this source is active.
- 8. Select the **TV Input** for the A/V sources by right-clicking **Don't Change** under the **Display Sources** column and select "**Slot 1**".

📕 g! Demo : Co	nfigurator (Press F1 for Help)									
System	😴 Theater TV 🛛 🖉 Living Room TV	$\cap$	Audio Zon	e: M864	A Theater					
-,	Sedroom TV									
Security	() My Drivers		Name		M86A Theat	er				
	🗏 🚭 Two-Way Devices	_	System #		22653					
Climate	FHC12 Audio Output 1	$\cap$	Universal Re	ceiver	< NONE >				•	
	J HC12 Audio Output 2		Display 1		Theater TV				-	
Lighting	📼 Elan DT11/DT22 AM/FM Tuner		Display 2		< NONE >				<u> </u>	
	📼 Elan DT11/DT22 Sirius Tuner		Slave Zone 1			D-V44M (4x4 H	DMD Zawa 2.0			
Content	Sunfire TGR/TGP-401 Internal A Sony BDP-CX7000ES					D-94400 (484 H	iDiwi) Zone 3 (	i neater Zune		
	Sony BDP-CX/000ES Integra DPC-7.4,7.5,8.5 (RS-232)		Slave Zone 2		< NONE >				-	
Media	<ul> <li>Integra DPC-7.4,7.5,6.5 (RS-232</li> <li>Living Room TV</li> </ul>		Tum On Sou	irce	< NONE >				-	
	Bedroom TV		Source Confi	aurotion						
Video	Theater TV		Source Comi Source Displ		s Show	Dienlay On	(Display 1 Int	Dienlay 2 In	rSlave 1 SouiSlaw	e 2 SouiVolume Con
	🗏 🧲 One-Way Devices		HC12 Au		Show	Turn Off	Don't Ch		Don't Ch	<< THIS
Messaging	🔳 🔚 Cable TV		HC12 Au		Show	Turn Off	Don't Ch		Don't Ch	<< THIS
Irrigation	🔚 🔚 Blu-Ray Changer		Elan DT1	LOCAL	Show	Turn Off	Don't Ch		Don't Ch	<< THIS
ingation	\Xi 📃 Cable DVR		Elan DT1	LOCAL	Show	Turn Off	Don't Ch		Don't Ch	<< THIS
Pool Control	∓ 🧮 DVD Changer		Blu-Ray		Show	Turn On	Slot 1		Source 0	<< THIS
	- Zone Controllers		Cable TV	LOCAL	Show	Turn On	Slot 1		Source 0	<< THIS
UPS	🚍 🚥 ELAN M86A (6 Zone) I 🐨 🥞 Sources									
	Goules									
Interface	Living Room	. ,								
	6 Bedroom	$\sim$								
Input/Output	🌖 M86A Theater 🛛 🕨									
· ·	Ø Zone 4									
Event Mapper	🚯 Zone 5									
	🕴 Zone 6									
	ELAN V85     ELAN V85									
	🗏 🚃 Sunfire TGR-401, TGP-401									
	Sources									
	(HD/BD) (SAT)									
				Apply						
		$\sim$				_				

 Turn off the TV for all the remaining audio sources by right-clicking Don't Change in the Display On/Off column and choosing Turn Off.

#### Exercise 9: Configure the Zones

*Overview* Before beginning Exercise 9, be sure you have completed the previous exercises of this lesson. In this exercise, you will set up the Zone Names and Settings pages for the Receiver, and remove unused zones from the Viewer interface.

Giving the zones user-friendly names provides the user with an intuitive interface for controlling the audio in their home. Remove unused zone controls from the Viewer interface to prevent confusion on the part of the homeowner, and to prevent them from turning on a zone to which no speakers are connected.

The optional settings interface gives the user access to less commonly used functions, such as bass, treble, and Listening Modes.

**Note:** On some surround sound receivers, the Settings interface will give the user access to various listening modes. See the *Integration Notes* for the specific receiver for details.

- How-to
   1. In the Media tab, Zone Controller node, click the plus (+) sign to expand the Zone List for the Sunfire TGR-401, TGP-401 receiver.
  - 2. Click on **Main Zone** in the zone list. *The properties for Main Zone will display on the right.*
  - 3. Change the name to **Theater** in the Name field, then click **Apply**. *The label of the zone will change in the Zone List to reflect the new name.*
  - 4. Right-click the Theater zone in the system node tree and select **Create Settings Page for this zone**. A new entry will be added under the zone name called **Theater: Settings**. Your screen should now look like the image below.

S <sup>I</sup> g! Demo : Co	nfigurator (Press F1 for Help)								_ @
System	Theater TV	Audio Zone: Thea	tor						
oystem	🗏 🥌 One-Way Devices	Audio Zone, mea	itei						
Security	🕂 🧮 Cable TV	Name	Theater						
Security	🖽 🧮 Blu-Ray Changer	System #	26433						
Climate	🕂 🧮 Cable DVR				_	_			
Climate	🕂 🧮 DVD Changer	Universal Receiver	< NONE >				<b>•</b>		
	🚍 📼 Zone Controllers	Display 1	Theater TV				-		
Lighting	🗏 📼 ELAN M86A (6 Zone)	Display 2	< NONE >				-		
	🗄 🧲 Sources	Slave Zone 1	< NONE >				•		
Content	🕂 🌔 Zones								
	ELAN V85	Slave Zone 2	< NONE >				-		
Media	🗏 📼 Sunfire TGR-401, TGP-401	Turn On Source	< NONE >				-		
	Sources								
Video	🗧 (HD/8D)	Source Configuration		Dis. 1	No. 1			oo	
	🚭 (SAT) 🧲 (DVR)	Source DispFrom Zon			Slot 1	nµ∪ispiay⊿	z inpsiave i	SouiSlave 2 S	
Messaging	(DVR) (MP3)	DVD Cha LOCAL Cable DVR LOCAL	Show Show	Turn On Turn On	Slot 1 Slot 1				<< THIS << THIS
	(MP3) (MP3) (DVD) DVD Changer	HC12 Au., M86A T		Turn Un Don't Ch					<< THIS << THIS
Irrigation	CABLE) Cable DVR	HC12 Au M86A T		Don't Ch					<< THIS << THIS
	CABLE) Cable DVR (VCR)	Elan DT1 M86A T		Don't Ch					<< THIS
Pool Control	🗧 (VCR) 🚪 (CD) Output From ELAN MB	Elan DT1 M86A T		Don't Ch					<< THIS
	(CD) Output Hom EDAN WO (HD/8D-7.1)	Blu-Ray M86A T		Don't Ch					<< THIS
UPS	SIRIUS)	Cable TV M86A T		Don't Ch					<< THIS
	Sunfire TGR/TGP-4	AM/FM T LOCAL	Show	Turn Off	Don't Ch.				<< THIS
Interface	🗧 (FRONT)	ANN WIT LOCAL	SHOW	Tuni On	Dont Ch.				~ 1112
	Tones								
Input/Output	■ I Theater								
	🕂 🧮 Theater: Settings								
Event Mapper	Zone 2								
Event mapper	■ ■ Ationa AT-HD-V44M (4x4 HDMI)								
	The sources								
	Occurrence								
	4 Living Room Video								
	Bedroom Video								
	Theater Zone Video								
	AT-HD-V44M Output 04	Apply							

- 5. Click the plus (+) sign next to Theater: Settings to expand the list.
  - a. Select the Large Format, and then Large Landscape (Standard) to display a representation of the settings page for this zone.

Page Layout : Theater: Settings	
Bass	
Trable	
Listen Modes	
LARGE LANDSCAPE (STANDARD) Bass Treble Usten Modes	LARGE PORTRAIT (STANDARD) Bass Treble Listen Modes

**Note:** The Settings page will auto-populate different controls depending on which commands are supported by the receiver.

b. Select the top object in the Interface Layout, labeled "Bass". *The control will be highlighted in yellow and the Audio Sound Adjust Properties window opens.* 

**Note:** In the Viewer, this object appears as a Bass tone control slider, allowing the user to increase or decrease the bass in the zone.

- c. Verify the following properties in the **Audio Sound Adjust** window:
  - The Name field is "Bass". This corresponds to the label on the control.
  - The Style drop-down is set to Bass Control.
  - The **Connect To** drop-down is set to **Theater**, indicating that this is the zone the slider controls.

Audio Sour	nd Adjust Pro	perties		×
Name	Bass			Picture
Text Color	🔽 Default			
Face Color	🔽 Default			
Radius	🔲 Default			
Shading	🔲 Default			
Shading	🔲 Default			
Style		Bass Control	Border	-
Text Size	🔲 Default	12 pt 💌	Align	-
Options		-	Universal Function	-
Connect To		Theater		-
		,		_
🔽 Default	Behavior			

**Note:** The Settings page is fully customizable and any of the objects on this page can be moved and resized so that other controls can be added.

- 6. To remove the unused zones from the Viewer interface, go to the **Interface** tab in the Configurator.
- 7. Under **Touch Screen Options** near the top of the System Node Tree, click the plus (+) sign to the left of the **Windows** option to expand the list:
  - a. Under the heading **Tab Layouts**, select **Media System** to view the following screen:

<mark>8/</mark> g! Demo : Co	nfigurator (Press F1 for Help)			- 7 🛛
System	E 🔹 Communication Devices	Tab Layout My PC: Media S	System	
Security	SUPPER VIANET ■ Interface Devices (TouchScreen) ■ Default	Default Tab Navigation Mode	< SELECT > Horizontal List	
Climate		Navigate to Default Page First	No	
Lighting	∓	Available Tabs	-	Visible Tabs
Content	📑 Power Scheme 📑 User Interface	M86A Theater Zone 4 Zone 5		Living Room Bedroom Theater
Media	Advanced Settings Tab Config: Security System	Zone 6 Living Room Video		Zone 2
Video	Tab Config: Lighting System Tab Config: Media System Tab Config: Climate System	Bedroom Video V85 Output 3		
Messaging	Tab Config: Messaging	V85 Output 4 V85 Output 5	Add Tab >>	
Irrigation Pool Control	🔰 Tab Config: Video System 🍜 Tab Config: Pool Control	V85 Output 6 V85 Output 7	<< Remove Tab	
UPS	Tab Config: Photos     Interface Devices (OSD)	∨85 Output 8 Living Room Video Bedroom Video	Move Up	
Interface	Interface Devices (TS2)     TS2 ViaNet 82     Interface Devices (HR2)	Theater Zone Video AT-HD-V44M Output 04	Move Down	
Input/Output	Image: Figure 192.168.0.100 Image: Image: Figure 192.168.0.100 Image: Image: Figure 192.168.0.100 Image: Image: Figure 192.168.0.100			
Event Mapper	∓	$\sim$		
	∓ ■ Home Owner ∓ ■ Kids ∓ ■ Mom			
	Home Pages      Weather + Calendar + System 1			
		Apply		
			Lesson9_HomeTheater.doc [Comp	atibility Mode] - Microsoft Word

b. The properties window is divided into two columns, **Available Tabs** and **Visible Tabs**. Items listed under Visible Tabs are available for interaction in the Viewer software. Because we are not using Zone 2 on the Sunfire receiver, we need to remove it from the Viewer. c. In the **Visible Tabs** column, click on **Zone 2**, click the **Remove Tab** button in the center, and then click **Apply**. *Zone 2 will move from the Visible Tabs column to the Available Tabs column.* 

ଟ g! Demo : Co	nfigurator (Press F1 for Help)			
System	Communication Devices     Set HR2     Set VIANET	Tab Layout My PC: Media :		
Security	<ul> <li>VIANE I</li> <li>Interface Devices (TouchScreen)</li> <li>Default</li> </ul>	Default Tab Navigation Mode	< SELECT > Horizontal List	
Climate		Navigate to Default Page First	No	
Lighting	🕂 💻 Windows = 💶 My PC	Available Tabs	_	Visible Tabs
Content	👺 Power Scheme 👺 User Interface	M86A Theater Zone 4 Zone 5		Living Room Bedroom Theater
Media	🖶 Advanced Settings 🔤 Tab Config: Security System	Zone 5 Zone 6 Living Room Video		Ineater
Video	Tab Config: Lighting System Tab Config: Media System	Bedroom Video V85 Output 3		
Messaging	┃ Tab Config: Climate System	V85 Output 4 V85 Output 5	Add Tab >>	
Irrigation	👷 Tab Config: Irrigation System 🐧 Tab Config: Video System Tab Config: Pool Control	V85 Output 6 V85 Output 7	<< Remove Tab	
Pool Control	Tab Config: Pool Control Tab Config: Photos	V85 Output 8 Zone 2	Move Up	
UPS	<ul> <li>Interface Devices (CSD)</li> <li>Interface Devices (TS2)</li> <li>TS2 ViaNet 82</li> </ul>	Living Room Video Bedroom Video	Move Down	
Interface	<ul> <li>Interface Devices (HR2)</li> <li>HR2 Remote 192.168.0.100</li> </ul>	Theater Zone Video AT-HD-V44M Output 04		
Input/Output	■ L Remote Users ■ Admin			
Event Mapper		$\sim$		
	⊞ 🔲 Kids ⊞ 🔲 Mom			
	💻 🗉 Home Pages 🕂 👅 Weather + Calendar + System 1			
	🕂 💷 Weather + Calendar 🕂 🖲 Calendar + System Modes	Apply		

**Note:** This step simply removes the zone from the Viewer software on a perscreen basis, it is not deleted and can be added back into the viewer at any time should the homeowner decide to expand their system. Each touch screen must be configured separately.

## Exercise 10: Check the Viewer Interface

*Overview* In Exercise 10, you will check your work in the Viewer. Before beginning, be sure you have completed all of the previous exercises in this lesson.

In addition to the Viewer, you will use the "Show Virtual Display" feature in the Configurator. This tool shows the expected power and source state for a display configured in the software.

How-To
 1. In the Configurator, select the Media tab. Right-click Theater TV in the Two-Way Devices node, and then select Show Virtual Display. The Theater TV Virtual Display Window will open:



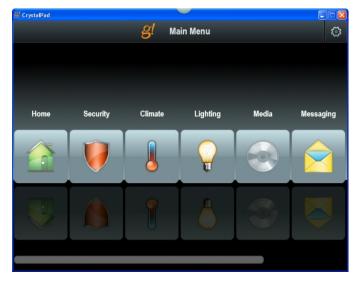
2. Right-click the **SunfireTheater** zone under the Zone Controllers node, and select "**Show Virtual Zone**" from the pop-up options. *The Virtual Theater Zone is displayed:* 

3. Right-click the **M86A Theater** zone and select "**Show Virtual Zone**" from the pop-up options. *The Virtual Theater Zone is displayed:* 

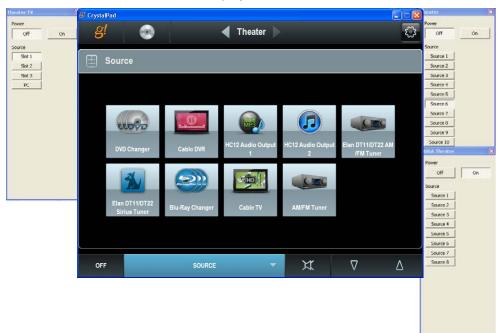
4. In the upper right corner of the Configurator window, click the **Restore Down** button to take the Configurator out of full screen mode:



5. From the g!Tools My Systems screen, click the **Viewer** button. *The Viewer interface displays the Main Menu. Click the Media icon.* 



- 6. Click the Theater icon to access the Theater zone user interface.
- 7. Arrange the windows on your desktop so that you can see the Viewer, the Virtual Zones and the Virtual Display window as shown below.



On this screen notice:

- The Sources are listed.
- The Source Name and Icon match those configured in the previous exercises.
- The Theater zone is off and the Theater TV is off.
- The Sources configured locally on the Sunfire Receiver appear.
- The sources from the Elan M86A Theater zone output appear as well.

- 8. Select the **Cable DVR** source. Notice the following:
  - The Virtual Display window indicates that the display has turned on and selected Slot 1.
  - The Virtual Theater Zone indicates the Sunfire has turned on and Selected the Cable Input (Source 6).
  - The Virtual M86A Theater Zone indicates the M86A Theater zone has made no change, and remains off.
  - The interface changes to provide the controls configured in previous lessons for the Cable DVR.
  - The zone's active source icon and name in the upper right has changed to reflect the source selected in the zone.

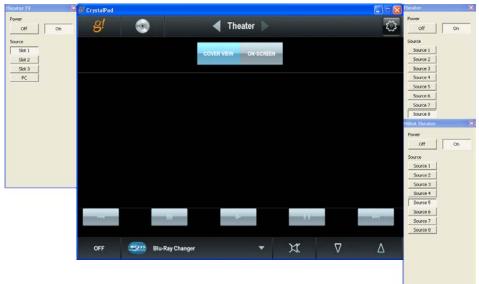


- 9. Select the MP3 Player 1 source. Notice the following:
  - The Virtual Display window indicates that the display has turned off.
  - The Virtual Theater Zone indicates the Sunfire has selected the CD Input (Source 8).
  - The Virtual M86A Theater Zone indicates the M86A Theater zone has turned ON and selected Source 1.
  - The interface changes to provide the built-in controls for the MP3 Player.
  - The zone's active source icon and name in the upper right has changed to reflect the source selected in the zone.

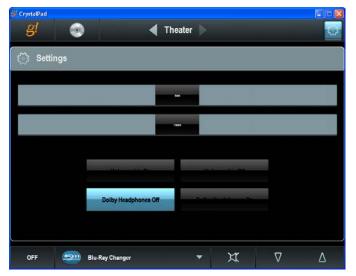


10. Select the Blu Ray Changer source. Notice the following:

- The Virtual Display window indicates that the display has turned on and selected Slot 1.
- The Virtual Theater Zone indicates the Sunfire still has selected the CD Input (Source 8).
- The Virtual M86A Theater Zone indicates the M86A Theater zone has selected Source 5.
- The interface changes to provide the controls configured in previous lessons for the Blu Ray Changer.
- The zone's active source icon and name in the upper right has changed to reflect the source selected in the zone.



11. Click the **Settings** button on the right. *The settings interface will open, providing access to Bass, Treble, Listening Holography, and Dolby Headphone functionality.* 



12. Click the "**Power**" button in the Viewer. Notice that the M86A Theater zone **does not shut off**. This is to prevent an interruption in the case that the speaker outputs from the zone or the second zone on the Sunfire are in use as well. You can set up an Event Map to turn off the M86A Theater zone when it is not in use by the Sunfire:

me Theater:Zone Turned Off			Syste	m#  4	517
Events (ANY Event Specified can execute	e commands, if conditions are m	et)			
Sub-System	Туре	Family	/	Sys #	Add
(Sunfire TGR-401, TGP-401) Zone: Theate	er Zone Turned Off	Audio	Zone Contr	4431	
					Remove
Conditions (ALL Conditions specified mus	the met for Commondo to Even	(at-			
conditions (ALL conditions specified mus					
Cub Custom	-		0	L Chatte	
Sub-System	Туре	Family	Sys #	State	Add
Sub-System Commands (ALL Commands will execute	Type	Family			Remove
Commands (ALL Commands will execute Sub-System	Type if Event occurs and Conditions a Type	Family are met)	4	Sys #	Remove
Commands (ALL Commands will execute	Type	Family are met)		Sys #	Remove
Commands (ALL Commands will execute Sub-System	Type if Event occurs and Conditions a Type	Family are met)	4	Sys #	Remove
Commands (ALL Commands will execute Sub-System	Type if Event occurs and Conditions a Type	Family are met)	4	Sys #	Remove
Commands (ALL Commands will execute Sub-System	Type if Event occurs and Conditions a Type	Family are met)	4	Sys #	Remove

For more details, please see the Event Map lessons.

## Notes:


## Notes:


## Lesson 9 IR Control



#### **Overview**

In this lesson, you will:

- Learn about the built in IR outputs and IR input on the g! system controllers
- Learn how to build an IR Driver
  - Learn how IR Devices and IR Codes are organized in the configurator.
  - Learn how to import an IR file, ELAN IRF or HIR, to build an IR Driver.
  - Learn how to use the IRL2 to learn IR codes directly into the g! software when building an IR Driver.
  - Learn how to check, test and optimize an IR device.
  - Understand Universal Functions and how they apply to IR devices and Interfaces.
  - Learn how to export and import IR Devices.
- Add IR Controlled Displays.
- Create and Customize Interface for IR Source
- Learn how to configure the built-in TV Channel Favorites interface.

#### Requirements

• A PC running g!Demo and g!Tools.

-or-

ELAN Controller and g!Tools.

#### Overview

*Overview* In previous lessons, you learned the basic steps for setting up an IR Controlled source and integrating it with the rest of the AV system. In this lesson, you will learn in detail all of the options available to build IR Drivers, called IR Devices, in the Configurator.

An IR Device is set up on the Input/Output tab of the Configurator and includes all of the IR Codes that are required to control the device. The IR code set that is added in the Input/Output tab is used as a code database by the rest of the system to control the device.

- IR controlled sources in the g! software require an IR Device and a customizable interface.
- IR controlled displays in the g! software require an IR Device and a customizable Generic Display.

IR Devices may also be used for control of unsupported zone controllers or non-AV equipment, though it is **strongly** recommended to use supported 2-way zone controllers. The g! software relies on feedback from the device to ensure the UI is in sync with the device, in the case of one-way IR Control the g! software has no way of knowing exactly what state the IR device is in.

In the following exercises, you will learn about IR Devices, IR Codes, and add IR controlled sources and displays to Configurator. You will also learn about importing and exporting your IR Devices and editing IR data.

*Terms* The following terms are used in the Configurator:

- **IR Device**: The IR device contains all pertinent information for a device being controlled by IR. This includes settings such as toggle bits and all IR codes.
- **IR Code**: The container for the specific hex (CCF) code that is sent to issue a command via IR. IR Codes also contain settings for the number of repeats and Universal Function, and information on the carrier frequency of the code.
- **Default Code Set**: The "template" of code blanks to use as a starting point when learning IR codes. Default code sets contain a list of codes with appropriate Universal Functions for you to learn codes into.
- **IR Sender**: The physical port to which an IR emitter is connected.
- **Default Sender**: The IR sender from which commands intended for a particular device should be sent.
- **Interface:** The customizable button layout that makes up the user interface in the Viewer to issue IR commands to the IR controlled devices.
- **Control:** A control is an object such as a button or group of buttons that can be added or removed in the user interface.
- **Universal Function:** A pointer used to map controls on an interface to their associated commands in the IR device.

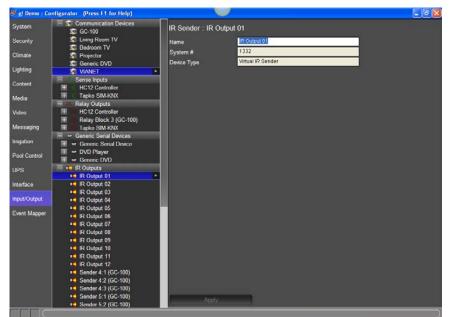
- *How-to* To integrate an IR Controlled Device with the g! software:
  - 1. Add the IR Device and configure its settings such as repeat count and the IR sender # to which the emitter is connected.
  - 2. Learn or import the IR codes for the device
    - IR Codes can be learned directly into the g! software using the ELAN IRL2 learning tool
    - IR Codes may be imported from:
      - The IR library in g!Tools
      - o ELAN IRF format files
      - ELAN (HomeLogic) HIR files
  - 3. Optimize and test IR Codes
  - 4. Backup (export) the IR Device (if desired)
  - 5. For sources:
    - Add the Interface
    - Customize the Interface (as needed)
    - Configure the Zone Controller for the sources and interfaces (See the lessons on Distributed AV and Home Theater for details)
  - 6. For Displays:
    - Add a Generic Video Display
    - Map IR commands to display
    - Add the Display to a zone on the Zone Controller (See the lessons on Distributed AV and Home Theater for details)

## Exercise 1: Built-in IR Control on the g! System Controllers

*Overview* The g! system controllers include built-in and pre-configured IR output ports and an IR input port. In the following exercise, you will navigate through the Configurator to see how the g! system controller built in IR input and outputs are organized in the software.

#### How-to

1. In the Configurator, navigate to the **Input/Output** tab.



2. In the system node tree click on IR Outputs> IR Output 01.

On this screen notice all 12 IR Output ports are pre-configured in the tree and already associated with their internal VIANET Communication Device. These IR Outputs may be renamed by editing the name field but they cannot be deleted. IR Outputs 1-6 are associated directly with the IR Output jacks on the back of the g! System Controller. All IR Outputs, 1-12, are available via the IR Link connection.

3. On the system node tree click on IR Receivers> HC12 EXT IR IN.

On this screen notice that the HC12 EXT IR IN is pre-configured in the tree and is already associated with the VIANET Communication Device. You can rename this IR input by editing the name field but you cannot delete it. The HC12 EXT IR IN is associated directly with the EXT IR IN jack on the back of the g! System Controller.

**Important Note:** The Settings option for the IR input turns the power on and off for the IR input jack. It is important to set this appropriately to avoid shorting the power supply in the controller. The settings are as follows:

**Local IR Sensor** - In most cases an IR Sensor is connected to this jack and requires power to function. The setting is **EXT IR Powered On**. Power is then supplied to the IR sensor's circuitry which allows it to receive IR.

**IR Source** – The alternative case occurs when the IR, connected to the g! system controller IR Input, is coming from an IR output device or IR source such as an IR repeater or a remote RF base station; in this case, the Jack does not need power since the IR signal is being generated from the repeater or base station. The setting for this case is **EXT IR Power Off**. It is important to set the power off since using a mono IR cable will short the power supply on the g! system controller.

# Exercise 2: Overview - IR Devices and IR Codes

*Overview* In Exercise 2, you will learn about IR Devices in the g! software. The IR device is the piece in the software that contains all of the data necessary to re-create and send IR out of the controller. It also includes information that allows the software to automatically link the various IR codes to buttons on a user interface.

In this exercise, you will review all of the various settings and options for the IR Device using the Built-in OSD IR Device. This is the IR device built into the g! System Controllers to run the On Screen Display.

*How-to* The IR Device includes all the pertinent details for the device being controlled. This includes settings such as the emitter port number on a g! System Controller, repeat counts, toggle bits (if needed), and the IR Codes themselves.

- 1. In the Configurator, navigate to the Input/Output tab.
- 2. Navigate to and click on the **OSD** under the **IR Devices** heading in the system node tree. *The window on the right shows all of the information pertinent to the OSD IR Device.*

IR Device : OSD		
Name	OSD	
System #	17829	
Default Sender	< SELECT >	•
RC5 Codeset	No	-
Decode IR from this device	No	•
Tuning Type	Cable (Type 1)	•
Minimum Digits (0 Padding)	0	•
Pre-Tune Command	< NONE >	•
Post-Tune Command	< NONE >	•
Delay Between Commands	250 msec	•

IR Device Refere	nce:
Name	Sets the name of the device. The name can be changed to reflect the devices location or for enumeration, for example "Satellite 1" or "Master Bedroom Cable Box"
System #	Unique, read-only number assigned by the gl software for internal use.
Default Sender	Drop-down field used to assign the controller IR output for the source device. This is the IR Jack on the back of the controller to which the emitter is connected.
RC5 Codeset	Also known as a toggle bit. This field is used to turn IR Toggle bits on or off. Default value is <b>No</b> . Some Phillips remotes use this format.
Decode IR from this Device	Set to "Yes" if there is an IR Receiver in a zone and the system should watch for incoming codes from this device for triggering event maps or universal functions. Default is <b>No.</b>
Tuning Type	For use with TV Channel Favorites. Drop-down field used to differentiate between devices with different channel assignments. Available options are Antenna, Cable (Type 1), Cable (Type 2), Satellite (Type 1) and Satellite (Type 2). Note that these type names are arbitrary assignments, and the names are provided for reference only. A Satellite box will still perform as expected if the Tuning Type set to Antenna. Default is Cable (Type 1).
Minimum Digits (0 Padding)	For use with TV Channel Favorites. Drop-down to select the minimum number of digits the device will accept as a channel number. If this is set to "3" and a single digit is entered for the TV Channel Favorite, the system will "Pad" the command by adding two "0" characters at the beginning of the IR stream. Default is "0"
Pre-Tune Command	For use with TV Channel Favorites. Use this drop-down to select a command to send before Direct Tuning. Default is <b>&lt; NONE &gt;</b>
Post-Tune Command	For use with TV Channel Favorites. Use this drop-down to select a command to send after Direct Tuning. Default is < NONE >
Delay Between Commands	For use with TV Channel Favorites. Set this value to the desired interval between Direct Tuning commands. Default is <b>250 msec</b> .

The reference table below explains each of the items in the window shown above.

**Note:** The OSD IR device is a special IR device. It is populated with the IR Codes from the IR Remote that controls the OSD. The controller needs to know about the IR from the remote to respond to incoming codes, and in turn, drive the On Screen Display.

In this case, the setting for "Default Sender" is **None** because these IR codes will never need to be sent. Also, the setting for "Decode IR from this Device" is **Yes**. This indicates that the controller needs to check all incoming IR data against these codes. If the controller recognizes an incoming IR code as an OSD code, it can respond appropriately and issue the associated OSD command.

3. Right-Click the OSD IR Device to bring up the OSD options menu.

Add New IR Device Delete OSD
Import From File
Export to File
Learn IR Codes
Set Repeat Count for All Codes

The reference table details each of the options shown in the screen above. These topics will be covered in detail in later exercises.

IR Device options	
Add new IR Device	Adds a new IR Device to the system configuration. A dialog box opens that allows you to name and choose an IR Device Template.
Delete	Deletes the highlighted IR Device.
Import From File	Imports IR data into the system for the highlighted IR Device. A dialog box opens that allows you to browse the IR Database within g!Tools.
Export to File	Export IR data from the system for the highlighted IR Device. A dialog box opens and you can select where to save the ELAN <b>.HIR</b> file.
Learn IR Codes	Activates the learning function for all of the codes within the IR device. Note that IR codes can also be learned individually, see below.
Set Repeat Count for All codes	Edits the repeat counts for every code within the IR device. Note that the IR codes can also be edited individually, see below.

4. Click the "+" sign to the left of the device to expand the list of IR Commands, then click on the POWER command to review the information and settings pertinent to an IR code in the g! software.

📕 g! Demo : Co	nfigurator (Press F1 for Help)			- • •
System	Virtual IR Receiver     IR Devices	IR Code : POW		
Security	Gable TV     Gable DVR     Gable DVR     Gable DVR     GSD	Name System #	POWER 26634	
Climate	TEST ONLY	Carrier	41000 Hz	
Lighting	## OSD	Universal Function	OSD:Power	
Content	=== 2 === 3	CCF Code		Preamble >>
Media	## 4 ## 5	Time 47 mseco		
Video	## 6 ## 7			
Messaging				
Irrigation Pool Control	- CLR			0000
UPS	WOLUME UP			
Interface	MUTE LAST CHANNEL UP			
Input/Output				
Event Mapper	DOWN	Μ		
	RIGHT			
	HI GUIDE HI MENU HI EXIT			
		Appl	(	
			gi Demo	)

IR Code Reference:								
Name	Sets the name of the IR Code.							
System #	Unique, read-only number assigned by the g! software for internal use.							
Carrier	Read-Only field displays the frequency of the IR Code							
Repeat	Drop-down selects the number of times the code is repeated for a single button press. All of the Repeat counts for a device can be changed by right-clicking the IR Device and selecting Set Repeat Count for All Codes. In the g! software the Default value is <b>1</b> .							
Universal Function	The universal function is the pointer for mapping the IR code to controls in an interface.							
CCF Code (Button)	Click this button to open a dialog box to enter HEX CCF IR values							
< <preamble (Button)</preamble 	Click this button to adjust the preamble selection of the IR Code to the left. This topic will be covered in detail in a later exercise within this lesson.							
>>Preamble (Button)	Click this button to adjust the preamble selection of the IR Code to the right. This topic will be covered in detail in a later exercise within this lesson.							

