



Elegance™ XL

Installation Manual

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Contents

Elegance™ XL Installation Manual.....	1
Contents	3
Overview	4
Specifications and Load Ratings.....	5
System Components:.....	7
Planning	9
Rough-In	10
High Voltage Connections	16
Test All 110-Volt Circuits for Shorts	18
Relay Module Diagnostics.....	19
Fan Speed High Voltage Connections (Optional)	20
Trim-Out	21
Connect Panel's Relay Driver Board	21
MCP Layout	22
Connect SuperSTARs and Auxiliary STARs to the MCP.....	23
Installing Wall switches.....	25
Wire the Remote Control Kit (Optional)	35
Fan Speed Controllers (Optional).....	37
Low-Voltage Relay Boards (Optional).....	39
High-Voltage Relay Boards (Optional).....	40
DSBK-24 Installation	41
Quick Reference Checklist: Low-Voltage Rough-In	42
Quick Reference Checklist: Trim-Out.....	43
Related Reference Materials.....	44
Product Warranty	45
Appendix A: Switch Placement Guide	47
Appendix B: Connector List.....	50
Appendix C: Load Schedule Worksheets (complete for each relay panel)	52
Appendix D: Keypad Assignment Sheets (complete for each available SuperSTAR)	53

Overview

The **Elegance XL™** is a centralized, panel-based lighting control system capable of controlling up to 192 lighting loads (zones) and a host of other electrical and motorized devices. The system is sold in 24-load relay (dimming) panels. The Master Control Panel (MCP), keypads and accessories are all sold separately. **Elegance XL™** can control lighting, fans, and mechanical low voltage relays. Each 24-load dimming panel includes, (1) SuperSTAR dry contact-closure input board, and (1) Elegance XL installation manual. At a minimum each functional system must include a Master Control Panel, at least (1) dimming panel and (1) low voltage keypad. The system, however, is capable of connecting up to (8) dimming panels, 384 inputs (keypads) and a variety of accessories including:

- Fan speed control boards
- Low voltage relay boards
- High voltage relay boards
- IR/RS-232 controller
- Key Fob remotes

The **Elegance XL™** controls lights using solid-state dimming **relays**. The **relays** are attached to Relay Modules. The Relay Modules are enclosed in the top section of the panel.

The **relays** are controlled by the Master Control Panel (**MCP**). The **MCP** is normally installed in air conditioned space inside a closet or utility room.

The **MCP** receives control signals from **Buttons** connected to the supplied **SuperSTAR** or optional **STARS**. Buttons are located on **Keypads**. The Keypads are placed on the walls where switches would normally go. Keypads are connected to the SuperSTAR with stranded 22AWG wire or CAT5 wiring.

Buttons can control individual **Lights** or groups of **Lights** in **Scenes**.

Scenes are groups of Lights which are preset to turn on to various levels of dimming.

The system is programmed by a PC using the **Elegance™** configuration software.

The **Elegance XL™** can include optional Fan Speed control boards (**FSCB**), Low Voltage Relay boards (**LVRB**), or High Voltage Relay Boards (**HVRB**).

The **Elegance XL™** can interface with other control systems and devices through its two RS-232 ports.

The system can also interface with a key-fob remote, and the CentraLite IR/RS-232 remote receiver.

The **Elegance XL™** is capable of operating in 3-phase power environments when wired for that purpose.

Specifications and Load Ratings

Types of Acceptable Power: Single or Three Phase Power @ 50 or 60 Hertz

24 Relays per Panel

Relay Panel Max. Load: 72 Amps @ 120VAC
63 Amps @ 240VAC

Relay Module Max. Load: 16 Amps @120VAC (72A maximum per panel)
14 Amps@240VAC (63A maximum per panel)

Individual Relay Max. Load: 8 Amps @120VAC (72A maximum per panel)
7 Amps @240VAC (63A maximum per panel)

Allowable Types of Dimming: Incandescent, Magnetic Low Voltage, and Suitable Electronic Low Voltage Fixtures

Dimming Method: Normal Phase Control leading edge dimming.

Note: Use copper conductors only.

Max. Ambient Temperature: 40 Degrees Celsius

Min. Ambient Temperature: 0 Degrees Celsius

Relay Panel must be mounted upright.

Do not insulate within 6 inches of Relay Panel.

All components must be mounted in dry conditions. Do not expose to rain, high humidity, or other sources of moisture.

WARNING:

LOAD CAPACITY PLANNING IS A CRITICAL PART OF THE PLANNING PROCESS.

DO NOT EXCEED THE MAXIMUM LOAD LIMITS ON INDIVIDUAL RELAYS, MODULES OR PANELS!

Elegance XL Expandable Hardwire Lighting Control From 24-192 Loads

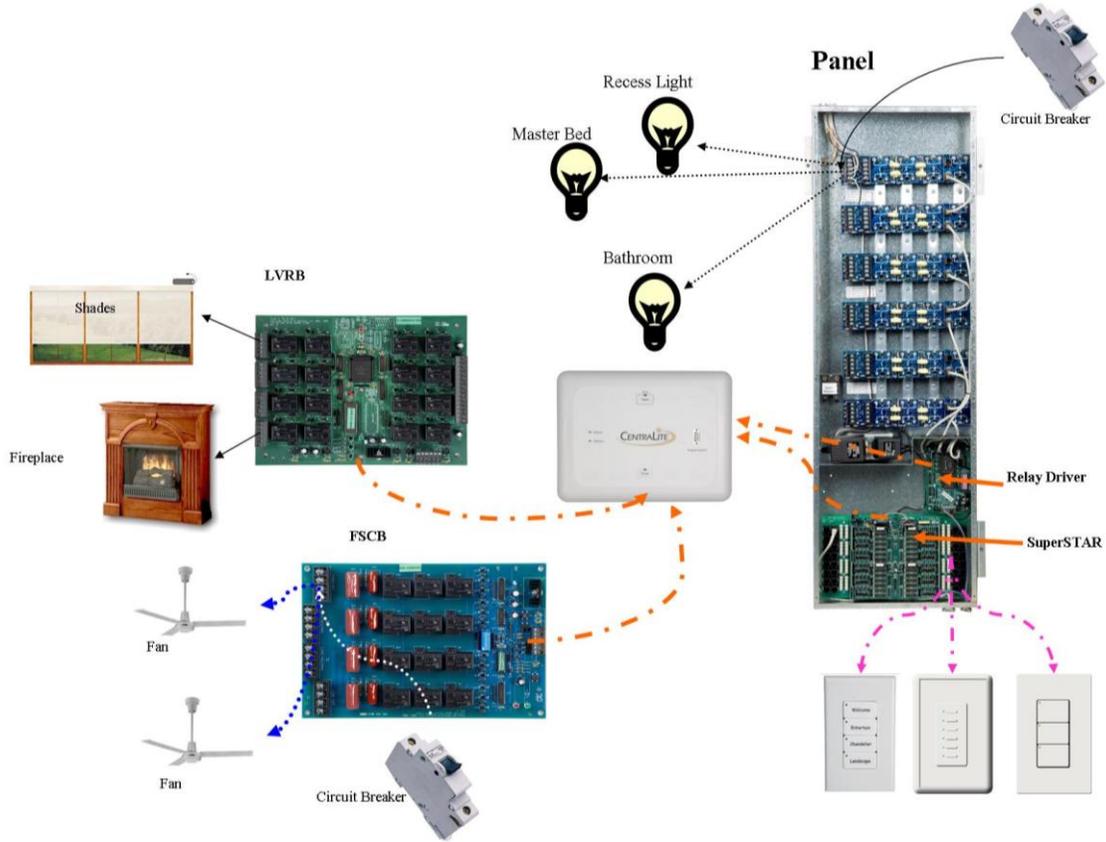


Figure 1
System Layout

System Components:

An Elegance XL system consists of several different components:

1. The Master Control Panel (MCP) is the brain of the system. It consists of several microcomputers all contained on a single circuit board. This unit must be mounted in air-conditioned space. A normal location is inside a closet or utility room. The unit is powered by one 12-volt AC class II transformer.
2. The MCP communicates with low voltage keypads via a factory installed SuperSTAR board. One SuperSTAR board is mounted in the low-voltage section of each dimming panel. The SuperSTAR board has inputs for 96 contact closure inputs. These are, in effect, switch concentrators. They will allow up to 96 different switch inputs, which can later be assigned to operate loads or scenes. Under certain circumstances additional inputs may be required.

Note: The ability to connect SuperSTAR boards or additional STAR boards will be determined by the availability of star chain inputs on the MCP. The MCP has 4 STAR input chain connections. Each connection supports up to 96 contact inputs from either a SuperSTAR or standard STAR chain. Panels without factory installed SuperSTARs are available for purchase for installations larger than 4 panels or when additional contact inputs are not required.

The STAR boards are connected to the MCP via 6 conductor 22AWG stranded wire. Connect the factory-installed SuperSTAR located in your first relay panel to the STAR Chain 1 connector on the MCP; if you have more than one relay panel, you would attach the next SuperSTAR to the next available STAR chain connector on the MCP, until all 4 available STAR chains connections have been used.

Note: If you are installing a large system and would like to distribute your SuperSTARs throughout the installation site, your SuperSTAR can easily be removed from the relay panel and relocated to a convenient location. Simply remove the 13 screws that hold the SuperSTAR in place in the relay panel. Install the SuperSTAR in a GP16 or similar enclosure suitable for low voltage devices.

3. **Keypads:** The system will receive most of the commands from Centralite keypads. CAT5 cable is used to connect each keypad to the SuperSTAR board. You can replace Centralite keypads for any device that generates a dry contact closure output (no voltage present). These inputs can include relay outputs from an alarm system, motion detectors, or door contacts.
4. Each Elegance XL panel has one (1) Relay Driver Board. Each relay driver board must be connected to the MCP via 4 conductor 22 AWG wire. It allows the MCP to interface with the High-Voltage dimming relays. Each Relay Driver board has a 9VAC Class II transformer installed at the factory.
5. Each Panel contains 24 high voltage dimming relays. These relays can be connected to incandescent lighting loads, magnetic low-voltage transformers, electronic low-voltage transformers, or fluorescent loads.
6. Optional Switch Status Terminal (SST) wall units may be included in the system. An SST is similar to a STAR board and is used to monitor and control up to 24 loads or scenes.

