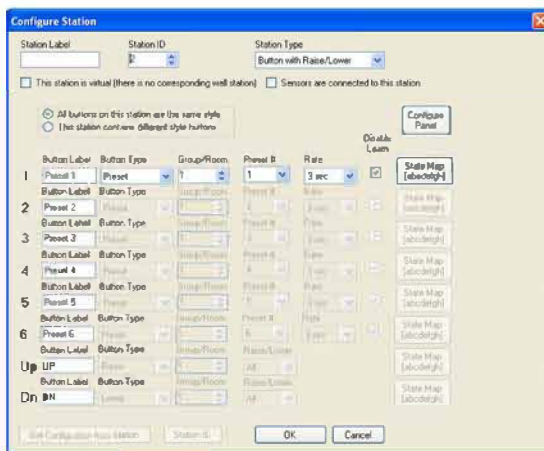




# Vision.net Designer Software



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**Vision.net 4.5 Designer Software System Manual**

# IMPORTANT INFORMATION

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## Warnings and Notices

When using electrical equipment, basic safety precautions should always be followed including the following:



- a. **READ AND FOLLOW ALL SAFETY INSTRUCTIONS.**
- b. Do not use outdoors.
- c. Do not mount near gas or electric heaters.
- d. Equipment should be mounted in locations and at heights where it will not readily be subjected to tampering by unauthorized personnel.
- e. The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition.
- f. Do not use this equipment for other than intended use.
- g. Refer service to qualified personnel.

**SAVE THIS MANUAL.**

---

**WARNING!** The Vision.net network must be its own autonomous network. Sharing the Vision.net Network with other networks (i.e., telecom, computer, etc.) will disrupt lighting control communications and may cause system to malfunction.

---



**WARNING:** You must have access to a main circuit breaker or other power disconnect device before installing any wiring. Be sure that power is disconnected by removing fuses or turning the main circuit breaker off before installation. Installing the device with power on may expose you to dangerous voltages and damage the device. A qualified electrician must perform this installation.

**WARNING:** Refer to National Electrical Code® and local codes for cable specifications. Failure to use proper cable can result in damage to equipment or danger to personnel.

**WARNING:** This equipment is intended for installation in accordance with the National Electric Code® and local regulations. It is also intended for installation in indoor applications only. Before any electrical work is performed, disconnect power at the circuit breaker or remove the fuse to avoid shock or damage to the control. It is recommended that a qualified electrician perform this installation.

**CAUTION:** Wire openings **MUST** have fittings or lining to protect wires/cables from damage. Use 75° C copper wire only! Aluminum wire may not be used.

## Additional Resources for DMX512

For more information on installing DMX512 control systems, the following publication is available for purchase from the United States Institute for Theatre Technology (USITT), "Recommended Practice for DMX512: A Guide for Users and Installers, 2nd edition" (ISBN: 9780955703522). USITT Contact Information:

**USITT**  
**6443 Ridings Road**  
**Syracuse, NY 13206-1111 USA**  
**1-800-93USITT**  
**[www.usitt.org](http://www.usitt.org)**

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# INTRODUCTION TO HARDWARE

---

## 1. About Vision.net

The Vision.net 4.5 system is designed to control architectural lighting by distributing both power and intelligence to all connected devices. The system provides processing power and control at each respective Master or Remote Station, eliminating the need for a central processor.

## 2. About the Hardware

Vision.net hardware stations are designed to bring exceptional control and flexibility to your project. Whether you are designing a board room or a large hotel and convention center complex, Vision.net station working in concert with Vision.net 4.5.5 software provides a wide range of fully scalable solutions. Easy to setup button stations, sensors and touchscreens can be combined and programmed using Vision.net 4.5.5 Designer to configure your system.

By combining button and slider stations, the system provides remote access to presets of dimmer channels, LEDs and automated luminaires. Additional commands include toggles, smart buttons, raise/lower control, multi-room partitioning and station lockout among other features. In the basic configuration mode, the room number can be set for Vision.net stations using the front panel buttons without removing the station from the wall and without the need for a computer. Occupancy Sensors and Photocells can be implemented to trigger actions.

Vision.net touchscreens allow fully customized displays that are easy to configure and may be programmed over an Ethernet link or an RS232 jack. Portable and fixed screen options are available.

Vision.net stations are natively compatible with Strand Lighting's A21, C21, R21, Contact Relay Panels and EC21 dimming cabinets and the Vision.net DMX512 interface. The Vision.net DMX512 interface allows "DMX512 Only" products, such as the Strand Lighting S21 IGBT dimmer bar, Light Pack, ProPack, Strand Selecon PL series of LED fixtures, VARI\*LITE's range of automated luminaires, ShowLine's range of LED products like the SL BAR 660, SL BAR 640, SL BAR 520, SL NITRO 510 Strobe, and other third-party DMX512 compatible products to be controlled by Vision.net 4.5.5.

Vision.net products are controlled by the Vision.net system protocol. All Vision.net control devices must be connected to the Vision.net system and given a unique address ID in order to interact properly. The ID identifies the device on the network and allows the device to avoid network collisions when transmitting data.

## 3. Vision.net Hardware Overview

Vision.net 4.5.5 expands to add intelligent fixture control to this impressive and scalable architainment control system.

Vision.net stations work with Vision.net 4.5.5 Designer to provide individual control of up to 16 sliders or up to 48 buttons per station. Combinations of sliders and buttons can be configured as well. A single gang faceplate can have up to 8 buttons or 4 sliders (one being a Grand Master). For more buttons or sliders, just expand the faceplate from a single gang up to a six gang faceplate.

Multiple stations may be linked together for control of up to 128 sliders. (127 channels plus a master).



Vision.net touchscreens are available. Screens shall be easily configured and setup with Vision.net 4.5.5 Designer using USB, serial or Ethernet interfaces. Using Strand's optional ShowNet Ethernet connectivity touchscreens can provide remote access to Strand Lighting Rack Palette, Palette and Light Palette control consoles, C21 and EC21 dimming systems and much more.

Touchscreens can provide astronomical time-clock and calendar functions, fully graphical room combine, bit-mapped backgrounds, on screen buttons and fader options. A web browser shall be available for all network-based stations.

Vision.net occupancy sensors and photocells provide dynamic lighting control for your facility. Choose from two ceiling-mount occupancy sensor types to meet the specific needs of your system. Photocell stations provide a choice of lumen maintenance and daylight harvesting. All settings and features of Vision.net occupancy sensors and photocells are easily programmed - from the ground without the use of ladders - using the IR Sensor Programming remote.



*Wall Mount Touchscreen*



*Ceiling Occupancy Sensor*

## 4. Vision.net Communications

Vision.net uses an RS485 multi-drop cabling system for communication between the various devices on the Vision.net network. This includes button stations, slider stations, touchscreens and other interface devices. The communication protocol is known as Strand Vision.net 485 also known as SVN/485.

---

**Note:** General references to Strand Vision.net communications shall be referred to as "SVN".

---

Certain devices can also use an Ethernet connection for communications. These devices include touchscreens and Vision.net 4.5.5 Designer software. Using Ethernet as the communications path for the touchscreens allows further enhanced control of the screens, allowing new software and configurations to be uploaded directly from Vision.net 4.5.5 Designer. This communication protocol is known as Strand Vision.net Internet Protocol or SVN/IP. (An internet connection is not necessary for this to function.)

SVN communicates with C21, EC21, A21, R21 and Contact Relay Racks as a native protocol. The DMX512 interface card is not necessarily required unless communicating with S21 dimmer strips or another product that communicates using the DMX512 protocol. An example would be third part devices such as LEDs and automated luminaires.

By including a Vision.net DMX512 interface, the system can communicate via DMX512 to Strand dimmer racks (C21, EC21, A21, S21 and R21) and Strand Consoles (Palette, LightPalette and RackPalette) or any DMX512 device.

Vision.net uses distributive processing techniques, whereby reliability is significantly increased over those of centralized processing systems. Intelligence is distributed across the network with output devices storing only the data that they need, reducing cost. In the event there is hardware failure, the fault is locally contained rather than compromising the entire system as would be the case in a centralized system.

---

**WARNING!** The Vision.net network must be its own autonomous network. Sharing the Vision.net Network with other networks (i.e., telecom, computer, etc.) will disrupt lighting control communications and may cause system to malfunction.

---



## 5. Components

This chart identifies Vision.net components and their available communication protocols that make up a Vision.net system. This list includes, but is not limited to, the following:

Components	Strand Shownet	VN Ethernet (SVN/IP)	VN RS-485 (SVN/485)	VN RS-232	DMX512	VN 4 Wire Digital LAN	Contact Closure	IR
C21 Dimmer Rack	✓		✓		Input		Input	
EC21 Dimmer Rack	✓		✓		Input		Input	
A21 Cabinet	Optional		✓		Input		Input	
R21 Cabinet	Optional		✓		Input		Input	
S21 Dimmer Strip					Input		Input	
Contact Relay Panel	Optional		✓		Input		Input	
Vision.net DMX512 Interface			✓		Input / Output***			
Vision.net Button / Slider Station			✓			✓	Input	✓
Palette / LightPalette Control Consoles	*	✓		✓	Input / Output			
RackPalette Show Control Console	*	✓		✓	Input / Output			
Vision.net Touchscreens		✓	✓					
Vision.net RS232 Serial Interface Port			✓	✓				
Occupancy Sensors						✓		**
Photocell Sensors						✓		**
Vision.net Contact Closure Interface			✓			✓	Input / Output	
Contact Power Pack Button Stations						✓		
Vision.net IR Station Remote								✓

\* Additional protocols: Streaming ACN E1.31, Pathport, CK Net and Artnet

\*\* For Configuration Only

\*\*\*The Vision.net DMX512 Interface Input does not allow DMX512 to control a Vision.net network. The most common use of the Vision.net DMX512 input is to monitor the DMX512 output of a lighting console, so that Vision.net can snapshot the console lighting look into a Vision.net preset.

## 6. Protocol Wiring Specifications for Vision.net Components

This chart identifies Vision.net protocols and the specified wiring that is to be used for installation.

Protocol	Specified Wiring	Plenum Equivalent Specified Wiring	Recommended Jack Color	Maximum Cable Length
Strand ShowNet	Belden 1583A CAT5e	Belden 1585A	Blue	300 feet (90 meters) per horizontal link*
VN Ethernet (SVN/IP)	Belden 1583A CAT5e	Belden 1585A	Blue	300 feet (90 meters) per horizontal link*
VN RS-485 (SVN/485)	Belden 1583A CAT5e	Belden 1585Ae	Green	1000 feet (300 meters) overall
DMX512	Belden 9829	Belden 89729	Gray	1000 feet (300 meters) per link
VN 4 Wire Digital LAN	Belden 1583A CAT5e	Belden 1585A	Black	500 feet (150 meters) per link
Contact Closure	(2) #16 AWG (1.0 mm <sup>2</sup> )	(2) #16 AWG (1.0 mm <sup>2</sup> )	DNA	100 feet (30 meters) per link

\* For vertical backbone links, fiber optic cable must be utilized. Consult the factory concerning this application.

---

**WARNING!** The Vision.net network must be its own autonomous network. Sharing the Vision.net Network with other networks (i.e., telecom, computer, etc.) will disrupt lighting control communications and may cause system to malfunction.

---

## 7. Standard Station Overview

The Standard Button Station shown is a Button Station with Raise/Lower. This station is a push button station that has 6 full sized buttons and the last button space is split into 2 half sized buttons. By default, the left half is Raise and the right half is Lower. Configuration can be changed to other functions using Designer for Vision.net 4.5.5 software. This station fits into a single gang back box.



*Standard  
Button  
Station*

The Button Station shown is a 2 Button Station. The Button Station hardware underneath the faceplate is identical to a standard Button Station (All 8 buttons are present underneath). Only buttons 3 and 5 have access through the faceplate and are available to the user.



*2 Button  
Station*

When ordered, each Vision.net station can be custom configured for your facility by indicating the number of buttons or sliders that are required in each gang position. The Module configuration chart is available on the product data sheet and available on [www.strandlighting.com](http://www.strandlighting.com) for your convenience.

The Button / Slider Station combination has a 7 Button Station on the left side and a 4 Slider Station on the right. This fits into a two gang station. For this station, the custom configuration chart would be used for both the first gang and the second gang.



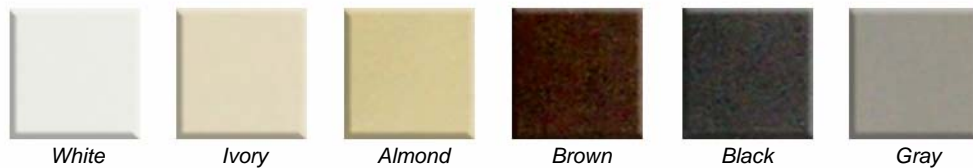
*7 Button /  
Slider  
Station*

The Module configuration chart is available on the product data sheet and available on [www.strandlighting.com](http://www.strandlighting.com) for your convenience.

Module 1 (1st Gang)			Module 2 (2nd Gang)		
Button	or	Slider	Button	or	Slider
1 <input type="checkbox"/>		1 <input type="checkbox"/>	1 <input type="checkbox"/>		1 <input type="checkbox"/>
2 <input type="checkbox"/>		2 <input type="checkbox"/>	2 <input type="checkbox"/>		2 <input type="checkbox"/>
3 <input type="checkbox"/>		3 <input type="checkbox"/>	3 <input type="checkbox"/>		3 <input type="checkbox"/>
4 <input type="checkbox"/>		4 <input type="checkbox"/>	4 <input type="checkbox"/>		4 <input type="checkbox"/>
5 <input type="checkbox"/>			5 <input type="checkbox"/>		
6 <input type="checkbox"/>			6 <input type="checkbox"/>		
7 <input type="checkbox"/>			7 <input type="checkbox"/>		
8 <input type="checkbox"/>			8 <input type="checkbox"/>		

## Station Color

The colors shown below are available for the Vision.net stations. All stations shall be supplied as white as the default color. Any station can be ordered in the listed colors. Ordering shall include the stations' part number plus "-CK" to indicate Color Kit. The color kit includes the faceplate, slider handles, button covers and installation instructions.



Please discuss this with the Strand representative that is quoting the Vision.net system.

## Station Engraving

There are two types of engraving options available; Button Keypad Engraving to label the buttons themselves and Faceplate Engraving to label the surrounding faceplate. If engraving is requested, it shall be selected when the system is quoted as each type of engraving is a different process.

Please discuss this with the Strand representative that is quoting the Vision.net system.

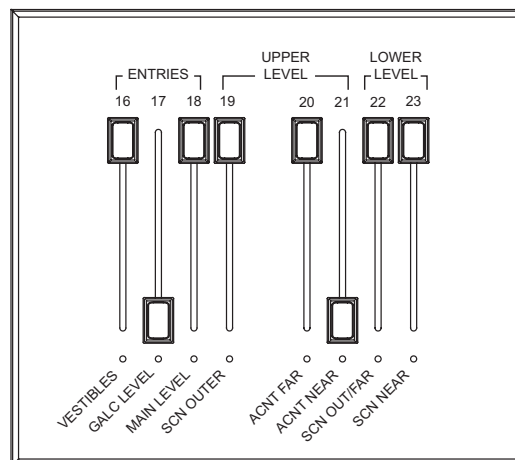
There is a separate form called Vision.net Button Station Custom Engraving Form that is available on our website at [www.strandlighting.com](http://www.strandlighting.com). Please download this form and follow all instructions for submitting custom engraving requests.

Below are two engraving examples:

- Example A is a close-up of sample Button Keypad Engraving.
- Example B shows Faceplate Engraving both above the slider and below when printed on a 45-degree angle.



Example A - Button Keypad Engraving



Example B - Faceplate Engraving

---

**Note:** If no engraving is specified, the station faceplates will be blank.

---

# HARDWARE

This section is devoted to the hardware itself, not the configuration of the devices in Vision.net 4.5 Designer. The main component categories to be discussed are:

- Control Stations
- Sensors
- Remotes
- Touchscreens
- Communication Devices.

## 1. Control Stations

Control stations are used to control the lighting in a room or zone. These stations can be push button stations, slider fader stations or slider and button combination stations.

### Button Stations

A Button Station is a push button station that has 7 buttons that can be configured to perform different functions. All button stations have the same number of physical buttons (7) and any unused buttons are masked by the faceplate. So a single button station is a 7 button station where the faceplate has only a single button exposed. (Button #4...in the middle.)



### Button Stations with Raise/Lower

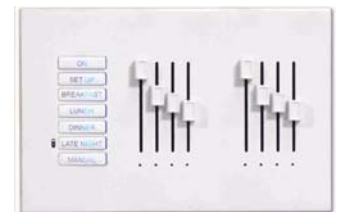
A Button with Raise / Lower Station is a push button station that has 6 full sized buttons and the last button space is split into two half sized buttons for a total of 8 buttons. The left half is Raise and the right half is Lower.



**Note:** Remember that this is an 8 button station and that the bottom split buttons can be set to any button type...not just Raise and Lower. This configuration can be adjusted using Vision.net Designer software.

### Slider Base Station

A Slider Base Station is a multiple gang panel that has a button station and a slider station for channel control. The first slider is a Grand Master, the others are controlling channels. You can configure the station to have channel sliders 1 through 16 with a separate Grand Master. Shown is a 7 channel slider base for a 3 gang back box. For this type of station, the bottom button is permanently configured to be a Manual button.



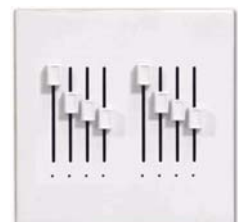
These sliders could be used for controlling the different channels of house lighting. (Orchestra section, wall sconces, aisle lights and down lights).

See ["Adding a Slider Base Station" on page 108](#) of this manual for programming options.

### Slider Extension

A Slider Extension is a potentiometer station that allows you to expand the number of channels (up to 16 sliders) that can be controlled using sliders. Shown is an 8 slider station for a 2-gang back box.

See ["Adding A Slider Extension Station" on page 110](#) of this manual for programming options.



## Submaster Base

A Submaster Base is a multiple gang panel that has a button station and a slider station for submaster control. The first slider is a Grand Master, the others are controlling submasters. You can configure the station to have from 1 to 16 sliders. Shown is a 3 submaster base for a 2-gang back box. For this type of station, the bottom button is permanently configured to be a Manual button.



These submasters could be used to control all channels of house lighting together and to store basic stage lighting looks for simple events (All house lights, stage wash and podium looks).

See ["Adding A Submaster Base Station" on page 110](#) of this manual for programming options.

---

**Note:** There is a paperclip hole on the hardware itself that allows recording at the station itself. Just set the levels and insert a paperclip to press and hold. When the Learn function has occurred, the station will beep to learn levels using Designer for Vision.net 4.5, see ["Recording to a Submaster" on page 111](#) in this manual.

---

## 2. Understanding the Stations

Vision.net products are controlled by the Strand Vision.net (SVN) protocol. All Vision.net control devices must be connected to the Vision.net system and given a unique ID (or address) in order to interact properly. The ID identifies the device on the network and allows the device to avoid network collisions when transmitting data.

On a multiple gang station, the first "gang" of the station has all the "intelligence" to connect to the Vision.net RS485 network. The other "gangs" in the station are "dumb" and simply connect via a ribbon cable jumper thru back to the first "gang" of the station.

### Portable Stations

Portable station is a wired Vision.net button/slider station that is available for remote operation. It is mounted in an enclosure and tethered for connection into a Vision.net system. The tethered connection can be temporary or permanent.

Portable stations can be standard Vision.net stations that reside in an enclosure and connect to the Vision.net system via a permanently mounted 6-pin XLR connector. This gives the advantage of keeping the station programming consistent to the portable station.

Portable stations can also be stations that contain no processing but connect to the Vision.net system via a permanently mounted Smart Jack. This gives the advantage of keeping the programming in the Smart Jack itself.

See ["Smart Jack \(63341\)" on page 56](#) for more information.

### Infrared

Some button stations have infrared capabilities. An infrared remote is necessary to take advantage of this feature. See ["Station Remote \(61205A\)" on page 34](#) of the manual on Remotes.

### Connectivity

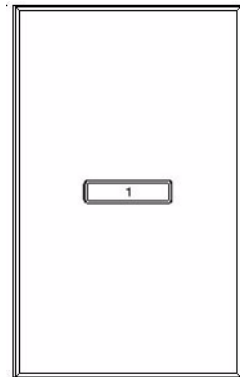
Stations are normally daisy chained together. In the event that it is not convenient to daisy chain all stations, a Vision.net Four-Way Data Splitter can be used. For more information, see ["Vision.net Four Way Data Splitter" on page 29](#).

## 3. Understanding Button Alignment

Many button stations are specified with fewer than the maximum capacity of buttons. To simplify manufacturing, these are still full button stations however only the quantity of buttons that are specified is exposed. The following graphics show 1, 2 and 4 standard button station options are discussed so that a basic understand of button alignment can be understood.

## Single Button Station Alignment

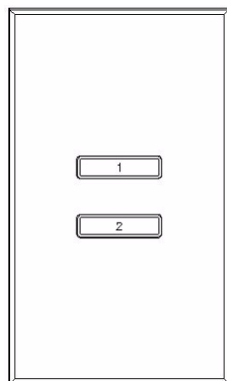
A single button station has all buttons behind the faceplate, but only button #4 (the one in the middle of the station) is exposed. The image on the left shows the single button station. The image on the right shows the Configure Station dialog box when configured properly for a single button station. Notice that buttons 1, 2, 3, 5, 6 and 7 are set for <no button>. To learn more about configuring button stations, see ["Configure a Button Station" on page 73](#).



Button Label	Button Type	Group/Room	Preset #	Rate	State Map
1	<no button>				[abcde fgh]
2	<no button>				[abcde fgh]
3	<no button>				[abcde fgh]
4	Preset	1	4	3 sec	[abcde fgh]
5	<no button>				[abcde fgh]
6	<no button>				[abcde fgh]
7	<no button>				[abcde fgh]

## Two Button Station Alignment

For a two button station, buttons #3 and #5 are the only exposed buttons.

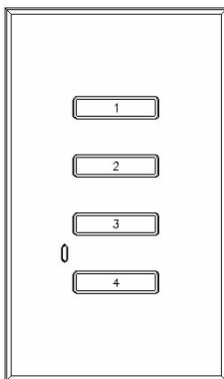


Button Label	Button Type	Group/Room	Preset #	Rate	State Map
1	<no button>				[abcde fgh]
2	<no button>				[abcde fgh]
3	Preset	1	1	3 sec	[abcde fgh]
4	<no button>				[abcde fgh]
5	Preset	1	1	3 sec	[abcde fgh]
6	<no button>				[abcde fgh]
7	<no button>				[abcde fgh]

## Four Button Station Alignment

For a four button station, buttons #1, #3, #5 and #7 are the only exposed buttons.

For standard button station alignment purposes, see ["Button Station Faceplate Alignment"](#) on page 161. This page can be printed (full size) and held up next to the station to assist in identifying the correct button.



**Configure Station**

Station Label:  Station ID:  Station Type:

☐ This station is virtual (there is no corresponding wall station) ☐ Sensors are connected to this station

☐ All buttons on this station are the same style  
☒ This station contains different style buttons

Button Label	Button Type	Group/Room	Preset #	Rate	Disable Learn	State Map [abcdehgh]
1	Preset 1	Preset	1	3 sec	<input checked="" type="checkbox"/>	State Map [abcdehgh]
2	<no button>					State Map [abcdehgh]
3	Preset 1	Preset	1	3 sec	<input checked="" type="checkbox"/>	State Map [abcdehgh]
4	<no button>					State Map [abcdehgh]
5	Preset 1	Preset	1	3 sec	<input checked="" type="checkbox"/>	State Map [abcdehgh]
6	<no button>					State Map [abcdehgh]
7	Preset 1	Preset	1	3 sec	<input checked="" type="checkbox"/>	State Map [abcdehgh]



# STATION INSTALLATION - QUICK START INSTRUCTIONS

## 1. Quick Start - Control Stations

**CAUTION:** This is designed for experienced technicians to get the standard Button Station up and running quickly. For more detailed information, refer to "[Station Installation - Standard Instructions](#)" on page 20.

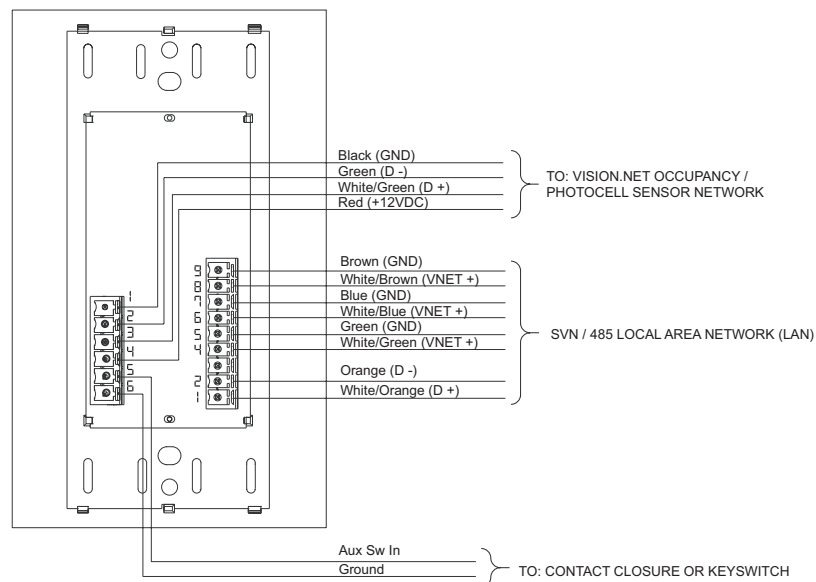
The drawing shows an example of a single gang station.

Use the following checklist:

Step 1. Install unit (refer to "[Station Installation - Standard Instructions](#)" on page 20).

Step 2. Connect to Vision.net network.

Vision.net Station Connections

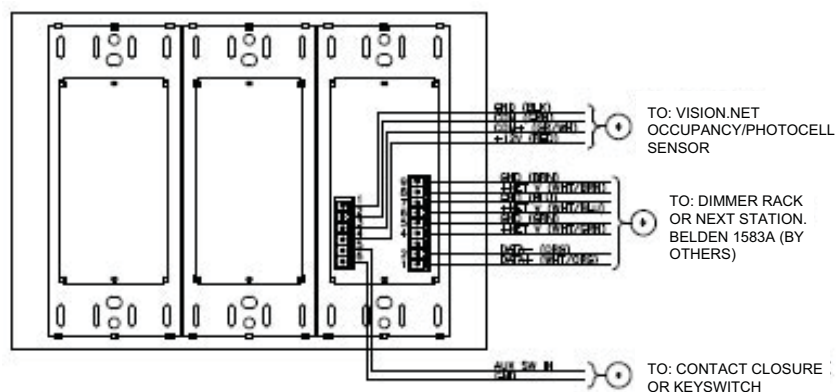


Step 3. Set the mode using the Vision.net 4.5 Designer Software.

The unit should now be ready for operation.

**Note:** Stations are pre-configured at the factory with the Station ID of 1 and are set to activate Presets 1 to 7 in Room 1 of your Vision.net system.

The diagram below shows the wiring for the example 3 gang station.



# STATION INSTALLATION - STANDARD INSTRUCTIONS

---

This section provides installation instruction for all Vision.net button/slider stations.

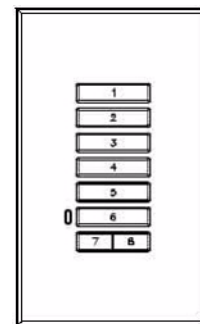
## 1. Specifications

### Electrical

Input Power:	+18-26 VDC (powered from Vision Net network)
Current:	20mA
Temperature:	Storage: -25° to 85° C Operating: 0° to 40° C
Relative Humidity:	30-90% (non-condensing)

### Communications

- Strand Vision.Net protocol (SVN/485)
- Vision.net 4.5 Wire Digital LAN
- Contact Closure



The Vision Net Network consists of a single CAT5e cable connecting all modules in a daisy chain manner. All standard units connect to the network using a 9-pin plug-in connector (included).

### LED Indicators

There are 3 LEDs on the control PCB. A description of each LEDs status when flashing...

- RED - Will blink whenever there is any activity from the front Buttons or Slider modules.

---

**Note:** Since button or slider activity will sometimes result in transmissions it may appear to be a transmit status, but is it not (try moving a slider when not in MANUAL mode).

---

- GREEN - Will blink whenever the unit receives or transmits network SVN/485 traffic.
  - AMBER - Will blink whenever the unit receives or transmits sensor 4 Wire Digital LAN traffic.
- 

**Note:** Not all button or slider activity will result in network traffic. For example, moving a slider when not in Manual mode will not generate LED activity from traffic.

---

## 2. Standard Station Installation Steps

### To install a Vision.net Control Station:

Step 1. Unpack unit and inspect for any signs of shipping damage.  
If this is a slider station, remove the slider knobs by pulling.

Step 2. Remove the faceplate by pulling on the faceplate top.

**Note:** Step 3 is only required if there is a need to replace the keypad buttons.

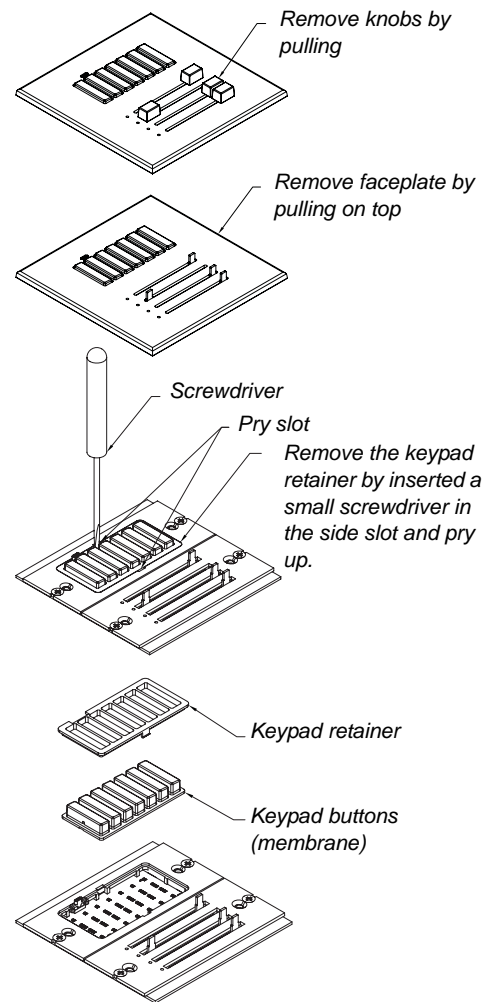
Step 3. (Optional if replacing keypad buttons) Remove the keypad retainer by inserted a small screwdriver in the side slot and pry up.

Step 4. Connect Vision.net Network Cable to 9-pin connector at back of the panel Interface and Occupancy / Photocell Sensors and Contact Closures to the 6-pin connector (if needed) as shown in [Figure 1](#).

Step 5. Attach the Vision.net button station to the back box with screws supplied with the back box.

Step 6. Reinstall the faceplate to the button station by snapping back in place.

**WARNING!** Use only wire specified on system drawings. All wiring must be daisy chained only.



Vision.net Station Connections

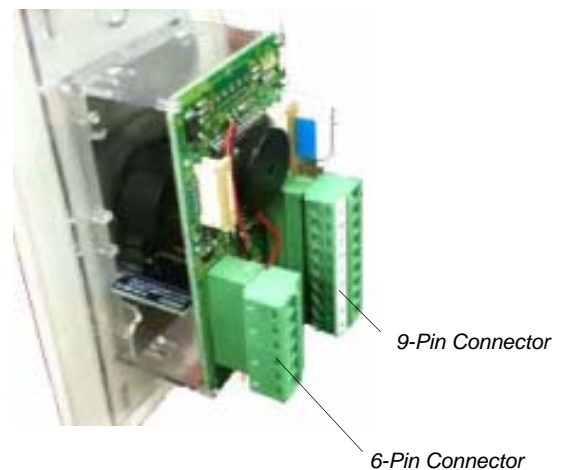
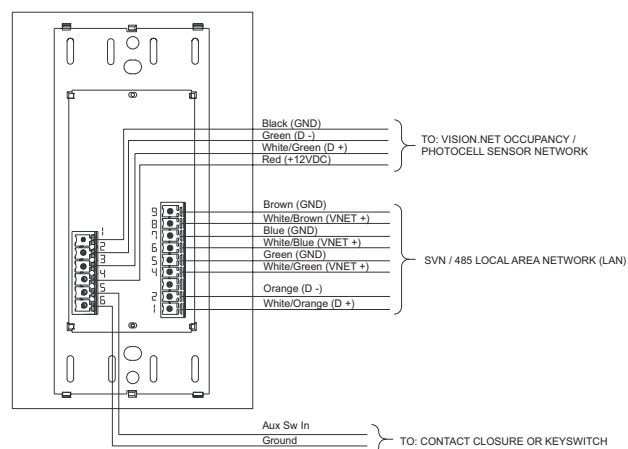


Figure 1: Vision.net Network Connections

# VISION.NET STATION OPERATION MODES

---

Vision.net stations can be set in either *Standard Mode* or *Configurable Mode*. The default setting for the unit is Station ID 1. A station, configured in either Standard or Configurable Mode, can be reset to the factory default as follows:

## Setting station mode (factory default):

- Step 1. Unplug the station from the network.
- Step 2. Re-plug the station while pressing and holding any button for at least 3 seconds.
- Step 3. The station will beep three times when it enters Standard Mode. The station will be in Factory Test Mode for 30 seconds. During that time, it will allow all buttons and sliders to beep when pressed or moved.
- Step 4. Unplug and re-plug to bypass the 30 second test.

## 1. Standard Mode

In Standard Mode, you can change the unit's Station ID.

### Assigning a Station's ID

- Step 1. Reset the station to the factory default, Device ID 1 as described above.
- Step 2. Press and hold Buttons 3 and 6 for 3 or more seconds to enter programming mode. When in programming mode, all button LED's are off, except for Button 1 which should be flashing. All other Stations on the network will blink with either one or two quick blinks every 2 seconds.
- Step 3. Pressing Button 2 increases the assigned Station ID number by 1.
- Step 4. Stations with a single blink every 2 seconds are already set to this Station ID. Pressing and holding any button on a blinking station that has the 2 blink pattern for 3 or more seconds, will set it to the current ID. It will blink in with the single blink pattern in confirmation.
- Step 5. Complete the programming mode by pressing and holding Button 1 on the first station.

---

**Note:** This is only accessible on a fully populated station. All others stations will need to assign the station's ID from Vision.net 4.5 Designer Software.

---

See [Configurable Mode](#) for more information.

## 2. Configurable Mode

In Configurable Mode, Vision.net products are controlled by the Vision.net System protocol (VNS). All Vision.net devices must be given a Station ID (or address), which identifies the device on the network and allows it to avoid network collisions when transmitting data. Station IDs are in the range of 1 to 1023. The Network ID for the panel will be pre-assigned at 1 by the factory and will need to be set to the required address and programmed as required for your installation. Vision.net stations are programmed and have their ID's set using the Vision.net Designer software.

To perform any function related to the station ID and its configuration, proceed to "[Station ID and Configuration](#)" on [page 94](#) in this manual.

## 3. Operation

This section discusses the Operation instruction of stations in their defaulted state.

### Selecting a Scene

Typically a 7-button station provides access to seven presets (1-7). To select a Preset, press and release the appropriate button on the keypad. The LED will change to its active state.

## Programming

For programming instructions when using Vision.net 4.5 Designer Software, please proceed to ["Configure a Button Station" on page 73](#) in this manual.

## Station Troubleshooting

In order to determine if a Vision.net 4.5 Network device is communicating, a network test signal can be sent.

See either [Standard Mode](#) or [Configurable Mode](#) for instructions.

### Standard Mode

**To enter standard mode:**

- Step 1. Press and hold Buttons 1, 3 and 6 for 3 or more seconds to enter programming mode, when in programming mode, Button 1 will blink once every 2 seconds and transmit a Set Station ID command on the SVN485 network.
- Step 2. Verify that all other stations on the network are also blinking. If they are not, look for a broken wire or a mis-wire between the previous blinking station.
- Step 3. Cancel programming mode by tapping Button 1 two more times.

### Configurable Mode

The network test signal can be sent using the Vision.net 4.5 Designer Software. To perform any function related to the station ID and its configuration, proceed to ["Station ID and Configuration" on page 94](#) in this manual.

# PORTABLE STATION INSTALLATION

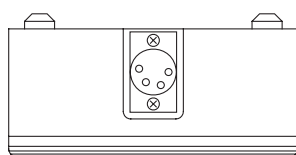
## 1. Portable Stations

Any button / slider station can be specified as a portable station. Just add a "PM" to the part number for the portable (metal) station equivalent to a standard station. The faceplate shall be the same as the comparable standard station. However, there are no processing electronics in the portable station. The portable stations connect to the Vision.net system via a 4 pin XLR cable. The cable in turn connects to a Smart Jack.

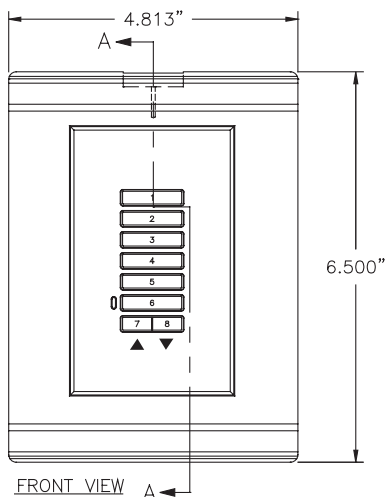
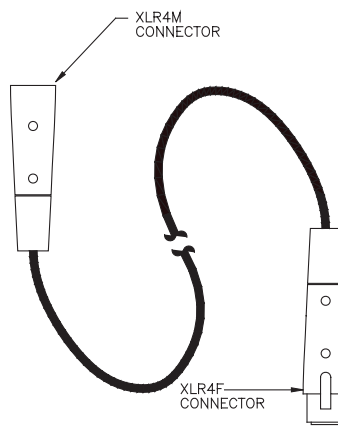
## 2. Portable Station Vision.net Connections

Portable stations connect to the Vision.net system via a 4 pin XLR cable. The cable in turn connects to a Smart Jack.

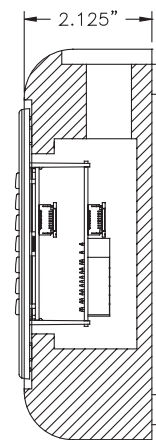
*Note, 8-button portable station shown.*



TOP VIEW



FRONT VIEW



SECTION A-A

**Portable Station Vision.net 4.5-Pin XLR Connection (Cable Type: Belden #1583A)**

Pin #	Function	Pin #
1	+8VDC	1
2	+NET V	2
3	DATA -	3
4	DATA +	4

**IMPORTANT!** All Vision.net portable stations must connect to a Smart Jack only. Direct connection to other devices may damage the unit. For more information on the Smart Jack, see ["Smart Jack \(63341\)" on page 56](#).

# VISION.NET TOUCHSCREENS

---

## 1. Touchscreen Models

Touchscreens are top level control components that provide a highly customizable interface to the Vision.net network. These are very flexible and provide a highly intuitive and easy way of working with the Vision.net system.

There are many applications for touchscreens:

### Wall Touchscreens

This is a Vision.net touchscreen that is permanently mounted in a wall. 7 inch and 10 inch models are available. The 7 inch model is available in either Almond or Black. (The Black 7 inch model is shown). Various sized models are available.



### Rack Mounted Touchscreen

This is a Vision.net touchscreen that is permanently mounted in an equipment rack. Various sized models are available.

### Portable Touchscreens

This is a wired Vision.net touchscreen that is available for remote operation. It is mounted in an enclosure and tethered for connection into a Vision.net system. The tethered connection can be temporary or permanent.

---

**Note:** If a touchscreen is not pre-configured, it will ship with a default file.

---

## 2. Installation of Vision.net Touchscreen Control PCB

The Vision.net Touchscreen Control PCB is a card that connects to the touchscreen to allow VN/485 and RS-232 communications. This card is mandatory for a Vision.net system that is communicating SVN/485 only.

The Touchscreen Control PCB are standard on the back of the touchscreen.

### Installation:

- Step 1. If conduit is required by local code, provide conduit to the back box where the Touchscreen Control PCB is pre-installed.
- Step 2. Install the backbox at the desired location.

### To connect wiring:

- Step 1. If an external power supply is used, connect to the external power supply using two (2) - #14 AWG (.75 mm<sup>2</sup>).

---

**IMPORTANT!** The external power supply must be mounted within 500 feet (150 meters) of the touchscreen.

---

- Step 2. Connect power cable from 24V connector on the touchscreen to the 3-pin connector on the bottom of the touchscreen control PCB. See diagram next page.

---

**IMPORTANT!** If an external power supply is not used, set the jumper appropriately to route power over the SVN/485 network. See diagram below.

---

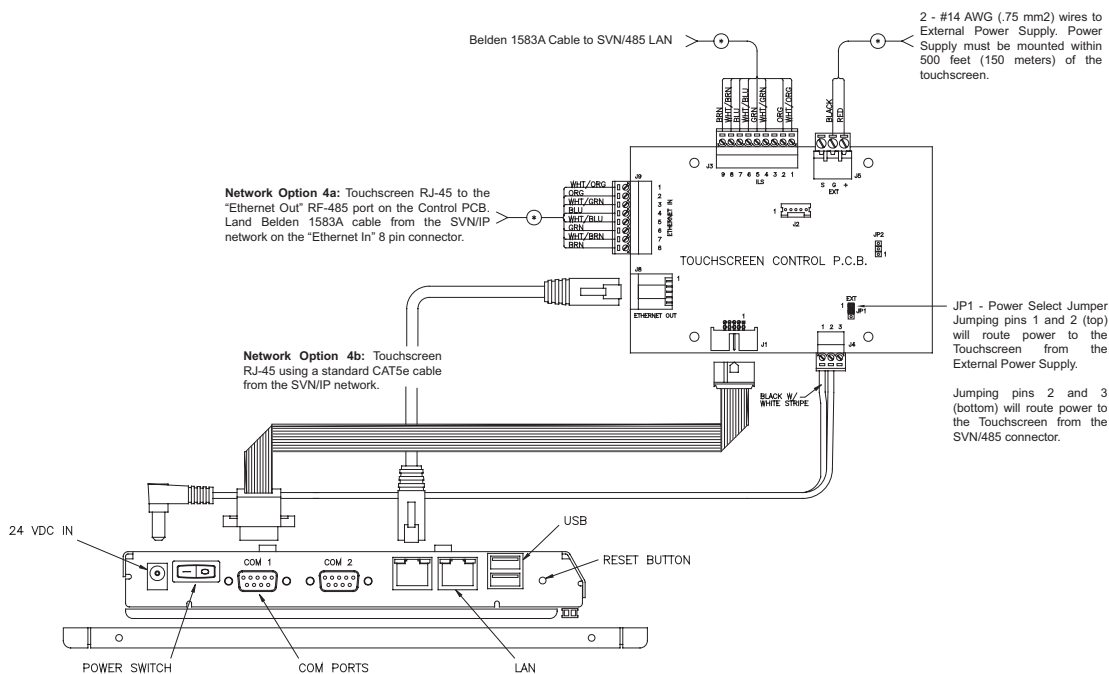
- Step 3. Connect to SVN/485 network using Belden 1583A cable according to the wiring diagram next page.
- Step 4. Connect power from the Control PCB to the external power supply according to the wiring diagram.

