ELAN®

Integration Note

Manufacturer:	Nuvo
Model Number(s):	**Essentia E6G**
Core Module Version:	4.0 Build 1452.0 or newer 6.0.236 and newer includes zone controller integration only, no virtual keypads for source control.
Comments:	Nuvo Essentia E6G FW v2.29, HWv00
Document Revision Date:	1/17/2013

OVERVIEW AND SUPPORTED FEATURES

THE FOLLOWING FEATURES ARE SUPPORTED:

Traditional Whole-House Audio: The Essentia six-source six zone Audio Zone Controller has keypads in each zone that control the volume and source.

Support for IR: The Essentia has IR outputs that can provide signals to each of the sources, enabling transport control (Play, Pause, Stop, etc) for equipment that has IR control. The Essentia has a built-in library of existing codes, as well as the ability to learn codes. These codes are supported through the Virtual ControlPad in the **g!** system.

Support for Nuvo Sources (up to v5.9): The Nuvo T2 tuner, M3 Server, and the NuvoDock sources are supported through the NuvoNet network using the interface from a Virtual ControlPad in the **g!** system. The Virtual ControlPad provides a representation of a real Nuvo keypad on the **g!** interface.

Display: The Virtual ControlPad keypads have a display that normally shows the name of the source, volume level etc. When playing audio from the **g!** system, the track information is displayed.

Multiple Chassis: The Nuvo Expansion Chassis is supported for a total of 12 audio zones.

Party Mode: Party mode can be initiated from a concerto Virtual ControlPad.

THE FOLLOWING FEATURES ARE **NOT** SUPPORTED:

Virtual Keypads for source control (v6): source control via virtual keypads is not supported in version 6.0.

Multiple Chassis: If multiple chassis are used, the Virtual ControlPad may be displayed in only four zones at any given time.

IR Through Custom Interfaces: The **g!** system can NOT send IR commands to the Essentia directly through Event Mapping. IR can only be sent using the Virtual ControlPad.

OSD/HR2/TS2 Controllers: The **g!** software On-Screen Display, HR2 and the TS2 **WILL NOT FUNCTION CORRECTLY** with this zone controller's source devices and is specifically **NOT** supported.

Source control in an "output from zone" configuration: virtual keypads for source control will not work unless they are directly in a Russound zone. They will not work when a zone from Russound is configured as a source in another zone controller.

Any feature not specifically noted as supported should be assumed to be unsupported.

The interface shown on the Viewer for sources to an Essentia depends on the source type.

- For sources with standard two-way serial control, the **g!** interface for the device will be displayed.

- For NuvoNet sources not controlled by RS-232 connections such as the NV-M3 3-Source Music Server or the NV-RIPD IPOD dock, the display will resemble the Essentia ControlPad interface and two-way feedback will be provided by the Essentia.

Note: Use of a virtual keypad when connecting to the Nuvo via SerialBrick is not supported at this time.

INSTALLATION OVERVIEW

1. During the rough-in phase, install speaker wire for the speakers and Cat5 cable for keypads, in each zone.

2. Also during the rough-in phase, run a Cat5 wire from the location of the zone controller back to the Network Assembly of the **g!** system for RS-232 communications. Refer to the *RS-232 Connection Options Integration Note* for other options.

3. Mount the speakers and keypads in each zone, and install the zone controller and the sources.

4. Program the Essentia using the NV-18G NV-E6G Configurator. This includes setting the number of sources, the names and input numbers for each source, and default behavior for all the zones. See the **Essentia Programming** section for more information.

5. Test the entire Essentia system on its own to ensure that all the sources play correctly in every zone, and that the keypad buttons behave correctly from the keypads.

6. If the system includes one or more NuvoNet device (such as the NV-M3 Music Server), they should be connected to the Essentia with NuvoNet according to the standard Nuvo procedure.

7. Connect the **g!** system to the Essentia system electrically. See the wiring diagrams for more information.

8. Configure the **g!** system for the Essentia and confirm communication between it and the **g!** system controller.

9. Test the system by changing sources in a zone to confirm the correct source plays, and by testing the **g!** interface transport control and media server controls.