7. Each relay panel comes with a dip switch backup (DSBK-24). The DSBK-24 connects between the relay driver output of the MCP and the Relay Driver Input on the relay driver card. The unit provides the ability to override the MCP in the event of a MCP failure.

Wall Switches are low voltage DC operated and may be installed at any desired location in the home or business. Each wall gang can contain up to 8 buttons, any one of which may operate a load, a scene, or a special function. Each keypad box is connected back to a SuperSTAR enclosure using CAT5 Cable. (Switches require 1 conductor more than the number of switches and in the case of backlit keypads they require 2 conductors more than the number of switches).

Note: Multi-gang configurations require a connection for each individual keypad. Keypads with 8 buttons would require (2) CAT 5 runs per keypad.

Fan Speed Controller Boards (FSCB) allows speed control of up to 4 fans per FSCB. Up to 6 FSCBs can be connected in parallel to one (1) Relay Driver Output on the MCP.

Low Voltage Relay Boards (LVRB) contains 16 mechanical relays used for sending contact closure signals as well as switching low voltage loads.

High Voltage Relay Boards (HVRB) contains 16 mechanical relays used for sending contact closure signals as well as switching high voltage loads.

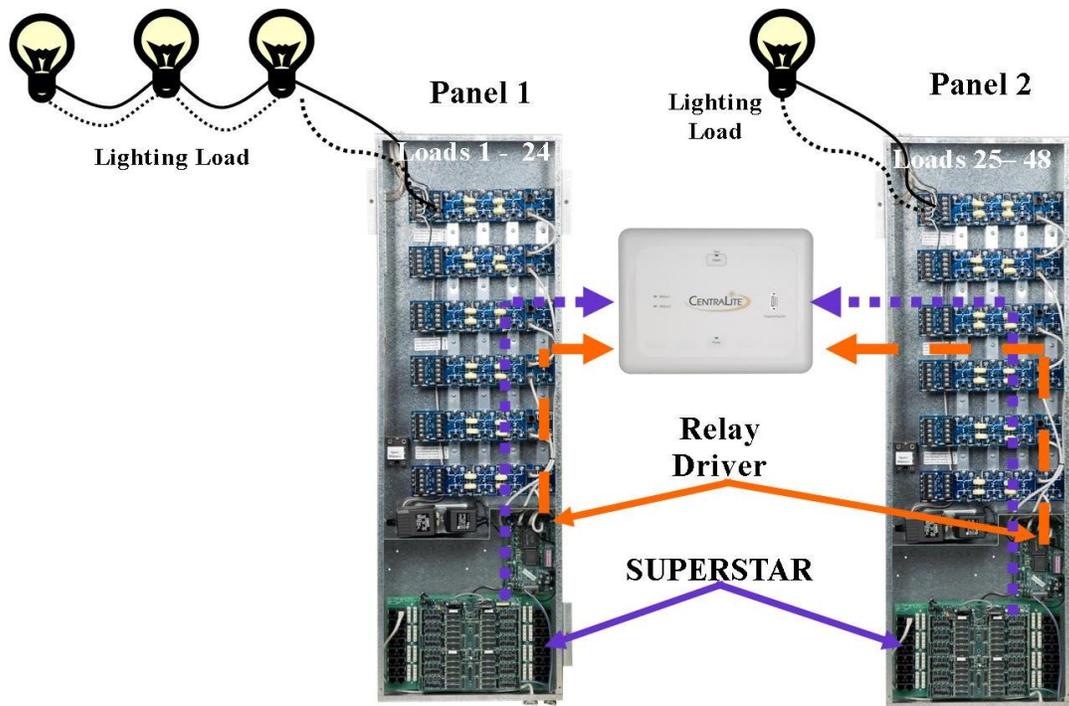


Figure 2
System Layout

Planning

Beginning Rough-In -- PLAN! PLAN! PLAN! A few minutes spent in planning at the beginning of a project will save hours of rework at startup time. Spend the necessary time up front with the home or business owner to be sure that the system is perfectly tailored to their needs. Take the time to fill out the planning schedule documents supplied by CentraLite Systems. These include the Switch Planning Form, the Scene Planning Form and the High Voltage Load Planning Form. Consult with the electrical contractor about the installation before any rough-in wiring begins.

Planning Steps:

1. Determine the number of loads to be switched or dimmed.
2. Determine the number of buttons to be installed. Each individual keypad button is considered a STAR input. Any given button may operate a load, a scene, or a special function. A four-button switch plate is counted as four inputs. Each switch button must be connected to a button input on a STAR board. This will determine the number of STAR boards needed. Keep in mind that each relay panel provides a SuperSTAR board. However, if you need more than the 96 inputs provided with each panel, you will need to determine the number of additional STAR boards needed

For any additional STAR boards plan for only 20 switches per STAR in order to leave a few for spare. Therefore, divide the number of switches by 20 to determine the number of STAR boards required. The system has 4 STAR connections and will, therefore, accommodate up to 4 SUPERSTARS or combination of SuperSTARS and standard STAR chains. If you need additional STARS plan for a location to mount the auxiliary STAR boards. A CentraLite GP-16 enclosure can be used to house auxiliary STAR boards.

3. The Relay driver and STAR Chain located in each panel of the Elegance XL system require two (2) six conductor 22AWG stranded wires run to the MCP. Plan to run a few extras incase a wire is destroyed during construction.
4. Relay Drivers 2-8 are available for additional, relay panels, accessory Fan Speed Control Boards (FSCB), High-Voltage Relay Boards (HVRB) or Low-Voltage Relay Boards (LVRB). See the chart for connection limitations:

	Dimmer Panel Relay Driver	Max FSCB	Max LVRB	Max HVRB
1	Panel 1 Relay Driver	N/A	N/A	N/A
2	N/A	6	1	1
3	N/A	6	1	1
4	N/A	6	1	1
5	N/A	6	1	1
6	N/A	6	1	1
7	N/A	6	1	1
8	N/A	6	1	1
*** NOTE: Relay Driver Ports 2-8 Support up to 6 FSCB, 1 LVRB, OR 1 HVRB per port ONLY!***				

Rough-In

Note: All low-voltage installation wire referenced below is 6-conductor, stranded, and 22-gauge, except wiring between the MCP and STAR boards. Optional individual STAR boards require an additional 18-gauge pair of wires for power.

1. Install Relay Panels

Consult with the job's electrical contractor as to the most convenient location for the relay panels. Generally, it is a good practice to install relay panels near breaker boxes. The preferable location for relay panel installation is a wall stud bay directly beside the breaker panel. The relay panels may also be installed in a closet or in a well-ventilated attic. Be sure to check local electrical codes for compliance.

Note: If your installation includes a relay panel without a factory installed SuperSTAR, the low voltage section, located at the bottom of the panel, will accommodate your MCP, (1) LVRB, (1) SuperSTAR, or (4) standard STAR boards. Standoffs to install any of these low voltage options will be included in each of these panels. Refer to the standoff locations in Figure 3 for each specific option. You must have access to the back of the panel to install the standoff, so be sure to install them before the wall is closed in.

2. Install the MCP Rough-In Enclosure

The Elegance XL Master Control Panel (MCP) has a rough in enclosure that must be installed between two studs. The box is 4" deep and 14" wide. Ensure that both sides of the box are firmly attached to the studs. Install the box in a location that will be convenient for connections at a later date. This will be the location that the installer will connect the PC and all third party devices to the system.

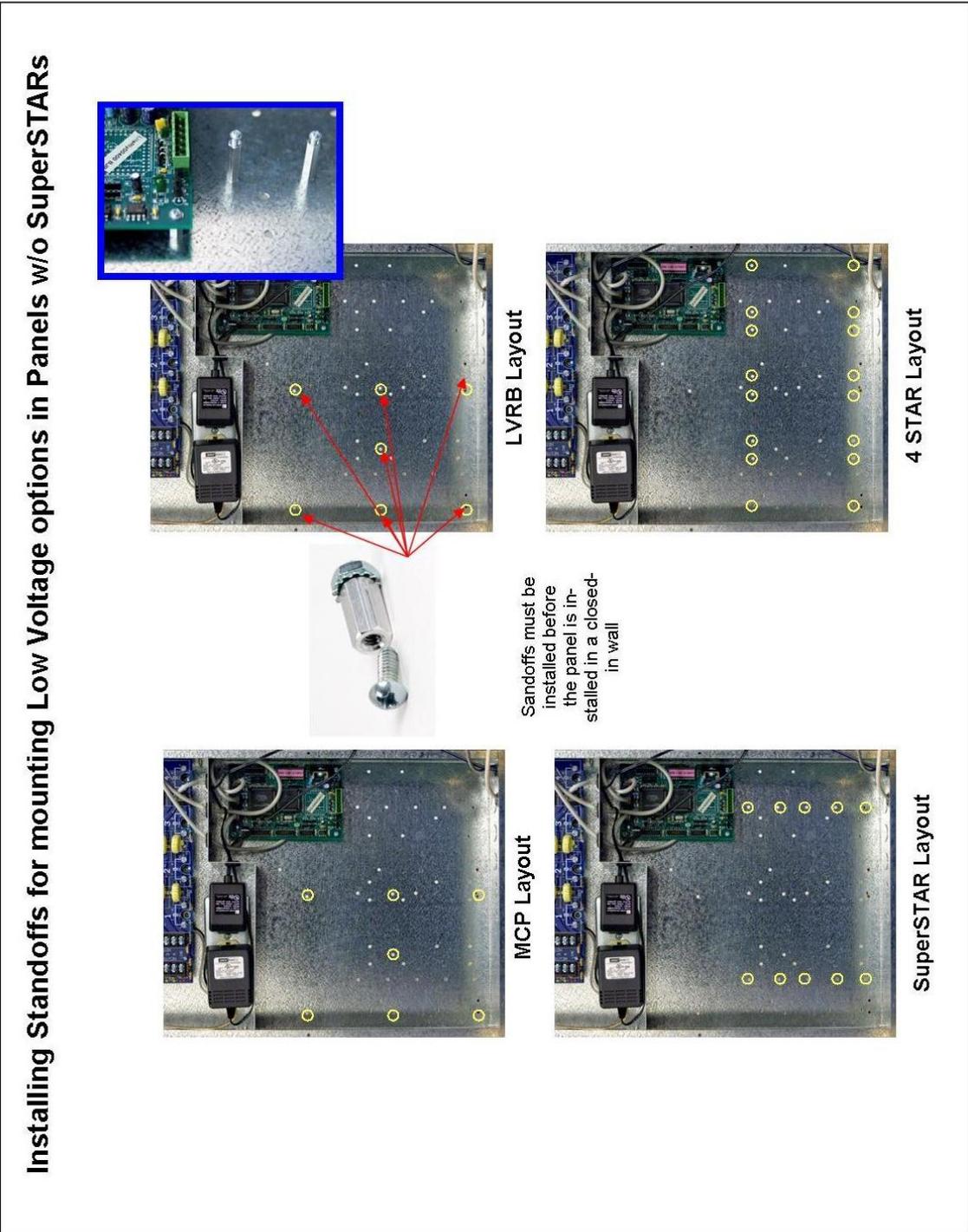


Figure 3
Standoff Installation

3. Mount Auxiliary STARS

If your system requires more inputs than the ninety-six (96) provided by the SuperSTAR board, mount the enclosure for an auxiliary SuperSTAR or Standard STAR boards and run a data cable between the enclosure and MCP location. A Centralite GP-16 enclosure can be used to mount up to 4 STAR boards or 1 SuperSTAR.

