

# QLink Help File

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## Welcome to QLink Version 4.82

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Welcome to QLink™ software help. We would like to hear from you if you have any suggestions to make this a better product. For questions or suggestions, please email us at [vtechsupport@vantagecontrols.com](mailto:vtechsupport@vantagecontrols.com).

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**Click on Objects in the Window Below for More Information**

{bmc bm1.SHG}  
Title Bar

File Menu

[Tool Bar](#)

[Status Bar](#)

Reference Manual:

[Getting Started](#)

[System Connections](#)

[Serial Communications](#)

[Diagnostics](#)

[Appendix A: Definition Boxes](#)

[Appendix C: Serial Communications](#)

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[Creating A New Project](#)

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[Appendix B: Event Programming](#)

[Appendix D: Trouble Shooting](#)

[Appendix F: Advanced Programming](#)

[V-Commands](#)

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Steps to Set Up a Vantage System:

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[Getting Started](#)

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- 1) [Define](#)
- 2) [Program](#)
- 3) [Configure Stations](#)
- 4) [Connect/Program](#)

Miscellaneous:

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- 1) [Run diagnostics](#)
- 2) [Print](#)
- 3) [Advanced Programming](#)
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## Getting Started

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### Vantage Controls

Vantage Controls, headquartered in Orem, Utah, designs and manufactures computerized control and dimming systems using conditional logic to automate lights, fans, pumps, thermostats, audio/video equipment, security systems, sprinklers, motorized drapes/blinds/doors and more. All these are integrated into various scenes (simple to complex programs) that execute on a regular schedule or when activated by sensors and buttons.

For commercial applications, the Vantage Automation System provides total control over lighting and customizable lighting scenes, security, audio/video, heating/cooling, draperies, pumps, fountains, motors and more. Because a Vantage Automation System is completely scalable, these components can be managed in buildings of any size.

For residential applications, the Vantage Automation System provides total control over every feature of a home from a single location integrating lighting, security, audio/video, heating/cooling, fountains, draperies, and many other household components. Customizable keypads are incorporated and each keypad button is capable of setting a particular "scene" that can trigger several actions with a one-button press. For example, a button labeled "Morning" can slowly raise lights, turn on a shower, and increase a thermostat to a comfortable temperature. A button labeled "Night" can raise exterior lighting and arm a security system. Each scene can be custom programmed to fit individual lifestyles.

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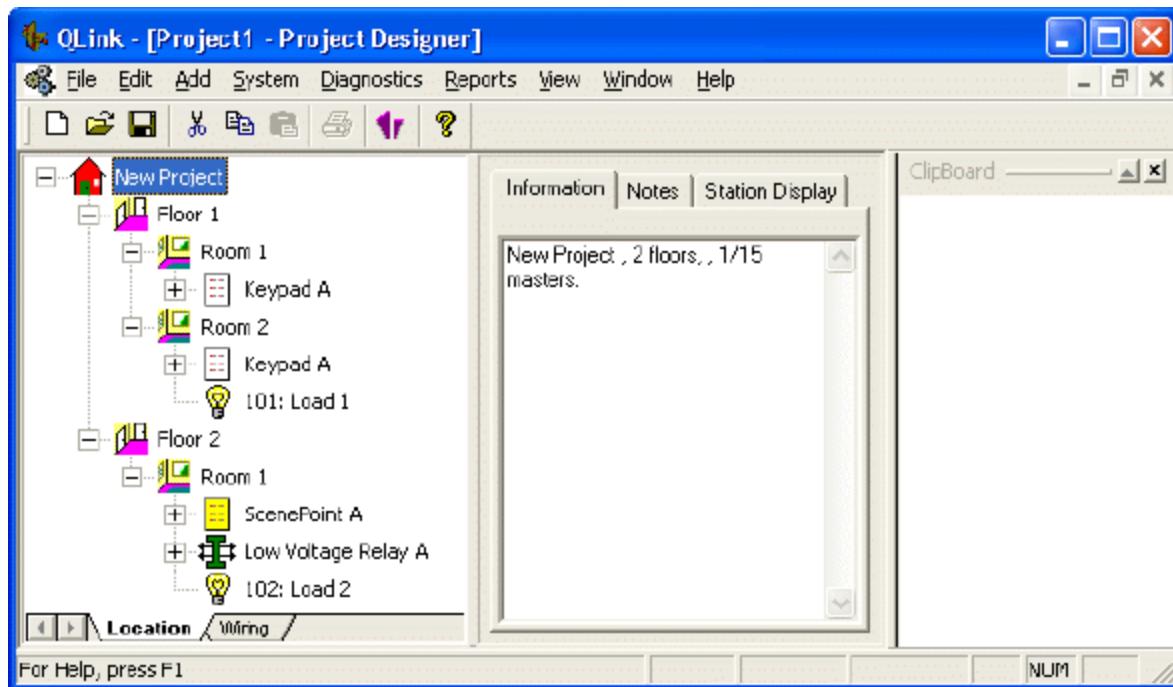
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## QLink

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QLink is the Vantage software that graphically presents the physical layout of installed automation system hardware along with the management of their operations. QLink simplifies the design, layout, programming, diagnostic and reporting capabilities of a Vantage System and offers powerful features, ease of use, and a high level of control over a wide range of installations.

The following figure displays the QLink layout of a Vantage system. Note the graphical representations and sequential numbering of each floor, room, station type, device, and load.



**Figure 1:** The layout of a Vantage system displaying installed hardware devices by floor and room.

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## Installation Prerequisites

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The following software and hardware is necessary to successfully install and run QLink:

- Microsoft Windows 2000, or XP
- Pentium Processor or equivalent running at 266MHz or faster
- Minimum 128 MB of RAM
- Minimum 100 MB of available hard disk space

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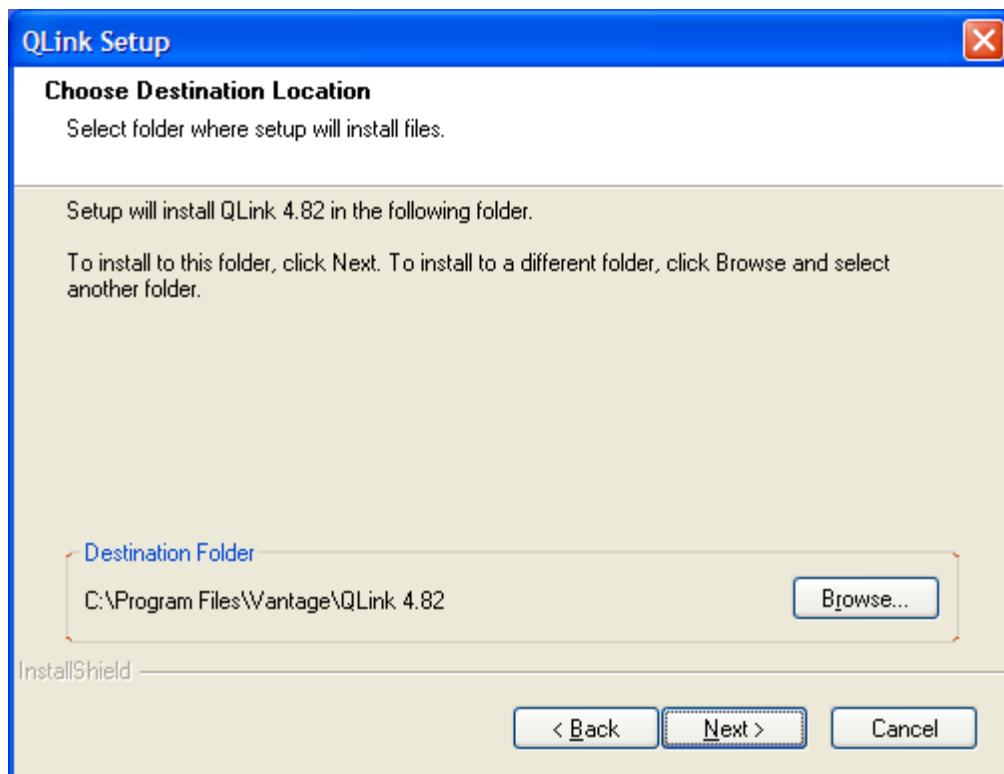
## Installation

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The QLink program ships on a CD-ROM; however, it may also be downloaded from the Vantage web site. If QLink is downloaded from the Vantage web site, when the downloading is complete, double-click the downloaded file to begin the setup process. The downloaded file may be deleted after installation.

If Auto Insert Notification is enabled on your system's CD Rom drive, the QLink setup program will start automatically when the QLink CD is inserted. If not, enable Auto Insert Notification or run the QLink Setup.exe file located on the QLink CD using the Windows Run command. The Run command is located on the Windows Start menu.

Follow the on-screen prompts. When prompted to choose a destination folder, it is recommended to choose the default location of \\Program Files\\Vantage\\QLink 4.82

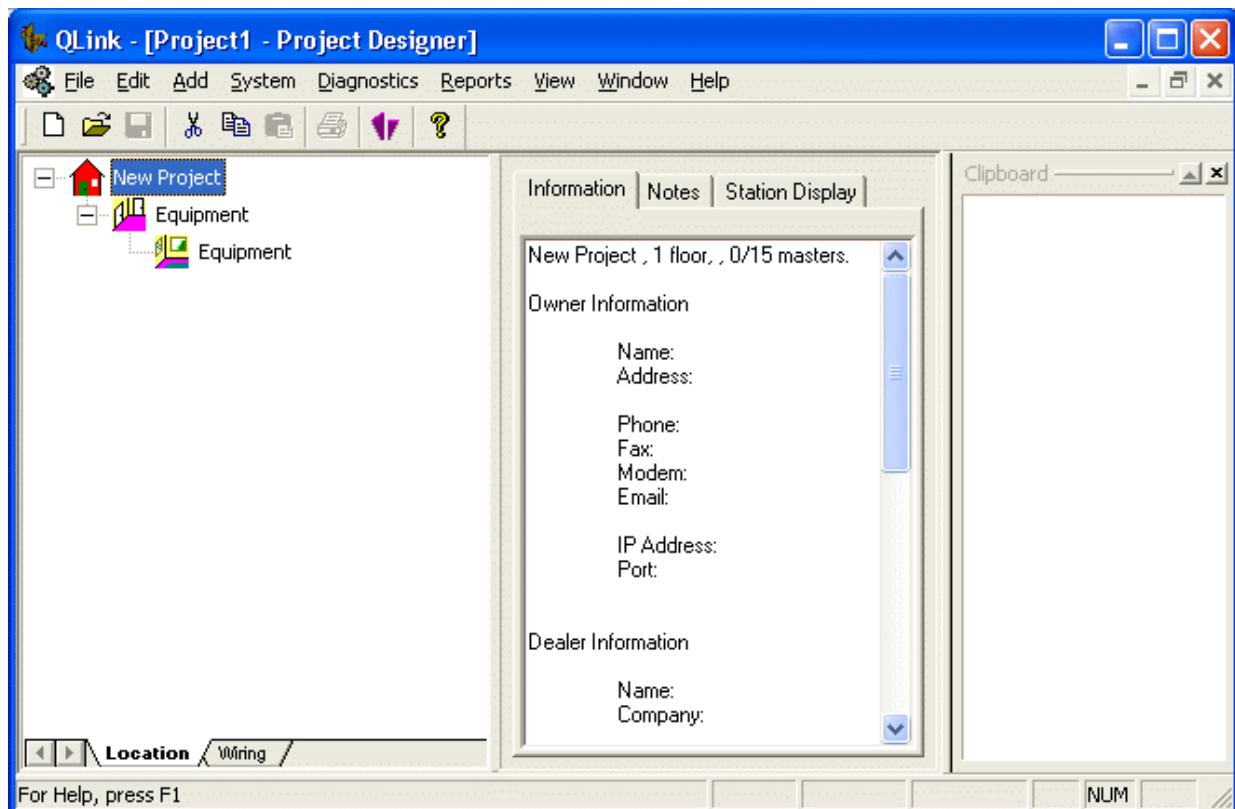


**Figure 2:** The Destination Folder dialog box.

After the installation has completed, the Setup Complete dialog box opens. Click Finish to close the Setup Complete dialog box and return to the Windows Desktop.

#### Starting QLink

The QLink setup program places a shortcut on the Windows desktop. To start QLink, double-click the shortcut. The Project Designer screen opens.



**Figure 3:** The opening Project Designer window.

A number of elements are present in the opening Project Designer screen. The following sections will explain the project designer screen, menu bar, tool bar, and the commands located under each bar and their functions.

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## Project Designer

All aspects of the QLink program are controlled from the project designer window. The project designer is composed of three sizable windows: the Project Designer window, the Project Information window, and the QLink Clipboard window. The project designer contains the following elements.

<u>Screen Element</u>	<u>Description</u>
<b>Title Bars</b>	Displays the name of the current project. The Title Bar provides minimize and maximize ability to the active screen and an icon for closing the program. The Project Designer title bar performs the same functions in the Project Designer window.
<b>Menu Bar</b>	Displays all available menus and their related commands.
<b>Tool Bar</b>	Displays commonly used commands in icon form.
<b>Project Designer</b>	Displays information about the current project.
<b>Project Information</b>	Displays information about loads, stations, installed components and their configurations in each floor and room.
<b>Clipboard</b>	The Clipboard is a small storage or buffer that stores any item cut or copied from the Project Designer window. Items can be cut (moved) from the Project Designer window, stored in the Clipboard, and then copied to other locations. When exiting QLink, any information stored in the clipboard will be deleted.
<b>Location/Wiring Tabs</b>	Provides two views: Location and Wiring. Location view displays the project's structural layout, which includes floors, rooms, and the location of hardware devices installed in or assigned to each room. Wiring view displays the wiring of hardware components such as the master controller, master enclosure, connected modules and their loads, defined IR zones, time controls, string controls, and the wiring of other installed hardware devices.

**Note:** Location view is the default view. Wiring view will change some of the menu commands. Masters, enclosures, modules, time controls, string controls and IR zones will only be accessible in Wiring view.

**Status Bar**

Displays a brief explanation of any command on the menu or tool bar as it comes in contact with the mouse pointer.

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## System Addresses

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An address is how each master, enclosure, module, station, etc. is identified on the Vantage System. Masters, modules and stations are each addressed differently. Below is a description of how each is addressed.

<b><u>Node</u></b>	<b><u>Address Description</u></b>
<b>Masters</b>	Two rotary switches on the Master Terminal Board are set to the appropriate address. Viable addresses are from 1 to 15.
<b>Enclosures</b>	The enclosure address is the number of the Master followed by the number of the enclosure. Viable addresses are from (1 - 1) to (15 - 4)
<b>Modules</b>	The module address is the number of the Master followed by the number of the enclosure followed by the number of the module in an enclosure. The top module is address 1. The bottom module is address 4 in a four module enclosure or address 2 in a two module enclosure. Viable addresses are from (1 - 1 - 1) to (15 - 4 - 4)
<b>Loads</b>	The load address is the number of the Master followed by the number of the enclosure followed by the number of the module followed by the number of a load on a module. Module loads are 1 - 4 on the left and 5 - 8 on the right. Viable addresses are from (1 - 1 - 1 - 1) to (15 - 4 - 4 - 8)
<b>Stations</b>	All stations come preprogrammed with an address. This address is printed on the label of each station and is referred to as the serial number. This serial number is a 24-bit quantity and is sometimes referred to as the 24-bit address of the station. They also have a system address or 6-bit address which is the number of the Master followed by the number of the station. The system address is from 1 - 50 for wired stations and from 65 - 124 for RF stations. Viable addresses for wired stations are from 1 - 1 to 15 - 50 and for RadioLink stations 1 - 65 to 15 - 124.
<b>Others</b>	Many other nodes use similar addressing. For example a Zone Control, String Control, or TimeControl would have the beginning address of 1-1, which is the Master number and the number of the specific node.

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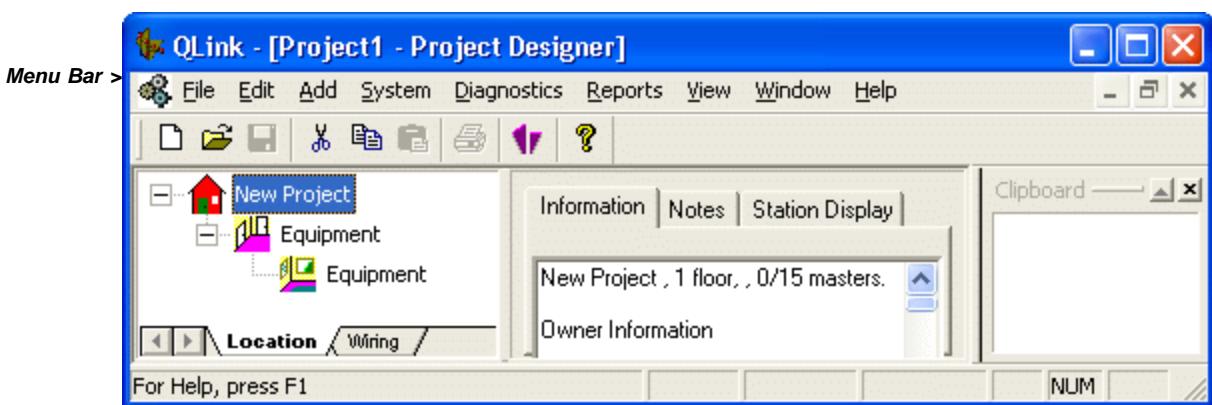
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## Menu Bar Commands

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The QLink Menu Bar contains nine separate pull down menus as shown in the following figure. Each menu contains a list of related commands.



**Figure 4: The QLink menu structure.**

When using menu commands, note the following:

Next to some of the commands statements are keyboard shortcuts like Ctrl+N, Ctrl+O, and Ctrl+F4 that may be used to accomplish the same result as clicking the command with the mouse.

An ellipsis (...) after a command indicates that another screen will open requiring input to complete the command.

The right triangle symbol indicates that another menu will open with related selections when tracing over it. Tracing is the act of moving the mouse pointer over a menu selection without clicking. A selection from the secondary menu must be made to complete the command.

A menu selection that is grayed out indicates that the command is not available until a related action is performed or additional components are in place in the program.

A check mark in front of a menu item indicates that the item is selected or enabled. For example, by default under the View menu, all selections are checked, indicating that all view categories will be visible.

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## File Menu

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### File Menu

The File menu contains the following commands:

<u>Menu Command</u>	<u>Keyboard Shortcut</u>	<u>Description</u>
New	Ctrl+N	Creates a new project. Each project will have its own Project Designer window. Multiple projects can be open simultaneously, but only one will be active. Clicking anywhere in another Project Designer window will activate that project or click
<a href="#"><u>Open</u></a>	Ctrl+O	Opens a previously created QLink project. By default, QLink project files are saved with a .qlk file extension.
Close	Ctrl+F4	Closes a project. A prompt to save any changes will appear upon closing if changes have not previously been saved.
<a href="#"><u>Save</u></a>	Ctrl+S	Saves any changes made to a project. If a project is opened and no changes are made, the Save command will be unavailable. It will only be available once a change is made.
<a href="#"><u>Save As</u></a>	N/A	Save an open project with a different name, and if desired, to a different folder location.
<a href="#"><u>Connect</u></a>	Ctrl+Q	Connects the active project to a Vantage system. If this command is clicked, the Connect dialog box opens. This dialog box contains options for the System, Backup Flash, Connection Device, and Com port.
Connect	N/A	Specifies if the connection to a system will be a direct connection or a remote (modem) connection.
Setup		
<a href="#"><u>Print Setup</u></a>	N/A	Opens printer options dialog.
<a href="#"><u>Print Preview</u></a>	N/A	Previews reports prior to printing. This command becomes enabled after a report has been selected on the Reports menu.
<a href="#"><u>Print</u></a>	Ctrl+P	Prints generated reports.
<a href="#"><u>Design Preferences</u></a>	N/A	Defines default load and module types., line feed settings, and load numbers.
<a href="#"><u>Create Pricelist</u></a>	N/A	Creates a dealer/distributor price list for the active project. The price list is based on an authorized discount for dealers and distributors.
Export Engraving	N/A	Exports the button engraving as a text file.
IR Learner	N/A	Starts the IR Learner software. Note, the IR Learner software must be installed. Additional Help is available from the IR Learner software.
Send	N/A	QLink will e-mail the Project file automatically.
Previously Opened Files	N/A	Maintains a list (up to 4) of the most recently worked on files. Click on one to open the QLink file directly.
Exit	N/A	Exits the QLink program.

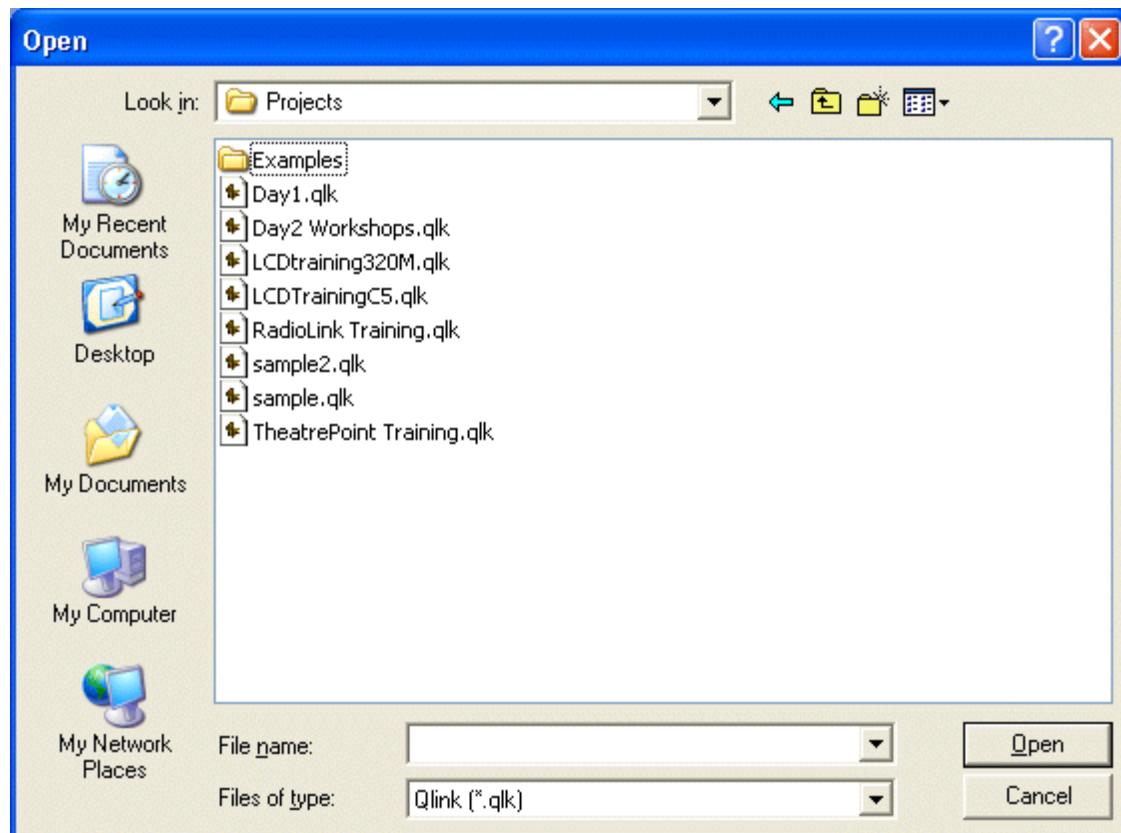
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## File Open Dialog Box

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This dialog box is opened by selecting the Open command from the menu.



**Figure 5:** The File Open Dialog box.

The following options allow you to specify which file to open:

Look in

Select any local or network drive available.

Select the sub-directory or folder by double clicking on it.

Look in: will display the selected folder automatically.

File Name

Type or select the filename you want to open. This box lists files with the extension you select in the List Files of Type box.

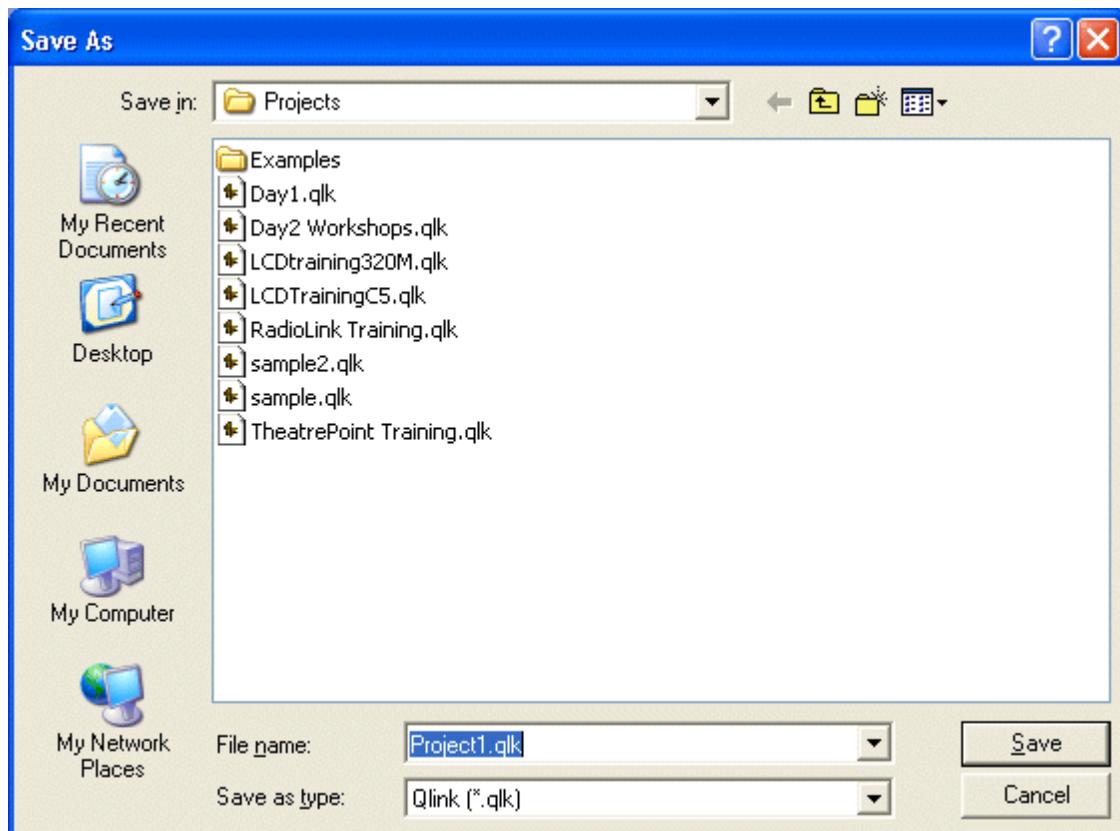
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## File Save/Save As Dialog Box

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The Save As dialog box allows the name and location of the file to be saved:



**Figure 6:** The File Save As Dialog box..

Save in:

Select any local or network drive available to store the document.

Select the sub-directory or folder by double clicking on it.

Save in: will display the selected folder automatically.

File name:

Press Alt+N or click in the file name window to type the file name or type a new file name to save a document with a different name. QLink automatically adds the extension ".qlk" to all files.

Save as type:

Do not change the default, QLink (\*.qlk)

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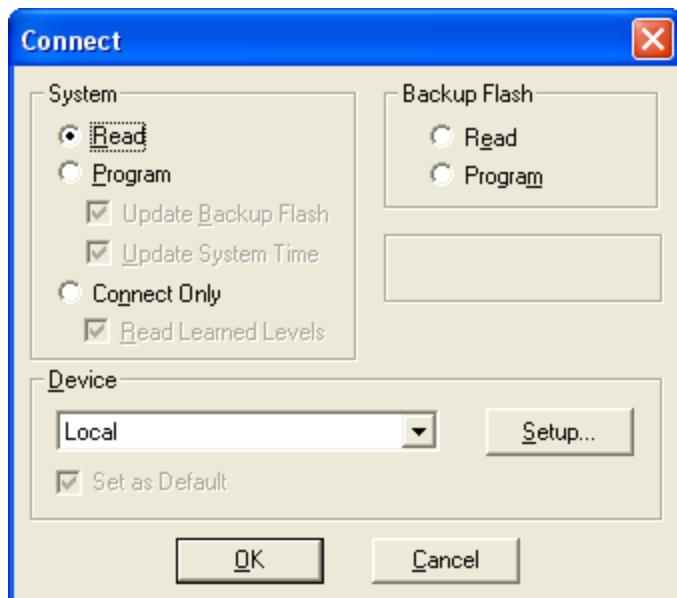
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## Connect to System Dialog Box

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The Connect box appears when the Connect Button {bmc bm9.SHG} is clicked or select Connect from the File menu.



**Figure 7:** The QLink Connect Dialog box.

From this box:

#### System

- |                     |  |
|---------------------|--|
| <b>Read</b>         | Reads the program from the Master Controller onto the Computer. Caution, this will replace the currently open program on the computer. You should have a blank (new) project screen when performing this option. |
| <b>Program</b>      | Programs the Master Controller, the Backup Flash and updates system time clock on all Masters (when checked)   |
| <b>Connect Only</b> | Connects the computer to the Master Controller for on-line programming and changes. The program open on the computer should match the program in the Vantage Master Controller.                                  |

#### Backup Flash

- |                |  |
|----------------|--|
| <b>Read</b>    | Reads the Flash program from the Master Terminal Board onto the Computer. Caution, this will replace the currently open program on the computer. You should have a blank (new) project screen when performing this option. |
| <b>Program</b> | Programs the Flash on the Master Terminal Board.   |

#### Device

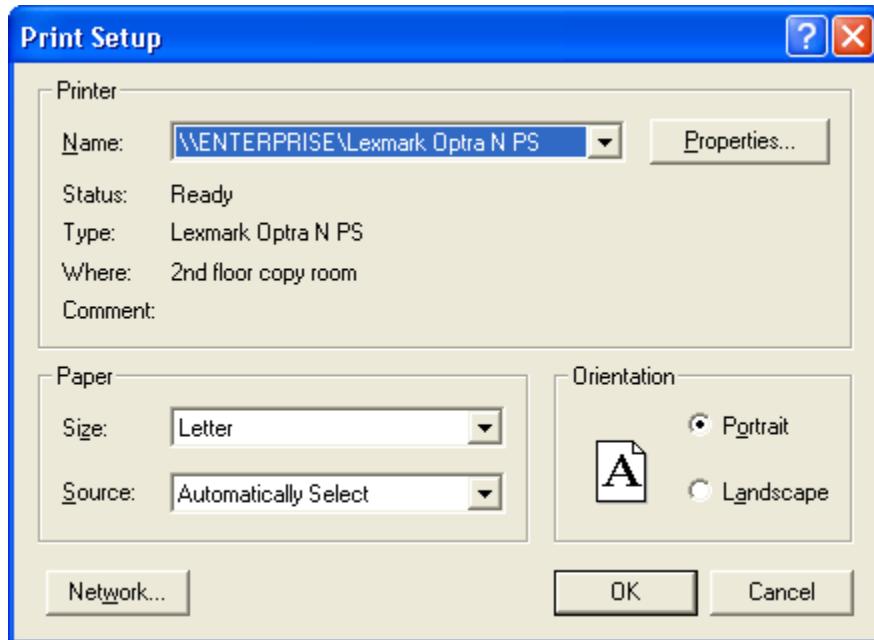
- |                         |   |
|-------------------------|---|
| <b>Local</b>            | Connecting through the COM port on your computer directly.  |
| <b>Modem</b>            | Connect through your computers Modem.   |
| <b>TCP/IP (Network)</b> | Connects through IP Host and IP Port.<br>Note: With WebPoint running it is necessary to use this option to connect. |
| <b>Setup</b>            | Select the COM port or the Modem Device to use  |
| <b>Default Device</b>   | Check this to change the default device used when the connect box is opened.  |

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## Print Setup Dialog Box

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**Figure 8:** The Print Setup Dialog box..

The following options allow you to select the destination printer and the printer connection.

#### Name

Select the printer you want to use. Choose the Default Printer; or choose the Specific Printer option and select one of the current installed printers shown in the box. Install printers and configure ports using the Windows Control Panel.

#### Orientation

Choose Portrait or Landscape.

#### Paper Size

Select the size of paper that the document is to be printed on.

#### Paper Source

Some printers offer multiple trays for different paper sources. Specify the tray here.

#### Properties

Displays a dialog box where you can make additional choices about printing, specific to the type of printer that has been selected.

#### Network.

Choose this button to connect to a network location, assigning it a new drive letter.

---

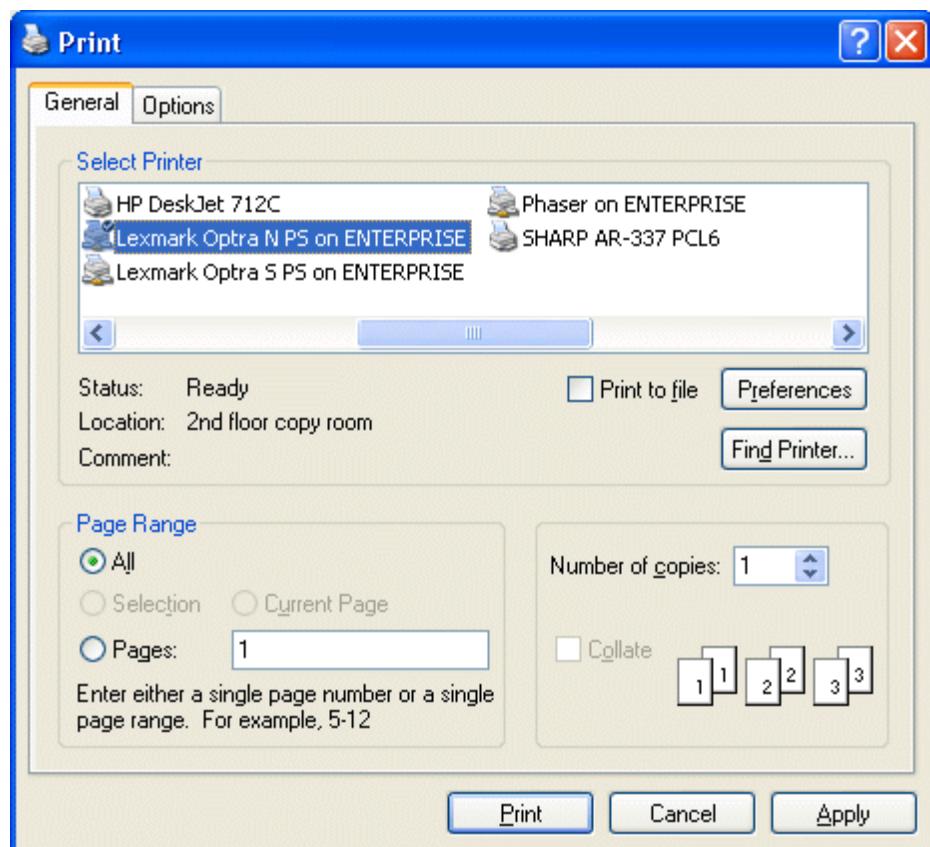
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## Print and Print Preview Dialog Box

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Only **Reports** may be printed from QLink.



**Figure 9:** The Print Dialog box.

The following options allow you to specify how the document should be printed:

#### Select Printer

This is the Windows' active printer and printer connection. See Windows' help for printer settings.

#### Print Range

Specify the pages you want to print:

**All** Prints the entire document.

**Selection** Prints the currently selected text.

**Pages** Prints the range of pages you specify in the From and To boxes.

#### Number of copies

Specify the number of copies you want to print for the above page range.

#### Collate Copies

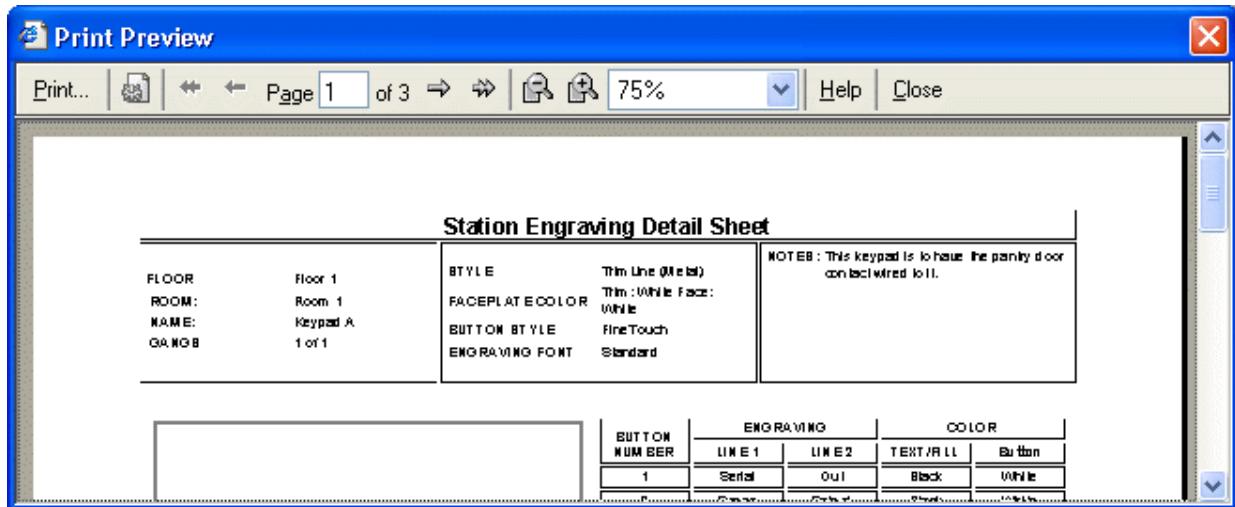
Prints copies in page number order, instead of separated multiple copies of each page.

#### Print Preview:

**Printing Suggestions:** Once the report is generated on the screen, press **Ctrl+Shift+P**

or

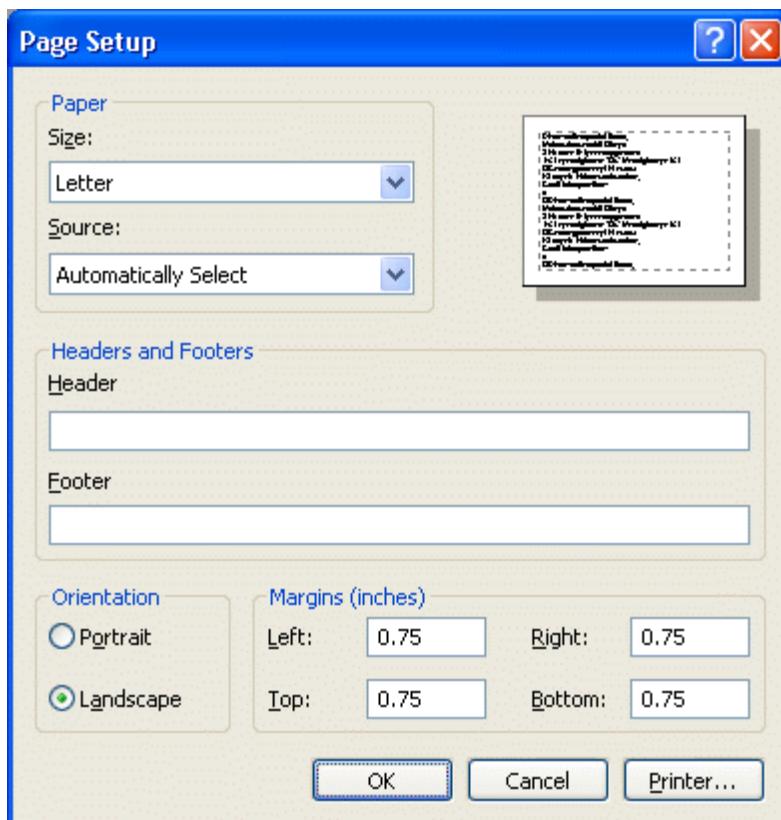
click on File | Print Preview..., this will open the Print Preview window.



**Figure 10:** Print Preview Window.



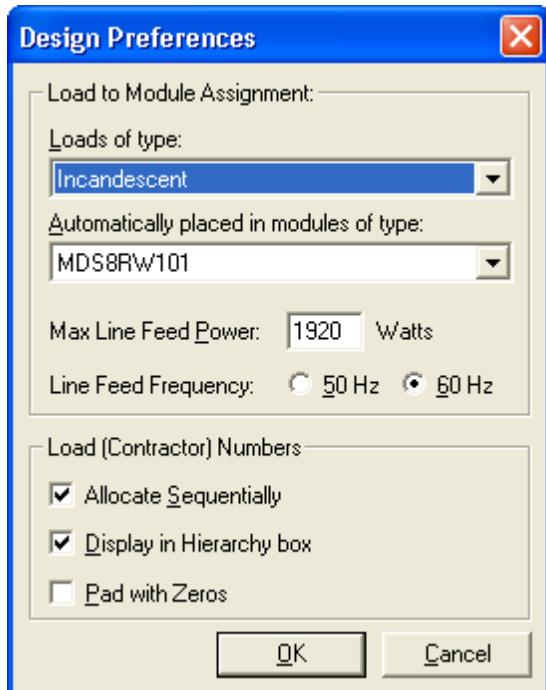
In the Print Preview window, click on the **Page Setup** button to open the page setup window. The page layout may be set to landscape or portrait and the Header and Footer information may be edited or removed and the margins may be changed as necessary.



**Figure 11:** Page Setup Window.

Click **OK** to close the page setup window and print the document.

## Design Preferences Dialog Box



**Figure 12:** The QLink Design Preferences Dialog box.

This dialog box lets you change various system settings and preferences i.e., the default load to module assignment scheme, Line Feed Frequency, etc.

### Load to Module Assignment

QLink will automatically assign loads to modules in the system. To do this scroll through the **Loads of type:** list and select the default load type. Then scroll through the **Automatically placed in modules of type:** and select a compatible module type.

Recommended default load to module settings are:

<b><u>Loads of type:</u></b>	<b><u>Default Assignment</u></b>
Incandescent	MDS8RW101 or MDS8RW201
Fluorescent Magnetic non-dimming	MDR8RW101 or MDR8RW201
Fluorescent Electronic non-dimming	MDR8RW101 or MDR8RW201
Fluorescent Magnetic dimming	MDS8RW101 or MDS8RW201
Fluorescent Lutron High Luminescence	ED4008-120
Low Voltage Electronic	ED4008-120
Magnetic Low Voltage	MDS8RW101 or MDS8RW201
Motor	MDR8RW101 or MDR8RW201
Variable Speed Motor	MDS8RW101 or MDS8RW201
HID	MDR8RW101 or MDR8RW201
Cold Cathode	MDS8RW101 or MDS8RW201

### Maximum Line Feed Power

The default line feed power on all the modules is 1920 Watts. This may be changed to any lower level, but it affects all modules in the system. QLink optimizes load placement according to this parameter as well as others.

### Line Feed Frequency

The default is 60Hz.

**Load (Contractor) Numbers**

Both boxes are checked by default.

Allocate Sequentially – (*automatically puts the numbers in sequentially*)

Display in Project Designer Window/Hierarchy box. – (*displays the contractor number with the name and load number in the Project Designer windows.*)

Pad with Zeros – Allows leading zeros in contractor numbers. Contractor numbers may only be 4 digits long including the leading zeros

---

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## Edit Menu

---

### Edit Menu

The Edit menu contains the following commands:

<u>Menu Command</u>	<u>Keyboard Shortcut</u>	<u>Description</u>
Cut	Ctrl+X	Removes anything cut from a project and places it on the clipboard.
Copy	Ctrl+C	Copies anything copied from a project and places it on the clipboard.
Paste	Ctrl+V	Pastes anything copied on the clipboard to a selected location.
Paste Programming	Ctrl+Shift+V	Pastes programming only from any button containing a program that has been Cut or Copied and is currently highlighted in the Clipboard
Delete	Ctrl+D	Deletes or removes anything selected for deletion.
Properties	Ctrl+E	Displays the configuration of any selected item for review or editing.
Program	Ctrl+W	Opens the Event Programming dialog.
Clear Programming	Ctrl+Alt+D	Clears all programming from a selected programmable device.
Delete Clipboard Object	N/A	Deletes the selected node in the Clipboard.
Clear Clipboard	N/A	Deletes all nodes in the Clipboard.
Change Project Case	N/A	Globally changes UPPER CASE, lower case, Title Case or Sentence case in Project.
IR Wizard	N/A	Opens the IR Wizard dialog window.
Convert to LCD 320	N/A	Converts the highlighted 160 LCD to a 320 LCD. Note: The fonts and graphics must be changed if necessary for the higher resolution, but programming is intact.

**Note:** While connected to a system Cut and Delete commands are unavailable.

---

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## Add Menu

---

### Add Menu

If the project house is selected the Add menu contains the following commands:

<u>Menu Command</u>	<u>Keyboard Shortcut</u>	<u>Description</u>	<u>Icon Representation</u>

Floor	Ctrl+F	Adds a floor.	 Floor 1
Variables	Ctrl+3	Adds variables.	 Variables  10011: Variable 1
String Variables	Ctrl+Shift+3	Adds string variables	 ABC StringVariable 1

If a floor is added and selected and Add on the menu bar is clicked, the Add menu changes to the following:

<u>Menu Command</u>	<u>Keyboard Shortcut</u>	<u>Description</u>	<u>Icon Representation</u>
Floor	Ctrl+F	Adds additional floors.	 Floor 1
Room	Ctrl+R	Adds additional rooms.	 Room 1

If a room is added and selected and Add on the menu bar is clicked, the Add menu changes to the following:

<u>Menu Command</u>	<u>Keyboard Shortcut</u>	<u>Description</u>	<u>Icon Representation</u>
Room	Ctrl+R	Adds additional rooms.	 Room 1
WireLink Stations	N/A	Adds a station type to a room.	N/A
Din Stations	N/A	Adds DIN Contact Input Station to a room	N/A
RadioLink Stations	N/A	Adds an RF (Radio Frequency) enabled stations to a room.	N/A
Loads	Ctrl+L	Adds a load to a room.	 101: Load 1
StripSwitch Keypad	Ctrl+1	Adds a stripswitch keypad to a room.	 StripSwitch 1
Slave Keypad	Ctrl+2	Adds a slave keypad to a room.	 Slave Keypad 1
Faceplate	N/A	Adds a Custom Faceplate	 Faceplate 1
Enclosure Group	Ctrl+G	Adds an enclosure group to a room.	 Enclosure Group 1

**Note:** In Wiring view if the Project House (Red House) is selected the following items may be available:

<u>Menu Command</u>	<u>Keyboard Shortcut</u>	<u>Description</u>	<u>Icon Representation</u>
Master Controller	Ctrl+M	Adds a master to a project.	 Master 1
Theatre C-Box	N/A	Adds a Theatre C-Box Main Controller to a project.	 Master 1
C-Box Controller	Ctrl+Shift+M	Adds a C-Box Main Controller master to a project.	 Master 1
RadioLink C-Box Controller	Alt+M	Adds a RadioLink C-Box Controller master to a project.	 Master 1
DIN Master	N/A	Adds a DIN Controller to a project.	 Master 1
C-Box LE with RadioLink	N/A	Adds a C-Box LE Main Controller to a project. NOTE: this is only available if no other controllers our in the project.	 Master 1
TeleAccess	Ctrl+4	Adds TeleAccess controls to a master.	 TeleAccess A
Variable	Ctrl+3	Adds variables to a project.	 Variables  10011: Variable 1
String Variable	Ctrl+Shift+3	Adds string variables to a project	 ABC StringVariable 1

**Note:** In Wiring view if the Main Controller is highlighted the Add menu may also include:

<u>Menu Command</u>	<u>Keyboard Shortcut</u>	<u>Description</u>	<u>Icon Representation</u>
Controllers	N/A	Adds Main Controllers	N/A
WireLink Stations	N/A	Adds stations	N/A
DIN Stations	N/A	Adds DIN stations	N/A
Enclosure	Ctrl+6	Adds an Enclosure	 Master Enclosure 1-1
Time Control	Ctrl+T	Adds a Time Control Trigger to a project.	 TimeControl 1
IR Zone	Ctrl+I	Adds a IR Zone to a project.	 Zone 1
String Control	Ctrl+Shift+S	Adds a String Control to a project.	 ABC String Control 1

Right-clicking Room and tracing to **Add WireLink Stations** with the mouse pointer will change the Add menu to the following:

<u>Menu Command</u>	<u>Keyboard Shortcut</u>	<u>Description</u>	<u>Icon Representation</u>
Keypad	Ctrl+K	Adds a keypad station. Switch 9 adds a remote IR receiver. Switches 9 and 10 add dry contact sensors. Switches 9 and 10 add extra buttons, which are defined as a slave buttons. Switch 10 adds a Vantage LightPoint sensor.	 Keypad A  Remote Infrared 1  Dry Contact 1  Slave Button 1  Sensor 1  ScenePoint A  Relay ScenePoint A  Contact Input A  HiddenTouch A  Infrared Emitter A  TPT A  LCD 320M  LCD 160  Low Voltage Output A  Power ScenePoint A  RS232 A  RS485 A  TheatrePoint A
ScenePoint Dimmer	F2	Adds a ScenePoint Dimmer station.	
ScenePoint Relay	N/A	Adds a ScenePoint Relay station.	
Contact Input	F7	Adds a contact input station.	
HiddenTouch	F4	Adds a HiddenTouch strip station.	
Infrared Emitter	F5	Adds an infrared emitter station.	
LCD Touchscreens	F3	Adds an LCD TPT color station, 320C5	
	F3	Adds an LCD touchscreen station, 320M	
	N/A	Adds an LCD touchscreen station, 160M	
Low Voltage Output	F11	Adds a low voltage output station.	
Power ScenePoint Dimmer		Adds a Power ScenePoint Dimmer Station 1200W, 2-gang Dimmer Station	
RS-232	F9	Adds a RS-232 station.	
RS-485	N/A	Adds a RS-485 station.	
TheatrePoint	Shift+F5	Adds a TheatrePoint station. STTERW101-Current Sensing, 120V STTERW201-Standard (no current sensing) 120V-240V	
Thermostat	F8	Adds a thermostat station.	 Thermostat A
<b>Also in Wiring View:</b>			
Four Channel Relay	N/A	Adds a 4 Channel Relay station.	 4 Channel Relay Station A
Low Voltage Relay	F6	Adds a low voltage relay station.	 Low Voltage Relay A

Power Station	N/A	Adds a Power station. STPSRW101, 120V, 2000W Power Booster STPSRW201, 220V-277V, 2000W Power Booster STPERR101, 120V, 1000W Electronic Power Booster STPERR201, 220V-277V, 1000W Electronic Power Booster	 Power Station A
DMX	F10	Adds a DMX station.	 DMX Station A
DMX Load		DMX Load	 DMX Channel 1

In Wiring view, click on **Add | Add DIN Stations** the Add menu changes to the following:

<u>Menu Command</u>	<u>Keyboard Shortcut</u>	<u>Description</u>	<u>Icon Representation</u>
Contact Input	N/A	Adds a DIN Contact Input Station	 DIN Contact Input A
Dimmer	N/A	Adds a DIN Dimmer Station	 DIN Dimmer A
Low Voltage Relay	N/A	Adds a DIN Low Voltage Relay Station	 DIN Low Voltage Relay A
HV Relay	N/A	Adds a DIN 10 Amp, 8 Channel Relay Station	 10 Amp Relay Station A

In Wiring view, click on **Add RadioLink Stations** the Add menu changes to the following:

<u>Menu Command</u>	<u>Keyboard Shortcut</u>	<u>Description</u>	<u>Icon Representation</u>
ScenePoint Dimmer	Shift + F2	Adds a RadioLink ScenePoint Dimmer station.	 RF ScenePoint A
ScenePoint Relay	N/A	Adds a RadioLink ScenePoint Relay station.	 RF ScenePoint Relay A
AccentPoint Dimmer	Shift + F11	Adds a AccentPoint (RadioLink outlet control) dimmer station.	 AccentPoint Dimmer A
AccentPoint Relay	Shift + F10	Adds a AccentPoint (RadioLink outlet control) relay station.	 AccentPoint Relay A
Contact Input (DIN)	N/A	Adds a RadioLink DIN Contact Input Station.	 RF Contact Input A
LCD320C5	N/A	Adds a RadioLink LCD320C5R TouchScreen.	 TPT RF A
Low Voltage Relay (DIN)	N/A	Adds a RadioLink DIN LVRS Station.	 RF Low Voltage Relay A
Power ScenePoint Dimmer	N/A	Adds a RadioLink Power ScenePoint Dimmer station.	 RF Power ScenePoint A
RS-232	Shift + F9	Adds a RadioLink RS-232 station.	 RF RS232 A
Satellite ScenePoint Dimmer	N/A	Adds a RadioLink Satellite ScenePoint Dimmer station (used to connect 3-ways). Satellite Button holds program for all connected Satellite Keypads.	 RF Satellite A  Satellite Button 1
Satellite Keypad	N/A	Adds a Satellite Keypad (to be connected to a RadioLink Satellite ScenePoint Dimmer station).	 Satellite Keypad 1
Thermostat	Shift + F8	Adds a RadioLink Thermostat	 RF Thermostat A

## System Menu

### System Menu

The System menu contains the following commands:

<i>Menu Command</i>	<i>Description</i>
<a href="#">Configure Stations</a>	Configures defined stations with the master.
<a href="#">Global Parameters</a>	Defines the global parameters for a project.
<a href="#">Location &amp; Time</a>	Sets the country, state, city, latitude, longitude, and time zone for the current project.
<a href="#">Defaults</a>	Sets default properties for HiddenTouch Station/StripSwitch Keypad, Keypad Station/Slave Keypad, Buttons, LCD Station, and ScenePoint Station. The defaults for Face Plate Style, Face Plate Color, Trim Color, Button Shape, and the Font used to describe these may also be set.
<a href="#">Color Palette</a>	Edit the Color Palette for BriteStyle, button style keypads.
<a href="#">Update</a>	Updates system firmware. Updates TeleAccess or erases TeleAccess.

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## Global Parameters Menu

**Reverse LED operation** - Normally when a load is active the LED is on. Reverse LED operation will change the system so that when a load is not active the LED is ON.

**Append linefeed on RS-232** - The RS-232 delimiter can be changed from just a carriage return to a carriage return plus a line feed. If this check box is checked then the delimiter is a carriage return plus a line feed. If this box is empty then the delimiter is only a carriage return. Also see V-Commands and VCL command.

**Display Temperatures in Fahrenheit** – Allows LCD's to globally display temperatures in Fahrenheit.

**Time before starting to cycle DIM loads** - This is for all buttons programmed to DIM loads. It is the time you must hold down on the button before the load will start to change. *NEVER* set this to 0 (zero seconds) or the Dim Function will not work correctly.

**Time before preset scenes are learned** - Allows you to globally define the time you must hold a button in before it will learn a new light level.

## Advanced Station Setup

**Frequency** - The tone or pitch of the sounder in a station. If you have a station configured with sound you can change the pitch of the sound that is emitted when the button is pressed.

**Pulse length** - The length of time sound will be heard when a button is pressed.

**Hold on Prescaler** - DO NOT CHANGE THIS VALUE.

**Fast LED blink rate** - The blink rate of an LED set to Blink.

## Module Setup

**Zero cross** - The zero-cross is when the line voltage is equal to neutral. This happens twice a cycle. Zero-cross provides the time information that is used to dim the load. To prevent noise on the power line from affecting the dim levels we use a pseudo zero cross time base that we generate from timers on the board. Differences between the voltage zero cross and the pseudo on board zero cross are calculated and produce an error that is used to modify the pseudo zero cross to make it match the actual zero cross. In normal operation the pseudo zero cross and the physical zero cross are identical.

The two parameters that can be adjusted control how the pseudo zero cross is allowed to change as it tracks the voltage zero cross. The max adjust is the maximum change in microseconds that the pseudo zero cross can change in one cycle. If the calculated error is larger than the max adjust the error is set to the max adjust. The max error is the maximum that the pseudo zero cross can vary from the voltage zero-cross. If it is exceeded a zero-cross failure is set, the loads turn off, the pseudo zero cross is tossed and the board tries to re-synchronize with the voltage zero cross. The number entered is multiplied by 256 and is approximately in microseconds.

The system has problems with the default settings and generators because the generator frequency changes faster than the max adjust allows. This prevents the pseudo zero cross for keeping up. In those cases we have changed the max adjust to 30-40us.

## Vacation Setup

Allows the user to determine when vacation mode runs. The user can specify all day or a specific time interval.

Default Load behavior: Globally Include or Exclude Loads for Vacaton.

## 2 Color Button – Advanced Switch Setup

**LED intensity** - The intensity and color of the LED in the on and off state.

**LED blink rate** - Set the blink rate (number of blinks per second).

**LED blink type** - Off intensity allows the user to specify how bright the LED is on when the button is in the off state.

**Sound type** - Specify continuous to have the station continue to have sound while a button is held down. If you select **Pulse** a short sound will be emitted as opposed to a continuous sound.

## 3 Color Button –3 Color Switch Setup

**LED Color** - Select the ON color and OFF color from the color palette. The selected color may also be edited by first selecting the color then selecting [Edit Color Palette](#).

**LED blink rate** - Set the blink rate (number of blinks per second).

**LED blink type** - Off intensity allows the user to specify how bright the LED is on when the button is in the off state.

**Sound type** - Specify continuous to have the station continue to have sound while a button is held down. If you select **Pulse** a short sound will be emitted as opposed to a continuous sound.

## Thermostat Setup

Allow the user to configure which thermostat's external temperature (if any) should be displayed on all thermostats.

## Contact Input

**Global Contact Input** – Globally set the switch polarity of dry-contacts to N.O./Normal or N.C./Reverse and globally set the Swithc hold time in seconds.

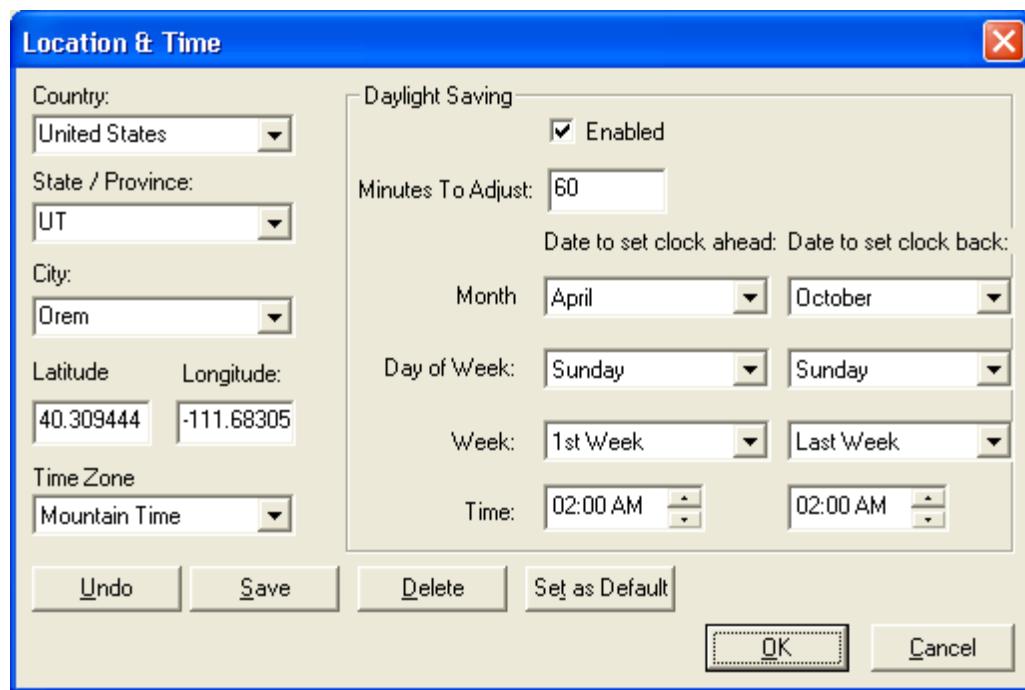
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## Location and Time

This dialog box is used to set up the sunrise and sunset times for the Vantage System. Select the country and city closest to the project and QLink automatically determines the sunrise and sunset times for the area. It is also possible to manually enter the desired times by selecting custom Latitude/Longitude settings, Time Zones, etc.



**Figure 13:** The QLink Location and Time Dialog box.

#### Daylight Saving

The settings for daylight saving times are usually automatic, however, QLink allows this area to be customized if needed. This is especially helpful for countries other than the United States.

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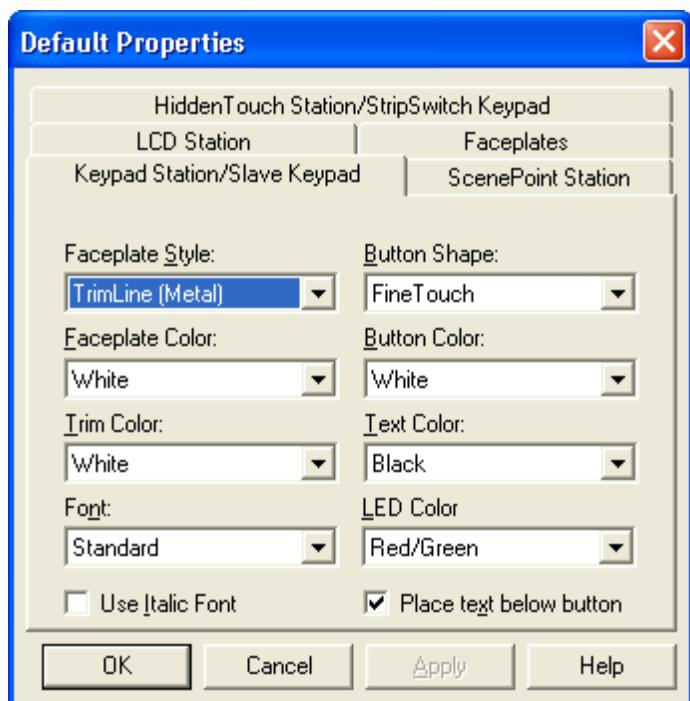
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## Defaults

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The screen below is opened when clicking on Defaults. Click on the different tabs to set default properties for **HiddenTouch Station/StripSwitch Keypad**, **Keypad Station/Slave Keypad**, **LCD Station**, **Faceplates**, and **ScenePoint Station**. The defaults for Face Plate Style, Face Plate Color, Trim Color, Button Shape/Style and color, Text Color, LED Color and the Font used to describe these may also be set. All Stations and Switches checked for Default will follow the settings made in these boxes.



**Figure 12a:** The QLink Default Properties Dialog box.

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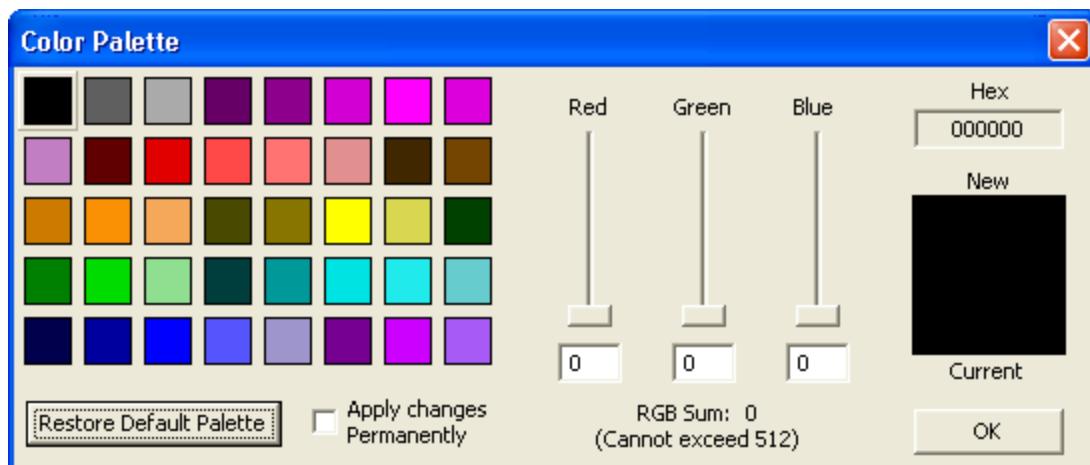
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## Color Palette

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By selecting System | Color Palette, the palette may be customized for BriteStyle buttons. Customized changes from the default palette are stored in the QLink file. This makes it possible for the file to be shared with other computers and still have the same custom palette colors for the BriteStyle keypads.

The color palette window appears as follows:



**Figure 12aa:** The QLink Color Palette Dialog box.

Highlight any color in the palette and adjust the Red, Green, Blue settings as desired. The **New** color and the **Current** color are displayed for comparison. The total sum of colors may not exceed 512.

Hex, values are given for computation and comparison of other color palettes.

NOTE: The darker colors may appear almost black on most computer displays but will show as pale colors on the actual buttons.



For example notice these three yellow colors, appear to be black to yellow but the dark (almost black) color will be a pale yellow on the BriteStyle button.

**IMPORTANT:** If *Apply changes Permanently* is checked the default color palette is changed for the current and future QLink files. If *Restore Default Palette* is checked and affirmed the color palette is restored to the installation/shipping color palette.

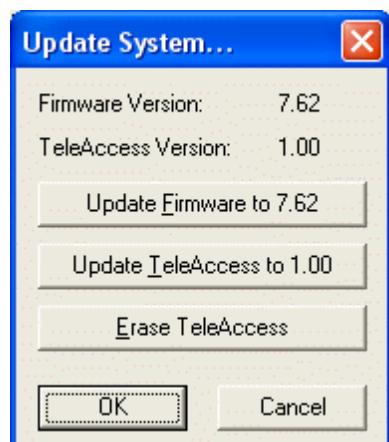
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## Update

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Updates system firmware also known as Master Firmware. From this same window it is also possible to install or remove TeleAccess from any Master Controller on the system.



**Figure 12b:** The QLink Update System Dialog box.

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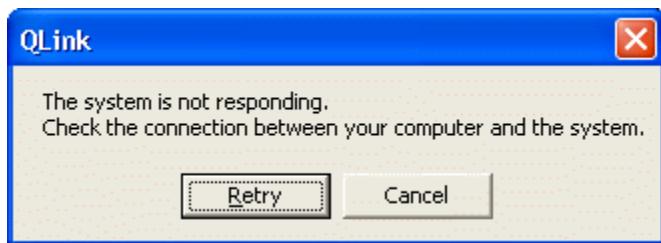
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## Diagnostics Menu

### Diagnostics Menu

Commands on the Diagnostics menu are only accessible if the computer is connected with the master controller and the master controller is on. If not, when trying to access commands on the Diagnostics menu, a dialog box will open with the following message.



**Figure 14:** System not Responding dialog box.

The Diagnostics menu contains the following commands:

<u>Menu Command</u>	<u>Description</u>
Master	Runs diagnostics on master controllers.
Module	Runs diagnostics on modules.
Station	Run diagnostics on stations.
Master Communications	Tests the network connection between masters when more than one master is present.
Monitor Button Presses	Displays buttons currently being pressed.
Send Command	Sends commands directly to the system via RS-232.
Time	Allows getting and setting of time in the master.
Button Press History	Shows switch presses for the past 14 days.
Vacation Load Log	Reports the Date, Time, Master, Address, Level, Name and Location of loads that will play back if the Vacation function is used. The report may be Updated live, printed and/or saved.
Utilities	Provides various utilities for the master. These include <i>Manual Override</i> -checks status of Override, <i>System Boot</i> -tracks the number of times the Master Controller has been Cold Booted and checks the status of the Terminator switch. <i>Reset</i> -resets the System, clears the memory from the Master Controller or resets modules and stations.
System Log	Provides additional event logging and diagnostics utilities. Select Master for the system log. Select Flash Test to test the Flash and also erase the flash memory. Select MProc. And type the number of the Controller to be checked then click Check. Select Station and type the number of the station to test communication to that station. Click the Test button for RS232 to test the controllers RS-232 communication.

#### Related Topics

[Diagnostics](#)

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## Reports Menu

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### Reports Menu

The Reports menu contains the following commands:

<u>Menu Command</u>	<u>Description</u>
Bill of Materials	Create/Edit a bill of materials of project hardware used for the active project. Tracing to Bill of Materials with the mouse pointer will change the Reports menu to the following: <i>Once the BOM has been created:</i>
	<b>Materials List</b> may be generated and printed
	<b>Dealer Price</b> may be generated and printed (dealer version of software)
	<b>Distributor Price</b> may be generated and printed (dealer version of software)
	<b>Customer Price</b> may be generated and printed (dealer version of software)
	<b>List Price</b> may be generated and printed (dealer version of software)
	<b>Purchase Order</b> may be generated and printed (dealer version of software)

Create Pricelist	Creates a dealer/distributor price list for the active project. The price list is based on an authorized discount for dealers and distributors.
Project Summary	Creates a report summarizing items in the current project.
Project Notes	Displays all notes in the current project for printing.
Item Summary	Shows detail information from the Information tab on each item in the project.
Job Information	Creates a report from information entered in Project Information (red house) windows.
Station Design	Shows station designs by floor/room, address, or name.
Engraving Detail	Creates a detailed sheet of all engraving
Client Station	Detailed information about each station
Faceplates	Graphic display of the station and buttons including engravings
Station List	Shows the assignment of stations by floor/room, address, or name.
BriteStyle Labels	Creates a report for printing BriteStyle labels
LCD Screens	Graphically displays all screens from all LCD stations in the current project.
Load Schedule	Reports load assignments by address, contractor number, name, or room.
Enclosure Schedule	Graphically displays loads as they are connected to an enclosure.
Programming	Graphically reports slave and strip switches in a station design report.
Button References	Reports each button with its affected loads.
Load References	Reports each load and its affecting buttons.
Preferences	Allows selection of Custom html template files for each type of report.

**Related Topics**[Reports](#)


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## View Menu

### View Menu

A check mark (v) to the left of a view category indicates that the associated category will be displayed in the Project Designer window. If a category is unchecked, it will not be displayed. This allows for the selective viewing of project categories.

In Location view, the View menu contains the following commands:

<b><u>Menu Command</u></b>	<b><u>Description</u></b>
Stations	Displays stations.
Loads	Displays loads.
Variables	Displays variables.
StripSwitches/	Displays stripswitch/slave keypads.
Slave Keypad	
Enclosure Groups	Displays enclosure groups.

In Wiring view, the View menu appears as follows:

<b><u>Menu Command</u></b>	<b><u>Description</u></b>
Stations	Displays stations.
Loads	Displays loads.
Time Controls	Displays time controls.
String Controls	Displays string controls
IR Zones	Displays IR zones.
TeleAccess	Displays remote access connections.
Variables	Displays variables.

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## Window Menu

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### Window Menu

The Window menu contains the following commands:

<u>Menu Command</u>	<u>Description</u>
Cascade	Open windows will overlap one another. Title bars will be visible. All windows must be open to be displayed. Closed or minimized windows will not be displayed. See Windows Help.
Tile Horizontal	Open windows will be oriented horizontally and will be given equal dimensions. All windows must be open to be displayed. Closed or minimized windows will not be displayed. See Windows Help.
Tile Vertical	Open windows will be oriented vertically and will be given equal dimensions. All windows must be open to be displayed. Closed or minimized windows will not be displayed. See Windows Help.
Clipboard	Opens or Closes the Clipboard, also clears highlighted item in clipboard or clears entire clipboard.
Currently Opened Projects	Shows all projects currently open. Click on project to make it the active project for editing.

---

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## Help Menu

---

### Help Menu

The Help menu contains the following commands:

<u>Menu Command</u>	<u>Description</u>
Index	Lists available help topics, and a glossary.
Using Help	Lists the standard Windows structure for getting help. Help may be accessed through the following three ways:  <b>Contents:</b> Arranges help in book form by category. Each book can be opened to display related topics and each topic can be opened to display its pages or contents. <b>Index:</b> Arranges help by topic in alphabetical order. Typing a few letters of a keyword will advance help to the alphabetical listing or topic. In addition, it may be scrolled to the keyword in the index, where selecting a topic will display its contents. <b>Find:</b> Allows searching for words and phrases in help topics. Find is like a search function that will search all available help.
About QLink	Opens the About QLink dialog box that provides information about the current version and program build, build date, available memory, disk space, and the program path to the QLink program.

---

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## Tool Bar

---

The toolbar contains graphical representations (icons) of some of the most commonly used menu bar commands. The toolbar contains the following command icons:

<u>Toolbar Icon</u>	<u>Description</u>	<u>Menu Bar Equivalent</u>
	Creates a new project in a new window.	File New
	Opens an existing project.	File Open
	Saves any changes.	File Save
	Cuts or removes a selection.	Edit Cut
	Copies a selection.	Edit Copy
	Pastes a cut or copied selection to a new location.	Edit Paste
	Prints a list from the Reports menu.	File Print
	Connects to the system. Purple indicates QLink connection is not established.	File Connect
	Gold indicates the system is actively connected.	
	Click to access QLink Help.	Help Index

---

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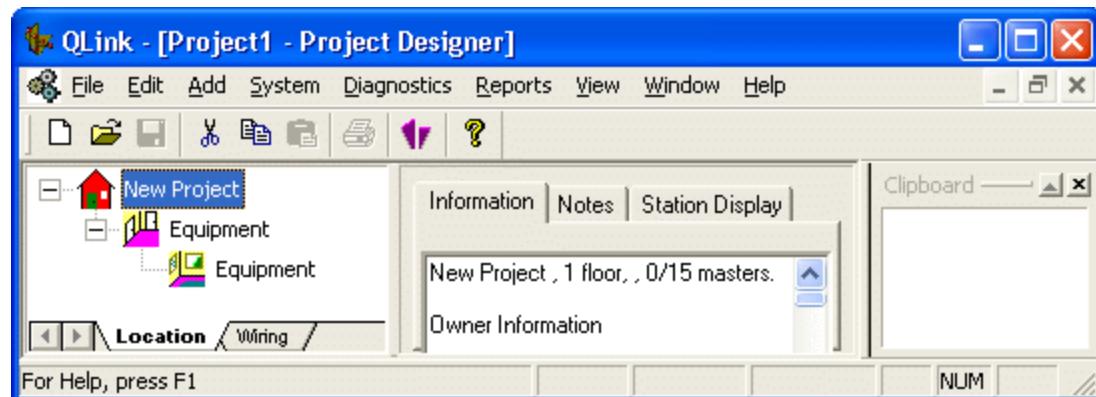
---

## Creating a New Project

---

A new project is created in a hierarchical order starting with the project, floors, rooms, stations, and loads. When QLink is first started, a new project screen will appear. If QLink is not already running, double-click the **QLink** shortcut on the **Windows** desktop.

The Project Designer opens.



**Figure 1:** The Project Designer.

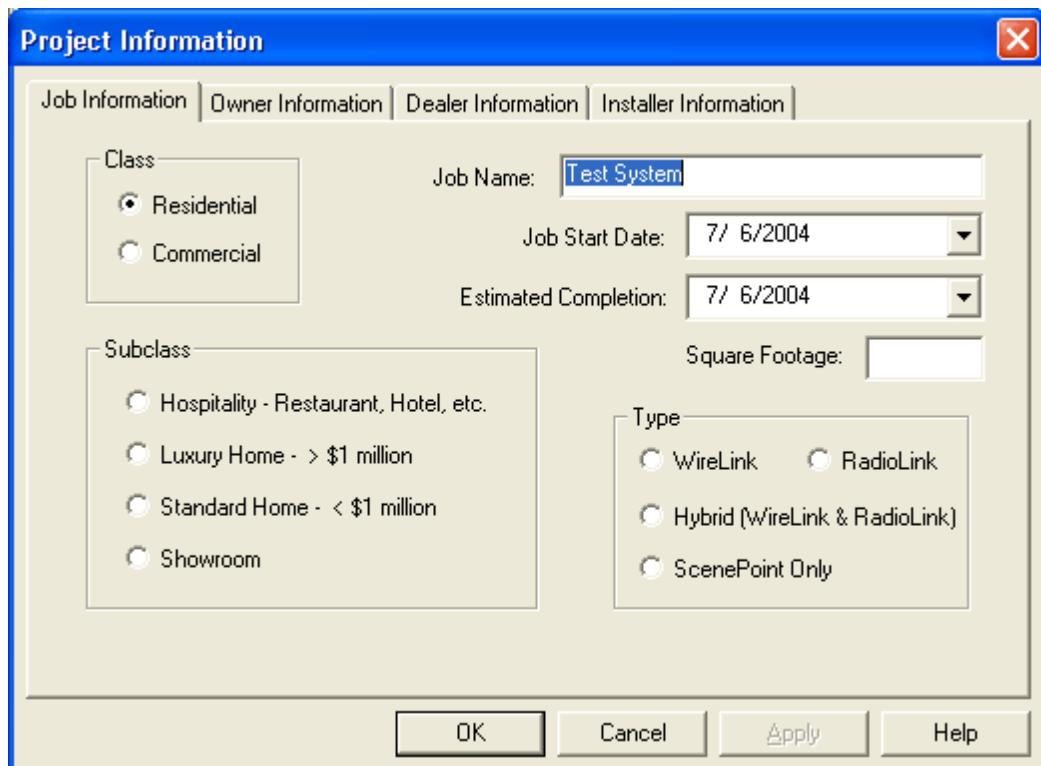
To Name and Identify a New Project:

On the Edit menu, click Properties (Ctrl + E).

-or-

In the **Project Designer** window, right-click **New Project**, and then click **Properties**.

The Project Information dialog box opens.



**Figure 2:** The Project Information dialog.

In the **Job Information**, **Owner Information**, **Dealer Information** and **Installer Information** boxes, type all information wanted then click **OK**. From the **Reports** menu select **Job Information** to generate and print the information above.

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## Floors

---

Floors may also be referred to as wings or levels.

To Add a Floor to a Project:

On the **Add menu**, click **Floor**.

-or-

In the **Project Designer** window, right-click the **New Project**, and then click **Add Floor**.

The Floor Definition dialog box opens.



**Figure 3:** The *Floor Definition* dialog box.

In the **Enter floor or wing name** box, type a **name**, and then click **OK**.

---

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## Rooms

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After mapping the project's floors, the next step is to map the project's rooms for each floor.

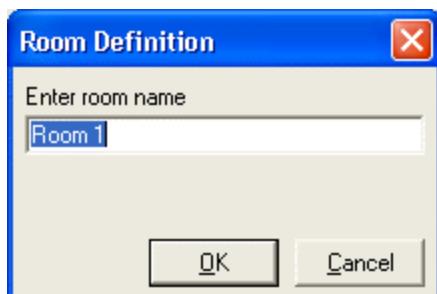
To Add a Room to a Floor:

On the **Add menu**, click **Room**.

-or-

Right-click the **floor**, and then click **Add Room**.

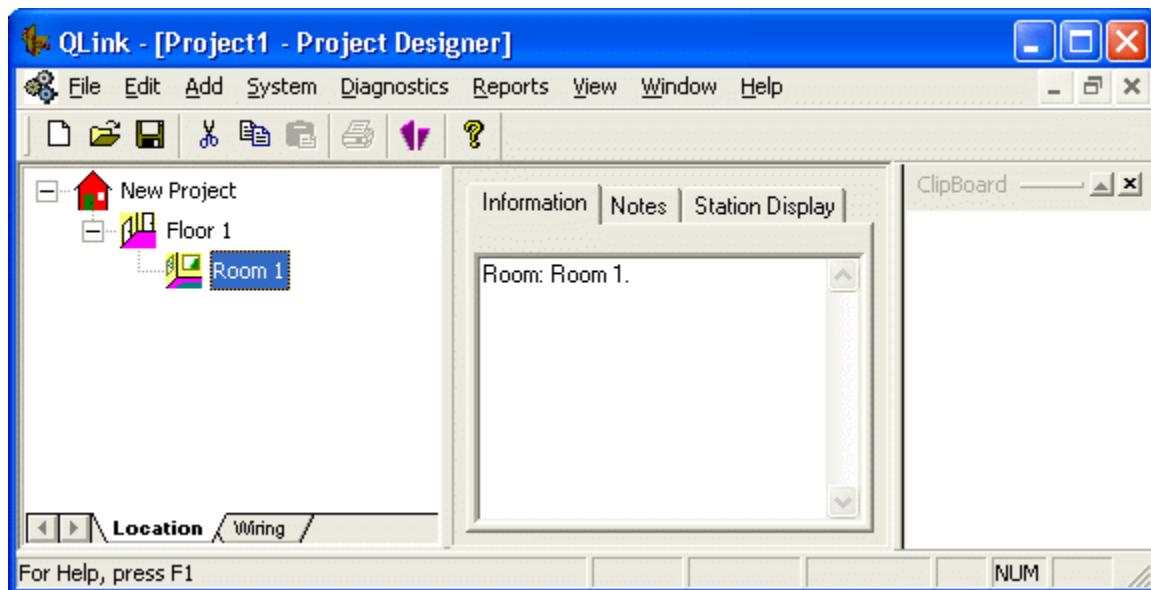
The Room Definition dialog box opens.



**Figure 4:** The *Room Definition* dialog box.

In the **Enter room name** box, type a **name**, and then click **OK**.

Except for names, the new project should appear as follows:



**Figure 5:** A New Project with a floor and a room.

**Save** the project.

**Note:** Ensure that programs are saved in a location that is accessible. It is strongly recommended that they be saved in the **\Projects** folder. The saved file will be referred to as the project **'example'** and will subsequently be used throughout this manual.

---

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## Enclosure Group

---

Defining an Enclosure Group is a way of telling QLink that loads, Master Enclosures, and Slave Enclosures need to be in the same location. It is not required but can be useful. For example the designer might want to run all the second floor load wires to a closet on the second floor and then run the first floor load wires to a mechanical room in the basement. To do this the designer would create an Enclosure Group in the Mechanical Room in the basement and an Enclosure Group in the Closet on the second floor. Don't confuse Enclosure Groups with Master Enclosures and Slave Enclosures. Each is unique. Enclosure Groups house Master Enclosures and Slave Enclosures.

To Add a Enclosure Group to a Room:

On the **Add menu**, click **Enclosure Group**.

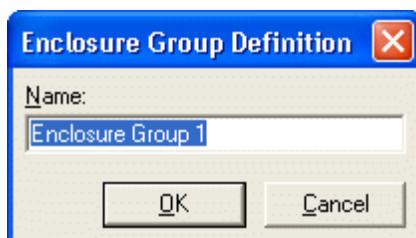
-or-

Right-click the **room**, and then click **Add Enclosure Group**.

-or-

With the room highlighted press **Ctrl+G**

The Enclosure Group Definition dialog box opens.



**Figure 4a:** The *Enclosure Group Definition* dialog box.

In the **Enclosure Group Definition** box, type a **name**, and then click **OK**.

---

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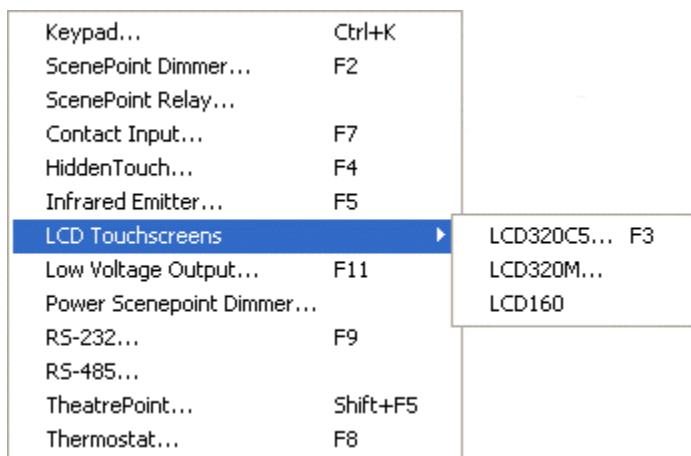
---

## Stations

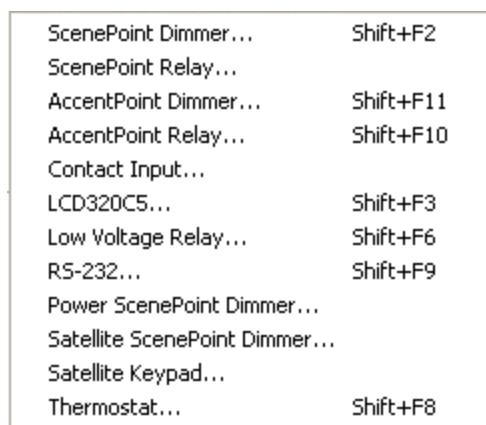
---

A station is an input/output device used for interaction with the Vantage system. Each station may have buttons, inputs, or outputs that can perform an action such as turning lights on or off, dimming lights, starting an audio/video device, etc. Stations will be physically installed in a room, therefore in software a room must be present before any stations can be added.

The first time a station is defined, a master controller will automatically be created, which can support up to 50 wired stations and 60 additional RF stations. If this number is exceeded, a new Master is automatically created. The following figures display the available station types. Note some of these stations will only appear in *Wiring* view.



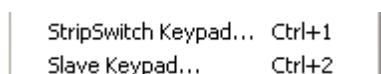
^ Standard Station List ^



^ RadioLink Station List ^



^ DIN Station List ^



^ Slave Station List ^

**Figure 6:** Available station types.

**Note:** the WireLink ScenePoint and the RadioLink ScenePoint dimmer and relay stations are different types with different part numbers.

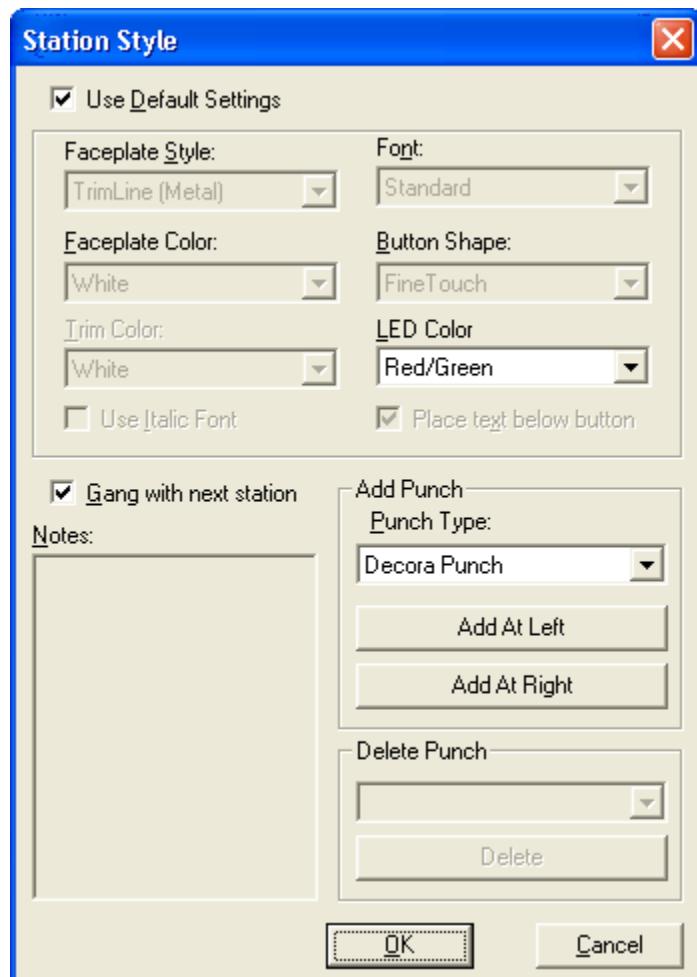
---

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## Station Style Setup

---

This box defines all the appearance parameters of the station faceplate.

**Style**

In Metal there are six faceplate styles:

### METAL FACEPLATES AND FINISHES



ARCHLINE



CRESTLINE



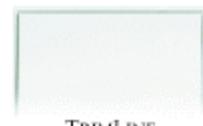
SOFTLINE



CLEARLINE



MARLINE



TRIMLINE



ALMOND



BLACK ANODIZED



CLEAR ANODIZED



IVORY



OIL RUBBED BRONZE



POLISHED BRASS



POLISHED CHROME



SATIN BRASS



SATIN CHROME



WHITE

**Face Plate - Metal**

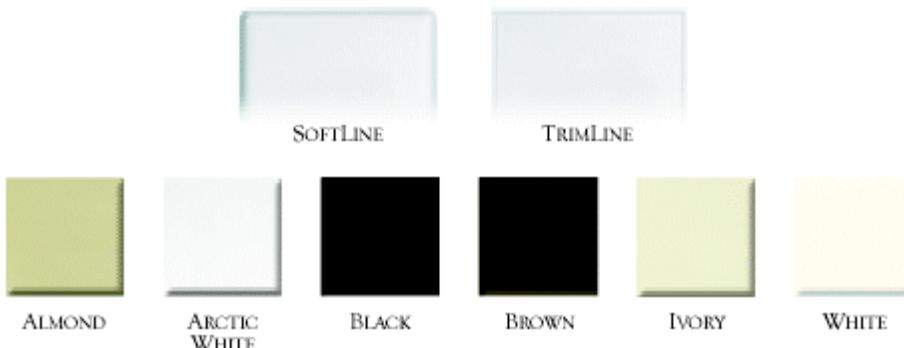
Metal faceplate colors: Almond, Black Anodized, Clear Anodized, Ivory, Oil Rubbed Bronze, Polished Brass, Polished Chrome, Satin Brass, Satin Chrome, White, prime coat or custom for Metal stations.

**Trim (Metal Faceplates)**

Around the edge of the station is the trim. Trim colors can be Almond, Black Anodized, Clear Anodized, Ivory, Oil Rubbed Bronze, Polished Brass, Polished Chrome, Satin Brass, Satin Chrome, White, prime coat or custom. **NOTE:** Only ClearLine, MarcLine and TrimLine (Metal) may have a trim with a different color.

In Plastic there are two faceplate styles:

## PLASTIC FACEPLATES AND FINISHES

**Face Plate - Plastic**

Plastic faceplate colors: Almond, Arctic White, Black, Brown, Ivory and White for plastic faceplates

**Font**

You may select the font of the engraved text. Font examples:

Font: Normal:

STANDARD

FUTURA

HELVETICA

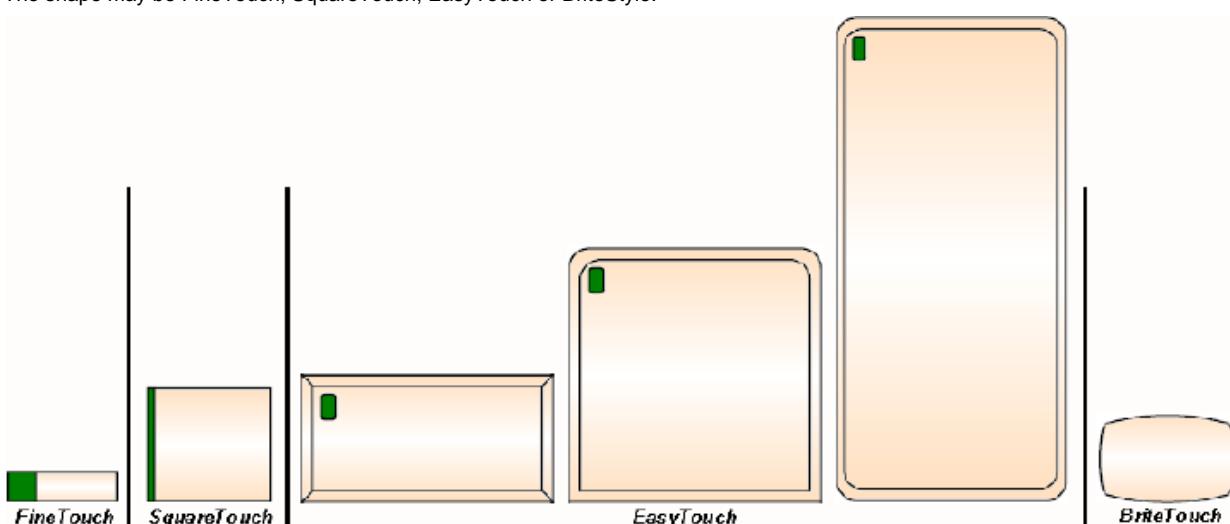
GRAVO

Font: Italic

A check in this box means that the text will be in italics and an empty box (no check) means the text will be normal.

**Button Shape**

The shape may be FineTouch, SquareTouch, EasyTouch or BriteStyle.

**LED Color**

Select Red/Green or Red/Blue LED Color. This option is grayed out and is not necessary for BriteStyle buttons.

#### Notes

Notes for the station are displayed here. Enter notes in the Project Designer window under the Notes tab.

#### Place text below button

For FineTouch buttons only: If this box is checked then the text for the station buttons will be engraved below each of the buttons on this station. If this box is empty then the text will be engraved above the buttons.

#### Gang with next station

If this box is checked then this station and the next station will be ganged together with a single faceplate and trim. When stations are ganged together be sure to define the same face plate color, trim color, and engraving information. Individual stations in multiple-gang arrangements can use IR control. Note: There can only be one bracket per set of ganged stations.

#### Adding and Deleting Punches

Punches are holes in the faceplate to cover standard non-Vantage equipment such as volume controls, decora or regular toggle switches, and duplex receptacles. You can have a faceplate that is a maximum of 3 or 5 stations wide depending on the style of faceplate.

#### Number of Ganged Stations Allowed

- Metal: TrimLine, up to 5 Gangs
- SoftLine, up to 3 Gangs
- ArchLine, ClearLine, CrestLine and MarcLine, up to 4 Gangs
- Plastic: TrimLine, up to 4 Gangs
- SoftLine, up to 4 Gangs

Please contact the factory for custom gang possibilities.



The station appearance window above displays station faceplate and buttons. If gang with next station has been selected, this window will show two stations side by side. When selecting punches, select before or after which is referenced to the selected station.

To delete custom punches click the **delete** button.

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## Keypad

Keypad stations are available in multiple button configurations with up to 8 buttons per gang for most styles. Keypad stations also include two additional button positions, 9 and 10, that can be installed and programmed as dry contacts, IR receivers, LightPoint sensor, or slave buttons located on a slave keypad. Each keypad button and device is programmed independently.

To Add a Keypad Station:

With the "example" project open.

Select a **Room**.

On the **Add** menu, trace to **WireLink Stations**, and then click **Keypad**.

-or-

With a **room** selected, press **Ctrl+K**.

-or-

Right-click a **Room**, trace to **Add WireLink Stations**, and then click **Keypad**.

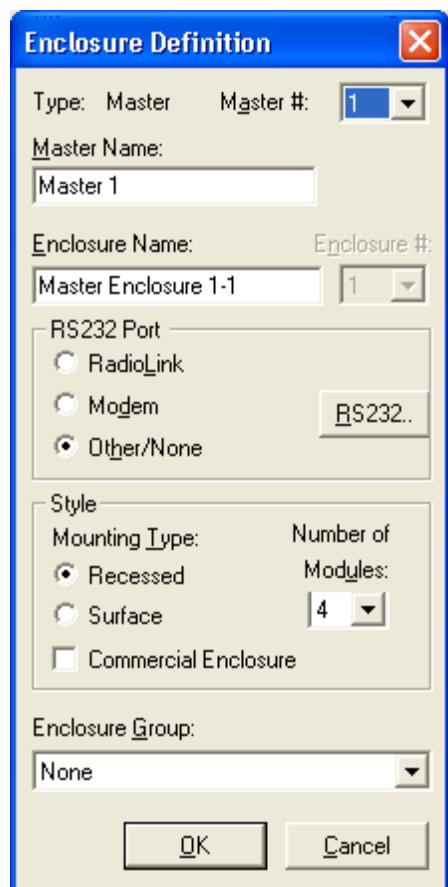
When adding the first station, a dialog box will appear, indicating a new master was created to accommodate the new station. Then dialogs will appear prompting for master type and parameters.



**Figure 7:** Master type dialog box.

Click **OK**.

The Enclosure Definition dialog box opens (for a standard MC).

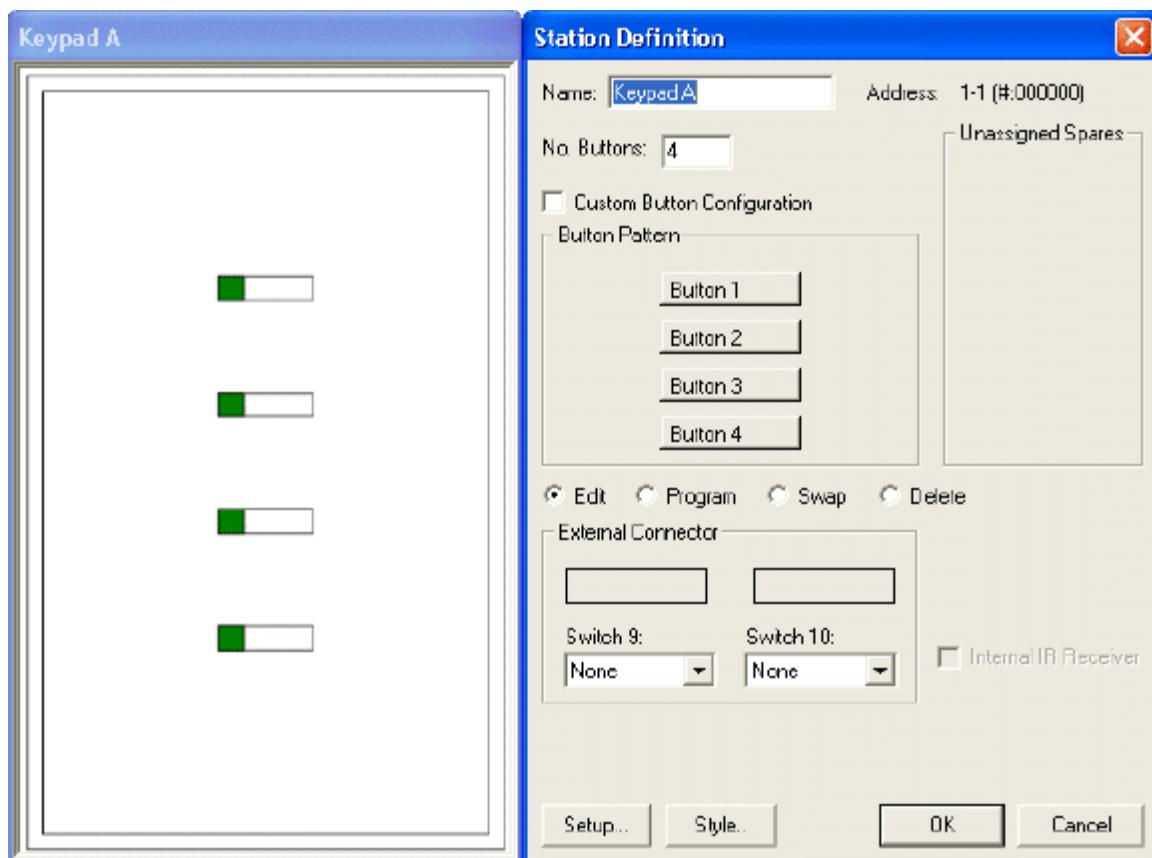


**Figure 8:** The Enclosure Definition dialog box.

**Note:** See *Enclosure* in Appendix A: Station Definitions for an explanation of the dialog box items.

Make any **necessary changes**, and then click **OK**.

The Station Definition dialog box opens.



**Figure 9:** The Station Definition dialog box for a keypad station.

**Note:** See Keypad in Appendix A: Station Definitions for a description of the available options.

Make any **necessary changes**, and then click **OK**.

Save the project.

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## ScenePoint Dimmer

A ScenePoint dimmer station is a wall box-mounted light dimmer that connects to the Vantage system. It is available in one to four gang configurations, with up to 6 or 8 keypad buttons, and an optional internal IR receiver. The dimmer station features a 600-watt dimmer that connects to local wiring within the wall box for lighting control. It also connects to the Vantage Station Bus for centralized control of the lighting circuit.

In the event that the Station Bus communication is lost, the Dimmer Station continues to function as a standard wall box dimmer. The Dimmer Station is powered through local line feed and is intended to replace a standard high voltage wall switch.

To Add a ScenePoint dimmer station:

With the "example" project open.

Select a **Room**.

On the **Add** menu, trace to **WireLink Stations**, and then click **ScenePoint Dimmer**.

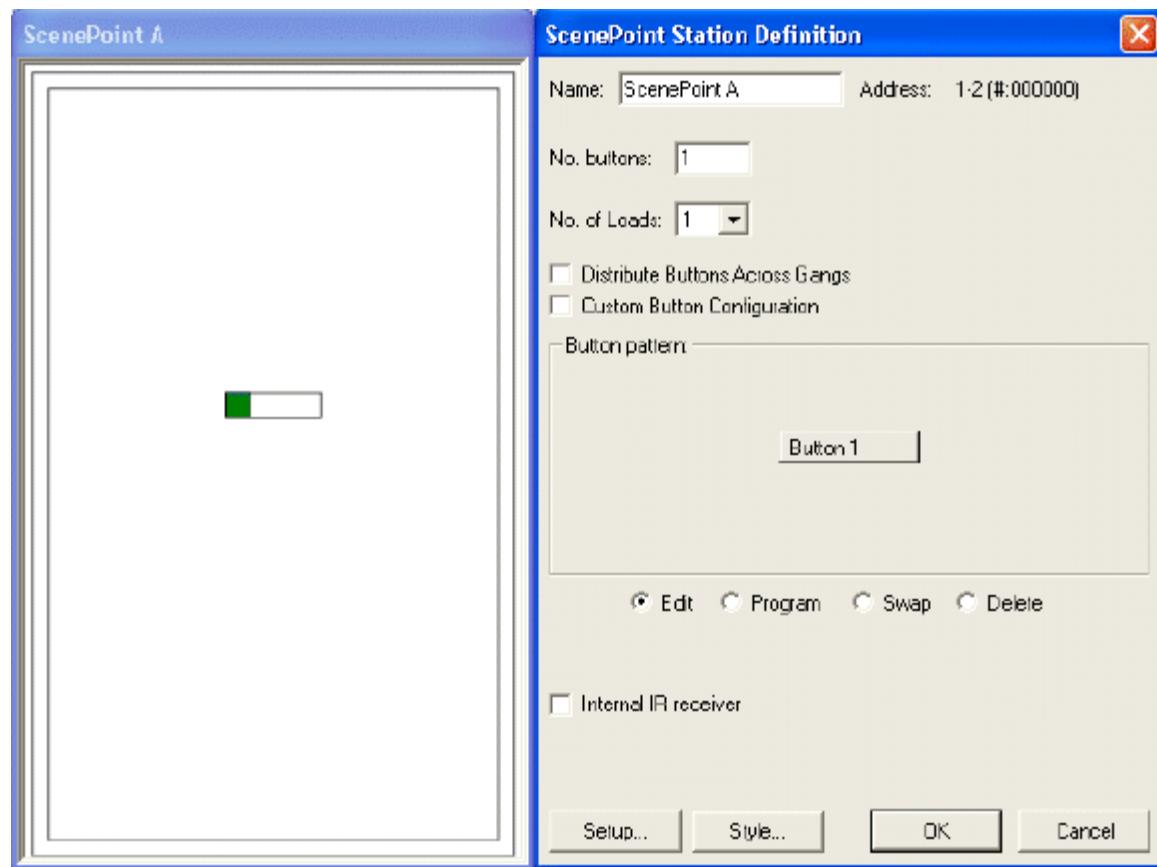
-or-

With a **room** selected, press the **F2** key.

-or-

Right-click a **Room**, trace to **Add WireLink Stations**, and then click **ScenePoint Dimmer**.

The ScenePoint Station Definition dialog box opens.



**Figure 10:** The ScenePoint Station Definition dialog box.

**Note:** See *ScenePoint dimmer* in *Appendix A: Station Definitions* for an explanation of the dialog box items.

Make any **necessary changes**, and then click **OK**.

Save and close the "example" project.

**Related Topic:** [RadioLink ScenePoint Dimmer](#)

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## ScenePoint Relay

The Vantage ScenePoint relay station is a wall box relay that connects to the Vantage Control System. It is available in a one load configuration and may be ganged with additional ScenePoint Stations up to 4 gangs. It is powered via the local line feed, and communicates with the system through the 2-wire station bus.

Before the relay is programmed, or if communication is lost, the relay functions in default mode as an independent toggle. Once a button is programmed it can perform any operation that a standard station supports controlling its own or other loads.

To Add a ScenePoint Relay station:

With the "example" project open.

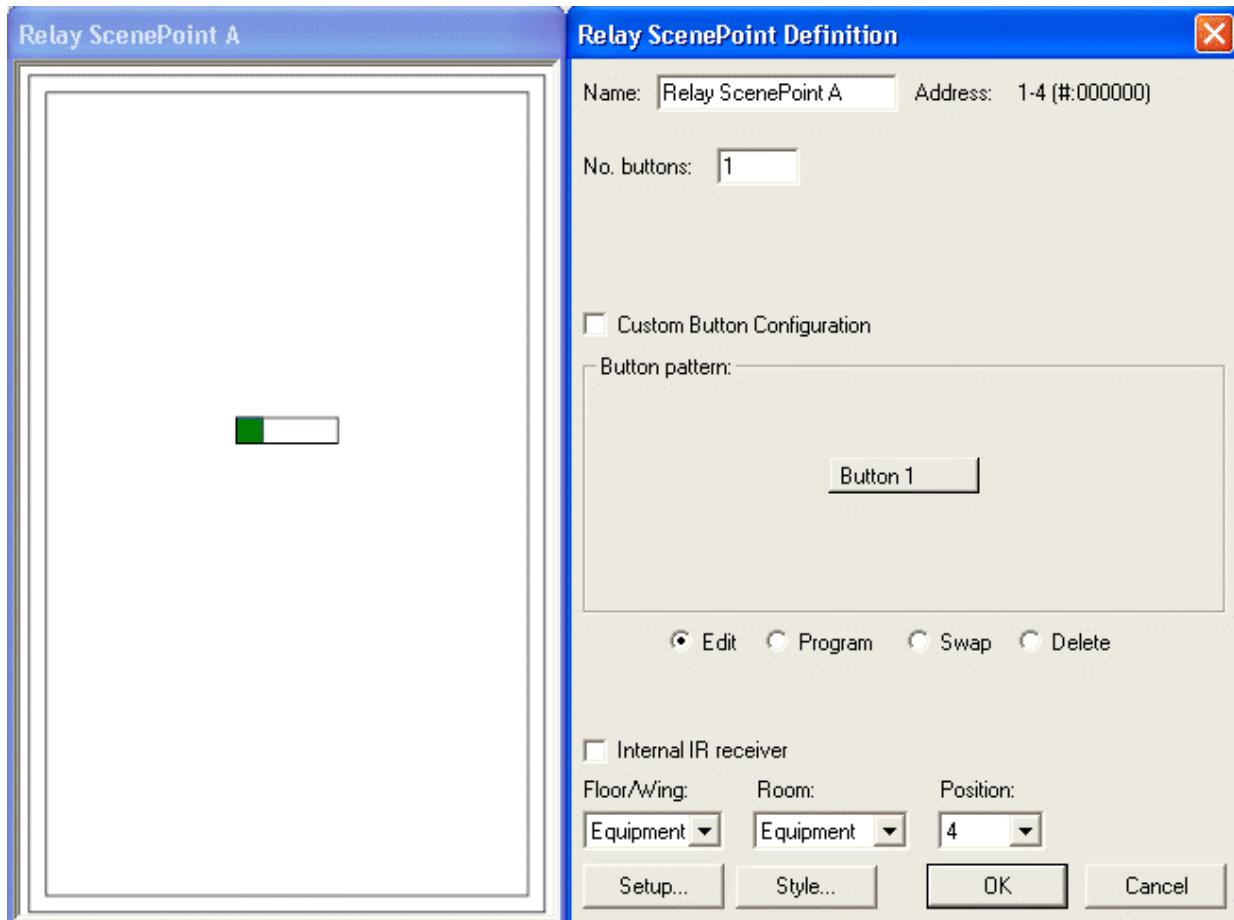
Select a **Room**.

On the **Add** menu, trace to **WireLink Stations**, and then click **ScenePoint Relay**.

-or-

Right-click a **Room**, trace to **Add WireLink Stations**, and then click **ScenePoint Relay**.

The ScenePoint Station Definition dialog box opens.



**Figure 10:** The ScenePoint Station Definition dialog box.

Make any **necessary changes**, and then click **OK**.

Save and close the "example" project.

## Specifications

Station Dimensions*	Height = 4.3" -or- 109mm Depth = 1.38" -or- 35mm Width = 2.5" -or- 63.5mm
Faceplate Dimensions*	Height = 4.7" -or- 119.3mm Width = 2.95" -or- 75mm
Weight	4.8oz. -or- 136g
Voltage	120/240V ~ 60/50Hz
Max. Load	16A (1920W @ 120V) - or - 16A (3840W @ 240V)
Built-in Protection	MOV surge suppression
Arc Suppression	Zero Cross Built-in arc suppression

Ambient Operating Temperature	32 - 95°F -or- 0 - 35°C
Ambient Operating Humidity	5 - 95% non-condensing
Cooling	None required
Status Indicator	Microprocessor Status
Load Types	Incandescent, Cold Cathode, HID, Fluorescent, Constant-Speed Motors
Minimum Load Required	0 Watts
UL and CUL Listed	Yes

Related Topic: [RadioLink ScenePoint Relay](#)

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## Contact Input

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A Contact Input Station can detect up to 10 contact closures. Contact closure occurs when contacts such as motion sensors, door contact, floor pressure sensors, etc. are shorted together or closed. Contact Input Stations may have remote IR sensors attached and will accept input from other systems.

To Add a Contact Input Station:

With the "example" project open.

Select a **Room**.

On the **Add** menu, trace to **WireLink Stations**, and then click **Contact Input**.

-or-

With a **room** selected, press the **F7** key.

-or-

Right-click a **Room**, trace to **Add WireLink Stations**, and then click **Contact Input**.

The Contact Input Station dialog box opens.

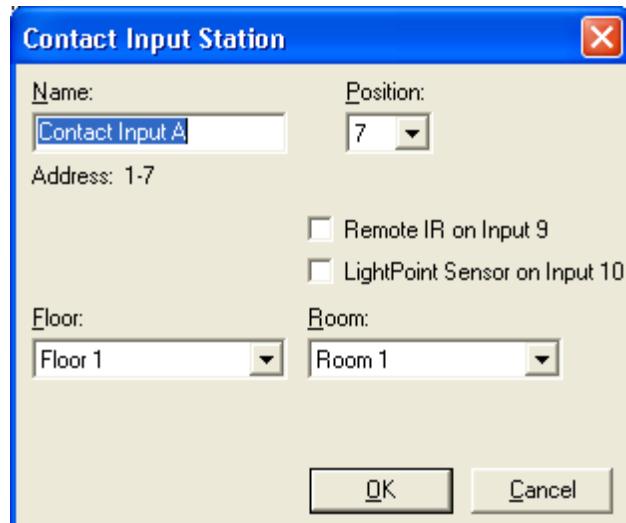


Figure 18: The Contact Input Station dialog box.

**Note:** If the Remote IR on Input 9 check box is selected, a Zone box will appear in the Contact Input Station dialog box. Enter an IR Zone in the Zone box. If either Remote IR on input 9 or Vantage Sensor on input 10 is checked the icons will change for those inputs.

Make any **necessary changes**, and then click **OK**.

**Save** the project.

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## Four Channel Relay

---

The 4 Channel, 10AMP Relay Station (STR4RW201) features 4 isolated, latching relay channels for switching. The station accepts voltage from 0 to 277volts up to 10amps. The STR4RW201 does not produce any power. Two relays are single-pole, double-throw, which offers a normally closed, normally open set of contacts. The other two Relays are single-pole, single throw to offer a normally open set of contacts. Each relay has a manual actuator or button on the front of the relay station which manually toggles the relay and is useful for testing wiring and operation without programming the system. Some examples for using an STR4RW201 are drapery motors, pumps, lights, HID and more. This station may also be used as a low voltage relay station. LEDs indicate relay operation. Relays latch to retain the last state in the event of a power interrupt.

To Add a 4 Channel Relay Station:

With the "example" project open.

Select **Wiring** view.

With the Main Controller selected click on the **Add** menu, trace to **WireLink Stations**, and then click **Four Channel Relay**.

Right click on the High Voltage Relay station and select Add High Voltage Relay to add the relays.

-or-

Right-click a **Room**, trace to **Add Loads | High Voltage Relay**, and then click **Four Channel Relay Station**.

The 4 Channel Relay Station dialog box opens.



**Figure 27a:** The 4 Channel Relay Station Definition (above) and HV Relay Definition dialog boxes (below).

Make any **necessary changes**, and then click **OK**.

In the Project Designer hierarchy window click the plus (+) in front of 4 Channel Relay Station to display the Relay Loads. Right click on a relay and select Properties.

The 4 Channel Relay Station dialog box opens.



**Figure 27b:** The 4 Channel Relay Station Definition dialog box.

Make any **necessary changes**, and then click **OK**.

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## HiddenTouch

---

HiddenTouch strip stations can have up to five buttons, four with an internal IR receiver. Because of the station's design, the auxiliary button positions, 9 and 10, are not available.

To Add a HiddenTouch Station:

Open the new project.

Select a **Room**.

On the **Add** menu, trace to **WireLink Stations**, and then click **HiddenTouch**.

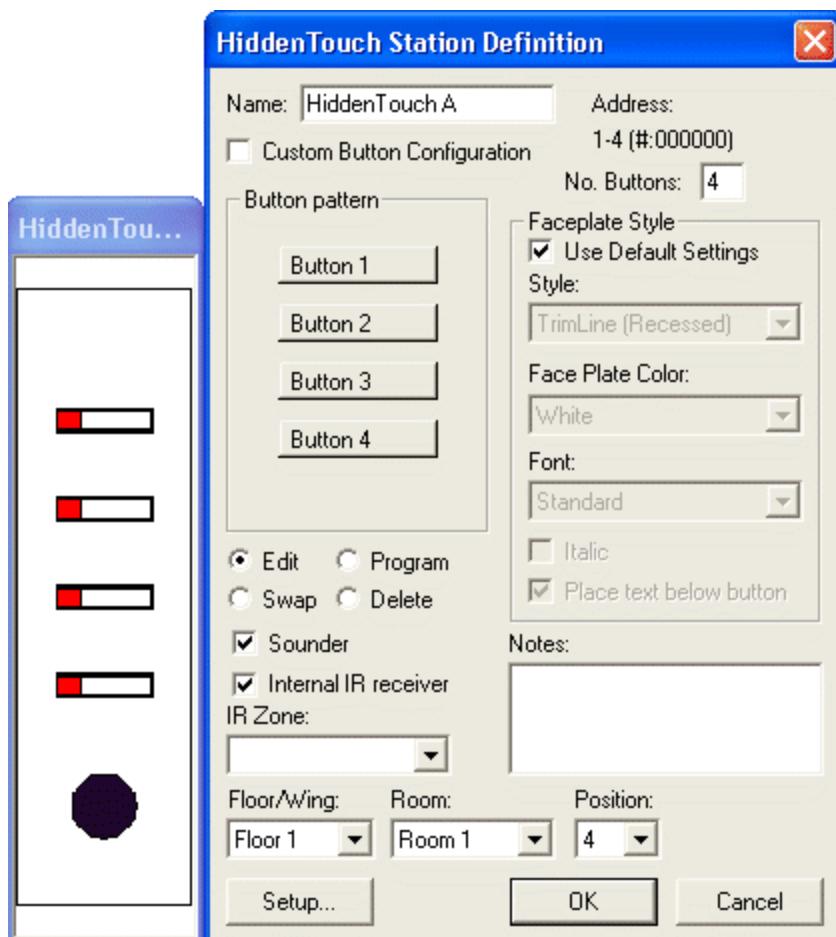
-or-

With a **room** selected, press the **F4** key.

-or-

Right-click a **Room**, trace to **Add WireLink Stations**, and then click **HiddenTouch**.

The HiddenTouch Station Definition dialog box opens.



**Figure 15:** The HiddenTouch Station Definition dialog box.

**Note:** See *HiddenTouch Station* in Appendix A: *Station Definitions* for an explanation of the dialog box items.

Make any **necessary changes**, and then click **OK**.

**Save** the project.

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## Infrared Emitter

---

An Infrared Emitter Station sends IR signals to any remote controlled hardware device. The emitter receives command from the Vantage system via keypad button press, LCD button press, etc. and intern sends an IR signal to the appropriate device.

To Add an Infrared Emitter Station:

With the "example" project open.

Select a **Room**.

On the **Add** menu, trace to **WireLink Stations**, and then click **Infrared Emitter**.

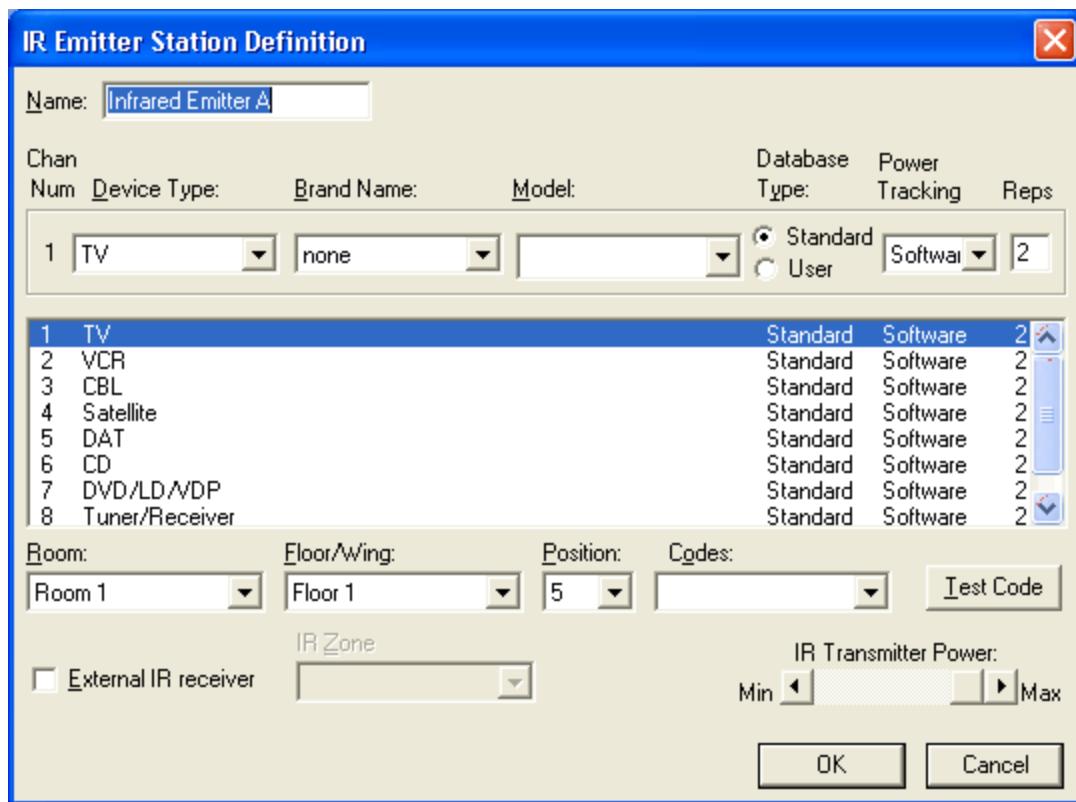
-or-

With a **room** selected, press the **F5** key.

-or-

Right-click a **Room**, trace to **Add WireLink Stations**, and then click **Infrared Emitter**.

The IR Emitter Station Definition dialog box opens.



**Figure 16:** The IR Emitter Station Definition dialog box.

**Note:** See *IR Emitter* in Appendix A: Station Definitions for an explanation of the dialog box items.

Make any **necessary changes**, and then click **OK**.

**Save** the project.

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## TPT 550 Color LCD Screen

---

Vantage's TPT color LCD touch screen, is a 65,536 color, active matrix liquid crystal touch screen with a backlit display. The quarter VGA LCD 5.5 inch diagonal display is small enough to keep any area from feeling cluttered but versatile enough to fulfill the needs of almost any application. A small proximity detector senses movement and activates the backlight, illuminating high resolution graphics.

To Add a TPT LCD Touchscreen Station:

With the "example" project open.

Select a **Room**.

On the **Add** menu, trace to **WireLink Stations**, and then click **LCD Touchscreens**.