CONNECTION DIAGRAMS
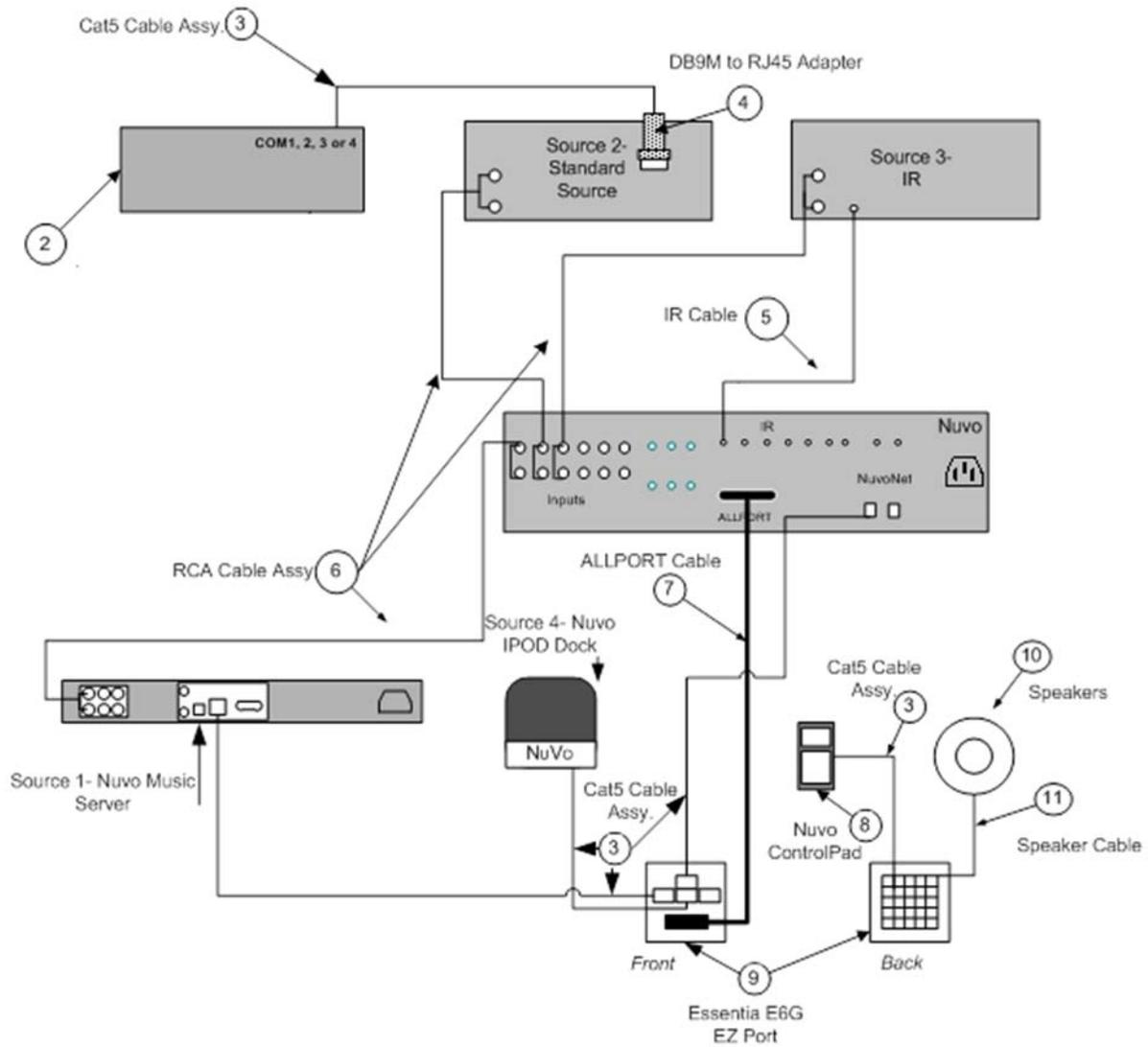
BILL OF MATERIALS

#	Device	Manufacturer	Part Number	Protocol	Connector Type	Notes
2	Controller	ELAN	Various (e.g. HC12)	RS-232	RJ-45 Female	
3	Cat5 Cable Assy.	Installer	N/A	RS-485, RS-232	RJ-45 Male X Punch Down	
4	DB9M to RJ45 Adapter	ELAN	HA-CB-307	RS-232	DB-9 Male X RJ-45 Female	
5	IR Cable	Any	N/A	Analog (stereo)	Mini to Emitter/Mini to Mini	Mini to Emitter: P/N: NV-VEC (Nuvo)
6	RCA Cable	Any	N/A	Analog	RCA X RCA	
7	ALLPORT Cable	Nuvo	NV-E6GAPC	NuvoNet	40 Pin	
8	Nuvo Essentia G ControlPad	Nuvo	NV-E6GCP-DC	NuvoNet	RJ-45 Male X RJ-45 Male	
9	Nuvo Essentia G Allport	Nuvo	NV-E6GMAP-DC	NuvoNet	RJ-45 Male X RJ-45 Male	
10	Speakers	Any	N/A	Analog	Wire	
11	Speaker Cable	Any	N/A	Analog	Wire	

ESSENTIA PROGRAMMING