Time:	This is the total length of the IR code in milliseconds.
(in the waveform	
window)	

5. Right-click the **POWER** command to bring up the IR Code Options Menu.

Add New IR Code... Delete POWER... Create Event Map For Test Code Now Learn This Code... Remove Repeats

IR Code Options:							
Add New IR Code	Adds a new IR Code to the IR Device in the system configuration. A dialog box opens that allows you to set the new IR Code Name.						
Delete	Select this option to delete the highlighted IR Code.						
Create Event Map for >	Creates an Event Map for when the controller receives this IR Code. A dialog box opens that allows you to name the new Event Map and define the behavior of the Event Map.						
Test Code Now	Sends the selected IR Code out of the default IR port as set on the IR Device. This is typically used for testing and verification of the IR data.						
Learn This Code	Activates the learning function for the Highlighted IR code. (Note that all IR codes within an IR Device can also be learned in one automated step as described in this lesson).						
Remove Repeats	Runs the g! software repeat filter on the highlighted IR Code. The software will analyze the IR Code and remove any erroneous repeats.						

# Exercise 3: Add an IR Device and Import an ELAN IRF file from g!Tools

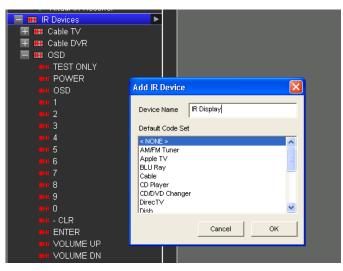
*Overview* **g!Tools** includes an IR database that can be imported directly into the g! Software. (ELAN .HIR & .IRF files saved from other projects can also be imported). Importing files from g!Tools is an alternative to learning codes manually.

**Note:** When using .IRF files, it is important to pay close attention to the Universal Functions in the commands. The g! software tries to choose the Universal Function based on code names.

In this exercise, you will create a new IR device for a Video Display, import the codes from an .IRF file, and then check the codes. In addition, this exercise explains how to copy in raw CCF (hex) for IR codes that might be missing from the imported file. Sources for these CCF codes include manufacturer documentation, online resources like remotecentral.com, or third-party universal remote programming software.

- *How-to* 1. Navigate to the **Input/Output** tab in the Configurator.
  - 2. Right-click **IR Devices** in the System Node Tree and select **Add New IR Device.**
  - 3. Change the name to IR Display, leave the Default Code Set set to <NONE>, and click Apply.

A new IR Device named IR Display will be added to the tree. The default code set is set to NONE since we are importing codes. We do not want any code blanks to populate, as imported IR code files will create their own codes.



4. Right-click **IR Display** and select **Import From File...** *The Windows File Open window opens.* 

5. Navigate to C:\Homelogic\Training Files and select IR Display.IRF:

Open					? 🛛
Look jn:	C TRAINING FI	LES	•	🗢 🗈 💣 🎟 •	
My Recent Documents Desktop My Documents My Computer	CableTV.HIR				
<b></b>	File <u>n</u> ame:	IR Display.irf		•	<u>O</u> pen
My Network Places	Files of <u>type</u> :	IR Files Open as <u>r</u> ead-only		•	Cancel

6. Click **Open**. After a moment, the Configurator refreshes, and the imported codes are shown under IR Display:

🚽 🎟 IR Display
Power Cycle
HIII Video 1
HII Video 2
🗰 Video 3

- 7. On the **Input/Output** tab in the Configurator, if necessary, click the "+" sign next to the IR Device **IR Display** to expand the commands list.
- 8. Click the IR Display to view its settings. Select **IR Output 5** as the default sender, and then click **Apply**. Notice that IR Output 5 becomes highlighted in the system node tree to indicate the association.

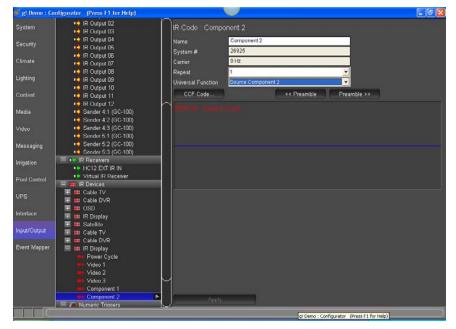
System	🔳 🛥 DVD Player	- r	IR Device : IR Display		
system	= 📫 IR Outputs		IR Device . IR Display		
Security	IR Output 01		Name	IR Display	
seconty	📢 IR Output 02		System #	26892	
Simate	IR Output 03		Default Sender	R Output 05	•
	📢 IR Output D4			and the second se	
ighting	IR Output 05		RC5 Codeset	No	
	IR Output 05		Decode IR from this device	No	-
	IR Output 08	r	Tuning Type	Cable (Type 1)	*
	IR Output 09		Minimum Digits (0 Padding)	0	
fedia	IR Output 10		Pre-Tune Command	< NONE >	•
	iR Output 11		Post-Tune Command	< NONE >	× × × ×
	📫 IR Output 12		Delay Between Commands	250 msec	
	Sender 4:1 (GC-100)		Delay Detween Commands	250 msec	<u> </u>
dessaging	14 Sender 4 2 (GC-100)				
	📫 Sender 4:3 (GC-100)				
rigation	Sender 5:1 (GC-100) Sender 5:2 (GC-100)				
	Sender 5.2 (GC-100)				
	= IR Receivers				
	HC12 EXT IR IN				
IPS	Virtual IR Receiver				
terface	🚍 🎫 IR Devices				
senace	🎹 🚥 Cable TV				
nput/Output	🔢 🚥 Cable DVR				
paroatpat	🗄 🗰 OSD				
vent Mapper	🗄 🗰 IR Display				
went mapper	E = Satellite				
	Cable DVR				
	E I R Display				
	Power Cycle	-			
	Wideo 1				
	Video 2		Apply		
	Video 3		<b>1</b>		

Notice that the list of imported IR Codes does not include any discrete Component Input Commands, only video input commands. In the following steps, you will use CCF data to add discrete Component 1 & 2 input commands.

- 9. To add a new command:
  - a. Right-click any of the existing commands and select **Add New IR Code...** The Add New IR Code window opens.

Add New I	Add New IR Code							
Name	Name Component 1							
	Cancel	ок						

- b. Name the new IR Code "Component 1", and click OK.
- c. Set the Universal Function for the new command to Source Component 1 and click Apply.
- d. Repeat steps **a**, **b** and **c** to add a 'Component 2'' Command.



e. Using Windows Explorer, navigate to C:\HomeLogic\Training Files and open the **Component 1.txt** file in Notepad.

D Component	1.txt - Notepad			
0015 0040 00 0015 0016 00 0015 003F 00 0015 0014 00		5 0015 003F 001 F 0015 0015 001 5 0015 003F 001	5 0014 0015 0 5 0014 0015 0 5 0015 0015 0 5 0016 0015 0	003F 003F 0016 0015 003F 0F9C

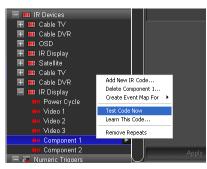
- f. Select Edit>Select All. All of the text in the document will be highlighted.
- g. Select Edit>Copy to copy the selected text to the Windows Clipboard:

Do	iomp	onent 1	.txt -	Not	epad								
File	Edit	Format	View	Hel	p								
000 001	Ur	ndo	Ctrl+Z		0155 0015	00AC 003F	0015	0014 003F	0015	0040 0014	0015 0015	003F 003F	~
001	CL	ut	Ctrl+X		0015	0015	0015	003F 0015	0015	0014	0015	0016	
001 001		opy aste	Ctrl+C Ctrl+V		0015	003F 0015	0015	003F	0015	0015 0016	0015 0015	0015 003F	
001		elete	Del		0015	003F	0015	003F	0015	0040	0015	0F9C	
		nd nd Next	Ctrl+F F3										
	Re	eplace	Ctrl+H										
		o To	Ctrl+G										
		elect All me/Date	Ctrl+A F5										
													V

- h. Close Notepad.
- i. Return to the Configurator and select the **Component 1** command from the **IR Display Device**.
- j. Click the **CCF Code** button. *The Edit CCF String window opens.*
- k. Right-click inside the Edit CCF String box and select **Paste**. *The text from the Windows Clipboard is pasted into the box:*

System	<ul> <li>IR Output 02</li> <li>IR Output 03</li> </ul>	IR Code : Component 1	
	IR Output 04	Name Component 1	
Security	IR Output 05	System # 26919	
Oliverte	IR Output 06		
Climate	IR Output 07		
	IR Output 08	Repeat 1	
Lighting	📫 IR Output 09	Universal Function Source Component 1	
	IR Output 10	CCF Code < Preamble Preamble >>	
Content	IR Output 11	CCF Code	
	IR Output 12	Time 172 msecc	
Media	Sender 4:1 (GC-100)		
	Sender 4:2 (GC-100)		
Video	Sender 4:3 (GC-100) Sender 5:1 (GC-100)		
	<ul> <li>Sender 5:1 (GC-100)</li> <li>Sender 5:2 (GC-100)</li> </ul>		
Messaging	<ul> <li>Sender 5:2 (GC-100)</li> <li>Sender 5:3 (GC-100)</li> </ul>		
	R Receivers	Edit CCF String	
Irrigation	HC12 EXT IR IN		
	Virtual IR Receiver	0000 006D 0000 0000 0155 00AC 0015 0014 0015 0040 0015 🔥	
Pool Control	= IR Devices	003F 0015 0040 0015 0016 0015 003F 0015 003F 0015 0014	
	🕂 🎟 Cable TV	0015 003F 0015 0016 0015 0015 0015 0015 0015 003F 0015 0014 0015 0016 0015 003F 0015 0014 0015 003F 0015 0015	
UPS	🕂 🎟 Cable DVR	0015 0015 0015 0015 0015 0014 0015 0016 0015 0015 0015	
	🕂 🎟 OSD	003F 0015 0016 0015 003F 0015 003F 0015 003F 0015 003F	
Interface	🕂 🎟 IR Display	0015 003F 0015 0040 0015 0F9c	
	🕂 🎟 Satellite		
Input/Output	🕂 🎟 Cable TV		
	🕂 🎟 Cable DVR		
Event Mapper	🚍 🎟 IR Display		
	HI Power Cycle		
	IIII Video 1		
	🗰 Video 2		
	HH Video 3	Annir	
	Component 1	Apply	
	Component 2		
	🗏 🔚 Numeric Triaaers		

- I. Click **Apply**. The Waveform View will be generated from the CCF Code.
- m. Repeat steps above to copy and paste the CCF for the **Component 2** command.
- 10. After all the codes are added and their IR Output assigned, test them using the Test Code Now option. From the Input/Output tab, right-click the code and select **Test Code Now**.



**Note:** Since the actual equipment is not installed for this lesson, we do not know if the command is effective; however, we will assume it is valid. On a real installation, testing codes can be very helpful, and is an important part of the driver creation process.

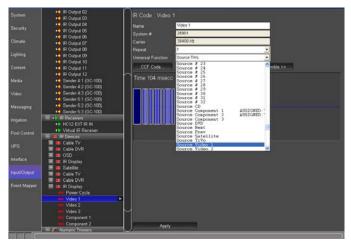
After you have verified that the imported codes work, it is a good idea to prepare them for use in an interface by checking Universal Functions. Since these files were imported from the ELAN database, they do not natively save Universal Function information.

The g! software attempts to match up Universal Functions for you automatically, but if the names of the codes do not match a Universal Function, they will not auto map. Therefore, it is important to **verify that all** 

**imported codes have Universal Functions set correctly** after importing them from the ELAN IRF file.

- 11. Check Universal Functions as follows:
  - a. Click on the Video 1 command. Since the g! software's equivalent Universal Function is labeled Source Video 1, this code does not align with any Universal Functions.

Set the correct Universal Function now by clicking on the **Universal Function** drop down, scrolling down and selecting Source Video 1, and click **Apply**.



b. Repeat for all the codes selecting the Universal Function as necessary.

Once the data has been mapped and tested, we recommend that you save it for future use. Refer to Exercise 6 for instructions on how to export an HIR file.

## Exercise 4: Add an IR Device and Learn Codes Using the ELAN IRL2

*Overview* The ELAN IRL2 Learner tool learns IR codes directly into the g! software from an OEM or universal IR remote control. The IRL2 connects to a USB port on the programmers' PC and it is used with the Configurator to learn IR codes into an IR Device.

In Exercise 4, you will add a new IR device for a Satellite Box and use the built-in g! IR learning functionality to assign IR codes for each function.

If you are running g!Demo or if you do not have a IRL2 and a remote, you cannot perform all the steps in this exercise. However, it is helpful to read through these steps to understand the process. All steps, minus the actual code learning, are possible without this equipment.

#### *How-to* **Step 1: Add an IR Device**.

The IR Device includes all the pertinent details for the controlled device, as well as settings for the emitter port on the g! System Controller, repeat counts, toggle bits (if needed), and the IR Codes themselves.

- 1. In the Configurator, go to the Input/Output tab
- 2. Right-click the **IR Devices** heading in the system node tree and select **Add New IR Device...** The Add New IR Device Window will open.
  - a. Select **DirecTV** from the list of **Default Code Sets**. The Default Code Set will pre-populate a list of code blanks into which the actual IR is learned.
  - b. Change the Device Name to "Satellite":

Add IR Device			×
Device Name	atellite		
Default Code Set			
< NONE > AM/FM Tuner Apple TV BLU Ray Cable CD Player CD/DVD Changer			
DirecTV Dish			~
	Cancel	ок	

c. Click OK. A new IR Device named "Satellite" is added.

IR Device : New IR Device						
Name	Satellite					
System #	7207					
Default Sender	< SELECT >					
RC5 Codeset	No					
Decode IR from this device	No					
Tuning Type	Cable (Type 1)					
Minimum Digits (0 Padding)	0					
Pre-Tune Command	< NONE >					
Post-Tune Command	< NONE >					
Delay Between Commands	250 msec 💌					

- 3. In the properties window of the Satellite IR device, select **IR Output 6** as the **Default Sender** for this IR Device.
- 4. Click **Apply**. This tells the controller that the emitter for the satellite is connected to the IR Output 6 on the back of the HC Controller.
- 5. Click the "+" sign to the left of the device to expand the list of IR Commands. *The Placeholders for commands for a typical IR controlled Satellite box are shown:*

**Note:** In a real installation, this would be a good time to look through the codes listed in the Default Code Set and compare them to the functions on the remote. If you wish to add commands that aren't already populated, it may be easier to add them now and learn them in all at once, rather than learn the additional commands individually later.

For details on adding commands, see Step 3 below.

#### Step 2: Learn IR Codes.

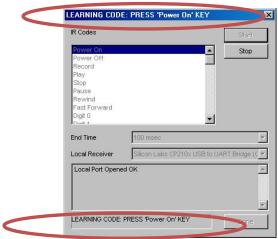
The next step in creating an IR Device is to learn the actual IR codes into the code blanks using the IRL2. If you do not have an IRL2 and remote, then follow these steps for reference only.

- 1. Attach the IRL2 to a USB port on your PC. The red PWR light on the IRL2 lights up, indicating it is on.
- 2. Right-click the **Satellite** IR device and select **Learn IR Codes** from the menu. *The IR Learning window is displayed, with the words "Ready, Press Start to Begin" at the top:*

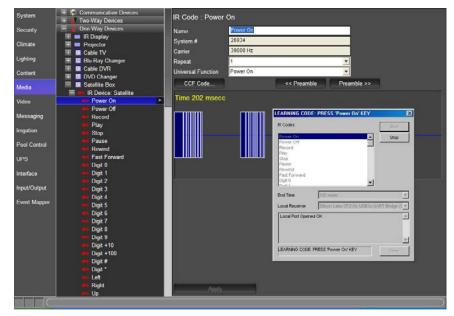
		Start
Power On		Stop
Power Off		107 ····
Record		
Play		
Stop		
Pause		
Rewind		
Fast Forward		
Digit 0 Digit 1		*
End Time	100 msec	
Local Receiver	Silicon Labs CP210x US	SB to UART Bridge (C
		2

**Note:** By default, the **End Time** is set to **100 msec**. This value can be reduced to help capture codes from remotes with shorter pauses between repeated commands.

- 3. From the **Local Receiver** drop-down, select the Silicon Labs CP210x USB to UART Bridge. *This is the driver for the IRL2 learning device.*
- 4. Click **Start**. The dialog changes to Learning Code Mode and prompts you for the code to learn in its Title Bar and Status window as shown.



5. Holding the remote 3-6" from the IRL2, point the remote control at the IR IN Sensor on the IRL2, then press the button that corresponds to the key referenced in the title bar and at the bottom of the learning window for two seconds, and release. *The IR IN Detect LED will blink on the IRL2 and the IR waveform will flash in the background of the Configurator as the code is learned.* 



6. When the code is received, the learning utility captures and processes the code, then automatically advances to the next code in the list. Be sure to wait to be prompted for the next code prior to pressing the next button. Continue until all codes are learned, and then click **Done**.

**Note:** If you make a mistake and learn a code into the wrong spot, you can go back and re-learn the individual codes one at a time. To do this, first complete learning the remaining codes in the list and click **Done**. Then, right-click the individual code in the system node tree and select **Learn this Code**.

#### Step 3: Add additional IR Codes.

During the process of learning all the codes contained in the Default Code Set for DirecTV, you may notice that some buttons on the remote were never asked for, and are not included in the Default Code Set. If there are codes you wish to use in the g! software that did not exist in the Default Code Set, you can add these codes manually.

In the following steps, you will add a new IR command and learn the code.

- 1. If the list of commands for the Satellite IR device is not already visible, click the "+" sign next to the IR device to expand it.
- 2. Right-click any existing command in the list and select **Add New IR Code...** from the pop-up menu. *The Add New IR Code dialog box will be displayed:*

Add New I	२ Code			×
Name	New	IR Code	 	
	[	Cancel	ок	

- 3. Enter a descriptive name for the new code and click **OK**. The new command is added at the bottom of the list and its properties are displayed on the right.
- 4. Right-click the New IR Code and select Learn this Code...
- 5. From the **Local Receiver** drop-down, select the Silicon Labs USB to UART driver for the IRL2.
- 6. Click **Start** then point the remote control at the IRL2 (at a 3-6 inch distance) and press the appropriate button for two seconds.
- 7. After the code is received, click **Done**.

## Exercise 5: Check and Optimize Codes

*Overview* The following steps explain how to verify the IR data and all settings relevant to IR codes in the g! software. These steps also include reference examples to demonstrate troubleshooting and how to work with bad IR codes.

How-to 1. IR Testing.

Testing an IR Code can be performed directly from the Configurator. It is important to test your codes after importing or learning them to ensure proper operation.

- a. Right-click the code you wish to send, and select **Test Code Now**. *The IR Code will be sent using the Default Sender port.*
- b. Verify that the device responds to the code properly and does not repeat the command.

	Add New IR Code Delete Digit 3 Create Event Map For ♪
Digit 7	Test Code Now Learn This Code
	Remove Repeats

- c. If the command does not work then check the following:
  - If not already installed, try testing the code with a visibly flashing IR emitter plugged into the default sender port. When the code is sent the emitter should blink.
  - Verify the LED IR OUT blinks when the IR code is tested.
  - Verify the emitter is located appropriately on the IR sensor on the device to be controlled.
  - Try re-learning the IR code.

**Note**: It is good policy to test <u>all</u> IR codes learned into the system. Since g!Demo is *simulating* equipment, we cannot know if the command is actually effective. In a real install, you should check for proper reactions. See the steps below for details on spotting when the code itself is the problem.

The HR2 remote cannot be used to test codes. Use a standard sender temporarily to test codes instead.

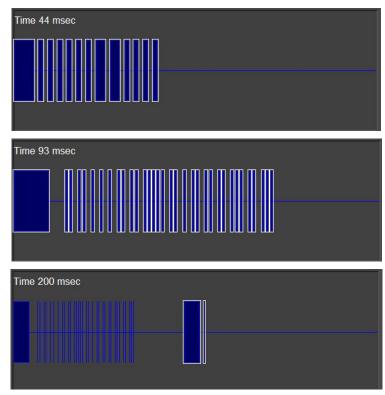
### 2. Spotting and Fixing Bad IR Codes.

The following steps demonstrate what proper IR codes typically look like in the Configurator, and how to spot bad IR Codes.

#### **Example 1: Proper IR Code Examples**

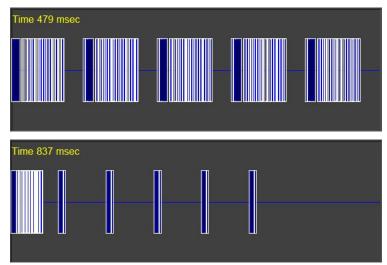
The following images are some examples of the waveform view of proper IR codes. Note that there are many typical waveforms and not all proper waveforms are shown in these examples. In the examples, please note:

- The IR code time is typically less than 200 msec.
- The white outline on the IR codes indicates the part of the code that will be repeated by the g! software in the case of a button hold from a user interface or the OSD remote. In the first two images the entire waveform will be repeated. In the third image the entire code will be sent once then the smaller repeating section will be repeated.
- The first two images are basic code waveform examples. When these codes are sent from the g! software, the entire waveform will be repeated when the command button is pressed and held down.
- The third image is an example of an IR code that includes the basic waveform and a separate smaller waveform that is its repeating section. When this IR code is sent, the software will first send the entire code then continue to send the small repeating section until the command button is released.



Example 2: Bad IR Code- Code repeated several times

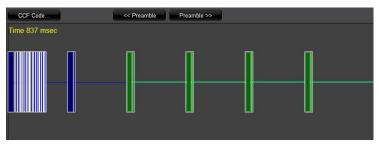
*How to spot:* The following image is an example of a **bad** IR code. Note that the time is well *over* 200 msec, and the font color of the displayed time has turned yellow. In the first image below, the code itself is repeated multiple times. In the second image the repeating section has been captured multiple times.



- *Why it happens:* Codes like this can occur when the button is held too long when learning, or when the End Time on the Learn IR Codes window is set too high.
- *How to fix:* The Configurator provides a built-in IR Code editor to fix codes such as this.

The large block at the beginning of the line is the actual code. The vertical line groupings after the first block are multiple repeating sections sent by the remote and erroneously learned by the software. To fix a code that looks like this, use the mouse to perform the following steps:

- a. Click the horizontal center line at the far right of the waveform.
- b. Continue to hold down the mouse button, and drag the mouse to the left. *The waveform will begin to highlight green:*



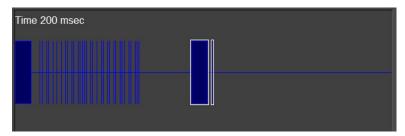
c. Continue to highlight the waveform, **leaving the last repeating section and end pause unselected** as shown in the image above.

d. Click the CCF Code button above the image. The CCF Code Window will open:

0000	006D	0000	0000	0154	0044	0015	003F	0015	0014	0015	
015	0015	0014	0015	0015	0015	003E	0015	0035	0015	0015	
0015	0014	0015	003F	0015	003E	0015	003E	0015	003F	0015	
0015	0015	0014	0015	003E	0015	003E	0015	003E	0015	0015	
0015	003E	0015	003E	0015	0015	0015	003E	0015	003E	0015	
0015	0015	0014	0015	003F	0015	0014	0015	0015	0015	003E	
0015	0015	0015	0014	0015	060A	0154	0055	0015	0E3C	0154	
0054	0015	OE3D	0154	0054	0015	OE3D	0154	0054	0015	0E3C	
0154	0055	0015	0E3C	0154	0054	0015	OE3D	0154	0054	0015	
DE3D	0154	0054	0015	0E3C	0154	0054	0015	OF8F			
										Apply	-

The highlighted text in the CCF code string corresponds to the highlighted portion of the waveform view.

- e. Press the Delete key on your keyboard, and then click Apply.
- f. Close the window and observe that section of the CCF Code was removed and the waveform is changed:



**Note:** If you cannot get codes to work after editing out suspected bad sections using the steps above, try re-learning the code.

### 3. Setting Universal Functions.

The g! software uses a concept called **Universal Functions** to help when mapping interface buttons to their respective commands. In the following steps, you will verify that all the Universal Functions are set correctly.

- a. Select the first command in the list. *The properties window for the IR* Code is displayed on the right:
- In the IR Code: properties window, select the appropriate item from the Universal Function drop-down, and then click Apply. If there is not a match for the code you are using you can either set it to
   <None> or you can assign it to one of the User functions.

_	HC12 EXT IR IN	$\mathbf{r}$			
System	I Virtual IR Receiver		IR Code : Pause		
	🗏 🚥 IR Devices		Name	Pause	
Security	🗄 🎟 Cable TV			26964	
	🔠 🎟 Cable DVR		System #		
Climate	🗄 🎫 OSD		Carrier	0 Hz	
	📰 🎟 IR Display		Repeat	1	
Lighting	🗄 🎟 Cable TV		Universal Function	Pause	
	📰 🎟 Cable DVR			Pause	
Content	🗏 🎟 IR Display		CCF Code	Picture	mble >>
	Power Cycle		EDDOD. J	PIP PIP Channel Down	ASSIGNED: ASSIGNED:
Media	Hit Video 1	r i	ERRUR: Invalid (	PIP Channel Up	ASSIGNED: 1
	HI Video 2			PIP Off PIP On	ASSIGNED: '
Video	🗰 Video 3			PIP Position	ASSIGNED: '
	Component 1			PIP Swap Play	ASSIGNED: '
Messaging	Component 2			Pop Up Menu Pover Cycle	10010120.
	E 🚥 Satellite			Pover Cycle Pover Off	ASSIGNED:
Irrigation	Bill Power On			Power On	ASSIGNED: '
	Power Off     Record			Preset Preset Next	
Pool Control				Preset Prev	
	Play Stop			Previous Program	ASSIGNED: 1
UPS	Pause	$\sim$		Progressive	
	Revind			Randon	×
Interface	Fast Forward				
	Digit 0				
Input/Output	Digit 1	Т			
a subar	Digit 2	Т			
Event Mapper	Digit 3				
C. contenting por	Digit 4	Τ_			
	Digit 5	Т			
	HI Digit 6	Т			
	BI Digit 7	Т			
	III Digit 8	Т			
	H Digit 9	Т	(		
	HI Digit +10	L	Apply		

c. Confirm that the Universal Function for the other codes are all set correctly to ensure proper mapping.

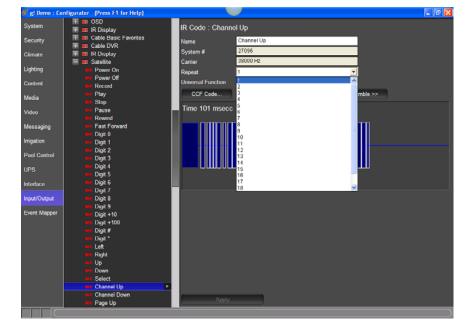
Notes:

- Codes added as part of a Default Code Set should already have proper mapping.
- The drop down list indicates which functions have already been mapped within the IR Device to help avoid setting duplicate functions.

#### 4. Set proper Repeat Counts.

By default, all IR commands have their Repeat Count set to 1, meaning the IR Code is sent once every time it is issued. In some cases it is desirable to increase this value to ensure that the IR Command is received successfully. However, if a repeating code causes undesired behavior when the IR code is sent (for example, sending the Channel Up command results in the channel incrementing more than once); you may need to decrease the Repeat Count for the code.

- a. Select the code in the Configurator.
- b. In the properties window for the selected code, change the selected number in the **Repeat** drop-down as needed and click **Apply**.



**Note:** You can change all of the Repeat Counts for an IR device at the same time by right-clicking the device and selecting Set Repeat Count for All Codes.

Add New IR Device... Delete Satellite... Import From File...

Export to File...

Learn IR Codes...

Set Repeat Count for All Codes...

### 5. Check pre-amble setting for repeating IR

Setting the preamble and repeating section properly is necessary to define the portion of the IR code that is repeated when a control button is pressed and held on the user interface or remote. The repeating portion of an IR code is marked with a white outline around the wave form in the Configurator waveform view.

The following steps identify and set the proper preamble to allow the g! software to accurately reproduce the IR code.

- a. Determine whether the device uses a small repeating section or if it simply repeats the entire code. Previously in Step 2, Example 1, we learned how to identify which repeating section the device used. The sample below uses a small repeating section.
- b. The first image shows an IR code that includes a separate repeating section but the g! software is configured incorrectly, repeating the entire waveform. Use the Preamble adjustment buttons to move the white outline and edit the selected repeat area.
- c. The second image shows the proper repeat area selection after the correction was made.



CCF Code	<< Preamble Pr	reamble >>	
Time 200 msec			
		Proper Repeat Selection	

## Exercise 6: Export an IR File

*Overview* Now that the IR Device has had all the codes tested and optimized, and all proper mapping completed, you can export a copy of the IR Device. The exported file can be re-imported into this system in case you are controlling multiple identical devices, or imported into another system if you are using this device in a future job. It is recommended that you export your files to an appropriate folder in the **g!Tools IR library** that they will be easy to find when you need them.

#### How-to

- 1. In the Configurator, go to the **Input/Output** tab.
- 2. Right-click the desired device under IR Devices, then select **Export to File...**
- 3. The **Export IR File** window opens. This window is used to save the new IRF file in the IR Library in g!Tools.

Export IR Fil	e									X
	ELAN	Brand	•	Cal AV Zone Co	tegory ntroller	T	New File	Filename		
			Ex	port		Cancel		Export (outsi	de CRL)	

4. Select the Manufacturer from the first drop-down list, and then select the appropriate category from the middle list.

**Note**: g!Tools sometimes installs the data files into a hidden directory. You need to select "show hidden files and folders" from your explorer folder options dialog box to be able to browse directly to it. Alternatively, you can create a shortcut on your desktop to the directory to access the folders.

5. In the **New File** field, type a descriptive name for the IR device then click **Export**. The EIR file will be saved into g!Tools.

If you wish to save the file elsewhere, click the Export (outside CRL) button. The Windows Save As dialog box opens. Navigate to the desired location on your computer or network, and then click **Save**.

**Note:** Saved file names should be as descriptive as possible and include manufacturer, model number and device type so that they will be easy to find when you have many saved devices.

# Exercise 7: Add an IR Controlled Display

Overvie In a previous exercise, you added the IR Codes for controlling an IR Controlled
 W Display. You will now add the Generic Display itself on the Media tab. The Generic Display is the item in the g! Configurator where you can define the display properties and settings so the g! software can know which IR codes are associated with the power states and inputs.

In this exercise, you will add an IR Controlled Display and assign IR commands to the various functions.