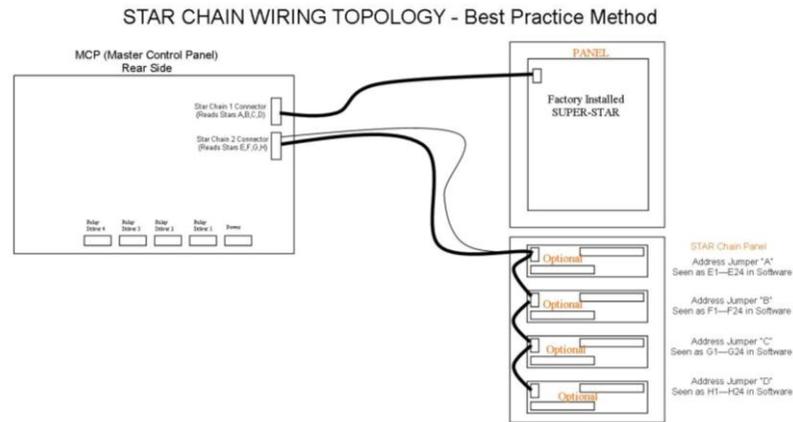


Figure 4
STAR Chain Layout

4. Select locations for Switch Enclosures.

Select locations where wall switches are to be installed. Remember, you can put up to 8 buttons into a single-gang box (depending on keypad style), so be sure to use a double-gang box wherever you think more than 8 buttons will be installed. In residential installations, be sure to put a switch location on either side of the master bed at a position slightly higher than the top of the bed so that the homeowners can control some load and scene switches from either side of the master bed. You may also want to do this in other bedrooms. Typical scenes to be installed beside the bed are: All On, All Off, Goodnight, Late Night Path, Outside Lights, etc. The Switch Placement Guide may be helpful in selecting switch enclosure locations.

5. Pull Control Wire.

Pull a 6 or 10 conductor control wire from each gang of wall switch enclosures back to a STAR location. The formula for the number of conductors required for a keypad is:

$$\text{Number Conductors Required} = \text{Number of Buttons} + 1$$

For example a 6 button keypad requires 7 conductors, 6 conductors for the buttons and 1 conductor for the common.

6. Install SST Rough-In Enclosures if used.

If SSTs are included in the system, install the rough-in box per the home or business owner's requirements in an air-conditioned space. Pull a 6-conductor cable from the SST rough-in enclosure back to the MCP.

7. Connect Panel Components

Pull two 6-conductor 22AWG cables between each relay panel and the MCP. One cable will be used for connecting the SuperSTAR to the MCP. The other will be used to connect the relay driver board to the MCP.

Note: If optional STAR boards are daisy-chained together or if a STAR board is located more than 100 feet from the processor; you must also run an 18-gauge pair for power.

Caution: Do not run CentraLite control wires adjacent to any high voltage wiring or parallel to them for more than two feet. Remember to mark both ends of ALL wires so you'll know which wires connect to which switches when you finish the installation.

8. Pull Remote Control Wire (optional)

If you are installing the key-fob remote kit pull one six-conductor cable from a STAR board to the remote control receiver's location. In addition, pull one six-conductor cable from the remote control receiver's location to the relay enclosure from power. The relay enclosure contains a 110-Volt receptacle to power the remote control's 9- or 12-Volt DC transformer.

Note: Consider the remote control receiver's location carefully to ensure that it has an adequate range. The remote control receiver should be located near where it will be most frequently used. (Usually in the corner of the attic associated with the garage and driveway.) Be sure that it is located in an accessible place should it ever need service or repair. It will always work 100 feet from the receiver, and often as far away as 300 to 400 feet. Be careful not to mount the receiver behind a metallic roof.

9. Mount Fan Speed Control Enclosures (Optional)

- Select a suitable location for the fan speed controller box. This box will fit between two normally spaced studs. Fix the box to the studs using 4 wood or metal screws. A CentraLite GP-16 will accommodate 2 FSCB's.
- Run one 18 gauge 2 conductor wire from a CentraLite relay enclosure which has at least one spare transformer plug-in available. Bring the wire in through the single knockout in the bottom of the box. Two FSCB's can share one 12VAC 1600mA transformer.
- Run one 22 gauge 6 conductor wire from the MCP location to the FSC box. Bring the wire into the box through the single knockout in the bottom of the box.

10. Mount Low-Voltage Relay Board Enclosures (Optional)

- Select a suitable location for the LVRB enclosure. This box will fit between two normally spaced studs. Fix the box to the studs using 4 wood or metal screws. A CentraLite GP-16 will accommodate 2 LVRB's.
- Run one 18 gauge 2 conductor cable from a CentraLite relay enclosure which has at least one spare transformer plug-in available for each LVRB. Bring the wire in through the single knockout in the bottom of the box. **DO NOT SHARE THE 12VAC 1600mA TRANSFORMER BETWEEN LVRB's.**
- Run one 22 gauge 6 conductor wire from the MCP location to the LVRB enclosure. Bring the wire into the box through the single knockout in the bottom of the box.

11. Mount High-Voltage Relay Board Enclosures (Optional)

- Select a suitable location for the HVRB enclosure. This box will fit between two normally spaced studs. Fix the box to the studs using 4 wood or metal screws. A CentraLite GP-16 will accommodate 2 HVRB's.
- Run one 18 gauge 2 conductor cable from a CentraLite relay enclosure which has at least one spare transformer plug-in available for each HVRB. Bring the wire in through the single knockout in the bottom of the box. **DO NOT SHARE THE 12VAC 1600mA TRANSFORMER BETWEEN HVRB's.**
- Run one 22 gauge 6 conductor wire from the MCP location to each HVRB. Bring the wire into the enclosure box through the single knockout in the bottom of the box.

12. Dip Switch Back Up (Included with each Relay Panel)

Select a suitable location for each relay panel's DSBK-24, somewhere between the relay panel and the MCP. Run (1) 6-conductor 22AWG cable between the relay panel and the DSBK-24 and, run another (1) 6-conductor 22AWG cable between the DSBK-24 and the MCP.

13. Pull Computer Connection Wire (Optional)

In most installations, the home or business owner may wish to connect the system with his/her computer. The connection will be made to a COM port using RS-232, so run the appropriate wire from the MCP location back to the computer location.

14. Finishing Rough-In

Seal up the MCP, the STAR board boxes, and the switch boxes with duct tape, masking tape, or other materials so that all wire and labels will be protected from any construction damage.

WARNING! Sheetrock dust is electrically conductive; Failure to protect the system components from sheet rock dust during construction may create short circuits and cause adverse effects on system performance. Protect all exposed circuitry with the provided paint shields. Painted MCP's or Relay Panels will void warranty coverage.

15. Begin High-Voltage Connections

When all sheet rock, painting, and finish work has been completed, you are ready to connect and power up the system. Be sure that power is applied to the transformer as the last step in the process. Be sure all fixtures are installed. If temporary lighting is required prior to trim-out (for painters, etc.) several inexpensive devices are available from CentraLite to allow for this without an MCP. Contact CentraLite for more information.

Note: Mounting of Main Enclosure Panels, Master Control Panels, Monitor Boards, STAR boards, and switches should be done in the upright position.

High Voltage Connections

Warning! All high voltage connections must be made according to the National Electric Code and local regulations. All connections must be made by a licensed electrician.