Once the equipment is installed and connected you must program the Essentia using the Nuvo Configurator Software according to Nuvo guidelines. Special steps that relate to **g!** are provided below.

Note: Program the Essentia by connecting to a true COM port, as the Nuvo Configurator Software will not establish a connection to the Nuvo when used over a USB-to-Serial connector. Once configured in Nuvo, the Essentia may be controlled over USB-to-Serial connectors.

SOURCE INPUTS

The source input devices set up in the Nuvo Essentia Configurator must match the Essentia's source set up in the **g!** Configurator, as well as the physical connections to the Essentia itself.
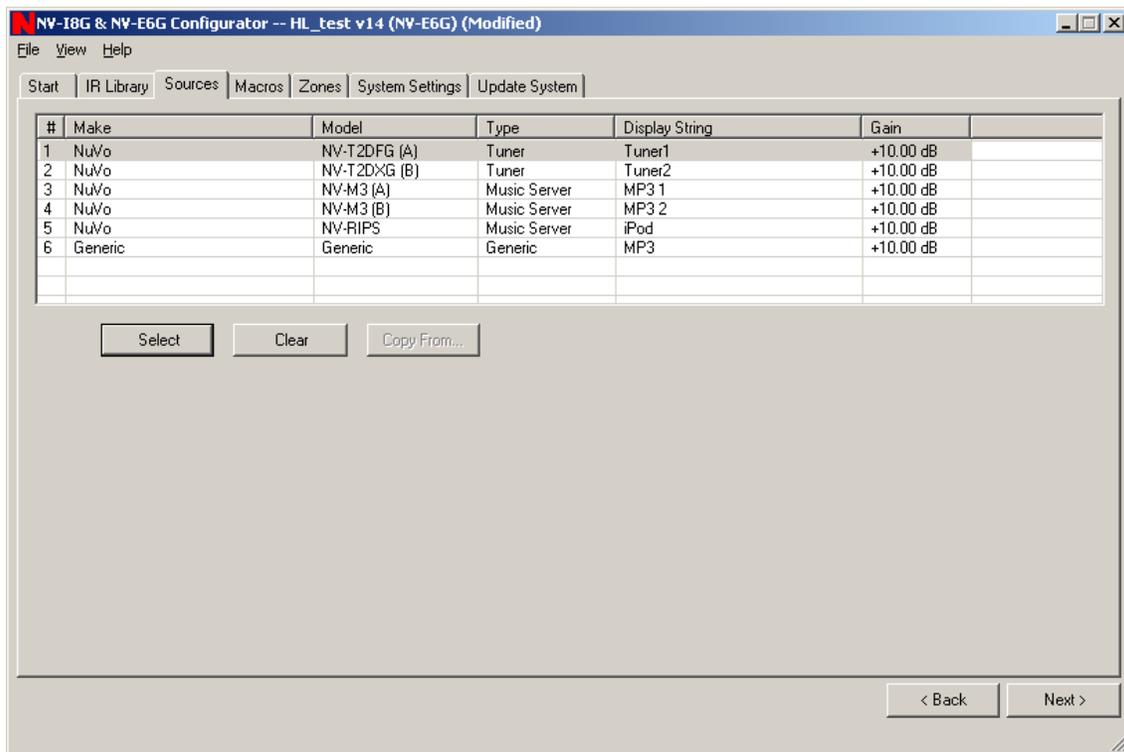
Add sources to the Essentia in the Nuvo software by choosing the source tab, then selecting the input number and clicking the select button.