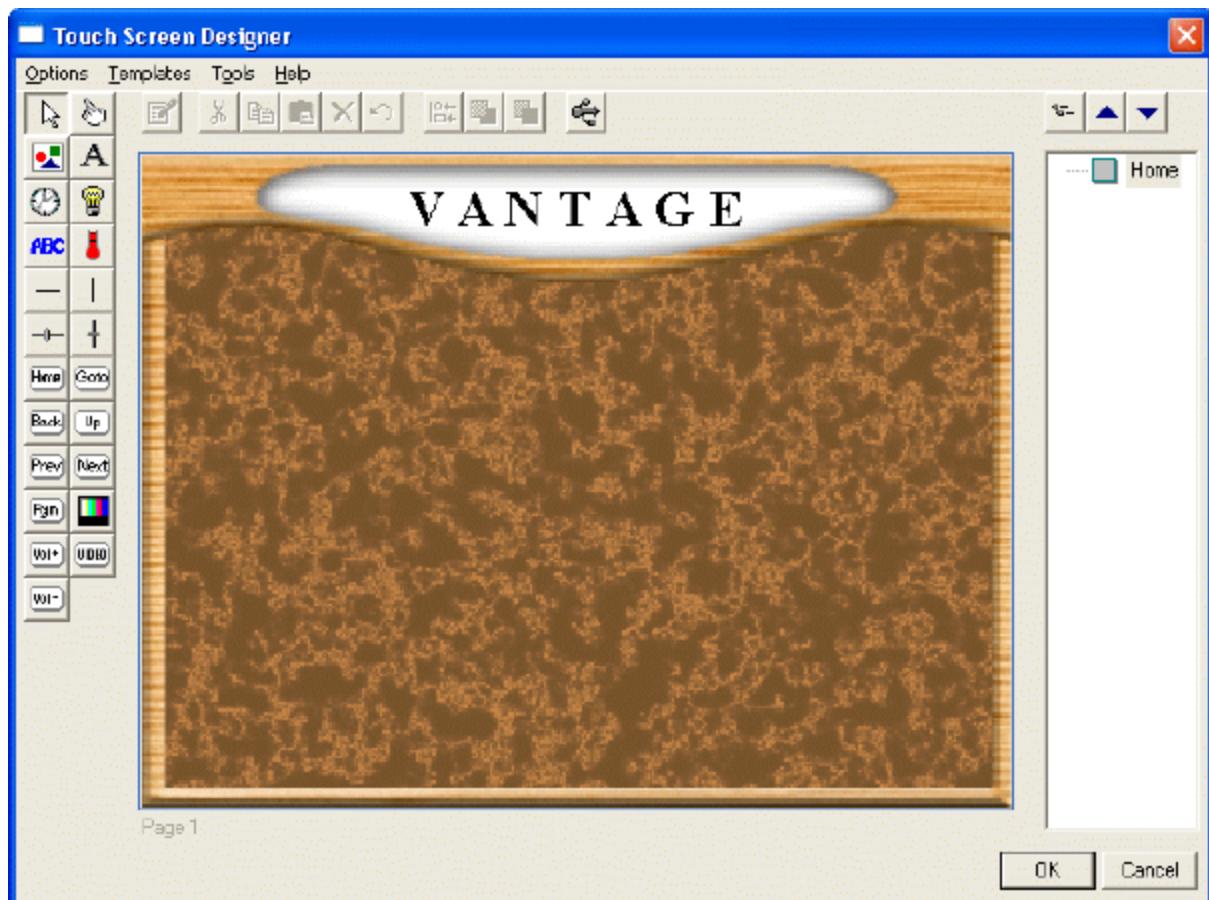
-or-

With a **room** selected, press **F3**.

-or-

Right-click a **Room**, trace to **Add WireLink Stations**, and then click **LCD Touchscreens**.

The TPT LCD320C5 Touchscreen Station Design dialog box opens.



**Figure 14a:** The TPT 550 Touch Screen Designer dialog box.

Make any **necessary changes**, and then click **OK**.

**Save** the project.

Additional Help is available from the Installation instruction sheet shipped with each TPT station.

**Related Topic:** [TPT Programming and Hardware](#)

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## LCD320M Touchscreen

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An LCD Touchscreen station is highly programmable and allows for a wide range of customization in function and appearance. It uses a touch sensitive LCD (liquid crystal display) screen. Information in the LCD touchscreen is organized in pages that can contain multiple objects such as buttons and other graphic images. Currently available touchscreens are the 320C5 (Color) and the 320M (Monochrome). The LCD320C5 is also available with Video and Sound hookups and may be ordered in a **RadioLink** model. The LCD320M model's LCD Designer window is displayed below.

To Add an LCD Touchscreen Station:

With the "example" project open.

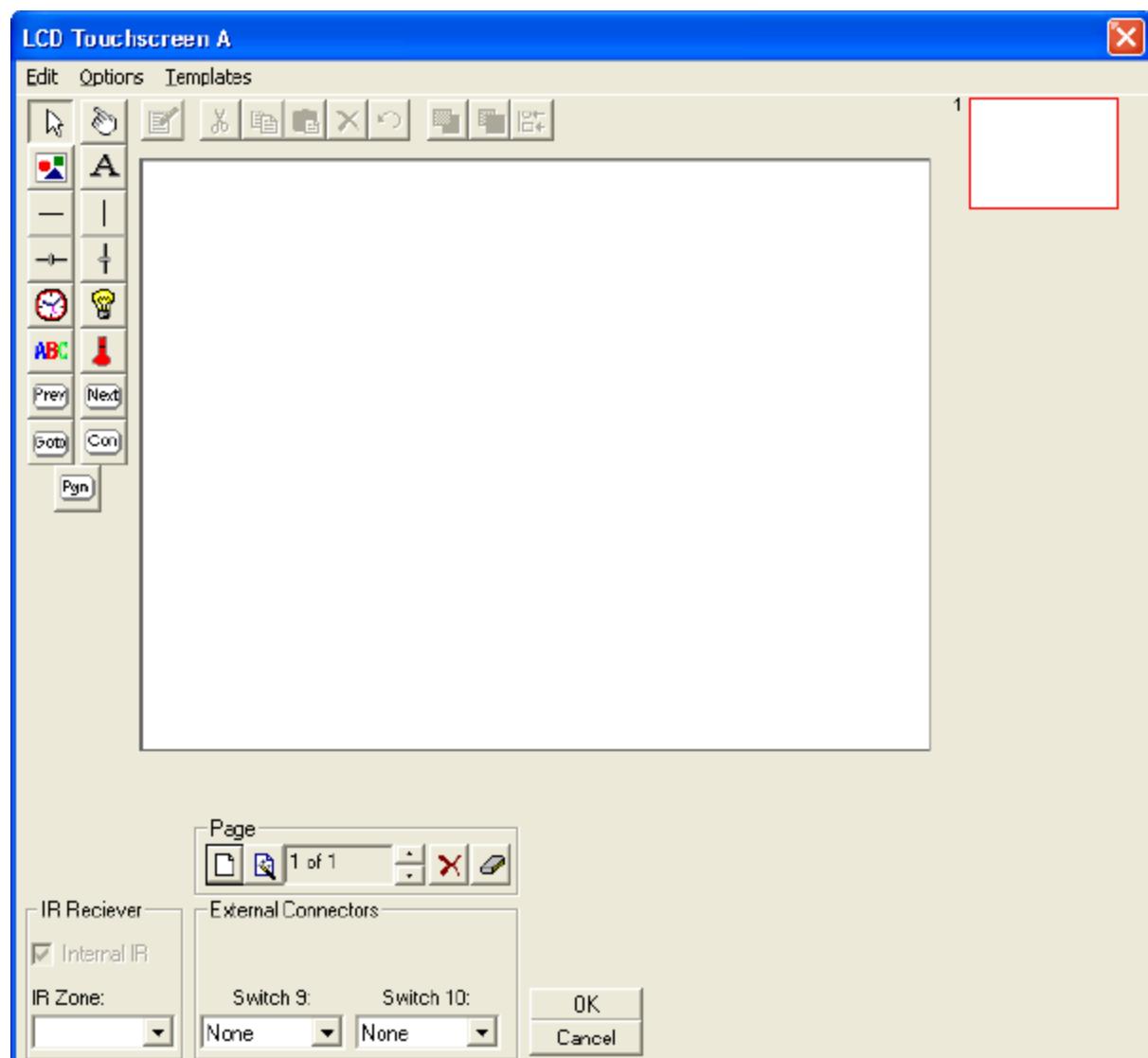
Select a **Room**.

On the **Add** menu, trace to **WireLink Stations**, and then click **LCD Touchscreens**.

-or-

Right-click a **Room**, trace to **Add WireLink Stations**, and then click **LCD Touchscreens**.

The LCD 320M Touchscreen Station Design dialog box opens.



**Figure 14:** The LCD320M Touch Screen Designer dialog box.

**Note:** See LCD Touchscreen Station in Appendix A: Station Definitions for additional information.

Make any **necessary changes**, and then click **OK**.

**Save** the project.

**Related Topic:** [Programming LCD Screens](#)

## Low Voltage Output

---

A Low Voltage Output Station is typically designed for dimmable low voltage fluorescent lights. Each dimmable fluorescent receives primary power and a low-voltage dimming signal from the station and can dim a maximum of four separate loads.

To Add a Low Voltage Output Station:

With the "example" project open.

Select a **Room**.

On the **Add** menu, trace to **WireLink Stations**, and then click **Low Voltage Output**.

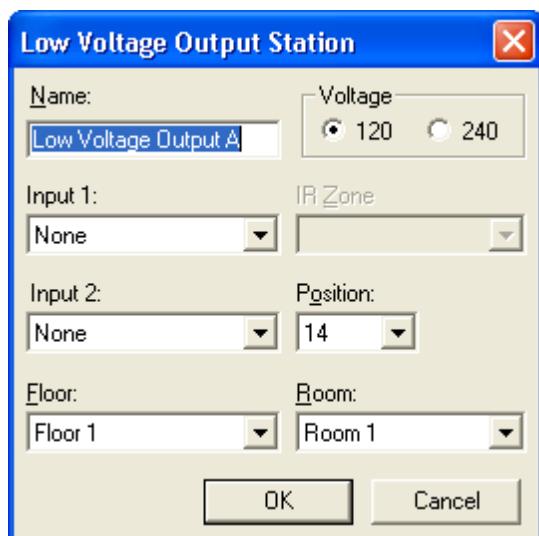
-or-

With a **room** selected, press the **F11** key.

-or-

Right-click a **Room**, trace to **Add WireLink Stations**, and then click **Low Voltage Output**.

The Low Voltage Output Station dialog box opens.



**Figure 26:** The Low Voltage Output Station dialog box.

**Note:** See *Low Voltage Output Station* in Appendix A: *Station Definitions* for an explanation of the dialog box items.

Make any **necessary changes**, and then click **OK**.

Save the project.

---

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## Low Voltage Relay

---

A Low Voltage Relay Station allows the Vantage system to control external motors, sprinkler systems, security systems, HVAC, etc. These systems are connected to one of the 8 relays on a Low Voltage Relay Station. The LVRS can be activated by a button press or remote control command from the Vantage System.

To Add a Low Voltage Relay Station:

With the "example" project open.

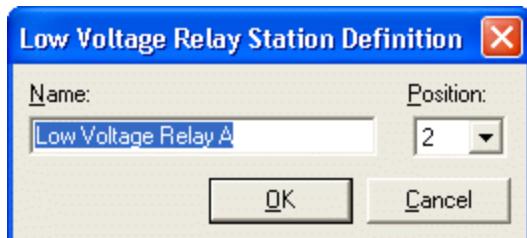
Select **Wiring** view.

On the **Add** menu, trace to **WireLink Stations**, and then click **Low Voltage Relay**.

-or-

With a Controller selected, press the **F6** key.

The Low Voltage Relay Station dialog box opens.



**Figure 17:** The Low Voltage Relay Station Definition dialog box.

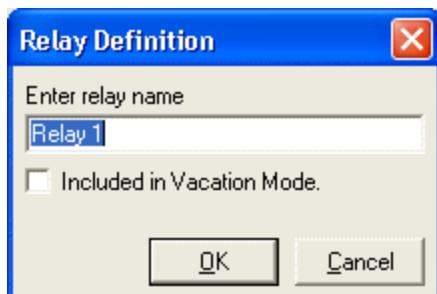
In the **Name** box type a **name**, and then click **OK**.

-or-

Right-click a **Room**, trace to **Add Loads**, and then click **Low Voltage Relay**.

Select the Low Voltage Relay Station.

An LVRS load is added to the room.



**Figure 17a:** The Low Voltage Relay Definition dialog box.

Right click one of the Relays under the room in Location view or the LVRS station in Wiring view and select Properties to open the Relay Definition window. Relays may be named for easy identification and may be checked to include or not include in vacation mode. Relays cannot be programmed directly. To program a relay for operation the Button, TimeControl, etc. should be programmed to control the relay.

**Save** the project.

---

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## Power Station

---

The Power Station Booster is essentially a single station dimmer able to handle bigger loads than a normal dimmer station. The power station is installed in a 2 gang box. Faceplate covers are available in Almond, Black, Brown, Ivory and White. Four models are available:

### Incandescent Magnetic low-voltage models

Model: STPSRW101=120VAC, 1920W/16A

Model: STPSRW201=220-277VAC, 3520W/16A@220VAC or 4432W/16A@277VAC

### Electronic or incandescent models

Model: STPERR101=120VAC, 960W/8A

Model: STPERR201=220-277VAC, 990W/4.5A@220VAC or 970W/3.5A@277VAC

To Add an Power Station:

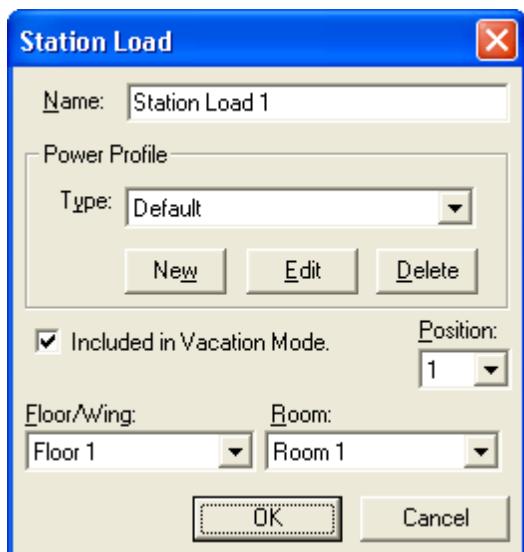
With the "example" project open.

Select a **Room**.

On the **Add** menu, trace to **Loads | Dimmed Station Loads | Power Station**.

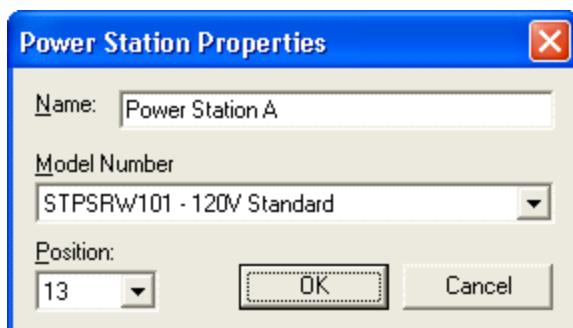
-or-

Right-click a **Room**, trace to **Add Loads | Dimmed Station Loads | Power Station**.



**Figure 23:** The Power Station Load dialog box.

In Wiring view right clickon the Power Station icon, select properties and the Power Station Properties dialog box opens.



**Figure 23a:** The Power Station Properties dialog box.

Make any **necessary changes**, and then click **OK**.

**Save** the project.

---

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## Power ScenePoint Dimmer

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The Power ScenePoint and Power ScenePoint with RadioLink are wall box dimmers that connect to the Vantage Control System. They are designed for one load that may draw up to 1200 watts. They are mounted into a two gang back box and are powered via the local 120V line feed.

To Add an Power ScenePoint Dimmer Station:

With the "example" project open.

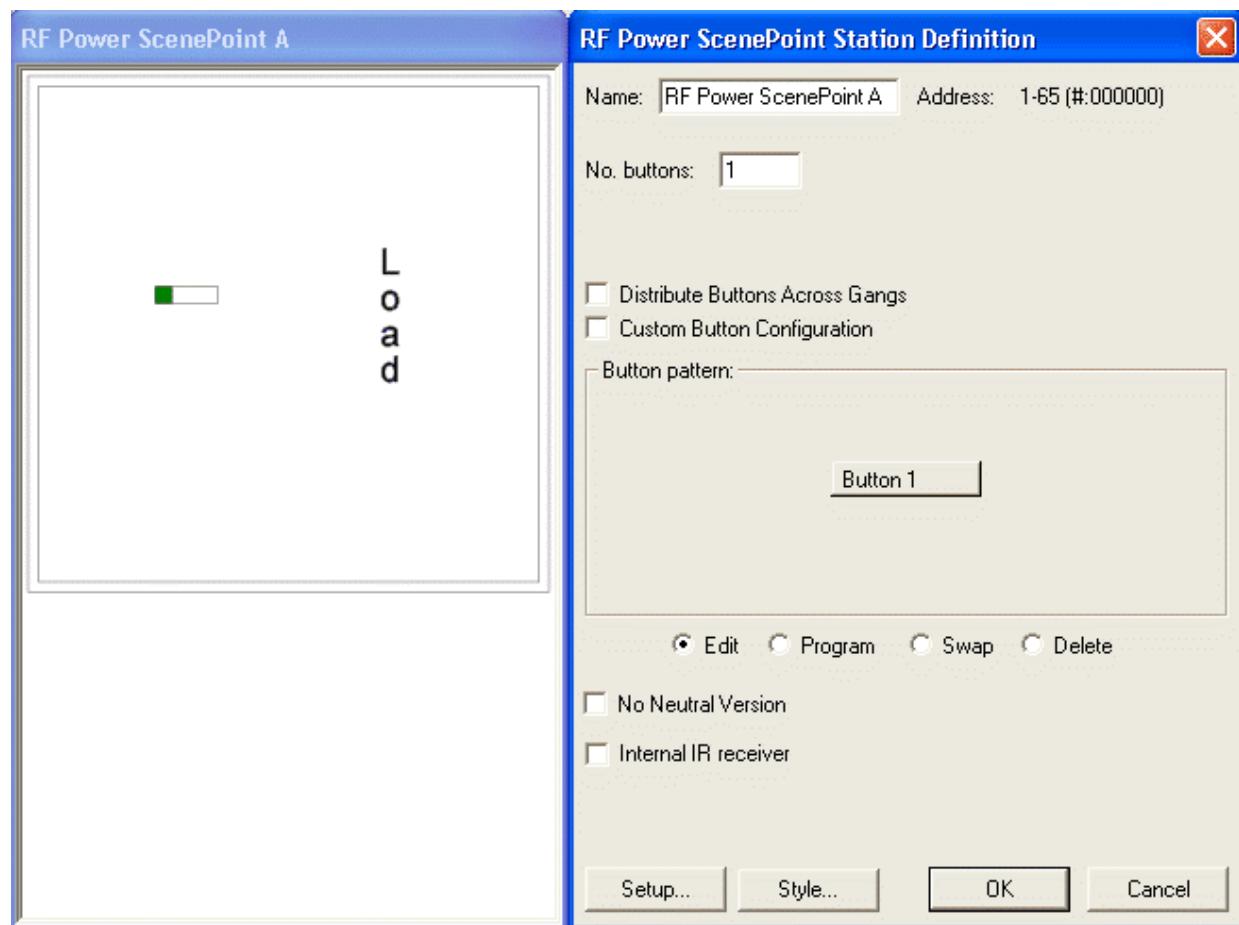
Select a **Room**.

On the **Add** menu, trace to **WireLink Stations or RadioLink Stations**, and then click **Power ScenePoint Dimmer**.

-or-

Right-click a **Room**, trace to **Add WireLink Stations or RadioLink Stations**, and then click **Power ScenePoint Dimmer**.

The Power ScenePoint Dimmer Station dialog box opens.



**Figure 24:** RF or WireLink Power ScenePoint Station Definition window.

Make any **necessary changes**, and then click **OK**.

**Save** the project.

An RS-232 Station allows external communication devices to be connected to the system and may be used as a remote diagnostics port for the Master Controller. The main purpose for the RS-232 station is to allow a flexible connection to and from the Vantage System with other 3rd party systems. While a diagnostic port is located on each Master Controller, the RS-232 station can be used anywhere on the station bus for instant connection to the Vantage System.

To Add an RS-232 Station:

With the "example" project open.

Select a **Room**.

On the **Add** menu, trace to **WireLink Stations**, and then click **RS-232**.

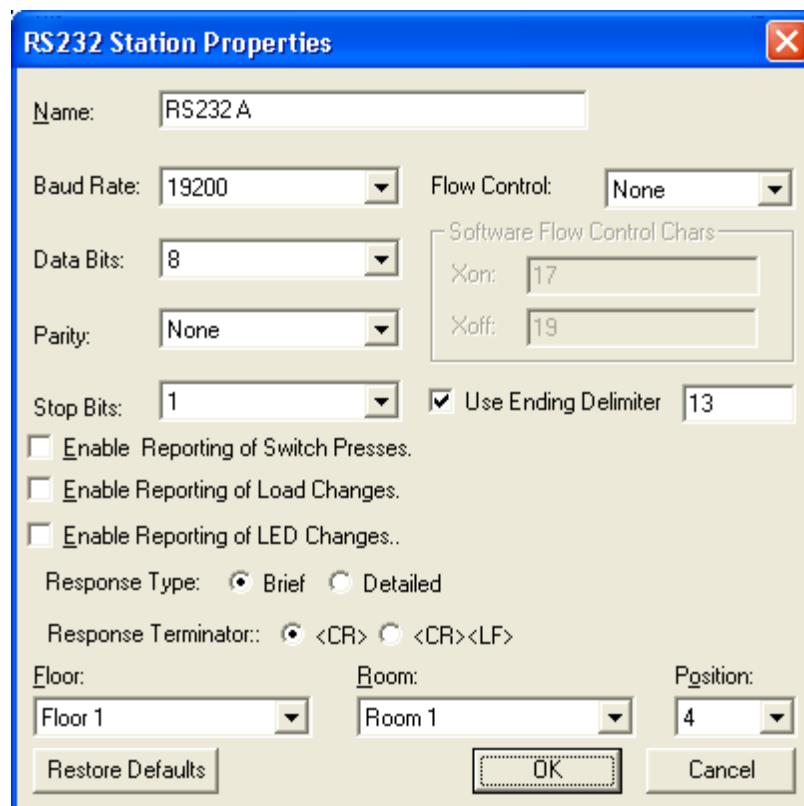
-or-

With a **room** selected, press the **F9** key.

-or-

Right-click a **Room**, trace to **Add WireLink Stations**, and then click **RS-232**.

The RS-232 Station dialog box opens.



**Figure 21:** The RS-232 Station dialog box.

The check box **Use Ending Delimiter 13**, is for **outgoing** RS-232 strings.

The radio buttons for **Response Terminator**: is for **incoming** RS-232 Strings.

**Note:** **Enable Reporting of Switch Presses.** (Automatically enables VOS responses)

**Enable Reporting of Load Changes.** (Automatically enables VOL responses)

**Enable Reporting of LED Changes.** (Automatically enables VOD responses)

**Response Type:** **Brief/Detailed** (Automatically sets responses to regular or detailed)

**Response Terminator:** **<CR>/<CR><LF>** (Automatically sets the response terminator)

(With these settings the traditional method of having the connecting equipment send the appropriate V-Commands is eliminated.)

**Note:** See RS-232 in [Appendix A: Station Definitions](#) for an explanation of the dialog box items.

Make any **necessary changes**, and then click **OK**.

**Save** the project.

**Related Topic:** [RS-485](#)

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## RS-485

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An RS-485 Station allows external RS-485 communication devices to be connected to the system. The main purpose for the RS-485 station is to allow a flexible connection to and from the Vantage System with other 3rd party systems. The RS-485 station may be used anywhere on the station bus for instant connection to the Vantage System.

To Add an RS-485 Station:

With the "example" project open.

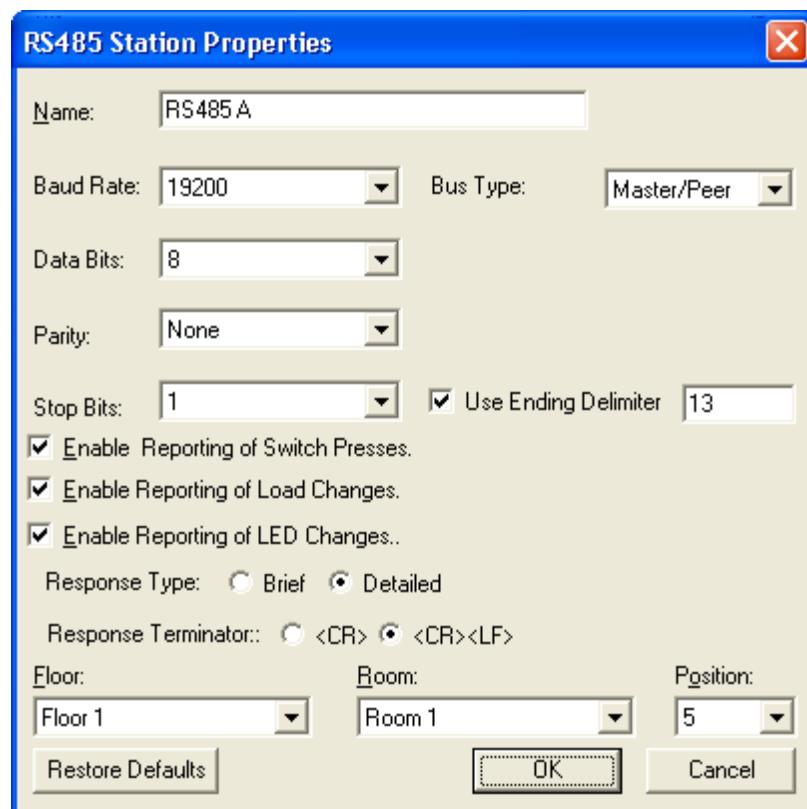
Select a **Room**.

On the **Add** menu, trace to **WireLink Stations**, and then click **RS-485**.

-or-

Right-click a **Room**, trace to **Add WireLink Stations**, and then click **RS-485**.

The RS-485 Station dialog box opens.



**Figure 22:** The RS-485 Station dialog box.

The check box **Use Ending Delimiter 13**, is for **outgoing** RS-485 strings.

The radio buttons for **Response Terminator:** is for **incoming** RS-485 Strings.

**Note:** **Enable Reporting of Switch Presses.** (Automatically enables VOS responses)

**Enable Reporting of Load Changes.** (Automatically enables VOL responses)

**Enable Reporting of LED Changes.** (Automatically enables VOD responses)

**Response Type:** **Brief/Detailed** (Automatically sets responses to regular or detailed)

**Response Terminator:** <CR>/<CR><LF> (Automatically sets the response terminator)

(With these settings the traditional method of having the connecting equipment send the appropriate V-Commands is eliminated.)

**Note:** See RS-485 printed instruction sheet for details.

Make any **necessary changes**, and then click **OK**.

**Save** the project.

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## TheatrePoint

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TheatrePoint is used for complete home theater automation. A/V equipment, Screens, Blinds, etc., may be controlled from any button, IR Remote, LCD or 3rd party equipment on the Vantage system. TheatrePoint has powerful functionality including current sensing outlets, contact inputs, an LCD interface, IR pass through capability, low voltage relay outputs, and RS-232 ports. Firmware is updateable via QLink software.

To Add a TheatrePoint Station:

With the "example" project open.

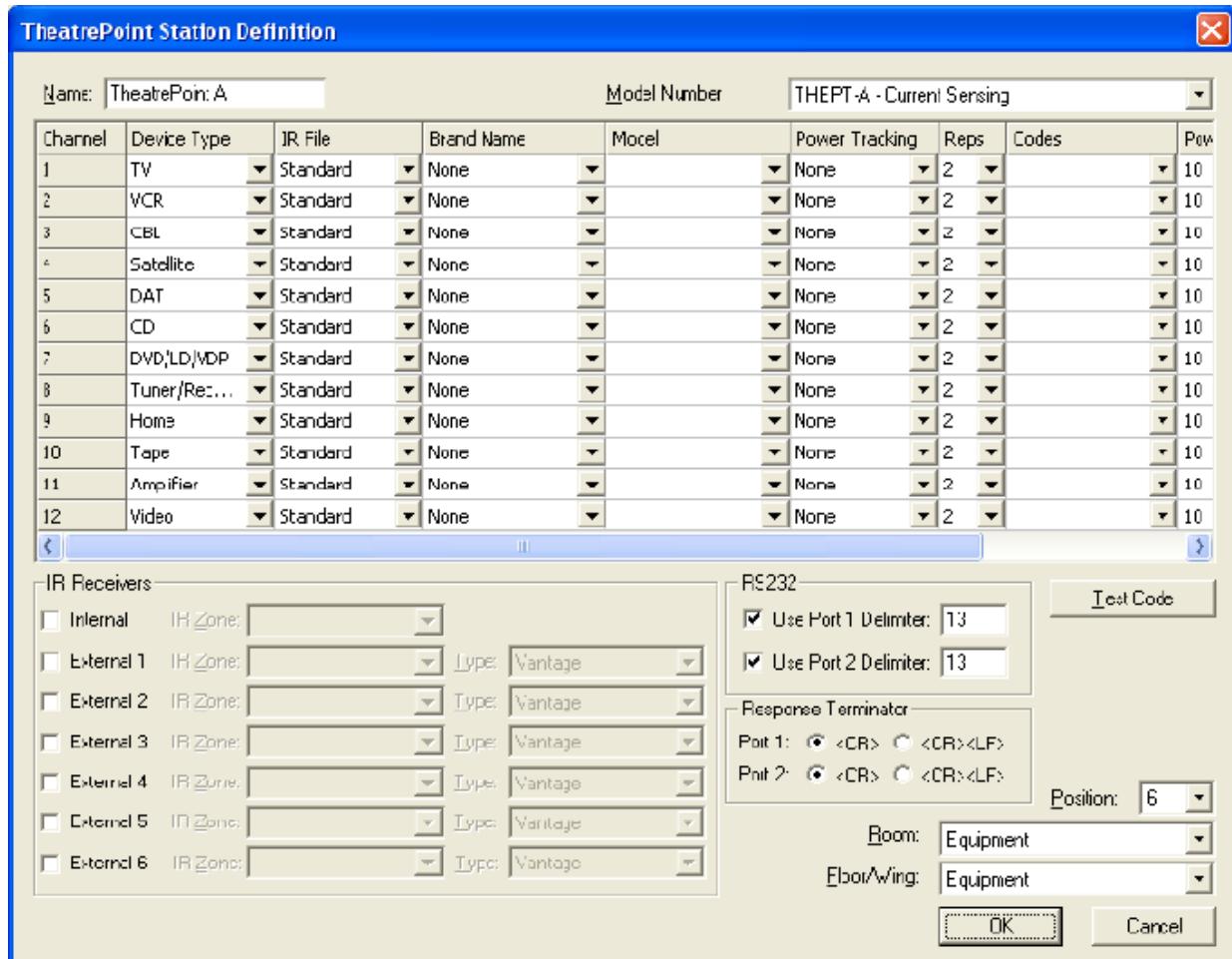
Select a **Room**.

On the **Add** menu, trace to **WireLink Stations**, and then click **TheatrePoint**.

-OR-

Right-click a **Room**, trace to **Add WireLink Stations**, and then click **TheatrePoint**.

The TheatrePoint Station dialog box opens.



**Figure 27:** The TheatrePoint Station Definition dialog box.

**Note:** See *TheatrePoint* in Appendix A: Station Definitions for an explanation of the dialog box items.

Make any **necessary changes**, and then click **OK**.

Save the project.

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## Thermostat

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A Thermostat Station allows direct control of HVAC devices and HVAC integration with many other Vantage station components. The Q-ETS3 provides bi-directional communication to thermostats via the Vantage Station Bus. Set points are easily changed from any button programmed using QLink software. Current set points and temperatures may be displayed on LCD stations. The Vantage Q-ETS3 station and the Vantage thermostats are used together to control HVAC systems. The Q-ETS3/Termostat combination counts as one (1) station on the Vantage System.

### System Requirements

Each Vantage thermostat requires one Q-ETS3:

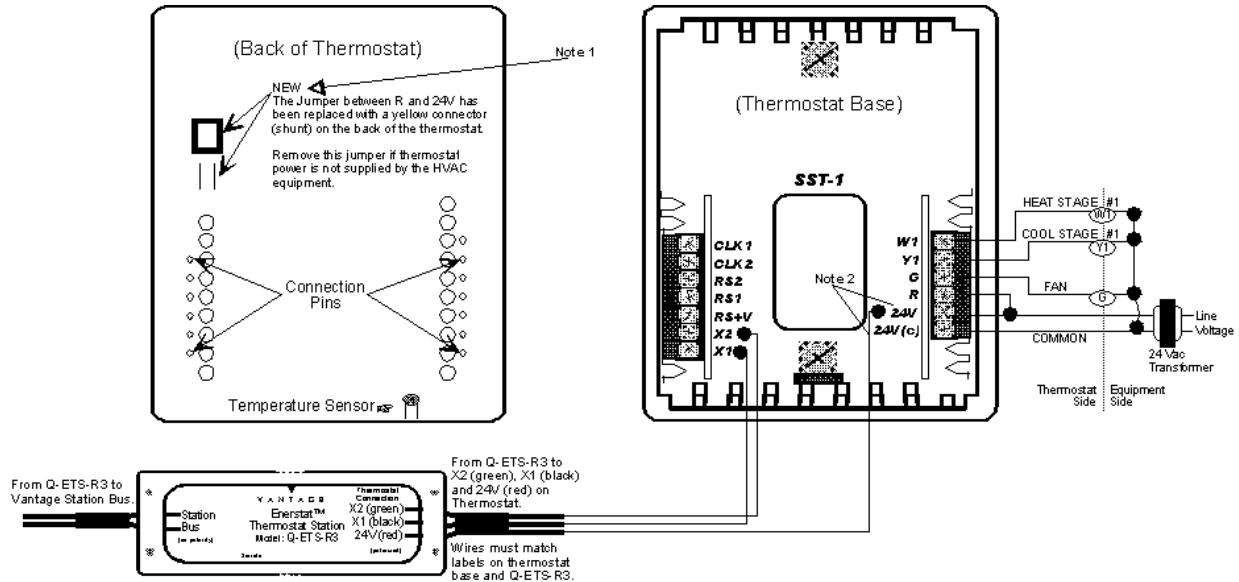
Thermostat Model Part #s:

V-SST-1-R3: 1 Heat/1 Cool Single Stage

V-MST-1-R3: 2 Heat/2 Cool Multi Stage

V-HPT-2-R3: 3 Heat/2 Cool Heat Pump

### Thermostat Wiring



Note 1: If the yellow jumper is removed (see back of thermostat drawing above), a dedicated transformer is required at the "R" terminal to power the loads.

Note 2: This thermostat may be used with 24 Volt DC/AC. The negative side of the DC supply must be wired to the 24V(c) terminal.

Note 3: If the Vantage AC Adaptor part# V-PWR24 is used and the yellow jumper is removed and power is also supplied to "R" from the HVAC system the common wire from the HVAC system cannot be connected to the 24V(c) on the thermostat. The common from the HVAC should be capped off and not used.

Note 4: The new Q-ETS-R3 red wire connects to the 24V screw on the thermostat base along with the 24V power supply. The Q-ETS-R3 does not supply power to the thermostat.

*Please refer to the information sheet shipped with the thermostat for proper handling, installation location, etc. of the thermostat.*

**Figure 19: Thermostat Wiring Diagram.**

To Add a Thermostat Station:

With the "example" project open.

Select a **Room**.

On the **Add** menu, trace to **WireLink Stations**, and then click **Thermostat**.

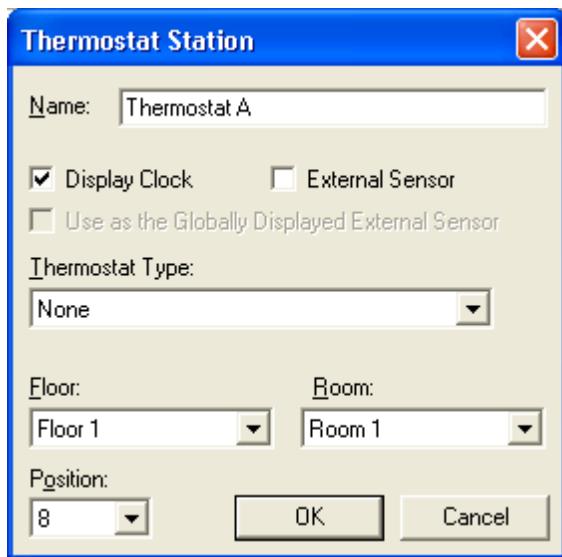
-or-

With a **room** selected, press the **F8** key.

-or-

Right-click a **Room**, trace to **Add WireLink Stations**, and then click **Thermostat**.

The Thermostat Station dialog box opens.



**Figure 20:** The Thermostat Station dialog box.

In the **Name** box type a **name**.

If the External Sensor check box is selected, the "Use as the Globally Displayed External Sensor" check box becomes available. Checking this box will display the temperature from this external sensor as the external sensor on all thermostats throughout the system.

Click the **Thermostat Type** dropdown list, and then select a **thermostat type**.

Click **OK**.

**Save** the project.

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## DMX

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The DMX station allows the Vantage system to communicate with components that use the DMX protocol.

NOTE: DMX stations are currently not available from Vantage. This option is only for projects which already have the DMX station installed. Please call Vantage for additional DMX support.

To Add a DMX Station:

With the "example" project open. Change to Wiring view.

Select a Controller.

Press the **F10** key.

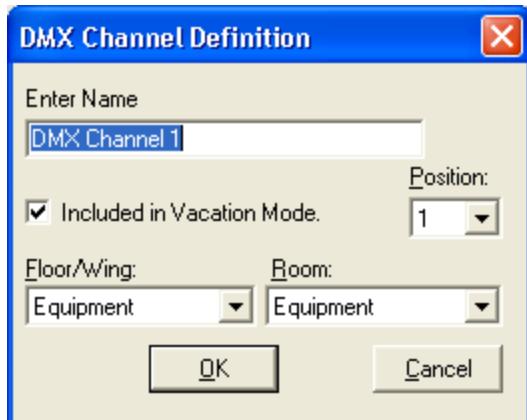
A DMX station is added to the project,

Right click on the DMX station and select Properties to open the DMX Station dialog box.



**Figure 25:** The DMX Station dialog box.

Right click on the DMX load and select Properties to open the DMX Channel Definition box.



**Figure 25a:** The DMX Channel Definition dialog box.

**Note:** See DMX in Appendix A: Station Definitions for an explanation of the dialog box items.

Make any **necessary changes**, and then click **OK**.

**Save** the project.

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## BriteStyle Buttons

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The BriteStyle keypad is Vantage's premiere backlit primary control point, used to replace multiple conventional switches with a single stylish keypad. BriteStyle keypads feature elegant design incorporating rounded keys to enhance aesthetic appeal. The rounded keycap also magnifies the button label for enhanced readability. Each button is evenly backlit with a built in diffuser and three color LED providing unlimited color choices. Keypads may be designed in single or multiple gang configurations. Each gang may have four or eight buttons. Configurations may even include third party devices utilizing Decora punch and other designs. See the QLink software for a complete selection

The backlight color indicates the status of the programming by providing the user with the option to personalize the color for on and off status. The keypad also features an ambient light sensor for automatic day/night backlight intensity control. BriteStyle keypads feature field changeable labeling that is printed by the dealer. This gives the programmer the flexibility to reprogram and re-label a system without the expense of purchasing new faceplates or buttons.

A built-in IR receiver that does not take the place of any buttons, comes standard and allows for control of the system using

Vantage's remote control IR Code Set. The BriteStyle keypad is software addressable and programmable. Faceplates are available in both metal and plastic designs. The keypads include a six pin auxiliary connector to easily integrate sensors and other devices into the Vantage system.

- Full range RGB adjustable backlight
- automatically adjusting brightness levels
- Field changeable dealer printed labeling
- Responds instantly to button press regardless of system size
- Two and Four button counts as one station on controller
- Six and Eight button counts as two stations on controller
- Uses Vantage's revolutionary two-wire, non-polarized station bus
- Features the unique clip-loc bracket to securely fasten the faceplate to the station
- Built-in surge suppression
- Built-in, inconspicuous IR receiver and ambient light sensors

## **System Requirements**

QLink 4 and Master Firmware 7.0 or higher is required. For new projects it is recommended that firmware and software be kept to the most current release.

## **Installation**

The Vantage Keypad Station installation is very simple. Connect using the 2 wire pigtail connection located on the rear of the station.

It can be mounted into a standard 1-5 gang electrical box for Metal faceplates or 1-4 gang electrical box for Plastic faceplates.

### **Specifications**

Station Dimensions	All Gangs Height = 4.125" (105mm) All Gangs Depth = .9" (23mm) One Gang Width = 1.9" (48.3mm) Two Gang Width = 3.75" (95mm) Three Gang Width = 5.6" (142mm) Four Gang Width = 7.45" (189mm)
Faceplate Dimensions	All Gangs Height = 4.7" (119.3mm) One Gang Width = 2.95" (75mm) Two Gang Width = 4.68" (118.8mm) Three Gang Width = 6.5" (165mm) Four Gang Width = 8.31" (211mm)
Weight	1.8oz. (51g) (1-gang)
Power	24V DC via Station Bus
Surge Suppression	Yes
Maximum Buttons	8
Auxiliary Connections	2
Station Count	1 – two and four button station
On MC	2 – six and eight button station
Maximum Number of Stations per Master	50 four button stations 25 eight button stations
Maximum Number of Gangs	Metal up to 5-gangs Plastic up to 4-gangs
Button LED*	RGB, Full Color
Button State LED*	Full Color Button Backlight
IR Receiver	Yes, built-in/standard
Ambient Light Sensor	Yes, built-in/standard, for pre-programmed button brightness
Sound	Yes (variable pitch)
Wiring Connection	2 Wire 600V Pigtail (included)
Addressing	Self addressing through software

Power for External Devices	15 mA @ 12V DC
Polarity Sensitive	No
Status LED	Behind Faceplate
Finishes	See QLink Software
Ambient Operating Temperature	32-95°F (0-35°C)
Ambient Operating Humidity	5-95% non-condensing
Outdoor Use	With Approved Weatherproof Cover (Part # WPC-1 or WPC-2)
1 or 2 gangs only	
UL and CUL Listed	Yes

## Auxiliary Connections

All auxiliary connections to the station are wired to a six wire pigtail available from Vantage. Motion detectors, wood and metal door contacts, pressure mat sensors, stress sensors, light sensors, etc., are available from Vantage. They work by simply connecting them to the 6-wire Auxiliary connector on any BriteStyle keypad. A 15 mA @ 12V DC power supply for Vantage's Motion detectors, LightPoint sensors and Q-REMOTEIR is supplied from this connection eliminating the need for an external power supply. Buttons 9 and 10 may be used as phantom buttons or in some cases they may be used as slave keypad buttons. Note, slave keypads are not available with BriteStyle buttons.

### Button Label Printing and Installation

Button labels may be printed on special transparency labels available from Vantage in Microsoft® Office Word and Corel® WordPerfect® or PDF formats. Only print labels using Inkjet printers set to Transparencies (see printer manufacturer instructions for proper transparency media settings). Template files for printing labels may be found on the QLink installation CD and in the BriteStyle folder under C:\Program Files\Vantage\Vantage40\BriteStyle.

For every five stations ordered one blank sheet and one preprinted Icon sheet of labels is supplied. Labels may be ordered using the following part numbers:

### Additional Options

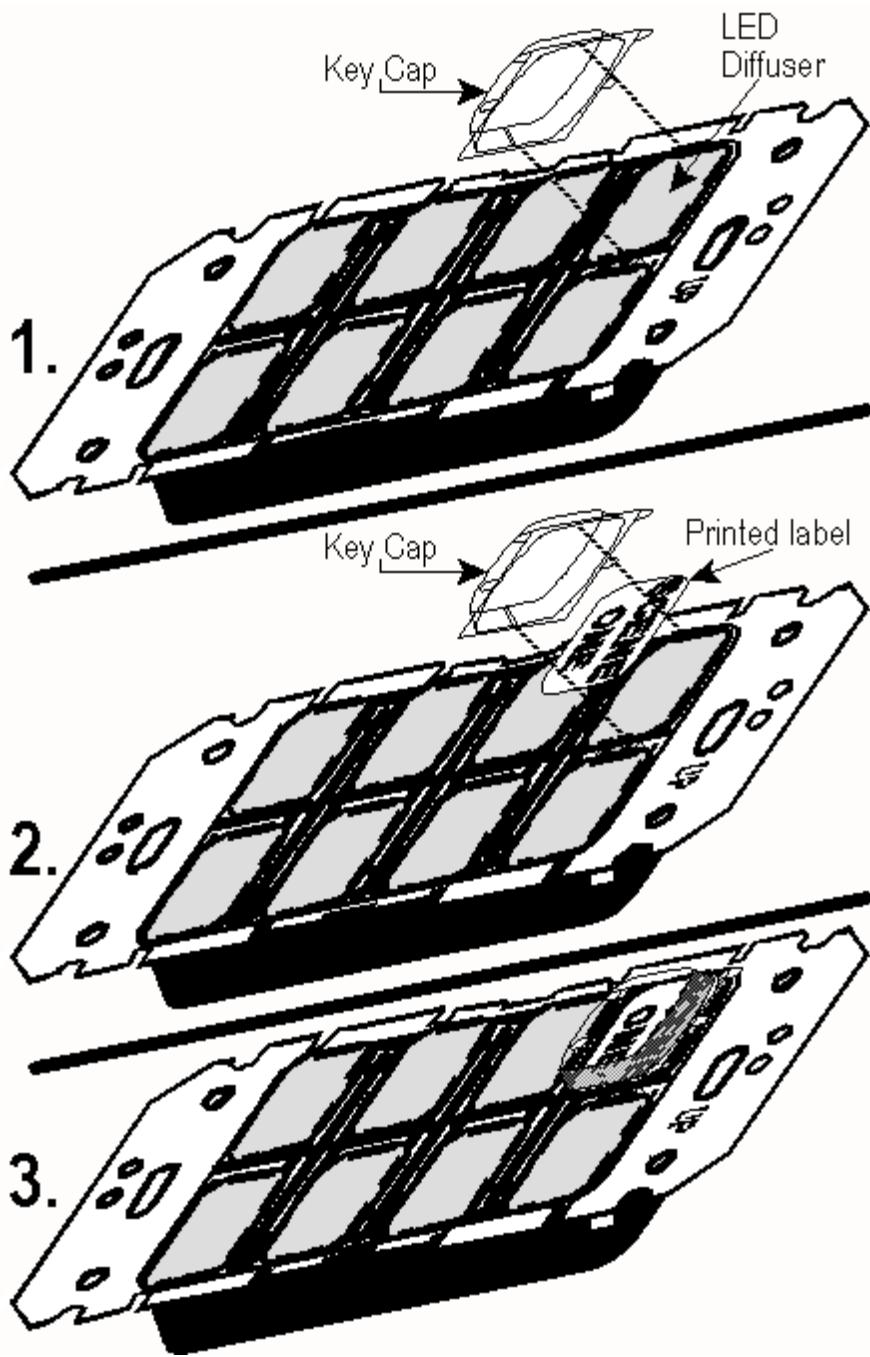
BriteStyle Preprinted Icons	BTLABEL-P
BriteStyle Blank Label (200 labels per sheet)	BTLABEL-B
BriteStyle Custom Printing	BTLABEL-C
BriteStyle Custom Printing and Assembly	BTLABEL-C1

**Step 1.** Remove the faceplate.

**Step 2.** Carefully lift the Keycap (clear plastic cap) by lifting from the top or bottom of the cap. Be careful to not remove the light diffuser. (If the light diffuser is accidentally removed see below for proper orientation when replacing.)

**Step 3.** Place the printed label on the Light Diffuser.

**Step 4.** Replace the Key Cap.



#### Global Settings

If the majority of the stations on a project will be BriteStyle before creating the stations click on System | Defaults and change

Button Shape to BriteStyle, M-Touch or R-Touch. To set the Global Parameters for switches click on System | Global Parameters | 3 Color Button and set the colors for ON and OFF. Colors may be customized. NOTE: very dim colors are usually selected for OFF state. Dim or low intensity colors may appear almost black on most computer monitors but provide correct intensity on BriteStyle buttons.

#### Standard Keypad Set Up with QLink

Before creating the first keypad click on System | Defaults to select the default style of stations, BriteStyle buttons, colors, etc. To add a BriteStyle keypad station in QLink, right click on the room and from the pop-up menu, select Add Station | Keypad from the station list. This will reveal the Station Definition Dialog Box. Select a four button or eight button station and switches 9 and 10 if wanted.

The **AutoLight** checkbox allows the built-in light sensor to automatically adjust the intensity of the buttons on the keypad depending on the amount of light in the room. Switch 9 may be used for an External IR and Switch 10 may be used for the Vantage LightPoint Sensor or they may be used for other auxiliary connections (see Auxiliary Connections above). Click on the Style... button in the bottom of this dialog box to change faceplate colors and style. Click OK to exit the Station Definition window. To change the button LED settings and color click on Button Properties. Right click on a button and select Program. This will reveal the Event Programming Dialog Box. Complete the programming by selecting the desired Station Loads, functions and conditions.

### **Configuration**

When the Station is first connected to the Station Bus, the Status LED will blink twice followed by a pause, meaning that the station is connected correctly but not yet configured. From QLink, select System | Configure Stations from the pull down menu. A list of all stations will be displayed on the screen. Select the Station and click on the radio Configure button in the Online Configuration section. The button LEDs on the Station will blink rapidly. To finish configuring press the first or second button on the Station 3 times. Another way to configure the station is to type the number in manually for each station and when the system is programmed the station will already be configured.

### **Status LED and Diagnostic Information**

If the faceplate is removed the Status LED can be seen in approximately the middle of the station's switch matrix. The Status LED is off or blinks 2, 3, 4 or 5 times followed by a pause to indicate status information.

**Off:** Station is operating correctly and is configured.

Note: if the station bus has not been connected or the controller has no power the status led as well as the button LEDs will be off, also the station buttons will not sound when pressed. If a problem is being diagnosed make sure the station bus has power and is properly connected. In QLink click on Diagnostics | Station | Select the correct Controller | Initiate.

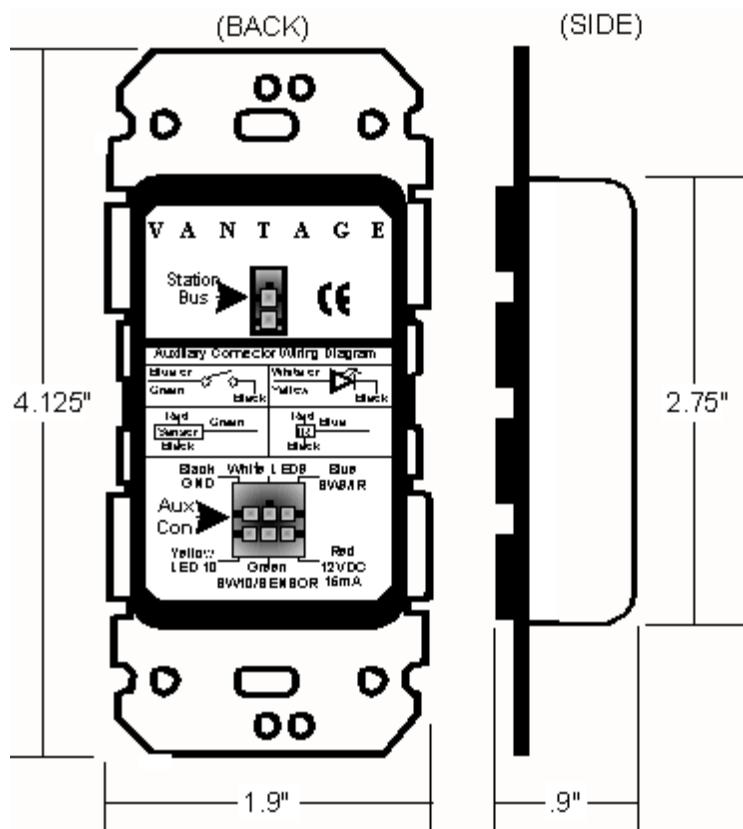
**Two blinks:** Station is operating correctly but is not configured.

**Three blinks:** Station is not communicating with the Master Controller. Verify that station bus wiring conforms to Vantage guidelines.

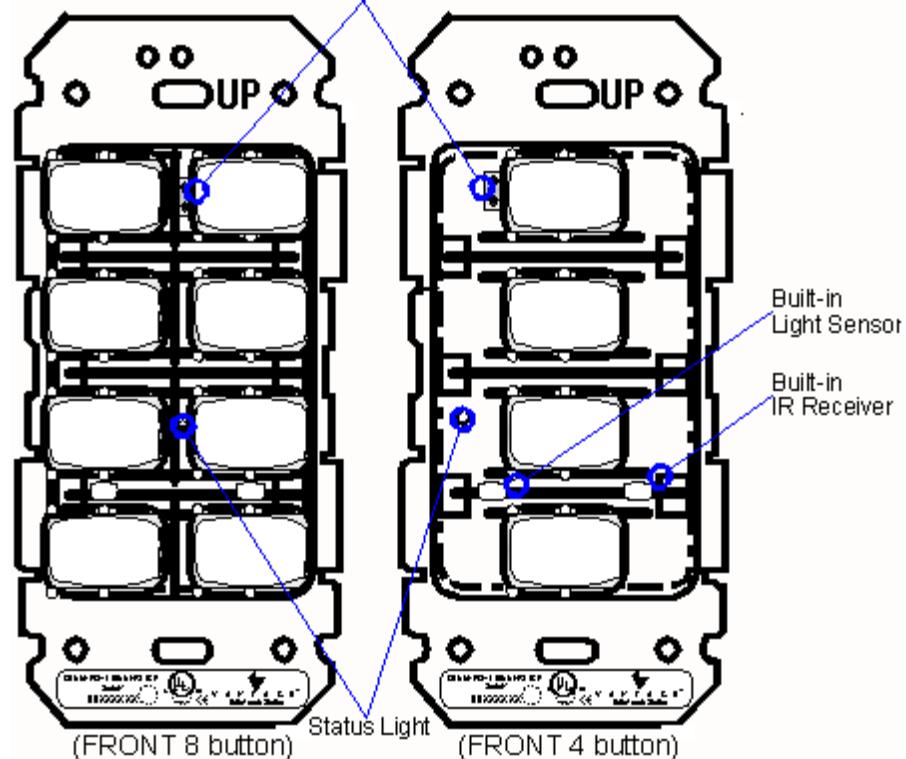
**Four blinks:** station problem. Please contact the factory.

**Five blinks:** Configuration mode.

### **BriteStyle / EasyGang back box and switch matrix**



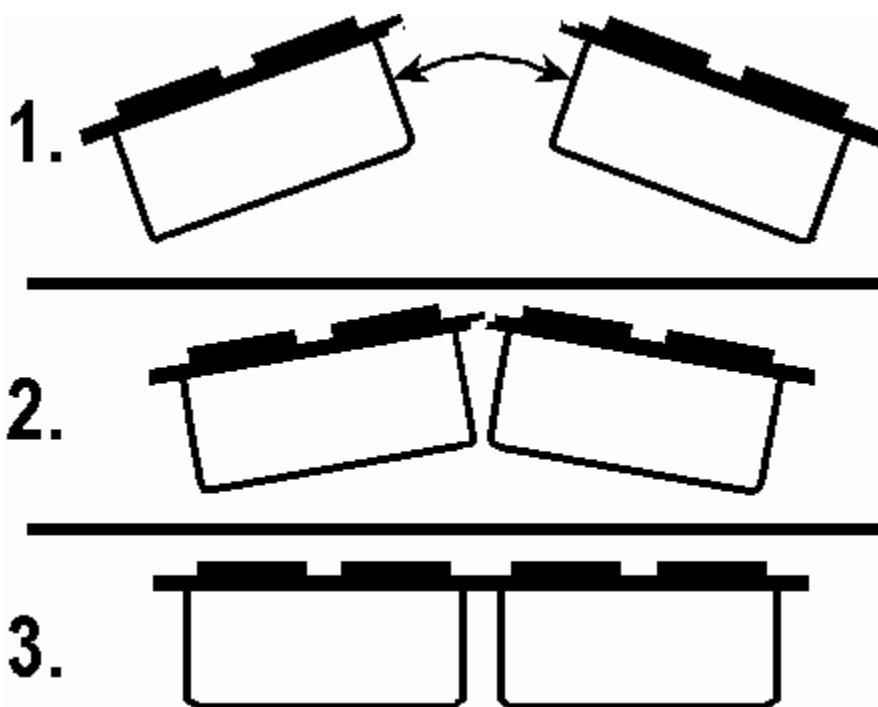
External Station Bus Interface (ESBI)  
For use with Vantage's Q-RS232-CABLE



#### Joining Stations Together

With the EasyGang station design multiple stations easily snap together to build multi-gang stations.

1. Align the two stations being joined making sure that UP is the same for both stations.
2. Carefully align locking grooves to mesh correctly.
3. Gently press the two halves together until they lock. The joined stations may then be straightened to secure the lock.



#### Tips Printing Labels

1. Print the ProofBriteStyleLabels.pdf file on the same printer that the actual labels will be printed on.
2. Hold the printed proof sheet up to the label sheet to see if they will be positioned correctly.
3. Do not change the size of the labels to adjust the position.
4. If the labels don't line up correctly first set the **Right** and **Bottom** margins to the minimum allowed on selected printer, then adjust the **Top** and/or **Left** margins to slightly move the labels up or down and left or right.
5. Label settings are:  
Top Margin ..... 0.900"  
Left Margin ..... 0.525"  
Bottom Margin ..... 0.900" or less  
Right Margin ..... 0.525" or less  
Vertical gutter space ..... 0.175"  
Horizontal gutter space ..... 0.200"  
Label Width ..... 0.675"  
Label Height ..... 0.420"

## RadioLink ScenePoint Dimmer

The RadioLink ScenePoint dimmer is designed to provide wireless RF (radio frequency) communication with the system. RadioLink stations have the same functionality as the wired ScenePoint dimmers except the station bus is not required.

To Add a RadioLink Station:

With the "example" project open.

Select a **Room**.

On the **Add** menu, trace to **RadioLink Station**, and then click **ScenePoint Dimmer**.

-or-

With a **room** selected, press **Shift+F2**.

-or-

Right-click a **Room**, trace to **RadioLink Station**, and then click **ScenePoint Dimmer**.

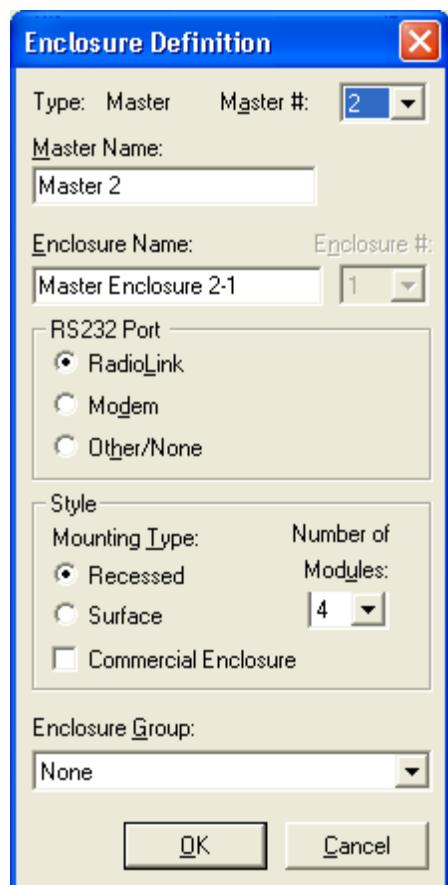
If an RF enabled master is not already in the project, the "Choose a Master" dialog box opens.



**Figure 11:** The Choose as Master dialog box.

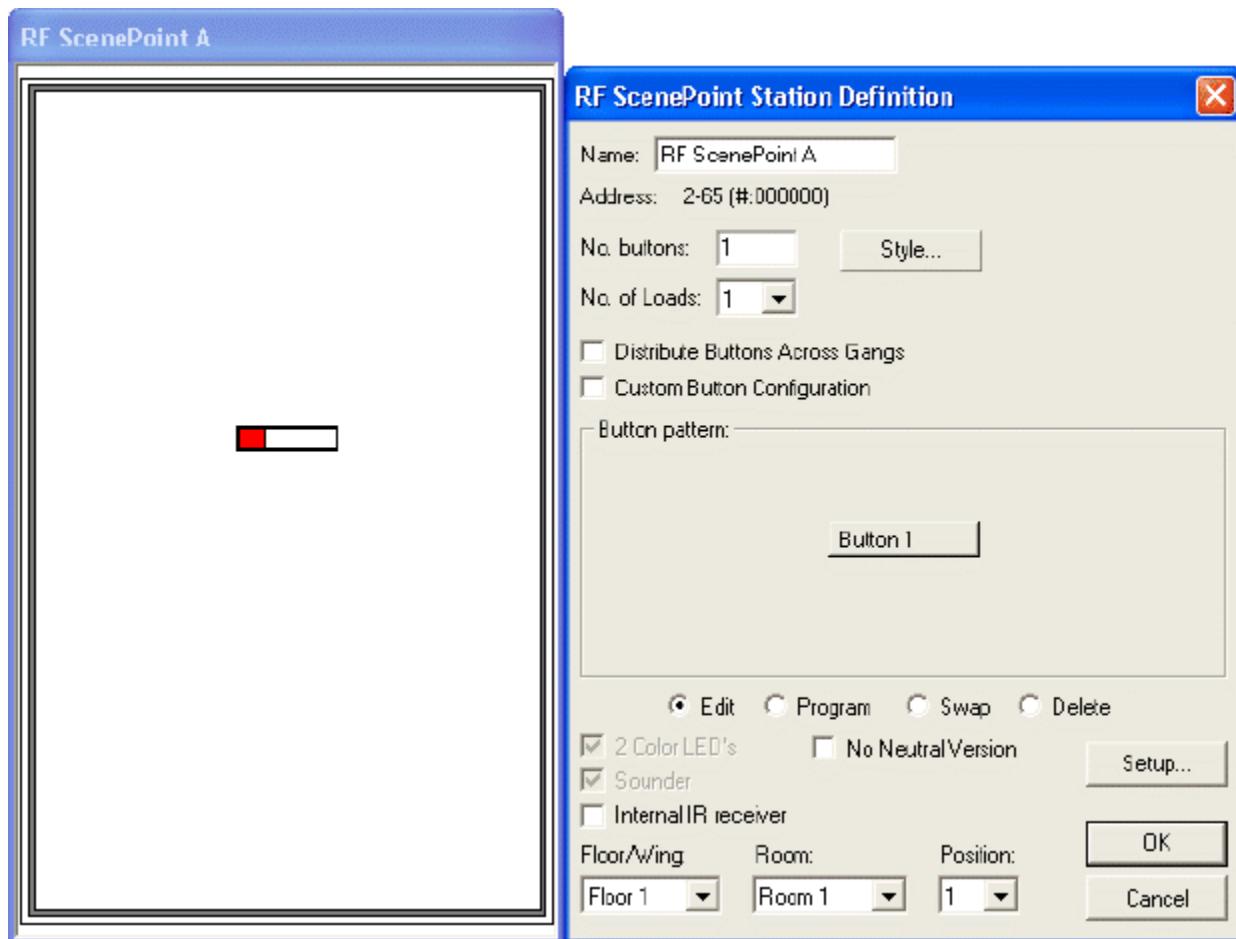
Click the **Model** dropdown list and select a **master**, and enter it's appropriate parameters.

The Enclosure Definition dialog box opens.



**Figure 12:** The Enclosure Definition dialog box.

The RF Dimmer Station dialog box opens.



**Figure 13:** The RF ScenePoint Station Definition dialog box.

**Note:** See *ScenePoint dimmer* in Appendix A: Station Definitions for an explanation of the dialog box items.

Make any **necessary changes**, and then click **OK**.

**Note:** In the RF Dimmer station, the one load default is a *dimmer* load.

**Save** the project.

**Related Topic:** [RadioLink Power ScenePoint Dimmer](#)  
[Power ScenePointDimmer](#)

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## RadioLink ScenePoint Relay

The Vantage ScenePoint Relay with RadioLink is a 16 Amp wall box relay that connects to the Vantage Control System. It is available in a one load configuration and may be ganged with additional ScenePoint Stations up to 4 gangs. It is powered via the local line feed, and communicates with the system through a radio transceiver.

Before the relay is programmed, or if communication is lost, the relay functions in default mode as an independent toggle. Once a

button is programmed it can perform any operation that a standard station supports controlling its own or other loads

To Add a RadioLink Station:

With the "example" project open.

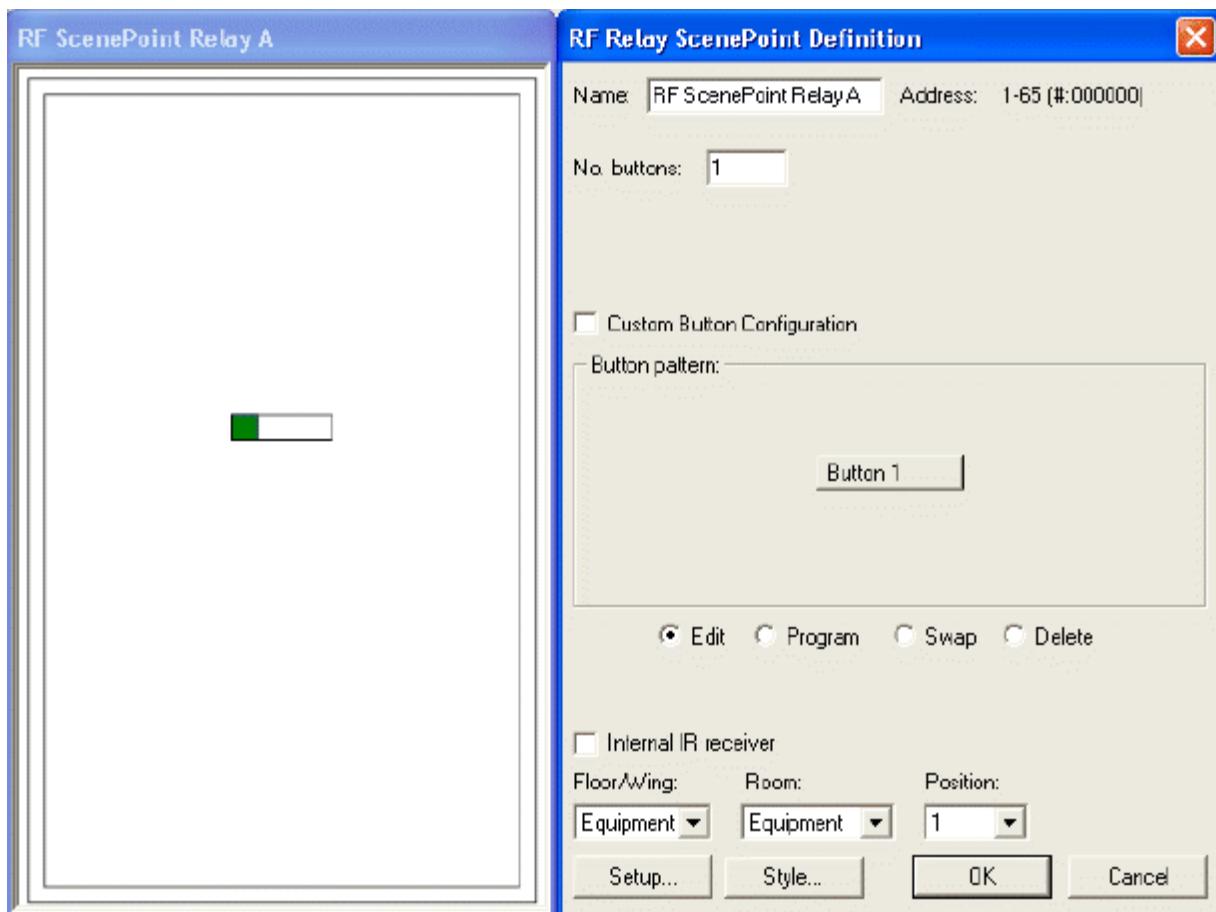
Select a **Room**.

On the **Add** menu, trace to **RadioLink Station**, and then click **ScenePoint Relay**.

-or-

Right-click a **Room**, trace to **RadioLink Station**, and then click **ScenePoint Relay**.

The RF Dimmer Station dialog box opens.



**Figure 13a:** The RF ScenePoint Station Definition dialog box.

Make any **necessary changes**, and then click **OK**.

**Note:** In the RF Relay station, the one load is a *relay* load.

**Save** the project.

## Specifications

Station Dimensions*	Height = 4.3" -or- 109mm Depth = 1.38" -or- 35mm Width = 2.5" -or- 63.5mm
Faceplate Dimensions	Height = 4.7" -or- 119.3mm Width = 2.95" -or- 75mm
Weight	4.9oz. -or- 139g

Voltage	120/240V ~ 60/50Hz
Max. Load	16A (1920W @ 120V) - or - 16A (3840W @ 240V)
Built-in Protection	MOV surge suppression
Arc Suppression	Zero Cross Built-in arc suppression
Ambient Operating Temperature	32 - 95°F -or- 0 - 35°C
Ambient Operating Humidity	5 - 95% non-condensing
Cooling	None required
Status Indicator	Microprocessor Status
Load Types	Incandescent, Cold Cathode, HID, Fluorescent, Constant-Speed Motors
UL and CUL Listed	Yes

**Related Topic:** [RadioLink Power ScenePoint Dimmer](#)  
[Power ScenePointDimmer](#)

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## RadioLink AccentPoint Dimmer and AccentPoint Relay

The RadioLink AccentPoint dimmer and relay station is designed to provide wireless RF (radio frequency) communication with the system. AccentPoint stations plug into existing outlets and communicate via RF to the Vantage system.

To Add a RadioLink AccentPoint Station:

With the "example" project open.

Select a **Room**.

On the **Add** menu, trace to **RadioLink Station**, and then click **AccentPoint Dimmer/Relay**.

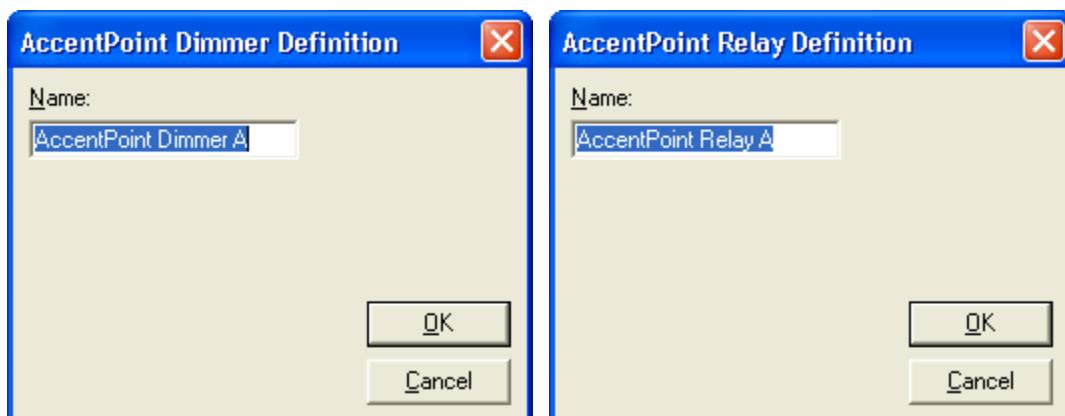
-or-

With a **room** selected, press **Shift+F10** or **Shift+F11**.

-or-

Right-click a **Room**, trace to **RadioLink Station**, and then click **AccentPoint Dimmer/Relay**.

The properties box for the station type opens.



**Figure 13:** The RF AccentPoint Dimmer and Relay Station Definition dialog boxes.

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## RadioLink Contact Input

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The DIN Contact Input Station wired model, STIDEW101 and RadioLink model, STIDER121 features 10 contact input channels for receiving Dry-Contact, Open/Close states from external devices. Various types of external switches and sensors are available from Vantage and other third party manufacturers. These include magnetic door contact switches, momentary switches, motion detectors, stress sensors, humidity and temperature sensors, smoke and carbon monoxide detectors, driveway probes, etc.

### Configuration with RadioLink

RadioLink DIN CIS stations need to be configured to associate which physical station goes with the station in QLink.

When the station is initially powered-up, the Status LED will blink three times followed by a pause - this means the station is powered correctly but not yet on the network. Before uploading the file to the Vantage system do the following: From the menu bar in QLink, select System/Configure Stations. A list of all stations will be displayed on the screen. Manually enter the serial number for each RadioLink station to match it with the corresponding programming in QLink. The serial number of each station is located on a sticker. Remove the sticker with the number only and place on the Station Design Report for easy reference when programming. The Main Controller will add to its network and configure all the RadioLink stations that it has serial numbers for. This may take several minutes depending on the number of RadioLink stations on the network. The Status LED will blink steadily when a station has been added to the network and configured.

**Related Topic:** [DIN Contact Input Station](#)

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## RadioLink LCD320C5R

---

Please click on Related Topics below:

**Related Topic:** [TPT Color LCD Screen](#)  
[TPT Programming and Hardware](#)

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## RadioLink Low Voltage Relay

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The DIN Low Voltage Relay Station wired model, STOLEW801 and RadioLink model, STOLER821 feature 8 isolated, latching relay channels for completing low voltage or dry contact closures to third party systems or devices. The LVRS does not produce or provide any power. Each relay is single-pole, double-throw, which offers a normally closed, normally open set of contacts. Each relay has a manual actuator or button on the front of the LVRS which manually toggles the relay and is useful for testing wiring and operation without programming the system. Some examples for using an LVRS would be: draperies, pumps, garage doors, HVAC dampers, lifts, screens, pool covers, sprinklers, showers, baths, security systems, etc.

LEDs indicate relay operation. Relays latch to retain the last state in the event of a power interrupt.

### Configuration with RadioLink

RadioLink DIN Low Voltage Relay Stations need to be configured to associate which physical station goes with the station in QLink. When the station is initially powered-up, the Status LED will blink three times followed by a pause - this means the station is powered correctly but not yet on the network. Before uploading the file to the Vantage system do the following: From the menu bar in QLink, select System/Configure Stations. A list of all stations will be displayed on the screen. Manually enter the serial number for each RadioLink station to match it with the corresponding programming in QLink. The serial number of each station is located on a sticker. Remove the sticker with the number only and place on the Station Design Report for easy reference when programming. The Main Controller will add to its network and configure all the RadioLink stations that it has serial numbers for. This may take several minutes depending on the number of RadioLink stations on the network. The Status LED will blink steadily when a station has been added to the network and configured.

**Related Topic:** [DIN Low Voltage Relay](#)

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## RadioLink RS-232 Station

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The STC2RR001 connects to RS-232 devices and communicates to Vantage via RadioLink communication. This design eliminates wire runs normally needed for interfacing with RS-232 devices. The Vantage System may be programmed to control RS-232 devices, or vice versa. Among the ever-growing list of devices that communicate via RS-232 are Audio/Video, Drape Controls, Pool Systems, Security Systems, Touch screens, PCs, etc. The system also allows "recognition" of RS 232 strings from third party devices. When these strings are sent to or monitored by the Vantage System any custom program may be executed.

Features of the RadioLink RS-232 station:

- Small and easy to conceal in inconspicuous places
- Allows online program changes from any point without connecting to the Station Bus for RF enabled Master Controllers
- True retro-fit connections between Vantage and third party RS-232 systems

To Add a RadioLink RS-232 Station:

With the "example" project open.

Select a **Room**.

On the **Add** menu, trace to **RadioLink Station**, and then click **RS232**.

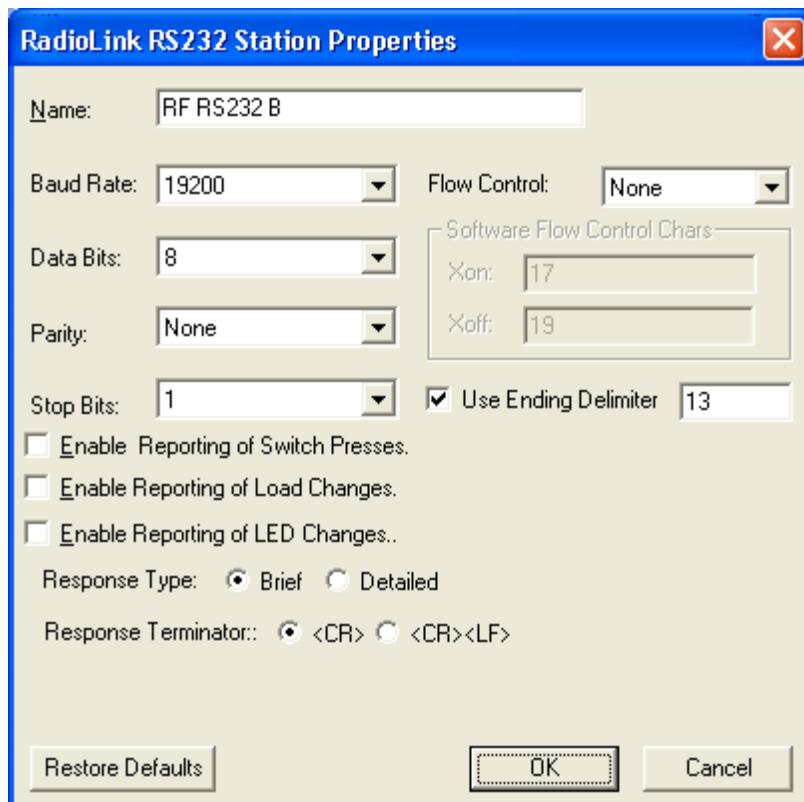
-or-

With a **room** selected, press **Shift+F9**.

-or-

Right-click a **Room**, trace to **RadioLink Station**, and then click **RS232**.

The properties box for the station type opens.



**Figure 13a:** The RadioLink RS-232 Station Definition dialog box.

**Note:** **Enable Reporting of Switch Presses.** (Automatically enables VOS responses)

**Enable Reporting of Load Changes.** (Automatically enables VOL responses)

**Enable Reporting of LED Changes.** (Automatically enables VOD responses)

**Response Type:** **Brief/Detailed** (Automatically sets responses to regular or detailed)

**Response Terminator:** <CR>/<CR><LF> (Automatically sets the response terminator)

(With these settings the traditional method of having the connecting equipment send the appropriate V-Commands is eliminated.)

Make any **necessary changes**, and then click **OK**.

**Save** the project.

**Related Topic:** [RS-485](#)

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## RadioLink Power ScenePoint Dimmer

The Vantage Power ScenePoint with RadioLink is a wall box dimmer that connects to the Vantage Control System. It is designed for control of one load that may draw up to 1200 watts. Mount the Power station into a two gang back box. The station is powered via the local 120V line feed, and communicates with the system through a radio transceiver.

To Add a RadioLink Power ScenePoint Station:

With the "example" project open.

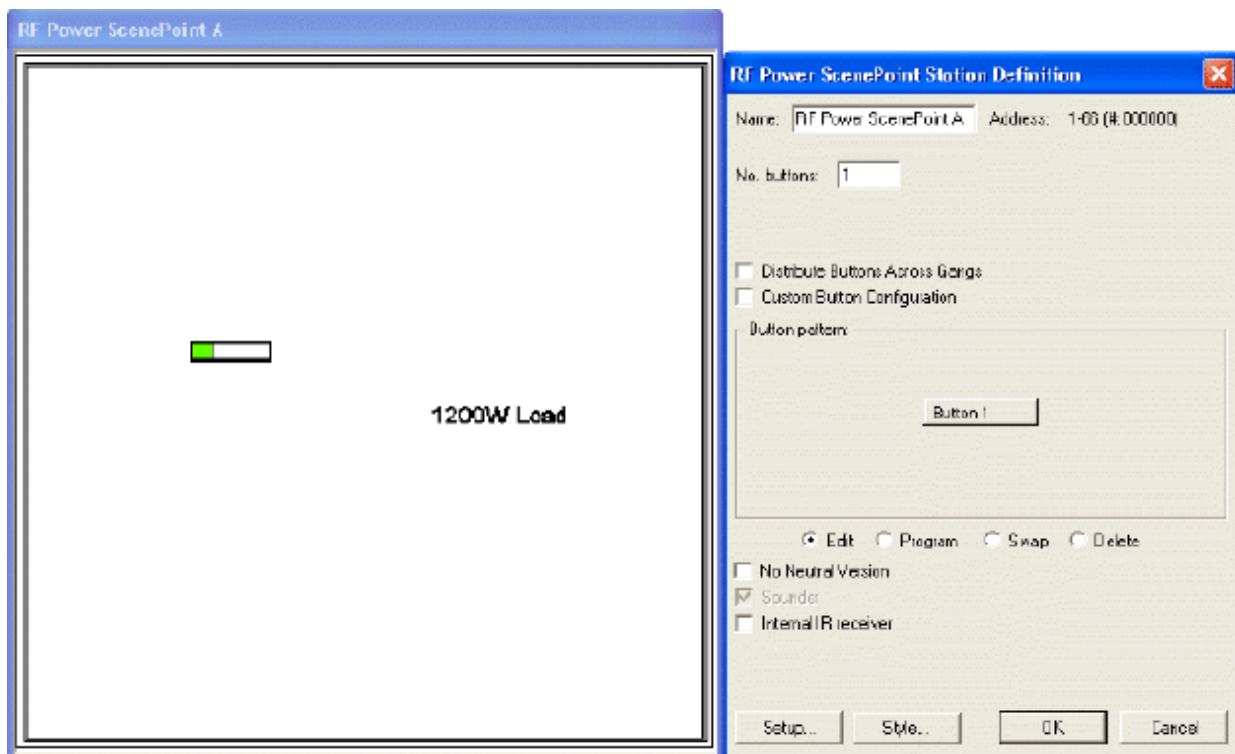
Select a **Room**.

On the **Add** menu, trace to **RadioLink Station**, and then click **Power ScenePoint Dimmer**.

-or-

Right-click a **Room**, trace to **RadioLink Station**, and then click **Power ScenePoint Dimmer**.

The properties box for the station type opens.



**Figure 13b:** The RadioLink Power ScenePoint Dimmer Station Definition dialog box.

Make any **necessary changes**, and then click **OK**.

**Save** the project.

**Related Topic:** [RadioLink ScenePoint Dimmer](#)

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## RadioLink Satellite ScenePoint Dimmer and Keypad

The Vantage Satellite ScenePoint Dimmer (RDSS1-1/2) with RadioLink is a wall box dimmer that connects to the Vantage Control System. It is available in a one gang, one load configuration. It may be ganged with other ScenePoint dimmers up to four gangs. It is powered via the local 120V line feed, and communicates with the system through a radio transceiver. Before the dimmer is programmed, or if communication is lost, the dimmer functions in default mode as an independent dimmer. Any load on the dimmer may be controlled by any other keypad, IR input, RS 232 or timed event. It supports up to six keypad buttons, and an optional internal IR receiver.

The Vantage Satellite Keypad (SK-1) connects to the Satellite ScenePoint Dimmer for 3-Way/4-Way, switch scenarios. It is available in a one gang, one button, one color LED (green) configuration. It may be ganged with other ScenePoint dimmers or other Satellite keypads up to four gangs. It is powered via the local 120V line feed, and communicates with the system through the 120V traveler wires running back to the RF Satellite ScenePoint Dimmer station. Before the Satellite Keypad is programmed, or if communication is lost, the Satellite functions in default mode, remotely controlling the ScenePoint dimmer's load that the Satellite is connected to. Once the Satellite button is programmed it can perform any operation that a standard station supports.

To Add a RadioLink Satellite ScenePoint Dimmer Station or Satellite Keypad Station:

With the "example" project open.

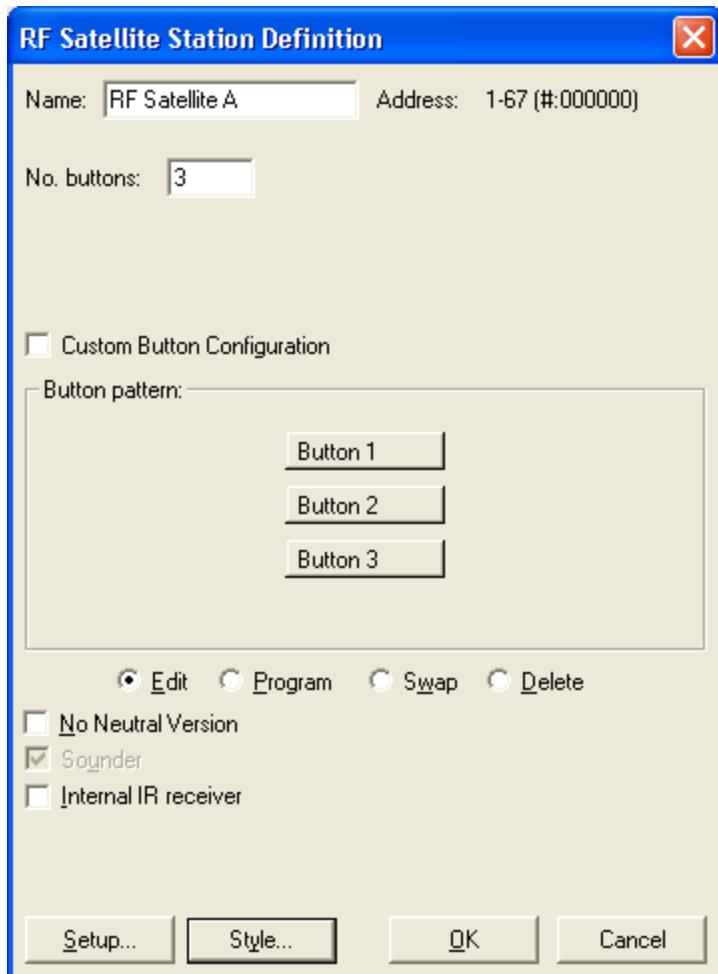
Select a **Room**.

On the **Add** menu, trace to **RadioLink Station**, and then click **Satellite ScenePoint Dimmer/Keypad**.

-or-

Right-click a **Room**, trace to **RadioLink Station**, and then click **Power ScenePoint Dimmer/Keypad**.

The properties box for the station type opens.



**Figure 13c:** The RadioLink Satellite ScenePoint Dimmer Station Definition dialog box.

Make any **necessary changes**, and then click **OK**.

**Save** the project.

---

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## DIN Dimmer Station

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### Overview

The Vantage STDSEW240, DIN Dimmer Station is a 4 channel dimmer that connects to the Vantage Control System. It is powered via the local line feed, and communicates with the system through the 2 wire station bus.

Before the dimmer is programmed, or if communication is lost, the dimmer functions in default mode as an independent dimmer by pressing the buttons on the front of the station or by closing contacts 1-4. Any load on the dimmer can be controlled by any other keypad, IR input or timed event. It supports up to 6 contact inputs.

**Station Specifications**

Dimensions	86 x 157 x 58mm
Weight	610 g
Mounting	35 mm DIN Rail (EN 50 022: 1977)
Number of Loads	4
Maximum Current per Load	2.5A
Maximum Watts Per Load	300W@120V or 600W@240V
Maximum Voltage	240VAC
Station Wiring configuration	Daisy-chain/Star/Branch
Station Bus Wire	2C 18AWG, non-shield, <25pF per foot
Ambient Operating Temperature	0-35°C / 32-95°F
Ambient Operating Humidity	5-95% non-condensing
Station Count on Master Controller	1

To Add a DIN Dimmer Station:

With the "example" project open.

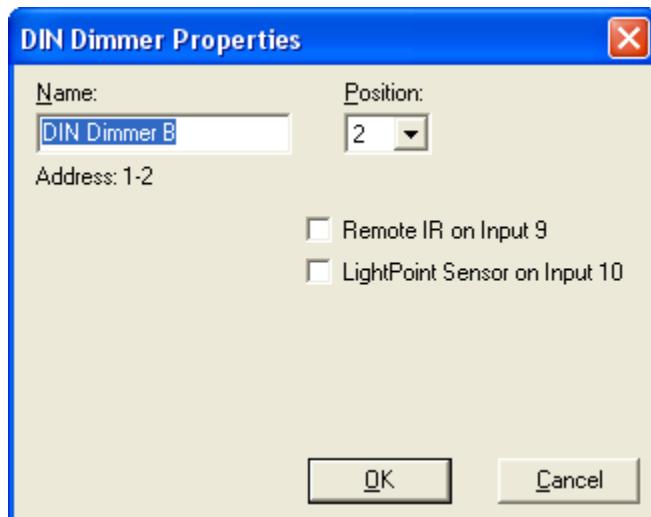
Select **Wiring** view.

On the **Add** menu, trace to **DIN Stations**, and then click **DIN Dimmer**.

-or-

Right-click a **Room**, trace to **Add Loads | Dimmed Station Loads**, and then click **DIN Dimmer**.

The properties box for the station type opens.



**Figure 13d:** The DIN Dimmer Properties station dialog box.

Make any **necessary changes**, and then click **OK**.

**Save** the project.

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## DIN Low Voltage Relay

The DIN Low Voltage Relay Station (STOLEW801) features 8 isolated, latching relay channels for completing low voltage or dry contact closures to third party systems or devices. The LVRS does not produce any power. Each relay is single-pole, double-throw, which offers a normally closed, normally open set of contacts. Each relay has a manual actuator or button on the front of the LVRS

which manually toggles the relay and is useful for testing wiring and operation without programming the system. Some examples for using an LVRS would be: draperies, pumps, garage doors, HVAC dampers, lifts, screens, pool covers, sprinklers, showers, baths, security systems, etc.

LEDs indicate relay operation. Relays latch to retain the last state in the event of a power interrupt.

#### **Station Specifications**

Dimensions	86 x 157 x 58mm
Weight	201 g
Mounting	35 mm DIN Rail (EN 50 022: 1977)
Number of Relay Inputs	8
Number of Relay Actuators	8
Maximum Current @ Relay	1A
Maximum Voltage @ Relay	48Vac / 30Vdc
Station Wiring configuration	Daisy-chain/Star/Branch
Station Bus Wire	2C 18AWG, non-shield, <25pF per foot
Ambient Operating Temperature	0-35°C / 32-95°F
Ambient Operating Humidity	5-95% non-condensing
Station Count on Master Controller	1

To Add a DIN Low Voltage Relay Station:

With the "example" project open.

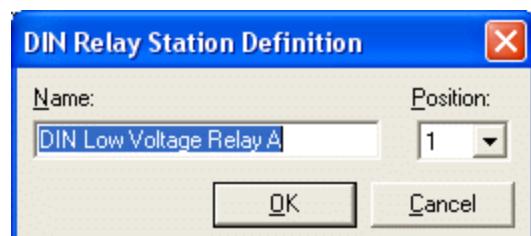
Select **Wiring** view.

On the **Add** menu, trace to **DIN Stations**, and then click **Low Voltage Relay**.

-or-

Right-click a **Room**, trace to **Add Loads | Low Voltage Load**, and then click **DIN Relay Station**.

The properties box for the station type opens.



**Figure 13e:** The DIN Relay Station Definition dialog box.

Make any **necessary changes**, and then click **OK**.

**Save** the project.

---

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## **DIN Contact Input Station**

The DIN Contact Input Station (STIDEW101) features 10 contact input channels for receiving Dry-Contact, Open/Close states from external devices. Various types of external switches and sensors are available from Vantage and other third party manufacturers. These include magnetic door contact switches, momentary switches, motion detectors, stress sensors, humidity and temperature sensors, smoke and carbon monoxide detectors, driveway probes, etc.

#### **Station Specifications**

Dimensions	86 x 157 x 58mm
Weight	201 g
Mounting	35 mm DIN Rail (EN 50 022: 1977)
Number of Contact Inputs	10
Maximum Current from +12V	50 mA
Station Wiring configuration	Daisy-chain/Star/Branch
Station Bus Wire	2C 18AWG, non-shield, <25pF per foot
Ambient Operating Temperature	0-35°C / 32-95°F
Ambient Operating Humidity	5-95% non-condensing
Station Count on Master Controller	1

To Add a DIN Contact Input Station:

With the "example" project open.

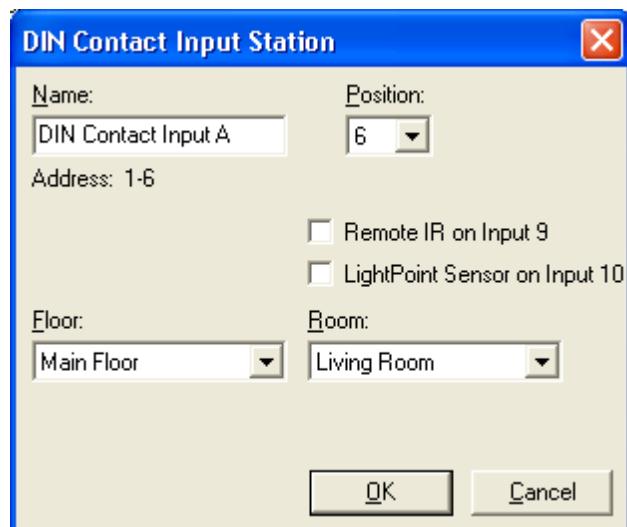
Select a **Room**.

On the **Add** menu, trace to **DIN Stations**, and then click **Contact Input**.

-or-

Right-click a **Room**, trace to **Add DIN Stations**, and then click **Contact Input**.

The properties box for the station type opens.



**Figure 13f:** The DIN Contact Input Station dialog box.

Make any **necessary changes**, and then click **OK**.

**Save** the project.

---

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## DIN 10 Amp Relay

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The DIN 8 Channel, 10AMP Relay Station (STR8RW201) features 8 isolated, latching relay channels. The station accepts voltage from 0 to 277volts up to 10amps. The STR8RW201 does not produce any power. Four relays are single-pole, double-throw, which offers a normally closed, normally open set of contacts. The other four Relays are single-pole, single throw to offer a normally open set of contacts. Each relay has a manual actuator or button on the front of the DIN relay station which manually toggles the relay and is useful for testing wiring and operation without programming the system. Some examples for using an STR8RW201 are drapery motors, pumps, lights, HID and more. This station may also be used as a low-voltage relay station. LEDs indicate relay

operation. Relays latch to retain the last state in the event of a power interrupt.

#### **Station Specifications**

Dimensions	86 x 157 x 58mm
Weight	403 g
Mounting	35 mm DIN Rail (EN 50 022: 1977)
Number of Relay Inputs	8
Number of Relay Actuators	8
Maximum Current @ Relay	10A
Maximum Voltage @ Relay	277Vac / 440Vdc
Minimum Voltage @ Relay	0Vac / 0Vdc
Station Wiring configuration	Daisy-chain/Star/Branch
Station Bus Wire	2C 18AWG, non-shield, <25pF per foot
Ambient Operating Temperature	0-35°C / 32-95°F
Ambient Operating Humidity	5-95% non-condensing
Station Count on Master Controller	1

To Add a DIN 10 Amp Relay Station:

With the "example" project open.

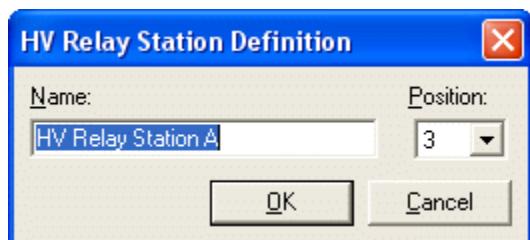
Select **Wiring** view.

On the **Add** menu, trace to **DIN Stations**, and then click **10 Amp Relay**.

-or-

Right-click a **Room**, trace to **Add Loads | High Voltage Relay**, and then click **HV Relay Station**.

The properties box for the station type opens.



**Figure 13g: The DIN 10 Amp Relay Station Definition dialog box.**

Make any **necessary changes**, and then click **OK**.

**Save** the project.

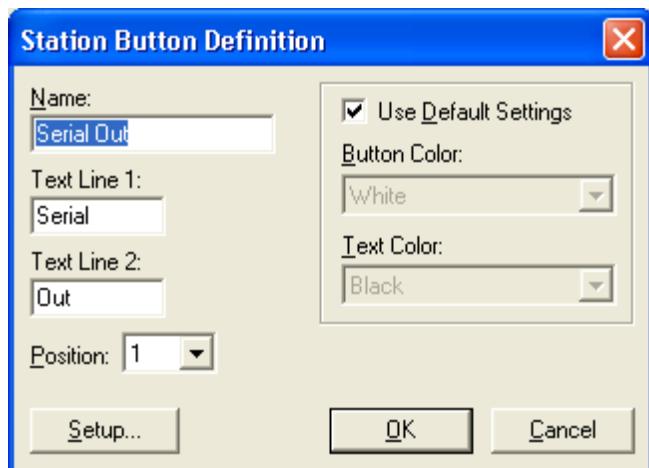
## **Buttons**

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Buttons come in three styles, FineTouch, SquareTouch, EasyTouch and BriteStyle.

To change the settings, Button Color, Text Color, etc., right click on the button and select properties.

The Station Button Definition window opens.



**Figure 27a:** The Station Button Definition dialog box.

Click Setup to open the Advanced Switch Setup window.

Related Topic: [Keypads](#)

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## Loads

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Loads are individual or groups of lights, fans, outlets, or other such devices. These may be controlled by and connected to the Vantage system. Loads may be added to rooms, stations, or modules (in wiring view).

To Add a Load to a Room, Station, or Module:

Select a Room or Station.

On the **Add** menu, click **Load**.

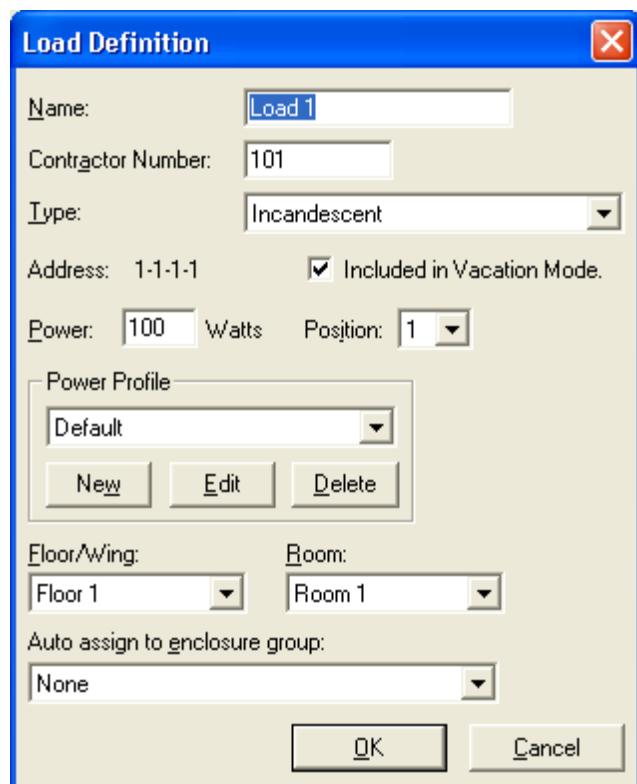
-or-

With a room, load, or module selected, press **Ctrl+L**.

-or-

Right-click a **Room or Station**, and then click **Add Load**.

The Load Definition dialog box opens.



**Figure 28:** The Load Definition dialog box.

**Note:** See [Load](#) in Appendix A: Station Definitions for a description of the available options.

Make any **necessary changes**, and then click **OK**.

**Save** the project.

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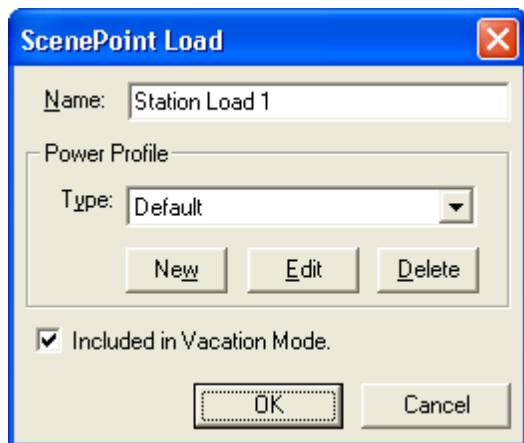
## Station Loads

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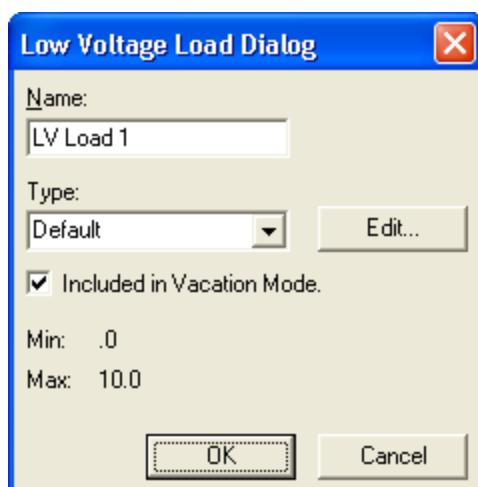
Station loads are found on ScenePoint Dimmer and Relay stations, RF ScenePoint Dimmer and Relay stations, AccentPoint, Power Stations, LVOS and LVRS, DIN products, etc.

Station loads may be included or excluded in Vacation mode and Power Profiles may be assigned just like regular stations.

Right click on the load of a ScenePoint station to open the Properties Window.



**Figure 28a:** The ScenePoint/AccentPoint/Power Station Load definition dialog box.



**Figure 28b:** The LVOS Load definition dialog box.

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## Power Profile

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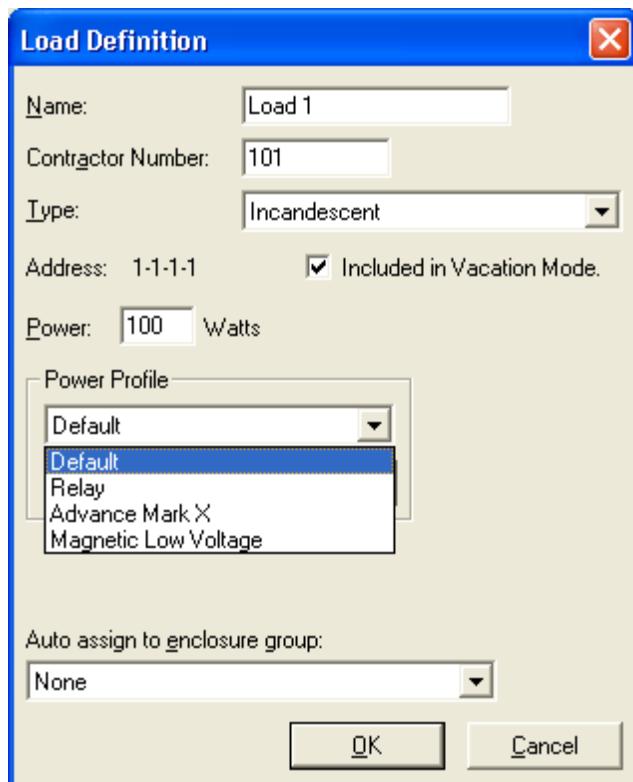
This dialog box is used to assign certain load types a Power Profile. Dimming Modules can have individual loads defined to work like a relay module load. On a Dimming Module a load with the Power Profile set to Relay will only be on at 100% or completely off. Power Profiles may also be used to define a minimum and maximum percentage of power for a load. For example: If particular lights flicker at low levels set the Minimum On power to be 10%, then when a load is dimmed down it will stop dimming when the load reaches 10%.

Most loads will work with the default power profiles:

- Default**
- Relay**
- Advance Mark X**
- Magnetic Low Voltage**

To get to the power profile menu, enter the Load Definition dialog box.

Right click on a load and select Properties.



**Figure 28a:** The Load Definition dialog box.

#### Custom Power Profiles

##### Min on and Max on Values

Some loads look like they are completely off with a voltage range of 0 to 14 percent, and look completely on from a voltage range of 83 to 100% of the peak voltage. This causes problems for dim controls that appear not to change in these regions. These boxes allow you to change the minimum voltage and maximum voltages as a percentage of the peak to remove these nonlinear on and off regions.

##### Adjust

Adjust the step ratio for a load. Normally a light appears to change a greater amount at lower percentages of power. Adjust allows you to change that step ratio.



**Figure 28b:** The Power Profile Definition dialog box.

#### Zero Cross (Adjust)

The zero cross is the point at which the line voltage is equal to neutral. This happens twice a cycle. Zero Cross provides the time information that is used to dim the load. To prevent noise on the power line from affecting the dim levels, a pseudo zero cross time base is used that is generated from timers on the board. Differences between the voltage zero cross and the pseudo on board Zero Cross are calculated and produce an error that is used to modify the pseudo Zero Cross to make it match the actual zero cross. In normal operation the pseudo Zero Cross and the physical Zero Cross are identical.

There are two parameters that can be adjusted to control how the pseudo Zero Cross is allowed to change as it tracks the voltage zero cross. The max adjust is the maximum change in microseconds that the pseudo Zero Cross can change in one cycle. If the calculated error is larger than the max adjust the error is set to the max adjust. The Max Error is the maximum that the pseudo Zero Cross can vary from the voltage Zero Cross. If it is exceeded, a zero cross failure is set, the loads turn off, the pseudo Zero Cross is tossed and the board tries to re-sync with the voltage Zero Cross. The number entered is multiplied by 256 and is approximately in microseconds.

Note: A common problem may occur with generators when set to default settings because the generator frequency changes faster than the max adjust allows. This prevents the pseudo Zero Cross from keeping up. In those cases, change the max adjust to 30 or 40us.

**Related Topic:** [Global Parameters](#)

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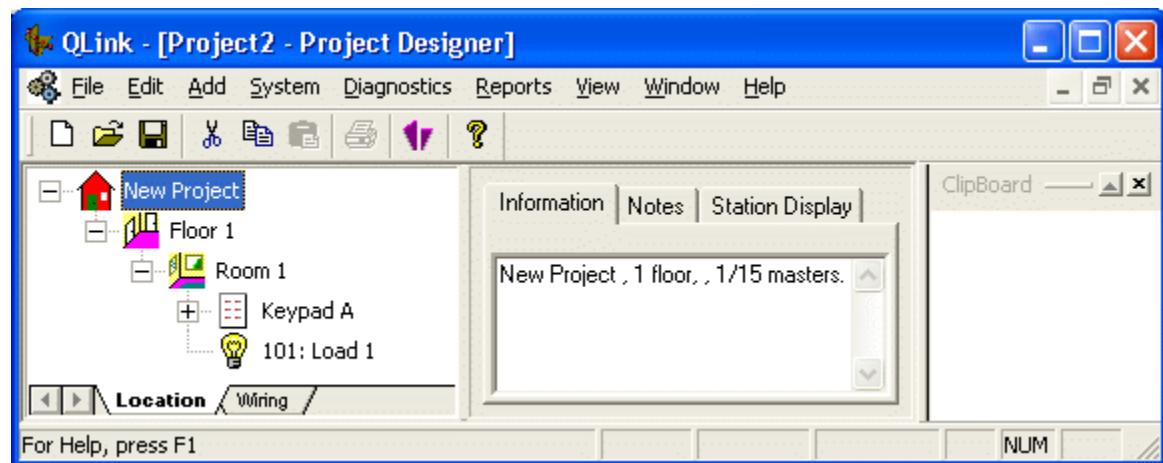
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## Views

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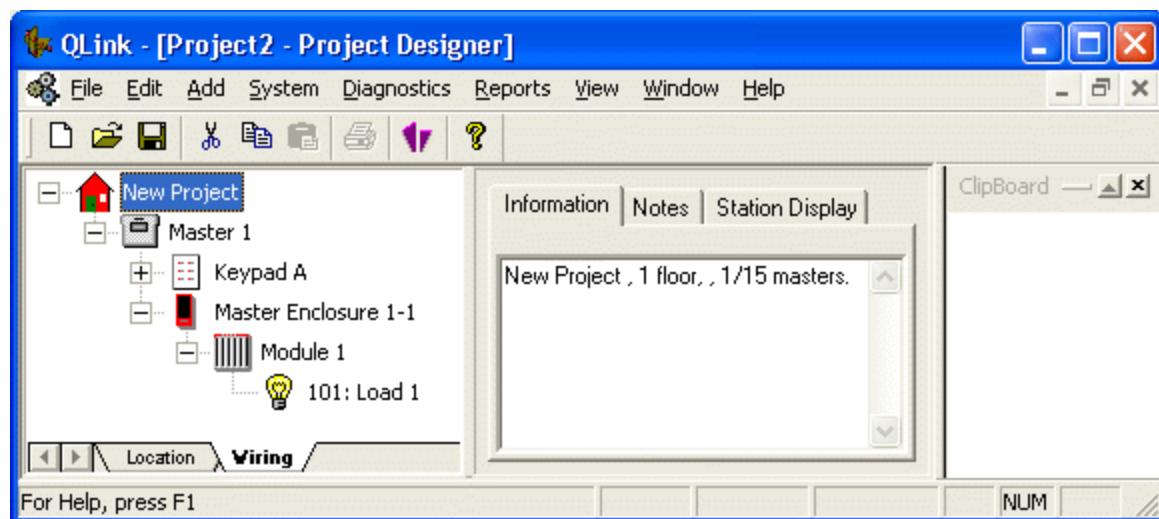
QLink uses two views in the Project Designer: Location and Wiring. Location view displays the structural layout of a project by floor and room along with the location and type of hardware. Wiring view displays the connections between the hardware components. For example, any defined loads will appear in both views; however, the *locations* of any loads and enclosure groups will only be visible in Location view. There will be times when it will be necessary to work in both views to setup and view the entire system.

Certain components and their locations can only be viewed in one view or the other. Station properties information may also vary between views. The following figure displays a new project with a floor, room, keypad station, and a load in Location view.



**Figure 29:** Location view.

The following figure displays the same project in Wiring view:



**Figure 30:** Wiring view.

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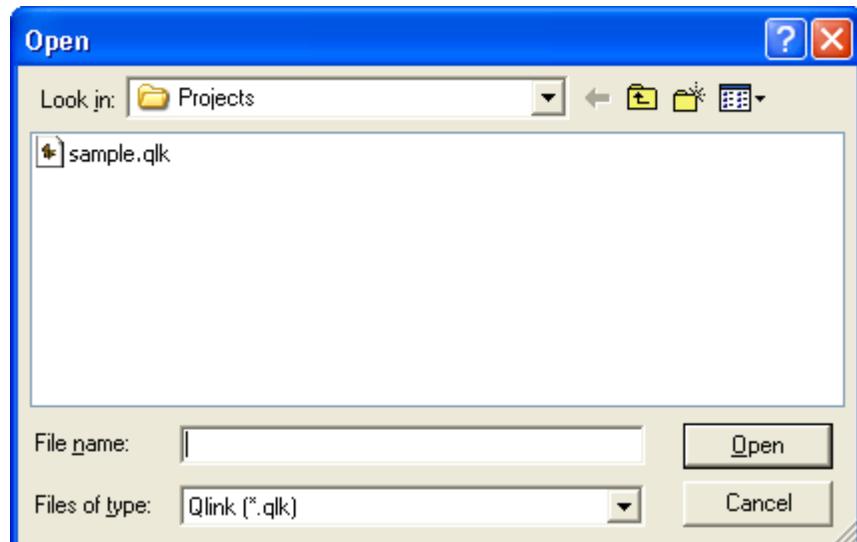
## Properties

Properties refer to names, settings, or configurations for any device that is a part of a project. This will include master controllers, modules, enclosures, stations, loads, floors, rooms, etc. The Project Information window in the Project Designer passively displays the properties of these as they are selected in the Project Designer window. Changes to Properties can be made through the Edit menu, and by right clicking an object in the Project Designer window and choosing Properties from the shortcut menu, or by selecting the device and pressing Ctrl+E or Alt+Enter.

To View a Project's Properties:

On the toolbar, click Open Project.

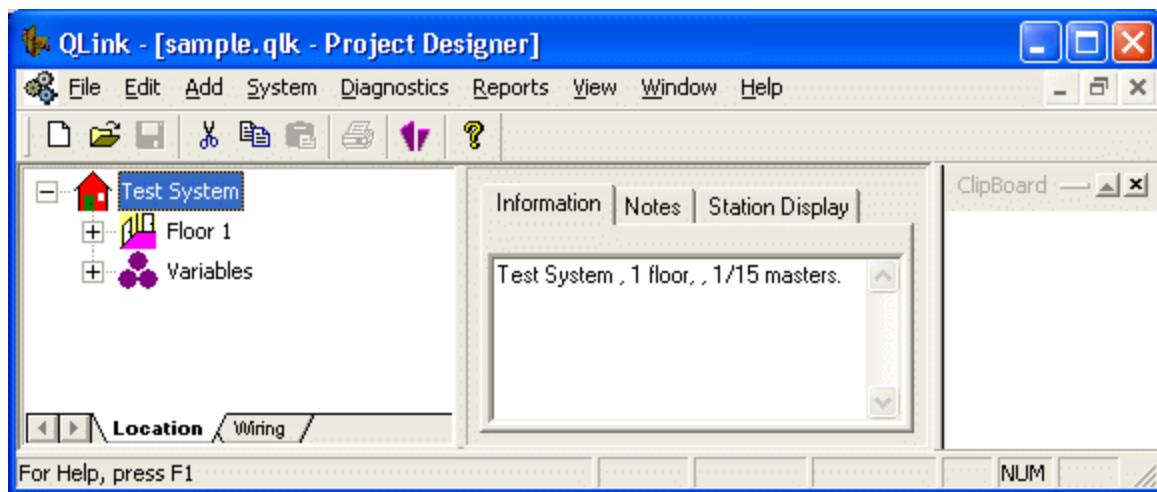
The Open dialog box opens.



**Figure 31:** The Open dialog box displaying the Sample project.

Select the **Sample project**, and then click **Open**.

The project opens in the Project Designer window.

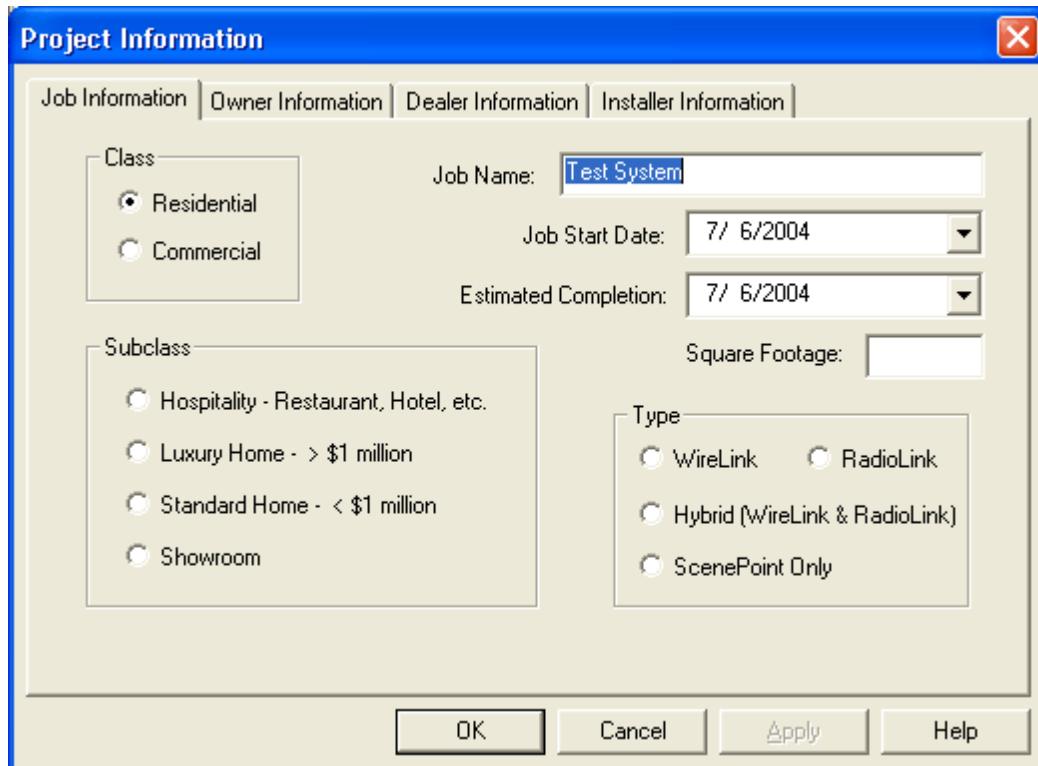


**Figure 32:** The selected Sample project.

To View or Change a Project's Properties:

Highlight the red house, then on the Edit menu, click Properties.

The Project Definition dialog box opens.



**Figure 33:** The Project Definition dialog box.

View the **information**, and then click **Cancel**.

To View or Change a Floor's Properties:

Right-click the **desired floor**, and then click **Properties**.

The Floor Definition dialog box opens.



**Figure 34:** The Floor Definition dialog box.

Click **Cancel**.

To View or Change the Properties of a Room:

Expand the desired floor.

Right-click the **desired room**, and then click **Properties**.

The Room Definition dialog box opens.



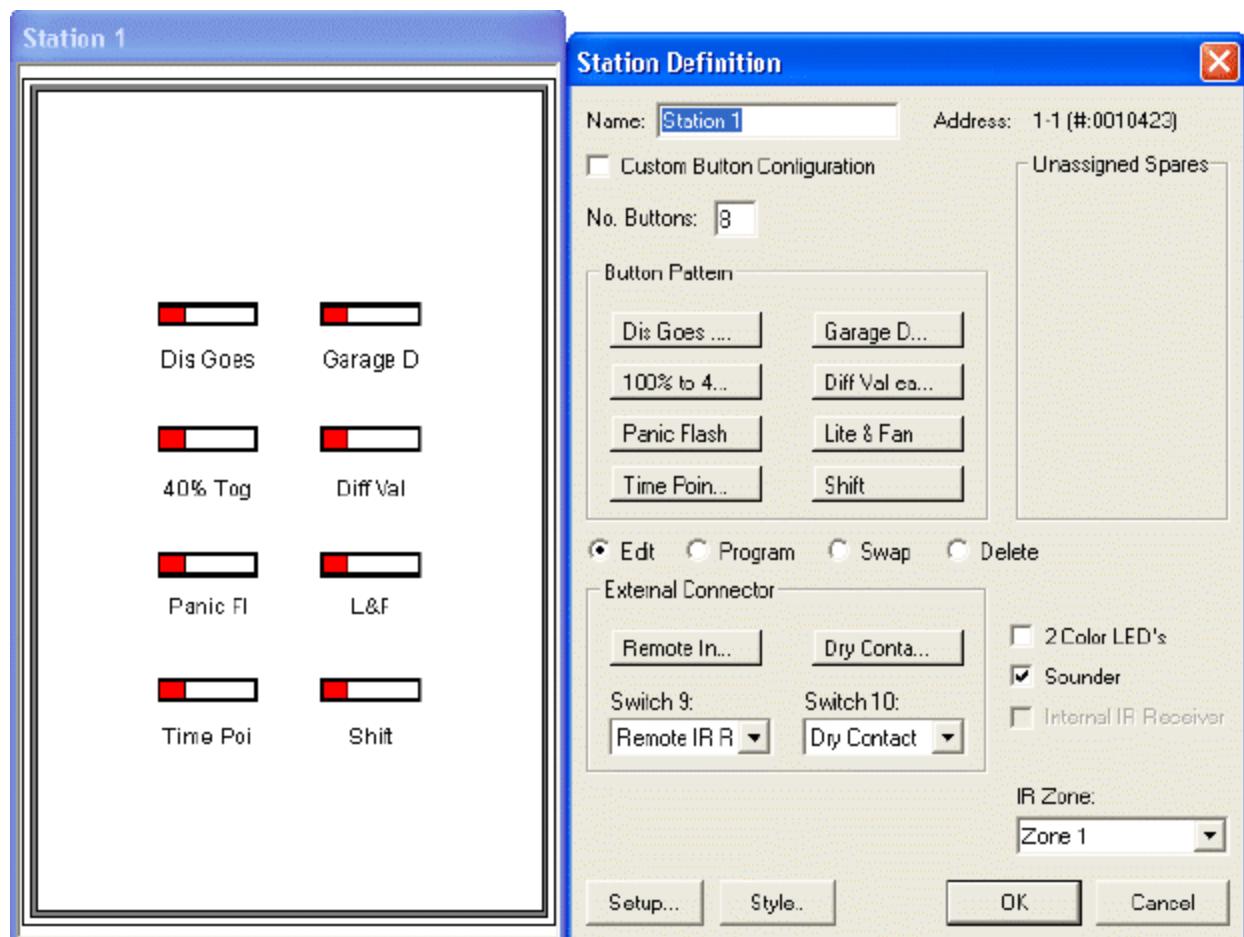
**Figure 35:** The Room Definition dialog box.

To View or Change a Station's Properties:

Expand **Room 1**.

Right-click **Station 1**, and then click **Properties**.

The Station Definition dialog box opens.



**Figure 36:** A Station Definition dialog box for an eight-button keypad station.

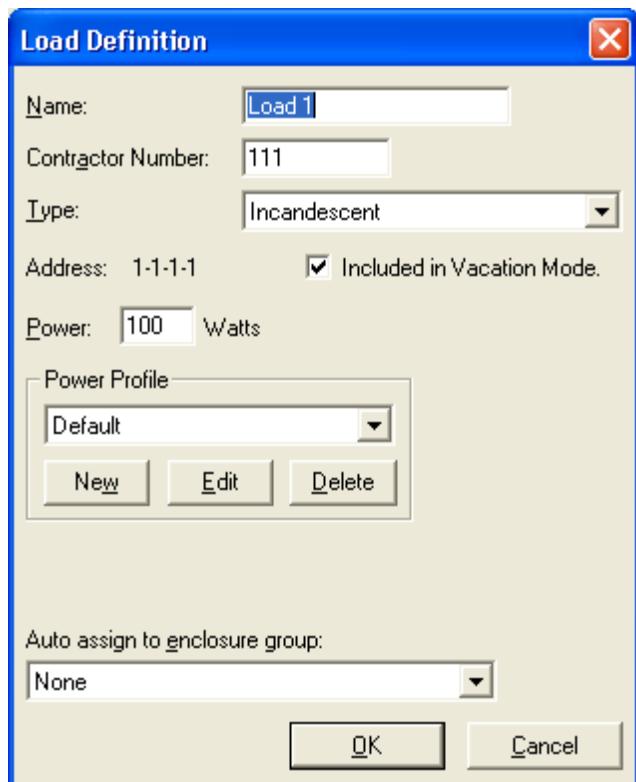
**Note:** The Station Definition dialog box will vary depending upon the station type. For example, a station can be a keypad, sensor, thermostat, etc. The above Station Definition dialog box allows changes to the buttons and other keypad properties for this station type.

To View or Change a Load's Properties:

Expand **Room 1**.

Right-click **111: Load 1**, and then click **Properties**.

The Load Definition dialog box opens.



**Figure 37:** A Load Definition for an incandescent load.

**Note:** The Load Definition window will vary depending upon the load type. Several load types are available. The Load Definition dialog box provides for changing the load type, its power requirement, and other load properties.