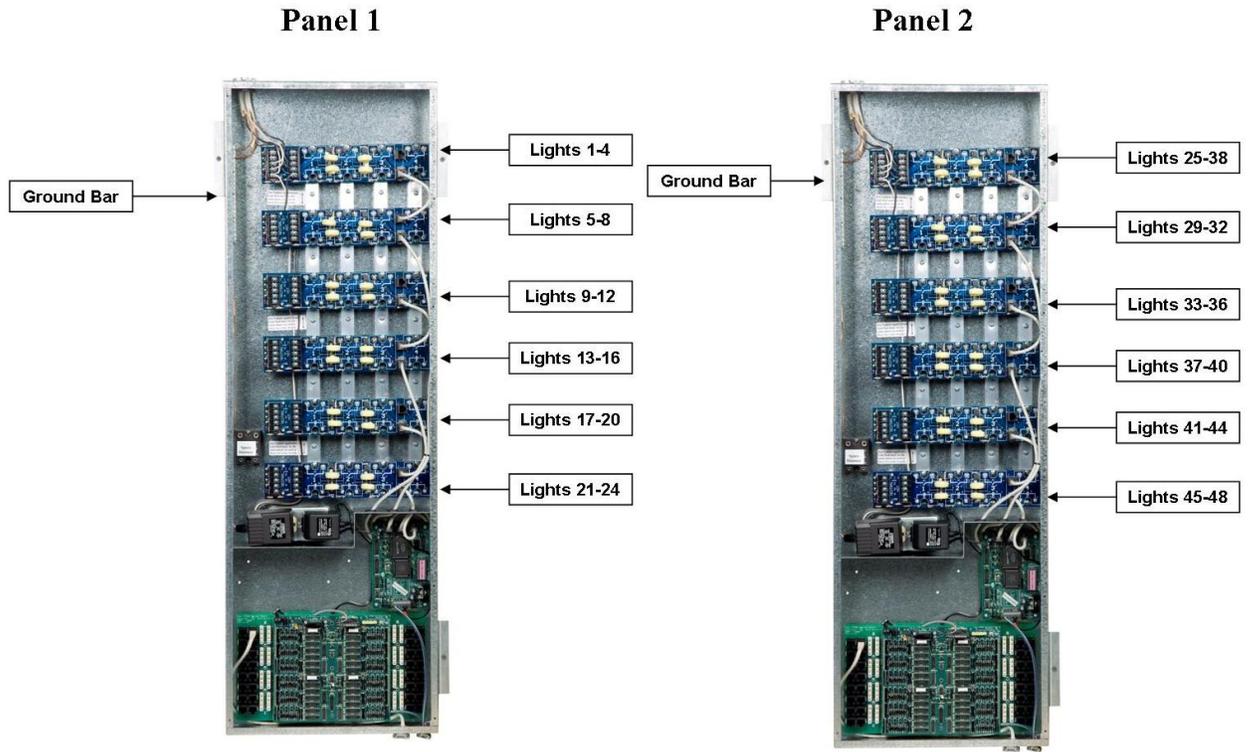


Figure 5
High Voltage Connections

Each Elegance XL dimming panel contains twenty-four (24) dimming relays. These dimming relays are mounted on six (6) relay modules. Each relay module requires one (1) 20 Amp circuit feed. The panel also contains a receptacle box for the MCP and Relay driver transformers.

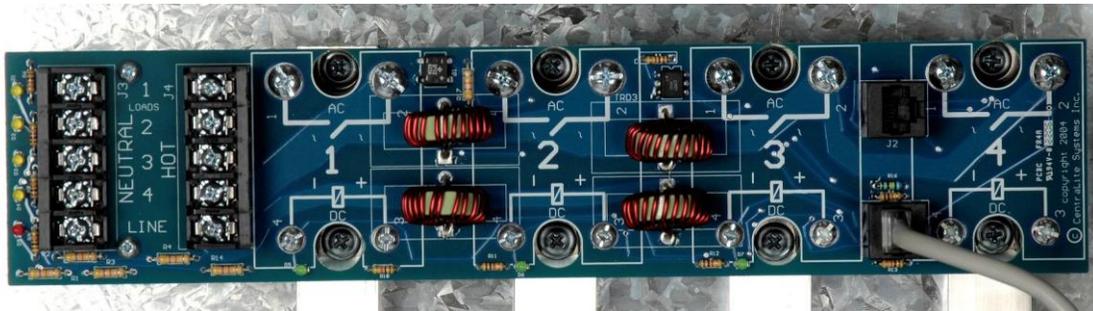
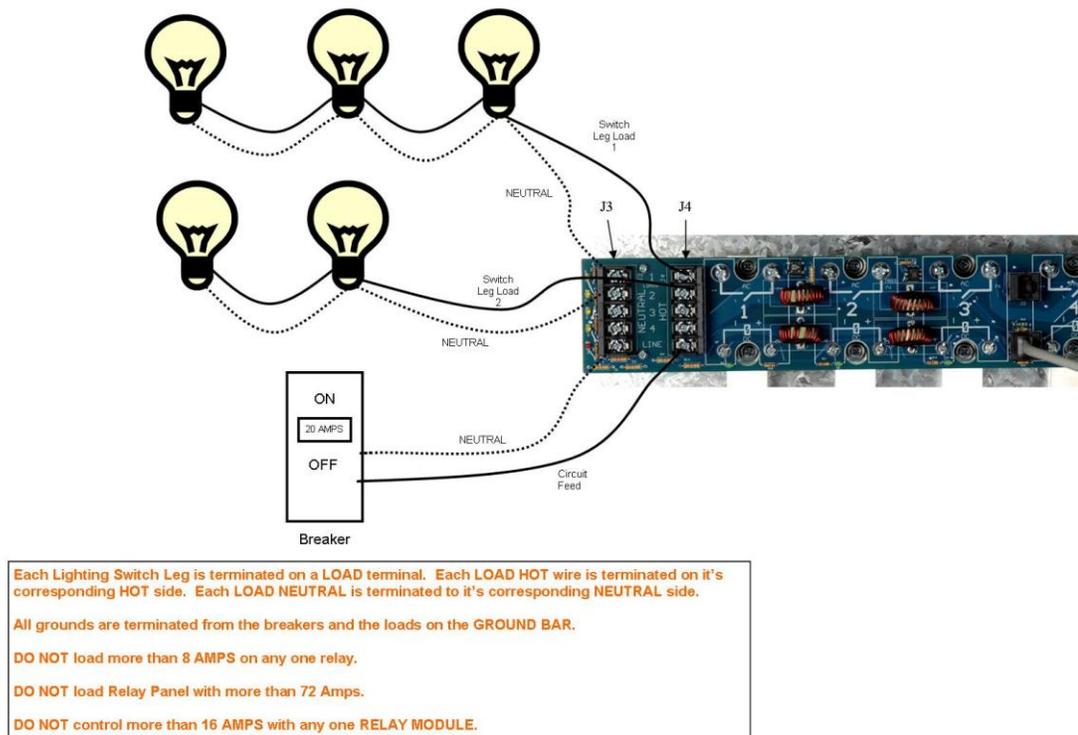


Figure 6
Relay Module

The electrician is responsible for connecting a feed from a 20 Amp circuit breaker and neutral to each relay module. The electrician must then connect the neutral and switch leg to the appropriate terminals on each relay module. All grounds are to be connected to the provided ground bar. The ground bar must be attached to the ground lug of the feeding load center with the appropriate wire.

As seen in Figure 7 the relay module has the “Hot” connections on the right hand terminal block labeled J4. All neutral connections are made on the terminal block labeled J3.

Note: All neutrals for the relay module are bonded.



Connect the feed from the circuit breaker to the bottom terminal of J4. Connect the Neutral from the load center to the bottom terminal of J3. Each of the four (4) loads has a neutral and switch leg terminal on J3 and J4 respectively.

Figure 7
High Voltage Connections

Test All 110-Volt Circuits for Shorts

Have the job electrician test all high-voltage AC circuits for shorts before applying control power. The solid-state control relays can withstand short-term overloads, but not a series of direct shorts. Have the electrician verify each circuit by shorting together the high voltage terminals of each relay. This is accomplished by turning off the feed breakers, providing shorts across the relays and resetting the breakers to see if the lights come on. When the terminals are shorted, the corresponding load should come on without tripping a breaker.

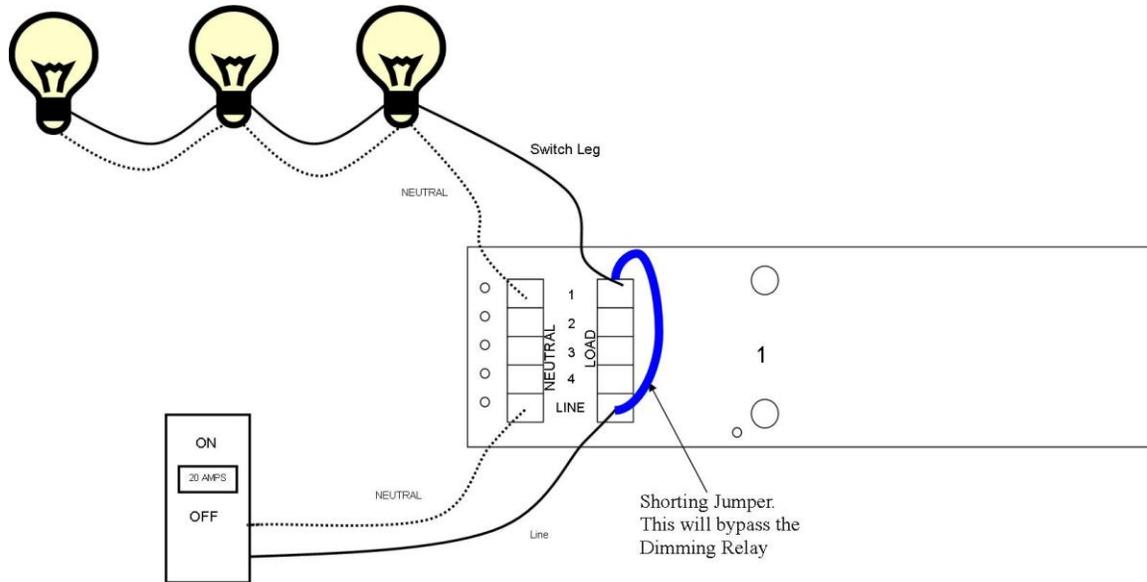
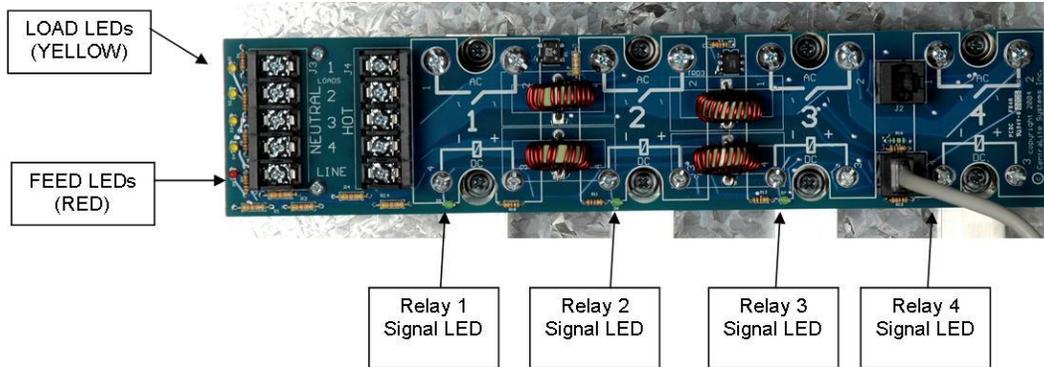


Figure 8
Testing Connections

Relay Module Diagnostics



Each relay module contains 4 solid-state relays. Each module has status LEDs which indicate information about the low voltage signal to the relays (GREEN), the feed power to the module from the breaker (RED), and the high voltage output of each relay (YELLOW). One look at the relay module yields information that usually requires a voltmeter and test light.