Note: The **g!** software will not read source and zone information from the Essentia. Source and Zone information must still be added manually in the **g!** Configurator.
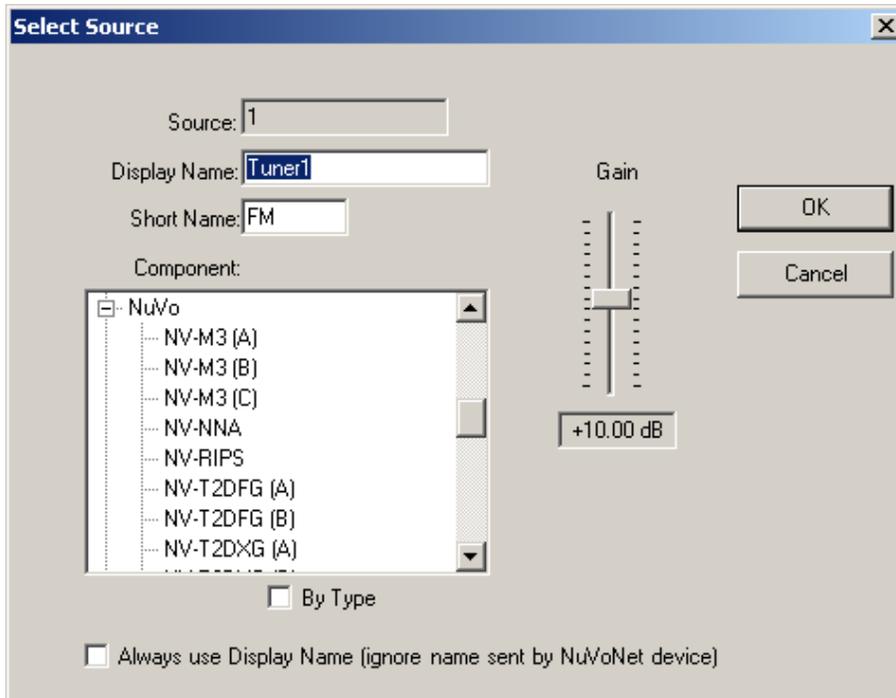
Fill in the Display Name and Short Name for the source, and then choose the nearest match for the component from the component list. The Gain can also be set here for input level matching. Click OK, and repeat for each additional source.

ZONE OUTPUTS

Configure the Zone Outputs in the Nuvo software by selecting the Zones tab, then choose the zone number to be configured and click the "Edit" button.
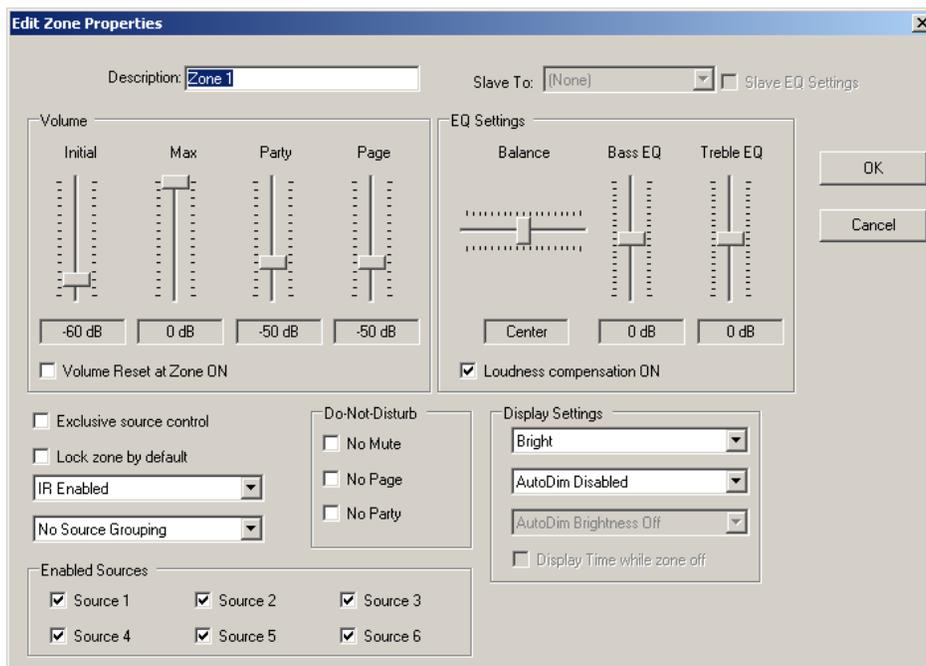
Fill in the Zone Description and make any adjustments to the sound and keypad levels that are necessary.