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## Enclosures

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An enclosure is a metal box that contains or houses a master controller, slave controllers, modules, dimmers, and/or relays. Enclosures are available in two types: recessed or surface mounted. An enclosure may be referred to as a master enclosure when the master controller is present in the enclosure, or as a slave enclosure when the slave controller is present. Multiple enclosures may be configured as an enclosure group when a user needs to locate modules in a specific location.

### Master Power Enclosure (MPER(S)-2/4)

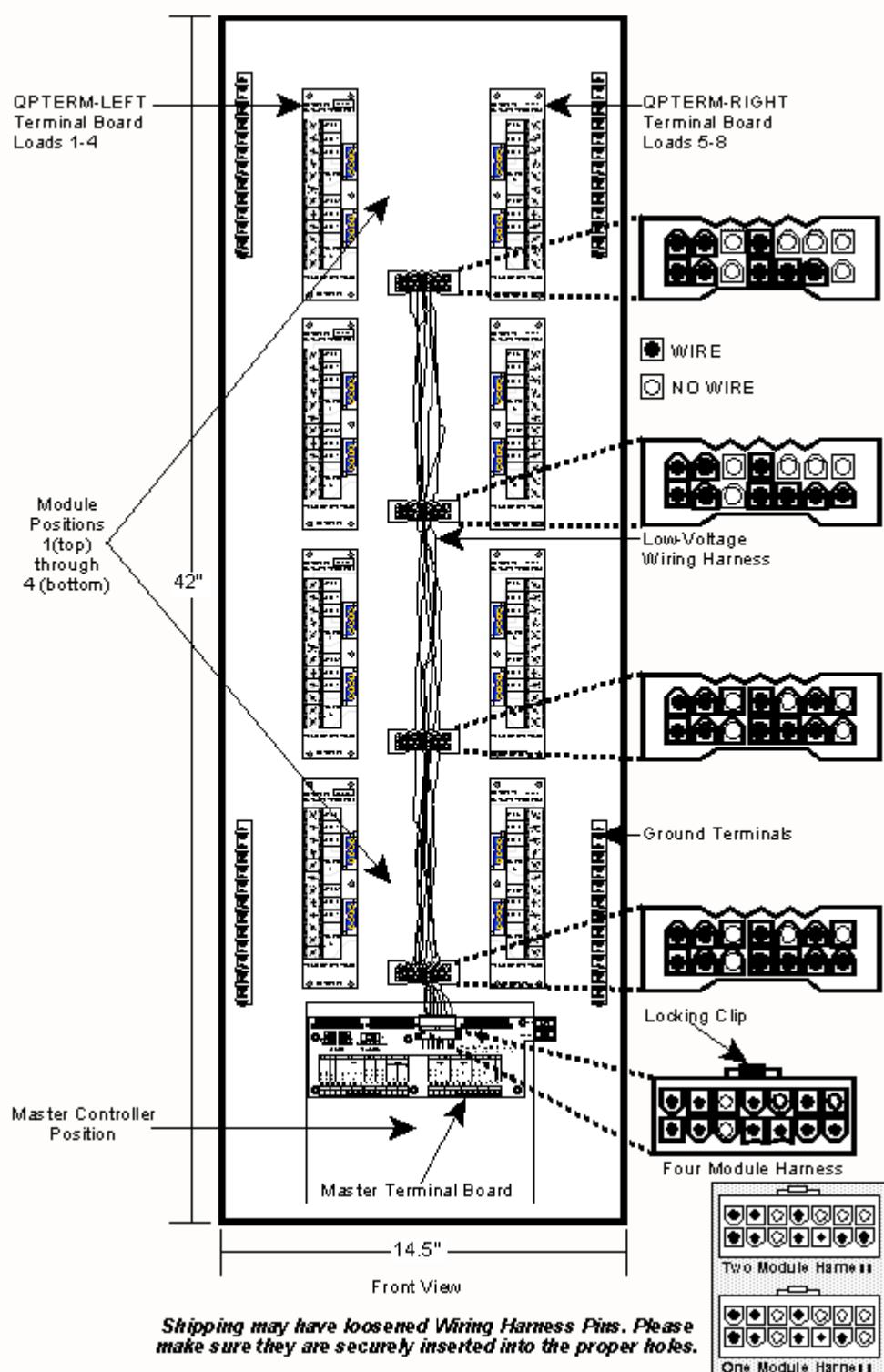
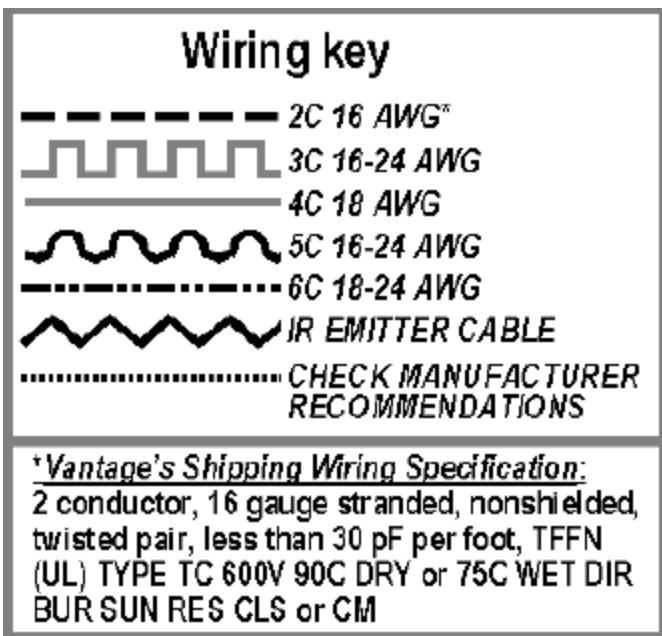
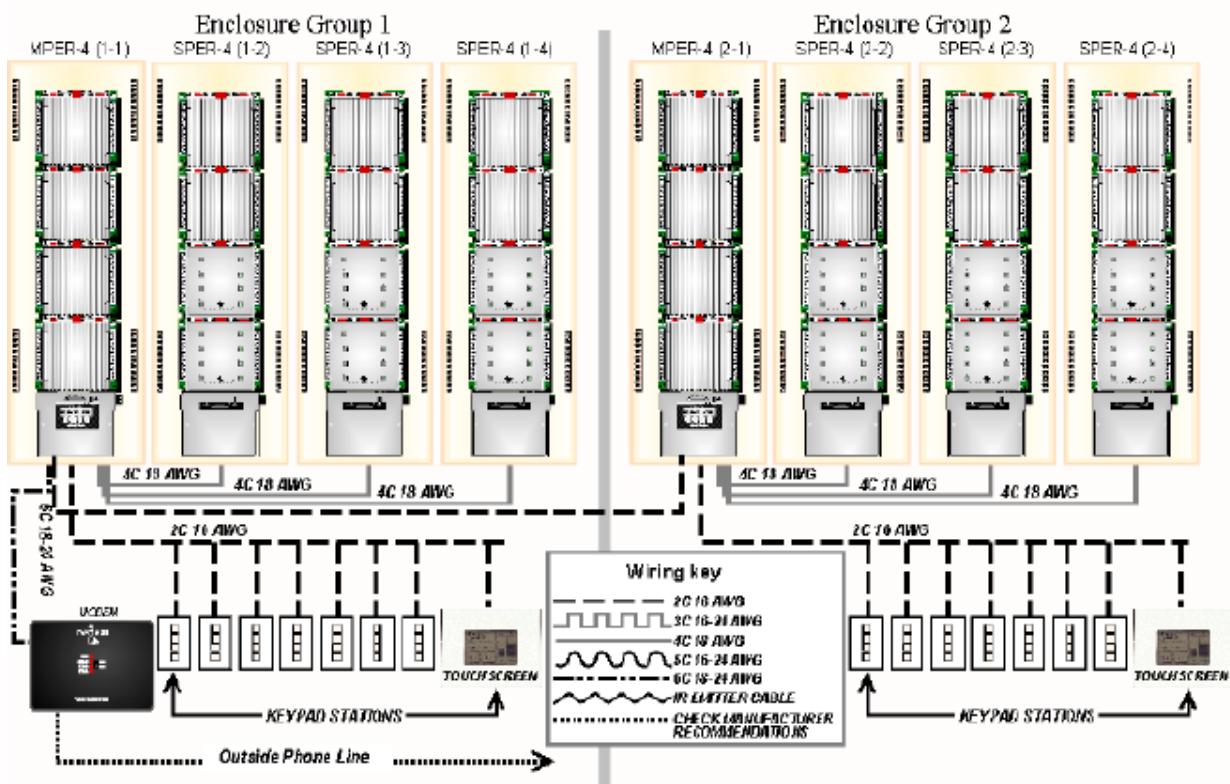


Figure 38: A four module Master Power Enclosure.

Enclosure and Wiring Overview



## Enclosure Overview



Related Topic: [Masters](#)  
[Enclosure Groups](#)

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## Controllers (Masters)

A Main Controller is the central processor of the Vantage system. It stores and executes all programming that controls dimming and

relay modules, stations, and loads. Note the following:

**Main Controllers:**

- Each project can support up to 15 Main Controllers.
- Each Main Controller can support up to sixteen modules.
- Each module can support up to 8 loads.
- Each Main Controller can support up to 50 wired stations (500 buttons, more if LCD screens are used).
- Each Main Controller can support up to 60 RadioLink stations (480 buttons, more if RadioLink LCD screens are used).
- Each Main Controller can support up to three Expansion Terminals (slave enclosures). (Accept C-Box LE Model Number CLLDRR100.)

\*A Main Controller using three Expansion Enclosures can support up to 16 modules, four in each enclosure 4x4 for a total of 128 loads.

**Expansion Terminals (slaves):**

An Expansion Terminal can support up to four modules in one, two, or four module configurations.

A single Expansion Terminal Board (slave enclosure) can support up to 32 additional loads.

Adding an Expansion Terminal Enclosure (slave controller/terminal board) does not allow room for additional stations.

Expansion Terminals are most often used to expand the number of loads in a system.

**Note:** If the 32-load limit is exceeded, it will be necessary to either install another Main Controller or an Expansion Terminal enclosure (slave controller/terminal board).

Controllers, main enclosures, and modules can only be added in Wiring view. Some things to remember are:

When adding loads and stations the software will automatically add enclosures to accommodate.

When adding an enclosure to a main controller enclosure, the added enclosure automatically becomes an Expansion Terminal Enclosure (slave enclosure) unless three Expansion enclosures are already assigned to the Main Controller enclosure. If a main enclosure has three expansion enclosures a new main enclosure must be created to continue growing the project.

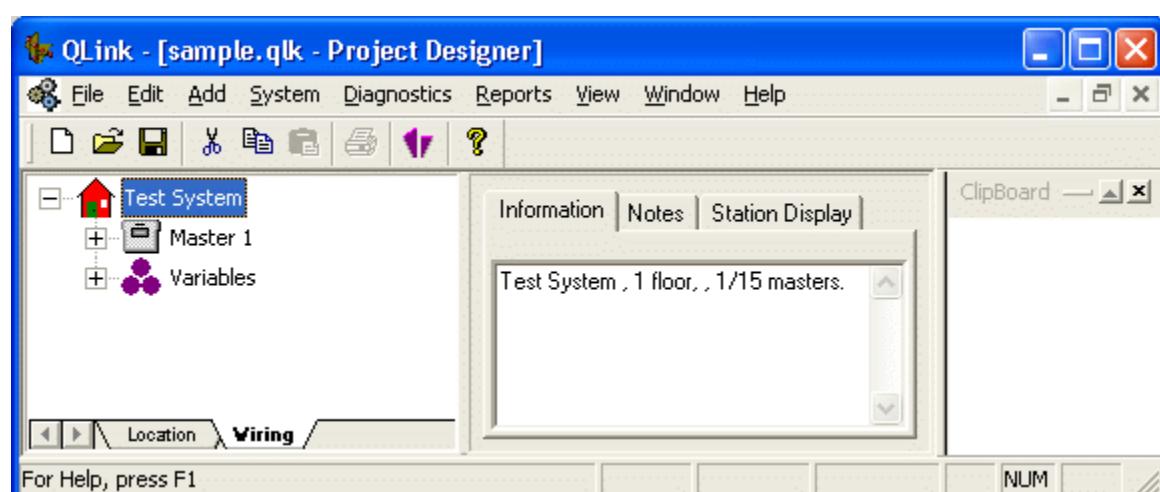
Additional Main Controllers may be added through the QLink software; however, if they are not physically present, when connecting to the system, an error will be generated.

**To Add a Master:**

With the "example" project open.

Click the **Wiring** tab.

The Project Designer window changes to the following:



**Figure 39: Wiring view.**

Select the project title.

On the **Add** menu, click **Add Controllers... | Master Controller**.

-or-

With the **project title** selected, press **Ctrl+M**.

The Enclosure Definition dialog box opens.

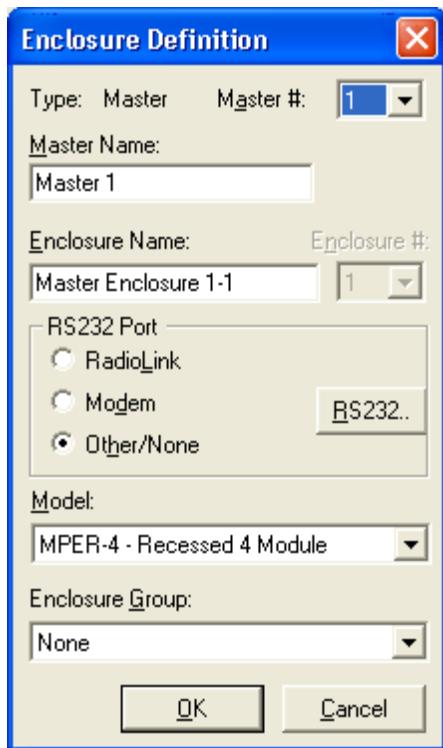


Figure 40: The Enclosure Definition dialog box.

#### RS-232 Connections to Master Controller

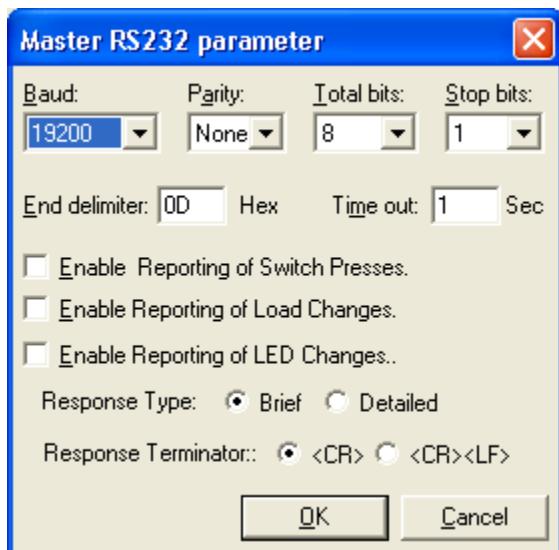


Figure 40a: The Master RS-232 Parameter dialog box.

The check box **End Delimiter 0D**, is for *outgoing* RS-232 strings.

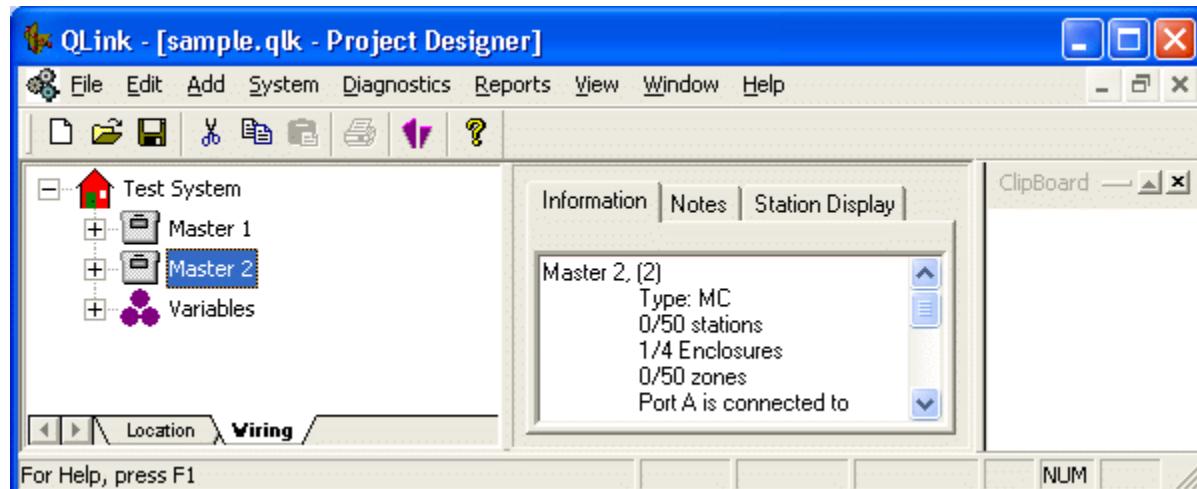
The radio buttons for **Response Terminator**: is for *incoming* RS-232 Strings.

- Note:**
- Enable Reporting of Switch Presses.** (Automatically enables VOS responses)
  - Enable Reporting of Load Changes.** (Automatically enables VOL responses)
  - Enable Reporting of LED Changes.** (Automatically enables VOD responses)
  - Response Type:** Brief/Detailed (Automatically sets responses to regular or detailed)

**Response Terminator:** <CR>/<CR><LF> (Automatically sets the response terminator)  
 (With these settings the traditional method of having the connecting equipment send the appropriate V-Commands is eliminated.)

Give the **Master** and the **Enclosure** a name, and then click **OK**.

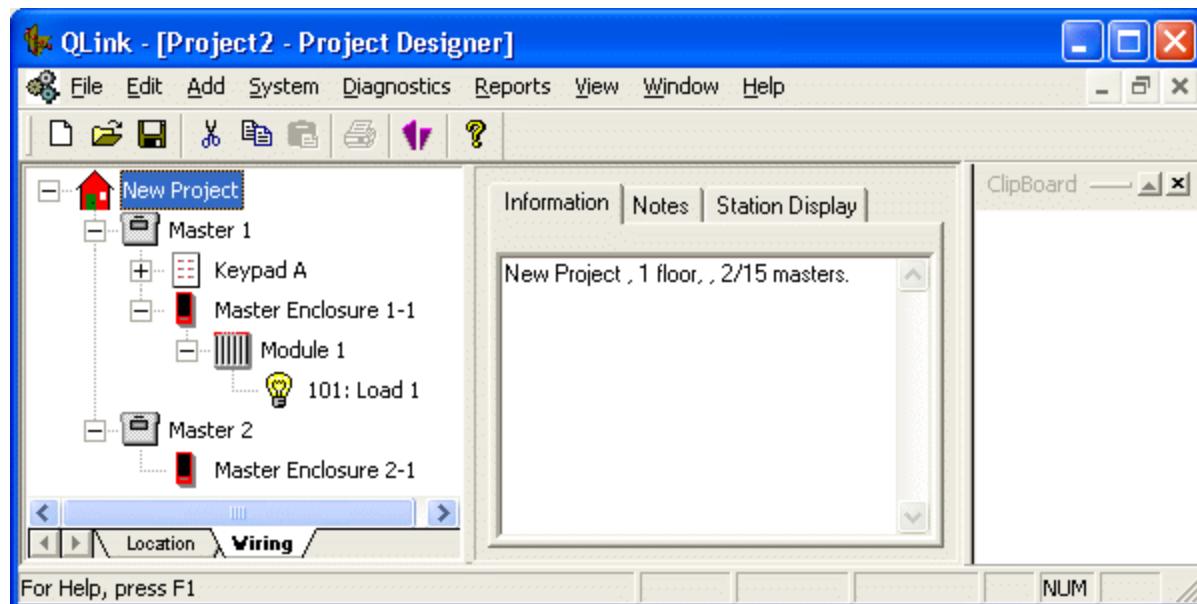
The Project Designer window changes to the following:



**Figure 41:** The Project Designer window in Wiring view displaying the new master.

Expand both **Masters**.

Except for the name, the project will appear as follows:



**Figure 42:** Master 2 expanded. Notice the automatic inclusion of Master Enclosure 2-1.

**Save** the project.

**Related Topics:** [Enclosures](#)  
[C-Box Masters](#)  
[DIN Masters](#)

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## C-Box Controllers

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### Overview

The C-Box Controller is one of the main "CPU" models of the Vantage lighting System. An LCD interface provides immediate status and diagnostics. A 20-year Lithium battery (un powered) retains memory and status in a power outage. The C-Box Controller has real time and astronomical time clocks. QLink software is used to program the C-Box. The C-Box runs independent of a PC after initial setup and programming. Firmware upgrades may be downloaded as they become available. Controllers operate as stand-alone or networked. A Vantage Network may contain up to fifteen Main Controllers or C-Box Controllers in any combination. The C-Box Controller comes in a Wall mount or a Desktop model. Both models may be **RadioLink** Enabled by setting PORT-A as a RadioLink Port. When this is done QLink will add a KIT to the BOM that includes an RF Enabler and a custom cable to connect the RF Enabler to C-Box's Port-A.

### Installation

The DeskTop C-Box may be placed on a shelf/table or in a stack system, or rack mounted. For the RF version care should be take to insure that the antenna is not obstructed and that interference is not impaired. See the installation instructions sheets shipped with each C-Box for additional installation tips.

### Powering The C-Box Controller

Maximum power draw by the C-Box controller is 1.25 amps or 150W @ 120V / 75W @ 240V. The Master Controller is plugged into a grounded 120V-240V, AC outlet.

### Controller to Controller Wiring

When connecting multiple Controllers, Vantage recommends the use of 18-gauge 2-conductor non-shielded wire. This is a polarized connection with "+" and "-" screw terminals for two runs of wire. The beginning and ending Controllers will use one run and all Controllers in-between will use two runs, i.e., one run connecting from the previous Controller and the other run continuing to the next Controller. The maximum wire length for all Main Controllers Nettworked, totaled, should not exceed 1,000ft.

### Main Controller Network Termination

If only one C-Box Controller is used, the Network Termination switch should be ON. This switch is located on the Top of the C-BOX (Wall Mount Model) or the back of the C-Box (Desktop Model). If multiple C-Box Controllers and/or conventional Masters are used ONLY the first and last Controller should have the Network Termination switch ON.

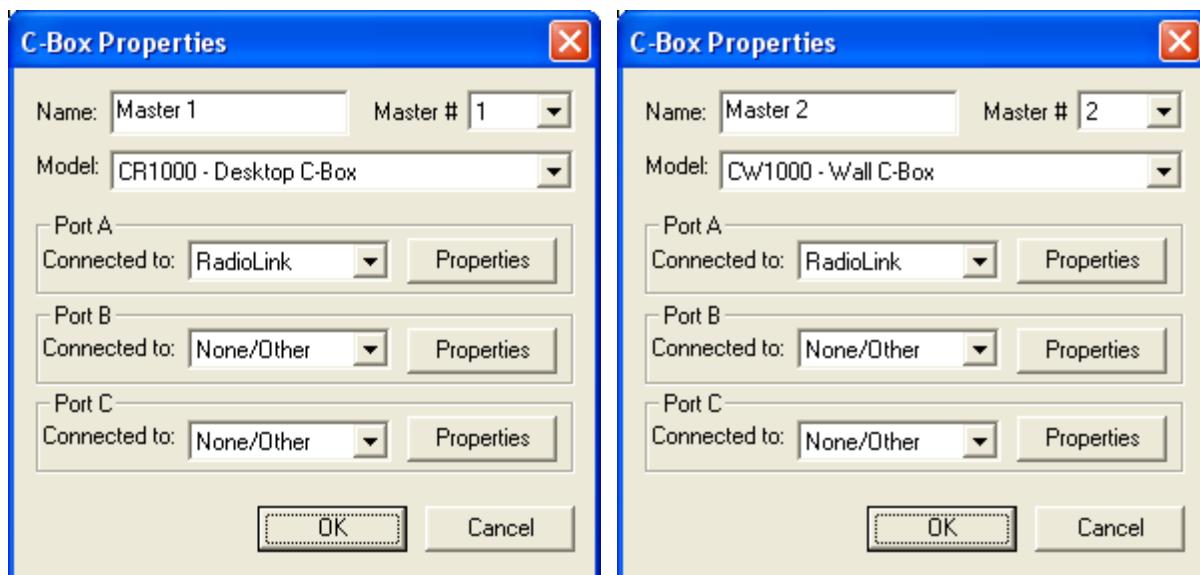
Example: In a five Controller system, Controllers 1 and 5 are not necessarily the first and last Controllers, i.e., the "wiring" order could be 2-1-3-5-4. In this example, Controller 2 and 4 are the first and last controllers in the network, so only these two would have the Network Termination switch ON, the other three must be OFF.

### External Power

The C-Box Controller has a 12 VDC and a 24 VDC auxiliary power connection. The 12 VDC connection is typically used for the Vantage Modem, power is limited to 250ma. The 12 VDC may also be used to power the RadioLink RS232 station. The 24 VDC connection should not be used with systems that have more than 30 "station bus type" stations connected.

To add a C-Box Controller to a project right click on the House Project and Select **Add Controllers | C-Box Controller** or **RadioLink C-Box Controller**.

The appropriate C-Box Properties window is opened.



**Figure 42a:** C-Box Properties with RadioLink selected for Port A.

**Related Topic:** [Masters](#)  
[RadioLink](#)

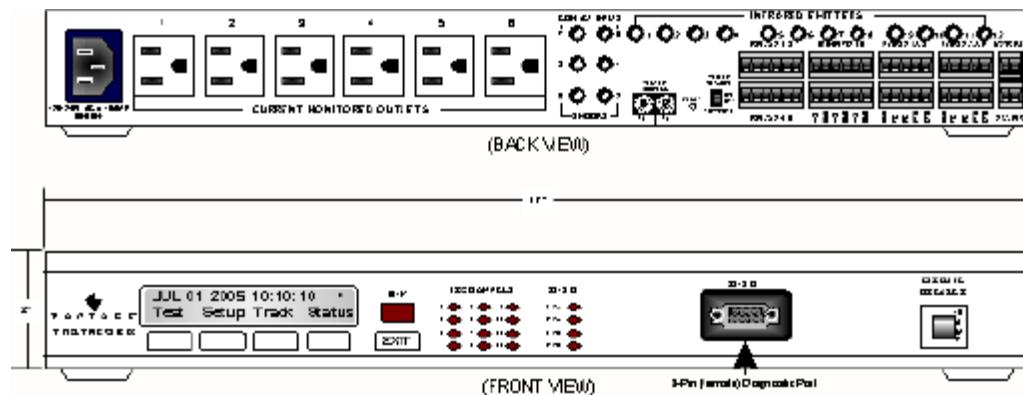
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## Theatre C-Box

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Theatre C-Box has all of the features of a C-Box controller and all of the features of TheatrePoint in the same box.



Please see and print the detailed Installation Instructions, available at:  
[http://dealer.vantagecontrols.com/tech\\_support/installation\\_instructions/](http://dealer.vantagecontrols.com/tech_support/installation_instructions/)

**Related Topic:** [C-Box Controllers](#)  
[TheatrePoint](#)  
[Controllers \(Masters\)](#)

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## C-Box LE

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### Overview

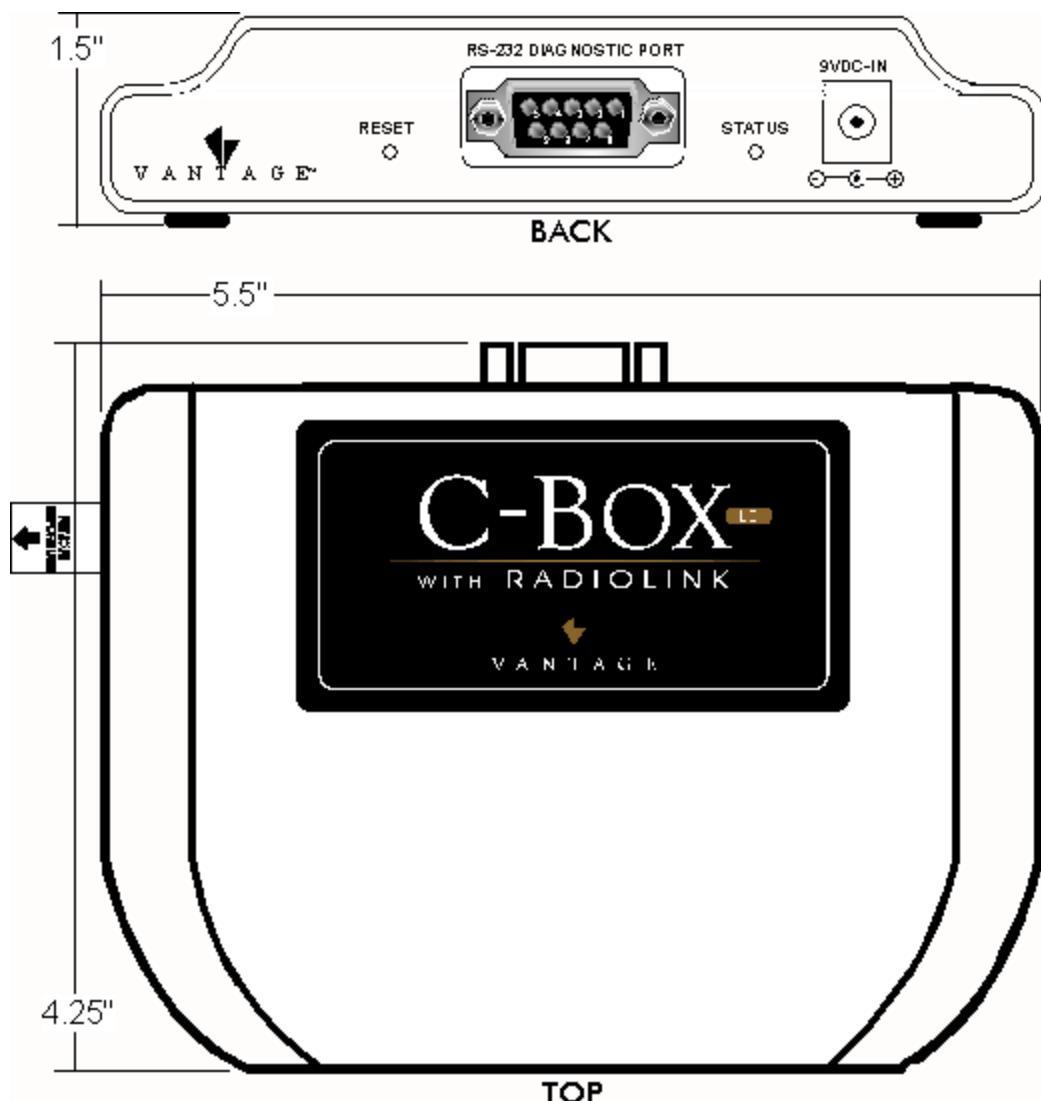
The C-Box LE with RadioLink is a completely programmable Controller for Vantage RadioLink only systems. Its design is compact and includes a built-in radio antenna, status LED, reset button, 9 Pin D-Sub RS-232 Connection for QLink programming and a 9V DC 300mA wall adaptor for power. A 20-year Lithium battery (un-powered) retains memory and status in a power outage. A backup Flash Memory chip is included as an additional safeguard for retrieving the program using a computer. The C-Box LE controller has real time and astronomical time clocks. The C-Box LE runs independent of a PC after initial setup and programming however, a computer or an IP Enabler may permanently be connected to the RS-232 port for access via QLink and WebPoint. Firmware upgrades may be downloaded as they become available. It is a perfect solution for smaller low-cost Vantage installations because it doesn't have Station Bus, Module Bus, Main Bus, LCD, or Manual Override, yet it supports up to sixty RF devices. C-Box LE is a single, stand alone, controller and may not be directly connected to other Vantage Master or Main Controllers.

### Specifications

<i>Description</i>	<i>Specification</i>
Dimensions, HWD	1.5" x 5.5" x 4.25" 1mm x 139.7mm x 108mm
Weight	6.9oz. – 195.6g
Input Power – Wall Adaptor	9V DC, 300mA
Ambient Operating Temperature	0-35°C / 32-95°F
Ambient Operating Humidity	5-95% non-condensing

### System Requirements

QLink 4 and firmware 7.0 or higher is needed. For new projects it is recommended that firmware and software be kept to the most current release.



### Installation

The C-Box LE controller may be placed on a shelf/table, almost anywhere because of its compact size. Because it communicates via RF, care should be taken to insure that the unit is not placed in an enclosure or location that could impair the RF signal, i.e., a metal cabinet or behind dense water sources. Before using remove the lithium battery tab insulator.

### RS-232 Connection

The 9 pin female RS-232 connector included on the back of the C-Box LE controller is called the diagnostic port and is a straight through cable connection. This port is used to connect a PC to program/read the system or may also be used to connect WebPoint. Any compatible RS-232 device may be connected to this port however, only one device should be connected at a time. Vantage typically uses RX, TX and GND for communication but does have RTS and CTS for some applications.

The default protocol for QLink RS-232 communication is:

Baud: 19200

Total bits: 8

Parity: None

Stop bits: 1

### C-Box LE with RadioLink Controller Setup in QLink

Create Floors and Rooms before creating the C-Box LE Controller. The Controller may be added in the Wiring view by right clicking on (Project House), and selecting Add Controllers and selecting C-Box LE Controller. If RadioLink dimmer stations are created first the software will automatically open a dialog box, "Choose a Controller" allowing the correct selection from a drop down list. Select the C-Box LE Controller.

Status Light and Reset Button

Count Even Blinks – Equal to number of stations communicating with controller

No Light – Check Power Supply

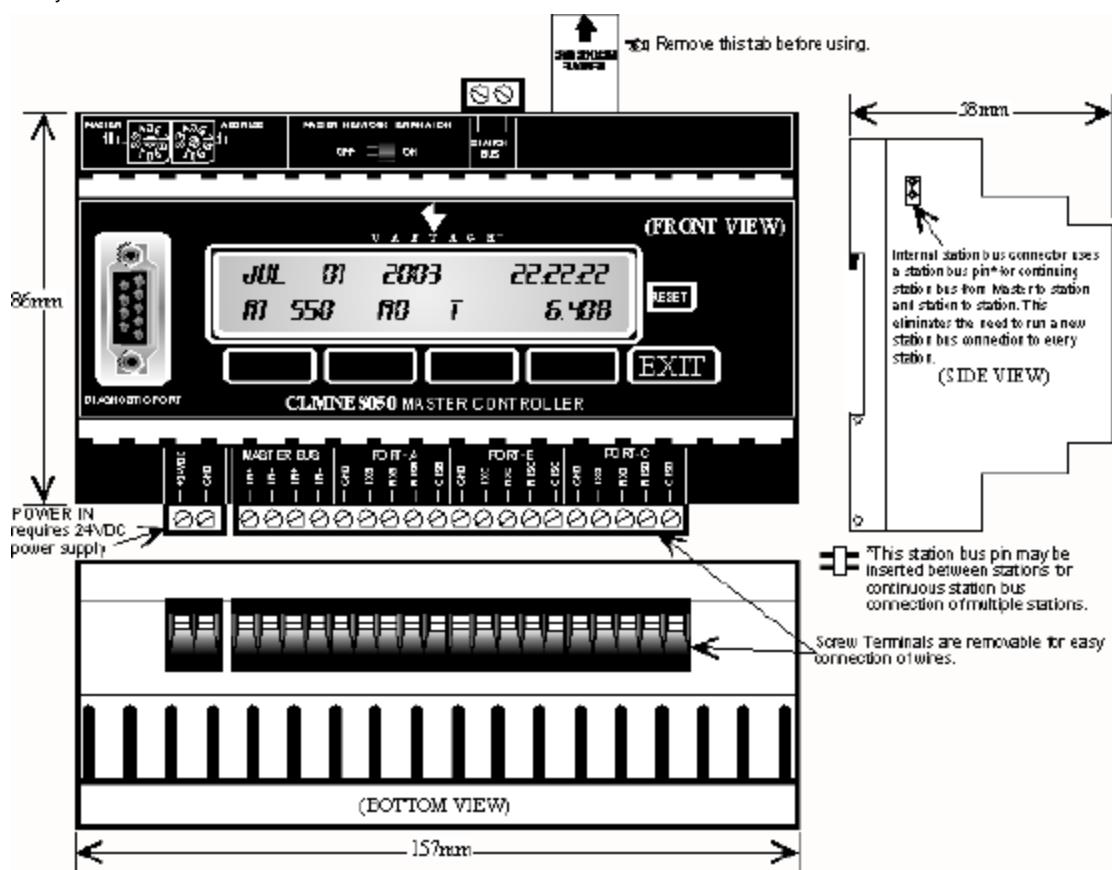
Random Blinking – during download and firmware updates

The Reset button will re-boot the controller causing the RF stations to temporarily go off line. Full operation should return within 15 minutes or less.

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## DIN Controllers (Masters)

The DIN (Master) Controller is one of the main "CPU" models of the Vantage lighting System. An LCD interface provides immediate status and diagnostics. A 20-year Lithium battery (un powered) retains memory and status in a power outage. The Master has real time and astronomical time clocks. QLink software is used to program the Master. The Master runs independent of a PC after initial setup and programming. Firmware upgrades may be downloaded as they become available. Master Controllers operate as stand-alone or networked. A Vantage Network may contain up to fifteen Master Controllers, C-Box Masters and/or DIN Master Controllers in any combination.



**Figure 42b: DIN Master Controller.**

To add a DIN Master Controller to a project right click on the House Project and Select **Add Master | DIN Master**. The appropriate C-Box Properties window is opened.



**Figure 42c:** DIN Master Properties dialog box.

Make any Name and Port settings changes as necessary and click **OK**.

Related Topic: [Masters](#)

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## Modules

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Modules provide the actual control of loads. The master controller instructs the modules when to turn on specific loads. Modules may be added to an Enclosure in the Wiring view. Loads in Wiring view are visible under Modules.

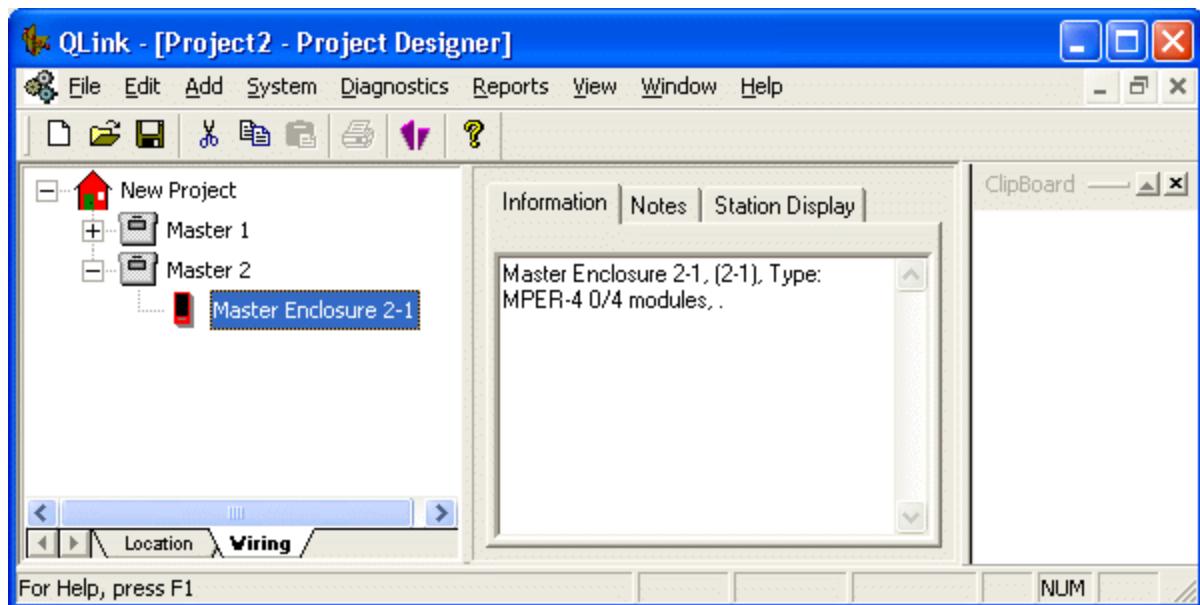
To Add a Module to a Master Enclosure:

With the "example" project open.

Click the **Wiring** tab.

Expand **Master 2**.

The Project Designer window changes to the following:



**Figure 43:** Master Enclosure 2-1 selected in Wiring view.

Select Master Enclosure 2-1.

On the **Add** menu, click **Module**.

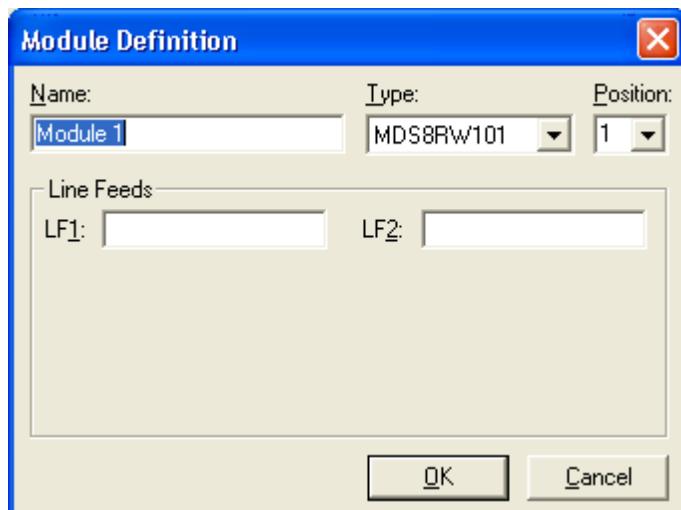
-or-

With Master Enclosure 2-1 selected, Press **Ctrl+7**.

-or-

Right-click **Master Enclosure 2-1**, and then click **Add Module**.

The Module Definition dialog box opens.

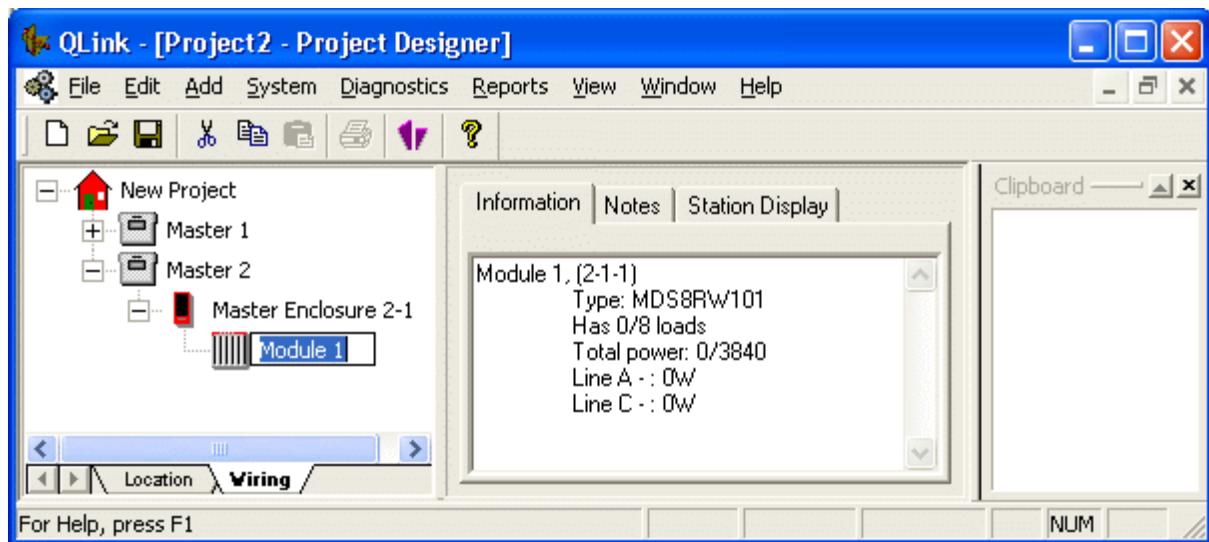


**Figure 44:** The Module Definition dialog box.

**Note:** See *Module* printed instruction sheets for details.

Give the module a **name**, and then Click **OK**.

The project will display as follows:



**Figure 45:** The new module added to Master Enclosure 2-1.

Click the Location tab to return to Location view.

Save the project.

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## Time Controls

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A time control is a command that activates at a preset time interval. This interval may be set for any specified time within a day, week, month or on a Specific Date. Time controls are added directly to the master controller.

To Add a Time Control:

With the "example" project open.

In the Project Designer, click the Wiring tab.

Select **Master 1**.

On the **Add** menu, click **Time Control**.

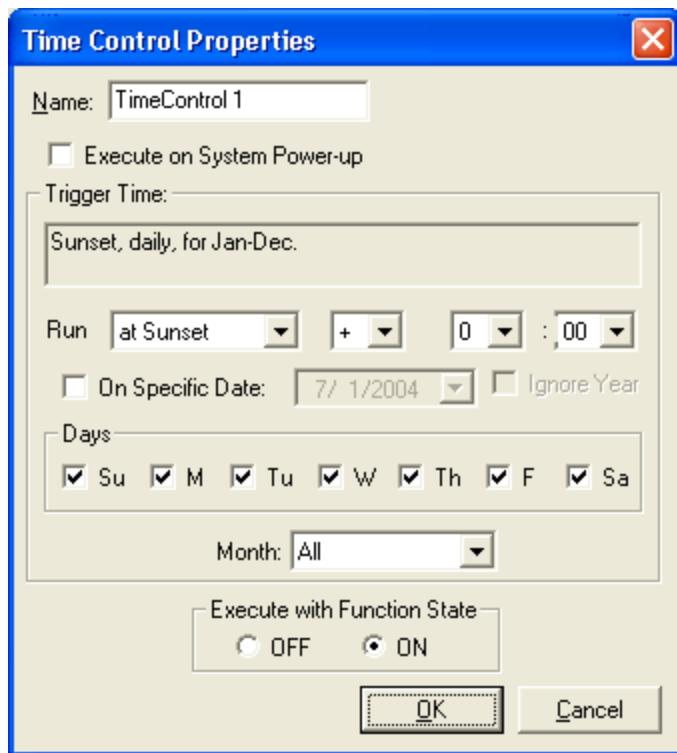
-or-

With **Master 1** selected, press **Ctrl+T**.

-or-

Right-click **Master 1**, and then click **Add Time Control**.

The Time Control Trigger Times dialog box opens.



**Figure 46:** The Time Control Trigger Times dialog box.

#### Name

The name of the time control is displayed in this box.

#### Execute on System Power-up

All Time Controls with this box checked will run if the system is re-booted. This includes Soft boots (reset) and Hard boots (power cycles).

#### Trigger Time

The trigger time with its active time is displayed in this box.

#### Run

Determines when the Time Control is run. Possible run options are: At Sunrise/Sunset +/- hours and minutes, At a specific hour, every hour or every minute.

#### On Specific Date

Allows a Time Control Function to run on a specified date.

#### Days

The days of the week that the time control is active are checked in these check boxes.

#### Month

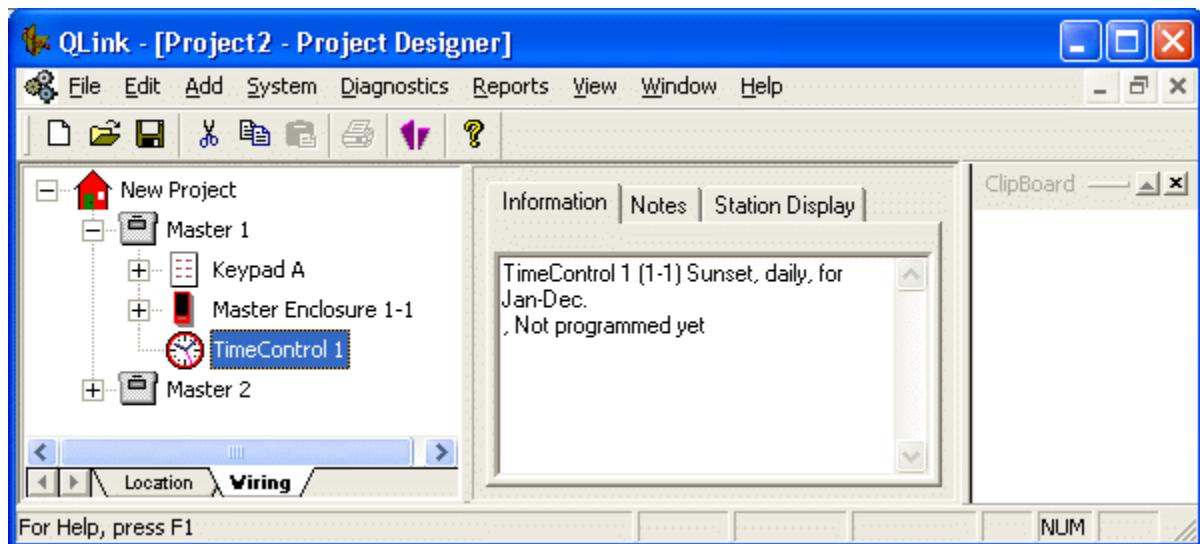
Select a specific month or All months the time control will be active.

#### Execute with Function State

This check box identifies whether the ON or OFF state is executed by the time control. Most time controls should specify the ON state. For example the Nite Lite function works when the state is OFF.

Give the time control a **name**, and then click **OK**.

Except for the name, the "example" will appear as follows:



**Figure 47:** The new TimeControl.

The time control may now be programmed like any other button or control.

**Save** the project.

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## String Controls

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A string control is a command that activates upon receiving a particular string via RS-232. This string may be received from any port or a specific port. String controls are added directly to the master controller. A total of 64 String Controls are possible in each QLink project. A string control may be 31 characters long.

To Add a String Control:

With the "example" project open.

In the Project Designer, click the Wiring tab.

Select **Master 1**.

On the **Add** menu, click **String Control**.

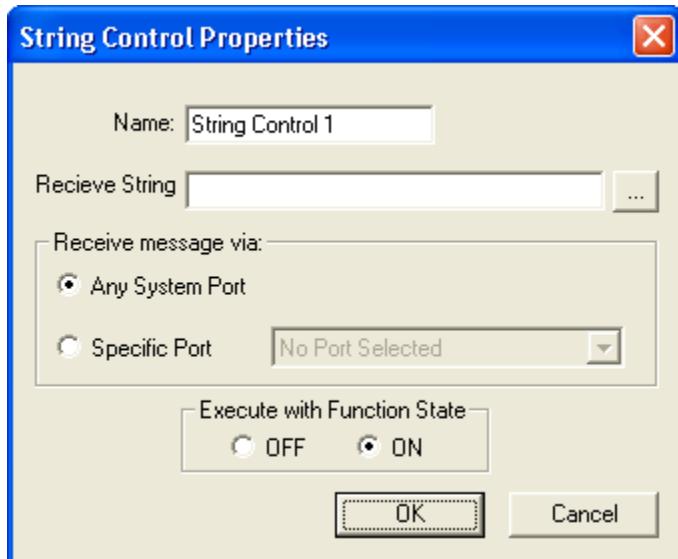
-or-

With **Master 1** selected, press **Ctrl+Shift+S**.

-or-

Right-click **Master 1**, and then click **Add String Control**.

The String Control Properties dialog box opens.



**Figure 48:** The String Control Times dialog box.

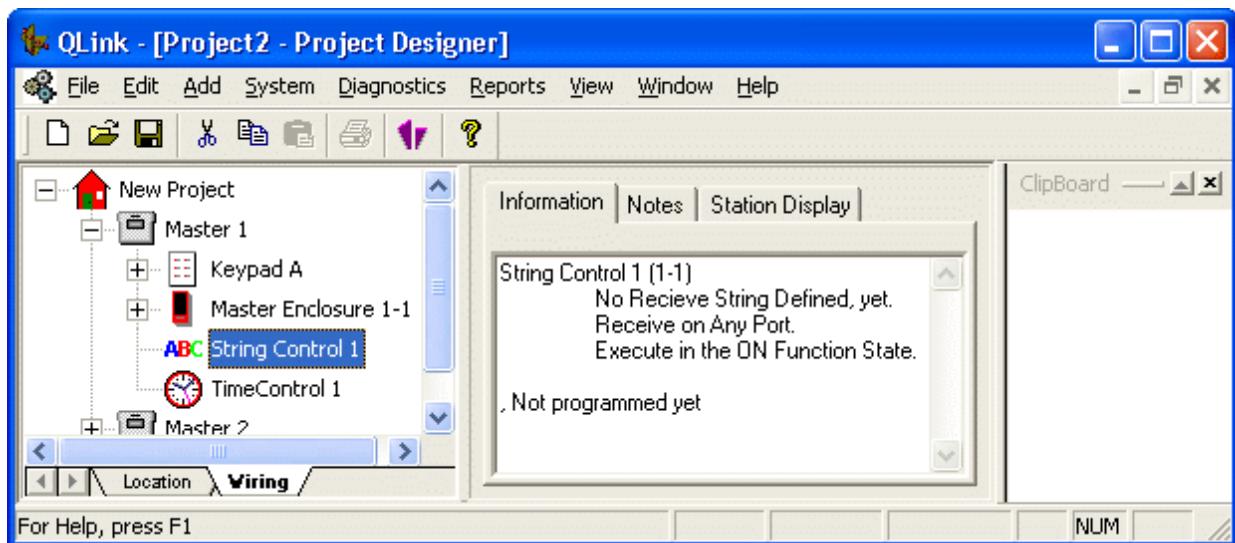
Give the string control a **name**

Enter the string that is expected from the **3rd party device**.

Select the port the device is connected to, or select Any System Port.

Choose whether to execute with the function state ON or OFF, and then click **OK**.

Except for the name, the "example" will appear as follows:



**Figure 49:** The new string control.

The string control may now be programmed as any other button or control.

**Save** the project.

**Related Topic:** [String Wildcards](#)  
[String Parsing](#)

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## IR Zones

An IR (infrared) Zone consists of a single IR Station or a group of IR Stations. An IR station is a station with either an internal or an external IR receiver. IR zones allow different areas of a home to respond differently to the same codes. Typically a room defines an IR Zone.

For example: Pressing the Scene 1 button on the remote control while in the living room may turn on living room lighting, while pressing the same button when in the master bedroom arms the security system and turns all landscape lighting on.

Each Master Controller may have up to 50 IR zones, each with 256 button controls. After creating IR zone(s), IR Control buttons may be defined and programmed. Every station with built in IR or external IR needs to be assigned to an IR zone or that IR receiver will not function. Multiple receivers in one zone act as a group, responding identically to the same codes.

**Note:** IR receivers should be spaced so only one receiver at a time actually receives the code. Stations can only belong to the Master Controller they are physically wired to, however any IR Control may be programmed to affect any load or IRX on the system.

To Add an IR Zone:

With the "example" project open.

In the Project Designer, click the Wiring tab.

Select **Master 1**.

On the **Add** menu, click **IR Zone**.

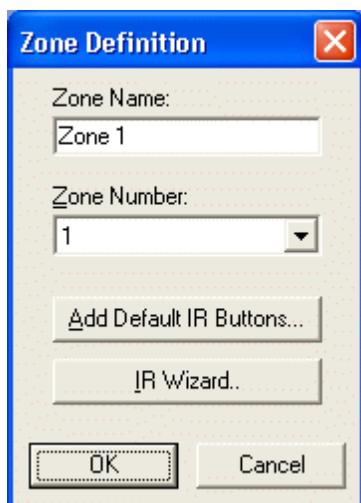
-or-

With **Master 1** selected, press **Ctrl+I**.

-or-

Right-click **Master 1**, and then click **Add IR Zone**

The Zone Definition dialog box opens.



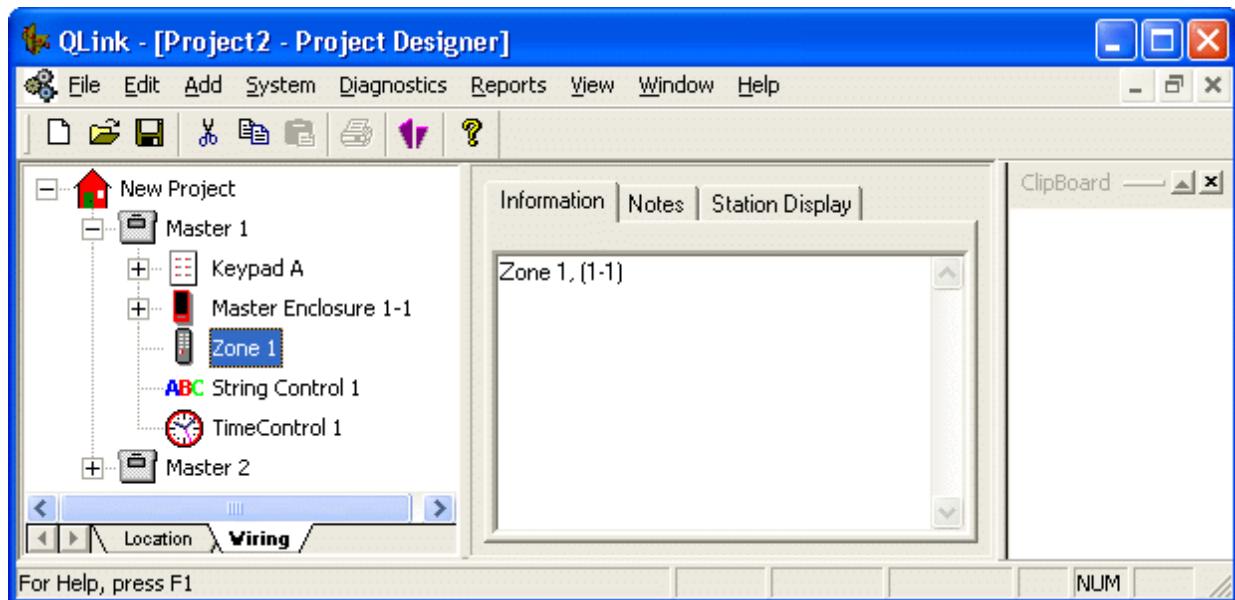
**Figure 50:** The Zone Definition dialog box.

**Note:** The "Add Default IR Buttons" button will present a dialog that allows selection of an Infrared Emitter station and a device on the Emitter station. After selecting IR, the buttons will be created and programmed and placed in the zone.

**Note:** The "IR Wizard" button is only available OFF LINE.

Give the IR zone a **name**, and then click **OK**.

Except for the name, the project changes to the following:



**Figure 51:** Wiring view displaying an added IR zone.

Save the project.

Related Topic: [IR Map](#)

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## IR Map

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Vantage IR Map Code Set

<b>Remote Button</b>	<b>TV</b>	<b>VCR</b>	<b>CBL</b>	<b>SAT</b>	<b>CD</b>	<b>DVD</b>	<b>AUD</b>	<b>AUX</b>
<b>Mode Select</b>	<b>203</b>	<b>204</b>	<b>205</b>	<b>202</b>	<b>199</b>	<b>200</b>	<b>198</b>	<b>201</b>
<b>Power</b>	<b>0</b>	<b>32</b>	<b>64</b>	<b>96</b>	<b>128</b>	<b>160</b>	<b>192</b>	<b>224</b>
<b>Ch Up</b>	<b>1</b>	<b>33</b>	<b>65</b>	<b>97</b>	<b>129</b>	<b>161</b>	<b>193</b>	<b>225</b>
<b>Ch Dn</b>	<b>2</b>	<b>34</b>	<b>66</b>	<b>98</b>	<b>130</b>	<b>162</b>	<b>194</b>	<b>226</b>
<b>Vol Up</b>	<b>3</b>	<b>35</b>	<b>67</b>	<b>99</b>	<b>131</b>	<b>163</b>	<b>195</b>	<b>227</b>
<b>Vol Dn</b>	<b>4</b>	<b>36</b>	<b>68</b>	<b>100</b>	<b>132</b>	<b>164</b>	<b>196</b>	<b>228</b>
<b>Mute</b>	<b>5</b>	<b>37</b>	<b>69</b>	<b>101</b>	<b>133</b>	<b>165</b>	<b>197</b>	<b>229</b>
<b>0</b>	<b>6</b>	<b>38</b>	<b>70</b>	<b>102</b>	<b>134</b>	<b>166</b>	<b>198</b>	<b>230</b>
<b>1</b>	<b>7</b>	<b>39</b>	<b>71</b>	<b>103</b>	<b>135</b>	<b>167</b>	<b>199</b>	<b>231</b>
<b>2</b>	<b>8</b>	<b>40</b>	<b>72</b>	<b>104</b>	<b>136</b>	<b>168</b>	<b>200</b>	<b>232</b>
<b>3</b>	<b>9</b>	<b>41</b>	<b>73</b>	<b>105</b>	<b>137</b>	<b>169</b>	<b>201</b>	<b>233</b>
<b>4</b>	<b>10</b>	<b>42</b>	<b>74</b>	<b>106</b>	<b>138</b>	<b>170</b>	<b>202</b>	<b>234</b>
<b>5</b>	<b>11</b>	<b>43</b>	<b>75</b>	<b>107</b>	<b>139</b>	<b>171</b>	<b>203</b>	<b>235</b>
<b>6</b>	<b>12</b>	<b>44</b>	<b>76</b>	<b>108</b>	<b>140</b>	<b>172</b>	<b>204</b>	<b>236</b>
<b>7</b>	<b>13</b>	<b>45</b>	<b>77</b>	<b>109</b>	<b>141</b>	<b>173</b>	<b>205</b>	<b>237</b>
<b>8</b>	<b>14</b>	<b>46</b>	<b>78</b>	<b>110</b>	<b>142</b>	<b>174</b>	<b>206</b>	<b>238</b>
<b>9</b>	<b>15</b>	<b>47</b>	<b>79</b>	<b>111</b>	<b>143</b>	<b>175</b>	<b>207</b>	<b>239</b>
<b>Enter</b>	<b>16</b>	<b>48</b>	<b>80</b>	<b>112</b>	<b>144</b>	<b>176</b>	<b>208</b>	<b>240</b>
<b>Pre. Ch</b>	<b>17</b>	<b>49</b>	<b>81</b>	<b>113</b>	<b>145</b>	<b>177</b>	<b>209</b>	<b>241</b>
<b>Guide</b>	<b>18</b>	<b>50</b>	<b>82</b>	<b>114</b>	<b>146</b>	<b>178</b>	<b>210</b>	<b>242</b>
<b>Play</b>	<b>19</b>	<b>51</b>	<b>83</b>	<b>115</b>	<b>147</b>	<b>179</b>	<b>211</b>	<b>243</b>
<b>Stop</b>	<b>20</b>	<b>52</b>	<b>84</b>	<b>116</b>	<b>148</b>	<b>180</b>	<b>212</b>	<b>244</b>
<b>Forward</b>	<b>21</b>	<b>53</b>	<b>85</b>	<b>117</b>	<b>149</b>	<b>181</b>	<b>213</b>	<b>245</b>
<b>Rewind</b>	<b>22</b>	<b>54</b>	<b>86</b>	<b>118</b>	<b>150</b>	<b>182</b>	<b>214</b>	<b>246</b>
<b>Pause</b>	<b>23</b>	<b>55</b>	<b>87</b>	<b>119</b>	<b>151</b>	<b>183</b>	<b>215</b>	<b>247</b>
<b>Exit</b>	<b>24</b>	<b>56</b>	<b>88</b>	<b>120</b>	<b>152</b>	<b>184</b>	<b>216</b>	<b>248</b>
<b>T/V</b>	<b>25</b>	<b>57</b>	<b>89</b>	<b>121</b>	<b>153</b>	<b>185</b>	<b>217</b>	<b>249</b>
<b>Menu</b>	<b>26</b>	<b>58</b>	<b>90</b>	<b>122</b>	<b>154</b>	<b>186</b>	<b>218</b>	<b>250</b>
<b>Fav</b>	<b>27</b>	<b>59</b>	<b>91</b>	<b>123</b>	<b>155</b>	<b>187</b>	<b>219</b>	<b>251</b>
<b>Info</b>	<b>28</b>	<b>60</b>	<b>92</b>	<b>124</b>	<b>156</b>	<b>188</b>	<b>220</b>	<b>252</b>
<b>Next</b>	<b>29</b>	<b>61</b>	<b>93</b>	<b>125</b>	<b>157</b>	<b>189</b>	<b>221</b>	<b>253</b>
<b>Alt</b>	<b>30</b>	<b>62</b>	<b>94</b>	<b>126</b>	<b>158</b>	<b>190</b>	<b>222</b>	<b>254</b>
<b>+10</b>	<b>31</b>	<b>63</b>	<b>95</b>	<b>127</b>	<b>159</b>	<b>191</b>	<b>223</b>	<b>255</b>
<b>Scene 1</b>					<b>230</b>			
<b>Scene 2</b>					<b>231</b>			
<b>Scene 3</b>					<b>232</b>			
<b>Scene 4</b>					<b>233</b>			
<b>Scene 5</b>					<b>234</b>			
<b>Scene 6</b>					<b>235</b>			
<b>Scene 7</b>					<b>236</b>			
<b>Scene 8</b>					<b>237</b>			
<b>Scene 9</b>					<b>238</b>			
<b>Scene 10</b>					<b>239</b>			

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## Modems and TeleAccess

### Overview

With a Vantage Modem it is possible to access the Vantage system from a remote location using a computer. This makes programming changes, diagnostics and other services available without having to be on location. Modems are automatically configured when installed. A Utility Handset Jack is provided for line testing or temporary, quick connections.

If TeleAccess is added it is also possible to execute commands to the Vantage system via any voice telephone. This feature allows clients phone-in control of their Vantage systems. TeleAccess buttons are programmed the same as regular Vantage buttons, i.e., Preset On, Toggle, Switch Pointer etc.

#### **System Specifications/Requirements**

- One free RS-232 port on a Master Terminal Board or a C-Box Master Controller.
- A six (6) conductor 20-22AWG wire to connect the Modem to the Master Controller.
- A working telephone line.

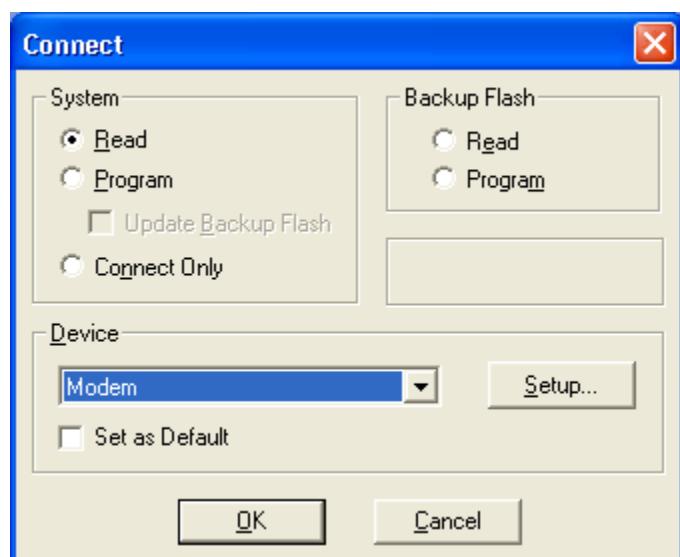
#### **Mounting**

The Q-MODEM-A installs in a 3-gang electrical box using supplied screws. Mount within 50 feet of the Master Power Enclosure.

#### **Using The Q-MODEM-A**

The Q-MODEM-A is to be used to connect to the Vantage System from a remote location. A working phone line attached to the Q-MODEM-A allows a computer with QLink software to connect to the Vantage System. Fax machines and answering machines should temporarily be disconnected when using the modem.

1. Make sure the modem on the programming computer is working.
2. In the QLink Software, click the Vantage Connect button  on the tool bar.
3. Select the proper radio button under System or Backup Flash.

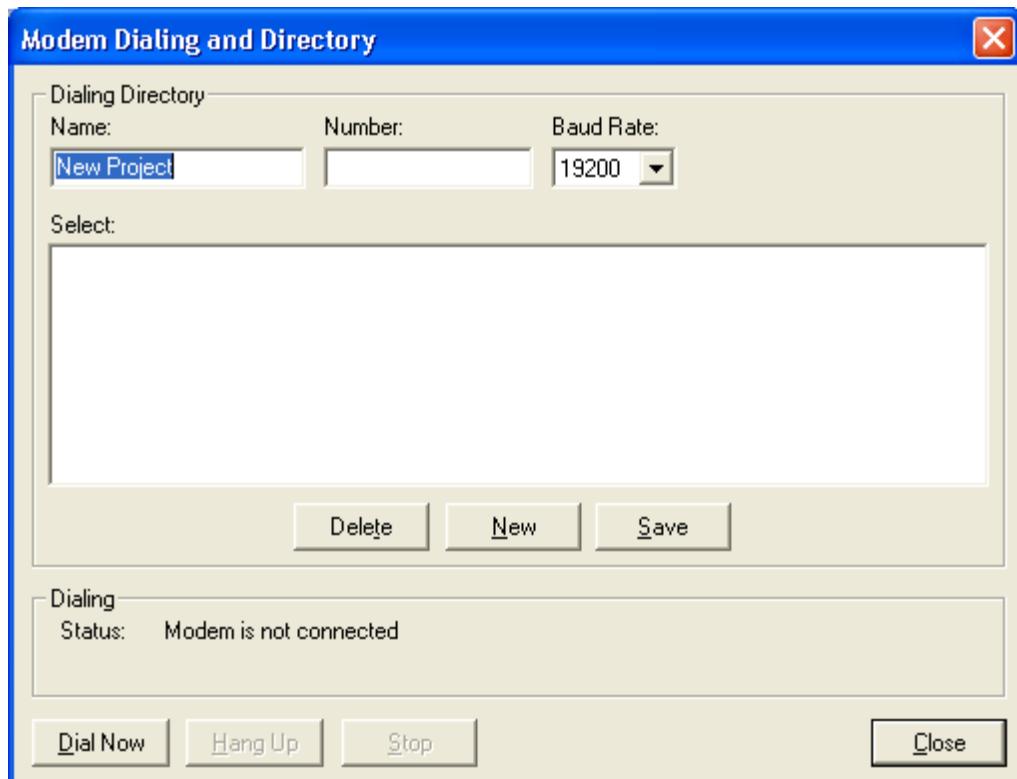


**Figure 52:** Connect window with Device set to Modem.

4. Under Device, select Modem, at the bottom of the Connect dialogue box.
5. Press Setup to Select the desired modem to be used.
6. Press OK to enter the dial-up screen.
7. Enter a project name and the phone number of the Q-MODEM-A on the job. The default baud rate is 19200. Click "Save", to save the selection.

Note: If the Name and Modem number are entered in the Project Definition screen, they will automatically be displayed in this

screen.



**Figure 53:** Modem Dialing and Directory window.

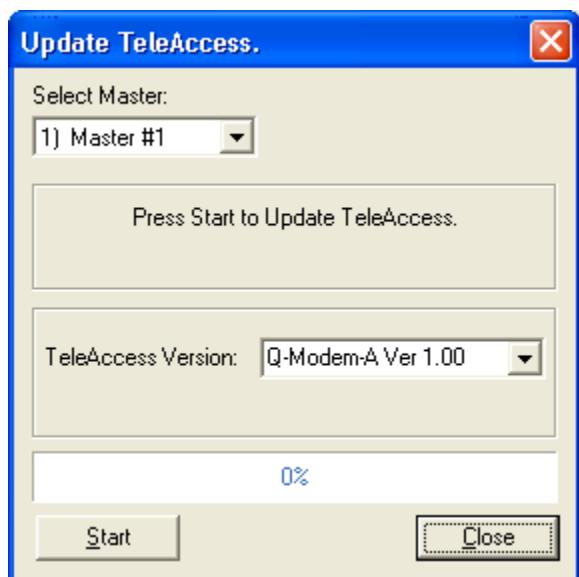
8. Press the "Dial Now" button to connect to the Vantage System via a computer modem.
9. The Q-MODEM-A will answer after the first ring, as indicated by the Off Hook LED. After the negotiation phase, connection is established. Once connected it is possible to go ON and OFF line at will, without disturbing the modem connection by pressing the Vantage connection button and answering "NO" when asked to disconnect the modem.

#### TeleAccess

TeleAccess allows remote access to the Vantage System via a telephone call. TeleAccess allows the user to call in and connect to the Vantage system. A voice menu will be played that will allow the user to configure TeleAccess or control TeleAccess functions. TeleAccess has a total of 16 programmable functions. These functions should be viewed as buttons on the Vantage System. By pressing the phone keypad number a garage may be opened, security or lights may be turned on and off, the state of HVAC equipment may be changed, etc.

#### Installing TeleAccess

TeleAccess Firmware must first be installed by clicking on System | Update and selecting Update TeleAccess in QLink software. The system will have to be re-programmed after the TeleAccess firmware is installed.

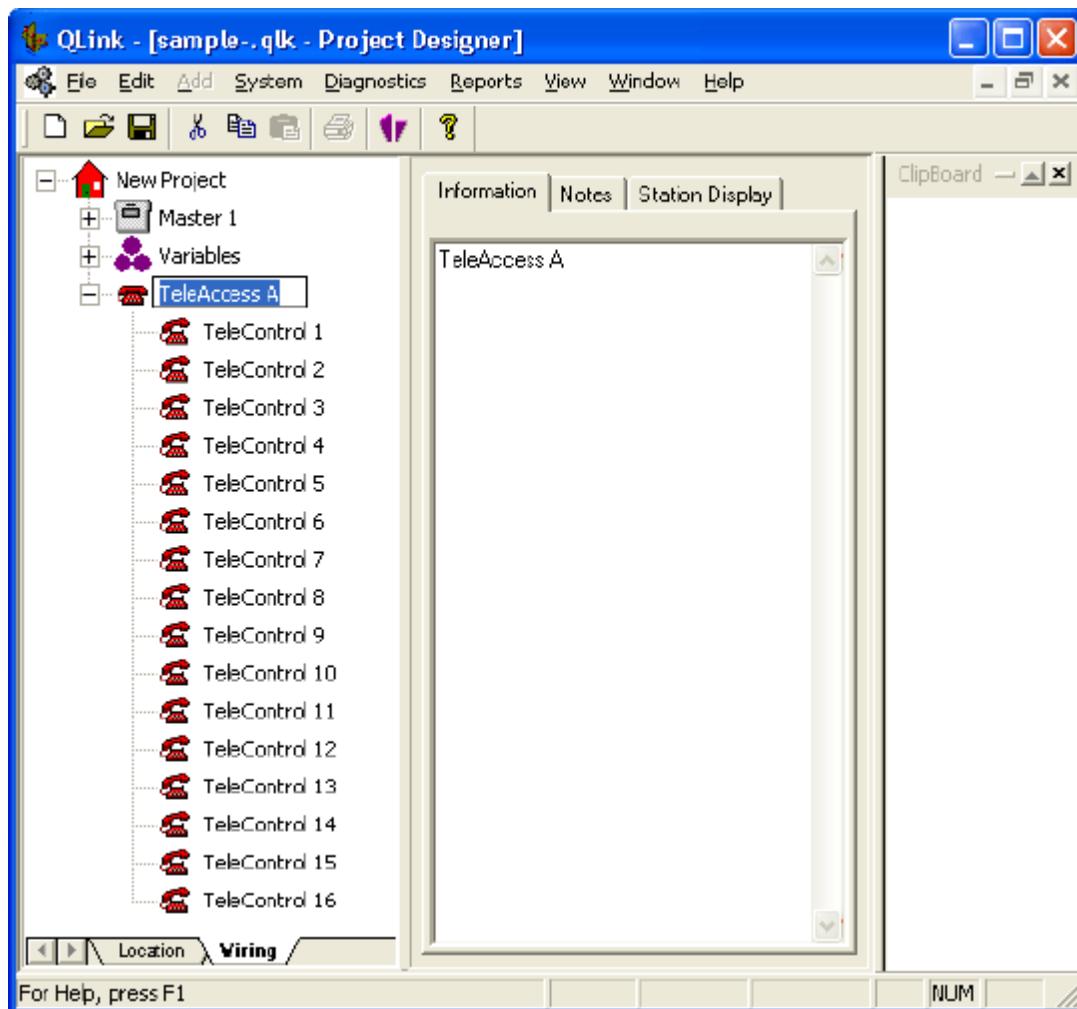


**Figure 54:** Update TeleAccess firmware window.

To add TeleAccess to a project, click on the Wiring Tab, highlight the project name with the red house icon, then select TeleAccess from the Add menu. Select the Master Controller that the modem is connected to and click OK. The TeleAccess feature will then be added to the project with 16 programmable functions (buttons). These are programmed just like other buttons by selecting the TeleControl you wish to program and then choosing the Program button.



**Figure 55:** Project window with TeleAccess installed



**Figure 56:** Project window with TeleAccess installed

#### Using TeleAccess

To access the Vantage system by telephone using the TeleAccess feature, dial the Vantage Modem phone number from any touch-tone telephone. The automated voice attendant will respond and ask for the password. The default factory-set password is "2468" followed by #. You will then be read a list of options and asked to enter your choices by pressing buttons on the telephone handset.

#### Calling a TeleAccess Enabled System With a Computer

Use QLink software in the normal way to connect with a Modem. The system automatically detects the modem call and will connect your computer.

#### Hints

**Updating Firmware:** The Firmware on the Master Controller may be updated over the modem using QLink 2.50 or greater. Do not attempt to update the firmware with QLink 2.1 or earlier.

**Using with voice phone line:** If the Q-MODEM-A is going to be used for occasional updates and diagnostics it can be used with the same phone line used for the residence. The modem switch should be kept in the off position and only turned on by someone at the residence before a connection is made. After the connection is terminated, the modem switch should be returned to the off position.

#### Trouble shooting

- Plug a telephone into "Utility Handset Jack" to verify dial tone and that phone rings when dialed with QLink.
- Is the "Modem" switch in the "On" position?
- Double-check the wiring using the following chart.
- Is the Master Controller in place in the Master Power Enclosure?
- Make sure the Master Controller is not addressed to 0.

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## Dry Contact Sensors

Dry contact sensors can be added to existing keypads. When wired to a keypad, dry contacts are always defined as switches 9 and 10. When the sensors contact is either opened or closed, it can trigger a press or release.

To Add a Dry Contact Sensor:

With the "example" project open.

Expand **Floor 1**, and then expand **Room 1**.

Select Keypad A.

On the **Edit** menu click **Properties**.

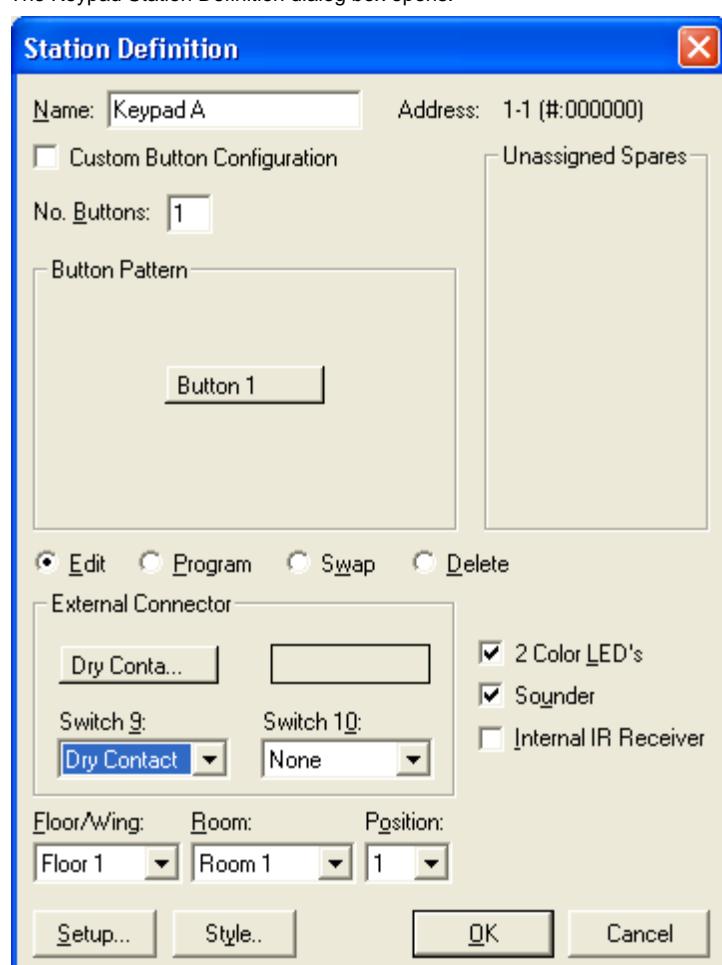
-or-

With **Keypad A** selected, press **Ctrl+E**.

-or-

Right-click **Keypad A**, and then select **Properties**.

The Keypad Station Definition dialog box opens.



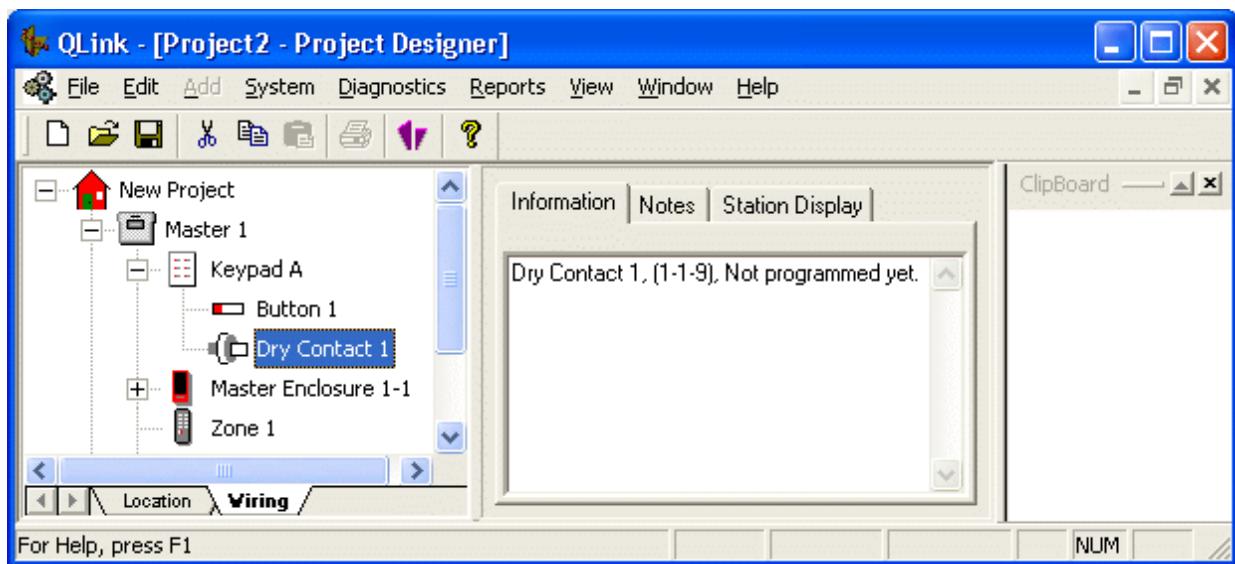
**Figure 57:** The Keypad Station Definition dialog box.

Click the **Switch 9** or **Switch 10** dropdown list, and then select **Dry Contact**.

Click **OK**.

Expand Keypad A.

The project appears as follows:



**Figure 58:** Keypad A with a dry contact sensor added.

Dry Contacts are programmed just like buttons. Right click on the Dry Contact and Select Properties.

The External Dry Contact Definition window is opened.



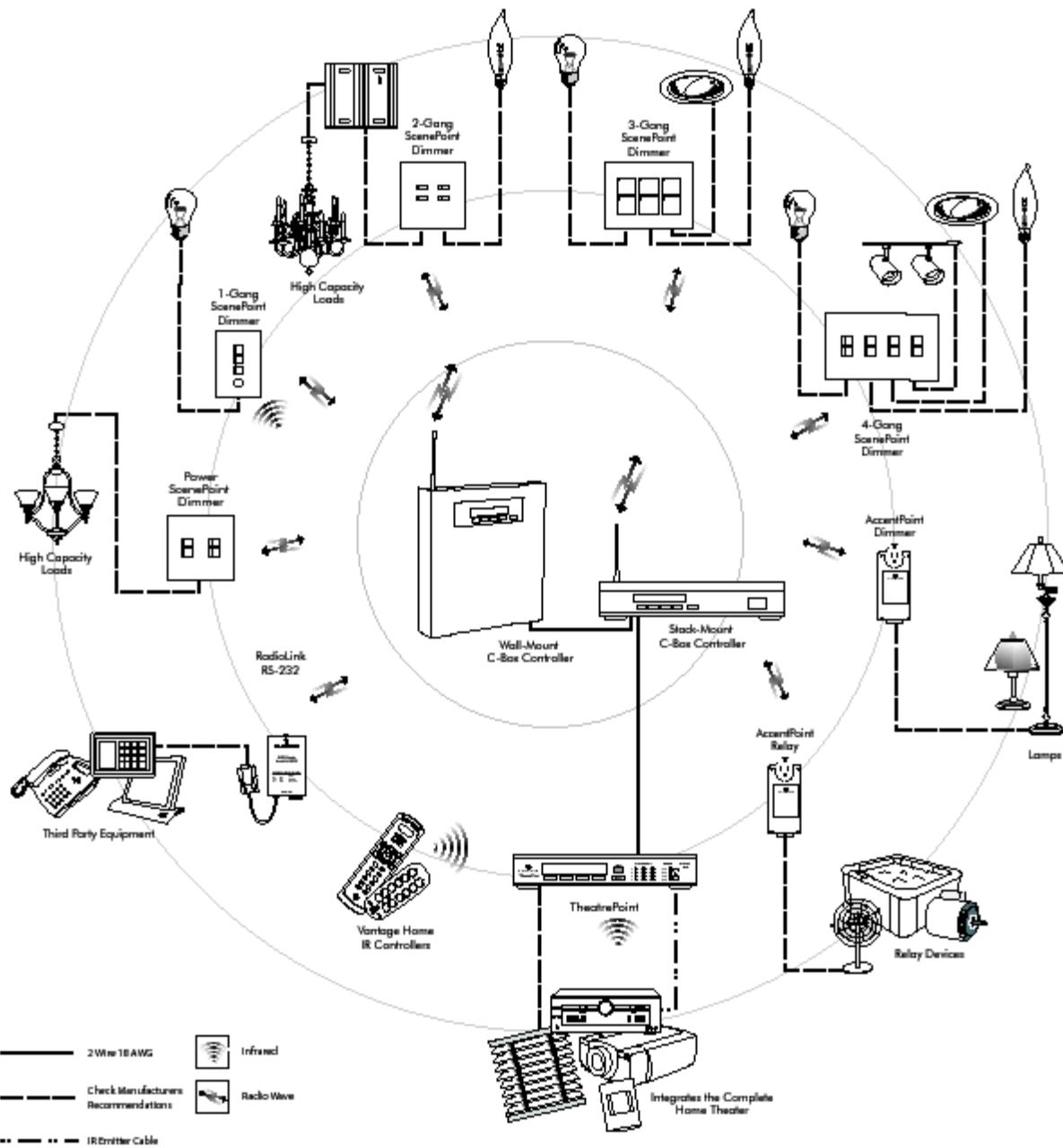
**Figure 58a:** External Dry Contact Definition window.

The Polarity and Switch Hold Time may be adjusted. Motion detectors are normally closed however some models will allow connections to NC or NO, select the same setting in software to match the hardware.

After setting the properties right click and select Program to program the dry contact.

## RadioLink

RadioLink is the first full featured wireless lighting control and automation product designed for new or existing building projects. With RadioLink, traditional light switches are quickly replaced with RadioLink ScenePoint (wall box) dimmers. No new wires are required because the dimmers communicate via radio waves with a master controller. The RadioLink system also includes products that allow the integration of almost any piece of equipment including audio/video equipment, fans, motors, table lamps and much more.



**Figure 1:** RadioLink Overview

**Related Topic:** [RadioLink Features](#)

## RadioLink Features

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RadioLink™ is radio frequency (RF) technology for the Vantage Control System. RadioLink has been carefully designed as an extension of the existing two-wire Vantage system, not as a separate product. Small transceivers are built into the Vantage product line providing wireless communication for the first time to a fully featured automation control system for residential and commercial use.

A single RadioLink system handles up to 15 controllers and each controller supports 60 RF loads (900 loads total) and provides error-free communication to 100 feet.

### RadioLink Features

Transmission Range per Controller to **100 Feet**

Building Coverage per Controller **4,188,790 Cubic Feet**

Frequency **900 MHz**

Digital Spread Spectrum Technology **Yes**

Frequency Hop Sequencing **Yes**

Number of Hopping Channels **25**

FM Direct Signal Modulation **Yes**

Unique Codes Ignore Nearby Installations **Yes**

Integration with Vantage Hard-Wire System **Yes**

Full-Featured Automation **Yes**

Software Upgradeable **Yes**

RS-232 Control **Yes**

Simple Expansion without Repeaters **Yes**

Number of RF Stations per Controller **60**

Number of Controllers per System **15**



**Figure 2:** RadioLink ScenePoint Dimmer Station

The Vantage ScenePoint is a wall box dimmer station that acts as a stand alone, self-contained dimmer or as a fully functional programmable keypad on the Vantage System. ScenePoint dimmers use standard electrical load wiring. No home run wiring is required. The Vantage ScenePoint dimmer stations allow incremental expansion of the Vantage System, load by load, keypad by keypad. **ScenePoint with RadioLink dimmer stations** allow the addition of lighting and automation controls to structures with existing electrical wiring.

The ScenePoint with RadioLink dimmer stations simply replace existing standard wall switches. This allows entire buildings to be retrofitted with a Vantage control system. In addition, it allows incremental extensions to existing Vantage control systems.

A simple, non-polarized two-wire bus connects Vantage stations to the controller, making installation easy and error free. In addition, plug and play dimmer, relay and control modules in the master enclosure make for quick installation and service.



**Figure 3: RadioLink Enabler**

The Vantage RadioLink Enabler is a wireless RF (radio frequency) transceiver that adds RF communications ability to a standard Vantage System. Designed as an extension of the existing Vantage System, each RadioLink Enabler increases total system capacity by an additional 60 stations.

RadioLink signals are specific to an identified station, ensuring secure transmissions that will not overlap with neighboring systems. Using 900 MHz digital spread spectrum technology on 25 channels, RadioLink is significantly less susceptible to interference than RF products situated on a single channel.

To date, fully functional automation and control has largely been reserved for new construction. Few wish to break into walls to run control wires. However, many wish they would have installed an automation system or would like to extend their current control system. RadioLink can conveniently retrofit into any building with minimal installation effort.

Vantage C-Box Controller and C-Box LE models are innovative control units for the Vantage System, designed specifically for use with Vantage ScenePoint dimmer stations. In combination, the Vantage C-Box and ScenePoint dimmer stations replace the traditional Vantage enclosure, master controller, dimming modules and keypad stations.

A single C-Box with RadioLink coordinates commands from up to 50 hard-wired keypad stations and up to 60 ScenePoint stations with RadioLink. C-Box is also available as a control unit using only the Vantage two-wire, non-polarized communication bus. C-Box comes in wall-mount, desk-mount or rack-mount configurations. C-Box LE is a single master system supporting up to 60 ScenePoint Stations with RadioLink.

**Related Topic:** [C-Box LE](#)  
[C-Box Masters](#)

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## Systems Connections

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## System Connections to Master Controller

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### Programming the Master Controller

The Master Controller stores the hardware identification numbers for all station types, loads, etc., and all software configurations for any hardware devices in a storage device called the Master Flash. The Master Terminal Board also contains a Backup Flash. In the event that the Master Controller becomes non-functional, the Backup flash may be used to recover configurations and read them

back into an open QLink project. From there the Master Flash may be reprogrammed.

A project may be programmed without being connected to the Master. With a project open, as the project configurations are saved, they will be retained in the QLink software. At anytime the programming may be uploaded into the Master Controller. To program the Master, open the project, connect to the Master, and send the information. When information is sent to the Master from QLink, the process is called an upload.

To Connect to the Master Controller:

With the "example" project open.

On the **File** menu, click **Connect**.

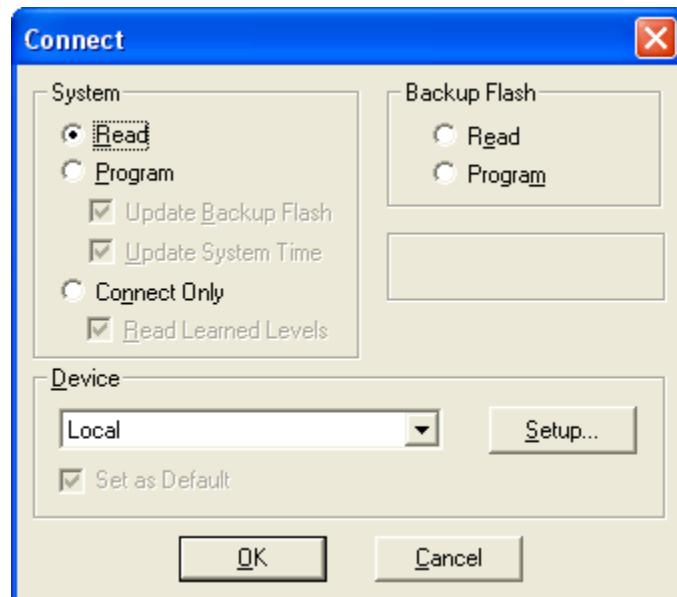
-or-

Press **Ctrl+Q**.

-or-



On the toolbar, click the Connect to Vantage System icon.



**Figure 1:** The Connect dialog box.

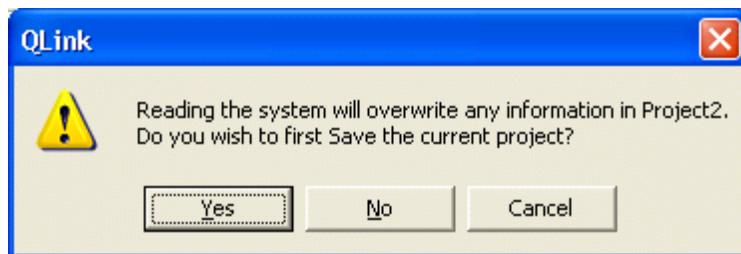
**Note:** When connected to the Vantage system, the Connect to Vantage System icon will change to a gold color.



The following options are available:

<b><u>Master Connection Options</u></b>	<b><u>Description</u></b>
System - Read	Reads what is stored in the Master Flash into an open QLink project. The Master Flash will only store numeric addresses. It will not recall the names of loads, stations, etc.
System - Program	Programs or stores new information in the Master Flash and updates the Backup Flash and updates the System Time.
System - Connect Only	Connect to the Master with no programming or updating. The QLink file must match the flash file on the master.
Backup Flash - Read	Reads what is stored in the Backup Flash into an open project.
Backup Flash - Program	Programs or stores new information in the Backup Flash from the open project.

Since a request for a Read will update the open QLink project, when accepting the default of Read under either System or Backup Flash in the Connect dialog box, the QLink dialog box opens with the following prompt:



**Figure 2:** QLink Prompt

**Note:** Any programming and configuration information previously stored in the Master Flash will be copied to the active project and any previous programming and configuration information stored in the active project will be overwritten if yes is selected. "Yes" allows the active file in QLink to be saved *before* the read over rights it. "No" allows the active file in QLink to be overwritten without saving it first.

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## Programming the Master Flash

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The Master Flash is the Master's main storage facility for all project information.

To Program the Master Flash:

On the **File** menu, click **Connect**.

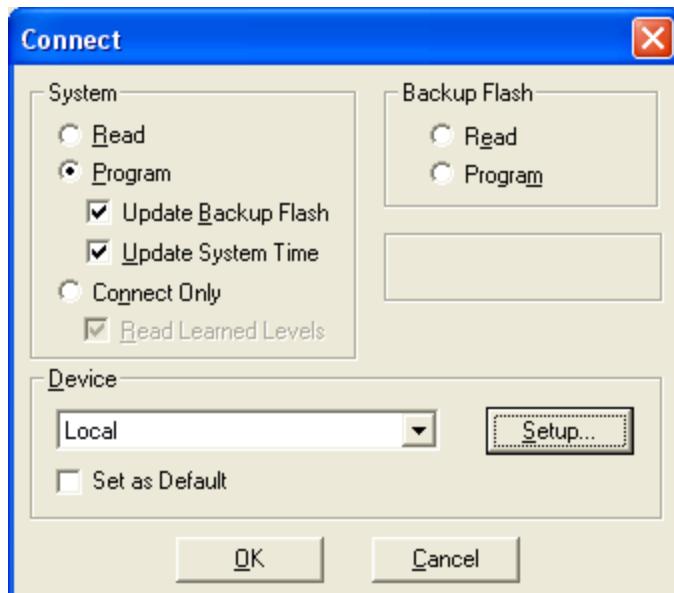
-or-

Click **Ctrl+Q**.

-or-

On the toolbar, click the Connect to Vantage System icon.

The Connect dialog box opens.



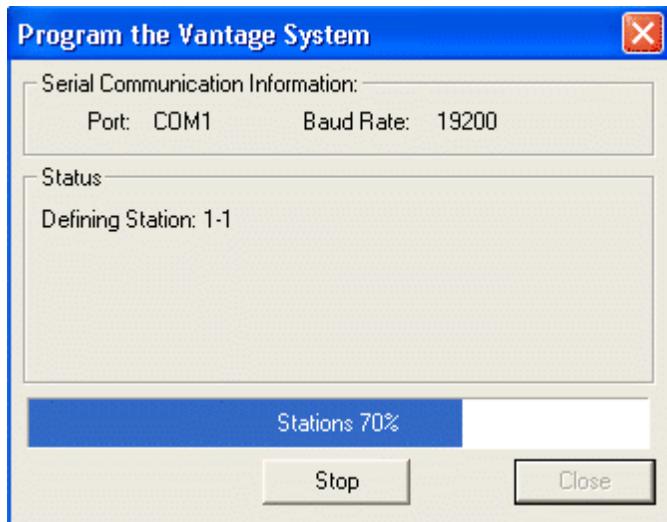
**Figure 3:** The Connect dialog box.

Under **System**, click the **Program** option button.

**Note:** The Update Backup Flash check box is automatically selected. When this box is checked, the backup flash will be updated with the program information after the program is uploaded into the Master Flash.

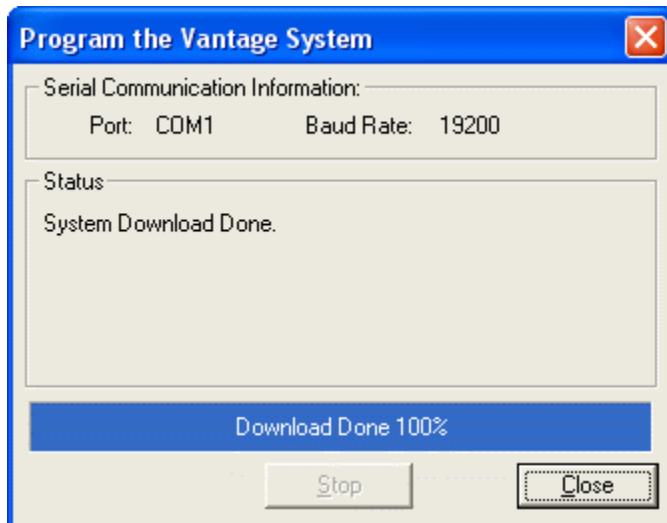
Click **OK**.

The Connect dialog box changes to the following:



**Figure 4:** Programming the Vantage System dialog box in progress.

When the programming of the Master Flash and the Backup Flash is complete, the Program the Vantage System dialog box indicates that the download is finished by changing to the following:



**Figure 5:** Completed programming the Vantage System dialog box.

Click **Close**.

Uploading the information from the "example" project to the Master Flash and the updating of the Backup Flash is now completed.

## Programming the Backup Flash

Information from both flashes can be read or programmed independent of one another. Treating both flashes separately gives the option to test changes to the Master Flash before changing or finalizing an entire system's setup. *Beginning with QLink version 4.2, the backup flash is compressed allowing larger files to fit the memory space. If a file is too large QLink will prompt the user instead of attempting to download the backup flash. In this case it is recommended that backups of the QLink file be left at the job on a floppy disk or any such method of memory storage as an alternate backup plan.* If a problem occurs that is not readily solvable or in verifying or troubleshooting complex system configurations it may be easier to:

Read in the Backup Flash.

Restore the Master Flash to its previous configurations.

Add and test any new configurations one by one.

Write each successful configuration to the Master Flash and then update the Backup Flash.

To Program the Backup Flash:

With the "example" project open.

On the **File** menu, click **Connect**.

-or-

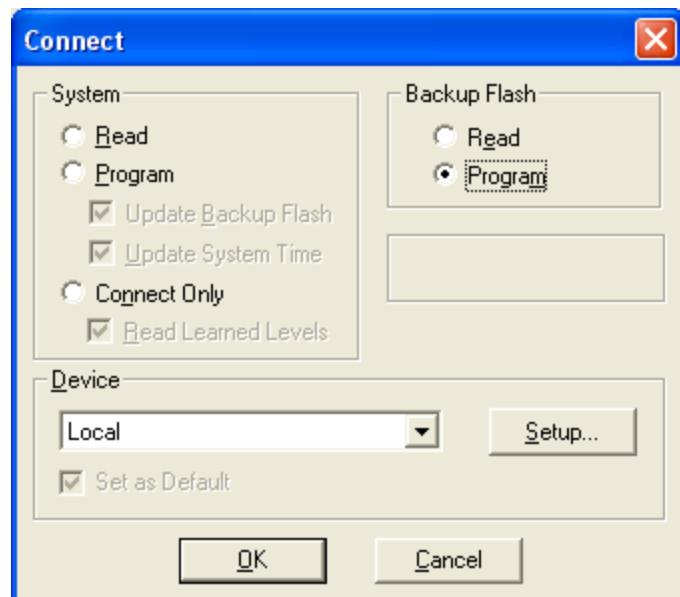
Click **Ctrl+Q**.

-or-



On the toolbar, click the Connect to Vantage System icon.

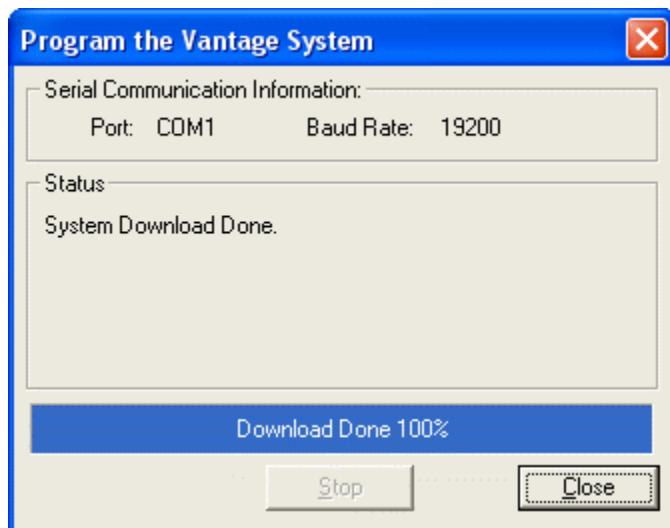
The Connect dialog box opens.



**Figure 6:** The Connect dialog box.

Under **Backup Flash**, click the **Program** option button, and then click **OK**.

The backup will start. After successful completion, the following dialog box appears:



**Figure 7:** Completed Backup Flash Program dialog box.

**Note:** Only the Backup Flash has been updated.

Click **Close**.

**Save** the project.

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## IP Enabler

The Vantage IP Enabler gives the Vantage Master Controller an Ethernet port. This allows a computer to connect to the Master Controller through a local area network, or even through the Internet. Both QLink and WebPoint can then access the Vantage system through the IP Enabler's IP address. This ability can be used to remotely control or program a system. It is also useful in locations where the computer is too far from the Master Controller for conventional RS-232, or in locations where no extra wires exist for RS-232, but Ethernet connections are present.

### System Specifications/Requirements

Dimensions, HWD	2.4" x 3.8" x .9" -or- 61mm x 97mm x 22mm
Weight	3.1oz -or- 88g
LED Indicators	<ul style="list-style-type: none"> <li>• RX</li> <li>• TX</li> <li>• Power</li> </ul>
BASE-T	<ul style="list-style-type: none"> <li>• LEFT</li> <li>• RIGHT</li> </ul>
LED indicators (see table below)	
Power Supply	9-12VDC@100ma
Finish	Black
Ambient Operating Temperature	32-95°F -or- 0-35°C
Ambient Operating Humidity	5-95% non-condensing

### **System Requirements**

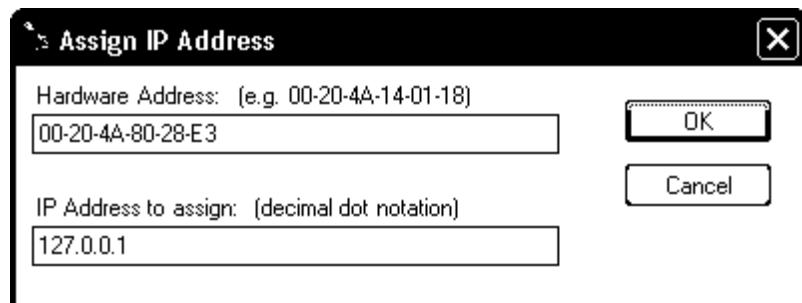
The Vantage system must be programmed with Master Controller firmware version 6.32 or higher and QLink software version 3.3 or higher for proper operation.

## Ethernet Setup

The IP Enabler Installer is used to setup the IP Enabler initially. This software is found on the CD in the IP Enabler folder or on the internet at [www.vantagecontrols.com](http://www.vantagecontrols.com).

1. In the IP Enabler folder, double click on Installer.msi to open it. If Microsoft .NET Framework is not installed, follow the prompts to install it first. Once the Installer.msi has completed click on Installer, under Start Menu, Programs, Installer. A window will appear with several buttons near the top.
2. Click on the button titled Search\*. A list of Ethernet to Serial devices will appear.
3. Verify the Hardware MAC address of the IP Enabler you are working with. The Hardware MAC address is on the white label, on the side of the IP Enabler.
4. Highlight the IP Enabler that shows the correct Hardware MAC address.
5. Write down the IP Address of the device for later use.
6. Press the button titled Web. An Internet Browser window will appear with some menu buttons down the left side.

\*Note: After clicking Search if No devices were found error displays or IP Enabler's Status in Installer is Unreachable, the IP address must be changed. Follow these steps carefully to correctly configure IP Enabler to have an Online status on the network. Skip to step 9 to get the correct IP Address information for your local network/computer, then come back to this note. In this example the IP address of the local computer is 192.168.11.151. The first three parts of this address are, 192.168.11.. Assume the IP Address of IP Enabler is 127.0.0.1, the IP address of IP Enabler must be changed so that the first three parts match the network/computer IP Address. In this example, change the IP Address of IP Enabler from 127.0.0.1, to 192.168.11.124. Before assigning the new IP Address, verify the IP Address to be assigned is a free address. Test the IP Address on the local network/computer, in the Installer program, by clicking on Ping. In the Ping Device window type the number 192.168.11.124 and click the Ping button. A few seconds later a report is generated in the Ping Device window. If the report has timed out and 100% loss of packets is returned the IP Address is free. With the device highlighted, click on Action | Assign IP Address.... The following window is opened.



Change the IP Address of the IP Enabler from 127.0.0.1, to 192.168.11.124 and click OK. If the device is not seen, click on Action | Assign IP Address.... Type the MAC address of the IP Enabler in the Hardware Address: box, then type 192.168.11.124 in the IP Address to assign: box and click OK. Wait for the IP Enabler to reboot before continuing with Web in step 6.

TIP: If the note above does not work try the following. If more than one computer is on the network, and that computer is on a different router. Install Installer.msi on that computer and follow these same instructions. Often a different computer is able to see the device.

7. Click on the Server Properties button to enter the network properties. The window will change to display the server properties. This is where you choose the Ethernet settings for the IP Enabler.
8. In the IP Address window, type the number you recorded from step 5.
9. Click on the Window's Start button (lower left side of screen) and select Run. Type in cmd and press enter. A DOS prompt will appear. Type in ipconfig. A list of addresses will appear. Included in this list are the addresses for the Subnet Mask and the Gateway Address.

```
C:\WINDOWS\System32\command.com
C:\>ipconfig
Windows IP Configuration

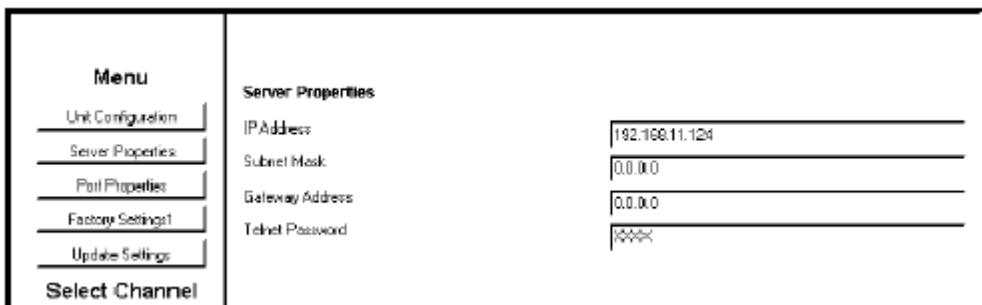
Ethernet adapter Local Area Connection:

  Connection-specific DNS Suffix  . : 
  IP Address. . . . . : 192.168.11.54
  Subnet Mask . . . . . : 255.255.240.0
  Default Gateway . . . . . : 192.168.1.244

C:\>-
```

10. Set the second field to the network Subnet Mask.

11. Set the third field to the Network Gateway Address.
12. The fourth field, titled Telnet Password can be left at default.
13. Click on **Update Settings**.



14. After setting the **Server Properties**, click on the **Port Properties** button to set the RS-232 settings for the IP enabler. If connecting to the Vantage system, the settings should be as follows:

<b>Menu</b> Unit Configuration Server Properties (Selected) Port Properties Factory Settings1 Update Settings Select Channel	<b>Selected Channel : 1</b> <b>Serial Port Settings</b> Serial Protocol: RS232 Speed: 19200 Character Size: 8 Parity: None Stopbit: 1 Flow Control: None
--	---

Serial Protocol: RS232  
 Speed: 19200  
 Character Size: 8  
 Parity: None  
 Stopbit: 1  
 Flow Control: None

Leave the other settings at default and Click **Update Settings** to complete IP Enabler setup. All the windows may now be closed.

#### Integration For Two or More Vantage Systems Using TCP/IP

15. (Optional Configuration Scenario) Each master in this setup should have a distinct Master Address. For example, if there are three stand-alone Master Controllers that need to communicate through the Ethernet, they could be addressed Master 1, Master 2 and Master 3. Each master should have an IP Enabler connected to it.

To setup the IP Enabler, while still in step 14 (above) in addition to the other settings in these instructions, change the

**Connect Mode Settings** to:

UDP Datagram Mode: Enable  
 UDP Datagram Type: 01  
 Incoming Connection: Accept Unconditional

Click **Update Settings** to complete IP Enabler setup. All the windows may now be closed.

#### Default Wiring

When wiring to the Vantage Master Terminal Board, wire straight through RX to RX, TX to TX, Ground to Ground and RTS to RTS. Connect power from the +12V connection on the Master Controller. If Port-A on the master board is already in use the IP Enabler may be connected to the front port of the Master Controller. The +12VDC connection may be shared with another Vantage device, i.e., RF-Enabler. (See drawing on last page.)

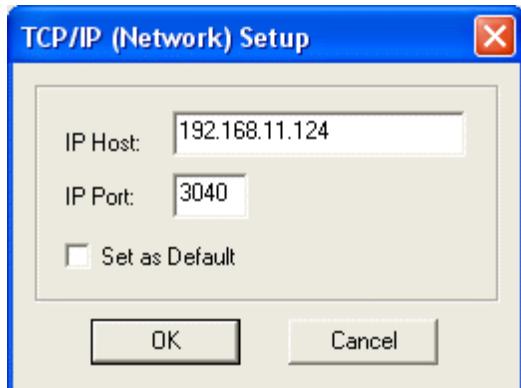
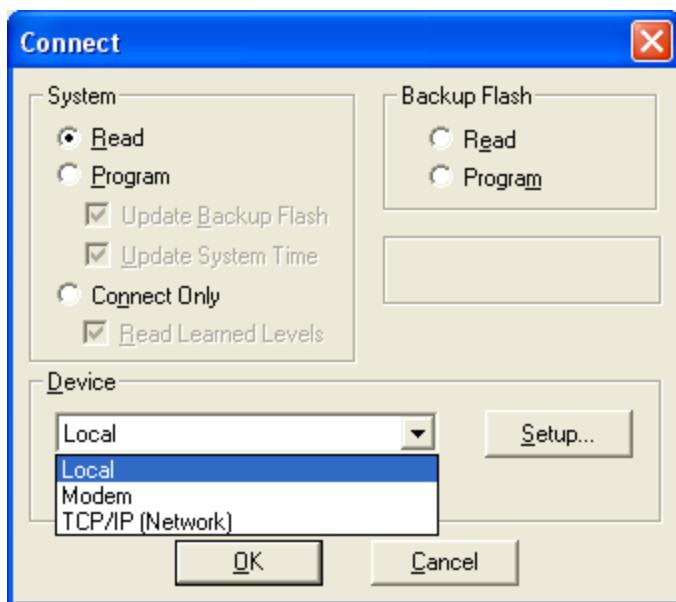
#### QLink Connection Using TCP/IP

In QLink open the file menu and choose connect, or press ctrl-Q.

Choose whether you want to read, program or connect only.

Under the Device Section, choose TCP/IP (Network).

Click on the Setup button next to the Device Pull Down Box to open the **TCP/IP (Network) Setup** window.



Set the IP Host to the IP address of the IP Enabler (Tip: The same address as recorded in Step 5 above).

Set the IP Port to **3040**.

Press **OK** to exit this dialog.

Press **OK** to connect to the system.

#### **Base-T Connection Orange and Green LED Functions on IP Enabler**

Off	Off	No Link
Off	Solid Amber	100BASE-T Half Duplex Link
Off	Blinking Amber	100BASE-T Half Duplex; Activity
Off	Solid Green	100BASE-T Full Duplex Link
Off	Blinking Green	100BASE-T Full Duplex; Activity
Solid Amber	Off	10BASE-T Half Duplex Link
Blinking Amber	Off	10BASE-T Half Duplex; Activity
Solid Green	Off	10BASE-T Full Duplex Link
Blinking Green	Off	10BASE-T Full Duplex; Activity

## Keypad Station

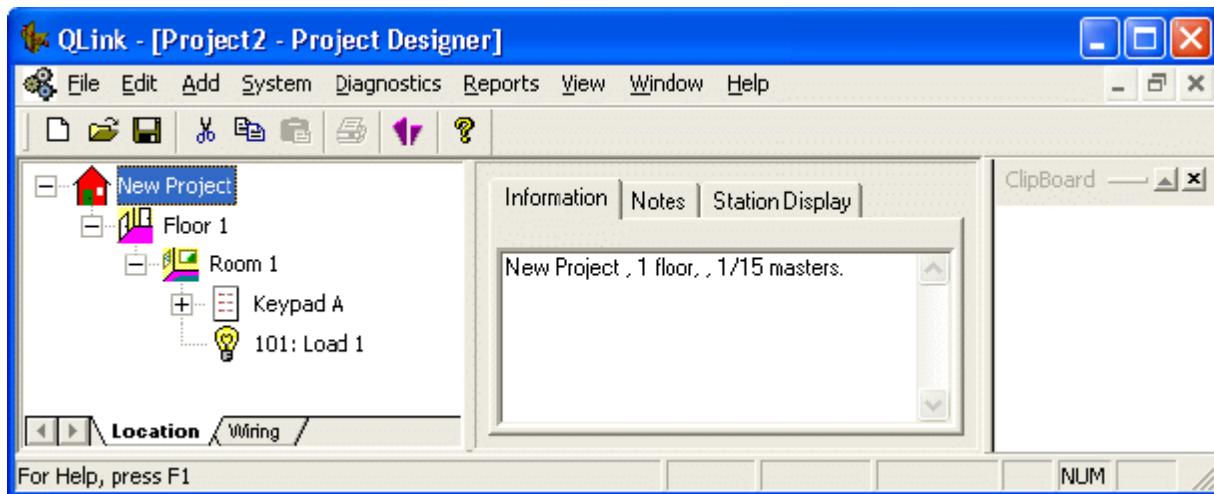
Keypad stations come in multiple button configurations. The maximum number of actual buttons on a keypad are eight however, keypad stations also include switches 9 and 10 that allow for the addition of slave buttons or dry contacts. Switch 9 allows for the addition of a remote IR receiver. Switch 10 allows for the addition of a Vantage LightPoint sensor. Each keypad button and device can be programmed independently. The default configuration is one button assigned to position 2.

To setup a Keypad Station:

With the "example" project open.

Expand **Floor 1**, and then expand **Room 1**.

The Project Designer window changes to the following:



**Figure 8:** The Project Designer window with Floor 1 and Room 1 expanded.

Select Keypad A.

On the **Edit** menu, click **Properties**.

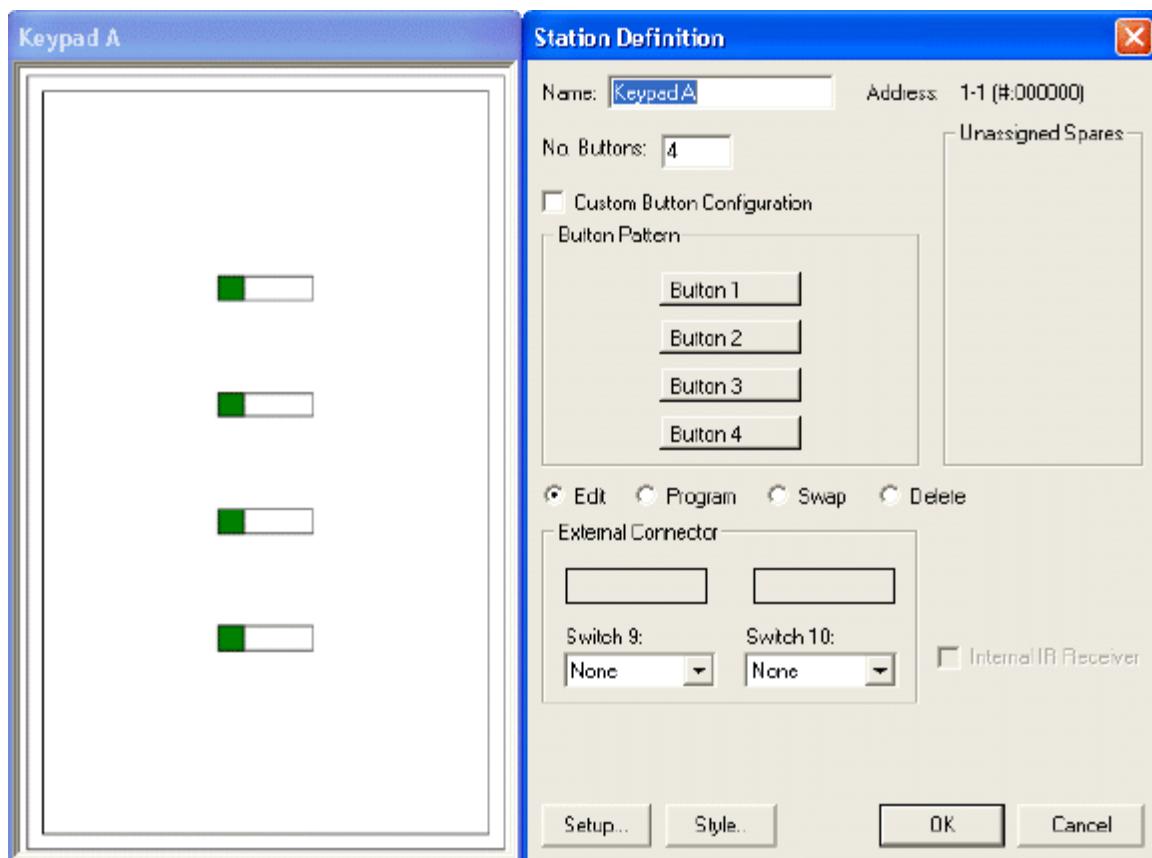
-or-

With **Keypad A** selected, press **Ctrl+E**.

-or-

Right-click **Keypad A**, and then click **Properties**.

The Station Definition dialog box for Keypad A opens.

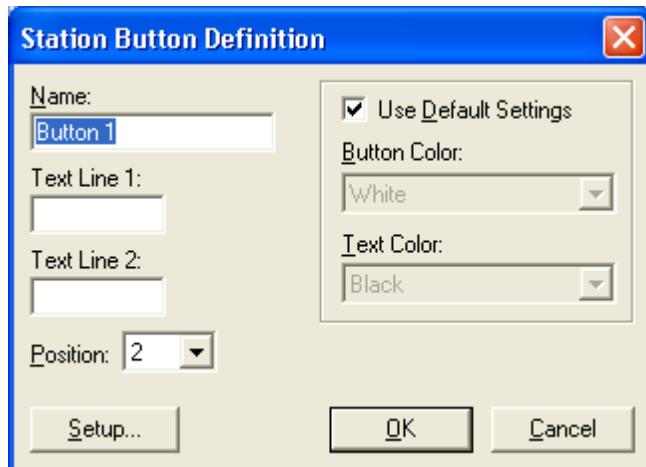


**Figure 9:** The Station Definition dialog box for Keypad A.

Only one button for Keypad A was defined by default. If Keypad A had been defined with multiple buttons, all the buttons would be listed under Button Pattern.

Click Button 1.

The Station Button Definition dialog box opens.