**Note:** Once the wiring is terminated to the Touchscreen Control PCB, proceed to connecting the touchscreen itself.

Step 5. Connect the network. There are two connection options:

- Connect the network cable from the RJ-45 port on the touchscreen to the "Ethernet out" RJ-45 port on the Control PCB card according to the wiring diagram below. Then land the Belden 1583A cable from the SVN/IP network on the "Ethernet in" 8-pin connector. OR;
- Connect a standard CAT5e cable from the SVN/IP network directly to the RJ-45 port on the touchscreen.

**Note:** The RJ-45 connections on the Control PCB are for convenience wiring only. It is only a pass through and does not convert SVN/IP to SVN/485 or SVN/485 to SVN/IP.



The tables below show the connection information for the Vision.net Touchscreen Control PCB card.

Vision.net PCB Connections (Belden #1583A)		
T.B #	Signal	Wire Color
1	DATA +	White / Orange
2	DATA -	Orange
3	No Connection	N/A
4	+ NET V	White / Green
5	Ground	Green
6	+ NET V	White / Blue
7	Ground	Blue
8	+ NET V	White / Brown
9	Ground	Brown

External Power Supply #14 AWG (.75 mm2) WIRES (DO NOT EXCEED 500 FEET - 150 METERS)		
T.B #	Signal	Wire Color
+	+24VDC	Red
G	COM	Black



### 3. Creating a Vision.net Touchscreen



**CAUTION:** Follow these instructions ONLY if the touchscreen arrives without any setup information.

Before beginning the process of adding Vision.net 4.5 Designer Software functionality to a touchscreen, be sure to inspect the screen to ensure that it is free of all manufacturer defects.

**Note:** Contact Strand technical support to get the touchscreen system files.

To add Vision.net 4.5 Designer Software functionality to a touchscreen

- Step 1. Power the touchscreen.
- Step 2. When booting is complete insert programming USB key into screen.
- Step 3. Open MYDEVICE/HARDDISK2.
- Step 4. Copy STARTUP FOR SHASTA.
- Step 5. Navigate to MYDEVICE/HARDDISK.
- Step 6. Paste STARTUP FOR SHASTA.
- Step 7. Close all windows.
- Step 8. Open the START menu.
- Step 9. Select SETTINGS/CONTROL PANEL.
- Step 10. Double tap on AUTOLAUNCH. This will open a configuration window.
  - a. Select BROWSE.
  - b. Navigate to MYDEVICE/HARDDISK.
  - c. Double tap on STARTUP FOR SHASTA.

**Note:** Old touchscreens used a file called START FOR TOUCHSCREEN. Delete this file and replace it with STARTUP FOR SHASTA if using new Shasta firmware.

- d. Verify that STARTUP FOR SHASTA now appears in the window.
  - e. Tap Save.
  - f. Tap OK (*Important - if X is pressed all changes will be lost*).
- Step 11. From the open CONTROL PANEL window select SYSTEM. This will open the device configuration window. CONTROL PANEL> SYSTEM> DEVICE NAME.
  - a. Select DEVICE NAME.
  - b. Set device name according to below:

**Note:** Must add last 3 digits of the IP address is screens are networked.

- PORTABLE =TS-P
- 7 inch & 10 inch =TS-I
- 3.5 inch =TS-D
- 15 inch (iEi Only) =TS-C
- 15 inch (Aaeon) =TS-B (Old Hardware)
- 7 inch (Aaeon) =TS-A (Old Hardware)

**Note:** Old Hardware designations are included for service and support issues. These must not be used in new installations.

- c. Tap X to close window.
- Step 12. Close all open windows.
- Step 13. Open the START menu.
- Step 14. Select SETTINGS/NETWORK and DIALUP CONNECTIONS. This will open the Network settings window.
- a. Tap and hold wireless connection icon for 3 seconds.
  - b. From menu select DISABLE.
  - c. If using SVN/IP, tap and hold wired connection icon for 3 seconds.
    - 1) From menu select properties.
    - 2) Set static IP address of wired connection.
  - d. Tap X to close window.
- Step 15. Open the START menu.
- Step 16. Select SETTINGS/TASKBAR AND START MENU. This will open the Taskbar settings window.
- a. Check the box to AUTOHIDE.
  - b. Uncheck the box for ALWAYS ON TOP.
  - c. Tap X to close window.
- Step 17. Close all windows.
- Step 18. Open MYDEVICE/HARDDISK.
- Step 19. Double tap on STARTUP FOR SHASTA. This will launch the Shasta environment.

---

**Note:** The USB key must be in place.

---

Step 20. Select UPDATE FIRMWARE AND LAUNCH APPLICATION. At this point the screen will copy all necessary files from the key. Warning! Do not remove the USB key until the transfer is complete.

Step 21. The Touchscreen is now ready for use.

---

**Note:** Depending on what ActiveScreen.ntc2 file was present in the UPDATE folder on the USB key the screen may display incorrectly. Please be sure that the file on the key is for the desired screen.

---

## 4. Testing a Vision.net 4.5 Touchscreen

Ensure that the touchscreen has been properly setup and configured before attempting the test procedure. If not, then go to ["Creating a Vision.net Touchscreen" on page 27](#).

### To test a Vision.net 4.5 touchscreen:

- Step 1. Attach Female end of the DB9 serial cable to Port 1 on the Touchscreen.
- Step 2. Attach Male end of the DB9 serial cable to the Vision.net RS-232 port (Part # 63025 or 3-723247-010).
- Step 3. Attach RS-232 port to Vision.net Test LAN (If touchscreen is not powered, power it now).
- Step 4. Verify that pressing buttons or moving sliders on the touchscreen causes Vision.net Designer to show these commands on the status line.

# VISION.NET FOUR WAY DATA SPLITTER

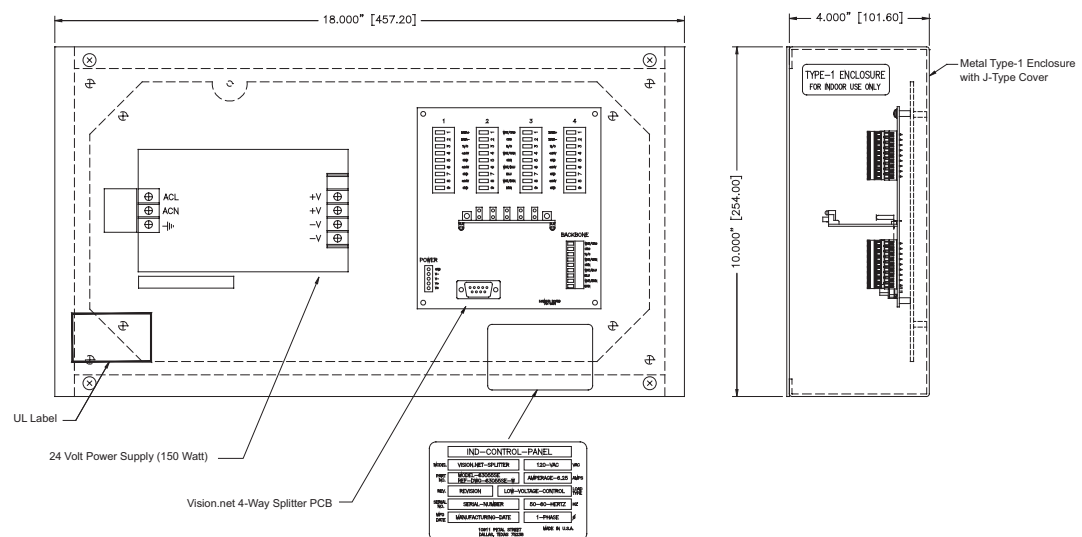
The Vision.net Four Way Data Splitter allows the addition of Vision.net stations without the requirement of daisy chaining to an existing station. The splitter can be specified as the card only or with an enclosure. If an enclosure is supplied, mount according to the mounting options that are available with the enclosure. In most installations, the Four Way Data Splitter may be installed in the 19 inch lighting control equipment rack, on a rack mount panel or shelf.

## 1. Four Way Data Splitter Installation

### Installation steps:

Step 1. Unpack unit and inspect for any signs of shipping damage. Ensure that all parts are accounted for.

Step 2. Mount splitter based on the installation compartment that is necessary for your application.



## 2. Four Way Data Splitter Wire Connections

### To connect wiring:



**WARNING!** Ensure that power is removed from the electrical service before connecting any wiring or cables to the power supply.

Step 1. Connect low voltage network to Four Way Data Splitter with Belden 1583A cable wires according to the table below.

Four Way Data Splitter Connections (Belden #1583A)		
Pin #	Signal	Wire Color
1	DATA +	White / Orange
2	DATA -	Orange
3	No Connection	N/A
4	+ NET V	White / Green
5	Ground	Green
6	+ NET V	White / Blue
7	Ground	Blue
8	+ NET V	White / Brown
9	Ground	Brown

Step 2. Once connected and powered, the splitter is ready for use.

# SENSORS

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Sensors allow the system to be controlled by intelligent components. The components available are:

- Occupancy Sensors
- Photocell Sensors
- Dry Contact Closures
- 0-10V Analog

## 1. Occupancy Sensors

This section provides installation and programming instructions for the following Vision.net Products:

- 63059CM - Vision.net Ceiling Occupancy Sensor
- 63059HB - Vision.net High Bay Ceiling Occupancy Sensor

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**IMPORTANT!** Please read all instructions before installing or using this product.

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### IMPORTANT INFORMATION. PLEASE READ!

This unit is intended for installation in accordance with the National Electric Code® and local regulations. It is also intended for permanent installation in indoor applications only. Before any electrical work is performed, disconnect power at the circuit breaker or remove the fuse to avoid shock or damage to the control. It is recommended that a qualified electrician perform this installation.

### Description

The Vision.net Low-Voltage Ceiling Occupancy Sensor is a multiple technology, occupancy-sensing low-voltage device that is designed for use with a Vision.net architectural control system. Each sensor may be programmed to act as a Vision.net button (like Preset, Preset/Off, Toggle, Smart, Console) providing the ability to execute any Vision.net command across the architectural control network.



*Vision.net Ceiling Occupancy Sensors  
(63059CM, 63059HB)*

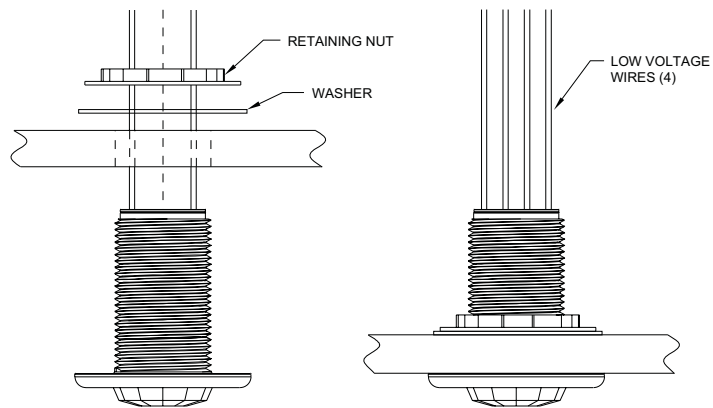
### Installation

The Ceiling Occupancy Sensor may be mounted in a junction box or directly to the ceiling depending on local code. The unit must have an unobstructed view of the area to be monitored. If the unit is subject to "false triggering" from activity beyond the desired area of coverage, a portion of the lens may be masked to achieve the desired response. Simply install the Field of View Customizing Template (provided with unit).

#### To install ceiling occupancy sensors:

- Step 1. Check for any obstructions located behind the desired mounting location.
- Step 2. Drill 1-1/2 inch hole in the desired mounting location.
- Step 3. Place Ceiling Occupancy Sensor through the hole and secure with supplied washer and locknut.
- Step 4. The lens may be removed to install the Field of View Customizing Template. Simply rotate the lens cover slightly counter-clockwise and remove.
- Step 5. Trim the template for the desired effect and install on interior of the lens. (Carefully placement of the template is necessary to ensure proper function.)

Step 6. Replace lens cover and verify that the unit is securely mounted.

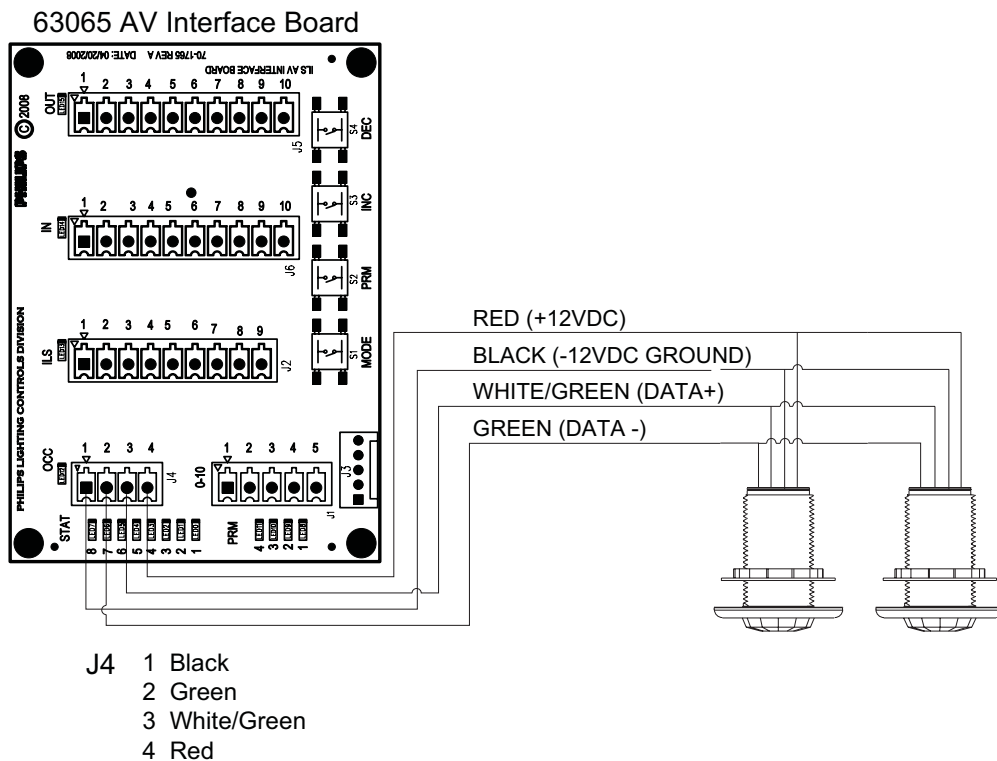


## Wiring

Ceiling Occupancy Sensors should be connected to an AV Interface Board (63065) or a Vision.net station.

### To connect wiring to ceiling occupancy sensors:

- Step 1. If conduit is required by local code, route low voltage wiring into adjacent junction box and secure with included 1/2- inch nipple.
- Step 2. Connect low voltage network to AV Interface Board with (4) #18 AWG (.75 mm<sup>2</sup>) wires according to the wiring diagram below.



**Note:** Up to eight (8) Occupancy Sensors may be linked in parallel.

See ["Configure Station Sensors" on page 74](#) for programming the sensor using Vision.net Designer.

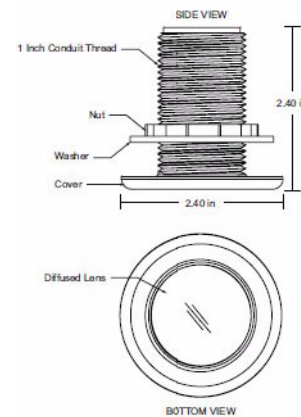
## 2. Photocell Daylighting Sensors

This section provides installation and programming instructions for the following Vision.net product:

- 63060CM - Vision.net Photocell Daylighting Sensor

### Description

The Vision.net Photocell Daylighting Sensor is a low-voltage daylighting sensor that measures changes in ambient light and controls its connected lighting loads according to the user's programming. The unit is able to decipher minor changes in light levels (such as passing cloud cover, intermittent shadowing, etc.) to prevent unwanted or inadvertent light cycling. In addition, the unit provides a programmable time-delay fade from 1 to 30 minutes for smooth light-cycling transitions. The Vision.net Photocell Daylighting Sensor is designed for use with a Vision.net Architectural Control System. When the device is connected, the sensor can dim the loads according to the space's needs for maximum energy conservation.

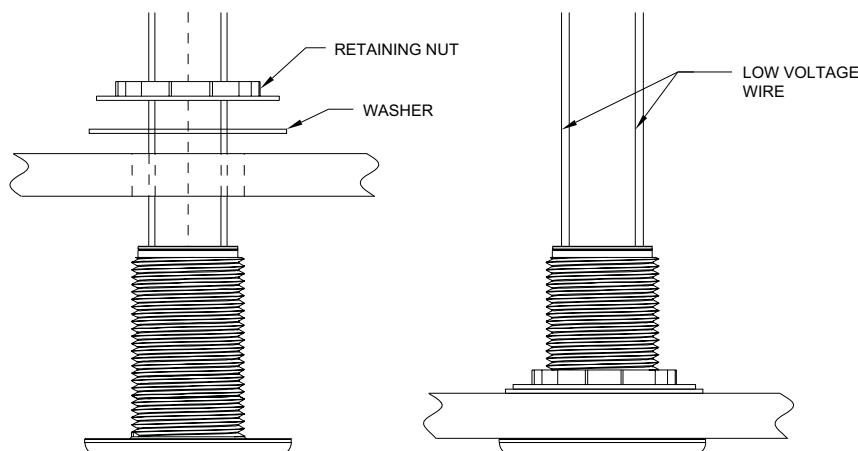


### Installation

The Photocell Daylighting Sensor may be mounted in a junction box or directly to the ceiling depending on local code. The unit must have an unobstructed view of the area to be monitored. Place the photocell near an exterior window where sunlight is most visible. Mount the photocell 1/2 the window height away from the window. Example: for a space with a 9' exterior window, mount the photocell 4-1/2' away from the window.

#### To install photocell daylighting sensors:

- Step 1. Check for any obstructions located behind the desired mounting location.
- Step 2. Drill 1-1/2 inch hole in the desired mounting location.
- Step 3. Place Photocell Daylighting Sensor through the hole and secure with supplied washer and locknut.
- Step 4. The lens may be removed to install the Field of View Customizing Template. Simply rotate the lens cover slightly counter-clockwise and remove.
- Step 5. Trim the template for the desired effect and install on interior of the lens. (Careful placement of the template is necessary to ensure proper function.)
- Step 6. Replace lens cover and verify that the unit is securely mounted.



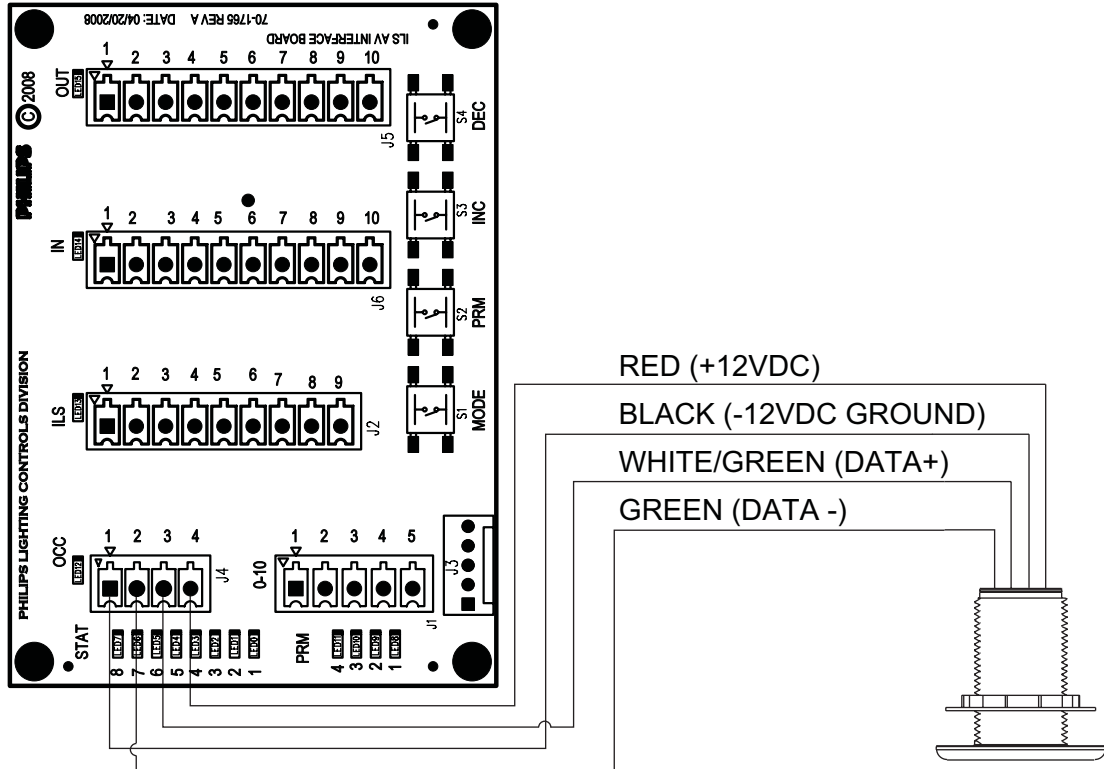
## Wiring

The Photocell Daylighting Sensor shall be connected to any Button / Slider Station or an AV Interface Board (63065).

### To connect wiring to photocell daylighting sensors:

- Step 1. If conduit is required by local code, route low voltage wiring into adjacent junction box and secure with included 1/2" nipple.
- Step 2. Connect low voltage network to Button / Slider Station or the AV Interface Board with (4) #18 AWG (.75 mm2) wires according to the wiring diagram below.

### 63065 AV Interface Board



- J4
- 1 Black
  - 2 Green
  - 3 White/Green
  - 4 Red

**Note:** Photocell sensor is shown connected to the AV Interface Board. The same 4 pin connector exists on all Button / Slider Stations for a similar connection.

# VISION.NET IR REMOTES

These are peripheral devices for external control of Vision.net products. This could be a station remote or a sensor programmer.

## 1. Station Remote (61205A)

The Vision.net Station Remote is an infrared transmitter and capable of operating over an unobstructed range of approximately 75 feet (22 meters). Within this range, scenes can be selected, raised and lowered and lighting may be turned on and off using the remote.

**IMPORTANT!** This is based on short line-of-sight operation. The receiver must be able to see the transmitter. Any obstruction between the transmitter and receiver may adversely affect the performance of the unit.

### Please read these IMPORTANT NOTES AND PRECAUTIONS

- Keep unit dry and free of debris.
- Install batteries before first time use.
- The button station must be enabled to receive the IR signal prior to the sensor working.

See "[Configure Panel](#)" on page 83 in this manual for configuration instructions.



## 2. Vision.net Remote IR Sensor Programmer (63063)

A Vision.net Remote Programmer is an optional accessory and can be used to program the sensors. It is designed to simplify programming of all Vision.net ceiling sensors and photocells.

**Note:** Configuration Changes made with the Remote Programmer will not be saved in the Vision.net Designer configuration file.

### Please read these IMPORTANT NOTES AND PRECAUTIONS

- Keep unit dry and free of debris.
- Install batteries before first time use.
- This is a Class IIIa Laser Product.
- **WARNING! Do not stare into the beam.**



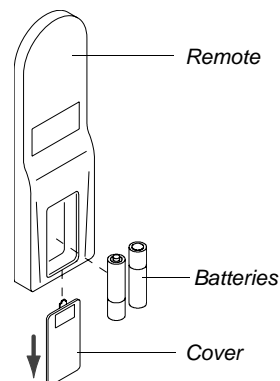
### Specifications

Laser Diode:	Class IIIa Laser Product
Wavelength:	650-670 nm
Max Output:	<5Mw

### Installing / Replacing Batteries

#### To install (or replace batteries):

- Step 1. At back of remote, remove the battery cover by sliding toward front of unit as shown at right.
- Step 2. Remove old batteries, if applicable.
- Step 3. Install two (2) AAA batteries (supplied), orienting positive (+) and negative (-) poles as shown.
- Step 4. Reinstall the battery cover.





# CEILING OCCUPANCY SENSORS

## 1. Programming with IR Sensor Remote Programmer

A Vision.net Occupancy Sensor Remote Programmer (optional accessory) can be used to program the occupancy and photocell sensors.



**IMPORTANT!** Configuration changes made with the Remote Programmer will not be saved in the Vision.net Designer software configuration file.

### To Enter Programming Mode:

- Step 1. Aim the remote at the Ceiling Occupancy Sensor and press the PGM (Program) button. All affected sensors will blink red.
- Step 2. You may now select which sensor you would like to program by "laser painting" it with the remote laser. Press and Hold the LASER button and allow the Laser beam to "hit" the sensor you want to select. Once the signal is received, the sensor will illuminate blue and is ready to receive commands. To change sensor parameters, first select the "field" that you would like to change. Programming fields include: Mode, Time, A/V Interface, Sensitivity, and Photocell Sensitivity. The following sections will explain each mode.

**Note:** If a sensor is set to a single relay, it can be used and programmed by Vision.net 4.5 Designer.

### To change the selected device(s) to be programmed:

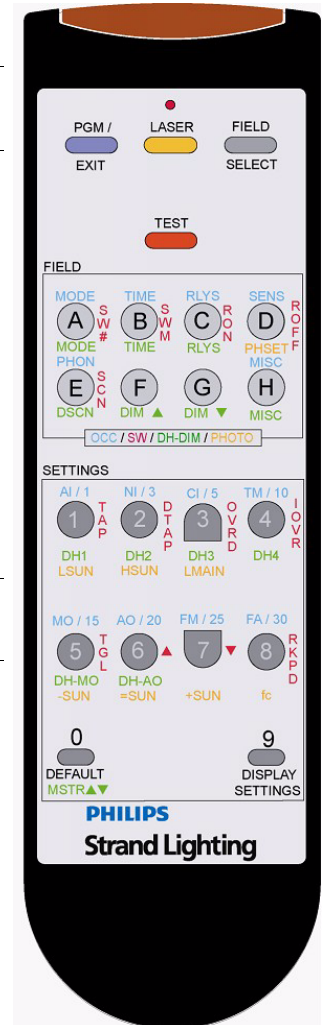
To select devices for programming, use the FIELD/SELECT button or individually select them using the LASER button. The FIELD/SELECT feature allows selection of devices to be programmed (singular occupancy, all occupancy, switches, or dimmers/photocells). The devices always start in Single Occupancy Mode.

Step 1. Enter Programming Mode. (Refer to [To Enter Programming Mode](#)).

Step 2. Press FIELD/SELECT button to toggle through modes:

- Blue = Single Occupancy Sensor
- Blue/Red = All Occupancy Sensors on network
- Red or Green = reserved for future use

**Note:** When the sensor is blue or blue/red, additional occupancy sensors may be selected or removed by "laser painting" them with the laser (LASER button).



## 2. Occupancy Sensor Programming Modes and Options

Ceiling Occupancy Sensor programming is the same for both single, multiple and all sensors on the network. Programming selections will affect all illuminated sensors.

### Mode

The MODE field allows access to intelligence level, Automatic or Manual On, and reset to factory default.

The Occupancy Sensor time-off delay can operate in four different modes. The default is **Fixed Time Mode**, which means the fixed time delay (as set by the user) is always used. The other three modes allow the sensor to automatically adjust to the space and occupancy patterns, differing in how aggressive the sensor is with saving energy.

- **Conservative Mode** will automatically adjust the time-off between 5 to 30 minutes.
- **Normal Mode** will automatically adjust the time-off between 3 and 15 minutes for enhanced energy savings.
- **Aggressive Mode** will automatically adjust the time-off delay between 1 minute and 3 minutes for maximum energy savings.

The Occupancy Sensor can be configured to operate in either a **Manual On** or **Automatic On** Mode.

- In **Manual On Mode**, the lights will only turn on when a designated switch activates the relay. The lights will turn off automatically when vacancy is detected for the time delay period.
- In the **Automatic On Mode**, the lights will automatically turn on as soon as occupancy is detected. The lights will turn off when either the designated switch deactivates the relay or automatically when vacancy is detected for the time delay.

#### To change the mode of the sensor:

Step 1. Enter Programming Mode. (Refer to ["To Enter Programming Mode:"](#) on page 35.)

Step 2. Press MODE button.

Step 3. Select intelligence level:

Setting Intelligence Level		
Button	Intelligence Level	Notes
1	Aggressive Intelligence	
2	Normal Intelligence	
3	Conservative Intelligence	
4	Fixed Timing	Factory Default

Step 4. Select activation mode:

Setting Activation Mode		
Button	Activation Mode	Notes
5	Manual On	
6	Automatic On	Factory Default
7	Factory Default Manual On	Press and hold for 3 or more seconds to factory default all settings.
8	Factory Default for Automatic On	
0	Factory Default	Fixed Timing and Automatic On

**Note:** Exit programming by pressing the PGM (Program) button or continue with programming by selecting another field.

## Time

The TIME field allows selection of the time-out period after the sensor no longer detects occupancy. Periods may be selected from 1 to 30 minutes.

**Note:** Increasing the time delay will lower the possibility of a false Off trigger, but will also lower the energy savings.

#### To change the time out period of the sensor:

Step 1. Enter Programming Mode. (Refer to ["To Enter Programming Mode:"](#) on page 35.)

Step 2. Press TIME button.

Step 3. Select time-out period by pressing the appropriate button:

Setting Time-Out Period		
Button	Time Out	Notes
1	1 minute	
2	3 minutes	
3	5 minutes	
4	10 minutes	
5	15 minutes	Factory Default
6	20 minutes	
7	25 minutes	
8	30 minutes	
0	Factory Default	15 minutes

**Note:** Exit programming by pressing the PGM (Program) button or continue with programming by selecting another field.

## Relay Selection

When an occupancy sensor is used with Contact Relay Pack, the RLYS (Relays) Select Button is used to program which Relay(s) are controlled by the occupancy sensor. One or more Relays can be programmed to be switched by the occupancy sensor, with the factory default set to control All Relays (1-8).

When the occupancy sensor is connected to a Vision.net Button Station, it is configured to trigger the 8 logical inputs on the stations. Detected motion will trigger the 'Button Down' action. At the end of motion timeout it will trigger the 'Button Up' action. When All Relays are selected (factory default), then the Button Station will treat it as Sensor #1.

Use Designer for Vision.net 3 to define the macro action associated with this input (see ["Button Type or Action" on page 85](#) and ["Configure Station Sensors" on page 74](#) in this manual).

### To change the Relay / Input selection of the sensor:

Step 1. Enter Programming Mode. (Refer to ["To Enter Programming Mode:" on page 35.](#))

Step 2. Press RLYS button.

Step 3. Use buttons 0 to 8 to select which Relay / Input is to be controlled by the sensor.

Selecting Relays Controlled by Sensor		
Button	Relay / Button	Notes
1	Relay 1 / Button 1	Factory Default
2	Relay 2 / Button 2	Factory Default
3	Relay 3 / Button 3	Factory Default
4	Relay 4 / Button 4	Factory Default
5	Relay 5 / Button 5	Factory Default
6	Relay 6 / Button 6	Factory Default
7	Relay 7 / Button 7	Factory Default
8	Relay 8 / Button 8	Factory Default
0	Factory Default	Current Mode Only

**Note:** Exit programming by pressing the PGM (Program) button or continue with programming by selecting another field.

## Occupancy Sensor Sensitivity

Part of the superior performance of the Ceiling Occupancy Sensor involves the increased sensitivity of the sensor system. The three settings are Low, Medium, and High. Each application may be slightly different and the preferences of each user might be different. The default setting (Medium) will be adequate for most situations. The settings are described as follows:

- **Low:** Lowest level of detection setting - when less detection is required - occupants are close to the sensor or movements within the space are more pronounced. This level may result in lights turning off with reduced activity.
- **Medium (default):** Default setting - medium level of detection to fit most applications.
- **High:** Highest level of detection - movements and activity within the space are less pronounced. This level increases the possibility of false triggering.

**To change sensitivity of the occupancy sensor:**

Step 1. Enter Programming Mode. (Refer to ["To Enter Programming Mode:" on page 35.](#))

Step 2. Press SENS button.

Step 3. Select the desired level of sensitivity.

Selecting Occupancy Sensor Sensitivity		
Button	Sensitivity	Notes
1	Low	
2	Medium	Factory Default
3	High	
0	Factory Default	Medium

**Note:** Exit programming by pressing the PGM (Program) button or continue with programming by selecting another field.

## Occupancy Sensor - Photocell Sensor Sensitivity

There is a photo eye (photocell) in the occupancy sensor which can prevent the sensor from automatically turning on the lights if the light level in the room is already higher than a set level. This feature can be enabled or disabled - with the factory default being disabled.

The PHOTOCELL SENSITIVITY field allows selection of the internal photocells sensitivity levels, as well as disable.

**To change sensitivity of the photocell sensor:**

Step 1. Enter Programming Mode. (Refer to ["To Enter Programming Mode:" on page 35.](#))

Step 2. Press PHON button.

Step 3. Set photocell sensitivity by manually selecting a time or let the unit "capture" a light level as follows:

- Use buttons 0 to 8 to select sensitivity.

Selecting Photocell Sensor Sensitivity		
Button	Sensitivity	Notes
1	Low Ambient	
2	Low-Medium Ambient	
3	Medium-Low Ambient	
4	Medium Ambient	
5	Medium-High Ambient	
6	High-Medium Ambient	
7	High Ambient	
8	Disabled	Factory Default
0	Factory Default	Disabled

- To let the unit "capture" the present room ambient, press and hold button 8 for 3-4 seconds. The unit will turn off the lights, take a snapshot of the current room ambient, and then turn the lights back on.

**Note:** Exit programming by pressing the PGM (Program) button or continue with programming by selecting another field.

## Miscellaneous Options (Enable Buzzer/Intelligent Off/Sensor)

The MISC field allows the audible buzzer and/or the complete occupancy sensor to be enabled or disabled.

**To activate/deactivate the audible buzzer or entire occupancy sensor:**

Step 1. Enter Programming Mode. (Refer to ["To Enter Programming Mode:" on page 35.](#))

Step 2. Press MISC button.

Step 3. Select desired parameters:

Miscellaneous (MISC) Options		
Button	Option	Notes
1	Enable Buzzer	Factory Default
2	Disable Buzzer	
3	Enable Status LED	Factory Default
4	Disable Status LED	
5	Enable Intelligent OFF	Factory Default
6	Disable Intelligent OFF	
7	Enable Sensor	Factory Default
8	Disable Sensor	
0	Factory Default	Enables buzzer and sensor

**Note:** Exit programming by pressing the PGM (Program) button or continue with programming by selecting another field.

## Test Mode

The TEST feature allows testing of the system without having to wait extended periods of time for the loads to time out. While in Test Mode, the timer functions at a rate of 1 second per 1 minute of decay. For example, a 30-minute time-out period would become a 30-second time-out period. There is a 10 second minimum. During testing, the sensor will blink RED to indicate it is in the Test Mode, BLUE when it detects motion, and GREEN when it is timing out.

**Note:** You may alternate between Test Mode and Programming Mode by simply pressing the TEST button anytime during the process.

**To enter Test Mode:**

Step 1. Enter Programming Mode. (Refer to ["To Enter Programming Mode:" on page 35.](#))

Step 2. Press TEST button. All sensors in Test Mode will blink red.

Step 3. Confirm all sensors, relays and switches are working properly.

Step 4. Press TEST button again to exit Test Mode.

## LED Display

When in the Programming Mode, the LEDs display the following information:

- Red LED - Always On.
- Blue LED - Blinks 1 to 6 times to indicate the Field being displayed or set (see Field/ Setting Table below).
- Green LED - Blinks 1 to 9 times to indicate the present setting of the Field (see Field/ Setting Table below).

Field / Setting Table	
Blue LED Blinks (FIELD)	Green LED Blinks (SETTING)
1 - Mode	1 - Aggressive Intelligence 2 - Normal Intelligence 3 - Conservative Intelligence 4 - Fixed Timing ( <i>Factory Default</i> )
2 - Manual / Automatic	1 - Manual 2 - Automatic ( <i>Factory Default</i> )
3 - Time	1 - 1 minute 2 - 3 minutes 3 - 5 minutes 4 - 10 minutes 5 - 15 minutes ( <i>Factory Default</i> ) 6 - 20 minutes 7 - 25 minutes 8 - 30 minutes
5 - Sensitivity	1 - Low 2 - Medium ( <i>Factory Default</i> ) 3 - High
6 - Photocell On Sensitivity	1 - Low, .7 High 8 - Disabled ( <i>Factory Default</i> )

### To set a field:

- Step 1. Enter Programming Mode. (Refer to ["To Enter Programming Mode:" on page 35.](#))
- Step 2. After entering programming mode, the Field LED (Blue) will blink one time (Mode Set), display the present setting (Green blinks), and then repeat the pattern.
- Step 3. Each press of the Field Button will select the next Field.
- Step 4. Pressing the button after the last field will exit the Programming Mode.
- Step 5. Once the Field is selected (proper number of Blue blinks), press the Setting Button one or more times to change the Field setting. Verify by observing the number of blinks.
- Step 6. You can select the factory default by pressing and holding the Setting Button for 3 seconds.

**Note:** Each tap of the Setting Button will advance the setting by one. Example: Three taps sets the Field setting to 3 (taps must be less than 2 seconds apart). After 2 or more seconds following the last tap, the Setting Button will reset back to 1 with the next tap. Example: Three taps, delay of 2 or more seconds, and then two taps will set the Field setting to 2.

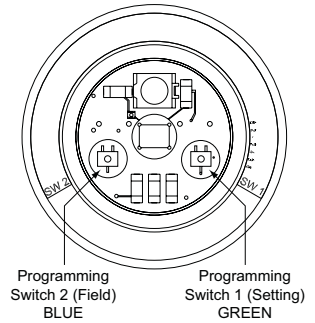
### To set Factory Default for All Fields:

- Step 1. Enter Programming Mode. (Refer to ["To Enter Programming Mode:" on page 35.](#))
- Step 2. When entering the Programming Mode, instead of hold the Field Button for 10 seconds.
- Step 3. After 10 seconds the Sensor will reset the Fields back to Factory Default, buzz long, and exit the Programming Mode.

### 3. Occupancy Sensor Programming - Manual Configuration

#### Using Programming Switches

There are two programming switches (buttons) on the Ceiling Occupancy Sensor which can be used to Display and Modify the Sensor's Settings. Programming Switch 2, the "Field" Button (turns on the Blue LED when pressed) is used to select the Field you wish to display or modify. Programming Switch 1, the "Setting" Button (turns on the Green LED when pressed) is used to set the value of the selected Field. By using both buttons, the Sensor can be manually configured for most applications.



#### To enter Manual Programming Mode:

- Step 1. Unscrew Lens Cover on Ceiling Sensor to access manual programming buttons.
- Step 2. Press and hold the Field Button for 3 seconds. After 3 seconds the Red LED will turn on indicating the unit is in the Manual Programming Mode. Release the button.

#### To exit Manual Programming Mode:

Use one of three ways to exit the Programming Mode:

- a. Keep tapping the FIELD Button until Ceiling Sensor exits Programming Mode.
- b. Hold the FIELD Button for 3 seconds.
- c. Stop tapping the buttons. The Ceiling Sensor will exit the Programming Mode 1 minute after the last button press.

### 4. Occupancy Sensor Troubleshooting Guide

The following troubleshooting guide addresses common issues with the Occupancy Sensor.

Symptom	Cause	Correction
Lights do not come on either manually or automatically.	Lamp(s) burned out or missing.	Replace lamp(s) in fixtures.
	Circuit breaker off.	Turn on circuit breaker.
Lights do not come on automatically.	Sensor is in Manual On mode.	Use Manual Mode if local code or installation requires.
		Reconfigure sensor to Automatic Mode, if allowed by local code or installation requirements.
Lights are on all the time.	Sensor sensitivity setting not appropriate.	Lower sensor sensitivity.
	Wire connections are faulty.	Recheck all wire connections. <b>IMPORTANT! Turn off circuit breaker before servicing.</b>
	Shorted or damaged device.	Replace sensor with new unit.
Remote does not turn on lights.	Wire connections are faulty.	Recheck all wire connections. <b>IMPORTANT! Turn off circuit breaker before servicing.</b>
Occupancy outside the desired space triggers sensor	Non-ideal placement or no mask is being used.	Use proper masking to mask unwanted areas.
	Sensor sensitivity setting not appropriate.	Lower sensor sensitivity.
No audible warnings before lights turn off.	Audible warning is disabled.	Enable audible warning tones.
Lights turn off, even though room is occupied.	Insufficient movement, frequency or amount.	Increase Time Out or increase sensor sensitivity.
Lights remain on too long when room is unoccupied.	Time Off delay too long.	Decrease Time Off delay or set Logic/Timer Mode accordingly.
Sensor is not reacting to programming from IR remote control.	Batteries are expired in IR remote.	Replace batteries.
	Sensor lens is obstructed or dirty.	Clean sensor lens. <b>WARNING! Do not use harsh chemicals or cleaners. Use a lint-free cloth only.</b>

# PHOTOCELL (DAYLIGHTING) SENSORS

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## 1. Photocell Programming Remote

Vision.net Photocell Sensors use the same IR programming remote (63063) as the Occupancy Sensors. Refer to ["Vision.net Remote IR Sensor Programmer \(63063\)" on page 34](#) for more information on this remote.

## 2. Programming with IR Sensor Remote Programmer

A Vision.net IR Sensor Remote Programmer (optional accessory) can be used to program the photocell and occupancy sensors.

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**IMPORTANT!** Configuration changes made with the Remote Programmer will not be saved in the Vision.net Designer software configuration file.

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### To Enter Programming Mode:

- Step 1. Aim the remote at the Photocell Daylighting Sensor and press the PGM (Program) button. All affected sensors will blink red.
- Step 2. You may now select which sensor you would like to program by "laser painting" it with the remote laser. Press and Hold the LASER button and allow the beam to "hit" the sensor you want to select. Once the signal is received, the sensor will illuminate Green and is ready to receive commands

## 3. Photocell Sensor Programming Modes and Options

The following sections show how to program the various available options and parameters in the photocell sensor using the IR remote.

### Programming Mode

#### To set unit to receive programming:

- Step 1. Enter Programming Mode (Refer to [To Enter Programming Mode:](#)).
- Step 2. Tap FIELD SELECT button until the Photocell Sensor lights up its Green LED (Dimmer and Photocell Mode).

### Programming Daylight Harvesting Options

#### Setting Up Daylight Harvesting

- Step 1. Tap MODE (A) button to select the Daylight Harvesting Mode.
- Step 1a. Tap buttons 1-6 to select the following modes:
- 1 (DH1) - Daylight Harvesting RLYS Button Control Open Loop (RLYS Button(s) On with Low Sunlight and Off with High Sunlight).
  - 2 (DH2) - Daylight Harvesting Dimmer Control Open Loop (Move towards Preset 1 with Low Sunlight and Preset 2 with High Sunlight).
  - 3 (DH3) - Daylight Harvesting Dimmer Control Closed Loop (Move towards Preset 1 with Low combined Room Ambient and Sunlight and Preset 2 with High combined Room Ambient and Sunlight).
  - 5 (DH-MO) - Tap to set the Photocell in Manual On Mode:
    - a – When in DH1 Mode, the Photocell is enabled whenever RLYS Button 1 is on. This allows it to be controlled by a Sensor controlling RLYS Button 1.
    - b – When in DH2 and DH3 Modes, the Photocell is enabled whenever its assigned RLYS Buttons are On and the system is in Preset 1 (On Preset).