CONFIGURING THE g! SOFTWARE

SETTING UP THE ESSENTIA

In the g! Configurator, select the Media tab. Add the Communication Device for the Essentia using Serial Port/ Standard Connection. Add the Essentia itself as an Audio Zone Controller and select the Communication Device added in the last step.

SETTING UP NUVONET DEVICES

Certain Nuvo Devices, such as the NV-M3 Music Server and the NV-RIPD IPOD dock, communicate directly with the Essentia using NuvoNet, bypassing the **g!** system. These devices can still be controlled and provide the **g!** software with feedback by configuring **g!** to emulate an Essentia ControlPad. Follow the steps below to set up this feature. These devices will not use the standard **g!** interfaces. The emulation imitates a NuvoNet Keypad.

Note: When setting up keypads to control Nuvo sources, you must create a keypad for **each** source.

ADDING A KEYPAD

Add the Essentia ControlPad in the Media tab by right clicking "Keypads and Interfaces" and choosing the "Add New Interface" option. Type a name for the keypad in the space provided. Leave "Create from Template" set to <NONE>, and choose <ACTIVE ZONE HANDLER> from the "Connect to Device" drop-down.
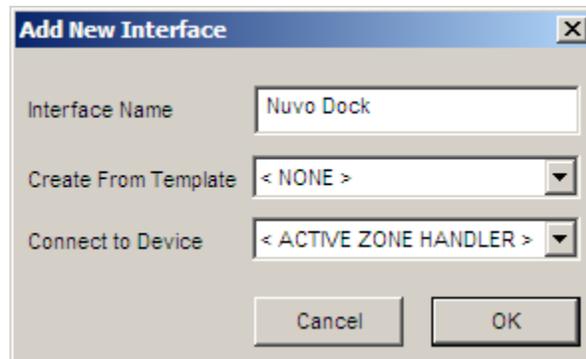
Click the "+" to the left of the new keypad interface to expand the view and show the five available layouts. Click the "800 x 600 Layout (Touchscreen)" option to display the blank interface page.