How-to
 1. Navigate to the Media tab in the Configurator, right-click One-Way Devices and select Add New Video Display.... The Add New Video Display Dialog box is shown:

Add New Vid	eo Display		X
Name	IR Display		
Device Type		🔲 Show Unsupported Devic	es
Generic Vide	eo Display		
1			
Search For	Devices	Cancel OK	

2. Select **Generic Video Display** from the list, name the device "**IR Display**", and click **OK**. *A New Video Display will be added:* 

System	+ 😨 Communication Devices	Video Display : Gener	ric Video Display
Security	🖃 📕 One-Way Devices	Name	IR Display
Climate	IR Display      Cable TV      Rev. Day: Changes	System # Device Type	29528 Generic Video Display
Lighting	<ul> <li>H III Blu-Ray Changer</li> <li>H III Cable DVR</li> </ul>	On Off Control Type	Cycling
Content	🔲 🧮 DVD Changer	Source Control Type	Cycling
Media		Delay After On/Off	100 msec 🗾 💌
Media	Cable Basic Favorites	Delay After Source	100 msec 💌
Video	🕂 📼 Zone Controllers	Controller Commands	
Messaging	Interface Groups	Power On/Off	
Irrigation			
Pool Control			
UPS		Down	
Interface		Add Input	Delete Input
Input/Output			
Event Mapper			

- 3. Check the **Settings** on the Display.
  - a. Set **On Off Control Type** to **Discrete Verify (Always Send)**. The Power Command in the Controller Commands Window will change from Power Cycle to separate commands for Power On and Power Off:

System	Communication Devices     O My Drivers	Video Display	: IR Display		
Security Climate Lighting Content	Two-Way Dences     HC12 Audio Output 1     HC12 Audio Output 2     Elan DT11/DT22 AM/FM Tuner     Elan DT11/DT22 AM/FM Tuner     Elan DT11/DT22 Funza Tuner     Sunfre TGR/TGP-401 Internal AM/F     Song 8DP-C/47/5/85 (RS-232)	Delay After On/C	ypo Discrete Verify (Always Send) III 100 msec	v v v	
Media	Lining Room TV     Bedroom TV     Theater TV	Delay After Sour Controller Comm Power O	ands		
Video Messaging Irrigation	Che-Way Derices     IR Display     IR Display     IR Cable TV     Ellu-Ray Changer     Ellu-Ray Changer     E Cable DVR     E DVD Changer      E DVD Changer      E DVD Changer	Up Power O	đ		
Poul Control UPS Interface	Interface Groups	Add Inpu	t Delete koput		
Input/Output					
		Ap	ply		

Quick Reference: Video Display			
Name	Name of Generic Display		
On Off Control	Select Cycling for units with a power toggle.		
Туре	Select Discrete for units with discrete on/off commands.		
	Select Discrete Verify to resend discrete commands even when in a perceived correct state.		
Source Control Type	Select Cycling, Discrete, or Discrete Verify control types for source/input selection.		
Delay After On/Off	Sets a delay before the next command for units that have a warm-up time during which they do not accept commands.		
Delay After Source	Sets a delay before the next command for units that have a time period after source change when they do not accept commands.		

- b. Set Source Control Type to Discrete Verify (Always Send) then click Apply.
- c. Click the **Add Input** button below the Controller Commands Window. *The Add New Display Input window opens.*

Add New Display Input				×
Name	New	Input		
		Cancel	ок	

- d. Name the new input "Video 1". Video 1 is added to the Controller Commands Box.
- e. Repeat the previous step to add Video 2 and Video 3.
- f. Click the **Power On** controller command. *The Commands Window is displayed.* Note that there is no command present for Power On.

System	🐨 Communication Devices	Video	Display : IR Dis	play	
Security Climate	Ko-Way Devices     HC12 Audio Output 1     HC12 Audio Output 2     HC12 Audio Output 2     Elan DT11/DT22 AM/FM Tuner	Name Syster Device		IR Display 27282 Generic Video Display	
Lighting Content	📼 Elan DT11/DT22 Sirius Tuner 📼 Sunfire TGR/TGP-401 Internal AM/F 🤣 Sony BDP-CX7000ES	On Off Source	Control Type Control Type After On/Off	Discrete Verify (Always Send) Discrete Verify (Always Send) 100 msec	
Content Media	Integra DPC-7.4,7.5,8.5 (RS-232)     Living Room TV     Bedroom TV	Delay .	After Source Iler Commands	100 msec	
Video	Theater TV  Cone-Way Devices  IR Display	Up	Power On Power Off Video 1		
Messaging Irrigation	Cable TV     Elu-Ray Changer     Elu-Ray Changer     Elu-Ray Changer		Video 2 Video 3	×	
Pool Con		Mov Up			
UPS		Mov Dow		ids	
Interface	Add Command Delete Command		Test Commands		
Input/Output					

- 4. Map the Controller Commands to the IR Commands.
  - a. Right-click the IR Display and select **Map/Remap Display to Device...** An HLCONFIG Warning box will be displayed, click **Yes** to continue, the Map/Remap Interface to Device window will open:

Map / Remap Interface to Device	X
Select Device:	
< ACTIVE ZONE HANDLER > IR Display Satellite	
Cancel	ОК

b. Select **IR Display** from the list of devices and click **OK** to map. *This is the display you added to the Input/ Output tab in the previous exercise.* 

c. Click the **Power On** Controller Command in the Controller *Commands* window. *The Commands Window is displayed.* Note that the window is now populated with the IR Command that matches the Power On Universal Function:

Commands 🛛					
IR Display: Power On : Send I	Move Up	Copy Commands			
		Move Down	Paste Commands		
Add Command	Τe	est Commands			

**Note:** If the Commands window does not have a command populated, it is most likely because the command name does not match the Universal Function of the command. Commands can be added manually by clicking the **Add Command** button.

d. Click through the other commands and verify proper mapping. Make any necessary corrections.

## Exercise 8: Create and Customize an Interface for an IR Source

*Overview* In a previous exercise, you created an IR Device with all proper settings and codes for your source device, in our example the Satellite box. In Exercise 8, you will create an interface to control the device using these IR codes. First, you will create the interface on the Media tab and associate it with the IR device. This will enable source selection on a zone controller and display the interface in the Viewer to allow control of the IR source device.

The g! software provides multiple templates to use as starting points for controlling your IR devices. While these templates cover the most common controls, you may want to customize the interface in order to provide additional functionality. This is accomplished by adding controls to the default interface and then arranging the layout appropriately.

**Note:** To preview what controls exist on the built-in templates, navigate to Interface Templates on the Media tab in the Configurator.

In this exercise, you will add an interface for a Satellite box using a predefined template, and then customize it by adding a new button.

How-to

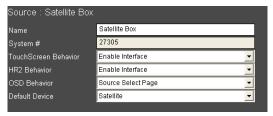
- 1. Navigate to the **Media** tab in the Configurator.
- 2. Right-click the One-Way Device node, and select **Add New Source** from the menu. *The Add New Interface window displays.* 
  - a. Name the new interface "Satellite Box".
  - b. From the Copy Layout From Template drop-down list, select DirecTV Basic Favorites
  - c. In the Connect to Existing Device list select Satellite.
  - d. Click OK.

Add New Interface	
Interface Name Copy Layout from template	Satellite Box DirecTV Basic Favorites
Connect to Existing Device     Create New IR Device     Create New Serial Device	Satellite
	Cancel OK

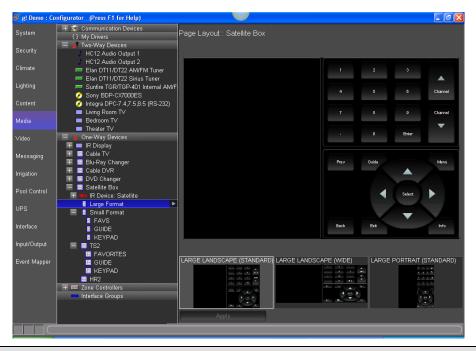
System	Communication Devices     Two-Way Devices	Source : Satellite Bo	ж		
Security	One-Way Devices	Name	Satellite Box		
	🗐 🔲 IR Display	System #	27305		_
Climate	🗄 💻 Projector				
	🐨 🔚 Cable TV	TouchScreen Behavior	Enable Interface		•
Lighting	🔠 📃 Blu-Ray Changer	HR2 Behavior	Enable Interface		•
Content	III 🔲 Cable DVR	OSD Behavior	Source Select Page		-
NAMES OF A	I DVD Changer	Default Device	Satellite		•
Media	E Satellite Box	- Contain Counce			
	IR Device: Satellite				
Video	Power On Power Off	Remote Control Buttons			
Messaging	Power Off	Incoming Button	Behavior	Output Device	Output Code/Command
measaging	Play	Up	Default	Satellite	Up
Imgation	III Stop	Down	Default	Satellite	Down
	Pause	Left	Default	Satellite	Left
Pool Control	Rewind	Right	Default	Satellite	Right
UPS	## Fast Forward	Select	Default	Satellite	Select
ura	Digit 0	OSD/GI	Read Only		
Interface	Digit 1	Play	Default	Satellite	Play
	Digit 2	Add	Default		
Input/Output	Digit 3	Digit 0	Default	Satellite	Digit 0
	Digit 4	Digit 1	Default	Satellite	Digit 1
Event Mapper	BB Digit 5	Digit 2	Default	Satellite	Digit 2
	Digit 6	Digit 3	Default	Satellite	Digit 3
	🗰 Digit 7	Digit 4	Default	Satellite	Digit 4
	Digit 8	Digit 5	Default	Satellite	Digit 5
	Digit 9	Digit 6	Default	Satellite	Digit 6
	Digit +10	Digit 7	Default	Satellite	Digit 7
	Digit +100	Digit 8	Default	Satellite	Digit 8
	Digit #	Digit 9	Default	Satellite	Digit 9
	Digit *	Volume Up	Read Only		
	the Left	Volume Down	Read Only		
	Right	Apply			
	dia Up				

**Note:** Selecting the Satellite IR device that was created previously sets it as the Default Device for this interface. Any button that is pressed that has a Universal Function associated with it, will issue the associated IR code from the Satellite IR device.

3. Select the Satellite interface and verify that the default device **Satellite** is selected. The default device drop down list allows selection of any configured IR device, serial device, or built-in driver. The selected device's commands will be mapped to the buttons on the interface via the Universal Function assignments.

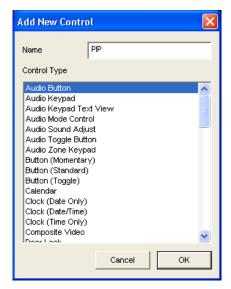


- 4. Expand the entry for your new Satellite Box interface by clicking the "+" sign immediately to its left.
- 5. Click the Large Format to select it, and then click Large Landscape(Standard) in the properties pane on the right. *The Interface Layout* for the Satellite Box displays on the right:



**Note:** Large Landscape (Standard) is the resolution typically used for a PC viewer. Some "netbooks" will run the Viewer in Large Landscape (Wide) mode.

- 6. Add a new button for the **PIP** command.
  - a. In the Interface Layout, right-click the space between the Prev, Back buttons and select **Add New Control**. *The Add New Control dialog box opens.*
  - b. Select **Audio Button** from the list of available controls. *The Audio Button is a special type of button which allows you add commands to the button directly in the interface. This button is only available on the Media Tab.*



c. Change the name of the button to "PIP"

- d. Click **OK**. A new button labeled "PIP" is added to the Interface Layout.
- 7. Click the new button in the Interface Layout to select it. *The Audio Button Properties window opens*.

🔲 😨 Communication Devices	Page Layout : Satellite Box			
My Drivers				
💻 🚺 Two-Way Devices				
HC12 Audio Output 1				
FLC12 Audio Output 2				
📼 Elan DT11/DT22 AM/FM Tuner	1 2 3			
Elan DT11 (DT12 Sirius Tunor Audio Button Properties				
Sun	4 5 6 Channel			
孩 Son Name 🛛 PIP	icon			
🧭 Inte <mark>:</mark> Text Color 🔽 Default				
Livir     Face Color     ✓     Default	7 8 9 Channel			
Ded				
The: Radius V Default	- 0 Enter			
🕂 💻 IR D Shade In 🔽 Default				
🕂 🧧 Cab Shade Out 🔽 Default				
I II Blu- III III Cab	Prev Guide Menu			
+ Cab + DVT Style < TEXT	Sorder ✓			
- E Sate Text Size V Default	Align Default			
E III IR Options	Universal Select			
	Function PIP			
Connect To				
E F				
E C Default Behavior	Back Exit Info			
🚍 📃 TS2				
FAVORITES				
🧮 GUIDE	LARGE LANDSCAPE (STANDARD) LARGE LANDSCAPE (WIDE) LARGE PORTRAIT (STANDARD)			
📕 KEYPAD				
📃 HR2				
🛨 📼 Zone Controllers				
Interface Groups				

 In the Audio Button Properties window, select PIP from the Universal Funct: drop-down list. Click Apply.

**Note:** Setting the Universal Function is an important step, since it allows this button to automatically map commands to the PIP IR code for the Satellite box.

Alternatively, de-selecting the "Default Behavior" check box in the button properties window lets you manually assign button commands to that button.

- 9. Drag the button to place it roughly into position below the **Prev** button in the interface.
- 10. Align and size the button more precisely as follows:
  - a. Click the **PIP** button to highlight it.
  - b. Hold the Control (Ctrl) key on your keyboard and click Prev.

Each of the buttons will be highlighted in yellow, and the group will be highlighted in green.

- c. Right-click one of the buttons and select Make Same Height.
- d. Right-click again and select **Make Same Width**. *Both buttons will now be the same size.*
- e. Right-click one of the selected buttons and select **Align Right Edges**. The right edge of the Menu button will line up with the right side of the Back button.

f. Click Apply to save your changes.

Your interface should now look similar to the one shown below:



## **Exercise 9: TV Channel Favorites**

*Overview* The g! software provides a pre-made interface for one-touch selection of favorite TV channels. The interface will display icons for favorite channels separated into groups like News or Sports. By clicking the TV icon in the Viewer, the g! software automatically translates this button press to the correct channel number and sends the digits to the cable/satellite box.

If the home has more than one television source, cable and satellite for example, the software can support multiple "tuning types" so that each network can have more than one channel number associated with it. For example, The Disney Channel might be channel 304 on the cable box and 215 on the satellite. The Viewer displays The Disney Channel icon for the homeowner to select, and the software tunes to the appropriate channel for whichever source is currently in use.

This exercise details how to add the TV Channel Favorites Control to a source interface, and to configure TV Channel Favorites for proper function.

Before beginning this exercise, be sure you have completed Exercises 2 through 5 in this lesson.

#### The basic steps of adding TV Channel favorites are:

- 1. Configure the IR Device by selecting the appropriate tuning type, minimum digits, and pre- and post-tune commands as necessary.
- 2. Configure the TV Channel favorites on the Content tab by entering the channel numbers for the appropriate tuning type.
- 3. Add a TV Channel Favorites control to a custom interface and connect it to the appropriate IR Device.

- How-to
- 1. Navigate to the Input/Output tab in the Configurator.
- 2. Select the **Satellite** IR device. The IR Device properties display on the right:

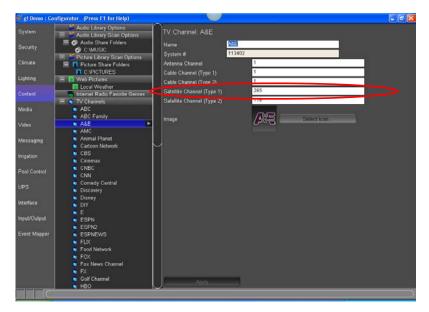
**Note:** The Tuning Type is used by the TV Channel Favorites control to send the correct channel number to the Satellite Box IR device. Later, you will learn how to add multiple channel numbers for each TV Channel saved in favorites. There are five Tuning Types available, so that up to five different channel numbers can be selected for each network (channel). The Tuning Type used here controls which number is sent when the interface for this device is used.

There are other settings below Tuning Type that affect TV Channel Favorites controls. For this exercise, we will assume the defaults are correct.

3. Select **Satellite (Type 1)** from the **Tuning Type** drop-down list and click **Apply**.

IR Device : Satellite				
Name	Satellite			
System #	26931			
Default Sender	IR Output 06			
RC5 Codeset	No			
Decode IR from this device	No			
Tuning Type	Satellite (Type 1)			
Minimum Digits (0 Padding)	0			
Pre-Tune Command	< NONE >			
Post-Tune Command	< NONE >			
Delay Between Commands	250 msec 💌			

- 4. Click on the **Content** tab in the Configurator.
  - a. In the System Node Tree, navigate to **TV Channels**, and then select the first entry in the list. *The properties for TV Channel are shown on the right:*



b. In the **Satellite Channel (Type 1)** field, type the channel number for the selected station from the Satellite provider. For this exercise, type in channel number 675, and click **Apply**.

In a real install, these are the digits that will be sent to the satellite box when the favorite channel is selected from the interface connected to the Satellite Box IR Device, since Satellite (Type 1) is its tuning type.

**Note:** There are two Cable channel types, two Satellite channel types, and an Antenna channel type, allowing you to use the same TV Favorites interface for five different kinds of devices.

The names are not important as long as the type selected for the IR device matches the channel number entered in the Content tab. Each IR device's **Tuning Type** field controls which channel number from these settings are sent when activated from the interface for that device.

In an actual install, you would now go through and enter the correct channel numbers for each TV Channel Favorite. This is also the time when you would add additional channels, upload new icons from your files or the icons library in g!Tools, and edit/customize the channel groups.

**Note:** ELAN strongly recommends that you create a backup of your settings after fully editing TV Channels and Groups.

al close test close test close te	📃 🚺 Local Weather	
Content	🗧 🔠 Internet Radio Favori	ite Genres
	📃 🍯 TV Channels	
Media	🎽 ABC	Add New TV Channel
	🎽 ABC Family	Import Channels and Groups
Video	👗 A&E	Export Channels and Groups
	📫 AMC	
	🗳 Animal Diamat	

This will allow you to import your TV Channels to the Content tab and not spend time entering channel numbers at each job. When you create your master file, it's a good idea to enter channel numbers under different tuning types for each type of service you will use, such as DirecTV, Comcast, etc., so that you do not need to update this file more than once.

To export/import your files, right-click on either the TV Channels or TV Channel Groups heading and select Export/Import TV Channels and Groups.

**Note:** You will not be able to see this interface in the Viewer until it is added to a Zone Controller. See the *Distributed AV* and *Configuring Home Theater* lessons for details.



The following screen shows how this interface will look in the Viewer.

### Notes:

\_ \_ \_ \_ \_ \_ \_ \_

### Notes:

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# **Lesson 10** Generic Serial Control (One-way)



#### Overview

This lesson shows you how to use the Generic Serial Device driver to add support for any RS-232 device that you can control with basic RS-232 commands.

You will:

- Learn how to add serial commands for oneway control of serial devices.
- Understand Universal Functions and how they apply to Generic Serial Devices and Interfaces.
- Learn how to use Generic Serial Device commands to control devices from the g! software.
- Learn how to export and import Generic Serial Devices.

#### Requirements

- A PC running g!Demo and g!Tools
- -or-
- g! system controller and g!Tools.

#### Overview

*Overview* The Generic Serial Device driver is used for sending one-way commands to a serial controllable device that either does not benefit from a full 2-way driver in the g! software, or for which a 2-way driver is not available. The Generic Serial Device driver is not intended to support full two-way communication, and is primarily used for devices that do not provide feedback.

Examples of devices that are well suited as Generic Serial Devices are audio and video sources (such as DVD players) and video displays (televisions or projectors). The Generic Serial Device driver is not intended for devices like tuners and receivers, where the two-way feedback (the current station on a tuner or the active source on the receiver) is important.

The following diagram shows the basic equipment in a system schematically. The diagram includes the components that are important to the g! system controller.



Terms

The following terms are used in the Configurator:

- **Communication Device:** The serial port or other communication method used to communicate with the device.
- **Generic Serial Device**: The device group containing serial commands and other information related to the device on the Input/Output Tab.
- Universal Function: A tool used to map controls in the interface to their associated commands in the Generic Serial Device.
- Hex or Hexadecimal: Code language commonly used in serial commands. Hex code strings use numbers and certain letters to represent the numbers 0-15. 0-9 equates 0-9, with A-F equating 10-15. Hex codes are often denoted by the presence of a small "h" at the end of a letter sequence. Sample: 02h
- **ASCII**: Code language commonly used in serial commands. ASCII strings are typically human readable text, such as ABCDEFG0123 etc.
- **Binary**: Code type consisting of 1's and 0's, representing ON and OFF respectively. Binary concepts are used frequently in serial codes, with the same command with a 1 or 0 on the end indicating whether to activate or deactivate that function.
- **Generic Display**: A Generic display driver that allows custom mapping of commands such as source and power. This display may be connected to a zone in zone settings for automatic switching based on source selection.
- **Interface:** The customizable button layout that makes up the user interface in the Viewer.

#### *How-to* To integrate a generic serial controlled device:

- Add the Communication Device.
- Add the Generic Serial Device, including adding commands.
- For displays: add a Generic Video Display, map the commands appropriately and configure this display in a zone.
- For sources: add the Interface, map commands and configure the Zone Controller for the source interface.
- For other items: Configure appropriate Event Mapping.

# Exercise 1: Add Generic Serial Devices from a Protocol Document

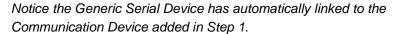
- *Overview* In Exercise 1, you will add a Generic Serial Driver for a projector. A projector is a good candidate for one-way serial control as they typically do not provide feedback, and there are a limited number of commands required to program.
- How-to
   1. In the Configurator, click on the Input/Output tab. Right-click
   Communication Devices and click Add New Communication Device.
   The Add New Communication Device window opens.
  - a. Enter "Projector" as the Device Name.
  - b. Leave the Type set to Serial Port.
  - c. Set Communication Type to Generic Serial.
  - d. Click OK.

**Note:** The communication type selection shows as Standard Connection when added, but will automatically change to Generic Serial and allow editing when linked to a Generic Serial device.

2. Right-click on Generic Serial Devices and Add New Generic Serial Device. The Add New Generic Serial Device window opens.

3. Select Generic Serial Device, type "**Projector**" in the **Name** field, and then click **OK**.

Add New Gen	eric Serial Device 🛛 🔀
Name	Projector
Device Type	F Show Unsupported Devices
Generic Seria	al Device
]	
Search For D	Devices Cancel OK



GC-100	Generic Serial Device	: Projector		
😴 Living Room TV	Name	Projector		
😴 Bedroom TV	System #	27517		
🧟 Projector	· · · · · · · · · · · · · · · · · · ·			
📃 🦿 Sense Inputs	Device Type	Generic Serial Device Internal		
🕂 🦿 HC12 Controller	Communication Device	Projector	-	
🕂 🦚 Tapko SIM-KNX		-		
🚽 🛲 Relay Outputs				
🕂 🛲 HC12 Controller	Tuning Type	Cable (Type 1)	<u> </u>	
🕂 🛲 Relay Block 3 (GC-100)	Minimum Digits (0 Padding)	0	<b>~</b>	
🕂 🖚 Tapko SIM-KNX	Pre-Tune Command	< NONE >	-	
💻 📟 Generic Serial Devices	Post-Tune Command	< NONE >	<b></b>	
🕂 🚥 Generic Serial Device				
🕂 🚥 DVD Player	Delay Between Commands	250 msec	<b>_</b>	
📕 📟 Projector 📃 🕨				
📟 No Serial Codes				
🖃 📫 IR Outputs				
IR Output 01				

4. Click **Projector** under **Communication Devices** in the System Tree to verify the baud rate and other serial settings are configured correctly for this device.

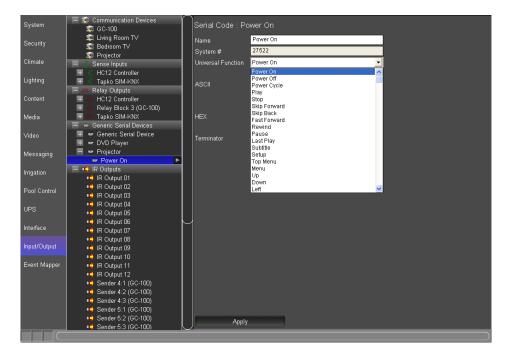
Communication Device: Projector		
Name	Projector	
System #	27516	
Device Type	Serial Port / Generic Serial	
Enable Sharing	No	
Sharing Port	0	
COM Port	NONE	
Protocol	RS232	
Baud Rate	9600 🔽	
Flow Control	None 🔽	
Parity	None 🔽	
Data Bits	8	
Stop Bits	1	

**Note:** For this exercise we will assume the default settings are correct, but in a real install all the serial settings must **exactly** match those indicated in the serial protocol for the device for communication to be effective.

- 5. Navigate to the Generic Serial Devices Projector in the System Tree, and right-click **No Serial Codes.** Select **Add New Serial Code.** *The Add New Serial Code window opens.*
- 6. Name the code **Power On** and click **OK**. The code is added below the Generic Serial Device named Projector and should be automatically highlighted, and the properties display on the right.

Add New Serial Code 🛛 🛛 🔀		
Name	Power On	
	Cancel	ок

7. In the Power On properties, select **Power On** from the **Universal Function** drop-down list. Before entering the code, it is important to select the Universal Function so that the g! software can properly associate the command with the control.



8. Now that the Universal Function is entered, enter the serial code for the projector. For this exercise, assume the power command is the ASCII string "Power1<cr>".

**Note:** Codes like <cr> are common in serial commands, and refer to "carriage return" or "enter".

- 9. You will add the code in two steps:
  - a. Enter the ASCII string in the box labeled ASCII. The ASCII string is the text portion of the code prior to <cr>; "Power1". Notice that as you do so the hex equivalent of your ASCII string is displayed in the HEX box.

**Note:** Some serial commands are case sensitive. Refer to the protocol document for details.

lame	Power On	
System #	27522	
Universal Function	Power On	-
	Power1	~
ASCII		
		~
	50 6F 77 65 72 31	~
HEX		
		~
Terminator	None	•

b. Enter the carriage return, which terminates the command and lets the projector know that this is the end of the command sequence. Since "carriage return" is not a character that can be displayed in ASCII, you will not enter anything into the ASCII field (pressing enter at the end of Power1 will not add the carriage return for you). Instead, select Carriage Return from the Terminator drop-down list.

Serial Code : Power On		
Name	Power On	
System #	27522	
Universal Function	Power On	-
	Power1	~
ASCII		
		~
	50 6F 77 65 72 31	
HEX		
Terminator	Carriage Return	·

c. Click Apply to save.

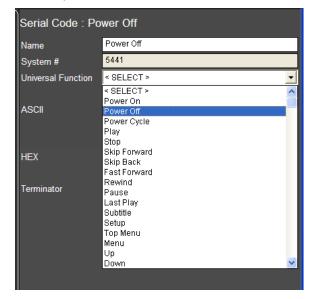
**Note:** The g! software allows you to automatically append common terminators like carriage return and linefeed to the end of serial commands through the drop-down. If your particular serial protocol requires a different terminator, you can enter the terminator's hex code into the hex field.

Typically, a small box will appear at the end of the ASCII string to indicate the presence of a non-display character (Vista users may not see this box). For example, a carriage return's ASCII code is 13. Since entering 13 into the ASCII string will send 1...3, you enter ØD into the hex field to append the correct data.

- 10. Add the rest of the codes. In total, you will add 3 more codes to this generic serial driver: **Power Off, Component Input**, and **HDMI Input**.
  - a. To add the **Power Off** command, right-click on the Power On code and select **Add New Serial Code**. *The Add New Serial Code window opens.*
  - b. Name the code "Power Off", and click **OK**.

Add New Serial Code		×
Name	Power Off	
	Cancel O	к

c. Select the Universal Function pointer for Power Off from the Universal Function drop-down list.



- d. The code string to turn the projector off is Power0<cr>
   Refer to steps 10a and 10b to enter the command:
  - Enter Power0 in the ASCII box
  - Select the **Carriage Return** separately from the **Terminator** drop-down.
  - Click Apply when finished.

Serial Code : Power Off		
Name	Power Off	
System #	5441	
Universal Function	Power Off	•
	Power0	^
ASCII		
		V.
	50 6F 77 65 72 30	^
HEX		
		$\sim$
Terminator	Carriage Return	-

 Refer to steps 10a and 10b to add the two input commands, being sure to set the Universal Function (inputs are listed as Source Video # etc). The commands for the remaining inputs are:

Input1<cr> for the **Component** input.

Input2<cr> for the HDMI input.

12. The completed commands should look like the following:

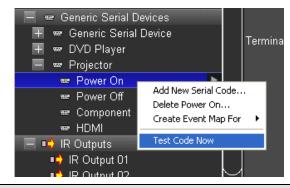
#### Component

Serial Code : Component		
Name	Component	٦
System #	5445	
Universal Function	Source Video 1	-
	Input1	^
ASCII		1
		~
	49 6E 70 75 74 31	^
HEX		1
		Υ.
Terminator	Carriage Return	•
Terminator	Carriage Return	J

HDMI

Serial Code : HDMI		
Name	HDMI	
System #	5449	
Universal Function	Source Video 2	-
	Input2	^
ASCII		
		V.
	49 6E 70 75 74 32	^
HEX		
		~
Terminator	Carriage Return	•

13. Once all the codes are added, it is a good idea to test them. To test codes at any time, navigate to the **Input/Output** tab, right-click on the code and select **Test Code Now**.



**Note:** Since actual equipment is not installed for this lesson, we cannot know the effectiveness of the command and will assume it is valid. On a real installation, testing codes can be very helpful when developing Generic Serial Drivers, and is an important part of the driver creation process.

- 14. Once you have fully tested the serial driver, cleaned up any codes, and added all Universal Functions, it is a good idea to **Export** the verified driver. This allows you to start to build a database of drivers you can control regularly.
  - a. To export files, right-click on the name of the Generic Serial Driver and select **Export to File**.



b. The Export Serial file dialog box opens:

Export Serial file		×
Brand Atlona	<b>-</b>	Filename New File
	Export	Cancel Export (outside CRL)

- Select the appropriate category from the drop down list, and then enter a descriptive name in the New File text field.
- Click Export to save the file into g!Tools. –or-

Click **Export (outside CRL)** to open the Windows Save As dialog box to save the file elsewhere on your computer or network.

Save As				?×
Savejn:	🗀 Backups	•	· 🗈 💣 🎫	
My Recent Documents Desktop My Documents My Computer				
Contract (1)	File <u>n</u> ame:	SerialProjectorModel	-	Save
My Network	Save as <u>t</u> ype:	HomeLogic Generic Serial Device Files (		ancel
Places	2.	, , ,	·	

**Note:** This file can be imported to any g! system running the same version or a later software version. This is useful if you have multiple units of the same type on one job, or will use this device again on another job. Even if you don't think you will use the device again, it is always a good idea to make a backup file.

# Exercise 2: Create a Generic Display

How-to

- *Overview* Once you have created a Generic Serial Device, you now have a database of codes you can use in the system. For a projector or other video display, the best way to use this database is to attach the codes to a Generic Video Display. Then you can assign that display to an A/V zone for automatic power and input switching based on source selection. (See the lessons on *Configuring Distributed A/V (Parts 1 and 2)* or *Configuring Home Theater Systems* for more information.)
  - In Configurator, navigate to the Media tab, right-click on One-Way Devices in the System Tree and then select Add New Video Display. The Add New Video Display window opens.
    - 2. Select **Generic Video Display** from the list. Name the display "**Projector**" and click **OK**.

Add New Video Display 🛛 🛛			
Name	Generic Video Display		
Device Type	🗌 Show Unsupported Devices		
Generic Vide	o Display		
1			
Search For (	Devices Cancel OK		

3. The Generic Video Display for Projector is added to the System Node Tree, and the configuration options appear in the properties window to the right.

Video Display : Generic Video Display				
Name		Projector		
System #		5453		
Device Type		Generic Video Display		
On Off Control Type	Cy	cling 📃		
Source Control Type		cling 📃		
Delay After On/Off	10	) msec 📃 💆		
Delay After Source 100		) msec 📃 💌		
Delay After Source 100 Controller Commands Up Power On/Off Down				
Add Input Delete Input				

Quick Reference: Video Display			
Name	Name of Generic Display		
On Off Control	Select Cycling for units with a power toggle.		
Туре	Select Discrete for units with discrete on/off commands.		
	Select Discrete Verify to enable resend of discrete		
	commands even when in a perceived correct state.		
Source Control	Select Cycling, Discrete, or Discrete Verify control types		
Туре	for source/input selection.		
Delay After	Use to set a delay before next command on units that		
On/Off	have a warm-up time during which they will not accept		
	commands.		
Delay After	Use to set a delay before next command on units that		
Source	have a period after source change where they will not		
	accept commands.		

4. Below the drop-down fields, there is a shaded area that contains **Controller Commands**. This is where you will map the appropriate commands to various projector functions. Change the drop-downs to the following settings, and as you do so, notice that the controller commands box is affected by your selections:

Property	Setting
On Off Control Type	<b>Discrete</b> (because we have unique On and Off commands.)
Source Control Type	<b>Discrete</b> (because we have unique commands for each input)
Delay After On/Off	For this exercise, leave these set to defaults. In an
Delay After Source	actual install, setting these fields typically requires a little trial and error testing.