**6 (DH-AO)** - Tap to set the Photocell in Auto Mode. Auto Mode is used whenever the Photocell is powered up. It will always turn on RLYS Buttons and set Preset 1. This mode is used whenever the Photocell Sensor is the only sensor in the system and the lights are externally controlled by a dimmer or relay cabinet.

**0 (DEFAULT)** - Factory Default (DH2 – Manual On).

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**Note:** DH1 and DH2 are considered Open Loop, in that the Photocell will make adjustments based on detected sunlight (artificial or fluorescent lighting has less affect).

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**Note:** DH3 is considered Closed Loop, in that the Photocell will make adjustments based on artificial or fluorescent light (sunlight has less affect).

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Step 2. Tap TIME (B) button to select response timing (speeds up or slows down the control of relay(s) or dimmers).

Step 2a. Select Response Time buttons 1-8:

Photocell Response Time Options		
Button	Option	Notes
1	1 minute	Most aggressive for Dimmer Raise / Lower Control
2	3 minutes	
3	5 minutes	
4	10 minutes	
5	15 minutes	
6	20 minutes	
7	25 minutes	
8	30 minutes	Slowest for Dimmer Raise/Lower Control
0	Factory Default	5 minutes

---

**Note:** For DH1 Mode, the Response Time is the time the sunlight is either below the Low Sunlight setting or above the High Sunlight setting before RLYS Button ON/OFF commands are transmitted.

---



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**Note:** For DH2 and DH3 Modes, the Response Time selects how rapidly the dimmers are adjusted with a change in light. Response times will vary based on how much and how rapid the light changes. The dimmers can respond in as little as 5 seconds or as much as 30 minutes.

---

Step 3. Tap AV (C) to select the AV Button Input(s) to control when in DH1 Mode. Tap AV (C) to select the AV Button Input(s) that need to be On when in DH2 or DH3 Mode to enable the Photocell.

Step 3a. Tap buttons 1-8 to select RLYS Buttons:

Selecting Relays Controlled by Sensor		
Button	Relay / Button	Notes
1	RLYS Button 1	Factory Default
2	RLYS Button 2	Factory Default
3	RLYS Button 3	Factory Default
4	RLYS Button 4	Factory Default
5	RLYS Button 5	Factory Default
6	RLYS Button 6	Factory Default
7	RLYS Button 7	Factory Default
8	RLYS Button 8	Factory Default
0	Factory Default	No RLYS Buttons Assigned

Step 4. Tap SENS (D) to Capture or Adjust the Low and High Sunlight Settings.

Step 4a. When the Sunlight is at its Low Level (early morning or late evening), Press and Hold the LSUN (1) button for 3 or more seconds. Release the button when the Photocell Sensor goes blank. After 5 seconds the Sensor will take a Snapshot of the room and set the Low Sunlight Setting.

A – The Sunlight Setting can be modified by Tapping the –SUN (5) button to decrease the level in 5% increments (max is -80%).

B – The Sunlight Setting can be set back to its Snapshot Level by Tapping the =SUN (6) button.

C – The Sunlight Setting can be modified by Tapping the +SUN (7) button to increase the level in 5% increments (max is +100%).

Step 4b. When the Sunlight is at its High Level (mid-day), Press and Hold the HSUN (2) button for 3 or more seconds. Release the button when the Photocell Sensor goes blank. After 5 seconds the Sensor will take a Snapshot of the room and set the High Sunlight Setting.

A – The Sunlight Setting can be modified by Tapping the –SUN (5) button to decrease the level in 5% increments (max is -80%).

B – The Sunlight Setting can be set back to its Snapshot Level by Tapping the =SUN (6) button.

C – The Sunlight Setting can be modified by Tapping the +SUN (7) button to increase the level in 5% increments (max is +100%).

## Testing Daylight Harvesting

### To test daylight harvesting settings and operation:

Step 1. Tap TEST button to put the system in TEST Mode. All Sensors will start flashing once every few seconds.

- The color of the Photocell Sensor will be based on whether it is sensing Sunlight below the Low Sunlight Level (Red), between the Low and High Sunlight Levels (Green), or above the High Sunlight Level (Blue).
- The control of the RLYS Buttons and Dimmers will be accelerated during Test Mode.

Step 2. While in test Mode the sensed Sunlight can be electronically adjusted by:

- Tapping the -SUN (5) to reduce it in 5% increments,
- =SUN (6) to return it to actual level, and
- +SUN (7) to increase it in 5% increments.
- This allows the Photocell to be tested (observe the colors) without waiting for the actual sun to change.

Step 3. Tap TEST button a second time to go back to Parameter Setting Mode.

## 4. Photocell Sensor Troubleshooting Guide

The following troubleshooting guide addresses common issues with the Photocell Sensor.

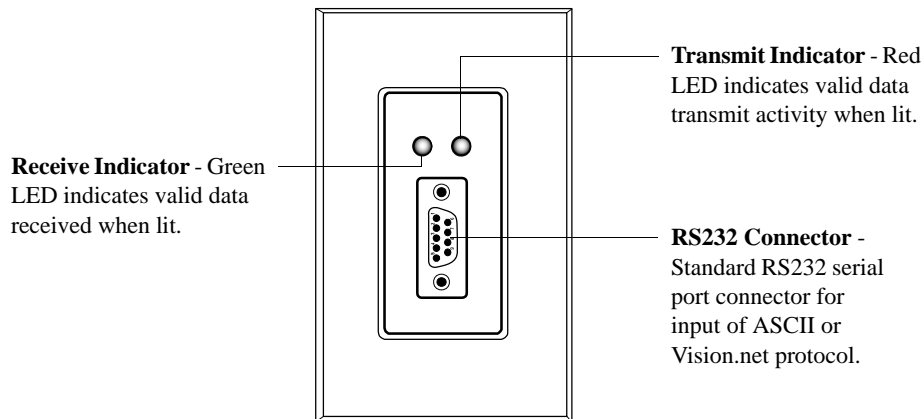
Symptom	Cause	Correction
Lights do not come on either manually or automatically.	Lamp(s) burned out or missing.	Replace lamp(s) in fixtures.
	Circuit breaker off.	Turn on circuit breaker.
	Wire connections are faulty.	Recheck all wire connections. <b>IMPORTANT! Turn off circuit breaker before servicing.</b>
Lights are too bright or not bright enough.	Ambient light level(s) is/ are not set correctly.	Readjust Preset 1 (adjusts Maximum Lamp Level) and/or Preset 2 (adjusts Minimum Lamp Level). Or Recapture the Low Sunlight and High Sunlight Levels. See Programming the Photocell Sensor.
Controlled lights react too quickly to ambient light changes.	Response Time not set properly.	Reprogram Response Time to a higher time setting.
The wrong fixtures react to the light levels.	Improper relays or dimmers are assigned to react to daylight harvesting control.	Reprogram to control the proper relays or dimmers.
Photocell Daylighting Sensor is not reacting to sun light level changes.	Unit is not properly programmed.	Verify programming and reprogram as desired.
	Unit is not located in the proper position to see sunlight changes.	Relocate daylighting sensor to view ambient (sunlight).
Sensor is not reacting to programming from IR remote control.	Batteries are expired in IR remote.	Replace batteries.
	Sensor lens is obstructed or dirty.	Clean sensor lens. <b>WARNING! Do not use harsh chemicals or cleaners. Use a lint-free cloth only.</b>

# RS232 SERIAL INTERFACE PORT

## 1. Overview

The RS232 Serial Interface Port (Strand Part No: 63025) allows integration with the Vision.net Network using standard RS232 communication. The RS232 Interface has the ability to receive and transmit data in two modes: Strand Vision.net (SVN) Protocol (binary) and Show Control Protocol (standard ASCII). The unit will sense the incoming protocol and automatically switch to the proper mode.

The RS232 Interface accepts standard 9-pin RS232 serial cable connections of up to 25 feet (7.5 meters).



**Note:** When sending/receiving Vision.net commands, the PC requires the use of Vision.net Designer software. Vision.net Designer software is available at [www.strandlighting.com](http://www.strandlighting.com)

## 2. Installation

The Vision.net Network consists of a single CAT5e cable connecting all modules in a daisy chain manner. All units connect to the network using a 9-pin plug-in connector (included).

**To install the RS232 serial port interface:**

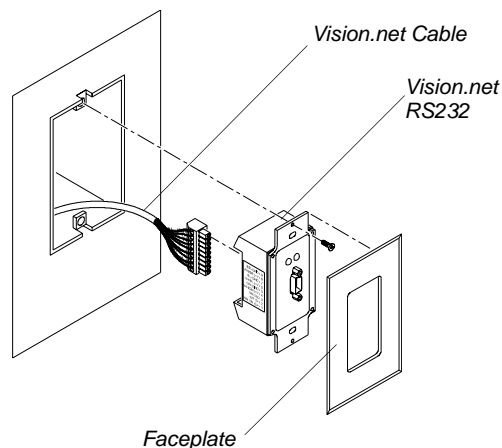
- Step 1. Unpack unit and inspect for any signs of shipping damage. Ensure that two mounting screws are included.
- Step 2. Connect Vision.net Network Cable to 9-pin connector at back of RS232 Interface.

RS232 Serial Port Interface Connections (Belden #1583A)		
Pin #	Signal	Wire Color
1	DATA +	White / Orange
2	DATA -	Orange
3	No Connection	N/A
4	+ NET V	White / Green
5	Ground	Green
6	+ NET V	White / Blue
7	Ground	Blue
8	+ NET V	White / Brown
9	Ground	Brown

Step 3. Insert RS232 Interface into standard deep rough-in box (not included). Secure with two supplied mounting screws.

Step 4. Snap faceplate into place.

**Note:** A standard IBM-compatible computer can be connected to the Vision.net Network using the RS232 Interface. The port accepts a standard one-to-one 9-pin serial cable up to 25 feet (7.5 meters) in length.



### 3. Operation

Here are the operational aspects of the RS232 Serial Interface Port

#### Communication Modes

The RS232 Serial Interface Port operates in one of two modes: Vision.net (binary) or Show Control (ASCII).

Vision.net Mode	Show Control Mode
8 Bit	8 Bit
1 Stop Bit	1 Stop Bit
19200 Baud	9600 Baud
Protocol: Binary	Protocol: ASCII

The unit will sense the incoming protocol and automatically switch to the proper mode.

**Note:** It may take several messages from either the third-party system or the Vision.net Designer PC before the RS232 Interface switches modes.

### 4. Communications

These are the communication protocols available for use with the RS232 Serial Port Interface.

- Vision.net Protocol (binary)
- ASCII

#### ASCII Codes

ASCII Code for Vision.net Show Control Protocol.

Designer Commands	ASCII RS232	Notes
Print Command Help Page	HH<cr>	
Start Preset	SP rrr pp tt<cr>	rrr = Room (1 - 255), pp = Preset (1-32, 0 = Off), tt = Rate Index (see "Rate Index" on page 47)
Toggle Down	TD rrr ccc<cr>	rrr = Room (1 - 255), ccc = Channel (1 - 127)
Toggle Up	TU rrr ccc<cr>	
Learn Preset	LP rrr pp<cr>	rrr = Room (1 - 255), pp = Preset (1-32, 0 = Off)
Slider Level	SL rrr ccc ll<cr>	rrr = Room (1 - 255), ccc = Channel (1 - 127), ll = Level (0 - 255)
Learn Submaster	LS rrr ss<cr>	rrr = Room (1 - 255), ss = Submaster Index (1 - 16)

Designer Commands	ASCII RS232	Notes
Manual	MN rrr ggg lll ... lll<cr>	rrr = Room (1 - 255), ggg = Grand Master Level (0 - 255), lll = Level (0 - 255)
Expander Group	EG rrr ee ff lll ... lll<cr>	rrr = Room (1 - 255), ee = Expander Group (0 - 15), ff = Index of First Channel, lll = Level (0 - 255)
Start Raise	RA rrr qq<cr>	rrr = Room (1 - 255), qq = Coded Channel (0: Reserved, 1- 127: Channels 1 to 127, 128: All Channels in Room, 129 - 255: Channel in Preset 1 - 126, 255: Current Preset Channels) <i>Note: Sending a second &lt;cr&gt; after a RA or LW command will automatically send the proper ST command.</i>
Start Lower	LW rrr qq<cr>	
Stop Raise/Lower	ST rrr qq<cr>	
Record Blind	RB rrr pp ggg lll ... lll<cr>	rrr = Room (1 - 255), pp = Preset (1-32, 0 = Off), ggg = Grand Master Level (0 - 255), lll = Level (0 - 255)
Lock Button	LB idd n<cr>	idd = _____, n = Button/LED (1-255)
Unlock Button	UB idd n<cr>	
Smart On	SN idd n<cr>	
Smart Off	SF idd n<cr>	
Define Room Link	DR x fff rrr ... rrr<cr>	x = Links (0: Clear All Links / 1: Do Not Clear), fff = First Room (1-255), rrr = Room (1 - 255)
Submaster Level	SB rrr ss lll<cr>	rrr = Room (1 - 255), ss = Submaster Index (1-16), lll = Level (0 - 255)
Take Control (sub)	TC rrr ggg lll ... lll<cr>	rrr = Room (1 - 255), ggg = Grand Master Level (0 - 255), lll = Level (0 - 255)
Set Channel	SC rrr ccc lll tt<cr>	rrr = Room (1 - 255), ccc = Channel (1 - 127), lll = Level (0 - 255), tt = Rate Index (see <a href="#">"Rate Index" on page 47</a> )
Set Mode	SM mm<cr>	mm = Mode (0 = All Modes)
Send Mimic	MC idd n a<cr>	idd = _____, n = Button/LED (1-255), a = Action (0/1= Off/On or Button Up/Down for Send Mimic Command) (0/1= Button Down/Up for Console Button Command) (0/1= LED Off/On for Console LED Command)
Console Button	CB idd n a<cr>	
Console LED	CL idd n a<cr>	

## Rate Index

For use with codes as called out in ["ASCII Codes" on page 46](#).

Value	Meaning
0	Instant
1	1 second
2	2 seconds
3	3 seconds
4	5 seconds
5	7 seconds
6	10 seconds
7	15 seconds
8	30 seconds
9	1 minute
10	5 minutes
11	15 minutes
12	30 minutes
13	60 minutes

# VISION.NET DMX512 INTERFACE (63054)

## 1. Overview

The section provides programming and installation instructions for the following Vision.net products:

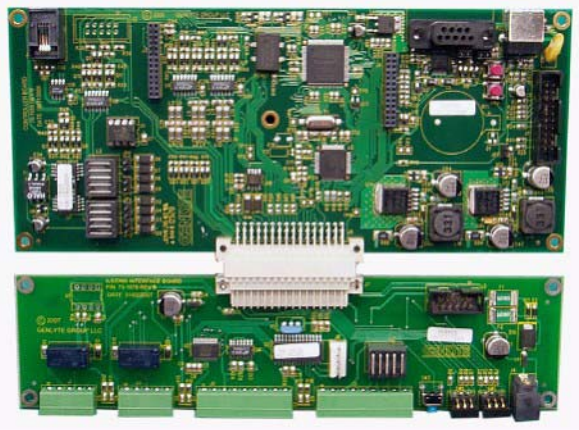
- 63054 Vision.net DMX512 Interface

Please read all instructions before installing or using this product.



### IMPORTANT INFORMATION. PLEASE READ!

This unit is intended for installation in accordance with the National Electric Code® and local regulations. It is also intended for permanent installation in indoor applications only. Before any electrical work is performed, disconnect power at the circuit breaker or remove the fuse to avoid shock or damage to the control. It is recommended that a qualified electrician perform this installation.



### Important Safeguards

- 1) When using electrical equipment, basic safety precautions should always be followed including the following:
- 2) READ AND FOLLOW ALL SAFETY INSTRUCTIONS.
- 3) Do not use outdoors.
- 4) Do not mount near gas or electric heaters.
- 5) Equipment should be mounted in locations and at heights where it will not readily be subjected to tampering by unauthorized personnel.
- 6) The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition.
- 7) Do not use this equipment for other than intended use.
- 8) Refer service to qualified personnel.

### SAVE THESE INSTRUCTIONS.



**WARNING!** You must have access to a main circuit breaker or other power disconnect device before installing any wiring. Be sure that power is disconnected by removing fuses or turning the main circuit breaker off before installation. Installing the device with power on may expose you to dangerous voltage and damage the device. A qualified electrician must perform this installation.



**WARNING!** Refer to National Electrical Code® and local codes for cable specifications. Failure to use proper cable can result in damage to equipment or danger to persons.



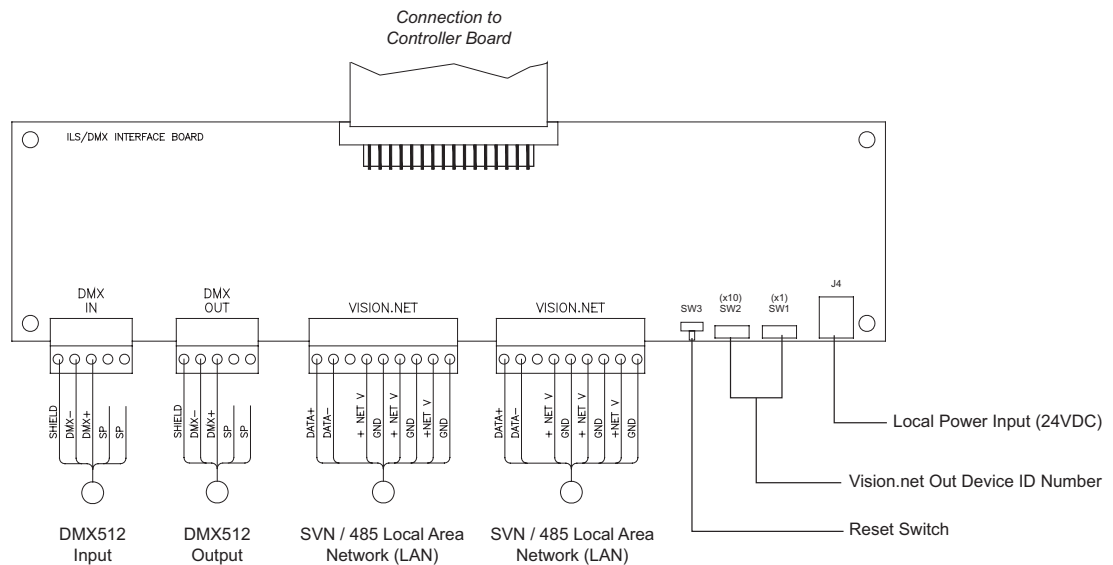
**CAUTION:** Wire openings **MUST** have fittings or lining to protect wires/cables from damage. Use 90° C copper wire only!

## 2. Installation

The Vision.net Network consists of a single CAT5e cable connecting all modules in a daisy chain manner via RS-485. All units connect to the network using a 9-pin plug-in connector (included).

**To install Vision.net DMX Interface:**

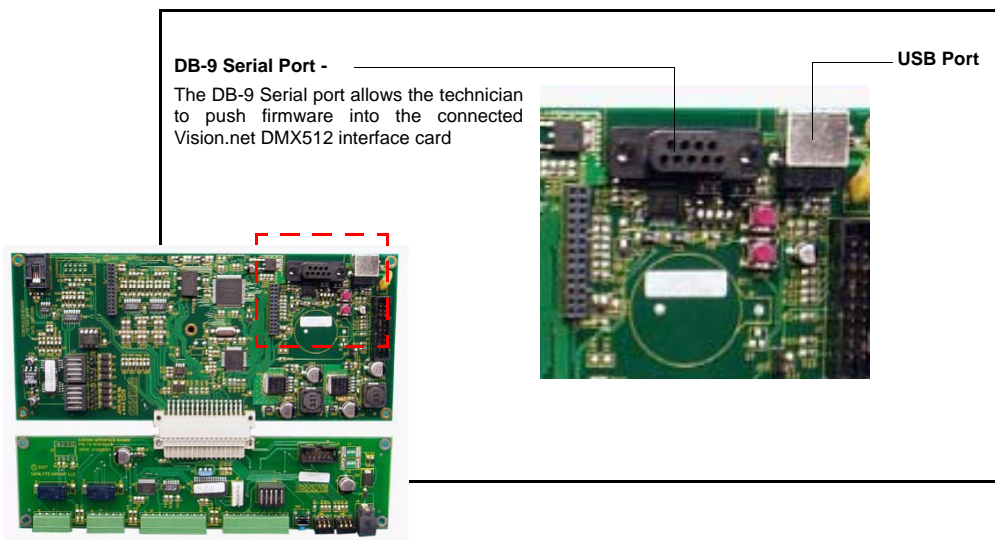
- Step 1. Unpack unit and inspect for any signs of shipping damage.
- Step 2. Connect Vision.net Network Cables to 9-pin connector at back of the panel interface.
- Step 3. Connect DMX512 Cables to 5-pin connector at back of the panel Interface.



- Step 4. Set the ID Address for the card using the rotary switches at the back of the panel interface.
- Step 5. Connect power at the back of the panel interface. If provided, the interface will pull power from Vision.net LAN.

**Note:** Use only wire specified on system drawings. All wiring must be daisy chained only.

Figure 2 shows the DB-9 Serial and USB Ports on the larger PCB of the Vision.net DMX512 interface.



**Figure 2: Vision.net DMX512 Interface**

**Note:** The serial connector shall not function as in the Vision.net RS-232 Interface. Contact Strand Lighting or your local Authorized Service Center for this service.

## 3. Configuration and Setup

### Uploading Configuration Data through the USB Port

The USB port allows a laptop to connect to the Vision.net DMX512 interface card via a USB A to B cable. Once connected, Vision.net 4.5 Designer Software can be used to configure any device on the Vision.net system, including the Vision.net DMX512 interface card that the laptop is connected to. See [Figure 2](#) for more information.

**In order for this feature to work, a driver needs to be installed on the computer first.**

Step 1. Download Vision.net Designer from [www.strandlighting.com](http://www.strandlighting.com).

Step 2. Install the driver.

Step 3. Set the appropriate serial port in Vision.net Designer. The computer will then see the port as a USB to Serial Adapter.

### Setting the Vision.net Network ID

Vision.net products are controlled by the Vision.net System protocol. All Vision.net devices must be given an ID (or address), which identifies the device on the network and allows it to avoid network collisions when transmitting data. Standard IDs are in the range of 1 to 255. The Network ID for the DMX512 Interface will be pre-assigned at 1 by the factory and will need to be set to the required address and programmed as required for your installation.

The Vision.net DMX512 Interface is configured and programmed using the Vision.net 4.5 Designer Software. To obtain the software, please download it directly from [www.strandlighting.com](http://www.strandlighting.com).

- Set the ID Address for the card using the rotary switches at the back of the panel interface.

### Configuration

Output devices are devices that connect to the Vision.net Network and drive lights or other controllable elements. These are typically the Strand Lighting C21, EC21, R21, A21 dimmer racks and Contact Relay Racks. DMX512 only devices may also be controlled using the Vision.net DMX512 Interface.

---

**Note:** For configuration instructions when using Vision.net 4.5 Designer, please proceed to the ["Add an Output Device" on page 97](#) section in this manual.

---

## 4. Operation

### Selecting a Scene

Use an 7-button station provides access to seven Scenes (1 - 7). To select a Scene, press the appropriate button on the keypad. The LED will illuminate to show the selected scene.

### Recording a Scene

If the button station does not have the "Learn Lock" feature enabled, pressing and holding the button on for 3 or more seconds will record the current state into the scene. The LED for the scene will then illuminate to confirm that it has been recorded.

### DMX 512 Input

If there is a DMX512 signal present on the DMX512 input J1, you can snapshot the levels of the DMX512 for channels in the selected room that you are recording into. You can also configure the way that recorded scenes combine with the current DMX512 signal being sent into the card. See [Recording a Scene](#).



## 5. Specifications

### Electrical

Input Power:	+18-26 VDC (powers from Vision.net network)
Current:	Up to 2A
Temperatures:	Storage: -25° to 85° C
	Operating: 0° to 40° C
	Relative Humidity: 30-90% (non-condensing)

### Communications

This is the communication protocol available.

- Vision.net Protocol (SVN)
- DMX512

### Connection Pin-Outs

#### Connectors J5 + J6 Vision.net

Vision.net DMX512 Interface Vision.net Connections (Belden #1583A)		
Pin #	Signal	Wire Color
1	DATA +	White / Orange
2	DATA -	Orange
3	No Connection	N/A
4	+ NET V	White / Green
5	Ground	Green
6	+ NET V	White / Blue
7	Ground	Blue
8	+ NET V	White / Brown
9	Ground	Brown

#### Connector J1 - DMX512 In

Vision.net DMX512 Interface DMX Input Connections	
Pin #	Signal
1	Shield
2	DATA -
3	DATA +
4	Not Used
5	Not Used

#### Connector J2 - DMX512 Out

Vision.net DMX512 Interface DMX Output Connections	
Pin #	Signal
1	Shield
2	DATA -
3	DATA +
4	Not Used
5	Not Used

# AUDIO VISUAL INTERFACE (63065)

## 1. Overview

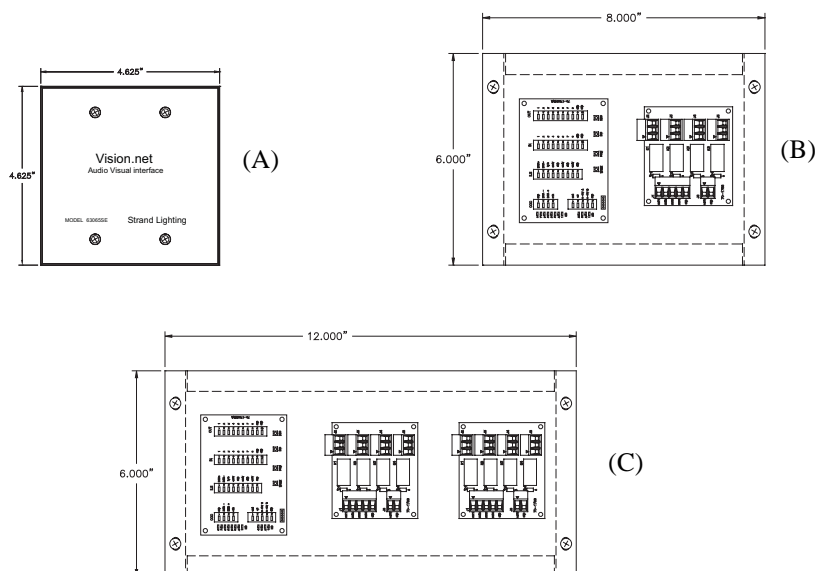
The AV Interface Board is designed as a standard Vision.net station but without the buttons and sliders. It will function just like a Vision.net button station. This allows custom panels to be built with custom buttons (Inputs), and LED or lamp Indicators. The Vision.net AV interface can also provide up to 8 dry contact closure inputs and 8 dry contact closure outputs. The AV interface may also simultaneously support the Vision.net family of occupancy and photocell sensors.

### Features

- Compact size for easy installation
- No additional master station required for programming or operation
- Provides 8 separate input and output open collector contacts
- LED's for programming and status indication
- Connects directly to any Vision.net network via low-cost CAT5e cabling
- Suitable for use as an interface to building management systems, show control systems, alarm systems and audio systems
- Non-volatile memory retains programming settings in the event of a power loss

There are three versions of a Vision.net AV Interface available depending on your connectivity needs.

- 63065SE - AV Input/Occupancy Sensor Interface with 8 Dry Contact Closure Inputs (A)
- 63057SE - AV Input/Occupancy Sensor Interface with 8 Dry Contact Closure Inputs and 4 Dry Contact Closure Outputs (B)
- 63057SE-8 - AV Input/Occupancy Sensor Interface with 8 Dry Contact Closure Inputs and 8 Dry Contact Closure Outputs (C)



## 2. Configuration

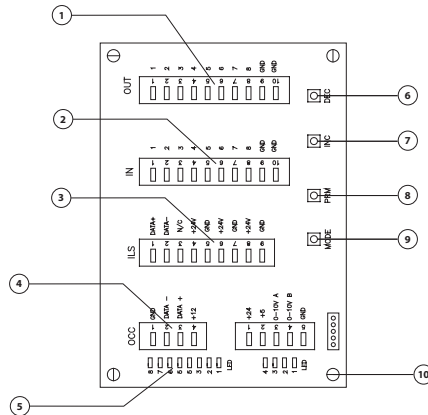
The AV Interface Board can be configured to function just as if it were an 8 button Vision.net station. The AV Interface board's 8 outputs equate to the 8 button LEDs of a Vision.net 8 button station.

Refer to ["Sensors" on page 30](#) to learn how to configure the contact closures using Vision.net 4.5 Designer Software.

## 8-CHANNEL DRY CONTACT INPUT BOARD (63065)

### 1. Overview

The image below shows the component detail for the Dry Contact Input Board for purposes of installation, connection to dry contact closure inputs, Vision.net connection, sensor inputs and configuration / programming hardware.



1. 8 Open Collector Outputs
2. 8 Momentary or Maintained Dry Contact Closure Inputs
3. Vision.net Network Connection
4. Occupancy/Photocell System Connection
5. Status LED Lights
6. Decrease Button (for programming)
7. Increase Button (for programming)
8. Main Programming Button
9. Mode Button
10. Mounting Holes (4 positions)

### 2. Specifications

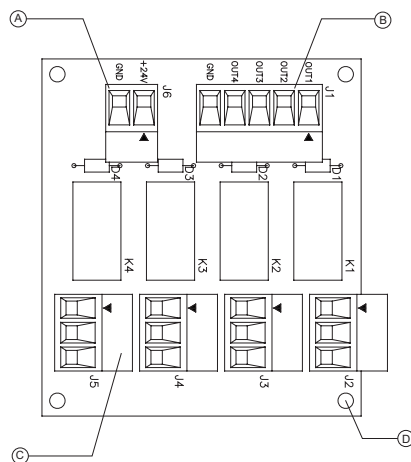
Power Requirements:	24 VDC, 20 mA (powered from Vision.net system. Note: assumes no sensors and no current draw from output)
Open Collector Inputs:	8 (Momentary or Maintained)
Input Limits:	Closed: 0.0 VDC to 1.5 VDC*
Opened:	2.5 VDC to 24 VDC*
Current:	2.0 mA to Ground**

**IMPORTANT!** \* Inputs are internally pulled to 5.0V. \*\*Input must never be pulled below ground.

### 3. AV Interface Output Card

#### AV Interface Output Card Details

The 63057 contact closure output card is a daughter board that has to be connected to a 63065 AV interface card. The 63057 has 4 outputs, that are provided as Normally Open & Normally Closed contact pairs. Two 63057 cards can be connected to a 63065 card for a total of 8 outputs.



- A. 24 VDC Power Input\*
- B. Relay Output Connections
- C. Relay Input Connections (4 independent inputs)
- D. Mounting Holes (4 positions)

Note: \*Connects to and is provided by Vision.net systems only.

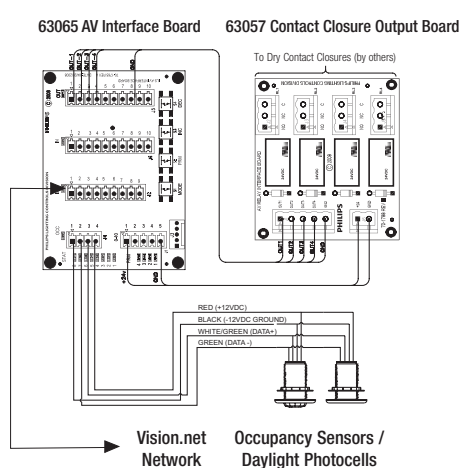
## Specifications

Power Requirements:	24 VDC, 100 mA (powered from Vision.net system) *
Relays:	4 Each (8 Each - 63057SE-8)
Relay Output Ratings:	24 VDC or VAC, 1 Amp (max) **

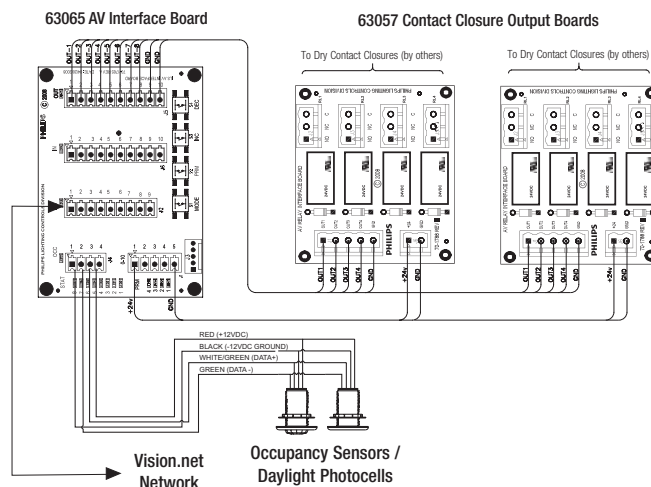
**Note:** \* 63057 contact closure output card operates on 24VDC only. \*\* For low-voltage use only - not to exceed ratings.

## AV Interface Card Wiring Diagrams

The two drawings below show both the 63057SE and the 63057SE-8's Wiring Diagrams. These diagrams show how both product's Input and Output Card(s) connect on the printed circuit board.

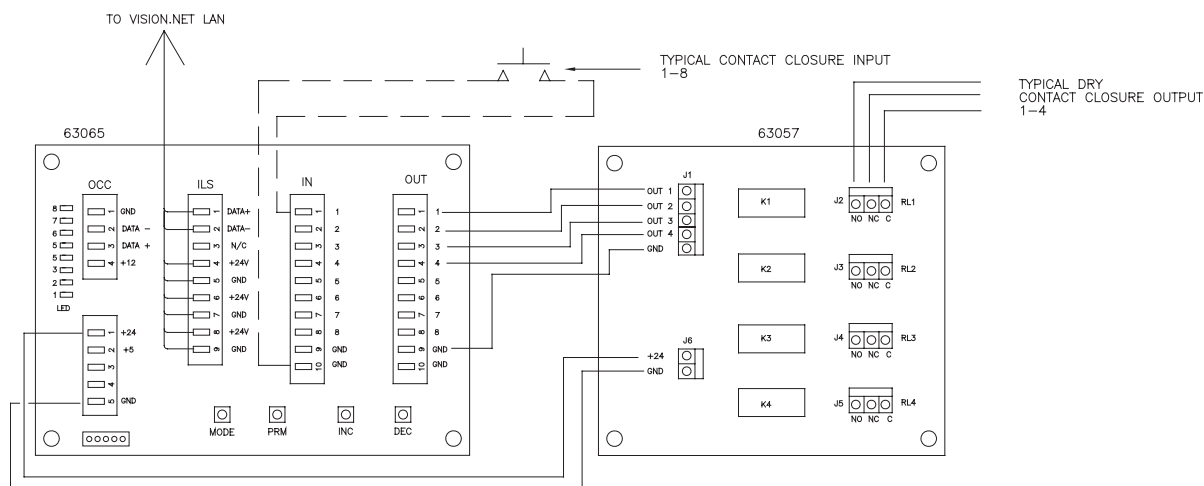


63057SE Wiring



63057SE-8 Wiring

In addition to the connection to the Vision.net LAN and typical contact closure wiring from the main board (63065), this shows the wiring of a typical contact closure output from the daughter board (63057).

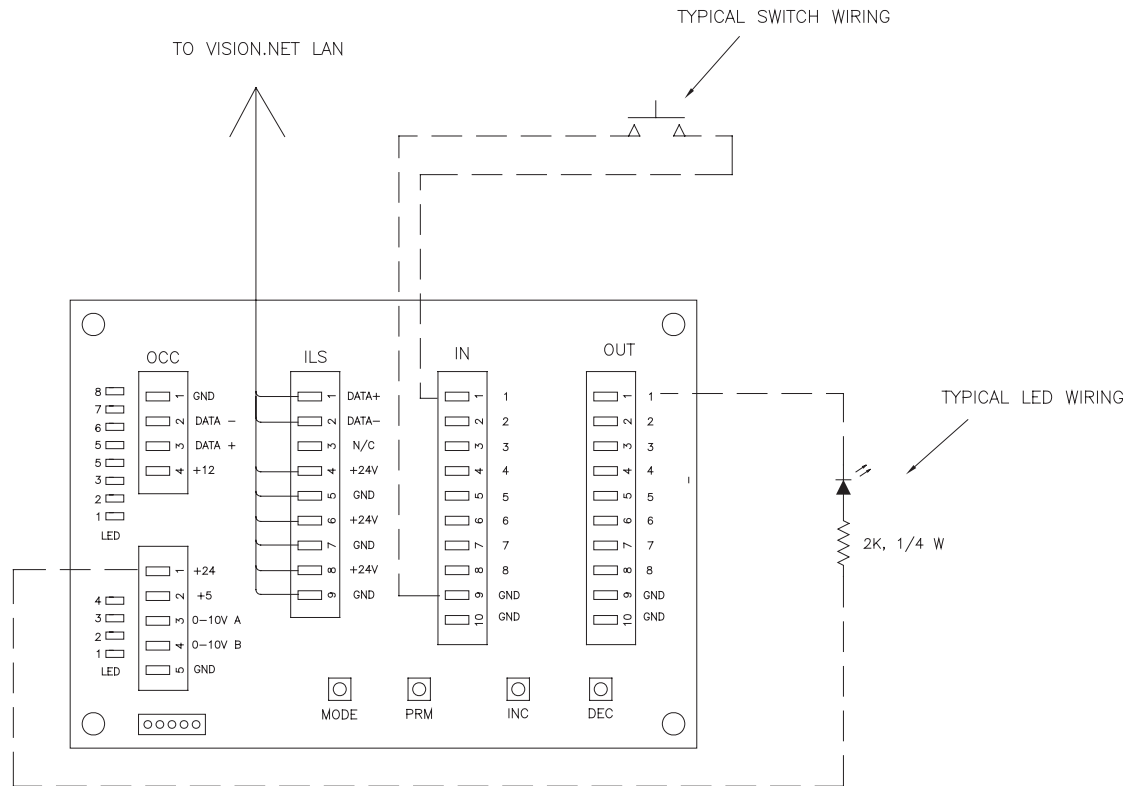


## Connecting Sensors to the AV Interface Card

The images above shows the AV Interface board with an Occupancy Sensor and a Daylight Photocell connected.

### AV Interface Typical LED Wiring

See diagram below for typical LED wiring.



# SMART JACK (63341)

---

## 1. Overview

The Smart Jack receptacle is a station with all the electronics and processing of a button / slider station but without the buttons or sliders. Instead of a button or slider interface, there is a 4-pin XLR connector that allows a portable station to connect via a tethered cable. Since the processing and station electronics reside in the Smart Jack station, all programming resides in the station as well. This allows multiple Smart Jacks to be installed in a facility and the portable station will operate according to the programming of the Smart Jack that the portable station is plugged into.

This application is particularly common in convention centers and ballrooms where a technician may move from room to room with the same "control surface only" station to adjust lighting levels for each room's individual event.



---

**Note:** Any button station can be ordered as a portable station. Then it shall connect to the Vision.net system using a Smart Jack. Just add "PM" to the station part number.

---

## 2. Programming

A Smart Jack shall be configured and programmed just as a standard button/slider station would be. In fact, Designer for Vision.net 4.5 does not need to know the difference between a Smart Jack (whether its Button/Slider station is connected or not) and a standard Button/Slider station.

For programming instructions when using Vision.net 4.5 Designer Software, please proceed to the ["Configure a Button Station" on page 73](#) in this manual.

---

**Note:** The portable station is not required to be attached for programming to occur from Vision.net 4.5 Designer. If the portable station is not attached and the Station ID needs to be set, send the change ID command from Vision.net 4.5 Designer and hold the contact closure input closed for 3 seconds (until the beep is heard) and release. This process will not function if the portable stations is attached.

---

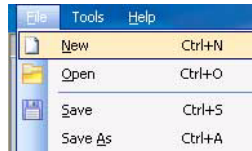
# DESIGNER FOR VISION.NET 4.5 SOFTWARE

## 1. Overview

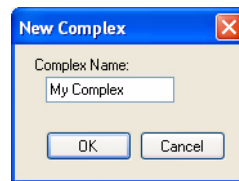
Vision.net 4.5 Designer allows the configuration of a Vision.net system to be designed, monitored, and modified.

It is a powerful graphical application that allows devices to be added, monitored or changed in an easy to use point and click environment. With common Windows features like copy and paste, it makes designing systems fast and easy to accomplish.

- When starting a fresh, select the File pulldown and New.



- This will create a New Complex. Assign a Complex Name if you wish to override the default.



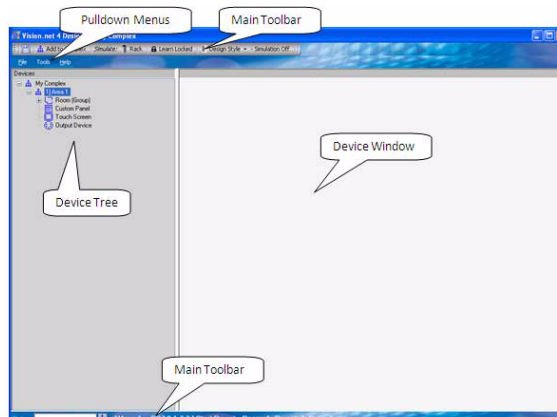
- Next step is to add to the Complex. Select the Add to Complex button from the Main Toolbar.



- Select the only option available, which is to add an Area...



- Below is the basic Designer configuration screen once an Area has been added.



## Specification

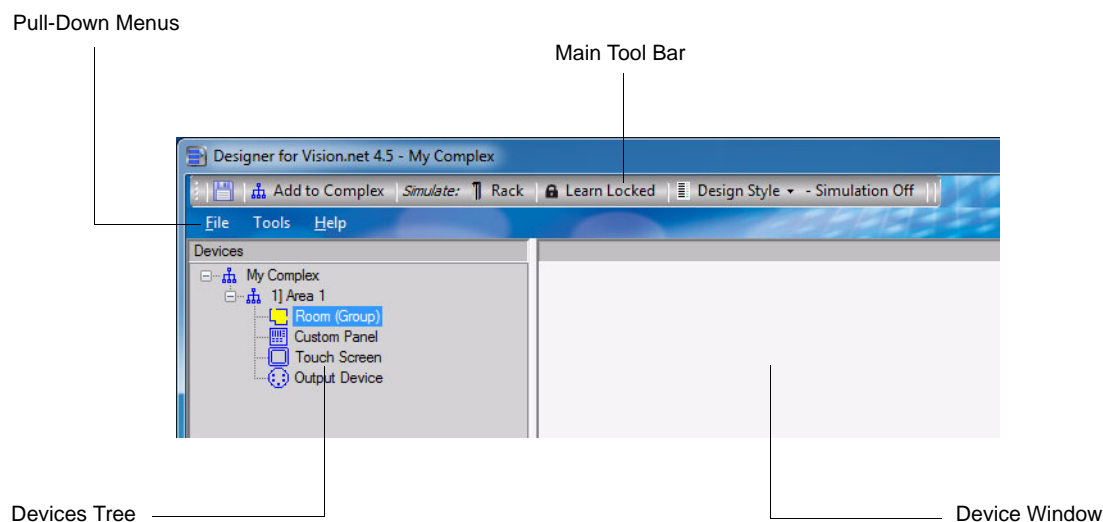
Designer for Vision.net 4.5 for single Area applications should run on a PC with the following specifications.