Right click anywhere in the blue field on the right and choose "Add New Control". From the list, choose "Audio Zone Keypad":
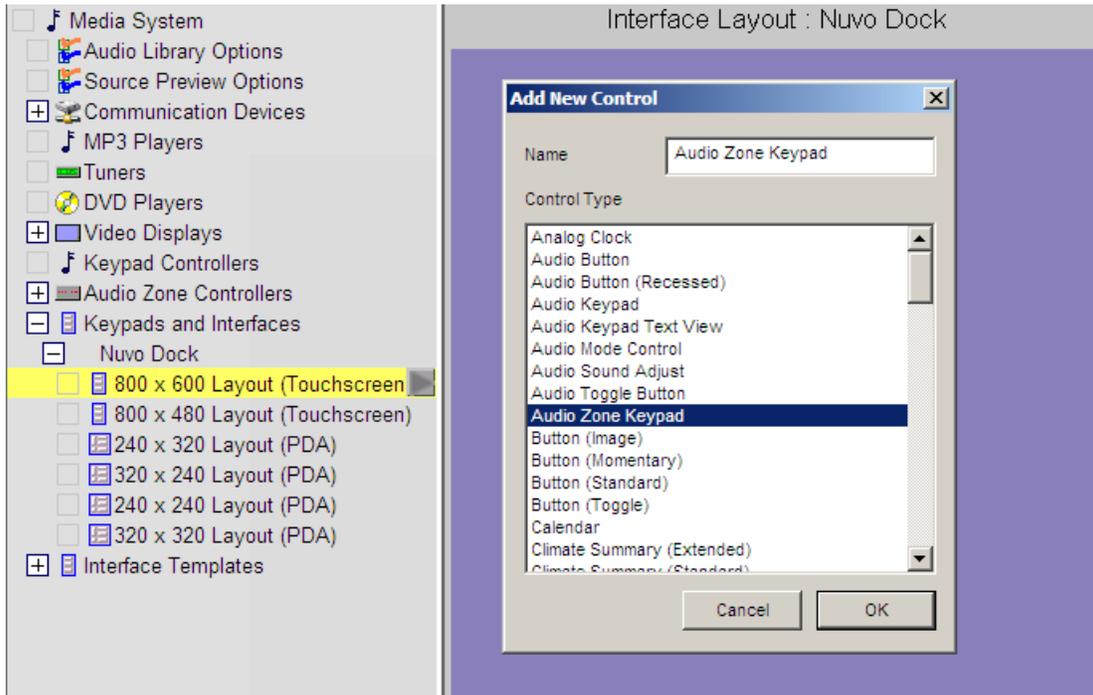
Click the small blue box that was added to turn the boarder yellow and allow resizing. Stretch the edges of the box to mostly fill the page. As always, leave a slight purple border around controls on a custom interface.
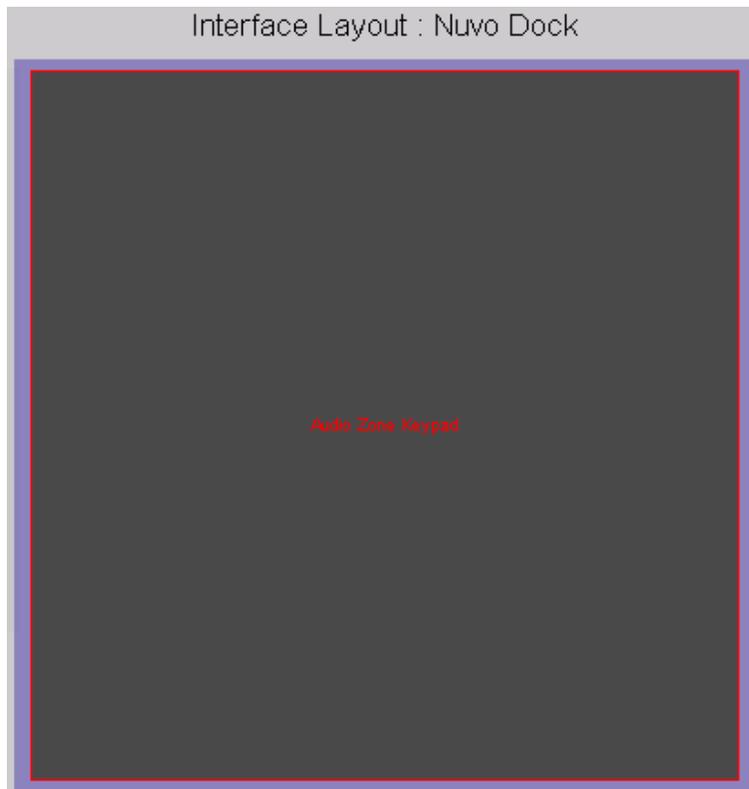
In the Audio Zone Keypad Properties window, select the text size drop down and choose "Auto" from the top of the list. Copy the completed interface to all other resolution settings that will be used in the system.
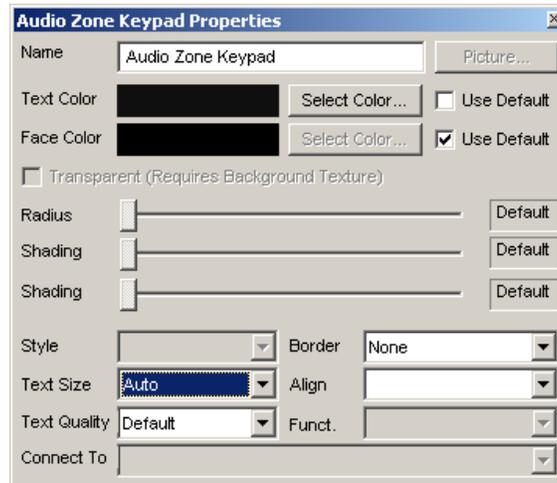
Note: To get the Audio Zone Keypad to appear on touch screens using other resolutions (such as 800x480 for Profile 700's), right-click on the other resolutions being used and choose "Copy From 800x600". Since the Audio Zone Keypad automatically maps to Active Zone Handler, there is no need for further programming.
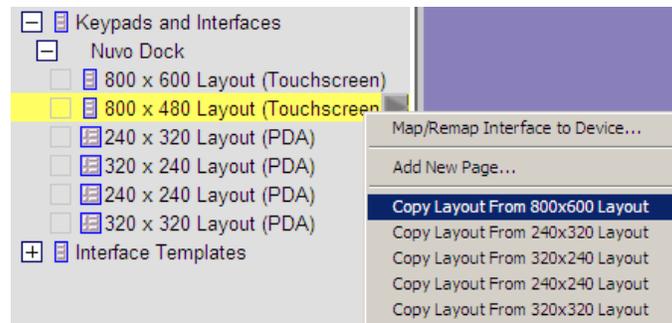
Next, add the keypad as a source to your Essentia in place of any sources controlled by the NuvoNet. Choose an Icon for the source, and change the Display Name to reflect the nature of the source:
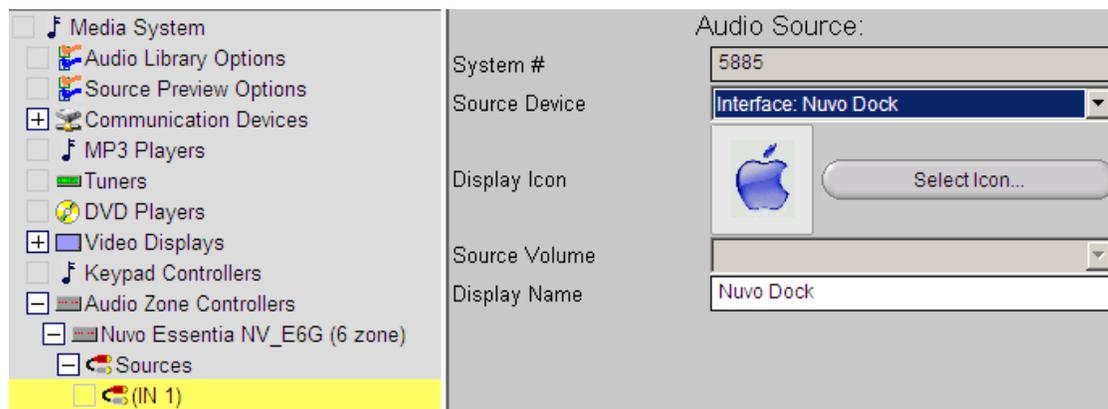
IMPORTANT! Source Input must match input programmed into Nuvo.