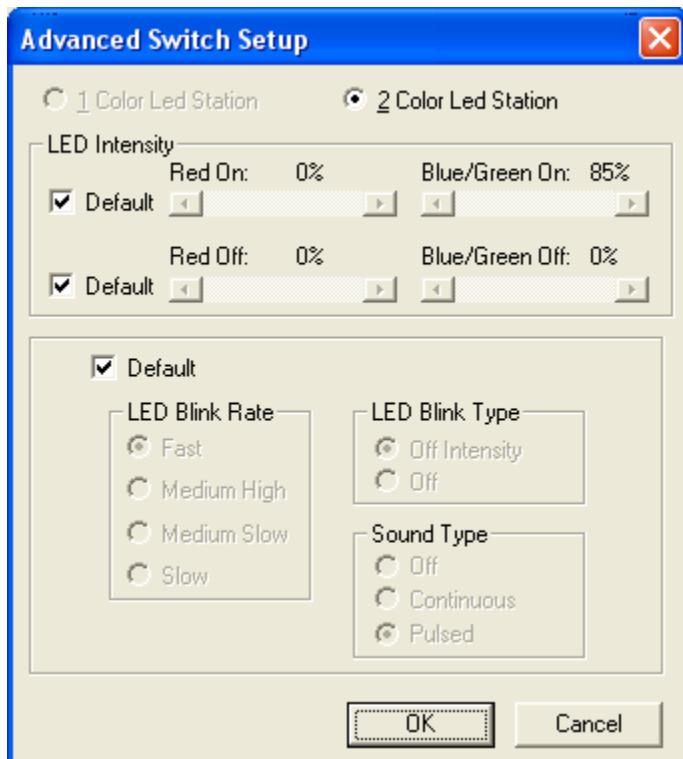


**Figure 10:** The Station Button Definition dialog box displaying the properties for Button 1.

A number of options for Button 1 may now be changed. Any Text Lines will display in the keypad layout box when the keypad's properties are displayed. When using a multiple button keypad one button's properties may be assigned to another button based on its position. If the Use Default Settings check box is cleared, separate colors for both the button's color and its displayed text may be chosen.

Click **Setup**.

The Advanced Switch Setup dialog box opens.



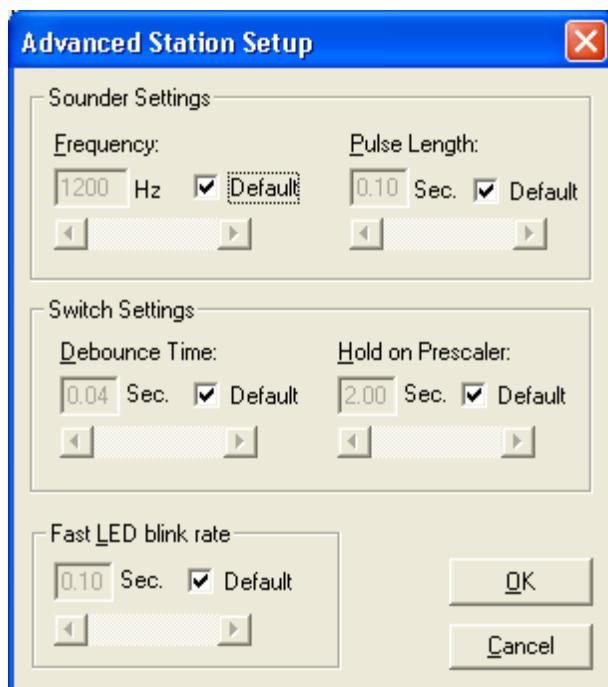
**Figure 11:** The Advanced Switch Setup dialog box displaying additional options for Button 1.

With Setup selected from the Station Button Definition dialog box, a number of additional options are available for Button 1. If the Default check box is cleared, the settings for that section may be changed. The LED slider controls allows blending the percentages of red and green into various shades or turn either one off to produce a solid color.

Click **Cancel** twice to return to the **Station Definition** dialog box.

In the **Station Definition** dialog box, click **Setup**.

The Advanced Station dialog box opens.



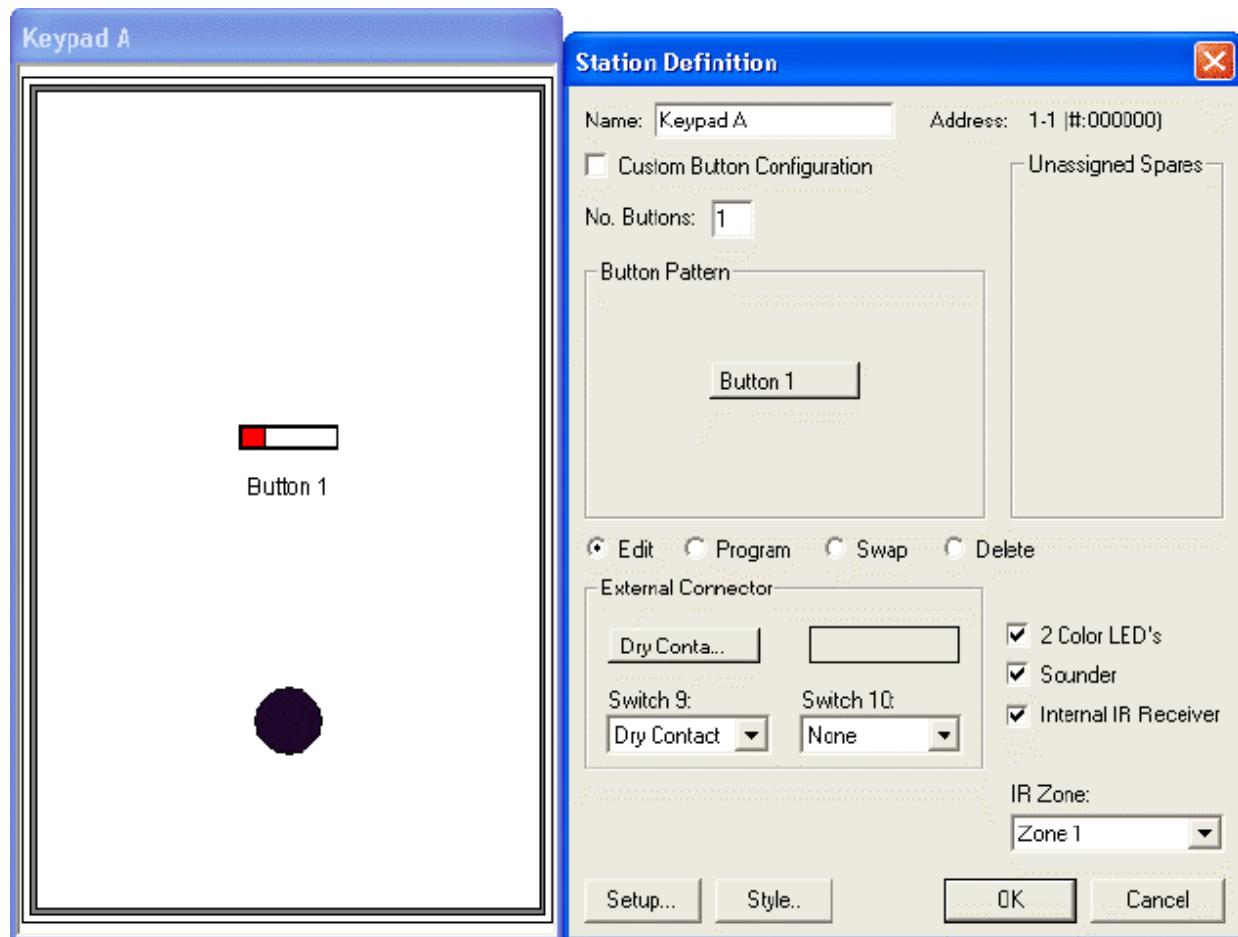
**Figure 12:** The Advanced Station Setup dialog box.

If a default check box is cleared, the settings for that section may be changed.

Click **Cancel** to return to the **Station Definition** dialog box.

In the **Station Definition** dialog box, select the **Internal IR Receiver** check box.

The Station Definition dialog box changes to the following:

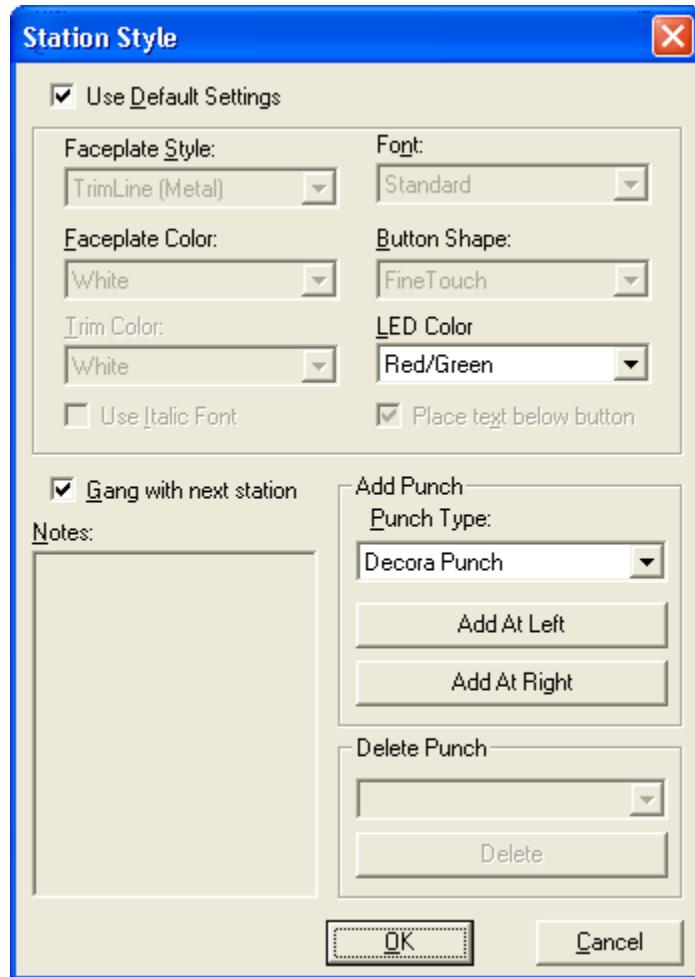


**Figure 13:** The Station Definition dialog box with the Internal IR Receiver check box selected.

Notice that Keypad A now has an IR Zone box in its Station Definition dialog box and a black sensor button in the Keypad A layout box. If an IR zone was previously created, an IR zone could now be specified.

Click **Style**.

The Station Style dialog box opens.



**Figure 14:** The Station Style dialog box for Keypad A.

A number of options are available for defining the keypad's style. If the "Use Default Settings" check box is cleared, settings for that section may be changed.

Click **Cancel** to return to the **Station Definition** dialog box.

Click **Cancel** to return to the **Project Designer** window.

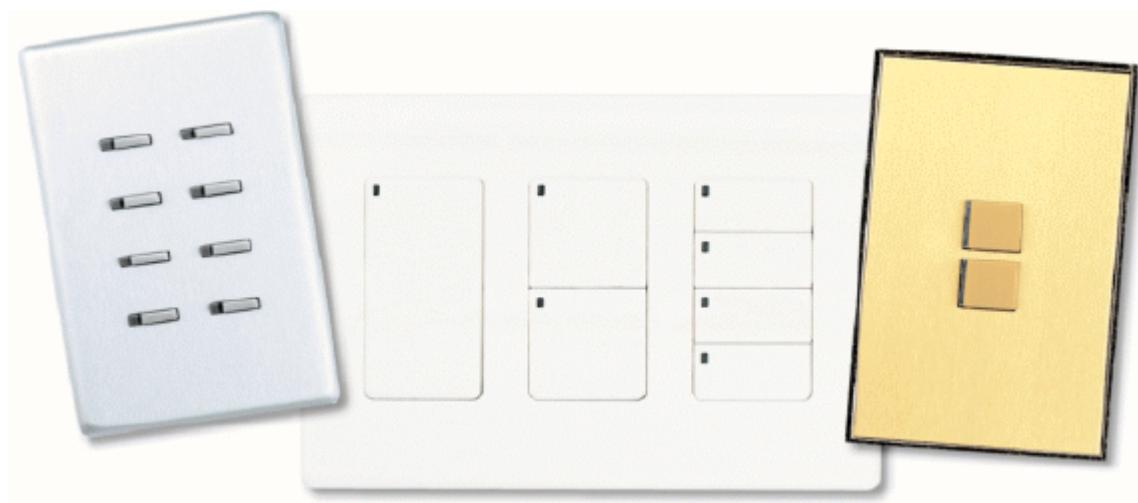
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## Keypad Styles and Colors

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Below are Station, Button and Color samples.



**Figure 15:** Station Styles displaying SoftLine and Trimline faceplates with FineTouch, EashTouch and SquareTouch buttons.



**Figure 16:** Station Styles displaying SoftLine and Trimline faceplates with faceplate and button colors.

Related Topic: [Station Style Setup](#)

## Thermostat Station

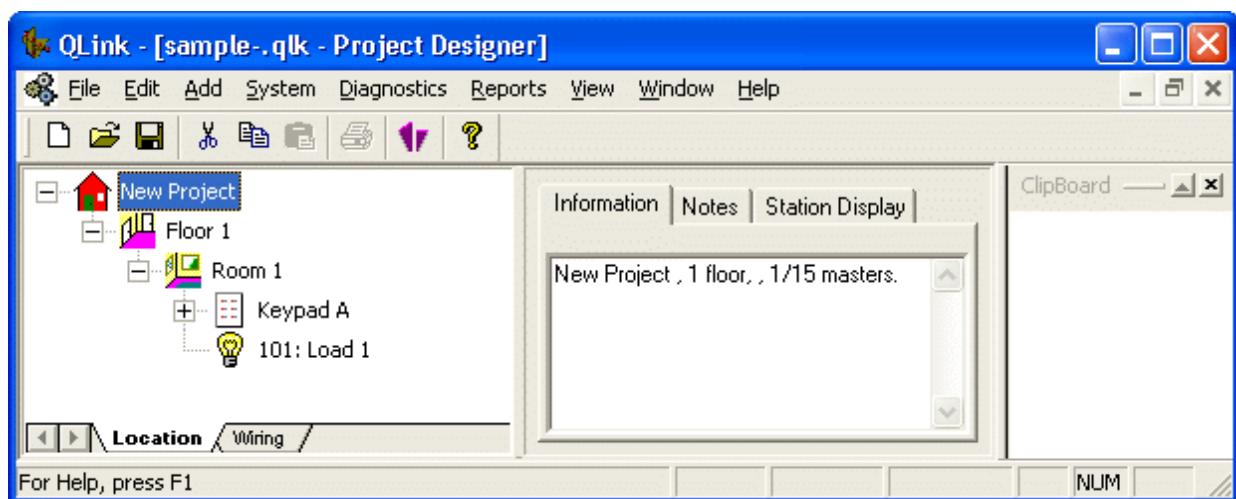
A Thermostat station may be used to directly control and integrate the Vantage System with HVAC devices. Multiple thermostats are supported as well as multiple temperature sensors, which can be attached to thermostats to monitor or display outside temperatures. These thermostats communicate directly with the system through the **Thermostat Station Interface** (Q-ETS).

To Add and Configure a Thermostat Station:

With the "example" project open.

Expand **Floor 1**, and then expand **Room 1**.

The Project Designer window changes to the following:



**Figure 17:** The Project Designer window with Floor 1 and Room 1 expanded.

Select **Room 1**.

On the **Add** menu, trace to **Station**, and then click **Thermostat**.

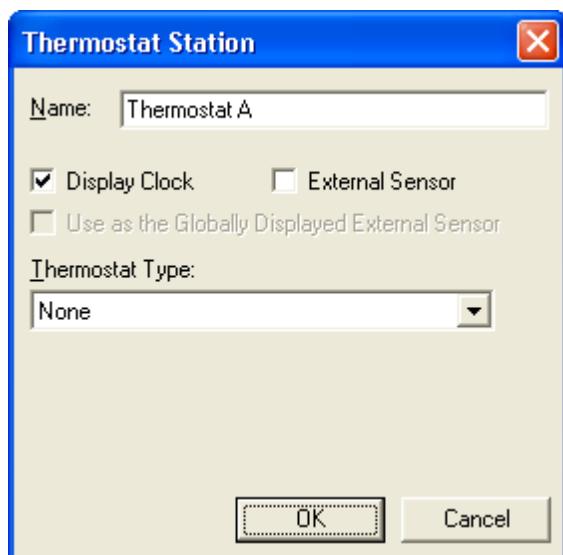
-or-

With **Room 1** selected, press the **F8** key.

-or-

Right-click **Room 1**, trace to **Add Station**, and then click **Thermostat**.

The Thermostat Station dialog box opens.

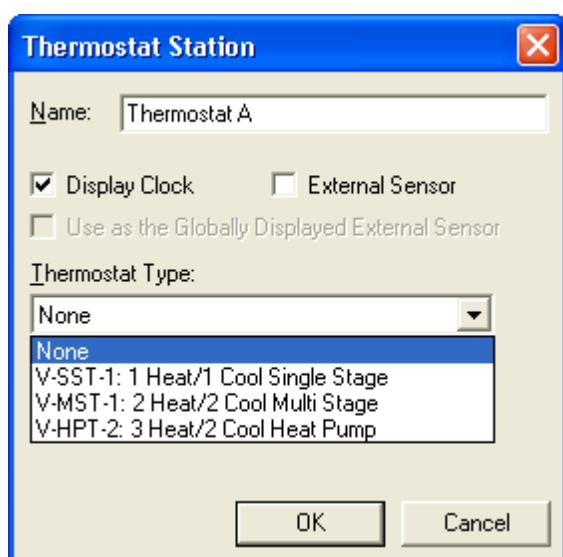


**Figure 18:** The Thermostat Station dialog box.

Give the **thermostat a name**. When the "External Sensor" check box is selected, the option to "Use as the Globally Displayed External Sensor" becomes available.

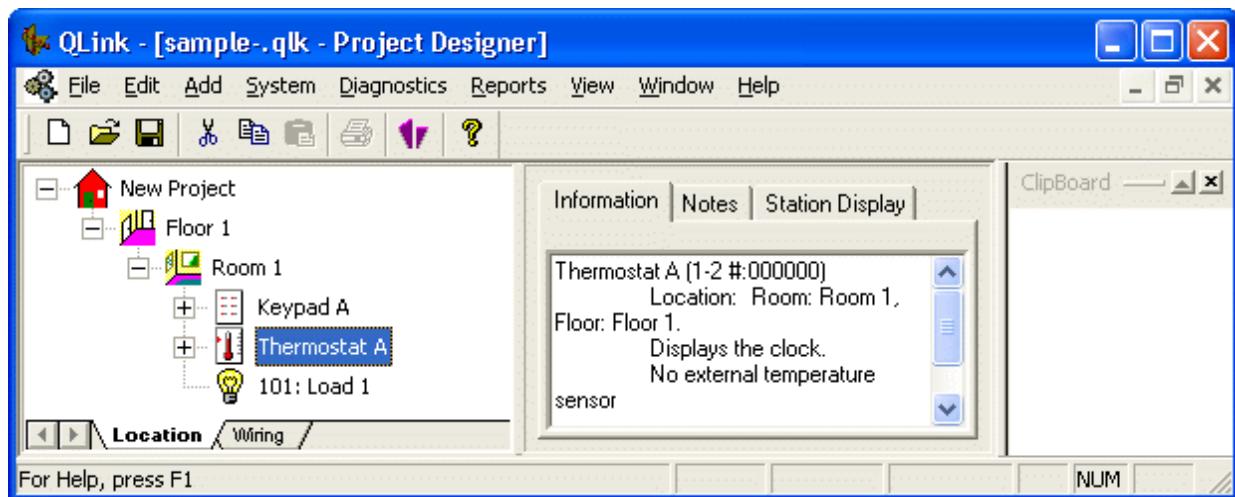
Click the **Thermostat Type** dropdown list.

The Thermostat Station dialog box changes to the following:



**Figure 19:** The Thermostat Station dialog box displaying the available thermostat types.

Select a **thermostat type**, and then click **OK**.



**Figure 20:** The Project Designer window displaying the new thermostat added to Room 1.

**Save** the project.

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## Contact Input Station

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Contact Input Stations are stations that receive input from dry contacts. In addition, Remote IR sensors may be attached to Contact Input Stations. These stations are often used for security purposes or for the automatic triggering of an event based on motion or a contact's open or closed condition.

To Add and Configure a Contact Station:

With the "example" project open.

Expand **Floor 1**, and then expand **Room 1**.

Select **Room 1**.

On the **Add** menu, trace to **Station**, and then click **Contact Input**.

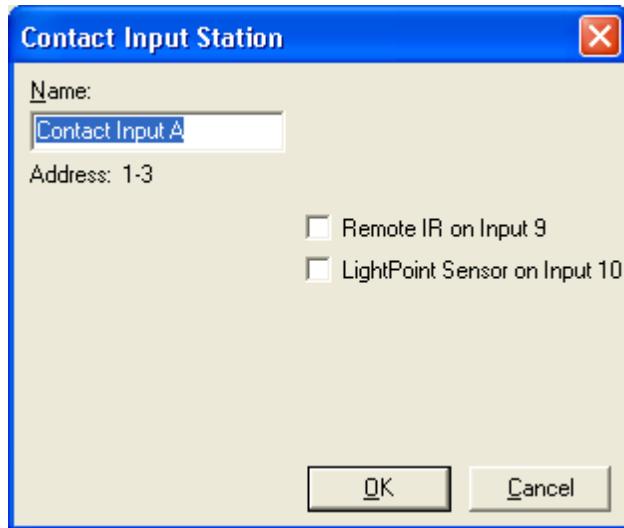
-or-

With **Room 1** selected, press the **F7** key.

-or-

Right-click **Room 1**, trace to **Add Station**, and then click **Contact Input**.

The Contact Input Station dialog box opens.

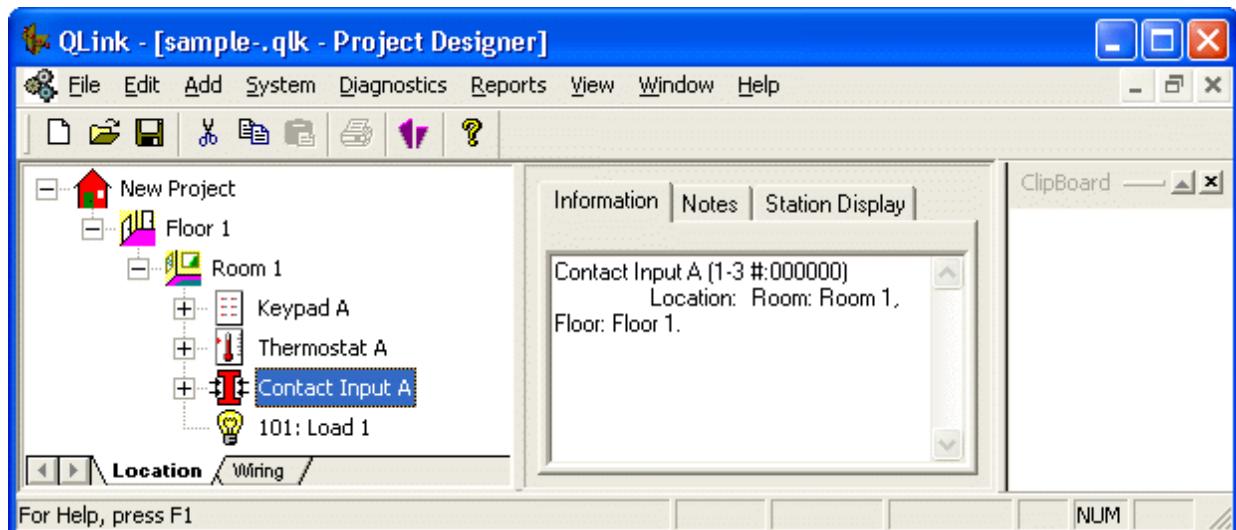


**Figure 21:** The Contact Input Station dialog box.

In the **Name** box, type a name.

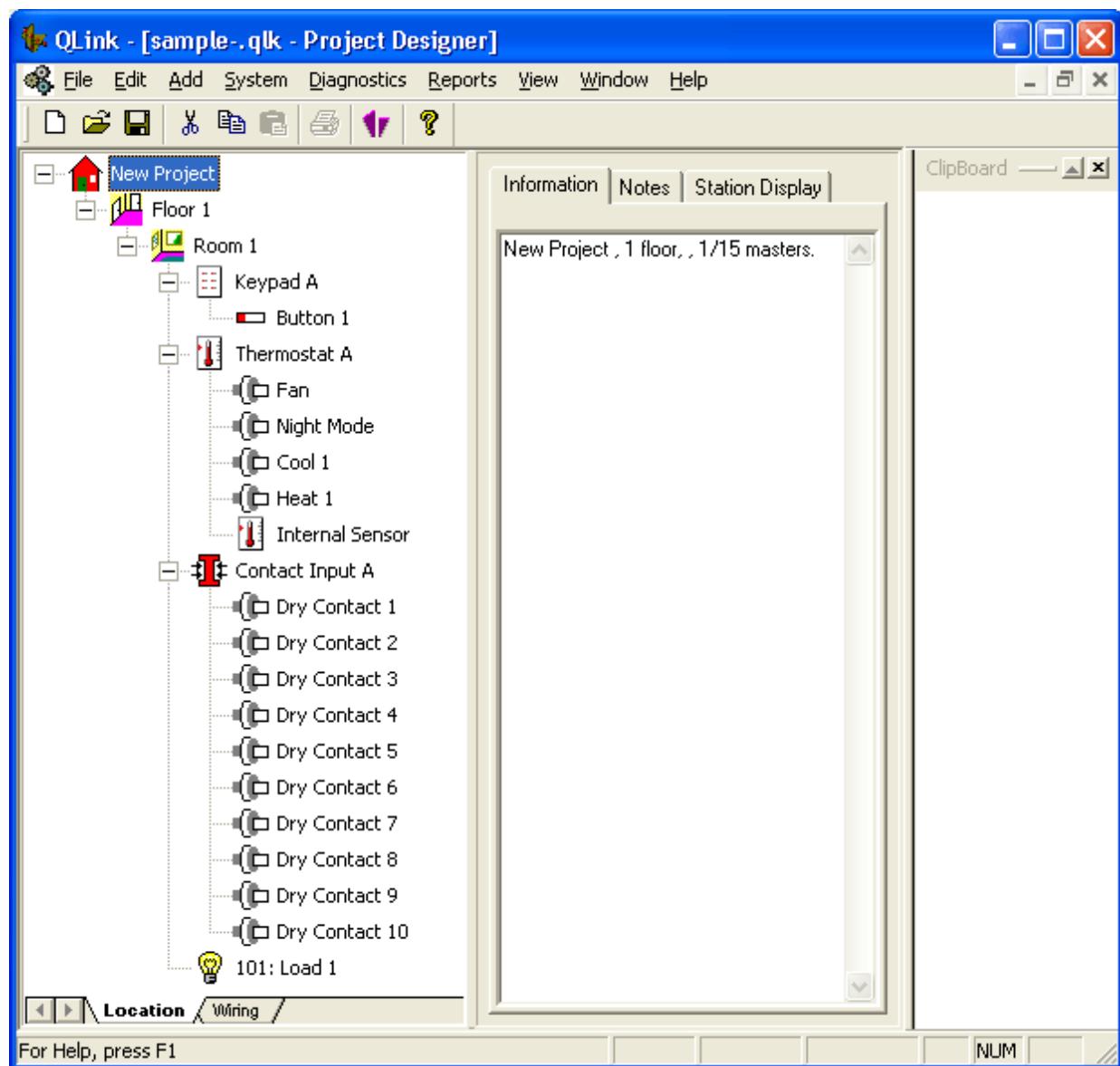
If the Remote IR on Input 9 check box is selected, an IR Zone will need to be specified. Click Vantage Sensor on input 10 to add a LightPoint Sensor.

Click **OK**.



**Figure 22:** The Project Designer window displaying the new contact input.

If all the hardware devices are expanded, the Project Designer window will appear as follows. Each device and its associated component have their own graphical representations. Each device is independently programmable.



**Figure 23:** The "example" expanded to display all the added hardware devices.

**Save** the project.

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## Event Programming

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Programming buttons, dry contacts, time controls, string controls, etc., is simply the process of creating one or more events. Each event has a Function and an LED setting. In addition, each event may utilize Conditions, to effect a desired action in the system. Assigning an event or a series of events to a device such as a keypad's button, a dry-contact, a time-control, etc. is necessary for the device to operate. Event programming dictates the behavior of hardware components in a given situation or under certain circumstances. Each event is a request for some action to be taken or some instruction to execute. Once events are programmed through the QLink software, they can be uploaded to the master controller.

Understanding terminology plays a large part in understanding Vantage programming. The following terms are often used in event programming.

**Related Topics:** [Functions](#)  
[Events](#)  
[States](#)  
[Conditions](#)

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## Events

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An event is a request for action through single or multiple sets of instructions. Turning a relay on or off, or dimming and raising lights are typical events. Each event in QLink instructs the Vantage system to perform an action. Events are assigned to but not limited to a time control, keypad button, or other station type. Events are user-defined and controlled by the QLink software. Where multiple events are present, the first event determines the state and passes that state to succeeding events.

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## States

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A [function's](#) required ON/OFF state can be thought of as a hidden condition. The first event in a program sets the Execution State (ON or OFF). Different functions set different Execution States. When used as the first event, Preset On and Preset Off turn the state ON, while Toggle and Preset Toggle alternately turn the state ON and OFF. Momentary will trigger both Execution States, an ON state when the button is pressed and an OFF state when the button is released. Once the first event has determined the execution state, the following event's execution will be based on that state.

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## Conditions

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A condition refers to a state that must be met before an event will be executed. For example, if a time (condition) is set for porch lights to turn on at a certain time of the day, once that time of day is reached the condition becomes true, and the lights turn on. Any time before the specified time the condition is false, and the lights will not turn on. The same principles apply if a time range is set for lights to automatically turn on and off. Conditions are either true or false at any specified time.

This dialog box is used to program the conditions for an event. It is activated by clicking the "Conditions.." button in the Event programming dialog box.



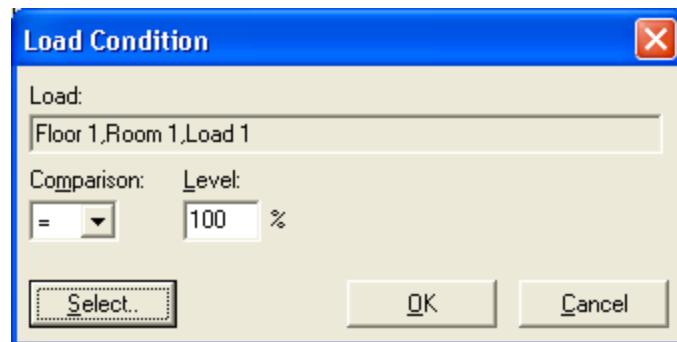
**Figure 1:** The Conditions Dialog box.

This box lists the conditions that exist for that event. Conditions can be edited by either double-clicking a condition, or selecting it with the mouse, and clicking the **Edit** button. Conditions can be reordered using the **Cut** and **Paste** buttons. A condition can be removed by simply cutting it from the list.

#### Load

**Description:** The load condition defines a comparison that can be made on the specified load level. The comparisons are:  $=$ ,  $<$ ,  $>$ ,  $\leq$ , and  $\geq$ . The current load level is compared to a specified percentage using one of the before mentioned comparisons.

This dialog box is used to set up a load condition for an event.



**Figure 2:** The Load Condition Dialog box.

#### Load

The address of the selected load to be the load condition is displayed here.

#### Select

This button is used to display the Select Load Dialog Box, which allows you to select by location the load to be used in the load condition.

#### Comparison

This box displays one of the six comparisons that can be made with the intensity level displayed. The six comparisons are  $<$ ,  $>$ ,  $=$ , not  $=$ ,  $\leq$ ,  $\geq$ .

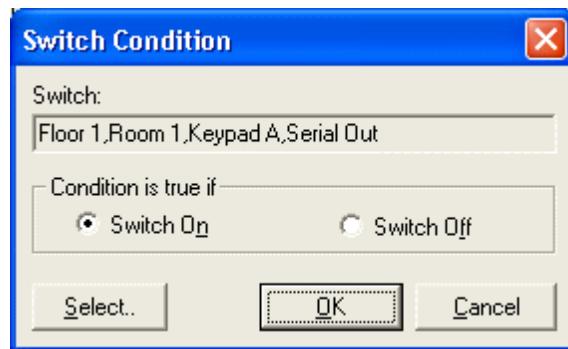
#### Level

The intensity level of the load is displayed here. Valid intensity levels are between 0% and 100%.

#### Switch

**Description:** The switch (On/Off) condition is true or false if the specified switch's first event is on or off. It only checks the switch's first event.

This dialog box is used to set up a switch condition for an event.



**Figure 3:** The Switch Condition Dialog box.

#### Switch

The address of the selected switch or button is displayed here.

#### Select

This button is used to display the Select Switch Hierarchy Box, which allows you to select by location the button to be used in the switch condition.

#### Condition is true if:

**Switch On** When this box is selected the switch condition is true if the button is on.

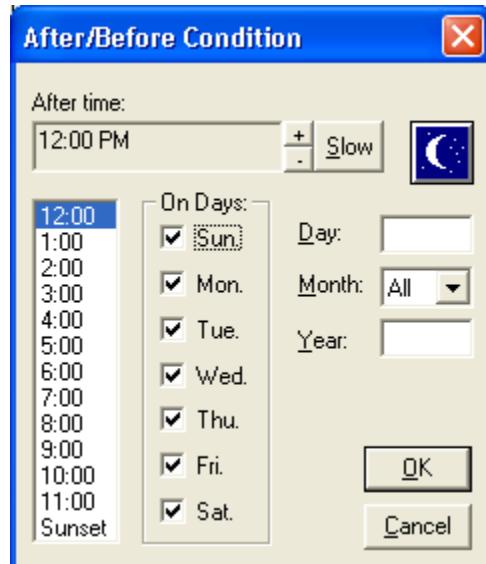
**Switch Off** When this box is selected the switch condition is true if the button is off.

#### After/Before

**Description:** The After and Before Condition allows you to specify a time for an event to be executed. The condition will only be true if the current time of day is after/before your specified time.

NOTE: If the After/Before condition is used to cross Midnight an OR Condition must be placed between the two conditions.

This dialog box is used to set up either an After or a Before condition for an event.



**Figure 4:** The After/Before Condition Dialog box.

#### After / Before time

This box displays the time that is being used in the Before or After condition.

#### On Days

In this box, select which days of the week this condition is to be valid. Select or deselect a day by clicking on it with the mouse.

#### Day

A date from 1 to 31 can be placed in this box to specify on which day of the month the condition is valid.

#### Month

A month can be selected from the drop down menu to specify the month that the condition is valid.

#### Year

A year from 1995 to 2100 can be entered here to specify a specific year or it can be left blank which means all years.



If this picture is present then the hours displayed are a.m. hours. Sunrise time is also displayed.

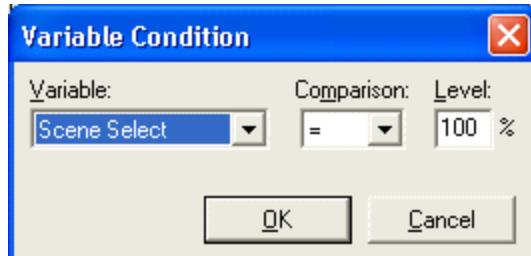


If this picture is present then the hours displayed are p.m. hours. Sunset time is also displayed.

#### Variable

**Description:** The variable condition defines six comparisons that can be made on the specified load variable value. There are up to 120 load variables per project. The comparisons include: =, not =, <, >=, <=, and >. The current variable value is compared to a specified percentage using one of the before mentioned comparisons.

This dialog box is used to set up a variable condition for an event.



**Figure 5:** The Variable Condition Dialog box.

#### Variable

The selected load variable to be the variable condition is displayed here.

#### Comparison

This box displays one of the six comparisons that can be made with the intensity level displayed. The six comparisons are <, >, =, not =, <=, >=.

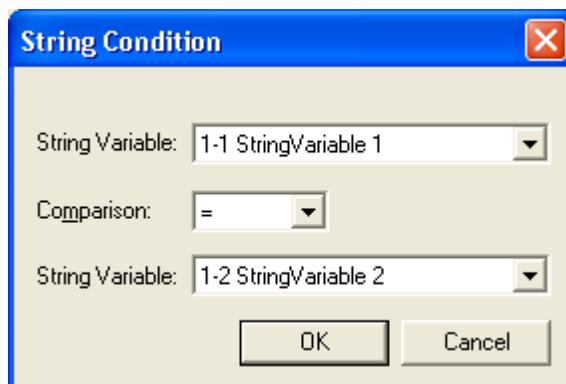
#### Level

The intensity level of the load variable is displayed here. Valid intensity levels are between 0% and 100%.

#### String

**Description:** The String condition defines six comparisons that can be made between String Variable values. The comparisons include: =, not =, <, >=, <=, and >. The current String value is compared to a specified string value using one of the before mentioned comparisons.

This dialog box is used to set up a String condition for an event.



**Figure 6:** The String Condition Dialog box.

#### String Variable (top)

The first String variable to be compared with is displayed here.

#### Comparison

This box displays one of the six comparisons that can be made with the intensity level displayed. The six comparisons are <, >, =, not =, <=, >=.

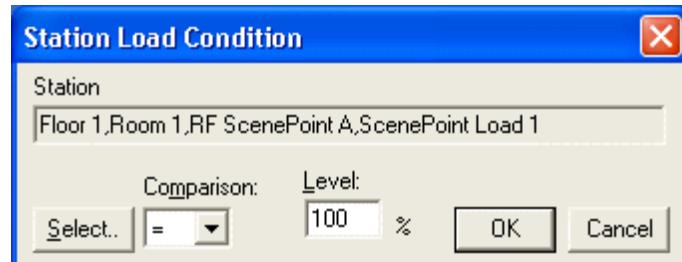
#### String Variable (bottom)

The second String variable to be compared with the first String variable is displayed here.

#### **Sta. Load**

**Description:** The Station Load condition defines a comparison that can be made on the specified station load level. The comparisons are: =, <>, <, <=, >, and >=. The current load level is compared to a specified percentage using one of the before mentioned comparisons.

This dialog box sets up a Station Load Condition.



**Figure 8:** The Station Load Condition Dialog box.

#### **Station Load**

The selected station load to be the load condition is displayed here.

#### **Select**

This button is used to display the Select Station Load Dialog Box, which allows you to select by location the load to be used in the station load condition.

#### **Comparison**

This box displays one of the six comparisons that can be made with the intensity level displayed. The six comparisons are <, >, =, not =, <=, >=.

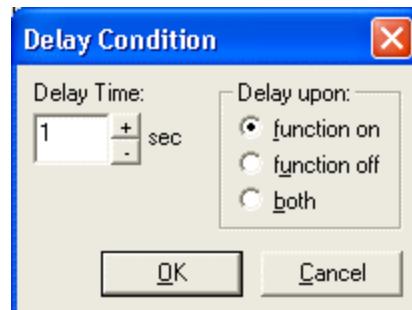
#### **Level**

The intensity level of the load is displayed here. Valid intensity levels are between 0% and 100%.

#### **Delay**

**Description:** The delay condition specifies the time that must pass before an event will be executed. No other condition will be checked after the condition delay until after the delay time has expired. The delay condition has a parameter that specifies what state the event has to be in to execute the delay. The default state is on (function on). Delay can also work when the state is off (function off). If the state is specified as "both" the delay condition will execute in both states.

This dialog box sets up a delay condition for an event.



**Figure 9:** The Delay Condition Dialog box.

#### **Delay Time**

A time from 0.2 to 6553 seconds can be entered in this box. Entry can be done by using the keyboard or by using the plus and minus buttons to the right of the box.

#### **Delay Upon**

Select a state for the delay condition by clicking on it with the mouse.

#### **Mode Off**

**Description:** The Mode Off condition specifies a switch event that executes the OFF state of another button. This will allow events like Preset (in the OFF state) or Nite lite to execute. All functions executing in the ON state and will not be affected by the Mode Off condition. The Mode Off condition works similar to the Interlock condition except it runs the specified switch with the Off State instead of turning off the loads.

This dialog box is used to set up an mode off condition for an event.



**Figure 10:** The Mode Off Condition Dialog box.

**Switch to be executed with the off state**

The name of the selected Button is displayed here.

**Select**

This button is used to display the Select Switch Hierarchy Box, which allows you to select by location the switch to be used in the mode off condition.

**Interlock Loads**

**Description:** The Interlock Load condition acts more like a function than a condition. It turns off the selected load. If other conditions exist in the list before the interlock condition and one is false, the interlock load will not be executed.

This dialog box is used to set up an Interlock Load condition for an event.



**Figure 11:** The Interlock Load Condition Dialog box.

**Turn off selected load**

The name of the selected load is displayed here.

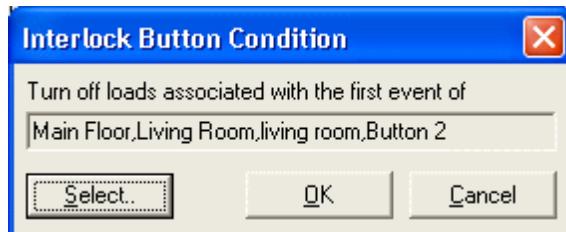
**Select**

This button is used to display the Select Load Hierarchy Box, which allows you to select by location the load to be used in the interlock load condition.

**Interlock Buttons**

**Description:** The Interlock Buttons condition acts more like a function than a condition. It turns off the loads associated with the first event of a specified button (none of the loads associated with any other event are turned off). If other conditions exist in the list before the interlock condition and one is false, the interlock will not be executed. **Beginning with QLink 4.2 Interlock Button will now work with IR, Time Control, String Control and TeleControl buttons.**

This dialog box is used to set up an Interlock Button condition for an event.



**Figure 12:** The Interlock Button Condition Dialog box.

**Turn off loads associated with the first event of**

The name of the selected Button is displayed here.

**Select**

This button is used to display the Select Switch Hierarchy Box, which allows you to select by location the switch to be used in the Interlock Button condition.

**Else**      **Description:** An Else condition is inserted into the condition of an event and is evaluated only if the previous event's conditions are false.

This check box sets up an else condition that reads: "Else (If the previous event's conditions were all false)"

**OR**      **Description:** An Or condition is used to separate two or more sets of conditions in the same event.

This box allows multiple conditions to be tested in the current event and reads: "OR: Do this event if the following conditions are true."

**Lockout**      **Description:** The lockout condition defines a time that prevents a switch event from executing for a specified amount of time. This is useful for things like pressure pads that can provide multiple triggers. The lockout time is specified in seconds and can be a value from 0 to 6552.

Prevents the current event from being retriggered for a specified amount of time.

**Edit**      Edit the condition currently highlighted in the Conditions list.

**Cut**      Cuts the highlighted condition in the Conditions list.

**Paste**      Pastes the last condition cut from the list.

**OK**      Save the current condition list and closes the Conditions window.

**Cancel**      Cancels any editing changes in the Conditions list and closes the Conditions window.

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## Condition Examples

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### Mode Off Condition

The **mode off** condition specifies a switch event that executes the OFF state of another button. This will allow events with Nite lite or Toggle type functions to execute in the OFF state. All functions that only operate in the ON state will not be affected by the **mode off** condition. The **mode off** condition works similar to the interlock condition except it runs the specified switch with the off state instead of turning off the loads.

### OR Condition

Conditions are normally logically "ANDed" together. AND means that the function is executed only if all conditions are true. The OR condition allows you to logically "OR" groups of ANDed conditions. OR means that if any of the logically ANDed groups are true then the function is executed.

### Time Condition

The time condition refers to the Before and After programming conditions. These conditions can be used to activate an even for a certain period of time.

### Switch Condition

A switch condition allows you to select a button that you would like to check the condition of. You can check whether or not a certain button is on or off. You could use it to check if the closet door is closed (Using a Contact Input Station) and if the door is closed then turn off the closet lights.

### Variable Condition

The variable condition defines six comparisons that can be made on the specified load variable value. There are up to 120 load variables per project. The comparisons include: =, not =, <, <=, >, and >=. The current variable value is compared to a specified percentage using one of the before mentioned comparisons.

### Load Type

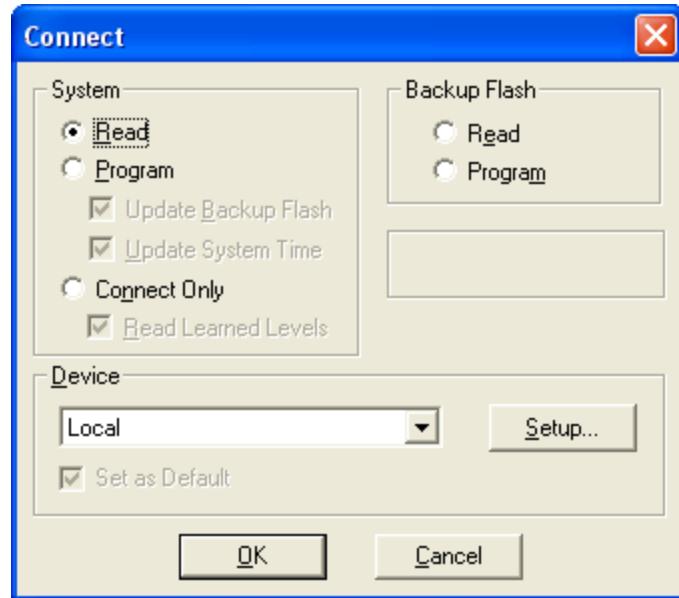
Load types are:

Description	
Incandescent	Standard light bulb
Fluorescent Magnetic non-dimming	
Fluorescent Electronic non-dimming	
Fluorescent Magnetic dimming	
Fluorescent 0-10V dimming	
Fluorescent Lutron High Luminescence	
Low Voltage Electronic	
Magnetic Low Voltage	
Motor Blinds etc.	
Variable Speed Motor	Ceiling fan
HID	High intensity discharge light bulb
Cold Cathode	Neon type light bulb

### Connect, Program or Read the Master

Connect

When you connect to the master by pressing the connect button ( {bmc bm9.SHG} or from the File menu select Connect) the following window will be opened.



Program the system: programming the master copies your project onto the master controller(s) To program your system with your current project (the name of the current project will appear in the title bar ) click on the program radio button and click OK.

Read the system: This command will copy the programming on the master(s) to your computer. This is useful if you have lost your program file or you would like to make sure you have the current settings. To read the system click on the Read radio button and click OK.

**Connect Only:** This command will connect you with the Vantage System. It does NOT copy your project onto the system. When you select this item and press OK you will be reminded the current program (project) must match the one on the system. If you are not sure that the programs match PROGRAM THE SYSTEM.

If they do not match the current programming on the master will be lost!

**Update Backup Flash:** When you program you can choose to make a backup and place it into the backup flash memory. If you would like to make the backup, check the update backup flash box. Note: The backup flash stores a complete copy of your program file. However, the master itself only stores the core information in your project. It does not store button names and other misc. information.

**Backup Flash Read:** Read the contents of the backup flash into your current project.

**Backup Flash Program:** Program the backup flash with the current project.

#### Making Changes to your System

There are two ways to make changes to your system. A) Make the necessary changes in QLink and then program the master (following the above steps). Or B) First connect to the master then make the necessary changes to the QLink project file. The major benefit of connecting first (connecting could refer to Program the system, Read the system, or Connect only) is that all changes are reflected instantaneously. This way you can make sure a button does what you want it to do.

When you have successfully connected the button will stay pressed as shown below. You will also see ONLINE in the status bar.

{bmc bm241.SHG}

#### Frequently Asked Questions

- 1) Question: Why should I program the backup flash? It just takes extra time and if I accidentally loose my project file I can just read the system.

Answer: The backup flash has several purposes. It stores a complete copy of the program file (the master only stores part of the program. It does not store button names and empty station buttons.) Therefore if you loose your program file or are not sure if you have the most recent copy of the program file you can read from the backup flash and obtain a complete backup. Another purpose for the backup flash is in the case of a master failure. If for example your master were to fail and you had programmed your backup flash as soon as the new master was put in the program from the backup flash would be loaded and your system would be instantly operational.

- 2) Question: What is the difference between reading the master and reading the flash?

Answer: The master only stores a copy of the actual program file. When you read from the master you get the programming, but you do not get any names. You also do not get any station buttons that have not been programmed. Therefore if you had an 8 button station that only had 3 buttons programmed the station would be read as a three button station.

- 3) Question: I programmed my backup flash, but it didn't get all my new commands.

Answer: The backup flash is only programmed when the whole system is programmed. When you connect to the system and then change the system programming while you are on line the changes are not copied to the backup flash. Each time changes are made you should re-program the backup flash.

#### Data string Explanation

The data string that is returned has four fields (shown below). All four fields are not always used. In the case that they are not used any value may appear in the slot. Disregard any of these values.

#### Format for the data string (HEX)

Reset Type	Field 1	Field 2	Field 3	Field 4
Module Reset	Processor #	Current Status	Previous Status	NOT USED
Module Init	Module Address	NOT USED		
Station Reset	Six bit address	24 bit address		

Master Reset	Begin/End Reset	# of cold boots	NOT USED
--------------	-----------------	-----------------	----------

Module Reset contains 2 status fields (current and previous). These fields are broken down from their hex representation to binary (2 characters in hex is 8 bits in binary). Each bit has a certain meaning as shown below:

#### **Status for Module Reset (Binary)**

Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit1	Bit 0
Primary Line Feed Not Detected	Reserved	Manual Override is Active	Disable Over Current Shutdown	Over Current Shutdown	Fan is Active	Over Temperature Shutdown	Reset Flag

#### **HEX Conversion table**

HEX	Binary
0	0000
1	0001
2	0010
3	0011
4	0100
5	0101
6	0110
7	0111
8	1000
9	1001
A	1010
B	1011
C	1100
D	1101
E	1110
F	1111

#### **Steps:**

- 1) 1) Click on the check button and choose which error you want to understand.
- 2) 2) Look at the top chart and determine which fields are used.
- 3) 3) Look at the first set of numbers and look them up on the HEX table to find their binary equivalent. (e.g. if the first set of numbers was '04' after looking up each number in the chart above you would find that 0 is '0000' and 4 is '0100').
- 4) 4) Then compare these 8 numbers (1's or 0's) to the chart above. Any 1's show that the problem exists. So in the example above the problem would be an "over current shut down"

#### **Example:**

If the following string was returned:

**Module Reset 01 80 00 00 12:15:05 12/18/97**

- 01 The processor number reporting the error.
- 80 80 is a HEX number. Converted to binary (from the chart above) it is "1000 0000". Bit 7 is the only "1" so the primary line feed was not detected which caused an error.
- 00 The previous status has 0 errors.

#### **Example 2:**

**Module Init 00 84 00 01 12:15:05 12/18/97**

00 Module address. Its address 0  
 84 Garbage. These bits are disregarded in Module Init.  
 00 Garbage. These bits are disregarded in Module Init.  
 01 Garbage. These bits are disregarded in Module Init.

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## Parameters

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Parameters are settings for **functions**. The Parameters window allows different options for each Function used. For example; the Parameters Window for a Toggle Function only allows the Fade time to be adjusted. A Dim Function allows the Fade time, Cycle Time, Type of Dim and Learnable to be adjusted. A range of values and other options may be used as part of programming.

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## Functions

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Functions are commands requesting a piece of hardware to perform an action. Events are based on functions. For most functions to execute, the state must be "On". Exceptions to this rule are functions that work in either or sometimes both States, i.e., Serial Out, Preset, IR Out. The only function that works only in the off State is a Nite Lite. Built into every Nite Lite is the condition "if Execution State is OFF," while almost every other function has the hidden condition "if Execution State is ON."

The following functions are available:

<b><u>Function</u></b>	<b><u>Description</u></b>
All Off	The All Off function will turn off every load in the QLink in the system except those specified. Loads that should not be turned off with this function must be specified as the exceptions with this command.
All On	The All On function will turn on (to 100%) every load in the system except those specified. Loads that should not be turned on with this function must be specified as the exceptions with this command, i.e., opposing drapery motors.
Dim	The Dim function turns the load(s) ON, to a learned value with the first press and release and OFF with the second press and release. To activate the dim cycle, press and hold the button in. The dimming cycle begins after the button has been held for one second (adjustable). The dim cycle completes in three seconds (adjustable), i.e., the amount of time it takes the load to cycle from 0 - 100%. During the dimming cycle, when the button is released, the new intensity level is learned and remains until the dimming process is repeated unless the "Learnable" check box is not checked.
External	The External function sends the switch address and state information to RS-232 ports.
Flash	The Flash function specifies loads flash on and off repeatedly at a specified pace.
Goto Page	The Goto Page Function will change the selected LCD Touchscreen to a specific page. It triggers in the ON or OFF state.
IR Out	The IR Out function sends IR commands through an IR emitter station.
IR Pointer	The IR Pointer function executes the program of an IR Button.
Learn	The Learn function Enables/disables learning of scenes. Use only if enable/disable is desired.
Led	The LED function Allows changes in the brightness of a button's LED, in the ON and OFF states. The change may be applied to specific buttons or globally.
Lower	The Lower function decreases the level of the loads when the button is held down. This function has a <b>fade</b> (cycle) time associated with it which specifies the time it takes for the load to go from 100% to 0% (off), therefore, a fade time value must be entered greater than zero seconds.

Memory	The Memory function is similar to the Panic Function with the added advantage of setting the ON levels of the selected loads to any value from 0% to 100% when the button is pressed and returning the same selected loads to their previous values with the second press.
Momentary	The Momentary function Turns loads on (100%) when the button is held down and off when the button is released.
Nite Lite	The Nite Lite function is used as a secondary (sub) function to turn loads to specified levels when they would normally be turned off. Nite Lite works in the OFF state of a button.
Panic	The Panic function will turn specified loads on to full (100%) when the button is pressed and released. The next button press and release will return the loads to their previous levels.
Preset	The Preset function works in the ON and/or the OFF state making it effective to set selected loads to any value in the ON and/or OFF state of the button. This function may be used in place of Preset On, Preset OFF, or Nite Lite.
Preset Add	The Preset Add function incrementally increases or decreases the percentage value of specified loads with each button press.
Preset Off	The Preset Off function turns specified loads off and is typically used with Preset On.
Preset On	The Preset On function turns specified loads on to specific levels.
Preset Toggle	The Preset Toggle function turns loads on to a specific level with the first press and release, and off with the next press and release.
Pulse	The Pulse function is used to turn a load ON and then OFF after a programmed time ranging from 0.1 seconds to 6553 seconds.
Raise	The Raise function increases load levels by pressing and holding down the button. This function has a <b>fade</b> (cycle) time associated with it which specifies the time it takes for the load to go from the 0% to 100%, therefore, a fade time value must be entered greater than zero seconds.
Sensor	The Sensor function is used with the Vantage LightPoint Sensor connected to the system.
Serial Out	The Serial Out function replaces the RS-232 function. Serial Out is used for RS-232 and other serial communication devices. Serial Out sends strings, on specified ports, to serial communication devices. <b>Also see:</b> <a href="#">String Wildcards</a> -and- <a href="#">Serial Communications</a>
LCD Slider	This function is automatically selected for all LCD slider controls. Sliders now support Conditional programming.
Sounder	The Sounder function sends a tone to a selected keypad station's sounder. This tone may be selected based upon both frequency and duration.
Step (Fan)	The Step (Fan) function provides load increments from 1 and 25 steps.
String Modify	Changes a specified string control to a new value.
String Pointer	The String Pointer executes the program of the String Control pointed to.
Switch Pointer	The Switch Pointer function is used to duplicate button functionality, i.e., 3-way switches.
Thermostat	The Thermostat function is used to control thermostats connected to a Thermostat Station. This function can turn on HVAC fans, alter the thermostat mode, or change the heat/cool set points.
Time Pointer	The Time Pointer function executes the program of a Time Control button.
Toggle	The Toggle function is on/off switching control. One or more loads will go on (100%) with the first press and release, and off with the second press and release.
Undefined	The Undefined function is the default function for un-programmed buttons. The button does nothing.
Vacation	The Vacation function plays back load activity from the past 14 days. The vacation buffer is limited to 3500 events.

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## Function Examples

### Learn

The learn function is a global enable for learning new load levels on Preset on and Preset toggle functions. When the Learn function is on new load levels can be learned by Preset on and preset toggle functions regardless of whether the learn condition is specified unless the "Do not learn, if global learn is set" check box is checked.

The learn function has three modes of operation: Toggle, Off, and On. The Toggle mode works like a toggle function in that it goes on (learn enabled) with the first button press and goes off (learn disabled) with the next button press. The Off mode disables the learn function regardless of the previous state. The On mode enables the learn function regardless of the previous state.

It is often useful to program a button to only enable the learn function for a specified period of time. This can be accomplished by programming the primary learn function (event #1) with the Toggle action and the sub-function (event #2) with the Off action. The sub-function should have the condition Delay defined to the number of seconds that Learn is to be enabled.

#### Example:

Button1 is set as Preset Toggle and controls 3 loads. (Load1 is a lamp, load2 is the main lights, and load3 is a wall light)

Currently all three loads turn on to 100% when button1 is pressed. You would like to use the learn feature to change the intensity of load1 (the lamp).

#### Steps:

- 1) First you define a button2 to control load1 (use the Dim function).
- 2) Define button3 as a learn button (set the function to Learn).
- 3) Use button2 to Dim the lamp to the desired level. Then press button3 to turn on the Learn function. While the learn is on press and hold button1 for three seconds (learn time).

When you press button1 the lamp will now toggle to the new level.

#### **IR-pointer function**

The IR pointer function is similar to a switch pointer. Conditions can be specified to conditionally run an IR pointer. After the IR pointer has executed, function is passed back to the original function being defined so additional sub-function can be defined.

The state of the IR pointer function to be executed can be specified as one of the following: CURRENT, OFF, and ON. The CURRENT state defines the IR pointer function to be executed with the current state of the function being defined. This is the default. The OFF state defines the IR pointer function to be executed with the off state regardless of the state of the function being defined. The ON state defines the IR pointer function to be executed with the on state.

#### **Lower Function**

The Lower function decreases the level of the loads when the button is held down. When the button is released the loads will remain at the current intensity level. The lower function has a fade time associated with it that specifies the time it takes for the load to go from the 100% to 0% (off).

#### **Momentary Function**

The momentary function turns loads on to 100% when the button is held down and off when the button is released. It is often used with external sensors and remote interface stations. A fade time can be associated with the Momentary function.

#### **Nite Lite Function**

The Nite lite function should be used as a secondary (sub-) function with the Toggle, Dim, Preset toggle, and Momentary functions. When the loads would normally be turned off by the before mentioned functions the Nite lite sub-function can turn them on to a specified level. In other words the Nite lite function works in the off state. There can be a fade time associated with the Nite lite function.

The Nite lite function works when the primary function would normally be turning off so the condition Delay default does not work. To allow the condition Delay to work with a Nite lite function the additional parameter FUNC\_OFF should be specified.

The Nite Lite function is most often used when sensing Contact Closures with the Contact Input Station or when using motion sensors. An example is shown below:

#### Contact Closure Example

Suppose you have a contact input station (CIS) connected to your garage door. When the door is opened you want the lights in the garage to come on then 10 minutes after the door is closed you want the lights to be turned off. Program the CIS button that corresponds to the garage door with the following two events:

Event # Function Condition Loads to Activate  
 Event1 Momentary  
 Event2 Nite Lite Delay 600 Load1=100%  
 Event3 Preset off Load1=0%

Event1 - Senses a change in state (on or off).

Event2 - Turns on the lights when the connection is broken (Door is opened).

Event3 - Turns off the lights when an on state is received (Door is closed).

You must use the momentary function as the first event because the momentary is activated in the on and off state. When the door is opened the CIS senses an off state and because the first event is triggered in the off state it will evaluate and execute all remaining events. If you did not have the momentary function as the first event the lights would never be turned on.

### **Preset Add Function**

This function allows a load to be incremented or decremented by a fixed percentage every time a control is activated.

### **Panic Function**

The panic function turns on the specified loads to full on (100%) when the button is pressed and released. The next button press and release will return the loads to their previous levels.

### **Preset Off Function**

The preset off function will turn off one or more loads (scene). A fade time can be specified. Preset off works the same as preset on with the load levels specified at 0%.

### **Preset On Function**

The preset on function will turn on one or more loads (scene) to specified values. A fade time can be specified. The preset on function is often used within time functions to turn loads on (or off if 0% is specified).

New load values can be learned by the button if the parameter LEARN is specified in the function or a switch function Learn is on (see function type Learn). If the parameter LEARN is defined for the switch or a switch function Learn is on then new load levels can be learned by holding the button in for a specified time (learn time is 0.1 to 999.9 seconds). Make sure all the loads are set to their desired levels before the button is held down and new values are learned.

Unlike any of the toggle functions, preset on will only turn the loads on to the specified value when the button is released, not when it is pressed.

The preset on function is activated on the button release because it has the ability to learn new load levels on the button press.

### **Preset Toggle Function**

The preset toggle function will turn on one or more loads (scene) to a specified value on the first button press/release and turn them off with the next button press/release. The Preset toggle function works like a Preset on with the first button press/release and a Preset off on the second button press/release. A fade time from 0.1 to 999.9 seconds can be specified that will gradually increase or decrease the load levels until they reach their final values.

New load values can be learned by the switch if the Condition LEARN is specified in the function or a switch function Learn is on (see function type Learn). If the condition LEARN is defined for the switch or a switch function Learn is on new load levels can be learned by holding the button in for a specified time (learn time is 0.1 to 999.9 seconds). Make sure all the loads are set to their desired levels before the button is held down and new values are learned.

The preset toggle function is activated on the button release because it has the ability to learn new load levels on the button press.

## Raise Function

The Raise function increases the level of the loads when the button is held down. When the button is released the loads will remain at the current intensity level. The raise function has a fade time associated with it, which specifies the time it takes for the load to go from the current intensity level to 100%.

## Thermostat Function

You can program an event to change thermostat functionality. This function allows you to set the thermostat state (auto or manual). You can control the fan or set a temperature.

To use this event check the box next to the state you would like to set. The parameters will then be available to change. Change the parameters and click OK.

A Thermostat function has been added to the function list to change the operating mode or set points. Choose which thermostats are affected by pressing the Add Thermostat button, and selecting thermostats like loads.

**Important:** The thermostat function modifies only the Auto(Day) modes and set points; if the thermostat is in Manual(Night) mode, the settings will have no effect. This feature allows the user to override all automatic set backs by putting the thermostat into Manual mode. To prevent missed setbacks, select Auto(Day) in the Thermostat Function Parameters when setting set points to force thermostat back into Auto(Day) mode.

## Fahrenheit / Celsius

QLink may be switched between Fahrenheit and Celsius by choosing Define -> Global Parameters from the menu and selecting Display Temperatures in Fahrenheit. This choice will determine how the set points are handled through out QLink, including displaying on the LCD station. To change display on the thermostat, press Up and Down buttons simultaneously.

## Time Pointer Function

The time pointer function is similar to a Switch pointer except the button being defined executes a time control. Conditions can be specified to conditionally run a Time pointer. After the Time pointer has executed, function is passed back to the original function being defined so additional sub-functions can be defined.

The state of the Time pointer function to be executed can be specified as one of the following: CURRENT, OFF, and ON. The CURRENT state defines the Time pointer function to be executed with the current state of the event being defined. This is the default. The OFF state defines the Time pointer function to be executed with the off state regardless of the state of the event being defined. The ON state defines the Time pointer function to be executed with the on state.

## Toggle Function

The toggle function is a simple on/off switching function. One or more loads will go on (100%) with the first button push and off with the second push. A fade time can be associated with a toggle function. There is no dimming capability associated with the toggle function.

The toggle can receive and pass the function states of ON or OFF. If a toggle receives the button state of BUTTON PRESS and the conditions are true, it will toggle the state from ON to OFF or vice versa. If a toggle function's conditions are false, then it merely passes the current button state to the next event's function without changing the state.

The default state operation for the toggle function is ON if any load associated with the function is on at any value.

If no load is assigned to the function, the toggle function changes state to ON with the first button press and then to OFF with the next press even though no loads are controlled. This is sometimes used as an enable for other buttons.

## Vacation Function

The Vacation function records load activity on the system over the last two weeks. Up to 3500 events per project can be stored and played back during the vacation function. By default all loads are defined as being included in Vacation mode.

**Note:** Any loads not to be included in Vacation mode must be specifically removed from Vacation mode in the load properties dialog box. It is recommended that the loads included in vacation mode be kept to a minimum.

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## String Wildcards

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### String Wildcards

Input: String input using wait for response with Serial out function, or String Control.

{\*} Anything

i.e. x{\*}y will trigger on all strings that begin with x and end with y regardless of the contents between the x and y.

{3\*} 3 of Anything

Each member of the wildcard expression counts towards the maximum 42 characters in string expressions.

For Serial Out.

{SV:<master>,<variable>} Sends the contents of the String Variable <variable> on master <master>.

i.e. {SV:3,10} Sends contents of String Variable 10 on Master 3

{V:<master>,<variable>} Sends the contents of the Variable <variable> on master <master>.

i.e. {V:2,6} Sends contents of String Variable 6 on Master 2

{L:<master>,<module>,<load>} Sends the load value for the load <load> on module <module> on master <master>. This percentage is sent as a numeric expression with out leading zeros.

i.e {L:1,3,8} Assume load 8 on module 3 master 1 was set to 50%. This command would send a 50.

{SL: <master>,<station>,<load>} Sends the load value for the load <load> on station <station> on master <master>. This percentage is sent as a numeric expression with out leading zeros.

i.e {L:1,70,2} Assume load 2 on dimmer station 70 master 1 was set to 0%. This command would send a 0.

Note:

For sending a { in a non-wildcard expression send two {{. It is not possible to send a { as part of a wildcard expression.

**Related Topics:** [Functions](#)  
[String Controls](#)

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## String Parsing

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### String Parsing In QLink 4

QLink 3.4 introduced the ability to insert load and variable values into outgoing strings to be able to have dynamic Serial Out events. Qlink 4 introduces the ability to read sections of incoming strings into variables, loads or string variables. This allows a number from an incoming string to set a load value or change the value of the variable. It also allows sections of ASCII text within a string to be displayed on a C5 touchscreen.

The parsing feature in Qlink 4 is built from the wildcard features introduced in previous versions. The wildcard syntax has changed slightly in QLink 4 in order to accommodate parsing.

To ignore a section of a string, use the following set of characters:

{\*}

This will ignore an unspecified number of characters. For example, if the following string is coming into the RS-232 port:

123456789

and the String Control defines the incoming string as follows

1{\*}89

then the String Control will only "care" about the 1 at the beginning and the 89 at the end. Any other characters (and any number of characters) can come in between, but the string will still match.

A specified number of characters can be ignored by placing a number before the '\*' character. I.e., {4\*} will ignore 4 characters, and {7\*} will ignore 7. As an example, with the same incoming string, but with the String Control defined as

1{6\*}89

The string will still match. If the number of characters between the 1 and the 89 is different than 6, however, the string will not match and the String Control will not execute.

In order to read a section of a string into a load, variable, or a string variable, the following format is used:

{nC:A,A}

n is the number of characters to read in. This parameter is optional.

C is the command. The possible values are

L for Load

SL for Station Load

V for Variable

SV for String Variable

A:A is the address of the variable/load/station load/string variable

#### Examples:

If a hypothetical 3rd party touch screen sent the string KITCHEN\_LIGHT=75 , with the intention of turning on the light in the kitchen to 75%, a String Control would be written like this:

KITCHEN\_LIGHT={L:1,3,5}

assuming the kitchen light load is on Master 1, Module 3, Load 5. Notice that the 'n' parameter was omitted. When there is no 'n' parameter, the number of characters read into the variable will be either 1, 2, or 3 depending on how many digits are read in before either the string ends, or before the String Control starts to match the characters defined after the wildcard.

---

A Jandy pool controller can send a string to indicate the air or water temperature. That string could look like this: !00 POOLTMP=72F to indicate a water temperature of 72 degrees in the pool. The corresponding String Control would be defined this way:

```
!00POOLTMP={V:1,6}F
```

Whatever number (up to 3 digits) comes between the '=' and the 'F' will be put into Variable #6 on Master 1.

The String Control can then be programmed to perform some action based on the value of that variable (using variable conditions). The variable can also be displayed on a touch screen using a variable status object. If the String Control is only being used to display the variable, and not to activate any programming, there must still be at least one defined event programmed on the String Control. This could be a Preset Event without any conditions or loads.

---

A Kaleidescape DVD video server could send a string with a movie title, like this: 01/03/000:TITLE\_NAME:Shrek:/25 . Everything before TITLE\_NAME can be ignored, and the Checksum at the end (25) can be ignored. The string control would be defined as:

```
{*}TITLE_NAME:{SV:1,1}:/{*}
```

The first String Variable defined in the system will get the text that corresponds with the movie title, "Shrek".

**Related Topic:** [String Wildcards](#)  
[String Controls](#)

---

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## Configuring Stations to the Master Controller

---

A Vantage system typically has multiple stations. Once stations are added to a project, they must be configured. Configuring stations assigns programming to the hardware in the master. The Vantage Master Controller keeps track of each station with a unique serial number.

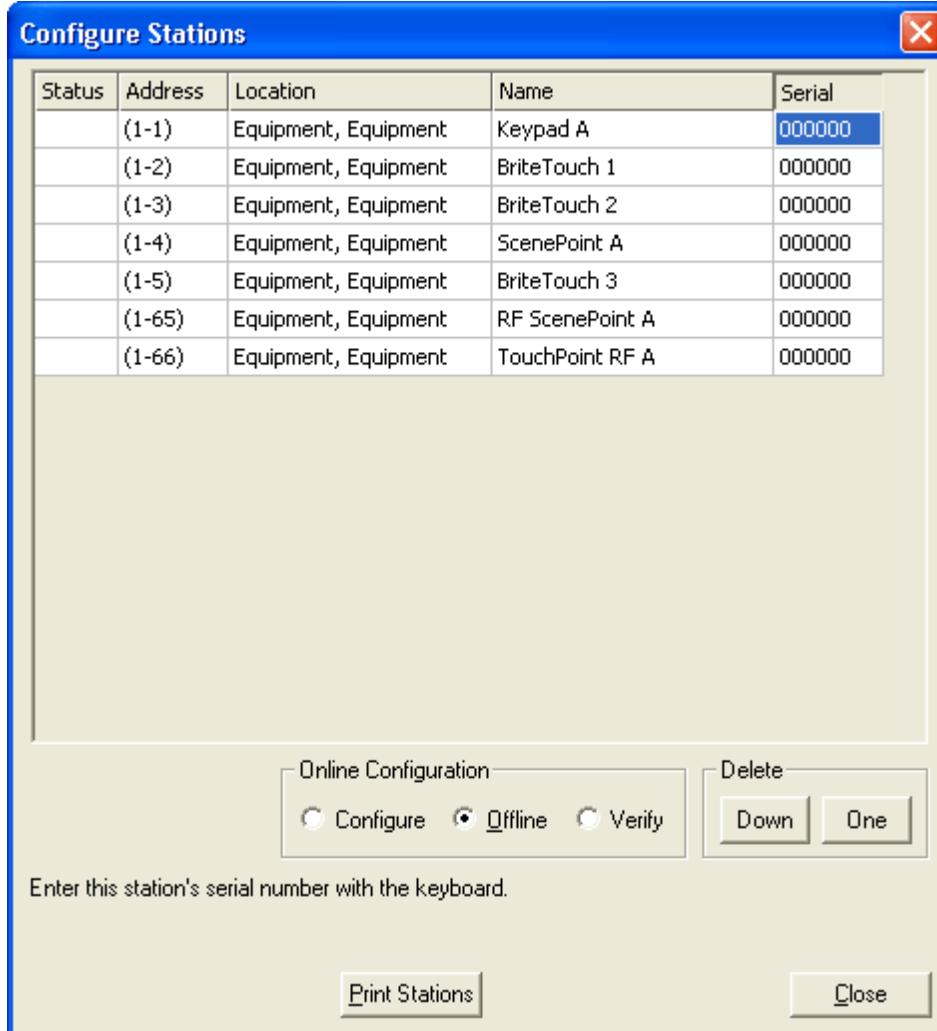
When programming for a button is uploaded, the master needs to know where the button is physically located. Every Vantage station has a physical address or serial number so the master controller knows where to assign the programming. The process of assigning these physical addresses is called **Configuring Stations**.

The procedure for configuring stations is similar for all types of stations. It is recommended that stations be configured prior to uploading to the System. If the actual hardware is not installed, when a connection is made to the master an error may be generated regarding any missing or unconfigured hardware, i.e., a missing Master Controller and all of its components will generate an error.

To Configure a Project's Stations:

On the System menu, click Configure Stations.

The Configure Stations dialog box opens.



**Figure 10:** The Configure Stations dialog box.

Floor 1, Room 1 has two assigned stations: Keypad A and LCD Touchscreen A. Keypad A is the currently selected station.

**Note:** If the station's serial numbers are known, they may be entered manually. **RadioLink** dimmers must be configured **manually**.

Click the **Configure** option radio button.

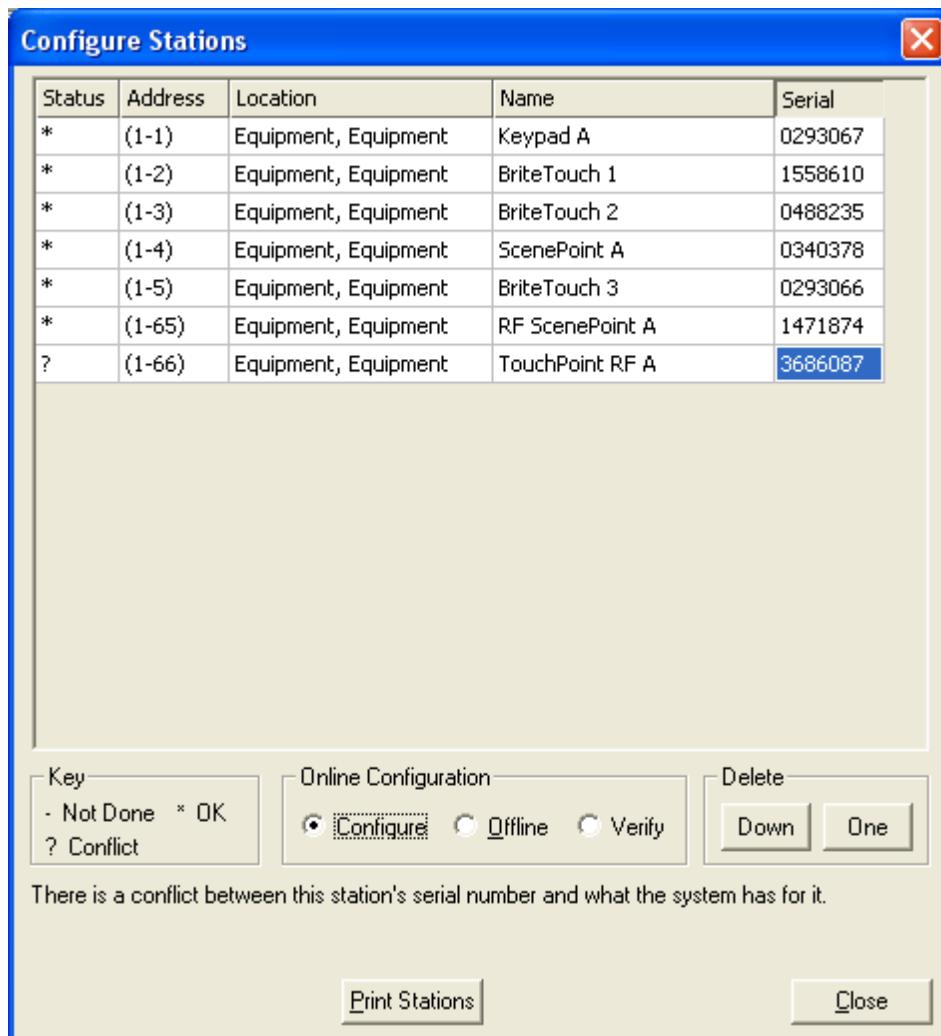
Keypad A's buttons will begin flashing. If more than one keypad was installed, all keypad buttons would begin flashing.

In three successive presses, press the number one button on Keypad A.

This is the upper left button. For each press a beep will be heard. Once Keypad A is registered with a serial number, QLink will highlight the next station for configuration, which is the LCD Touchscreen.

Touch the **LCD Touchscreen** once to register it.

Once the LCD Touchscreen and the keypad are registered, the Configure Stations dialog box changes to the following:



**Figure 11:** The Configure Stations dialog box.

Click **Close**.

---

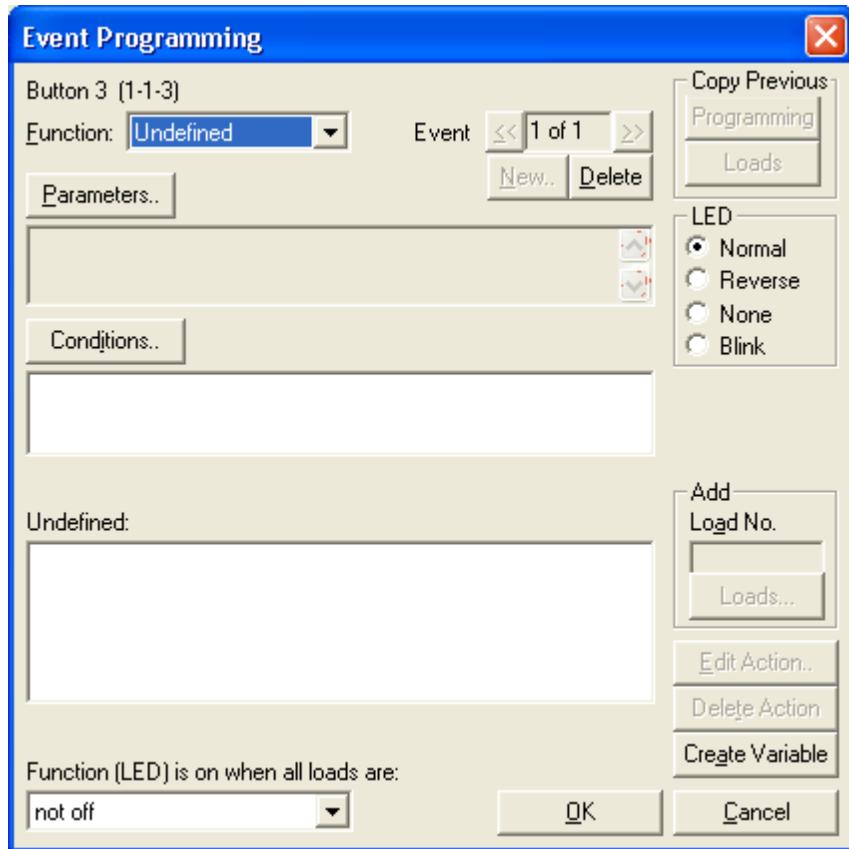
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## The Event Programming Window

---

This dialog box is used to program the events that are triggered by control activation.



### Function

This box identifies which function is to execute when the station button is pressed. By clicking on the down arrow or the actual box, a drop down menu containing all the possible functions will appear and you can select the function that is wanted. If there are parameters associated with that function QLink will automatically prompt you for them. You can also press the Parameters button to edit the parameters associated with that function.

### Event (New/Delete)

This box indicates which event is being displayed in the event programming dialog box. A button can have up to 255 events associated with it that are performed in order. Use the arrows to the left and right of the box to cycle through the events. Press the "New" button to create a new event. Press the "Delete" button to remove the current event.

### Copy Previous

- |                    |   |
|--------------------|---|
| <b>Programming</b> | This button is used to copy all of the previous event's programming including Conditions. |
| <b>Loads</b>       | This button copies all of the loads from the previous event.                              |

### Parameters

This box lists all the parameters and their current values for the selected function. You can edit these parameters by pressing the Parameters button.

### Conditions

This box lists all the conditions that must be true before the switch will execute its function. Press the Conditions button to display the Conditions Dialog Box and define conditions for that event.

### Action List (Affected Loads: etc.)

This box lists the loads, station loads and load variables assigned to this control. These are the loads that will be affected when the button is pressed.

### LED

This area allows you to determine how the LED (Light Emitting Diode) that is associated with the selected button will operate. The "Normal" state tells the LED to turn on when the function is on and it is off when the function is off. The "Reverse" state tells the LED to turn on when the function is off and off when the function is on. The "None" state causes the LED to never turn on.

**Add (Load No., or Load)**

This button allows you to select any load from the project and add to your action list. When the actions are performed this load will be toggled, turned on to a certain level, or turned off depending on the function.

**Variable**

This button allows you to select any load variable from the project and add to your action list. When the actions are performed this load variable may be added to (preset add) or turned off. Load variables are often used for advanced programming.

**Sta. Load**

This button allows you to select a station load. For example a relay from a low voltage relay station or a ScenePoint load, etc. When the actions are performed the station load will be toggled, set, or reset depending on the function.

**Edit Action**

Some functions (like preset on) allow you to set the loads/load variables to a certain level. These values may be changed using the Edit Action button.

**Delete Action**

This button is used to remove the action from the action list.

**Create Variable**

This button allows a Variable to be created while in the Event Programming window.

**Function (LED) is on when all loads are:**

Specifies when the function state is on (active). If your LED state is set to normal the function is on when the LED is on. The default setting for this is different for different functions and typically is never changed. Exceptions to this rule are in advanced programming.

- On 100%
- at learned value
- off
- not 100%
- not at learned value
- not off

**Related Topics:** [Functions](#)

[Events](#)

[States](#)

[Conditions](#)

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## Programming a Single Event

---

In the "example" project an incandescent load (101: Load 1) was defined. However, parameters have not been set, nor has the load been assigned to a keypad button. Through the following three phases, these tasks will be accomplished:

Phase 1: Program the event.

Phase 2: Assign the event to a load.

Phase 3: Test the event.

## Program the Event

The first phase in programming an event is to select a function and set any desired parameters or conditions based on that function to the event. In the following procedure a load will be assigned to button 1 on Keypad A.

To Program an Event:

Open the "example" project.

Expand **Floor 1**, and then expand **Room 1**.

Expand **Keypad A**, and then select **Button 1**.

On the **Edit menu**, click **Program**.

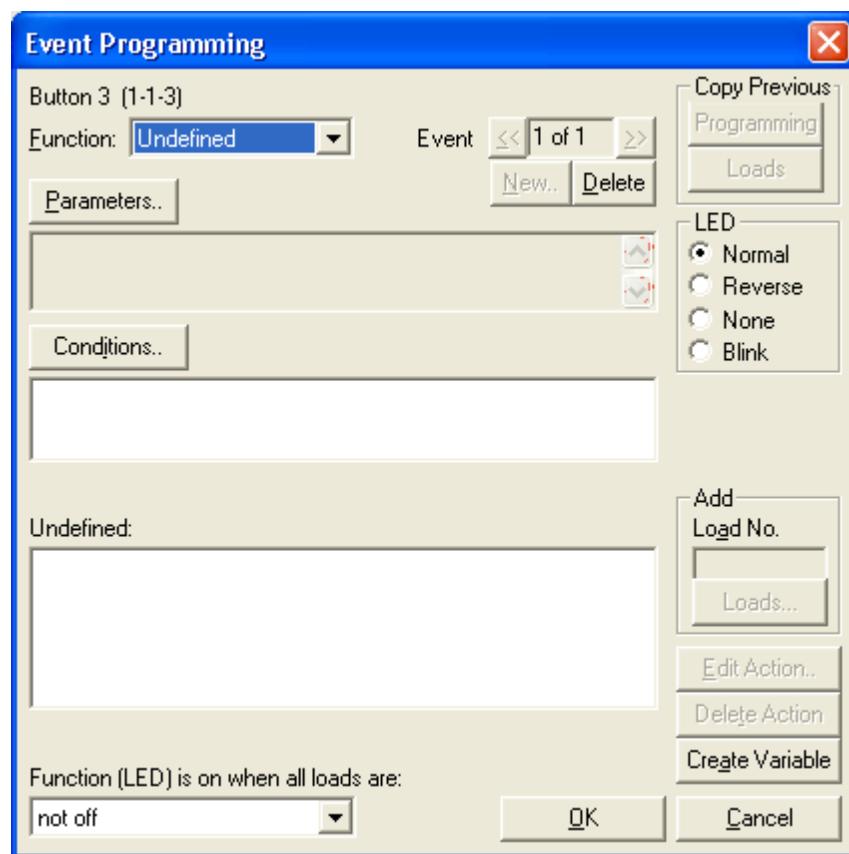
-or-

Press **Ctrl+W**.

-or-

Right-click **Button 1**, and then click **Program**.

The Event Programming dialog box opens.

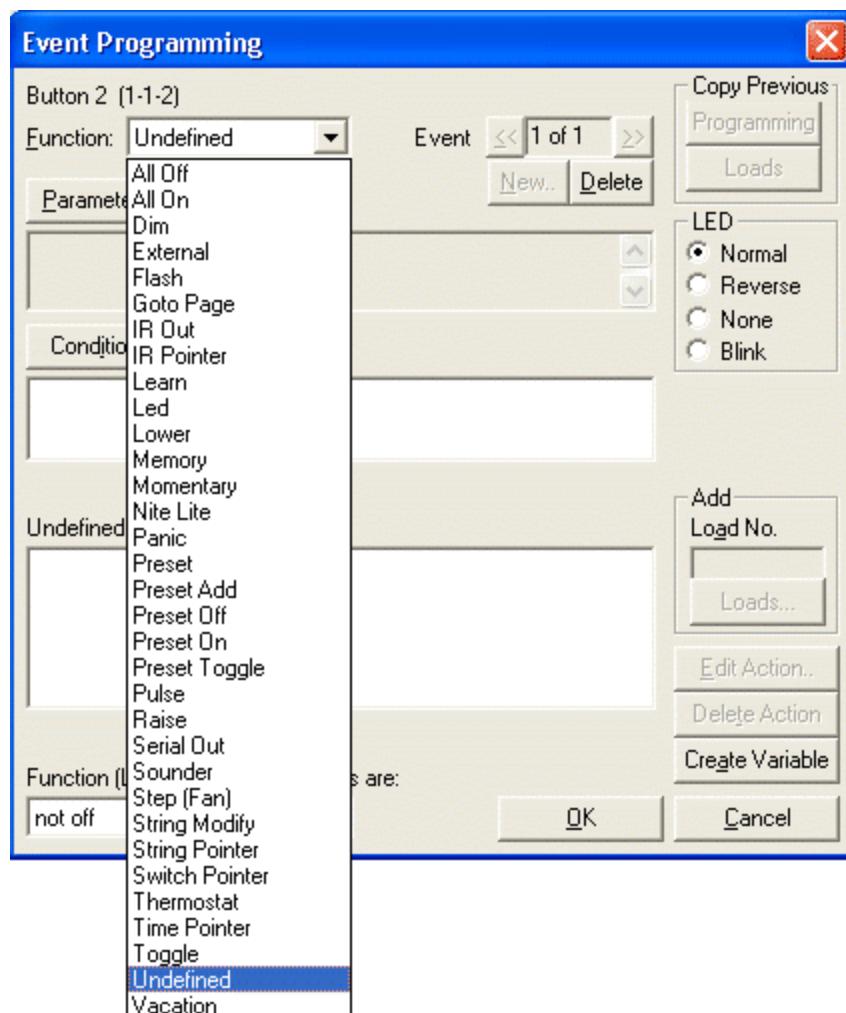


**Figure 12:** The Event Programming dialog box.

**Note:** See Event Programming in [Appendix B: Event Programming Definitions](#) for an explanation of the dialog box items.

Click the **Function** dropdown list.

The Event Programming dialog box changes to the following:



**Figure 13:** The Event Programming dialog box after clicking the Function dropdown list.

Click Toggle.

The Fade/Learn dialog box opens.



**Figure 14:** The Fade Time dialog box.

Set the **fade time** for **5 seconds**, and then click **OK**.

## Assign the Event to a Load

The second phase in creating an event is to assign it to a load. Before continuing, ensure the steps under *Creating an Event* have been completed.

To Assign an Event to a Load:

In the **Event Programming** dialog box under **Add**, click **Load**.

The Select Loads & Variables dialog box opens.

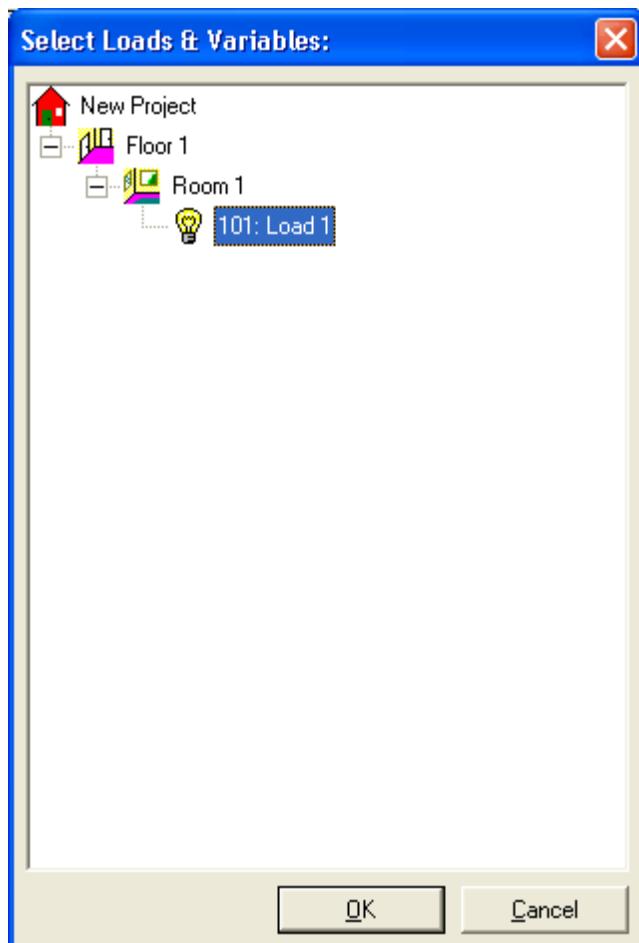
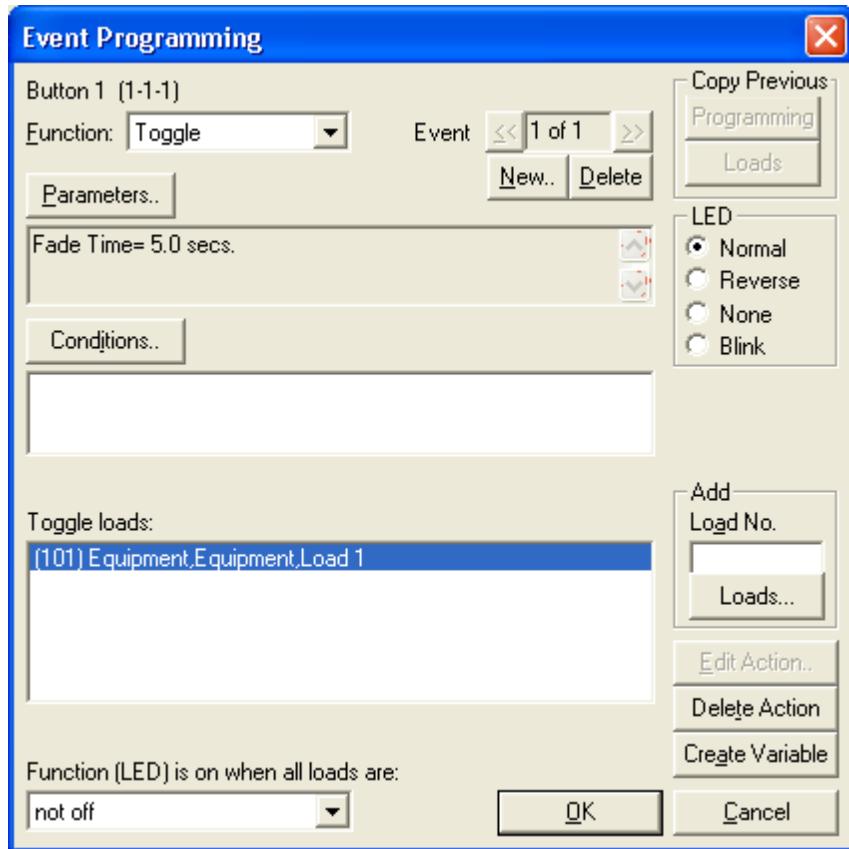


Figure 15: The Select Loads & Variables dialog box.

Click **101: Load 1**, and then click **OK** to return to the Event Programming dialog box.



**Figure 16:** The Event Programming dialog box with the toggle function selected and the fade time set to five seconds.

**Note:** If the Load number is known, it may be typed in the Add Load No. box.

Click **Ok**.

**Variation:** If the load is assigned to a Preset, Preset On, Preset Toggle, Dim or Nite Lite function the load may be assigned a **Load Level** value.



**Figure 16a:** The Load Level dialog box.

---

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## Test the Event

---

The final phase in creating an event is to test it. Before continuing ensure the steps under *Assigning an Event to a Load* have been

completed.

To Test the Event:

On the **File** menu, click **Connect**.

-or-

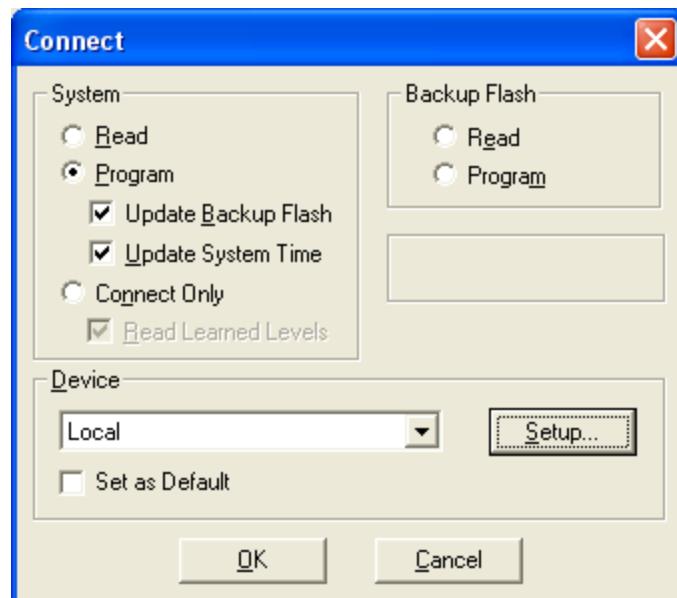
Press **Ctrl+Q**.

-or-



On the toolbar, click the Connect icon.

The connect dialog box opens.

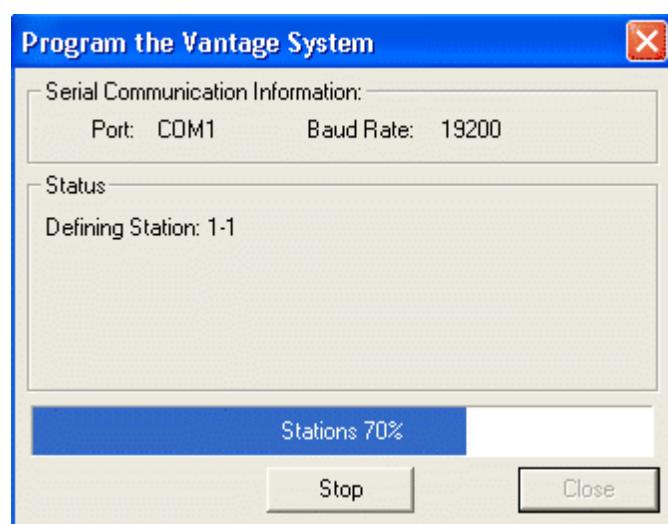


**Figure 17:** The Connect dialog box.

Ensure that the **Program** option button is selected.

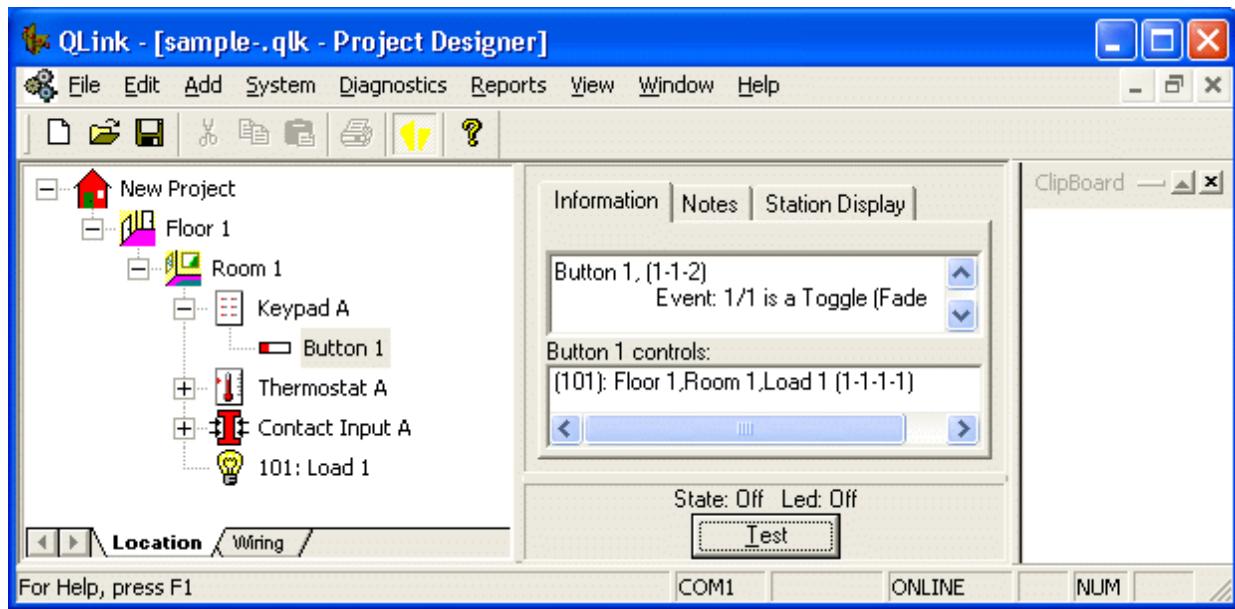
Click **OK**.

The Program the Vantage System dialog box opens.



**Figure 18:** The Program the Vantage System dialog box displaying the programming in progress.

After the programming is completed, click **Close**.



**Figure 19:** The "example" connected to the system displaying the single event information.

Click the **Test**. button.

The load will turn **ON**.

Click **Test** again.

The load will turn **OFF**.

Press **Button 1** on **Keypad A** to toggle the load "On" and "Off."

**Save** the project.

---

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## Programming Multiple Events

---

In the above single event, a toggle was assigned to button one on Keypad A to turn a load on and off with a five second fade. Multiple events may be added to execute additional actions. These are typically linked together. The following scenario presents a setting for multiple events.

Intermediate Scenario:

Setup a *single button* to turn a load On or Off after a 5 second press and hold. This program uses a Delay Condition and the Conditions of a Load to turn the load On or Off. The following should occur:

Press and hold the button for 5 seconds to turn the light On.

Press and hold the button for 5 seconds to turn the light Off.

The following tables display the setup of events using this scenario. The LED is **None** for the first 2 events, **Reverse** for the 3rd event and **Normal** for the 4th event. **GRAY = NO ACTION**

First Press and Hold for 5 seconds:

<u>Event</u>	<u>Function</u>	<u>Parameters</u>	<u>Conditions</u>	<u>Action</u>
1	Momentary	Fade Time = 0.0 secs.	-	State = On (LED=None)
2	Preset On	Fade Time = 0.0 secs.	Delay 5.0 seconds if the function state is on.	Hold Time (LED=None)
3	Preset Off	Fade Time = 1.0 secs.	Load: If Load 1 is >0%	Load 1 = 0% (LED=Reverse)
4	Preset On	Fade Time = 1.0 secs.	Else (If the previous event's condition were false)	Load 1 = 80% (LED=Normal)

**Table : The Momentay function setting the state to On and the Load to On.**

Second Press and Hold for 5 seconds:

<u>Event</u>	<u>Function</u>	<u>Parameters</u>	<u>Conditions</u>	<u>Action</u>
1	Momentary	Fade Time = 0.0 secs.	-	State = On (LED=None)
2	Preset On	Fade Time = 0.0 secs.	Delay 5.0 seconds if the function state is on.	Hold Time (LED=None)
3	Preset Off	Fade Time = 1.0 secs.	Load: If Load 1 is >0%	Load 1 = 0% (LED=Reverse)
4	Preset On	Fade Time = 1.0 secs.	Else (If the previous event's condition were false)	Load 1 = 80% (LED=Normal)

**Table : The Momentary function setting the state to On and the Load to Off.**

Advanced Scenario:

Setup a *single button* to control a bathroom's lights, its exhaust fan, and a night-light. The following should occur:

When the button is first pressed, the Preset On Functions execute. The bathroom light turns on immediately.

After a 5 second delay, the bathroom fan turns on.

When the button is pressed the second time the Nite Lite Functions execute. The bathroom light turns off immediately.

After a 10 second delay the bathroom fan turns off.

The following tables display the setup of events using the Toggle Function to set the button's State. The Toggle is On (On State) with the First Press and Off (Off State) with the second press. The Preset On Functions will execute in the On State and the Nite Lite Functions will execute in the Off State. **LIGHT GRAY TEXT = NO ACTION**

First Press:

<u>Event</u>	<u>Function</u>	<u>Parameters</u>	<u>Conditions</u>	<u>Action</u>
1	Toggle	Fade Time = 0.0 secs.	-	State = On
2	Preset On	Fade Time = 2.0 secs.	-	Load A = 80% - Lights
3	Preset On	Fade Time = 0.0 secs.	Delay: 5.0 seconds for Load B if the state is On.	Load B = 100% - Fan
4	Nite Lite	Fade Time = 2.0 secs.	-	Load A = 0% - Lights
5	Nite Lite	Fade Time = 0.0 secs.	Delay: 10.0 seconds if the state is Off.	Load B = 0% - Fan

**Table : The Toggle function setting the state to On.**

Second Press:

<u>Event</u>	<u>Function</u>	<u>Parameters</u>	<u>Conditions</u>	<u>Action</u>
1	Toggle	Fade Time = 0.0 secs.	-	State = Off
2	Preset On	Fade Time = 2.0 secs.	-	Load A = 80% - Lights
3	Preset On	Fade Time = 0.0 secs.	Delay: 5.0 seconds for Load B if the state is On.	Load B = 100% - Fan
4	Nite Lite	Fade Time = 2.0 secs.	-	Load A = 0% - Lights
5	Nite Lite	Fade Time = 0.0 secs.	Delay: 10.0 seconds if the state is Off.	Load B = 0% - Fan

**Table : The Toggle function setting the state to Off.**

The following tables display the setup of events using the Preset Toggle Function to set the button's State and turn the lights On with the same event. The Preset Toggle is On (On State) with the First Press and Off (Off State) with the second press. The Preset

On Function will execute in the On State and the Nite Lite Function will execute in the Off State.

GRAY = NO ACTION

### First Press:

<b><u>Event</u></b>	<b><u>Function</u></b>	<b><u>Parameters</u></b>	<b><u>Conditions</u></b>	<b><u>Action</u></b>
1	Preset Toggle	Fade Time = 2.0 secs.	-	State = On Load A = 80% - Lights
2	Preset On	Fade Time = 0.0 secs.	Delay: 5.0 seconds for Load B if the state is On.	Load B = 100% - Fan
3	Nite Lite	Fade Time = 0.0 secs.	Delay: 10.0 seconds if the state is Off.	Load B = 0% - Fan

**Table :** The Preset Toggle function setting the state to On and turning on Load A within the same event.

### Second Press:

<b><u>Event</u></b>	<b><u>Function</u></b>	<b><u>Parameters</u></b>	<b><u>Conditions</u></b>	<b><u>Action</u></b>
1	Preset Toggle	Fade Time = 2.0 secs.	-	State = Off Load A = 80% - Lights
2	Preset On	Fade Time = 0.0 secs.	Delay: 5.0 seconds for Load B if the state is On.	Load B = 100% - Fan
3	Nite Lite	Fade Time = 0.0 secs.	Delay: 10.0 seconds if the state is Off.	Load B = 0% - Fan

**Table :** The Preset Toggle function setting the state to Off and turning off Loads A within the same event.

Event 1: When the assigned button is pressed, Toggle sets the state to On (Preset Toggle sets the state to On and turns Load A on to 80%). Once the state is set, it is passed to succeeding events until the button is pressed again. Event 1 determines whether the state will be On or Off.

Every time the assigned button is pressed, the state is toggled from an On state to an Off state. For example, press 1= state On, press 2= state Off, press 3= state On, etc. Every time the button is pressed, the state changes, starts from Event 1, and is passed to succeeding events.

Event 2: The state is On so the condition On has been met. Five seconds later, Preset On turns Load B on to 100%.

Event 3: The Nite Lite function does not respond to an On state. Pressing the assigned button again would trigger Event 1 to set the state to Off and turn Load A off. Event 2 will not function in an Off state, and since the delay in Event 3 is based on an Off state, there will be a 10 second delay and then Event 3 will execute.

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## Variables

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Variables are programming values that can change depending on conditions or on information passed to the QLink program. A program consists of instructions in the form of data that instruct the computer to perform or do something. The data consist of *constants* (fixed values) that never change and *variables* (values that change based on user instructions).

Each master board has a set of eight predefined contractor numbers that can be used as load variables. They work just like regular incandescent loads. The contractor numbers for each load variable can be calculated as follows: 10XXn. Where the XX is the address of the master board and n is the number of the load variable. For example, 10041 corresponds to the first load variable on master 4 and 10128 corresponds to the eighth load variable on master 12.

The Vantage system uses variables in a condition or comparison setting based on a user-defined value. Since variables are based on loads, Vantage often uses the term *load variables* to reference variables. The load variable value is based on a load percentage from 0% to 100%.

Variable logic is expressed with six symbols and is based on the following conditions:

**Variable Condition**

Equals or is equal to the user-defined value.  
 Is not equal to the user-defined value.  
 Is less than the user-defined value.  
 Is greater than the user-defined value.  
 Is less than or equal to the user-defined value.  
 Is greater than or equal to the user-defined value.

**Representing Symbol**

=  
 not =  
 <  
 >  
 <=br/>
 >=

**Note:** Variables may only be added at the Project level. Each project may have up to 120 variables.

Load variables are used mainly in advanced multiple event programming and do not correspond to actual physical loads. The term for this load functionality without a physical counterpart is referred to as a *virtual* load.

A virtual load is capable of doing the same thing as a physical load without actually being a physical load. Virtual loads can be assigned to any device component through event programming.

Variables or virtual loads only exist in software. If a user wants a button to do more than just execute a state to On or Off, a variable is needed. For example, if a button is pressed that turns on a light whose power level is set to 10%, then another action can be performed based on that condition. If the button is pressed a second time and the load's power level is set to 20%, then a different action can occur. In this example, we use the power level as a tracking device to execute alternate actions based on the percentage of the power level.

It would not be practical to use a physical light as a tracking device, so we use a variable or a virtual load to accomplish the same thing. The functionality of the variable or virtual load is stored in software and is not based on a physical device. Variables or virtual loads may be assigned to any room in a project, but because they are virtual, they are assigned at the project level. Variables can be set from 0% to 100%, just like a load. Once a variable is defined, QLink builds a category for variables. All user-defined variables are stored under the Variables category.

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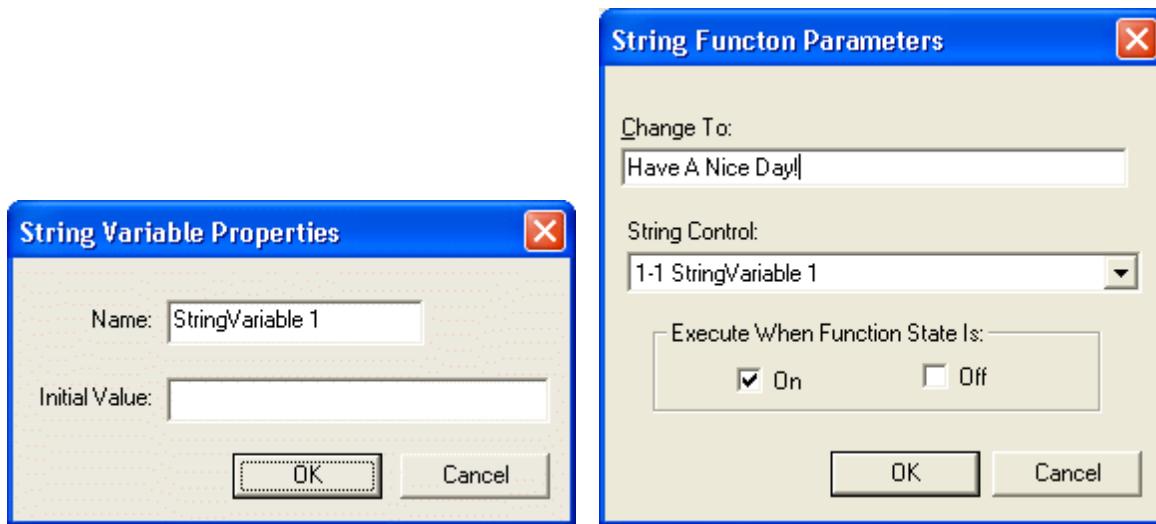
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## String Variables

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String Variables are "text" variables. They may be given an initial value or the initial value may be left blank. This string value may be displayed on LCD touch screens using the Object Status for String Variables. Strings Variables may be given a new value using the function String Modifier. A single QLink project may contain up to 32 String Variables.



Related Topic: [String Modify](#)

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## Scene Select

The following scenario has been created to demonstrate how variables may be used. Each event hypothetically adjusts a scene, which is the same as the ambiance of a room's lights. Since several scenes are depicted, the scenario is referred to as Scene Select, which is composed of five events. These are explained and recreated below using the example as the basis for the scenario.

<u>Event</u>	<u>Function</u>	<u>Variable Condition</u>	<u>Action</u>
1	Preset Add	Adds 1 to the variable	Passes the variable's value to the succeeding events.
2	Preset On	If variable = 1, then execute Preset On	Executes Scene one, which can be several loads at different values in a room.
3	Preset On	If variable = 2, then execute Preset On	Executes Scene two, which may be a different configuration of Scene 1, or several loads at different values in another room.
4	Preset On	If variable = 3 then execute Preset On,	Executes Scene three, which may be a different configuration of Scene 2, or several loads at different values in another room.
5	Preset Off	If variable >= 4, then execute Preset Off	Resets the variables back to 0 and starts over.

Preset Add increments the variable with a value of 1. Every time the button is pressed, QLink starts at Event 1 and counts the variable's value. If the button is pressed three times, then the variable value equals 3, and Events 2, 3, and 5 are ignored because their value is not equal to 3. As was mentioned before, variables are typically used in multi event programming.

To Create a Variable:

Open the "example" project.

Right-click **Load 1**, and then click **Add Load**.

Repeat **step 2**.

There should now be a total of three loads.

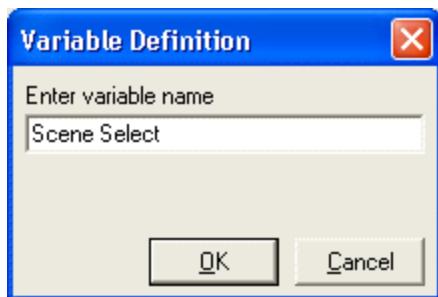
Expand **Keypad A**.

Right-click **Button 1**, and then click **Properties**.

Change the button's name to **Scene Select**.

Right-click the project icon, and then click **Add Variables**.

The Variable Definition dialog box opens.

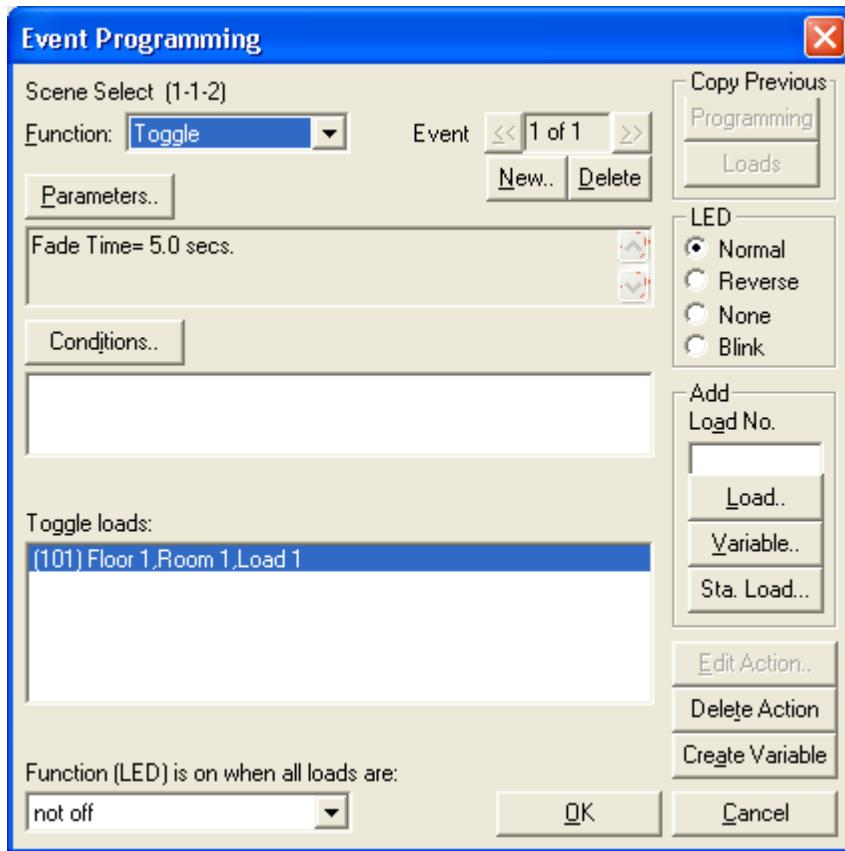


**Figure 20:** The Variable Definition dialog box.

Name the variable **Scene Select**, and then click **OK**.

Right-click the **Scene Select** button, and then click **Program**.

The Event Programming dialog box opens.

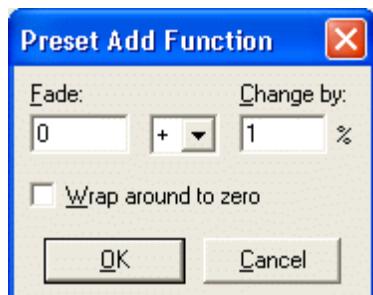


**Figure 21:** The Event Programming Dialog Box.

To Program Event 1:

Click the **Function** dropdown list, and then select **Preset Add**.

The Preset Add Function dialog box opens.



**Figure 22:** The Preset Add Function dialog box.

Set the Fade Time to 0 and the change by to 1 percent.

The **Wrap around to zero** check box does not matter in this example. Click OK to return to the Event Programming window.

Click Variable.

The Select Loads & Variables dialog box opens.

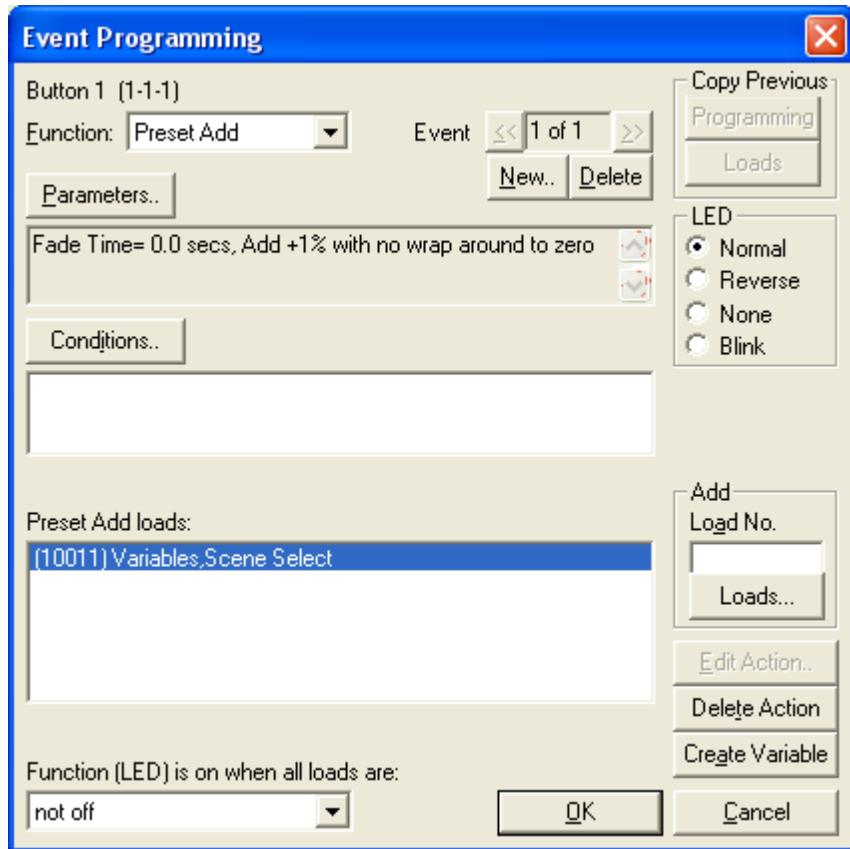


**Figure 23:** The Select Loads and Variables dialog box.

Select the **Scene Select** variable, and then Click **OK**.

Click on *(101) Floor 1, Room 1, Load 1* to highlight it and then click **Delete Action** to remove it.

The Event Programming dialog box should now appear as follows:



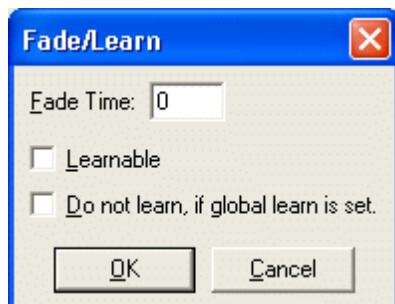
**Figure 24:** The Event Programming dialog box displaying the completed Event 1.

To Program Event 2:

Under **Event** in the **Event Programming** dialog box, click **New**.

Click the **Function** dropdown list, and then select **Preset On**.

The Fade/Learn dialog box opens.



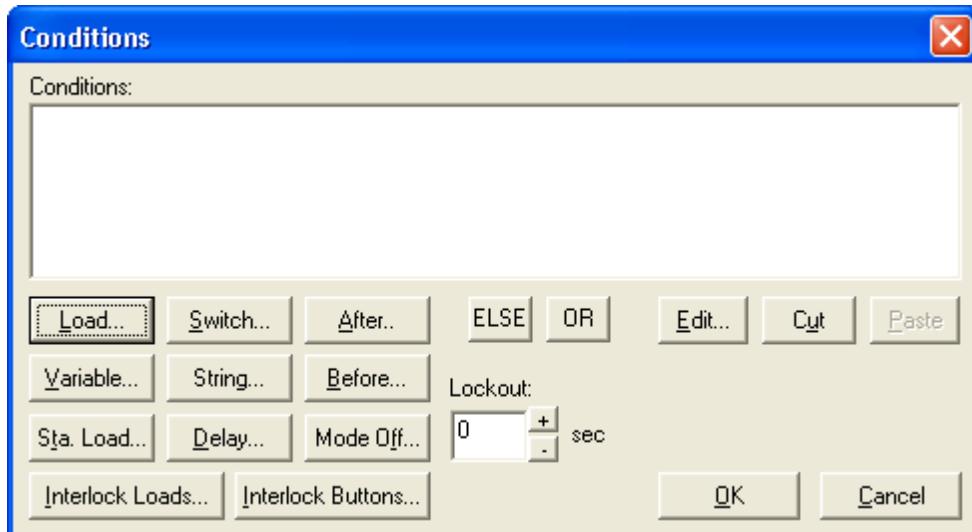
**Figure 25:** The Fade/Learn dialog box.

Change the **Fade Time** to **0**, and then click **OK**.

The Event Programming dialog box opens.

Click Conditions.

The Conditions dialog box opens.

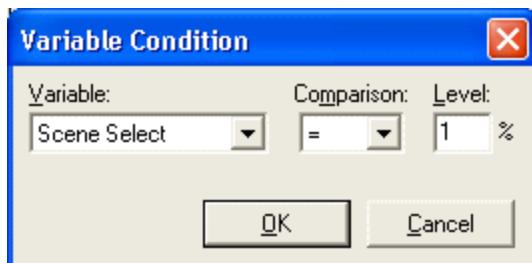


**Figure 26:** The Conditions dialog box.

Click Variable.

The Variable Condition dialog box opens.

Click the **Variable** dropdown list, and then select **Scene Select**.



**Figure 27:** The Variable Condition dialog box.

Change the **Level** to **1 percent**, and then click **OK** twice to close the **Variable Condition** and **Conditions** dialog boxes.

The Event Programming dialog box opens.

Click **Load**.

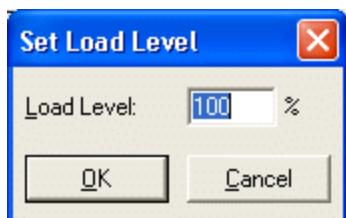
The Select Loads & Variables dialog box opens.

Ensure that all **three loads** are **visible** under **Room 1**.

Move the **mouse pointer** to the **right** of the three **loads**.

Click and drag to **select all three loads**, and then click **OK**.