- 32 bit or 64 bit, Windows 7 Enterprise or Professional PC with 4GB of RAM

Designer for Vision.net 4.5 for multiple Area applications should run on a PC with the following specifications.

- 32 bit or 64 bit, Windows 7 Enterprise or Professional PC with 8GB of RAM

## Screen Layout - Overview



The main screen is divided into multiple areas. The Devices Tree, Device Window and Main Tool Bar are some of the primary areas. In addition to these there is the Menu bar with pull-down menus of File, Tool and Help.

**There are three pull-down menus:**

- **File** - for basic file operation.
- **Tools** - for setting up your configuration file.
- **Help** - for basic help information.

The **Main Tool Bar** allows the selection of the primary tools needed for your configuration session.

**My Complex** is a representation of the physical layout of your project. This is the top tier location of all of the configuration file's data.

**My Complex** is broken up into Areas.

- **Areas** - are virtual versions of each physical location within the complex. An area will house a collection of lower level items (Rooms, Panels, Touch Screens and Output devices) and their configuration information. Most architectural lighting systems will be in one area. Normally, only large scale projects will need multiple areas. Multiple areas is accessed via a password as it is locked from normal operation.



---

**Note:** Items can be reordered within the device tree. Just select and drag into the preferred order.

---

The device tree is the left window area and can show all of the different devices broken down into four device groupings within a given Area.

- **Rooms (Groups)** - a collection of circuits and control panels that are dedicated to adjusting the lighting in a particular zone or area of the building.

---

**Note:** Items can be reordered within the device tree per area. Just select and drag into the preferred order.

---

- **Custom Panels** - a collection of Control Stations that are generally grouped together in a location and which may control one or more Groups or Zones. For example, this might be a central control room controlling several rooms or zones or a Stage Managers Panel where control is available for house lighting, work lights and other show state lighting.

---

**Note:** Items can be reordered within the device tree per area. Just select and drag into the preferred order.

---

- **Touchscreens** - top level control components that provide a highly customizable surface for interfacing with the Vision.net network. These are very flexible and highly intuitive interfaces for working with the Vision.net system.

---

**Note:** Items can be reordered within the device tree per area. Just select and drag into the preferred order.

---

- **Output Devices** - these are devices that connect to the Vision.net network like dimmer racks and relays that are used to drive lights, LEDs, automated luminaires or control other elements.

---

**Note:** Items can be reordered within the device tree per area. Just select and drag into the preferred order.

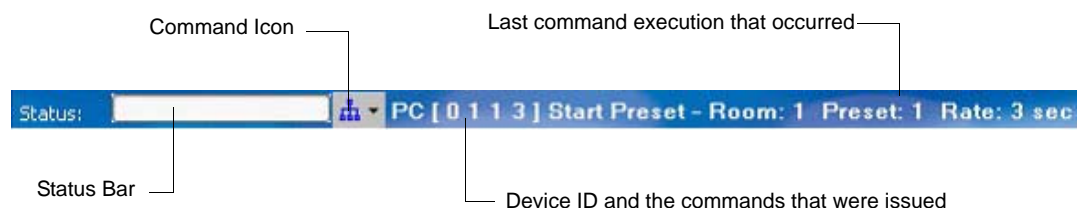
---

The device window (largest area) will show you each device that is selected within the device tree window on the left. At the moment there are no devices so this area will be blank.

At the bottom left of your screen a status bar will display Offline when not communicating with any devices on a network.



The Last Command List icon, will show you up to the last 20 commands that were seen on the Vision.net network. This is useful for testing and fault finding purposes.




---

**Note:** This is what the status bar looks like when it is online.

---

This status bar will also show a progress bar when uploading or downloading to Vision.net devices.

**Note:** The online / offline status is changed in the File pull-down. Work Offline stops all sending and receiving of data from the network.

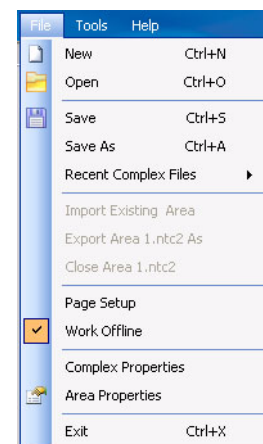
## 2. Pull-down Menus - Overview

Pull-down menus give you quick access to system commands.

### File

The File pull-down gives you the following options:

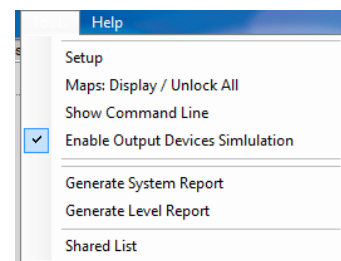
- New - start a new Vision.net 4.5 configuration file.
- Open - open an existing Vision.net 4.X configuration file. This will open files with the extensions of .gyn2 and .svnz.
- Save - save existing Vision.net 4.5 configuration file.
- Save As - save and name existing data as a Vision.net 4.5 configuration file.
- Recent Complex Files - open a recently viewed Vision.net 4.5 configuration file.
- Import Existing Area - allows the import of an existing Vision.net 3 Area. This will "add" all existing items from the Vision.net 3 file to the current Vision.net 4.5 file.
- Export Area 1.ntc2 As - save and name existing area as a Vision.net 3 configuration file.
- Close Area 1.ntc2 - closes the selected area. (What appears will depend on the areas in the configuration file.)
- Page Setup - allows you to setup the page layout for printing.
- Work Offline - allows you to work in a standalone mode without trying to communicate with panels. This stops all sending and receiving of data from the network.
- Complex Properties - allows entry and identification of important pieces of information about the complex in the configuration file, title, location, people involved and a place for notations.
- Area Properties - allows entry and identification of important pieces of information about the selected area in the configuration file, title, location, people involved and a place for notations.
- Exit - to close the Vision.net 4.5 configuration software.



### Tools

The Tools pull-down give you the following options:

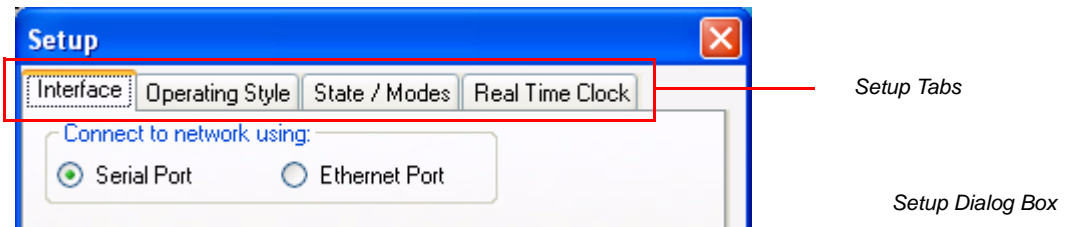
- Setup - displays the Setup dialog for Operating Style, States / Modes and Real Time Clock settings. - See ["Setup" on page 61](#) for details.
- Maps: Display / Unlock All - defaults Designer for Vision.net back to showing all components. This even applies to devices that have been hidden in certain modes.
- Show Command Line - allows a theatrical command line for quick multiple channel level entry.
- Enable Output Devices Simulation - with this enabled, the Toolbar reveals an option to display a Rack to simulate any actual output. With this unchecked, the Simulate: Rack option will not appear on the toolbar.
- Generate System Report - generates a report of all configuration data. After generation, Vision.net will allow the configuration file to be saved and opened.
- Generate Level Report - generates a report of all levels that be stored in the configuration file.



**Note:** If levels have been changed locally, these will not be part of the Vision.net 4.5 Designer Software configuration file.

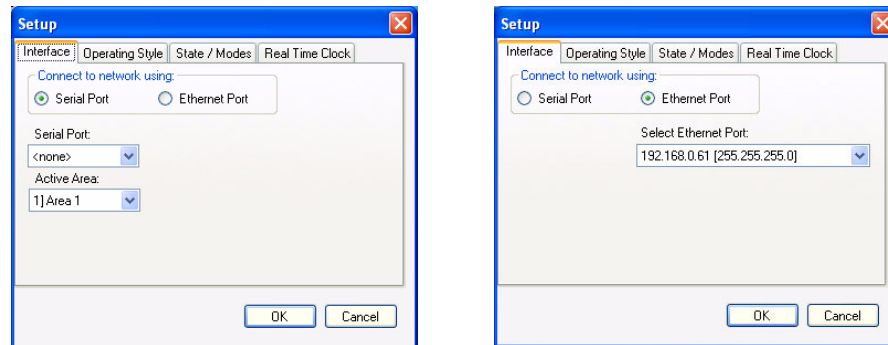
## Setup

There are 4 tabs within the Setup dialog box to help configure the Vision.net 4.5 configuration for both software and hardware alike.



## Interface

Choose the serial port that Vision.net 4.5 Designer Software will use to communicate with components of the system. This will be the serial port that is used to communicate from the Windows computer to the Vision.net stations.



Network Connection Interface Options - Serial Port or Ethernet

Set the Active Area that this will configure to. This will be Area 1 by default.

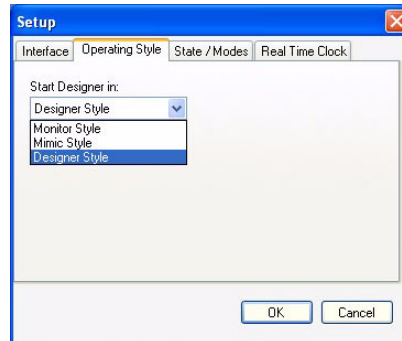
**Note:** Only the default option is available unless the multiple area option is enabled.

Or, select the Ethernet option to allow Vision.net 4.5 Designer Software to connect to the Vision.net network over an Ethernet connection.

**Note:** Standard Ethernet rules apply as Vision.net 4.5 Designer Software must be connected to the same subnet as the Vision.net 4.5 gateway.

## Operating Style

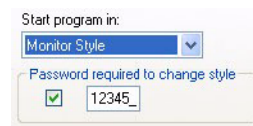
You can default Vision.net 4.5 Designer Software to start in one of the three operating styles.



*Operating Style*

- **Monitor Style** - allows the software to mimic the state of the Vision.net 4.5 Designer Software network but not to change the state of any device. Look but can't touch.
- **Mimic Style** - allows the software to mimic the state of the Vision.net 4.5 Designer Software network and to change the state of any device. Look and turn on and off. Smart buttons do not simulate on the PC.
- **Designer Style** - allows the software to change and configure all aspects of the Vision.net 4.5 Designer Software system. This is full programming mode.

**Note:** You can set a password to protect the Operating Style by selecting a different mode and then selecting "Password Required to Change Style" and select your password.



*Password Required to Change Style Box*

**WARNING!** Implement this feature cautiously. Strand Lighting does not encourage the casual use of this feature. If you set password security in Vision.net 4.5 Designer Software and forget or lose your password, you will lose access to your configuration file. If you implement password protection, please document your password in a secure location.

## State / Modes (State)

States / Modes can be used to mask features and facilities of a Vision.net 4.5 system to reflect the current state of operation.

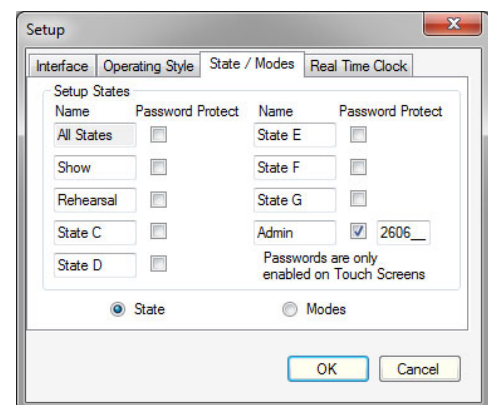
The difference in States and Modes are that States are exclusive and the system can only be in one State at a time.

Modes are not exclusive and the system can be in more than one Mode at a time.

You can have up to 8 different States and any or all of them can be password protected. Just check the Password Protect checkbox and set the password in the box that appears.

The All States mode is not changeable and allows you to get back to a default state of all states available.

There are two default states called **Show** and **Rehearsal**. Later on we'll see how you use these to have certain components of the Vision.net 4.5 Designer Software system only appear when in a certain state. As an example, when a stage manager presses a button called **Show**, the Work Light button on a button station in a public area is locked out and is no longer active or a Work Light button on another touchscreen just goes away and is no longer visible.



Another example would be to create two different states, one called **Day Time** and one called **Night Time**. The Vision.net 4.5 Designer Software system can be configured so that Day Time operations gives you access to more lighting options for technical work related activities while the Night Time operation only gives you access to performance related activities.

**Note:** When a user selects a different state / mode from a touchscreen, where the password protection has been enabled, a numeric keypad will appear and ask for the password to be entered.



*Numeric Keypad (on touchscreen display)*

**IMPORTANT!** Passwords are only enabled on Touchscreens.

### State / Mode (Modes)

Modes are similar to a State in that they can be used to mask features and facilities of a Vision.net 4.5 system to reflect the current state of operation.

The difference between States and Modes are that Modes are not exclusive and the system can be in more than one Mode at a time.

States are exclusive and the system can only be in one State at a time.

You can have up to 8 different modes and any or all of them can be password protected. Just check the Password Protect checkbox and set the password in the box that appears.

The Learn Lock mode is not editable and allows you to lock the learn (record) feature in Vision.net, from a mode button. This would be a physical button or a button that is setup on a touchscreen.

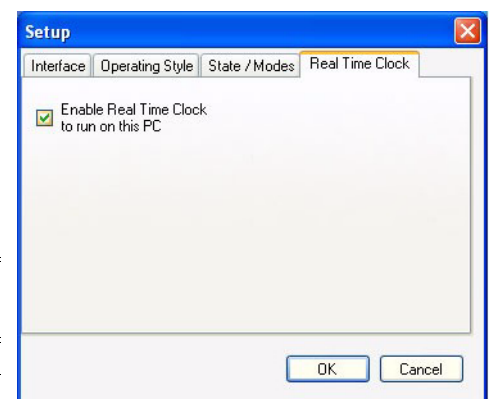
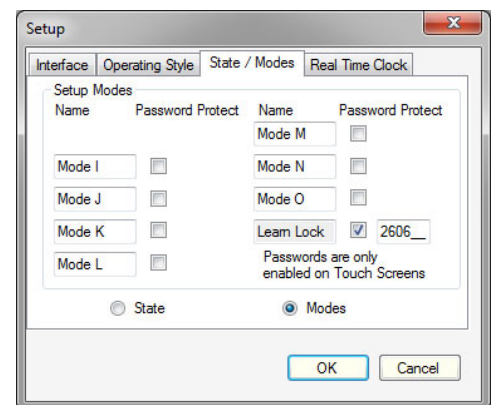
### Real Time Clock

Real time and astronomical events can be set to run on Vision.net. For this, a PC running Vision.net 4.5 Designer Software can be connected to the network and can be setup to trigger these events.

To do this, just enable Real Time Clock. (The default is off) You can also setup a Real Time Clock to run on a touchscreen however there can only be one real time clock in a system.

**WARNING!** There can only be one Real Time Clock per Vision.net 4.5 system.

**Note:** Modification of the Real Time Clock is only possible when the system is running in the Admin Map or All Map mode.

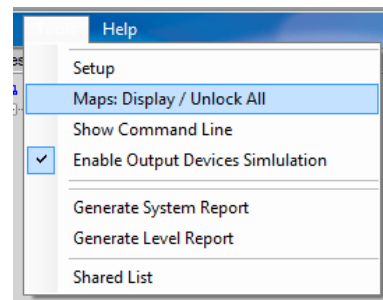


### Maps: Display / Unlock All

This allows Vision.net 4.5 Designer Software to default all components to be visible, even if they have been hidden in certain modes.

This can be very useful for testing purposes, especially when buttons and stations have been hidden as a result of putting the system into a different mode. The above example of Show and Rehearsal works well here. If the system is in Show mode and a Work Light button is no longer visible on a touchscreen, this feature would allow you to see this button and all devices.

**Note:** When show modes are shown, Enable All States will briefly appear in the Status bar.



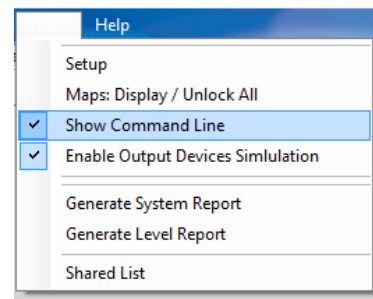
### Show Command Line

Show Command Line - when selected and checked, a Command Line area will appear at the bottom of your item display area.

The Command Line allows the programming of levels numerically as a theatrical console.

Select the room from the pull-down and then type in the Command Line area. The structure of the Command Line Syntax is very similar to most theatrical style command line options.

Type in the channel number (as a single item or by range using the slash (/) key), followed by the @ symbol, then the level then ENTER to complete the command.



### Examples of legal commands are:

- 1 @ @ - quick way to get a channel to Full.
- 1 @ 5 ENTER - sets 1 to 50%.
- 1 @ 50 ENTER - sets 1 to 50%
- 1/5 @ 5 ENTER - sets 1 thru 5 to 50%.
- 1+3 @ 5 ENTER - sets 1 and 3 to 50%.
- 1/5-4 @ 5 ENTER - sets 1 thru 3 and 5 @ 50%.



*Example of a Command Line*

**Note:** Once a level has been entered on a set of channels, pressing @ again will allow changing the levels of the currently selected fixtures without reselecting them.

## Generate System Report

When documentation is needed, Vision.net 4.5 can generate a Word document report of all configuration data. After generation, Vision.net 4.5 will allow the configuration file to be saved and opened. This is an example of a portion of a generated system report.

### Area: 1] Area 1 -- Area Properties --

Area: 1] Area 1

-- Rooms (Groups) --

#### Room(Group): Room 1 Id: 1

Station: Id: 1, Station Type: ButtonNew

- 1) Button: Preset 1 -- Preset/Off: 1 (3 sec) in Room: 1 {abcdefgh}
- 2) Button: Preset 2 -- Preset/Off: 2 (3 sec) in Room: 1 {abcdefgh}
- 3) Button: Preset 3 -- Preset/Off: 3 (3 sec) in Room: 1 {abcdefgh}
- 4) Button: Preset 4 -- Preset/Off: 4 (3 sec) in Room: 1 {abcdefgh}
- 5) Button: Preset 5 -- Preset/Off: 5 (3 sec) in Room: 1 {abcdefgh}
- 6) Button: Preset 6 -- Preset/Off: 6 (3 sec) in Room: 1 {abcdefgh}
- 7) Button: Preset 7 -- Preset/Off: 7 (3 sec) in Room: 1 {abcdefgh}

## Generate Level Report

When documentation is needed, Vision.net 4.5 can generate a Word document report of all level configuration data. After generation, Vision.net 4.5 will allow the configuration file to be saved and opened. Below is an example of a portion of a Generated Level Report.

---

**IMPORTANT!** The Vision.net configuration file must be saved prior to generating the report.

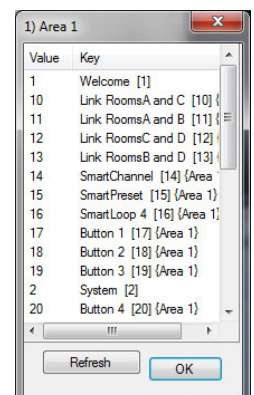
---



## Shared List

The Shared List will display all Shared Buttons. This is primarily for diagnostic and troubleshooting purposes.

The Refresh button will refresh the list.





## Help

The Help menu gives you access to:

- **Contents:** displays the Help file.
- **Reset Warnings:** will reset all warnings.
- **About...:** displays the software splash screen, software name and version of code.



## 3. Main Tool Bar

The Main Tool Bar is where you will start when building a configuration file.




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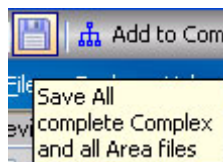
**Note:** The Simulate: Rack will only appear when the Tool > Enable Output Devices Simulation is checked.

---

From the Main Tool Bar you can:

### Save Complex

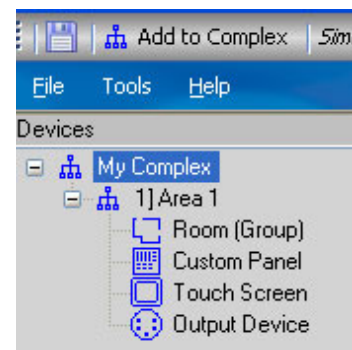
Save Complex allows the storing of the entire Vision.net 4.5 complex's configuration file in the current location that it is set to be stored.



### Add to Complex

Use this to add top level items to your network tree. Items that can be added are:

- **Areas** - are virtual versions of each physical location within the complex. An area will house a collection of lower level items (Rooms, Panels, Touch Screens and Output devices) and their configuration information. Most architectural lighting systems will be in one area. Normally, only large scale projects will need multiple areas.
- **Rooms/Groups** - is a collection of circuits and control panels that are dedicated to adjusting the lighting in a particular zone of the building. For a theatre, this could be the audience area, the backstage area, green room, the lobby or others. For an office building, this could be an office, bathroom, employee common area or others.
- **Custom Panels** - is a collection of control stations that are generally grouped together in a location so that it may control one or more groups or zones. This could be a central control room that can control several rooms or zones, a stage managers panel where control is available for house lighting, work lights and other show state lighting.
- **Touchscreens** - are top level control components that provide a highly customizable interface to the Vision.net network. These are very flexible and provide a highly intuitive and easy way of working with the Vision.net system.
- **Output Devices** - are devices that connect to the Vision.net network and manipulate lights and other controllable elements like dimmers, automated luminaires and/or LEDs. Typically, these are Strand's C21, EC21, R21 and A21 dimmer systems and Contact Relay Racks; however other DMX512 devices can be





controlled using the Vision.net DMX512 interface card and therefore communicate with any DMX512 device.

- **Real Time Clock** - allow events to be based on the time of day. Event schedules may be done on a daily basis, either at an absolute time or relative to sunrise and sunset. In order for events to be scheduled, the Real Time Clock has to be present on the Vision.net network. Vision.net designer itself can serve as a Real Time Clock or it can be triggered from a touchscreen or a Contact relay panel. This should be configured from one location only.

**Note:** There can only be one Real Time Clock in a system. Modification of the Real Time Clock is only possible when the system is running in the Admin Map or All Map mode.

## Simulated Output Device (Rack)



**Note:** The Output Device (Rack) Simulation cannot display until an Output Device is configured in Vision.net 4.5 Designer.

Please see the ["Add an Output Device" on page 97](#) section for this information.

## Learn Lock Mode Feature

Learn Lock establishes a lock on all learning (recording) of presets "if" the Learn Lock check box is selected in the button station configuration dialog box.

**Note:** See ["Configure a Button Station" on page 73](#) information.

When a button station is created and configured, the Learn Lock option is turned on by default to eliminate accidental recording of the presets from occurring. Pressing the Learn Locked icon will display Learn Override and allow that preset to be recorded by pressing and holding the button until the Learn flag appears (3 seconds). When you are done, press the Learn Override button to take the Vision.net 4.5 system back to the default configuration of each station.



### In Depth:

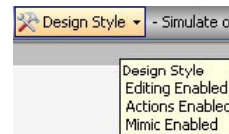
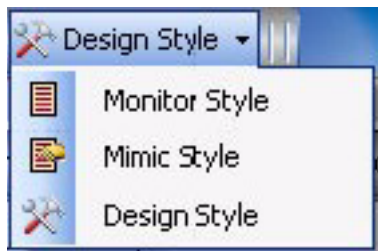
When Vision.net 4.5 Designer is launched, the software forces Learn Lock to be set. This sends the command to the network. Even if you have a button in the system that may have changed the system to Learn Override, the entire Vision.net 4.5 system will be set back to Learn Lock enabled. This occurs when you start Vision.net 4.5 Designer or you load a new file. In addition, when you power up a station or a touchscreen, they will all be in Learn Lock

mode and will only change when they see a mode change command on the network. If you power up a touchscreen while Vision.net 4.5 Designer is running in Learn Override, you will have to recycle the button to get everyone in sync.

Should you want Vision.net 4.5 Designer to start up in Learn Override (*not recommended*), a macro button can be defined as "run at startup" and hidden within the system.

## Design Style

This pulldown allows the selection of one of 3 different design styles.



### Monitor Style

This allows the software to mimic the state of the Vision.net 4.5 network but not to change the state of any device. Editing is disabled and actions are disabled. Look but can't touch.

### Mimic Style

This allows the software to mimic the state of the Vision.net 4.5 network and to change the state of any device. Editing is disabled but actions are enabled. Look and turn on and off.

### Design Style

This allows the software to change and configure all aspects of the system. This is full programming mode. Editing and actions are enabled and it will mimic the Vision.net 4.5 system.

## Simulate on PC

This feature allows simulation of Shared Buttons and Room Links for Stations and Touchscreens from Vision.net 4.5 Designer. The simulation is on by default and the button disables it.

If you are working with Vision.net Designer, it is generally recommended that this is enabled so that all programmed buttons will respond appropriately.

# BUILDING A BASIC VISION.NET 4.5 CONFIGURATION

---

In the following pages, we will build a basic Vision.net 4.5 configuration.

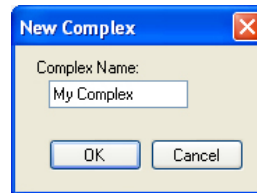
## 1. New Complex

Since Vision.net 4.5 can now manage much larger systems, to get started a new complex must be created.

**To add a new complex:**

Step 1. Select the File pulldown and New.

Step 2. Enter the complex name and select OK.



Step 3. Once the complex has been created, the next step is to add an Area.

---

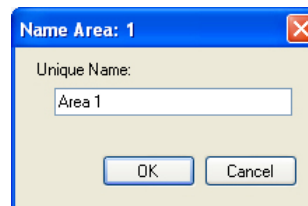
**Note:** If the Complex name needs to be changed later, just right click the item to be changed in the Device Tree.

---

## 2. Add an Area

**To add an Area to the complex:**

Step 1. Select the Add to Complex icon and select Area.



Step 2. Create a unique name and press OK.

---

**Note:** If the Area name needs to be changed later, just right click the item to be changed in the Device Tree.

---

## 3. Add a Room/Group

A Group or Room is a collection of circuits and Control Panels, all dedicated to adjusting the lighting in a particular zone of the building.

**To add a room/group:**

Step 1. Select Add to Network.

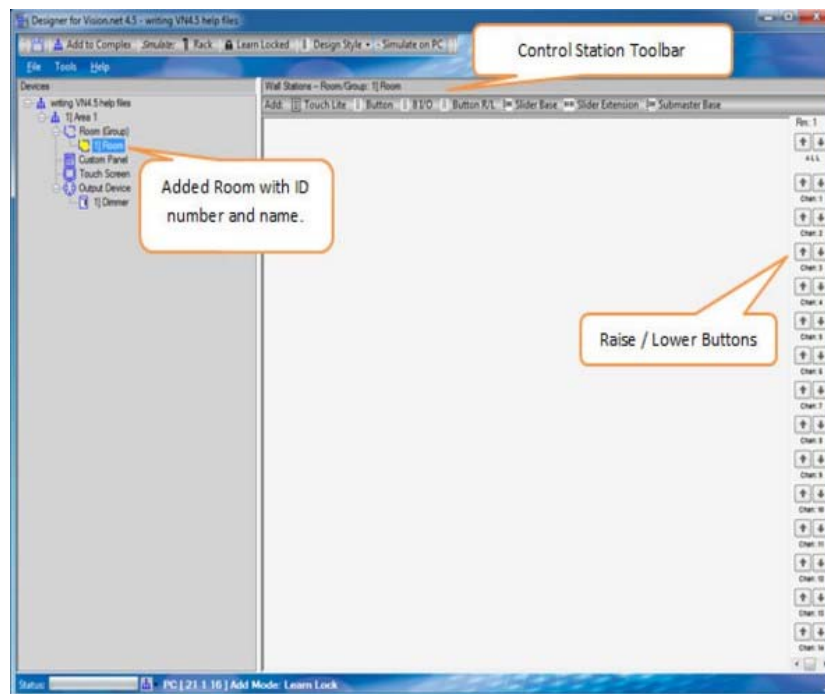
Step 2. Select Room/Group.

Step 3. Let's call it Room1 and give it an ID number. Press OK. (The ID number will auto increment as you add more stations.)



**Notes:**

- Now you see this Designer for Vision.net 4.5 window.



- Now you have Room1 in your device tree under Room/(Group).
- You also have Raise and Lower control buttons on the far right.
- You have the Control Station Toolbar that allows you to add Control Stations to your room.
- Let's talk about what you can add to the room.

**Last Preset Function**

Vision.net 4.5 is being updated to allow a Last Preset function to replace the current Room 240-255 Pile-On Preset feature. The VN/DMX interface will no longer support the Room 240-255 HTP functionality.

See [“Add an Output Device” on page 97](#) for more information regarding priorities.

**Control Stations**

Control stations are used to control the lighting in a room or zone. These stations can be push button stations, slider fader stations or slider and button combination stations. Touchscreens may also be added to the system. Stations are added to the room by using the Control Station Toolbar and then configured by changing the various properties of the Buttons and Slider Faders on the station.

The options listed on the Control Station Toolbar are not the only hardware versions available but are a listing of the different hardware station types. Internal configuration of each station can be adjusted to other versions of hardware. An example is the Button Station. The one listed here is the 7 Button Station. Once that is inserted, it can be changed to a station that has fewer buttons.

There is amazing flexibility with the programming options of the hardware stations. The following hardware listing is intended as an introduction to the hardware. The buttons can be configured to do a wide variety of tasks.

**Note:** See ["Introduction to Hardware" on page 9](#) or visit Strand Lighting's website [www.strandlighting.com](http://www.strandlighting.com) for more information on the hardware stations.

## Button Stations

### Button Station

This is a push button station that has 7 buttons that can be configured to perform different functions. All button stations have the same number of physical buttons (7) and any unused buttons are masked by the faceplate. So a single button station is a 7 button station where the faceplate has only a single button exposed. (Button #4...in the middle.)



### Button with Raise/Lower

This is a push button station that has 6 full sized buttons and the last button space is split into two half sized buttons. The left half is Up and the right half is Down.



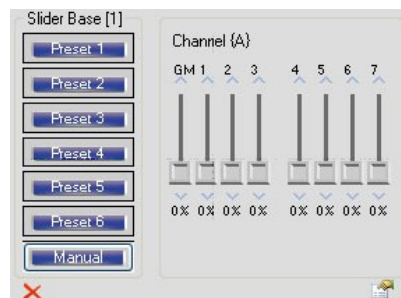

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**Note:** Remember that this is an 8 button station and that the bottom split buttons can be set to any button type...not just Raise and Lower.

---

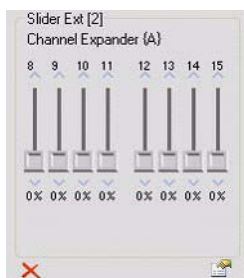
## Slider Base

This is a multiple gang panel that has a button station and a slider station for channel control. The first slider is a Grand Master, the others are controlling channels. You can configure the station to have a Grand Master and 1 to 16 Channels. Shown is a 7 channel slider base.



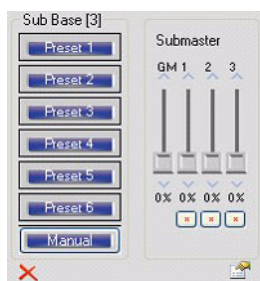
## Slider Extension

This is a potentiometer station that allows you to expand the number of channels that can be controlled using sliders. Shown is an 8 slider station.



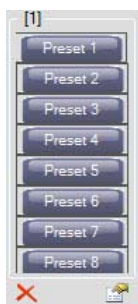
## Submaster Base

This is a multiple gang panel that has a button station and a slider station for submaster control. The first slider is a Grand Master, the others are controlling submasters. You can configure the station to have from 1 to 16 submasters. Shown is a 3 submaster base.



## Touch Lite

This is a single gang touch panel station that has 8 buttons that can be configured to perform different functions. It functions much like the standard Button station with the exception of the improvement of a touch display.



## 8 I/O (Input / Output)

This is a non-push button station that has 8 input / outputs for connection purposes however, it does not have any visible buttons associated with the station. All configuration options are the same as any Button station. This can be useful when you need things to happen on the system that does not require an actual station to be present.



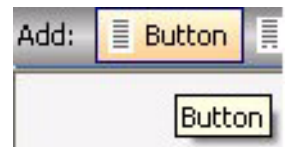
**Note:** When configuring an Input / Output station, go into the Configure Station properties window and select the checkbox for "Sensors are connected to this station".

See ["Configure Station Sensors" on page 74](#) for configuration information.

## 4. Adding a Button Station to a Room/Group

Select Button from the Control Station Toolbar.

When dealing with button stations with fewer buttons, see the ["Understanding Button Alignment" on page 16](#) of the manual.



## 5. Configure a Button Station

The Configure Station dialog box will appear. In the Station Label, let's call this Station1.

	Button Label	Button Type	Group/Room	Preset #	Rate	Disable Learn	State Map
1	Preset 1	Preset	1	1	3 sec	<input checked="" type="checkbox"/>	[abcde]gh
2	Preset 2	Preset	1	2	3 sec	<input type="checkbox"/>	[abcde]gh
3	Preset 3	Preset	1	3	3 sec	<input type="checkbox"/>	[abcde]gh
4	Preset 4	Preset	1	4	3 sec	<input type="checkbox"/>	[abcde]gh
5	Preset 5	Preset	1	5	3 sec	<input type="checkbox"/>	[abcde]gh
6	Preset 6	Preset	1	6	3 sec	<input type="checkbox"/>	[abcde]gh
7	Preset 7	Preset	1	7	3 sec	<input type="checkbox"/>	[abcde]gh

## Station Label

A Station ID must be set and since this is our first station, just accept the default of Station ID 1. This is a unique number for each station on the Vision.net network.

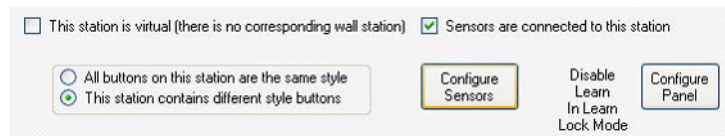
We'll keep the Station Type to *Button*.

## Virtual Station

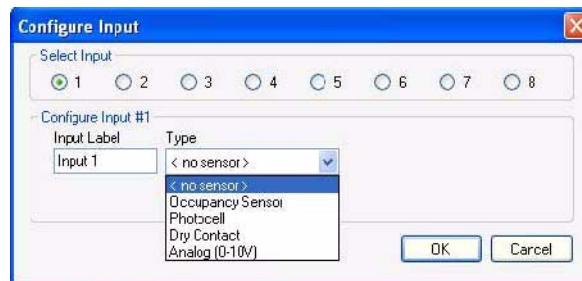
You have an option to make this station virtual (so that it only appears within Vision.net 4.5 Designer). This can be useful when you need things to happen on the system that does not require an actual station to be present. Let's leave this unchecked.

## 6. Configure Station Sensors

On a Vision.net station there are 8 logical inputs in addition to the buttons or faders. These logical inputs are triggered by data sent from Sensors to the station over a 4 wire network, connected to a 6 Pin connector on the rear of the station.



If sensors are attached to a button station the first step is to check the box for **Sensors are connected to this station**. Then press the **Configure Sensors** button.



Select the input that the Sensor has been configured to control (see ["Configure Sensor Hardware" on page 77](#) for the sensors). Give a Label to the input as needed and select the type of sensor that is controlling it. Depending on the sensor type selected, further options now become available.

Up to 8 different sensors can be connected to a station on the 4 wire network. The sensors can be configured (or addressed) as sensor 1, 2, ...7, or 8. Where Sensors are configured to control the same input, they will act together in order to cover a larger area.

## Occupancy Sensor

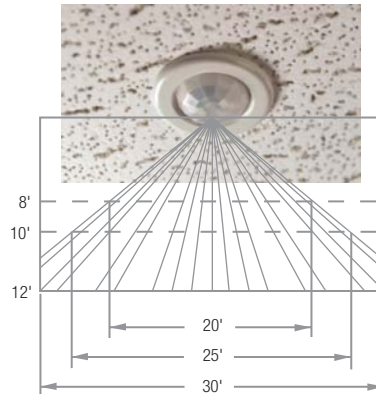
An Occupancy Sensor allows Vision.net 4.5 to perform configured actions based on the occupancy of the room. For example, you may want a conference room to turn on the lights when someone enters and turn off after a period of time after they have left the room.

There are two types of Occupancy Sensors available:



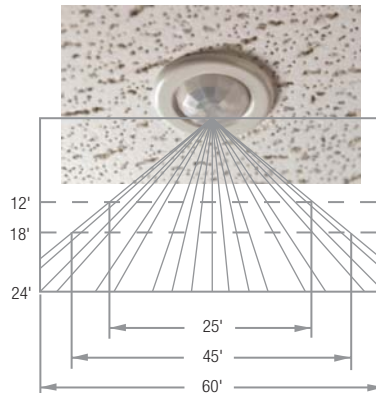


- Occupancy Sensor (63059CM) is designed for coverage of rooms with lower ceilings. The image below shows the sensor's coverage area.



Field of View: Occupancy Sensor (63059CM)

- Occupancy Sensor (63059HB) is designed for coverage of rooms with higher ceilings. The image below shows the sensor's coverage area.



Field of View: Occupancy Sensor (63059HB)

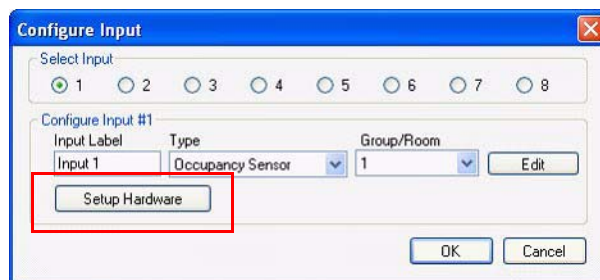
See ["Occupancy Sensors" on page 30](#) for installation and hardware information.

After the Type has been set to Occupancy Sensor, the hardware should be setup.

The Group/Room setting determines the Group/Room the sensor is connected to.

### Configure Sensor Hardware

From the Configure Input dialog box, select the Setup Hardware button. Using the pulldown menu, the occupancy sensor time-off delay can operate in one of four different modes.

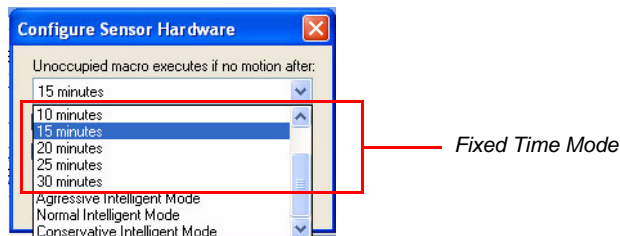


In addition, you can enable or disable an Audible Warning, the LED blink status, the sensor itself or the intelligence of the sensor.

Press **OK** when the configuration of the panel is complete.

### Fixed Time Mode

This is the default and the fixed timed delay (configured by the user) is always used. Time ranges from 1 minute to 30 minutes are available. 15 minutes is the default delay time.

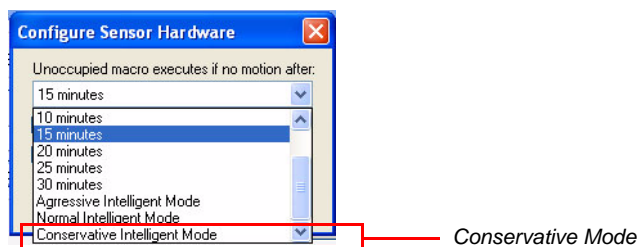


### Intelligent Modes

The three intelligent modes allow the sensor to automatically adjust to the space and occupancy patterns, differing in how aggressive the sensor is with saving energy.

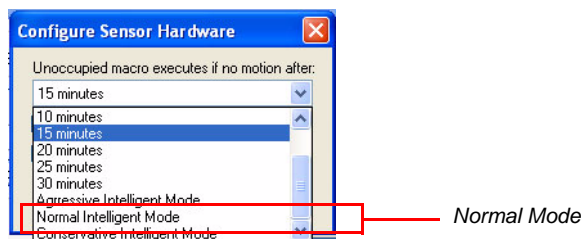
#### Conservative Mode

Conservative Mode will automatically adjust the time-off between 5 and 30 minutes for basic energy savings.



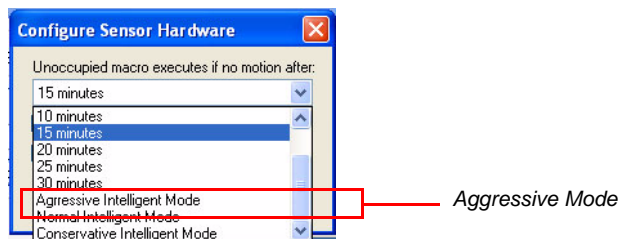
#### Normal Mode

Normal Mode will automatically adjust the time-off between 3 and 15 minutes for enhanced energy savings.



#### Aggressive Mode

Aggressive Mode will automatically adjust the time-off delay between 1 and 3 minutes for maximum energy savings.



## Occupancy Sensor Macro

Now that the sensor is setup, we need to create the Macro or action(s) that it will perform. There are two actions. The first action (represented in the left box) is the action when the room “becomes occupied”. The second action (represented in the right box) is the action when the room “becomes unoccupied”.



**Note:** Above is an example whereby a room becomes occupied, Preset 1 is triggered at a rate of 3 seconds. When the room becomes unoccupied, the sensor will wait the programmed time from the sensor hardware configuration and then it will trigger Preset 2 at a rate of 3 seconds.

The macro can perform many of the same features that a Smart button can perform.

**Note:** See the ["Button Type or Action" on page 85](#) for a list of actions that are available for Sensor Macros.

## Testing the Occupancy Sensor

Once you have the occupancy sensor configured, it will likely be inconvenient to wait until the time passes after the room is empty to test the configuration. So there is an indicator on the button station that will allow testing. The little red indicator is available and if you press it, it will light up and trigger the occupancy sensor.

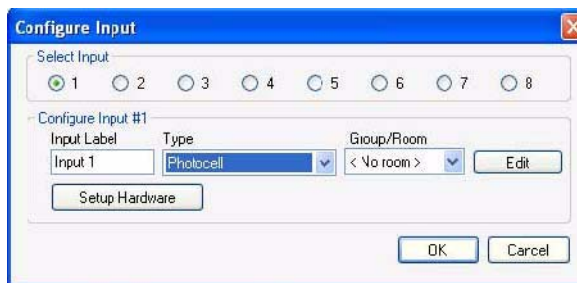
Very handy...very intelligent.

**Note:** Hover over the edge of the button station and a handy tooltip will pop up to show you the sensor configuration.