If the **RED** Feed LED is lit, this means power from the breaker is feeding the module.

If the **GREEN** LED for a relay is lit, this means that a 5 Volt signal is being sent to the relay from the MCP.

If the **YELLOW** LED is lit, this means the relay is outputting high voltage from the terminal and the light fixture it is connected to should be working.

If the **YELLOW** LED is lit but light fixture is not working, this probably indicates that a bulb is out or the fixture is not wired correctly.

Figure 9
Relay Module Diagnostics

Fan Speed High Voltage Connections (Optional)

If your system is utilizing a Fan Speed Control Board, have the electrician make all required high voltage connections to the FSCB. Each FSCB has terminals for 4 line level feeds, 4 fan speed control outputs, as well as 4 isolated line and load neutral terminals. Follow the directions in the diagram below for high voltage termination.

Note for ARC-Fault Circuit Breakers:

Sharing neutrals between a fan motor and light kit are not allowed unless the Relay Module feeding the light kit and FSCB channel are fed from the same ARC Fault breaker. Mixing neutrals from conventional breakers and ARC-Fault breakers will cause the breakers to trip when both loads are turned on simultaneously.

FSCB (Fan Speed Controller Board) DESCRIPTION DETAIL

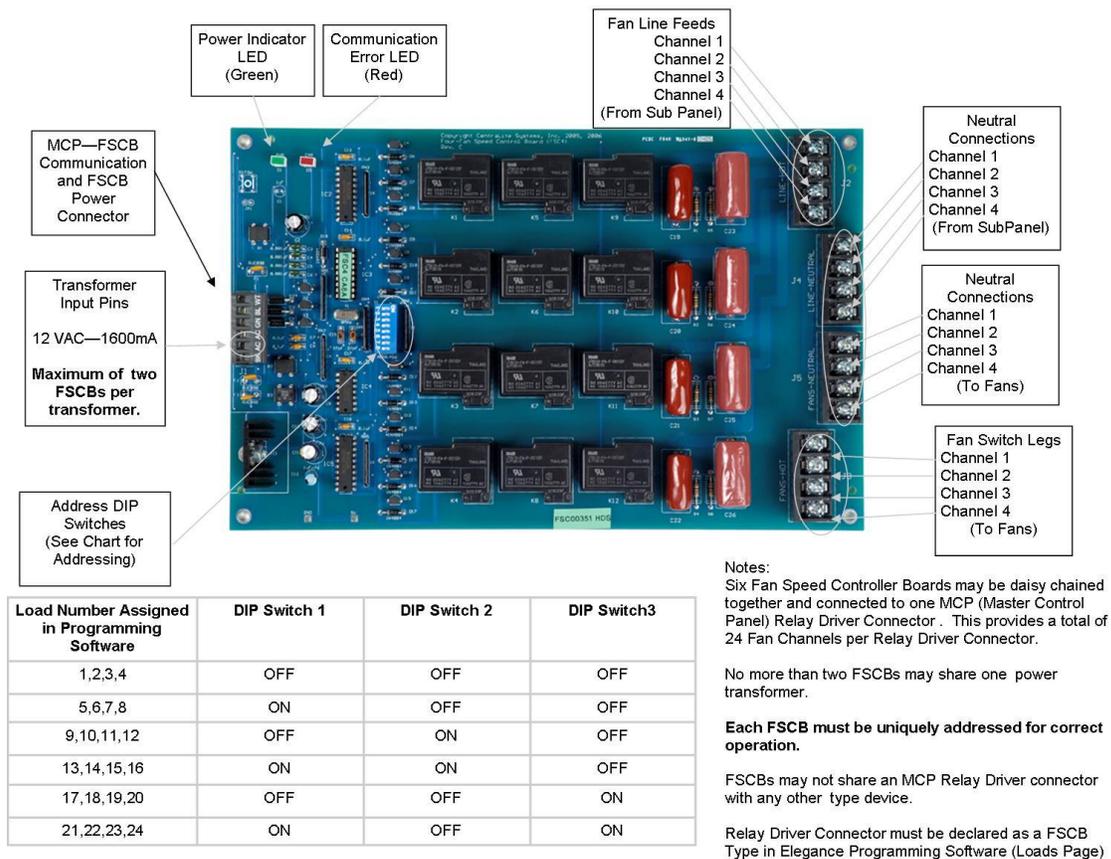


Figure 10
Fan Speed Controller Board

Trim-Out

When all sheet rock, painting, and finish work has been completed, you are ready to connect keypads and low voltage wiring for testing. Make sure that power is applied to the transformer as the last step in the process. Before beginning trim-out, be sure that the house has permanent power, and be sure that all the lighting fixtures have been hung. If something is not yet in place, have the electrician wire a temporary socket in place of the fixture so you can test it.

Connect Panel's Relay Driver Board

The relay driver for each panel is connected to the relay modules. It is the responsibility of the installer to connect the low-voltage control cable between the MCP and Relay driver. Follow the color code imprinted on your Relay Panel's relay driver data connector and the MCP's "Relay Driver" Connector.