Video Display : Generic Video Display					
Name		Projector			
System #		5453			
Device Type		Generic Video Display			
On Off Control Type	Di	screte	-		
Source Control Type		screte	•		
Delay After On/Off	10	0 msec	-		
Delay After Source	10	0 msec	-		
Controller Commands					
Up Power On Power Off Down					
Add Input		Delete Input			

 Before you add commands, you must manually add commands for inputs. To add an Input Command, click Add Input at the bottom of the Controller Commands list. *The Add New Display Input window opens.* 6. Name the input "Component" and click OK.

Add New Display Input			
Name	Component		
	Cancel	к	

7. Repeat these steps and add a second input and name it HDMI.

Add New Display Input				×
Name	HDMI			
		Cancel	ОК	

The next step is to tell the g! software what code to send when each command is issued. To add codes to the Controller Command for Power On, click on the name Power On in the Controller Commands box. The Commands window opens.

Commands			×
		Move Up	Copy Commands
		Move Down	Paste Commands
Add Command	Delete Command	Τe	est Commands

 Click the Add Command button.... The Add Commands window opens. Generic Serial Commands occupy their own System Family in the list, and each code is listed by the name of the Generic Serial Device followed by a colon (:) and the name of the code. 10. Select the code for **Power On** to send via **Default Device** (the *Default Device* is the Communication Device we created and associated with the Generic Serial Device on the Input/Output tab) and click **OK**. *The command is added to the Commands window.* 

Add Command			
System Family	Command Groups		
System Family Audio Zone Controller Climate System Display Door Lock DVD Player DVR Energy Monitoring General System Generic Serial Device Input/Output Inputs Interface Device IR Sender Irrigation System Keypad Controller Lighting System	Projector: Component Projector: HDMI Projector: Power Off Projector: Power On Available Commands Send via Default Device Send via Device		
Messaging Outputs			
Pool Control Security System Tuner UPS (Uninterruptible Pow Video Controller Video System		Cance	al 0K
1		Cance	
Commands			×
Projector: Power On : Send v	via Default Device	Move Up	Copy Commands
		Move Down	Paste Commands
Add Command	Delete Command	Te	st Commands

**Note:** All commands in the Command window will automatically be sent in sequence when this command function is called.

- 11. Close the Commands window since we do not need to add any further commands to power on the projector in this exercise.
- 12. Repeat steps 8-11 to add commands to **Power Off**, **Component**, and **HDMI**.

Once all commands are added, you are ready to configure the Generic Display as the display on an AV Zone just like you would with a display with built-in driver. See *Configuring Distributed A/V (parts 1 and 2)* or *Configuring Home Theater Systems* for details.

# Exercise 3: Import a Serial File from g!Tools for a Generic Serial Source

*Overview* In Exercise 3, you will import a serial code file from the Serial library in g!Tools to provide one-way serial control from the g! software. The steps outlined here will work much the same for importing Generic Serial Drivers created and exported from the g! software, except that g! files will include full Universal Function data.

In the following steps, you will add a Generic Serial Driver for a DVD Player. A DVD Player is a good candidate for one-way serial control as there is typically no feedback required.

How-to

- 1. In Configurator, navigate to the Media tab.
- 2. Right click **Communication Devices** and click **Add New Communication Device.** *The Add New Communication Device window opens.*
- 3. Name the device **Generic DVD** or similar, leave the **Type** set to **Serial Port**, and set the **Communication Type** to **Generic Serial** and click **OK**.

Add New Communication Device				
Generic DVD				
Serial Port				
Generic Serial 💌				
) Devices				
Cancel OK				

**Note:** The communication type will appear as Standard Connection when added but will change to Generic Serial and allow editing when linked to a Generic Serial driver.

4. Right-click One-Way Devices, and select Add New Source.... The Add New Interface window opens.

5. Enter "Generic **DVD** " as the Interface **Name**, select DVD Single Disc from the Copy Layout from Template list, and select Create New Serial Device. Click **OK**.

Add New Interface	
Interface Name	Generic DVD
Copy Layout from template	DVD Single Disc
C Connect to Existing Device	< NONE >
C Create New IR Device	< NONE >
Create New Serial Device	
	Cancel OK

 Click the (+) sign next to Generic DVD in the One-Way Device node to expand it, then click the Generic DVD serial device to view its properties. Verify that the Generic DVD communication device added in Step 1is linked to this serial device.

Communication Devices	Generic Senai Device . DVD Player					
	Name	DVD Player				
Seneric DVD	System #	5774				
Input Controllers	Device Type	Generic Serial Device				
Output Controllers	Communication Device	Generic DVD	-			
Generic Senar Devices     Filme Projector	Tuning Type	Cable (Type 1)	-			
🕀 🔤 DVD Player	Minimum Digits (0 Paddin	ng 0				

7. Click the **Generic DVD** under **Communication Devices** to verify the baud rate and other serial settings are configured correctly.

	9482 -	
Name	Generic DVD	
System #	5776	
Device Type	Serial Port / Generic Serial	
Location	< SELECT >	
Enable Sharing	No	
Sharing Port	0	
COM Port	NONE	
Protocol	RS232	-
Baud Rate	9600	-
Flow Control	None	
Parity	None	•
Data Bits	8	
Stop Bits	1	

For this exercise we will assume the default settings are correct, but in a real install all the serial settings must **exactly** match those indicated in the serial protocol for the device for communication to be effective.

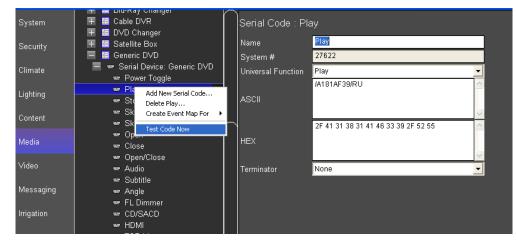
- 8. Import the serial codes. **Note:** The serial codes must be in **Elan SC4\_SER**, **HomeLogic HSR** or **ELAN .ESR** file format.
  - To import a file, right-click on Generic DVD Player in the System Node Tree and select Import From File.... to open the Windows File Open Folder. This folder opens directly into the g!Tools Serial Library directory.
  - b. Browse to Pioneer\DVD and select the Pioneer BDP-LXSS.HSR file as shown below to import the Pioneer DVD Player file.

Open					? 🔀
Look jn:	🗁 DVD		•	🗢 🖻 💣 📰 <del>-</del>	
My Recent Documents Desktop My Documents My Computer	Pioneer BDP-L:	XS5.HSR			
My Network Places	File <u>n</u> ame: Files of <u>type</u> :	Pioneer BDP-LX55.HSR Serial Files		•	<u>O</u> pen Cancel

c. For a few moments the g! software will read and interpret the settings saved in the file. Once finished, click the + symbol. You will see a list of codes displayed inside the Generic Serial Device: DVD Player in the System Tree.



9. Once all the codes have been added, test them using the Test Code Now option. Right-click the code, and select **Test Code Now**.



**Note:** Since actual equipment Is not installed for this lesson, we cannot verify that the command is effective, but will assume it is valid. On a real install, testing codes can be very helpful when developing Generic Serial Drivers, and is an important part of the driver creation process.

10. Once you have verified that the imported codes work, it is a good idea to prepare them for use in an interface by checking Universal Functions.

Since these files were imported from the ELAN database, they do not natively save Universal Function information. The g! software attempts to match up Universal Functions for you automatically, but if the names of the codes in the imported serial files do not match a Universal Function, they will not auto-map.

Therefore, it is important to verify that all imported codes have Universal Functions set correctly after performing an import from ELAN.

- a. Scroll through the list and locate CD/SACD, this code does not align with any Universal Functions.
- b. Set the correct Universal Function now by clicking on the **Universal Function** drop down, scrolling down and selecting **Source CD**.

System		ſ	Serial Code : CI	D/SACD	
Security	<ul> <li>E Generic DVD</li> <li>Serial Device: Generic DVD</li> <li>Power Toggle</li> </ul>		Name System #	CD/SACD 27666	
Climate	• Play		Universal Function	Source CD	-
Lighting	∞e Stop ∞e Skip Forward ∞e Skip Back		ASCII	/A181AF2A/RU	
Content	we Open			2F 41 31 38 31 41 46 32 41 2F 52 55	<u>× .</u>
Media	∞∞ Close ∞∞ Open/Close ∞∞ Audio	r	HEX	21 41 51 50 51 41 40 52 41 21 52 55	~
Video	we Subtitle		Terminator	None	-
Messaging	∞ Angle ∞ FL Dimmer ∞ CD/SACD				
Irrigation	∞ HDMI ∞ TOP Menu	Γ			
Pool Control	See Function				

c. Go through all the codes repeating steps **a** and **b** as necessary.

#### Notes about codes that do not match a Universal Function:

-Some codes, like **I\_P Selector**, will not have a Universal Function in the g! software. You may leave these unmapped.

-Any commands you do not map Universal Functions to will **not** auto-map to an Interface.

-There are 20 "User" Universal Functions available for you to map any functions you wish to auto-map that are not in the g! software's default listing.

- 11. Now that the Serial Device has had all codes tested and optimized, and all proper mapping completed, it is a good idea to export a copy. The exported file can be imported again to this system, if you were controlling multiple identical devices, or imported to another system at a later date if you will reuse this device in a future job.
  - a. Right-click the **Serial Device: Generic DVD** and select **Export to File** from the menu to open the Export Serial dialog box.

System	🕂 🔚 DVD Changer 🕂 🔚 Satellite Box		Generic Serial
Security	🔲 🔚 Generic DVD		Device Type
Climate	∞ Power Toggle ∞ Play	Add New Serial Co Delete Serial Devic	
Lighting	∞ Stop ∞ Skip Forward	Import from File Export to File	
Content	e Skip Back ™ Open		Pre-Tune Comman
Media	∞ Close ∞ Open/Close	ŕ	Post-Tune Comma Delay Between Co
	🛥 Audio		Delay Between Co

Export Serial file	X
Brand	Filename New File
Export	Cancel Export (outside CRL)

b. Select the brand from the list, and name the file. Then, click Export to save the file in g!Tools. Otherwise, click the Export (outside CRL) button to navigate to a folder on your PC where you would like to save the file. For this exercise, select the Pioneer folder in g!Tools as shown above.

**Note**: g!Tools installs the data files into a hidden directory. You may need to select "show hidden files and folders" from your explorer folder options dialog box to be able to browse directly to it. Alternatively you can create a shortcut on your desktop to the directory to access the folders.

c. In the File Name field, type "DVD Player", then click Save.

**Note:** Saved file names should be as descriptive as possible and include manufacturer, model number and device type so that they will be easy to find the next time you need them.

# Exercise 4:Verify the Interface for Generic Serial-controlled Source

*Overview* When you add the new Generic Serial Device on the Media tab, the system adds both the codes and the interface under the One-Way Devices node. Verify the the graphical layout of buttons and other elements to control the device from a touch screen.

How-to

Ι

 Verify that mapping was effective for the default device. Click on the Generic **DVD Player** in the One-Way Devices list and verify the default device is set to Generic DVD.

Source : Generic DVD							
Name	Generic DVD						
System #	28374						
TouchScreen Behavior	Enable Interface 🗾						
HR2 Behavior	Enable Interface						
OSD Behavior	Source Select Page 🗾						
Default Device	Generic DVD						

- Click the + next to Generic DVD Player in the System Node Tree and select Large Format, Large Landscape Standard layout to preview the Generic DVD interface.
- 3. Click the **Menu** button in the interface to display the buttons properties. Verify the **Funct** (Universal Function) selection is set to **Menu**. When this button is pressed in the Viewer the Menu command for this interfaces default device will be issued.

System	Bedroom TV Theater TV	l l	Page La	yout : Generic	DVD				
Security	<ul> <li>One-Way Devices</li> <li>IR Display</li> <li>IR = Projector</li> </ul>								
Climate	E E Cable TV								
Lighting	E Cable DVR								
Content	🖷 🧮 Satellite Box 🚍 🖾 Generic DVD			ŀ	≪				
Media	🖬 📟 Serial Device: 0	Seneric DVD ▶			4				
Video	Audio Button Propertie								
Messaging	None Ment	-		loon		Menu			3
Irrigation	Text Color I Default Face Color I Default								
Pool Control	Radius 🔽 Default							8 .	
UPS	🔚 Shade In 🔽 Detaut						, r	*	
Interface	Shade Out 🔽 Default				1	Setup	Clear		Enter
Input/Output	E Style Text Size 🔽 Default	< TEXT >	Border Align	Default	•	<u> </u>			
Event Mapper	Options Connect To		Universal Function	Merku	RD) LARG	E LANDSCAPE (W	DE) L		RAIT (STANDARD)
	E Default Behavior			- 200 - 201 - 20				D.	
	The formula and the second sec		J	Apply	)^				

### Notes:

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# Lesson 11 Configuring Video



#### **Overview**

This lesson shows you how to configure IP video cameras and servers to provide live video to any connected Viewer.

You will:

- Learn how video cameras are organized in the Configurator.
- Use the Configurator to set up video cameras.
- Check the Viewer interface to confirm proper configuration.

#### Sample House

Our sample house will be configured with two video cameras:

- Backyard: Pan/Tilt IP camera
- Front Door: Analog camera connected to the g! software with an IP Video Server

#### Requirements

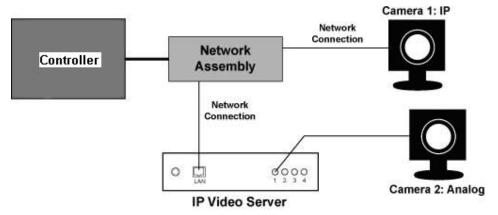
• A PC running g!Demo and g!Tools.

-or-

• g! system controller and g!Tools.

# Video Overview

*Overview* The following diagram shows two video sources in a basic system schematically. The diagram includes the components that are important to the ELAN controller.



*Terms* The following terms are used in the **Configurator**:

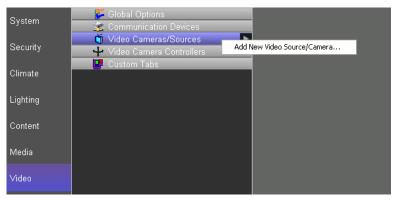
- **Communication Device**: Most video devices do not require a communication device, but in a few cases they will. Refer to the video devices integration note for details:
  - IP cameras do not require a communication device, the communication information is contained within the Video Camera setup in the Configurator.
  - Some video servers do require a communication device. In this case the network communication information is configured in the communication device. Check the video server Integration Note for details.
- Video Camera/Source: This is the camera/source itself. It can be an IPbased network camera or an input port on a video server.
- *How-to* To integrate video cameras:
  - Add the Communication Device (if applicable)
  - Add the Video Cameras

# Exercise 1: Add a Single IP-Based Network Camera

*Overview* In the following steps you will add a Panasonic IP-based network camera. IP cameras do not require a communication device, you will only need to add the camera and enter the required information for communication over the network.

*How-to* **Note:** All IP cameras must be configured properly prior to integrating with the g! software. Refer to the *Integration Note* for the specific camera used for required camera setup steps.

1. In the **Configurator**, click the **Video** tab, then right-click **Video Cameras/Sources** in the System Tree, as shown below.



- 2. Click Add New Video Source/Camera.... The Add New Video Source/Camera window opens.
- 3. Select **Panasonic Standard Series** from the Device Type list. Name the camera "Back Yard", and then click **OK**.

Add New Vide	o Source/Ca	mera			D	×
Name	Back Yard					
Device Type		∏ Sh	ow Uns	upportec	I Devices	
Darim NetGa Darim NetGa HomeLogic V Panasonic Pr	tor B&W Tideo Source To Series				^	
Panasonic Si Sony SNC-P1 Sony SNC-R2 Sony SNC-R2 Sony SNC-R2 Toshiba IK-W Toshiba IK-W Toshiba IK-W Virtual Video Vivotek Netwo	725N 730N 750N 1911A 1915A 1921A Controller					
Search For D	revices	Car	ncel		ОК	]

- 4. Select the Back Yard camera in the System Tree and enter the following required information for communication in the properties window:
  - a. Enter the camera's IP address.
  - b. Enter the camera login username and password. (if required)
  - c. Select **Yes** for each option that your IP camera supports and you wish to enable in the g! software.
  - d. Click Apply.

**Note:** If you are using the g!Demo setup the camera options as shown below.

<mark>8</mark> / g! Demo : Co	nfigurator (Press F1 for Help)								
System	Global Options	Video Source/Camera	/ideo Source/Camera : Back Yard						
Security	📕 🍯 Video Cameras/Sources	Name	Back `	Yard					
	■ Back Yard ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■	System #	22611	1					
Climate	Custom Tabs	Device Type	Panas	sonic Stand	dard Series	3			
		IP Address	10	. 11	. 80 .	0			
Lighting		Port	80						
Content		UserName		Administ	rator				
		Password		passwor	З				
Media		Enable DVR		No					~
Video		Has Pan/Tilt		Yes					-
VIGEO		Has Zoom		No					-
Messaging		Has Presets		Yes					-
		Has Audio		No					-
Irrigation		Has Motion Detect		Yes					-
Pool Control		Flip Image 180		No					-
Poor Control		Hide Resolution Control		No					-
UPS		Hide Full Screen Control		No					-
		Default Resolution		Auto					-
Interface		Goto Preset when Idle		< NONE >	•				-
Input/Output		Record Resolution		< DONT (	CHANGE ≻				-
input/Output		Apply		50%					-

#### Exercise 2: Add an Analog Video Camera

- *Overview* In this exercise, you will configure an AvioSys IP Video Server. This video server has four analog video inputs to convert video from up to four analog video sources to be viewed on the Viewer interface. You will first add a communication device and then add one port (video input) on the video server that the g! software uses to display the video.
- *How-to* **Note:** All IP video servers must be configured properly prior to integrating with the g! software. Refer to the *Integration Note* for the specific video server used for required server setup steps.
  - Add the video server communication device. On the Video tab, select Communication Devices. Right-click and select Add New Communication Device. The Add New Communication Device window opens
    - a. .Name the device "Video Server" then click OK
    - b. Select Ethernet as the Type.
    - c. Select AvioSys IP Video 9100B as the Communication Type.
    - d. Click OK.

📕 g! Demo : Co		or Help)					
System	📕 👺 Global Options						
oystem	🔀 Communication						
Security	Video Cameras/Sources						
	🕂 Video Camera	Controllers					
Climate	📴 Custom Tabs						
Lighting							
		Add New Communica	tion Device				
Content		Device Name	Video Server				
Media		Dente Rume					
		Туре	Ethernet	•			
Video		Device					
Messaging			,				
		Communication Type	AvioSys IP Video 9100B				
Irrigation		Show Unsupported	Devices				
Pool Control			Cancel	ОК			
UPS							
Interface							
Interface							
Input/Output							
per per							

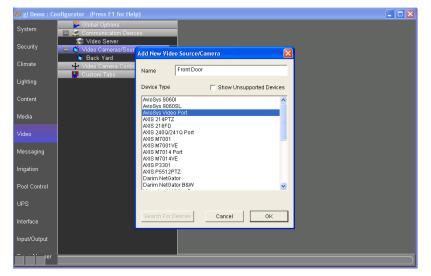
- Enter the required information for communication. Click on the Video Server communication device in the system tree and enter the following information:
- 312

- a. Enter the video server's IP address.
- b. Enter the camera login username and password. (if required)

Configurator (Press F1 for Help) <mark>3/</mark> g! Demo 5 Video Server Name Sack Yard Ethernet / AvioSys IP Video 9100B Device Type < SELECT > Enable Sharing IP Address 10 80 Interface 

**Note:** If you are using the g! Demo you can leave this information blank.

- 3. Add the video server port:
  - a. On the Video tab, select Video Cameras/Sources on the system tree. Right-click and select Add New Video Source/Camera. The Add New Video Source/Camera window opens.
  - b. Select AvioSys Video Port from the list
  - c. Set the name to "Front Door" and click OK.



- 4. Edit the properties for the video source:
  - a. Click the Front Door camera in the system tree to view the camera properties window.
  - b. Confirm the Communication Device is set to Video Server,

c. Set the **Video Source** to **1**. *This defines the input port on the server to which the video is connected.* 

🗳 g! Demo : Co	nfigurator	(Press F1 for Help)				l.	
System	🛯 🗮 🛣 C	lobal Options ommunication Devices	Video Source/Camera	i : Fro	ont Door		
Security		Video Server ideo Cameras/Sources	Name	Front			
		Back Yard	System #	22621	1		
Climate			Device Type	AvioSy	ys Video Port		
		ideo Camera Controllers	Communication Device	Video	Server		-
Lighting		ustom Tabs	Video Source	1			-
Content			Settings	Disab	le Audio		-
			Enable DVR		No		Ψ.
Media			Controller		< SELECT >		-
Video			Flip Image 180		No		•
			Hide Resolution Control		No		-
Messaging			Hide Full Screen Control		No		-
			Default Resolution		Auto		-
Irrigation			Record Resolution		< DONT CHANGE >		-
Pool Control			Record Mode		Auto (Medium Sensitivity)		-
Pool Control			Record Threshold		0%		Ψ.
UPS							
Interface							
Input/Output							
			Apply				
per per							

d. Click **Apply** at the bottom of the screen.

### Exercise 3: Check the Viewer Interface

- *How-To* Once you have configured the two video cameras, check the Viewer to confirm your work.
  - 1. From the g!Tools My Systems screen, click the **Viewer** button.
  - 2. Click **g!** in the upper left to access the main system icons, then click the **Video** icon to access the available video streams. You will see two icons; one for each camera. Select each one and notice the differences.





- For cameras with Pan / Tilt capability, you can click anywhere in the video image to re-center the camera view on that spot.
- For cameras with zoom, +/- buttons display to allow you to zoom in or out.
- For cameras with audio, icons display at the bottom right for control of the audio volume level.

• For cameras that allow Presets, a series of numbered Preset buttons are displayed. To save a new preset move the camera to the desired new location, press and hold the preset # to save the new view.

Sample screenshot from an IP camera that supports Pan, Tilt, Zoom, Presets and Audio:



## Notes:

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## Lesson 12 Messaging



#### **Overview**

The g! software Messaging feature is used to provide phone answering service, including voice mail boxes where users can receive voice messages from incoming phone calls, or leave messages to each other from touch screens within the home.

The phone answering service also allows remote access of messages, as well as status and control of the home system over a standard phone line. In addition, Messaging features are used for transmitting alerts via phone (TTS), e-mail or text message based on system events.

You will:

- Learn how to setup your compatible g! system controller for phone features.
- Learn how to use and configure voice mail features.
- Learn how to send alerts based on system events.

#### Requirements

• A PC running g!Demo and g!Tools.

-or-

• g! system controller and g!Tools.

## Messaging Overview

- *Overview* The Messaging tab can be used to provide a number of communication features to the Home Owner by using a modem to integrate with the phone line; providing both answering service and remote telephone-based access to home control features. Voice mail messages and call logs can be accessed through the g! Viewer. The messaging tab also can be used to send alerts via phone, e-mail or text messages to multiple contacts based on system events.
- TTS Engine Internal engine for translating text into speech (audio); used for phone-based messaging functions and sending phone alerts.
  - **Telephone Controller** The software component to use the modem for interfacing with the phone line
  - Voice Mail Boxes The individual mail boxes where voice mail can be recorded either from the phone or at a touch screen.
  - E-Mail Messages (Outbound) Customizable e-mail messages that can be sent to system contacts based on system events.
  - Text/Speech Messages Customizable TTS messages that can be sent to system contacts or announced on touch screens based on system events.
  - Greeting Message played to incoming callers prior to voice mail recording.

*How-to* To integrate messaging features:

- Add the Telephone Controller so the g! software will interact with the phone line
- Configure **Telephone Controller** options such as default voice settings and login pin for remote access via telephone
- Configure a Voice Mail box for each anticipated user
- Setup Greeting options in the Viewer

## Exercise 1: Configure Messaging

*Overview* In this exercise we will set up phone and voice mail features. This exercise will involve creating a framework in the Configurator so that features may be used and customized in the Viewer.

How-to

- 1. Open **Configurator** and click on the **Messaging** tab.
- 2. Right-Click **Telephone Systems** and choose **Add New Device...**, then add a **Telephone Controller**.

<mark>8/</mark> g! Demo : Co	nfigurator (Press F1 for Help)			
System	Global Options	Device : Telephone C	Controller	
Security	E / Telephone Systems	Name	Telephone Controller	
	I Telephone Log	System #	3232	
Climate	+ 🗹 Voice Mail Boxes	Device Type	Telephone Controller	
	Email Accounts	Number of Lines	1	-
Lighting	📃 🖂 Email Messages (Outbound)	TTS Voice	Male	-
Content	<ul> <li>test</li> <li>Text/Speech Messages</li> </ul>	Announce Date/Time	Yes	
	<ul> <li>security alert</li> </ul>	Announce Name	Yes	•
Media	📴 Custom Tabs	Announce Number	Yes	•
		Login PIN	****	
Video				
Messaging				
Irrigation				
Pool Control				
UPS				
Interface				
Input/Output				
Event Mapper		freis		
		Apply		

3. Configure Internal Telephone Controller options as desired:

	Quick Reference				
TTS Voice	Choose the gender of computer generated Text-To- Speech voice.				
*Announce Date/Time	Choose Yes or No. Controls announcing of Date/Time of voice messages by TTS Engine.				
*Announce Name	Choose Yes or No. Controls announcing of Caller ID name by TTS Engine.				
*Announce Number	Choose Yes or No. Controls announcing of Caller ID incoming number by TTS Engine.				
Login PIN	Set a numerical pin which can be used to login to the system and access messages and Home Control features over the telephone.				

\*Used when checking messages through dial-in.

- 4. There is an existing 'House' Voice Mail Box, and this will be used as the default "catch-all" for the system. Add another Voice Mail Box:
  - a. Right-click Voice Mailboxes in the System Tree, and select Add New Mailbox....
  - b. Type a name for the new mailbox. (Example: Kids)

Add New MailBox						
Name	Kids			_		
		Cancel	ОК			

# Exercise 2: Configure Messaging Alerts (Phone)

Overview Alerts can be sent out by the system to specific contacts based on certain system events, such as a security alarm, a temperature reading, or even a certain A/V zone being activated after a certain time. These alerts can be sent as text via e-mail or text messaging or via voice over a telephone. The alert messages themselves can be customized and support the use of "tokens" to include specific system details. In the following exercise, phone alerts will be used to contact the home owner in the event of a burglar alarm sounding.

Note: Phone Alerts are not available on controllers that do not have a modem.

How-to

1. Set up Users with phone numbers on the User Settings page in the Viewer. If you already entered a phone number for a contact as part of Lesson 2: Configurator Overview, you may skip this step.

Add or edit an existing user and enter the phone number as it should be dialed, including any prefix or area code information. Do not use punctuation such as dashes or parentheses. For example:

CrystalPad					_ 🗆 🛛		
g!	٩.	Settings	: Home Ow	ner			
Remote Access	Password			1234	Set		
Local Access P	asscode			< NOT SET >	Set		
Email Address				homeowner@accounte.net	Set		
Remote Access				NONE			
Call Notification	n Settings				Set	)	
		S CrystalPad		0-11 11-686	0		
		g!	•	Call Notification	n Settings		
		Phone Number				1234567890	Set
		Acknowledge Sto	ops Alert Calls			YES	-
		Number of Call A	uttempts			3	-

2. Configure a TTS message on the Messaging tab in Configurator. This will be read by the controller using its Text-to-Speech engine, and will be read as typed.

Note: This feature is only available with the Messaging Pro App.

- a. To add a new Text/Speech message, right-click Text/Speech Messages and select Add New Text/Speech Message.
- b. Enter a name for the message. ELAN recommends that you name the message something descriptive. For example, name a security panel related message "Security Alert".
- c. Type in text to be read by the controller to your contact when triggered. In the example below, the message text is *Security Alarm Active*.

TTS Mesage :Security Alert					
Name	Security Alert				
System #	22823				
Text	Security Alarm Active				
Token Reference (Insert any	/where in Text above)				
Token	Description	$\cap$			
<time></time>	Current Time				
<date></date>	Current Date				
<last_cid></last_cid>	Last Caller ID Name				
<last_remote_nam< td=""><td>Last Remote Login Name</td><td></td></last_remote_nam<>	Last Remote Login Name				
<last_remote_ip></last_remote_ip>	Last Remote IP Address				
<roomtemp:x></roomtemp:x>	Thermostat Room Temp where (x = system number)				
<heatsp:x></heatsp:x>	Thermostat Cool Set Point where (x = system number)				
<coolsp:x></coolsp:x>	Thermostat Heat Set Point where (x = system number)				
<singlesp:x></singlesp:x>	Thermostat Single Setpoint where (x = system number)				
<nvmail:x></nvmail:x>	Number of voicemails in mailbox (x = system number)				
<nemail:x></nemail:x>	Number of emails in mailbox (x = system number)				
<outsidet></outsidet>	Outside Temperature	M			

- 3. Create an Event Map to set the controller to send the message when a specified system event occurs.
  - a. Navigate to the Event Mapper tab, right-click Event Maps and Add New Event Map.

**Note:** ELAN recommends naming all your messaging alert event maps with the prefix *Alert:* to keep them organized.

Add New Event Map					
Name	Alert:Security				
	Cancel	ĸ			

b. Add an Event to trigger sending the message in the **Events** box.

Add Event			
System Family	Event Groups		
Audio Zone Controller Climate System Display Door Lock DVD Player DVR Energy Monitoring General System Generic Serial Device Input/Output Inputs Interface Device IR Sender Irrigation System Keypad Controller Lighting System Media System Messaging Outputs Pool Control Security System Tuner UPS (Uninterruptible Pow Video Controller Video System	1st Floor Motion         Back Door         Front Door         Garage         Garage Door         House         Side Entrance         Available Events         Armed in Away Mode         Armed in Stay Mode         Armed In Stay Mode         Burglar Alarm         Disarm         Entry Delay         Exit Delay         Fire Alarm		
1		Cancel	0K

For this example, send a message when the Burglar Alarm is active in the House Partition. Select:

- **System Family** = Security System
- **Event Group** = House (for the House Partition)
- Available Events = Burglar Alarm
- c. Add a command to select the action of sending the message in the **Command** box.

Add Command	X
System Family	Command Groups
System Family Audio Zone Controller Climate System Display Door Lock DVD Player DVR Energy Monitoring General System Generic Serial Device Input/Output Inputs Interface Device IR Sender Irrigation System Keypad Controller Lighting System Media System Media System Media System Tuner Outputs Pool Control Security System	Command Groups Contact: Home Owner MailBox: Kids TTS: Security Alert WAV File: beep12.waw WAV File: bleep10.wav WAV File: changemode.wav WAV File: chime1.waw WAV File: chime1.waw Available Commands Call on Line 1 Send Email Options Security Alert
UPS (Uninterruptible Pow Video Controller Video System	
	Cancel OK

In this example, we are sending our Security Alert Text/Speech message to Contact Home Owner. Select:

- System Family = Messaging
- Command Group = Contact: Home Owner
- Available Commands = Call on Line 1
- **Options** = Security Alert (the specific message you wish to send)

## Exercise 3: Check the Viewer

*Overview* In Exercise 1 we set up the framework for voice messaging in Configurator. In this exercise, we will explore voice messaging features.

How-to1. Start the Viewer, click the g! icon to access the main menu, then click messaging icon to access the various messaging options.



The screen displays available messaging options:

- The House Voicemail box
- The Kids Voicemail box
- A page to access the messaging settings (this is added via the Interface tab in the Configurator. Touch Screen Options, Tab Config: Messaging.)
- A page to view the recent call log (this is added via the Interface tab in the Configurator. Touch Screen Options, Tab Config: Messaging.)
- 2. Click the House icon to access the House voicemail box.