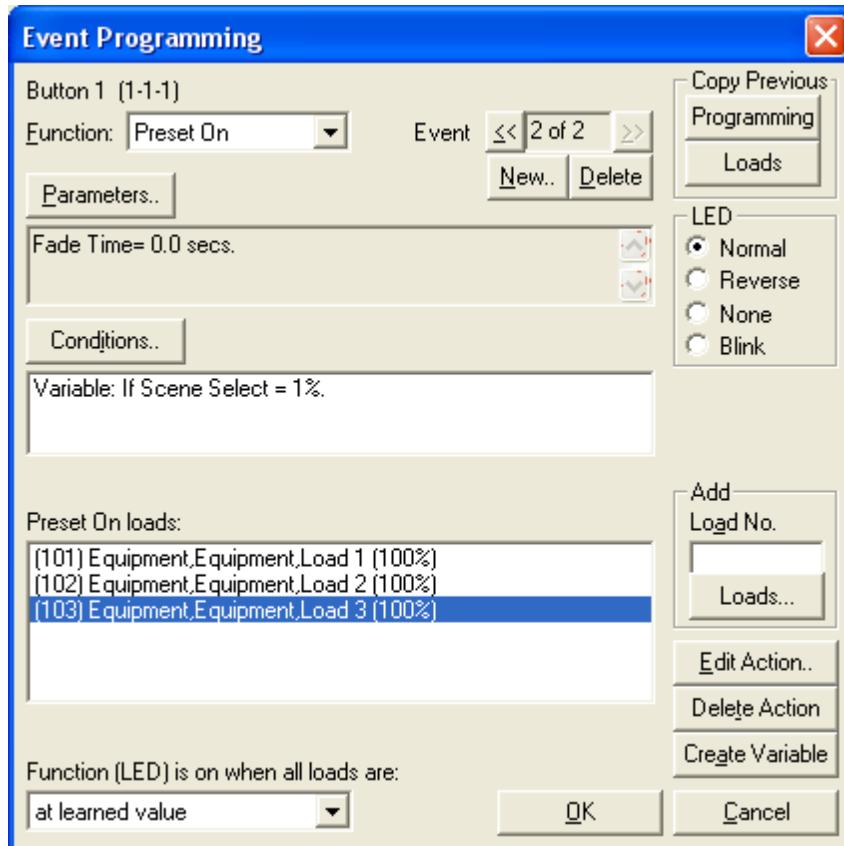
The Set Load Level dialog box opens.



**Figure 28:** The Set Load Level dialog box.

Ensure that the **load** is set to **100 percent**, and then click **OK**.

The Event Programming dialog box should now appear as follows:



**Figure 29:** The Event Programming dialog box displaying the completed Event 5.

To Program Event 3:

Under **Event** in the **Event Programming** dialog box, click **New**.

Click the **Function** dropdown list, and then select **Preset On**.

The Fade/Learn dialog box opens.

Change the **Fade Time** to 0, and then click **OK**.

Click **Conditions**.

The Conditions dialog box opens.

Click **Variable**.

The Variable Condition dialog box opens.

Click the **Variable** dropdown list, and then select **Scene Select**.

Change the **Level** to **2 percent**, and then click **OK** twice to close the **Variable Condition** and **Conditions** dialog boxes.

Variable Condition dialog box closes.

Click **Load**.

The Select Loads & Variables dialog box opens.

Ensure that all **three loads** are visible under **Room 1**.

Move the **mouse pointer** to the **right** of the three **loads**.

Click and drag to **select all three loads**, and then click **OK**.

The Set Load Level dialog box opens.

Ensure that the **load level** is set to **100 percent**, and then click **OK**.

The Event Programming dialog box opens.

Under **Preset On loads**, select **Load 1**, and then click **Edit Action**.

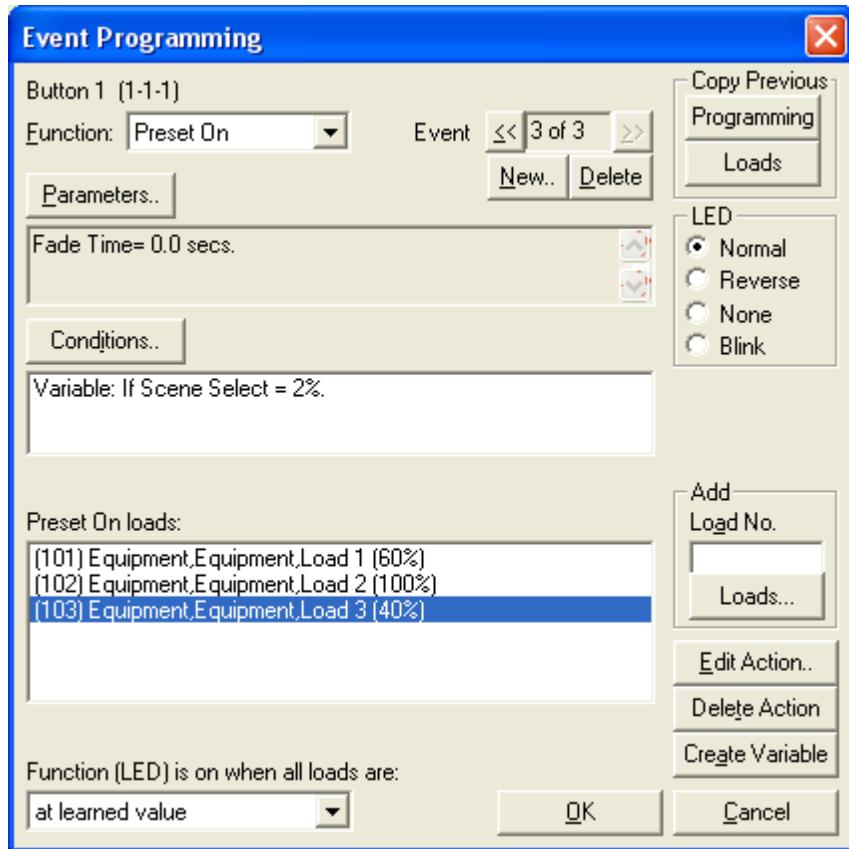
The Set Load Level dialog box opens.

Change the **load level** to **60 percent**, and then click **OK**.

Select **Load 3**, and then click **Edit Action**.

Change the **load level** to **40 percent**, and then click **OK**.

The Event Programming dialog box should now appear as follows:



**Figure 30:** The Event Programming dialog box displaying the completed Event 3.

To Program Event 4:

Under **Event** in the **Event Programming** dialog box, click **New**.

Click the **Function** dropdown list, and then select **Preset On**.

The Fade/Learn dialog box opens.

Change the **Fade Time** to 0, and then click **OK**.

Click **Conditions**.

The **Conditions** dialog box opens.

Click **Variable**.

The **Variable Condition** dialog box opens.

Click the **Variable** dropdown list, and then select **Scene Select**.

Change the **Level** to **3 percent**, and then click **OK** twice to close the **Variable Condition** and **Conditions** dialog boxes.

The Event Programming dialog box opens.

Click **Load**.

The **Select Loads & Variables** dialog box opens.

Ensure that all **three loads** are **visible** under **Room 1**.

Move the **mouse pointer** to the **right** of the three **loads**.

Click and drag to **select all three loads**, and then click **OK**.

The **Set Load Level** dialog box opens.

Ensure that the **load** is set to **100 percent**, and then click **OK**.

The Event Programming dialog box opens.

Under **Preset On loads**, select **Load 1**, and then click **Edit Action**.

The **Set Load Level** dialog box opens.

Change the **load level** to **30 percent**, and then click **OK**.

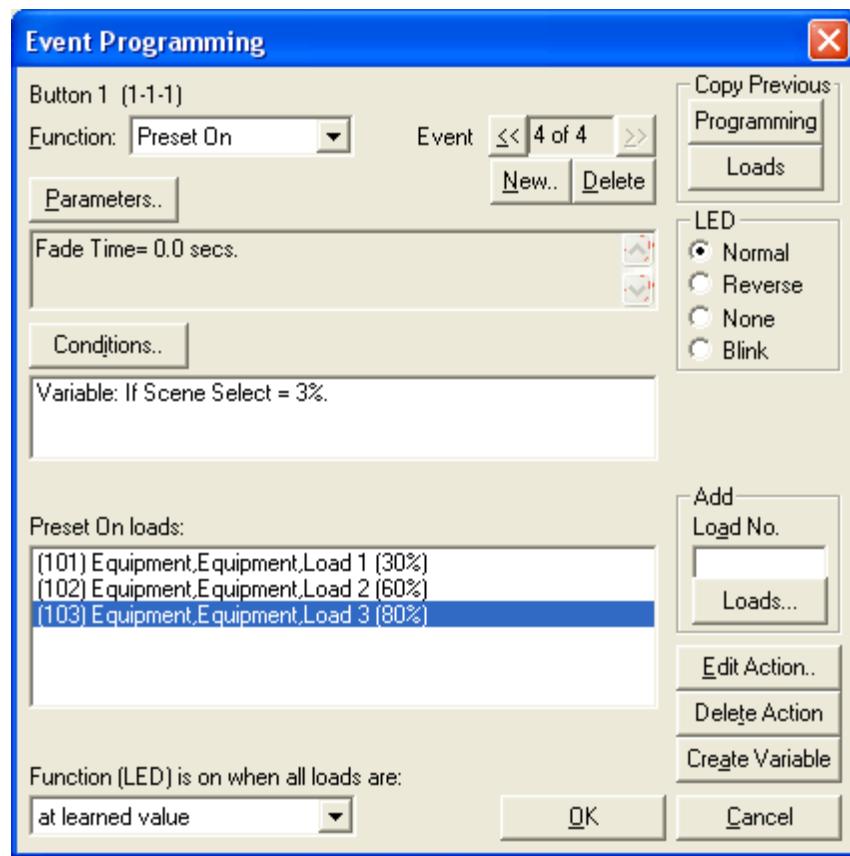
Select **Load 2**, and then click **Edit Action**.

Change the **load level** to **60 percent**, and then click **OK**.

Select **Load 3**, and then click **Edit Action**.

Change the **load level** to **80 percent**, and then click **OK**.

The Event Programming dialog box should now appear as follows.



**Figure 31:** The Event Programming dialog box displaying the completed Event 4.

To Program Event 5:

Under **Event** in the **Event Programming** dialog box, click **New**.

Click the **Function** dropdown list, and then select **Preset Off**.

The Fade/Learn dialog box opens.

Change the **Fade Time** to **0**, and then click **OK**.

Click **Conditions**.

The Conditions dialog box opens.

Click **Variable**.

The Variable Condition dialog box opens.

Click the **Variable** dropdown list, and then select **Scene Select**.

Change the **Comparison** to **>=**.

Change the **Level** to **4 percent**, and then click **OK** twice to close the **Variable Condition** and **Conditions** dialog boxes.

The Event Programming dialog box opens.

Click **Load**.

The Select Loads & Variables dialog box opens.

Ensure that all **three loads** are **visible** under **Room 1**.

Move the **mouse pointer** to the **right** of the three **loads**.

Click and drag to **select all three loads**, and then click **OK**.

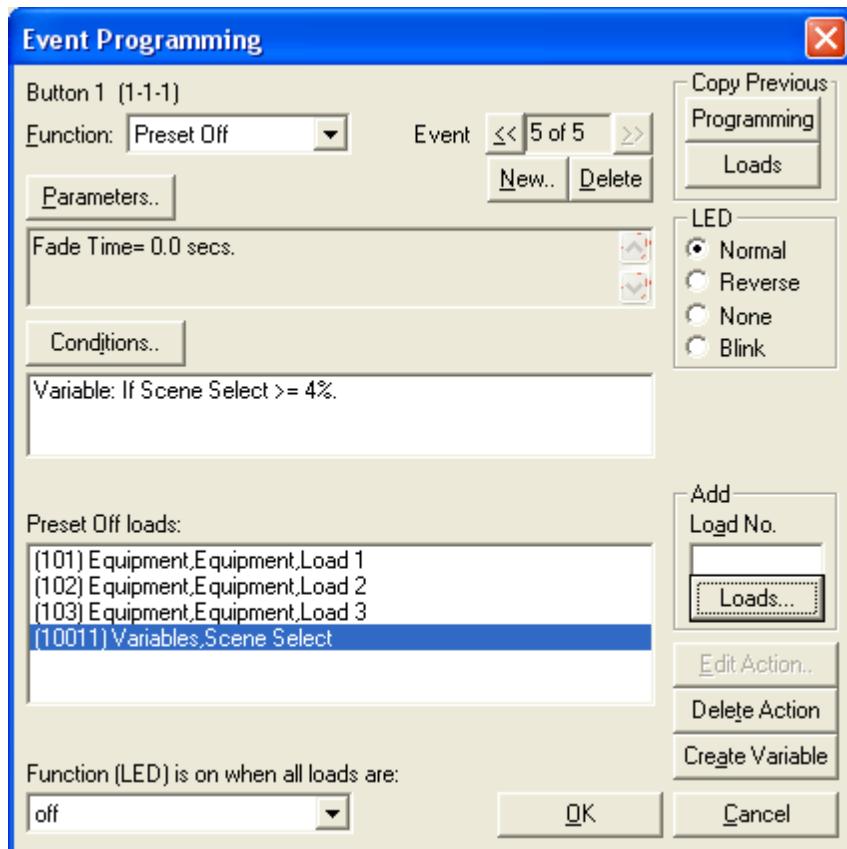
The Event Programming dialog box opens.

Click **Variable**.

The Select Loads & Variables dialog box opens.

Expand **Variables**, select **Scene Select**, and then click **OK**.

The Event Programming dialog box should now appear as follows.



**Figure 32:** The Event Programming dialog box displaying the completed Event 5.

Click **OK** to close the **Event Programming** dialog box.

The event programming is now complete.

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## Serial Communications and V-Commands

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RS-232 and RS-485 ports are serial communications ports. On personal computers these are often referred to as COM ports. There are multiple ports available in a Vantage system. The RS-232 port on the front of a Master Controller is a programming port. It serves as a communication path between the Vantage system and a personal computer using the serial port on the computer and a serial cable. This is called the Diagnostic port and is used to program the Vantage system.

Additional RS-232 ports may be found on the Master Terminal Board or on the top and back of C-Box Masters. Using these or an RS-232 Station connected to the station bus or an RF RS-232 (RadioLink) station allow external communication devices, such as modems or 3rd party serial communication enabled devices to communicate with the Vantage System.

The RS-485 Station is connected to the system via the Station Bus. RS-232 and RS-485 Stations count as 2 stations each towards the 50 total stations allowed on a single Master Controller.

The main purpose for Serial Communication ports is to allow a flexible connection to and from the Vantage System for devices using the RS-232 or RS-485 protocol, such as audio/video systems, security systems, touch screens, etc. These serial ports may be programmed to talk directly to 3rd party device's, and third party devices may talk to Vantage through the use of V-commands or String Controls.

RS-232 and RS-485 communication works two ways with the Vantage system. It provides for receiving or sending serial commands. To send a serial string to a 3rd party device, program the button using the Serial Out function. In the Serial Out function parameters box make sure to select the proper Master Port, RS-232 or RS-485 station for the serial string. When programming a 3rd party device use the V-Commands to send strings to the Vantage System, or setup String Controls to receive specific 3rd party strings.

Switch (VOS), LED (VOD) and Load Changes (VOL) are now persistent after a reset of a system. Each Serial Port (On a Master or Station) now have the option to enable reporting. So when the system is reset, it is no longer necessary to re-send the V-Commands.

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## Creating an RS-232 or RS-485 Station

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If communication is to be done through an RS-232 or RS-485 station, the first phase is to create and prepare the station to communicate with a Serial device.

To Create an **RS-232 Station**:

With the "example" project open.

Select **Room 1**.

On the **Add** menu, trace to **Station**, and then click **RS-232**.

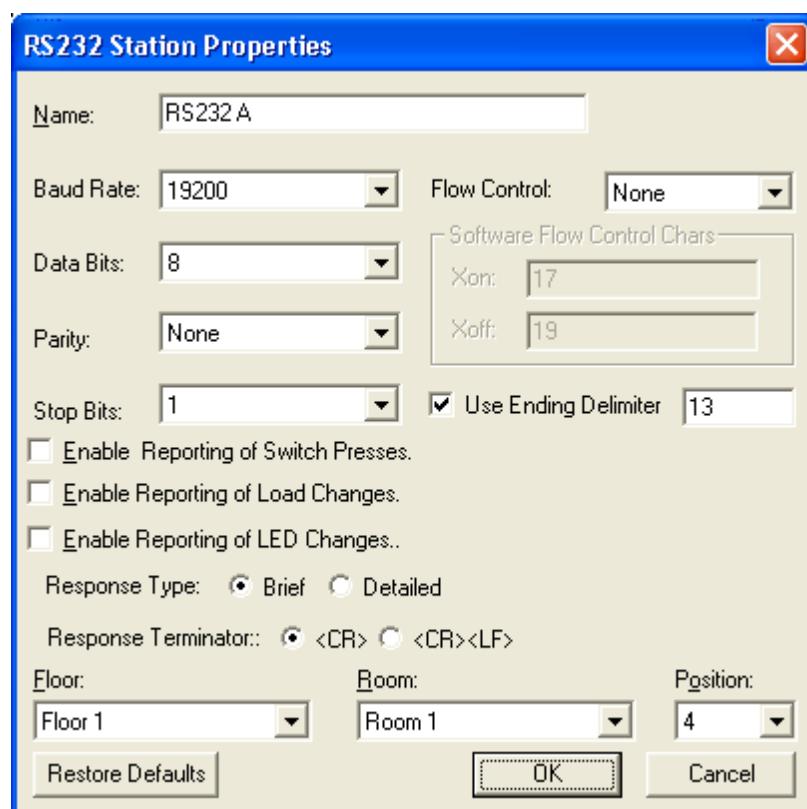
-or-

With **Room 1** selected, press the **F9** key.

-or

Right-click **Room 1**, trace to **Add Station**, and then click **RS-232**

The RS-232 Station dialog box opens.



**Figure 1:** The RS-232 Station dialog box.

The check box **Use Ending Delimiter 13**, is for **outgoing** RS-232 strings.

The radio buttons for **Response Terminator**: is for **incoming** RS-232 Strings.

**Note:**

- Enable Reporting of Switch Presses.** (Automatically enables VOS responses)
- Enable Reporting of Load Changes.** (Automatically enables VOL responses)
- Enable Reporting of LED Changes.** (Automatically enables VOD responses)
- Response Type:** **Brief/Detailed** (Automatically sets responses to regular or detailed)
- Response Terminator:** <CR>/<CR><LF> (Automatically sets the response terminator)
- (With these settings the traditional method of having the connecting equipment send the appropriate V-Commands is eliminated.)

To Create an **RS-485 Station**:

With the "example" project open.

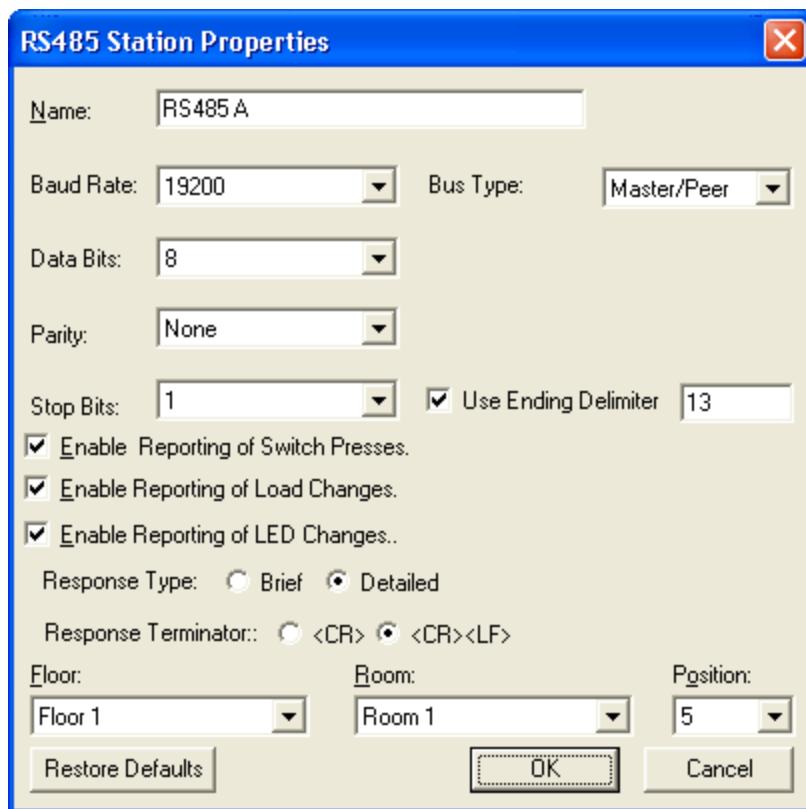
Select **Room 1**.

On the **Add** menu, trace to **Station**, and then click **RS-485**.

-or

Right-click **Room 1**, trace to **Add Station**, and then click **RS-485**

The RS-485 Station dialog box opens.

**Figure 2:** The RS-485 Station dialog box.

The check box **Use Ending Delimiter 13**, is for **outgoing** RS-485 strings.

The radio buttons for **Response Terminator**: is for **incoming** RS-485 Strings.

**Note:**

- Enable Reporting of Switch Presses.** (Automatically enables VOS responses)
- Enable Reporting of Load Changes.** (Automatically enables VOL responses)

**Enable Reporting of LED Changes.** (Automatically enables VOD responses)

**Response Type:** Brief/Detailed (Automatically sets responses to regular or detailed)

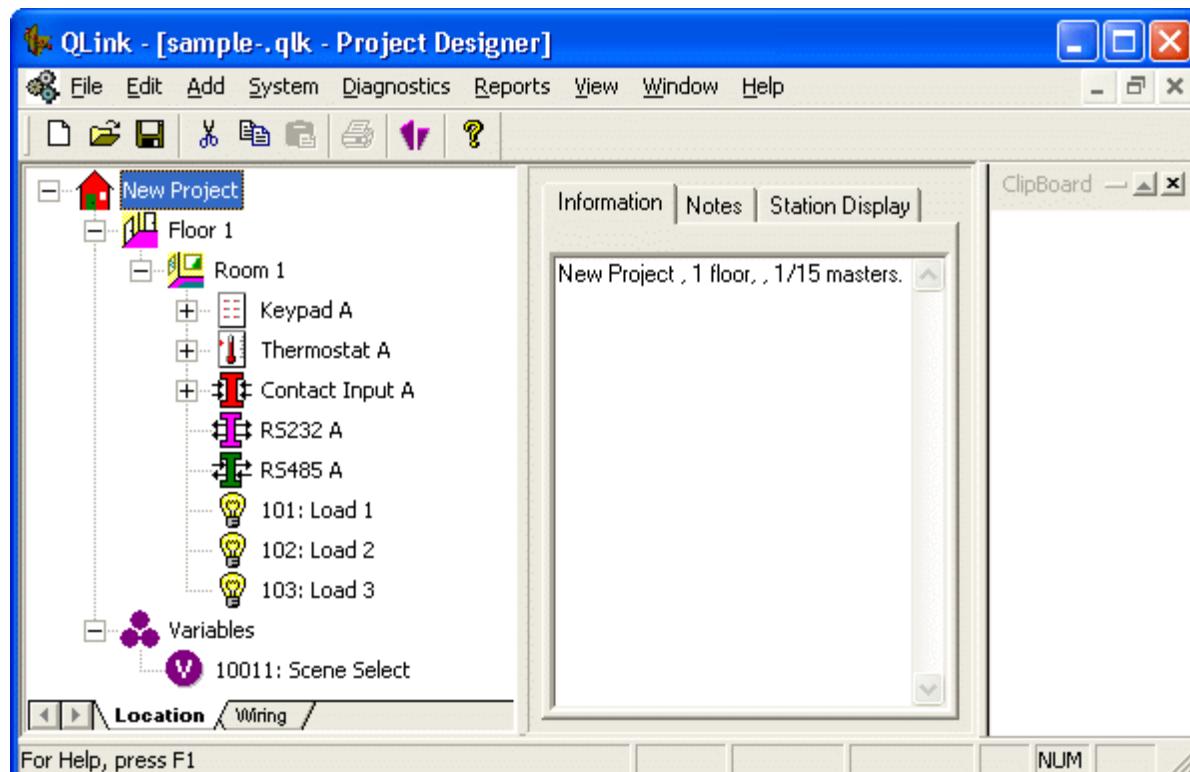
**Response Terminator:** <CR>/<CR><LF> (Automatically sets the response terminator)

(With these settings the traditional method of having the connecting equipment send the appropriate V-Commands is eliminated.)

Give the **station** a **name**.

Click **OK**.

The "example" program changes to the following:



**Figure 3:** The "example" project after adding an RS-232 and RS-485 station.

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## Selecting a Station Device Component

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The second phase is to select a station device component, such as a keypad button, and program the button to send V-commands to communicate with another Vantage system, or send third party strings to communicate with third party equipment.

To Select a Station Device:

In the "example", expand **Keypad A**

Add an additional button from the keypad properties dialog.

and then select **Button 1**.

On the **Edit** menu, click **Program**.

-or-

With **Button 1** selected, press **Ctrl+W**.

-or-

Right-click **Button 1**, and then click **Program**.

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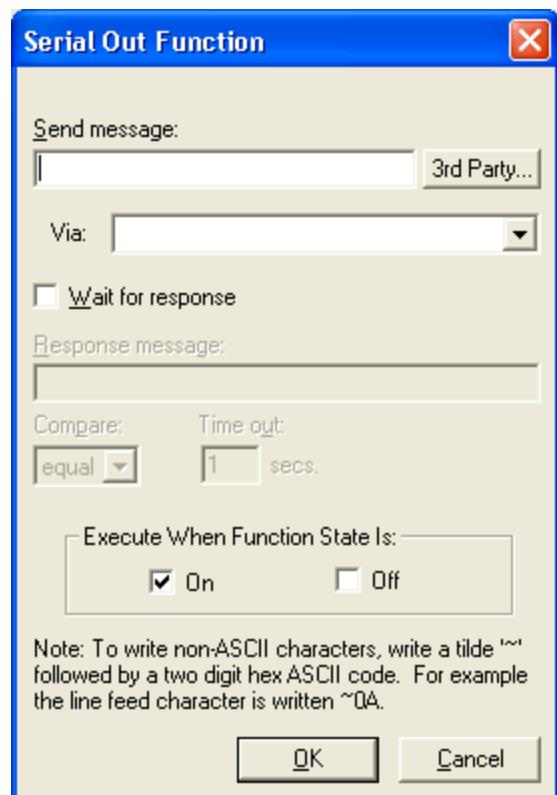
## Programming the Station Device Component

The final phase is to program the keypad button so that it can be used to execute any desired options or V-commands.

To Program the Button:

Click the **Function** dropdown list, and then select **Serial Out**.

The Serial Out Function dialog box opens.



**Figure 4:** The Serial Out Function dialog box.

**Note:** See *Serial Out Function* in *Appendix C: Serial Out Serial Communications* for a description of the available options and a list of V-Commands. A Serial Out function using a V-Command is used to talk to a separate Vantage System.

Specify the desired **options** and **commands** in the **Serial Out Function** dialog box.

Select the appropriate **device** for sending commands, this will either be through a **Master** or an **RS-232 Station**.

Click **OK**.

**Save** the project.

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## LCD 320M Programming

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A Vantage LCD (liquid crystal display) station is capable of displaying hardware information and associated command or control options in graphical form through the use of bitmap images. These are available in the form of programmable buttons, arrows, and rectangles that contain or represent commands such as On, Off, Up, Down, Next, or Previous. In addition, clipart images are available for enhancing touchscreen displays.

LCD screens are designed in pages. Each LCD station may contain up to 250 pages making it a highly flexible, powerful, and visual station. A total of 250 objects are possible on each LCD Touch Screen. An object is any Program button, Status Button - excluding Time/Date status buttons and/or Sliders. Bitmaps and Navigation buttons *do not* count towards the 250 objects. Bitmap images are limited to 160 x 80 pixels for model 161M or 320 x 240 pixels for model 320M. Anything larger will not display correctly. The default properties for the LCD Touchscreen may be viewed and edited from the Edit menu.

To Create an LCD 320M Station:

With the "example" project open.

Select **Room 1**.

On the **Add** menu, trace to **Station**, and then click **LCD Touchscreens** and select **LCD 320M**.

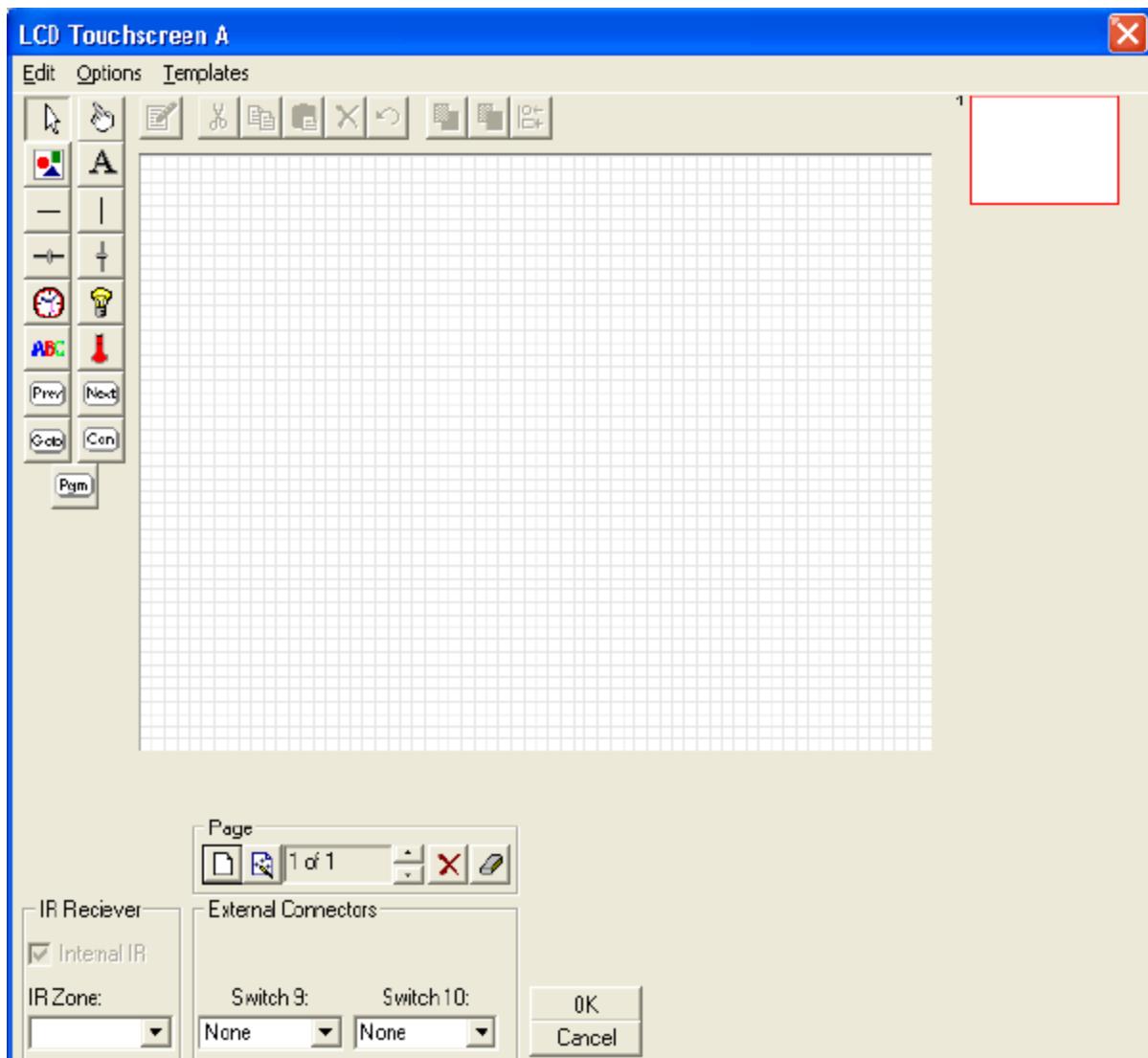
-or-

With **Room 1** selected, press the **F3** key.

-or-

Right-click **Room 1**, trace to **Add Station**, and then click **LCD Touchscreens** and select **LCD 320M**.

The LCD 320 Station dialog box opens.



**Figure 1:** The 320M LCD Touchscreen dialog box.

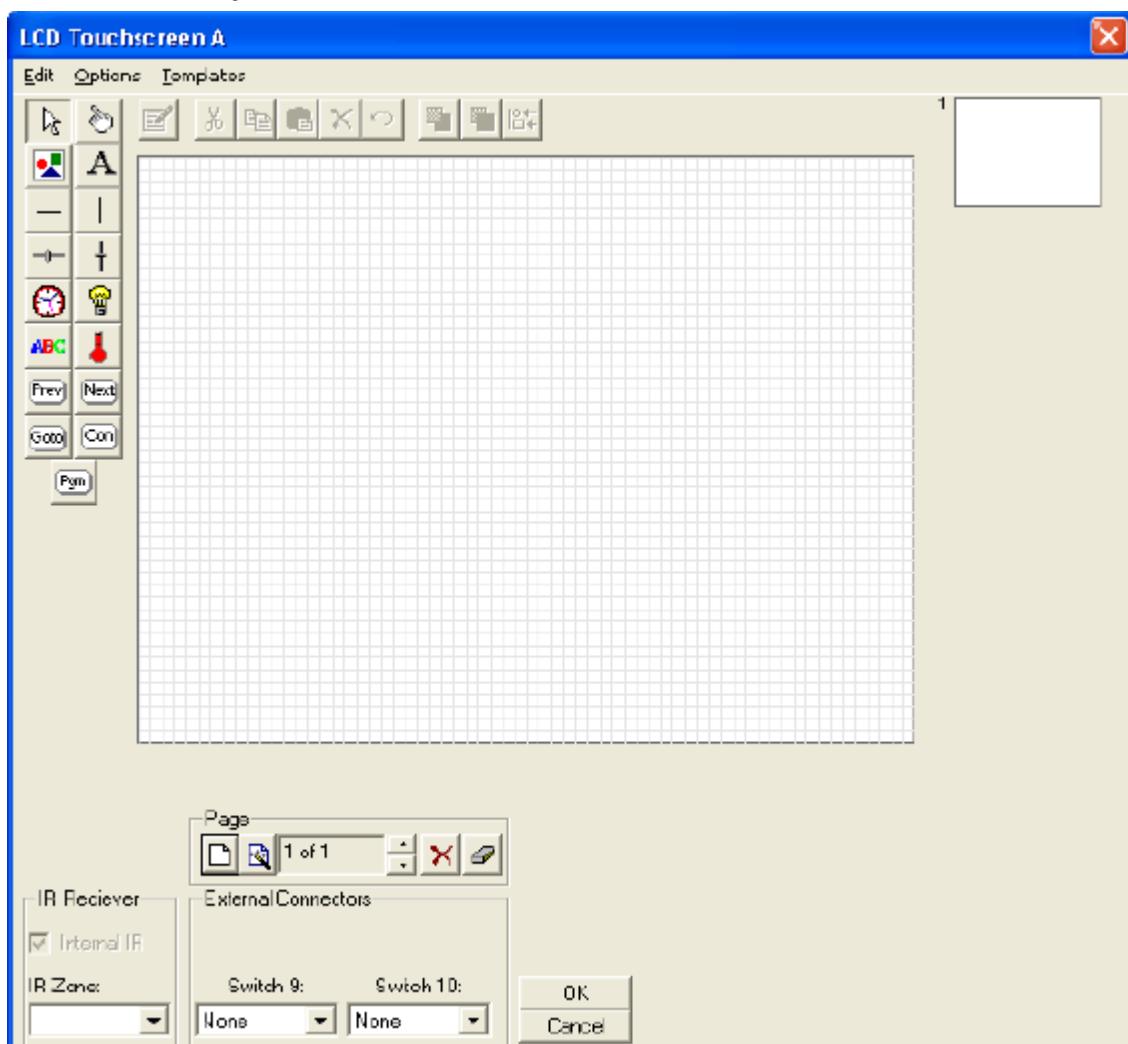
Before proceeding, see [LCD Touchscreen](#) in Appendix A: *Station Definitions* for an explanation of the dialog box items. Using the mouse, trace over the toolbars in the LCD Touchscreen dialog box. A tool tip (a small text box) will appear with a brief description of each item.

Each LCD Touchscreen toolbar object has its own properties box. Once a toolbar object is created, right-click the object to see its properties. The properties dialog boxes also allow for a number of additional options such as cut, copy, and pasting, alignment and spacing of objects, normal, expanded, and thumbnail views, and the displaying of an alignment grid and the option to align objects to grid lines.

The drag or drag and drop method is frequently used in positioning and sizing objects in the LCD Touchscreen design area. The procedure requires the user to click the object or object-sizing handle and while keeping the left mouse button depressed, drag in the desired direction, and then release. Creating an object usually requires the user to first anchor the starting point at the upper left corner of the design area by clicking on a spot with the left mouse button and while keeping the mouse button depressed, dragging diagonally (i.e. from the upper left corner towards the lower right corner). Objects can be resized to fill any part of the LCD Touchscreen design area.

## LCD 320M TouchScreen Overview

LCD TouchScreen dialog box.



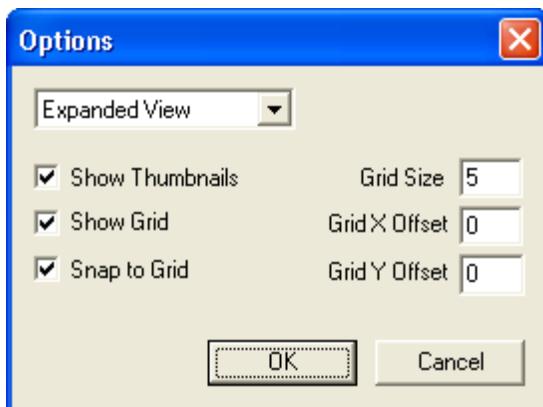
**Figure 2:** The 320M LCD Touchscreen dialog box.

### Edit

- |                   |   |
|-------------------|---|
| LCD Properties    | See LCD <a href="#">TouchScreen Properties</a> .  |
| Replicate Station | Allows you to select a station already defined on your Vantage System and copy that station's buttons onto the current page. Note: These buttons will be switch pointers to the buttons on the station that was selected. The text that is displayed on the button face will be the first line of the engraving (Text Line 1) and not the name of the button. |

### Options

- |                |   |
|----------------|---|
| Dialog Options | View, Thumbnails, Grid, Snap Grid, and etc. |
|----------------|---|



**Figure 3:** The 320M LCD Edit Options dialog box.

#### Update Firmware

When online, the LCD Touch Screen Firmware can be updated. To verify the firmware update process press Ctrl+u and check the box next to Enable Verify, then click Update Firmware. Using Enable Verify will take longer to update the firmware.

#### **Templates**

##### Insert

Retrieve a Template into the current Design.

##### Save

Save the current LCD Page or all Pages to a template file.

#### **Tools (top)**

##### Edit

Edit the selected object.

##### Cut

Cut objects in the layout. The most recent item cut may be pasted back to any page.

##### Copy

Copy an object. The most recent copied item may be pasted back to any page.

##### Paste

After you cut or copy an object you can paste it. If you copy an item and paste it back to the same page it will be placed directly on top of the original object (drag it to a new position on the LCD page).

##### Delete

Deletes the selected item. Deleted items are not placed on the clipboard. Select Undo to restore the deleted item.

##### Undo

Undoes the last creation, deletion, object move or size.

##### Bring to Front

Move the selected object(s) to the front of the other objects on the page.

##### Send to Back

Move the selected object(s) to the back of the other objects on the page.

##### Align

Opens the Alignment/Size Dialog window to align, space and size the selected objects.

#### **Tools (left side)**

##### Select items

Allows you to move, edit, the LCD display settings.

##### Test Mode

When selected, the functionality of the designed pages can be verified. If online the program buttons and sliders will also execute their functions.

##### Place Bitmap

Add a bitmap to the Layout.

##### Place Text

Add custom text to the layout.

##### Horizontal Line

Add a horizontal line to the layout.

##### Vertical Line

Add a vertical line to the layout.

##### Horizontal Slider

Add a horizontal sliding bar that can raise/lower a load or load variable. There are four styles of sliders available.

##### Vertical Slider

Add a vertical slider to the layout.

##### Status Buttons

Add a DATE, LOAD, STRING or TEMPERATURE status object.

##### Previous Button

Allows you to navigate to the previous page.

##### Next Button

Allows you to navigate to the next page.

##### Goto Button

Allows you to navigation (jump) to any page on the LCD.

##### Contrast Button

Allows you to edit the contrast of the LCD. Note: This page is factory defined and not viewable except on the LCD. This page is actually added as the screens are downloaded to the LCD Station.

##### Program Button

Add a programmable button. A bitmap can be used to indicate LED status.

**Position**

<b>First Number</b>	Number of pixels from the left edge of screen
<b>Second Number</b>	Number of pixels from the top edge of screen
<b>Third Number</b>	Width of the selected object
<b>Forth Number</b>	Height of the selected object

**Page**

<b>New</b>	Create a new page.
<b>Page Wizard</b>	Creates multiple pages with automatic navigation buttons, i.e., Prev., Next, GoTo.
<b>Up/Down Arrows</b>	Navigate forward and backward through the existing LCD Pages.
<b>Delete</b>	Deletes the current LCD Page.
<b>Clear</b>	Removes all objects from the current LCD Page.

**IR Receiver**

<b>Internal IR</b>	Current release of the LCD 320M has a built-in IR receiver.
<b>IR Zone</b>	Select a valid IR Zone. IR Zones must be created in the wiring view of the Project Designer Window.

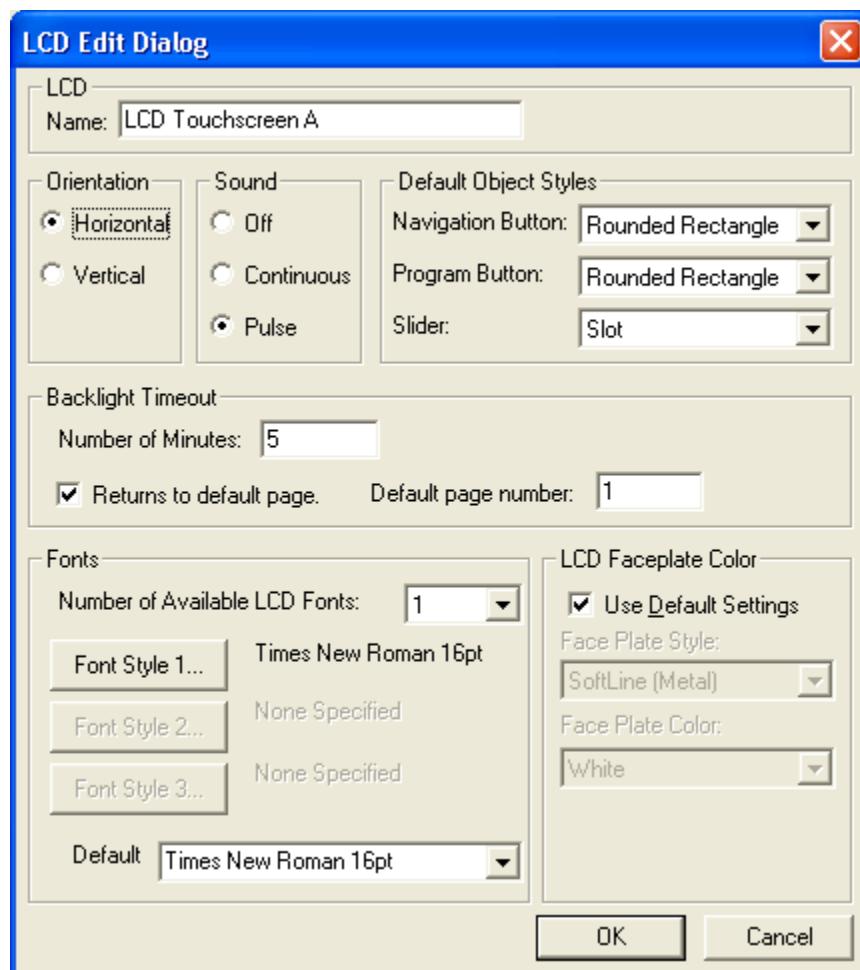
**External Connectors**

<b>Switch 9</b>	Auxiliary connection on back of LCD screen may be set to NONE, BUTTON, REMOTE IR RECEIVER or DRY CONTACT.
<b>Switch 10</b>	Auxiliary connection on back of LCD screen may be set to NONE, BUTTON, LIGHTPOINT SENSOR or DRY CONTACT.

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## LCD 320M TouchScreen Properties

The Properties Dialog Box is shown below:



**Figure 4:** The 320M LCD Edit Dialog box.

#### Properties

**LCD Orientation** - The LCD display can be positioned two ways:

Horizontal	Landscape
Vertical	Portrait

#### LCD Sound

Off	No sound when a button is pressed.
Continuous	Constant sound while button or slider is pressed.
Pulse	Short tone each time button or slider is pressed.

#### Default Object Styles

<b>Navigation Button</b>	Select the default Navigation Button style (rectangle, ellipse, etc.)
<b>Program Button</b>	Select the default Program Button style (rectangle, ellipse, etc.)
<b>Slider</b>	Select the default Slider style (slot, fill, rectangle, etc.)

#### LCD Backlight Timeout

<b>Number of minutes</b>	Number of minutes the backlight will stay lit after a button is pressed.
<b>Default Page Number</b>	This option defines which page is the default page.
<b>Returns to default page</b>	If this box is checked the default page will be displayed after the backlight times out.

#### LCD Faceplate Color

<b>Use Default Settings</b>	When the box is checked it uses the default settings you have selected under System   Defaults.
-----------------------------	---

- Or** Allows you to select a faceplate style and from a list of available colors when the Default option is not checked.

### LCD Fonts

- |                            |  |
|----------------------------|--|
| <b>Number of LCD Fonts</b> | The number of different fonts that will be used for the LCD Station. The maximum number of fonts is three. |
| <b>Font Style 1/2/3</b>    | This allows selection of the font style and size for each of the three fonts on the LCD screen.            |
| <b>Default Font</b>        | This is the font that is always used unless specifically set by the user.                                  |

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## Text Boxes

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Text boxes contain any text messages that are necessary to accompany an image, button, or status field.

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## Creating a Text Box

---

The LCD Touchscreen allows text to be aligned bottom left, bottom middle, bottom right, centered, middle left, middle right, top left, top middle, and top right. Additionally different be chosen and selected from the LCD Properties dialog.

To Create a Text Box:



On the LCD Touchscreen toolbar click the Place Text button.

Move the mouse pointer onto the design area.

The mouse pointer changes to a cross hair.

Click **once** to place the **text box** in the desired location in the **design area**.

-or-

Position the mouse pointer at the upper left corner of the text box.

Click and hold the **left mouse button**, and then drag the **text box** diagonally to change its **default size**.

Release the **mouse button**.

The text box is now resized and placed in the design area.

---

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## Editing Text Box Text

When a text box is first created, only the word "Text" appears in the box as a place marker.

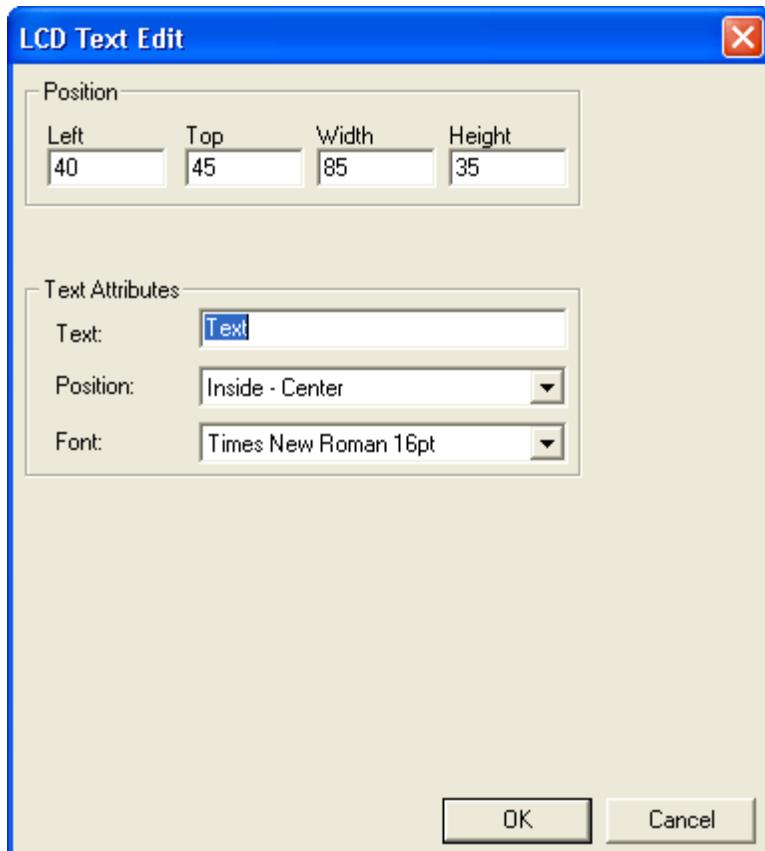
To Edit the Text in a Text Box:

In the **design area**, double-click the **text box**.

-or-

Right-click the **text box**, and then click **Properties**.

The LCD Text Edit dialog box opens.



**Figure 5:** The LCD Text Edit dialog box.

**Note:** Text box measurements are in pixels. The text box's position in the design area can be changed by changing any of the values in the object Position boxes.

Under **Text Attributes**, click in the **Text** box to edit the text.

Under **Text Attributes**, click in the **Position** box to select a predefined position.

-or-

Under **Position**, specify a value for **Left**, **Top**, **Width**, and **Height**.

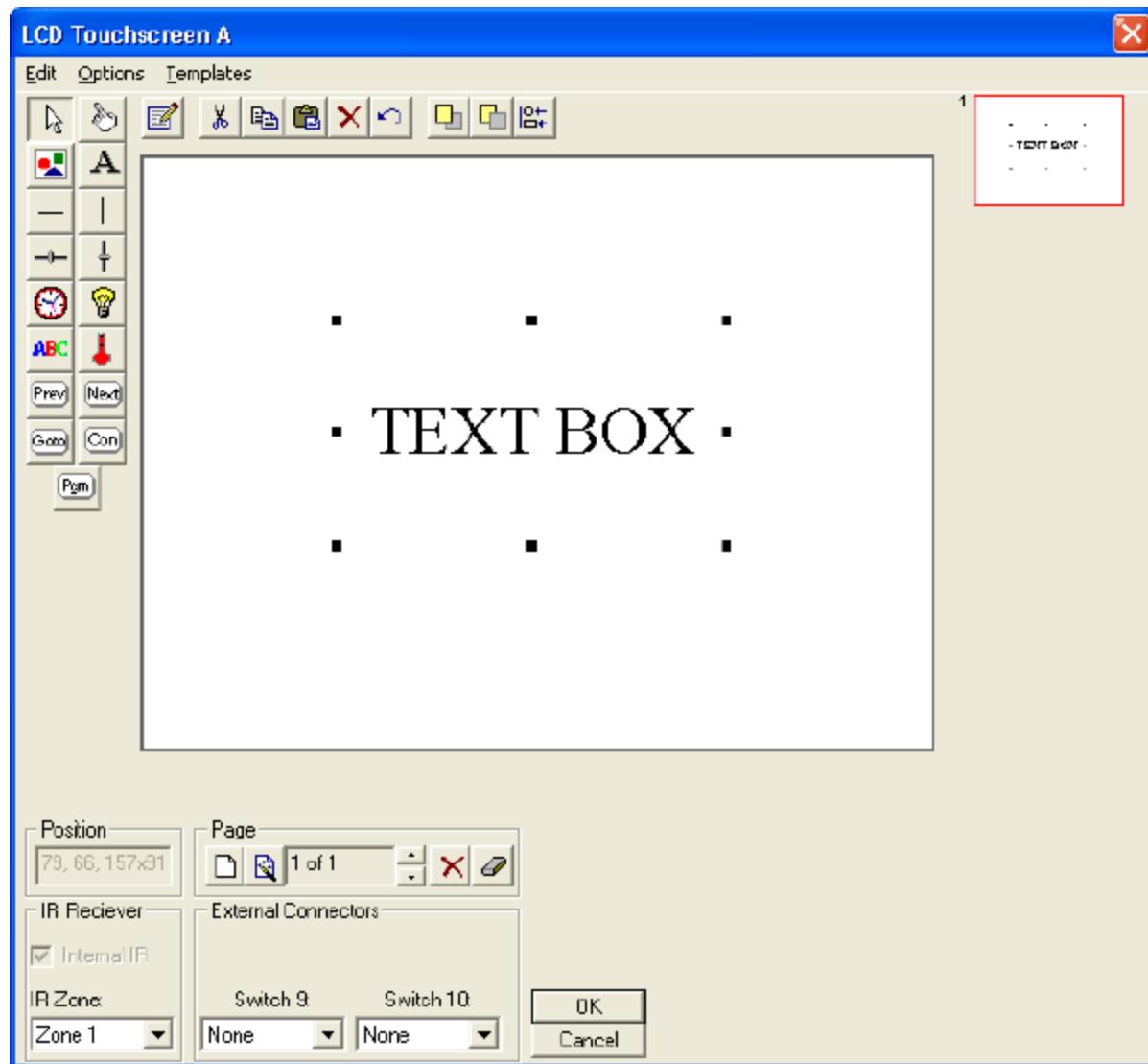
Click **OK**.

Click on a blank area in the design area to deselect the text box.

## Moving a Text Box

A text box may be moved to any location in the design area.

To Move a Text Box:



**Figure 6:** The LCD Text dialog box selected.

Select the **text box**.

Eight sizing handles will outline the text box. These appear as small black rectangles.

Click and **hold** in the **middle** of the **text box**.

Drag the text box to its new location.

Release the **mouse button**.

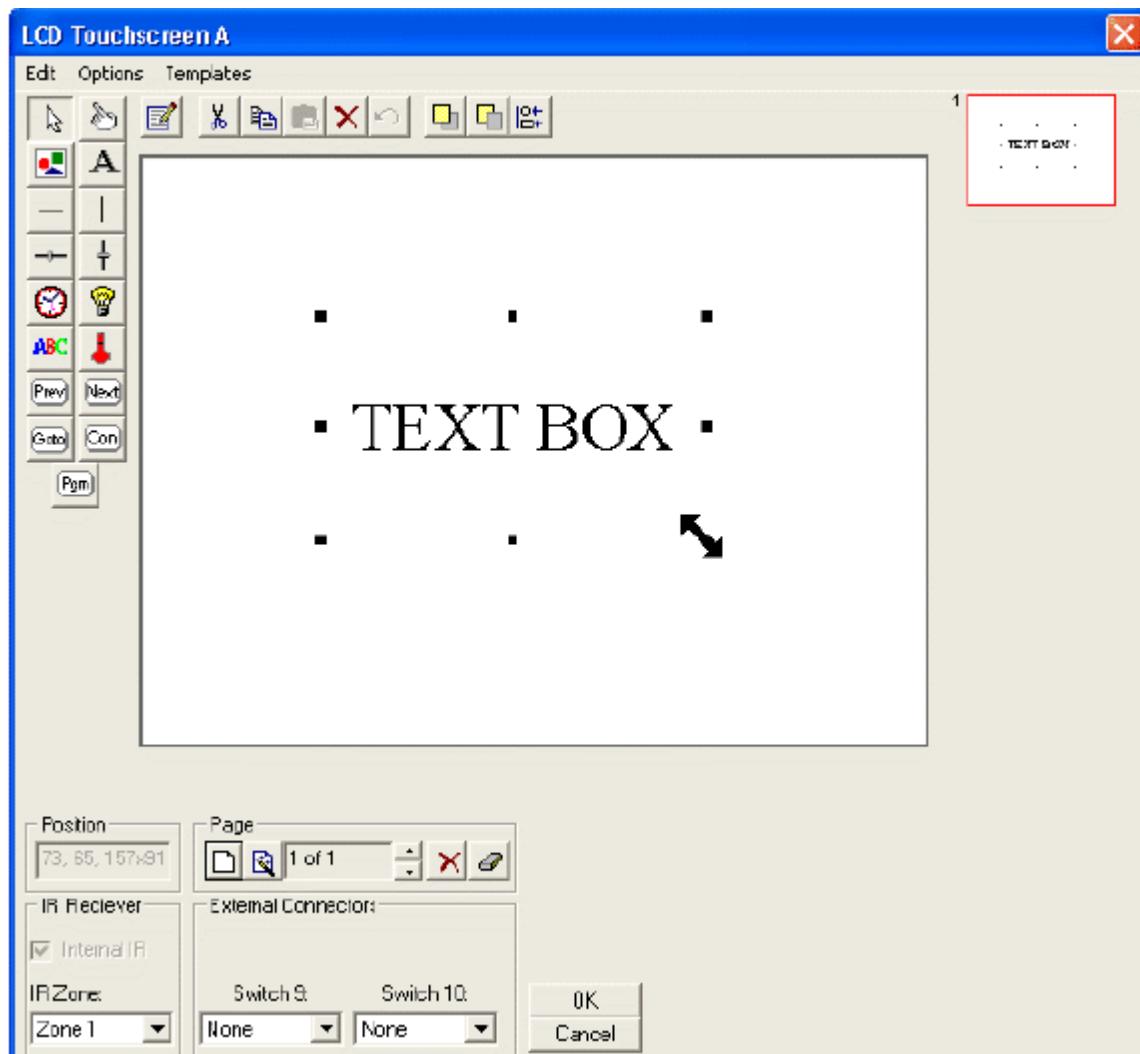
The text box is now relocated to its new location.

## Sizing a Text Box

A text box can be sized to fill any part of or the entire design area. It can be sized using the drag method or from the LCD Text Edit dialog box.

NOTE: Sizing a text box only changes the border size not the size of the text.

To Size a Text Box Using the Drag Method:



**Figure 7:** The LCD Text dialog box selected for sizing.

Select the **text box**.

Eight sizing handles will outline the text box.

Move the mouse pointer over each sizing handle.

Notice that the pointer becomes a double-headed arrow, pointing in a horizontal, vertical, or diagonal direction depending upon which sizing handle comes in contact with the mouse pointer.

Select a sizing handle, and then drag the handle in the corresponding direction.

Dragging inward reduces the size; dragging outward enlarges the size.

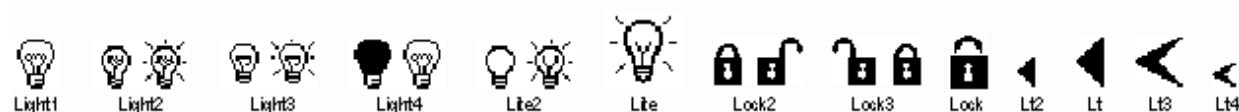
Click on a blank area in the design area to deselect the text box.

The text box is now resized.

## Bitmaps

---

A bitmap refers to a graphic image. It may be a button, horizontal or vertical line, cartoon character, etc. The LCD Touchscreen will accommodate a bitmap of 160 x 80 pixels for model 161M or 320 x 240 pixels for model 320M. Anything larger will not display correctly.



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## Placing a Bitmap

---

Bitmap images can be sized and placed anywhere within the LCD Touchscreen design area.

To Place a Bitmap Image:



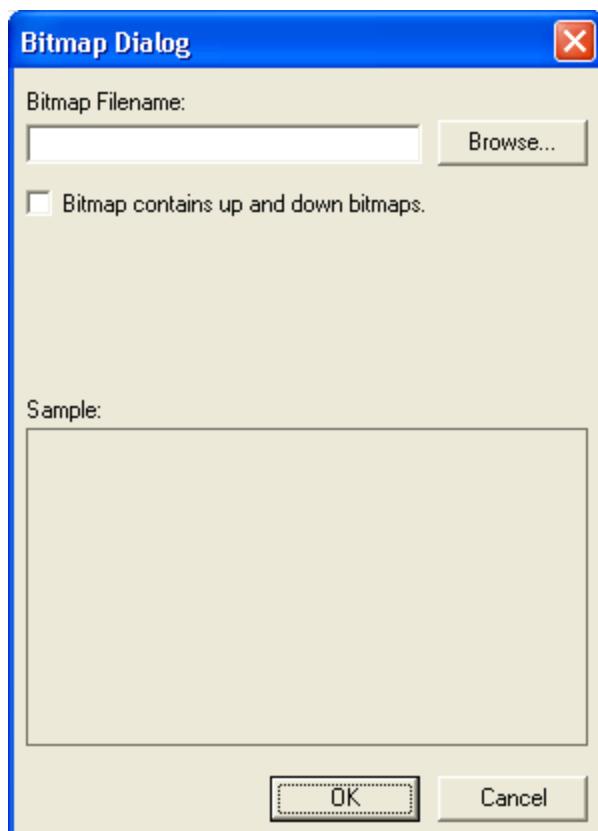
On the **LCD Touchscreen** toolbar click the **Place Bitmap** button.

Move the mouse pointer onto the design area.

The mouse pointer changes to a crosshair.

Click **once**

The Bitmap Dialog box opens.



**Figure 8:** The Bitmap dialog box.

Click **Browse**.

The Open dialog box opens.

Select a **bitmap** image.

Click **Open**.

The bitmap image is placed in the Bitmap Dialog box

Click **OK**.

The bitmap is placed in the current LCD Touchscreen design area.

Click and drag the **image** to the desired **location**, and then release the **mouse button**.  
The selected image may be sized by dragging any of the eight sizing handles.

---

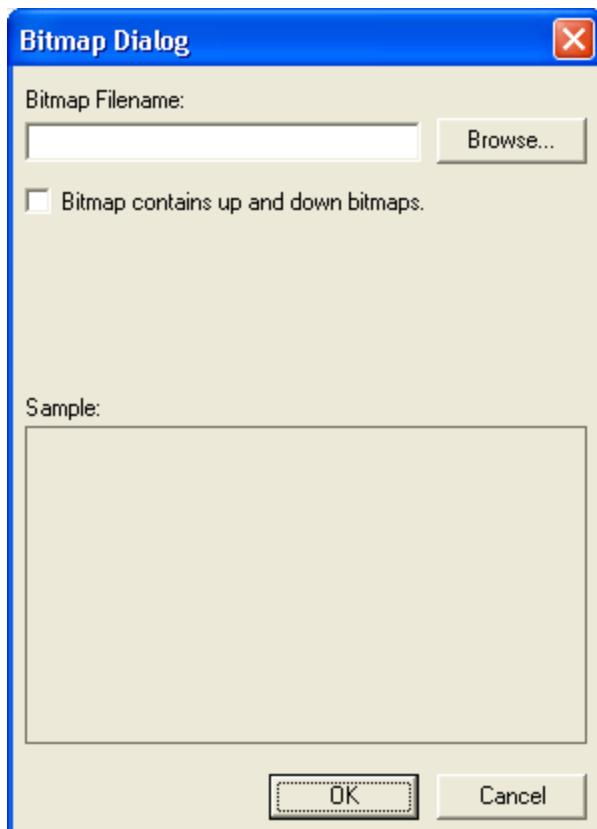
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## Editing a Bitmap Box

---

To Edit the bitmap object:

In the **design area**, double-click the **bitmap object box**.  
-or-  
Right-click the **bitmap box**, and then click **Properties**.  
The LCD Bitmap Dialog box opens.



**Figure 9:** The LCD Bitmap Dialog box.

Click **Browse** to change the bitmap image.  
The Open dialog box opens.  
Select a new **bitmap** image.  
Click **OK**.  
The new bitmap is placed in the current LCD Touchscreen design area.

---

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[assistant](#)

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## Moving a Bitmap Box

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Click and drag the **image** to the desired **location**, and then release the **mouse button**.

---

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## Sizing a Bitmap Box

---

Select the **text box**.

Eight sizing handles will outline the text box.

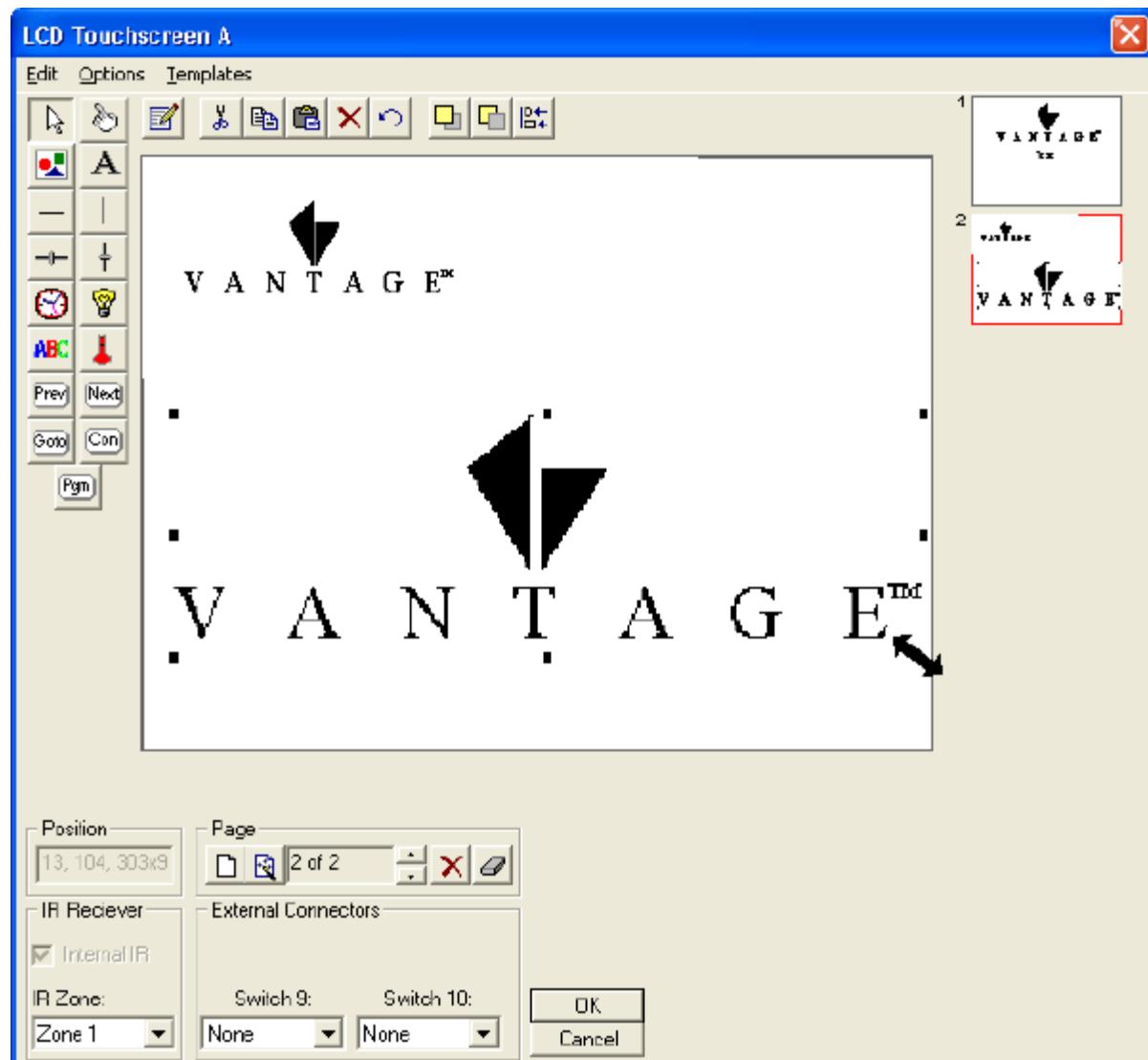
Move the mouse pointer over each sizing handle.

Notice that the pointer becomes a double-headed arrow, pointing in a horizontal, vertical, or diagonal direction depending upon which sizing handle comes in contact with the mouse pointer.

Select a sizing handle, and then drag the handle in the corresponding direction.

Dragging inward reduces the size; dragging outward enlarges the size.

Click on a blank area in the design area to deselect the bitmap box.



**Figure 10:** The LCD Bitmap Dialog box.

The bitmap box is now resized.

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## Placing Lines

---

Horizontal and vertical lines may be placed anywhere in the design area.

To Place a Line:



On the **toolbar** click the **horizontal** or a **vertical line** button.

Move the mouse pointer onto the design area.

The mouse pointer changes to a crosshair.

Place the crosshair at the starting point.

Click and hold the **left mouse button**, drag in the **appropriate direction**, and then release.

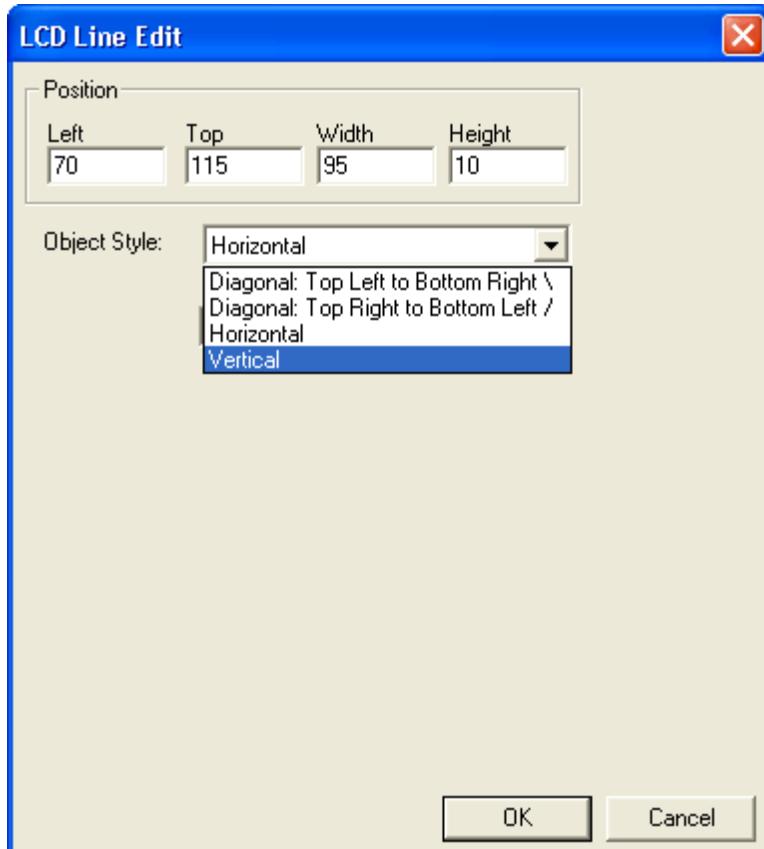
Lines may also be set to **Diagonal** lines.

To change the line to a diagonal line double click on the line

-or-

Right-click the **line** and then click **Properties**.

The LCD Line Edit dialog box opens. Select the Object Style pull down list for the line type.



**Figure 11:** The LCD320M Line Edit dialog box.

**Note**, the vertical and horizontal position may be changed in this box. **Width** will effectively change the length of horizontal lines. **Height** will effectively change the length of vertical lines. **Width** and **Height** will effectively change the length and angle of diagonal

lines.

Change as needed. Click **OK** to close the dialog box when finished.

---

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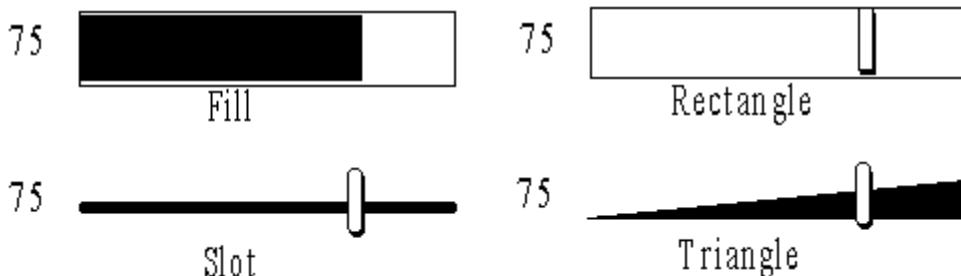
## LCD Sliders

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LCD Sliders allow you to set load levels by sliding the bar to the level of intensity you desire. The four available sliders are illustrated below.

**Object Style**

Four options are provided for the slider style - Fill, Rectangle, Slot, and Triangle.



**Program**

Brings up the standard Event Programming Dialog to add the loads that are controlled.

**Vertical Slider**

Change a horizontal slider to a vertical slider and visa versa.

**Draw Inc./Dec. buttons**

**Not supported in the current version.** Increment/decrement buttons are displayed

**Value Position**

Displays or hides the value of the slider. The position of the value is relative to the slider.

---

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## Placing Sliders

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A slider is a fader control that can increase or decrease a load's intensity.

To Place a Slider:



On the **toolbar** click the **horizontal** or a **vertical slider**.

Move the **mouse** onto the **design area**.

The mouse pointer changes to a crosshair.

Select a starting point.

Click and drag to an **ending point**.

Release the **mouse button**.

---

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## Programming Sliders

Slider controls can be programmed and assigned to control load values.

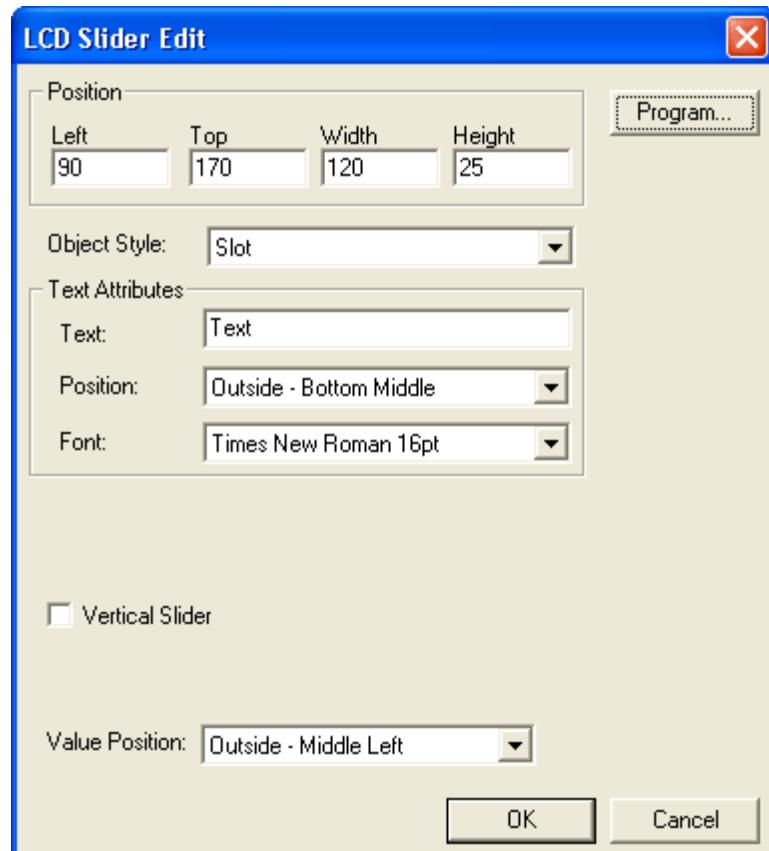
To Program a Slider:

Double-click the **slider** to program.

-or-

Right-click the **slider**, and then click **Properties**.

The LCD Slider Edit dialog box opens.



**Figure 12:** The LCD Slider Edit dialog box.

Four styles of sliders are available: Fill, Rectangle, Slot, and Triangle. To change the style, click the Object Style dropdown list and select the desired style.

Click **Program**.

The Event Programming dialog box opens.

Click **Load**.

The Select Loads & Variables dialog box opens.

Expand the **room** that contains the **load(s)**, and then select the **load(s)**. The level or percentage of the load should be set to 100%.

Click **OK**.

Click **OK**.

-or-

Select an **additional load**, and then click **OK**.

Click **OK** to close the **Event Programming** dialog box.

Click **OK** to close the **LCD Slider Edit** dialog box.

## Placing a Status Field

A stat (status) field places the date and time, Load Level, String Variable or Thermostat data, on the display.

To Place a Status Field:

On the **LCD Touchscreen** toolbar click one of the **Stat** buttons.



Move the mouse pointer onto the design area.

The mouse pointer changes to a crosshair.

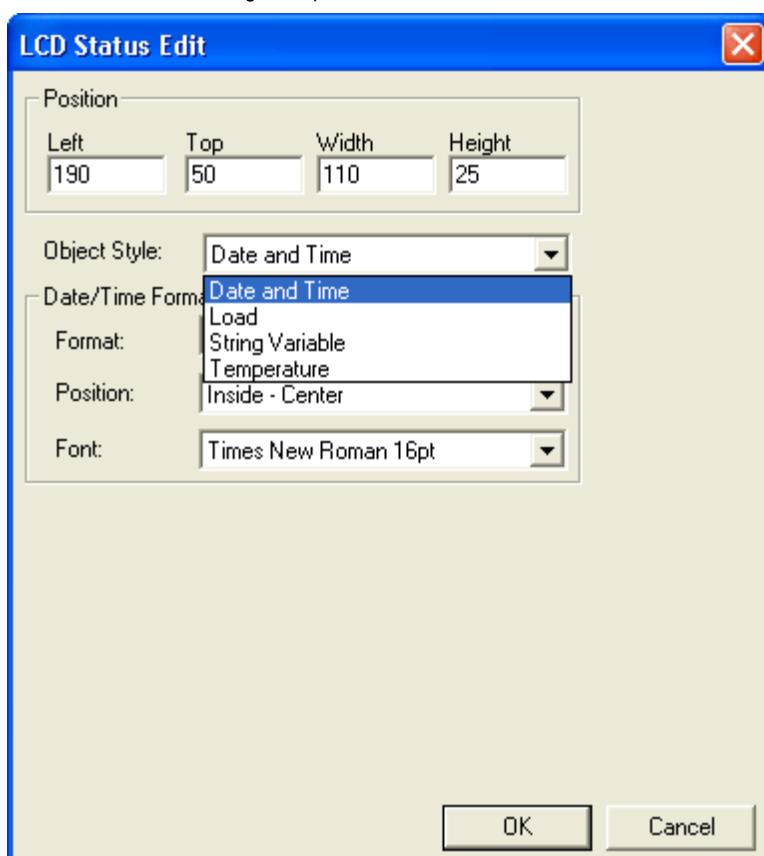
Select a starting point.

Click and drag to an **ending point**.

Release the **mouse button**.

Right-click the new status button, and then click **Properties**.

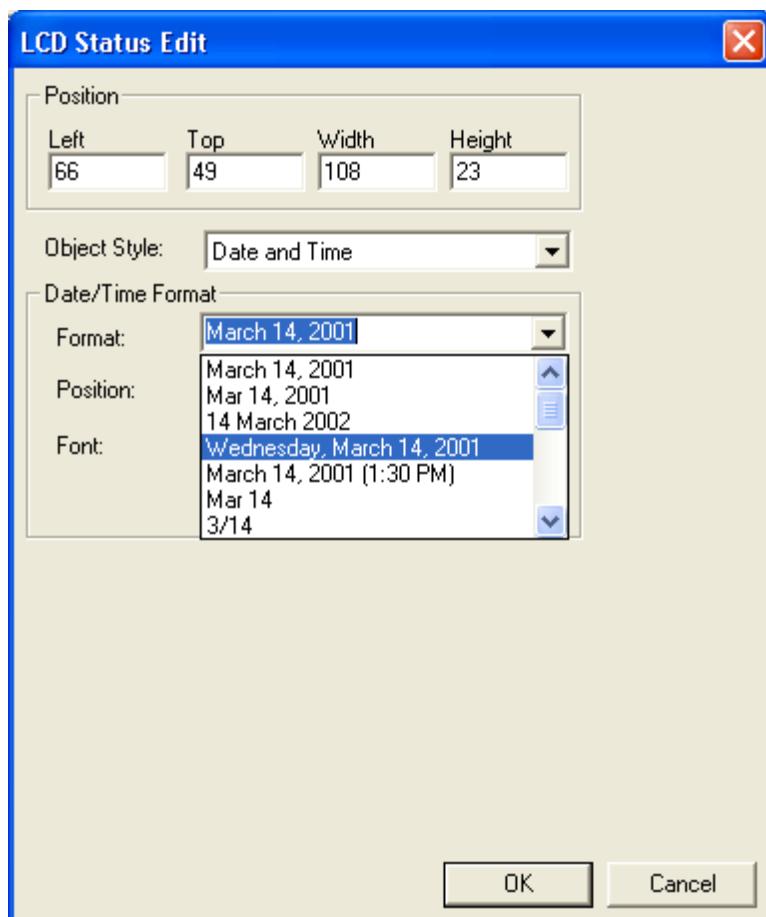
The LCD Status Edit dialog box opens.



**Figure 13:** The LCD Status Edit dialog box.

**Note:** To change the type of status information, choose Object Style and select from Date and Time, Load, String Variable or Temperature. Be sure to select the date format, Load, String Variable or Thermostat depending on the Object Style selected. Temperature statuses include, Cool Set Point, Heat Set Point, Indoor Sensor and Outdoor Sensor.

When the Date and Time object style is selected a drop down list of date formats is available to choose from. Choose the desired format and click OK to close the LCD Status Edit window.



**Figure 14:** The LCD Status Edit dialog box showing Date formats.

Another way to enter Date and Time formats is to type the actual % codes in the Date/Time Format | Format box.

#### Date/Time Formatting:

%a	Abbreviated weekday name
%A	Full weekday name
%b	Abbreviated month name
%B	Full month name
%d	Day of the month as a decimal number (01-31)
%H	Hour in 24-hour format (00-23)
%I	Hour in 12-hour format (01-12)
%m	Month as a decimal number (01-12)
%M	Minute as a decimal number (00-59)
%p	Current locale's AM/PM indicator for a 12-hour clock
%S	Second as a decimal number (00-59)
%w	Weekday as a decimal number (0-6; Sunday is 0)
%y	Year without the century as a decimal number (00-99)
%Y	Year with the century as a decimal number
%%	Percent sign

Basically this allows you do display date/time in any format you can conceive of. Some useful examples:

For a 12:59:59 PM	- %I:%M:%S %p
For September 29, 1997	- %B %d, %Y
For 11/21/97	- %m/%d/%y
For Monday	- %A

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## Placing Buttons

Previous (Prev), Next, GoTo, Contrast (Con), and Program (Pgm) buttons may be placed in the design area. A program button is the only button that can be programmed for dual operation. For Example, a Program button may turn lights on and navigate to a new page on the LCD with the same button press.

To Place a Button in the Design Area:



On the **LCD Touchscreen** toolbar click the **desired** button.

Move the mouse pointer onto the design area.

The mouse pointer changes to a crosshair.

Select a starting point.

Click and drag to an **ending point**.

Release the **mouse button**.

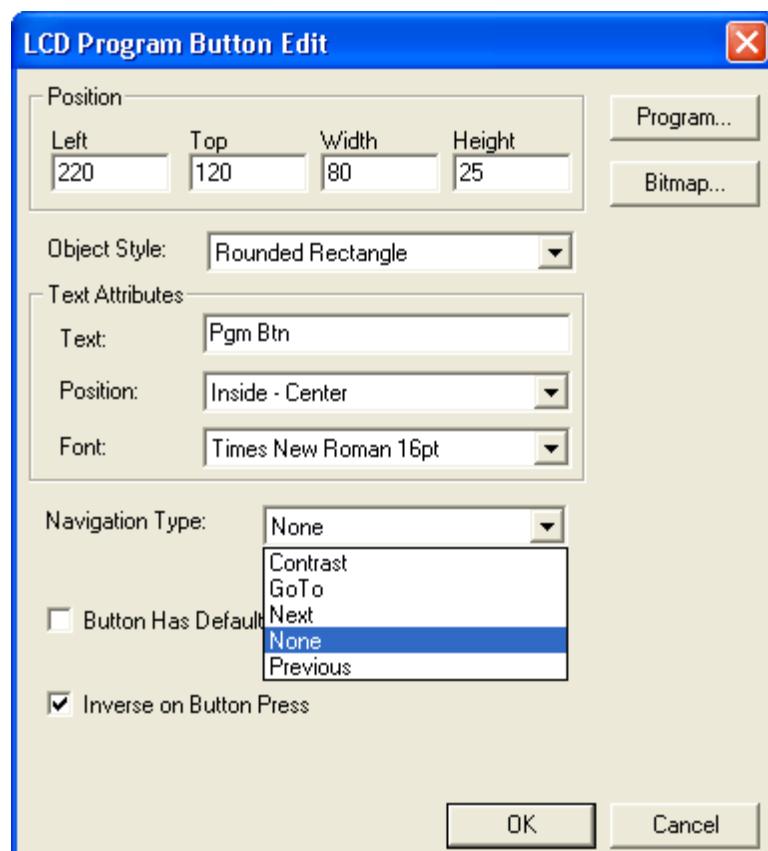
Once the button has been added:

Double Click the button

-or-

Right Click the button and select **Properties**.

The LCD Program Button Edit dialog is opened.



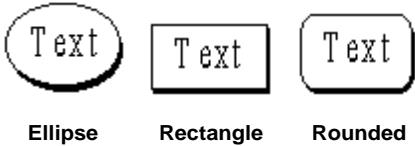
**Figure 15:** The LCD Program Button Edit dialog

### Position

These boxes indicate the position/size of the navigation button. By changing the numbers in these boxes the button can be resized and/or moved. **Top** is the distance

from the top of the display. **Left** is the distance from the left etc.

<b>Object Style</b>	Four options are provided for the button outline – Ellipse (Circle or Oval), Rounded Rectangle, Rectangle and None for no outline.
---------------------	--



#### Text Attributes

<b>Text</b>	Text is displayed on the button.
<b>Position</b>	The position of the text relative to the button outline.
<b>Font</b>	Which font the text will appear in.

<b>Program</b>	Press to go to the Event Programming window.
----------------	--

<b>Bitmap</b>	Selects which bitmap, if any, will be displayed. Same dialog as the Bitmap Dialog., with one exception – If the bitmap up/down box is checked the left half of the bitmap will be displayed when the button is up, and the right half will be displayed when the button is pressed.
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<b>Navigation Type:</b>	This box allows dual programming. For example the button may be programmed to turn lights on and at the same time navigate to a new page on the LCD Touch Screen.
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<b>Check Box For:</b>	For program buttons indicates if the button should stay depressed. For navigation buttons indicates the type of navigation as well as the page that it navigates to.
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## LCD Program Buttons

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A Program button is identical in function to a keypad button. Edit Program buttons to label them with text and/or bitmaps. Although a Program button can look just like a text or a bitmap object, labeling a Program button with text or a bitmap is different than adding a Text or Bitmap object. Bitmap labels on Program buttons can be used to simulate keypad LEDs.

Select the  button and click in the LCD screen to create. Double click the new button to open the LCD Program button Edit window.

**Figure 15a: The LCD Program Button Edit dialog**

Click the "Program..." button in the upper right side to open the Event Programming window. Program the same as a keypad button and click OK when finished.

Program buttons have the ability to execute an Event Program **and** at the same time Navigate to a new page. To Navigate to a new page simply click the Navigation Type drop down list and select the navigation type wanted.

**Related Topics:** [Placing Buttons](#)  
[Placing Status Field](#)

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## Adding a Bitmap to a Program Button

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Besides text an icon or bitmap may also be placed on the button face.

**Figure 16:** *Bitmap Dialog showing an Up/Down Bitmap*

To add a bitmap to a button face do the following:

- 1) Click on the **Select item** from the tools box
- 2) Double click on the button you would like to add a bitmap to.
- 3) Click on the Bitmap button.
- 4) Type in the path of the bitmap image or select browse to locate the bitmap file.

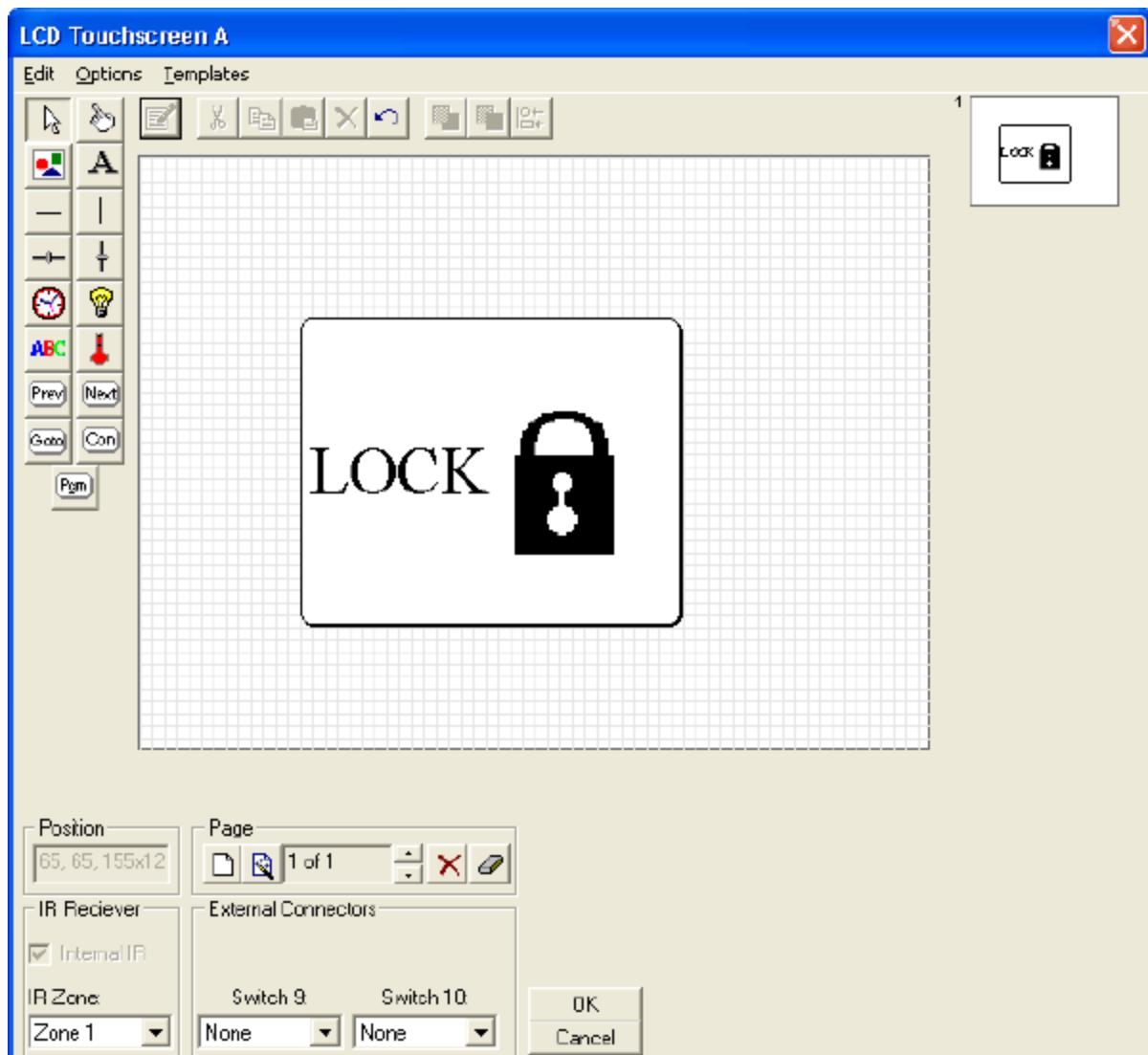
If the image is an up/down image, click on the "Bitmap contains up down bitmaps" box. An up/down image is a bitmap that contains two images side by side. The image on the left will be displayed when the button is not being pressed. The image on the right will be displayed when the button is being pressed.

You also have the option to use the bitmap image as an LED indicator. If you select this option the down image (the right most image in the file) will be displayed when the LED would normally be on. This is usually when any of the loads associated with the even are on.

A sample button using an up/down bitmap is shown below:



Figure 17: LCD TouchScreen dialog showing bitmap open.



**Figure 18:** LCD TouchScreen dialog showing bitmap locked

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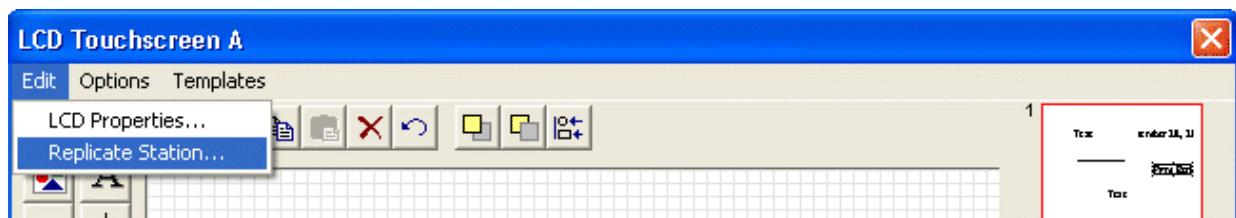
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## Replicate

---

The **Replicate** option is used to replicate buttons from a keypad station and place them in the current LCD Touchscreen. Each button on the LCD then Switch Points to the button on the keypad that was replicated.

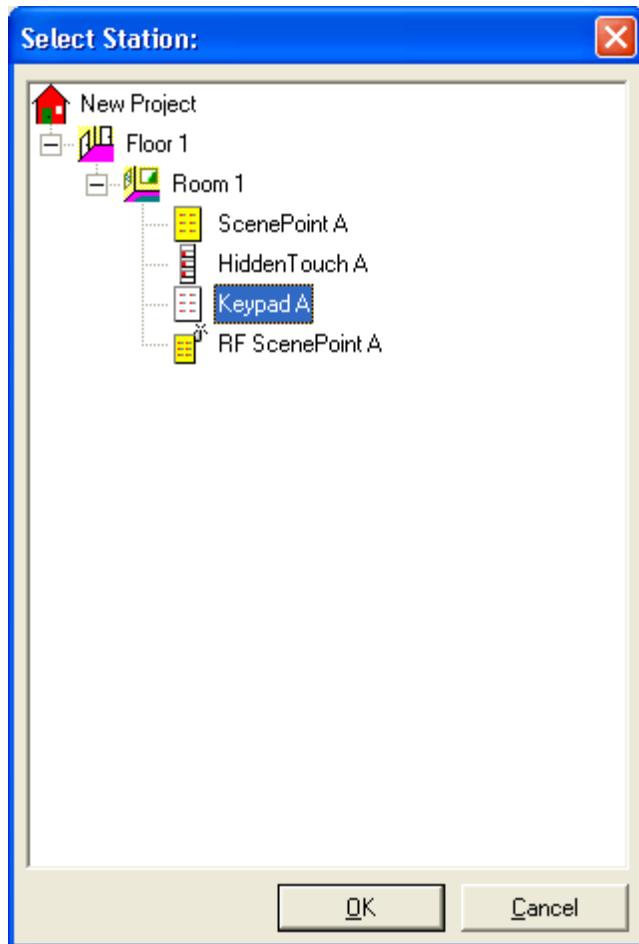
To Replicate Buttons from a Keypad Station:



**Figure 19:** Edit, Replicate Station.

On the Edit menu, click Replicate Station.

The Select Station dialog box opens.



**Figure 19a:** Select Station Dialog box.

Select a **keypad station**, and then click **OK**.

The keypad buttons appear in the current LCD Touchscreen.

The new buttons are Switch Pointers to the replicated stations.

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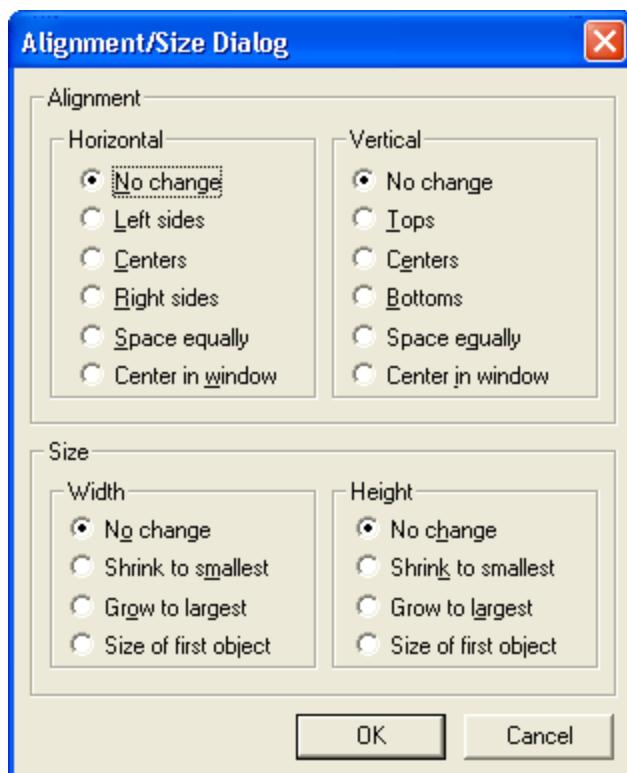
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## LCD Object Alignment

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**Align/Size Dialog box**



**Figure 20:** Alignment/Size Dialog box.

Aligning/Sizing happens to selected objects. Multiple objects on separate pages can be selected (Shift+Click to select multiple objects) and then sized and aligned so that they are all the same size and position.

#### Alignment Horizontal and/or Vertical

- |                               |   |
|-------------------------------|---|
| <b>No Change</b>              | Do not move the Horizontal/Vertical alignment from its current position.  |
| <b>Left Sides or Tops</b>     | Line up the left sides or Top sides of the selected objects based upon the first object selected.                     |
| <b>Centers</b>                | Line up the centers of the selected objects based upon the first object selected.                                     |
| <b>Right Sides or Bottoms</b> | Line up the right sides or Bottom sides of the selected objects based upon the first object selected.                 |
| <b>Space Equally</b>          | Makes the spacing - vertical or horizontal - between objects the same. Note this only works on three or more objects. |
| <b>Center in window</b>       | Takes the selected object/group and centers it in the window Horizontally, Vertically or both.                        |

#### Size – Width/Height

- |                             |   |
|-----------------------------|---|
| <b>No Change</b>            | Leave the width/height the same.  |
| <b>Shrink to Smallest</b>   | Change all object's width/height to that of the smallest object.                |
| <b>Grow to Largest</b>      | Change all object's width/height to that of the largest object.                 |
| <b>Size to First Object</b> | Change all object's width/height to that of the first object that was selected. |

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## LCD Shortcut Keys

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### Keyboard Shortcuts

- <Enter> - Edit selected object.
- <CTRL> + S - Select Tool

<CTRL> + A - Select All (Current Page)  
 <CTRL> + D - Delete  
 <CTRL> + Z - Undo  
 <CTRL> + X - Cut  
 <CTRL> + C - Copy  
 <CTRL> + V - Paste

Holding the shift key down while selecting allows the user to select multiple objects

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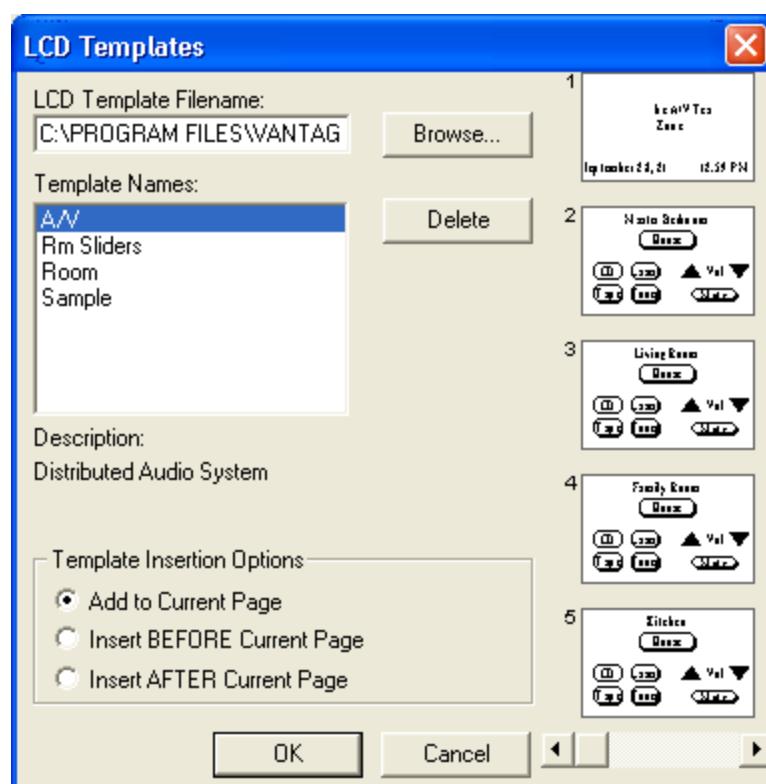
## Templates

Templates are preformatted screens of bitmap images and text boxes that may be used repeatedly. These typically require minimal editing. They are often treated as ready-to-go pages. QLink provides a number of templates for immediate use. These may be edited as needed or can serve as the basis for new templates that can be saved for future use. While formatting is saved, programming is not.

To Add a Template to a Touchscreen:

On the **Templates** menu, click **Insert**.

The LCD Templates dialog box opens.

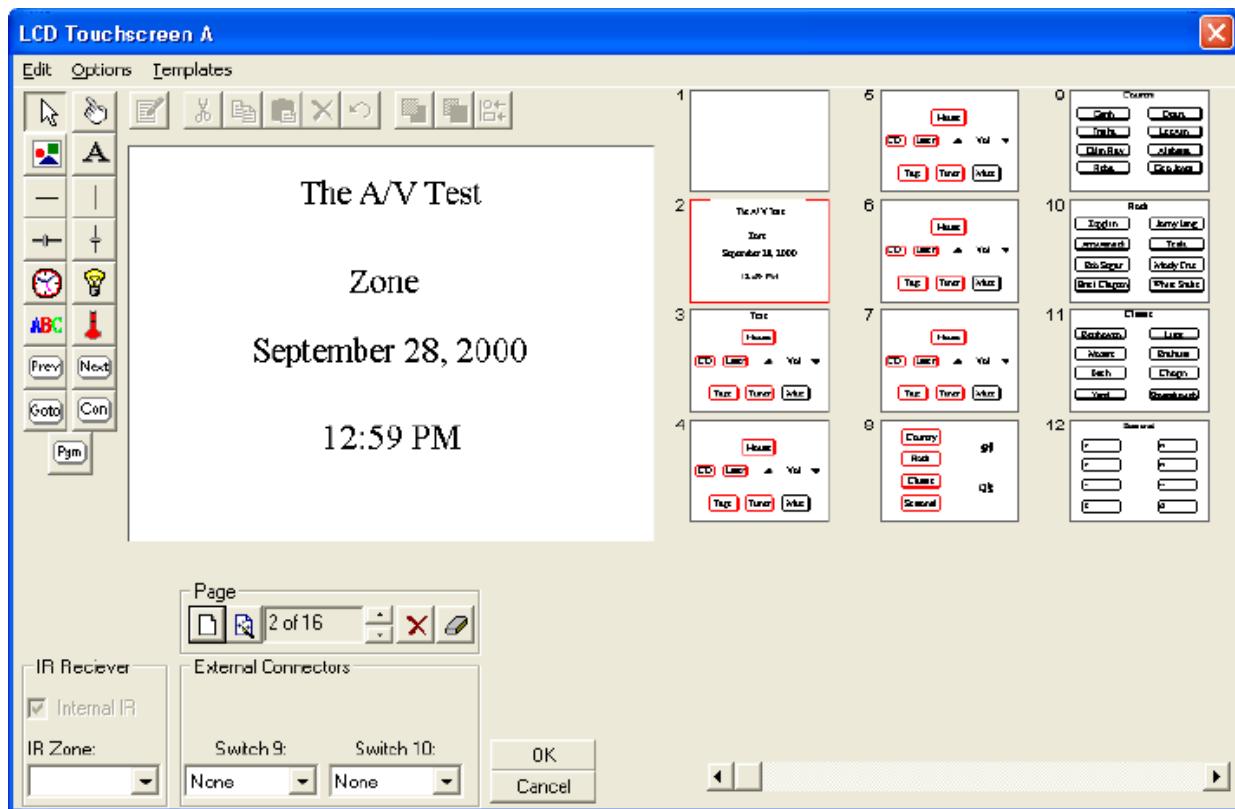


**Figure 21:** The LCD Templates dialog box.

Under **Template Names**, select a category of templates.

Under **Template Insertion Options** ensure that the correct **program button** is selected for the template's **placement**. Click **OK**.

The LCD Touchscreen dialog box opens.



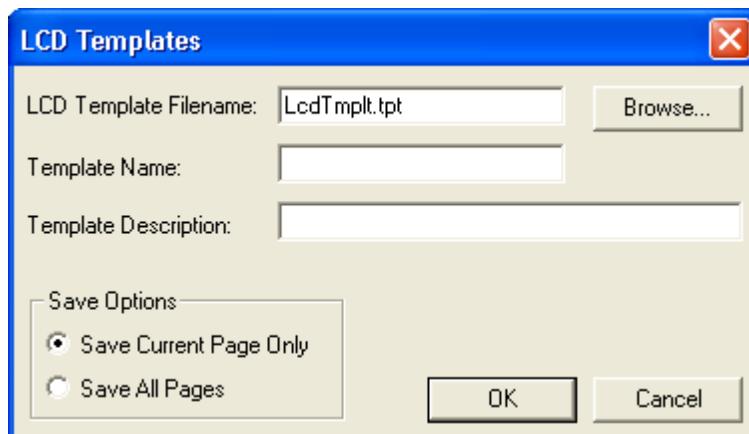
**Figure 22:** The selected A/V template and thumbnail views of its pages.

The thumbnail views are numbered and correspond to the page layout, page number, and number of pages in the A/V template. Click any thumbnail to place it in the design area for viewing or editing. The thumbnail and other views can be turned on or off from the Options menu by clicking Dialog Options.

To Save a Screen or all Screens to a Template:

On the **Templates** menu, click **Save**.

The LCD Templates save dialog box opens.



**Figure 22a:** The LCD Save template dialog box.

Fill in the name and description and click OK to save the template

Click **OK** to close the LCD Touchscreen.

Save the **project**.

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## Sample of LCD Layout

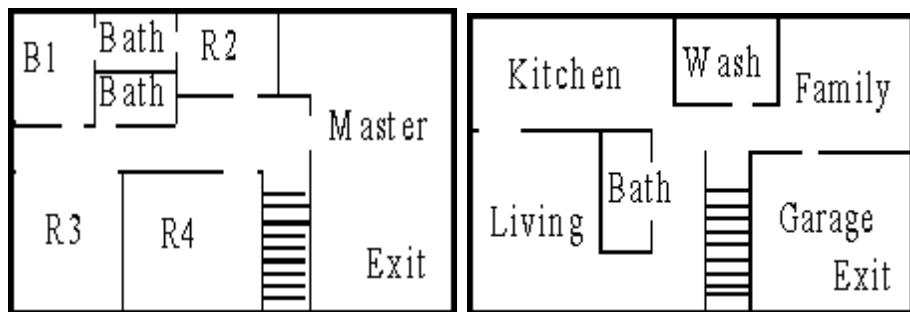
There are an infinite number of possible uses for an LCD Station.

Below is one such possibility.

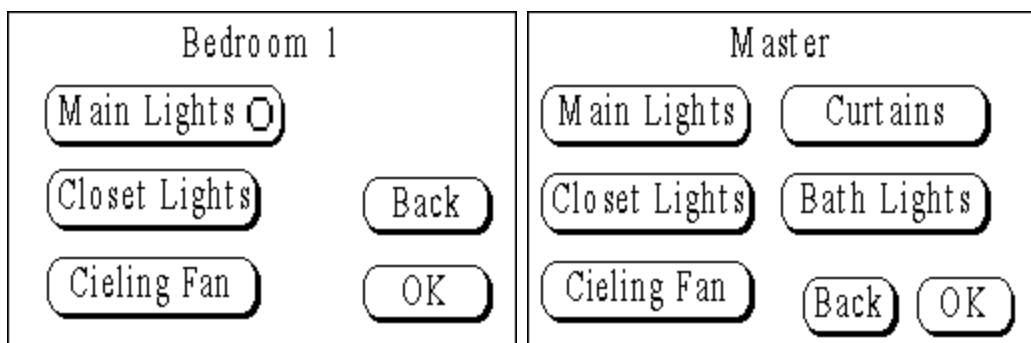
Below is the home or default page for this example.



By pressing on the upper half of the house above you will display a layout for the upper level of the home. By pressing on the lower half you will select a layout for the lower level of the home (shown below):



When you press on the room you would like a menu will show you all the loads that you can control (shown below):



In the above direction control to a complete home is possible from a single station with minimal button presses.

A more detailed description of the above pages is below:

In figure 1 we see a house and depending on whether you click on the top or bottom a different layout will appear. This page is

designed with a total of 6 objects:

- 1) The graphic of the house.
- 2) The date object (status object with format %b %d, %y).
- 3) The time object (status object with format %I:%M %p).
- 4) The menu button - A navigation button.
- 5) A hidden navigation button under the top half of the house. This button has no border or text.
- 6) A second hidden navigation button under the bottom half of the house bitmap.

Figure 2 is a bitmap image (the layout) that is first added. Then all the buttons are added. These buttons are custom buttons (a custom button is the same as a next button except it doesn't go to the next page. It jumps to any page you want). The buttons have no border and are placed on top of the bitmap image.

**More Samples**

## Sample Template



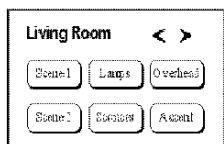
Page 1 of 22. The default page. Touch the screen to go to first menu (pg 2). Returns to this page after one minute of inactivity.



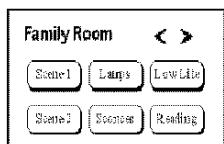
Page 2 of 22. The first Menu. Choose one of the Rooms or press *More* for the next menu (pg 3).



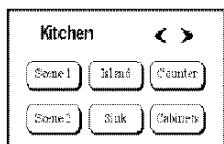
Page 3 of 22. The second menu. Choose one of the Rooms. Press **<** for the previous menu (pg 2) or **>** to go to Misc (pg 16).



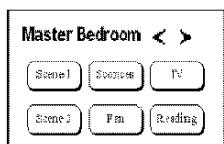
Page 4 of 22. Program buttons for the Living Room. Press **<** to return to the Menu on pg 2. Press **>** to go to the Room Slider (pg 10).



Page 5 of 22. Program buttons for the Family Room. Press **<** to return to the Menu on pg 2. Press **>** to go to the Room Slider (pg 11).



Page 6 of 22. Program buttons for the Kitchen. Press **<** to return to the Menu on pg 2. Press **>** to go to the Room Slider (pg 12).



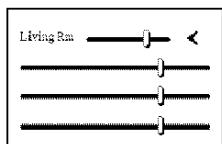
Page 7 of 22. Program buttons for the Master Bedroom. Press **<** to return to the Menu on pg 3. Press **>** to go to the Room Slider (pg 13).



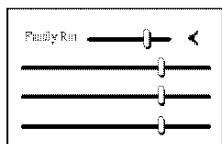
Page 8 of 22. Program buttons for the Master Bath. Press **<** to return to the Menu on pg 3. Press **>** to go to the Room Slider (pg 14).



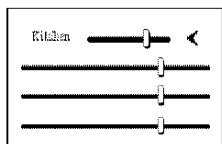
Page 9 of 22. Program buttons for the Nursery. Press **<** to return to the Menu on pg 3. Press **>** to go to the Room Slider (pg 15).



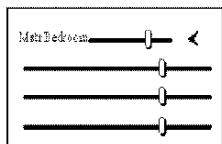
Page 10 of 22. Sliders for the Living Room loads. Press **<** to return to the main Living Room page (pg 4).



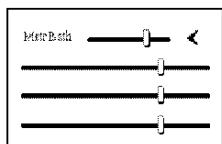
Page 11 of 22. Sliders for the Family Room loads. Press **<** to return to the main Family Room page (pg 5).



Page 12 of 22. Sliders for the Kitchen loads. Press **<** to return to the main Kitchen page (pg 6).



Page 13 of 22. Sliders for the Master Bedroom loads. Press **<** to return to the main Master Bedroom page (pg 7).



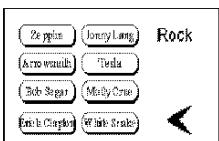
Page 14 of 22. Sliders for the Master Bath loads. Press **<** to return to the main Master Bath page (pg 8).



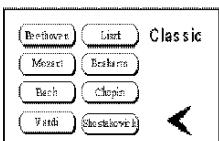
Page 7 of 15. Music selection screen. Choose at type of music, or press < to return to CD (pg 3).



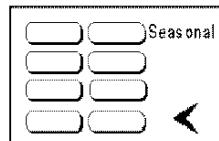
Page 8 of 15. Country music selection. Press < to return to the music selection page (pg 7).



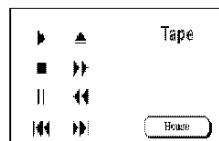
Page 9 of 15. Rock music selection. Press < to return to the music selection page (pg 7).



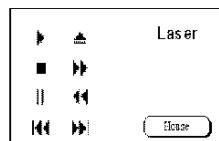
Page 10 of 15. Classic music selection. Press < to return to the music selection page (pg 7).



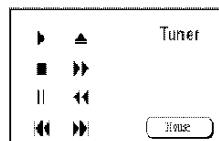
Page 11 of 15. Seasonal music selection. Press < to return to the music selection page (pg 7).



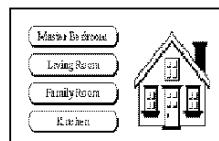
Page 12 of 15. Program buttons for the Tape. Press *Home* to return to the Menu (pg 15).



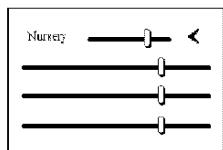
Page 13 of 15. Program buttons for the Laser. Press *Home* to return to the Menu (pg 15).



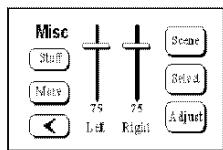
Page 14 of 15. Program buttons for the Tuner. Press *Home* to return to the Menu (pg 15).



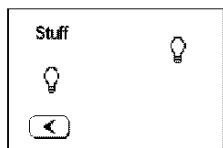
Page 15 of 15. Main Menu page. Select the room to control.



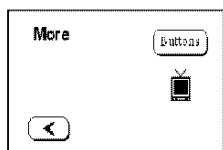
Page 15 of 22. Sliders for the Nursery loads. Press < to return to the main Nursery page (pg 9).



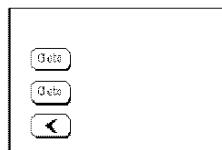
Page 16 of 22. Program Buttons and Sliders. Press the *Stuff* button to go to pg 17. Press the *More* button to go to pg 18. Press ☐ to return to pg 3.



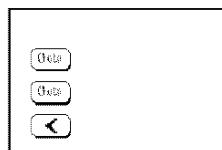
Page 17 of 22. Program buttons with bitmaps. Press ☐ to return to pg 16.



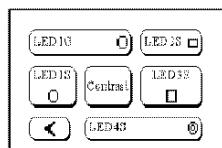
Page 18 of 22. Navigation buttons. Press *Buttons* to go to pg 21. Press the TV to go to pg 22. Press ☐ to return to pg 16.



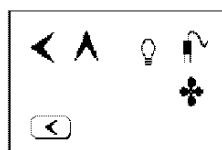
Page 19 of 22. Press top *Goto* button to go to pg 17. Press second *Goto* button to go to pg 18. Press ☐ to return to pg 3.



Page 20 of 22. Press top *Goto* button to go to pg 17. Press second *Goto* button to go to pg 18. Press ☐ to return to pg 3.

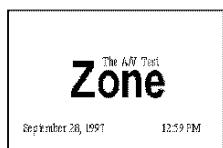


Page 21 of 22. Program buttons. Press ☐ to return to pg 18.

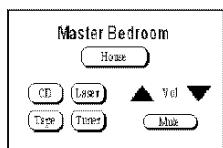


Page 22 of 22. Program buttons. Press ☐ to return to pg 18.

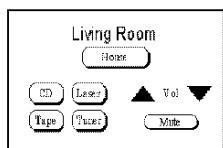
## AV Template



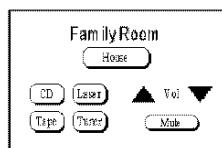
Page 1 of 15. The default page. Touch the screen to go to the menu (pg 15). Returns to this page after one minute of inactivity.



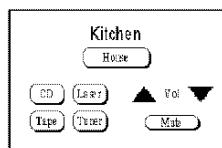
Page 2 of 15. The Master Bedroom controls. Press *Home* to return to the main menu (pg 15).



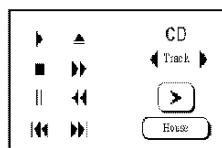
Page 3 of 15. The Living Room controls. Press *Home* to return to the main menu (pg 15).



Page 4 of 15. The Family Room controls. Press *Home* to return to the main menu (pg 15).



Page 5 of 15. The Kitchen controls. Press *Home* to return to the main menu (pg 15).



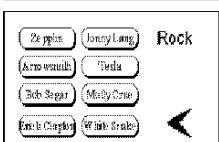
Page 6 of 15. Program buttons for the CD. Press ☐ to go to the music section (pg 7). Press *Home* to return to the Menu (pg 15).



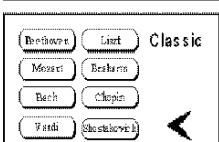
Page 7 of 15. Music selection screen. Choose at type of music, or press < to return to CD (pg 3).



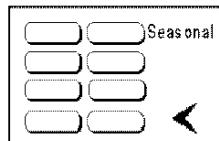
Page 8 of 15. Country music selection. Press < to return to the music selection page (pg 7).



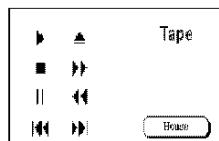
Page 9 of 15. Rock music selection. Press < to return to the music selection page (pg 7).



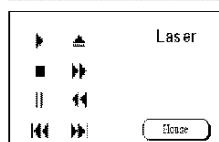
Page 10 of 15. Classic music selection. Press < to return to the music selection page (pg 7).



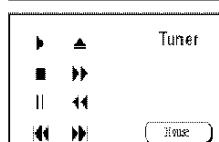
Page 11 of 15. Seasonal music selection. Press < to return to the music selection page (pg 7).



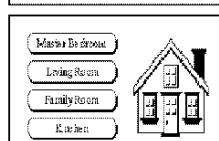
Page 12 of 15. Program buttons for the Tape. Press *Home* to return to the Menu (pg 15).



Page 13 of 15. Program buttons for the Laser. Press *Home* to return to the Menu (pg 15).



Page 14 of 15. Program buttons for the Tuner. Press *Home* to return to the Menu (pg 15).



Page 15 of 15. Main Menu page. Select the room to control.

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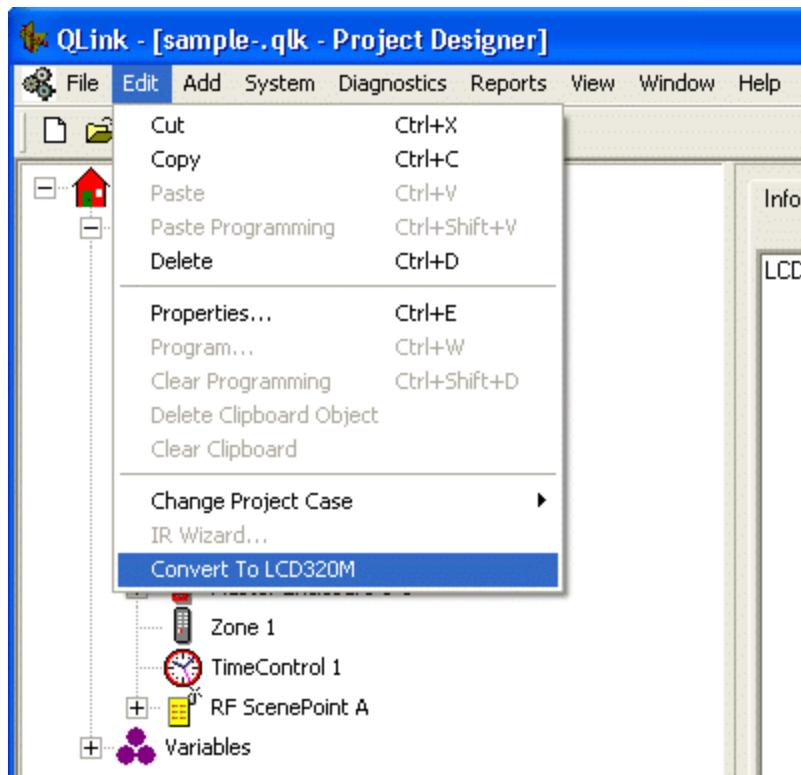
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## Converting LCD 160 Series to 320 Series TouchScreens

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It is possible to convert older 160 series to 320M series touch screens in QLink.

Select the 160 series LCD screen then click on Edit from the file menu.



**Figure 23:** The *Edit* menu selecting *Convert To LCD320M*.

Additional editing of the LCD will be needed but all programming will be intact.

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## TPT 550 Programming and Hardware

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### Overview

Vantage's TPT 550 color LCD touch screen, is a 65,536 color, active matrix liquid crystal touch screen with a backlit display. The quarter VGA LCD 5.5 inch diagonal display is small enough to keep any area from feeling cluttered but versatile enough to fulfill the needs of almost any application. It may be ordered with Video and Sound hookups in WireLink or as a RadioLink model. A proximity detector senses movement and activates the backlight, illuminating high resolution graphics. The user can easily see to navigate up to 250 distinct pages making it an ideal central control point. An LCD station is often used in Master Bedrooms or Kitchens giving remote access to all or much of the Vantage System's controls from one location.



**Figure 23a:** TPT 550 Color LCD Screen.

TPT is perfect for a home theater application in addition to a control center. Status buttons allow the LCD to display date, time, thermostat information, load status and custom messages via String Variables. Using UP/DOWN bitmaps it can visually track individual loads or rooms for any loads left on and much more. It is 100% customizable by the designer. The backlight "On Time" may be adjusted from 15 to 600 seconds. The backlight levels for ON and OFF states may also be adjusted. A built-in light sensor may be set to automatically adjust the brightness of the screen's On and Off levels depending on the amount of light in the room. Other features include an integrated IR receiver and a port to add other accessories. The IR receiver accepts commands from a remote control and the auxiliary port may be used to add contact inputs, light sensors, motion sensors, and more.