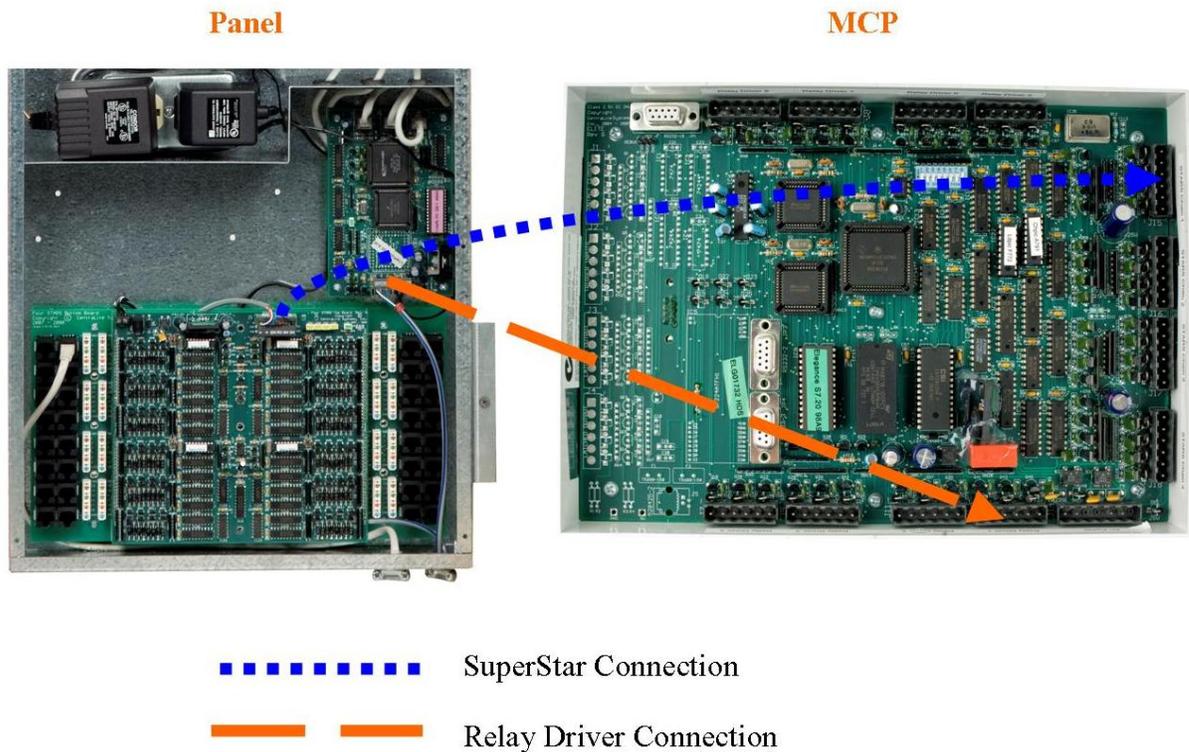


Figure 11
Panel to MCP Connections

MCP Layout

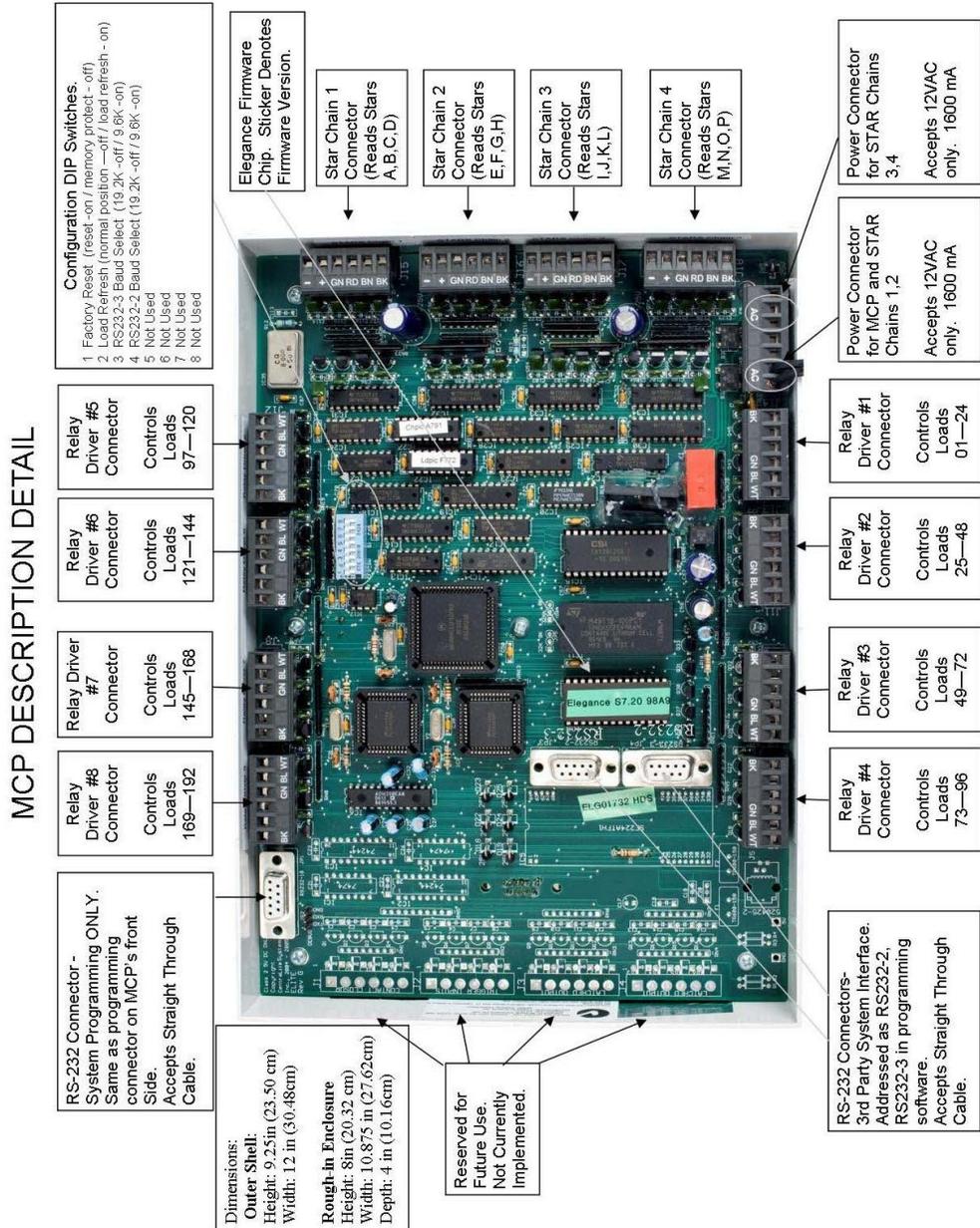
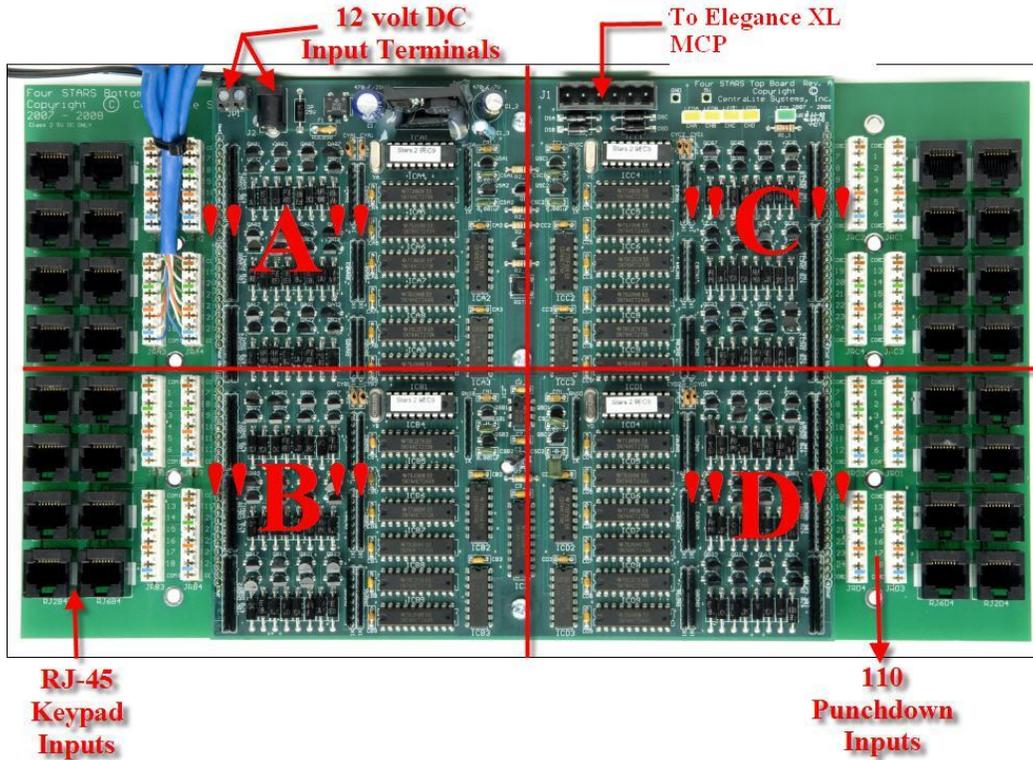


Figure 12
MCP Layout

Connect SuperSTARs and Auxiliary STARs to the MCP

The Elegance XL system ships from the factory with 1 SuperSTAR mounted in each relay panel. Connect the Data connection of the SuperSTAR to an available STAR CHAIN connector on the MCP. Connect any additional STAR's to the next available STAR CHAIN located on the MCP, etc. All STAR connections should be made at this time. Refer to the following diagrams for wiring details.



Match the wire color of the STAR's data connector to the color of the MCP STAR chain connector.

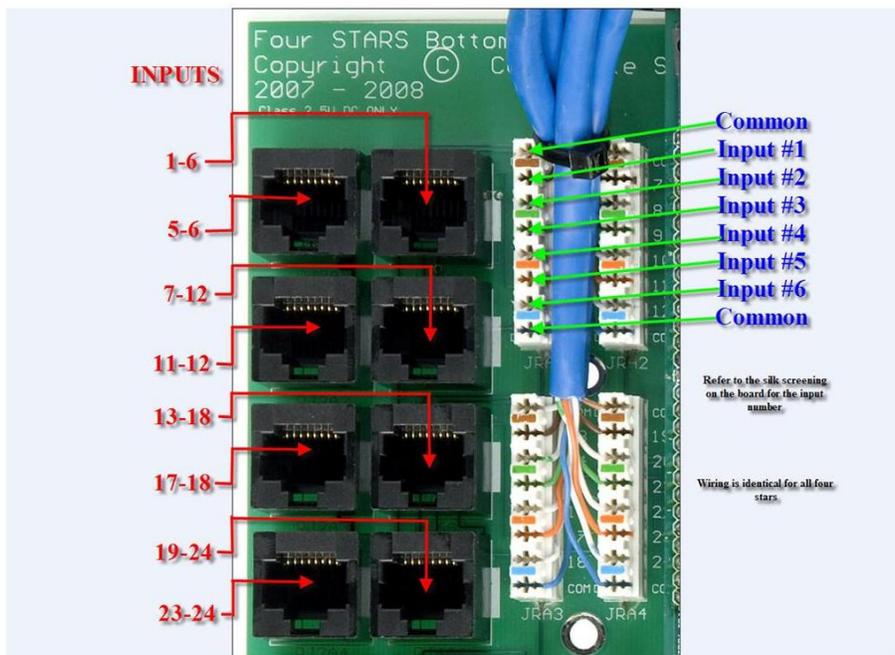


Figure 13 STAR Chain Wiring Detail

STAR CHAIN WIRING DETAIL

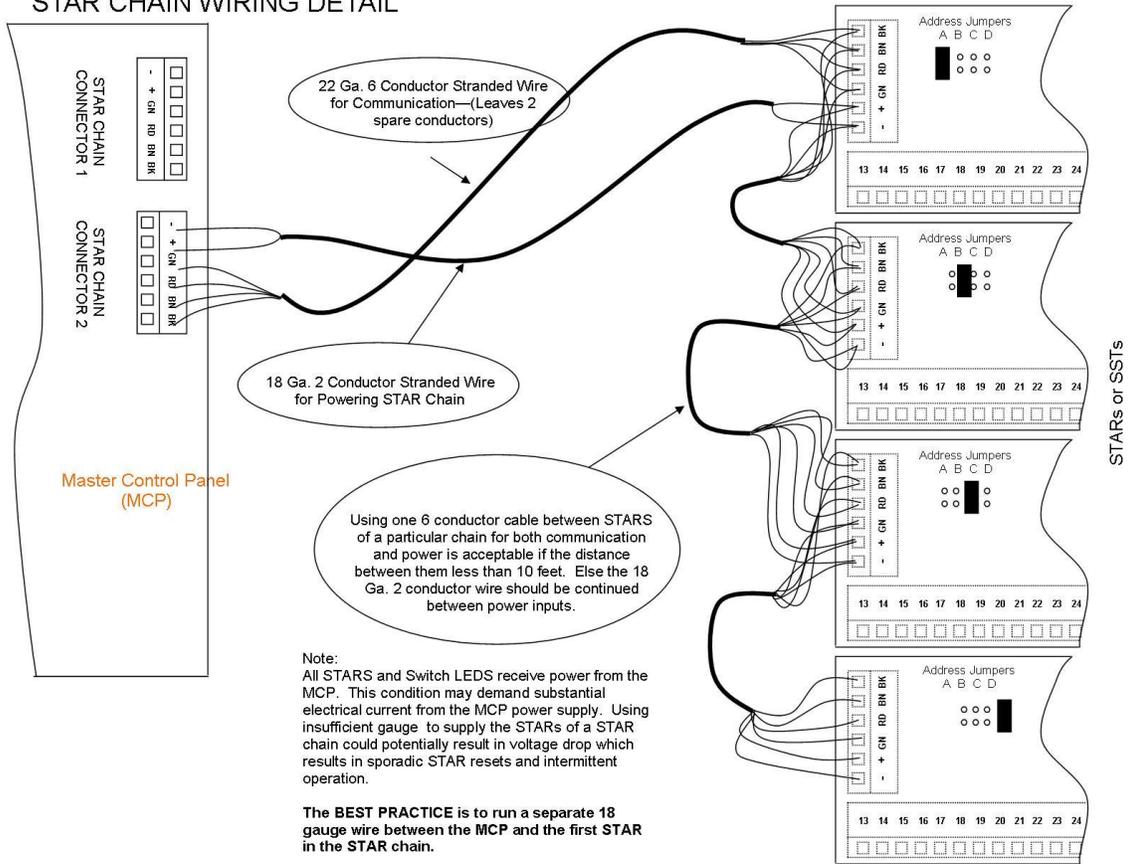


Figure 14
STAR Chain Wiring Detail

Installing Wall switches

Install each keypad at the proper location and connect it to the appropriate STAR inputs. Connect each switch to a STAR board connector, and mark the inside of the wall plate with the alphabetic letter of the STAR board to which it is connected and the number within that STAR board. Be sure you document each STAR board input and what it will control. Each keypad can connect to the SuperSTAR using a standard straight through CAT-5 cable.