## Photocell Daylighting Sensors

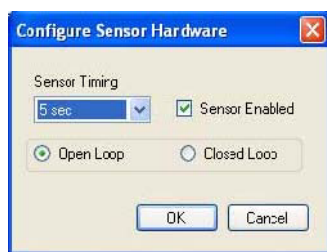
Photocell Daylighting Sensors may be programmed with Strand Lighting's Vision.net Designer software, as part of a Vision.net architectural controls system.



## Configure Sensor Hardware

From the Configure Input dialog box, select the Setup Hardware button. Using the pulldown menu, the photocell sensor timing can function with several timing options from 1 second to 5 minutes.

The Sensor Enabled check box will enable the photocell sensor when checked.



You can select an *Open Loop* or *Closed Loop* setting based on the desired affect.

- An *Open Loop* will allow the Photocell to make adjustments based on detected sunlight. Artificial or fluorescent lighting has less affect.
- A *Closed Loop* will allow the Photocell to make adjustments based on artificial or fluorescent light. Sunlight has less affect.

### Sensor Programming with Remote

A Vision.net Sensor Remote Programmer (optional accessory) can be used to program the unit(s). *Please note that configuration changes made with the Remote Programmer will not be saved in the Vision.net Designer software configuration file.*

#### To enter Programming Mode:

- Step 1. Aim the remote at the Photocell Daylighting Sensor and press the PGM (Program) button. All affected sensors will blink red.
- Step 2. You may now select which sensor you would like to program by "laser painting" it with the remote laser. Press and Hold the LASER button and allow the beam to "hit" the sensor you want to select. Once the signal is received, the sensor will illuminate green and is ready to receive commands.

#### Entering Programming Mode:

- Step 1. Enter Programming Mode (see above)
- Step 2. Tap FIELD SELECT button until the Photocell Sensor lights up its Green LED (Dimmer and Photocell Mode).

#### Setting Up Daylight Harvesting

- Step 1. Tap MODE (A) button to select the Daylight Harvesting Mode.
- Step 2. Tap buttons 1-6 to select the following modes:



Button	Operation Mode / Meaning
1 (DH1)	Daylight Harvesting RLYS Button Control Open Loop (RLYS Button(s) On with Low Sunlight and Off with High Sunlight)
2 (DH2)	Daylight Harvesting Dimmer Control Open Loop (Move towards Preset 1 with Low Sunlight and Preset 2 with High Sunlight).
3 (DH3)	Daylight Harvesting Dimmer Control Closed Loop (Move towards Preset 1 with Low combined Room Ambient and Sunlight and Preset 2 with High combined Room Ambient and Sunlight).
5 (DH-MO)	Tap to set the Photocell in Manual On Mode: a – When in DH1 Mode, the Photocell is enabled whenever RLYS Button 1 is on. This allows it to be controlled by a Sensor controlling RLYS Button 1 b – When in DH2 and DH3 Modes, the Photocell is enabled whenever its assigned RLYS Buttons are On and the system is in Preset 1 (On Preset).
6 (DH-AO)	Tap to set the Photocell in Auto Mode. Auto Mode is used whenever the Photocell is powered up. It will always turn on RLYS Buttons and set Preset 1. This mode is used whenever the Photocell Sensor is the only sensor in the system and the lights are externally controlled by a dimmer or relay cabinet.
0 (Default)	Factory Default (DH2 - Manual On)

**Note:** DH1 and DH2 are considered Open Loop, in that the Photocell will make adjustments based on detected sunlight (artificial or fluorescent lighting has less affect).

**Note:** DH3 is considered Closed Loop, in that the Photocell will make adjustments based on artificial or fluorescent light (sunlight has less affect).

Step 3. Tap TIME (B) button to select response timing (speeds up or slows down the control of relay(s) or dimmers).

Step 4. Select Response Time buttons 1-8:

Button	Response Time Setting
1	1 Minute - Most aggressive for Dimmer Raise/Lower Control
2	3 Minutes
3	5 Minutes
4	10 Minutes
5	15 Minutes
6	20 Minutes
7	25 Minutes
8	30 Minutes - Slowest for Dimmer Raise / Lower Control
0	Factory Default Time (5 Minutes)

**Note:** For DH1 Mode, the Response Time is the time the sunlight is either below the Low Sunlight setting or above the High Sunlight setting before RLYS Button ON/OFF commands are transmitted.

**Note:** For DH2 and DH3 Modes, the Response Time selects how rapidly the dimmers are adjusted with a change in light. Response times will vary based on how much and how rapid the light changes. The dimmers can respond in as little as 5 seconds or as much as 30 minutes.

Step 5. Tap AV (C) to select the AV Button Input(s) to control when in DH1 Mode. Tap AV (C) to select the AV Button Input(s) that need to be On when in DH2 or DH3 Mode to enable the Photocell.

Step 6. Tap 1-8 to select RLYS Buttons:

Button	Relay Buttons
1	RLYS Button 1
2	RLYS Button 2
3	RLYS Button 3
4	RLYS Button 4
5	RLYS Button 5
6	RLYS Button 6
7	RLYS Button 7
8	RLYS Button 8
0	Factory Default (No RLYS Buttons Assigned)

Step 7. Tap SENS (D) to Capture or Adjust the Low and High Sunlight Settings.

- a. When the Sunlight is at its Low Level (early morning or late evening), Press and Hold the LSUN (1) button for 3 or more seconds. Release the button when the Photocell Sensor goes blank. After 5 seconds the Sensor will take a Snapshot of the room and set the Low Sunlight Setting.
  - 1) The Sunlight Setting can be modified by Tapping the -SUN (5) button to decrease the level in 5% increments (max is -80%).
  - 2) The Sunlight Setting can be set back to its Snapshot Level by Tapping the =SUN (6) button.
  - 3) The Sunlight Setting can be modified by Tapping the +SUN (7) button to increase the level in 5% increments (max is +100%).

- b. When the Sunlight is at its High Level (mid-day), Press and Hold the HSUN (2) button for 3 or more seconds. Release the button when the Photocell Sensor goes blank. After 5 seconds the Sensor will take a Snapshot of the room and set the High Sunlight Setting.
  - 1) The Sunlight Setting can be modified by Tapping the –SUN (5) button to decrease the level in 5% increments (max is -80%).
  - 2) The Sunlight Setting can be set back to its Snapshot Level by Tapping the =SUN (6) button.
  - 3) The Sunlight Setting can be modified by Tapping the +SUN (7) button to increase the level in 5% increments (max is +100%).

## Testing Daylight Harvesting

### To test daylight harvesting operation:

- Step 1. Tap TEST button to put the system in TEST Mode. All Sensors will start flashing once every few seconds. The color of the Photocell Sensor will be based on whether it is sensing Sunlight below the Low Sunlight Level (Red), between the Low and High Sunlight Levels (Green), or above the High Sunlight Level (Blue). The control of the RLYS Buttons and Dimmers will be accelerated during Test Mode.
- Step 2. While in test Mode the sensed Sunlight can be electronically adjusted by tapping the –SUN (5) to reduce it in 5% increments, =SUN (6) to return it to actual level, and +SUN (7) to increase it in 5% increments. This allows the Photocell to be tested (observe the colors) without waiting for the actual sun to change.
- Step 3. Tap TEST button a second time to go back to Parameter Setting Mode.

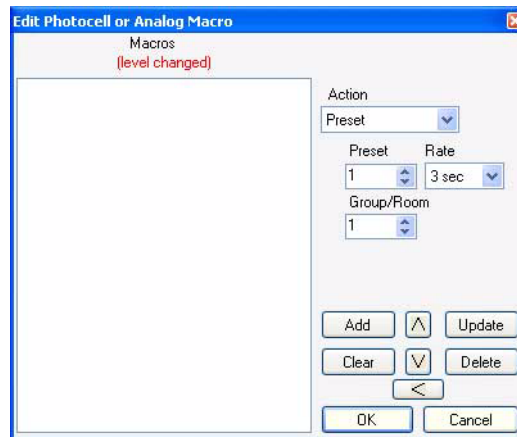
**Note:** Refer to "[Programming with IR Sensor Remote Programmer](#)" on page 35 for Programmer Remote button layout.

## Troubleshooting Guide

Symptom	Cause	Correction
Lights do not come on either manually or automatically.	Lamp(s) are burned out or missing.	Replace lamp(s) in fixture(s).
	Circuit breaker is off.	Turn on Circuit breaker.
	Wire connections are faulty.	Recheck all wire connections. Important! Turn off circuit breaker before servicing.
Lights are too bright or not bright enough.	Ambient light level(s) is/are not set correctly.	Readjust Preset 1 (adjusts Maximum Lamp Level) and/or Preset 2 (adjusts Minimum Lamp Level). or Recapture the Low Sunlight and High Sunlight Levels. See " <a href="#">Sensor Programming with Remote</a> " on page 78"
Controlled lights react too quickly to ambient light changes.	Response Time not set properly.	Reprogram Response Time to a higher time setting.
The wrong fixtures react to the light levels.	Improper relays or dimmers are assigned to react to daylight harvesting control.	Reprogram to control the proper relays or dimmers.
Photocell Daylighting Sensor is not reacting to sun light level changes.	Unit is not properly programmed.	Verify programming and reprogram as desired.
	Unit is not located in the proper position to see sunlight changes.	Relocate daylighting sensor to view ambient (sunlight).
Photocell Daylighting Sensor is not reacting to programming IR remote control.	Batteries are expired in IR remote.	Replace batteries.

## Photocell Macro

Now that the sensor is setup, we need to create the Macro or action(s) that it will perform. There is a single macro (which can activate a Preset or many other functions) that will be triggered when the Photocell is triggered based on the sensors settings.



The macro can perform many of the same features that a Smart button can perform.

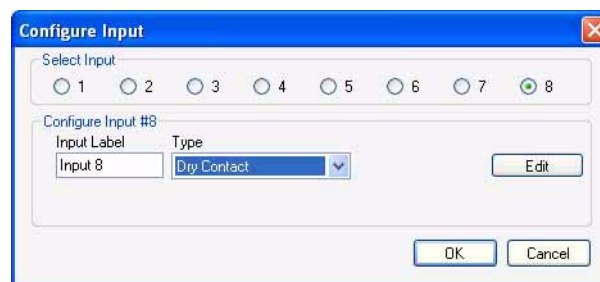
---

**Note:** See ["Button Type or Action" on page 85](#) for a list of actions that are available for Sensor Macros.

---

## Dry Contact

A dry contact closure can fire a macro (which can activate a Preset or many other functions).



The dry contact on the station must use input 8. Then select Dry Contact from the Type pulldown. Then you select the Edit button to configure the Macro.

---

**Note:** Input 8 may be wired for other sensors but it is the only input that can work for a dry contact.

---

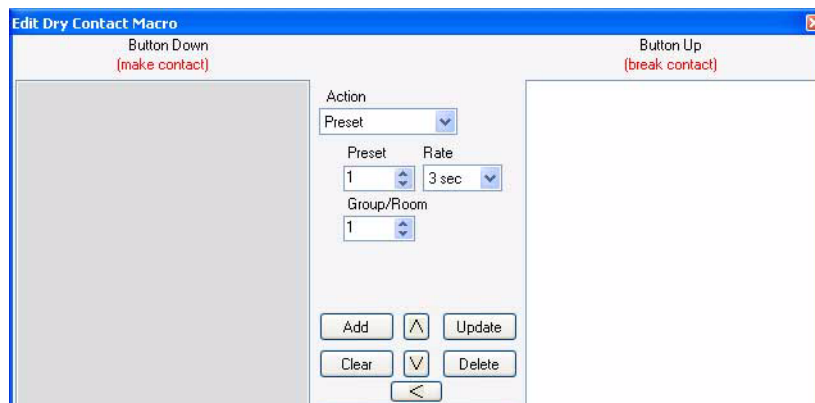
## Configure Sensor Hardware

From the Configure Input dialog box, select the Setup Hardware button. The Sensor Enabled check box will enable the Dry Contact closure when checked.



## Dry Contact Macro

Now that the sensor is setup, we need to create the Macro or action that it will perform. There are two actions. The first action (represented in the left box) is the action when the dry contact "makes contact". The second action (represented in the right box) is the action when the dry contact "breaks contact".



The sensor macro can perform many of the same features that a Smart button can perform.

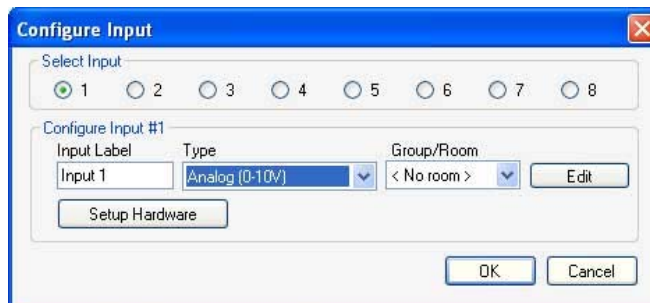
---

**Note:** See the ["Button Type or Action" on page 85](#) list for a list of actions that are available for Sensor Macros.

---

## Analog (0-10v)

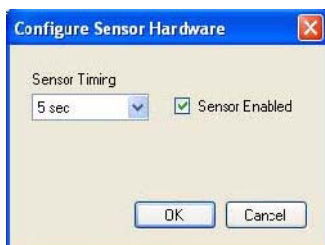
An analog (0-10V) can fire a macro (which can activate a Preset or many other functions).



## Configure Sensor Hardware

From the Configure Input dialog box, select the Setup Hardware button. Using the pulldown menu, the Analog (0-10V) timing can function with several timing options from 1 second to 5 minutes.

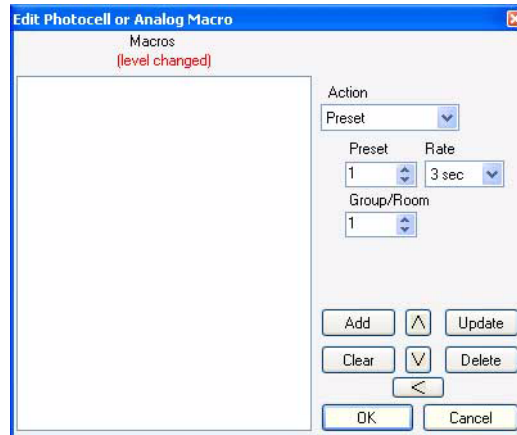
The Sensor Enabled check box will enable the Analog (0-10V) when checked.





## Analog Macro

Now that the sensor is setup, we need to create the Macro or action(s) that it will perform. There is a single macro (which can activate a Preset or many other functions) that will be triggered when the Analog (0-10V) is triggered based on the settings.

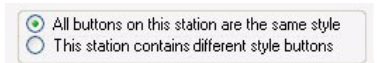


The macro can perform many of the same features that a Smart button can perform.

**Note:** See the ["Button Type or Action" on page 85](#) list for a list of actions that are available for Sensor Macros.

## All Buttons On This Station Are The Same Type

All buttons on this station are to be the same type. Let's keep the "All buttons..." selected for this application. This is a quick way to change one button type and have it cascade to all buttons on this station. Later on we'll get into different button types on the same station but for now, let's keep this as is.



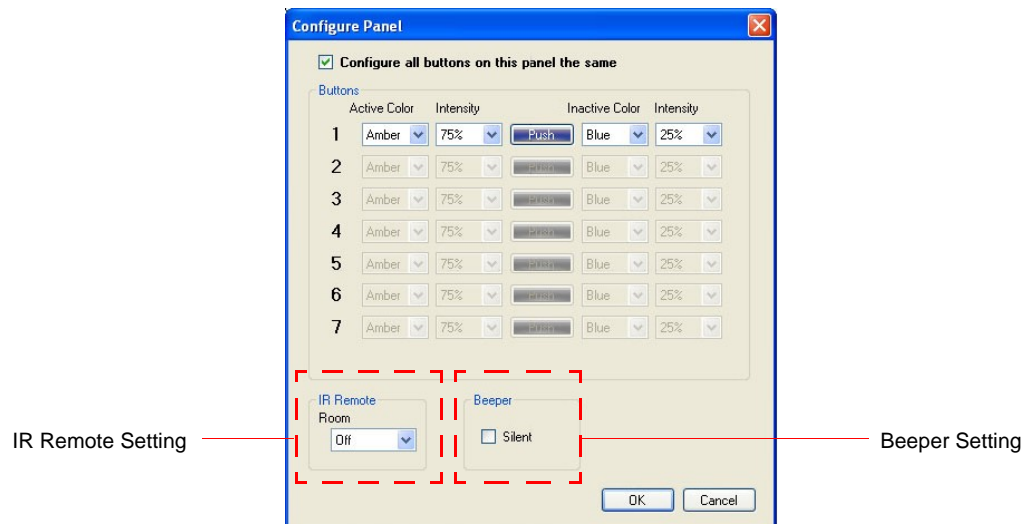
## Configure Panel

Configure Panel allows the configuration of the active and inactive colors and their associated intensities to be programmed for every button individually.



Check or uncheck the Configure all buttons on this panel the same as needed.

If you look at button one in the Configure Panel dialog box (see image below), pressing the Push button will simulate the active color and intensity while the normal state (not pushed) will show the inactive color and intensity.



Color options for both are Amber, Blue, White and Off. Intensity options are 25%, 50%, 75% and 100%.

By default all inactive colors are 25% blue and the pushed or active color is Amber at 75%. If you want the button station to only light up when active, the set the inactive color to Off. If the button station is going to be in a stairwell backstage and you want the button to be lit when the light is off so the technician can see where the button station is, then set the button to an appropriate inactive color so that it can be seen.

### IR Remote

If activating presets with the Vision.net Station Remote, configure the Room from the pulldown list on the Configure Panel dialog box. The options are Off, 1, 2, 3, or 4.

See [“Station Remote \(61205A\)” chapter on page 34](#) of this manual for more information.

### Beeper

This check box allows the beeper to be inactivated by checking the box for Silent operation in the Configure Panel dialog box.

Press OK when the configuration of the panel is complete

## Button Label

This allows labeling for the button that appears on the button station in Vision.net 4.5 Designer or on a Touchscreen.

**Note:** When you change the button type, the label will change to reflect that button type so change the button type before you edit the label.

	Button Label	Button Type	Group/Room	Preset #	Rate	Disable Learn	State Map
1	Preset 1	Preset	1	1	3 sec	<input checked="" type="checkbox"/>	[abcde]fgh
2	Preset 2	Preset	1	2	3 sec	<input checked="" type="checkbox"/>	[abcde]fgh
3	Preset 3	Preset	1	3	3 sec	<input checked="" type="checkbox"/>	[abcde]fgh
4	Preset 4	Preset	1	4	3 sec	<input checked="" type="checkbox"/>	[abcde]fgh
5	Preset 5	Preset	1	5	3 sec	<input checked="" type="checkbox"/>	[abcde]fgh
6	Preset 6	Preset	1	6	3 sec	<input checked="" type="checkbox"/>	[abcde]fgh
7	Preset 7	Preset	1	7	3 sec	<input checked="" type="checkbox"/>	[abcde]fgh

## Button Type or Action

Very simply put, the Button Type determines the action that the button takes. Button Types are the basic building block for the actions that the Vision.net system will generate to the lighting system.

Many devices use Button Type commands to generate actions onto the Vision.net system. This includes Button Stations, Touchscreens, Sensor Macros, Smart Buttons and Timed Events. Not all button types are available on all devices. This section will cover all button types no matter what device is capable of delivering the command. Just look for the note at the end of each button type's description for the device that is capable of that command.

Once a Button Type is selected the relative options to the right will change according to the Button Type action selected.

In the Configuration Station window, select the pulldown for Button Type...

Let's talk about the button types and what the commands are...



### Preset

Button Label	Button Type	Group/Room	Preset #	Rate		State Map
1	Preset 1	Preset	1	3 sec	<input checked="" type="checkbox"/>	[abcde fgh]

A Preset is a lighting state of a collection of channels' levels. This would be similar to a Cue in a theatrical control system. It is defined by a Group/Room number. Pressing a preset button allows the button to activate a Group/Room and a Preset for the button. Just select the appropriate Group/Room number and Preset number to the right of the Button Type pulldown. The fade time (from Instant to 60 minutes) can be set. The checkbox shown above allows the ability to enable or disable the Learn in Learn Lock Mode features.

---

**Note:** See ["Disable Learn" on page 93](#) to understand this feature.

---

The State(s) in which the button is available can be set in the State Map.

---

**Note:** Applies to Touchscreens, Smart Buttons, Timed Events, Sensor Macros and Button Stations.

---

### Preset/Off

A Preset/Off button is a latching button. It switches the selected Preset on and off. It is defined by a Group/Room number. Pressing a preset button allows the button to activate a Group/Room for the button you select. (The button is active when the button's light is on.) Pressing the button again allows the button to deactivate the configured Preset. (The button is deactivated when the light is off.) The fade time can be set and the Learn Lock Mode can be enabled or disabled. The State(s) in which the button is available can be set in the State Map.

Button Label	Button Type	Group/Room	Preset #	Rate		State Map
1	Preset 1	Preset/Off	1	3 sec	<input checked="" type="checkbox"/>	[abcde fgh]

---

**Note:** Applies to Touchscreens, Smart Buttons, Sensor Macros and Button Stations. Preset Off is not available for Rooms 240 - 255.

---

### Toggle

A Toggle button will switch a channel belonging to a group on and off with each press. Specify the ID of the Group the channel belongs to and the number of the channel. The State(s) in which the button is available can be set in the State Map.

Button Label	Button Type	Group/Room	Channel #		State Map
1	Toggle 1	Toggle	1		[abcde fgh]

---

**Note:** Applies to Touchscreens, Smart Buttons, Timed Events, Sensor Macros and Button Stations.

---

## Smart

Smart buttons are one of the Vision.net 4.5's most powerful features. They are completely flexible buttons allowing a number of actions to be combined on the press of a single button. Pressing Edit will allow the configuration of the Smart button's assignment. The State(s) in which the button is available can be set in the State Map. The button can be Shared.

A toolbar for smart button configuration. It includes a 'Button Label' field with the value '1', a 'Button Type' dropdown menu set to 'Smart', an 'Edit' button, a 'State Map' button with the text '[abcde fgh]', and a 'Share' button.

**Note:** Applies to Touchscreens, Smart Buttons, Timed Events and Button Stations. Refer to [Smart Button Configuration](#) for more information.

## Smart Button Configuration

Smart Buttons are extremely powerful and configurable. Editing this button allows you to set that button's action to be not only a single action but a combination of actions that will occur in the order in which they are programmed.

Smart buttons can either be latching, momentary, or radio. A separate action can be assigned to either the "Button Down" action (when the button is pressed) or to the "Button Up" action (when the button is released). The default action is placed on the button up action.

**Note:** Applies to Touchscreens, Smart Buttons and Button Stations.

Press the Edit button to configure.

The 'Edit Smart Button' dialog box. It has a title bar 'Edit Smart Button'. Inside, there are two main sections: 'Button Down (only while button is held)' on the left and 'Button Up (when button is release)' on the right. Between them are radio buttons for 'Momentary' (selected), 'Latched', and 'Radio'. Below these are fields for 'Action' (a dropdown), 'Preset' (a dropdown), 'Rate' (a dropdown set to '3 sec'), and 'Group/Room' (a dropdown set to '1'). There are also buttons for 'Add', 'Update', 'Clear', 'Delete', 'OK', and 'Cancel'. At the bottom right is a checkbox labeled 'Run at Power-up'.

The button can be Momentary (temporary), Latched (will stay until pressed again) or Radio (while turning itself on will turn all other like radio buttons off).

There are two main configurable areas the Button Down area and the Button Up area. By default, all Momentary commands will be programmed to be triggered when the button is released, while the default for Latched and Radio are when the button is pressed. The white area is the currently editable area.

**Note:** Button down actions only take place when the button is held down, it is usually best when using a momentary action on a Smart Button, to put all of the actions in the Button Up list. This removes the need for the user to hold the button down until all of the events have completed processing.

Run at Power-up shall activate the Smart Button when the system powers up.

The options for Smart button actions are listed in the Button Type section of the manual.

## Raise

A button configured as a raise button gives the ability to increase the configured items levels. The button can be configured to raise All, a specific Channel, a specific Preset or the Current Preset. When selecting a specific item an addition pulldown menu appears for this selection.

	Button Label	Button Type	Group/Room	Raise/Lower	State Map
1	Raise All	Raise	1	All	[abcdehgh]

The State(s) in which the button is available can be set in the State Map.

**Note:** Applies to Touchscreens and Button Stations. Current preset is not available for Special Rooms.

## Lower

A button configured as a lower button gives the ability to decrease the configured items levels. The button can be configured to lower All, a specific Channel, a specific Preset or the Current Preset. When selecting a specific item an addition pulldown menu appears for this selection.

	Button Label	Button Type	Group/Room	Raise/Lower	State Map
1	Lower All	Lower	1	All	[abcdehgh]

The State(s) in which the button is available can be set in the State Map.

**Note:** Applies to Touchscreens and Button Stations. Current preset is not available for Special Rooms.

## State/Mode

This function allows the button to select one of the different States or Modes of the system.

	Button Label	Button Type	State / Mode	State Map
1	S: All Modes	State / Mode	All Modes	[abcdehgh]

The State(s) in which the button is available can be set in the State Map.

**Note:** Applies to Touchscreens, Smart Buttons, Timed Events, Sensor Macros and Button Stations.

## No Button

This removes the button from the station for configuration purposes.

	Button Label	Button Type	State Map
1		<no button>	[abcdehgh]

The State(s) in which the button is available can be set in the State Map.

## Room Link

This allows the button to act as a room combine function, effectively joining two groups or rooms together.

	Button Label	Button Type	Group/Room	Room	State Map	Share
1	Link	Room Link	1	1	[abcdehgh]	

The State(s) in which the button is available can be set in the State Map. The Button can be Shared.

**Note:** Room Link buttons must all be on the same station or touchscreen and must only be on one device. This is the only way the Room Link commands know what combination to transmit. Should the need arise to have Room Links work across multiple stations, use a Shared Button to mimic to another station, touchscreen or the PC.

**Note:** Applies to Touchscreens and Button Stations.

## Console Button

This function allows triggering of events on a Strand PaletteOS based console. PaletteOS requires that a Room number be identified so the Group/Room number here would correspond with that on the PaletteOS showfile.

Button Label	Button Type	Group/Room	Button #	State Map
1 Console 1	Console Button	1	1	[abcde fgh]

The State(s) in which the button is available can be set in the State Map.

When setting a Macro to be a Console Button the interface is slightly different. The radio button options allow the console button to be activated on either the button press (Down) or the release of the button press (Up).

**Note:** Applies to Touchscreens, Smart Buttons, Timed Events, Sensor Macros and Button Stations.

Action
Console Button
Button
1
Group/Room
1
<input checked="" type="radio"/> Down <input type="radio"/> Up

## Share Button

This allows a shared button to be remotely pressed. Another button must be setup as the target shared button prior to setting up the remote button that it shares to. The Share Button pulldown will allow the selection of any previously shared button. The Edit Target button allows the configuration of the original button that is shared.

Button Label	Button Type	Share button:	Edit Target	State Map
1 Share	Share Button			[abcde fgh]

The State(s) in which the button is available can be set in the State Map.

When setting a Macro to be a Share Button the interface is slightly different. The radio button options allow the share command to activate on the Up action or the Down action of the button to mimic the button push. Or it could be set to Activate or Deactivate the button's action and LED indicator.

For example, if a Shared Button was activating a Smart Button that had two actions in it to activate two presets (Work lights SL and Work Lights SR) and the Work Lights SL was on (activated by a local button) and the Work Lights SR was off (deactivated by a local button) then it would just turn one work light off and the other work light on. If you want to make sure that both work lights are on, then set the radio button to Active and if one work light's button is already on, then it will ignore it and turn the other work light on so that both are on. Deactive will perform the opposite action to make sure that both work lights are off. The LEDs for each button's action will follow the action itself. (When the work lights are on, the LED indicator will be on, when the work light is off, the LED indicator will be off.)

Action
Share Button
Share Button:
Smart [2]
<input type="radio"/> Up <input checked="" type="radio"/> Down <input type="radio"/> Active <input type="radio"/> Deactive

**Note:** Applies to Touchscreens, Smart Buttons, Timed Events, Sensor Macros and Button Stations

This completes the list of Button Types for Button Stations. However, there are Button Type options for Buttons that are Smart Buttons, Touchscreen Buttons and Macros on Timed Events or Sensors. In order to keep all Button Type information in one section of the manual, the remainder of the Button Type options will be listed here and when the manual discusses, Smart Buttons, Touchscreen Buttons and Macros, you will be redirected to this sections for information on the remaining Button Types available.

A notation follows every button type description to identify on what item each action can be found.

## Toggle On

This function will turn on a Channel in a Room/Group. Assign the Channel and Group/Room with the parameters shown.

**Note:** Applies to Smart Buttons only.

Action
Toggle On
Channel
1
Group/Room
1



## Toggle Off

This function will turn off a Channel in a Room/Group. Assign the Channel and Group/Room with the parameters shown.

**Note:** Applies to Smart Buttons only.

## If

This function is a conditional statement that allows a sophisticated set of commands to run on a Smart Button.

For example, a Smart button could be programmed with the following logic:

- If the system is in Mode: Show, then activate Preset 1. Otherwise (Else), activate Preset 2.

**Note:** Applies to Smart Buttons, Sensor Macros and Timed Events.

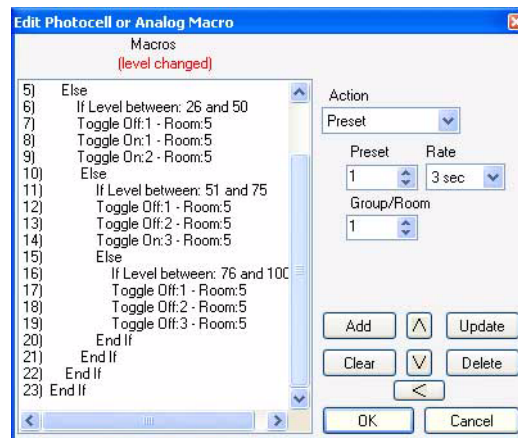
## If-Level

The If-Level command is designed to allow logical If-Else-End Macro logic to control what happens as a Photocell Sensor moves from No Sunlight (0%) to Full Sunlight (100%).

As an example, the following would allow the Macro to control Non-Dim Lights in a large room to logically turn on an off based on Sunlight received by the Photocell (Channels 1 through 3 control lights that are closest to furthest from a window).

The first image shows the first part of the command list.

The second image shows the last set of commands that use the End If instruction to close out the Else instructions.



Basically, if the sensor detects only a little sunlight (between 0% and 25%), the macro toggles all of the channels on. As sunlight increases (between 26% and 50%), the macro toggles off the channel closest to the window and the others on. As sunlight continues to increase (between 51% and 75%), the macro toggles the 2 channels closest to the window off and the one furthest from the window on. As sunlight reaches its maximum (between 76% and 100%), the macro toggles all of the channels off.

**Note:** Applies to Photocell and Analog only.

### Wait

This function allows a delay between the activation of other commands. The ranges of wait times are between 1/4 second and 4 hours.

**Note:** Applies to Smart Buttons.



### Loop

This function allows a list of commands to be repeated. The loop command would be set to loop "To" a particular command in the macro list. Setting the loop "To: 1" would have the sequence loop back to action 1 on the list. The Count pulldown menu allows you to determine how many times the Loop command would initiate. If you set the count to "2" then when the Smart button is pressed, the will run through the list of actions until it gets to the Loop command, then it would loop back to action number 1 (or the number set in the To: box above) then it would repeat the sequence twice before it would skip the loop command. If you need the Smart button to always run the same sequence, then leave Count at the default setting of Forever.

**Note:** Applies to Smart Buttons.



### Indicator Control

This function allows a Smart button to turn a button's indicator on or off as well as set the button's color when the indicator is on. Use the radio button section for the proper indicator. Set the desired color from the Button Color pulldown menu.

**Note:** Applies to Smart Buttons.





## Lock Button

This function allows a Smart button to disable a button's function. Once the Action: Lock Button is selected: the Station or Touchscreen shall be selected via the Station pulldown. Then select the appropriate button from the Button pulldown. Notice that you can lock all buttons on a station.

**Note:** Applies to Smart Buttons.

## Unlock Button

This function allows a Smart button to enable a button's function that has been previously locked. Once the Action: Unlock Button is selected: the Station or Touchscreen shall be selected via the Station pulldown. Then select the appropriate button from the Button pulldown.

**Note:** Applies to Smart Buttons.

## RTC Group

This function allows enabling or disabling of the Real Time Clock Group Events. Select the Group number accordingly.

## CK Show

This allows the button to trigger a Color Kinetics show from a Color Kinetics playback device such as an iPlayer 3.

The iPlayer 3 connects to the Vision.net 4.5 system using a DB9 cable from a Vision.net touchscreen to either serial port 1 or 2 on the iPlayer. Select the show from the pulldown list. The button can turn the show Off or activate playback 1 thru 225. The cable should be connected to serial port 2 on the touchscreen.

**Note:** Applies to Touchscreens only.

## Set Clock

This allows the button to set the clock on the Touchscreen.

**Note:** Applies to Touchscreens only.

## Suspend Clock

This allows the button to suspend the clock function on the Touchscreen.

**Note:** Applies to Touchscreens only

## Toggle Master

This allows toggle button groups to be learned and can be very useful when using Toggle Buttons for non-dims of a theatrical lighting system.

**Toggle Masters can be set to perform one of 4 ways:**

- 1) **Alternative Action:** where the button alternately turns on and off the selected toggle buttons.
- 2) **All On:** where the button turns on the selected toggle buttons.
- 3) **All Off:** where the button turns off the selected toggle buttons.
- 4) **Any On Indicator Only:** when any learned toggle is turned on, the toggle master will turn on its indicator to reflect that at least one of its learned toggles is on.

---

**Note:** Applies to Touchscreens only.

---

## Screen Saver

This allows the button to enable the system's screen saver.

---

**Note:** Applies to Touchscreens only.

---

## Set Channel

The Set Channel command is designed to allow individual channels to be set to specific levels. This can allow some customizing of room lighting without having to add a new preset.

Uses could be to allow certain channels to fade to a low fixed level regardless what the Room Preset is set to.

Select the action of Set Channel, then select the Room, Channel and Level to apply. The level information appears in both DMX value and it percentage value for your convenience.

Just Add when you have the correct action settings and continue adding multiple Set Channel actions as desired.

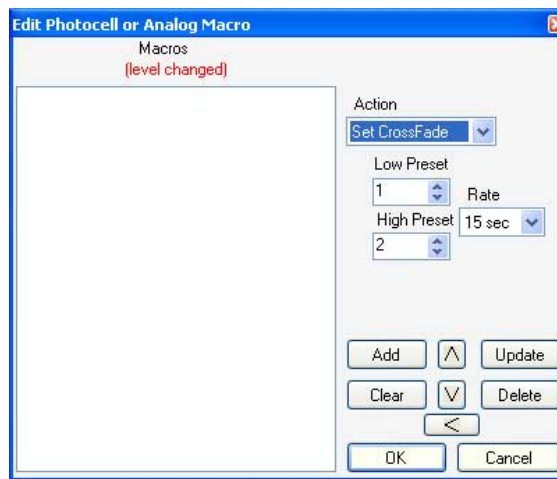
---

**Note:** Applies to Photocell and Analog only and are dependent on the sensors abilities.

---

## Set Crossfade

The Set Crossfade command is designed to allow the setting of levels between two Presets based on Sunlight percentage.



For example, this would allow the user to setup Preset 1 as the preset for No or Low Sunlight conditions and Preset 2 for Full Sunlight conditions. As the Sunlight percentage moves from Low Sunlight (0%) to High Sunlight (100%), the Dimmers would set their channel levels between Preset 1 and Preset 2 based on the percentage of Sunlight.

Select the action of Set CrossFade then the Low Preset for no or low sunlight conditions, set the High Preset for high sunlight conditions and the Rate at which the crossfade is desired. (Options are from Instant to 60 minutes).

---

**Note:** Applies to Photocell and Analog only and are dependent on the sensors abilities.

---

This completes the list of Button Type actions that are available in Vision.net 4.5 Designer. The manual will now return to the remaining options on the Button Station configuration dialog box.

## Disable Learn

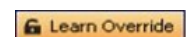
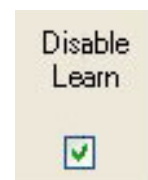
This feature locks out the recording ability of the button using the Press and Hold functionality built into Designer for Vision.net 4.5.

When this box is checked, the buttons learn capabilities are disabled. This is enabled by default as a safety to keep the button's stored data from being overwritten. If you want to keep the button locked for the safety of the system but need to store the proper levels on the preset, just leave the box checked (Disable Learn) and when it is time to store the preset, press the Learn Locked icon on the Main Toolbar. That will temporarily disable the Learn Lock Mode and allow you to store levels to the preset. Then press the Learn Override icon and that will restore the system to its default state.

---

**Note:** When this box is checked the learn feature is disabled ONLY when in Learn Lock Mode and Learn Lock Mode is enabled by default. When the box is unchecked, the learn feature is NOT disabled when in Learn Lock Mode. Another way of saying this is, any button that is not checked will always be able to learn.

---



## State Map

States are different conditions that can be setup to reflect a current state of operation. Two examples are pre-determined for each Vision.net system and those are **Show** and **Rehearsal**.

Let's say you have a button station that is exposed to the audience area of a theatre and that button station has a button that is configured to turn on the house lights to full. You may not want that button functioning during a performance to allow an audience member to accidentally press that button and bring the house lights to full. Use the States / Modes that Vision.net 4.5 offers and change this button to not be active in the Show State. Now when you are in the Show State, this button will not be active.

Once the buttons are configured to the installations specifications, let's look at uploading the data to the station.



## Station ID and Configuration

Vision.net 4.5 is a decentralized system where there is no central processor to store the configuration data. Each station will store its own configuration data. The main benefit is there is no one point of failure for the Vision.net system. The following section discusses the procedures involving uploading station data as well as setting up the stations with the proper firmware and ID.

The system will allow the ability to work offline and upload later. We'll take a look at working with the configuration data once a station has been configured in Vision.net 4.5 Designer.

## Working Offline/Online

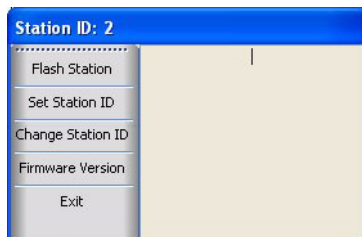
If you are working Online, then the OK button at the bottom of the configuration dialog box will display Upload & OK. If you press this and you are not online, a Network Communication Error dialog box will appear.



No worries, as all you have to do is check the box that asks if you want to work offline. From now on, all configurations of stations will remain in Vision.net Designer only. When you want to go online and upload, go to the File pulldown menu and uncheck Work Offline. Then you may upload station configuration data.

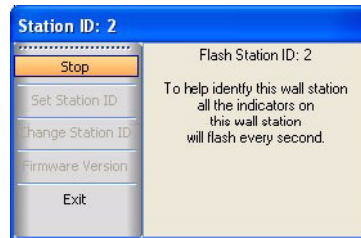
## Button Station ID

From the Configure Station dialog box, click on the Station ID button to work with the station's ID and firmware.



## Flash Station

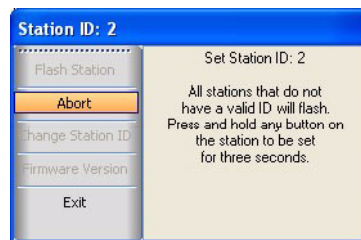
This interface will identify the wall station with the listed ID number.



All lit buttons will flash to identify the station in question.

## Set Station ID

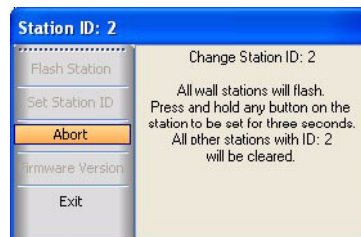
This interface will allow the setting of the station ID.



All stations that do not have a valid ID will flash. Just press and hold any button on the station to be set for three seconds.

## Change Station ID

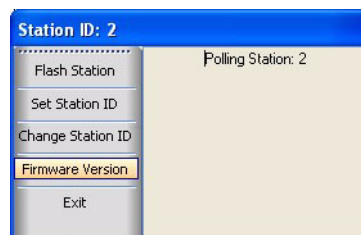
This interface will allow the changing of the station ID.



All stations will flash. Press and hold any button on the station to be set for three seconds. All other stations with the same ID will be cleared.

## Firmware Version

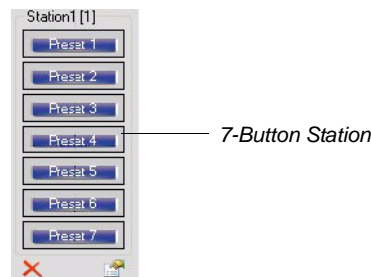
This interface will allow the polling of the station to determine the firmware version. Once the station has completed polling, the firmware version will display.



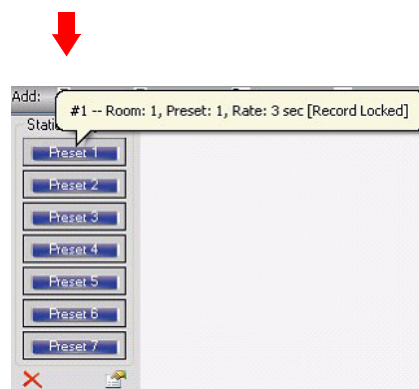
When done here, press Exit to close out the configuration of the button station. We'll talk about more specific configuration in the following sections.

## Button Stations

Now we have a 7 Button Station programmed into Room1. You see that the name of the button is at the top (Station1) and the Station ID (1) is beside the name in brackets. Below that is a graphical representation of each of the 7 buttons. At the bottom is an X where you can delete this Button Station. In the bottom right hand corner is the icon that gets you to the Properties dialog box. This is the same dialog box that appears when the item is created so it's easy to get back and change configuration information.



If you hover your mouse pointer over the first button (Preset 1) you will see what it is configured for by default. Once the button is pressed, it is now highlighted because it has been activated. The hovering text box tells us that it's Button #1. That it is turning on the lights for Room: 1. It's activated the programming of Preset: 1. It's fading its programming in a Rate: 3 seconds. The Record Locked feature is enabled.



**Note:** Also notice that the Status bar changes to reflect the command of pressing this button.

Trouble is, other than the Status Bar, we don't have a way of knowing what actually happened yet. In fact, nothing happened as we don't have anything set up for the outputs yet. You now need to create output devices. See [“Add an Output Device” on page 97](#) for information.

## Walk Around Programming

Walk Around Programming is used to set up a simple system using Vision.net keypads without a computer (Vision.net Designer not required). When a keypad is in its Factory Default Mode, its Room assignment can be configured using the Relay Panel. Its buttons will default to Presets 1 - 6, and OFF (7 button keypad for example). This allows a simple system to be setup using keypads that just send out Preset commands.

For a keypad to respond to Walk Around Programming commands it must be in its *Factory Default Mode*.