Advanced software allows the installer to quickly and easily create custom interfaces. Connecting to the screen for programming is facilitated through a Mini-B USB connector that sits behind the faceplate. Through this connection, even large programs with multiple images can be quickly programmed into the touchscreen customizing the look of the interface to meet the needs of the end user.

#### Features

- Fast USB downloads and firmware updates
- Responds to touch with advanced active matrix LCD technology
- Senses interaction with a proximity detector and activates the backlight
- Senses light conditions for automatic brightness levels
- Video and Audio feed connections (some models)
- RadioLink (some models)
- Accepts commands through an integrated IR receiver
- Features status buttons to display date, time, thermostat information, load status and custom messages
- Supports 250 programmable buttons and 250 screens
- Incorporates components such as contact inputs, light sensors, and motion sensors through an auxiliary port on the back of the station

- Provides 100% design customization through Vantage's QLink programming software
- Displays images on a quarter VGA display
- Features easy retro-fit style mounting "wings"
- Connects to the Vantage system with a simple two-wire bus or 900mhz RadioLink enabled system.

**Specifications of TPT, part# C5V-W**

<b>Description</b>	<b>Specification</b>
Dimensions, HWD without Faceplate	5.56" x 6.5" x 1.2" 141.2mm x 165.1mm x 30.5mm
Faceplate Dimensions HW	5.9" x 6.8" x 0.19" 150mm x 171 x 5mm
Weight	1lb. 12.9oz -or- 0.819kg
Display Resolution	320 x 240 pixels
Colors	65,536 colors
Pixel Size	0.1160 mm x 0.3480mm
Pixel Pitch	0.3480mm x 0.3480mm
Viewing Area	112 mm x 84.28 mm
Active Area	111.4mm x 83.5mm
Type of Touchscreen	Resistive
Low light illumination	CCFL Backlight w/ programmable "time out"
Brightness	400 Nit
Contrast Ratio	400 : 1
Backlight Intensity Adjust	ON and OFF adjusted separately
Screen Design	Using QLink software
Types of Objects	Bitmaps, text, lines, sliders, navigational buttons, status, programmed buttons, combination navigational and program buttons
Bitmaps	Any .bmp file up to 320 x 240 pixels
Fonts	Any Windows font (Max. 3)
Maximum LCD320C5 stations per Master Controller	4 (non-video) or 3 (video) Stations when powered from the station bus or 50 Stations when powered from an auxiliary source
Station Load	Counts as 1, 12 or 14 Stations (see Station Count below)
RadioLink Model	Range is 100 feet radius from source
Power Rating	24VAC or VDC @300mA

**Station Count**

TPT counts as twelve (standard model) or fourteen stations (video model) on the Main Controller when powered from the station bus or one Station when powered from an auxiliary 24V power source. RadioLink model counts as one RF station on the Main Controller.

**Vantage Auxiliary Power Supplies**

Part # V-PWR24, 24VAC 20VA (800mA) Or Part # VFA 0001, 24VDC 400mA

For best results keep power wire runs 500 feet or less.

**Software/Firmware**

QLink 4.0 and Main Controller firmware 7.0 or higher is required. Additionally the LCDs firmware should be kept current for optimum performance and functionality. For new projects it is recommended that firmware and software be kept at the most current release.

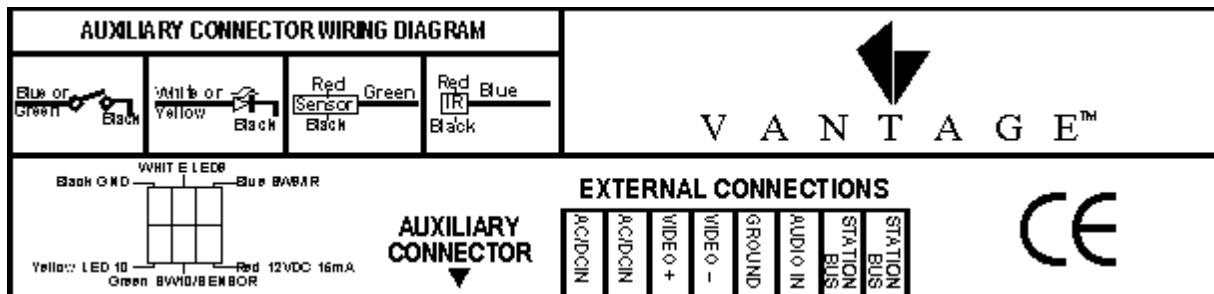
**Mounting**

The recommended wall mounting height is 6" above that of a typical keypad station or approximately 50" to 58" from the floor. TPT is mounted in the wall using a metal mounting frame already built onto the station. The station is best installed into a hollow sheetrock wall. The hole should be cut very precisely to the template provided. After connecting the station bus and other input cables and confirming proper communication, tighten the screws snugly but do not over tighten. The faceplate snaps securely onto the station after the installation is complete.

Other installations, i.e. solid walls will require the use of lag bolts or toggle bolts for secure installations. Never over tighten causing the frame to twist. A metal mounting box for conduit installations is available from Vantage, part number VHA-0656. If the video model is installed in the metal mounting box and the video feed is from an F-Connector/Coaxial cable, a 90° F Connector is needed for proper fit in the mounting box.

Plug TPT into the station bus using a standard Vantage pigtail or phoenix connector screw terminals.

#### Video, Audio and Other Connections



The label above shows video, audio and other connections to TPT . External Connections are made via a removable phoenix connector (see drawing below). Auxiliary Connector is for the Vantage 6-wire pigtail.

Video connections may be made by terminating CAT5 wire directly to the phoenix connector or coaxial cable using F Connectors (see LCD drawings for location of F-Connector below). Audio is connected via CAT5 or similar gauge wire to the phoenix connector only, the audio signal on coaxial will not activate the touch screen's audio. Audio feed is set for Line Level input only. If an audio connection will not be used, connect a jumper wire on the phoenix connector between AUDIO IN and GROUND to prevent speaker noise. NOTE: Video and Audio phoenix connections are polarized. Other connections, i.e., Station Bus, External Power, etc. are similarly connected and are not polarized.

Note: The protective film on the front of the LCD may be removed at any time. It is in place to protect the LCD during shipment and installation.

#### Installing The LCD Screen Download Driver

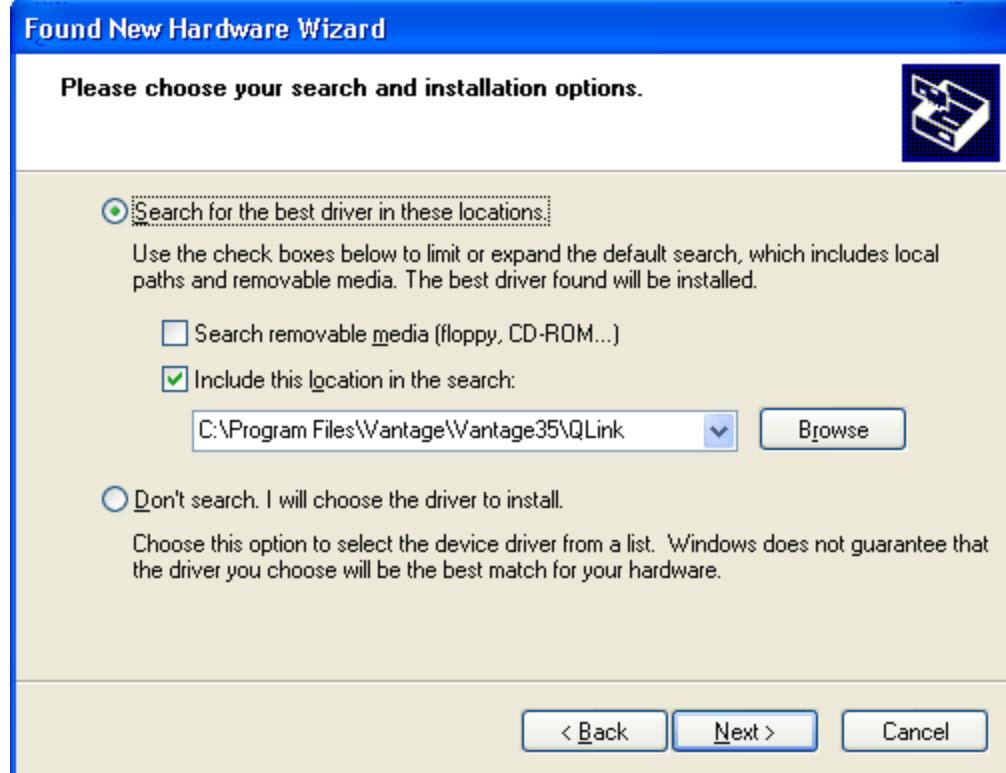
Steps to install the USB driver:

- First install QLink 4.0 or higher
- Make sure TPT is powered
- Connect the USB cable to the computer and the TPT station
- Windows should detect the new hardware and open the following screen. Check "Install from a list or specific location (Advanced)." Click Next.



- Uncheck "Search removable media (floppy, CD-ROM)"
- Click Browse and select the folder as illustrated ...\\Program Files\\Vantage\\VantageXX\\QLink.

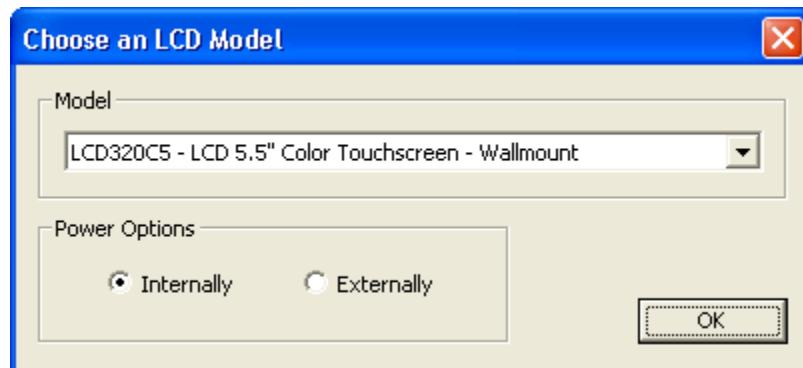
Click **Next**.



- The "Found New Hardware Wizard" will install the driver
- Click **Finish** when the install is complete

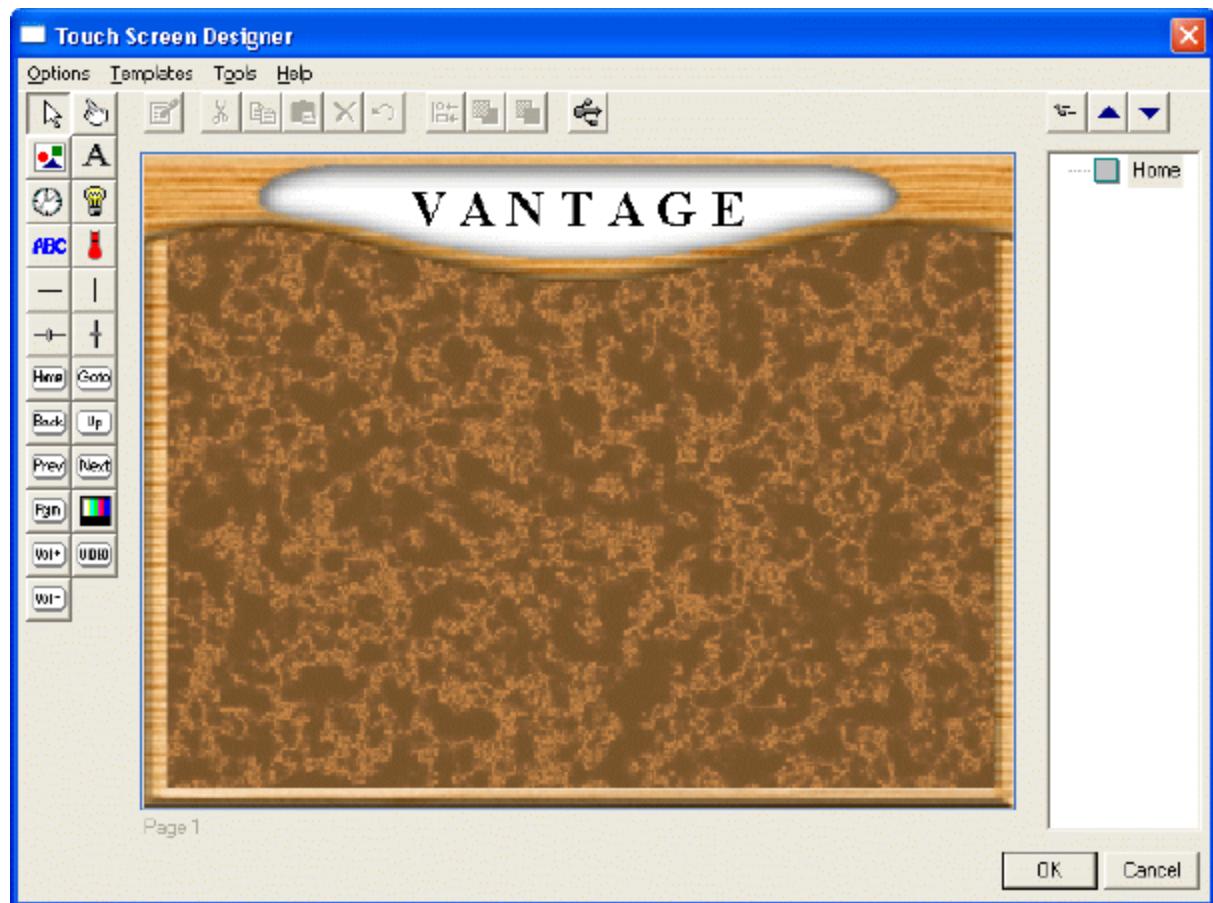
#### LCD Programming with QLink

In the Project Designer, Location view window, select the floor and room to add the LCD station to. Either right click or from the Add menu select *WireLink Stations* or *RadioLink Stations* | LCD Touchscreens | LCD320C5 (shortcut key = Shift + F3, WireLink).

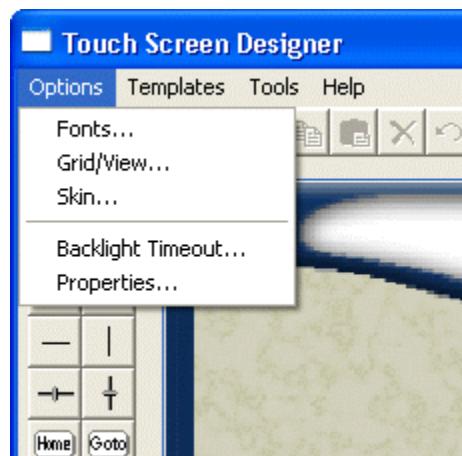


From the screen above select the correct model and power source for the project. RadioLink TPT screen models are available when Add RadioLink Stations is selected.

The LCD Designer will pop up, allowing the screens to be designed and buttons programmed. Note: the standard model will not have the video program buttons as shown below.

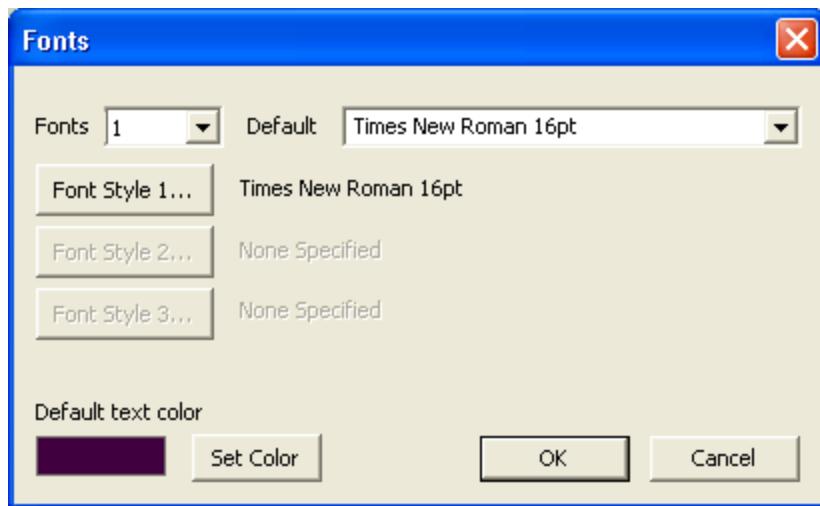


Start programming by first clicking Options and setting up the desired preferences.

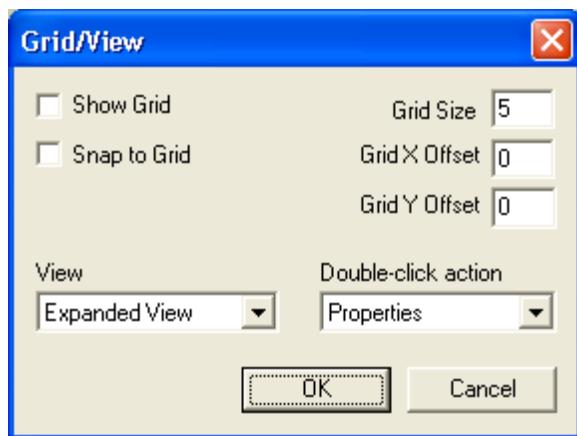


#### Fonts:

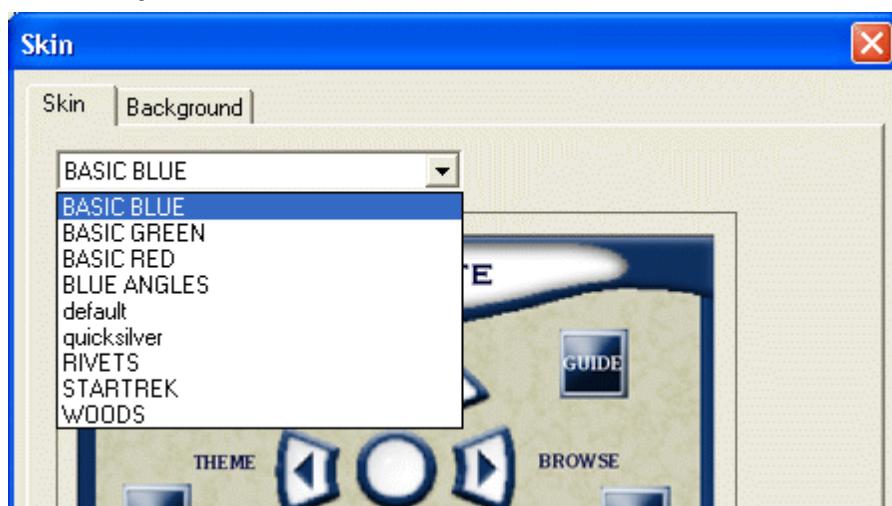
In the Fonts menu, setup 1 to 3 fonts. The list of fonts is the same list Windows uses. A default font and the default font color are also selected.

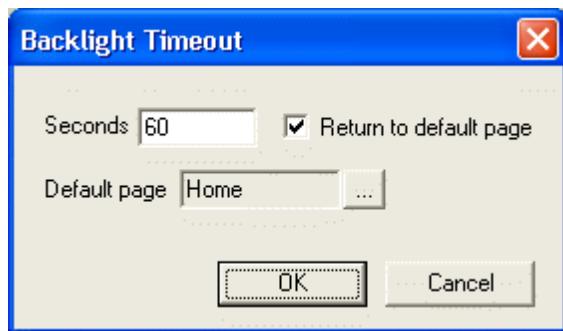
**Grid/View:**

In the Grid/View menu the grid may be turned off and on, grid size, GridXOffset and GridYOffset may be customized. The touchscreen designer view may be changed from normal to expanded and when double clicking a button the desired action may be changed between object Properties or Event Programming.

**Skins:**

Color schemes called Skins are available by selecting Options | Skin. Click the drop down list of available skins and select a default skin and Background.

**Backlight Timeout:**



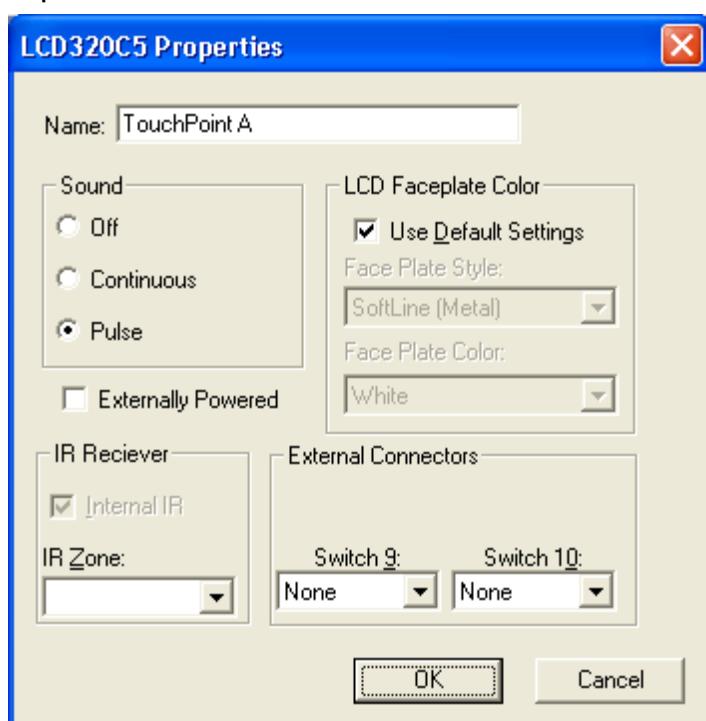
**Seconds** Number of seconds (15 to 600 seconds) the backlight will stay lit after proximity sensor or press is actuated.

**Default page** This option defines which page is the default page.

**Return to default page** If this box is checked the default page will be displayed after the backlight times out.

Note: Video models will not return to the default page from any video pages automatically. A hidden home button must be placed on video screens to allow navigation out of video pages.

#### Properties:



The Properties screen menu allows touch response Sound setting | Faceplate | Externally Powered | External Connectors (Switch 9/Switch10) and IR Receiver settings. LCD model may be changed by clicking the drop-down list and selecting a new model.

For more information on designing LCD screens see the help file included in QLink, or while editing the LCD by pressing F1.

Once the options have been selected a large number of Templates have already been created to facilitate fast LCD designing. Select one or more of these templates making design and setup quick, with minimal effort. Click **Templates | Insert** and select from the list of templates. Additional ideas and help are available by studying sample QLink (.qlk) files utilizing these templates. The sample files are located in the ...\\Vantage<xx>\\Projects\\Examples folder.

#### Configuration with WireLink

The TPT touch screen stations need to be configured to associate which physical station goes with the station in QLink.

From the menu bar in QLink, select System | Configure Stations. A list of all stations will be displayed on the screen. Select the LCD station and select the Configure radio button in the Online Configuration section of the window. The following text will be displayed on the LCD screen.

**CONFIGURATION MODE**

Touch the LCD screen to complete Configuring and close the Configure Stations dialog box.

A layout, including buttons and bitmaps, can be designed in QLink. After the layout is complete the LCD will need to be

programmed. This happens in two stages. The next time the system is programmed the LCD program is loaded into the Master Controller.

#### **Configuration with RadioLink**

RadioLink TPT stations need to be configured to associate which physical station goes with the station in QLink.

When the station is initially powered-up, the Status LED will blink three times followed by a pause - this means the station is powered correctly but not yet on the network. Before uploading the file to the Vantage system, do the following: From the menu bar in QLink, select System/Configure Stations. A list of all stations will be displayed on the screen. Manually enter the serial number for each RadioLink TPT station to match it with the corresponding programming in QLink. The serial number of each station is located on two stickers, behind the faceplate. Remove the sticker with the number only and place on the Station Design Report for easy reference when programming. The Main Controller will add to its network and configure all the RadioLink stations that it has serial numbers for. This may take several minutes depending on the number of RadioLink stations on the network. The Status LED will blink steadily when a station has been added to the network and configured.

-Then -

#### **USB Download**

Download the design to the LCD by connecting the USB cable from the computer to the LCD touchscreen. A Mini-B USB cable is available from Vantage, part #USBM. Open the QLink file, right click on the LCD and select Properties. Click on the USB download button or click Tools | USB Download. **Note:** The computer does not need to be connected to the Main Controller. The download procedure will Reset the LCD, Erase the LCD then download. While the download is in progress do not touch the LCD screen. The following message will be flashing during the download stage.

**DOWNLOADING**

When the download is complete, wait for the screen to reset. The LCD is then ready for operation.

#### **Other Messages**

**APPLICATION CODE INVALID**

*LCD Firmware is Invalid* - The firmware on the LCD needs to be updated. See "Updating LCD Firmware".

**LCD DATA INVALID**

*Screen Data Invalid* - No screen program for the LCD has been programmed. Using QLink, design the LCD layout and then program the LCD through the Mini-B USB connection.

#### **Boot Process/Setup Screen**

When the LCD station boots, the "Start" page appears for two seconds with the message:

**BOOT VERSION X.X**

Next the station will begin booting the application.

**STARTING APPLICATION CODE  
PRESS SCREEN TO ABORT**

If the screen is touched while Start Application is displayed, it will go to the default page (below):



If the screen is touched again on the default page (above) the display changes to the Setup Screen page. Note: The Setup Screen page may also be activated by touching a blank portion of the screen until the message "Release to RESET" appears, then follow the step above.



The Setup Screen page allows adjustment of Backlight settings for the On and Off states. Enable may be turned On allowing automatic brightness levels depending on the amount of light in the room. The proximity (Motion) detector sensitivity may be adjusted. Other options as indicated.

#### **Auto-Dimming Backlight**

Enable is programmed as follows:

- Turn Enable OFF
- Set Backlight On to desired low level, then press LOW
- Set Backlight On to desired medium level, then press MED
- Set Backlight On to desired high level, then press HI
- Turn Enable ON

#### **Backlight On/Off**

The backlight levels may be adjusted so that the light is at a specific level when the screen is on (meaning that it has been touched or that the proximity detector has been tripped) and a specific level when it is off (when it hasn't been touched for 15 to 600 seconds, and the proximity detector hasn't been tripped).

#### **Motion Sensor**

The motion sensor is used to illuminate the backlight when someone approaches or passes by the station. The sensitivity level is adjusted by tapping the motion sensor left or right buttons. When the motion sensor level is set all the way to the left or zero, the backlight will not respond to motion, only to touch.

#### **Calibrate**

The touchscreen calibration utility draws crosses on the screen. To calibrate tap the center of the first two crosses, then tap inside the small box to verify that the touchscreen has been correctly calibrated. **Note:** The screen is calibrated at the factory. Calibration should not be changed without proper justification. If calibration is necessary, it is recommended that a fine tool be used, i.e., a touch screen stylus.

### **Start App**

The Start App button, resets the station and starts the application code.

### **Self Test**

The Self Test button begins the stations self-diagnosing utility. A red line increases from left to right at the bottom of the screen as the test is running. Once this is finished, either the pass or fail message is displayed:



The screen then automatically starts the programmed application. If the test fails the firmware should be downloaded and the test ran again.

### **Exit**

The Exit button returns to the application home page or if no program is downloaded it returns to the default page.

### **Helpful Hints**

The TPT station will not show on the bus and will not be available for diagnostics through QLink while in the Setup Screen page.

### **Loading Custom Bitmaps**

The bitmaps that are used on the LCD should be no larger than 320x240 pixels. Bitmaps may be created in any drawing program that can create bitmap files. The best size for small bitmaps is approximately 25x25 pixels. Custom bitmaps may be drawn with the upper left pixel being a unique color. This color may then be designated as a transparent color for LCD screen. Use high color settings for the best results, i.e., 24bit color.

### **Using Fonts for Images**

Font Sizes and Types: TPT uses the same font list used by the Windows operating system. Test font appearances by programming the LCD to see the best fonts and sizes for the design wanted. Some fonts that are useful for images, are Zapf Dingbats, Keystroke, foreign language fonts, etc. The size of the images or characters are changed by changing the font size. If a font is used to create a custom logo it is recommended that a graphic of the text be created instead of using the font because defining a font for one time use is memory extensive and a bitmap of the text may give the same results.

### **Touch Screen Layout**

If buttons are too small or too close together, a large finger will be unable to press the button or may activate an adjacent button by mistake. This design practice may also cause very narrow sliders to function erratically. **Make sure buttons do not overlap.** While in the LCD properties screen hold the shift key in to select multiple objects, this will make overlapping buttons apparent.

### **Copy and Paste LCD Stations**

Entire LCD stations may be copied and pasted in the same document without loosing any programming. If an LCD screen is copied to the Vantage clipboard and then pasted into a new document the layout is preserved but program buttons will have to be re-programmed.

### **LCD Templates**

While in the LCD properties screen, click on Templates | Insert or Save. Templates are used to save the layout of complex pages. A single page or the entire LCD layout may be saved. These layouts may then be used in new projects by inserting the template into the new LCD screen design. TPT Templates are saved in \\Vantage35\Graphics\Templates.

### **Updating LCD Firmware**

To update the firmware on the LCD, connect to the Vantage system, and go "on-line". Once on-line, right click on the LCD and select Properties. From the LCD properties window select Options | Properties | Update Firmware and answer Yes to the prompt. Repeat this process for each LCD needing a firmware update.

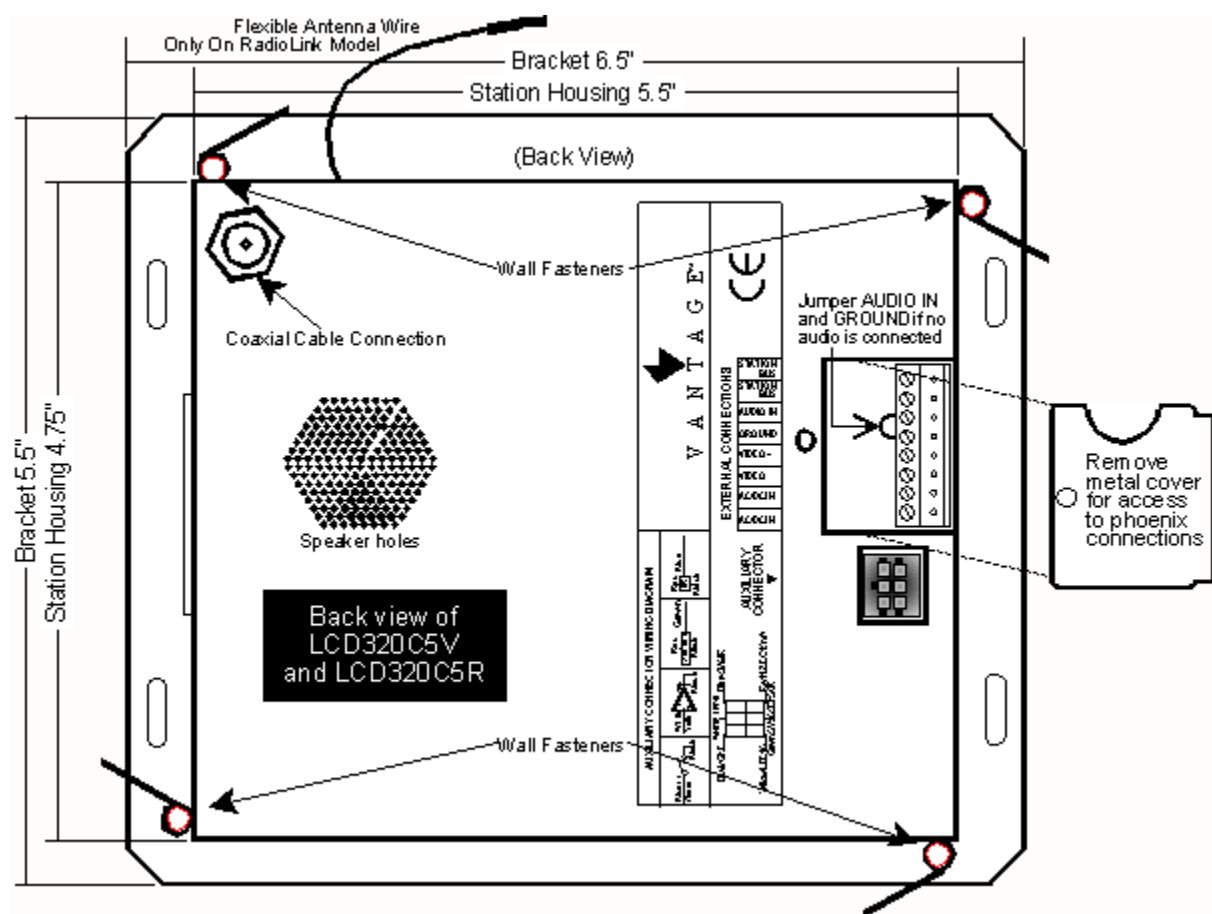
### **LED Tracking using Icon Bitmaps**

To track/indicate the state of the LED or button use an Icon from the Skin set. Many Icons are drawn in an "up-down" bitmap style. An "up-down" bitmap is a bitmap that contains two images. The image on the left is displayed when the button state is false. The right half is displayed when the button state is true (the same function as an LED on a normal station.)

Note: Menu buttons from the Skins are also "up-down" bitmaps. These buttons will display Down when the menu button and page are the same. All "up-down" bitmaps must be named as follows; bitmapname[2].bmp. The "[2]" is used to tell the touchscreen that it is an "up-down" bitmap.

### Firmware Updates Using USB

Firmware updates may be done through the USB connection using QLink 4.0. In the Touch Screen Designer window click on Tools | Update Firmware over USB. For QLink 3.5 QLink must be connected (yellow connection button on tool bar) then in the Touch Screen Designer window click on Options | Properties | Update Firmware.



Related Topic: [LCD Programming](#)

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## TPT 550 Wallplate

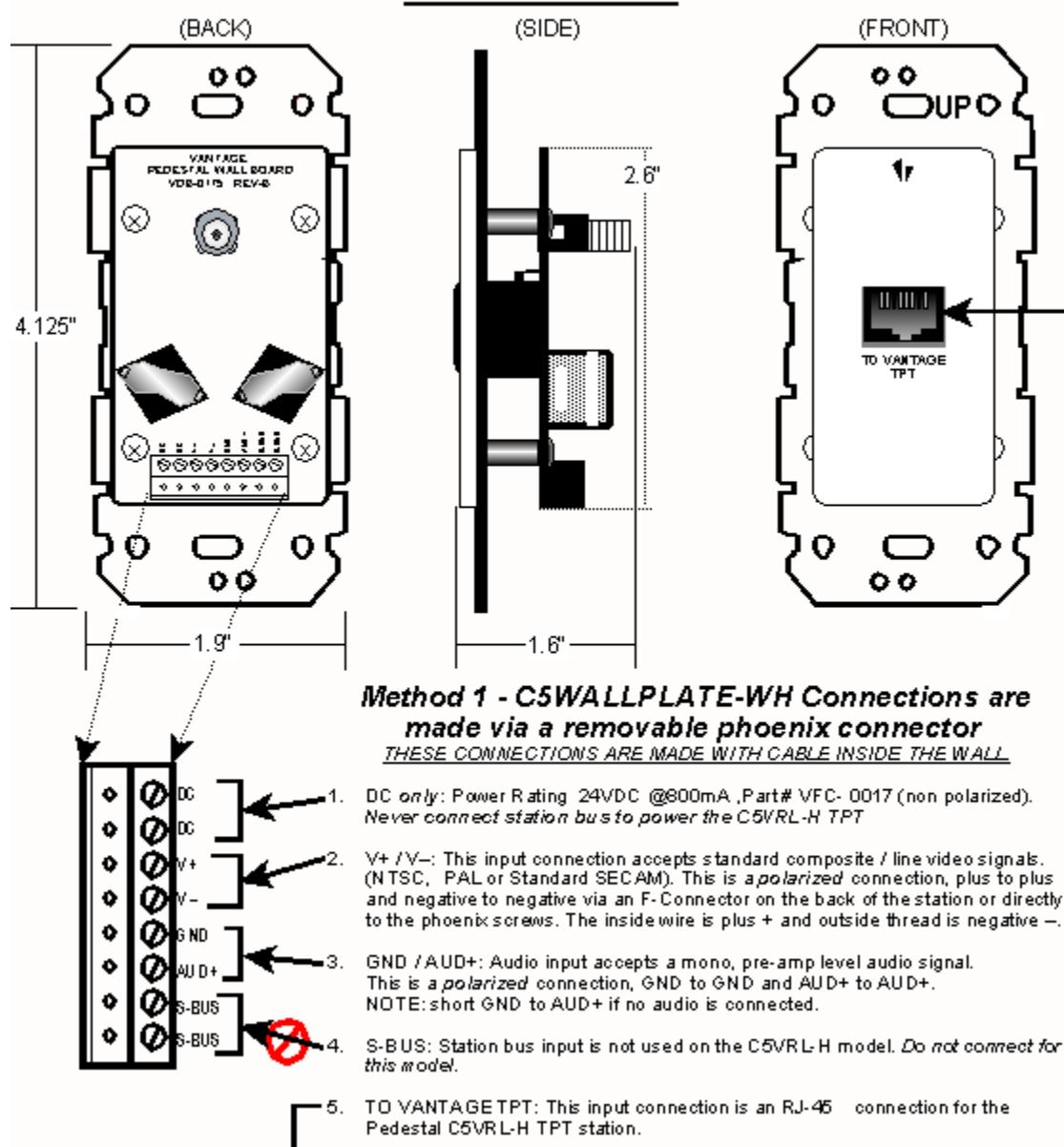
Installation: See Installation instructions shipped with each product for more specific information.

The pedestal version of TPT 550 is perfectly suited for night stands, lamp stands, audio & video chair consoles, kitchen counters, reception desks, etc. All pedestals connect using a standard CAT-5 wire with a RJ-45 jack. Two TPT 550 Wallplate Stations are described below. Both Wallplate station styles include built-in audio/video isolation. These Wallplate interface stations install in a standard single gang electrical box. When installing please keep the following two methods in mind. Method One is typically for new installations and ships standard with the C5. Method Two is more suited for retrofit applications. Either installation method can be used at the installer's discretion.

1. **Method One:** White Wallplate station (internal). Use Vantage's Wallplate Station Model # C5WALLPLATE-WH (standard

with pedestal C5, additional colors available through custom ordering). The C5VRL-H connects via a 10ft, RJ 45 cable from the C5 touch screen to the Remote LCD320C5 Wallplate Station. Follow the wire diagram below for installation connections. A longer cable may be made by the installer.

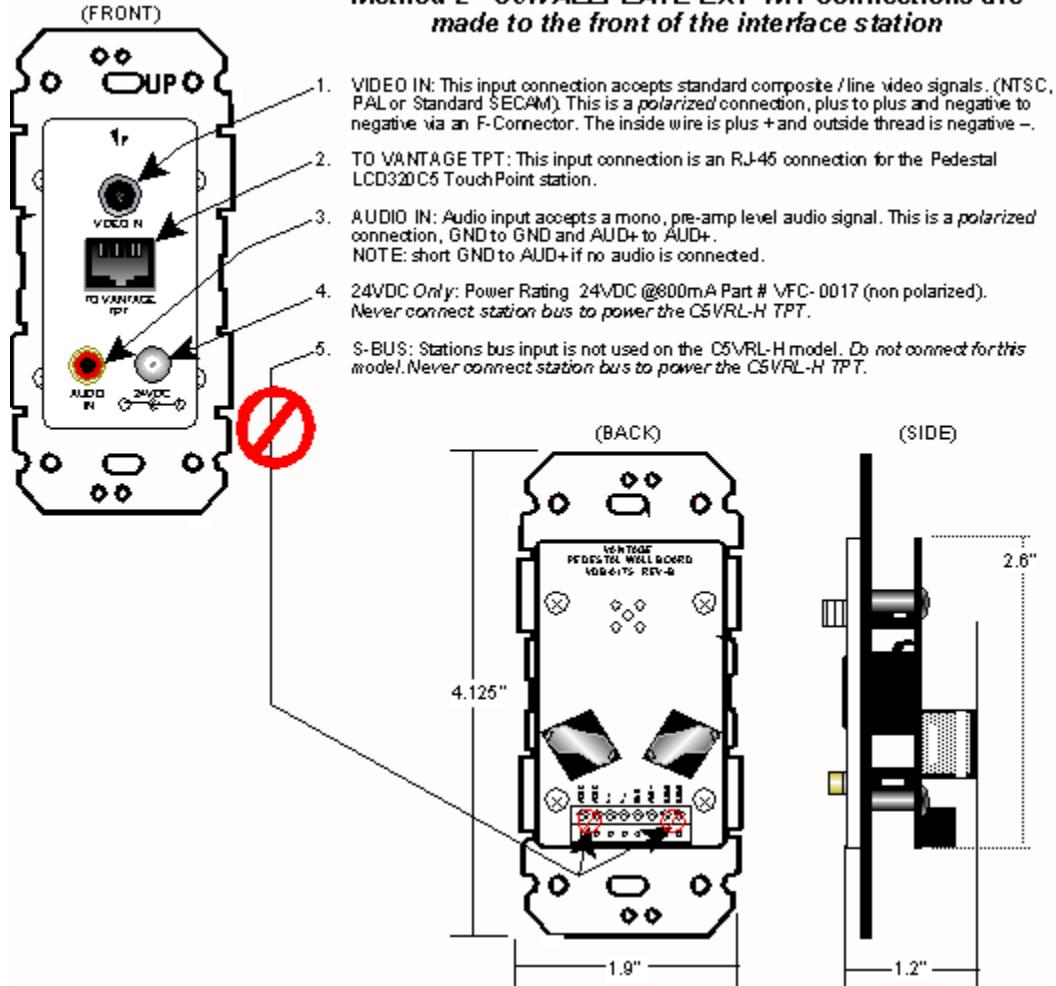
### C5WALLPLATE-WH



2. **Method Two:** White Wallplate station (external). Use Vantage's LCD320C5 Wallplate Station with external connections, Model # C5WALLPLATE-EXT-WH (optional with pedestal C5 additional colors available through custom ordering). This installation allows Video, Audio and Power to be connected outside of the wall through the Wallplate station, making it ideal for retrofit scenarios. The C5VRL-H connects via a 10ft, RJ-45 cable from the C5 touch screen to the Wallplate Station. Follow the wire diagram below for installation connections. A longer cable may be made by the installer.

**C5WALLPLATE-EXT-WH**

**Method 2 - C5WALLPLATE-EXT-WH Connections are made to the front of the interface station**



Related Topic: [TPT\\_550 Programming](#)

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## Diagnostics

The QLink Diagnostics menu contains 12 separate menu items for testing and monitoring master, module, and station activity, button presses, and communications between a master and other components. In addition, a set of utilities is included for performing master diagnostics along with the ability to monitor button presses and review them over the last 14-days. A system log may be enabled to show system activity, and the displayed data can be saved to a file for future reference.

**Click on menu items under Diagnostics for more information.**

{bmc bm339.SHG}

**Figure 1:** The Menu Bar Diagnostics list.

Commands on the Diagnostics menu are only accessible when a computer is connected to the master controller. If not, when trying to access commands on the Diagnostics menu, the QLink dialog box will open with the following message.



**Figure 2:** The System Not Responding dialog box.

**Note:** It is not necessary to be "online" with the system to perform Diagnostics.

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## Master Diagnostics

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Master diagnostics performs twelve separate tests.

To Start Master Diagnostics:

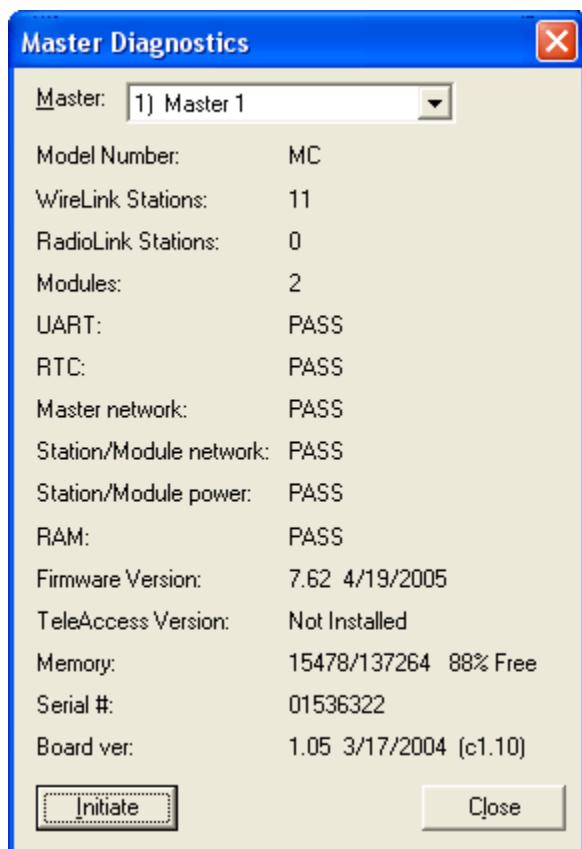
Open the **"New Project."**

On the **Diagnostics** menu, click **Master**.

The Master Diagnostics dialog box opens.

Click **Initiate** to start the tests.

The Master Diagnostics dialog box changes to display the results.



**Figure 3:** The Master Diagnostics dialog box displaying diagnostic results.

The following tests results are automatically returned:

<u>Test/Option</u>	<u>Description</u>
Master	Specifies which master to test when multiple masters are present in a system.
Model Number	Type of Controller, i.e., MC, CLMNE50, etc. (master must be programmed first)
WireLink Stations	Reports the number of WireLink stations, physically connected to the station bus.
RadioLink Stations	Reports the number of RadioLink stations logged on to the controller.
Modules	Reports the number of load modules connected to the controller, including expansion enclosures.
UART	Tests the master controller's RS-232 communication capabilities.
RTC	Tests that the Real Time Clock is operating correctly
Master Network	Tests the communication network between master controllers when more than one is present in a system.
Station/Module Network	Tests the communication network between master controllers and the Station/Module Network.
Station/Module Power	Displays whether or not the power to the Station/Module network is on. ON = PASS, OFF = FAIL.
RAM	Tests the system's memories for successful read and write access.
Firmware Version	Displays the current version and date of the Master Controller's firmware.
TeleAccess Version	Displays the current version and date of the TeleAccess firmware if installed.
Memory	Displays the distribution of memory as total, used, and percent free.
Serial #	Displays the Master Controller's serial number.
Board ver	Displays the version and date of the master terminal board.

## Module Diagnostics

Module diagnostics tests each module on a master or slave for proper operation.

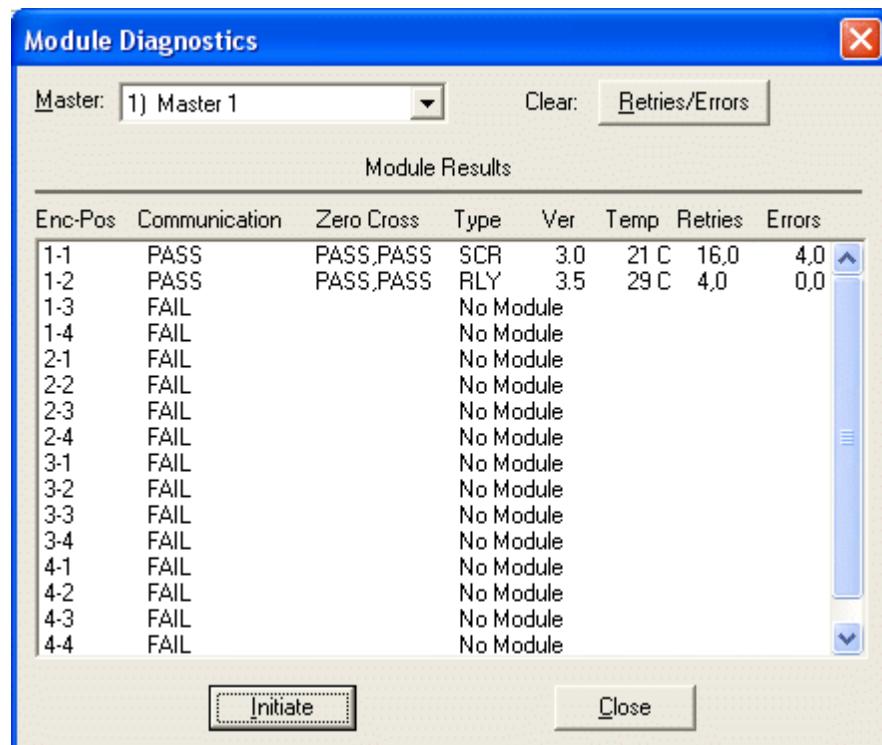
To Start Module Diagnostics:

On the **Diagnostics** menu, click **Module**.

The Module Diagnostics dialog box opens.

Click **Initiate** to start the tests.

The Module Diagnostics dialog box changes to display the results.



**Figure 4:** The Module Diagnostics dialog box displaying diagnostic results.

The following test results are automatically returned:

<u>Test/Option</u>	<u>Description</u>
Master	Specifies which master to test when multiple masters are present in a system.
Clear Retires/Errors	Clears the Retries and Errors columns.
Initiate	Initiates or starts the module tests.
Close	Closes the Module Diagnostics dialog box.
Enc-Pos	Displays a module's enclosure and its position in the enclosure.
Communication	Verifies successful communication with a module If the test passes but an unknown module type is detected, a hexadecimal number will be displayed, indicating the number of loads found.
Zero Cross	Indicates whether or not the cross voltage for a module is correct with a PASS. PASS/PASS relates to the left and right sides of the module. Zero Cross is an important test for a module's internal performance.
Type	Displays the module type (i.e. SCR dimming module, electronic dimming module, and relay module). See Communication.
Ver	Displays the module's factory version number or release number.
Temp	Displays the operating temperature of the module at test time. The temperature should range from 0 - 35° C.
Retries	Displays the number of times the master unsuccessfully tried to communicate with a module. An

Errors	error occurs after the master completes four successive attempts to communicate with a module.
	Displays any communication errors between the master controller and the module. A 0,0 indicates no perceivable errors.

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## Station Diagnostics

Station diagnostics tests every station on the master. A master can support up to 50 stations.

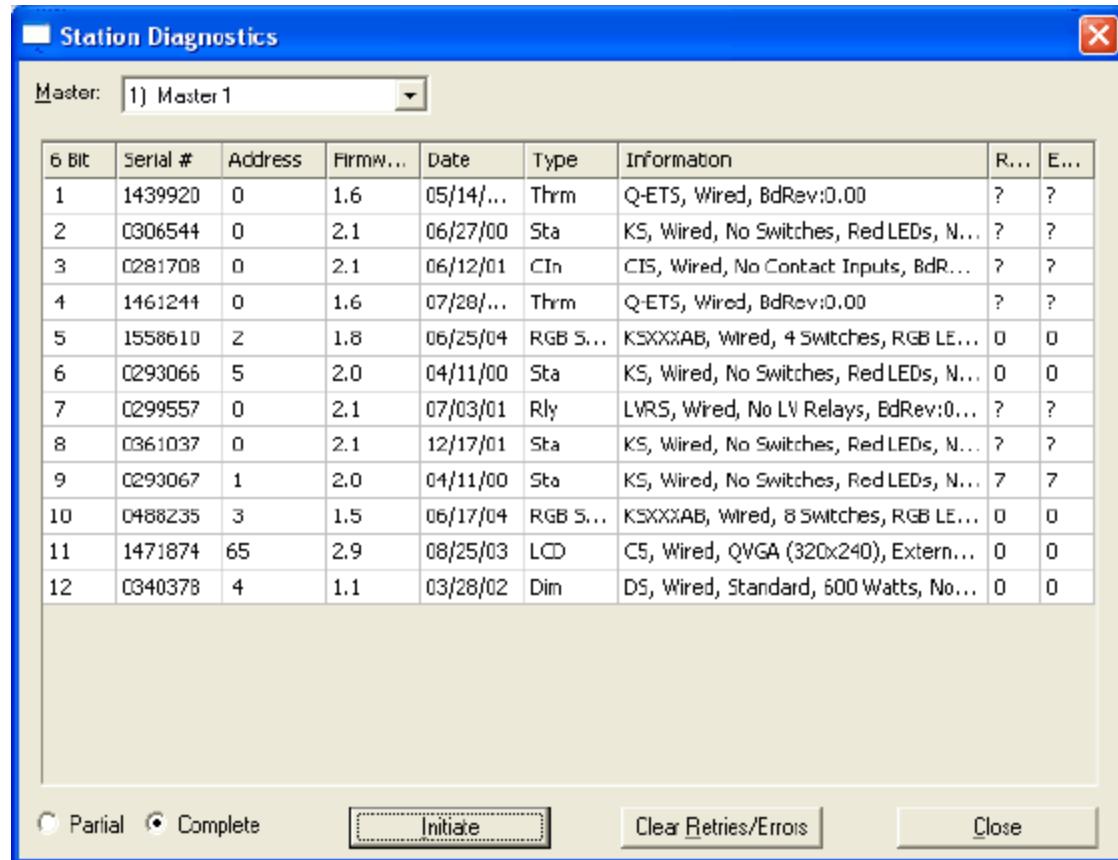
To Start Station Diagnostics:

On the **Diagnostics** menu, click **Station**.

The Station Diagnostics dialog box opens.

Click **Initiate** to start the tests.

The Module Diagnostics dialog box changes to display the results.



**Figure 5:** The Station Diagnostics dialog box displaying diagnostic results.

There are two types of Station Diagnostics that may be run. A **partial** diagnostics will return the 6Bit station ID, the stations Serial #, station address, and station version. A Complete diagnostics will return full information. The following test results are returned:

<u>Test/Option</u>	<u>Description</u>
Master	Specifies which master to test when multiple masters are present in a system.
Clear Retries/Errors	Clears the Retries and Errors columns.

Initiate	Initiates or starts the station tests.
Close	Closes the Station Diagnostics dialog box.
6 Bit	Displays the master controller's internal numbering of the stations in a system.
Serial #	Displays the station's factory programmed number. This number is transferred to the master controller when the station is configured. On the System menu, see <i>Configure Stations</i> .
Address	Displays a logical address created at the time a station is created. For example, keypad A = 1, keypad B = 2, etc.
Firmware	Displays the manufacturer's Firmware version.
Date	Displays the date the manufacturer programmed the station.
Type	Displays the station type. Vantage supports 12 station types. See <i>Add Station</i> .
Information	Displays Switches, LEDs, Sounder, external Connector, IR, and other information.
Retries	Displays the number of times the master unsuccessfully tried to communicate with a station. An error occurs after the master completes four or more successive attempts to communicate with a station.
Errors	Displays the number of times communication between the master controller and the station failed.

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## Master Communication

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Master Communication diagnostics runs a continuous test of communication between all Master Controllers in a Vantage system. This test can be stopped at any time.

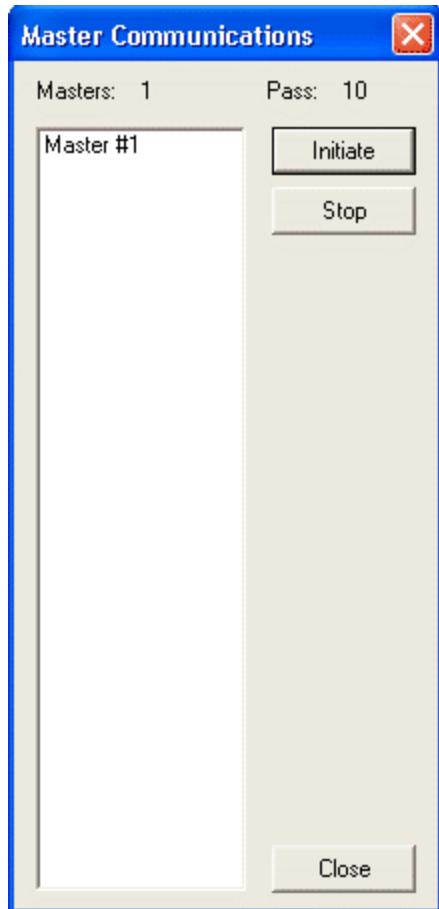
To Start Master Communication Diagnostics:

On the Diagnostics menu, click Master Communication.

The Master Communication dialog box opens.

Click **Initiate** to start the test.

The Master Communications dialog box changes to display the continuous test in progress.



**Figure 6:** The Master Communications dialog box displaying a continuous test in progress.

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## Monitor Button Presses

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Monitor Button Presses monitors button presses in the system. When a button is pressed, its location, keypad, button number, address (or IR code if the button sends an IR signal) serial number, and the action performed are displayed.

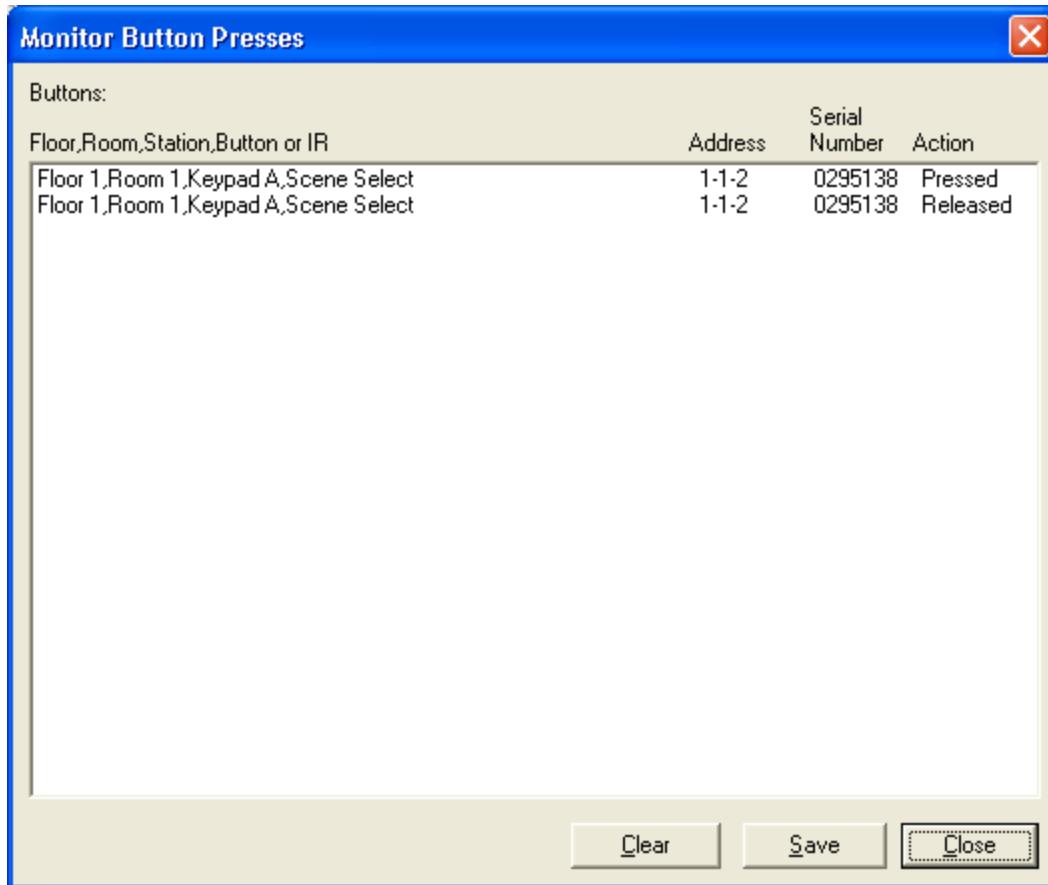
With the "example" project open.

On the Diagnostics menu, click Monitor Button Presses.

The Monitor Button Presses dialog box opens.

Press and release **Button 2** on **Keypad A**.

The Monitor Button Presses dialog box changes to display the button presses.



**Figure 8:** The Monitor Button Presses dialog box displaying a button press and releases.

The following test results are returned:

<b><u>Test/Option</u></b>	<b><u>Description</u></b>
Buttons:	Displays the location, keypad, button number, address (or IR code if the button sends an IR signal) serial number, and the action performed.
Floor, Room, Station, IR	
Address	Displays the address by master, station, and button (1-1-2).
Serial Number	Displays the station's 7-digit serial number.
Action	Displays the action performed.
Save	Saves the displayed button presses in a .txt log file. Test results must be saved before the Monitor Button Presses dialog box is closed or the results will be lost.

Click **Save** to save the **test results** to a **file**.

Click **Clear** to clear all results in the window.

-or-

Click **Close** to close the **Monitor Button Presses** dialog box.

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## Send Command

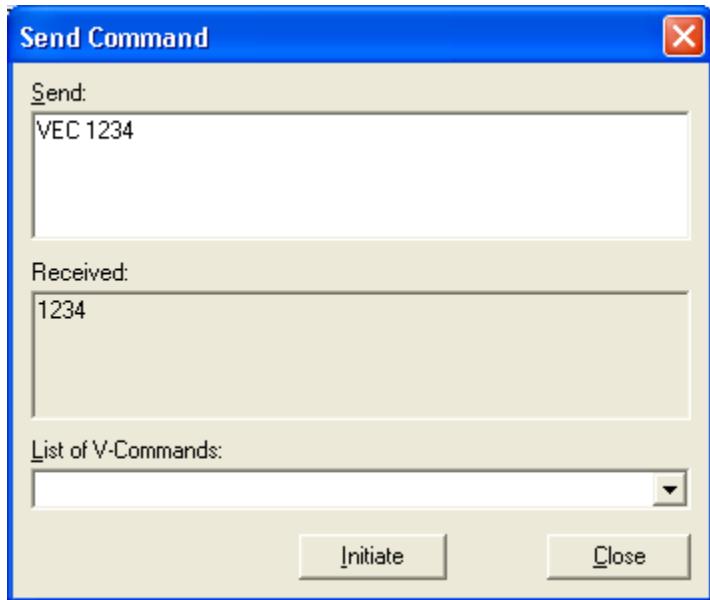
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The Send command allows sending of V-commands (Vantage RS-232 commands) to the system.

To Send V-commands:

On the Diagnostics menu, click Send Command.

Type in all caps VEC 1234 and press enter.



**Figure 9:** The Send Command dialog box.

The following options are available:

<b><i>Option</i></b>	<b><i>Description</i></b>
Send	Displays the V-command selected from the List of V-Commands box.
Received	Returns a message when the Vantage system receives the V-command.
List of V-Commands	Displays a list of V-commands.
Initiate	Sends the selected V-command.
Close	Closes the Send Command dialog box.

Click the **List of V-Commands** dropdown list, and then select a **V command**.

**Note:** Some V-commands will appear with options (<option>). Each option within the brackets must be replaced with a corresponding numerical value. For example, the VLO command will appear as VLO <CN> <Level> <Fade>. Replace each bracketed option with the desired master, station, and button numbers. The string would look like this: VLO 101 65 3. For contractor number 101, 65% 3 second fade.

Click **Initiate** to send the command.

A message will appear in the Received box when the Vantage system receives the command.

Click **Close**.

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## Time

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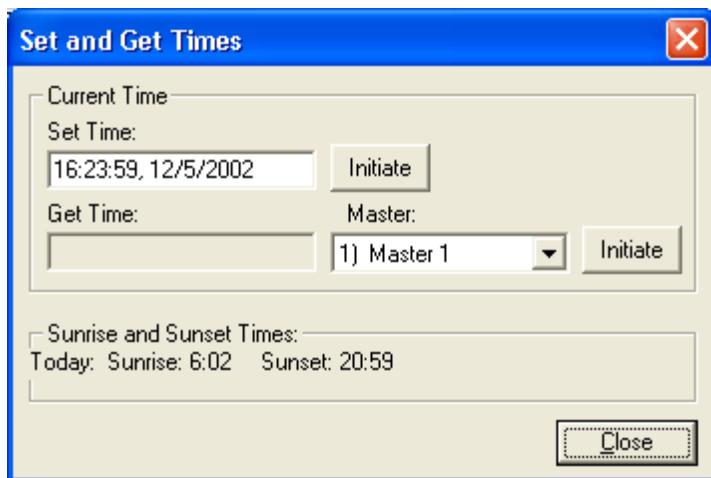
Time sets the current time and date on a master controller. The current time and the sunrise/sunset times are based on a 24-hour clock. Sunrise and sunset times are based on a geographical location.

**Note:** The current time and date is pulled from the computer's internal time/date and time zone clocks

To Set the Time:

On the **Diagnostics** menu, click **Time**.

The Set and Get Times dialog box opens.



**Figure 10:** The Set and Get Times dialog box.

The following options are available:

<b><u>Option</u></b>	<b><u>Description</u></b>
Set Time	Sets the current time and date. Press the Set Time: <b>Initiate</b> button to update the Vantage master. If other masters exist, they will also be updated.
Get Time	Gets the current time from whatever master is selected. Select a master and press Get Time: <b>Initiate</b> button to get that master's current time.
Sunrise and Sunset Times	Sunrise and Sunset Times are calculated from the current time and from information entered into the Location & Time Dialog.

To select a different master, click the **Master** dropdown list, and then select a **Master**.

To set a new time, in the **Set Time** box, enter the **new time**, and then under Set Time: click **Initiate**.

Click **Close**.

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## Button Press History

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The Button Press History command reports button presses over the last 14-day period.

To View the Button Press History:

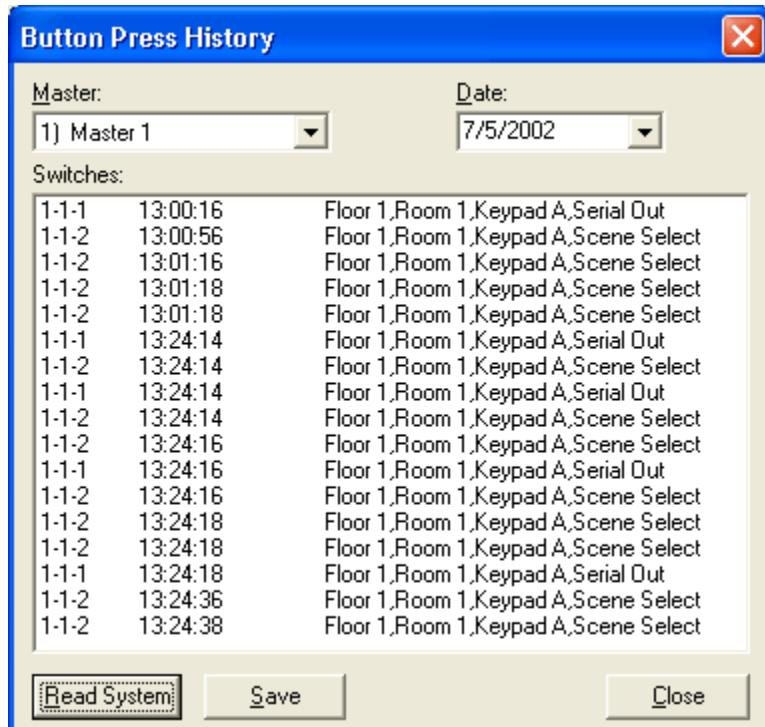
On the Diagnostics menu, click Button Press History.

The Switch Press History dialog box opens.

Click **Read System**.

Click the **Date** dropdown list, and then select a **date** to view from.

The Switch Press History dialog box changes to display the history.



**Figure 11:** The Switch Press History dialog box.

The following options are available:

<u>Test/Option</u>	<u>Description</u>
Master	Specifies which master to test when multiple masters are present in a system.
Date	Selects a date from which to track button presses.
Read System	Reads the system for button presses.
Save	Saves button press history to a .txt file.

Click **Save** to save the **test results** to a file.

-or-

Click Close to close the Switch Press History dialog box.

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## Vacation Load Log

The Vacation Load Log test reports details of when loads where turned ON and OFF and what percentage they were set at. This information is helpful in diagnosing the Vacation function in QLink.

The report may be sorted by any of the columns by clicking on the column heading, i.e., Date, Time, etc.

The screenshot shows a Windows-style dialog box titled "Vacation Load Log". The main area is a grid table with the following columns: Date, Time, Master, Address, Level, Name, and Location. The data in the table is as follows:

Date	Time	Master	Address	Level	Name	Location
07/21/2004	14:11:26	01	E1-1-1	97%	Load 1	Equipment, Equipment
07/21/2004	14:11:26	01	E1-1-2	97%	Load 2	Equipment, Equipment
07/21/2004	14:11:26	01	E1-1-3	97%	Load 3	Equipment, Equipment
07/21/2004	14:14:02	01	E1-1-1	00%	Load 1	Equipment, Equipment
07/21/2004	14:14:02	01	E1-1-2	00%	Load 2	Equipment, Equipment
07/21/2004	14:14:02	01	E1-1-3	00%	Load 3	Equipment, Equipment
07/21/2004	14:14:02	01	E1-1-4	00%	Load 4	Equipment, Equipment
07/21/2004	14:14:02	01	E1-1-5	00%	Load 5	Equipment, Equipment
07/21/2004	14:14:02	01	E1-1-6	00%	Load 6	Equipment, Equipment
07/21/2004	14:14:02	01	E1-1-7	00%	Load 7	Equipment, Equipment
07/21/2004	14:14:06	01	E1-1-1	97%	Load 1	Equipment, Equipment
07/21/2004	14:14:06	01	E1-1-2	97%	Load 2	Equipment, Equipment
07/21/2004	14:14:06	01	E1-1-3	97%	Load 3	Equipment, Equipment
07/21/2004	14:14:46	01	E1-1-1	97%	Load 1	Equipment, Equipment

At the bottom of the dialog box are four buttons: Refresh, Print, Save, and Close.

**Figure 11a:** The Vacation Load Log dialog box.

Address places an "E" for enclosure loads and an "S" for Station loads at the beginning.

Click on Refresh, Print, Save or Close when finished.

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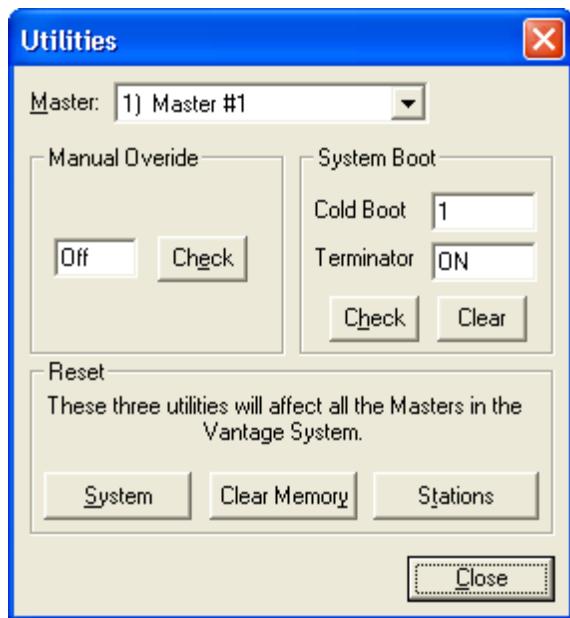
## Utilities

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The Utilities tests allows for checking the status of system boot, and manual override. Three additional utilities are available that will affect all masters in a system. These reset the system, clear master memory, and reset modules and stations.

To Use the Utilities Tests:

On the **Diagnostics** menu, click **Utilities**.



**Figure 12:** The Utilities dialog box.

The following options are available:

<u>Option</u>	<u>Description</u>
Master	Allows specification of which master to test when multiple masters are present in a system.
Manual Override	Checks whether or not the manual override switch on the currently selected master is ON or OFF.
Cold Boot	Displays how many times the selected master has been rebooted during the current session or login. <b>Note:</b> a cold boot and a reset are synonymous.
Terminator	Checks to see if the terminator switch located on the currently selected master's master terminal board is ON or OFF.
System	Resets all masters, modules, and stations.
Clear Memory	Clears all master's memory, erasing all programming. The master must be reprogrammed after using this command. <b>Note:</b> Backup Flash is not erased.
Stations	Resets all stations on the system.

Select the desired **test** to be **run**, and then click its **Check** option.

When the reset is complete, a dialog indicating completion will appear.

Click **Close** to **close** the Utilities dialog box.

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## System Log

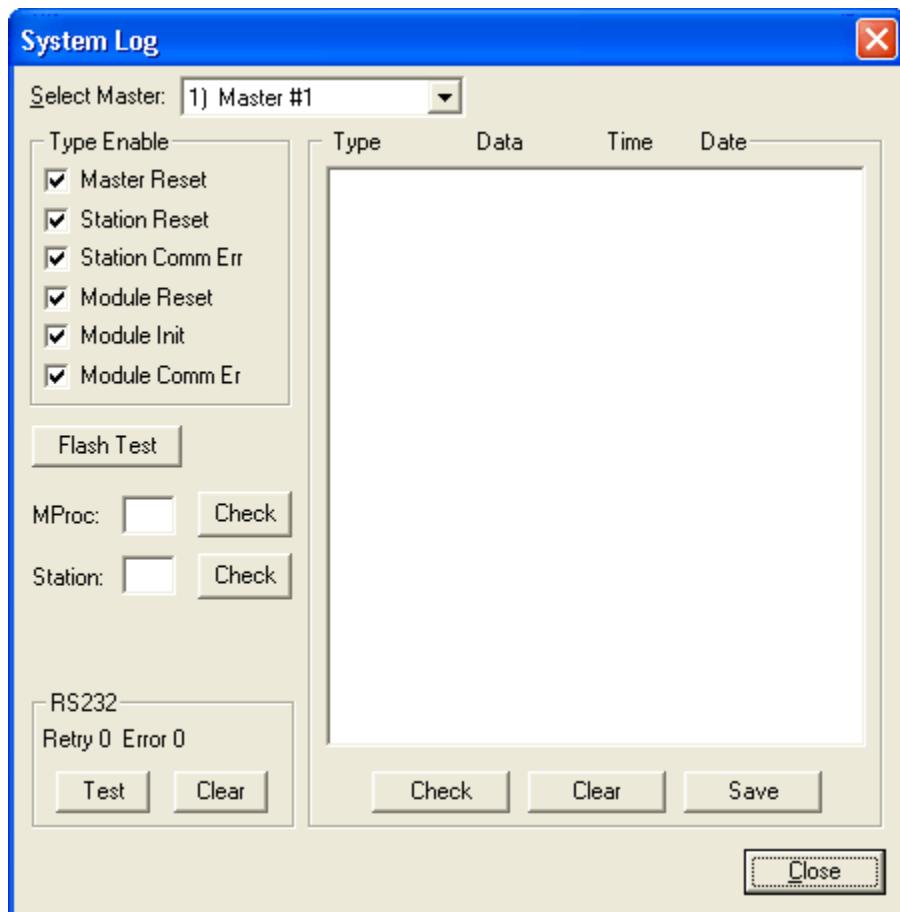
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The System Log test performs either a Flash, Microprocessor, and or a station test.

To Use the System Log Tests:

On the **Diagnostics** menu, click **System Log**.

The System Log dialog box opens.



**Figure 13:** The System Log dialog box.

The following options are available:

<u>Option</u>	<u>Description</u>
Select Master	Allows specification of which master to test when multiple masters are present in a system.
Master Reset	Reports the number of times a master has been reset.
Station Reset	Reports the number of times a station has been reset.
Station Comm Err	Reports master to station communication errors.
Module Reset	Reports the number of times a module has been reset.
Module Init	Reports the number of times a module has been initiated.
Module Comm Er	Reports master to module communication errors.
Flash Test	Writes to the Flash and then verifies that the data has been written. <b>Note:</b> This test will erase whatever is currently stored in the Flash.
Mproc:	Performs a communications test with the system's microprocessor. If multiple microprocessors are in use, specify the microprocessor number to test.
Station:	Performs a communications test with the system's stations. If multiple stations are installed, specify the station number to test.
RS-232	Checks the RS-232 port communications.
Save	Allows saving the test results to a .txt file.

Click **Check** to initiate and view results of the tests listed under **Type Enable**.

-or-

Select the **MProc**, **Station** or **RS-232** test.

Click **Save** to save the test results.

-or-

Click **Close** to close the **System Log** dialog box.

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## Reports

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QLink provides several reports that are useful for better understanding a project, and for placing orders for Vantage hardware.  
Available reports include:

<a href="#">Bill of Materials</a>	<a href="#">Station List</a>
<a href="#">Create Pricelist</a>	btl
<a href="#">Project Summary</a>	<a href="#">LCD Screens</a>
<a href="#">Project Notes</a>	<a href="#">Load Schedule</a>
<a href="#">Item Summary</a>	<a href="#">Enclosure Schedule</a>
<a href="#">Job Information</a>	<a href="#">Programming</a>
<a href="#">Station Design</a>	<a href="#">Button References</a>
<a href="#">Engraving Detail</a>	<a href="#">Load References</a>
<a href="#">Client Station</a>	<a href="#">Preferences</a>
<a href="#">Faceplates</a>	

**Note:** When a report is generated from the Reports menu, print features are activated.

### Sorting

Many reports have two level sorting capability. The following lists the reports which have this ability:

- Station Design
- Station List
- Engraving Detail
- Client Station
- Faceplates
- LCD Screens
- Load Schedule

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## Bill of Materials

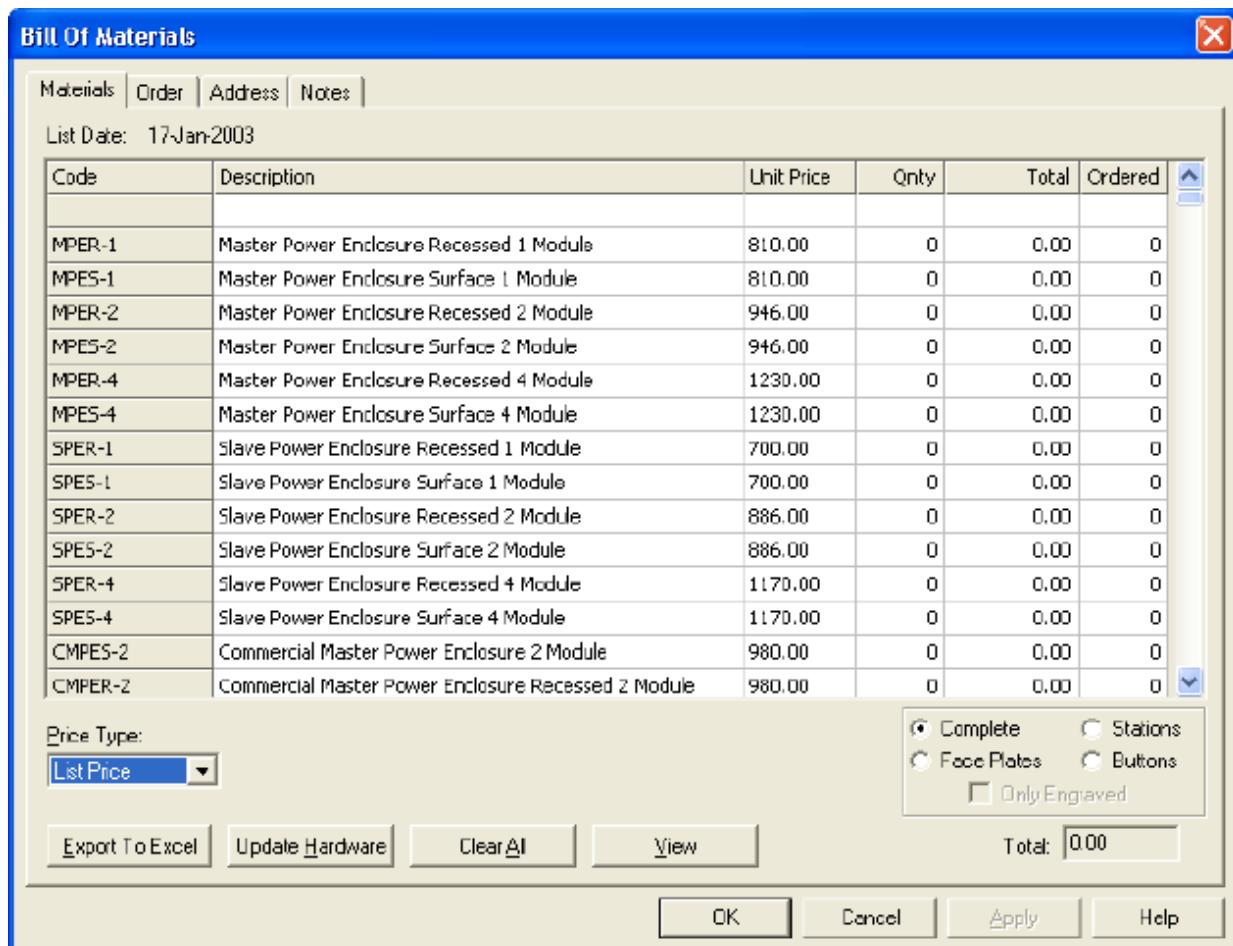
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Bill of Materials provides a list of Vantage hardware from which a bill of materials for the current project can be generated.

To Create a Bill of Materials List from the hardware in the current Project:

With the "example" project open.

On the **Reports** menu, trace to **Bill of Materials**, and then click **Create**.



**Figure 1:** The Bill of Materials-Materials dialog box.

Vantage hardware is listed by category, beginning with Enclosures.

Click **Update Hardware**. This will read the project in memory and add appropriate quantities of hardware to the Bill of Materials list. Some items on the Bill of Materials do not update automatically with the Update Hardware button. These items include Modems, and apparel.

To Create a Bill of Materials List Manually:

Identify the **enclosure type** for the project.

Select **MPER-4**, enter **1** in the **Qty**, column and then press **Enter**.

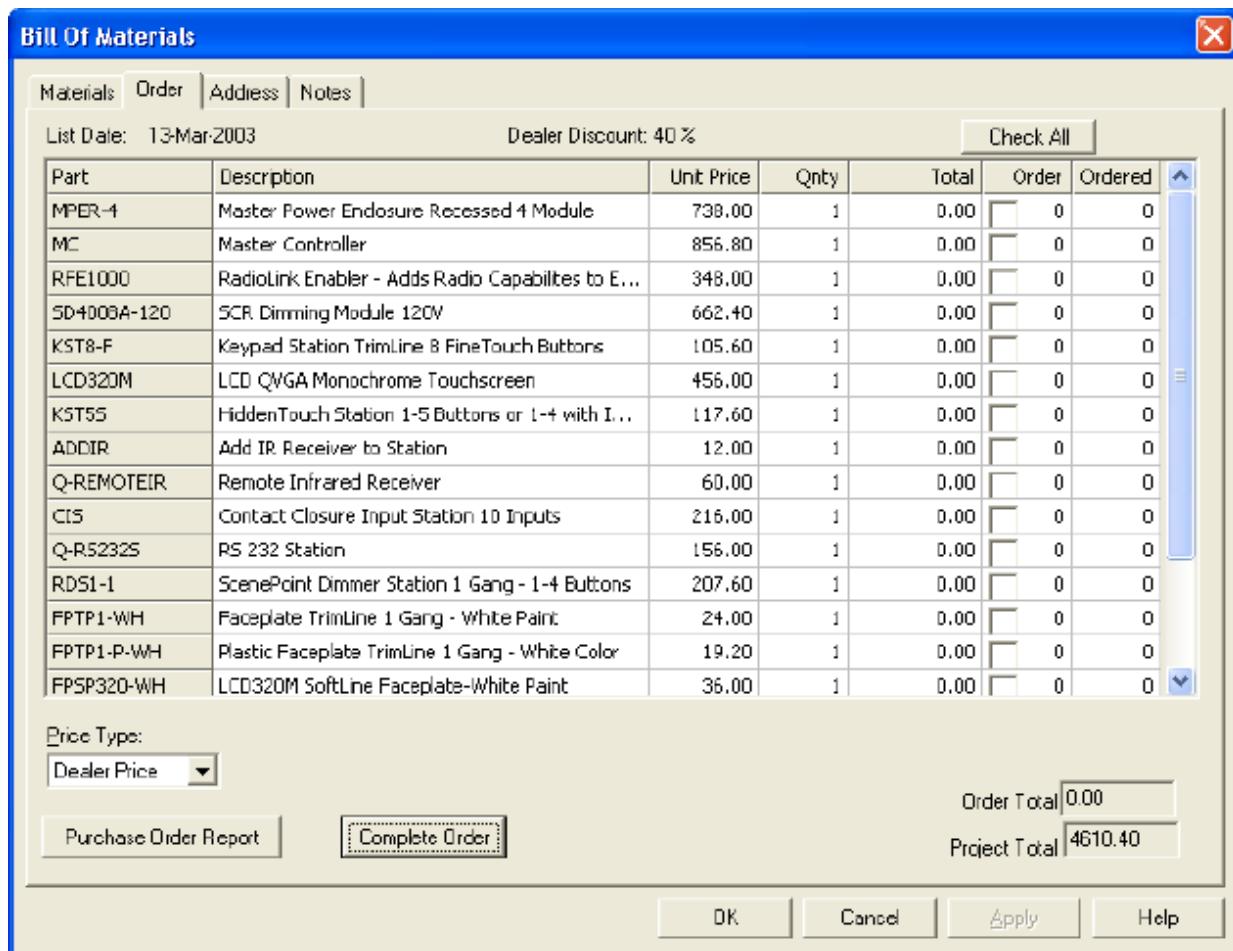
Select the next **hardware component**, enter a **quantity**, and then press **Enter**.

Repeat until all hardware components have been accounted for.

**Note:** The manual method above may be used to create bids. Often using this method a QLink file is not actually created, however, the blank QLink file must be saved to properly save the Materials List file which is the QLink filename.qnt.

**Note:** The section containing "Complete", "Stations", "Face Plates", "Buttons" and "Only Engraved" is used when creating an order. For example, if ordering ONLY stations then the "Stations" radio button would be marked. If ordering ONLY Buttons with Engraving then the "Buttons" radio button and the "Only Engraved" check box would be marked, etc.

After materials Information has been entered click on the **Order** tab.



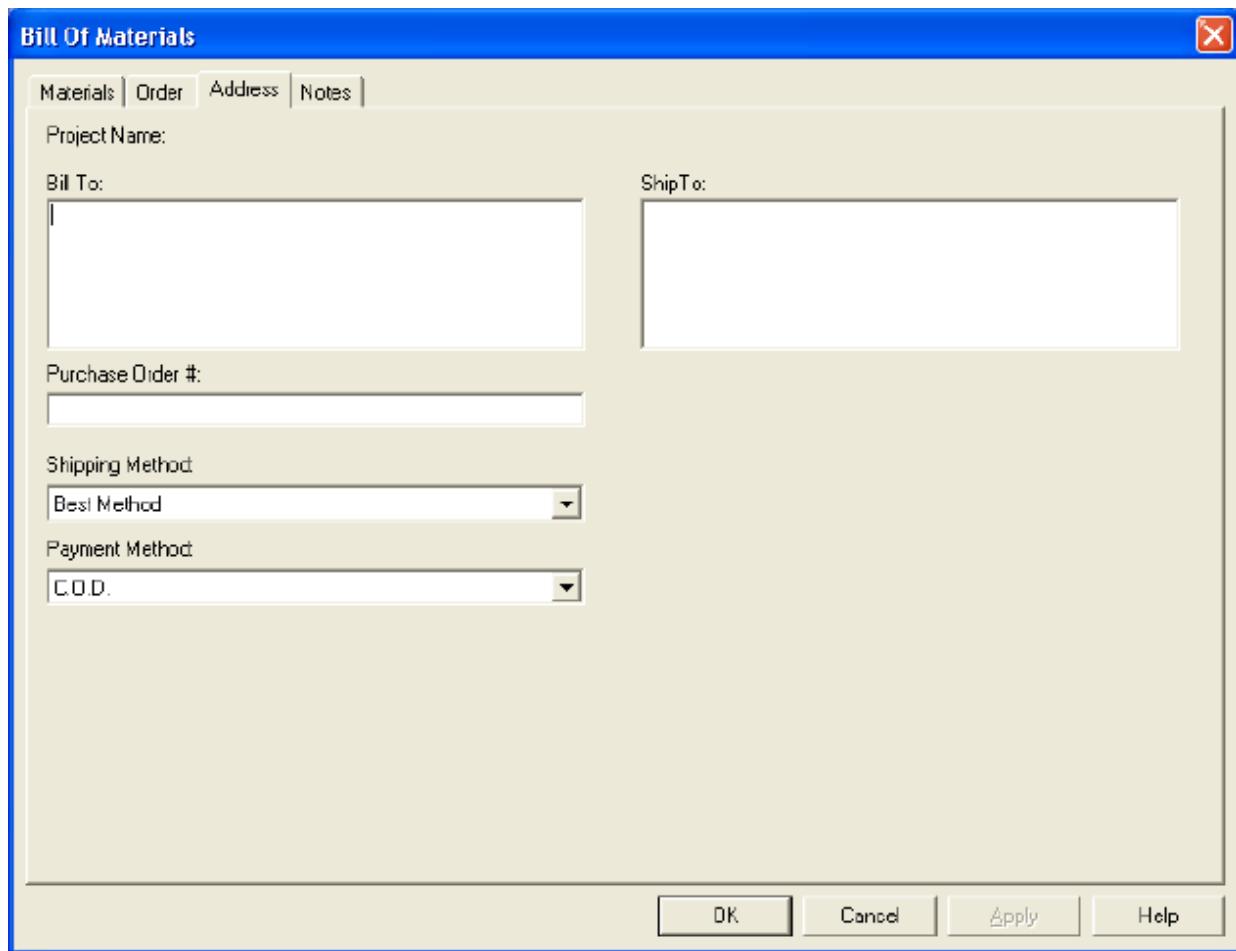
**Figure 2:** The Bill of Materials-Order dialog box.

The orders dialog box is used by the dealer to customize an order.

Create a custom company logo and have it automatically placed on all purchase orders. Create your logo and save it as pologo.jpg to the \Program Files\Vantage\Version34\Config folder. The recommended size is 150 x 150 pixels or smaller.

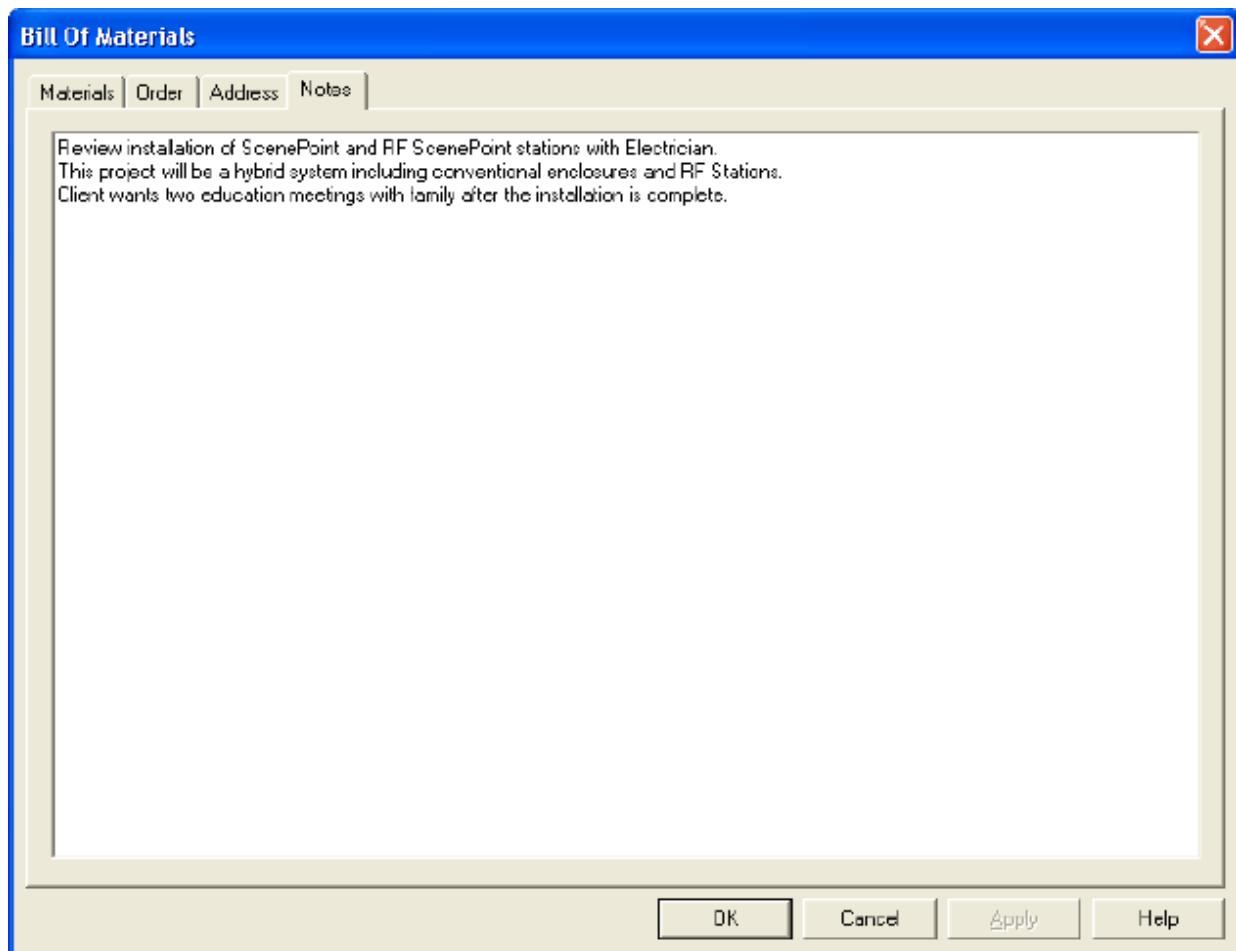
**Note:** To display pricing it is necessary to have the Dealer version of QLink. To properly display Dealer or Distributor Discounts select the **Create Pricelist** option from the File menu or the Reports menu and fill in the appropriate discount level.

After customizing the order click on the **Address** tab to enter shipping Information.



**Figure 3:** The Bill of Materials-Address dialog box.

After shipping information has been entered click on the **Notes** tab.

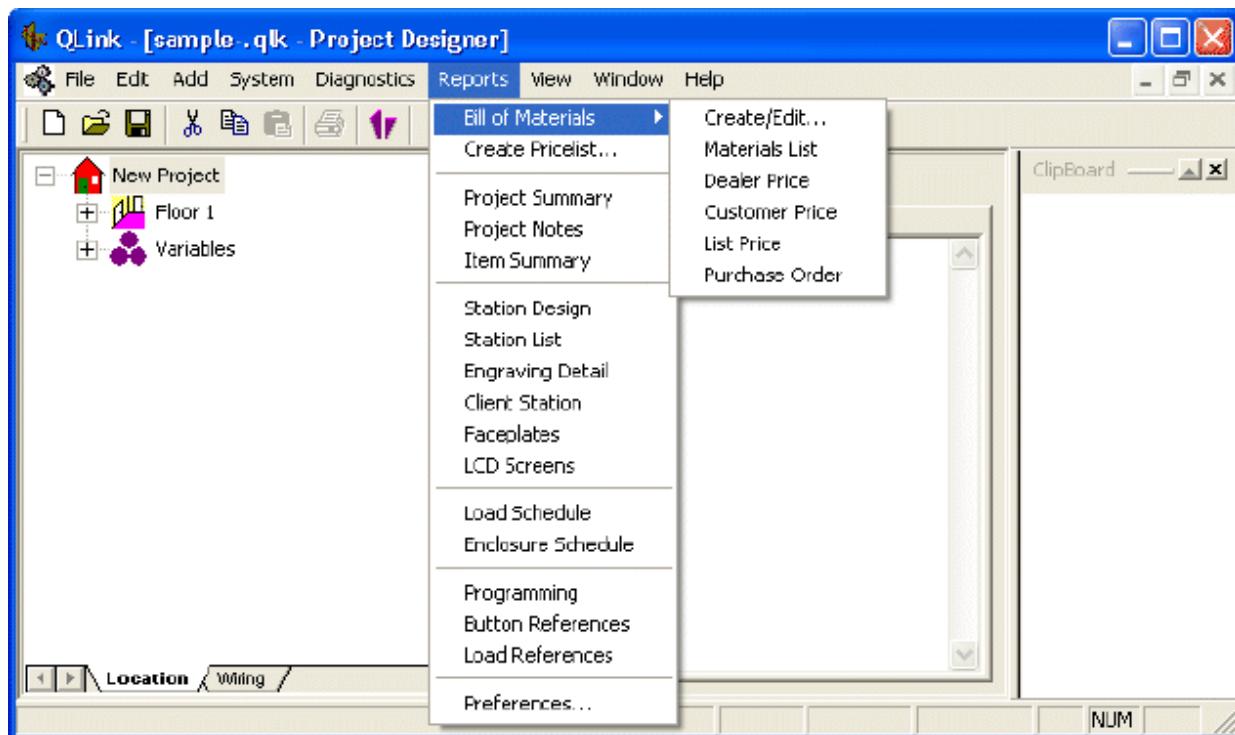


**Figure 4:** The *Bill of Materials-Notes* dialog box.

Enter any notes or special instructions regarding the current QLink project.

Click OK to close the Bill of Materials window.

On the **Reports** menu, trace to **Bill of Materials**, and then click the **Materials List**.



**Figure 5:** The Reports pull down menu.

The Material List report is generated overlaying the project designer window.

The screenshot shows the QLink Project Designer interface with a "Material List" report overlaid. The report has a header "New Project" and "Material List" with the date "12/06/02 08:17:56". It lists the following components:

Part Number	Description	Quantity
MPER-4	Master Power Enclosure Recessed 4 Module	1
MC	Master Controller	1
SD4008A-120	SCR Dimming Module 120V	1
KST4-F	Keypad Station TrimLine 4 FineTouch Buttons	1
LCD320M	LCD QVGA Monochrome Touchscreen	1
ADDR	Add IR Receiver to Station	1
CIS	Contact Closure Input Station 10 Inputs	1
Q-RS232S	RS 232 Station	1
FPTP1-WH	Faceplate TrimLine 1 Gang - White Paint	1
FPSP320-WH	LCD320M SoftLine Faceplate-White Paint	1

**Figure 6:** A Bill of Materials Report.

#### Purchase Orders

Purchase orders may now be generated by QLink. Create a custom company logo and have it automatically placed on all purchase

orders. Create your logo and save it as pologo.jpg to the \\Program Files\\Vantage\\Vantage34\Config folder. The recommended size is 150 x 150 pixels or smaller.



**Figure 7: A Purchase Order Report.**

The lists window overlay the project designer window. If the window's close button is clicked, QLink will exit. To close the window and remain in QLink, click the folder icon to the left of the File menu and select Close or press Ctrl+F4.

The window may need to be resized to view the entire report. Additionally a full page view or a multi-page view may be generated by selecting print preview from the File menu.

## Create Pricelist

The Pricelist allows QLink to calculate costs for the project.

Click on Create Pricelist to open the Creating Price List window.



**Figure 8:** Creating Price List window.

Creates a dealer/distributor price list. The price list is based on an authorized discount for dealers and distributors.

**Note:** To display pricing it is necessary to have the Dealer version of QLink. To properly display Dealer or Distributor Discounts select the **Create Pricelist** option from the File menu or the Reports menu and fill in the appropriate discount level.

The Dealer version of QLink has no effect on the actual QLink file.

---

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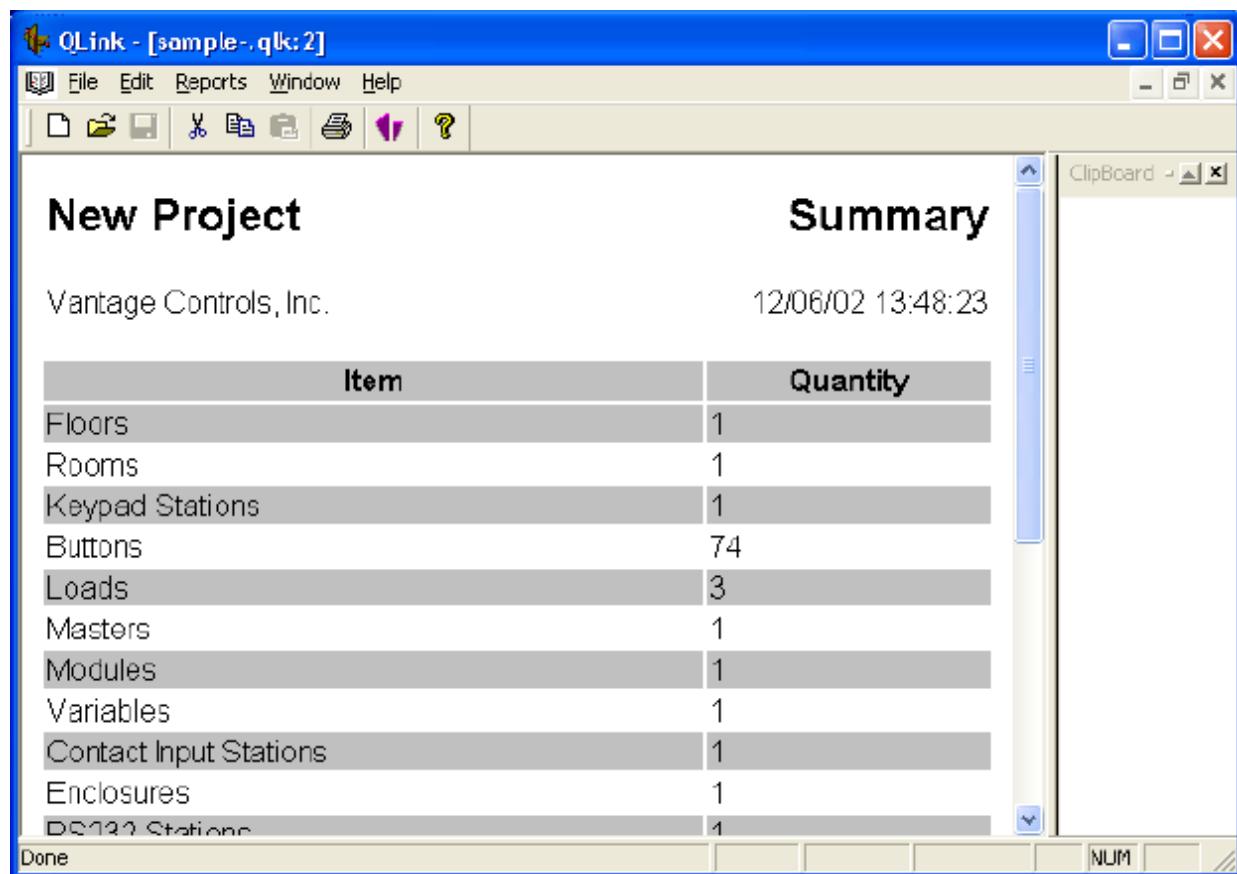
---

## Project Summary

The Project Summary report provides a quantity list of items or objects in the current project. These include number of buttons, loads, keypads, etc.

To View the Project Summary Report:

On the **Reports** menu, trace to **Project Summary**.



**Figure 9:** A *Station Summary Report*.

---

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---

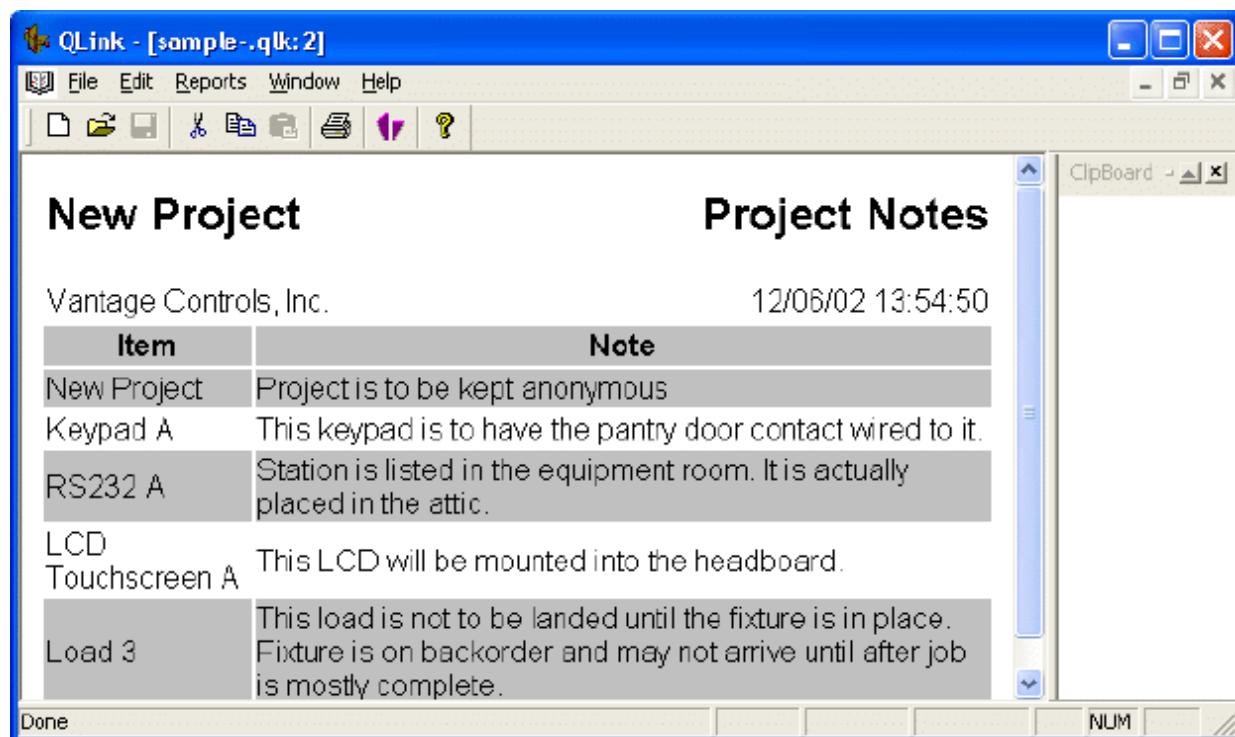
## Project Notes

---

The Project Notes report is a list of all notes for an entire project.

To View the Project Notes Report:

On the **Reports** menu, trace to **Project Notes**.



**Figure 10:** A *Project Notes Report*.

---

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---

## Item Summary

---

The Item Summary report is a complete list of all items for an entire project summarizing each item's information and programming.

To View the Item Summary Report:

On the **Reports** menu, trace to **Item Summary**.

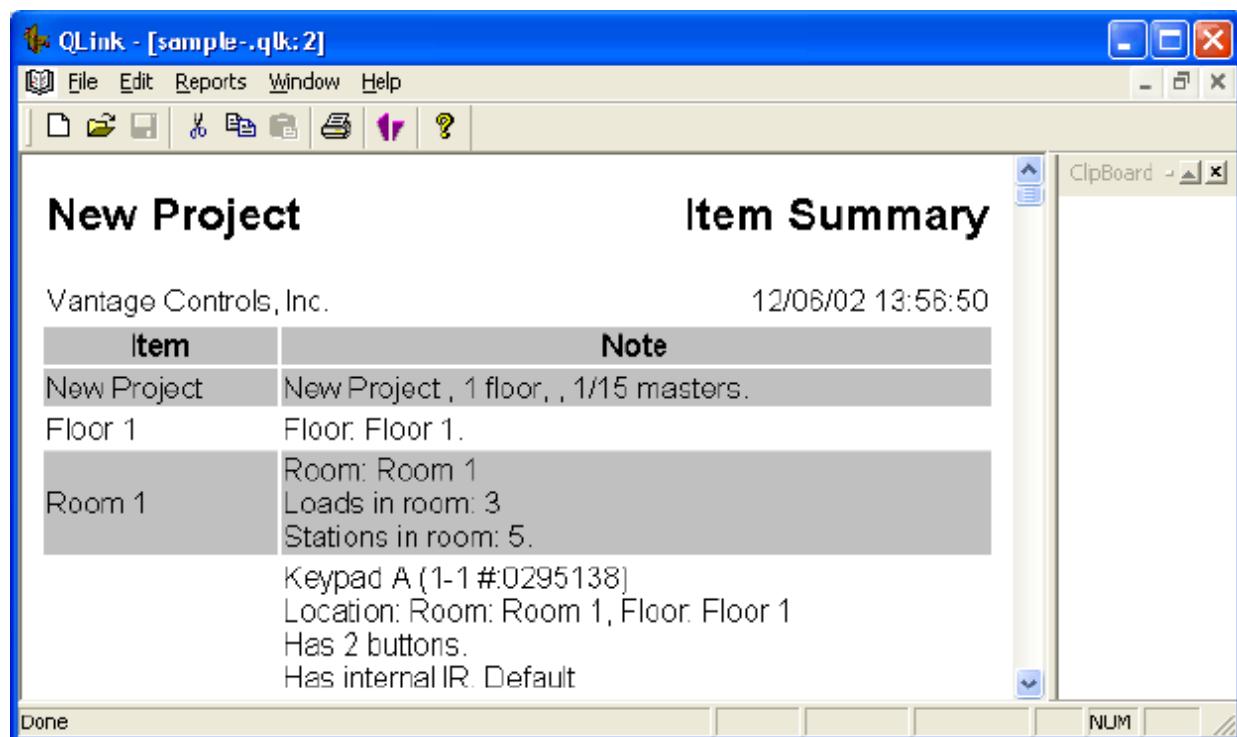


Figure 11: The *Item Summary* Report.

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## Job Information

Job Information Creates a report from information entered in Project Information (red house) windows.

To View the Job Information Report:

On the **Reports** menu, trace to **Job Information** and click.

The report is generated and may be printed.

The screenshot shows the QLink software interface with a blue title bar containing the text "QLink - [sample2.qlk:2]". Below the title bar is a menu bar with options: File, Edit, Reports, Window, and Help. A toolbar follows, featuring icons for file operations like Open, Save, Print, and Help.

The main window displays a "New Job Information Sheet" with the following details:

- Job Name:** Sample Two
- Date:** 08/28/03
- Dealer:**
  - Company Name: [empty]
  - Contact: [empty]
- Job Information:**
  - Start Date: 08/28/03
  - Estimated Completion: 08/28/03
  - Square Footage: [empty]
  - Class: None
  - SubClass: None
  - Type: None
- Owner:**
  - Name: [empty]
  - Address: [empty]  
U.S.A.
  - Telephone: [empty]
  - Fax: [empty]
  - Email: [empty]
- Installer:**
  - Company: [empty]
  - Contact: [empty]
  - Phone: [empty]
  - Email: [empty]

At the bottom left is a "Done" button, and at the bottom right is a numeric keypad labeled "NUM".

**Figure 11a:** A Job Information Report.

**Related Topic:** [Creating A New Project](#)

---

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---

## Station Design

The Station Design report provides a graphical view of the engraveable station in the current project.

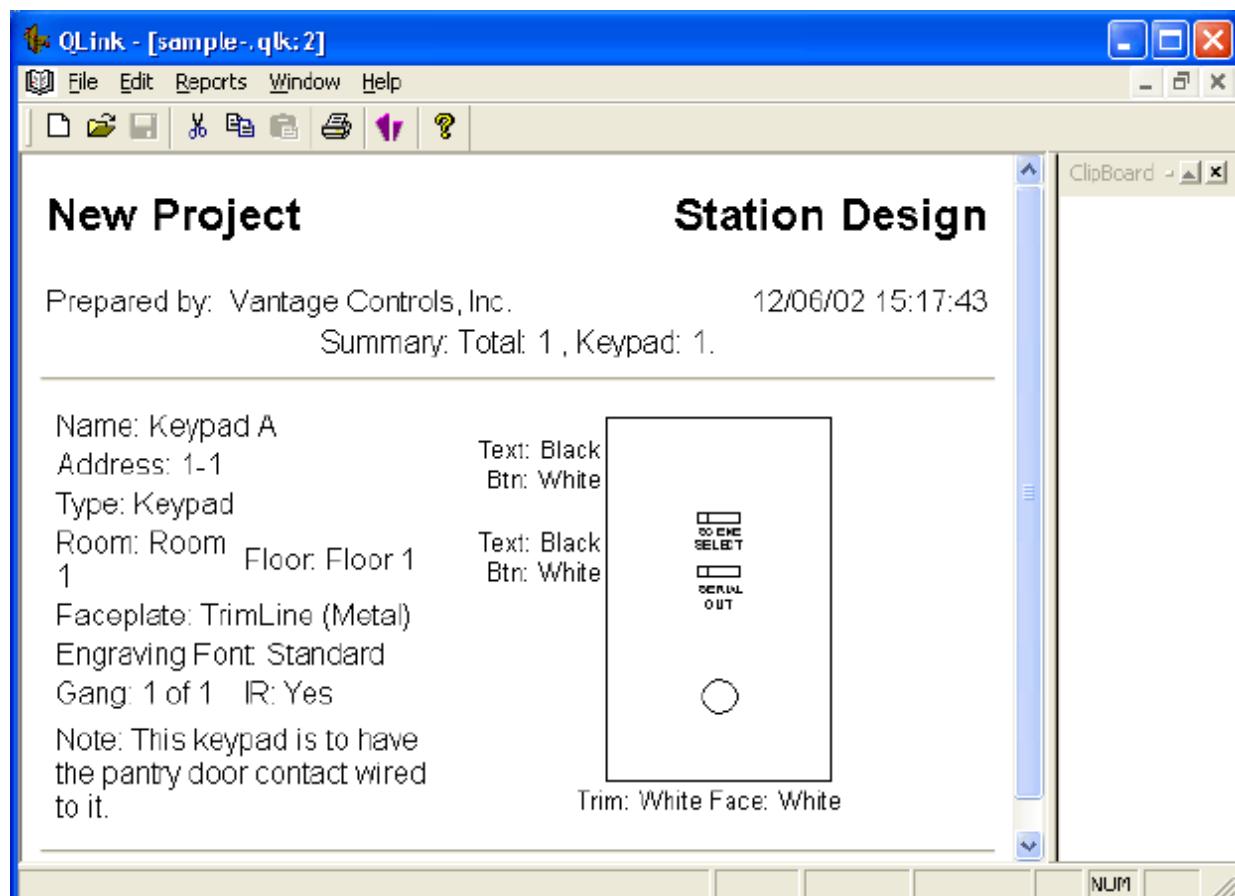
To View the Station Design Report:

On the **Reports** menu, trace to **Station Design**.

The View List dialog box opens. It may be sorted by None, Name, Floor, Room, Address or Station Type. This Report supports two level sorting capability.

Click **OK** to sort.

Size the window to view all information.



**Figure 12:** A *Station Design Report*.

---

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---

## BriteStyle Labels

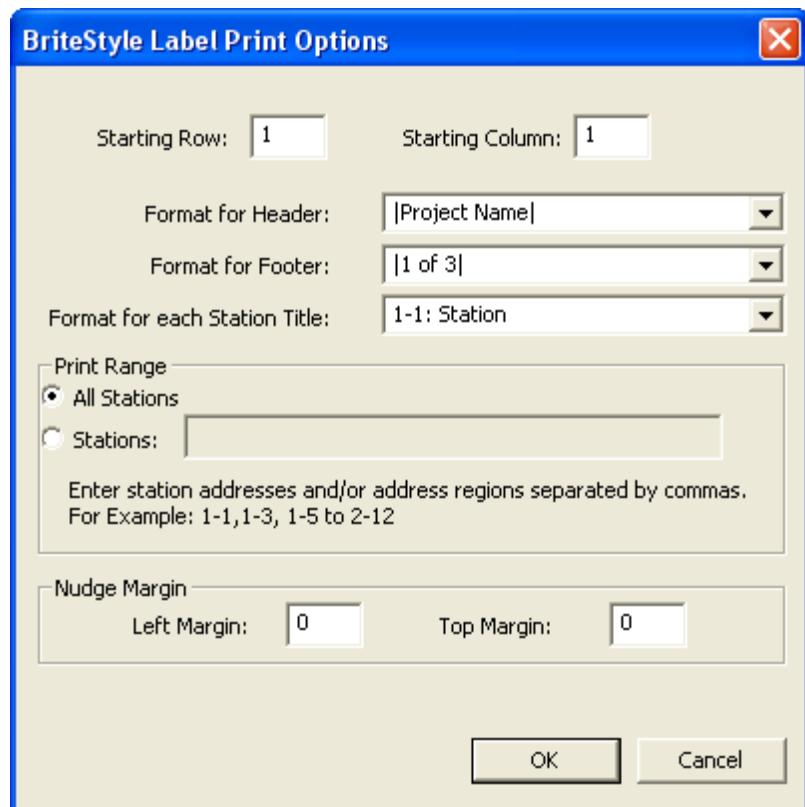
---

The BriteStyle Labels report allows the printing of BriteStyle labels to a special transparent label form. These label forms are available from Vantage, part # BTLABEL-B.

To View the BriteStyle labels report:

On the **Reports** menu, trace to **BriteStyle Labels**.

The *BriteStyle Label Print Options* dialog box opens.



**Figure 20a:** BriteStyle Label Print Options.

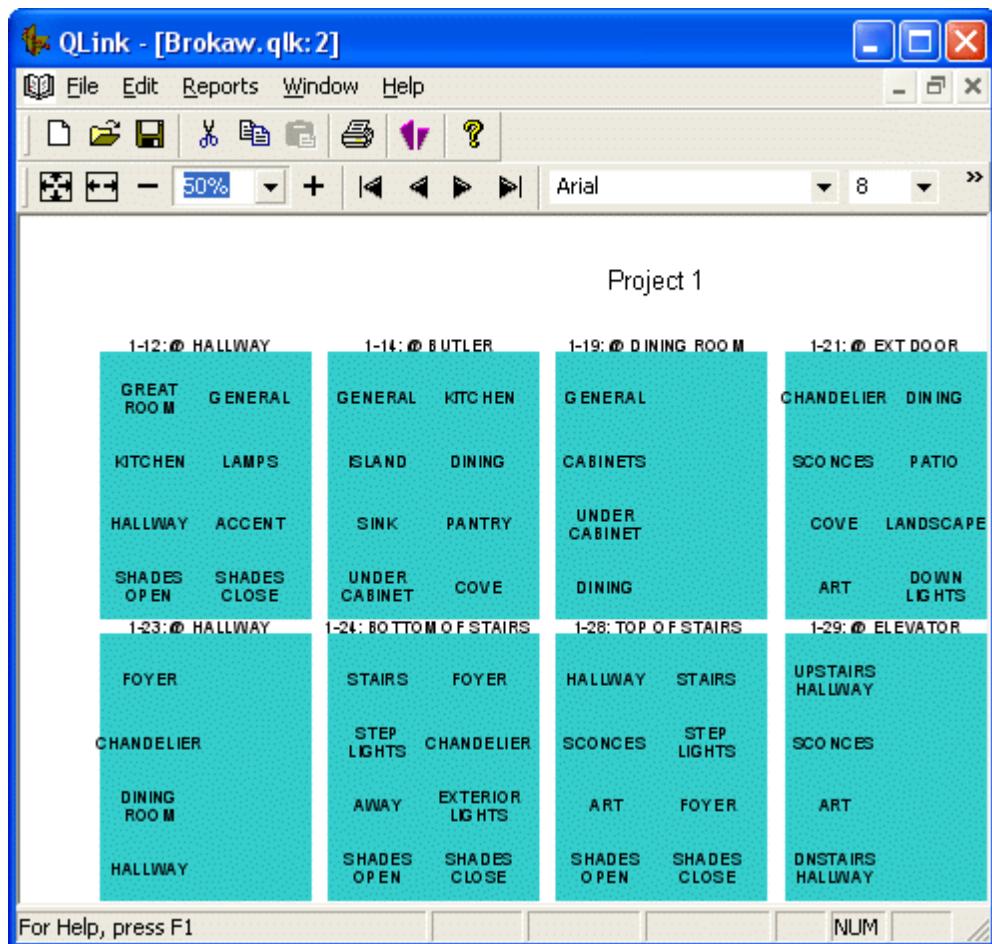
Accept the default settings in this window or change them as desired.

Starting Row: A sheet of labels have rows 1 through 5. Row 1 is the top row and row 5 is the bottom row.

Starting Column: A sheet of labels have columns 1 through 5. Column 1 is the left column and column 5 is the right column.

Other settings are self explanatory.

Click **OK** and the BriteStyle Label next window is opened:



**Figure 20b: BriteStyle Report.**

Before you print from this screen you can globally change:

1. Change the font type, size and color
2. Add font attributes, Bold, Italic, Underline
3. Change the background color if desired
4. Scroll through pages
5. Zoom the view in and out
6. Print

*It is recommended that you print to plain paper first to check alignment of the labels.*

---

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## Station List

---

The Station List report provides a list of all stations in the current project. The list includes the station 's address, name, room name, floor, gang, number of buttons, and serial number.

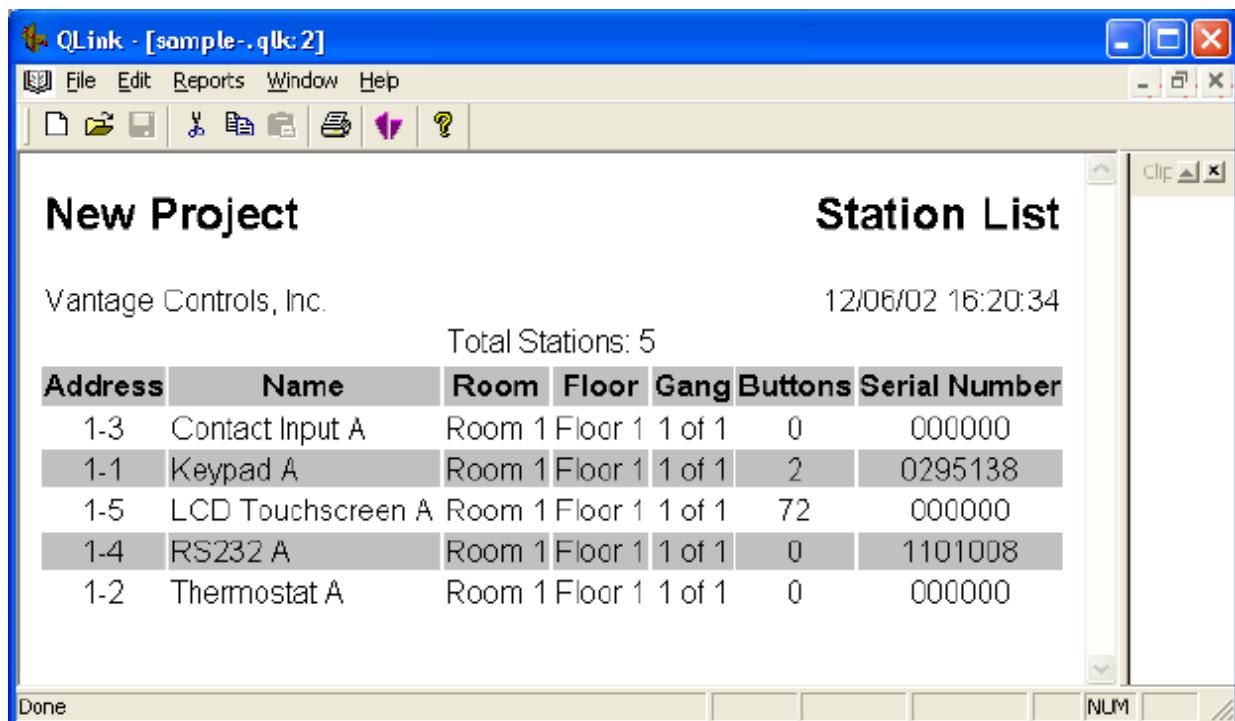
To View the Station List:

On the **Reports** menu, trace to **Station Lists**, and then click **Station List**.