📕 CrystalPad					
<u>g!</u>			🚽 House 🕨	0 NEW	0 old
			No Messages		
×	E				•
PLAY	PLAY ALL	Mark	Delete		RECORD

Notice on this page:

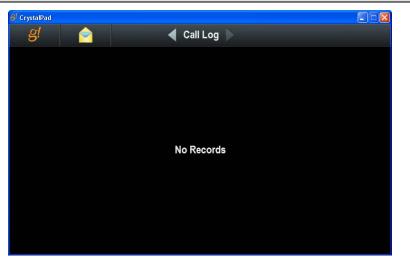
- There are no messages in the g!Demo; an actual system would show messages here.
- Options to playback and delete messages
- Options to adjust playback volume.
- 3. Click the Messaging icon next to the **g!** at the top to access the other messaging screens, then click **Settings**.

🖉 CrystalPad 📃 🗆 🔀									
<u>g!</u>		Sett	tings 🕨						
	Answer Settings								
After 1 Rings	After 2 Rings	After 3 Rings	After 4 Rings	After 5 Rings	After 6 Rings				
2/4 Call Saver									
Greeting: H	louse		Greeting: K	lids					
Default Greeting									
Use Default Record New Play >									

Notice on this screen there are options to configure the greeting and answering system pickup time.

4. Click the Messaging icon next to the **g!** at the top, then click **Call Log**. *The Call Log displays a list of recent calls.* 

**Note:** There will not be any calls listed in g!Demo.



## Notes:

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# Lesson 13 Configuring Irrigation Systems



#### Overview

This lesson shows you how to configure an irrigation system.

You will:

- Learn how irrigation systems are organized in the Configurator.
- Use the Configurator to set up communication for the irrigation controller and add the controller
- Configure irrigation groups.
- Add irrigation zones and assign them to irrigation groups.
- Learn how to configure watering schedules
- Check the Viewer to confirm proper configuration.
- Understand the various features available in the Viewer.

#### Sample House

Our sample house will be configured as follows:

- Two irrigation groups: Lawns and Flower Beds.
- Four zones: One rotor zone and one spray zone for the lawns and two drip zone valves

#### Requirements

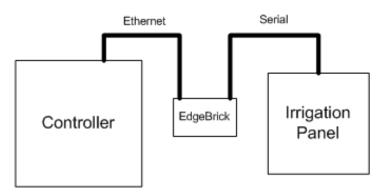
• A PC running g!Demo and g!Tools.

-or-

• g! system controller and g!Tools.

## Irrigation Integration Overview

*Overview* The following diagram shows the sample house irrigation system schematically, illustrating the components that are important to the g! system controller.



Integrating the irrigation panel with the g! software will provide the homeowner access to their irrigation system through the Viewer. For the irrigation system in their home, they will be able to:

- View system status
- Manually activate individual zones
- Manage watering schedules and seasonal adjustments
- Review watering history.

*Terms* The following terms are used in the Configurator:

- Communication Device: The method the g! software uses to communicate with an external device, including information about the connection type and protocol.
- Irrigation Controller: The actual irrigation controller (manufacturer/ model) that is integrated.
- Irrigation Group: A group of similar plant-type irrigation zones. Typical irrigation groups include Lawns and Flower Beds. Irrigation zones are grouped to provide appropriate watering schedules for the zone types. For example, the flower beds may need to be watered on a daily basis but the lawns only watered every few days. Each Irrigation Group will display in the Viewer as a separate tab to allow individual group scheduling.

- Irrigation Zone: An individual water valve in the system, such as Lawn Rotors or Flower Drips. These are the valves that the controller will activate to start watering. Note that there is often more than one spraying head per zone but only one zone can be active at a time.
- **Global Irrigation Periods:** A time of the day for which you will schedule a watering.
- *How-to* To integrate an irrigation system
  - Add the Communication Device
  - Add the Irrigation Controller
  - Add the Irrigation Groups
  - Add the **Zones** and assign them to an **Irrigation Group**
  - Check the Viewer interface

Note: Refer to the irrigation controller integration notes for details.

## Exercise 1: Add the Communication Device

*Overview* In Exercise 1, you will add a **Communication Device**. The Communication Device is the bridge between the g! software and the irrigation controller, and is where you will specify how the systems are physically connected and what communication protocol should be used.

**Note:** Actual system setup may be different depending upon which irrigation controller is installed on site. Refer to the *Integration Notes* for the particular controller for details.

How-to

- 1. Start the Configurator, click the **Irrigation** tab at left, then click **Communication Devices.**
- 2. Right-click **Communication Device** and select **Add New Communication Device**. *The Add New Communication Device window opens.*
- 3. Configure the settings as shown below for a standard serial port, and click **OK**.

📕 g! Demo : Configurator (Press F1 for Help)						
System	Communic 🕵 Communic	Controllers				
Security	📫 Irrigation G 🚯 Global Irrig	Groups pation Periods				
Climate						
Lighting		Add New Communicatio	m Device			
Content		Device Name	Irrigation			
Media		Туре	Serial Port	•		
Video		Device		<b>_</b>		
Messaging		Communication Type	Standard Connection	•		
Irrigation		🔲 Show Unsupported D				
Pool Control			Cancel	ок		
UPS						
Interface						

Quick Reference	Quick Reference: Add New Communication Device					
Device Name	Enter a name for the external device. This can be any name, but should be descriptive so that you can identify this specific device in the Configurator. DO NOT leave this field set to "New Device".					
Туре	The type of connection you are using, such as serial port or Ethernet.					
Device	This field will populate only if needed, depending on the selected Type.					
Communication Type	This is the protocol of the communication. See the <i>Integration Note</i> for the specific irrigation controller for more information.					
Show Unsupported Devices	Select this checkbox to display legacy devices on the Device dropdown list. Legacy devices have not been tested with the current version of g! and are no longer supported by ELAN. If you choose to install an unsupported device, a message will display to warn that the device is not supported by ELAN technical support.					

#### 4. Select the **Irrigation** device in the System Tree as shown.

<mark><i>S</i>/</mark> g! Demo : Co	nfigurator (Press F1 for Help)			
System 🤇	Communication Devices	Communication Devic	e: Irrigation	
Security	Irrigation Controllers Irrigation Groups	Name	Irrigation	
	Global Irrigation Groups	System #	22826	
Climate		Device Type	Serial Port / Standard Connection	
Lighting		Location	< SELECT >	•
ացուղց		Enable Sharing	No	•
Content		Sharing Port	0	
		COM Port	NONE	-
Media		Protocol	RS232	~
Video		Baud Rate	9600	~
VIGEO		Flow Control	None	<b>_</b>
Messaging		Parity	None	<
		Data Bits	8	<u> </u>
Irrigation		Stop Bits	1	<b>v</b>
Pool Control				
UPS				
Interface				
Input/Output				
Event Mapper				
		Apply		
			Thursday	. February 21, 2

#### 5. In the properties window at right, select the desired COM port.

**Note:** The drop-down box only shows a list of all the COM ports and indicates if a port is in use. Leave the selection set to **NONE** if you are using **g!Demo.** 

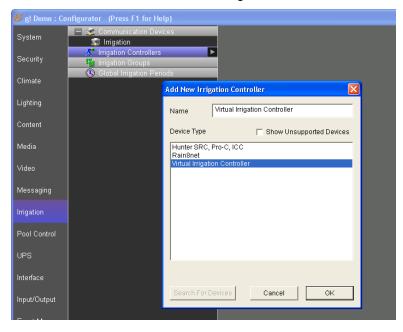
## Exercise 2: Add the Irrigation Controller

*Overview* At this point the Communication Device is configured, so now you will add the irrigation controller.

**Note:** Actual system setup may be different depending upon which irrigation controller is installed on site. Refer to the *Integration Notes* for the particular controller for details.

How-to

- 1. In the Configurator, right-click **Irrigation Controllers**, then click **Add New Device**.
- 2. In the Add New Device dialog box, select Virtual Irrigation Controller, and then click OK. *This adds a new irrigation controller.*



3. Select the new irrigation controller in the Configurator tree. The properties for that controller display on the right.

<mark>8</mark> g! Demo : Co	mfigurator (Press F1 for Help)			
System	Communication Devices Irrigation	Irrigation Controller : '	Virtual Irrigation Controller	
Security	K Irrigation Controllers      K Virtual Irrigation Controller	Name System #	Virtual Irrigation Controller 22827	
Climate	Irrigation Zones (None) ☐ Irrigation Log ☐ Irrigation Groups	Device Type	Virtual Irrigation Controller	
Lighting	Global Irrigation Periods			
Content				
Media				
Video				
Messaging				
Irrigation				

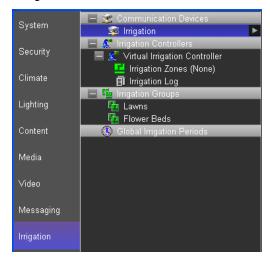
# Exercise 3: Add Irrigation Groups and Irrigation Zones

- *Overview* At this point the irrigation controller has been added and set to communicate with the g! system controller. You will now add Irrigation Groups and Irrigation Zones, and then associate the zones with Irrigation Groups. Each Irrigation Group will populate in the Viewer as a separate tab in the scheduler view. Assigning zones to the Irrigation Groups will allow you to schedule watering for the zones separately in the Viewer.
- How-to
- 1. Add two Irrigation Groups.
  - a. Right-click on Irrigation Group and click **Add New Irrigation Group**. *The add Irrigation Group box opens.*

윙 g! Demo : Co	nfigurator (Press F1 for Help)		
System	<ul> <li>— Sector Communication Devices</li> <li>Sector Irrigation</li> </ul>		
Security	<ul> <li>— &amp; Irrigation Controllers</li> <li>— &amp; Virtual Irrigation Controlle</li> </ul>	r	
Climate	Irrigation Zones (None) 前 Irrigation Log		
Lighting	Irrigation Groups Slobal Irrigation Periods	Þ	
Content			
Media			
Video		Add Irrig	ation Group 🛛
Messaging		Name	Lawns
Irrigation			Cancel OK
Pool Control			
UPS			

b. Enter the name of the group as Lawns and click OK.

- c. Repeat the two steps above to add another irrigation group named **Flower Beds**.
- d. Your configuration should now look similar to the screen below.



- 2. Add four irrigation zones and assign them to zone groups.
  - a. Right-click **Irrigation Zones** in the System Tree and select **Add New Irrigation Zone**. *The Add Irrigation Zone box opens.*
  - b. Set the **Zone Name** of the first zone to **Lawn Rotors**. *This is the zone name as it will be displayed in the Viewer.*
  - c. Set the **Irrigation Group** to **Lawns**. This step assigns the zone to an *Irrigation Group*

System	📃 🛣 Communication 😨 Irrigation	Devices	
	📃 🌊 Irrigation Control	llers	
Security	🗏 🛒 Virtual Irrigatio		
Climate	💻 Irrigation Zon		
Climate	🗐 Irrigation Log		
Lighting	📃 – 🏪 Irrigation Groups		
2.9.1.1.9	Flower Beds		
Content	(I) Global Irrigation	Periods	
Media		Add Irrigation Zone	
Video		Zone Name	Lawn Rotors
Messaging		Controller Zone Number	Zone #1
		Irrigation Group	Lawns
Irrigation			_
Pool Control			Cancel OK
UPS			

d. Click **OK** to add the new zone

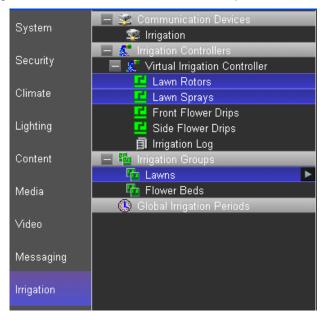
**Note:** The Controller Zone Number is the zone output on the actual irrigation controller. By default this will start at Zone #1 and increase incrementally.

- 3. If you are adding zones out of order, select the proper Controller Zone Number following these steps:
  - a. Repeat step 2a-d to add a second zone named **Lawn Sprays** and assign to the **Lawn** irrigation group.
  - b. Add a third zone named **Front Flower Drips** and assign it to the **Flower Beds** Irrigation Group

Add Irrigation Zone	
Zone Name	Front Flower Drips
Controller Zone Number	Zone #3
Irrigation Group	Flower Beds
	Cancel OK

c. Add a fourth zone named **Side Flower Drips** and assign it to the **Flower Bed** Irrigation Group.

4. Your configuration should look similar to the example below.



**Note:** Clicking on Irrigation Groups in the tree will highlight all zones assigned to that group.

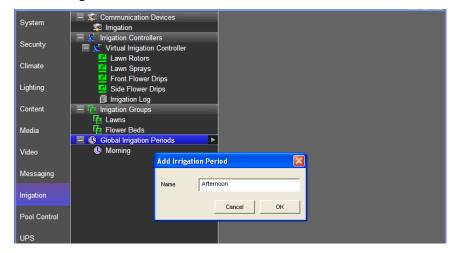
## Exercise 4: Add Global Irrigation Periods

*Overview* At this point the irrigation system has been configured and you now need to set up the irrigation scheduling framework in the Configurator. You will add one Global Irrigation Period for each time of day that you will be watering.

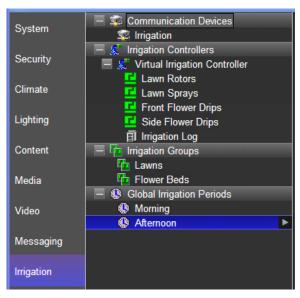
How-to

By default, the irrigation scheduler includes one Global Irrigation Period named Morning. In this exercise you will add a second period for afternoon. Each Global Irrigation Period will add a place holder in the Viewer for setting the actual time of day to begin the watering.

 Right-click Global Irrigation Periods in the System Tree and select Add New Irrigation Period.



2. Enter **Afternoon** as the name, and then click **OK**. Your configuration should now look similar to the example below.



#### Exercise 5: Check the Viewer

Overview In this exercise you will use the Viewer to check the irrigation system configuration and learn about the features and controls related to the irrigation system. Note that the Irrigation icon does not appear in the Viewer by default. Use the Interface tab, Touch Screen Options, Tab Config: Irrigation System in the Configurator to set up the display.

How-to

1. Open the Viewer to access the g! Home page. Click the g! icon to access the main system icons then click the irrigation icon navigate to the Irrigation screen.

<mark>🖉</mark> CrystalPad				
<u>g!</u>	Irrigation	<b>À</b> STATUS	SCHEDULE	山」 HISTORY
	All 7-map 0#	0"	Manual	Run
	All Zones Off	Off	Manual	Program
Manual Z	one Operation			Start
Zone Name	Manual-Mode	e Run Time		

In the example above you can see:

- a. There are icons at the top of the screen to view system status, schedule, and history.
- b. The current system status is **All Zones Off**. This means that there are no zones currently watering. When the system is running a scheduled watering, the current active zone will display in the status window.
- c. The system is currently in **Run Program** mode. This means that it will run any scheduled watering events.

- 2. Configure the schedule for the Lawn Irrigation Group as follows.
  - a. On the Status tab, change the status from Run Program to Off.
  - Set the schedule for the Lawn Rotors to run for 10 minutes and the Lawn sprays to run 8 minutes every Monday, Wednesday, and Friday starting 20 minutes after sunrise.
  - c. Confirm that the Lawn zones will not water during the afternoon schedule.

#### To do this:

- a. Click the **Schedule** icon at the top of the page.
- b. Click on the Lawn Rotors zone then click the More Time button until the Base Time is set to 10 minutes.
- c. Click on Lawn Sprays and adjust the Base Time to 8 minutes.
- d. Click the **Days of the Week** button to highlight it then click **Mon**, **Wed**, and **Fri** to highlight them and set them as the days to water.
- e. Verify that watering times for the Lawn zones are set to zero minutes for the **Afternoon** schedule. *This will keep the lawn from watering at the afternoon period.*

CrystalPad					
g!	Irrigat	ion	<b>Č</b> STATUS	SCHEDULE	
Lawns	Flower	Flower Beds Start Times Seasonal Map			
Zone	Base Time	Applicatio	n Time		
Morning (SUNRISE	)				
Lawn Rotors	10 Min	10 Min, 0	Sec		
Lawn Sprays	8 Min	8 Min 8 Min, 0 Sec 🗕 🕂			
Afternoon (SUNRIS	E)				
Lawn Rotors					
Deve to Weter	Days in Month	Days in Week	Every Day	Skip Day	s
Days to Water	Mon Tue	Wed	Thu Fri	Sat Si	un

 Click the Start Times tab to set the times for both the Morning and Afternoon periods. Click Sunrise for Morning then use the arrow buttons to increment to + 20 minutes. Set Clock for afternoon, then use the arrows to set the desired start time.

g CrystalPad	Irrigation		ن STATUS		and the second s	D 🛛 🔀 Lili Tory
Lawns	Flower Beds		Start Times	Seaso	nal Ma	p
		4				
Morning			SUNR	ISE	•	
Afternoon			4:00 1	РМ	•	
	SUSUNRISE					
	SUNSET					
	CLOCK					

**Note:** Any time a schedule adjustment is made, the System Mode will change to **Off**. Once you have finished making schedule changes, click **Run Program** to start the system running the new schedule.

4. Repeat the steps above to configure the schedule for the Flower Beds Irrigation Group so that each Flower Bed Drip zone waters for 10 minutes in the morning and again at 4pm in the afternoon every day of the week. Your Flower Bed schedules should look like the examples below.

gl CrystalPad		rrigatio	on		۵.	Ø	<b>ک ا ا</b>
		-			STATUS	SCHEDULE	HISTORY
Lawns		Flower B	eds	Sta	rt Times	Sease	onal Map
Zone	Base T	ime	Ар	plication <sup>-</sup>	Time		
Morning (SUNRISE +	⊦20m)						
Front Flower Drips	10 Min		10	Min, 0 Se	C		
Side Flower Drips	10 Min		10	Min, 0 Se	C		
Afternoon (4:00 PM)	)						
Front Flower Drins	10 Min		10	Min O Se	r		
Days to Water	Days in M	onth	Days in \	Neek	Every Da	iy s	skip Days
	Mon	Tue	Wed	Thu	u Fri	Sat	Sun

With this schedule set up, the system will water the Lawn zones followed by the Flower Bed zones in the morning starting at 20 minutes after sunrise. Since irrigation controllers will only water one zone at a time, the system will begin watering with the first zone in the list, in this case the Lawn Rotors.

Once that zone has run for its scheduled time, it will shut off and the Lawn Sprays will start. Next, the Front Flower Drips will run, followed by the Side Flower Drips. Then, at 4pm only the Flower Bed zones will water in order from top to bottom.

5. Click on the Seasonal Map tab. This tab allows you to adjust the percentage of application time on a month by month basis. This is useful as an adjustment during spring and fall when the temperatures are not as high and watering requirements are less. A typical system may be adjusted as shown in the screen below.



To adjust the percentage for each month, click and hold the arrow (up arrow to increase percentage, down arrow to decrease percentage) until the desired percentage is displayed. The longer the arrow is pressed, the faster the percentages will scroll.

## Notes:

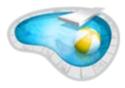
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## Notes:

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## Lesson 14 Configuring Pool Systems



#### Overview

This lesson will show you how to configure a pool controller in the g! software.

You will:

- Learn how to add a pool controller.
- Learn how to control and schedule pool functions in the Viewer.

#### Requirements

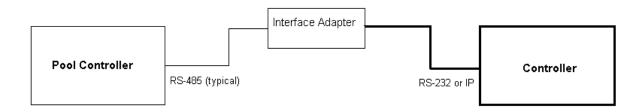
- A PC running g!Demo and g!Tools.
- -or-
- g! system controller and g!Tools.

#### Overview

*Overview* Integrating a Pool System with the g! software provides the home owner with access to control pool features in the present, schedule pool functions for the future, and check the history of pool pumps and circuits. Pool Integration can control, schedule, and report history for many pool devices, including: Filter Pumps, Water Features, Heaters, Chlorinators, Pool Lights, Spa Jets and more.

**Note:** Specific features available in the g! software will vary depending on the Pool System installed. Please review the Integration Notes for the specific system for more information.

Typically, the pool controller is installed by a pool system professional, and is a fully functional independent system prior to integration with the g! software. In most instances, the Pool & Spa are controlled by a single control board, and an interface adapter is used to connect the ELAN controller electrically with this controller.



- *Terms* The following terms are used in the **Configurator** to describe the equipment in a pool system:
  - **Communication Device:** The method the g! software uses to communicate with an external device and includes information about the connection type and protocol.
  - Pool Controller: The Pool Controller interfaces with and controls pool devices like filter pumps, heaters, and pool circuits such as fountains or lights.

*How-to* To integrate Pool & Spa:

- Add the Communication Device
- Add the Pool Controller
- Configure Circuits
- Check the Viewer

#### Exercise 1: Add the Pool Controller

*Overview* The Virtual Pool Controller which you will add in Exercise 1 simulates the control, feedback, and temperatures of a real pool system. It closely resembles a fully featured Pool Controller such as a Pentair IntelliTouch.

**Note:** Actual system setup may be different depending upon which pool controller is installed on site. Refer to the *Integration Notes* for the particular pool controller for details.

How-to

- 1. Add a Communication Device.
  - a. From the Pool Control tab in the Configurator, right-click
     Communication Devices and select Add New Communication
     Device. The Add New Communication Device window opens.

Add New Communication Device					
Device Name	Pool & Spa				
Туре	Serial Port				
Device					
Communication Type	Standard Connection				
📕 Show Unsupported [	) Devices				
	Cancel OK				

- b. Name the Communication Device "Pool & Spa".
- c. Set the communication type to Standard Connection.
- d. Click OK.
- 2. Add a Pool Controller.
  - a. Right-click **Pool Controllers,** and select **Add New Pool Controller**. *The Add New Pool Controller window opens.*

Add New	Pool Controller 🛛 🔀
Name	Virtual Pool Controller
Device T	when a
	quaLink RS
Pentair	ntelliTouch ool Controller
Virtual P	oor controller
Search	For Devices Cancel OK
Gealen	

b. Select Virtual Pool Controller, and click OK.

**Note:** In a live system, the next step would typically involve configuring circuits to ensure controls are named correctly and appear in the correct area of the Viewer. However, the Virtual Pool Controller used for this training is hard-coded, and the circuits are not editable.

### Exercise 2: Check the Viewer

*Overview* After adding the pool controller, we will open the Viewer to verify the pool temperature, control pool features, set up a schedule and explore the available options.

#### How-to

- 1. Open the **Viewer** and navigate to the default **Pool** screen.
- 2. The screen typically contains the controls for the filter pump, cleaners, spa jets, and heat settings.



The Main screen is divided into two sections:

- **Pool:** 2-Way toggle buttons for the Pool Filter Pump, Cleaner, and Heating Options. Up and Down arrows alter the heater set point.
- **Spa:** 2-Way toggle buttons for the Spa Filter Pump, Spa Jets, and Heating Options. Up and Down arrows alter the heater set point.
- Click the icon in the upper right corner of the page to access settings for light and water features, schedules, timers, alerts and history.

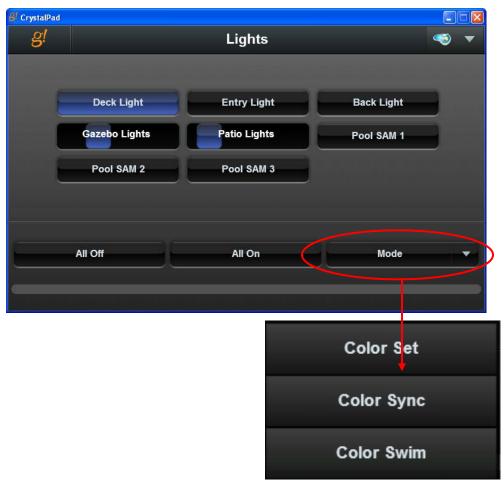




- 3. Click on the **Features** tab to access the **Water Features** controls. Use this page to control other pool circuits with 2-way toggle buttons.
  - Typically used for major water features such as fountains and waterfalls.
  - Click the **Fountain** button to turn the fountain on.

CrystalPad					
g!		Features			•
E	Waterfall	Mist	Fountain	3	
				uruuru Vooraa	

4. Click the **Lights** tab to access the lighting control screen. This screen gives you basic on/off and level control (if applicable) of lights controlled by the Pool Controller.



- 5. Click the **Light Colors** tab. This tab provides access to various settings in the pool system.
  - a. The lighting tabs allow you to adjust the lighting colors on pool systems that have this feature.

CrystalPad			
g!	Light Colors	٤	<u>ک</u>
Pool SAM 1		Lavender	
Pool SAM 2		Cyan	
Pool SAM 3		White	•

b. The **Schedule** tab allows you to add scheduled "programs" for pool pumps, water feature circuits, and lighting. These programs will activate the desired filter or circuit for the time period entered, and may be customized to run only certain days and times.

CrystalPad			
<u>g!</u>	Sch	edule	Ø •
Circuit	Start	Stop	Days + -
Pool Heater: 82°	8:00 AM	10:00 PM	Every Day
Deck Light	7:00 PM	11:00 PM	Mon, Tue, Wed, Thu, Sun
Deck Light	7:00 PM	12:05 AM	Fri, Sat
Pool 🔻	Start 8:00 AM ►		
Heater 🔻	Set Point	Set Point 82°	Days

c. The **Run-Once** tab allows similar features as the Schedule tab, but items set on this page will only run once, rather than repeat the cycle every week. This is useful in instances when there may be some special event, like a party, and you would like to schedule the filter to run on what is usually an off day to ensure the pool is clean for your guests.

d. The Circuit Timers tab sets the default interval for pool feature activations. Typically, when items are activated manually or scheduled on the **Run-Once** tab, they will use the circuit timers to control how long the circuit will stay active. This prevents features like Waterfalls or Lights from running all day and wasting energy, and relieves the home owner of the need to remember to shut them off.

CrystalPad			
g!	Circuit Timers	$\oslash$	▼
Spa	12h 00m	- +	
Jets	12h 00m		
Waterfall	12h 00m		
Mist	12h 00m		
Fountain	12h 00m		
Deck Light	12h 00m		J
Entry Light	12h 00m		
Back Light	12h 00m		

6. The **History** tab displays the temperature readings for the Pool, Spa, and outside temperature in a line graph, with colored blocks along the bottom indicating when certain circuits are active. This enables the home owner to track the usage and run times of circuits like filters and heaters alongside temperature readings, and may also be useful as a diagnostic tool.

### Notes:


# Lesson 15 Interfaces: GUI, TS2L, TS7, TS10, OSD, and HR2

g.

### Overview

This lesson discusses the main options available in the Configurator to customize colors and tab arrangements for in-wall touch screens, wireless tablets and other user interfaces in the system.

#### You will:

- Learn how to identify Interfaces in a system.
- Change basic settings for each interface and set which Tabs and Zones to show on which interfaces.
- Use built-in Display Settings.
- Use built-in Home Pages.
- Customize Home Pages.
- Add a Web Picture (such as weather radar).
- Configure a TS2L Keypad
- Configure a TS7 or TS10 Touchscreen
- Configure the On-Screen Display (OSD)
- Configure the HR2 Remote

### Requirements

• A PC running g!Demo and g!Tools.

-or-

• g! system controller and g!Tools.

### Overview

*Overview* This lesson explores many features available to customize the appearance of the Viewer on various interfaces.

In an ELAN system, interfaces include:

- In-Wall Touch Screens
- In-Wall Keypads
- Wireless Tablets
- Computers in the home (on the local network)
- Computers connecting remotely (over the Internet)
- iOS Devices
- Andriod Devices
- The OSD (On-Screen Display)
- HR2 Remote

# *Terms* The following terms are used in the Configurator Interface tab when setting up the interfaces for a system:

**Touchscreen Options**: The Touch Screen Options are configured per-subsystem and include options for each interface that has connected to the g! system Controller locally. Touchscreen Options include settings such as: what systems are visible on the interface; which tabs, keypads and zones are visible, and power settings.

**Display Settings**: Display Settings are the options for the colors, textures, and sizes of items in a touchscreen layout. These are also referred to as "themes" or "skins". The g! default display setting is BLACK with an optional BLACK HIVIS (High Visibility) for dimmer screens.

**Home Page**: Home Pages are the first page the user sees when logging into an interface. The Home Page is similar to a Custom Tab, and provides the ability to add a variety of controls such as system mode buttons and display information such as the time, a calendar, and weather.

# Exercise 1: Identify and Name Individual Interfaces

Overview Each touch screen, computer, or other interface that logs on to a g! system controller will automatically populate an Interface Device (*device type*) entry on the Interface tab. Each Interface Device options entry contains settings for that specific Interface such as power settings and display options.

The first step to managing the settings for a touch screen interface is to know that you are working with the *correct* touchscreen. In this lesson you will learn how to **identify** a touch screen and then **name** it so that it can be edited quickly and easily later on.

Interface Device entries are added automatically for interfaces when those devices (touchscreens, tablets, etc.) connect to the system for the first time. In other words, you don't have to add interfaces manually in the Configurator. Instead, connect the device to the system and power it up. Once it has connected to the ELAN Controller, a new heading will automatically appear in the Interface Devices list in the System Node Tree.

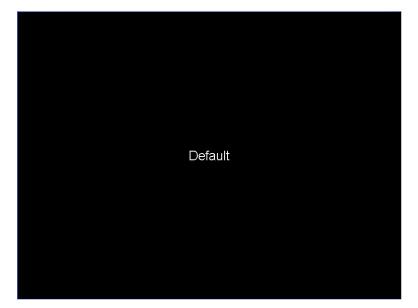
The g! software provides a default interface with the system. When a new device (touchscreen, tablet, etc.) connects for the first time, the new Interface is created with settings *copied* from the **Default** interface. For this reason, Default cannot be deleted and the name cannot be changed.

*How-to* In the following steps you will identify and name an interface.

- 1. Start the **Configurator**, and the **Viewer**. Arrange the windows on your monitor so you can see at least a part of the Viewer behind Configurator.
- 2. In the Configurator, go to the Interface tab. In the System Node Tree, under Interface Devices (TouchScreen), select the Default interface.

<mark>៩/</mark> g! Demo : Conf	figurator (Press F1 for Help)	
	🕂 😴 Communication Devices	
System	🕂 🔲 Interface Devices (TouchScreen)	
	Interface Devices (OSD)	
	🕂 🔲 Interface Devices (TS2)	
	🕂 🔲 Interface Devices (HR2)	
	🕂 🏖 Remote Users	
	🕂 🗊 Home Pages	
Lighting	🔣 🚍 Display Settings	
	System Images	
Content	System Sounds	
Media		
Video		
Messaging		
Irrigation		
Pool Control		
1100		
UPS		
Interface		
Interface		
In the second second		
Input/Output		
per er		

3. Note the large **ID This TouchScreen** button in the properties window. Click this button to force the associated client Viewer to black out and display the text in the Name field as shown in the screen below.



4. Click the **ID This TouchScreen** button for each entry under Touch Screen Options until your open Viewer blacks out and displays the name. Once you have found the entry that is your PC, rename it to **MY PC**.

			👹 g! Dema		- ×
System		TouchScreen : Windo			
Security	🕂 💻 Default	Name	My PC		
Security		System #	2742		
Climate	ELAN IS/     Windows	Platform	Windows		
		Format	TouchScreen 800x480		
Lighting	Interface Devices (OSD)	(		My PC	
	+ 🔲 Interface Devices (TS2)		ID This TouchScreen		
Content	🕂 🔲 Interface Devices (HR2)				
	🕂 🌲 Remote Users				
Media	🕂 🔲 Home Pages				
	🕂 🧮 Display Settings				
Video	System Images				
	System Sounds				
Messaging					
Irrigation					
Pool Control					
Pool Control					
UPS					
0,0					
Interface					
Input/Output					
mpau Output		Apply			
- per					

# Exercise 2: Explore Interface Settings

#### Overview

How-to

Each set of Interface Device options contains multiple headings that allow you to customize everything from what zones and interfaces appear on that particular touchscreen, to changing screen saver, power management, and display settings.