### To put a keypad into Factory Default Mode do the following:

- Step 1. Remove the keypad from the VN network (power down).
- Step 2. Press and hold any of the keypad's buttons and then plug it back into the VN network (Power up).
- Step 3. Hold the button until the keypad beeps once, and then twice (keypad is setting all of its parameters to their Factory Default settings).
- Step 4. Release the button and wait for the keypad to beep 4 times (parameters are now initialized).
- Step 5. Press EVERY button on the keypad (keypad will beep with every press). This tells the keypad which buttons are available on the keypad. It will remain in this Factory Test Mode for 30 to 60 seconds and then return back to Normal (4 more beeps). Removing the keypad from the network and then plugging it back into the network will also restore the keypad back to normal.

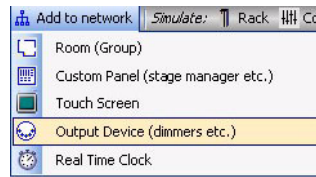
**Note:** Only those buttons that have been tapped will now be enabled.

The keypad is now ready to be assigned a room by using the Walk Around Programming Menus on the Relay Panel.

**Note:** Once Vision.net Designer has configured a keypad, it will not respond to Walk Around Programming commands. It must be returned to *Factory Default Mode*.

## 7. Add an Output Device

Select Add to Network from the Main Toolbar Select Output Device Let's accept the default ID of 1.



**Note:** This will auto-increment as you add more devices for a given category.

Enter Rack1 as the output device name.

### Output Device Types

The options for Type are:

- **Dimmer** - Dimmer Racks like C21 or EC21.
- **Relay** - Relay Panels like Contact.
- **DMX512** - for the DMX512 Interface or DMX512 Only devices like LEDs
- **Dimmer** (Active Power Management)
- **Relay** (Active Power Management)
- **Intelligent Fixture Interface**



The Active Power Management options display an addition column for Maximum Amperage. This is set at the factory and it limits the current placed on that circuit to meet energy codes. Let's keep the type set to Dimmer. Number of output channels of 16 is fine for this example.

Select OK.

Now you see the Dimmer Rack Configuration Spreadsheet.

 A screenshot of the software interface showing the 'Device Outputs' spreadsheet for a Dimmer rack. The spreadsheet has columns for Dimmer Slot #, Circuit Number, Description, Room [Group], Channel [Zone], Non Dim, Priority, and Warn. The data shows 16 channels, all with a priority of 'Highesttakes prec' and a 'Warn' checkbox.
 

Dimmer Slot #	Circuit Number	Description	Room [Group]	Channel [Zone]	Non Dim	Priority	Warn
1	1		1	0	<input type="checkbox"/>	Highesttakes prec	<input type="checkbox"/>
2	2		1	0	<input type="checkbox"/>	Highesttakes prec	<input type="checkbox"/>
3	3		1	0	<input type="checkbox"/>	Highesttakes prec	<input type="checkbox"/>
4	4		1	0	<input type="checkbox"/>	Highesttakes prec	<input type="checkbox"/>
5	5		1	0	<input type="checkbox"/>	Highesttakes prec	<input type="checkbox"/>
6	6		1	0	<input type="checkbox"/>	Highesttakes prec	<input type="checkbox"/>
7	7		1	0	<input type="checkbox"/>	Highesttakes prec	<input type="checkbox"/>
8	8		1	0	<input type="checkbox"/>	Highesttakes prec	<input type="checkbox"/>
9	9		1	0	<input type="checkbox"/>	Highesttakes prec	<input type="checkbox"/>
10	10		1	0	<input type="checkbox"/>	Highesttakes prec	<input type="checkbox"/>
11	11		1	0	<input type="checkbox"/>	Highesttakes prec	<input type="checkbox"/>
12	12		1	0	<input type="checkbox"/>	Highesttakes prec	<input type="checkbox"/>
13	13		1	0	<input type="checkbox"/>	Highesttakes prec	<input type="checkbox"/>
14	14		1	0	<input type="checkbox"/>	Highesttakes prec	<input type="checkbox"/>
15	15		1	0	<input type="checkbox"/>	Highesttakes prec	<input type="checkbox"/>
16	16		1	0	<input type="checkbox"/>	Highesttakes prec	<input type="checkbox"/>



## Dimmer Rack Configuration Spreadsheet

This spreadsheet has all the information necessary for you to configure the dimmer rack.

Dimmer ▲	Description	Room [Group]	Channel [Zone]	Non Dim	Priority	Warn
1		1	1	<input type="checkbox"/>	Highest takes precedence ▼	<input type="checkbox"/>
2		1	2	<input type="checkbox"/>	Highest takes precedence ▼	<input type="checkbox"/>
3		1	3	<input type="checkbox"/>	Highest takes precedence ▼	<input type="checkbox"/>
4		1	4	<input type="checkbox"/>	Highest takes precedence ▼	<input type="checkbox"/>
5		1	5	<input type="checkbox"/>	Highest takes precedence ▼	<input type="checkbox"/>
6		1	6	<input type="checkbox"/>	Highest takes precedence ▼	<input type="checkbox"/>
7		1	7	<input type="checkbox"/>	Highest takes precedence ▼	<input type="checkbox"/>
8		1	8	<input type="checkbox"/>	Highest takes precedence ▼	<input type="checkbox"/>
9		1	9	<input type="checkbox"/>	Highest takes precedence ▼	<input type="checkbox"/>
10		1	10	<input type="checkbox"/>	Highest takes precedence ▼	<input type="checkbox"/>
11		1	11	<input type="checkbox"/>	Highest takes precedence ▼	<input type="checkbox"/>
12		1	12	<input type="checkbox"/>	Highest takes precedence ▼	<input type="checkbox"/>
13		1	13	<input type="checkbox"/>	Highest takes precedence ▼	<input type="checkbox"/>
14		1	14	<input type="checkbox"/>	Highest takes precedence ▼	<input type="checkbox"/>
15		1	15	<input type="checkbox"/>	Highest takes precedence ▼	<input type="checkbox"/>
16		1	16	<input type="checkbox"/>	Highest takes precedence ▼	<input type="checkbox"/>

The columns are as follows:

- **Dimmer:** dimmer number listing based on the rack size that was chosen.
- **Circuit:** circuit number column that is purely a labeling column for configuration management purposes.
- **Description:** location to label the dimmers function.
- **Room/Group:** Room or Group that the channel is assigned to.
- **Channel/Zone:** Channel or Zone in the Room that the dimmer will respond to.
- **Non Dim:** check if this is a switched circuit. By default it will dim from 0% to 100%.
- **Priority:** in a system where you have both theatrical control (DMX512) and Architectural control (VN), this allows the channel to be controlled using the follow rules. Note: Priority does not function in C21/EC21.
  - 1) **Highest Takes Precedent:** highest value from either system takes priority.
  - 2) **If DMX512 then no Architectural:** if the dimmer received a DMX512 value, then any value from the Vision.net system is dropped.
  - 3) **DMX512 Only:** only responds to a DMX512 signal from the theatrical controller.
  - 4) **Arch [0-31] DMX [32]:** when Vision.net is outputting to Presets 0 thru 31, the signal shall come from Vision.net. When Vision.net is outputting to Preset 32, the signal shall come from the DMX512 based console.
- **Warn:** determines if the circuit will give a warning flash when the room it belongs to is swept.

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**Note:** A Sweep Room action will place the room in darkness. This is a macro that occurs as a timed event. See "[Real Time Clock Macros](#)" on page 148 in this manual for configuration information.

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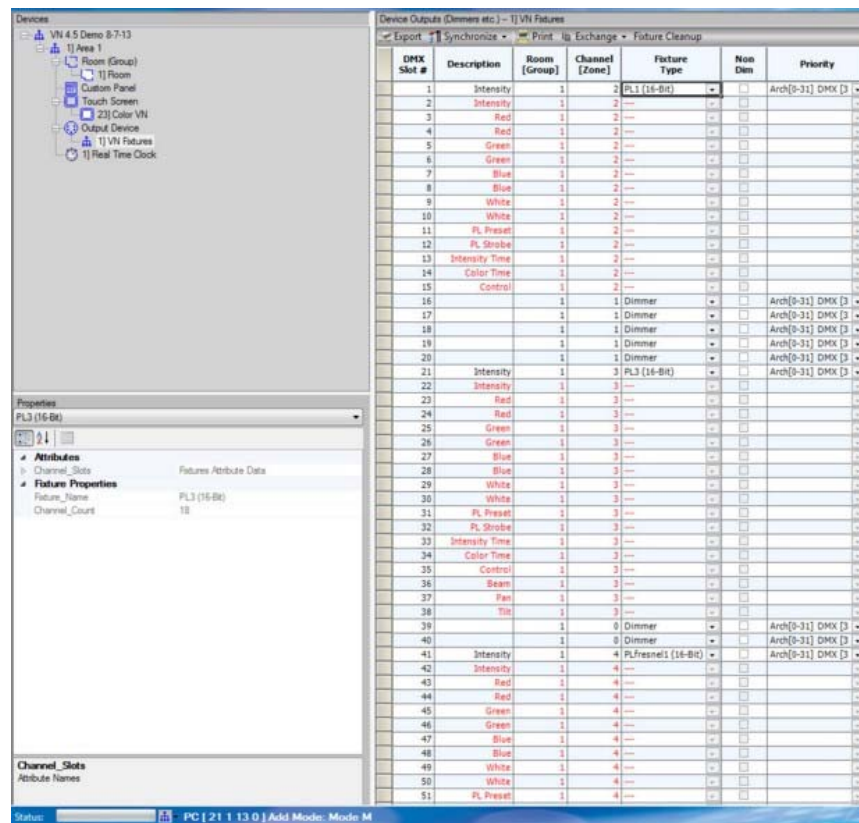
**Note:** Many of the columns are for different output device types. Not all columns are applicable for all output device types. The Dimmer and DMX types have identical columns. The Relay has no non-dim column as all relays are non-dim. The Active Power Management types display a Maximum Amperage column that is display only.

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## Intelligent Fixture Interface

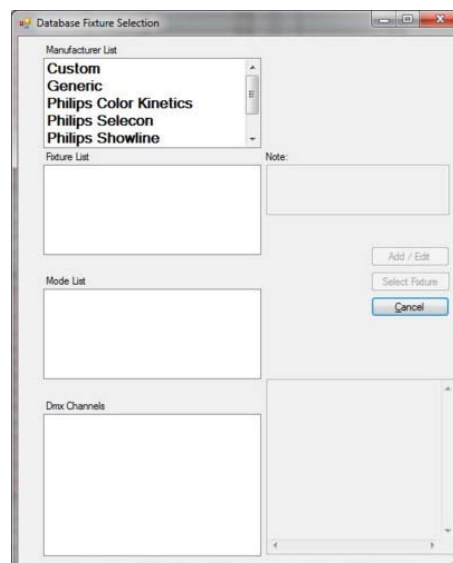
The Intelligent Fixture Interface has some unique features regarding LED and Automated Luminaire configuration and patching.



The Fixture Type column will allow the user to select an intelligent fixture from the list of available fixture in the configuration file. The fixture type list shall be populated with all patched fixture types. If the desired fixture type is not present, select New Fixture to access the fixture selection database.

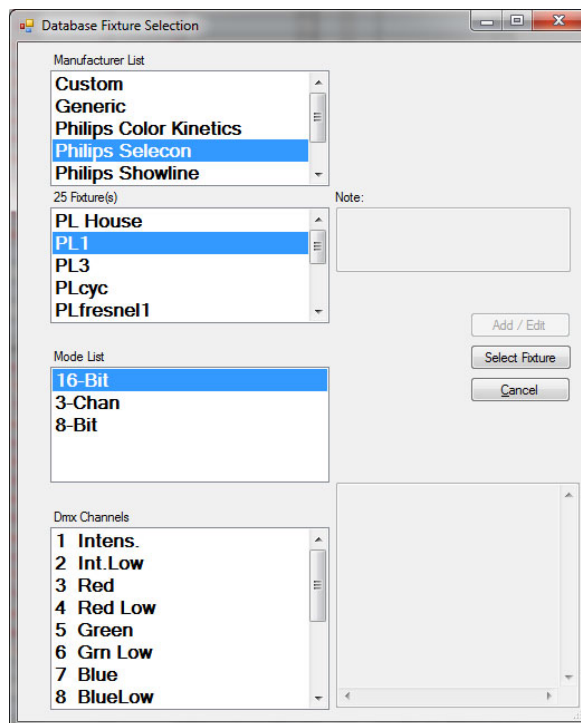
### Fixture Selection

When New Fixture is selected in the Fixture Type pulldown, the fixture selection database will be accessed.



This fixture selection database has fixture models from different manufacturers. Select a Manufacturer from the Manufacturer's List, then a fixture in the next box, then a Mode in the next box if available.

The image below shows a Selecon PL1 LED Luminaire in 16 bit mode selected.



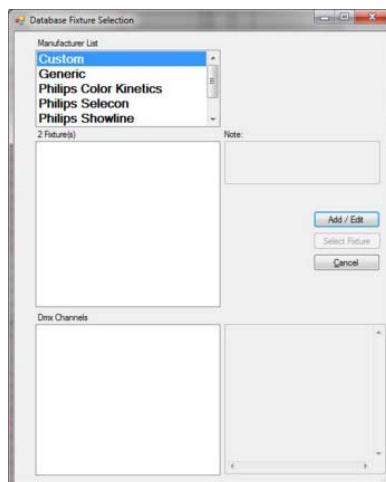
The bottom box shows the DMX channels in order. When ready press Select Fixture to apply this to the Fixture type for the selected Room and Channel.

**Note:** When a fixture other than a Dimmer is selected, the Priority is automatically changed to Arch[0-31] DMX[32].

### Custom Fixture

Should a Custom Fixture be required, any user can create any fixture as long as you have the DMX chart of the fixture in question.

From the Fixture Selection window, select Custom in the Manufacturer's list.



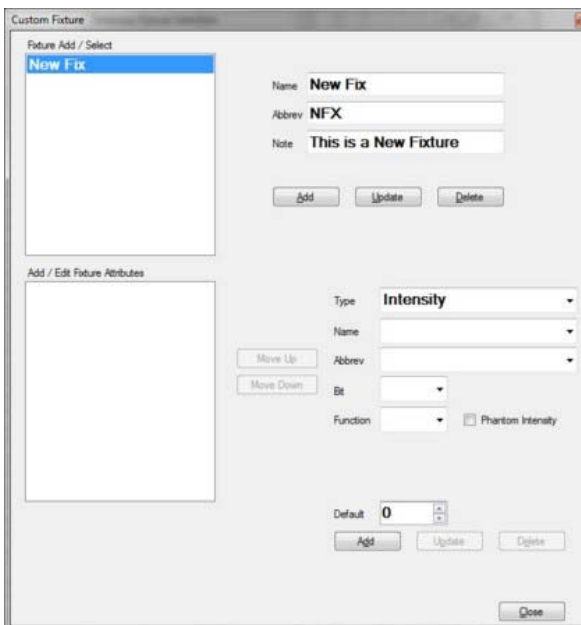
Then select Add/Edit.



From the Custom Fixture dialogue box, create a Name, Abbreviation (3 character minimum) and Note then press Add.



Once the New Fixture has been created, select the fixture in the Fixture Add/Select box.



Now you need to populate the fixture based upon the DMX map from the fixture manufacturer.

First select the Type. This will assign the attribute to a particular attribute family. The options are...

- **Intensity** - is treated as a variable parameter for the brightness of the fixture.
- **Color** - refers to the color family and will treat all attributes appropriate to other colors.
- **Beam** - refers to the Position family and will treat all attributes appropriate to pan and tilt.
- **Focus** - refers to the beam family and will treat all attributes appropriate to other focus parameters. The focus family is traditionally described as anything "outside" the beam of light. Zoom or Edge are examples.

- **Edge** - refers to the beam family and will treat all attributes appropriate to other edge parameters. The edge family is traditionally described as anything "outside the beam of light. Focus and Edge are generally interchangeable.
- **Control** - refers to the beam family and will treat all attributes appropriate to other utility parameters. The control family is traditionally described as any of a utilitarian nature. Control, Reset, Strobe or Timing channels.

Once a Type has been set for the family, select the applicable Name. The names available will be based upon the Type selected.

Now select the appropriate Abbrev that applies for the Name selected.

Then select the Bit. This will be either 8 bit (one output per parameter) or 16 bit (two outputs per parameter).

Select the Function that most appropriately applies. The options are...

- **Fade** - this is a variable parameter. This level will fade between presets. Most attributes will be variable.
- **Instant** - this level will be set immediately between presets. Fading will be provided by the fixture. Fixture timing channels will be used where applicable.
- **Timing** - any parameter that controls timing for other parameters. Vision.net will allow fixture timing to be used instead of Vision.net doing the timing. Position timing, color timing and beam timing are examples.
- **Constant** - a non-variable parameter that doesn't change. This parameter will always be set to the default level for each preset selected.

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**Note:** The Phantom Intensity check box will apply a phantom intensity to LED fixture where the DMX map does not provide an intensity channel.

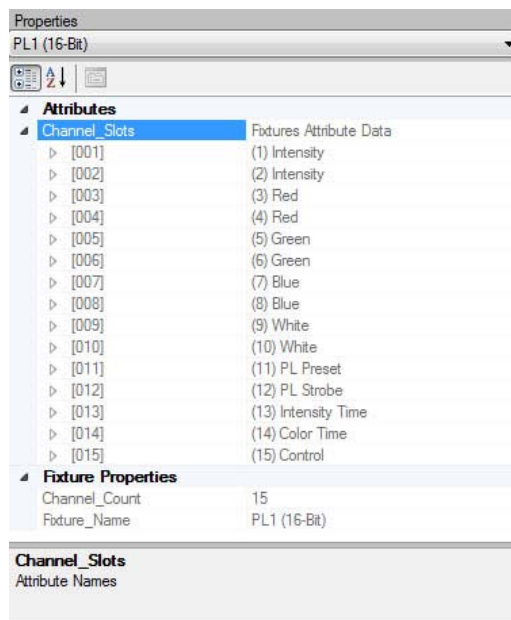
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The Default box allows you to set a DMX values that the attribute will default to. Pan and Tilt are often preferred to default to their mid-point of travel. That would be a DMX value of 127.

Just repeat creating attributes until you all of the DMX channels from the DMX map created for your fixture.

### Intelligent Fixture Properties

Within the Properties window, any patched fixture can be selected from the pulldown, then it can be sorted by Category or Alphabetically.



From within, the Channel Slots can be viewed to see the attributes as they are in patch order.

## Spreadsheet Features

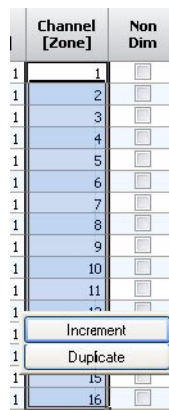
This spreadsheet has many features that you come to expect from spreadsheets and a few that are specific to Vision.net 4.5 Designer.

- You can click each column heading to numerically sort in either direction numerically.
- Use the mouse point to click the cell that you want to edit, enter your information and then either press Enter to confirm and move down to the next cell or press Tab to confirm and move laterally to the next cell.

Dimmer Slot #	Circuit Number	Description	Room [Group]	Channel [Zone]	Non Dim	Priority	Warn
1	1		1	1	<input type="checkbox"/>	Highest takes precedence	<input type="checkbox"/>
2	2		1	2	<input type="checkbox"/>	Highest takes precedence	<input type="checkbox"/>
3	3		1	3	<input type="checkbox"/>	Highest takes precedence	<input type="checkbox"/>
4	4		1	4	<input type="checkbox"/>	Highest takes precedence	<input type="checkbox"/>
5	5		1	5	<input type="checkbox"/>	Highest takes precedence	<input type="checkbox"/>
6	6		1	6	<input type="checkbox"/>	Highest takes precedence	<input type="checkbox"/>
7	7		1	7	<input type="checkbox"/>	Highest takes precedence	<input type="checkbox"/>
8	8		1	8	<input type="checkbox"/>	Highest takes precedence	<input type="checkbox"/>
9	9		1	9	<input type="checkbox"/>	Highest takes precedence	<input type="checkbox"/>
10	10		1	10	<input type="checkbox"/>	Highest takes precedence	<input type="checkbox"/>
11	11		1	11	<input type="checkbox"/>	Highest takes precedence	<input type="checkbox"/>
12	12		1	12	<input type="checkbox"/>	Highest takes precedence	<input type="checkbox"/>
13	13		1	13	<input type="checkbox"/>	Highest takes precedence	<input type="checkbox"/>
14	14		1	14	<input type="checkbox"/>	Highest takes precedence	<input type="checkbox"/>
15	15		1	15	<input type="checkbox"/>	Highest takes precedence	<input type="checkbox"/>
16	16		1	16	<input type="checkbox"/>	Highest takes precedence	<input type="checkbox"/>

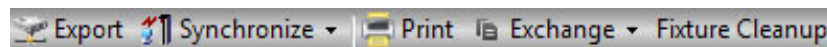
## QuickTool

Vision.net 4.5 Designer has a Quick Tool feature that can help you number the Channel / Zones for this rack.



Use your mouse to click and drag and select all Dimmers in the Channel column. Start at the top (Dimmer 1) and go to the bottom (Dimmer 16). We want Dimmer 1 to be assigned to Channel 1 so press 1 and then Enter. The Vision.net Designer's Quick Tool pops up and asks if you want to Increment the data or to Duplicate it. Let's choose Increment so that we will now have a 1 to 1 patch assignment for all dimmers.

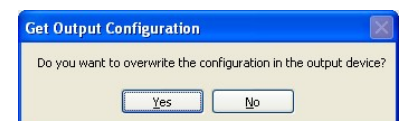
## Output Device Toolbar



Once an output device is created and configured, the Output Device Toolbar will allow the following features.

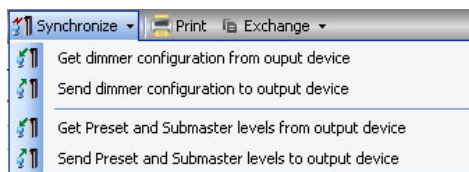
### Export

This feature will send the configuration from Vision.net 4.5 Designer to the output device's processor. A dialog box will ask if you want to send the configuration out to the output device first.



## Synchronize

This feature will synchronize the data in Vision.net 4.5 Designer with the data in the output devices processor.

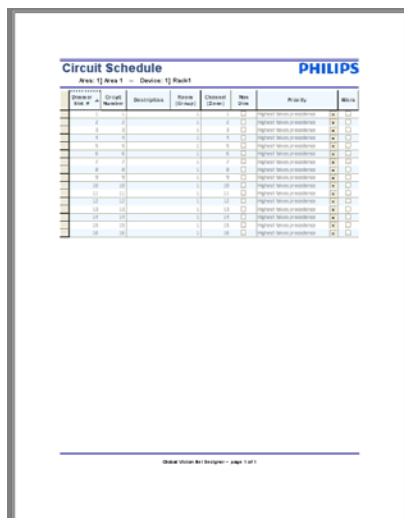


### The options are:

- Get Dimmer Information from Output Device
- Send Dimmer Information to Output Device
- Get Preset and Submaster Levels from Output Device
- Send Preset and Submaster Levels to Output Device

## Print

This feature will print the Output Devices configuration to a print preview screen. From there, it can be sent to a printer.

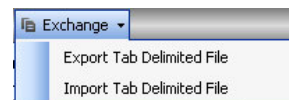


## Exchange

This feature allows the importing or exporting of the Output Device's configuration data to a text file.

### The options are:

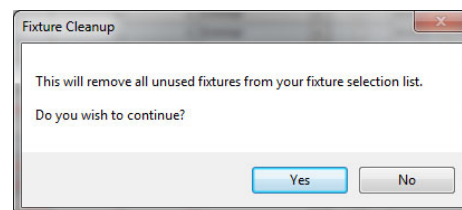
- Export Tab Delimited File
- Import Tab Delimited File



## Fixture Cleanup

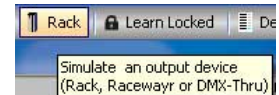
Fixture Cleanup will remove all unused fixtures from your fixture selection list.

A warning box will ask for user confirmation to continue.



## Dimmer Rack Simulation

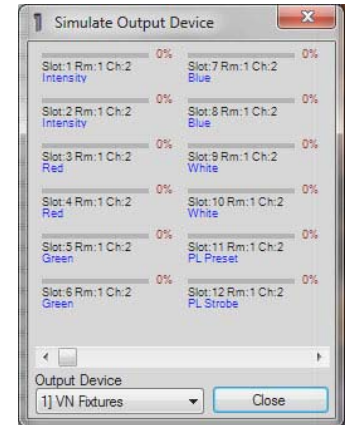
We need a way to see the dimmer output since we are working offline and have no dimmers attached to our Vision.net Designer software. In the Main Tool Bar, we have an option to simulate a rack. Hover over the Rack icon and you'll see this:



Press Rack and you'll get a Rack simulation window.

**Note:** This image shows a PL1 patched in Room 1 Channel 2. This would apply if you had setup an Intelligent Fixture Interface.

- This is the Simulated Output dialog box and it will always be visually present when active. If you want it to go away, just press the Rack icon in the Main Tool Bar again.
- The Simulated Output screen allows you to see the simulated output of any output device and any circuit or dimmer. Just select the appropriate Output Device in the pulldown menu.
- This window can be increased in size both vertically and horizontally to display a larger quantity of outputs.
- Each output will be labeled as a Slot and it will show you the Room and Channel that it is assigned to as well as the current level of that output both in a horizontal bar graph and a percentage output.



*Rack Simulation Window*

The next step is to adjust control of channels so that we can see the simulated output.

**Note:** Simulated Output is not available for the Intelligent Fixture Interface.

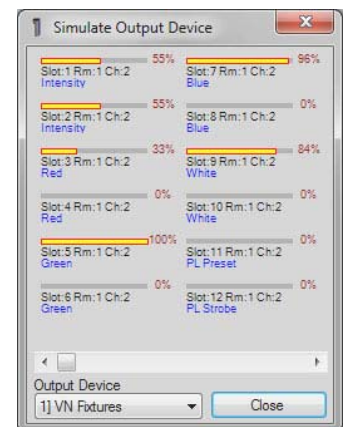
## Adjusting a Channel's Levels

Let's go back to the main device window. On the right you will see the Room control Raise and Lower buttons.

- Pressing any Up arrow will raise that Channel's level. Pressing any Down arrow will lower that Channel's level. Up and Down arrows are available for All channels in that room.
- You'll need to press it several times or just press and hold.
- Now you see that the channel's intensity has been raised.



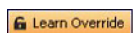
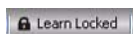
**Note:** While the level is actively changing, there will be a red box around the affected channel's output bar.



Go ahead and take all channels to full and we will record this as our first preset.

## Recording a Preset

To record all channels at full as your first preset, just "Press and Hold" Button 1. When the recording action has taken place, the recorded button will flash and the preset has been recorded.



**Note:** If by pressing and holding button 1, the button does NOT flash, it is because the Disable Learn in Learn Lock Mode box is checked in the Station Configuration for Button 1. Go to the Main Tool Bar and toggle Learn Locked so that it says Learn Override. Now you will be able to record a preset.



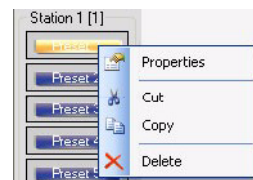
When we added our 7 Button Station earlier in the manual, we accepted the default of all buttons being Presets. But that's not serving us very well right now as we can't turn the channels off. Let's look at different button types to see if we can gain more options for control. In fact, let's look at all of the configuration options for a Button Station.

**Note:** See ["Button Type or Action" on page 85](#) for a full list of Button Type Commands available.

## Changing a Button Type

We need to look at editing the Button Station that is in Room1. So hover over the Button Station and right click.

You'll see the Advanced Editing window appear. Let's select Properties to edit the station's settings.

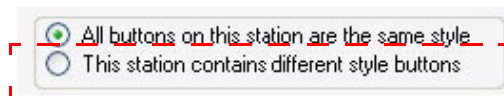


**Note:** There is also a properties box in the lower right hand corner of the Button Station where you may left click to go straight into the Properties dialog box of the Button Station. Also double clicking the button brings up the configuration window.

## This Station Contains Different Style Buttons

This radio button option will allow the button station to contain different style buttons.

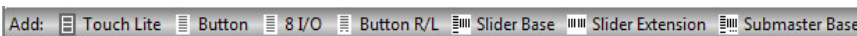
- Let's change Button 1's type only. First select This station contains different style buttons.
- Let's leave Button 1 as is but let's change Button 2 to be a Preset/Off for Group/Room 1 and Preset 1. Select OK.
- Toggle Button 2 on and off and you can watch the levels go up and down by viewing the Simulated Output window. Notice that when the Preset 1 button is engaged, the red box will automatically highlight the maximum level that is stored. Then you can watch the yellow bar increase as the lights fade up to their recorded levels using the rate that is stored on the button.



Feel free to experiment with changing the different button type options for other buttons on this station.

## Control Stations Configurations

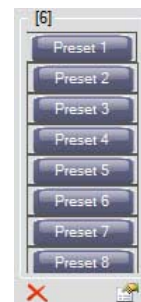
The Control Station section early in the manual, takes an in-depth look at many of the configuration opportunities within Vision.net designer using a button station. However, not all configuration options are available on the button station.



We will now look at some of the configuration opportunities with the other types of stations.

## Adding a Touch Panel

The Touch Panel is a touch screen version of a button station. It functions and configures exactly like a button station with the advantage of having the interface be a touch panel.





## Configure a Touch Panel

The Configure Station dialog box for the Touch Panel Single is very similar to the one for the Button Station. Notice that there are 8 buttons instead of 7.

**Configure Station**

Station Label:  Station ID:  Station Type:

☐ This station is virtual (there is no corresponding wall station) ☐ Sensors are connected to this station

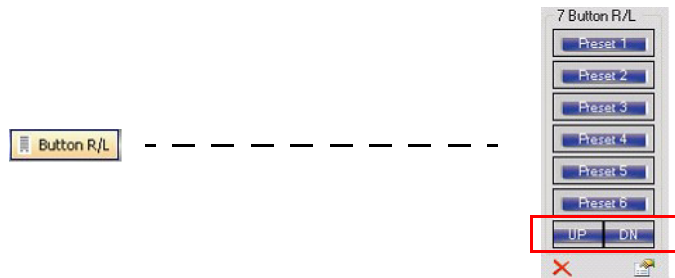
☒ All buttons on this station are the same style  
☐ This station contains different style buttons

	Button Label	Button Type	Group/Room	Preset #	Rate	Disable Learn	State Map
1	Preset 1	Preset	1	1	3 sec	<input checked="" type="checkbox"/>	[abcdefgh]
2	Preset 2	Preset	1	2	3 sec	<input checked="" type="checkbox"/>	[abcdefgh]
3	Preset 3	Preset	1	3	3 sec	<input checked="" type="checkbox"/>	[abcdefgh]
4	Preset 4	Preset	1	4	3 sec	<input checked="" type="checkbox"/>	[abcdefgh]
5	Preset 5	Preset	1	5	3 sec	<input checked="" type="checkbox"/>	[abcdefgh]
6	Preset 6	Preset	1	6	3 sec	<input checked="" type="checkbox"/>	[abcdefgh]
7	Preset 7	Preset	1	7	3 sec	<input checked="" type="checkbox"/>	[abcdefgh]
8	Preset 8	Preset	1	8	3 sec	<input checked="" type="checkbox"/>	[abcdefgh]

See “Adding a Button Station to a Room/Group” on page 73 for configuration information.

## Adding a Button R/L (Raise / Lower) Station

Button R/L (Raise / Lower) is a push button station that has 7 full sized buttons and the last button space is split into two half sized buttons. The left half is Up and the right half is Down.



From the Control Station Toolbar, select Button R/L.

## Configuring a Button R/L Station

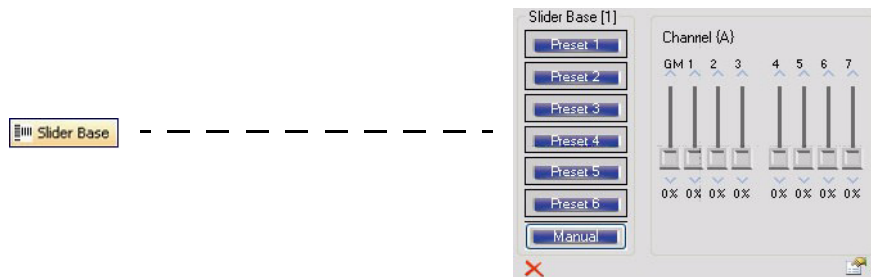
The Configure Station dialog box for the Button R/L is very similar to the one for the Button Station. Notice that there are 8 buttons instead of 7.

Just remember that the last 2 buttons occupy the space of a normal button, they are split into two half sized buttons.

See ["Adding a Button Station to a Room/Group" on page 73](#) for configuration information.

## Adding a Slider Base Station

A Slider Base Station is a multiple gang panel that has a button station and a slider station for channel control. The first slider is a Grand Master, the others are controlling channels. You can configure the station to have from 1 to 16 channel sliders. (A Grand Master will be assigned to the first slider). Shown is a 7 channel slider base for a 3 gang back box.



The interface allows the ability to click and drag the slider handle or you can click the arrows above and below the slider to increment the slider's level up/down.

From the Control Station Toolbar, Select Slider Base.

## Configuring A Slider Base Station

The Configure Station dialog box for the Slider Base Station is very similar to the one for the Button Station. Notice that there are slider configuration options at the bottom of the configuration screen.

*Slider Configuration Options*

### Buttons

The Configure Station dialog box for the Slider Base Station is very similar to the one for the button portion of the station. Notice that the 7th button is set to be a Manual button. This will allow the station to take control of the sliders. By checking the Enable Manual/Off the Manual button will now toggle between manual operation and off.

**Note:** The Manual button must be engaged for the Sliders to take control.

### Sliders

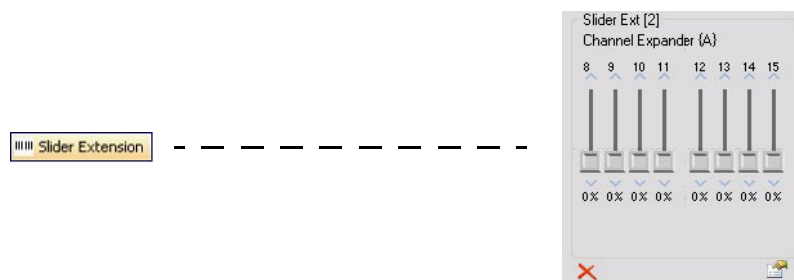
The Slider portion of the station has many configuration options.

- **Slider Room:** The Slider Room option determines which Room/Group the sliders are controlling.
- **Number of Sliders:** quantity of sliders to match the hardware. Options are from 1 to 16. In addition to the number of sliders, there is a Grand Master.
- **Expander:** allows the slider extension to associate with the proper base station.
- **State Map:** allows configuration of the States in which this station functions.

**Note:** See ["Adding a Button Station to a Room/Group" on page 73](#) for configuration information.

## Adding A Slider Extension Station

A Slider Extension Station is a potentiometer station that allows you to expand the number of channels that can be controlled using sliders. Shown is an 8 slider station for a 2 gang back box.



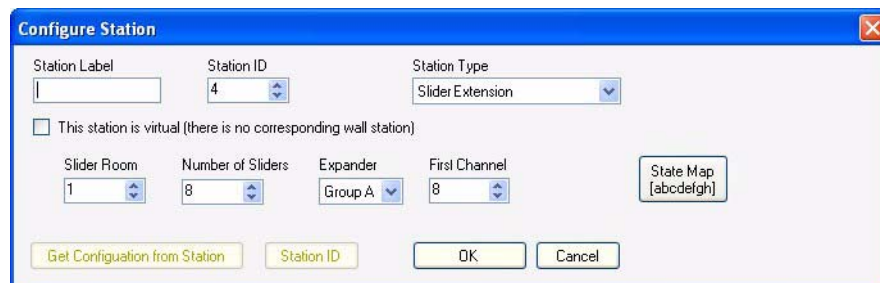
The interface allows the ability to click and drag the slider handle or you can click the arrows above and below the slider to increment the slider's level up/down.

From the Control Station Toolbar, select Slider Extension.

## Configuring A Slider Extension Station

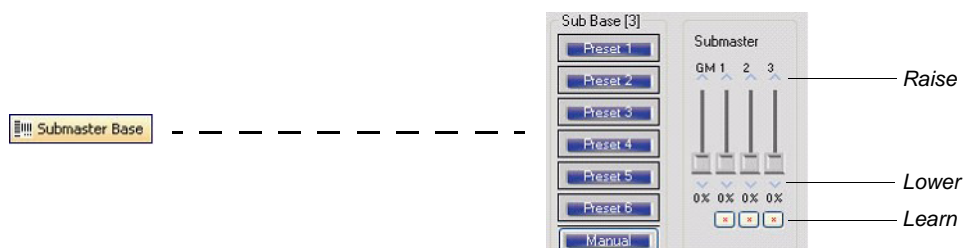
The Configure Station dialog box allows the configuration of the following items.

- **Station Label:** assign a text label to the station.
- **Station ID:** a unique identification number that is mandatory for each station. As you add stations, the Station ID will auto-increment.
- **Station Type:** allows the ability to change the type of station configured.
- **Virtual Station:** the check box allows this station to exist in Vision.net 4.5 Designer only. This is handy when a station is needed for configuration purposes but does not physically exist in the Vision.net system.
- **Slider Room:** the Room/Group that the sliders will control.
- **Number of Sliders:** the quantity of sliders that are available on the station.
- **Expander:** if the system has more than one slider base station, the Expander option allows the assignment to the proper slider base station. The options are from Group A thru Group H.
- **First Channel:** assigns the channel number to the first slider and then auto-increments from there.
- **State Map:** allows configuration of the States in which this station functions.



## Adding A Submaster Base Station

From the Control Station Toolbar, select Submaster Base.



A Submaster Base Station is a multiple gang panel that has a button station and a slider station for submaster control. The first slider is a Grand Master, the others are controlling submasters. You can configure the station to have from 1 to 16 sliders. Shown is a 3 submaster base for a 2 gang back box.

The interface allows the ability to click and drag the slider handle or you can click the arrows above and below the slider to increment the slider's level up/down. The button below the slider is a Learn button. Press and hold for 3 seconds and the output state will be stored into the appropriate submaster.

## Recording to a Submaster

Set your levels and then press and hold the box below the submaster with the red x. This will store the live output to the submaster.

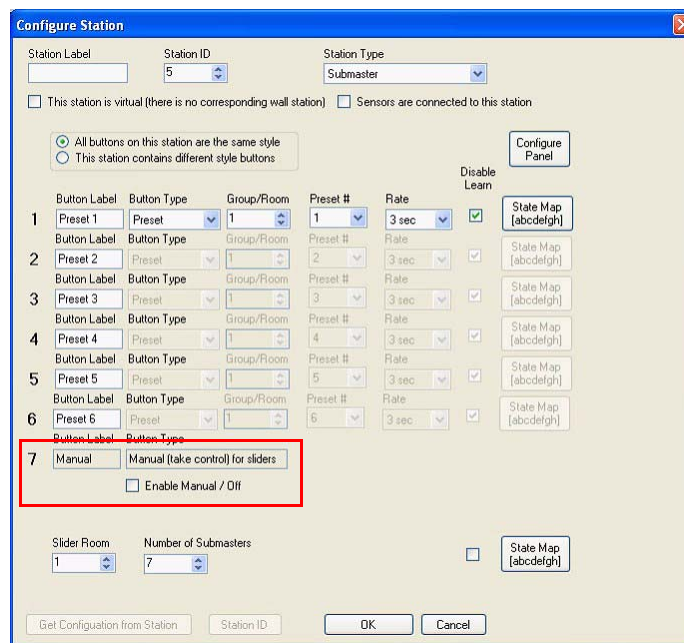


**Note:** There is a paperclip hole on the hardware itself that allows recording at the station itself. Just set the levels and insert a paperclip to press and hold. When the Learn function has occurred, the station will beep.

## Buttons and Sliders

### Buttons

The Configure Station dialog box for the Submaster Base Station is very similar to the one for the button portion of the station. Notice that the 7th button is set to be a Manual button. This will allow the station to take control of the sliders.



By checking the **Enable Manual/Off** the Manual button will now toggle between manual operation and off.

**Note:** The Manual button must be engaged for the Sliders to take control.

### Sliders

The Slider portion of the station has many configuration options.

- **Slider Room:** The Slider Room option determines which Room/Group the sliders are controlling.
- **Number of Submasters:** quantity of sliders to match the hardware. Options are from 1 to 16. In addition to the sliders, there is a Grand Master.
- **State Map:** allows configuration of the States in which this station functions.



**Note:** See ["Adding a Button Station to a Room/Group" on page 73](#) for configuration information.

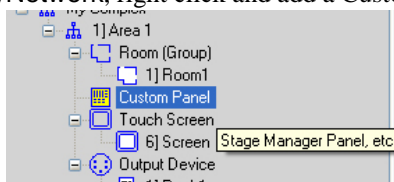
## Custom Panels

A Custom Panel is a collection of control stations that are generally grouped together in a location so that it may control one or more groups or zones. This could be a central control room that can control several rooms or zones, a stage managers panel where control is available for house lighting, work lights and other show state lighting.

Once a Custom Panel is added to the network, individual panels are then added to this location in the same way as adding panels to a Group/Room using this Custom Panel Add Toolbar.

### Add a Custom Panel

Highlight the Custom Panel label in MyNetwork, right click and add a Custom Station.



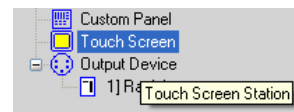
In the example given, it will be named SM Panel for a Stage Managers Panel. The ID number will auto increment. Once the panel is created, use the Button Station Toolbar to add stations as needed. The adding and configuration of these stations will be the same as adding stations to a Room/Group as outlined earlier in the manual.



**Note:** See ["Adding a Button Station to a Room/Group" on page 73](#) for configuration information. See ["Control Stations Configurations" on page 106](#) for configuration information.

## Touchscreens

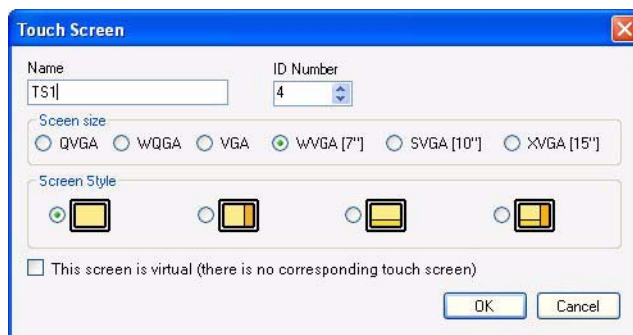
Touchscreens are top level control components that provide a highly customizable interface to the Vision.net network. These are very flexible and provide a highly intuitive and easy way of working with the Vision.net system.



**Note:** See the ["Vision.net Touchscreens" on page 25](#) for more information on the touchscreen hardware.

### Add a Touchscreen

Highlight the Touchscreen label in MyNetwork, right click to add a touchscreen to your Vision.net configuration.



- **Name:** for labeling this touchscreen.
- **ID Number:** an ID number must be established for every device on a Vision.net 4.5 system. This will auto-increment as the next available ID number.
- **Screen Size:** this determines the screen size and resolution of the configured touchscreen.