The View List dialog box opens. It may be sorted by None, Name, Floor, Room, Address or Station Type. This Report supports two level sorting capability.

Click **OK** to sort.

Size the window to view all information.



**Figure 13:** A *Station List*.

---

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## Engraving Detail

---

The Engraving Detail report is a highly detailed report of the engraving information

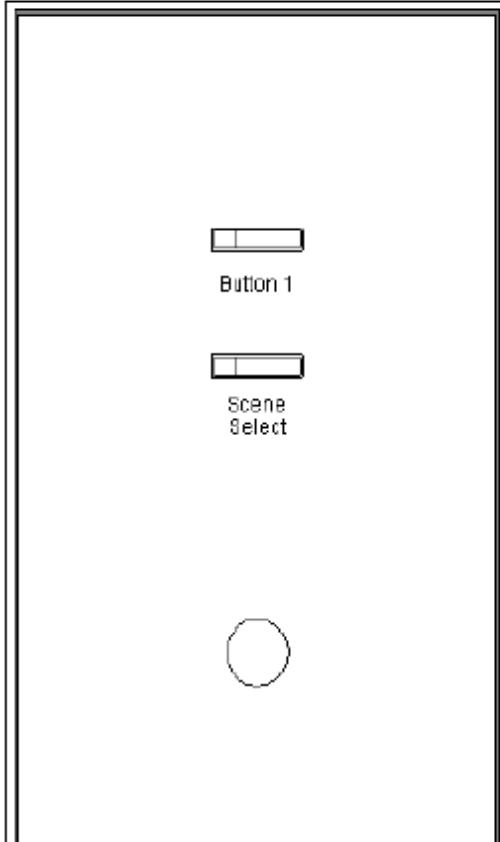
To View the Engraving Detail Report:

On the **Reports** menu, trace to **Engraving Detail**, and left click.

The View List dialog box opens. It may be sorted by None, Name, Floor, Room, Address or Station Type. This Report supports two level sorting capability.

Click **OK** to sort.

Size the window to view all information.

Station Engraving Detail Sheet																																																					
FLOOR ROOM: NAME: GANGS	Floor 1 Room 1 Keypad A 1 of 1	STYLE FACEPLATE COLOR BUTTON STYLE ENGRAVING FONT	TrimLine (Metal) Trim: White Face: White FineTouch Standard	NOTES: None																																																	
		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2" style="width: 15%;">BUTTON NUMBER</th> <th colspan="2" style="width: 40%;">ENGRAVING</th> <th colspan="2" style="width: 45%;">COLOR</th> </tr> <tr> <th style="width: 20%;">LINE 1</th> <th style="width: 20%;">LINE 2</th> <th style="width: 15%;">TEXT/FILL</th> <th style="width: 15%;">Button</th> </tr> </thead> <tbody> <tr><td>1</td><td>Button 1</td><td></td><td>Text: Black</td><td>Btn: White</td></tr> <tr><td>2</td><td>Scene</td><td>Select</td><td>Text: Black</td><td>Btn: White</td></tr> <tr><td>3</td><td></td><td></td><td></td><td></td></tr> <tr><td>4</td><td></td><td></td><td></td><td></td></tr> <tr><td>5</td><td></td><td></td><td></td><td></td></tr> <tr><td>6</td><td></td><td></td><td></td><td></td></tr> <tr><td>7</td><td></td><td></td><td></td><td></td></tr> <tr><td>8</td><td></td><td></td><td></td><td></td></tr> </tbody> </table>			BUTTON NUMBER	ENGRAVING		COLOR		LINE 1	LINE 2	TEXT/FILL	Button	1	Button 1		Text: Black	Btn: White	2	Scene	Select	Text: Black	Btn: White	3					4					5					6					7					8				
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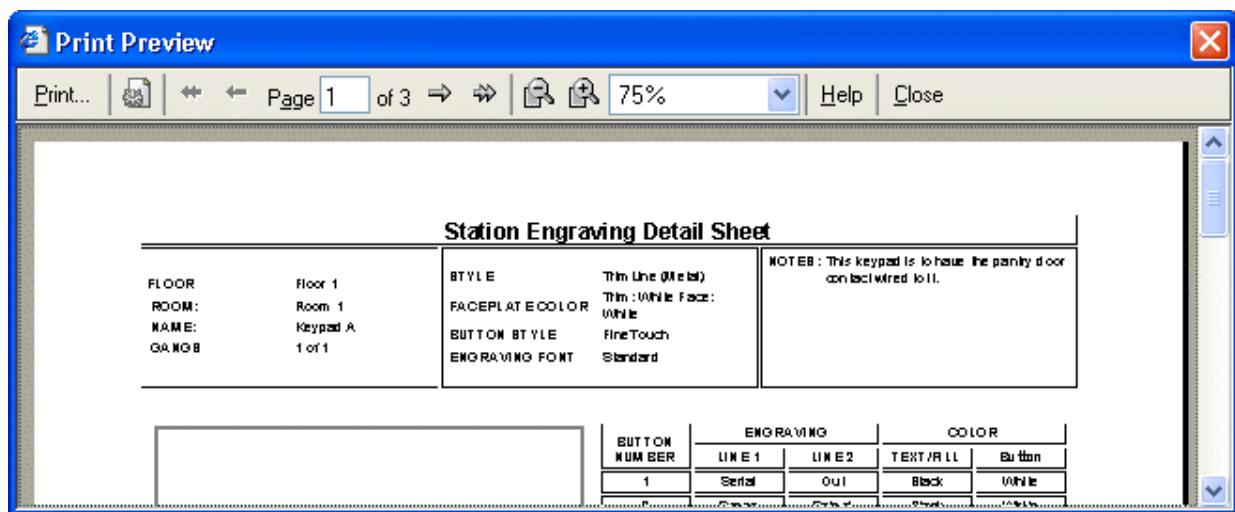
**Figure 14:** Engraving Detail List.

Size the window to view all station information.

**Printing Suggestions:** Once the report is generated on the screen, press **Ctrl+Shift+P**

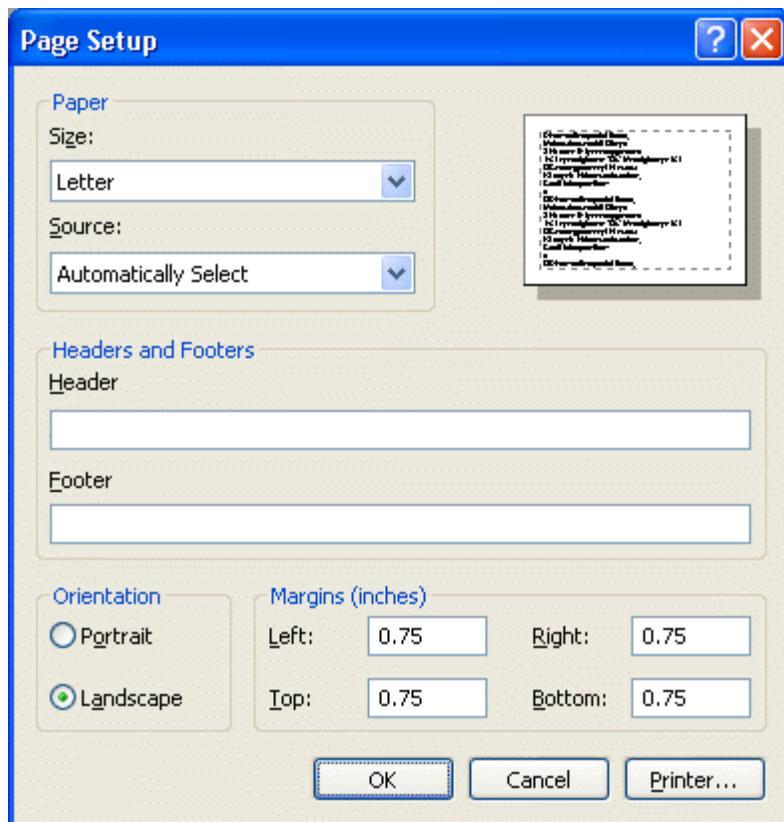
or

click on File | Print Preview..., this will open the Print Preview window.



**Figure 15:** Print Preview Window.

In the Print Preview window, click on the **Page Setup** button to open the page setup window. The page layout may be set to landscape or portrait and the Header and Footer information may be edited or removed and the margins may be changed as necessary.



**Figure 16:** Page Setup Window.

Click **OK** to close the page setup window and print the document.

## Client Station

The Client Station report is a detailed report of each station, showing engraving information, text color, button color, loads controlled by each button, etc. This report is very helpful to the client, and may be used as a sign off sheet and an education tool for the client.

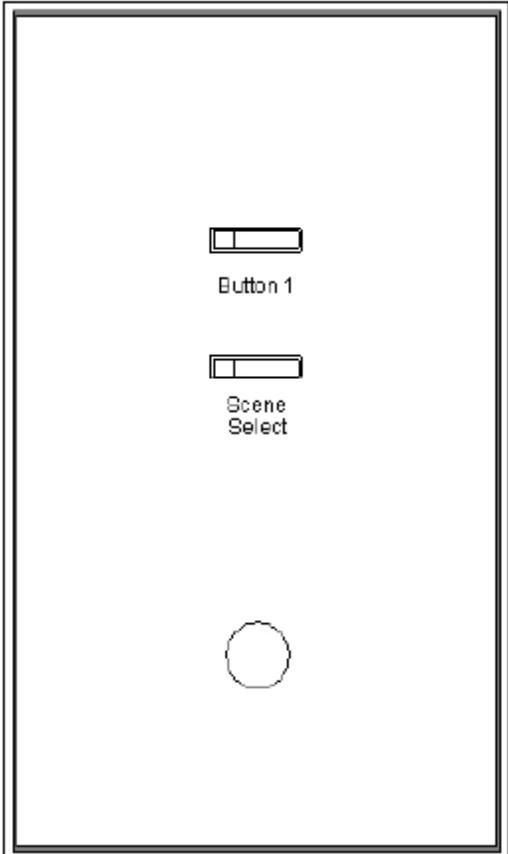
To View the Client Station Report:

On the **Reports** menu, trace to **Client Station**, and left click.

The Select List dialog box opens. It may be sorted by None, Name, Floor, Room, Address or Station Type. This Report supports two level sorting capability.

Click **OK** to sort.

Size the window to view all information.

Client Station Sheet																																																																							
FLOOR ROOM: NAME: GANGS	Floor 1 Room 1 Keypad A 1 of 1	STYLE FACEPLATE COLOR BUTTON STYLE ENGRAYING FONT	TrimLine (Metal) Trim: White Face: White FineTouch Standard	NOTES:																																																																			
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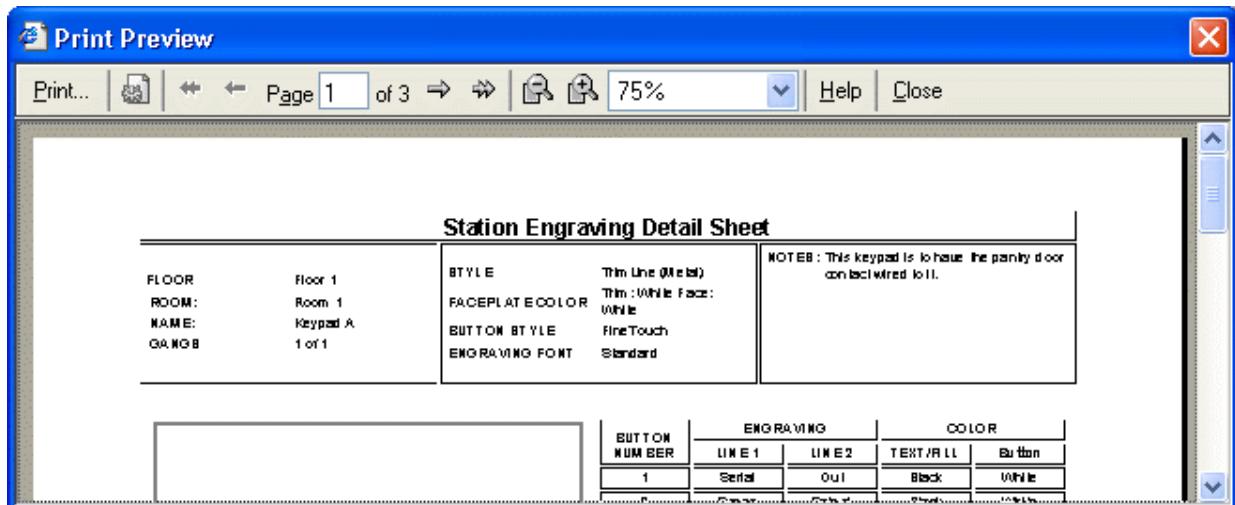
**Figure 17: Client Station Report.**

Size the window to view all station information.

**Printing Suggestions:** Once the report is generated on the screen, press **Ctrl+Shift+P**

or

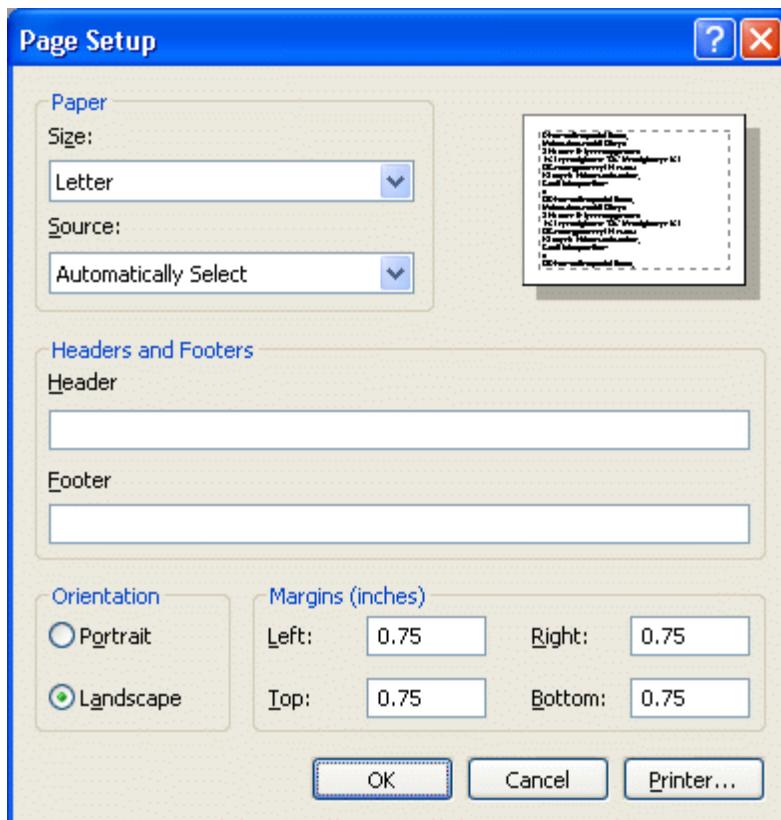
click on File | Print Preview..., this will open the Print Preview window.



**Figure 18:** Print Preview Window.



In the Print Preview window, click on the **Page Setup** button to open the page setup window. The page layout may be set to landscape or portrait and the Header and Footer information may be edited or removed and the margins may be changed as necessary.



**Figure 19:** Page Setup Window.

Click **OK** to close the page setup window and print the document.

---

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---

## Faceplates

---

The Faceplates report is a detailed report of each station, showing the style, material, color and button.

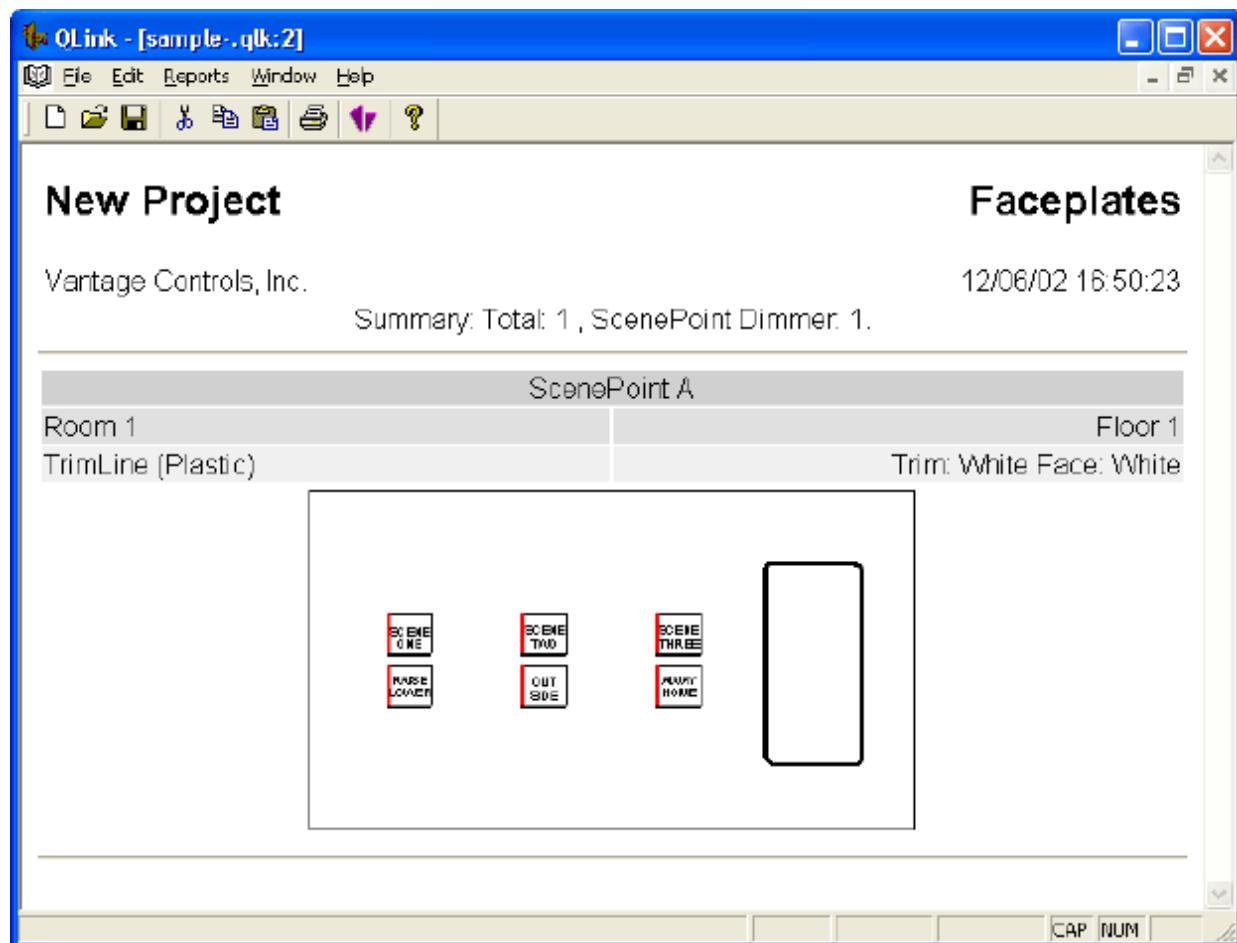
To View the Faceplates Report:

On the **Reports** menu, trace to **Faceplates**, and left click.

The Select List dialog box opens. It may be sorted by None, Name, Floor, Room, Address or Station Type. This Report supports two level sorting capability.

Click **OK** to sort.

Size the window to view all information.



**Figure 20:** Faceplates Report.

Size the **window** to view all **station** information.

Click on File | Print to print the report.

---

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---

## LCD Screens

The LCD Screens report provides a graphical report of all LCD Screens used in an entire project.

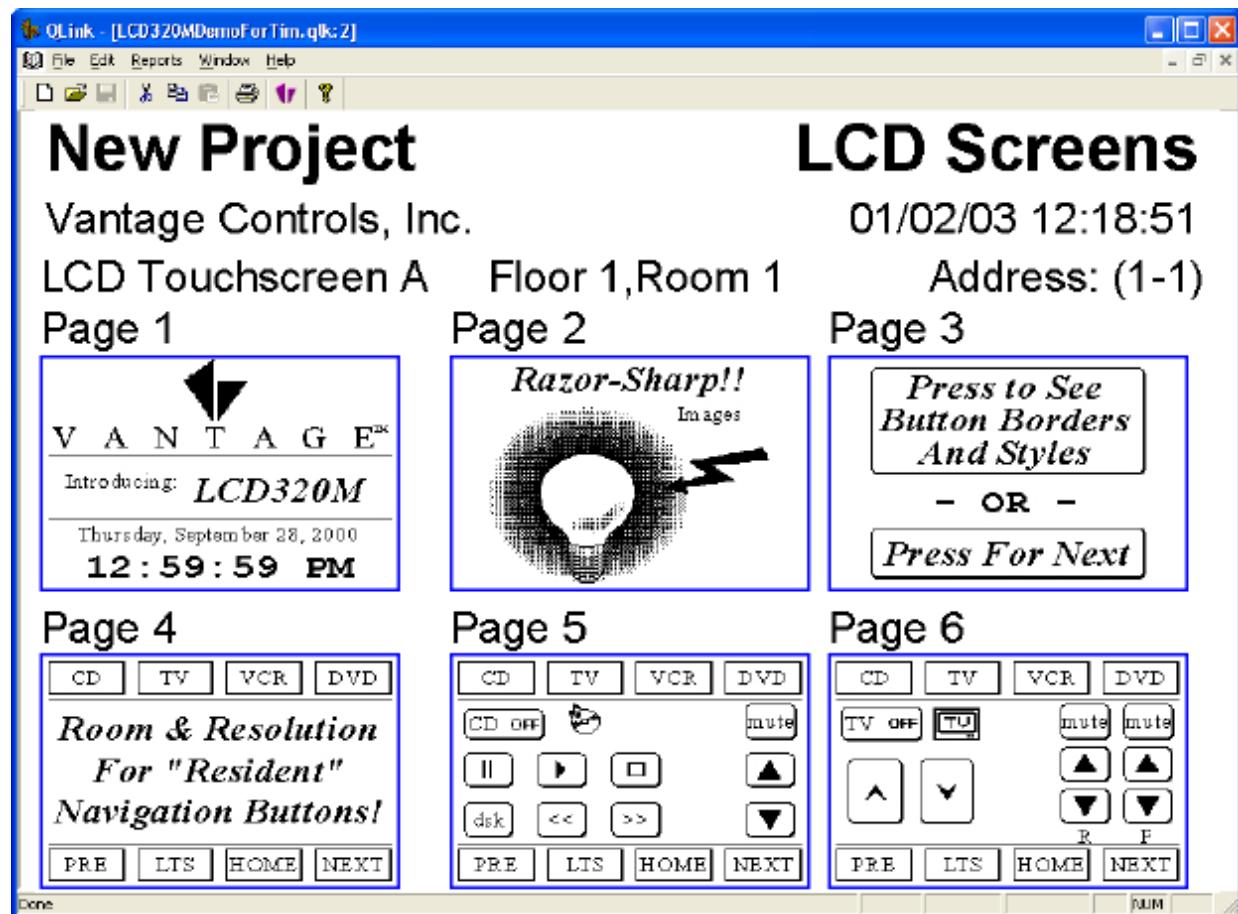
To View the LCD Screens Report:

On the **Reports** menu, trace to **Reports**, and then click **LCD Screens**.

The View List dialog box opens. It may be sorted by Name, Floor, Room or Address. This Report supports two level sorting capability.

Click **OK** to sort.

Size the window to view all information.



**Figure 21:** An LCD Screens Report.

---

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## Load Schedule

The Load Schedule report provides a load description list of all the loads installed in a project.

To View the Load List:

On the **Reports** menu, click **Load Schedule**.

The View List dialog box opens. Load lists may be sorted by None, Name, Floor, Room, Address, Load Class, Contractor Number, Power, Load Type or Enclosure Group. This Report supports two level sorting capability.

Click **OK** to sort.

Size the window to view all information.

**New Project**      **Load Schedule**

Vantage Controls, Inc.      11/01/05 12:29:51

Total Loads: 9

Contractor Number	Name	Room	Floor	Total Power	Type	Address	Wired to	Vacation
10100101	Station Load 1	Equipment	Equipment	-	-	1-1-1 (1-1)	ScenePoint A	Yes
101	Load 1	Equipment	Equipment	100	Incande	1-1-1-1 (1-1-1)	Module 1	Yes
102	Load 2	Equipment	Equipment	100	Incande	1-1-1-2 (1-1-1)	Module 1	Yes
103	Load 3	Equipment	Equipment	100	Incande	1-1-1-3 (1-1-1)	Module 1	Yes
104	Load 4	Equipment	Equipment	100	Incande	1-1-1-4 (1-1-1)	Module 1	Yes
<b>Done</b>								

**Figure 22:** A Load List.

---

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---

## Enclosure Schedule

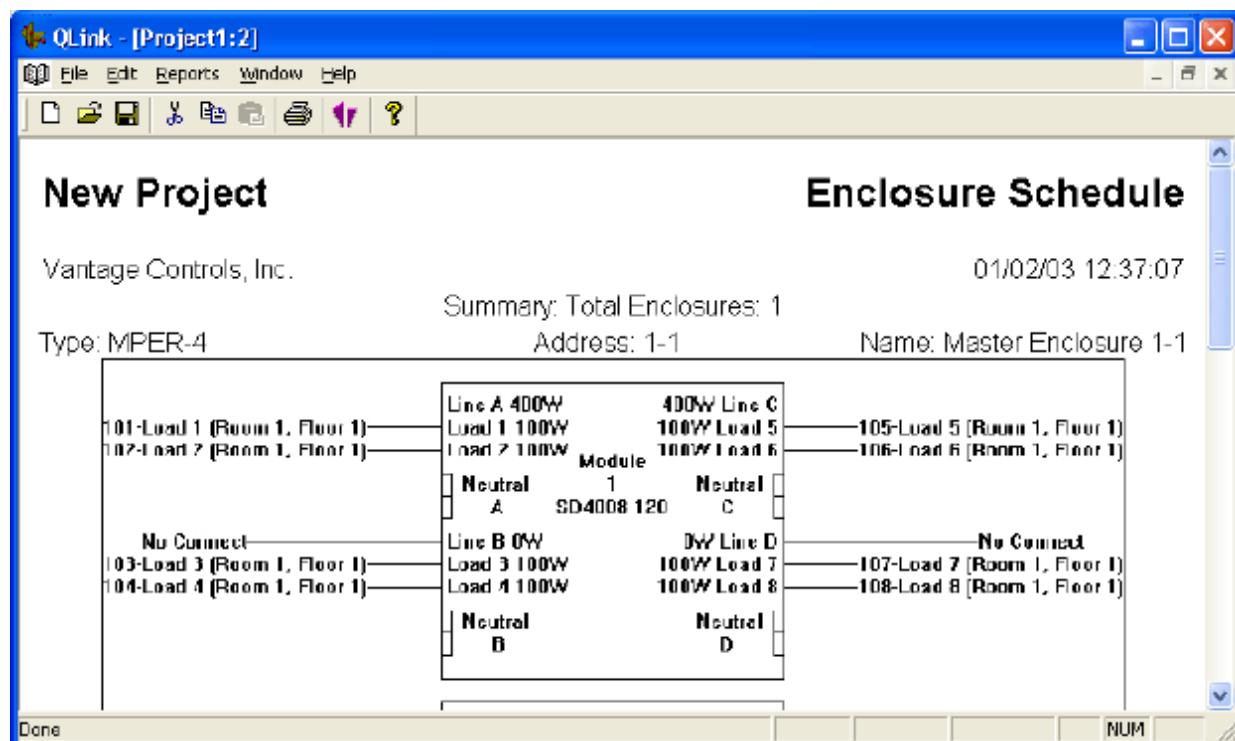
---

The Enclosure list provides a list of all enclosures with details on where high voltage wiring should be landed in the enclosure. Enclosure lists are also referred to as enclosure schedules.

To View the Enclosure List/Schedule:

On the **Reports** menu, click **Enclosure List**.

An Enclosure Schedule window opens.



**Figure 23:** An Enclosure Schedule.

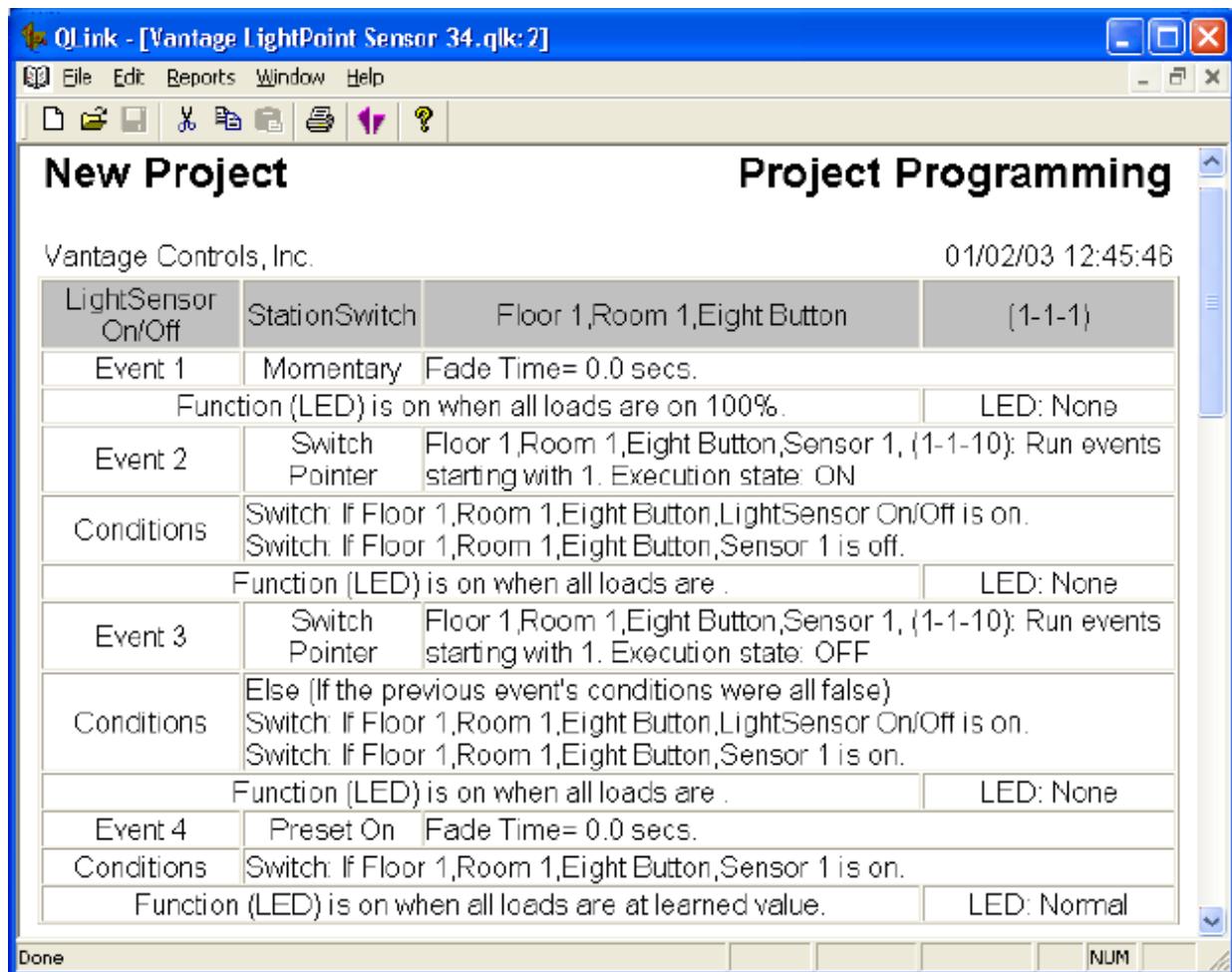
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## Programming

The Programming report provides a list of all the programming in a project.

To View the Programming report:

On the **Reports** menu, click **Programming**.



**Figure 24:** Programming Report.

---

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---

## Button References

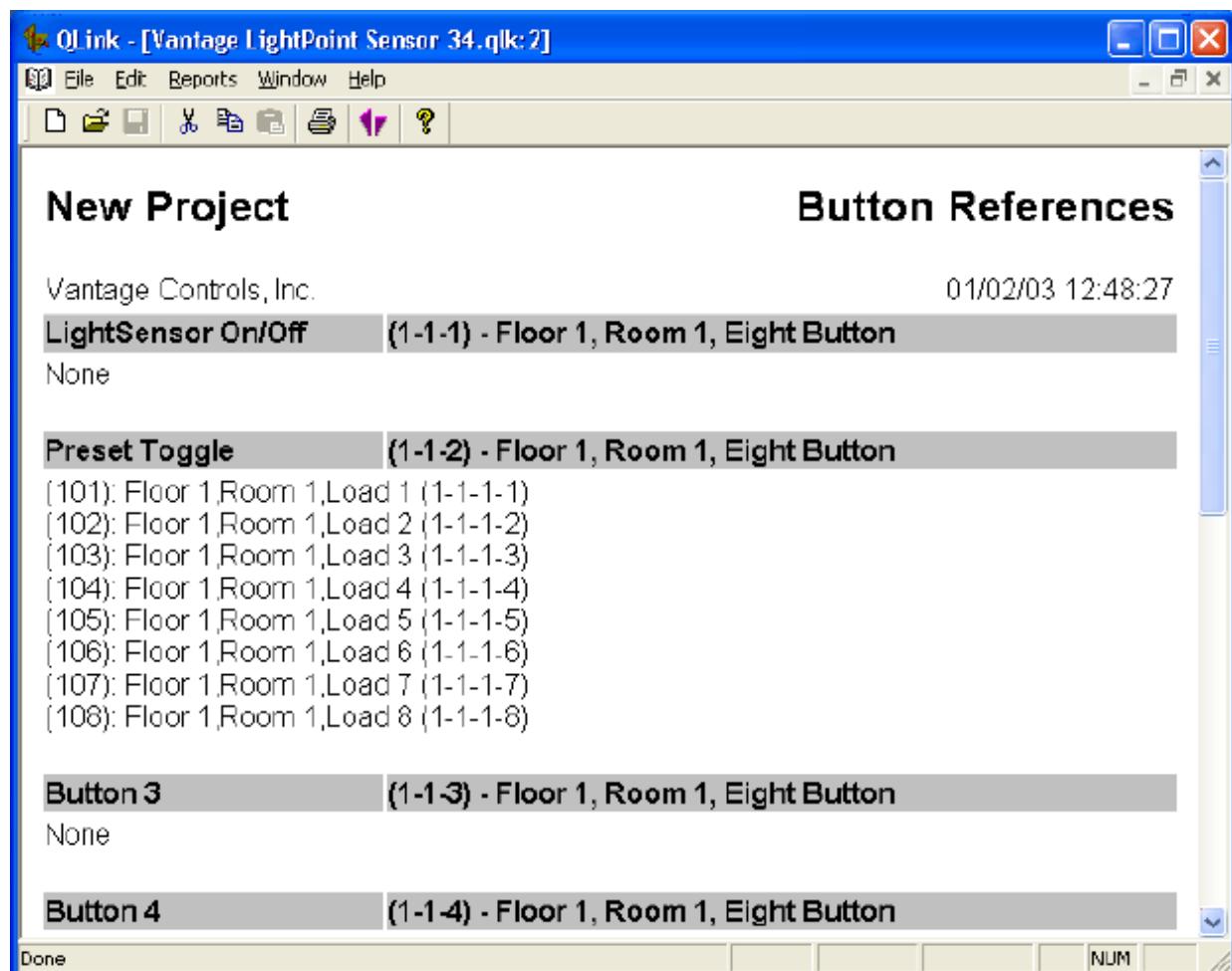
---

The Button References report provides a list of all buttons and their referenced loads that they control.

To View the Button References Report:

On the Reports menu, click Button References .

An Enclosure Schedule window opens.



**Figure 25:** A *Button Reference Report*.

---

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---

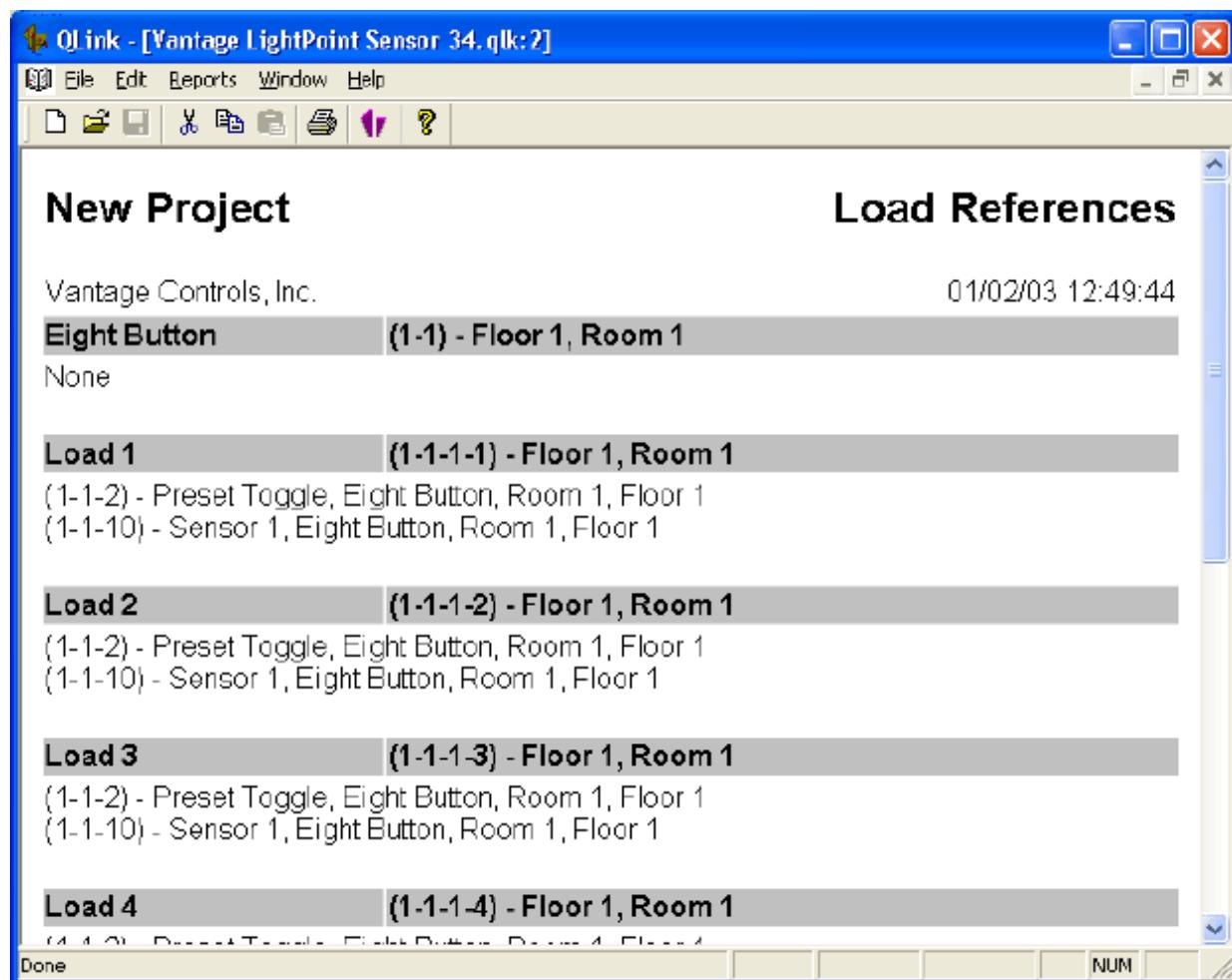
## Load References

---

The Load References report provides a list of all loads in a project with references to everything that may affect the load..

To View the Load References Report:

On the **Reports** menu, click **Load References**.



**Figure 26:** A Load References Report.

---

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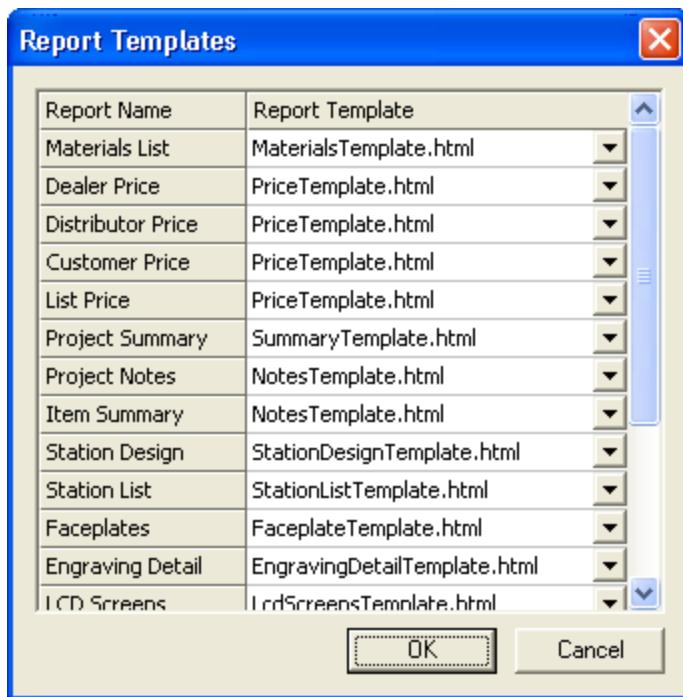
## Preferences, Reports

---

The Preferences option on the Reports menu allows the selection of which HTML template is used to generate each report. This allows the QLink programmer to select the default HTML template or select a custom HTML template for each report.

To View the Preferences window:

On the **Reports** menu, click **Preferences**.



**Figure 27: Report Preferences.**

#### Related Topics

[Customizing QLink Reports](#)

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## Customizing QLink Reports

QLink uses template files to create the reports. You can modify the template file, to modify how the report looks.

The reports are found on the hard drive within the Vantage folder inside of the folder named Config. The following is a list of the Template files and what report they relate to:

Template File	Reports that use this file.
ControlledByTemplate.html	Controlled by Buttons, Controlled By Loads.
EnclosureScheduleTemplate.html	Enclosure Schedule
HeaderTemplate.html	Programming, LCD Screens, Summary
LCDScreensTemplate.html	LCD Screens
LoadListTemplate.html	Load List
MaterialsTemplate.html	Materials List
NotesTemplate.html	Notes
PriceTemplate.html	List Price, Dealer Price, Distributor Price, Customer Price
ProgrammingTemplate.html	Programming
StationDesignTemplate.html	Station Design
StationListTemplate.html	Station List

#### Variables

A variable in the template file is defined as \_Name\_ where Name is the variable. A variable can appear anywhere in the file. If it isn't defined anywhere it won't be inserted. Modifying where these variables are lets you customize how the reports look.

Standard Variable	Description

ProjectName	Name of the Project.
CompanyName	"Vantage Controls, Inc."
FileName	Name of the QLink File
FullFileName	Name of the QLink File with the full Path. e.g. C:\Vantage\Projects\House qlk
BrevWeekDay	Abbreviated weekday name.
WeekDay	Full weekday name.
BrevMonthString	Abbreviated month name.
MonthString	Full Month Name.
DateTime	Date and time representation appropriate for locale.
Day	Day of month as decimal number (01-31).
Hour	Hour in 12-hour format (01-12).
24Hour	Hour in 24-hour format( 00-23).
DayOfYear	Day of year as decimal number (001-366).
Month	Month as decimal number (01-12).
Minutes	Minute as decimal number (00-59).
AMPM	Current locale's A.M./P.M. indicator for 12-hour clock.
Seconds	Second as decimal number (00-59)
WeekNumber	Week of year as decimal number, with Sunday as first day of week (00-53)
WeekDayNumber	Weekday as decimal number (0-6; Sunday is 0).
LocalDate	Date representation for current locale.
LocalTime	Time representation for current locale.
YearNoCentury	Year without century, as decimal number (00-99).
Year	Year with century, as decimal number.
TimeZone	Time-zone name or abbreviation; no characters if time zone is unknown
BaseFont	"Arial"
Title	Title of the Web Page.
ReportName	Name of the Report.

## Templates

A template is anything that QLink inserts into the report. A template has a name, and variables that get inserted into it. A template has the format:

```
<!-- TEMPLATE TemplateName
Body of the Template
-->
```

By changing the alignment, and by changing the order and position of the variables in the HTML file, you can make your reports appear any way you like.

## The following is A Description of Variables and Templates used in the template files.

Additional Variables are Variables that are not in a template, but are specific to the HTML file.

Templates are The templates contained in the HTML file.

Template Variables are variables that are contained in the templates whose name they bear.

### ControlledByTemplate.html

#### Templates:

Row— Adds a table that contains the button or load name, its address and location, and what loads it controls or buttons control it.

#### Template Row Variables.

Name – Name of the button or load.

Info – Address & Location of the button or load.

LoadList – List of what loads the button controls or a list of what buttons control the load.

### **EnclosureScheduleTemplate.html**

#### **Additional Variables:**

Summary: Number of Enclosures in this report.

#### **Templates:**

Row – Adds a table that contains the enclosure information

#### **Template Row Variables:**

Model : Model Number of the Enclosure.

Address: Address of the Enclosure

EnclosureName: Name of the Enclosure.

EnclosureImage: Link to the image of the enclosure.

ImageWidth: Width of the image of the enclosure.

ImageHeight: Height of the image of the enclosure.

RowStyle: Style to use for the Row. Defined as Break to create a page break after the line.

### **LCDScreensTemplate.html**

#### **Templates**

StartTable: Add the start of the LCD Screen Table.

TitleRow: Add the First row to the LCD Screen Table

StartRow: Starts a Table Row

Page Cell: Adds the Table Cell that has the Page Number of the LCD.

End Row: Ends the Row

ImageCell: Adds the Table Cell that has the Page Image.

EndTable: Ends the Table.

End Page: Ends the HTML Page

#### **Template TitleRow Variables:**

Name: Name of the LCD Station

Location: Room & Floor of LCD Station

Address: Address of LCD Station.

#### **Template Page Cell Variables:**

Page: Page Number of the LCD Station.

#### **Template ImageCell Variables:**

PageImage: Filename of the Image of the LCD Page.

Width: Width of the Image.

Height: Height of the Image.

### **LoadListTemplate.html**

#### **Additional Variables:**

TotalLoads: The number of loads in this report/project.

#### **Templates:**

Row: Adds a row to the table.

**Template Row Variables:**

RowStyle: Style of the row. Currently includes coloring. The styles are defined at the top of the template file.

ExtraStuff: A place to add extra formatting . Not used.

LoadNumber: Contractor Number of the Load.

LoadName: Name of the Load.

LoadRoom: Room that the Load is in.

LoadFloor: Floor that the Load is in.

LoadPower: Power of the Load.

LoadType: Type of the Load.

LoadAddress: Address of the Load.

LoadVacation: If the load is included in vacation mode.

**MaterialsTemplate.html**

**Templates:**

Row: Adds a row to the report.

**Template Row Variables:**

PartNumber : Vantage part number.

Description: Full description from the Pricelist.

Quantity: Quantity of the item.

**NotesTemplate.html**

**Templates**

Row : Adds a row to the report.

**Template Row Variables:**

RowStyle: Style to use with the row. Controls the background color. The styles are defined at the top of the Template File.

ExtraStuff: Extra Formatting Info. Not currently used.

Item: Item Name

ItemNote: The note that is associated with it.

**PriceTemplate.html**

**Additional Variables:**

GrandTotal: The Grand Total of all of the materials.

**Templates:**

Row: Adds another row to the Report.

**Template Row Variables:**

RowStyle: Style to use with the row. Currently controls the background color. The styles are defined at the top of this Template File.

ExtraStuff: Extra Formatting Info. Not currently used.

PartNumber : Vantage part number.

Description: Full description from the Pricelist.

UnitPrice: Item cost.

Quantity: Quantity of the item.

Subtotal: Subtotal of the items on this line.

### [ProgrammingTemplate.html](#)

#### Templates:

StartTable: Start of the Table

StartRow: First row in the table

NotProgrammedRow: Row that gets inserted when there is no programming on the control.

EventRow: Inserted for each event on the control

ConditionRow: Inserted for each condition.

LoadsRow : Inserted for the loads/actions on an event.

EndRow : Row that finishes off each event

EndTable : Finish off the Table

Footer: Finish off the HTML file.

#### Template StartRow Variables:

Name: Name of the Button or Control

Type: Type of the Button or Control.

Location: Location of the Button or Control.

Address: Address of the Button or Control.

#### Template EventRow Variables:

EventNumber: Event Number.

Function Type: Function Type.

Parameters: Function Paramters

#### Template ConditionRow Variables:

Condition: What the condition is.

#### Template LoadsRow Variables:

Actions: Actions/Loads associated with this event.

#### Template EndRow Variables:

FunctionState: When the function is on.

LEDState: What the state of the LED is.

### [StationDesignTemplate.html](#)

#### Additional Variables:

Summary: Summary of the stations in the report.

#### Templates:

Row: Inserts a table for the station into the report.

#### Template Row Variables:

StationName: Name of the Station.

StationAddress: Address of the Station.

StationType: Type of Station.

StationRoom: Room that the Station is in.

StationFloor: Floor that the Station is in.

StationFaceplate: Faceplate Style

StationGang: Number of Gangs.

StationGangImage: Filename of the Gang Image.

StationGangWidth: Width of the Gang Image.  
StationGangHeight: Height of the Gang Image.  
StationNote: Station Note.  
StationImage: Filename of the Station Faceplate Image  
StationImageWidth: Width of the Station Faceplate Image.  
StationImageHeight Height of the Station Faceplate Image  
Button<1:8>TextColor: Text Color of the engraving for the Button  
Button<1:8>Color: Color of the Button  
StationFaceplateColor: Color of the Faceplate and Trim  
RowStyle: Style used to tell the browser when to break when printing.

#### **StationListTemplate.html**

##### **Additional Variables:**

TotalStations: Total Number of stations in this report.

##### **Templates:**

Row : Inserts a row into the report.

##### **Template Row Variables:**

RowStyle: Style to use with the row. Currently controls the background color. The styles are defined at the top of this Template File.

ExtraStuff: Extra Formatting Info. Not currently used.

StationAddress: Address of the Station.

StationName: Name of the Station.

StationRoom: Room that the Station is in.

StationFloor: Floor that the Station is in.

StationGang: Number of Gangs.

StationButtons: Number of Buttons.

StationSerialNumber: Serial Number of the Station.

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## **Appendix A: Definition Boxes**

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The Vantage system has multiple station, enclosure, and module types. Each has its own definition dialog box that lists the configuration options available for that component. Each station's definition dialog box options are explained in the following pages.

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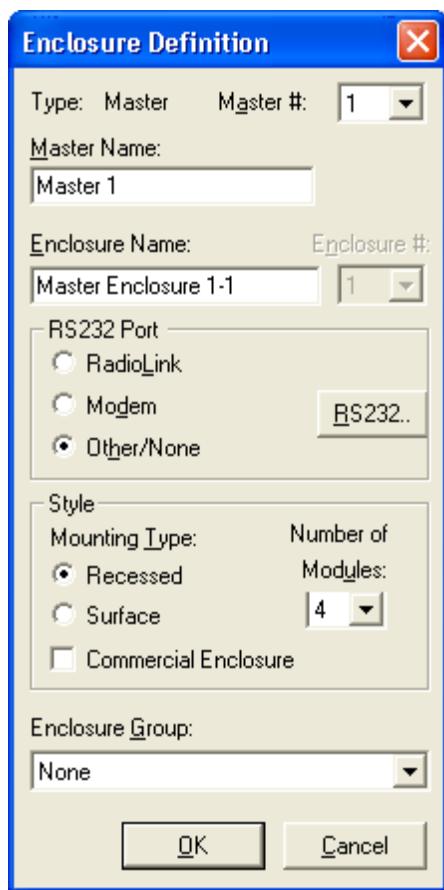
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## **Enclosure**

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Master #:

The master number corresponds to the address set on the master terminal board.

**Number of Modules:**

Modules provide actual control of loads. One, two, or four modules can be specified.

**Mounting Type:**

Enclosures may be purchased in either a recessed mount or a surface mount configuration. The door is flush with the enclosure for the surface mount and overlaps  $\frac{1}{2}$ " for the recessed mount.

**RS232 Port:**

Specifies what type of RS232 device is wired to the master terminal board.

**Enclosure #:**

A Master Controller can control up to four enclosures: the one it is housed in and three slave enclosures.

**Enclosure Name:** The enclosure name generally refers to the master number and the enclosure number; however, a more descriptive name for the enclosure may be used.

**Master Name:**

The master name refers to the master number; however, a more descriptive name for the master may be used.

**Enclosure Group:**

Each enclosure can be assigned to a previously defined enclosure group. Use an enclosure group to specify that certain modules must be in a specific location.

**OK/Cancel:**

Click OK to accept any changes. Click Cancel to cancel any changes.

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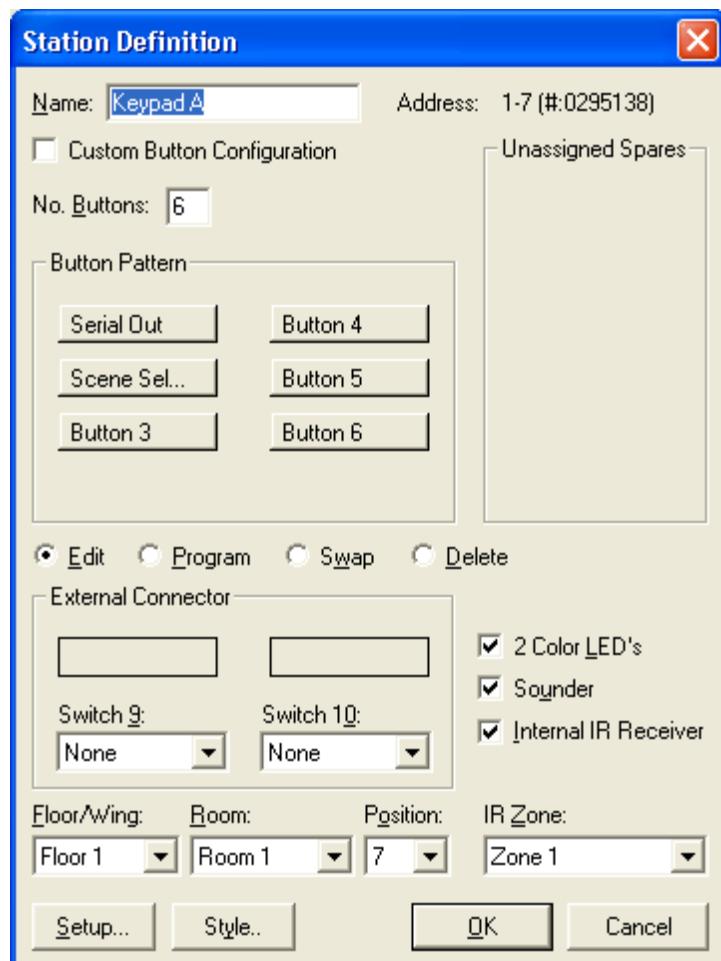
## Keypad

Name:

Specify a unique name to distinguish between stations and their locations.

Address:

The two-digit station address identifies the master number (1) and the station number (1). The station's 6-digit serial number is in parentheses.



Custom Button Configuration:

Used for non-standard button layout.

No. Buttons:

Displays the user-requested number of buttons. Up to eight is allowed in a keypad.

Button Layout:

Displays the button layout in a keypad pattern.

2 Color LED's:

When selected, the keypad displays both a red and a green LED.

Sounder:

When selected, allows the keypad to beep.

Button Pattern:

Displays the button layout, names, and the assigned function if the button has been programmed.

Switch 9:

A ninth button, dry contact, or a remote IR receiver can be added to Switch 9. These can be wired to the back of any keypad station and programmed as button nine.

Ok/Cancel:

Click OK to accept any changes. Click Cancel to cancel any changes.

Setup:

Opens the Advanced Station Setup dialog box for configuring Sounder settings, Switch Settings, and the LED blink rate.

Internal IR Receiver:

Select if the station has an internal IR receiver.

Style:

Used to define the keypad 's aesthetic characteristics.

Edit, Program, Swap, Delete:

Once an option is selected, the following will occur to a selected keypad button.

**Edit** allows for the editing of a button's characteristics.

**Program** allows for the programming of a button through the Event Programming dialog box.

**Swap** allows for the swapping of button locations by dragging and dropping one button on to another.

**Delete** allows for the deletion of a button.

Switch 10:

A tenth button, Vantage LightPoint sensor, or a dry contact can be added to Switch 10. These may be wired to the back of any keypad station and programmed as button ten.

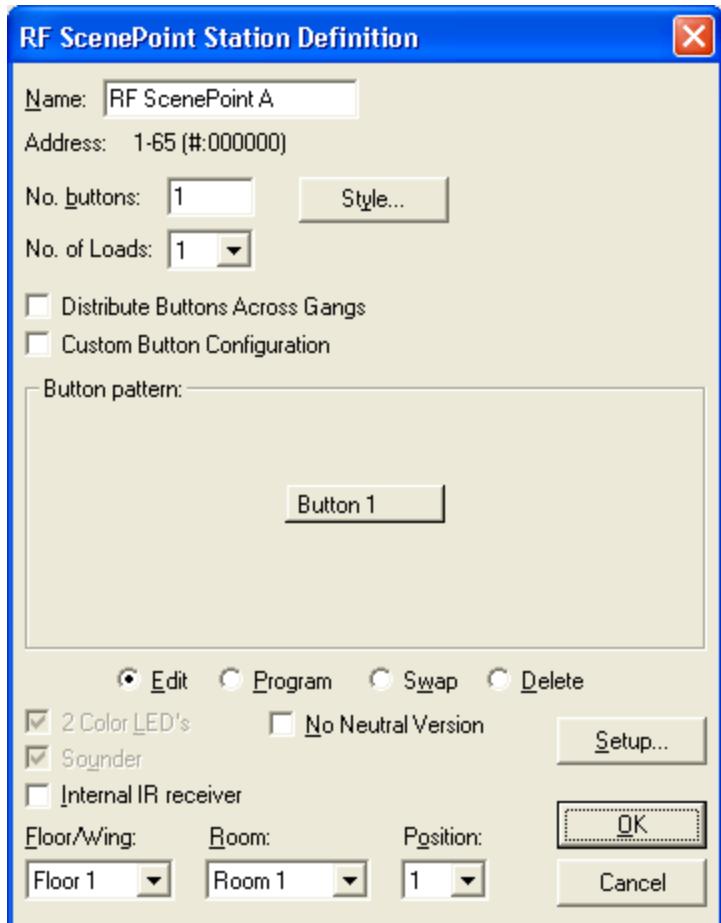
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## (RF) ScenePoint Dimmer

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**Sounder:**

When selected, allows the keypad to beep.

**2 Color LED's:**

Preset to display both a red and a green LED.

**Custom Button Configuration:**

Used for non-standard button layout.

**Address:**

The two-digit station address identifies the master number (1) and the station number (4). The station's 6-digit serial number is in parentheses.

**Style:**

Used to define the aesthetic characteristics of the keypad.

**Name:**

Specify a unique name to distinguish between stations and their locations.

**Distribute Buttons Across Gangs:**

Buttons can only be distributed across gangs if more than one gang/load is present.

**Setup:**

Opens the Advanced Station Setup dialog box for configuring Sounder settings, Switch Settings, and the LED blink rate.

**Button Pattern:**

Displays the button layout with the button's name.

**Ok/Cancel:**

Click OK to accept the current settings or any changes. Click Cancel to cancel any changes.

**Button Layout:**

Displays the button layout in a keypad pattern.

**No. of Loads:**

Specifies the number of loads. Up to 4 is allowed.

**Edit, Program, Swap, Delete:**

These options work in conjunction with the keypad buttons. Once an option is selected, the following will occur to a selected button:

**Edit** allows for the editing of a button's characteristics.

**Program** allows for the programming of a button through the Event Programming dialog box.

**Swap** allows for the swapping of button locations by dragging and dropping one button on to another.

**Delete** allows for the deletion of a button.

Internal IR Receiver:

Select if this station has an internal IR receiver.

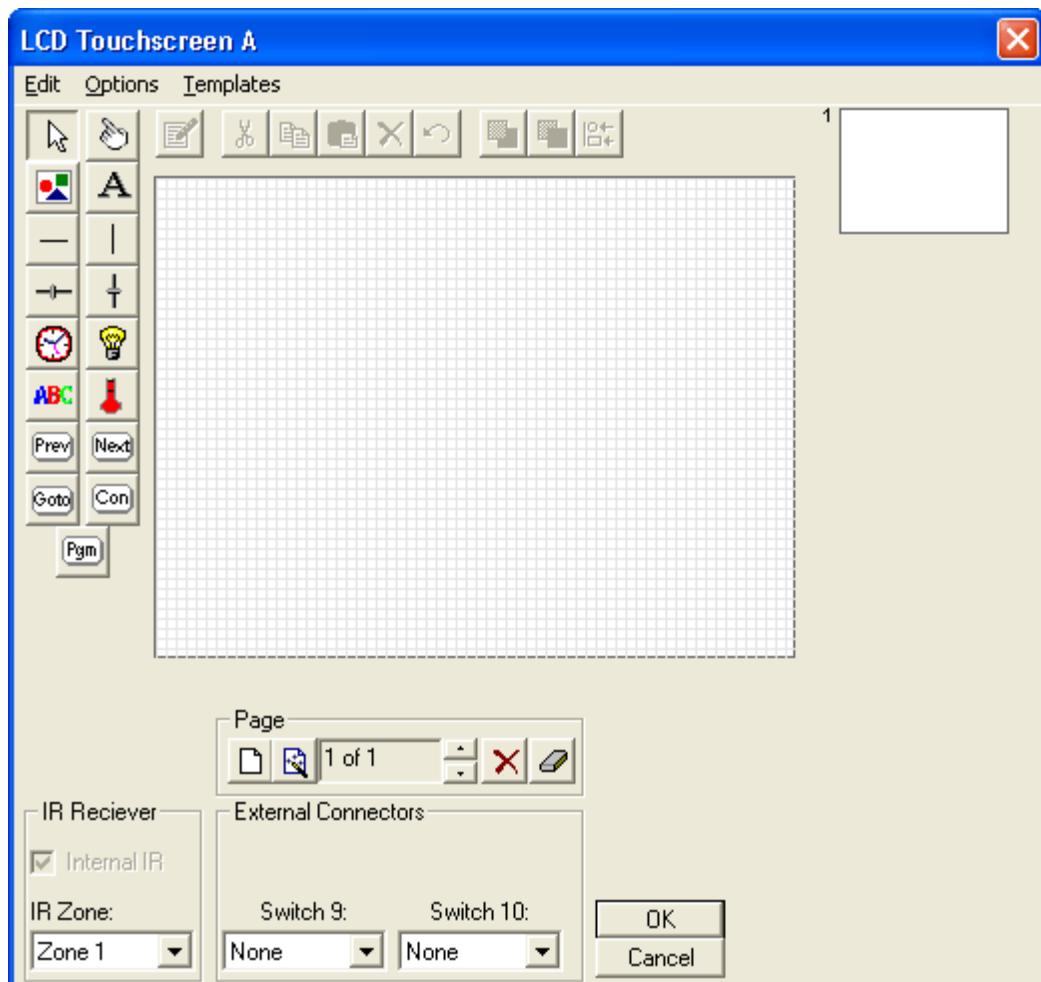
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## LCD Touchscreen

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**LCD Touchscreen Toolbar:**

Use to perform a variety of functions such as adding text and bitmaps, adding and programming buttons, drawing lines, and placing slider controls. Trace over each icon with the mouse pointer to see its purpose.

**Template Thumbnail Viewer:**

Use to switch between pages in a selected template and view or edit them in the design area.

**Page Editor:**

Use to create new pages, access the page wizard, navigate, delete, and clear pages.

**Standard Toolbar:**

Use to edit item properties, perform common editing tasks, layer objects, and align objects. Trace over each icon with the mouse pointer to see its purpose.

**Design Area:**

This is the working area for designing and editing an LCD touchscreen.

**OK/Cancel:**

Click OK to accept any changes. Click Cancel to cancel any changes.

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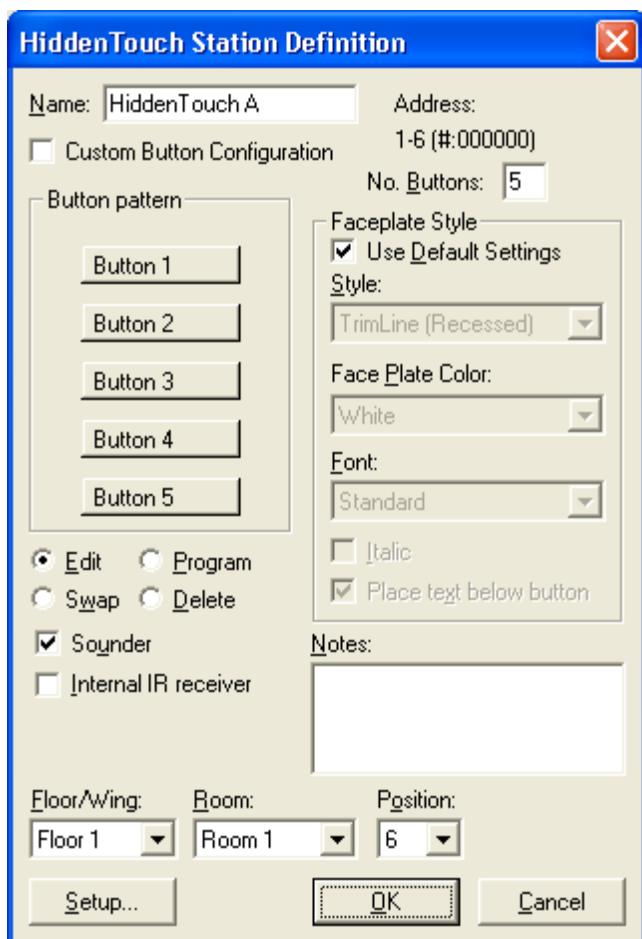
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## HiddenTouch

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Name:

Specify a unique name to distinguish between stations and their locations.



Custom Button Configuration:

Used for non-standard button layout.

Notes:

Used to add additional information about this station.

No. Buttons:

Displays the user-requested number of buttons. Up to five is allowed in a strip station.

Faceplate Style:

Used to define the aesthetic characteristics of the keypad's faceplate.

Button Layout:

Displays the button layout in a keypad pattern.

Internal IR Receiver:

Select if the station has an internal IR receiver.

Button Pattern:

Displays the button layout, names, and the assigned function if the button has been programmed.

Sounder:

When selected, allows the keypad to beep.

#### Edit, Program, Swap, Delete:

These options work in conjunction with the keypad buttons. Once an option is selected, the following will occur to a selected button:

**Edit** allows for the editing of a button's characteristics.

**Program** allows for the programming of a button through the Event Programming dialog box.

**Swap** allows for the swapping of button locations by dragging and dropping one button on to another.

**Delete** allows for the deletion of a button.

#### Ok/Cancel:

Click OK to accept any changes. Click Cancel to cancel any changes.

#### Setup:

Opens the Advanced Station Setup dialog box for configuring Sounder settings, Switch Settings, and the LED blink rate.

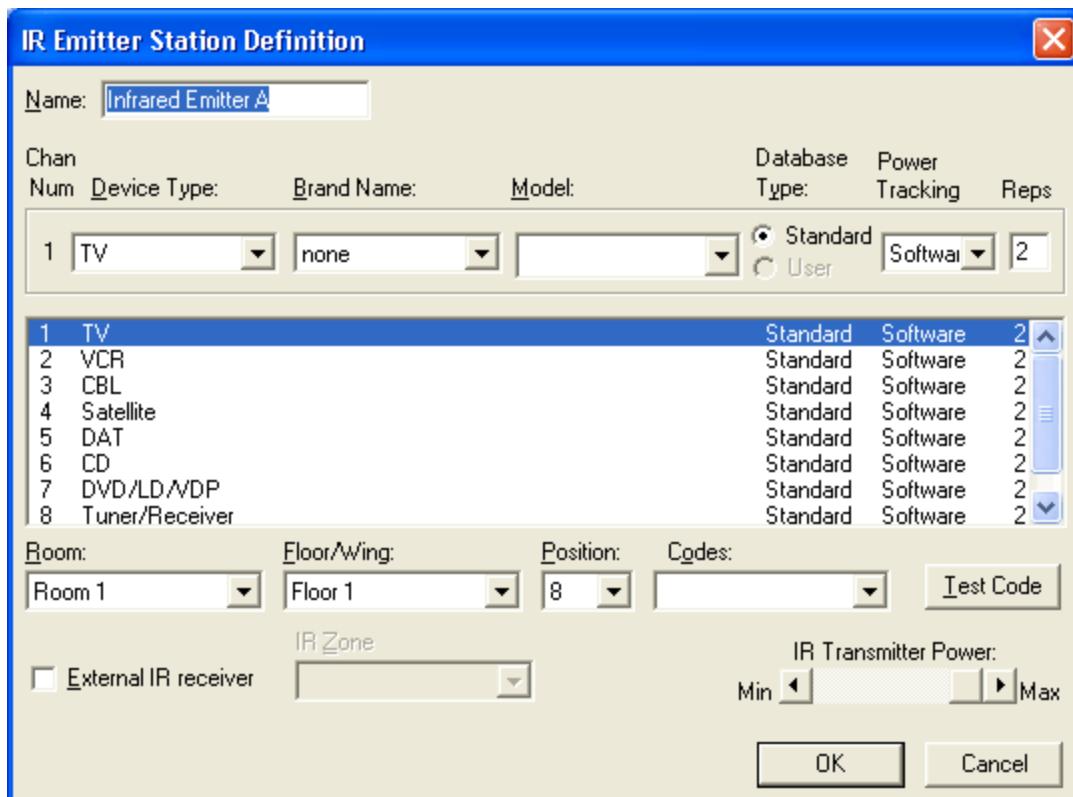
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## IR Emitter

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#### Reps:

Specifies the number of responses the IR signal sends to its receiver.

#### Codes:

Once a device's brand name is selected, click the Codes box arrow to select a code.

#### Model:

Specify the model number of the device.

#### Brand Name:

Specify the brand name.

#### Device Type:

Specifies the type of device used.

#### Power Tracking:

Choose power tracking setup, Hardware, software, or none.

Database Type:

Selects standard codes included with QLink or from user learned codes.

Chan Num:

Eight separate device channels are available.

Name:

Specify a unique name to distinguish between stations and their locations.

IR Transmitter Power:

Set the IR transmitter's power level.

IR Zone:

If an external IR receiver is being used and IR zones have been defined, specify the IR zone for this emitter.

External IR receiver:

Select if the station has an external IR receiver.

Ok/Cancel:

Click OK to accept any changes. Click Cancel to cancel any changes.

Test Code:

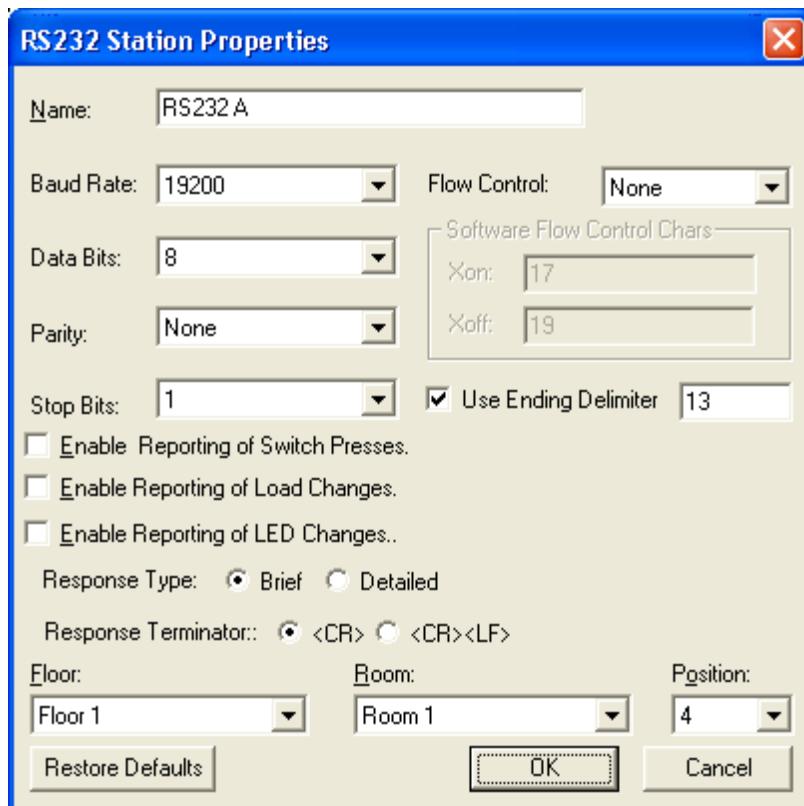
After a code is selected in the Codes box, it can be tested.

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## RS-232 Station



**Flow Control:**

If Software is selected, character 17 for Xon and character 19 for Xoff are automatically assigned.

**Use Ending Delimiter:**

Character 13 is automatically assigned as an ending delimiter.

**Stop Bits:**

Specify the number of stop bits.

**Parity:**

Specify the desired parity.

**Data Bits:**

Specify the number of data bits.

**Baud Rate:**

Specify the desired baud rate.

**Name:**

Specify a unique name to distinguish between stations and their locations.

**Ok/Cancel:**

Click OK to accept any changes. Click Cancel to cancel any changes.

**Restore Defaults:**

Restores the default settings.

**Related Topic:** Creating RS-232 or RS-485 Stations

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## DMX Station



**Refresh Rate:**

Specify a different refresh rate.

**Base Address:**

Specifies a different base address.

**Start Code**

Specifies a different start code.

**Ok/Cancel:**

Click OK to accept any changes. Click Cancel to cancel any changes.

**# of Loads:**

A maximum of 16 loads is allowed.

The DMX Station allows communication with DMX lighting equipment of up to 16 channels. In the Project Designer, select the floor and room you would like to add the DMX Station to. Right-click on the room and select Add Station – DMX. The DMX Station dialog box will pop up, allowing you to change any communication settings necessary. With the DMX Station defined, it can now be used to transmit Vantage Function actions to any DMX equipment. When you program a button to control a DMX device, the load will be selectable by clicking the Station Load button.

The DMX Station is connected to the equipment it will be interfacing with. The small package will fit into most enclosures, or hang behind the equipment. There is a Remote Station Outlet available that is used to make a connection from the wall to the DMX Station (part #Q-RSO).

The DMX Station connects to the Station Bus through two screw terminals on one end of the DMX Station. If the wire connected to the DMX station is short (less than 50 feet) any two-conductor cable can be used. If the wire is longer, the Vantage Station Bus wiring specification should be followed.

The Q-DMX can be used with any of the Programming Functions specifically designed to control lighting, such as Toggle, Dim, etc. It WILL NOT perform any function for External, IR Out, Learn, RS-232, etc. Also, it does not function with the All On and All Off commands.

When the Q-DMX is first connected, the diagnostic LED will blink twice, followed by a pause. This means the DMX Station is connected properly but not configured. It is configured like any other station. From QLink, select System – Configure Stations, highlight the DMX Station on the list of stations, and select Configure in the Online Configuration box at the bottom of the window. To

finish configuring, push the Config Button on the end of the DMX Station. You will need a small screwdriver or paper clip to depress this recessed button. The diagnostic LED will now blink regularly, at roughly once per-second.

The DMX Station is designed to control DMX accent lighting and small color wheels only, and is capable of addressing no more than 16 channels.

The DMX Station is a 2.4" x 3.8" x .88" box with a female DMX connector on an 18" lead from one end. The other end has two screw terminals for attachment to station bus wire.

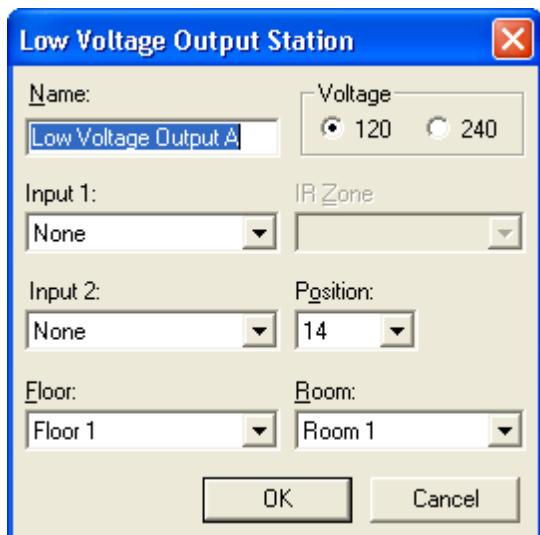
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## Low Voltage Output

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**Input 1:**

Specify the type of input. Same as switch 9 on a keypad

**Input 2:**

Specify the type of input. Same as switch 10 on a keypad

**Voltage:**

Select the desired voltage.

**IR Zone:**

If IR zones have been defined, select the zone for this station.

**Name:**

Specify a unique name to distinguish between stations and their locations.

**Ok/Cancel:**

Click OK to accept any changes. Click Cancel to cancel any changes.

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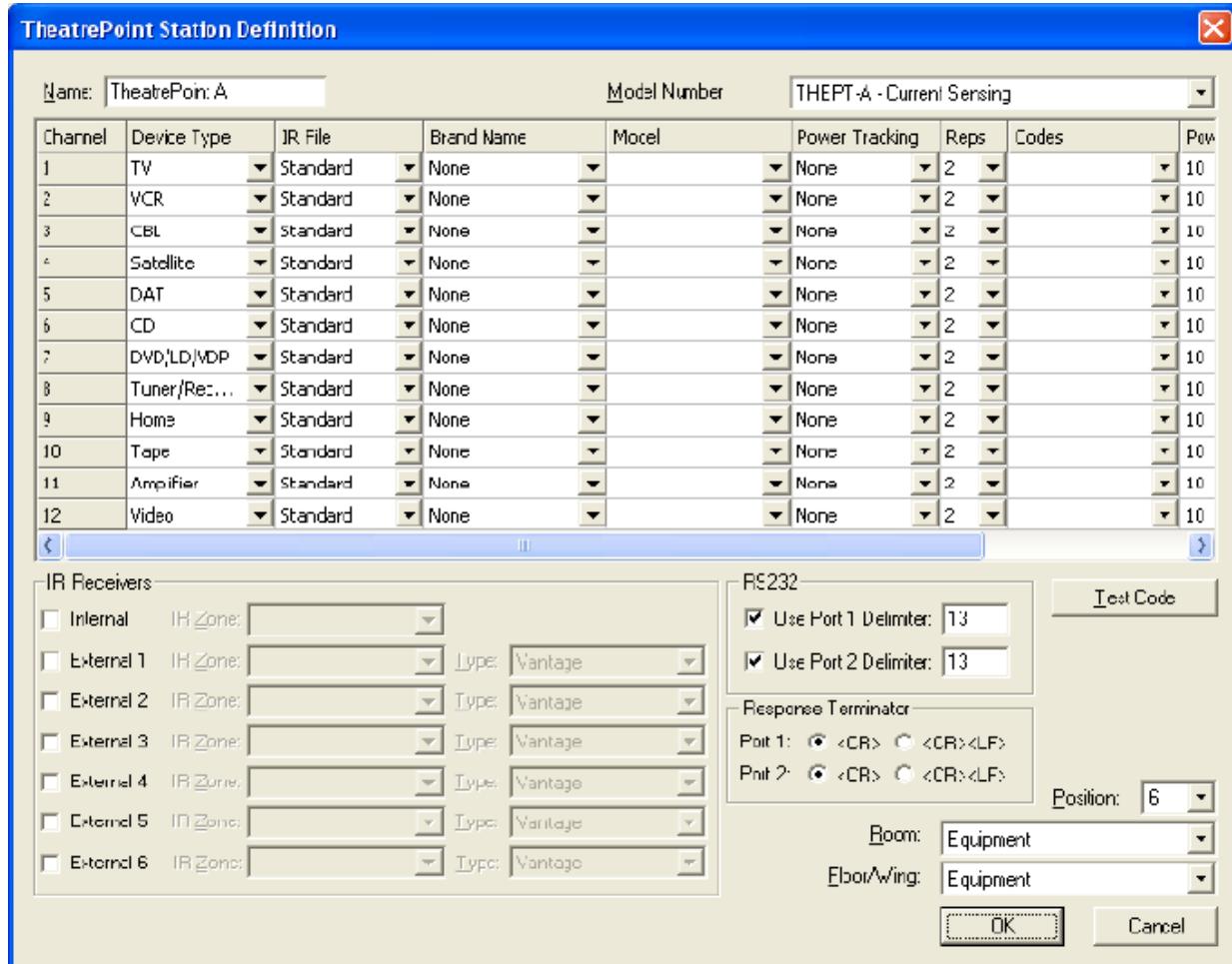
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## TheatrePoint

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### TheatrePoint Setup in QLink

Right click on the TheatrePoint node and select Properties. This will reveal the TheatrePoint Station Definition Dialog Box. From this window first type the name of the TheatrePoint station and select the correct model. Next, setup each of the twelve IR Channels. Select the Channel, Device Type, IR File (Standard or User). Next select Brand Name, Model, Power Tracking, Reps and Codes.



Slide the Horizontal Bar all the way to the right to see rest of the options. Continue by selecting Power, External 1, External 2, Pulsed and Inverted, as needed. External 1 and External 2 need to be checked to enable pass through. Pulsed is checked if the IR code set is a pulsed code set. And Inverted is checked if the IR code set needs to be inverted to work correctly

### TheatrePoint Firmware Update

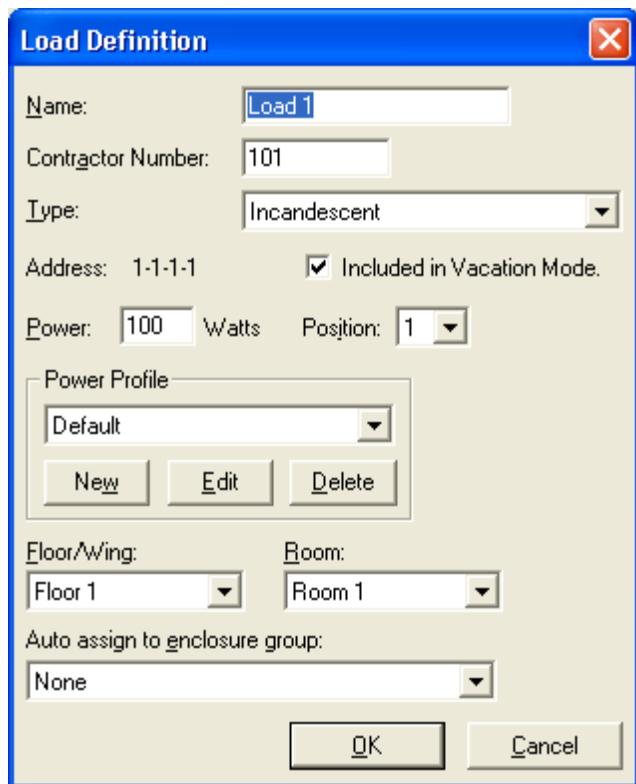
Updating firmware requires an online connection with the QLink software. Simply click on the Update to X.X box to update TheatrePoint to the latest firmware. Note, the Update to X.X box will only appear when connected to the system. As enhancements to the firmware become available they will be posted at [www.vantagecontrols.com](http://www.vantagecontrols.com).

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## Load Definition

**Type:**

Specify a load type.

**Contractor Number:**

Specify a unique number (0-9999) to identify the load from other loads.

**Power Profile:**

Specify a power profile, create a new profile, edit an existing profile, or delete an existing profile.

**Auto assign to enclosure group:**

If one or more enclosure groups have been created, the load may be assigned to a group.

**Name:**

Specify a unique name to distinguish between loads.

**Included in Vacation Mode:**

With this selected, the load's operation is automatically included in vacation mode.

**Power:**

Specify the load's power in wattage.

**Ok/Cancel:**

Click OK to accept any changes. Click Cancel to cancel any changes.

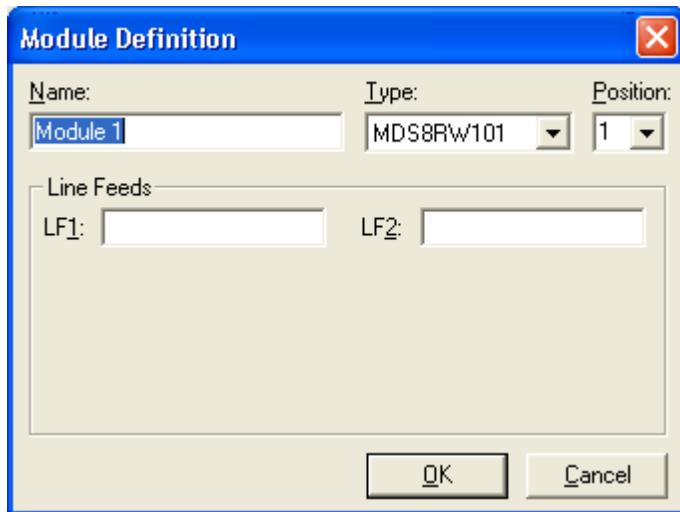
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## Module Definition

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**Line Feeds:**

Specify a line feed or breaker number.

**Type:**

Specify the module's type.

**Position:**

Specify the module's position.

**Name:**

Specify a unique name to distinguish between modules.

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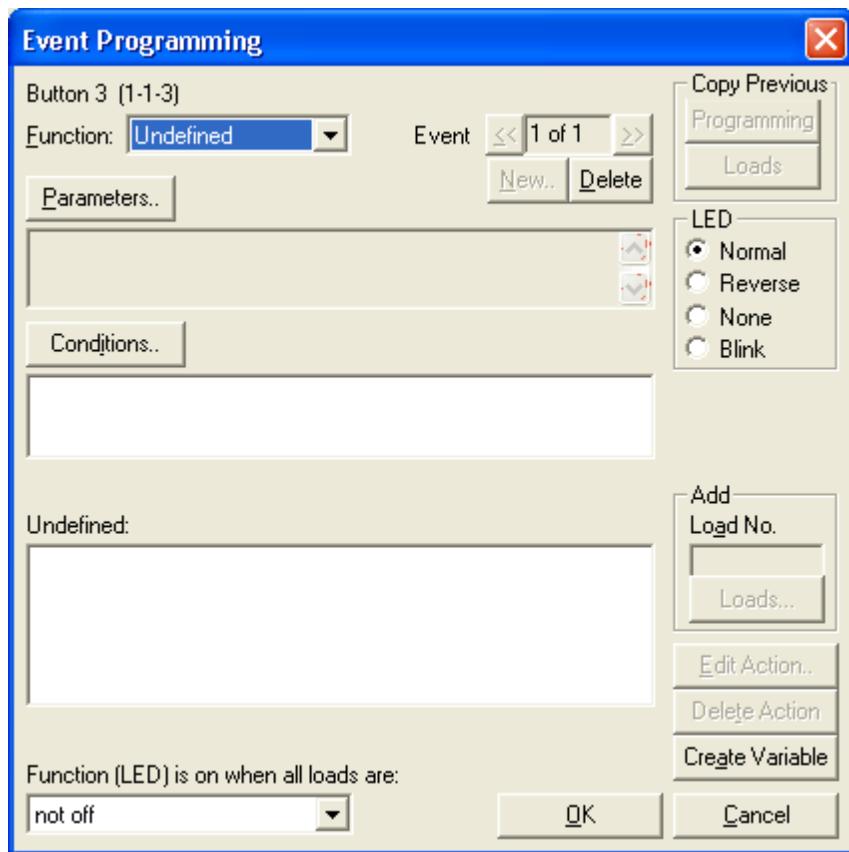
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## Appendix B: Event Programming

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The Event Programming dialog box is where the actual programming of a station device or its components takes place. Functions, parameters, conditions, multiple events can all be assigned and edited from this dialog box.

**Actions:**

Assigned actions can be edited or deleted. If more than one event is present, it can be copied.

**Add Load No.:**

Allows for entering the load number manually, or for locating a load, variable, or station load.

**Event:**

Multiple events are managed through the Event box.

**Conditions:**

Specifies conditions based on the selected function type.

**Function:**

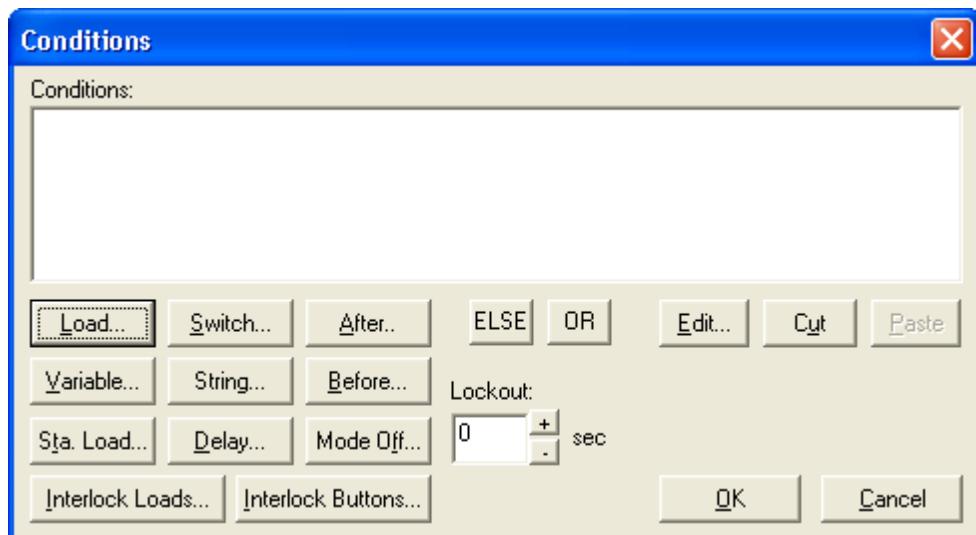
Assigns the appropriate function or functions to an event or events.

**Parameters:**

Specifies parameters or settings based on the function type.

**Led:**

Adjusts the LED display on a device's buttons.

**Conditions Box:**

Once a condition is defined it is placed in the Conditions box and can be managed from here.

**Conditions:**

Each Condition option has one or more dialog boxes for setting condition parameters.

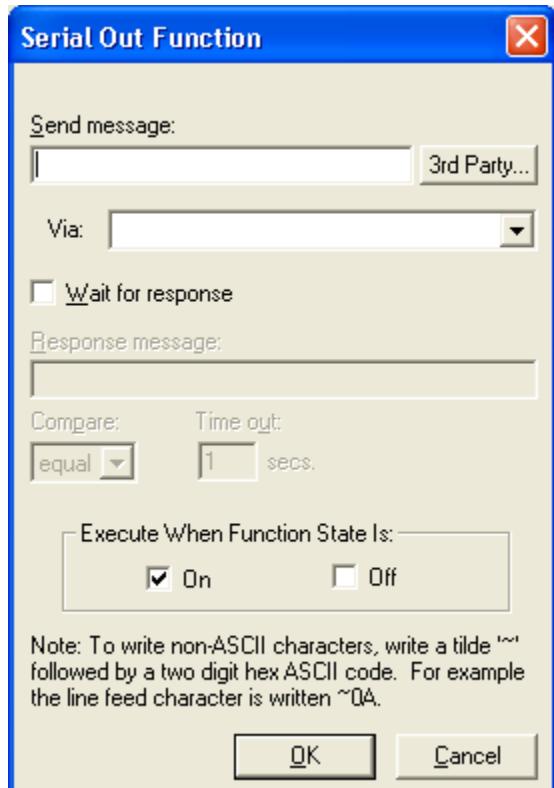
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## Appendix C: Serial Communications

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**Serial Out Function** parameters dialog box.

**Send Message via:**

Serial strings can transmit via any Master, or RS232 station.

**Send Message:**

Strings are typed in the Send message box.

**Wait for response:**

Each serial string can return a response. Select the Wait for response check box to specify how the response should be returned. Type the response message and specify the time out. Compare specifies under what conditions the response should be sent. The conditions are:

- = Equal to
- not = Not equal to
- < Less than
- <= Less than or equal to
- > Greater than
- >= Greater than or equal to

The **Serial Out Device** dialog box. Click on the  button at the end of the **Send Message:** window to open.



1. The strings for several third-party products are already formatted. Simply replace the bracketed text, i.e., <xxxx>, with the correct value and the string is properly formatted for the RS-232 equipment.
2. The **RS-232** Drop down window beginning with Apex has several other products ready for selection.
3. Once the product has been selected the **Device Commands** drop down list has properly formatted syntax strings for that product's most popular command strings.

**Related Topic:** [String Wildcards](#)

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## RS232 V-Commands

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RS-232 devices such as audio/video systems, security systems, touch screens, etc. can be controlled and queried using a computer (or any other device) that has an attached RS-232 serial port. An RS-232 connection can be used to query a system and simulate switch presses using ASCII character strings. The RS-232 strings used to communicate with a Vantage system are referred to as "V" commands because they start with the ASCII character V. These commands can control actions such as switch presses, turning loads on and off, and returning information on the state of a Vantage system. The command format is:

VXX{S} {<parameters> {< >}}

Where V is the command start character, XX is a 2-letter command, and S is an optional special character that overrides the default response format defined in the VCL command. Each command has a set of parameters that are used to specify the action of the command. The <parameters> option allows additional information to be included in the command and allows for the default response format defined in the VCL command to be overridden. All data sent and received over the RS-232 connection should be in ASCII format and in upper-case letters. All commands sent to a Vantage system should be terminated with a carriage return character [CR].

Valid values for the optional special character S are:

<b>S</b>	<b>Description</b>
!	Do not send any response for this command.
@	Send a regular response for this command.
#	Send a detailed response for this command.

Every V command will send a response back to the computer. The response depends on the command sent to the system and will be delimited with either the carriage return character [CR] or the carriage return and line feed characters [CR/LF].

Switch (VOS), LED (VOD) and Load Changes (VOL) are now persistent after a reset of a system. Each Serial Port (On a Master or Station) now have the option to enable reporting. So when the system is reset, it is no longer necessary to re-send the V-Commands.

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## V Command Controls Addresses

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V commands may address several different controls. When referring to these controls, it is necessary to use their address for the field <station>.

<b>Control Type</b>	<b>Address</b>	<b>Available Buttons</b>
Wired Stations	1-50	1-10
LCD Stations	1-50	1-255
RadioLink Stations	65-124	1-8
String Control	131	1-255
TeleAccess	132	1-16
Time Control	133	1-255
IR Zone	140-189	1-255

For example:

To execute a button press on the first wired station on master one using the switch control  
V-command VSW use:

VSW 1 1 1 1

To execute the first String Control on master one with the ON state using the switch control  
V-command VSW use:

VSW 1 131 1 1

To execute the third Time Control on master one with the OFF state using the switch control  
V-command VSW use:

VSW 1 133 3 2

To simulate a press and release to output the IR command for the fifth IR Zone, button 2 using the switch control V-command VSW use:

VSW 1 144 2 6

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## V-Commands

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### Overview

The Vantage System can be controlled and queried using a computer, or any other device, that has a RS-232 serial port. This serial interface can be used to query the system and simulate switch presses using ASCII character strings. The commands used to communicate with the system are referred to as 'V' commands because they all start with the ASCII character V.

The following is a list of V commands used to interface with the Vantage System. They can control things such as switch presses, turning loads on and off, and returning information on the state of the system. The format of the commands consists of the capital letter V followed by a 2-letter command. An optional special character can directly follow the three-letter V command. This special character will override the default response format. Each command has a set of parameters used to specify the action of the command. All commands sent to the system should be terminated with the carriage return [CR] character.

The format of each command is:

VXX{S} {<parameters> {<Y>}}

Where V is the command start character, XX is the 2-letter command, and S is an optional special character that overrides the default response format setup in the VCL command. The optional <parameters> specify information for each command. All data sent and received over the RS-232 interface should be in ASCII format and in all capital letters.

Valid values for the optional special character S include:

<u>S</u>	<u>Description</u>
!	Don't send any response for this command.
@	Send a regular response for this command.
#	Send a detailed response for this command.

Switch (VOS), LED (VOD) and Load Changes (VOL) are now persistent after a reset of a system. Each Serial Port (On a Master or Station) now have the option to enable reporting. So when the system is reset, it is no longer necessary to re-send the V-Commands.

The following is a list of V-commands used to interface with a Vantage system.

<u>V Command</u>	<u>Description</u>
<u>V?S</u>	Allows Dimmer Station loads to have their Max Adjust and Max Error properties changed.
<u>V?V</u>	Return the Vacation Function Load History on specific Master Controller
<u>VCL</u>	Set the return delimiter characters to [CR] or [CR/LF] and the return format to regular or detailed. Use for setting up RS-232 communication with other system.
<u>VEC</u>	Echo the number sent to the system. Used for communication testing.
<u>VET</u>	Executes a Time Function
<u>VGA</u>	Return the current level of a load specified by the mast, module, and load, address. Querying Q System for load data.
<u>VGB</u>	Return the current level of a load specified by the master, enclosure, module, and load, address. Same as VGA using a newer format.
<u>VGC</u>	Return the current level of the station load specified by the address. Used for LVRS, Wall box dimmer or 0-12v loads residing on the station bus.
<u>VGD</u>	Return the current level of each of the loads specified by the module address. Used to receive load values for an entire module simultaneously.

<u>VGH</u>	Return station information from a thermostat connected to a QLink external thermostat station.
<u>VGL</u>	Return the current level of a load specified by the contractor number.
<u>VGN</u>	Return the name of stations, loads, and masters.
<u>VGS</u>	Return the current state of a switch function.
<u>VGT</u>	Return the current state of each of the switch functions on the specified station. Same as VGS for all 10 station switches simultaneously.
<u>VGV</u>	Return the version of the master controller and the date and time.
<u>VIC</u>	Outputs an IR code to an Infrared Emitter.
<u>VIR</u>	Outputs an IR code to an Infrared Emitter. Same as VIC using a different format.
<u>VLA</u>	Set the load specified by address to a certain level.
<u>VLB</u>	Set the load specified by address to a certain level. Same as VLA using a newer format.
<u>VLC</u>	Set the station load specified by address to a certain level. Used for low voltage relay station, wall box dimmer or 0-12 volt loads residing on the station bus.
<u>VLD</u>	Set the state of a switch LED.
<u>VLO</u>	Set the load specified by contractor number to a certain level.
<u>VLP</u>	Change Module Load profile
<u>VLS</u>	Return the current state of a switch LED.
<u>VLT</u>	Return the current state of each of the switch LEDs for the specified station.
<u>VOD</u>	Setup the system to output RS-232 strings when a station LED changes.
<u>VOL</u>	Set up the system to output RS-232 strings when loads change.
<u>VOS</u>	Set up the system to output RS-232 strings when a station switch or infrared button is pressed or released.
<u>VPG</u>	Program the system using QLink .qlk file format strings.
<u>VQA</u>	Returns the address and port number of the master controller that has the current RS-232 port.
<u>VQM</u>	Query the system for master controllers.
<u>VQP</u>	Query a master controller for modules.
<u>VQS</u>	Query a master controller for stations.
<u>VQT</u>	Get Time function execution parameters
<u>VSC</u>	Configure a station
<u>VSH</u>	Set parameters on a thermostat connected to a QLink external thermostat station.
<u>VSP</u>	Change Station Load profile
<u>VST</u>	Set Time function execution parameters
<u>VSW</u>	Execute the specified switch function.

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## V Command Ordering Syntax

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V-commands often appear with bracketed options (<>). Each bracketed option must be replaced with a corresponding numerical value. Each bracketed option is separated with a space. Delete the brackets.

<b><i>V Command</i></b>	<b><i>Ordering Syntax</i></b>
V?S	<master number> <C+6bit address of station> <97> <Max Adjust (in HEX)> <Max Error>
V?V	<master> or V?D <master> <specific day> <limit report for specific day>
VCL	<flag>[CR]
VEC	<number>[CR]
VET	<master> <function#> <state>
VGA	<master> <module> <load>[CR]
VGB	<master> <enclosure> <module> <load>[CR]
VGC	<master> <station> <load>[CR]
VGD	<master> <enclosure> <module>[CR]
VGH	<master> <stations> {<type> {<type> {<type>}} [CR]
VGL	<contractor #>[CR]

VGN	<master> <address> <pos>[CR]
VGS	<master> <station> <switch>[CR]
VGT	<master> <station>[CR]
VGV	<master>[CR]
VIC	<master> <cflag> <code> <state> <IR emitter>[CR]
VIR	<master> <code> <state> <IR emitter>[CR]
VLA	<master> <module> <load> <level> {<fade>}[CR]
VLB	<master> <enclosure> <module> <load> <level> {<fade>}[CR]
VLC	<master> <station> <load> <level> {<fade>}[CR]
VLD	<master> <station> <led> <state>[CR]
VLO	<con_num> <level> {<fade>}[CR]
VLP	<master> <enclosure> <module> <load> <profile>
VLS	<master> <station> <led>[CR]
VLT	<master> <station> <format>[CR]
VOD	<master> <format> <enable>[CR]
VOL	<master> <format> <enable>[CR]
VOS	<master> <format> <enable>[CR]
VPG	<string>[CR]
VQA	[CR]
VQM	[CR]
VQP	<master>[CR]
VQS	<master>[CR]
VQT	<master> <function#>
VSC	<master> <station> <serialno>[CR]
VSH	<master> <station> <type> <temp> (<type> <temp> {type <temp>}) [CR]
VSP	<master> <station> <load> <profile>
VST	<master> <function#> <state> {<hour> <min> {<sun> <mon> <tue> <wed> <thu> <fri> <sat> {<day> <month> <year> } } }
VSW	<master> <station> <switch> <state>[CR]

### V Command Errors

If an error occurs the return response depends on the format parameter in the V Command. If the format parameter is specified as 0 there are three error values that can be returned. They include the following:

- 256 Bad command.
- 257 Bad parameter.
- 258 System error.

### Related Topics

[RS-232 Function\\_](#)

[Send a V Command](#)

[V Command summary](#)

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## V?S Command

---

V?S <master number> <C+6bit address of station> <97> <Max Adjust> <Max Error>

This command allows Dimmer Station loads to have their Max Adjust and Max Error properties changed. "Global Parameters |

Module | Max Adjust and Max Error" settings In QLink do not affect dimmer station loads, only enclosure module loads, so this V-Command is the only way to change these settings on Dimmer Station loads. *It is recommended to leave the Max Error at three or four.*

**Example:**

V?S 1 C1 97 60 4

If the Dimmer station's 6bit address is one (1), sending the above command will change that station's Max Adjust to 96 and Max Error to 4. In this example above the Max Adjust sent is 60, this number is in HEX and when sent changes to 96 as the Max Adjust value.

Note 1: Run station diagnostics to get the 6bit address of the stations you are changing. Do not reset the master after getting the 6bit address of the station until you have sent the V-Command, otherwise the 6bit address could change.

Note 2: This same command may be sent to the power booster stations.

Note 3: Doing a factory reset to any of the stations will return them to their defaults: Max Adjust 40 and Max Error 4.

Note 4: Range for Max Adjust and Max Error is 0-255.

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## V?V Command

V?V <master>

Or

V?D <master> <specific day> <limit report for specific day>

The V?V and V?D command Returns the Vacation Function Load History on specific Master Controller

**Examples:**

1. To Read the Summary of the 14 Days from a Master;

V?V 1[CR]

Returns the total number of load entries per day for Master 1.

2. To Read An Individual Day's Entries;

V?D 1 2[CR] (2 represents a day 0-14 can be used)

Returns a detailed list of all loads recorded on Master 1, Day 2, including each loads ON/OFF times and Level.

or

V?D 1 2 100[CR] (100 represents the number of entries to be reported on that day.)

Returns a detailed list of up to 100 loads recorded on Master 1, Day 2, including each loads ON/OFF times and Level.

**Related Topics**

[Send a V Command](#)

[V Command](#)

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## VCL Command

VCL <flag> {<format>}[CR]

The VCL command is used to set the return termination character(s) format for the interface. The termination characters can be either carriage return [CR] (default) or carriage return and line feed [CR/LF].

**<Flag>** The <flag> parameter specifies the format of the data being returned.  
 0 specifies carriage return [CR].  
 1 specifies carriage return and line feed [CR/LF].

**<Format>** The <format> parameter specifies whether the data returned is regular or detailed.  
 0 specifies a regular response.  
 1 specifies a detailed response.

**Regular Response:** <Flag> {<Format>}[Return Delimiter]

**Detailed Response:** RCL <Flag> {<format>}[Return Delimiter]

#### Example 1:

VCL 1[CR]

Regular Response: 1[CR/LF]

The VCL command sets the system to return the carriage return and line feed [CR/LF] characters to delimit this and all future return strings. The <format> parameter is set to regular responses by default. The response string is number 1 followed by the delimiter characters (CR and LF).

#### Example 2:

VCL 0 1[CR]

Detailed Response: RCL 0 1[CR]

The VCL command sets the system to return the carriage return [CR] character to delimit the return string. The <format> parameter is set to detailed responses for this and all future V command responses. The response string is 'RCL 0 1' followed by the delimiter character [CR].

#### Related Topics

[Send a V Command](#)  
[V Command](#)

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## VET Command

---

VET <master> <function#> <state>

The VET command executes a Time Function

Parameters Explanation:

<master#> - master number (1-15)

<function#> is the equivalent of a button number on a station. The number (1 – 255) which identifies the time function.

<state> can be : 0 (Off State), 1 (On State)

**Example:**

VET 1 1 1

Executes Time Control Trigger number 1 on master number 1 in the ON state.

**Related Topics**

[VOT Command](#)

[VST Command](#)

Send a V Command

V Command

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## VEC Command

VEC <number>[CR]

The VEC command is used to verify proper communication between the computer and the system. The value for <number> sent to the system should be echoed back to the computer.

**<number>** The <number> parameter specifies the decimal number to be echoed from the system. It can range from 0 to 65535.

**Regular Response:** <number>[CR]

**Detailed Response:** REC <number>[CR]

The <number> returned should be the same number that was sent with the VEC command.

**Example:**

VEC 1234[CR]

Regular Response: 1234[CR]

Detailed Response: REC 1234[CR]

**Related Topics**

Send a V Command

V Command

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## VGA Command

VGA <master> <module> <load>[CR]

The VGA command gets the current load level for the load specified by <master> <module> <load>. The value returned is a number from 0 to 100 as a percent of on.

**<master>** The <master> parameter specified the address of the master board the load is on. Values for <master> include 1 to 15.

**<module>** The <module> parameter specifies the address of the module the load is on. Values for <module> include 1 to 16. Modules 1-4 are in the master enclosure, module 5-8 are in the first slave enclosure, modules 9-12 are in the second slave enclosure, and modules 13-16 are in the third slave enclosure.

**<load>** The load parameter specifies the position of the load on module board. The first load on the module (top left load) is referred to as load 1. This number is not the same as the contractor number.

**Regular Response:** <level>[CR]

Detailed Response: RGA <master> <module> <load> <level>[CR]

**<level>** The return string will be the current <level> of the load specified. It will be a value from 0 to 100. The <level> is a number representing the percentage the load is on.

#### Example:

VGA 3 2 6[CR]

Regular Response: 65[CR]

Detailed Response: RGA# 3 2 6 65[CR]

The VGA command queries the system for the load level of the sixth load on master 3 and module 2 and gets a value of 65%.

#### Related Topics

[Send a V Command](#)

[V Command](#)

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## VGB Command

VGB <master> <enclosure> <module> <load>[CR]

The VGB command will return the current load level for the load specified by <master> <enclosure> <module> <load>. The value returned is a number from 0 to 100 as a percent of on.

**<master>** The <master> parameter specified the address of the master board the load is on. Values for <master> include 1 to 15.

**<enclosure>** The <enclosure> parameter specifies the enclosure number the load is on. Values for <enclosure> include 1 to 4.

**<module>** The <module> parameter specifies the address of the module the load is on. Values for <module> include 1 to 4.

**<load>** The load parameter specifies the position of the load on module board. The first load on the module (top left load) is referred to as load 1. This number is not the same as the contractor number.

**Regular Response:** <level>[CR]

**Detailed Response:** RGB <master> <enclosure> <module> <load> <level>[CR]

**<level>** The return string will be the current <level> of the load specified. It will be a value from 0 to 100. The <level> is a number representing the percentage the load is on.

#### Example 1:

VGB 2 3 4 5[CR]

Regular Response: 45[CR]

Detailed Response: RGB 2 3 4 5 45[CR]

The VGB command queries the system for the load level of the fifth load on master 2, enclosure 3, module 4 and returns a value of 45%.

#### Example 2:

VGB# 3 2 1 4[CR]

Detailed Response: RGB 2 3 4 5 100[CR]

The VGB command queries the system for the load level of the fourth load on master 3, enclosure 2, module 1, and returns a value of 100%. The special response character ?#? is sent which specifies the response to be detailed.

#### Related Topics

Send a V Command

V Command

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## VGC Command

VGC <master> <station> <load>[CR]VGC

The VGC command will return the current load levels for station loads specified by <master> <station> <load>. The level returned is a number from 0 to 100 as a percent of on.

**<master>** The <master> parameter specified the address of the master board the station is on. Values for <master> include 1 to 15.

**<station>** The <station> parameter specifies the station address number of the station. Values for <station> include 1 to 50 for regular stations or 65 to 124 for RadioLink Stations.

**<load>** The <load> parameter specifies the address of the load. Values for <load> include 1 to 8 for and LVRS or 1 - 4 for a RadioLink Station.

**Regular Response:** <level, 0-100> [CR]

**Detailed Response:** VGC# <master> <station> <load> <level, 0-100> [CR]

**<level-x>** The <level> is a number representing the percentage the load is on.

**Example:**

VGC 2 3 4[CR]

Regular Response: 100 [CR]

VGC# 2 3 4

Detailed Response: RGC# 2 3 4 100 [CR]

The VGC command, in the above example, queries the system for the load level of master 2, station 3, load 4, which is on 100%.

**Related Topics**

Send a V Command

V Command

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## VGD Command

---

VGD <master> <enclosure> <module>[CR]

The VGD command will return the current load levels for the 8 loads specified by <master> <enclosure> <module>. The level returned is be a number from 0 to 100 as a percent of on.

**<master>** The <master> parameter specified the address of the master board the load is on. Values for <master> include 1 to 15.

**<enclosure>** The <enclosure> parameter specifies the enclosure number the load is on. Values for <enclosure> include 1 to 4.

**<module>** The <module> parameter specifies the address of the module the load is on. Values for <module> include 1 to 4.

**Regular Response:** <level-1> <level-2> <level-3> <level-4> <level-5> <level-6> <level-7> <level-8>[CR]

**Detailed Response:** RGD <master> <enclosure> <module> <level-1> <level-2> <level-3> <level-4> <level-5> <level-6> <level-7> <level-8>[CR]

**<level-x>** The <level> is a number representing the percentage the load is on. Each load on the specified module will be returned in order starting with load 1.

**Example:**

VGD 2 3 4[CR]

Regular Response: 50 50 75 80 80 100 100 100[CR]

Detailed Response: RGD 2 3 4 50 50 75 80 80 100 100 100[CR]

The VGD command queries the system for the 8 load levels on master 2, enclosure 3, module 4.

#### Related Topics

[Send a V Command](#)

[V Command](#)

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## VGH Command

---

VGH <master> <station> <type> {<type> {<type> {<type>}} [CR]

The VGH command will return data associated with each of the sent registers. One to four registers can be read with each command. The data is accessed using the following register table. The Q-ETS station must be configured for this command to work.

<master>	The <master> parameter specified the address of the master board the load is on. Values for <master> include 1 to 15.
<station>	The <station> parameter specifies the station number being accessed. Values for <station> include 1 to 50.
<type>	The <type> parameter specifies the type of data to be returned. The values for type are in the Data Type Table shown below.

**Regular Response:** <temp> {... <temp>} [CR]

**Detailed Response:** RGD <master> <station> <type> {<type> {<type> {<type>}}} <value> {<value> {<value> {-<value>}}} [CR]

#### Data Type Table

5	Heat Setpoint Day, <temp>
6	Heat Setpoint Night, <temp>
7	Cool Setpoint Day, <temp>
8	Cool Setpoint Night, <temp>
9	Day/Night Status, 0=Day, 1=Night
10	Fan Mode, 0=Auto, 1=On
11	Operation Mode, 0=Off, 1=Cool, 2=Heat, 3=Auto.
12	Outdoor Temp, <temp>
13	Indoor Temp, <temp>
48	High Range Indoor Sensor, <temp>
49	Low Range Indoor Sensor, <temp>
50	Hysteresis Indoor Sensor, <temp>
51	High Range Outdoor Sensor, <temp>
52	Low Range Outdoor Sensor, <temp>
53	Hysteresis Outdoor Sensor, <temp>

NOTE: Temperatures (<temp>) are reported in half degrees Celsius.

- For temperature ranges between 55 to 85 degrees Fahrenheit, use the following formulas to convert:  
 $^{\circ}\text{C} = <\text{value}>/2$     $^{\circ}\text{F} = <\text{value}> + 28$ .
- For temperature below 55 degrees and above 85 degrees use the following formulas to convert:  
 $^{\circ}\text{C} = <\text{value}>/1.8$     $^{\circ}\text{F} = <\text{value}>/2 * 1.8 + 32$ .

**Example:**

Assume Indoor Temperature is 23°C and the heat day setback is 19°C.

VGH 1 7 13 5[CR]

Regular Response: 46 38[CR]

Detailed Response: RGH 1 7 13 5 46 38[CR]

The command reads the indoor temperature and heat setback from station 7 on master 1. The read values are twice the actual temperature since the temperatures are sent in 1/2 ° Celsius.

**Related Topics**

[Send a V Command](#)

[V Command](#)

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## VGL Command

VGL <con\_num>[CR]

The VGL command queries the system for the current level of the load referenced by the contractor number <con\_num>.

**<con\_num>** The <con\_num> parameter specifies the contractor number of the load to be queried. <con\_num> must be a valid contractor number for the system.

**Regular Response:**      <level>[CR]

**Detailed Response:**      RGL <con\_num> <level>[CR]

**<level>** The return string will be the current <level> of the load specified. It will be a value from 0 to 100. The <level> is a number representing the percentage the load is on.

**Example:**

VGL 101[CR]

**Regular Response:**      50[CR]

**Detailed Response:**      RGL 101 50[CR]

The current level of the load referenced by the contractor number 101 is returned as 50%.

**Related Topics**

[Send a V Command](#)  
[V Command](#)

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## VGN Command

---

VGN <master> <address> <pos>[CR]

The VGN command returns the name of a master, station, or load.

**<master>** The <master> parameter specifies the address of the master board containing the switch to be queried. It can range from 1 to 15.

**<address>** The <address> parameter specifies the address of the device we want the name from.

**<pos>** The <pos> parameter specifies which type or number we want.

**<pos> Description**

1-8 load number

master name

station name

**Regular Response:** <name>[CR]

Detailed Response: RGN <master> <address> <pos> <name>[CR]

**<name>** The return string is the name of the device. The format of the string name is: Name|Room|Floor|Type.

**Example:**

VGN 1 5 255[CR]

Regular Response: Station Name|Room Name|Floor Name|0[CR]

Detailed Response: RGN 1 5 255 Station Name|Room Name|Floor Name|0[CR]

The name of station 5 on master 1 is returned.

**Related Topics**

[Send a V Command](#)  
[V Command](#)

---

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## VGS Command

---

**VGS <master> <station> <switch>[CR]**

The VGS command will return the current state of the switch specified by <master> <station> <switch>.

**<master>** The <master> parameter specifies the address of the master board containing the switch to be queried. It can range from 1 to 15.

**<station>** The <station> parameter specifies the address of the station board containing the switch to be queried. It can range from 1 to 50.

**<switch>** The <switch> parameter specifies the number of the switch to be queried. It can range from 1 to 10.

**Regular Response:** <state>[CR]

**Detailed Response:** RGS <master> <station> <switch> <state>[CR]

**<state>** The <state> return value is the current state of the switch function and has the following values:

**<state> Description**

The switch function is off.

The switch function is on.

The switch function is not programmed.

**Example:**

VGS 1 2 4[CR]

Regular Response: 0[CR]

Detailed Response: RGS 1 2 4 0[CR]

The VGS command returns the current state of the fourth switch on master 1 on station 2 as off.

**Related Topics**

[Send a V Command](#)

[V Command](#)

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## VGT Command

---

**VGT <master> <station>[CR]**

The VGT command returns the current state of each of the 10 switches specified by <master> <station>.

**<master>** The <master> parameter specifies the address of the master board containing the switch to be queried. It can range from 1 to 15.

**<station>** The <station> parameter specifies the address of the station board containing the switch to be queried. It can range from 1 to 50.

**Regular Response:** <state-1> <state-2> <state-3> <state-4> <state-5> <state-6> <state-7> <state-8> <state-9> <state-10>[CR]

**Detailed Response:** RGT <master> <station> <state-1> <state-2> <state-3> <state-4> <state-5> <state-6> <state-7> <state-8> <state-9> <state-10>[CR]

**<state-x>** The <state> return value will be 0 if the switch function is off, 1 if the function is on, and 2 is the function is not defined. All ten of the switch states will be returned in order starting with switch 1.

**Example:**

VGT 1 2[CR]

Regular Response: 0 0 0 0 1 1 1 0 1 0[CR]

Detailed Response: RGT 1 2 0 0 0 0 1 1 1 0 1 0[CR]

The VGT command returns the current state of each of the 10 switches on master 1, station 2.

**Related Topics**

[Send a V Command](#)

[V Command](#)

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## VGV Command

VGV <master>[CR]

The VGV command returns the version and date of the master controller firmware.

**<master>** The <master> parameter specifies the address of the master board to be queried.

**Regular Response:** <VER x.xx> <(date)>[CR]

**Detailed Response:** RGV <master> <VER x.xx> <(date)>[CR]

**<VER x.xx>** The first part of the return string will be VER with the master controller flash version x.xx.

**<(date)>** The second part will be the date of the flash firmware in the following format: month/day/year.

**Example:**

VGV 2[CR]

Regular Response: VER 5.37 10/14/1997[CR].

Detailed Response: RGV 2 VER 5.37 10/14/1997[CR].

Master controller 2 firmware is version 5.37 and date is Oct 14, 1997.

#### Related Topics

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[V Command](#)

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## VIC Command

---

VIC <Master> <CFlag> <Code> <State> <IR Emitter>[CR]

The VIC command outputs an IR code to an Infrared Emitter station.

VIC <master> <cflag> <state> <code> <IR emitter>[CR]

<Master> The <master> parameter specifies the address of the Master Controller to output the IR code on.

<CFlag> The <Cflag> parameter specifies whether <Code> is referenced to an IR codeset (values 1-8) or to a specific code (value of 0).

<Code> The <Code> parameter specifies the IR code to be output. If <Cflag> is 0 then <Code> is a number from 0 – 255. Values 0 - 31 correspond to IR codeset 1, values 32-63 correspond to IR codeset 2, and so on. If <Cflag> is 1-8 then <Code> is a number from

0-31. These numbers correspond to the code within the <Cflag> codeset. [IR Code Mapping](#)

<State> The <state> parameter defines whether the state will be off (value of 0) or on (value of 1).

<IR Emitter> The <IR Emitter> parameter specifies the station position (address) of the Infrared Emitter Station (IRX) to output the code to.

**Regular Response:** <State>[CR]

**Detailed Response:** RIR <Master><CFlag><Code><State><IR Emitter>[CR]

#### Example 1:

VIC 1 2 31 1 4

Regular Response: 1[CR]

Detailed Response: RIC 1 2 31 1 4[CR]

The VIC command outputs the on state of IR code 31 of codeset 2 to the Infrared Emitter Station on, master 1, station 4.

#### Example 2:

VIC 1 1 0 1 4[CR]

Regular Response: 1[CR]

Detailed Response: RIC 1 2 31 1 4[CR]

The VIC command outputs the on state of IR code 0 (codeset 1, code Power On) to the Infrared Emitter Station on Master Controller 1, station 4.

#### **Related Topics**

[Send a V Command](#)

[V Command](#)

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## **VIR Command**

---

**VIR <Master> <Code> <State> <IR Emitter>[CR]**

The VIR command will output an IR code to an Infrared Emitter station.

**<Master>** The <master> parameter specifies the address of the Master Controller to output the IR code on.

**<Code>** The <Code> parameter specifies the IR code to be output. <Code> is a number from 0 – 255. Values 0 - 31 correspond to IR codeset 1, values 32-63 correspond to IR codeset 2, and so on. IR Code Mapping

**<State>** The <state> parameter defines whether the state will be off (value of 0) or on (value of 1).

**<IR Emitter>** The <IR Emitter> parameter specifies the station position (address) of the Infrared Emitter Station (IRX) to output the code to.