#### Inside each set of Interface Device options:

- **Power Scheme-** Battery/AC Settings such as display off and screen saver timing.
- **User Interface-** Choose current Home Page, Display Settings, and whether schedules for climate are available on this interface.
- Advanced Settings- Toggle Browser tab, enroll in security announcements (if enabled in Security settings) and set volume. Also includes settings related to hardware graphics (typically should be left to defaults).
- **Tab Layouts-** Configure the zones and interfaces (such as keypads) per subsystem for the selected touchscreen.

#### 1. Navigate to the Interface tab and expand the Default interface.

2. Click on **Power Scheme**.

System	Communication Devices 4 HR2	AC Settings: Default	
Security	<ul> <li>Interface Devices (TouchScreen)</li> <li>Default</li> </ul>	AC Power Screen Saver Time	5 Minutes
Climate	Power Scheme	Display Off Time	20 Minutes
Lighting	📴 Advanced Settings 🔤 Tab Config: Security System		
Content	Tab Config: Lighting System Tab Config: Media System Tab Config: Climate System		

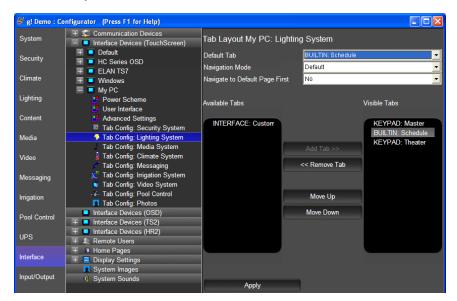
Quick Reference: Power Scheme Fields				
Screen Saver Time Time before the display starts showing pictures.				
Display Off Time	Time before the backlight is turned off when on AC Power (tap screen to wake).			

### 3. Click User Interface.

User Interface: Default		
Home Page	Weather + Calendar + System Modes	-
Display Settings	BLACK	-
Hide HVAC Schedules	No	-
Quick Reference: User Interface fields		

Home Page	Select which home page to show.
Display Settings	Select the color settings to use.
Hide HVAC Schedules	Don't show the climate scheduling page on this interface.

 Use the Tab Layouts:Tab Config to configure which tabs are shown on each interface. For example, click on Tab Config: Lighting System. Notice that Master and Theater are set to be displayed on the Default interface, and the Custom Tab is not shown.



### Exercise 3: Home Page Setting

*Overview* The system comes pre-configured with several built-in Home Page layouts. In the following steps, you will select from among the different built-in Home Pages to see the differences.

How-to

- 1. Navigate to the **Interface** tab, expand the **My PC** interface, and select **User Interface**.
- 2. In the properties window at right, select **Weather + Calendar + System Modes** from the **Home Page** drop-down list, and then click **Apply** at the bottom of the screen.

<mark>8</mark> g! Demo : Co	nfigurator (Press F1 for Help)		
System		User Interface: My PC	
Security		Home Page Display Settings	Weather + Calendar + System Modes
Climate	ELAN TS7     EVINGOWS     My PC	Hide HVAC Schedules	No
Lighting	Power Scheme      User Interface		
Content	Advanced Settings     Tab Config: Security System		
Media	Tab Config: Lighting System Tab Config: Media System		
Video	🛔 Tab Config: Climate System 💣 Tab Config: Messaging		
Messaging	Tab Config: Irrigation System 🇃 Tab Config: Video System		
Irrigation	<ul> <li>Tab Config: Pool Control</li> <li>Tab Config: Photos</li> </ul>		
Pool Control	<ul> <li>Interface Devices (OSD)</li> <li>Interface Devices (TS2)</li> </ul>		
UPS	<ul> <li></li></ul>		
Interface			
Input/Output	System Images () System Sounds	Apply	
per per			

3. Go to the Viewer, to observe how the new Home Page appears.

erystaPad ef		Hon	ne						ago Fair
Forecast					Feb	oruary	2013		
Thursday	25° / 33	•	Sun	Mon	Tue	Wed	Thu	Fri 1	Sat 2
Perceasing Clouds Friday Partiy Sunny	30° / 39	•	3 10	4 11	5 12	6 13	7 14	8 15	9 16
Saturday	32° / 40'	•	17 24	18 25	19 26	20 27	<b>21</b> 28	22	23
Sunday	26° / 40	•		Home	2	I		Away	v
Monday	28° / 38	•							
	Thursday,	February	21, 2013	8:28 AM					

4. Change **Home Page** to **Weather + System Modes** and view the change.

g!  Home  33° Fair	
	CONTRACTOR OF STREET, ST.
Chursday 25° / 33° Home	
Partiy Sunny 30° / 39°	
Saturday Snow Snow Sunday	
Sunday Snow Likely Monday	
Slinht Chance Snow Showers 28° / 38° Thursday, February 21, 2013 8:29 AM	

## Exercise 4: Creating a Custom Home Page

- *Overview* In Exercise 4, you will create a customized Home Page. As with color settings, the built-in Home Pages are not meant to be modified. Instead, we will create a new Home Page using Default 2 as the starting point and add a web image to it.
- How-to
   1. First, add a static, refreshing jpg image to populate on the Home Page. This image originates from the Internet, and requires a link on the Web to the desired image. *If you don't have Internet access, skip the following steps.*
  - a. Open a web browser and navigate to a weather site such as www.weather.com.
  - b. Browse for local weather, and then find an image map that shows current weather conditions for your area.

For example, go to <u>www.weather.com</u> and type in your zip code. Scroll down to the Weather Map area, which displays an interactive map.



Click on the **Classic Maps** link to get a standard JPG file instead of the interactive map.

#### **Classic Weather Maps**



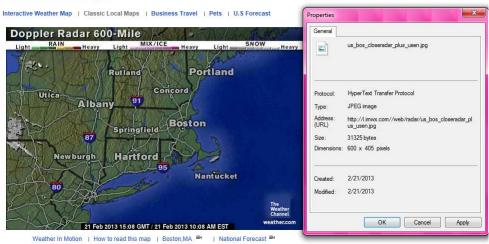
Interactive Weather Map | Classic Local Maps | Business Travel | Pets | U.S Forecast

**Note:** You <u>must</u> use a static image file: html pages, Flash, and javacript will not load.

c. For Windows IE, right-click inside the image, and select **Properties**. In the **Properties** dialog box, use your mouse to highlight the **URL**, and then press **CTRL+C** to copy the text.

#### In Internet Explorer:

#### **Classic Weather Maps**



In Google Chrome, right-click inside the image and select Copy Image

#### URL from the popup menu.

#### **Classic Weather Maps**

Interactive Weather Map | Classic Local Maps | Business Travel | Pets | U.S Forecast **Doppler Radar 600-Mile** MIX/ICE SNOW RAIN Heavy Light Light Heavy Light Heav 100 Portland Rutland Concord Utica 91 Albany Save image as... Copy image URL Boston Springfield Copy image 87 Open image in new tab Newburgh Hartford New Note Inspect element Nant 80 Weather weather.com 2013 14:54 GMT | National Forecast 🖷 Weather In Motion | How to read this map | Boston,MA 🗮

- d. In **Configurator** click on to the **Content** tab. Right-click **Web Pictures**, then **Add New Web Picture**.
- e. Set the Name to "Local Weather" and click OK.

Lighting	📑 Web Pictures 🔹 🕨	Add New Web Picture
	🔠 Internet Radio Favorite Genres	
Content	🛨 🍏 TV Channels	Name Web Picture
	🔲 👸 TV Channel Groups	
Media	🧓 NETWORKS	Cancel OK
	🧓 FAMILY	

- f. In the properties window for the new Web Picture, place the cursor in the URL edit box, and then press CTRL+V to paste the URL text for the weather image that you copied earlier.
- g. Click Apply at the bottom of the screen.

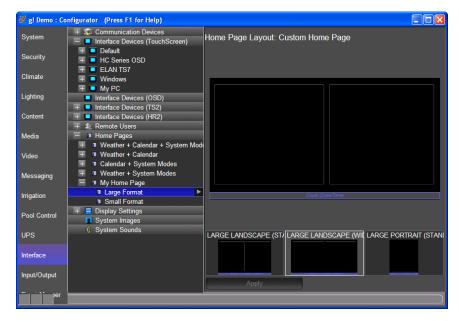
System	😴 Audio Library Options 🗖 🊰 Audio Library Scan Options	Web Picture: Local	Weather
Security	E 🤣 Audio Share Folders	Name	Local Weather
	Ø C:\MUSIC – Sector Library Scan Options	System #	22801
Climate	📃 🤦 Picture Share Folders	Refresh Time	Every Hour
	C:\PICTURES	Server Name	i.imwx.com
Lighting	📃 📕 Web Pictures	File Name	//web/radar/us_bos_closeradar_plus_usen.jpg
	Local Weather		http://i.imwx.com//web/radar/us_bos_closeradar_plus_usen.jpg
Content	Internet Radio Favorite Genres		
	🛨 🍏 TV Channels		
Media	🔚 👸 TV Channel Groups		

2. Add a new Home Page on the **Interface** tab. Right-click **Home Pages**, and then click **Add New Touchscreen Home Page**.

- a. Set the Name to "My Home Page",
- b. Select Weather + Calendar from the Copy From list.
- c. Click **OK**. This creates a new Home Page and starts it off with the same layout as the built-in g! Weather + Calendar.

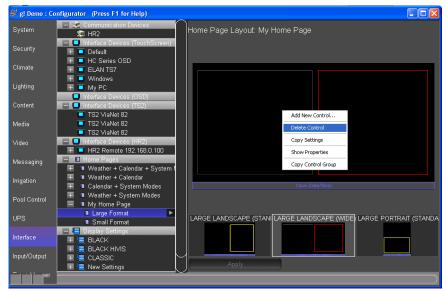
Add New	Home Page		×
Name	My Home Pag	ye	
Copy From:			
Weather + Weather +	System Mode Calendar Calendar + Sy System Modes	stern Modes	
	Cancel	ок	

- 3. Delete the Calendar Control.
  - a. Expand My Home Page.
  - b. Select Large Format from the list of Viewer resolutions, then Large Landscape (Wide) from the properties pane on the right.



Quick Reference	Quick Reference: Screen Resolutions	
Large Format	<ul> <li>Large Landscape (Standard). Viewer running on g!Tools Traditional Viewer, ELAN 8.4" in-wall, and 8.4" wireless tablets.</li> <li>Large Landscape (Wide). Viewer running on TS7, TS10 or Valet 10 tablets.</li> <li>Large Portrait- Viewer running on an iPad.</li> </ul>	
Small Format	Portrait or Landscape resolutions for iPhone or iPod Touch.	

c. Select the smaller block on the right– this is a **Calendar Control**. Right-click the control, then select **Delete Control** to remove the calendar.



- 4. Add a new control to display a web image in its place:
  - a. Right-click in the open area, then click Add New Control.
  - b. Select the **Picture From Internet** control, set the name to "Local Weather" and click **OK**.

💋 g! Demo : Co	nfigurator (Press F1 for Help)		🗙
System	<ul> <li>Section Devices</li> <li>HR2</li> <li>Interface Devices (TouchSc</li> </ul>	Home Page Layout: My Home Page	
Security	🕂 🗖 Default	reen)	
Climate		Add New Control	
Lighting	H Windows H My PC	Name Picture from Internet	
Content	<ul> <li>Interface Devices (USD)</li> <li>Interface Devices (TS2)</li> <li>TS2 ViaNet 82</li> </ul>	Control Type Light Scene Button (Recall/Save)	
Media	<ul> <li>TS2 ViaNet 02</li> <li>TS2 ViaNet 82</li> <li>TS2 ViaNet 82</li> </ul>	Light Switch Control Light Toggle Control Lighting Global Control	
Video	Interface Devices (HR2)     Interface Remote 192,168.0.1	Lighting Keypad Numeric Keypad Numeric Text	
Messaging	Home Pages      Weather + Calendar + Sy	Output Momentary Button	
Irrigation	■ Weather + Calendar     ■ Calendar + System Mode	Picture from Share	
Pool Control	🕂 👅 Weather + System Mode 🔲 💷 My Home Page		
UPS	<ul> <li>Large Format</li> <li>Small Format</li> </ul>	Cancel OK LANDSCAPE (WIDE) LARGE PORTRA	IT (STANDA
Interface	🗕 📒 Display Settings 🕀 🔚 BLACK		
Input/Output	🗄 🗮 BLACK HIVIS 🖻 📜 CLASSIC		
	📑 🧮 New Settings		

c. Use the drop-down in the **Picture from Internet Properties** window to link it to the Web Picture added previously.

📕 g! Demo : Co	onfigurator (Press F1 for He	lp)	<b>- - X</b>
System	Communication Devi	Home Page Lavout: My Home Page	
Security	Interface D	om Internet Properties	
occomy	Hand Default		
Climate	ELAN TS		
	Hace Color	r j Deraut	
Lighting	H S My PC Radius	Jør Default	
Content	E Interface D Shading	🔽 Default	
	TS2 Vial Shading	🔽 Default	Picture from Internet
Media	TS2 ViaN		
Video	🔲 🗖 Interface D	Border V	
	🔲 🔲 HR2 Ren Text Size	✓ Default     ✓	
Messaging	Home Pag Options     Weather Connect To	Universal Function	
Irrigation	The Weather Connect To	o	
inigation	🕂 💷 Calendar		
Pool Control	🕂 🗉 Weather 🔽 Defaut   🗐 🤨 My Home Page	t Behavior	
1150	■ Large Format		
UPS	Small Format	LARGE LANDSCAPE (STANI LARGE LANDSCAPE	(WIDE) LARGE PURTRAIT (STANDA
Interface	– 🧮 Display Settings III 🧮 BLACK		
	🗐 🧮 BLACK HIVIS		
Input/Output		Apply	
	🔲 🗮 🧮 New Settings		

d. Resize the control to make it roughly the size of the calendar deleted in step 3c. Click **Apply**. *Notice the box automatically snaps to the correct aspect ratio for your web image. (This will only happen if you have an internet connection and you pasted a valid picture link).* 

<mark>8</mark> / g! Demo : Co	nfigurator (Press F1 for Help)	
System	E − Scommunication Devices Home Page Layout: My Home Page	
Security	Interface Devices (TouchScreen)     Default     Default	
Climate	HC Series OSD     ELAN TS7     Windows	
Lighting	H → Willows H → My PC	
Content	Interface Devices (US2)     TS2 VialVet 82	
Media	TS2 ViaNet 82     Picture from Internet     TS2 ViaNet 82     Picture from Internet	
Video	—	
Messaging	I Home Pages IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	
Irrigation	T ■ Weather + Calendar      T = ■ Calendar + System Modes	
Pool Control	Weather + System Modes     Wy Home Page	
UPS	Large Format     Large Landscape (STAN LARGE LANDSCAPE (WIDE) LARGE PORTRAIT (     Small Format     Longs and Large Landscape (STAN LARGE LANDSCAPE (WIDE) LARGE PORTRAIT (     Longs and Large Landscape (STAN LARGE LANDSCAPE (WIDE) LARGE PORTRAIT (     Longs and Large Landscape (STAN LARGE LANDSCAPE (WIDE) LARGE PORTRAIT (     Longs and Large Landscape (STAN LARGE LANDSCAPE (WIDE) LARGE PORTRAIT (     Longs and Large Landscape (STAN LARGE LANDSCAPE (WIDE) LARGE PORTRAIT (     Longs and Large Landscape (STAN LARGE LANDSCAPE (WIDE) LARGE PORTRAIT (     Longs and Large Landscape (STAN LARGE LANDSCAPE (WIDE) LARGE PORTRAIT (     Longs and Large Landscape (STAN LARGE LANDSCAPE (WIDE) LARGE PORTRAIT (     Longs and Large Landscape (STAN LARGE LANDSCAPE (WIDE) LARGE PORTRAIT (     Longs and Large Landscape (STAN LARGE LANDSCAPE (WIDE) LARGE PORTRAIT (     Longs and Large Landscape (STAN LARGE LANDSCAPE (WIDE) LARGE PORTRAIT (     Longs and Large Landscape (STAN LARGE LANDSCAPE (WIDE) LARGE PORTRAIT (     Longs and Large Landscape (STAN LARGE LANDSCAPE (WIDE) LARGE PORTRAIT (     Longs and Large Landscape (STAN LARGE LANDSCAPE (WIDE) LARGE PORTRAIT (     Longs and Large Landscape (STAN LARGE LANDSCAPE (WIDE) LARGE PORTRAIT (     Longs and Large Landscape (STAN LARGE LANDSCAPE (WIDE) LARGE PORTRAIT (     Longs and Large Landscape (STAN LARGE LANDS	STAN <b>DA</b>
Interface	R → Company Settings	
Input/Output	Image: CLASSIC     Apply	
per per		

- 5. Set the interface to use the new Home Page.
  - a. On the Interface tab, expand the My PC interface, and select User Interface.
  - b. In the properties window at right, set the **Home Page** field to **My HomePage**. Click **Apply**. *The My PC interface will now use the custom Home Page instead of the built-in*.

Communication Devices HR2	User Interface: My PC		
<ul> <li>Interface Devices (TouchScreen)</li> <li>T Default</li> </ul>	Home Page	My Home Page	
F THC Series OSD	Display Settings	BLACK HIVIS	-
🕂 🔲 ELAN TS7	Hide HVAC Schedules	No	-
🔲 Windows			
🗏 🔲 Му РС			
Power Scheme			
User Interface			

6. Check the Viewer:



## Exercise 5: Adding and Configuring a TS2L

*Overview* The TS2L is a small, in-wall keypad style interface that can provide basic control of security, climate, lighting, and media for a specific area or zone rather than the entire system. To configure this interface, first connect and add the keypad to the system, then specify the specific partition, thermostat, lighting keypad, and zone that it will control.

#### *How-to* To add a TS2L interface from the Configurator **Interface** tab:

1. Add a Communication Device. TS2L keypads communicate on the builtin ViaNet port on the g! System controllers. The Communication device is configured by default and no other steps are required.



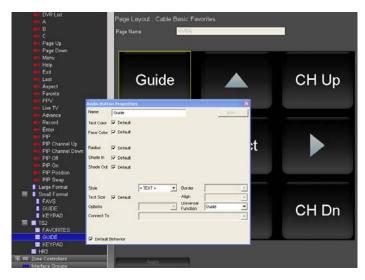
**Note:** The g!Demo software will automatically add one TS2L to the system. In an actual system the keypads will be discovered as they are added. See the *TS2L Integration Note* and *TS2L Installation Manual* for details and specific steps required to add TS2L keypads to an actual system.

System	Communication Devices	Interface Device : TS	2 ViaNet 82	
Security	HR2	Name	TS2 ViaNet 82	
	Interface Devices (TouchScreen)     TouchScreen)	System #	1239	
Climate	F B HC Series OSD	Device Type	ELAN TS2	
	🕂 🔲 ELAN TS7	Communication Device	VIANET	
Lighting	H Windows	ViaNET ID	82	
Content	H My PC Interface Devices (OSD)	Enable Weather Page	Yes	
	Interface Devices (TS2)	Enable Forecast Page	Yes	
Media	TS2 ViaNet 82	Enable Sys Mode Page	Yes	
	+  Interface Devices (HR2)  Remote Users	Media Zone	<none></none>	
Video	+ I Home Pages	Security #1	<none></none>	-
Messaging	🕂 🗮 Display Settings	Security #2	<none></none>	-
55	System Images	Security #3	<none></none>	-
Irrigation	Optimized System Sounds	Lighting Keypad #1	«NONE»	
Pool Control		Lighting Keypad #2	<none></none>	
Pool Control		Lighting Keypad #3	<none></none>	
UPS		Thermostat	<none></none>	
		Backlight Timeout	10 Seconds	
Interface				
Input/Output				
mputoutput		Apply		
per				

2. Configure options for the TS2L interface as described in the following table.

Field	Description
Name	Editable field to name the device
System #	System-assigned number. Cannot be changed.
Device Type	Pre-filled with device type selected when adding this device. Cannot be changed.
Communication Device	Select the communication device for this interface.
ViaNET ID	System-provided ID. Cannot be changed.
Enable Weather Page	Select Yes or No whether to display the weather info on the home page
Enable Forecast Page	Select Yes or No whether to display a weather forecast on the TS2L device.
Enable Sys Mode Page	Select Yes or No whether to display the page that allows House Mode selection.
Media Zone	Select the Media Zone for this TS2L device.
Security Partition	Select the Security Partition for this TS2L device.
Lighting Keypad	Select the Lighting Keypad for this TS2L device.
Thermostat	Select the Thermostat for this TS2L device.
Backlight Timeout	Select the period of time that this device will remain illuminated without interaction.

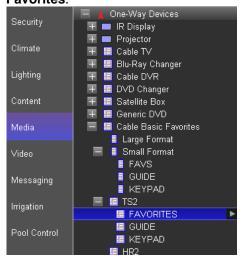
- When configuring media interfaces for source control on a TS2L, you
  must be sure that you create your controls/mapping on the TS2L
  resolution that is available when you create a new interface under OneWay Devices on the Media tab. For this exercise select Cable Basic
  Favorites that was added in an earlier exercise.
  - a. Under the TS2 interface, select the Guide page.
  - b. Click the Guide button in the display in the right pane to verify its properties. Guide should be listed as the Universal Function for this button.



c. Click the other buttons to verify that their function is mapped properly.

In addition, the TS2L uses a special control to handle TV Channel Favorites that requires some additional configuration. Rather than display a page with all favorites as on larger touchscreens, the TS2L allows you to select individual channel buttons and the templates will typically have a page with 9 Channel Favorite Buttons pre-populated.

 Choose the channels the customer will watch frequently, and manually assign the desired channel on the Favorites page under the TS2L resolution for the desired source interface. For this exercise, select the TS2L Favorites under Media>One-Way Devices>Cable Basic Favorites.



5. Click a button on the TS2L Favorites interface to display the TV Channel Favorites Properties window. From the **Connect To** dropdown, choose the desired channel. Click **Apply** when done.



- 6. When configuring Lighting Keypads for control from a TS2L, note the following:
  - Only Keypads can be added (no Custom Tabs)
  - It is recommended to build special Virtual Keypads on the Lighting Tab for lighting devices you wish to control from a TS2L. There are special Keypad Templates to match the TS2L screen.
  - Sample settings when adding a Virtual Keypad for Lighting control from a TS2L:

Add New Lighting	Keypad	×
Keypad Name	TS2 Living Room	_
		_
Interface Device	Virtual Keypad	-
Keypad Type		
CentraLite 2 Button		^
CentraLite 3 Button		
CentraLite 4 Button		
EDT I-ON-MB		
ELAN TS2-1B		
ELAN TS2-1BRL		
ELAN TS2-2B ELAN TS2-2BRL		
ELAN TS2-2BRL		
ELAN TS2-38		~
		_
Lighting Device		<u> </u>
	Cancel OK	1

See the Lighting Lesson for more details on using Virtual Keypads. The above selection will add a 3-Button layout that is sized for the TS2L's LCD.

## Exercise 6: Configuring TS7/TS10/Valet 10 Touchscreens

*Overview* The ELAN TS7, TS10, and Valet10 are interfaces that include the following features:

- IP based communication
- 7 inch (TS7) or 10 inch (TS10) diagonal touchscreen. The TS7 and TS10 are in-wall; the Valet10 is mounted externally.
- 800x480 resolution (Large Format > LARGE LANDSCAPE (WIDE))
- Composite video input
- Hard buttons for direct control of Media and Lighting.

To configure a TS7/TS10/Valet10, simply connect it to the g! controller network and power up the unit. An entry for the TS7/TS10/Valet10 is automatically added to the Configurator on the Interface tab.

**Note:** The g!Demo software will automatically add one TS7 Touchscreen to the system. In an actual system, the TS7/TS10/Valet10s will be added as they are connected to the system.

#### How-to Media Hard Buttons

To configure the Media Hard Buttons on a TS7/TS10 touchscreen, navigate to the Configurator **Interface** Tab:

- 1. Under Interface Devices (TouchScreen), click the "+" next to the entry labeled ELAN TS7 or ELAN TS10 to expand the list.
- Verify this item is the screen that you are trying to configure using the ID This TouchScreen button as described in Exercise 1 at the beginning of this lesson.
- 3. Select the entry labeled Tab Config: Media System.
- 4. In the Properties pane, use the **Default Tab** dropdown to select the Media Zone where the screen is located that the hard buttons will control. For training purposes, select the Living Room zone. Selecting a zone here has the following effects:
  - a. The "Music" hard button on the panel will automatically be mapped to toggle power for the zone. If the zone is not currently showing in the Viewer, you will be taken to the zone. Additionally, pressing and holding this button will execute All Zones Off.
  - b. The "Up Arrow" and "Down Arrow" hard buttons will automatically be mapped to ramp volume up and down for the zone.

The "Mute" button will be automatically mapped to the Mute Toggle command for the zone.

### **Light Hard Button**

The Light hard button on the TS7/TS10/Valet10 is configured using Event Maps, and can be used to toggle a lighting load or lighting scene. When the button is pressed, the system receives a "Light Button Down" message from the screen. When it is released, the system receives a "Light Button Up" message. These messages are the Events in the event mapper.

 From the Interface tab, right click the ELAN TS7 or ELAN TS10 entry and select Create Event Map For > Light Button Down option. The Create New Event Map window will open, with the name "ELAN TS7 (or TS10):Light Button Down" pre-filled:

Create New Even	t Map	×
Name	ELAN TS7:Light Button Down	
	Cancel OK	

2. Click the **OK** button to accept the name and open the **Edit Event Map** window. The Event section is automatically pre-filled with the button press command as seen in the image below:

Edit Event Map			_	_	<u> </u>
Name ELAN TS7:Light Button Down			Syst	em#	3740
Events (ANY Event Specified can execute co	mmands, if conditions are met)				
Sub-System	Туре	Family		Sys	# Add
Client: ELAN TS7	Light Button Down	Genera	System	2500	
					Remove
Conditions (ALL Conditions specified must be	met for Commands to Execute)				
Sub-System	Туре	Family	Sys #	Stat	Add
					Remove
Commands (ALL Commands will execute if Ex					
Sub-System	Туре	Family		Sys	# Add
					Remove
					Move Up
					Move Down
	Test All Commands				
L				_	

3. To add a lighting command, click the **Add** button next to the **Commands** section of the window. *The Add Command window will be displayed:* 

Add Command	
System Family	Command Groups
Audio Zone Controller Climate System Display DVD Player DVR Energy Monitoring General System Generic Serial Device Input/Output Inputs Interface Device IR Sender Irrigation System Keypad Controller Lighting System Media System Messaging Outputs Pool Control Security System Tuner UPS (Uninterruptible Pow Video Controller Video System	Available Commands

4. From the System Family section, select Lighting System. If you have completed Lesson 5: Lighting, the devices added in that lesson will be shown. In the Command Groups window, select Keypad: Master-> On then select Press Scene Button from the Available Commands list:

Add Command		
System Family	Command Groups	
Audio Zone Controller Climate System Display DVD Player DVR Energy Monitoring General System Generic Serial Device Input/Output Inputs Interface Device IR Sender Irrigation System Keypad Controller Lighting System Media System Media System Media System Messaging Outputs Pool Control Security System Tuner UPS (Uninterruptible Pow Video Controller Video System	Keypad: Master -> Lower Keypad: Master -> Off Keypad: Master -> Raise Keypad: Master -> Scene A Keypad: Master -> Scene B Keypad: Master -> Scene C Keypad: Master -> Scene D Switch/Dimmer: Guest Bedroom Available Commands Press Scene Button	
	Canc	el OK

5. Click **OK** to save the command to the event map, and then close the Edit Event Map window.

The previous step is a simple example of configuring the light button. In the software there are also system commands to set the light button LED state and conditionals that can be used in the event mapper to check the LED state.

The following is an example of utilizing the Light button with the LED and conditionals to control a single load, this example requires 4 separate event maps:

- a. Event Map 1, Lights On:
  - Event: TS7(TS10/Valet10) Light Button Down
  - Condition: TS7(TS10/Valet10) LED is On = False
  - Commands:
    - Set TS7(TS10/Valet10) LED ON
    - Set desired light load or scene on
- b. Event Map 2, Lights Off:
  - Event: TS7(TS10/Valet10) Light Button Down
  - Condition: TS7(TS10/Valet10) LED is On = True
  - Commands:
    - Set TS7(TS10/Valet10) LED Off

- Set desired light load or scene off
- c. Event Map 3, Lights On LED sync:
  - Event: desired light load or scene turned on
  - Command: Set TS7(TS10/Valet10) LED on
- d. Event Map 3, Lights Off LED sync:
  - Event: desired light load or scene turned off
  - Command: Set TS7(TS10/Valet10) LED off

#### **Composite Video**

The TS7/TS10 can be configured to display an analog video source. If the home has more than one analog video camera installed, Event Maps can be set up to enable the display on the TS7/TS10/Valet10 to be switched between the different sources.

**Note:** The following assumes that the TS7 has been configured with the appropriate Line ID. Refer to the Configurator Reference Guide for more information.

To configure video display on the TS7/TS10/valet10, set up a custom tab as follows:

- 1. On the **Video** tab in Configurator, navigate to Custom Pages in the System Node Tree.
- 2. Right –click Custom Tabs and select **Add New Custom Page**.... *The Add New Custom Page window opens.*
- 3. Name the new page "Cameras", then click **OK**.

Add New Custom Page			×	
Name	Cameras			
		Cancel	ОК	

- 4. Under Custom Pages>Cameras in the System Node Tree, select the Large format. *The Custom Page Layout: Cameras area displays on the right.*
- 5. Right-click in the Page Layout area, and select **Add New Control...** *The Add New Control window opens.*

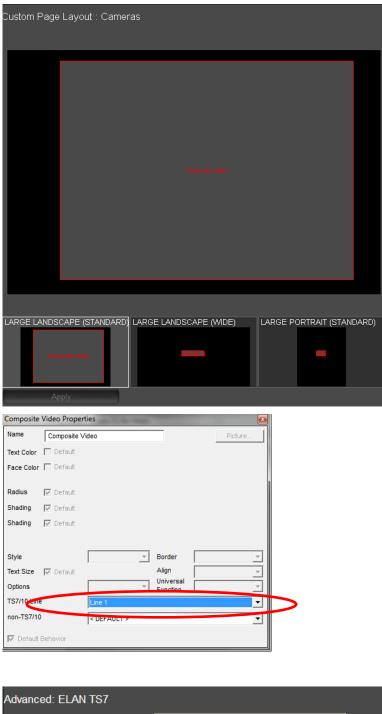
System	Global Options	Custom Page Layout : Cameras
Security	😴 Video Server 🧮 🍯 Video Cameras/Sources	
Climate	I Back Yard I Front Door ✓ Video Camera Controllers	
Lighting	Video Camera Controllers  Custom Pages Cameras	
Content	🗧 Large Format 📃 🕨	
Media	📕 Small Format	
Video		
Messaging		Add New Control
Irrigation		
Pool Control		
UPS		
Interface		
Input/Output		
Event Mapper		LARGE LANDSCAPE (STANDARD) LARGE LANDSCAPE (WIDE) LARGE PORTRAIT (STANDARD)
		Apply

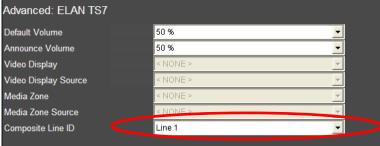
6. Select **Composite Video** from the Control Type list, and then click **OK**.

Name	Composite Video		
Control Type			
Clock (Time On	ly)		~
Composite Vide	во		
Door Lock			
Door Lock Secure All Button			
Door Lock Unsecure All Button			
Graph View			
Icon Image			
Input Toggle Indicator			
KNX Shade Button (Latching)			
Light Dimmer Control			
Light Preset Control			
Light Rocker Control			
Light Rocker Control (One-Way) Light Scene Button (Customizable)			
Light Scene Button (Custonizable)			
Light Scene Button (Pront Keypad)			

**Note**: A Composite Video control and Video Stream control (from an IP camera) cannot exist on the same interface. Adding one of these controls to an interface will remove the other option from the "Add New Control" dialog box.