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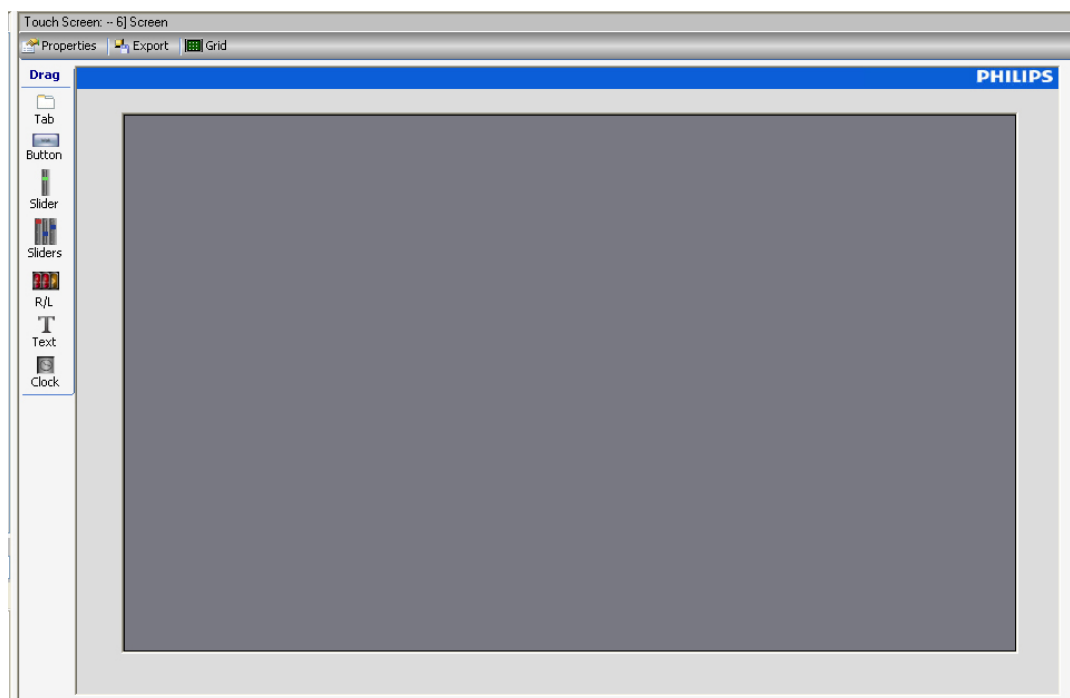
**Note:** This will determine the resolution of screen saver images needed.

---

- **Screen Style:** this determines whether the screen is broken up into independent screen areas.
- **Virtual Screen Box:** allows the configured screen to be treated as a virtual screen.

For configuration purposes, this will accept the defaults of a 7" screen with one configuration area.

## Touchscreen Configuration

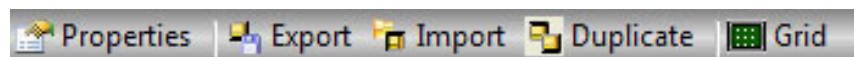


*Touchscreen Configuration Screen*

Once a touchscreen has been added, there are many configuration options.

## Touchscreen Toolbar

The touchscreen's toolbar allows the flexibility to configure the touchscreen for basic and advanced functionality. Let's start with the Properties of the touchscreen itself.



## Touchscreen Properties

### Screen Saver

The screen saver can display a floating clock or a logo. Select the appropriate radio button. The Import Logo feature allows you to import an image file to display when the screen saver is activated. The image file can be a .jpg, .bmp or .gif formatted image file. The files resolution will be determined by the screen size selected when the screen was added.

- **Display Screen Saver:** Determine the amount of time that the system must be inactive prior to displaying the screen saver.
- **Password on Restore:** if checked, a text box will appear to the right to mandate the configuration of a password to be entered to restore from the screen saver once initiated.
- **Preview Screen Saver:** allows the previewing of the configured screen saver.

### Connect to SVN/IP Network

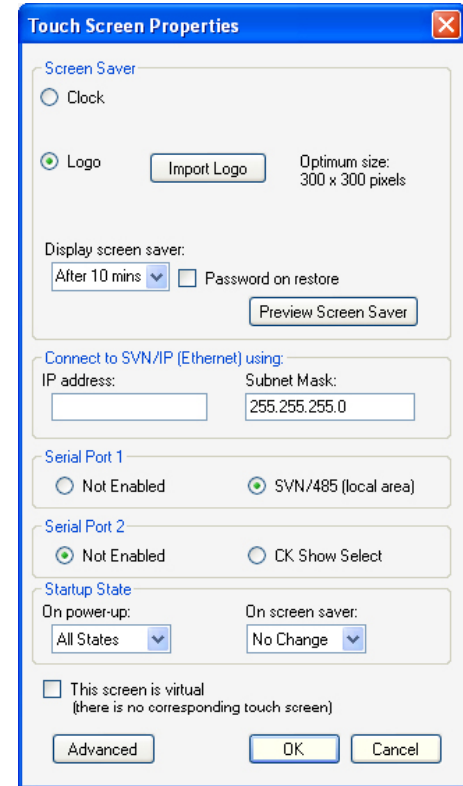
Configure the touchscreen to communicate with the network using the Ethernet Port. The Ethernet Port requires a static IP and a Subnet Mask. The default Subnet mask should work fine for most installations.

### Serial Port 1

The first serial port communicates using the SVN/485 protocol based on the comm port setting under Tools > Setup.

### Serial Port 2

The touchscreen's second serial port can be enabled to select a Color Kinetics show that has been stored on a CK playback unit.



**Note:** See ["CK Show" on page 91](#) section of the manual for more information.

### Startup State

On Power Up setting will instruct the Vision.net system to change to the selected state when the system is powered up.

On Screen saver setting will instruct the Vision.net system to change to the selected state when the system is powered up.

**Note:** States only are available for this Startup function as States (not Modes) are exclusive.

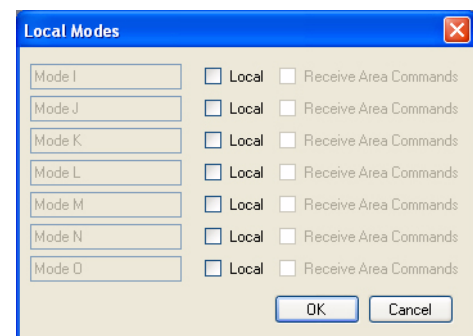
### Virtual Screen

The virtual screen check box should be used when there is no corresponding physical touchscreen.

### Advanced - Local Modes

Allows the configuration and limiting of modes to the current touch screen only. Once a Mode is selected and determined to be local, all commands for that mode will be limited to the configured touch screen.

The check box will allow/disallow the touch screen to receive area commands.





### Touchscreen - Export

- **File for Touchscreen:** allows the ability to save a touchscreen configuration to a separate file that can be loaded into a touchscreen via a USB storage key.

**Note:** To export a file, take the exported file, place on a USB key in a folder called Update, plug into the touchscreen and reboot the touchscreen. File must be called activescreen.ntc2.



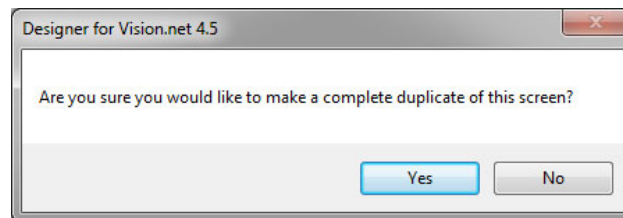
- **Ethernet:** allows the ability to send a touchscreen configuration to a touchscreen over Ethernet. When selected, the box below will become active and the destination touchscreen's IP address is required.

### Touchscreen - Export

Touchscreen Import allows the user to import a touchscreen from another Vision.net file (.ntc2 file) or Vision.net touchscreen file (.nts2 file).

### Touchscreen - Duplicate

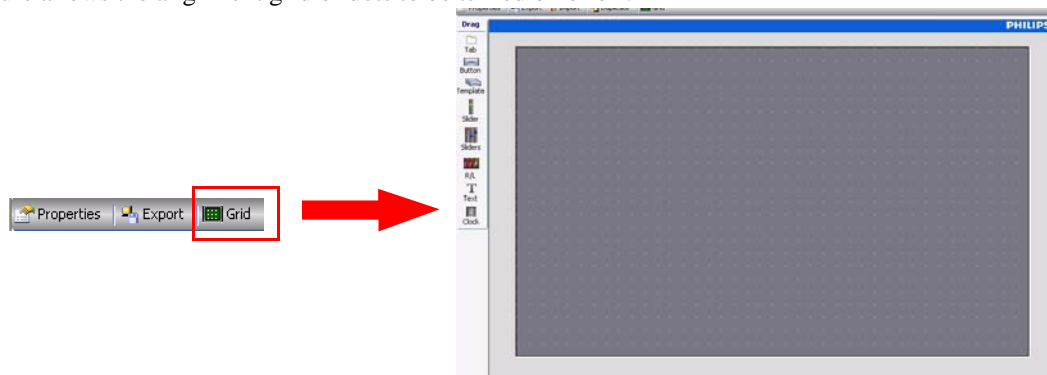
Duplicate Screen allows the user to make a copy of the selected touchscreen.



**Note:** Be aware that the shared name of buttons on the new screen have been removed. This eliminates the possibility of having two buttons with the same name. These links need to be restored manually.

### Touchscreen - Grid

This feature allows the alignment grid of dots to be turned on or off.

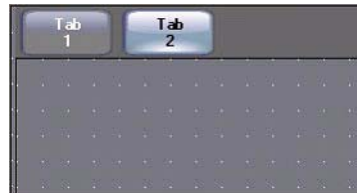


## Touchscreen Drag Options

Once there is a blank touchscreen, go to the vertical drag icons for configuration options. These allow the ability to "click and drag" to add any item listed.

### Tab

Allows the addition of additional tabs of layout space on a touchscreen. Click the Tab icon and drag onto the touchscreen surface to create a new tab.

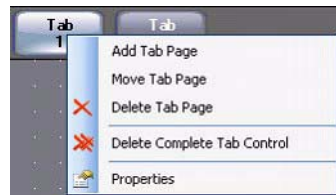


Once multiple tabs are created, selecting a tab will highlight that tab in silver and allow the viewing of the selected touchscreen surface.

**Note:** Add tabs prior to adding items to a Vision.net 4.5 touchscreen, adding the first tab will remove all content from the touchscreen.

### Tab Configuration

Right click on the selected tab and the following options exist.



- **Add Tab Page:** add an additional tab page. This will appear as a New Tab at the end of the list.
- **Move Tab Page:** allows the moving of the selected tab to another location thus changing the order of the tabs. A dialog box allows the selection of the proper location.
- **Delete Tab Page:** allows the deletion of the selected tab.
- **Delete Complete Tab Control:** allows the deletion of all tabs. A confirmation box will appear.

### Touchscreen Drag Options



**WARNING!** The Delete Complete Tab Control action cannot be undone.

- **Tab Properties:** allows the graphical configuration for the selected tab and its related panel.

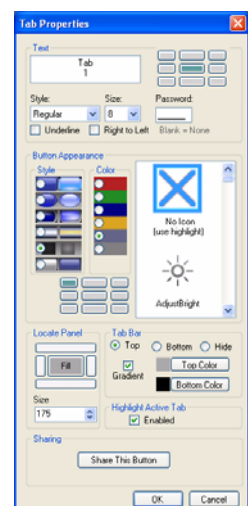
### Text Area

Allows the configuration of the text.

- **Text:** allows the ability to change the tab's label.

**Note:** The "/" key forces remaining text to the next line.

- **Alignment:** Graphically select from the 9 different alignment options for the text.
- **Style:** select the text style.
- **Size:** select the text size.



- **Password:** select a password to change the text label. Blank equals no password.
- **Underline:** check box to underline the text.
- **Right to Left:** box should be checked if the chosen language reads right to left (Arabic or Hebrew for example).

### Button Appearances

Allows the selection of the available styles, colors, icons and alignment for the appearance of the button.

- **Style:** select from the offered button styles.
- **Color:** select from the offered button colors.
- **Icon:** select from the offered icons.
- **Alignment:** Graphically select from the 9 different alignment options for the selected icon.

### Locate Panel

Allows the location of the tab's panel. Selection of a panel other than center will orient the panels toward the selected edge and place the tabs and their associated panels in their own panel space.

- **Size:** will determine the size of the associated panel area. Sizes range from 100 pixels to 800 pixels.

### Tab Bar Location

Allows the orientation of the tab bar.

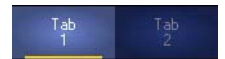
---

**Note:** If the Hide option is chosen, a box appears in the upper right hand corner for tab access.

---

### Highlight Active Tab

When enabled, if any Preset other than off is selected or any Toggle is on, a yellow bar highlight on the tab bar will appear. This also works on Tabs within Tabs.



### Sharing

Allows the tab to be shared. Once selected, it requires a unique name.

---

**Note:** If the tab is shared and needs to be unshared, just delete the label and press OK. That will unshare the tab.

---



**IMPORTANT!** Remember any button whose Highlight Active Tab option is not "enabled" will not produce the highlight line under it's tab.

---

### Touchscreen Button

Click and drag a button onto the touchscreen panel. Hover over the button and right click for configuration.

Once the button is on the touchscreen panel, hover the mouse pointer over the button and the button's configuration will appear in a text box.

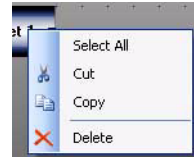


Once the button is selected, you may click and drag, from the bottom left, to change the button's size.

This text box lists the station id - Room #, Preset #, Fade Rate and whether Record Lock is enabled or disabled.

## Button - Right Click Options

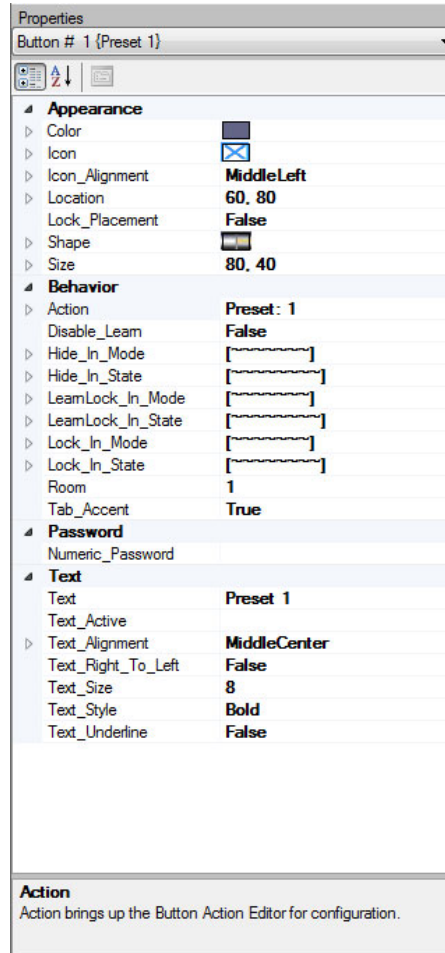
Hover over the button and right click for the editing options. Standard options for a graphical user interface are available with Cut, Copy and Delete. Paste will be available when something has been cut or copied.



**Note:** Properties are available under the Device tree.

## Properties

The Properties of an item will appear below the Device Tree on the lower left side of Vision.net 4.5 Designer when the item is selected.



Here is where all editable properties of a Vision.net 4.5 item can be configured.

**Note:** The above are the properties for a Button. Selections will change based on the item.

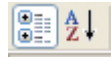
## Item Properties Pulldown

The pulldown allows the user to select the item available in the selected touchscreen's tab.



## Display Format

Allows user to see all property configuration data broken down by Category or Alphabetical without Category headings.



## Appearance

Allows user to configure the appearance of the Button with the following options:

Appearance	
Color	
Icon	
Icon_Alignment	MiddleLeft
Location	40, 40
Shape	
Size	80, 40

## Color

Select the Color of the Button from a pulldown list.



## Icon

Select an Icon to appear within the Button from a pulldown list.



## Icon Alignment

Select the alignment and justification for the icon within the Button from a pulldown graphic.



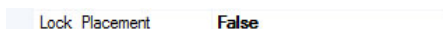
## Location

Starts at the top left hand corner of the touchscreen. The first number is the horizontal position moving right from 0 and the second number is the vertical position down from 0.



## Lock Placement

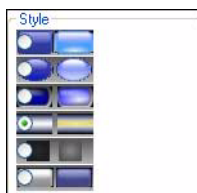
Will lock the location of the item on the touchscreen to keep it from moving. The options are Trued (locked) or False (unlocked).



The default is False (unlocked).

## Shape

Select the Shape or Style of the Button from a pulldown graphic list.



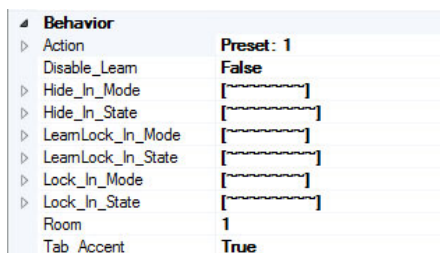
## Size

Starts at the top left hand corner of the item. The first number is the width of the item, the second number is the depth. (The minimum is 20, 20.)



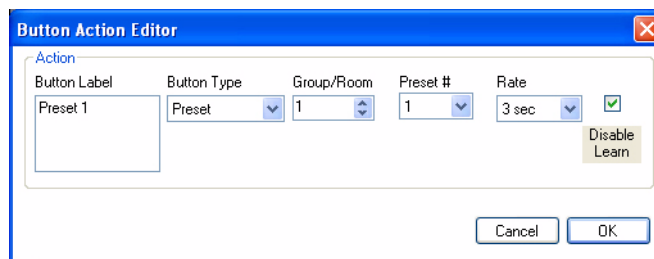
## Behavior

Allows user to configure the behavior of the Button.



## Action

Action brings up the Button Action Editor for configuration.



The Action section gives configuration options for the Button Label, Button Type, the Group/Room that it is applied to, the Preset that it is affecting, the Rate in which it fades and the check box, when checked, determines that when in Learn Lock Mode, this button's learn feature will be disabled.

**Note:** See ["Adding a Button Station to a Room/Group" on page 73](#) for configuration information for the Action section.

### Disable Learn

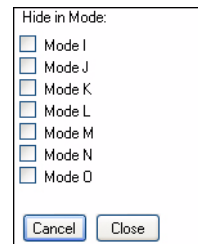
Allows the user to disable the learn feature on this item.



Basically it's an item level override to lock the buttons ability to be learned. The options are True (learn disabled) or False (learn enabled). The default is False (learn enabled).

### Hide In Mode

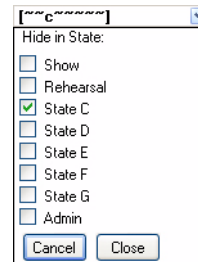
When in the selected Mode, the button will be hidden.



The configuration selection will appear in the text box list to the right of the behavior that was configured. A tilde (~) indicates no selection. If a letter appears, then that mode/state is hidden or locked depending on the behavioral item configured.

### Hide in State

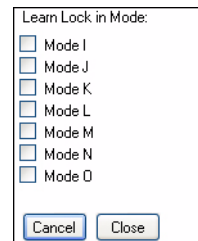
When in the selected State, the button will be hidden.



**Note:** For purposes clarify in the manual, I have set the behavior of this button to hide in state C and you can see how this gets displayed (at the top of this image) in the pulldown box once the configuration box is closed.

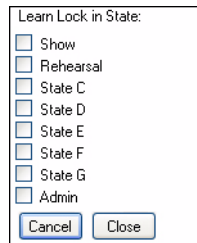
### Learn Lock in Mode

When in the selected Mode, the Button will be learn locked to disable recording functionality.



### Learn Lock in State

When in the selected State, the Button will be learn locked to disable recording functionality.



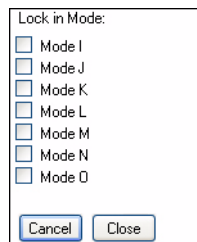
Learn Lock in State:

- ☐ Show
- ☐ Rehearsal
- ☐ State C
- ☐ State D
- ☐ State E
- ☐ State F
- ☐ State G
- ☐ Admin

Cancel Close

### Lock in Mode

When in the selected Mode, the Button will be locked to disable functionality.



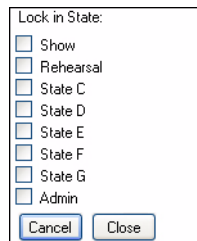
Lock in Mode:

- ☐ Mode I
- ☐ Mode J
- ☐ Mode K
- ☐ Mode L
- ☐ Mode M
- ☐ Mode N
- ☐ Mode O

Cancel Close

### Lock in State

When in the selected State, the Button will be locked to disable functionality.



Lock in State:

- ☐ Show
- ☐ Rehearsal
- ☐ State C
- ☐ State D
- ☐ State E
- ☐ State F
- ☐ State G
- ☐ Admin

Cancel Close

### Room

Room which the Action is configured to.



Room | 1

### Tab Accent

If a Preset that is located inside a Tab is on, the tab will display a yellow bar accent underneath the Tab itself. Setting this to False will disable the Tab Accent.



Tab\_Accent True

Visual representation showing a yellow bar accent under a tab labeled 'Tab 1'.

### Password

When configured, a password must be entered for the Button to function. (Max: 6 digits. Blank: Disabled).



Password

Numeric\_Password



## Button Text

Allows the user to configure the Button text and all associate configurable attributes.

Text	(Edit)
Text_Active	(Edit)
Text_Alignment	MiddleCenter
Text_Right_To_Left	False
Text_Size	8
Text_Style	Bold
Text_Underline	False

## Text

Allows user to configure the label on the Button.

## Text Active

Allows the user to configure specific text to be displayed when the Button is activated only.

## Text Alignment

Allows user to align the text both vertically and horizontally from a pulldown list.

## Text Right to Left

Allows user to configure text when using languages like Arabic or Hebrew that natively read from right to left. Settings options are False for Left to Right and True for Right to Left.

## Text Size

Allows user to configure text size from a pulldown list.

### Text Style

Allows user to configure text style from a pulldown list.

Text\_Style    **Normal**

Normal  
Italic  
**Bold**  
Bold\_Italic

### Text Underline

Allows user to underline the Button text. Options are true (underlined) or false (not underlined).

True  
**False**

### Properties Help

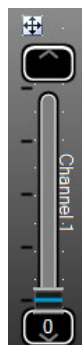
Properties Help will appear based on the configurable properties item selected.

**Action**  
Action brings up the Button Action Editor for configuration.

### Slider

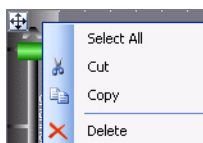
Click and drag a Slider onto the touchscreen. This slider will allow you to vary the output of the connected load. The slider can also be set to Rate.

There are Raise and Lower buttons at the top and bottom of the slider.



### Slider - Right Click Options

Hover over the slider and right click for the editing options. Standard options for a graphical user interface are available with Cut, Copy and Delete. Paste will be available when something has been cut or copied.



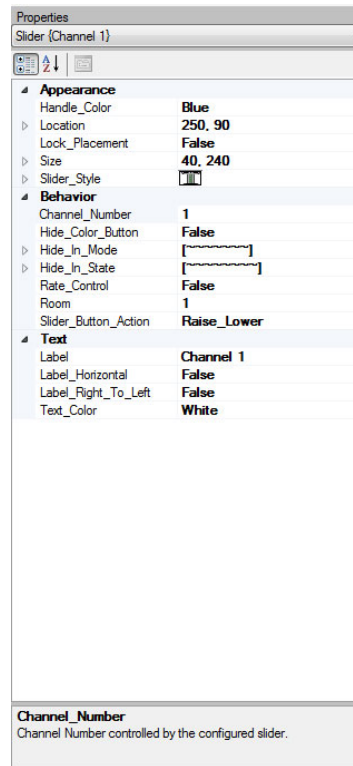

---

**Note:** Properties are available under the Device tree.

---

## Properties

The Properties of a slider will appear below the Device Tree on the lower left side of Vision.net 4.5 Designer when the item is selected.



Here is where all editable properties of a Vision.net 4.5 item can be configured.

### Slider Properties Pulldown

The pulldown allows the user to select the item available in the selected touch screen's tab.



### Display Format

Allows user to see all property configuration data broken down by Category or Alphabetical without Category headings.



### Appearance

Allows user to configure the appearance of the item.

#### Handle Color

Select the Color of the Sliders' Handle from a pulldown list.

#### Lock Placement

Will lock the location of the item on the touchscreen to keep it from moving.

The options are Trued (locked) or False (unlocked). The default is False (unlocked).

#### Appearance

▲ Appearance	
Handle_Color	Blue
▶ Location	250, 90
Lock_Placement	False
▶ Size	40, 240
▶ Slider_Style	

#### Handle Color

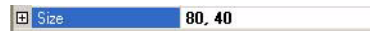
- Red
- Green
- Blue
- Cyan
- Yellow
- Magenta
- White
- Black

#### Lock Placement

Lock_Placement	False
----------------	-------

## Size

Starts at the top left hand corner of the item.



The first number is the width of the item, the second number is the depth. (The minimum is 20, 20.)

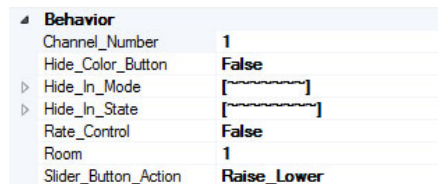
## Slider Style

Select the slider's style from a graphical options.



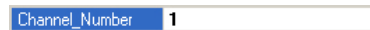
## Behavior

Allows user to configure the behavior of the item.



## Channel Number

Assigns the channel number that which the slider is associated.



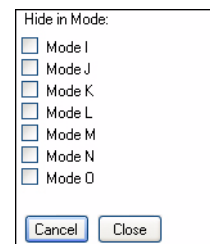
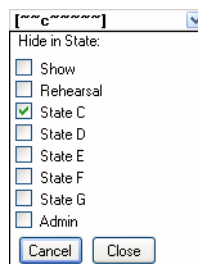
## Hide in Mode

When in the selected mode, the button will be hidden.

The configuration selection will appear in the text box list to the right of the behavior that was configured. A tilde (~) indicates no selection. If a letter appears, then that mode/state is hidden or locked depending on the behavioral item configured.

## Hide In State

When in the selected state, the button will be hidden.



**Note:** For purposes clarify in the manual, I have set the behavior of this button to hide in state C and you can see how this gets displayed (at the top of this image) in the pulldown box once the configuration box is closed.

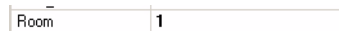
## Number of Sliders

Allows user to configure the number of sliders available.



## Room

Allows the user to determine the room that the slider is configured to.



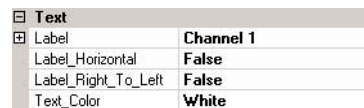
## Slider Button Action

Controls the action of the Slider Button. The options are Raise/Lower or Full/Off. The default setting is Raise/Lower.



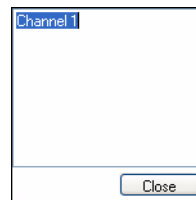
## Slider Text

Allows the user to configure the slider text and all associate configurable attributes.



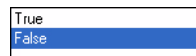
## Label

Allows user to configure the vertical label on the slider.



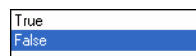
## Label Horizontal

Orientation of the label. If False, the text will align vertically. If True, the text will align horizontally.



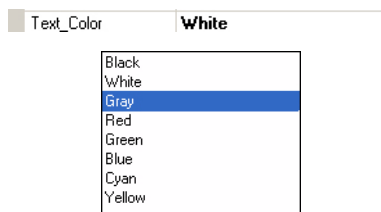
## Text Right to Left

Allows user to configure text when using languages like Arabic or Hebrew that natively read from right to left. Settings options are False for Left to Right and True for Right to Left.



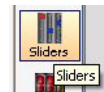
## Text Color

Allows user to configure the slider color from the pulldown list above.



## Sliders

Click and drag a set of Sliders onto the touchscreen. These sliders allow the configuration of multiple sliders. The concept is the same as a single slider...just more. The differences are there is a Grand Master and a Manual button.



These sliders allow the configuration of multiple sliders. The concept is the same as a single slider...just more. The differences are there is a Grand Master and a Manual button.




---

**Note:** The image above shows bubbles above channels 2 through 6. This is the color bubble for a color mixing fixture.

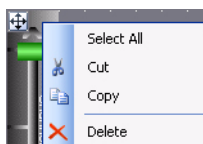
---

### IMPORTANT NOTES!

- Make sure the Manual button is pressed in order to accurately display the correctly output values.
- If the Grand Master is at less than full and a value is entered via the Command Line, the value will output accurately to the output device. The virtual sliders will attempt to compensate based on the Grand Master's level to display as accurately as possible.
- For example, if the Grand Master is at 50% and through the Command Line, channel 1 is set to 30%, it will display at 60% on the appropriate slider. First and foremost, the channel has gone to the correct value based on the levels entered.

### Sliders - Right Click Options

Hover over the slider and right click for the editing options. Standard options for a graphical user interface are available with Cut, Copy and Delete. Paste will be available when something has been cut or copied.



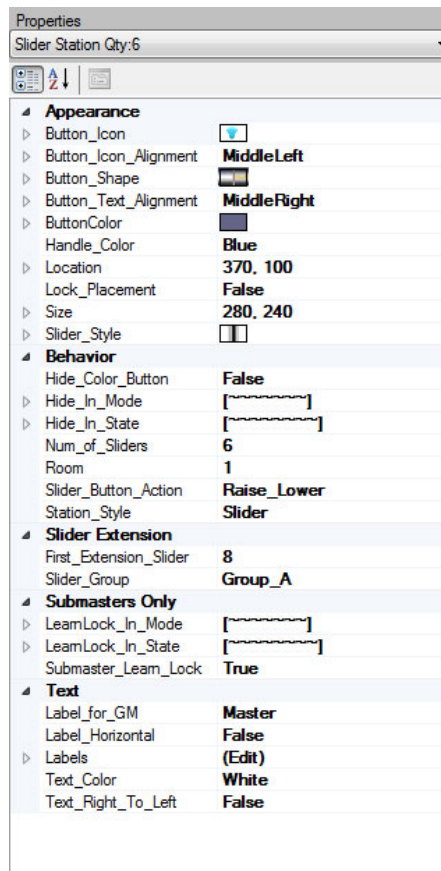

---

**Note:** Properties are available under the Device tree.

---

## Properties

The Properties of the slider bank will appear below the Device Tree on the lower left side of Vision.net 4.5 Designer when the item is selected.



Here is where all editable properties of a Vision.net 4.5 item can be configured.

### Sliders Properties Pulldown

The pulldown allows the user to select the item available in the selected touch screen's tab.



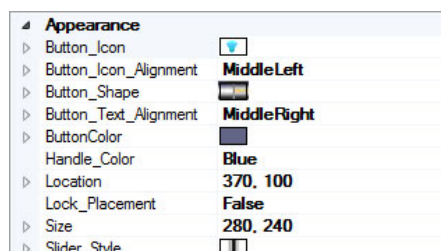
### Display Format

Allows user to see all property configuration data broken down by Category or Alphabetical without Category headings.



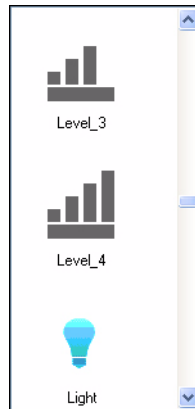
### Appearance

Allows user to configure the appearance of the item.



### Button Icon

Select an Icon to appear within the Sliders' Button from a pulldown list.



### Button Icon Alignment

Select the alignment and justification for the icon within the Slider's Button from a pulldown graphic.



### Button Shape

Select the Shape or Style of the Sliders' Button from a pulldown graphic list.



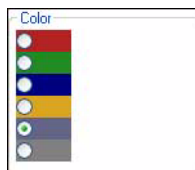
### Button Text Alignment

Select the alignment and justification for the text within the Slider's Button from a pulldown graphic.



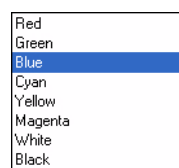
### Button Color

Select the Color of the Sliders' Button from a pulldown list.



### Handle Color

Select the Color of the Sliders' Handle from a pulldown list.





## Location

Starts at the top left hand corner of the touchscreen. The first number is the horizontal position moving right from 0 and the second number is the vertical position down from 0.

 Location 0, 0

## Lock Placement

Will lock the location of the item on the touchscreen to keep it from moving. The options are Trued (locked) or False (unlocked). The default is False (unlocked).

 Lock\_Placement False

## Size

Starts at the top left hand corner of the item. The first number is the width of the item, the second number is the depth. (The minimum is 20, 20.)

 Size 80, 40

## Slider Style

Select the slider's style from a graphical pulldown.



## Behavior

Allows user to configure the behavior of the item.

Behavior	
Hide_Color_Button	False
Hide_In_Mode	[ ~ ]
Hide_In_State	[ ~ ]
Num_of_Sliders	6
Room	1
Station_Style	Slider

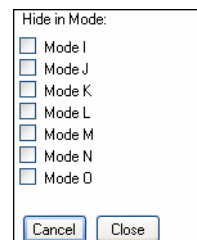
## Hide Color Button

The Color Button displays color on a color mixing fixture. This option allows that button to be hidden (True) or revealed (False). The default setting is to have the button displayed (False).

 Hide\_Color\_Button False

## Hide in Mode

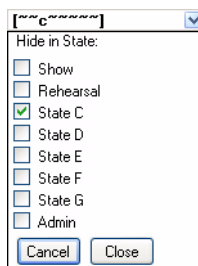
When in the selected mode, the button will be hidden.



The configuration selection will appear in the text box list to the right of the behavior that was configured. A tilde (~) indicates no selection. If a letter appears, then that mode/state is hidden or locked depending on the behavioral item configured.

### Hide in State

When in the selected state, the button will be hidden.



**Note:** For purposes clarify in the manual, I have set the behavior of this button to hide in state C and you can see how this gets displayed (at the top of this image) in the pulldown box once the configuration box is closed.

### Number of Sliders

Allows user to configure the number of sliders in this bank.



**Note:** The maximum for this is 15. Slider Extension can be used to add more.

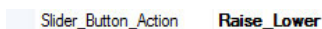
### Room

Allows the user to determine the room that the sliders are configured to.



### Station Button Action

Controls the action of the Slider Button. The options are Raise/Lower or Full/Off. The default setting is Raise/Lower.



### Station Style

Allows the user to configure the type of slider station from a pulldown list.

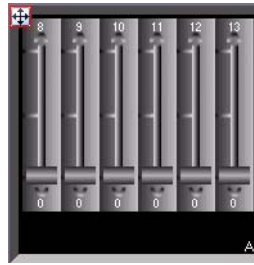


- **Slider:** is a collection of sliders that are associated with a room and channels in consecutive numerical order.
- **Submaster:** is a collection of sliders that are submasters and can be recorded to.



**Note:** With the submaster station style, a block appears below the slider. Press and hold this button to record or learn this submaster.

- **Slider Extension:** a collection of sliders in an extension bank. Often used when additional sliders are needed.



**Note:** With the slider extension station style, the master and manual buttons are gone as they are controlled from the main slider station as determined by the slider group configuration.

### Slider Extension

The slider extension parameters allow the user to configure how the slider extension is configured.

<b>Slider Extension</b>	
First_Extension_Slider	8
Slider_Group	Group_A

### First Extension Slider

Allows user to configure the channel of the first slider on the extension. Configuration is numerical and sequential.

First_Extension_Slider	8
------------------------	---

### Slider Group

Allows user to select a common group for the slider extension.

Slider_Group	Group_A
--------------	---------

This pulldown shows all available groups for the configuration of the slider extension's group.

Group_A
Group_B
Group_C
Group_D
Group_E
Group_F
Group_G
Group_H

### Submasters Only

The submasters only parameters allow the user to configure how the submaster station style is configured.

<b>Submasters Only</b>	
LearnLock_In_Mode	[...]
LearnLock_In_State	[...]
Submaster_Learn_Lo	True

### Learn Lock in Mode

When in the selected mode, the button will be learn locked to disable recording functionality.

Learn Lock in Mode:	
<input type="checkbox"/> Mode I	
<input type="checkbox"/> Mode J	
<input type="checkbox"/> Mode K	
<input type="checkbox"/> Mode L	
<input type="checkbox"/> Mode M	
<input type="checkbox"/> Mode N	
<input type="checkbox"/> Mode O	
<input type="button" value="Cancel"/>	<input type="button" value="Close"/>

## Learn Lock in States

When in the selected state, the button will be learn locked to disable recording functionality.

Learn Lock in State:

- ☐ Show
- ☐ Rehearsal
- ☐ State C
- ☐ State D
- ☐ State E
- ☐ State F
- ☐ State G
- ☐ Admin



## Submaster Learn Lock

Allows the user to lock recording (learn) of submasters.

Submaster_Learn_Lo	True
--------------------	------

## Submaster Text

Allows the user to configure the submaster's text and all associate configurable attributes.

	<b>Text</b>	
	Label_for_GM	<b>Master</b>
	Labels	<b>[Edit]</b>
	Text_Color	<b>White</b>
	Text Right To Left	<b>False</b>

**Label for Grand Master (GM)**

Allows the user to edit the vertical label for the Grand Master.

Label_for_GM	Master
--------------	--------

## Label Horizontal

Orientation of the label. If False, the text will align vertically. If True, the text will align horizontally.

True  
False

## Labels

Allows the user to edit the vertical label for any and all sliders using the pulldown shown here.

 Labels [\(Edit\)](#)

[illegible]

### Text Color

Allows user to select the color of the text using the pulldown list shown.



### Text Right to Left

Allows user to configure text when using languages like Arabic or Hebrew that natively read from right to left. Settings options are False for Left to Right and True for Right to Left.



### Raise Lower Array

Raise and Lower buttons allow the configured buttons to raise the output or lower the output of the selected channel.



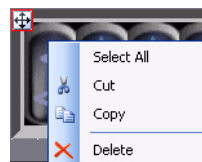
Hovering the mouse pointer over the array will allow a text bubble to appear and identify the configured Area ID.



- Single Left Arrow (<) will slide the visible channels one to the left on the array.
- Double Left Arrows (<<) will slide the visible channels one page to the left on the array.
- The Raise/Lower buttons will raise or lower the output of the selected channel. The level will appear in yellow below the channel number.
- Single Right Arrow (>) will slide the visible channel one to the right on the array.
- Double Right Arrows (>>) will slide the visible channels one page to the right on the array.

### Array - Right Click Options

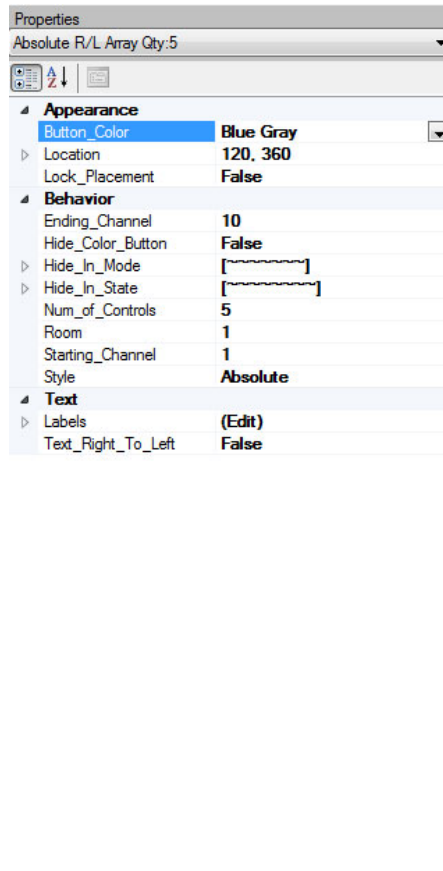
Hover over the array and right click for the editing options. Standard options for a graphical user interface are available with Cut, Copy and Delete. Paste will be available when something has been cut or copied.



**Note:** Properties are available under the Device tree.

## Properties

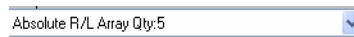
The Properties of the array will appear below the Device Tree on the lower left side of Vision.net 4.5 Designer when the item is selected.



Here is where all editable properties of a Vision.net 4.5 item can be configured.

### Array Properties Pulldown

The pulldown allows the user to select the item available in the selected touch screen's tab.



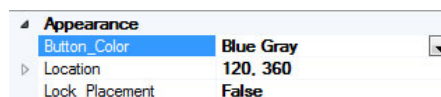
### Display Format

Allows user to see all property configuration data broken down by Category or Alphabetical without Category headings.



### Appearance

Allows user to configure the appearance of the item. Button Color, when selected, will reveal a pulldown list of options. Location is set numerically.



### Button Color

Select the button color theme for the array from the pulldown list.



## Location

Starts at the top left hand corner of the touchscreen. The first number is the horizontal position moving right from 0 and the second number is the vertical position down from 0.

 Location




## Lock Placement

Will lock the location of the item on the touchscreen to keep it from moving. The options are Trued (locked) or False (unlocked). The default is False (unlocked).

 Lock\_Placement


## Behavior

Allows user to configure the behavior of the item.

 Behavior	
Ending_Channel	10
Hide_Color_Button	False
 Hide_In_Mode	[~]
 Hide_In_State	[~]
Num_of_Controls	5
Room	1
Starting_Channel	1
Style	Absolute

## Ending Channel

Allows user to configure the last channel to be displayed.

 Ending\_Channel

## Hide Color Button

Allows user to hide the Color Fixture Button for all channels configured to the array.

 Hide\_Color\_Button

## Hide in Mode

When in the selected mode, the button will be hidden.

Hide in Mode:
 

- ☐ Mode I
- ☐ Mode J
- ☐ Mode K
- ☐ Mode L
- ☐ Mode M
- ☐ Mode N
- ☐ Mode O

The configuration selection will appear in the text box list to the right of the behavior that was configured. A tilde (~) indicates no selection. If a letter appears, then that mode/state is hidden or locked depending on the behavioral item configured.

## Hide in State

When in the selected state, the button will be hidden.

Hide in State:
 

- ☐ Show
- ☐ Rehearsal
- ☒ State C
- ☐ State D
- ☐ State E
- ☐ State F
- ☐ State G
- ☐ Admin

**Note:** For purposes clarify in the manual, I have set the behavior of this button to hide in state C and you can see how this gets displayed (at the top of this image) in the pulldown box once the configuration box is closed.

### Number of Controls

Allows user to configure the number of channel controls to be displayed.

Num of Controls	5
-----------------	---

## Room

Allows the user to determine the room that the slider is configured to.

Room	1
------	---

### Starting Channel

Allows user to configure the first channel to be displayed.

Starting Channel	1
------------------	---

## Style



Allows user the configure the selected array's style. The options are:

Style	Absolute
-------	----------

- **Proportional:** use only with DMX capture.
- **Absolute:** use for large numbers of sliders.

## Array Text

Allows the user to configure the array's text and all associate configurable attributes.

 Text	
 Labels	(Edit)
Text Right To Left	False

## Labels

Allows the user to edit the vertical label for any and all items using the pulldown shown here.

[illegible]

## Text Right to Left

Allows user to configure text when using languages like Arabic or Hebrew that natively read from right to left. Settings options are False for Left to Right and True for Right to Left.

True  
False



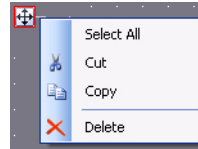
## Screen Text

Click and drag a screen text box onto the touchscreen. This allows for the configuration and placement of text onto a touchscreen.