**Regular Response:** <State>[CR]

**Detailed Response:** RIR <Master><Code><State><IR Emitter>[CR]

**Example:**

VIR 1 0 1 4

Regular Response: 1[CR]

Detailed Response: RIR 1 0 1 4[CR]

The VIR command outputs the on state of IR code 0 (codeset 1, code Power On) to the Infrared Emitter Station on master 1, station 4.

#### **Related Topics**

[Send a V Command](#)

[V Command](#)

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## **VLA Command**

---

**VLA <master> <module> <load> <level> {<fade>}[CR]**

The VLA command turns the specified load on to the value given by <level> with a fade rate specified by <fade>.

**<master>** The <master> parameter specifies the address of the master board containing the load to be controlled. It ranges from 1 to 15.

**<module>** The <module> parameter specifies the address of the module containing the load to be controlled. It ranges from 1 to 16. Modules 1-4 are in the master enclosure, module 5-8 are in the first slave enclosure, modules 9-12 are in the second slave enclosure, and modules 13-16 are in the third slave enclosure.

**<load>** The <load> parameter specifies the position of the load on the module board to be controlled. It is not the contractor number. It ranges from 1 to 8.

**<level>** The <level> parameter specifies the level to turn the load on as a percentage of full on. A value of 0 will turn the load off. Values from 1 to 100 will be a percent of full on.

**<fade>** The optional <fade> parameter specifies the number of seconds it will take to ramp up the load to the level specified. The fade rate can range from 0 to 6553.5 seconds with .1 second increments. The default for <fade> is 0 seconds.

**Regular Response:** <level>[CR]

**Detailed Response:** RLA <master> <module> <load> <level> {<fade>}[CR]

**<level>** The <level> response returned is be the same value sent in the VLA command.

#### VLA for variable control:

Each master has virtual modules. Module #17 is the module that holds the variables. As variables are created notice that the variable # count from 10011-10018 and then to 10021-10028 and so on. The fourth number of this is the master # and the fifth number is the load number. So, to turn variable #10 to 100% the syntax would be VLA 2 17 2 100. To turn variable #8 to 100% the syntax would be VLA 1 17 8 100.

#### Example 1:

VLA 3 1 2 75 3.5[CR]

Regular Response: 75[CR]

Detailed Response: RLA 3 1 2 75 3.5[CR]

The second load on module 1, master 3, is turned on to 75% with a fade rate of 3.5 seconds.

#### Example 2:

VLA! 2 7 4 50[CR]

Response:

The fourth load on module 7 (enclosure 2, module 3), master 2, is turned on to 50% with a fade rate of 0 seconds. There is no response returned because the special response character >! is specified.

#### Related Topics

[Send a V Command](#)

[V Command](#)

## VLB Command

---

**VLB <master> <enclosure> <module> <load> <level> {<fade>}[CR]**

The VLB command turns the specified load on to the value given by <level> with a fade rate specified by <fade>.

**<master>** The <master> parameter specifies the address of the master board containing the load to be controlled. It ranges from 1 to 15.

**<enclosure>** The <enclosure> parameter specifies the number of the enclosure the module is in. It ranges from 1 to 4.

**<module>** The <module> parameter specifies the address of the module containing the load to be controlled. It ranges from 1 to 4.

**<load>** The <load> parameter specifies the position of the load on the module board to be controlled. It is not the contractor number. It ranges from 1 to 8.

**<level>** The <level> parameter specifies the level to turn the load on as a percentage of full on. A value of 0 will turn the load off. Values from 1 to 100 will be a percent of full on.

**<fade>** The <fade> parameter specifies the number of seconds it will take to ramp up the load to the level specified. The fade rate can range from 0 to 6553.5 seconds with .1 second increments. The default for <fade> is 0 seconds.

**Regular Response:** <level>[CR]

**Detailed Response:** RLB <master> <enclosure> <module> <load> <level> <fade>[CR]

**<level>** The <level> response returned will be the same value sent in the VLB command.

**Example:**

VLB 3 4 1 2 75 3.5[CR]

Regular Response: 75[CR]

Detailed Response: RLB 3 4 1 2 75 3.5[CR]

The second load on module 1, enclosure 4, master 3, is turned on to 75% with a fade rate of 3.5 seconds.

### Related Topics

[Send a V Command](#)

[V Command](#)

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## VLC Command

---

**VLC <master> <station> <load> <level> {<fade>}[CR]**

The VLC command is used to set the station load specified by address to a certain <level> with the option of a fade time specified by <fade>. Used for low voltage relay stations, wall box dimmers or 0 12 volt loads residing on the station bus.

**<master>** The <master> parameter specifies the address of the master board containing the load to be controlled. It ranges from 1 to 15.

**<station>** The <station> parameter specifies the address of the station containing the load to be controlled. It ranges from 1 to 50.

**<load>** The <load> parameter specifies the position of the load on the module board to be controlled. It is not the contractor number. It ranges from 1 to 8.

**<level>** The <level> parameter specifies the level to turn the load on as a percentage of full on. A value of 0 will turn the load off. Values from 1 to 100 will be a percent of full on.

**<fade>** The <fade> parameter specifies the number of seconds it will take to ramp up the load to the level specified. The fade rate can range from 0 to 6553.5 seconds with .1 second increments. The default for <fade> is 0 seconds.

**Regular Response:** <level>[CR]

**Detailed Response:** RLC <master> <station> <load> <level> <fade>[CR]

**<level>** The <level> response returned is be the same value sent in the VLC command.

#### Example:

VLC 3 1 2 100[CR]

Regular Response: 75[CR]

Detailed Response: RLC 3 1 2 100[CR]

The second load on station 1, master 3, is turned on to 100% with a fade rate of 0 seconds.

#### Related Topics

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[V Command](#)

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## VLD Command

VLD <master> <station> <led> <state>[CR]

The VLD command will turn the LED specified by <master> <station> <led> to the value given in <state>. This command only works with switches that have not be defined by the system to control the LED.

**<master>** The <master> parameter specifies the address of the master board containing the switch LED to be controlled. It ranges from 1 to 15.

**<station>** The <station> parameter specifies the address of the station board containing the switch LED to be controlled. It ranges from 1 to 50.

**<led>** The <led> parameter specifies the number of the switch LED to be controlled. It ranges from 1 to 10.

**<state>** The <state> parameter is defined as follows: 0 for off; 1 for on; and 2 for blink.

**Regular Response:** <state>[CR]

**Detailed Response:** RLD <master> <station> <led> <state>[CR]

**<state>** The value of the state set by the VLD command is returned.

**Example:**

VLD 2 3 4 1[CR]

Regular Response: 1[CR]

Detailed Response: RLD 2 3 4 1[CR]

The fourth switch on station 3, master 2, is turned on.

**Related Topics**

Send a V Command

V Command

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## VLO Command

---

VLO <con\_num> <level> {<fade>}[CR]

The VLO command turns the specified load on to the value given by <level> using a fade rate specified by <fade>.

**<con\_num>** The <con\_num> parameter specifies the contractor number of the load to be controlled. It must be a valid contractor number for a load in the system. It ranges from 1 to 9999.

**<level>** The <level> parameter specifies the level to turn the load on as a percentage of full on. A value of 0 will turn the load off. Values from 1 to 100 will be a percent of full on.

**<fade>** The <fade> parameter specifies the number of seconds it will take to ramp up the load to the level specified. The fade rate can range from 0 to 6553.5 seconds with .1 second increments. The default for <fade> is 0 seconds.

**Regular Response:** <level>[CR]

**Detailed Response:** RLO <con\_num> <level> {<fade>}[CR]

**<level>** The <level> response returned will be the same value sent in the VLO command.

**Example:**

VLO 201 50 2.3[CR]

Regular Response: 50[CR]

Detailed Response: RLO 201 50 2.3[CR]

The load referenced by contractor number 201 is turned on to 50% with a fade rate of 2.3 seconds.

#### Related Topics

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[V Command](#)

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## VLP Command

VLP - Change Load profile (load on Module)

Usage: VLP <master> <enclosure> <module> <load> <profile>

Response: < new profile >

Verbose Response: RLP <master> <enclosure> <module> <load> <profile> <new profile>

#### Field explanation:

<master#> - master number (1-16)

<enclosure> Enclosure number (1-4)

<module> Module Number (1-4)

<load> Load Number (1-8)

<profile> Profile identifier – must be a user profile (not 0 or 1) (2-22)

example: Set load 4 on enclosure 2 on module 3 on master 1, to use load profile 4 (a user defined profile found in the .qlk file)

Command: VLP 1 2 3 1 4

Response: 4

Verbose Response RLP 1 2 3 1 4

#### Related Topics

[Send a V Command](#)

[V Command](#)

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## VLS Command

VLS <master> <station> <led>[CR]

The VLS command returns the current state of the LED specified by <master> <station> <led>.

**<master>** The <master> parameter specifies the address of the master board containing the switch LED. It ranges from 1 to 15.

**<station>** The <station> parameter specifies the address of the station board containing the switch LED. It ranges from 1 to 50.

**<led>** The <led> parameter specifies the number of the switch LED. It ranges from 1 to 10.

**Regular Response:** <state>[CR]

**Detailed Response:** RLS <master> <station> <led> <state>[CR]

**<state>** The LED state is returned. <state> is 0 for off, 1 for on, and 2 for blink.

**Example:**

VLS 2 3 4[CR]

Regular Response: 1[CR]

Detailed Response: RLS 2 3 4 1[CR]

The state of the fourth LED on station 3, master 2, is returned as on.

**Related Topics**

[Send a V Command](#)

[V Command](#)

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## VLT Command

---

VLT <master> <station>[CR]

The VLT command will return the current state of each of the LEDs specified by <master> <station>.

**<master>** The <master> parameter specifies the address of the master board containing the station to query. It ranges from 1 to 15.

**<station>** The <station> parameter specifies the address of the station board to query. It ranges from 1 to 50.

**Regular Response:** <onleds> <blinkleds>[CR]

**Detailed Response:** RLT <master> <station> <format> <onleds> <blinkleds>[CR]

**<onleds>** The <onleds> parameter is a hex number representing which LEDs are on.

**<blinkleds>** The <blinkleds> parameter is a hex number representing which LEDs are blinking.

The LEDs that are not specified as on or blinking are defined as off.

**Example:**

VLT 2 3[CR]

Regular Response: 4C 20[CR]

Detailed Response: RLT 2 3 4C 20[CR]

The state of each of the station LEDs on station board 3, master board 2 is returned. The on LEDs value is 4C (hex) which says LEDs 3, 4, and 7 are on. The blink LEDs value is 20 (hex), which says LED 6 is blinking. The rest of the LEDs are off.

#### Related Topics

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[V Command](#)

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## VOD Command

VOD <enable>[CR]

The VOD command enables or disables the outputting of information when a station LED changes state.

**<enable>** The <enable> parameter specifies whether to enable (1-3) output strings or disable (0) them.

VOD 1, enables standard keypad LED changes

VOD 2, enables LCD LED changes

VOD 3, enables ALL LED changes

VOD 0, disables ALL LED changes

**Regular Response:** <enable>[CR]

**Detailed Response:** ROD <enable>[CR]

Output string format when an LED changes state and <enable> is 1:

#### LCD-LED Feedback:

**NOTE:** LCD feedback is slightly different than LED feedback.

LCD Button LED Feedback that is reported from Master

#### LCD – LED Feedback:

**LC <master> <station> <switch> <0(off) or 1(on)>[CR]**

The LCD-LED feedback is not in HEX, it is a true button number address.

#### Keypad – LED Feedback:

**LE <master> <station> <onleds> <blinkleds>[CR]**

**<onleds>** The <onleds> parameter is a hex number representing which LEDs are on.

**<blinkleds>** The <blinkleds> parameter is a hex number representing which LEDs are blinking.

#### Example:

VOD 1[CR]

Regular Response: 1[CR]

**Detailed Response:** ROD 1[CR]

Then when one or more LEDs on station 3 of master 1 change state the following output string will be sent.

LE 1 3 4C 20[CR]

The state of each of the station LEDs on station 3, master 1 is returned. The on LEDs value is 4C (hex) which indicates LEDs 3, 4, and 7 are on. The blink LEDs value is 20 (hex) which indicates LED 6 is blinking. The rest of the LEDs are off.

Switch (VOS), LED (VOD) and Load Changes (VOL) are now persistent after a reset of a system. Each Serial Port (On a Master or Station) now have the **option** to enable reporting. So when the system is reset, it is no longer necessary to re-send the V-Commands.

#### Related Topics

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V Command

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## VOL Command

---

VOL <enable>[CR]

The VOL command enables or disables the outputting of information when a Load changes. If an ALL\_ON event is executed the string AON <num\_not\_effected>[CR]@ will be output instead of all the loads. If an ALL\_OFF event is executed the string AOFF @ <num\_not\_effected>[CR]@ will be output.

**<enable>** The <enable> parameter specifies whether to enable (1) output strings or disable (0) them.

**Regular Response:** <enable>[CR]

**Detailed Response:** (NA)

Output string format when <enable> is 1:

Load changes value:

**Module Load = LO <master> <enclosure> <module> <load> <level>[CR]**

-or-

**Station Load = LS <master> <station> <load> <level>[CR]**

-or-

**Variable Load = LV <master> <variable> <level>[CR]**

**<master>** The <master> parameter specifies the address of the master board containing the load. It ranges from 1 to 15.

**<enclosure>** The <enclosure> parameter specifies the number of the enclosure the module is in. It ranges from 1 to 4.

**<module>** The <module> parameter specifies the address of the module containing the load that changed. It ranges from 1 to 4.

**<load>** The <load> parameter specifies the position of the load on the module. It is NOT the contractor number. It ranges from 1 to 8.

**<level>** The new level of the load (0-100).

**<variable>** The <variable> parameter specifies the load variable number that changed. It ranges from 1 to 8.

**<station>** The <station> parameter specifies the address of the station containing the load that changed. It ranges from 1 to 124. For example, the station load could be on a Low Voltage Relay Station.

**Example:**

VOL 1[CR]

Regular Response: 1[CR]

Detailed Response: ROL 1[CR]

Then when a load changes state the following output string will be sent.

LO 1 3 2 5 55[CR]

This example shows when load 5 on module 2 of enclosure 3 of master 1 changes to 55%.

Switch (VOS), LED (VOD) and Load Changes (VOL) are now persistent after a reset of a system. Each Serial Port (On a Master or Station) now have the **option** to enable reporting. So when the system is reset, it is no longer necessary to re-send the V-Commands.

**Related Topics**

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V Command

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## VOS Command

VOS <format> <enable>[CR]

The VOS command enables or disables the output of information when a station switch or IR button is pressed and released.

**<format>** The <format> parameter specifies the format of the data being returned. Valid values for <format> include:

**<format>** Description

- |   |                                     |
|---|-------------------------------------|
| 0 | Do not output station serial number |
| 1 | Output station serial number        |

**<enable>** The <enable> parameter specifies whether to enable (1) output strings or disable (0) them.

**Regular Response:** <enable>[CR]

**Detailed Response:** ROS <format> <enable>[CR]

Output string format when a station switch or IR button is pressed/released and <enable> is 1:

If <format> is 0 then the return format string is:

```
SW <master> <station> <sw> <state>[CR]
IR <master> <zone> <data> <state>[CR]
```

< <b>master</b> >	The address of the master the station is on.
< <b>station</b> >	The address of the station the switch is on.
< <b>sw</b> >	The number of the switch being pressed.
< <b>state</b> >	1 for pressed and 0 for released.
< <b>zone</b> >	The number of the IR zone the receiver is on.
< <b>data</b> >	The number of the IR code being pressed (0-255).

Else if <format> is 1 then the return format string is:

```
SW <master> <station> <sw> <state> <serial_no>[CR]
IR <master> <zone> <data> <state> <serial_no>[CR]
```

< <b>serial_no</b> >	The serial number of the station being pressed.
----------------------	---

#### **Example 1:**

VOS 0 1[CR]

Regular Response: 1[CR]

Detailed Response: ROS 0 1[CR]

When a switch 5 on station 3 on master 2 is pressed the following is output:

SW 2 3 5 1[CR]

When IR button corresponding to code 231 on zone 3, master 4, is pressed the following is output:

IR 4 3 231 1[CR]

#### **Example 2:**

VOS 1 1[CR]

Regular Response: 1[CR]

Detailed Response: ROS 1 1[CR]

When a switch 5 on station 3 on master 2 is pressed the following is output:

SW 2 3 5 1 10345[CR]

Switch (VOS), LED (VOD) and Load Changes (VOL) are now persistent after a reset of a system. Each Serial Port (On a Master or Station) now have the **option** to enable reporting. So when the system is reset, it is no longer necessary to re-send the V-Commands.

#### Related Topics

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## VPG Command

---

VPG <string>[CR]

The VPG command is used to program a Q series system using ASCII strings like those in a QLink .qlk file. See the documentation of the .qlk file format for more information on the <string> parameter.

**<string>** The <string> parameter specifies the ASCII string used to program a Q series system.

**Regular Response:** <error>[CR]

**Detailed Response:** RPG <string> <error>[CR]

<error> The error state of the program string. A 0 indicates OK and a 1 indicates an error.

**Example:**

VPG Floor: Kitchen[CR]

Regular Response: 0[CR]

Detailed Response: RPG Floor: Kitchen 0[CR]

The Kitchen floor name is defined.

#### Related Topics

[Send a V Command](#)  
[V Command](#)

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## VQA Command

---

VQA[CR]

The VQA command returns the address and port number of the master controller that has the current RS-232 connection.

**Regular Response:** <master> <port>[CR]

**Detailed Response:** RQM <master> <port>[CR]

<**master**> <master> is the address of the master controller the RS-232 connection is with.

<**port**> <port> is the number of the port on the master terminal board the RS-232 connection is with.

**Description**

0	Diagnostic Port
1	Port A
2	Port B
3	Port C
4	Port D

**Example:**

VQA[CR]

Regular Response: 4 1[CR]

Detailed Response: RQA 4 1[CR]

The RS-232 connection is with master 4 port A.

**Related Topics**

[Send a V Command](#)

[V Command](#)

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## VQM Command

VQM[CR]

The VQM command will return the number and addresses of all the master controllers in the system.

**Regular Response:** <number> {<master> Y}[CR]

**Detailed Response:** RQM <number> {<master> Y}[CR]

<**number**> <number> represents the number of master addresses being returned. Valid range is 1 to 15.

<**master**> <master> represents the address of each master in the system. Valid master addresses range from 1 to 15.

**Example:**

VQM[CR]

Regular Response: 4 1 2 3 4[CR]

Detailed Response: RQM 4 1 2 3 4[CR]

Four master controller addresses are returned with addresses of 1, 2, 3, and 4.

#### **Related Topics**

Send a V Command  
V Command

---

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---

## **VQP Command**

---

VQP <master>[CR]

The VQP command will return the number of modules and the information about each module.

<master>                   The <master> parameter specifies the address of the master controller. It ranges from 1 to 15.

#### **Regular Response:**

```
<number>[CR]<number>[CR]
{<master> <enclosure> <module> <type> <ver>[CR]}
{Y}
```

#### **Detailed Response:**

```
RQP <master> <number>[CR]RQP <master> <number>[CR]
{RQP <master> <enclosure> <module> <type> <ver>[CR]}
{Y}
```

<number>                   <number> represents the number of modules being returned.

<master>                   <master> is the address of the master controller (1-15).

<enclosure>                <enclosure> represents the enclosure number (1-4).

<module>                  <module> represents the address of the module returning the information (1-4).

<type>                    The type of the module:

#### Type      Description

Undefined	
Undefined	
AR8008-120 or AR18008-277	
CAR160A	
Undefined	
SD4008-120 or SD9008-277	
ED4008-120	

<ver>                    <ver> is the firmware version number of the module.

#### **Example:**

VQP 1[CR]

**Regular Response:**

```
6[CR]
1 1 1 5 1.0[CR]
1 1 2 2 1.0[CR]
1 1 3 5 1.0[CR]
1 1 4 5 1.0[CR]
1 2 1 5 1.0[CR]
1 2 2 5 1.0[CR]
```

**Detailed Response:**

```
RQP 1 6[CR]
RQP 1 1 1 5 1.0[CR]
RQP 1 1 2 2 1.0[CR]
RQP 1 1 3 5 1.0[CR]
RQP 1 1 4 5 1.0[CR]
RQP 1 2 1 5 1.0[CR]
RQP 1 2 2 5 1.0[CR]
```

Six module information strings are returned. Module 2-2 is an AR8008-120 and the rest are SD4008-120.

**Related Topics**

[Send a V Command](#)  
[V Command](#)

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## VQS Command

VQS <master>[CR]

The VQS command returns the number of stations and the information about each station on the specified master.

**<master>** The <master> parameter specifies the address of the master controller. It ranges from 1 to 15.

**Regular Response:**

```
<number>[CR]
{<master> <station> <type> <cfg> <ver> <6-bit> <serial no>[CR]}
{Y}
```

**Detailed Response:**

RQS <master> <number>[CR]
{RQS <master> <station> <type> <cfg> <ver> <6bit> <serial no>[CR]}
{Y}

**<number>** <number> represents the number of stations being returned.

**<master>** <master> is the address of the master controller (1-15).

**<station>** <station> represents the address of the station returning the information.

**<type>** The type of the station.

**Type      Description**

Keypad  
 Contact Input  
 LV Relay  
 Infrared Emitter  
 0-10V  
 Dimming  
 LCD

**<cfg>**      **Description:** <cfg> is a hex number that represents the configuration of the station. Each bit set represents a piece of information.

**Bit      Description**

Eight buttons  
 2 Color LED?S  
 External Connector  
 Internal IR  
 Sounder

**<ver>**      **Description:** <ver> is the firmware version number of the station.

**<6bit>**      **Description:** An internal number used to address the physical station.

**<serial no>**      **Description:** The serial number of the station.

**Example:**

VQS 1[CR]

**Regular Response:**

3[CR]  
 1 1 0 15 1.0 1 10123[CR]  
 1 2 2 0 1.0 2 10124[CR]  
 1 3 1 0 1.0 3 10125[CR]

**Detailed Response:**

RQS 1 3[CR]  
 RQS 1 1 0 15 1.0 1 10123[CR]  
 RQS 1 2 2 0 1.0 2 10124[CR]  
 RQS 1 3 1 0 1.0 3 10125[CR]

Three station information strings are returned. Station 1 is a Keypad station, serial number 10123, with sound, external connector, and 8 buttons, version 1.0, and 6bit of 1. Station 2 is a LV Relay station, serial number 10124, and 6bit of 2. Station 3 is a Contact Input station, serial number 10125, and 6bit of 3.

**Related Topics**

Send a V Command  
 V Command

## VQT Command

---

VQT <master> <function#>

Get Time function execution parameters

<function#> is the equivalent of a button number on a station

Response: <state> <hour> <min> <sun> <mon> <tue> <wed> <thu> <fri> <sat> <day> <month> <year>

Verbose Response: RQT <master> <function#> <state> <hour> <min> <sun> <mon> <tue> <wed> <thu> <fri> <sat> <day> <month> <year>

Field explanation:

<master#> - master number (1-15)

<function#> - the number (1 – 255) which identifies the time function (number comes from .qlk file)

<state> can be : 0 (Off State), 1 (On State), and 2 (Disable Time Control)

<hour> 0-23 for hours, -1 for all hours, 24 for sunrise, 25 for sunset

<minute> minute of hour for hours 0-23 – -1 for all minutes, otherwise an offset from sunrise/sunset

<sun> 1 if function should execute on Sunday, otherwise 0

<mon> 1 if function should execute on Monday, otherwise 0

<tue> 1 if function should execute on Tuesday, otherwise 0

<wed> 1 if function should execute on Wednesday, otherwise 0

<thu> 1 if function should execute on Thursday, otherwise 0

<fri> 1 if function should execute on Friday, otherwise 0

<sat> 1 if function should execute on Saturday, otherwise 0

<day> [1-31] 0 used for all days

<month> [1-12] for January-December. 0 used for all months

<year> comes in the form [yyyy] – 0 is used for all years

example:

Command: VQT 1 1

Response: 1 0 0 0 6 30 0 1 1 1 1 1 0

Verbose Response RQT 1 1 6 30 0 1 1 1 1 1 0 0 0 0

Time Control [1] executes in the On state at 6:30 AM on Monday, Tuesday, Wednesday, Thursday, and Friday

Every day, every month, every year.

example:

Command: VQT 1 2

Response: 0 25 150 1 1 1 1 1 1 0 4 0

Verbose Response RQT 4 0 25 150 1 1 1 1 1 1 0 4 0

- Time Control 4 is disabled but configured to execute 2 hours and 30 minutes after sunset, daily in April.

### Related Topics

[VET Command](#)

[VST Command](#)

Send a V Command

V Command

## VSC Command

---

VSC <master> <station> <serialno>[CR]

The VSC command is used to configure stations.

**<master>** The <master> parameter specifies the address of the master controller the station is on.

**<station>** The <station> parameter specifies the address of the station to configure. This station address is used to reference the station in most other commands.

**<serialno>** The <serialno> parameter specifies the serial number of the station being configured.

**Regular Response:** <errflag>[CR]

**Detailed Response:** RSC <master> <station> <serialno> <errflag>[CR]

**<errflag>** The <errflag> return parameter specifies the error value for the VSC command. A value of 0 means no error occurred.

**Example:**

VSC 1 4 10878[CR]

Regular Response: 0[CR]

Detailed Response: RSC 1 4 10878 0[CR]

The VSC command configures the station with serial number 10878, on master 1, to the address of 4.

**Related Topics**

[Send a V Command](#)

[V Command](#)

---

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---

## VSH Command

---

VSH <master> <station> <type> <temp> {<type> <temp> {<type> <temp>}} [CR]

The VSH command will write the value to the register. Up to 3 registers value pairs can be sent with one command. The register table is shown below. The Q-ETS station must be configured for this command to have effect.

When the command successfully executes it returns the station number.

**<master>** The <master> parameter specified the address of the master board the load is on. Values for <master> include 1 to 15.

**<station>** The <station> parameter specifies the station number being accessed. Values for <station> include 1 to 50.

**<type>** The <type> parameter is one of the numbers in the register number list shown below.

**Regular Response:** <station> [CR]

**Detailed Response:** RSH <master> <station> <register> <temp> {.. <register> <temp>} CR]

#### Data Type Table

5	Heat Setpoint Day, <temp>
6	Heat Setpoint Night, <temp>
7	Cool Setpoint Day, <temp>
8	Cool Setpoint Night, <temp>
9	Day/Night Status, 0=Day, 1=Night
10	Fan Mode, 0=Auto, 1=On
11	Operation Mode, 0=Off, 1=Cool, 2=Heat, 3=Auto.
12	Outdoor Temp, <temp>
13	Indoor Temp, <temp>
48	High Range Indoor Sensor, <temp>
49	Low Range Indoor Sensor, <temp>
50	Hysteresis Indoor Sensor, <temp>
51	High Range Outdoor Sensor, <temp>
52	Low Range Outdoor Sensor, <temp>
53	Hysteresis Outdoor Sensor, <temp>

NOTE: Temperatures (<v>) are reported in half degrees Celsius. Use formula to convert: °C = <v>/2 °F = <v> + 28.

#### **Example:**

This changes the heat setback of master 1, station 7, to 20°C and the cool setback to 25°C.

VSH 1 7 5 40 7 50[CR]

Regular Response: 7[CR]

Detailed Response: RSH 1 7 5 40 7 50[CR]

#### **Related Topics**

Send a V Command

V Command

---

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## **VSP Command**

---

VSP - Change Station Load profile

#### **Station Load Profile Assignment**

Usage: VSP <master> <station> <load> <profile>

Response: < new profile >

Verbose Response: RSP <master> <station> <load> <profile> <new profile>

#### **Field explanation:**

<master#> - master number (1-15)

<station> Station (1-50 for station bus stations and 65-124 for RF Stations)  
 <load> Load Number (1-4)  
 <profile> Profile identifier – must be a user profile (not 0 or 1) (2-22)

example: Set Station 65, Load 1, on master 1 to load profile 4 (a user defined profile found in the .qlk file)  
 Command: VSP 1 65 1 4  
 Response: 4  
 Verbose Response RLP 1 65 1 4

#### Related Topics

[Send a V Command](#)  
[V Command](#)

---

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---

## VST Command

---

VST <master> <function#> <state> {<hour> <min> {<sun> <mon> <tue> <wed> <thu> <fri> <sat> {<day> <month> <year>} } }

The VST command is used to Set Time function execution parameters.

Parameters Explanation:

<master#> - master number (1-15)  
 <function#> is the equivalent of a button number on a station. The number (1 – 255) which identifies the time function.  
 <state> can be : 0 (Off State), 1 (On State), and 2 (Disable Time Control)

Set Time function execution parameters

Usage: VST <master> <function#> <state> {<hour> <min> {<sun> <mon> <tue> <wed> <thu> <fri> <sat> {<day> <month> <year>} } }  
 Response: <state> <hour> <min> <sun> <mon> <tue> <wed> <thu> <fri> <sat> <day> <month> <year>  
 Verbose Response: RST <function#> <state> <hour> <min> <sun> <mon> <tue> <wed> <thu> <fri> <sat> <day> <month> <year>

#### Related Topics

[VET Command](#)

[VQT Command](#)

[Send a V Command](#)

[V Command](#)

---

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## VSW Command

---

VSW <master> <station> <switch> <state>[CR]

The VSW command will execute the switch function specified. The <state> parameter specifies the state of the switch function to execute.

**<master>** The <master> parameter specifies the address of the master board containing the switch to be executed. It ranges from 1 to 15.

**<station>** The <station> parameter specifies the address of the station containing the switch to be executed. When updating a pre-6.2 system that uses V-commands to control TelleAccess, Time Controls, or IRZones, please adjust the V-command to point to the correct station number. Station addresses for new and older systems are:

<b><i>Control Type</i></b>	<b><i>New Address</i></b>	<b><i>Pre-6.2 firmware Address</i></b>
Wired Station	1-50	1-50
RadioLink Stations	65-124	NA
String Control	131	NA
TelleAccess	132	104
Time Control	133	51 (also see VET command)
IR Zone	140-189	52-101

**<switch>** The <switch> parameter specifies the number of the switch to be executed. It ranges from 1 to 10.

**<state>** The <state> parameter specifies the operation of the switch function to perform.

#### **<state> Description**

- 0 Execute the switch with the off state.
- 1 Execute the switch with the on state.
- 2 Learn the current load values for the switch function. This is only valid for switch function types Dim, Preset\_on, and Preset\_toggle.
- 3 Start dimming cycle on loads of a Dim function.
- 4 Execute the switch emulating a switch press.
- 5 Execute the switch emulating a switch release.
- 6 Execute the switch emulating a switch press and release.

**Regular Response:** <state>[CR]

**Detailed Response:** RSW <master> <station> <switch> <state>[CR]

**<state>** The <state> return value will be the same as the value sent in the VSW command.

#### **Example:**

VSW 2 10 4 1[CR]

Regular Response: 1[CR]

Detailed Response: RSW 2 10 4 1[CR]

The VSW command executes the on function for switch number 4 on station 10 on master 2.

**Related Topics**

[Send a V Command](#)  
[V Command](#)

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## Shortcut Keys 1

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### Shortcut Keystrokes

Short Cut	Command	Description
F1	Help	Bring up the Help File.
Ctrl+N	New Project	Create a new Projects
Ctrl+O	Open Project	Open a Project.
Ctrl+S	Save the Document	Save to a QLK File
Ctrl+P	Print	Print the View.
, (Comma)	Select Location Tab	Activate the Location View.

. (Period)	Select Wiring Tab	Activate the Wiring View.
Ctrl+C	Copy	Copy a Node
Ctrl+D	Delete	Delete a Node
Ctrl+X	Cut	Cut the selected node.
Ctrl+V	Paste	Paste a copied/cut node into the project.
Ctrl+E or Alt+Enter	Edit Properties	Edit Node Properties.
Ctrl+W	Edit Programming	Edit the Programming for the selected Node.
Ctrl+Q	Connect	Connect to the System.

Short Cut	View Tab	Command	Description
Ctrl+1	Location	Add StripSwitch Keypad	Add StripSwitch Keypad
Ctrl+2	Location	Add Slave Keypad	Add Slave Keypad
Ctrl+F	Location	Add a Floor	Add a Floor to the Project.
Ctrl+G	Location	Add an Enclosure Group	Add an Enclosure Group.
Ctrl+R	Location	Add a Room	Add a Room to the Project
Ctrl+4	Wiring	Add TeleAccess	Add TeleAccess
Ctrl+5	Wiring	Add IR Button	Add IR Button
Ctrl+6	Wiring	Add Enclosure	Add Enclosure
Ctrl+7	Wiring	Add Module	Add Module
Ctrl+I	Wiring	Add an IR Zone	Add an IR Zone
Ctrl+M	Wiring	Add a Master	Add a Master
Ctrl+T	Wiring	Add a Time Control	Add a Time Control
Ctrl+3	Location/Wiring	Add Variable	Add Variable // Does work for starting variables.//
Ctrl+B	Location/Wiring	Add a Button	Add a Button
Ctrl+K	Location/Wiring	Add Keypad Station	Add a Keypad Station
Ctrl+L	Location/Wiring	Add Module Load	Add a Module Load
Shift+F2	Location/Wiring	Add RadioLink ScenePoint	Add RadioLink ScenePoint
Shift+F3	Location/Wiring	Add LCD320C5	Add an LCD320C5
Shift+F5	Location/Wiring	Add TheatrePoint	Add a TheatrePoint
Shift+F6	Wiring	Add RadioLink DIN LVRS	Add RadioLink DIN LVRS
Shift+F9	Location/Wiring	Add RadioLink RS-232	Add RadioLink RS-232
F2	Location/Wiring	Add Dimmer Station	Add Dimmer Station
F3	Location/Wiring	Add LCD Station	Add LCD Station
F4	Location/Wiring	Add Strip Station	Add Strip Station
F5	Location/Wiring	Add IRX	Add IRX
F6	Wiring	Add LVRS	Add LVRS
F7	Location/Wiring	Add CIS	Add CIS
F8	Location/Wiring	Add Thermostat	Add Thermostat
F9	Location/Wiring	Add RS-232	Add RS-232
F10	Wiring	Add DMX	Add DMX
F11	Location/Wiring	Add LVOS	Add LVOS

Short Cut	View Tab	Command	Description
\	Location/Wiring	Activate Test Button	Activate Test Button
Ctrl+J	Location/Wiring	Increment Selected Load by 10%	Increment Selected Load by 10%
Ctrl+H	Location/Wiring	Decrement Selected Load by 10%	Decrement Selected Load by 10%
Ctrl+U	Location/Wiring	Increment Load by 1%	Increment Load by 1%
Ctrl+Y	Location/Wiring	Decrement Load by 1%	Decrement Load by 1%

<b>Short Cut</b>	<b>Command</b>	<b>Description</b>
Enter 5	Edit	Edit Selected Object
Ctrl+A	Select All	Select Current Page
Ctrl+C	Copy	Copy the Selected Item
Ctrl+D	Delete	Delete the Selected Item
Ctrl+S	Select Tool	Changes to <i>Select</i> in the Tool list
Ctrl+V	Paste	Paste Copied Item
Ctrl+X	Cut	Cut Selected Item
Ctrl+Z	Undo	Undo Last change

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## Readme

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QLink 4.8 Update History:

### QLink Version 4.82

Firmware Versions shipping with this version:

Master Firmware Version: 7.89

TeleAccess Version: 1.0

LCD 160 Firmware: 2.2

LCD 320M Firmware: 2.6

LCD 320C5 Firmware: 1.6

LCD 320C5RF Firmware: 2.2

TheatrePoint Firmware: 1.4

TheatrePoint Rev. 2 Firmware: 3.0

Version Requirements:

Windows 2000 or Windows XP only

Microsoft .NET Framework Version 1.1 (included during install)

Adobe SVG Viewer 3.01 (included during install)

Master Controller Rev. B or newer

General Software and Hardware Improvements/Changes

- 
- Updated Pricelist to reflect Jan 2007 changes.
  - Updated Cities Database for Daylight Savings Time Changes.
  - Fixed a few BOM generation problems.

### (Previous) QLink Version 4.8

Firmware Versions shipping with this version:

Master Firmware Version: 7.88

TeleAccess Version: 1.0

LCD 160 Firmware: 2.2

LCD 320M Firmware: 2.6

LCD 320C5 Firmware: 3.4

LCD 320C5RF Firmware: 2.4

TheatrePoint Firmware: 1.4

TheatrePoint Rev. 2 Firmware: 2.8

Version Requirements:

Windows 2000 or Windows XP only

Microsoft .NET Framework Version 1.1 (included during install)

Adobe SVG Viewer 3.01 (included during install)

Master Controller Rev. B or newer

#### General Software and Hardware Improvements/Changes

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- \* Reports are now stored in the same directory as project files
- \* Extended Price in Purchase Orders now calculate correctly
- \* Engraving Detail for faceplates/buttons on multi-gang stations is now correct
- \* 2 and 6 button stations now convert to BriteStyle when the Default is changed to BriteStyle
- \* QLink no longer allows Slave Keypads to have BriteStyle buttons
- \* Internal IR on an LCD TPT 550 no longer causes QLink to crash
- \* String Variables can now be added even after deleting the Variable Tree
- \* QLink files sent, using the Send option, now include the .qlk extension
- \* ArchLine, ClearLine, MarcLine faceplate and trim options are now all correct
- \* New V-Command -V?S- in HELP for changing zero/cross for station loads

#### LCD TPT 550 updates in QLink 4.8

---

- \* No more problems when adding more than 128 pages

#### LCD TPT 350 (320M) updates in QLink 4.8

---

- \* Buttons and Sliders now display correctly in portrait mode

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## Appendix D: Trouble Shooting

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### Cannot connect with Master Controller

Check Master Controller address to insure it is set between 1 to 30

Check Master Controller display to see that it indicates hardware statistics

If Master Controller fails to boot

    Press Reset button on Master Controller when plugged into enclosure

    Unplug Master Controller from enclosure, change address to a different number between 1-15, plug Master Controller back into enclosure, unplug Master Controller to change address back to the correct address, plug Master Controller back into enclosure.

    Press and hold two left most buttons on face of Master Controller as you plug in Master Controller. This will bypass backup memory download.

    Check to ensure Master Controller is being powered by AC line.

If Master Controller fails to communicate with PC

    Check serial communication port on PC

    Check PC serial port to ensure it is set to

        19200 Baud

        Parity None

        Total Bits 8

        Stop Bits 1

        End Delimiter OD

        Timeout 1

    Check cable connection between Master Controller and PC.

        Plug into face of Master Controller using a standard PC modem cable. This is NOT a Null Modem cable.

        Purchase an RS-232 communication tester from Radio Shack to ensure transmit and receive are working from PC to Master Controller

    Plug into RS-232 port on Master Controller terminal board located inside enclosure

    Demonstration

### System Periodically Locks up

It happens after a button is pressed or at the same time of day

Check programming to ensure system is not placed in an loop

Modules stop communicating with Master Controller

Check programming to ensure system is not placed in an loop

Demonstration

#### **System has ghosts**

Check programming for unknown timed events

Check button press history during known poltergeist rampage to identify ghost location

Clear memory using hard memory reset, and download programming again. Then be very careful about selecting Connect Only when connecting to the system for online programming

#### **Module Does Not Fit Easily Into Enclosure**

Check for physical obstructions

Align module using the wiring harness connector (bottom center of module)

Check wiring harness connector located in enclosure to ensure the keyed edge is positioned to correspond with the module

#### **When Should You Write To Backup Flash**

Downloading to the Backup Flash should be done anytime the system is deemed to be primarily programmed.

#### **LEDs Are Not Tracking Correctly**

Button has one event

At the bottom of each programming window is a field that reads: ?Function is on when all loads are:? This is the parameter the programming uses to track the LED. The most common complaint is when several LEDs come on different buttons when a button is pressed. If you look at the programming for the undesired buttons you will see that their loads are at the same value as the button pressed.

Button has multiple events

When multiple events are programmed under the same button, only one event should have the LED selected to a value other than none. All other events should have the LED state of none selected.

Demonstration of Master Error

#### **relay modules**

<u>Indicator</u>	<u>Meaning</u>
Off	Module is not powered.
Blink Fast	Module is not communicating with the master. This is about 6 times a second.
Blink Slow	Module is communicating with the master. This is about once per second.
Steady On	Module is held in reset. T/R +/- lines from Master Controller are reversed.

#### **dimming modules**

<u>Indicator</u>	<u>Meaning</u>
Off	Module is not powered.
Blink Fast	Module is not communicating with the master.
Blink Slow	Module is communicating with the master.

Steady On Module is held in reset. T/R +/- lines from master are reversed.

#### **stations**

<u>Indicator</u>	<u>Meaning</u>
------------------	----------------

Off	Station not powered.
4 Blinks Then Pause	Station does not have a valid serial number.
3 Blinks Then Pause	Station is not communicating with the master controller.
2 Blinks Then Pause	Station has not been configured. Configuration is where the station's serial number is associated with a programmed station name.
1-second Blink	This is an even 1 second on, 1 second off blink. It indicates that the station is fully functional.
Fast Blink	The station is currently receiving an IR code. This can be from either an on-board or external IR receiver. The indicator will revert back to other indications as soon as the transmission stops.

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## Appendix E: Accessories and Auxiliary Connections

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An infinite number of possibilities exist when connecting sensors, dry contacts, any number of third party interfaces just to name a few.

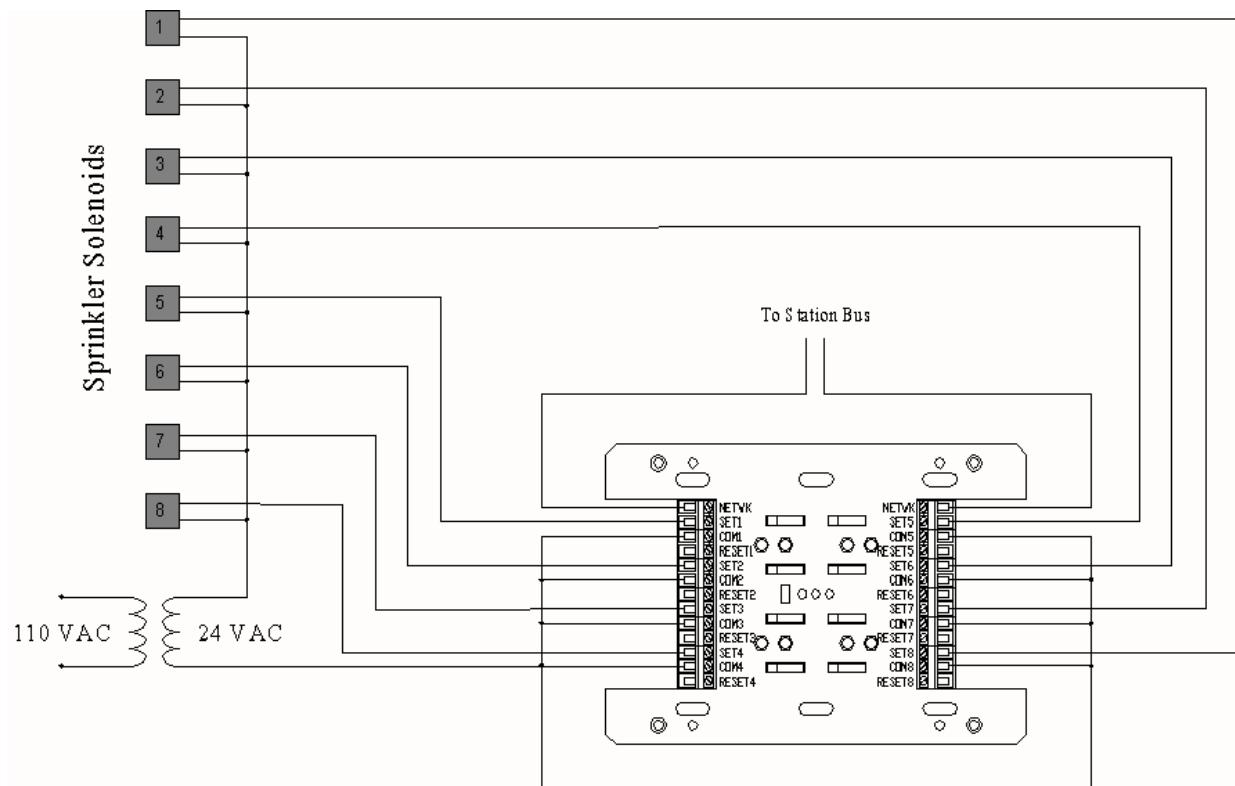
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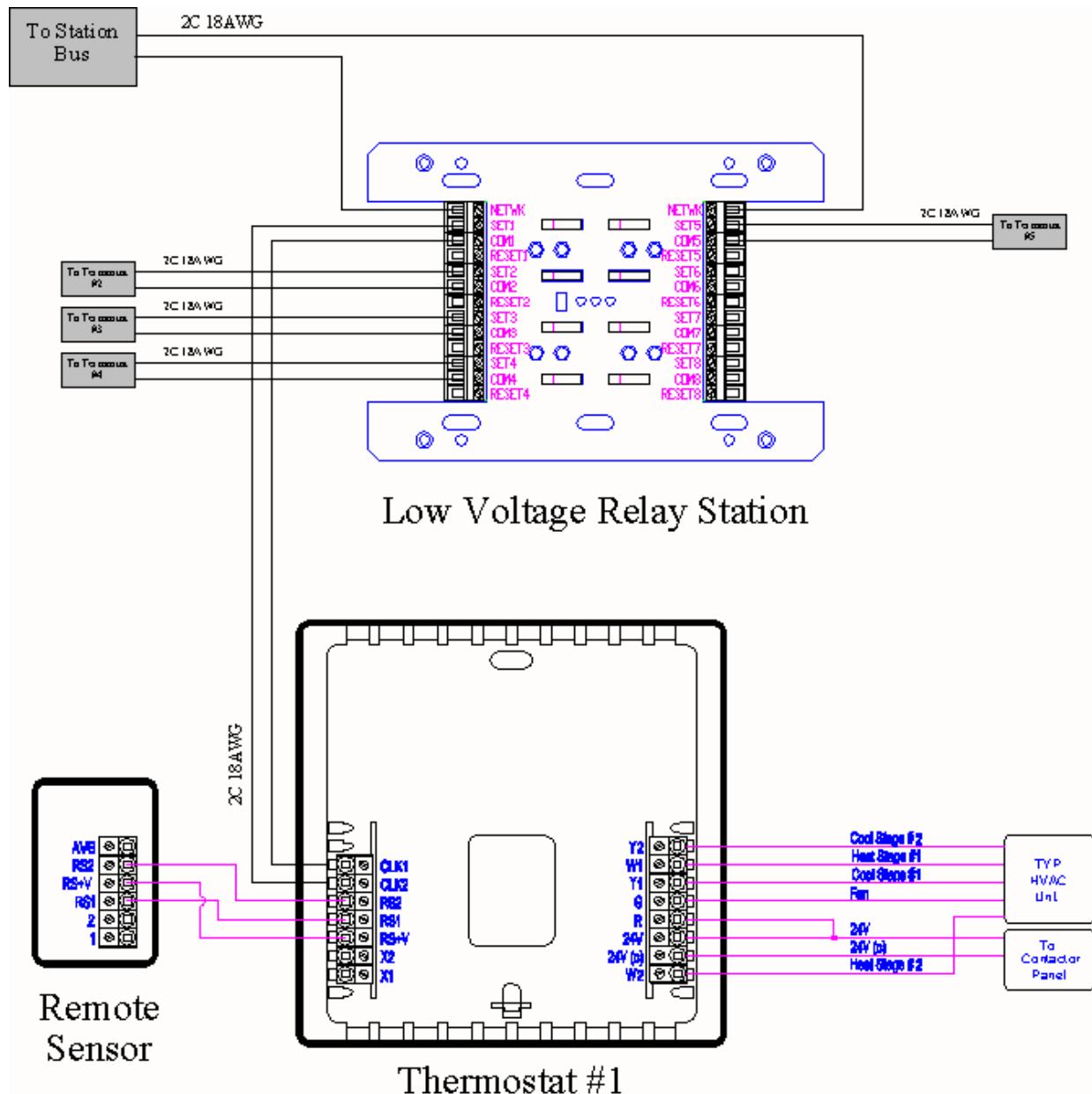
## LVRS (Sprinkler System)

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## LVRS (thermostat)

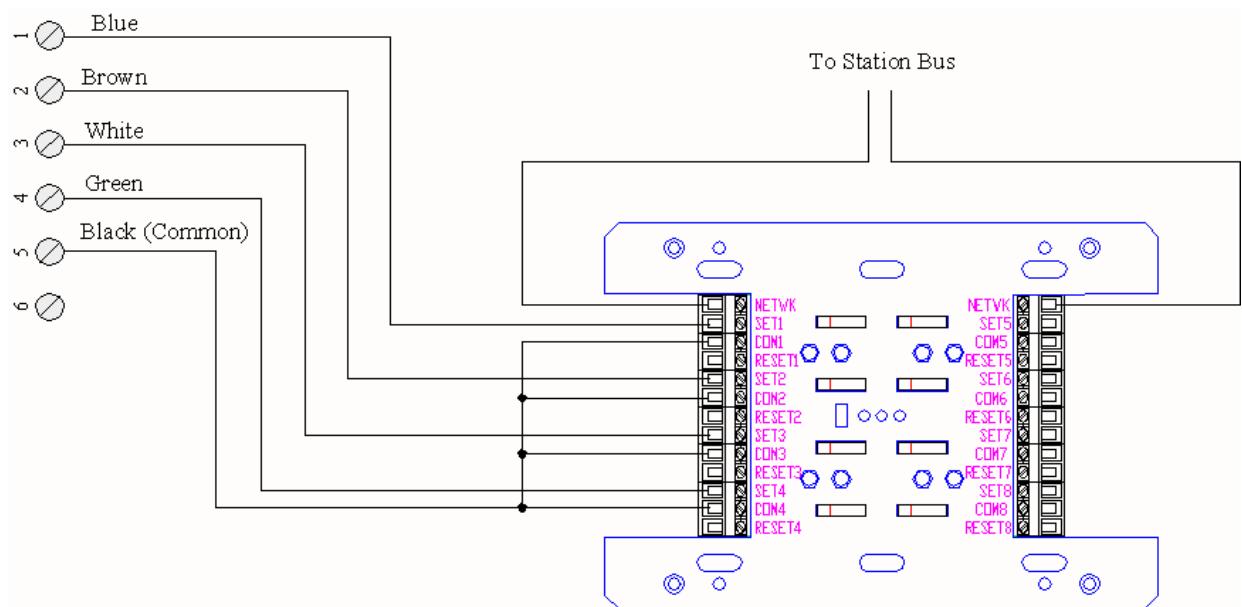



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## LVRS to SPA



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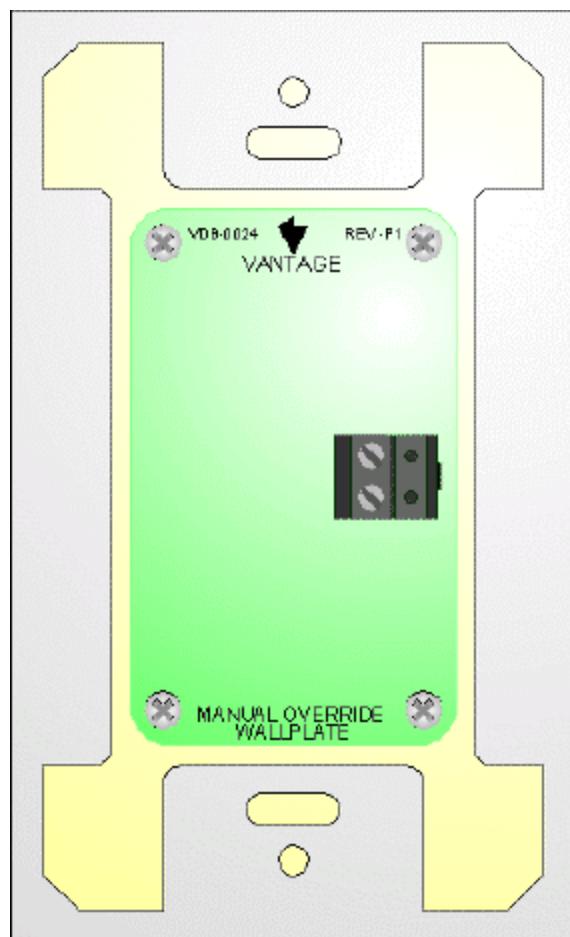
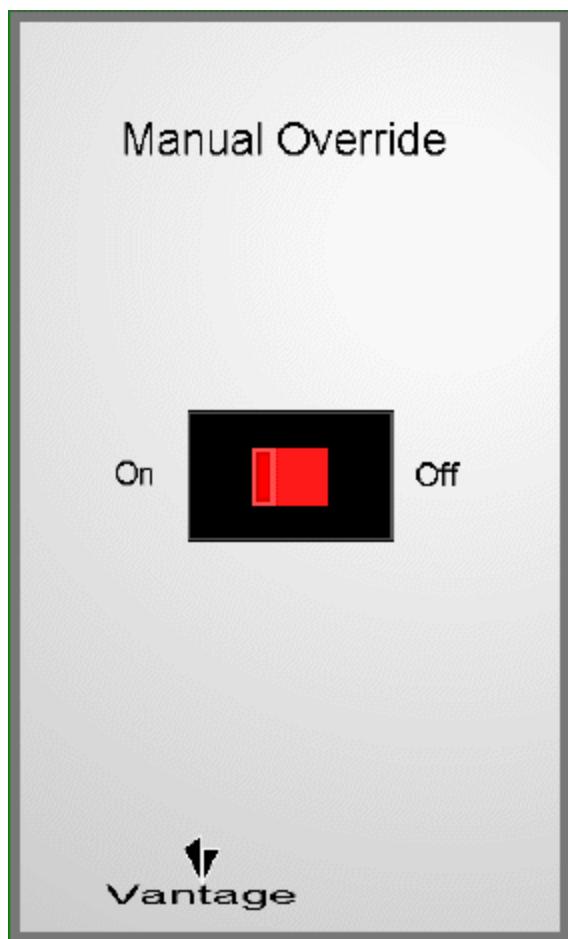
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## Manual Override

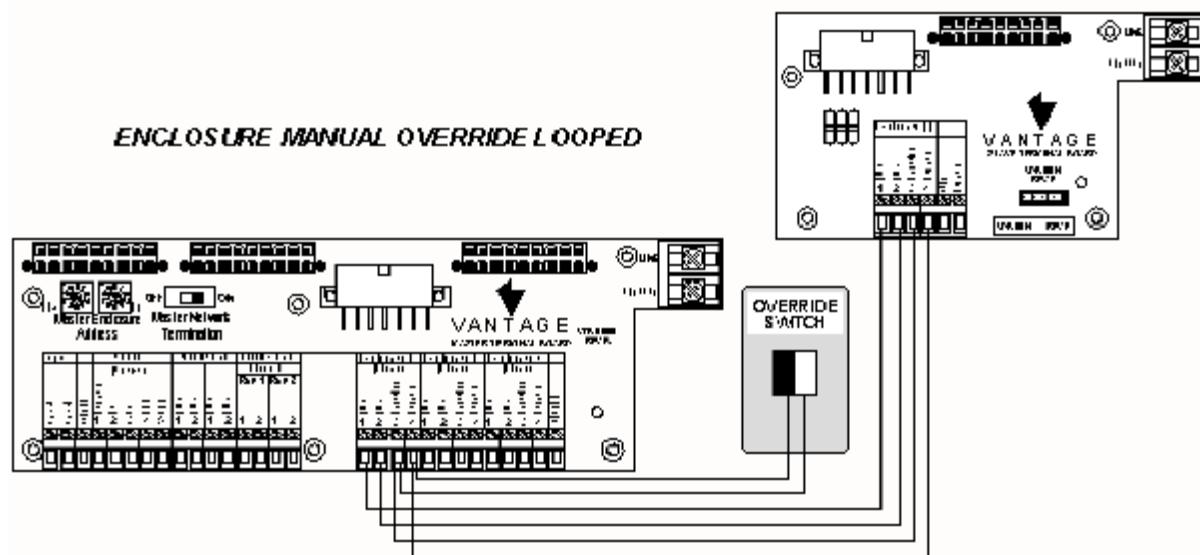
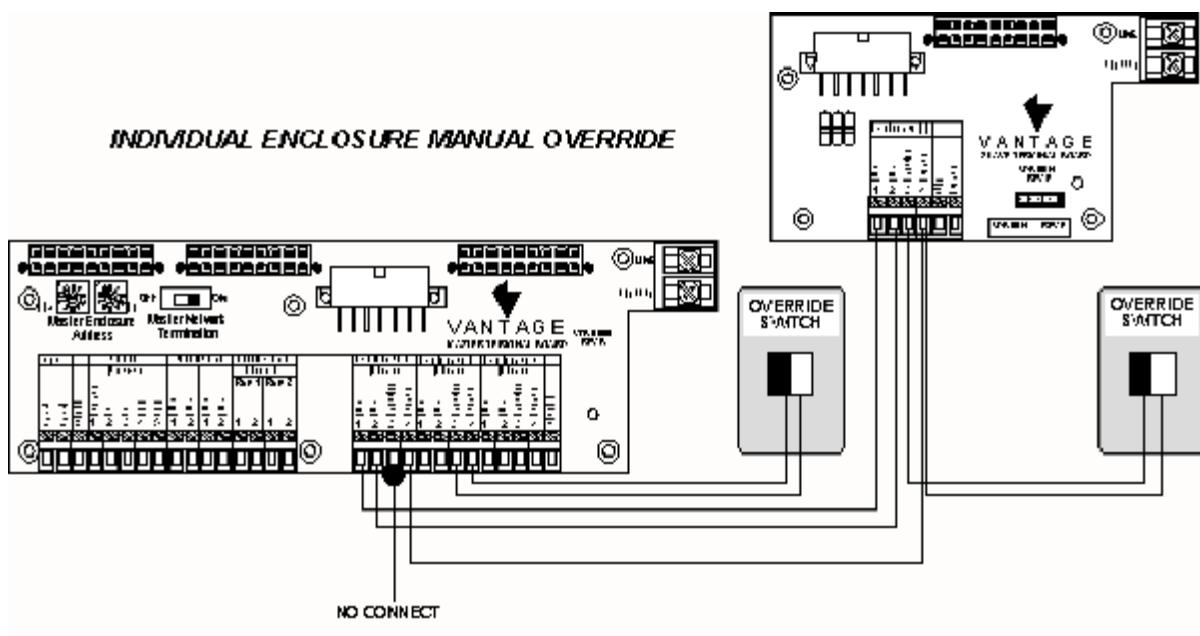
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FRONT VIEW

BACK VIEW



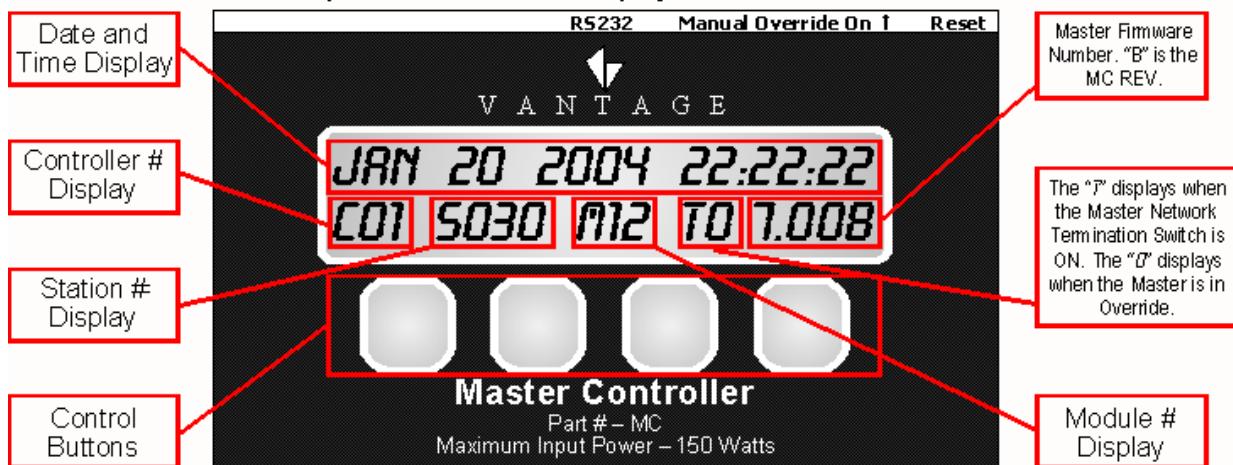
**Wiring Diagrams**



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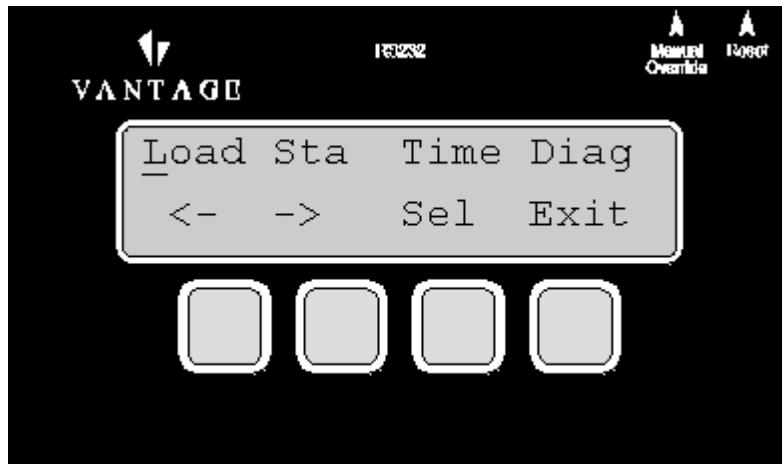
## Master Controller Buttons

**▼ Explanation of default display on Master Controller ▼**



Button operation:

Pressing any of the four buttons will display the following menu:



You are presented with four options.

- 1) Change Load status.
- 2) Change station status. (including switch status)
- 3) Change the current time and date.
- 4) Run diagnostics on Master, Station, RS232 or Gen (Flash Backup)

Press the buttons under the arrows to select which option you would like. Then press the Sel button.

**Details:**

1. Set Load Levels By:
  - a. Master
  - b. Module
  - c. Load
  - d. Level, Toggle or Increment (10%)
2. Set Station Switch Status (not implemented):
3. Set MasterTime:
  - a. Time
    - i. Month/Date/Year/Hour/Minute/Second
  - b. Calibrate Time Clock
    - i. '+' or '-' number of seconds per day
4. Diagnostics Of:
  - a. Master
    - i. Version

- ii. Network Communications
- iii. TeleAccess Installed Status: Yes/No
- iv. Generate - Displays Master Address
- b. Station (not implemented)
- c. RS-232
  - i. Displays Current RS-232 Settings Only, i.e. PortA 19200,N,8,1
  - d. Gen
    - i. Load Backup Flash (re-program MC from Flash Memory)
- 5. Prevent new MC from reading the backup flash:
  - a. A Master Controller may have been have been pre programmed. Use this option to prevent automatic programming from the backup flash.

**Implementation:**

If navigation stops working press the reset button on the Master Controller.  
(Always do step "A" (below) first before starting each of the steps, 1-5 below)

- A. Press any of the four buttons on the Master Controller to access the menu functions.
- 1. How to set Load Levels:
  - a. Press arrow keys so the cursor is on the L in Load, then press the button under Sel.
  - b. Move the cursor to Ma1 (Master#), Mo1 (Module#), Ld1 (Load#). Each of these selections can be changed by pressing the Inc (increment), button when the cursor is on that item, i.e. change the Ma1 to Ma2, etc.
  - c. When selections are made the load can be toggled or incremented in 10% steps.
- 2. How to set Station Switch Status:
  - a. Currently not implemented
- 3. How to set or Calibrate Master Controller Time:
  - a. Press arrow keys so the cursor is on the T in Time, then press the button under Sel.
  - i. To Set/Change the time and date on the Master Controller, place the cursor on Set and press Sel.
    - (1) Each component of the date and time can be decremented or incremented.
    - ii. To Calibrate the Master Controller's internal clock, place the cursor on Calibrate and press Sel.
      - (1) The internal Master clock speed can be decremented or incremented to + or - 58 seconds daily.
- 4. How to run Diagnostics and Reports:
  - a. Press the arrow keys so the cursor is on the D in Diag, then press Sel.
    - i. For Master diagnostics place the cursor on Mast and press Sel.
      - (1) Select Ver for Master Firmware Version.
      - (2) Select Net for network communications.
      - (3) Select Tele to see if TeleAccess has been installed.
      - (4) Select Gen to see the Master Address.
    - ii. For Station diagnostics (not implemented)
    - iii. For RS-232 diagnostics place the cursor on RS232 and press Sel.

- (1) The current port, baud rate, parity, Total bits, and Stop bits is displayed.
- iv. For Gen diagnostics place the cursor on Gen and press Sel.
- (1) With the cursor on Ldbk Flsh, press Sel and the Master Controller will be reprogrammed from the Backup Flash. When display reads "Backup Flash Loaded", Press Exit until display returns to normal.
5. How to prevent a new MC from reading the Backup Flash:
- Hold buttons 1 and 2 in while plugging in the Master Controller.

To exit, press the exit button. This button acts like the escape button on a computer.

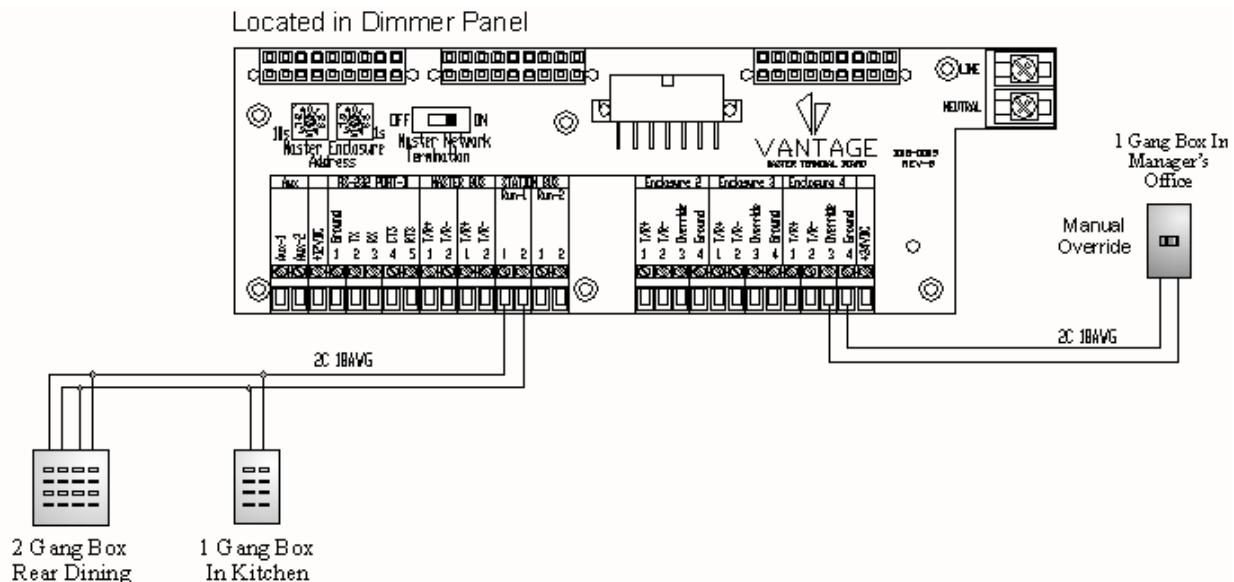
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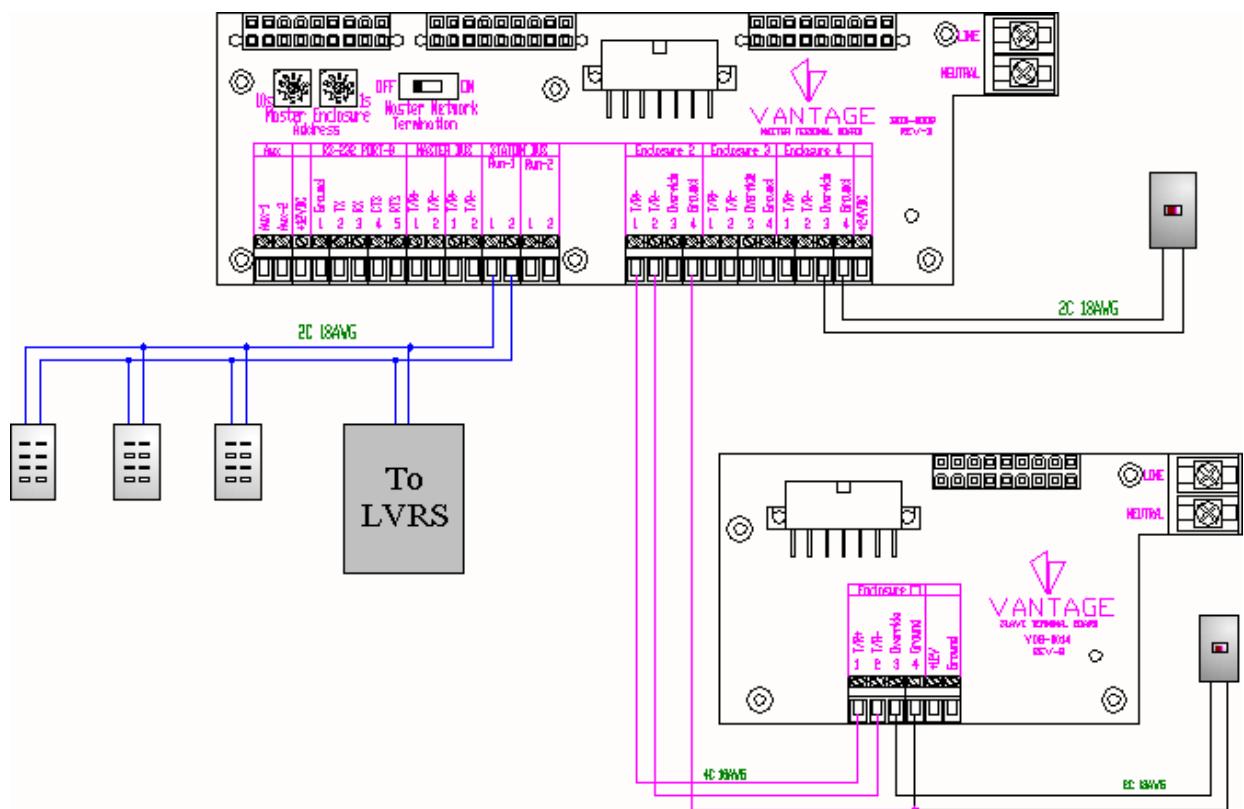
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## Master Terminal Board

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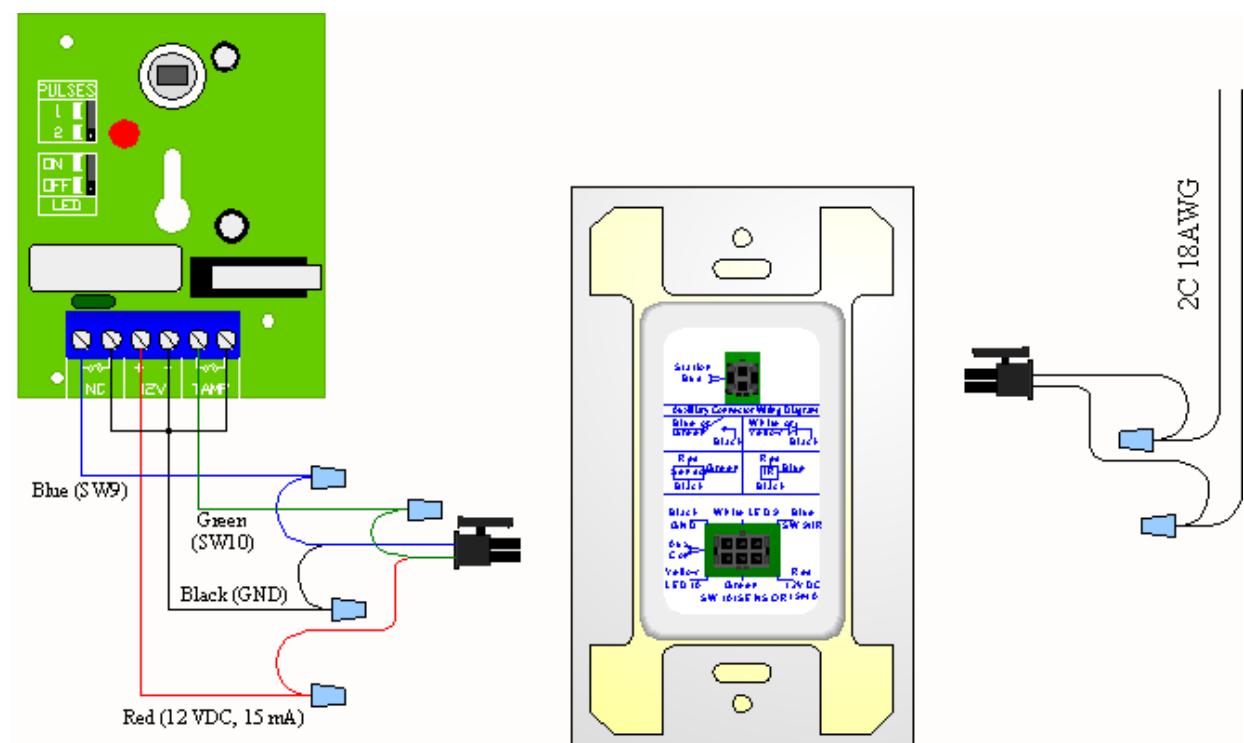




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## Motion Sensor Wiring

**Motion Sensor**

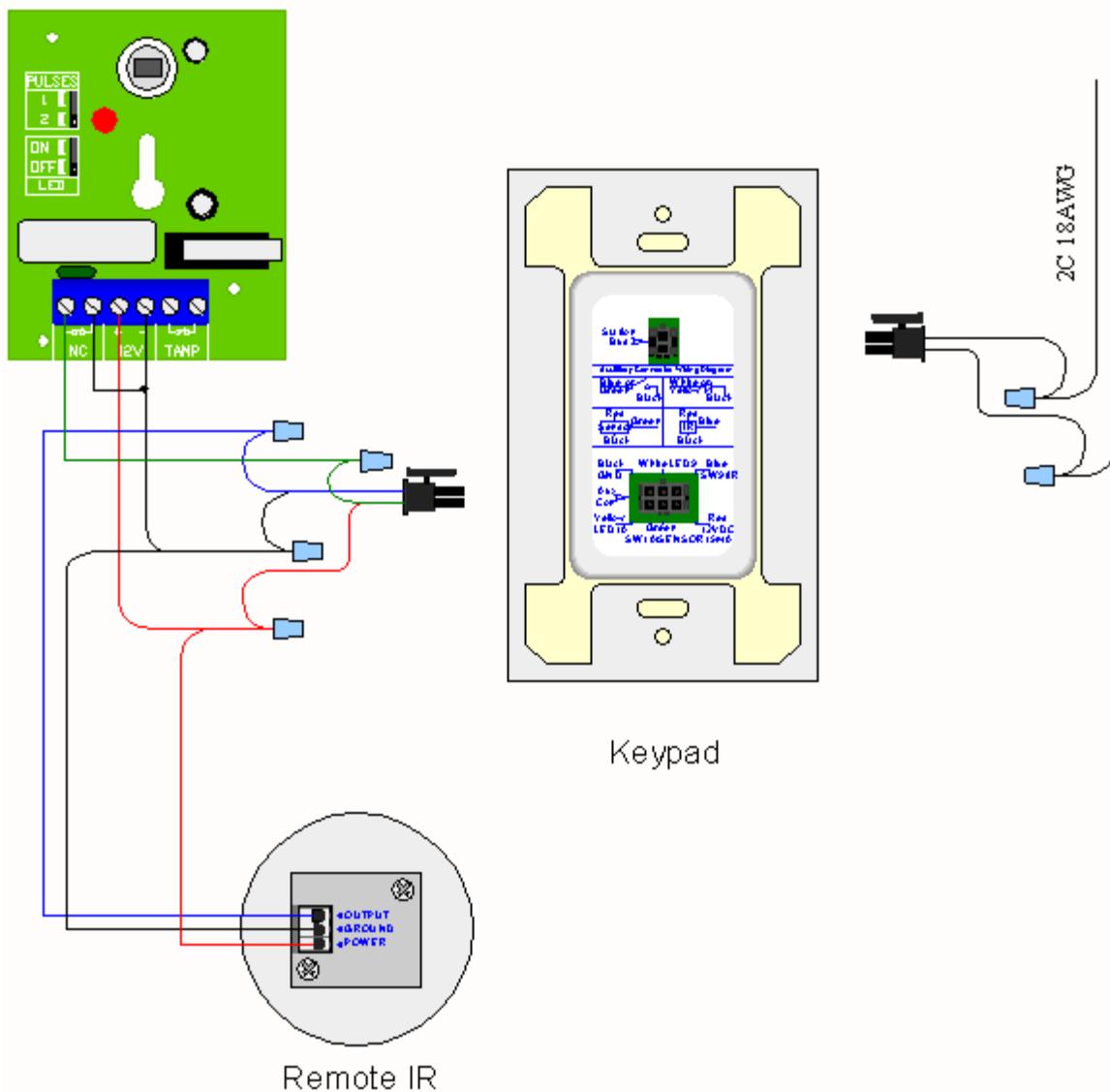


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# Motion Sensor With IR

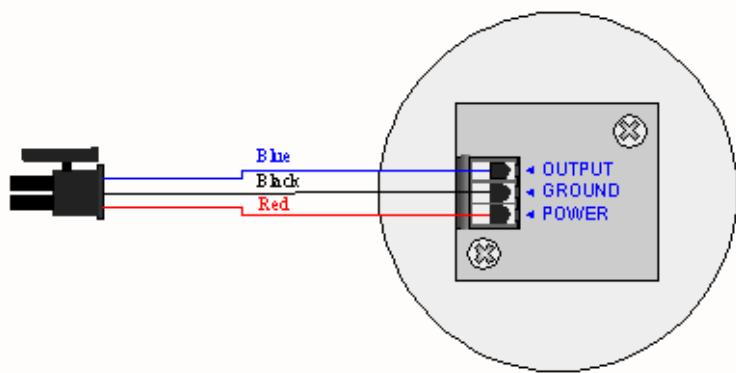
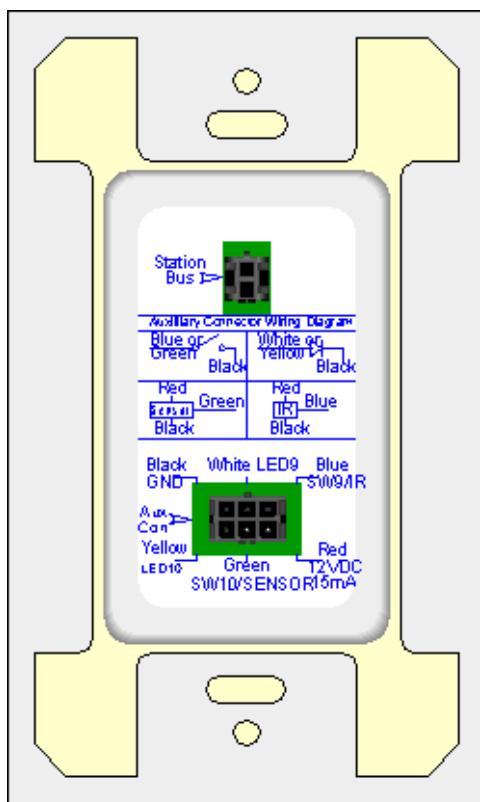
## Motion Sensor with IR

## Motion Sensor



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## Remote IR



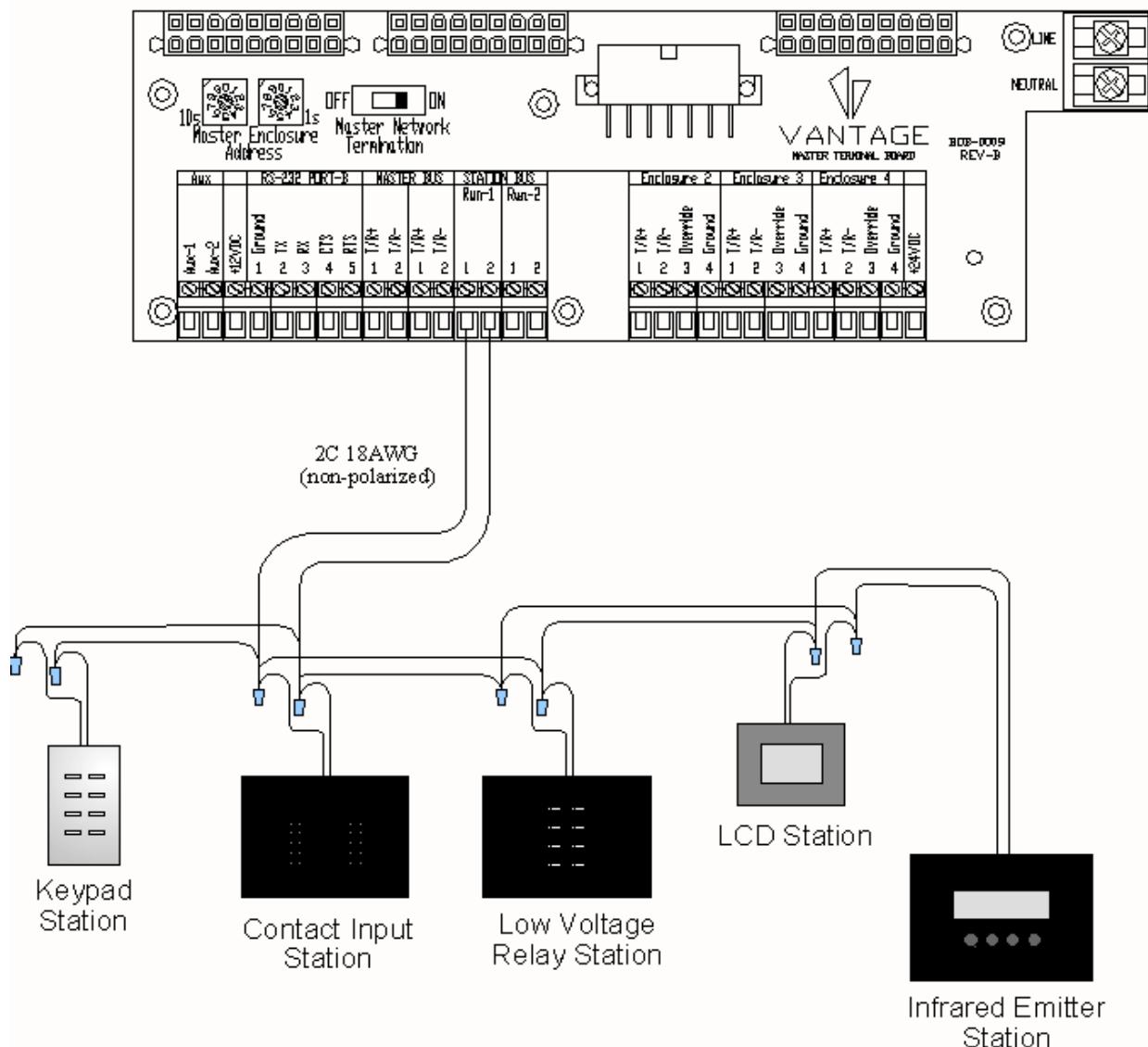
Remote IR

## Keypad

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## Station Bus

## Central Panel Terminal Board

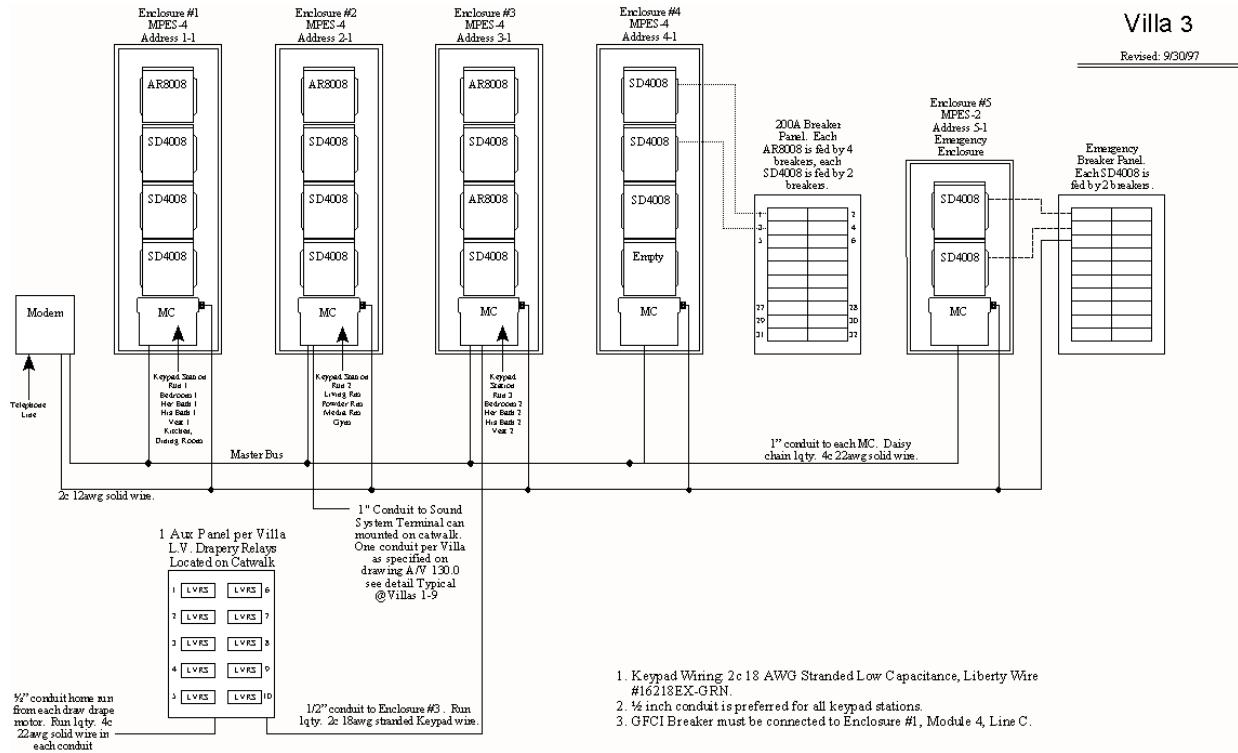


## Complete Control and Flexibility

Vantage offers five types of control stations that wire directly onto the non-polarized station bus in any configuration (daisy chain, branch, home run, or any combination of the three):

1. Keypad Station. This is Vantage's standard control station; can have up to 24 buttons that can be programmed for lighting, A/V, HVAC, security and other subsystem control.
2. LCD Station. The first of its kind, the LCD Station is a true touchscreen that can be custom designed and programmed to control the same subsystems as the standard Keypad Station. Also offers diagnostics, time, temperature and other statuses; and simple programming of any control zone in the home.
3. Infrared Emitter Station (IRX). The IRX offers 8 independent IR channels for controlling dedicated home theaters, whole-house audio and A/V equipment.
4. Low Voltage Relay Station (LVRs). The LVRs provides 8 contact closures for controlling motorized drapery, TV lifts, pool and pond filters and heaters, sprinkler systems, security systems.
5. Contact Input Station (CIS). The CIS enables Vantage to receive additional dry contact inputs (door contacts, motion and pressure sensors, etc.); up to 10 per CIS.

## System Wiring Overview



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## Appendix F: Advanced Programming

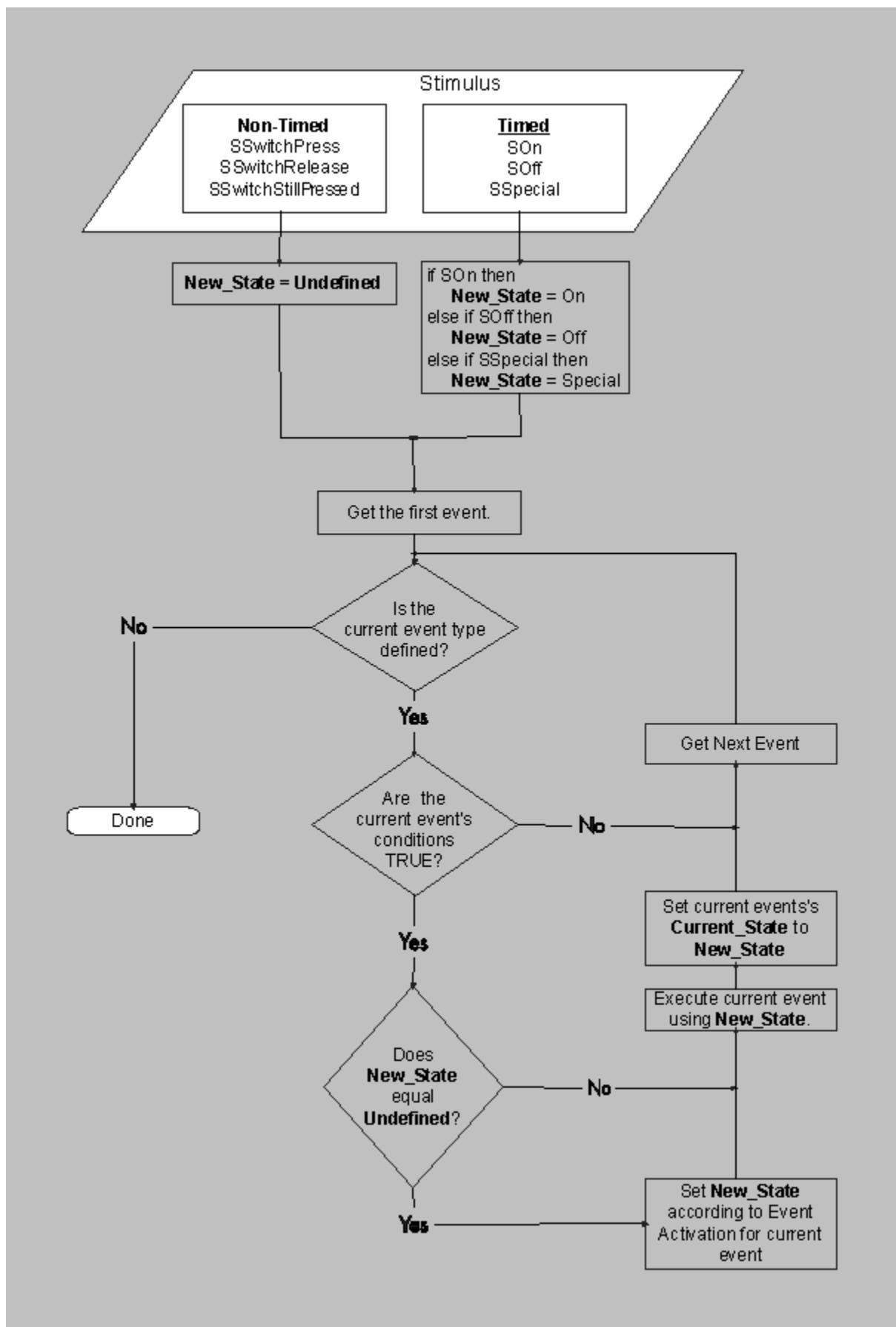
### Advanced QLink System Programming

#### Overview

Vantage's QLink System Control and Automation System has the flexibility and power to accomplish a wide variety of tasks. By understanding the programming logic flow your job of user satisfaction will be easier to obtain. This section covers in detail the programming aspects of the QLink System. An over-simplified example might help to define the terms used throughout this section.

For our example, assume there is a button programmed with one Toggle **event**, no conditions, and lists the loads corresponding to the overhead lights in a room. The overhead lights are currently off and the LED on the button is also off. Therefore, the current state (i.e. - **Current\_State**) of this event is also off. Figure 1 shows the flow of logic through the QLink System.

When you press the button, it sends a switch-press (i.e. SSwitchPress) **stimulus** to the QLink System. Since this is a non-timed stimulus, **New\_State** is set to Undefined. The Toggle event is examined and since there are no conditions, the events conditions evaluate to True. Since New\_State is Undefined, the Toggle's **Event Activation** rules are applied. For a Toggle, this means that a SSwitchPress will set New\_State to On since the Current\_State of the event is off. And because New\_State is On, the Toggle's **Event Execution** rules will turn On the loads for the overhead lights. At the end of Event Execution, the Current\_State is set to the New\_State reflecting its new state. Finally, the system sends a message to the station to turn the button's LED On.



The rest of this section contains a more detailed description of the terms used above.

## Events

The most basic programming unit is called an **event**. An event defines the type of action to be taken when a stimulus, such as a switch press or a time of day trigger, has occurred. The following is a list of valid event types:

- All Off
- All On
- Dim
- External
- Fan (Step)
- Flash
- Goto Page
- IR Out
- IR Pointer
- Learn
- Lower
- Memory
- Momentary
- Nite Lite
- Panic
- Preset
- Preset Add
- Preset Off
- Preset On
- Preset Toggle
- Raise
- Sensor
- Serial Out
- Sounder
- String Modify
- String Pointer
- Switch Pointer
- Thermostat
- Time Pointer
- Toggle
- Undefined
- Vacation

An event consists of its event type (and accompanying parameters), a list of conditions and a list of loads (either or both lists can be empty). If the list of conditions evaluates to true (an empty list is assumed true) AND the New\_State requires an action to take place by the event type, then the list of loads (and/or **Load Variables**) are affected according to the event type.

A **programmable control** (i.e. a control station button, time of day control, IR code, and dry contact closures) may be programmed with one or more events (or it may not be programmed at all. I.E. only one Undefined event). When a stimulus occurs affecting a programmable control, its events are executed in order.

## Stimulus

All programmable controls are activated by a stimulus. A button on a control station, an IR input code, a RS232 input string, a TeleLink key press, or a dry contact closure all activate a programmable control with one of the Non-Timed Stimuli below. Time of day stimulus will activate programmable controls with one of the Timed Stimuli defined below.

**Non-Timed Stimuli**

SSwitchPress  
SSwitchRelease  
SSwitchStillPressed

**Timed Stimuli**

SOn  
SOff  
SSpecial

The Event Activation rules for each event type uses these stimuli and Current\_State states to determine the value of New\_State for Event Execution.

**Event Activation**

Each event has a set of rules known as its Event Activation. When New\_State is Undefined, the event's rules are used to set New\_State. Once New\_State has been set up properly (i.e. not Undefined) Event Execution can proceed normally and no more Event Activation rules will be checked.

**Current\_State and New\_State**

The states which Current\_State and New\_State may assume are identical since New\_State is the future or desired state for Current\_State to be. These states are defined below.

On  
Off  
Special  
None

Each event maintains its Current\_State according to its **Event Checking** section as defined below. Some event types use its associated load levels to set Current\_State. Others (like Vacation) key off of something else to determine Current\_State. See the Event Checking rules for each event to determine how Current\_State is set.

New\_State is the event state we want given a specific stimulus. Timed Stimuli will automatically set New\_State according to the following straightforward mapping:

<b>Timed Stimulus</b>	<b>New State</b>
SOn	On
SOff	Off
SSpecial	Special

Non-Timed stimuli determine New\_State according to the Event Activation rules of the first event whose conditions evaluate to true. In other words, if multiple events are defined for a switch, only the Event Activation rules of the first event with true conditions, usually event 1, are used to determine the value of New\_State.

The value of New\_State is then used for each subsequent event during Event Execution. Events whose conditions evaluated to false are skipped during Event Execution.

**Event Checking**

Every event of every programmable control is continually being checked (10 to 20 times a second) to determine the events Current\_State. Each event has a set of rules, which are continually being tested in order to maintain the event's Current\_State. This

is how the LED indicators are kept up to date when more than one button affects a load.

### Event Execution

Event Execution rules define how the event behaves given New\_State. Each event, whose conditions are true, is executed using the value of New\_State. If New\_State is **None**, nothing will be performed during event execution.

#### Conditions

All conditions in an event (up to the OR condition) must be true for the event to be executed. Conditions are checked in the order specified in the event. The first condition found to be false will stop the checking of the remaining conditions (up to the OR condition) and the event will not be executed.

The condition Delay is a special type of condition. It should usually be placed at the end of the list of conditions for an event. Condition Delay will suspend the execution of an event, and any subsequent events, until the specified delay time. The Delay condition has a parameter that specifies the event state it will work with. Valid Delay event states include:

- Event On
- Event Off
- Event On and Off (Both)

An Else condition evaluates to true if the previous event's conditions are false. A button may have more than one event with an else statement. However, each event that has an else statement must not be preceded by another event that also contains an else statement. In other words, events with else statements must be separated with events that do not contain else statements.

Example:

Event #	Function	Conditions	Affected Loads
Event 1	Preset On	Load1=100%	Load2=100%
Event 2	Preset On	Else	Load3=100%

When Button1 is pressed, if Load1 is on, then Load2 gets turned on. Otherwise Load3 gets turned on.

#### Function Descriptions

The following is a description of how each event type works. The Event Activation section determines the New\_State value. The Event Execution section then uses the New\_State value.

##### All Off

###### Description:

The all off function will turn off every load in the system except those specified. Loads that should not be turned off with this function must be specified as the exceptions with this command. It will also set all Load Variables to 0%.

###### Event Activation:

```
If Stimulus equals SSwitchPress then
    New_State = On
Else if Stimulus equals SSwitchRelease then
    New_State = Off
Else if Stimulus equals SSwitchStillPressed then
    New_State = None
```

###### Event Execution:

```
If New_State equals On then
    Turn all loads off except for the ones specified.
```

```

Else
    Do nothing.

```

**Event Checking:**

**Current\_State** = the state of **New\_State** during the last Event Execution.

**Notes:**

The **Current\_State** does not track the state of this event properly.

**All On****Description:**

The all on function will turn on (to 100%) every load in the system except those specified. Loads that should not be turned on with this function must be specified as the exceptions with this command.

**Event Activation:**

```

If Stimulus equals SSwitchPress then
    New_State = On
Else if Stimulus equals SSwitchRelease then
    New_State = Off
Else if Stimulus equals SSwitchStillPressed then
    New_State = None

```

**Event Execution:**

```

If New_State equals On then
    Turn all loads on except for the ones specified.
Else
    Do nothing.

```

**Event Checking:**

**Current\_State** = the state of **New\_State** during the last Event Execution.

**Notes:**

The **Current\_State** does not track the state of this event properly.

**Dim****Description:**

The dim function is similar to the toggle function in that the loads turn on with the first button press and then off when you press the button again. However, the dim has the capability to set the on intensity of the load. You can set the on by holding down the button. As you hold the button down the light will cycle between on and off. When the light is at the intensity you want let off the button. Then when you press the button the first time it will only turn on as bright as you set it to be. This intensity is called the learn value. The dim function has a fade time associated with it.

**Event Activation:**

```

if Dim Type equals Cycle then
    if Stimulus equals SSwitchPress then
        if Current_State equals On then
            New_State = On
        else
            New_State = Off
    Else if Stimulus equals SSwitchRelease then
        If Current_State equals Special (cycle loads) then

```

```

New_State = On
Else
    New_State = None
Else if Stimulus equals SSwitchStillPressed then
    New_State = Special

Else if Dim Type equals Raise/Lower then
    If Stimulus equals SSwitchPress then
        New_State = None
    Else if Stimulus equals SSwitchRelease then
        If Current_State equals Special (cycle loads) OR Current_State equals Off then
            New_State = On
        Else if Current_State equals On then
            New_State = Off
    Else if Stimulus equals SSwitchStillPressed then
        New_State = Special

Else if Dim Type equals R/L/Scene then
    If Stimulus equals SSwitchPress then
        If Current_State equals Off then
            New_State = On
    Else if Stimulus equals SSwitchRelease then
        If Current_State equals On then
            If currently R/L then
                New_State = Off
            Else
                New_State = None
        Else if Current_State equals Special
            New_State = On
    Else if Stimulus equals SSwitchStillPressed then
        New_State = Special

```

**Event Execution:**

```

If Dim Type equals Cycle then
    If New_State equals On then
        If Current_State equals Special (cycle loads) then
            Stop cycling loads and save current load levels.
        Set loads to specified levels
    Else if New_State equals Off then
        Turn loads off
    Else if New_State equals Special then
        Start cycling loads.

Else if Dim Type equals R/L/Scene or R/L/Scene then
    If New_State equals On then
        If Current_State equals Special then
            Stop and save
        Set loads to specified levels
    Else if New_State equals Off then
        Turn loads off
    Else if New_State equals Special then
        If last time was a Raise
            Start lowering loads to Off

```

```

    Else
        Start raising loads to 100%

```

**Event Checking:** (Same for all types)

```

    If the loads are to the specified levels then
        Current_State = On
    Else
        Current_State = Off

```

**Notes:****External****Description:**

The external function provides an RS-232 ASCII interface to external equipment. It is normally used as a sub-event to send information of the state of the switch to an external device. The ASCII string that is passed out the RS-232 port of a master board is in the following format:

"ST <master> <station> <switch> <state> <cr>"

ST - The ASCII characters S and T,  
<master> is the address of the master board the station is on.  
<station> is the address of the station the switch is on.

<switch> is the switch number being activated  
<state> specifies the switch's state: 0 for off and 1 for on  
<cr> is the carriage return (CR) or carriage return / line feed (CR/LF) delimiter.

For example, "ST 1 3 8 1 <cr>", would correspond to master 1, station 3, switch number 8 in the on state.

**Event Activation:**

```

If Stimulus equals SSwitchPress then
    New_State = On
Else if Stimulus equals SSwitchRelease then
    New_State = Off
Else if Stimulus equals SSwitchStillPressed then
    New_State = None

```

**Event Execution:**

```

If New_State equals On then
    RS232 output: "ST <master> <station> <switch> 1" <CR>
Else if New_State equals Off then
    RS232 output: "ST <master> <station> <switch> 0" <CR>
Else
    Do nothing.

```

**Event Checking:**

**Current\_State** = the state of **New\_State** during the last Event Execution.

**Notes:**

The **Current\_State** does not track the state of this event properly.

**Fan**

**Description:**

The fan function sets the loads to four values (high, medium, low, and off). The loads will cycle to a new setting on each button press and release.

**Event Activation:**

```
if Stimulus equals SSwitchPress then
    New_State = On
else
    New_State = None
```

**Event Execution:**

```
If New_State equals On then
    If the first load is at a high level then
        Set the specified loads to medium
    Else if the first load is at a medium level then
        Set the specified loads to low
    Else if the first load is at a low level then
        Set the specified loads to off
    Else if the first load is off then
        Set the specified loads to high

else
    Do nothing.
```

**Event Checking:**

```
If the loads are on then
    Current_State = On
else
    Current_State = Off
```

**Notes:****Flash****Description:**

The flash function will continually turn the specified loads on and off at a specified time interval (from 0.1 to 999.9 seconds). When the button is pressed and released again the loads will go off.

**Event Activation:**

```
if Stimulus equals SSwitchPress then
    if Current_State equals Off then
        New_State = On
    else
        New_State = Off
else
    New_State = None
```

**Event Execution:**

```
If New_State equals On then
    If the first load is off then
        Turn on all loads
    Else
        Turn off all loads
Run this event again after the specified flash time.
```

```
Else if New_State equals Off then
    Turn the loads off
```

**Event Checking:**

**Current\_State** = the state of **New\_State** during the last Event Execution.

**Notes:**

The **Current\_State** does not track the state of this event properly.

**IR Out****Description:**

IR Out allows you to send an IR signal to an IR Emitter. To use this function you must first define an IR Emitter. You can use IR Out to send signals to turn on or off any remote-controlled device.

**Event Activation:**

```
If Stimulus equals SSwitchPress then
    New_State = On
Else if Stimulus equals SSwitchRelease then
    New_State = Off
Else
    New_State = None
```

**Event Execution:**

```
If New_State equals On then
    If mode = Off then
        If IR code is Power On or Power Off then
            Output power Off IR code.
        Else
            Stop Outputting last IR code.
    Else
        Output IR code.
Else if New_State equals Off then
    If IR code is Power On or Power Off then
        Output power Off IR code.
    Else
        Stop Outputting last IR code.
Else if New_State equals Special then
    Do nothing.
```

**Event Checking:**

**Current\_State** = the state of **New\_State** during the last Event Execution.

**Notes:**

The **Current\_State** does not track the state of this event properly.

**Learn****Description:**

The learn function is a global enable for learning new load levels on Preset on and Preset toggle functions. When the Learn function is on new load levels can be learned by Preset on and preset toggle functions regardless of whether the learn condition is specified.

The learn function has three modes of operation: Toggle, Off, and On. The Toggle mode works like a toggle

function in that it goes on (learn enabled) with the first button press and goes off (learn disabled) with the next button press. The Off mode disables the learn function regardless of the previous state. The On mode enables the learn function regardless of the previous state.

It is often useful to program a button to only enable the learn function for a specified period of time. This can be accomplished by programming the primary learn function (event #1) with the Toggle action and the sub-function (event #2) with the Off action. The sub-function should have the condition Delay defined to the number of seconds that Learn is to be enabled.

#### **Event Activation:**

```
If Stimulus equals SSwitchPress then
    New_State = On
Else
    New_State = None
```

#### **Event Execution:**

```
If New_State equals On then
    If Learn Mode = Toggle then
        If learn is disabled then
            Enable learn.
        Else
            Disable learn.
    Else if Learn Mode = On then
        Enable learn.
    Else if Learn Mode = Off then
        Disable learn.
Else
    Do Nothing
```

#### **Event Checking:**

```
If learn mode is enabled
    Current_State = On
Else
    Current_State = Off
```

#### **Notes:**

#### **Lower**

##### **Description:**

The Lower function decreases the level of the loads when the button is held down. When the button is released the loads will remain at the current intensity level. The lower function has a fade time associated with it which specifies the time it takes for the load to go from the 100% to 0% (off).

#### **Event Activation:**

```
If Stimulus equals SSwitchPress then
    New_State = On
Else if Stimulus equals SSwitchRelease then
    New_State = Off
Else if Stimulus equals SSwitchStillPressed then
    New_State = None
```

#### **Event Execution:**

```
If New_State equals On then
    Start lowering the load levels
```

```

Else if New_State equals Off then
    Stop lowering the load levels
Else
    Do nothing

```

**Event Checking:**

**Current\_State** = the state of **New\_State** during the last Event Execution.

**Notes:**

The **Current\_State** does not track the state of this event properly.

**Momentary****Description:**

The momentary function turns loads on to 100% when the button is held down and off when the button is released. It is often used with external sensors and remote interface stations. A fade time can be associated with the Momentary function.

**Event Activation:**

```

If Stimulus equals SSwitchPress then
    New_State = On
Else if Stimulus equals SSwitchRelease then
    New_State = Off
Else if Stimulus equals SSwitchStillPressed then
    New_State = None

```

**Event Execution:**

```

If New_State equals On then
    Turn loads on
Else if New_State equals Off then
    Turn loads off
Else if New_State equals Special then
    Do nothing

```

**Event Checking:**

```

If New_State equals On during the last Event Execution AND loads are on then
    Current_State = On
Else
    Current_State = Off

```

**Notes:****Nite Lite****Description:**

The Nite lite function should be used as a secondary (sub-) function with the Toggle, Dim, Preset toggle, and Momentary functions. When the loads would normally be turned off by the before mentioned functions the Nite lite sub-function can turn them on to a specified level. In other words the Nite lite function works in the off state. There can be a fade time associated with the Nite lite function.

The Nite lite function works when the primary function would normally be turning off so the condition Delay default does not work. To allow the condition Delay to work with a Nite lite function the additional parameter FUNC\_OFF should be specified.

**Event Activation:**

**New\_State = None**

**Event Execution:**

```
If New_State equals On then
    Do nothing
Else if New_State equals Off then
    Set loads to specified levels
Else if New_State equals Special then
    Do nothing
```

**Event Checking:**

**Current\_State = Off** (Always)

**Notes:**

## Panic

**Description:**

The panic function turns on the specified loads to full on (100%) when the button is pressed and released. The next button press and release will return the loads to their previous levels.

**Event Activation:**

```
If Stimulus equals SSwitchPress then
    If the current event state is off then
        New_State = On
    Else
        New_State = Off
    Else
        New_State = None
```

**Event Execution:**

```
If New_State equals On then
    Save the current load levels then turn the loads on to 100 %.
Else if New_State equals Off then
    Return the loads to their previous levels
Else if New_State equals Special then
    Do nothing
```

**Event Checking:**

```
If the loads are on then
    Current_State = On
Else
    Current_State = Off
```

**Notes:**

## Preset Add

**Description:**

This function allows a load to be incremented or decremented by a fixed percentage every time a control is activated.

**Event Activation:**

If Stimulus equals SSwitchPress then

```

New_State = On
Else
New_State = None
```

**Event Execution:**

```

If New_State equals On then
    Change loads by the specified percent.
Else
    Do nothing
```

**Event Checking:**

```

If the loads are on then
    Current_State = On
Else
    Current_State = Off
```

**Notes:****Preset Off****Description:**

The preset off function will turn off one or more loads (scene). A fade time can be specified. Preset off works the same as preset on with the load levels specified at 0%.

**Event Activation:**

```

If Stimulus equals SSwitchPress then
    New_State = On
Else
    New_State = None
```

**Event Execution:**

```

If New_State equals On then
    Turn loads off
Else
    Do nothing
```

**Event Checking:**

```

If the loads are off then
    Current_State = On
Else
    Current_State = Off
```

**Notes:****Preset On****Description:**

The preset on function will turn on one or more loads (scene) to specified values. A fade time can be specified. The preset on function is often used within time functions to turn loads on (or off if 0% is specified).

The button can learn new load values if the parameter LEARN is specified in the function or a switch function Learn is on (see function type Learn). If the parameter LEARN is defined for the switch or a switch function Learn is on then new load levels can be learned by holding the button in for a specified time (learn time is 0.1 to 999.9 seconds). Make sure all the loads are set to their desired levels before the button is held down and new values are learned.

Unlike any of the toggle functions, Preset On will only turn the loads on to the specified value when the button is released; not when it is pressed.

The Preset On function is activated on the button release because it has the ability to learn new load levels on the button press.

#### **Event Activation:**

```
If Stimulus equals SSwitchPress then
    New_State = None
Else if Stimulus equals SSwitchRelease then
    New_State = On
Else if Stimulus equals SSwitchStillPressed then
    New_State = Special
```

#### **Event Execution:**

```
If New_State equals On then
    Set loads to specified levels
Else if New_State equals Off then
    Do nothing
Else if New_State equals Special then
    If Learn is enabled then
        Learn new load levels
```

#### **Event Checking:**

```
If the loads are on then
    Current_State = On
Else
    Current_State = Off
```

#### **Notes:**

### Preset Toggle

#### **Description:**

The preset toggle function will turn on one or more loads (scene) to a specified value on the first button press/release and turn them off with the next button press/release. The Preset toggle function works like a Preset on with the first button press/release and a Preset off on the second button press/release. A fade time from 0.1 to 999.9 seconds can be specified that will gradually increase or decrease the load levels until they reach their final values.

The switch can learn new load values if the Condition LEARN is specified in the function or a switch function Learn is on (see function type Learn). If the condition LEARN is defined for the switch or a switch function Learn is on new load levels can be learned by holding the button in for a specified time (learn time is 0.1 to 999.9 seconds). Make sure all the loads are set to their desired levels before the button is held down and new values are learned.

The preset toggle function is activated on the button release because it has the ability to learn new load levels on the button press.

#### **Event Activation:**

```
If Stimulus equals SSwitchPress then
    New_State = None
Else if Stimulus equals SSwitchRelease then
    If Current_State equals On then
        New_State = Off
    Else
```

```

New_State = On
Else if Stimulus equals SSwitchStillPressed then
    New_State = Special

```

**Event Execution:**

```

If New_State equals On then
    Set loads to specified levels
Else if New_State equals Off then
    Turn loads off
Else if New_State equals Special then
    If Learn is enabled then
        Learn new load levels

```

**Event Checking:**

```

If the loads are on then
    Current_State = On
Else
    Current_State = Off

```

**Notes:****Raise****Description:**

The Raise function increases the level of the loads when the button is held down. When the button is released the loads will remain at the current intensity level. The raise function has a fade time associated with it, which specifies the time it takes for the load to go from the current intensity level to 100%.

**Event Activation:**

```

If Stimulus equals SSwitchPress then
    New_State = On
Else if Stimulus equals SSwitchRelease then
    New_State = Off
Else if Stimulus equals SSwitchStillPressed then
    New_State = None

```

**Event Execution:**

```

If New_State equals On then
    Start raising the load levels
Else if New_State equals Off then
    Stop raising the load levels
Else if New_State equals Special then
    Do nothing

```

**Event Checking:**

**Current\_State** = the state of **New\_State** during the last Event Execution.

**Notes:**

The **Current\_State** does not track the state of this event properly.

**RS232****Description:**

The event type RS232 will output an ASCII string over a master board RS232 port. This is

the method of controlling things like ThermoLink. The event type RS232 can optionally wait for a specific response.

The RS232 communication parameters can be specified for each master board RS232 port. Things like baud rate, bits per character, parity, and number of stop bits can be set up.

**Event Activation:**

```
If Stimulus equals $SwitchPress then
    New_State = On
Else
    New_State = None
```

**Event Execution:**

```
If New_State equals On then
    Output string to RS232 port on the specified master
Else
    Do nothing
```

**Event Checking:**

**Current\_State** = the state of **New\_State** during the last Event Execution.

**Notes:**

The **Current\_State** does not track the state of this event properly.

## Switch Pointer, Time Pointer, IR Pointer

**Description:**

The switch pointer function is used to connect two or more buttons together (i.e. when you press one button the other button is also pressed). This is very important when two DIM switches control the same light. Conditions can be specified to conditionally run a Switch pointer. After the Switch pointer has executed, function is passed back to the original event being defined so additional sub-events can be defined.

The state of the Switch pointer event to be executed can be specified as one of the following: CURRENT, OFF, or ON. The CURRENT state defines the Switch pointer event to be executed with the current state of the function being defined. This is the default. The OFF state defines the Switch pointer event to be executed with the off state regardless of the state of the event being defined. The ON state defines the Switch pointer event to be executed with the on state.

**Event Activation:**

```
If the Pointer Execution State equals On then
    New_State = On
Else if the Pointer Execution State equals Off then
    New_State = Off
Else if the Pointer Execution State equals Current then
    Do the Event Activation rules for the event we're pointing to
```

**Event Execution:**

Run the event(s) pointed to by this event.

**Event Checking:**

**Current\_State** = the state of **New\_State** during the last Event Execution.

**Notes:**

The **Current\_State** does not track the state of this event properly.

## Toggle

**Description:**

The toggle function is a simple on/off switching function. One or more load will go on (100%) with the first button push and off with the second push. A fade time can be associated with a toggle function. There is no dimming capability associated with the toggle function.

The toggle can receive and pass the function states of ON or OFF. If a toggle receives the button state of BUTTON PRESS and the conditions are true, it will toggle the state from ON to OFF or vice versa. If a toggle function's conditions are false, then it merely passes the current button state to the next event's function without changing the state.

The default state operation for the toggle function is ON if any load associated with the function is on at any value.

If no load is assigned to the function, the toggle function changes state to ON with the first button press and then to OFF with the next press even though no loads are controlled. This is sometimes used as an enable for other buttons.

**Event Activation:**

```
If Stimulus equals SSwitchPress then
    If Current_State equals Off then
        New_State = On
    Else
        New_State = Off
Else
    New_State = None
```

**Event Execution:**

```
If New_State equals On then
    Turn loads on
Else if New_State equals Off then
    Turn loads off
Else if New_State equals Special then
    Do nothing
```

**Event Checking:**

```
If Number of loads = 0 then
    If last Event Execution's New_State was On then
        Current_State = On
    Else
        Current_State = Off
Else
    If loads are on then
        Current_State = On
    Else
        Current_State = Off
```

**Notes:****Undefined****Description:**

This is an undefined event. Nothing happens for this event.

**Event Activation:****Event Execution:**

**Event Checking:****Notes:****Vacation****Description:**

The vacation function plays back button presses recorded by the system over the last two weeks. Up to 4000 button presses per master can be stored and played back during the vacation function.

The loads listed with this function are ones that are NOT to be affected during vacation play back. If more than one button is to activate the vacation function they should point (button pointer) to the originally defined vacation button function. This function is enabled and disabled like the toggle function (turned on with the first button press and off with the next press).

**Event Activation:**

```
If Stimulus equals SSwitchPress then
    If Current_State equals Off then
        New_State = On
    Else
        New_State = Off
Else
    New_State = None
```

**Event Execution:**

```
If New_State equals On then
    Start (enable) Vacation load play back sequence.
    If New_State equals Off, then
        Stop (disable) Vacation load play back sequence.
Else
    Do nothing
```

**Event Checking:**

```
If Vacation load play back is enabled
    Current_State = On
Else
    Current_State = Off
```

**Notes:****Example #1:**

Event 1: MOMENTARY

LOAD 101

Switch Press

Event Activation	Sets <b>New_State</b> to On.
Event Execution	Turn on load 101 ( <b>New_State</b> has a value of On).

Switch Release

Event Activation	Sets <b>New_State</b> to Off.
Event Execution	Turn off load 101 ( <b>New_State</b> has a value of Off).

Switch Still Pressed

Event Execution	Do nothing.
-----------------	-------------

**Example #2:**

```

Event 1 MOMENTARY
;
Event 2 PRESET_ON 0
LOAD 101,80%
;
Event 3: NITE_LITE Fade of 5 seconds
LOAD 101,0%
```

## Switch Press

Event Activation	Event 1 sets <b>New_State</b> to On.
Event 1 Execution	No loads to turn on.
Event 2 Execution	Turn on load 101 to 80%.
Event 3 Execution	Do nothing.

## Switch Release

Event Activation	Event 1 sets <b>New_State</b> to Off.
Event 1 Execution	No loads to turn off.
Event 2 Execution	Do nothing.
Event 3 Execution	Fade load 101 to 0% over 5 seconds.

## Switch Still Pressed

Events 1,2,3 Execution	Do nothing.
------------------------	-------------

**Example #3:**

```

Event 1: TOGGLE
COND SWITCH_ON 1 1 8
LOAD 101 102
;
Event 2: DIM 3
COND SWITCH_OFF 1 1 8
LOAD 102
;
Event 3: NITE_LITE 0
COND SWITCH_ON 1 1 8
LOAD 101,20%
```

## Switch Press

Event Activation	If switch 1 1 8 is On then
	If loads 101 and 102 are off then
	Event 1 sets <b>New_State</b> to On
	Else
	Event 1 sets <b>New_State</b> to Off
	Else if switch 1 1 8 is Off then
	If load 102 is off then
	Event 2 sets <b>New_State</b> to On
	Else
	Event 2 sets <b>New_State</b> to Off
Event 1 Execution	If switch 1 1 8 is On then
	If <b>New_State</b> = On then
	Turn loads 101 and 102 on

Event 2 Execution	Else if <b>New_State</b> = Off then Turn loads 101 and 102 off If switch 1 1 8 is Off then If <b>New_State</b> = On then Turn load 102 on Else if <b>New_State</b> = Off then Turn load 102 off
Event 3 Execution	If switch 1 1 8 is On then If <b>New_State</b> = Off then Set load 101 to 20%
<b>Switch Release</b>	
Event Activation	If switch 1 1 8 is Off then If the current state for Event 2 is Special (Cycle) then Event 2 sets <b>New_State</b> to On
Event 1 Execution	Do nothing.
Event 2 Execution	If switch 1 1 8 is Off then If <b>New_State</b> = On then Stop cycle of loads
Event 3 Execution	Do nothing.
<b>Switch Still Pressed</b>	
Event Activation	If switch 1 1 8 is Off then Event 2 sets <b>New_State</b> to Special
Events 1 Execution	Do nothing.
Events 2 Execution	Start loads cycling.
Events 3 Execution	Do nothing.

## LED Control

The switch LED control is determined by the event type, the load levels, and LED options. The switch LED will be on if any of its events are in the on state. The switch events are continually being checked, according to their load levels, to set them in their proper state. The four switch event LED options include:

Regular:	Switch LED on when event is on.
Reverse:	Switch LED off when event is on.
Blink:	Switch LED blink when event is on.
No_led:	Switch LED not changed by event state.

The load levels of a switch event normally determine its state. A switch event can be programmed to be on for the following:

- All loads equal 100%.
- All loads equal their learned levels.
- All loads are Off.
- All loads are not at 100%.
- All loads are Not at their learned levels.
- Any load on at any level.

Some event types will not use load levels for LED control. These include: All Off, All On, External, Flash, IR Out, Learn, Lower, Nite Lite, Raise, RS232, and Vacation.

Each switch event is continually being checked to see if its current state and LED need to be updated.

## Load Variables

Load variables are used like regular module loads except they are not associated with a physical module output. There are eight predefined load variables per master controller. The contractor numbers are calculated as follows:

Contractor # = 100MMn

Where MM is the two digit master board address and n is the number of the load variable. MM can range from 01 to 15 and n can range from 1 to 8. For example, 10021 corresponds to the first load variable on master 2.

Because there are eight load variables per master a total of 120 Variables is available for each QLink project.

## Software Interfacing

### RS232 Port

Every master controller contains two RS232 ports. These ports can be used for connecting to a PC for system programming and diagnostics, to a modem for remote telephone control, and to other equipment to be controlled by Vantage. The default settings for the RS232 port is: 19200 baud, 8 bits/character, no parity, and 1 stop bit.

### Interface V Commands

The Interface V commands are ASCII strings used to control the Vantage system over the RS232 port. They can control things such as switch presses, and load levels. All commands are specified with all capitals and are terminated with the carriage return (CR) character. Each command will return a response string.

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