 The Composite Video control displays on the tab layout. Be sure to verify that the Line ID matches the Line ID set in the Interface>Advanced Settings properties. Note the window automatically snaps to the correct aspect ratio as soon as you resize it.





# Exercise 7: Configuring the On Screen Display (OSD)

Overview The OSD, or On-Screen Display, is an interface for controlling the g! system using a television and the included IR remote control. (The OSD can also be controlled with an HR2 Wi-Fi remote control. See Exercise 8.) The OSD is designed to control a single media zone, but basic functionality for all media zones is supported. Additionally, the OSD will provide interfaces for control and status of other sub-systems in the home.

The following lists important information about the OSD that you should know:

- The OSD is designed to provide output and control to a single display/media zone, and is not intended to be used through a Video Switch for multiple zones.
- The g! System Controllers feature support for video pass-through with a single component input, and a single component output. Video passthrough is available to allow the g! System controller to share the component input on newer televisions, which may provide a limited number of component inputs. Pass-through is the default state of the video output on the OSD, and the g! system controller must be powered up for pass-through to function.
- g! System Controllers include a basic remote, known as the g! remote, to provide control of sources and OSD functions through IR and Universal Functions. For more advanced features, the HR2 WiFi remote can provide additional features alongside OSD control as explained in Exercise 8.
- The g! remote is designed to directly drive the active source, even when the OSD is not active. This allows basic functions, such as volume, power, and source transport control to be available from the remote without activating the OSD. The g! remote's IR input is automatically interpreted to send commands to the appropriate device. This allows generic IR input to send serial, Ethernet or IR commands as appropriate based on the active source, and Universal Functions.
- The OSD becomes active and exits pass-through mode when the g! system controller receives the OSD (g! button) toggle code. The g! remote or HR2 Wi-Fi remote will then change the function of some buttons in order to appropriately navigate the OSD.
  - Note that an IR receiver must be attached to the g! system controller to receive the IR code from the included remote..
  - When in OSD mode, some functions of the OSD remote or HR2 Wi-Fi remote will change.
  - It is not possible to drive the OSD from a touchscreen or other

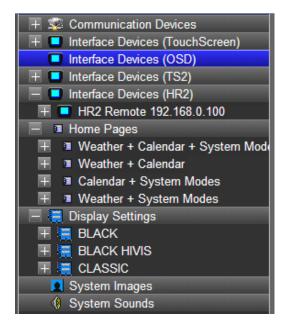
interface, as it is intended to be controlled from the g! remote IR codes, or through the HR2 Wi-Fi remote.

This option is only available on HC-Series controllers and is not available on a HomeBrick or MultiBrick. Component video cables and an IR receiver, such as the ELAN IRS5 (each sold separately), must be connected to the HC Controller for the IR commands to be received and the signal to be displayed. Refer to the HC Controller installation manual (available on the ELAN dealer site) for details.

### How-to Note: The OSD cannot be viewed using g! Demo.

The OSD is enabled by default on the HC-series controllers, and needs only to be configured prior to use. Navigate to the **Interface** tab in the Configurator to configure the OSD:

- 1. Select Interface Devices (OSD) in the System Node Tree.
  - Set the Enable Local OSD field to No to disable the OSD
  - Set the Enable Local OSD field to Yes to enable the OSD
  - Adjust Video Output as needed for the video display connected to the HC output. HC power cycle is required for the change to take effect.



- 2. Click on the "+" next to the HC Series OSD entry in the Interface Devices (OSD) list to view the OSD configuration settings.
  - **Power Scheme** is not applicable to the HC OSD.
  - User Interface is not applicable to the HC OSD.
  - Advanced Settings Some of the fields shown are not applicable to the OSD configuration. Listed below are the fields that are important when using the OSD:

Advanced: HC Series OSD		
Announce Security Events	No	•
Show Photos Tab	Yes	•
Default Volume	50 %	-
Announce Volume	50 %	-
Video Display	Theater TV	•
Video Display Source	Slot 3	•
Switch to Source before off	< NONE >	•

- The Video Display field selects the display or zone output to which the HC controller OSD is connected. This will allow the software to manage the power and inputs for the OSD. For this training, select Theater TV (added in Lesson 9: Configuring Home Theater) as the display for the OSD.
- The Video Display Source field selects the source on the display or zone output to which the controller is connected. This will automatically switch the display or zone to the selected source when the g! button is pressed on the remote control. Select Slot 3 as the Video Display Source.
- The **Switch to Source before off** field allows you to set the display back to a default input before turning off the zone. This is primarily used when you are navigating the OSD, turn off the Media Zone, and on next use wish the TV to not wake up on the OSD input (to avoid HDMI delay).

**Note**: If a default Media zone is configured with a display and is ON, and OSD is toggled OFF, the g! button will automatically set the display back to the correct state for the active source based on zone display settings.

- Tab Config: The tab config settings can be used to show or hide various systems in the OSD. These settings can also change the order in which the subsystems appear. Below is an overview of each system and its functionality on the OSD. Update all below images to the OSD used in 6.2 Thin Client Some descriptions may need to change
  - Security The Security OSD is built in and allows for multiple partition selection. For each partition the OSD will show the security panel, zone, and fault status and allow for arming/disarming the system, and locking/unlocking wireless door locks..





Remote Function: For the Security section of the OSD, the standard cursor controls are used for navigation; when arming/disarming or locking/unlocking, the number keys of the remote are used for PIN entry. If a default media zone is active, hard buttons like Volume will still pass to the default media zone.

• **Climate** – The Climate OSD interface is built in and includes an all zones selection page with status overview and each thermostat page includes status and settings for heat/cool set points, system and fan mode.



Remote Function: For the Climate section of the OSD, the standard cursor controls are for navigation. If a default media zone is active, hard buttons like Volume will still pass to the default media zone.

• Lighting – The Lighting OSD interface is configured by the installer as a Lighting Custom Page, see configuration screenshot below.

pe	Name	Connect to	1
ight Dimmer Control	Kitchen Recessed Lights	Top Left	
ight Dimmer Control	Counter Lighting	Bottom Left	Add
ight Dimmer Control	Sink Light	Top Right	
ight Dimmer Control	Table Chandelier	Bottom Right	
ight Scene Button (From Keypad)	All On	Keypad Scene (5B RL): Scene 4	
ight Scene Button (From Keypad)	All Off	Keypad Scene (5B RL): Scene 5	
Name Control Type			Move Up
Light Dimens Costul Light Scene Button (Cutomizable) Light Scene Button (Cutomizable) Light Scene Button (Cutomizable) Light Toggle Control			Move Day

- The OSD custom page supports adding the following controls: Light Dimmer Control, Light Scene Button (Customizable), Light Scene Button (From Keypad), Light Switch Control, and Light Toggle Control.
- Master
  On
  On
  Scene A
  Scene B
  Scene C
  Scene D
  Off
- The OSD for the Custom Light configuration above will look like the image below.

Remote Function: For the Lighting section of the OSD, the standard cursor controls are used for navigation. Select a specific light by highlighting it with the cursor to make it active. When selected, the arrow keys can be used to raise/lower lights. For toggle controls, the OK button will toggle between On and Off states. If the default media zone is active, hard buttons will still pass to the default media zone.

 Media – The OSD interface for Media provides an overview page for all Media zones but is intended primarily to drive media in the Default Media Zone. Controls are available for each Media zone to select the source, control basic source functions or power the zone On/Off using the OSD.



- Default Media Zone Certain sources can display an interface to the OSD, such as the Internal Audio Player, and can be controlled from the OSD regardless of zone. Other sources do not provide an interface to the OSD as they are best driven through their own video output (such as the majority of sources using Custom Interfaces, like a Cable Box). Sources without an OSD interface will automatically deactivate the OSD and switch to the configured display settings in the Default Zone. When this occurs, the sources own video output (if available) is displayed, and the remote hard buttons use Universal Functions to send the correct commands to the active source.
- Set a Default Media Zone On the Tab Config for Media there is a **Default Tab** selection. The selection defines the zone that the OSD interface is assigned to. When this selection is made, the OSD IR remote provides power, source selection, and volume control for that zone, even when the OSD is inactive. Additionally, the remote provides universal control for the active source in this zone.

Tab Layout HC Series OSD: Media System				
Default Tab	Zone 1			
Navigate By Group	No			
Navigate to Default Page First	No			
Show Zone Arrows	Yes			
Enable Page Swipe	No			

Remote Function with OSD Active: For the Media section of the OSD, the standard cursor controls are used for navigation and selection of basic zone and source selections. Except for the Play button, which is required to play a selection. If the default media zone is active, hard buttons like transport controls still pass to the default media zone.

Remote Functions with OSD Inactive: When the OSD is toggled off, the g! remote hard buttons can still be used to control the Default Media Zone. Buttons including Power, Mute, Volume, and transport controls (Play, Pause, Prev, Next) will still control the Default Zone and current active source without activating the OSD.

• Video – The OSD video interface provides a video overview page for selecting and viewing individual cameras.



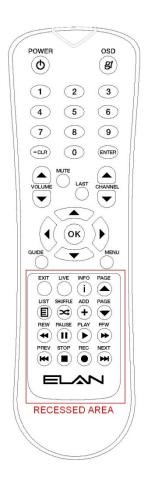
Remote Function: For the Video section of the OSD, the standard cursor controls are used for navigation of video feeds on the Overview screen. With a video feed highlighted using the cursor controls, press **OK** on the remote to make that feed full screen. In Full Screen mode, the arrow keys can be used on compatible cameras to pan/tilt the video feed, and the Page Up/Page Down buttons can be used to zoom. You can also select existing preset Pan/Tilt/Zoom positions by pressing number keys 1–8. If a default media zone is active, hard buttons like Volume will still pass to the default media zone.

- Irrigation There is no OSD interface or control for the Irrigation App.
- **Pool** There is no OSD interface or control for the Pool App.
- Photos The OSD photos browser will provide folder browsing for the configured photos library. The OSD remote can be used to navigate the photos, or the selected folder can be set into random slideshow. Use the arrow buttons to navigate the photos. Press OK to present the selected image full size; press OK with the image full size to start the slideshow.



Remote Function: For the Photos section of the OSD, the standard cursor controls are used to navigate the photos, or the selected folder can be set into random sideshow. Use the arrow buttons to navigate the photos. Press **OK** to present the selected image full size; press **OK** with the image full screen to start the slideshow in that folder. If a default media zone is active, hard buttons like Volume will still pass to the default media zone.

- Other g! remote functions The following functions are generally true, with some exceptions when OSD is active in certain partitions.
  - OSD (g!) toggle: Toggles OSD
  - o Power: Toggles Power on Default Media Zone
  - All buttons in recessed area at bottom of remote (Exit Next) pass to the Default Media Zone's active source (if applicable)
  - o LIVE: Exits OSD
  - Menu: If OSD is active, returns to main page of OSD.
  - Last: If OSD is active, goes back one page.
  - List: If OSD is active, goes to Now Playing page.



### Exercise 8: Adding and Configuring the HR2 Wi-Fi<sup>™</sup> Remote Control

Overview The HR2 Handheld remote control is a slim, portable device that provides an interface to the g! system through a familiar and convenient remote control form factor. The HR2 combines a customizable OLED touch screen with an array of remote control style hard buttons. Through instant-on Wi-Fi, the HR2 can provide control and feedback of Serial, Ethernet, and IR subsystems attached to a compatible g! system Controller. The HR2 is designed to control a single media zone, but basic functionality for all media zones is supported. Additionally, the HR2 provides interfaces for control and status of other subsystems in the home.

The supported 2-way features include:

- Media zone and source control
- Hard buttons to drive current source
- On-Screen Display (OSD) functions
- System mode control and optional weather information
- Basic security and climate feedback and control
- Customizable lighting control
- Special functions in certain areas
- IR Blaster: The HR2 includes an IR blaster for providing power control of a video display where it is not possible to run an IR emitter or another type of control method.

The following controls are supported using the touch screen interface:

- Audio button, keypad, mode control, and sound adjustment
- Channel favorite button

Once the Wi-Fi network information is set up, the HR2 remote is automatically added to the Configurator and connected to the controller. The HR2 remote is enabled by default on the HC series controllers, and only needs to be configured prior to use.

The HR2 remote option is available only on the HC-Series controllers and is not available on a HomeBrick or MultiBrick.

**Note:** Refer to the HR2 Integration Note (available at the ELAN dealer site) for details.

*HR2 Layout* The HR2 features a customizable touch screen, and an array of hard buttons to provide control of various subsystems attached to a compatible g! system controller.



The following lists some basic operational notes on the HR2:

**Power Button:** The power button is configurable; refer to the *HR2 Interface Device* table below.

Press and hold the **Power** button to send an All Zones Off to all media zones.

**Touch screen**: The information in this area may change, but in general all but the thin line at the bottom of the touchscreen can be pressed.

Note: From the main menu, if you press and hold a button such as Climate ( ) on the touchscreen, the touch screen displays a new page which lists all the zone selections from that subsystem that are available on the HR2. If you single tap button, the last accessed selection is displayed.





**Button Display**: The thin line at the bottom of the touchscreen is actually three buttons that are contextual and become accessible when you press the corresponding arrow ( $\blacktriangle$ ) button below the touchscreen. For example, Random was toggled on by pressing the right-most arrow ( $\bigstar$ ) button.

Arrow Buttons: The two rows of buttons (the first row with the three arrow (▲) buttons, and the second row with Now Playing ▶, Media, and g! buttons) will always affect the HR2 Touchscreen, unless you are in OSD mode.

Press and hold the **Media** button to access the settings page for the current media zone. In OSD mode, the Now Playing reduction Media, and g! buttons will affect the OSD.





All hard buttons below the silver line will, in general, send commands to the current source or active media zone, except when the HR2 is in OSD mode. In that case, the buttons are either disabled or provide the same functions as the g! remote. See OSD Exercise 7 for more details.



- *How-to* If you have an HR2 remote, follow along with the instructor. If you do not have an HR2 remote, refer to the Integration Note.
  - 1. Verify the software version for the HR2 radio as follows:
    - a. Navigate to the **System** tab, **System** in the System Node Tree, and verify that the software version is 5.2 or later.
    - b. Power on the HR2 remote using the power switch located under the bottom end-cap.
    - c. Press the following buttons at the same time to access the SETUP MENU:
      - -CLR
      - <u>g</u>!
      - arrow (▲) above the g!
    - d. Verify the software version.
  - 2. Add the HR2 remote as a new communication device to the Configurator.
    - a. Navigate to the Interface tab.
    - b. In the System Node Tree, right-click **Communication Devices** and click **Add New Communication Device**. *The Add New Communication Device window opens*.
    - c. Do the following:
      - Name the device HR2
      - Set the Type to Ethernet
      - Set the Communication Type to ELAN HR2 Controller
      - Click OK.

Note: Only one Communication device is required for any number of HR2s.

Add New Communication Device				
Device Name	HR2			
Туре	Ethernet	•		
Device				
Communication Type	ELAN HR2 Controller	•		
🔲 Show Unsupported De	evices			
	Cancel OK			

- 3. Power off the HR2 remote using the power switch located under the bottom end-cap.
- 4. Configure the HR2 remote as follows:
  - a. Connect the HR2 remote to your PC with the included USB-to-mini USB cable.
  - b. Power on the HR2 remote until it boots up with the **Enter Password** screen.
  - c. On the remote, press the numbers **3526** and press **ENTER**. *The Remote screen should state "Correct" and switch to USB active.*
  - d. If a window pops up reporting disk or file errors, click **Fix** or **Run Scan** button, then close the window after it runs.
- 5. Right-click the **HR2 Communication Device** in the System Node Tree and select **Configure attached HR2** from the menu. *The Configure HR2 dialog box opens*.

figure HR2					
HR2 IP	192 . 1	.68 .	0	. 100	
Netmask	255 . 2	255 .	255	. 0	
Gateway	192 . 1	168 ,	0	. 1	
Controller IP	192 . 1	168 .	0	. 2	
	Load Control	ller Seti	tings	2	
SSID	HR2 V	ViFi			20.
KEY (26 HEX Di KEY (13 Charac					
WPA/TKIP or Passphrase	WPA2/AES *				
9.5.		voral			
O No Encryptio	'n				
* Disabled en override the		cess p	oint o	r router v	vill

- 6. Configure the dialog box as follows:
  - a. Type the IP address for the HR2 (outside of the network DHCP range) in the **HR2 IP** field.

Note: Get the IP address from your network administrator, if you do not know it.

b. Click Load Controller Settings to automatically set the Netmask, Gateway, and Controller IP fields.

#### Note: Controller must have static IP for this function.

- c. Type the SSID that the HR2 remote is connecting to in the SSID field.
- d. Select the encryption type and enter the wireless password in the **Passphrase** field.
- e. Click **Save Configuration** to add the configuration information to the remote.
- f. When you get the notification that it is safe to disconnect the USB, click **OK**.
- 7. Remove the USB cable. The remote will reboot and then display "Configuring Radio." This may take a minute or two to complete. It will then connect to the access point and finally the system controller. Once connected to the system controller, it will automatically populate an entry under the **Interface** tab, **Interface Devices** in the System Node Tree.

System	Communication Devices	Interface Device (HR2	2) : HR2 Remote 192.168.0.100	
Security	HR2     Interface Devices (TouchScreen)     Interface Devices (OSD)	Name System #	HR2 Remote 192,168.0.100 1720	
Climate	Interface Devices (CSD)     Interface Devices (TS2)     Interface Devices (HR2)	Device Type	ELAN HR2	
Lighting	🔲 🔲 HR2 Remote 192.168.0.100 🔹 🕨	Communication Device	HR2 _	
Content	<ul> <li>Home Layout</li> <li>Media Zones</li> <li>Climate Zones</li> </ul>	Power Button Auto-Return to Media	Source Select  Never	
Media	<ul> <li>Lighting Keypads</li> <li>Security Pages</li> </ul>	On-Cradle Zone	< NONE >	
Video	Zone Options	Timeout	60 sec 👱	
Messaging	<ul> <li></li></ul>			
Irrigation	<ul> <li></li></ul>			
Pool Control	Display Settings E BLACK			
UPS	I I I I I I I I I I I I I I I I I I I			
Interface	System Images Images System Sounds			
Input/Output				
Event Mapper				

Quick Reference: HR2	Quick Reference: HR2 Interface Device				
Name	Editable field to name the device.				
System #	System-assigned number. Cannot be changed.				
Device Type	Pre-filled with device type selected when adding this device. Cannot be changed.				
Communication Device	Select the communication device for this interface.				
Power Button	<b>Source Select</b> – Press <b>On</b> to display the source select page for the selected zone. If the remote is On, press to turn <b>Off</b> .				
	<b>Toggle</b> – Changes a zone to On if the previous selection was Off or vice-versa. If the remote is Off, when it is turned On, it returns to the last active source.				
	Optionally, you can select a Turn-On Source from the Configurator <b>Media</b> tab on the Audio Zone set up page. This will force the zone to always turn on to that source when the power is toggled on.				
Auto-Return to Media	Defines how long the remote interface stays at a different subsystem before it returns to the default media zone.				
	Settings are: Never, 10 or 30 secs, 1 or 2 mins				
On-Cradle Zone	Optionally, you can set a zone to which the HR2 remote returns when it is placed on the cradle. See Step 9e.				
Timeout	Determines how long the remote screen displays before going dark. The settings are: <i>10, 15, 20, 30, 45, 60</i> secs				

- 8. Set up the Interface Device fields as follows:
  - a. Change the **Name** field in the properties window to the location where the remote is installed, such as "Living Room Remote".

This is critical if you have multiple remotes at different locations.

**Note:** Press the Menu and Info buttons on the HR2 remote at the same time, and the remote screen displays the name that you set.

- b. Verify that the **System #**, **Device Type**, and **Communication Device** are automatically detected.
- c. Set the **Power Button** field to one of the following settings:
  - Source Select
  - Toggle

- d. Set the Auto-Return to Media field to one of the following settings:
  - Never
  - 10 or 30 secs
  - 1 or 2 mins
- e. Set the **On-Cradle Zone** field to a zone.
- f. Set the **Timeout** field to a time setting.
- g. Click Apply.

Communication Devices	Interface Device (HR	2) : HR2 Remote 192.168.0.100
🤹 HR2	Name	Living Room Remote
🕂 🗖 Interface Devices (TouchScreen)	System #	1720
Interface Devices (OSD)		
🕂 🗖 Interface Devices (TS2)	Device Type	ELAN HR2
📃 🗖 Interface Devices (HR2)	Communication Device	HR2
📕 🔲 Living Room Remote 🛛 🕨		
🗕 🗉 Home Pages	<b>D D</b>	Tanada
🛨 🔳 Weather + Calendar + System Mod	Power Button	Toggle
🛨 🔳 Weather + Calendar	Auto-Return to Media	10 sec 💌
🛨 🗉 Calendar + System Modes	On-Cradle Zone	< NONE >
🕂 🔳 Weather + System Modes	Timeout	30 sec
📃 🧮 Display Settings	Timeout	
🕀 🧮 BLACK		
🧮 BLACK HIVIS		
🕂 🧮 CLASSIC		
System Images		
() System Sounds		

 Click the "+" next to the Living Room Remote entry under Interface Devices to view the HR2 configuration settings.

System	Communication Devices VIANET	Interface Device (HR2	2) : HR2 Remote 192.168.0.100
Security	HR2     HR2     Interface Devices (TouchScreen)     Interface Devices (OSD)	Name System #	Living Room Remote 1720
Climate	🕂 🔲 Interface Devices (TS2)	Device Type	ELAN HR2
Lighting	Interface Devices (HR2)     Living Room Remote	Communication Device	HR2
Content	Home Layout     Media Zones	Power Button	Toggle 🗾
Media	🚶 Climate Zones 🐤 Lighting Keypads	Auto-Return to Media	Togle   10 sec   30 sec    30 sec
media	Security Pages	On-Cradle Zone Timeout	< NONE >
Video	Zone Options	lineout	
Messaging	Home Pages     Weather + Calendar + System Mode     Weather + Calendar		
Irrigation	Calendar + System Modes     Weather + System Modes		
Pool Control			
UPS			
Interface	System Images Ø System Sounds		
Input/Output			
Event Mapper			
		Apply	

- 10. Configure the display screen for the remote by selecting to hide or display the tabs in each zone previously set up in the Configurator and click **Apply** for each configuration.
  - Home Layout configure the Home interface to provide the status and control of system modes or display the weather conditions and forecast information.

System	E Scommunication Devices	Tab Laurant Linian Daram Dara	antas Cuatana	
System	😨 VIANET	Tab Layout Living Room Rem	iole. System	
<b>.</b> .	😨 HR2			
Security	🕂 🔲 Interface Devices (TouchScreen)	Available Tabs		NC 31. 77.1
	Interface Devices (OSD)	Available Tabs		Visible Tabs
Climate	\pm 💶 Interface Devices (TS2)			
	📃 🔲 Interface Devices (HR2)	System Modes		Weather Current
Lighting	🗏 🔲 Living Room Remote			Weather Forecast
	Home Layout			
Content	Media Zones			
	🔒 Climate Zones			
Media	👎 Lighting Keypads			
	Security Pages			
Video	Zone Options			
	📃 🔳 Home Pages		Add Tab >>	
Messaging	🕂 🗉 Weather + Calendar + System Mod			
5 5	🕂 🗉 Weather + Calendar		<< Remove Tab	
Irrigation	🕂 🗉 Calendar + System Modes			
	🕂 🗉 Weather + System Modes			
Pool Control	🔚 🧮 Display Settings		Move Up	
	🗮 🧮 BLACK		annen an	
UPS	🗮 🧮 BLACK HIVIS		Move Down	
0-3				
Interface	System Images			
Intenace	System Sounds			
Input/Output				
Event Mapper				
		Apply		

Media Zones – configure the system to display one or more media zones.

📕 g! Demo : Co	nfigurator (Press F1 for Help)			
System	Communication Devices	Tab Layout Living Room Rem	ote: Media System	
Security	Interface Devices (TouchScreen)     Interface Devices (OSD)	Available Tabs		√isible Tabs
Climate	Interface Devices (CCC)     Interface Devices (TS2)     Interface Devices (HR2)	Bedroom M86A Theater		Living Room Living Room Video
Lighting	Living Room Remote Home Layout	Zone 4 Zone 5		
Content	Media Zones	Zone 6 Living Room Video		
Media	🦻 Lighting Pages 📼 Security Pages	Bedroom Video √85 Output 3		
Video	Zone Options I sense	V85 Output 4 V85 Output 5	Add Tab >>	
Messaging	🕂 🗉 Home Pages 🕂 🧮 Display Settings	V85 Output 6 V85 Output 7	<< Remove Tab	
Irrigation	System Images Ø System Sounds	V85 Output 8 Theater		
Pool Control		Zone 2 Bedroom Video		
UPS		Theater Zone ∨ideo AT-HD-∨44M Output 04	Move Down	
Interface				
Input/Output				
Event Mapper				
		Apply		

Any sources using custom interfaces that will be displayed on the HR2, must have interfaces configured on the HR2 resolution for that interface on the **Media** tab. When creating the interface for the HR2, notice that many standard controls (arrow keys, channels, and so forth) are shown already as physical buttons on the HR2 and will be mapped automatically to send the appropriate commands. Therefore, the only controls that need be shown in the HR2 resolution are for buttons or controls unavailable from the HR2 hard buttons. You many also customize which command is sent when a specific button is pressed. See the next section, "Customize HR2 Button Mapping."

**Note:** TV Channel Favorites use the same special button control as the TS2. For more information, see the TS2 exercise in this lesson.

#### **Customize HR2 Button Mapping**

Any of the hard buttons below the silver line on the HR2 remote can be customized to send a different command than what is shown on the button. This section explains how to reprogram those HR2 buttons.

For Example: You can program a button such as the **List** button on the HR2 remote and customize it to access the **On Demand** feature of your cable box.

- 1. Navigate to the Media tab on the Configurator.
- 2. Under One-Way Devices, click "+" to expand the list.
  - a. Select the interface for the source device that you want to customize, such as Cable TV.
  - b. Select Cable TV to display the button settings.
  - c. Locate List under the Incoming Code column.
  - d. Right-click **Default** under the Behavior column and change to **Override**.

System	F S Communication Devices	Source : Cable TV			
	One Way Devices		Cable TV		
Security	IR Display	Name			
	🐨 🗖 Projector	System #	23437		
	🖃 🔚 Cable TV	TouchScreen Behavior	Enable Interface		•
	E III IR Device: Cable TV	HR2 Behavior	Enable Interface		*
Lighting	Large Format	OSD Behavior	Source Select Pag	p	•
	📕 🚦 Small Format	Default Device	Cable TV		
	E FAVS	Denault Device	Cable TV		
Media	E KEYPAD	Remote Control Buttons			
	🗏 🔳 TS2	Incoming Button	Behavior	Output Device	Output Code/Command
	FAVORITES	Enter	Default	Cable TV	Enter
		Mute Toggle	Default		
Messaging	KEYPAD	Power Cycle	Read Only		
		Clear	Default		
rrigation	🗮 📕 Blu-Ray Changer	Exit	Default	Cable TV	Exit
	E Cable DVR	Live TV	Default	Cable TV Cable TV	Live TV
Pool Control	🗮 🔳 DVD Changer	Info	Default	Cable TV	Info
	🔳 📕 Satellite Box	Page Up	Default	Cable TV	Page Up
UPS	🗮 🛄 Generic DVD	Fage Down	Default	Cable TV	Page Down
	🔳 🔳 Cable Basic Favorites	List	Override	00010111	r ago 20mi
nterface	🐨 📰 Zone Controllers	Random	Default		
	Interface Groups	Rewind	Defends		
input/Output		Fast Forward	Default	Cable T∨	Fast Forward
input/output		Pause	Default	Cable TV	Pause
Event Mapper		Skip Back	Default		, 4455
Event mapper		Skip Forward	Default		
		Stop	Default	Cable TV	Stop
		Record	Default	Cable TV	Record
		Channel Up	Default	Cable TV	Channel Up
		Channel Down	Default	Cable TV	Channel Down
		E 1977			56
		Apply			

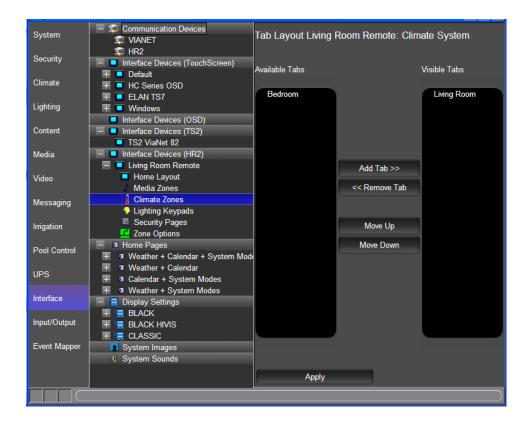
- e. Select the desired custom output device from the Output column.
- f. Select the desired output code from the Output Code column.

System	🐨 🔹 Communication Devices	Source : Cable TV				
2101011	👎 🖥 Two-Way Devices	Source . Cable I V				
ecurity	E Dne Way Dences	Name	Cable TV			
, c.c.unit	🗮 💻 IR Display	System #	23437			
limate	🔚 💻 Projector	TouchScreen Behavior	Enable Interface			
	Cable TV     R Devce: Cable TV	005573993999399553995299939969				
ighting		HR2 Behavior	Enable Interface		<u>·</u>	
dinnið.	Large Format	OSD Behavior	Source Select Pag	e	•	
Content	FAVS	Default Device	Cable TV			
ontein	GUIDE					
fedia:	KEYPAD	Remote Control Buttons				
ite una	E II TS2	Nemole Control Baltons				
/ideo	E FAVORITES	Incoming Button	Behavior	Output Device	Output Code/Command	10
	GUIDE	Enter	Default	Cable TV	Enter	
	KEYPAD	Mute Toggle	Default			
lessaging	HR2	Power Cycle	Read Only			
	🗮 🖪 Blu-Ray Changer	Clear	Default			
rigation	🗮 🖪 Cable DVR		Default	Cable TV		
	🔳 🖪 DVD Changer		Default	Cable TV		
	🗐 🔚 Satellite Box	Info	Default	Cable TV	Info	
	🗐 🔚 Generic DVD	Page Up	Default	Cable TV	Page Up	
IPS	🔳 🖪 Cable Basic Favorites	Page Down	Default	Cable TV	Page Down	
	F I Zone Controllers	Lot	Override	Cable TV	Favorites	
iterface	Interface Groups	Random	Default			
		Rewind	Default		Rewind	
put/Output		Fast Forward	Default	Cable TV	Fast Forward	
		Pause	Default	Cable TV	Pause	
vent Mapper		Skip Back	Default			
		Skip Forward	Default			
		Stop	Default	Cable TV	Stop	
		Record	Default	Cable T∨	Record	
		Channel Up	Default		Channel Up	
		Channel Down	Default	Cable TV	Channel Down	5
		Apply				

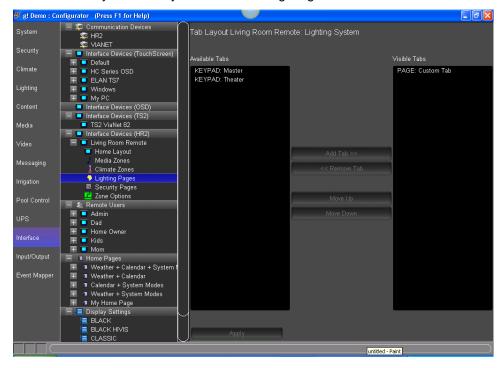
#### 3. Click Apply.