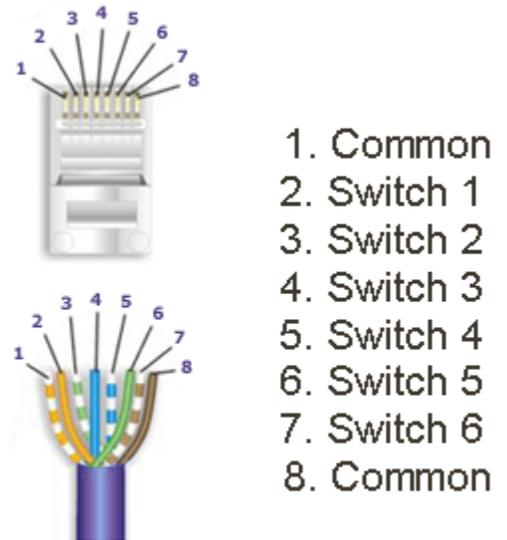


Figure 15
Keypad Wire Pin-Out for RJ-45 Connections

If you are using the optional STARS with screw-terminal style keypads refer to the diagram for keypad wiring.

WALL SWITCH to STAR WIRING DETAIL

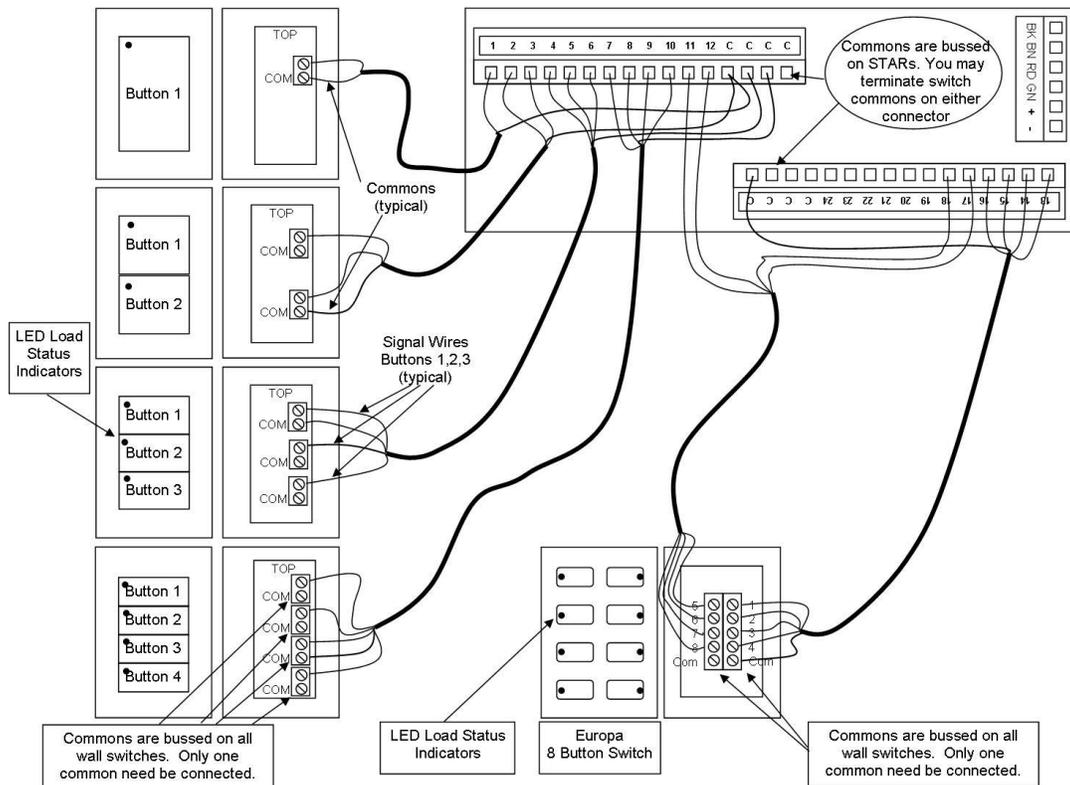


Figure 16
Keypad Wiring Details with optional STARS

Installing Finesse Backlit Wall switches

Installation with 22AWG Wire:

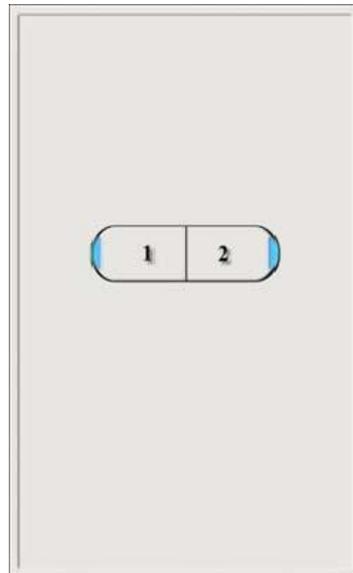
1. Carefully remove the switch unit from its packing.
2. The coated metal faceplate is held on by magnets. Remove the metal plate.
3. The plastic frame may have a slot on the bottom to help with faceplate removal, otherwise, insert a very thin screwdriver between the faceplate and the frame. Another removal method is to hold the frame with one hand with the front of the switch facing away from the hand and rap the frame sharply on the other hand. Since it is held on only with magnets, the metal face plate should fall out into your hand.
4. Now connect the switch wiring and backlight wiring to the terminals on the back.
5. Test the switch for backlight brightness and indicator function. Remember, you can adjust the brightness using the thumbwheel on the back.
6. Now screw the frame into the wall using just enough pressure to attach the frame to the wall. You can adjust the frame slightly up and down and left and right before tightening. Be careful not to over-tighten as you may crack the plastic frame.
7. Check to see that all the buttons are flush on each side with the frame. If not, you can use a small screwdriver or butter knife to push the button sides down onto the frame.
8. Be sure that the mask (Mylar sheet) is in place over the buttons.
9. Install the Metal faceplate and you are done.

Notes:

- a. All White wires at the MCP are to be connected together and connected to an unused switch input (example Input 96).
- b. Program a dummy scene that includes no loads.
- c. Assign input 96 to the scene.
- d. Create a timed event relative to the astronomical clock that turns on the dummy scene at sunrise and turns it off at sunset. (This will set a higher light level on the backlighting during the daylight hours)
- e. Backlight Common and Switch Common are connected on the keypad.

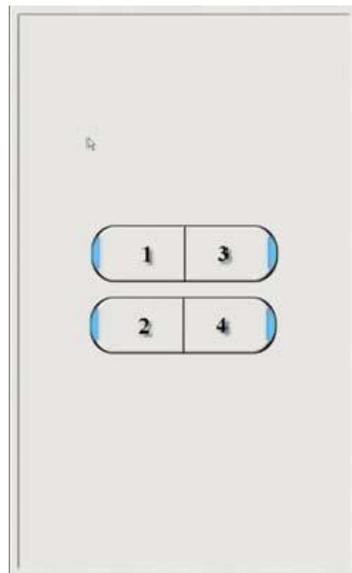
Two Button Finesse Keypad with 22AWG Wire

Finesse Button #	Screw Terminal	Wire Color
	1	
1	2	BROWN
	3	
	4	
	5	
2	6	RED
	7	
	8	
	9	
COMMON	10	BLACK
BACKLIGHT	+	WHITE



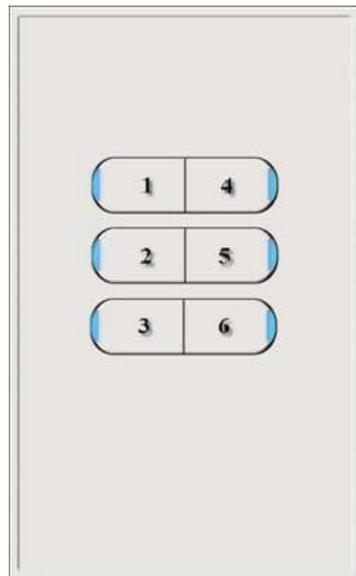
Four Button Finesse Keypad with 22AWG Wire

Finesse Button #	Screw Terminal	Wire Color
	1	
1	2	BROWN
2	3	RED
	4	
	5	
3	6	ORANGE
4	7	YELLOW
	8	
	9	
COMMON	10	BLACK
BACKLIGHT	+	WHITE



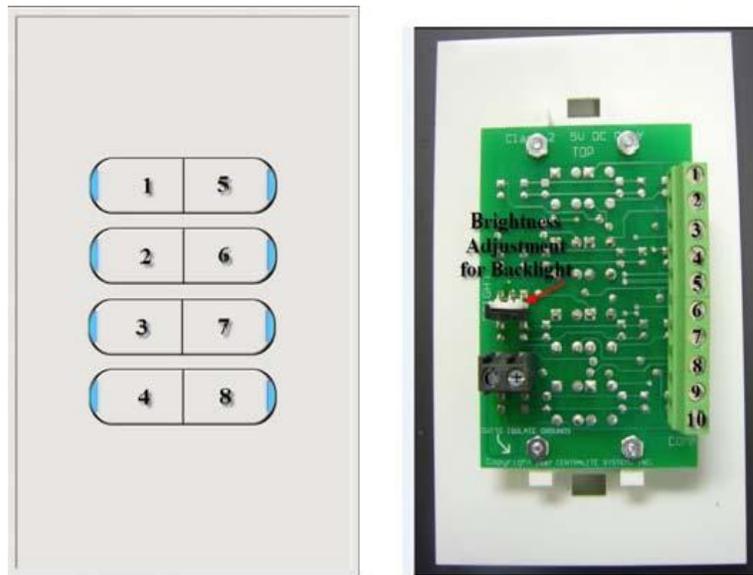
Six Button Finesse Keypad with 22AWG Wire

Finesse Button #	Screw Terminal	Wire Color
1	1	BROWN
2	2	RED
3	3	ORANGE
	4	
4	5	YELLOW
5	6	GREEN
6	7	BLUE
	8	
	9	
COMMON	10	BLACK
BACKLIGHT	+	WHITE



Eight Button Finesse Keypad with 22AWG Wire

Finesse Button #	Screw Terminal	Wire Color
1	1	BROWN
2	2	RED
3	3	ORANGE
4	4	YELLOW
5	5	GREEN
6	6	BLUE
7	7	VIOLET
8	8	GREY
	9	
COMMON	10	BLACK
BACKLIGHT	+	WHITE



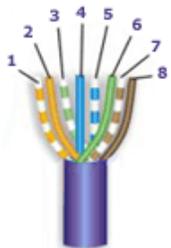
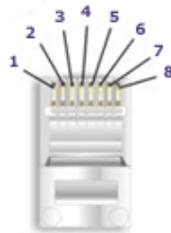
Installing Finesse Backlit Wall switches

Installation with CAT5 Wire:

1. Carefully remove the switch unit from its packing.
2. The coated metal faceplate is held on by magnets. Remove the metal plate.
3. The plastic frame may have a slot on the bottom to help with faceplate removal, otherwise, insert a very thin screwdriver between the faceplate and the frame. Another removal method is to hold the frame with one hand with the front of the switch facing away from the hand and rap the frame sharply on the other hand. Since it is held on only with magnets, the metal faceplate should fall out into your hand.
4. Now connect the switch wiring and backlight wiring to the terminals on the back.
5. Test the switch for backlight brightness and indicator function. You can adjust the brightness using the thumbwheel on the back.
6. Now screw the frame into the wall using just enough pressure to attach the frame to the wall. You can adjust the frame slightly up and down and left and right before tightening. Be careful not to over-tighten as you may crack the plastic frame.
7. Check to see that all the buttons are flush on each side with the frame. If not, you can use a small screwdriver or butter knife to push the button sides down onto the frame.
8. Be sure that the mask (Mylar sheet) is in place over the buttons.
9. Install the Metal faceplate and you are done.