## Text - Right Click Options

Hover over the array and right click for the editing options. Standard options for a graphical user interface are available with Cut, Copy and Delete. Paste will be available when something has been cut or copied.



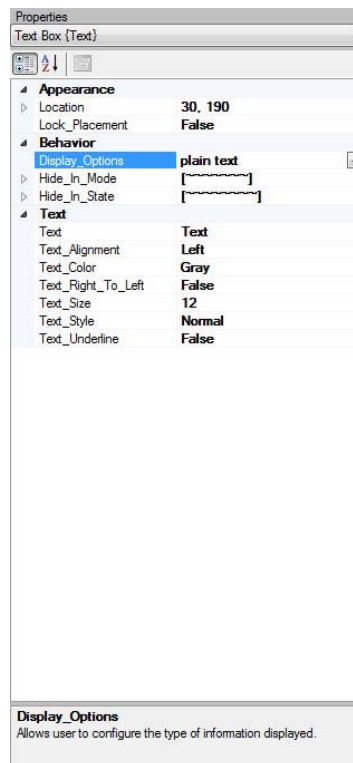

---

**Note:** Properties are available under the Device tree.

---

## Text Properties

The Properties of the text box will appear below the Device Tree on the lower left side of Vision.net 4.5 Designer when the item is selected.



Here is where all editable properties of a Vision.net 4.5 item can be configured.

## Text Properties Pulldown

The pulldown allows the user to select the item available in the selected touch screen's tab.



## Display Format

Allows user to see all property configuration data broken down by Category or Alphabetical without Category headings.



## Appearance

Allows user to configure the appearance of the item.

<b>Appearance</b>	
Location	30, 190
Lock_Placement	False

## Location

Starts at the top left hand corner of the touchscreen. The first number is the horizontal position moving right from 0 and the second number is the vertical position down from 0.

Location 0, 0

## Lock Placement

Will lock the location of the item on the touchscreen to keep it from moving. The options are Trued (locked) or False (unlocked). The default is False (unlocked).

Lock\_Placement False

## Behavior

Allows user to configure the behavior of the item.

<b>Behavior</b>	
Display_Options	plain text
Hide_In_Mode	[ ]
Hide_In_State	[ ]

## Display Options

Allows user to select from a prebuilt list of display options. The pulldown options are shown below.

plain text  
time  
date  
date time  
day date time  
Firmware Ver.  
IP Address

## Hide in Mode

When in the selected mode, the button will be hidden.

Hide in Mode:

☐ Mode I

☐ Mode J

☐ Mode K

☐ Mode L

☐ Mode M

☐ Mode N

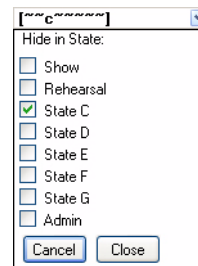
☐ Mode O

Cancel Close

The configuration selection will appear in the text box list to the right of the behavior that was configured. A tilde (~) indicates no selection. If a letter appears, then that mode/state is hidden or locked depending on the behavioral item configured.

## Hide in State

When in the selected state, the button will be hidden.



**Note:** For purposes clarify in the manual, I have set the behavior of this button to hide in state C and you can see how this gets displayed (at the top of this image) in the pulldown box once the configuration box is closed.

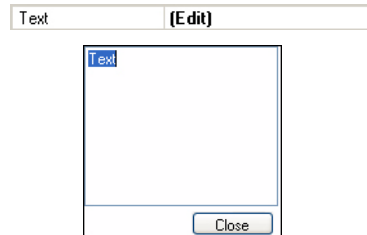
## Screen Text Options

Allows the user to configure the Text box's properties and all associate configurable attributes.

Text	
Text	(Edit)
Text_Alignment	Left
Text_Color	Gray
Text_Right_To_Left	False
Text_Size	12
Text_Style	Normal
Text_Underline	False

## Screen Text - Text

Allows the user to edit the text that is displayed.



## Text Alignment

Allows the user to configure the text alignment from the pulldown list below.



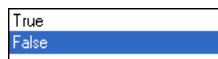
## Text Color

Allows user to configure the text color from the pulldown list below.



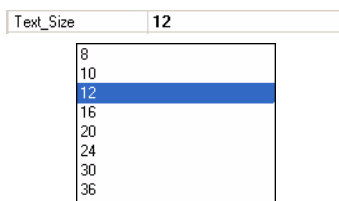
### Text Right to Left

Allows user to configure text when using languages like Arabic or Hebrew that natively read from right to left. Settings options are False for Left to Right and True for Right to Left.



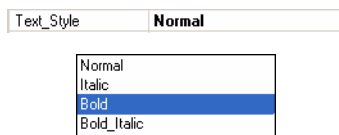
### Text Size

Allows user to configure text size from a pulldown with the following options.



### Text Style

Allows user to configure text style using the pulldown with the following options.



### Text Underline

Allows the user to turn on or off the text underline feature.



### Clock Display

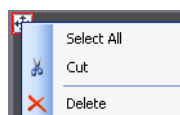
Click and drag a clock onto the touchscreen. This allows for the configuration and placement of a clock onto a touchscreen.

Clock display configuration options allow the ability to display the second hand and display the running events that have been configured.



### Clock - Right Click Options

Hover over the array and right click for the editing options. Standard options for a graphical user interface are available with Cut and Delete. Paste will be available when something has been cut.



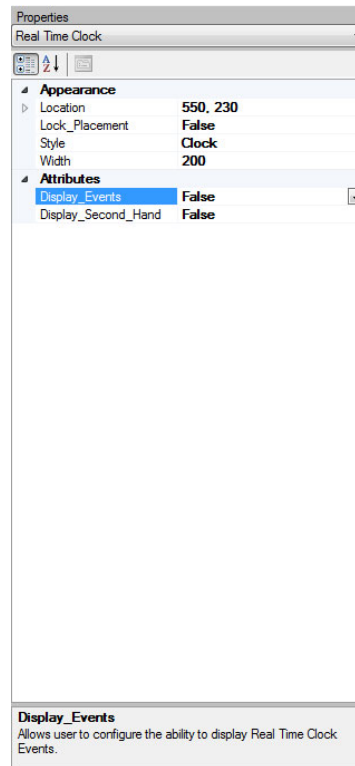

---

**Note:** Properties are available under the Device tree.

---

## Properties

The Properties of the clock will appear below the Device Tree on the lower left side of Vision.net 4.5 Designer when the item is selected.



Here is where all editable properties of the Vision.net 4.5 clock can be configured.

### Clock Properties Pulldown

The pulldown allows the user to select the item available in the selected touch screen's tab.



### Display Format

Allows user to see all property configuration data broken down by Category or Alphabetical without Category headings.



### Appearance

Allows user to configure the appearance of the item.

Appearance	
Location	400, 60
Style	Timer
Width	200

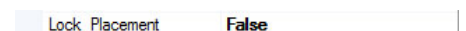
### Location

Starts at the top left hand corner of the touchscreen. The first number is the horizontal position moving right from 0 and the second number is the vertical position down from 0.



### Lock Placement

Will lock the location of the item on the touchscreen to keep it from moving. The options are Trued (locked) or False (unlocked). The default is False (unlocked).



## Style



Allows the user to select the style to either be the Clock...



...or the Timer...



## Clock

The Clock can be configured to appear on a touchscreen as either an analog clock or a Timer.



## Timer

The Clock can be configured to appear on a touchscreen as either an analog clock or a Timer.

When the Style is set to Timer, there are two buttons available to active the Timer.

- The **Start** button will start the timer.
- The **Reset** button can be used to default the Timer back to zero.

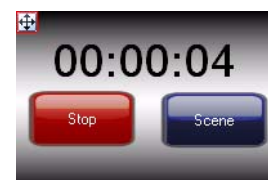
When the Start button is activated, the Timer will begin counting. The **Start** button then changes to the **Stop** button.

- The **Stop** button will pause the Timer.
- The **Scene** button will allow the creation of Scenes (or Laps) to time just parts of the whole.

When the Scene button is activated, a pulldown of the Scenes will be available.

## Width

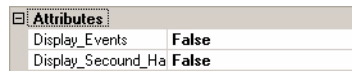
With the Width number, the clock can be made bigger (higher number) or smaller (lower number).



**Note:** The Clock will remain uniform in height and width.

### Attributes

Shows the list of configurable attributes for the selected clock.

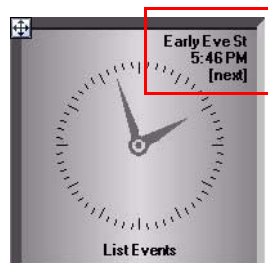


### Display Events

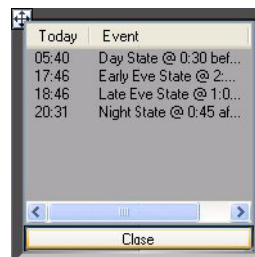
When the Display Events is set to **True**, the clock will show the next scheduled event as listed in the upper right hand corner of the clock.



To see the entire list of programmed Real Time Clock events, just click anywhere on the clock and the event list will appear.



The list of events will appear in a color based on the event's status.



The colors and the meaning are listed below:

Event Color	Meaning
Black	Event has not occurred today
White	Event has occurred today
Red	Event is disabled
Yellow	Event is not scheduled for this day of the week

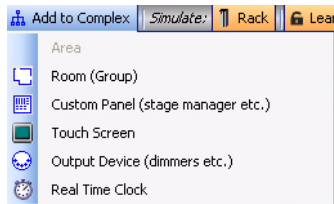
### Display Second Hand

When the Display Second Hand setting is **True**, the clock's second hand will display.



## REAL TIME CLOCK AND EVENTS

The Real Time Clock feature allows events to be triggered based upon the time of day. Event scheduling can be done based on exact daily times or relative to sunrise and sunset. In order for events to be scheduled, a real time clock must be present on the Vision.net 4.5 network.



Vision.net 4.5 designer itself can serve as a real time clock, a touchscreen or a Contact Relay panel may be used. Only one Real Time Clock can be used on a Vision.net 4.5 system.



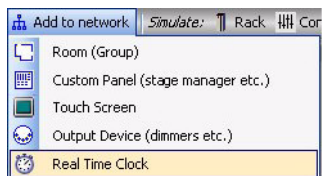
**Note:** Modification of the Real Time Clock is only possible when the Vision.net 4.5 system is running in the Admin State or All Mode State.



**IMPORTANT!** There can only be one real time clock per Vision.net 4.5 system.

### 1. Adding a Real Time Clock

From the Main Tool Bar, click on the Add to network pulldown and select Real Time Clock.



This dialog box will appear and allow you to set the ID number. Vision.net will prompt the system for the next available ID number.



**Clock Runs On:** allows you to identify from which device the clock should run. The options are PC, touchscreen or output device.

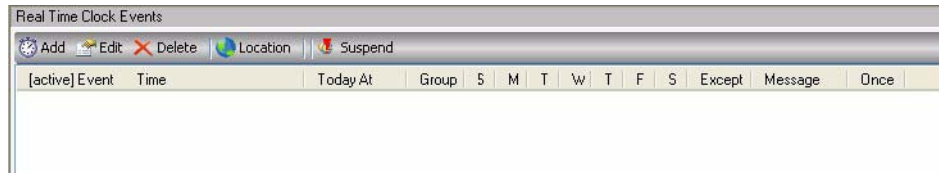


**Note:** If the Real Time Clock is going to reside on an Output Device or Touchscreen, set the ID number to match the hardware setting.

Once the Real Time Clock is setup, move on to setting up the Real Time Clock Events.

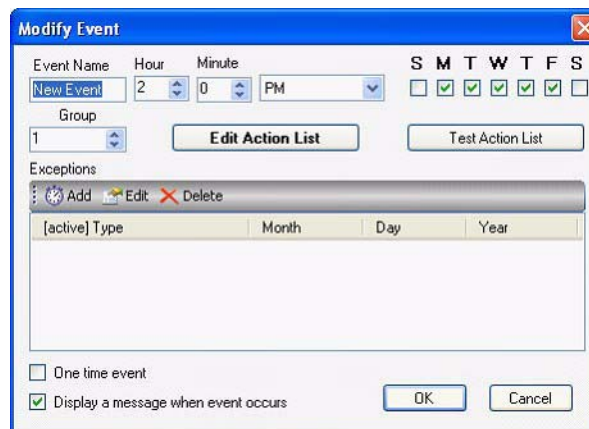
## 2. Real Time Clock Events

The Real Time Clock Events window allows you to perform the following actions.



### Adding a Real Time Clock Event

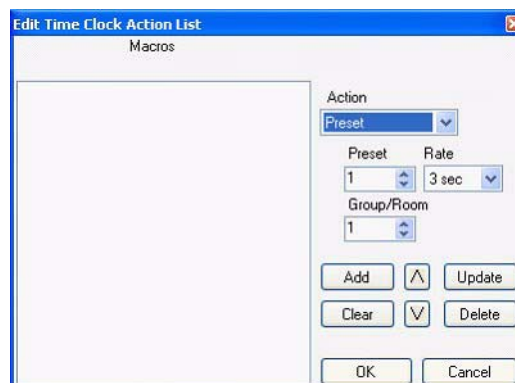
This function allows the adding of an event and setting all of its parameters. Name, Time, Day, and Group can be set here.



Check boxes allow the event to run only once and to display a message when the even runs. Uncheck any item that is not requested.

**Test Action List:** allows the user to test the event.

Checkboxes at the bottom of the dialog box allow for an event to be a "one time" event (occurs only once) and it can display a message on the PC's taskbar that the event has occurred.



Pressing Edit Action List will allow the configuration of the macro for the actions that are triggered by this event. This event list can be programmed just like any Smart button.

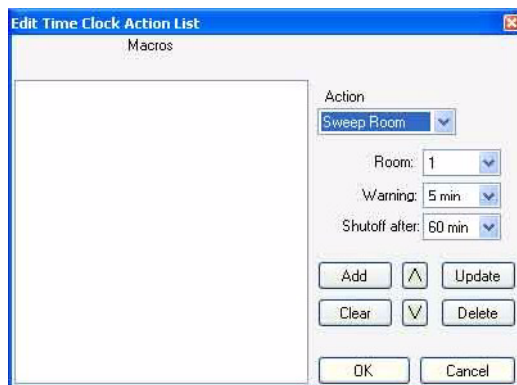
**Note:** See ["Smart Button Configuration" on page 86](#) for a list and explanation of action commands.

## Real Time Clock Macros

Real Time Clock Macros are very similar to macros that are configured on button stations and touchscreens. However, there are a few macro items that are available only on a Real Time Clock.

### Sweep Room

This action will place the configured room into darkness by "sweeping up" and turning all of the lights off. The Sweep action has 2 parameters - Warning and Shutoff times.



When the Sweep action takes place, the lights in the configured room will briefly flash to warn you that they will change. This flash is the "Warning" that is configured in the Warning pulldown window. (The options are from None to 15 minutes).

In order for the warning flash to occur, the designated circuit must have the warning option selected in the Output Device.

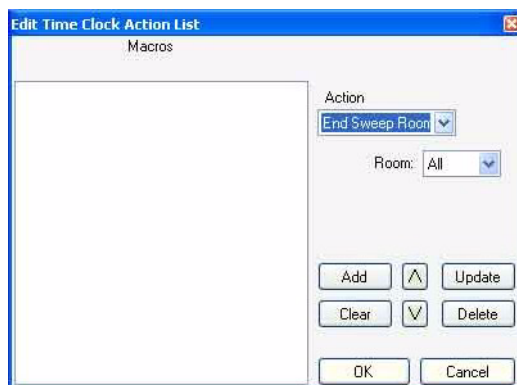
See ["Dimmer Rack Configuration Spreadsheet" on page 98](#) in this manual for configuration information.

After the warning time, Preset 0 for that room will be selected. If a new preset is selected after the warning, that preset will remain active for the Shutoff time. (The options are from 1 minute to 120 minutes.)

Here is an example. If a sweep is set for 11pm where the Warning is 5 minutes and the Shutoff after is 60 minutes, then at 11pm, the lights that are configured for the warning feature will flash and at 11:05pm all lights will turn off. If after that, at 11:30pm a preset is pressed, then at 12:30am, the lights that are configured for the warning feature will flash and at 12:35am, all lights will turn off.

### End Sweep Room

The End Sweep Room event cancels the Sweep Room Action.



The End Room Sweep action allows the configuration of Rooms to end the sweep action. The options are All or 1 through 255).

## Edit a Real Time Clock Event

This function allows the editing of an event. Once the event is selected, pressing Edit will reveal the same Modify Event interface that the Add button reveals.



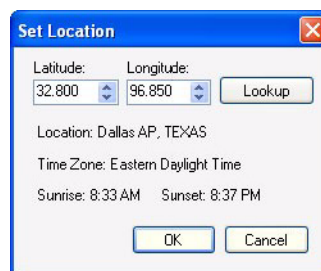
## Delete a Real Time Clock Event

This function allows the removal of an event.



## Location for a Real Time Clock Event

This function allows the user to set the geographical location of the Vision.net system based on latitude and longitude. As an alternative, the system can be configured by a list of cities and states. Just press the Lookup button for this list.



## Export a Real Time Clock Event

This allows the ability to Export by one of three methods.

- **via VN Network** - over the Vision.net Network
- **File** - saves the file so that it can be transferred to a touchscreen on a USB key in the same manner as a screen configuration would be transferred.
- **Ethernet** - over the Ethernet. An IP address is required.



## Set Remote Clock

Sets the clock of the remote device to the clock settings of the Vision.net Designer PC.



## Suspend a Real Time Clock Event

Toggles to hold any real time clock events from running until the Suspend feature is released.



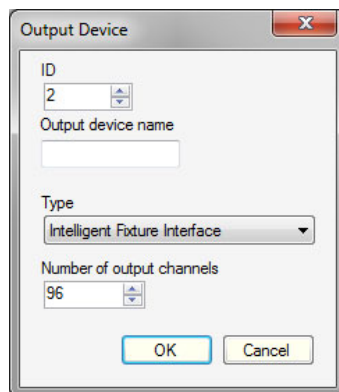
# CONFIGURATION TUTORIAL

Designer for Vision.net 4.5 has many powerful features within the configuration options for the button stations. Some examples are below.

## Working with Automated Luminaires.

In order to use automated luminaires with Vision.net 4.5, it is necessary to first know what brand, model and mode the desired fixture is to be configured.

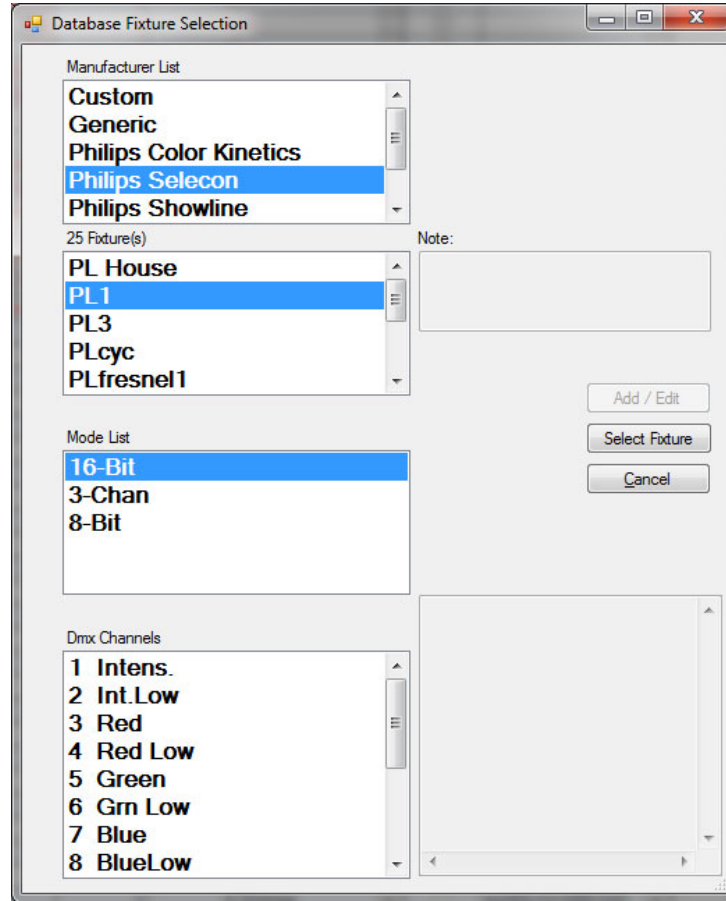
Once the desired fixtures are identified, they first need to be patched. Setup an output device that corresponds to a VN/DMX Interface Card. This is the DMX device where the automated luminaires will be connected via DMX512.



Once the device is setup, patch the unit within the output device. Set the address on the fixture to 1, then patch the fixture starting with DMX Slot # 1, Room 1, Channel 1 and set the Fixture Type to the device type that you have. Let's say this is a PL1 LED Luminaire.

Export Synchronize Print Exchange Fixture Cleanup							
DMX Slot #	Circuit Number	Description	Room [Group]	Channel [Zone]	Fixture Type	Non Dim	Priority
1	18416383	Intensity	1	1	PL1 (16-Bit)	<input type="checkbox"/>	Arch[0-31] DMX [32]
2	590336	Intensity	1	1	---	<input type="checkbox"/>	---
3	3736063	Red	1	1	---	<input type="checkbox"/>	---
4	2687232	Red	1	1	---	<input type="checkbox"/>	---
5	3736319	Green	1	1	---	<input type="checkbox"/>	---
6	2687488	Green	1	1	---	<input type="checkbox"/>	---
7	3736575	Blue	1	1	---	<input type="checkbox"/>	---
8	2687744	Blue	1	1	---	<input type="checkbox"/>	---
9	3743744	White	1	1	---	<input type="checkbox"/>	---
10	2695168	White	1	1	---	<input type="checkbox"/>	---
11	2187264	PL Preset	1	1	---	<input type="checkbox"/>	---
12	4293632	PL Strobe	1	1	---	<input type="checkbox"/>	---
13	131073	Intensity Time	1	1	---	<input type="checkbox"/>	---
14	2228225	Color Time	1	1	---	<input type="checkbox"/>	---
15	48431616	Control	1	1	---	<input type="checkbox"/>	---
16	50331904		1	2	Dimmer	<input type="checkbox"/>	Arch[0-31] DMX [32]
17	50331904		1	0	Dimmer	<input type="checkbox"/>	Arch[0-31] DMX [32]
18	50331904		1	0	Dimmer	<input type="checkbox"/>	Arch[0-31] DMX [32]

If the fixture is not already in the list, just select New Fixture, then from the Manufacturer's List: Selecon, Fixture: PL1, Mode: 16-Bit, Select Fixture.

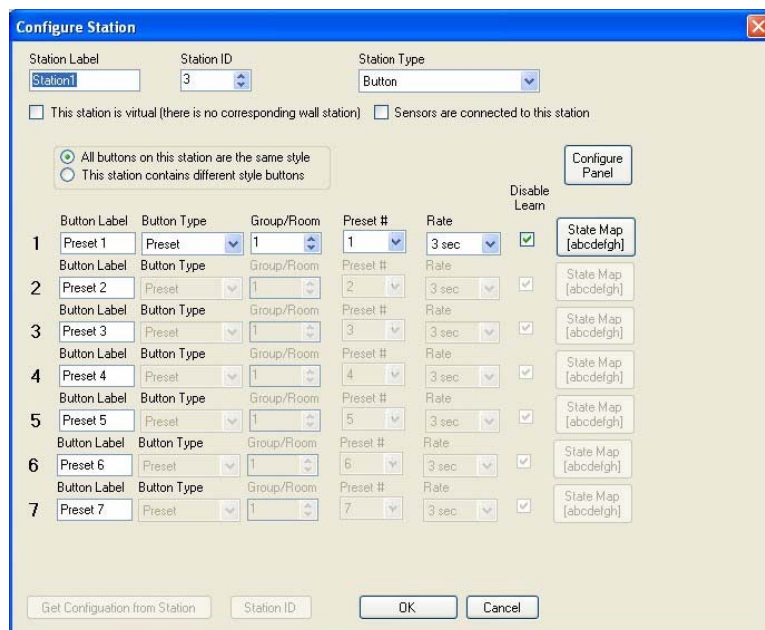


## What Can You Do With Modes?

- Let's create a button station that will be installed in a location reserved for facility technicians...like the lighting booth.



- Here I have created a simple Button Station with 7 buttons. I went into the Properties of the Button Station and changed Button 2 to the Button Type: State / Mode and left the State / Mode set to All Modes. I then changed Button 3 to the Button Type: State / Mode but set the State / Mode to Show.



- Now when the second button is pressed, it takes you back to a default position of all modes being available. But when you put the system into Show State by pressed button 3, any button or function of the system that is NOT available in Show Mode will be unavailable. So Preset 2 will not function when in the Show State. Another way of putting it... If I have a preset button that is a work light preset and I have that button set to only appear in the Rehearsal State then when I go to the Show State, then that work light preset will not be available. When the system is returned to the All Modes State, then the work light preset will function again.

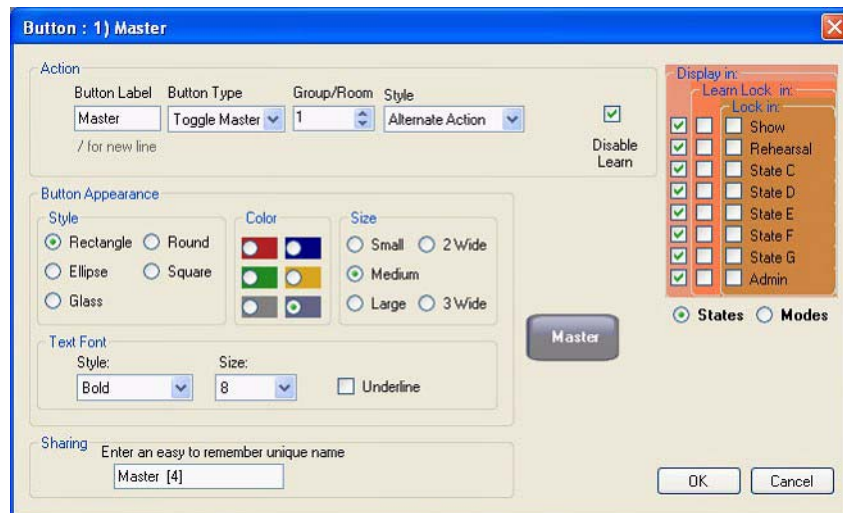
**Note:** Notice the State Map button on Button 4. It is showing that only the second state is the one it will display in.

## What Can You Do With Toggle Masters?

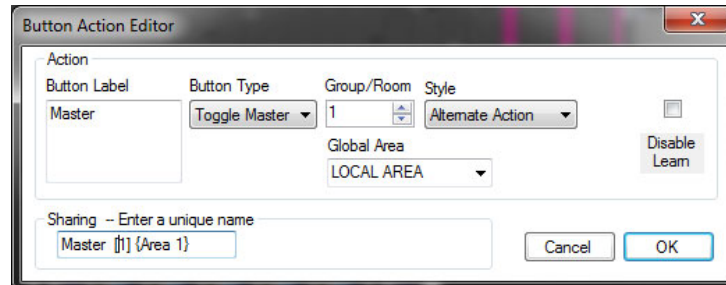
- Toggle Masters allow a single button to function as a master button for a set of toggles that are in a particular combination of being on and off.
- Let's say you have 6 toggles on a button station and you need a button that turns 1 + 3 + 5 on and off.



### Create a Toggle Master on a touchscreen.



- 1) Configuring that button; set it for the Alternative Action Style and Share the button so that it can be the 7th button on the Button Station as the Toggle Master.



- 2) Create a Button Station; the first 6 buttons are Toggles. The last button is a Shared Button from the Toggle Master on a touchscreen.
- 3) Toggle on Buttons 1 + 3 + 5.
- 4) Go to the Toggle Master button on the touchscreen and "learn" the toggle state. (You will likely need to press Learn Locked to override.)
- 5) Press the Shared Toggle Master button on the Button Station and you will find that it will turn on/off Toggles 1 + 3 + 5.

### Tips and Hints...

- Experiment with the other Styles. (All On, All Off and Any On Indicator Only)
- When the Style is set to All On, the Toggle Master will always turn all learned toggles on.
- When the Style is set to All Off, the Toggle Master will always turn all learned toggles off.
- When the Style is set to Any On Indicator Only, the Toggle Master's indicator will light up when "any" of the learned Toggles are turned on manually. This turns the Toggle Master in to an indicator circuit for any learned Toggle that is active.



## Need To Do Pile-On Presets?

- Normally Presets are exclusive and when one Preset is activated, any other active Preset is turned off. (Preset 1 is on, activate Preset 2 and Preset 1 goes out.) Where there is a need for pile-on presets, there are special rules that apply to Rooms 240 - 255, whereby these Rooms' Presets will respond as pile-on presets.

**Configure Station**

Station Label:  Station ID:  Station Type:

☐ This station is virtual (there is no corresponding wall station) ☐ Sensors are connected to this station

☒ All buttons on this station are the same style  
☐ This station contains different style buttons

	Button Label	Button Type	Group/Room	Preset #	Rate	Disable Learn	State Map
1	Preset 1	Preset	240	1	3 sec	<input checked="" type="checkbox"/>	[abcde fgh]
2	Preset 2	Preset	240	2	3 sec	<input checked="" type="checkbox"/>	[abcde fgh]
3	Preset 3	Preset	240	3	3 sec	<input checked="" type="checkbox"/>	[abcde fgh]
4	Preset 4	Preset	240	4	3 sec	<input checked="" type="checkbox"/>	[abcde fgh]
5	Preset 5	Preset	240	5	3 sec	<input checked="" type="checkbox"/>	[abcde fgh]
6	Preset 6	Preset	240	6	3 sec	<input checked="" type="checkbox"/>	[abcde fgh]
7	Preset 7	Preset	240	7	3 sec	<input checked="" type="checkbox"/>	[abcde fgh]

- In all Rooms, there resides the capacity for 32 Presets and they are exclusive to each other. In Rooms 240-255, these 32 Presets are ganged together in groups of 8 (1-8, 9-16, 17-24, 25-32) in terms of their exclusive nature. So one Preset from each of these four groups, can pile-on as highest takes precedence for the ability to mix and match lighting states.
- For example, you may have 3 color cyc lights (Red, Green and Blue) in the theatre and the specification calls for 3 presets to be programmed with each color for color mixing abilities. This could be done by having each cyc color programmed into Room 240 (or above) and Red could be Preset 1, Green could be Preset 9 and Blue could be Preset 17. With this configuration, the 3 presets would be able to pile on to mix colors.

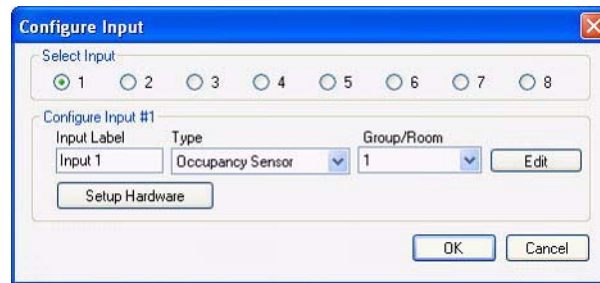


**IMPORTANT!** The Pile On Preset has been disabled in the latest VN/DMX Card's firmware where Intelligent Fixture console has been added to the card as it no longer supports it.



## Need to User Room Combine with Occupancy Sensors?

- When using Occupancy Sensors in a facility where Room Combine is needed, the Group/Room dialog box will allow the sensors to be linked.



- If two rooms are combined, their Occupancy Sensors are also combined. The Group/Room is used to define the Room that the Sensor is controlling.

## What Features Are Available When a Contact Relay Pack is Connected to a Station?

- When a Contact Relay Pack is added to the Station, it will act as an Output Device when it's Group/Room matches. This feature is used when the Station acts as the Main Button Station for a Contact Sensor/Relay application, with the ability to talk to the SVN/IP as well.

## LEGACY STATION SUPPORT - OUTLOOK VN

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Below are some important notes about legacy Outlook VN Stations. Please read carefully. If you have any questions, please contact Strand Lighting technical support at 1.214.647.7880.

### Support from Vision.net Designer

Outlook VN Stations from Vision.net Designer 2

- 1) Strand Outlook VN stations (legacy stations) are supported through Vision.net Designer Version 2.00.xx; they are not supported in Designer for Vision.net 3 and later.
- 2) Vision.net stations will support all the functions of Vision.net Designer Version 2.00.xx allowing them to be added to existing systems. Only the functions of Vision.net Designer Version 2.00.xx are supported.
- 3) Outlook VN systems and hybrid systems will need to be maintained using Vision.net Designer Version 2.00.xx.
- 4) If a Vision.net Designer Version 2.00.xx file is loaded into Designer for Vision.net 3, Vision.net 4.5 or later, all the Outlook VN stations will be converted to Vision.net stations. An error will occur if Designer for Vision.net 3, Vision.net 4.5 or later tries to configure an Outlook VN station.
- 5) In a distributed system like Vision.net 4.5, it is essential that all functions be supported by the entire system to ensure consistent performance.
- 6) The firmware in all Vision.net stations is field programmable over the Strand Vision.net 4.5 network. This will allow the entire system to be synchronized as the product develops.

# VISION.NET 4.5 DESIGNER SYSTEM REQUIREMENTS

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## 1. Computer and Operating System

### Single Area Applications

Computer:	Designer for Vision.net 4.5 for <b>single Area applications</b> should run on a PC with 64 BIT, Windows 7 Enterprise or Professional
Memory:	Minimum of 4GB (RAM) memory. Minimum of 50 MB of hard disk space (not including pagefile memory).
Monitor:	SVGA color monitor; minimum screen resolution of 1024 x 768 (16-bit color or higher).

### Multiple Area Applications

Computer:	Designer for Vision.net 4.5 for <b>multiple Area applications</b> should run on a PC with 64 BIT, Windows 7 Enterprise or Professional
Memory:	Minimum of 8GB (RAM) memory. Minimum of 50 MB of hard disk space (not including pagefile memory).
Monitor:	SVGA color monitor; minimum screen resolution of 1024 x 768 (16-bit color or higher).

## TOOLS FOR SERVICE TECHNICIANS

There are several features in Vision.net 4.5 Designer that are designed to make installation and debugging the Vision.net system simple and easy. These features are available in Version 1.1.14.6 or later. The touchscreen startup file must be **Startup for Shasta.exe** and Auto Launch must point to this file.

Whenever possible an Ethernet connection should be provided to each touchscreen. This will make updating firmware and configuration files possible without removing the touchscreen from the wall.

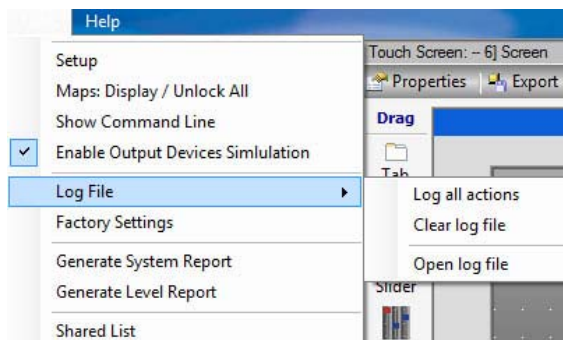
### 1. Touchscreen Shasta Update via FTP

#### Do the following:

- Step 1. On your computer, copy your new Shasta files into a folder named “update”.
- Step 2. Open Windows Explorer and type FTP://xxx.xxx.xxx.xxx (IP address for the desired touchscreen) in the address bar.
- Step 3. Once Explorer connects, you should see 2 text files, one of which is named “ID.txt”.
- Step 4. Right click in the folder window, hover over new, and click “Folder” on the pop-out menu.
- Step 5. Keep the default folder name “New Folder”.
- Step 6. Copy your “update” folder into the “NewFolder”.
- Step 7. To save time and avoid multiple reboots, you may also put an ActiveScreen file into the //New Folder/update if you wish to do so.
- Step 8. As with updating via USB, this folder MUST BE NAMED UPDATE.
- Step 9. Open the text file named “ID.txt”.
- Step 10. At the bottom of the text file, you should see a pointer key (NewFiles123456).
- Step 11. Copy the text “NewFilesXXXXXX”.
- Step 12. Right click on your “New Folder” that contains “update”.
- Step 13. Past “NewFilesXXXXXX” into the name of the folder.
- Step 14. You must go to the touch screen within 20 seconds of renaming the folder to “NewFilesXXXXXX”.
- Step 15. A dialog box will appear on the screen prompting you accept the external firmware update request.
- Step 16. Press “Yes”.
- Step 17. You will then be prompted to reboot the touch screen.
- Step 18. The touch screen will reboot, and the Startup for Shasta executable with start. You must then click OK while “update firmware and start program” is selected.

### 2. Log File

This is a command that is hidden from view by default. To unlock this feature to appear on your Tool pull down, press and hold Ctrl then click on Tools. Log File will appear.



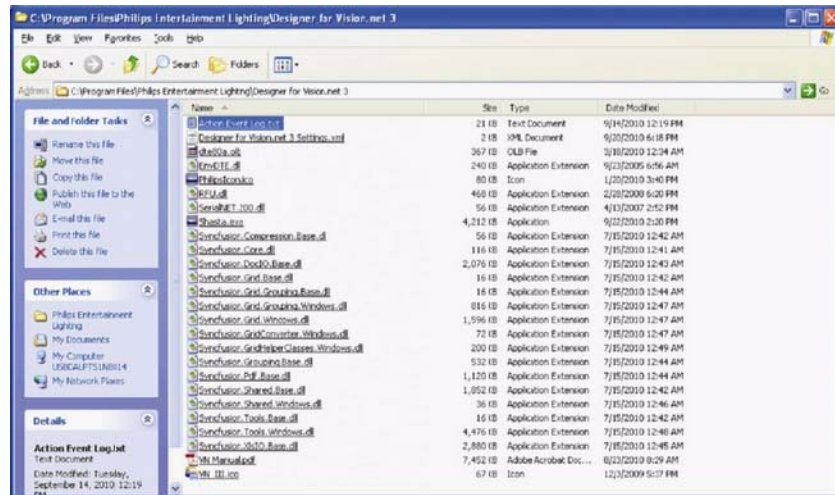
By selecting this you have the option of selecting and checking off Log All Actions.

When you select this option all future actions that the system does will be logged in a text file.

This file can be viewed in:

C:\Program Files\Entertainment Lighting\Designer for Vision.net 4.5

**Note:** This is the default location for Windows XP. Any other operating system will have a different default installed location. For example, Windows 7 may use the following location C:\Users\ (User Name) \AppData\Local \Entertainment Lighting\Vision.net 4.5\ (version number).



**Note:** This is the default installation location. If the software was installed in a different location, the path for the log will need to be adjusted to the installed file folder.

Selecting the Clear Log File will erase all log entries and all the log to start fresh.

Later on, when we have action events that are logged, I welcome you to come back here and see what is being logged on the system.

This is very useful when configuring a large facility that has many devices.

**Note:** You can always see the last 20 actions by clicking the Network Icon in the Status bar at the bottom of the Vision.net Designer window.

### 3. Factory Settings

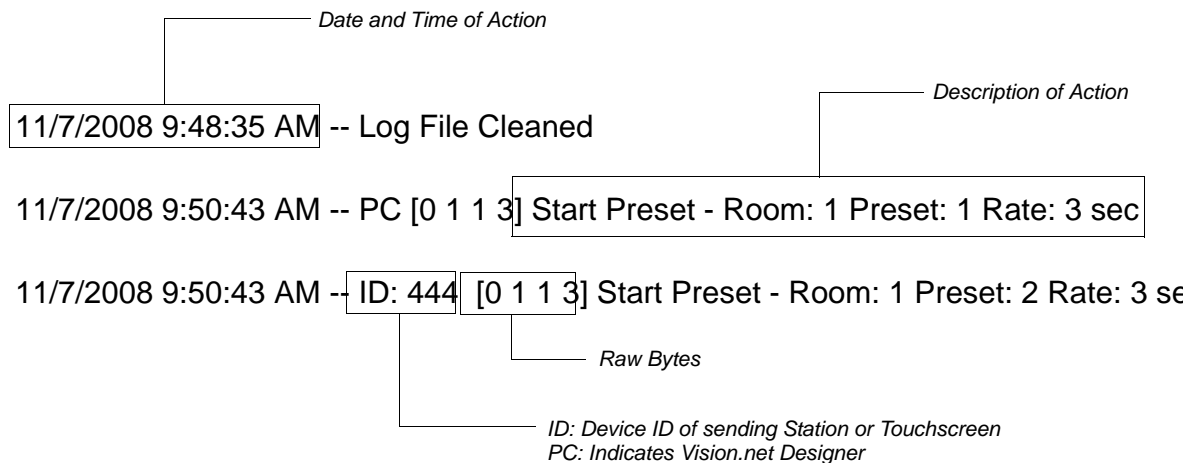
This is only available to the factory for rack setting of maximum amperage.

This is only applicable to a factory technician.

Please contact Strand Lighting's technical support group for further information.

## 4. Action Definition

Below is an example of actions and then its meaning.



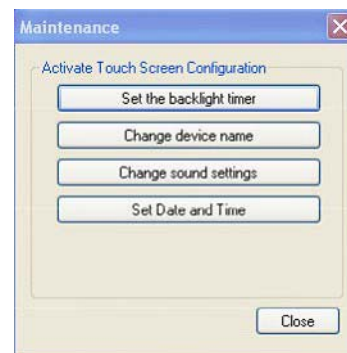
## 5. Touchscreen Configuration

Press and Hold Ctrl and select a touchscreen from the Devices window under MyNetwork.

- A new dialog box called Maintenance will appear.
- When you select it, enter the password: 2606.
- This will allow you to remotely open configuration dialogs on the touchscreen.

**Configuration options are:**

- 1) Set the backlight timer
- 2) Change device name
- 3) Change sound settings
- 4) Set Date and Time



**Note:** Touchscreen configuration does not require an Ethernet connection.

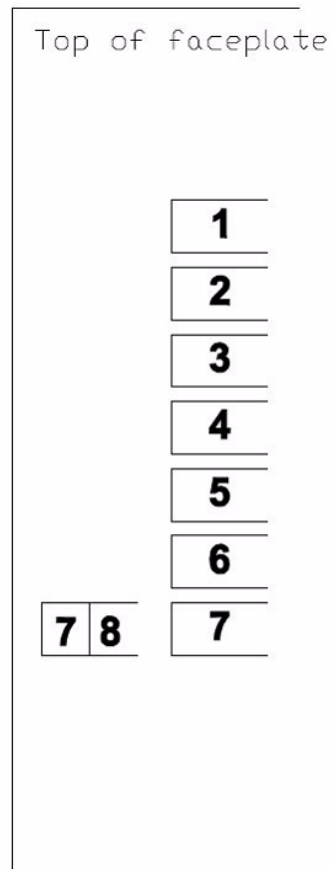
# BUTTON STATION FACEPLATE ALIGNMENT

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## 1. Overview

When a button station is specified with less than a full complement of buttons, they are often specified to not be in button numerical order but center aligned to the station. This image (when printed and physically aligned to the station) can help in identifying the alignment between physical buttons and their configuration buttons. For example, a single button station will expose button #4. A two button station will expose buttons #3 and #5.

## 2. Template





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