**Note:** Custom mapping is global for the source and will affect all g! interfaces such as touchscreens and PC Viewer.

• Climate Zone – Configure the system to display one or more climate zones. The HR2 remote provides heat or cooling mode and fan control, and includes adjustments to temperature settings.

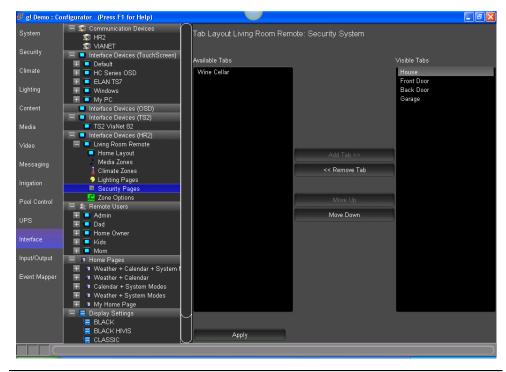


 Lighting Keypads – Configure the system to display one or more custom lighting keypads. The HR2 remote touchscreen provides 2way control of your scenes and lighting devices.



**Note:** The HR2 only displays Lighting Keypads (no Custom Tabs), and it is recommended you create custom Keypads for the HR2's screen for best results. The TS2L Keypad Templates are a good starting point, for more details see the TS2L Exercise in this Chapter.

• Security Partitions – Configure the system to display one or more partitions. The HR2 displays a keypad in the touchscreen that you can use to arm or disarm a partition.



**Note:** You can select Zone Options to map Media zones and set your default lighting keypad, default thermostat, and default security zone. See online help for instructions.

#### Using the HR2 to Control the OSD

The HR2 provides control of the HC On Screen Display by accessing a special OSD mode. In OSD mode, the touchscreen of the HR2 will not show the normal interface, and the behavior of the HR2 hard buttons is changed. To enable OSD mode on the HR2, the OSD must have a default zone configured.

- 1. Navigate to the Interface tab on the Configurator.
  - a. Select HC Series OSD and click "+" to expand the list.
  - b. Select Tab Config: Media Systems.
  - c. From the **Default Tab** drop-down box, select the zone to which the OSD interface is assigned.
  - d. Click Apply.

Tab Layout HC Series OS	D: Media System	
Default Tab	Zone 1	<b>•</b>
Navigate By Group	No	-
Navigate to Default Page First	No	-
Show Zone Arrows	Yes	-
Enable Page Swipe	No	-
Enable Page Swipe	No	

- 2. Under Interface Devices, click "+" to expand the list.
  - a. Select HR2 Remote.
  - b. Click "+" to expand the list and select Media Zones.
  - c. From the **Available Tabs** list, move the zone that you configured as the default tab for the OSD to **Visible Tabs**.
  - d. Click Apply.

#### To set the HR2 to OSD mode:

- 1. Press **g!** button, then press and hold **Media** button, and then select the desired zone (Zone 1).
- 2. Press the **g!** button to return to the main menu on the HR2 touchscreen.
- 3. Press the center arrow ( $\blacktriangle$ ) button to enter OSD mode.



The OSD command is sent to the HC, to activate the OSD on your display, and change the HR2 to OSD mode.



When in OSD mode, the HR2 hard buttons will mimic the g! remote buttons. The HR2 has two additional hard buttons: Now Playing ▶ and g!, which are not present on the g! remote; so when the **Now Playing** button is pressed, it will jump the OSD to the **Now Playing** screen. When the **g!** button is pressed, it will jump to the OSD main menu.

For details on other button features in OSD mode, see the OSD exercise in this lesson.

## Notes:

·	 	 

## Lesson 16 Event Mapper



#### **Overview**

The Event Mapper is the area of the Configurator where advanced custom programming is performed. It allows you to execute commands in response to events detected by the system.

For example, when the front door to a home is opened, the front-hallway light is turned on. In this example, the event is the front door opening, and the command mapped to that event is "turn on the light".

You will:

- Learn how custom events and macros are organized in the Configurator.
- Create Event Maps in response to sample system events.

#### Requirements

• A PC running g!Demo and g!Tools.

-or-

- ELAN Controller and g!Tools.
- Completion of Lesson 3, *Configuring Security Systems*.

### **Event Mapper Overview**

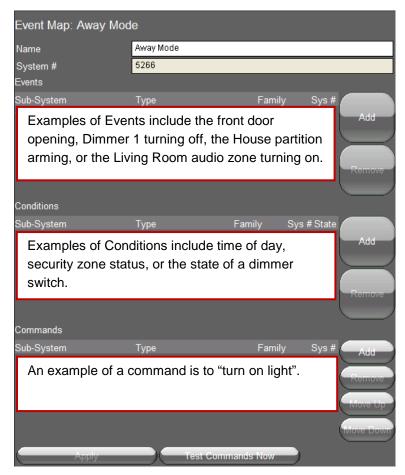
*Overview* Event Maps contain three distinct categories:

**Events.** An Event is something that has happened in the system and could come from any configured sub-system. Events are used to trigger Event Maps. These can be equated to "IF" statements. Multiple Events in this window will trigger as "OR".

**Conditions.** Conditions are tests that allow control over when an Event should cause something to happen. Conditions place limits on when an Event Map should execute; as the Event *plus* the Condition must be met. These can be equated to "AND" statements. Multiple Conditions must ALL be met to trigger the Event Map and execute the commands.

**Commands.** Commands are the steps that are taken in response to a particular Event. These can be equated to THEN statements. Multiple Commands will execute in sequence.

#### Examples of each are shown below.



*How-to* Setting up an Event Map consists of the following steps:

- 1. Add the Event Map.
- 2. Set the events that should trigger the Event Map.
- 3. Add conditions to control if or when the Event Map runs (if needed).
- 4. Set the commands to execute when the Event Map runs.

Event Maps can be generated by entering the Event Mapper tab in Configurator, adding a new Event Map and then selecting the appropriate event (triggers), conditions and commands. This is the method detailed in the following exercises.

Event Maps can also be created on sub-systems tabs by right-clicking on a subsystem component and using the *Create Event Map for...* option, which will create a new event map with the selected trigger event already populated.



#### Example:

A Note<br/>about thisThe following exercises are intended to demonstrate the concepts of Event<br/>Mapper, and are not in any way comprehensive of the possibilities available within<br/>the Event Mapper function.

You should use these exercises and topics merely as a starting point for creating your own custom event maps.

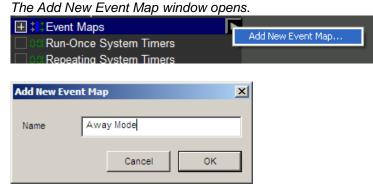
## Exercise 1: Arm the Security System on Away House Mode

*Overview* In this exercise, you will use Event Mapper to add additional functionality to a System Mode. System Modes will automatically tie into scheduling features on tabs such as Climate and Lighting, but through Event Maps additional functions can be added. Our sample function will be to automatically arm our Virtual Security System when the Away System Mode is selected.

**Note:** The alarm system <u>cannot</u> be automatically disarmed from a system mode or any other system command: the g! software does not support auto-disarm features as they could present a security risk.

How-to

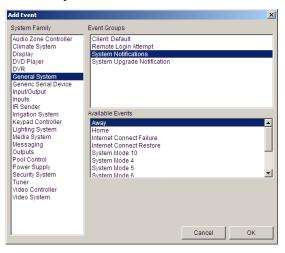
 Click the Event Mapper tab in the Configurator, then right-click Event Maps and Add New Event Map in the System Tree.



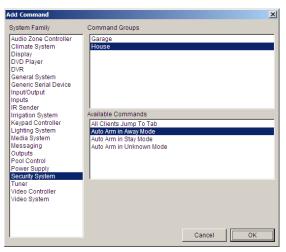
2. Name the Event Map **Away Mode**, and then click **OK**. *The Away Mode properties window displays to the right*.

glDemo : Conl	figurator				
System	Weight Map System     Global Options	Event Map: Awa	y Mode	•	
Interface	the second	Name System #		Away Mode 7164	
Security	Repeating System Timers	Events			
Climate	Timed Events  Triggers  Triggers	Sub-System	Туре	Family S	Add
Lighting					Remove
Media		Conditions			
Messaging		Sub-System	Туре	Family Sys S	
Video					Add
Irrigation					Remove
Pool Control		Commands			
Input/Output		Sub-System	Туре	Family S	ys i Add
UPS					Remove Move Up
Event Mapper					Move Down
Content		Apply		Test Comman	ds Now

- 3. To the right of the **Events** section (top section), click the **Add** button. *The Add Event window opens.* 
  - a. Select General System in the System Family section.
  - b. Select System Notifications in the Event Groups section.
  - c. Select Away in the Available Events section.



- d. Click **OK.** The Add Event window closes and the event displays in the properties window.
- 4. To the right of the **Commands** section (bottom section), click the **Add** button. *The Add Command window opens*.
  - a. Select Security System in the System Family section.
  - b. Select House in the Event Groups section.
  - c. Select Auto Arm in Away Mode in the Available Events section.



d. Click **OK**. The Add Command window closes and the command displays in the properties window.

<i>₿</i> ! g!Demo : Conl	figurator					_ 🗆 🗵
System	Line Contemned Contemned Content of Con	Event Map: Away I	Mode			
Interface	Event Maps	Name	Away Mode			
Security	the second	System # Events	7164			
Climate	Timed Events  Timed Folder Triggers	Sub-System System Notifications	Type Away	Family General System	Sys # 1004	Add
Lighting						Remove
Media						
Messaging		Conditions Sub-System	Туре	Family	Sys # Sta	_
Video						Add
Irrigation						Remove
Pool Control		Commands				
Input/Output		Sub-System House	Type Auto Arm in Away Mode	Family Security System	Sys # 2675	Add
		Tiouse	, ato , an in , way would	, occurry oysten	2013	Remove
UPS						Move Up
Event Mapper						Move Down
Content		Apply	Test Co	mmands Now		

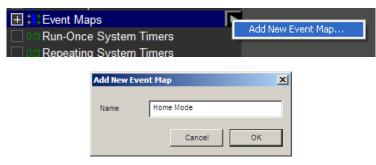
e. Your screen should now look like the one below.

## Exercise 2: Set Home Mode on Security Disarm

*Overview* In this exercise, you will set up an Event Map to have the system automatically set the g! software System Mode to Home when the security system is disarmed.

#### How-to

1. On the Event Mapper tab, right-click Event Maps, then Add New Event Map... The Event Map window opens.

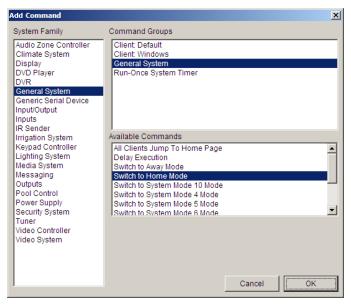


- 2. Name the Event Map **Home Mode**, then click **OK**. *The Home Mode properties window displays to the right.*
- 3. To the right of the **Events** section (top), click the **Add** button. *The Add Event window opens.* 
  - a. Select Security System in the System Family section.
  - b. Select House in the Event Groups section.
  - c. Select Disarm in the Available Events section.

Add Event		×
System Family	Event Groups	
Audio Zone Controller Climate System Display DVD Player DVR General System Generic Serial Device Input/Output Inputs IR Sender	1st Floor Motion Back Door Front Door Garage Garage Door House Side Entrance	
Irrigation System Keypad Controller Lighting System Media System Messaging Outputs Pool Control Power Supply Security System	Armed in Any Mode Armed in Away Mode Armed in Stay Mode Armed in Unknown Mode Burglar Alarm Disarm Entry Delay Evit Delay	
Tuner Video Controller Video System		Cancel OK

d. Click **OK.** The Add Event window closes and the event displays in the properties window.

- 4. To the right of the **Commands** section (bottom), click the **Add** button. *The Add Command window opens*.
  - a. Select General System in the System Family section.
  - b. Select General System in the Event Groups section.
  - c. Select Switch to Home Mode in the Available Events section.

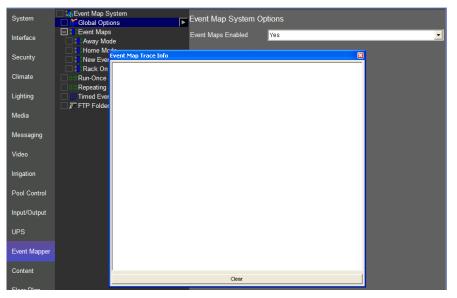


- d. Click **OK**. The Add Command window closes and the command displays in the properties window.
- e. Your screen should now look like below.

<i>ទី</i> ! g!Demo : Conf	igurator					_ 🗆 🗵
System	Weight Map System     Global Options	Event Map: Home Mo	ode			
Interface Security	A shore Mode	Name System # Events	Home Mode 7165		_	
Climate	Run-Once System Timers     Repeating System Timers     Firmed Events     FTP Folder Triggers	Sub-System House	Type Disarm	Family Security System	Sys # 2683	Add
Lighting Media						Remove
		Conditions				
Messaging		Sub-System	Туре	Family	Sys # S	
Video						Add
Irrigation						Remove
Pool Control		Commands				
Input/Output		Sub-System General System	Type Switch to Home I	Family Node General Syste	Sys # em 1003	Add
						Remove
UPS						Move Up
Event Mapper					I	Move Down
Content		Apply	Test C	Commands Now		

## Exercise 3: Check the Commands

- *Overview* In the following steps you will use the **Event Map Trace Info** window to see your Event Maps in action. Event Map Trace can be useful when creating and testing Event Maps to see events happening in real-time and observe when they may be triggering an Event Map.
- How-to
- 1. On the **Event Mapper** tab, right click **Global Options** near the top in the System Tree, and click **Show Event Map Trace Info**.



2. Open the **Viewer**, and arrange the windows so that you can see both the Trace window and the Viewer on your screen at the same time.

g! Demo	Ног	ne					<b>41</b> Fair	° 🥚
Event Map Trace Info	×			Feb	ruary	2012		
EVENT DETECTED. System Notifications -> Mode 3 EVENT DETECTED. System Notifications -> Away EXECUTING EVENT MAP Away Mode D 1551		Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2	3	4
		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			
			Home				Away	
			Mode 3				Mode 4	
Clear	bruary	9, 2012	11:51	АМ				

3. In the Viewer on the Home page, click the **Mode 3** button, then click **Away**.

In the **Event Map Trace Info** window you will now see several lines of text, each representing an event in the system, or an Event Map executing.

**Note:** An EVENT DETECTED message does not explicitly mean that it is going to trigger an Event Map; it is merely a notification of an event in the system which could *potentially* trigger an Event Map.

In the example above, we get an Event for Mode 3, which does not trip any Event Maps; and an event for the system mode changed to Away (System Notifications -> Away), which does trigger the Event Map "Away Mode".

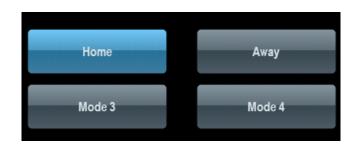
Depending on what other configuration you have done in the system you may see several other events being detected during this test.

gl Demo		Hous	e 🕨		<b>E</b> Status	ZONES	
	R	leady to	Arm				
Zon	e Status			System	Faults		
	Zone <del>s</del> eady		No System Faults				
	Disarm	Stay	ļ	Away			

4. Click **g!** to access the main system icons then click the **Security** icon. *Notice the results of the Event Map "Away Mode": The House Partition of our Security Panel is now "Armed in Away Mode".* 

Event Hap Trace Into		House	STATUS	ЦЦ. HISTORY
EVENT OF TECHED House -> Dearm EXECUTING EVENT MAP Home Mode D 1552		Armed System Faults		
	All Zones Ready	No System	n Faults	
Clear	Disarm	Stay Away		

- 5. Test the Home Mode Event Map.
  - a. Tap the **Disarm** button, then enter **1...2...3...4...Enter** on the security keypad.
  - b. Notice that the Event Map trace displays Event Detected House -> Disarm, and this in turn causes the "Home Mode" Event Map to trigger.
- 6. Return to the Home page of the Viewer, and observe the results of the "Home Mode" Event Map. When you disarmed the House Partition, the System Mode was set to Home.



# Exercise 4: Doorbell Triggers Jump to Video Tab

*Overview* In this exercise, you will use the sense input on an ELAN HC-Series Controller to create a reaction to someone pressing the door bell, which results in flipping all touch screens to a video feed. This example assumes that you have wired the door bell or a third-party door station unit appropriately to the Sense Input and have already configured a Video camera in the system. Note that the HC Series controllers will have Sense Inputs pre-configured by default.

**Note:** These basic steps can be followed for other sense inputs, such as those on the back of an ELAN S12 controller.

- *How-to* 1. Add a new Event Map and name it "Input: Door Bell Video Flip" or similar.
  - 2. Add an EVENT for the Chassis Input Shorted:
    - System Family: Inputs
    - Event Group: Sense Input 1
    - Event: Input Turned ON

Edit Command		×
System Family	Event Groups	
Audio Zone Controller Climate System Display DVD Player DVR Energy Monitoring General System Generic Serial Device Input/Output	Sense Input 1 Sense Input 2 Sense Input 3 Sense Input 4 Sense Input 5 Sense Input 6	
Inputs Interface Device	Available Events	
IR Sender Irrigation System Keypad Controller Lighting System Media System Messaging Outputs Pool Control Security System Tuner UPS (Uninterruptible Pow Video Controller Video System	Input Turned Off Input Turned On	
		Cancel

- 3. Add a command to flip touch screens to the video feed. Note that you can chose to either flip all touch screens to the video feed (a), or select only specific screens (b).
  - a. Flip all touch screens to the video feed: Add a Command for the touch screens to flip to a certain video feed by choosing Add
     Command and selecting the System Family: Video System, Command Group: (desired camera feed), and Command: All Clients Jump to Tab. In the example below, an Aviosys Video Port will be displayed on all touch screens when the Input is turned on:

Edit Command	×
System Family	Command Groups
Audio Zone Controller Climate System Display DVD Player DVR General System Generic Serial Device Input/Output Input/output Inputs Interface Device IR Sender Irrigation System Keypad Controller Lighting System IMedia System IMedia System Media System Media System Media System Messaging Outputs Pool Control Power Supply	AvioSys Video Port Panasonic BL-C10A Available Commands All Clients Jump To Tab Record Video at 1 Frame/Second Record Video at 5 Frames/Second Record Video at 5 Frames/Second Record Video at 5 Frames/Second Record Video at Frames/Second Record Video at Frames/Second Record Video at Frames/Second Record Video at Full FrameRate Set Exclusive Mode
Security System Tuner Video Controller <b>Video System</b>	
	Cancel OK

b. Flip only a specific touch screen to the video feed: Add a Command for the touch screens to flip to a certain video feed, by choosing Add Command and selecting System Family: General System, Command Group: Client: (desired touch screen), and Command: Jump to Video Tab. In the example below, the front hall touch screen will jump to the Video Tab:

Add Command		x
System Family	Command Groups	
Audio Zone Controller Climate System Display DVD Player DVD Player DVR Generic Serial Device InputS Interface Device IR Sender Irrigation System Keypad Controller Lighting System Media System Messaging Outputs Pool Control Power Supply Security System Tuner Video Controller Video Controller Video Controller Video Controller	Client Front Hall Client Kitchen General System Jump to Climate Page Jump to Home Page Jump to Home Page Jump to Media Page Jump to Media Page Jump to Messaging Page Jump to Messaging Page Jump to Messaging Page Jump to Video Page	•
1	Cancel OK	

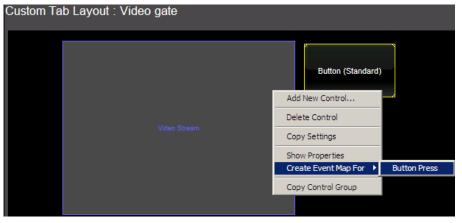
## Exercise 5: Use Relay Outputs to Open a Gate

*Overview* In this exercise, you will use the Relay Output on an ELAN HC-Series Controller to close the contact controlling a powered driveway gate. This exercise works well with Exercise 4 if a button to actuate the relay is placed on the Video Page, so that the homeowner can open the gate after glancing at the Video feed to see who pressed the door bell. This example assumes that you have wired the gate control unit appropriately to the Relay Output, and have created a button on a Custom Tab with the Video feed. Note that the HC Series controllers will have Relay Outputs pre-configured by default.

**Note:** These basic steps can be followed for other contact closures, such as those on the back of a Global Cache.

*How-To* 1. Add an EVENT for the Button Press (assumes using a standard button):

Right-click the button on your Custom Tab and select Create Event
 Map For > Button Press



- b. Name the Event Map "Output: Open Gate" or something similar.
- c. Observe that the Event is pre-populated on this event map, showing the name of the Custom tab, resolution, and button name.

Edit Event Map					X
Name Output: Open Gate			Syste	em # 1	13052
Events (ANY Event Specified can execute co	ommands, if conditions are met)				
Sub-System	Туре	Family		Sys #	Add
Button: (Video gate 800x600)->Button (Sta	Button Press	General S	ystem	13051	
					Remove
Conditions (ALL Conditions specified must be	met for Commands to Execute)				
Sub-System	Туре	Family	Sys #	State	Add
					Remove
Commands (ALL Commands will execute if Ev	vent occurs and Conditions are met)-				
Sub-System	Туре	Family		Sys #	Add
					Remove
					Move Up
					Move Down
	Test All Commands				

If you want to use this event map for multiple resolutions, you can add additional event triggers to this event map directly from System Family: General System: Button Button Name (Resolution): Button Press

Edit Command		×
System Family	Event Groups	
Audio Zone Controller Climate System Display DVD Player DVR Generic Serial Device Input/Output Inputs Interface Device IR Sender Irrigation System Keypad Controller Lighting System Media System Media System	Button: (Video gate 800x480)>>Button (Standard) Button: (Video gate 800x600)>>Button (Standard) Client Default Client ELAN Profile Client HC Series OSD Client HC Series OSD Client HC MelLogic IPad Client Mindowe Available Events Button Press	
Security System Tuner UPS (Uninterruptible Pow Video Controller Video System	Cancel	K 🛛

2. Add a command to close the Relay, which will open the gate. In this example, we are assuming the gate requires the relay to be closed for 3 seconds.

**Note:** You may need to adjust this time, or may not need the delay at all depending on the specific setup.

- System Family: Outputs
- Command Group: Relay Output 1
- Command: Turn Output ON
- 3. Add a command to Delay the next command by 3 seconds:
  - System Family: General System
  - Command Group: General System
  - Command: Delay Execution
  - Time: 3 Seconds
- 4. Add a command to open the relay:
  - System Family: Outputs
  - Command Group: Relay Output 1
  - Command: Turn Output OFF.

dit Event Map				2	
Name Output: Open Gate Sys				13052	
- Events (ANY Event Specified can execute commands, if conditions are met)					
Sub-System	Туре	Family	Sys	#	
Button: (Video gate 800x600)->Buttor	n (Sta Button Press	General S	ystem 1305	1 Add	
				Remarks	
				Remove	
- Conditions (ALL Conditions specified			[		
Sub-System	Туре	Family	Sys # Sta	te Add	
- Commands (ALL Commands will exec				Remove	
Sub-System	Туре	Family	Sys	# Add	
HC12 Controller : Relay 1	Turn Output On	Outputs	1237	Demoure	
Delay Execution	00:00:03:000	General S	ystem 1041 1238		
HC12 Controller : Relay 1	Turn Output Off	Outputs	1238	Move Up	
				Move Down	
	Test All Com	mands			

## AV Macro Examples

*Overview* You can use the Event Mapper to create macros to automate a variety of A/V functions. This section presents examples of some common macro functions.

**Note:** Use this section for examples and ideas, but bear in mind it is not a comprehensive list of possible functions.

PoweringThe following text uses the example of turning on a DVD Player, but the stepsOn abelow can be used with any Source Interface. Event Maps may also be used to turnSourceoff IR, Generic Serial, or sources with built-in drivers.

 In Configurator on the Media tab, right-click the DVD Player interface under Keypads and Interfaces and select Create Event Map For > Selected into one or more Zones.

Lighting	- ELAN S8.6 A		
Media		(0 201103)	
Messaging	E Keypads and Int     DVD Player	terfaces	
Video	Cable     Interface Templ	Add New Interface Delete DVD Player	
Irrigation	Interface Group	Import From File Export to File	
		Create Event Map For 🔸	Selected into one or more Zones
Pool Control			Not Selected in any Zone

 Add a command to send the Power On Serial Code to the DVD Player. Click Add next to the Commands box, then select System Family: Generic Serial Device. Scroll to the correct Serial Code and select Send Via Default Device.

Interfa Edit E	vent M	Add Command		×	×
Name		System Family	Command Groups		
Securi	nts (ANY	Audio Zone Controller Climate System	DVD Player: Menu DVD Player: Open_Close	•	
	b-System D Player	Display DVD Player DVR	DVD Player: Pause_Step DVD Player: Play DVD Player: Play DVD Player: Plus 10		Add
Lightin		General System Generic Serial Device Input/Output	DVD Player: Power Off DVD Player: Power On DVD Player: Power Toggle		Remove
	iditions (4	Inputs Interface Device	DVD Player: Repeat	•	
Messa	b-System	IR Sender Irrigation System Keypad Controller	Available Commands Send via Default Device Send via Device		Add
Video		Lighting System Media System			Remove
Irrigati	nmands (. b-System	Messaging Outputs Pool Control			Add
Pool C		Power Supply Security System Tuner	-		Remove
Input/C		Video Controller Video System			Move Up
UPS	_				fove Domm
Event mapp		1	Cancel OK		

3. Whenever the DVD Player interface is selected, the g! software will automatically send an IR command to the DVD Player to Power ON.

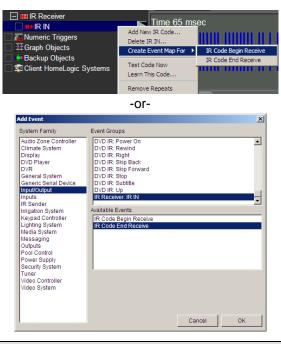
**Note:** You may wish to also program a second Event Map to perform the inverse. Use the steps above to create an Event Map to Power Off the DVD Player when it is "not selected in any zones". React toBy using an IR receiver such as the Global Cache IRE, the g! software can triggerIR inputevents off the reception of specific IR codes.

IR input for Event Map Triggering:

- 1. Add your IR Receiver as per its Integration Note.
- 2. Add an IR Device and learn the IR code(s) you wish to use to trigger the event. If possible, learn the IR through the same method IR will come in to trigger the event.
- 3. Edit the IR Device properties and set **Decode IR from this device** to **Yes**.

Input/Output     Scommunication Devices	IR Device : IR Receiver		
🛨 🖞 Input Controllers	Name	IR Receiver	
Controllers     Generic Serial Devices	System #	2910	
	Default Sender	< SELECT >	•
	RC5 Codeset	No	-
= IR Devices	Decode IR from this device	Yes	-
	Tuning Type	Cable (Type 1)	•
III IR Receiver	Minimum Digits (0 Padding)	0	-
Numeric Triggers	Pre-Tune Command	< NONE >	-
Graph Objects     Backup Objects	Post-Tune Command	< NONE >	•
Sector Objects	Delay Between Commands	250 msec	•

4. Either right-click on the desired IR code and Add an Event Map for IR Code Begin Receive or go to the Event Mapper tab and add a new event with the trigger: System Family: Input/Output, the IR Device: IR Code, and IR Code Begin Receive.



**Note:** The above example assumes a single IR code input to trigger a single event in the g! software, you can choose either IR Code Begin Receive or IR Code End Receive. However, if you were to input IR continuously, such as with a volume control or a light dimmer, Begin Receive allows you to set an Event Map when the button is *pressed*, and End Receive allows you to set a different event map for when the button is *released*.

5. Add commands to the event as desired.

- All Off: This exercise demonstrates how to use an event map to turn off multiple devices. In this example, you will turn off all audio sources whenever no zones are active on the zone controller.
  - 1. In Configurator, on the **Media** Tab, right-click the name of the zone controller. Select **Create an Event Map For > All Zones Turned Off**.

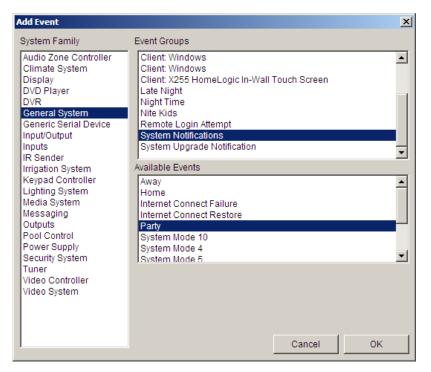
Lighting	- Audio Zone Controlle		
Media		Add New Audio Zone Controller Delete ELAN S8.6 AV (6 Zones)	
Messaging	📃 🧧 Keypads and Interfa	Bonnioda carrent betangs	
Video	+ DVD Player + Cable	Create Event Map For	One or More Zones Turned On All Zones Turned Off

2. Add commands to turn off the various sources.

me ELAN System12 (8 Zone):Al		-,	
	xecute commands, if conditions are met)		
Sub-System	Туре	Family Sys#	Add.
LAN System12 (8 Zone)	All Zones Turned Off	Audio Zone Contr 4016	
		Re	emo
			_
Conditions (ALL Conditions specifie	d must be met for Commands to Execute)		
	Type	Family Sve # State	
Sub-System	Туре	Family Sys # State	Add.
Sub-System	Туре	Family Sys# State	Add.
Sub-System	Туре		
Sub-System	Туре		Add.
Sub-System	Туре		
	Type	R	
Commands (ALL Commands will ex	ecute if Event occurs and Conditions are met)	R	'emor
Commands (ALL Commands will ex Sub-System	ecute if Event occurs and Conditions are met)	Family Sys#	(emor
Commands (ALL Commands will ex Sub-System JVD IR: Power Off	ecute if Event occurs and Conditions are met) Type Send IR via Defaut Device	Family Sys# R Sender 3260	emor Add.
Commands (ALL Commands will ex Sub-System	ecute if Event occurs and Conditions are met)	Family Sys#	emor Add.
Commands (ALL Commands will ex Sub-System JVD IR: Power Off	ecute if Event occurs and Conditions are met) Type Send IR via Defaut Device	Family         Sys #         7           R Sender         3260         R           Tuner         3441         R	Add.
Commands (ALL Commands will ex Sub-System JVD IR: Power Off	ecute if Event occurs and Conditions are met) Type Send IR via Defaut Device	Family         Sys #         7           R Sender         3260         R           Tuner         3441         R	Add.
Commands (ALL Commands will ex Sub-System JVD IR: Power Off	ecute if Event occurs and Conditions are met) Type Send IR via Defaut Device	Family         Sys #         Image: Constraint of the system           R Sender         3260         R           Tuner         3441         M	

PartyIn this example, you will configure an additional System Mode to be used to set the<br/>house for a party. In this event map, you will use the Whole House Music function<br/>built into the Elan S-12 Zone Controller, but it is possible to also configure a similar<br/>function by editing individual zones.

- 1. Add a New System Mode named Party Mode, and place a System Mode button on a Custom Tab or Home Page to activate the Event Map. Please see Lesson 13, *Interfaces: GUI and TS2* for details.
- 2. Configure Lighting and Climate scheduling information as desired.
- 3. Add a New Event Map and name it Party Mode or similar.
- 4. Add an Event from System Family: **General System**, Event Groups: **System Notifications**, and choose the **System Mode Party Mode**.



5. Add Commands as desired. For example, turn on the XM radio, select the XM Radio source, set volume on a particular zone, and then enable Whole House Music Mode for the S-12.

Commands			
Sub-System	Туре	Family	Sys # Add
Elan XM-R3 Tuner	Turn Tuner On	Tuner	3125
Zone 1	Set Source to Source 02	Audio Zone Controller	1882 Remove
Zone 1	Set Volume To 60	Audio Zone Controller	1878
Zone 1	Set Option Whole House Mode On	Audio Zone Controller	1835 Move Up
			Nove Down

## Notes:

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## Notes:

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