g! CONFIGURATION DETAILS

The following table provides settings used in the **g!** Configurator when connecting to an Essentia system. Please refer to the **g!** *Configurator Reference Guide* for more details.

In the table below:

- "<Select>" Select the appropriate item from the list (or drop-down) in the Configurator.
- "<User Defined>", etc. Type in the desired name for the item.

Devices	Variable Name	Setting	Comments
Communication Devices	**Name**	<User Defined> (Default: **Nuvo Essentia**)	
	Type	**Serial Port**	
	Communication Type	**Standard Connection**	
	Location	<User Defined> (Not Required)	
	Com Port	<Select>	
Audio Zone Controllers	**Name**	<User Defined> (Default: **Nuvo Essentia NV_E6G**)	Select 6 or 12 zones as appropriate.
	Device Type	**Nuvo Essentia NV_E6G**	
	Location	<User Defined> (Not Required)	
	Comm Device	<Select> (Default: **Nuvo Essentia**)	
Sources	**Name**	<User Defined>	
	Source Device	<Select> <User Defined>	
	Source Volume	<Select>	
	Show Source	<Select>	
Zones	**Name**	<User Defined>	
	Show Zone	<Select>	
Keypads and Interfaces			Add a keypad and a control for an **Audio Zone Keypad**

COMMON MISTAKES

1. Improper programming of the Essentia. Make sure you complete programming of the Nuvo equipment, and that it functions properly as a stand-alone system, before attempting to connect and control from the **g!** system.

2. Source number mismatch from Essentia configuration to g! Configurator. Make sure that the source input configuration is the same in **g!** Configurator as in the Essentia configuration to ensure the keypads in **g!** match the source selected on the Essentia.
(I.E. Nuvo config: source 1 AM/FM; **g!** config: source 1 AM/FM)

3. Not adding a virtual keypad for each Nuvonet source. Each Nuvonet source (iPod dock, M3 server etc.) must have its own keypad configured for source control.