Notes:

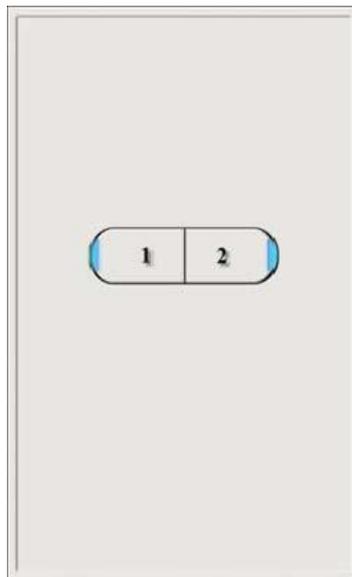
- a. All CAT5 Brown wires at the SuperSTAR are to be connected together and connected to an unused switch input (example Input 96).
- b. Program a dummy scene that includes no loads.
- c. Assign input 96 to the scene.
- d. Create a timed event relative to the astronomical clock that turns on the dummy scene at sunrise and turns it off at sunset. (This will set a higher light level on the backlighting during the daylight hours)
- e. Backlight Common and Switch Common are connected on the keypad.



1. Common
2. Switch 1
3. Switch 2
4. Switch 3
5. Switch 4
6. Switch 5
7. Switch 6
8. Common

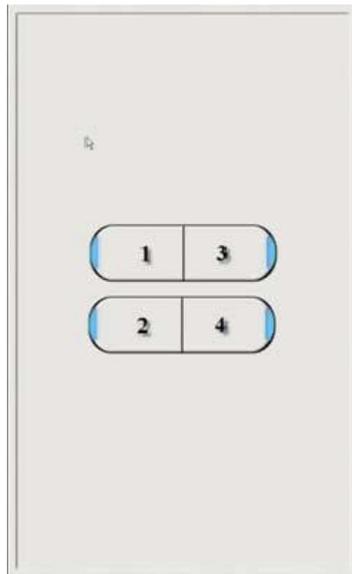
Two Button Finesse Keypad using CAT5

Screw Terminal	Finesse Button #	CAT5 Wire Color	RJ-45 Pin at SuperSTAR
1			
2	1	ORG	2
3			
4			
5			
6	2	WHT/ GRN	3
7			
8			
9			
10	COMMON	WHT/ ORG	1 OR 8
+		BRN	ISOLATE FROM RJ-45



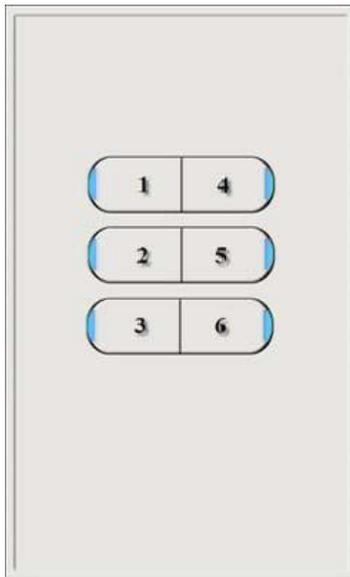
Four Button Finesse Keypad using CAT5

Screw Terminal	Finesse Button #	CAT5 Wire Color	RJ-45 Pin at SuperSTAR
1			
2	1	ORG	2
3	2	WHT/ GRN	3
4			
5			
6	3	BLU	4
7	4	BLU/ WHT	5
8			
9			
10	COMMON	WHT/ ORG	1 OR 8
+	BACKLIGHT VOLTAGE	BRN	ISOLATE FROM RJ-45



Six Button Finesse Keypad using CAT5

Screw Terminal	Finesse Button #	CAT5 Wire Color	RJ-45 Pin at SuperSTAR
1	1	ORG	2
2	2	WHT/ GRN	3
3	3	BLU	4
4			
5	4	WHT/ BLU	5
6	5	GRN	6
7	6	WHT/ BRN	7
8			
9			
10	COMMON	WHT/ ORN	1 OR 8
+	BACKLIGHT VOLTAGE	BRN	ISOLATE FROM RJ-45



Wire the Remote Control Kit (Optional)

You will need to use three switch inputs on a SuperSTAR board. Connect the Remote Receiver to the appropriate SuperSTAR inputs.



Figure 17
Remote Control Kit

1. Connect the 9VDC power supply to the Key Fob Remote Receiver Quick Connect board.
 - a. Run 18AWG 2 conductor between the relay panel and the Key Fob Remote Receiver.
 - b. Connect the power cable to J3. Be careful to observe the polarity.
 - c. Connect the output of the transformer to the 2 Conductor 18AWG cable.
2. Run CAT5 from the Quick Connect Board to your SuperSTAR
 - a. Run CAT5 from the Remote Receiver to your SuperSTAR contact closure input
 - b. Connect the CAT5 cable from RJ1 to the CAT5 input jack on your Elegance XL SuperSTAR.
3. Connect the Quick Connect Board to the Key Fob remote receiver. Plug the transformer into the relay panel outlet.
4. Program the Key Fob Remote's inputs to a load or a scene, just as you would program a standard button input.
5. Test the key fob buttons for proper operation.



Figure 18
Remote Receiver with Quick Connect Board Installed

REMOTE CONTROL RECEIVER to SUPERSTAR WIRING DETAIL

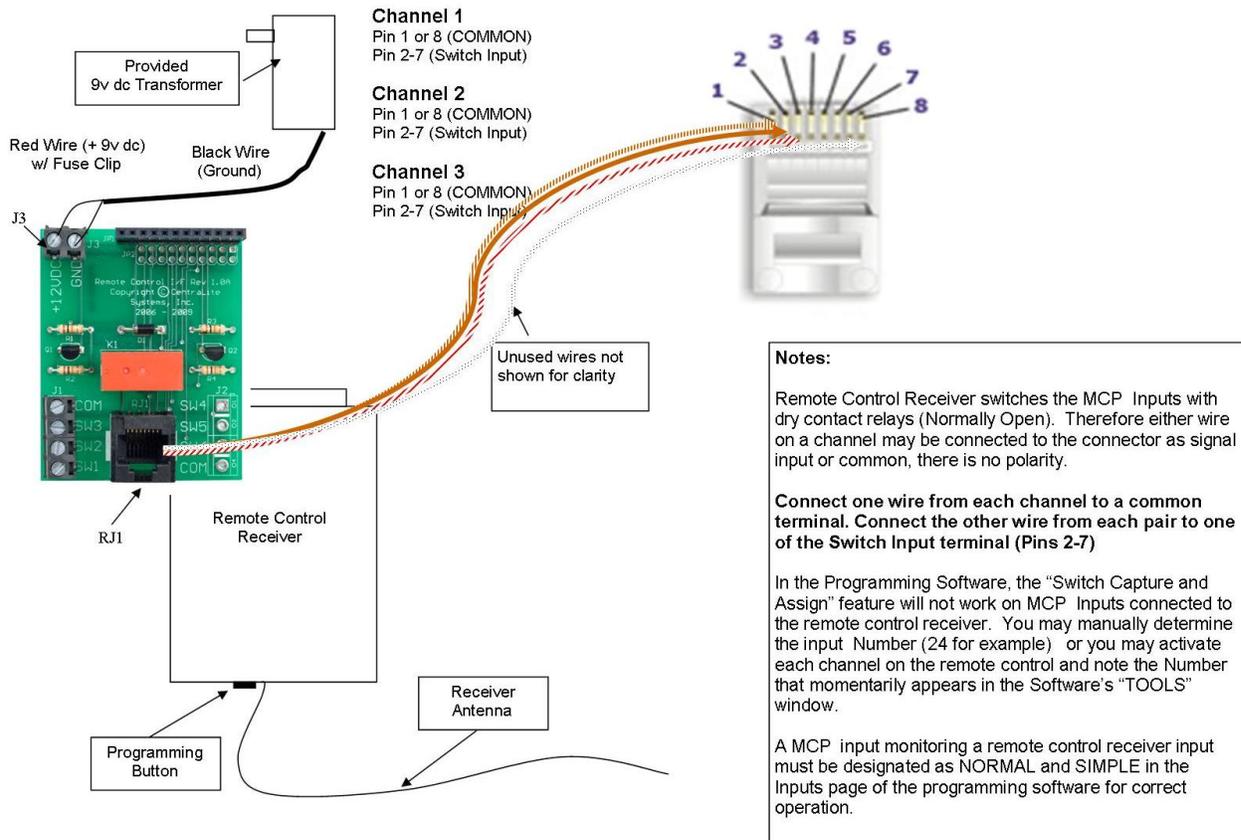


Figure 19
Key Fob Connection Diagram

To add additional remotes:

1. **PRESS AND RELEASE** the program button on the receiver. The light on the receiver will come **ON**.
2. Immediately **PRESS** button 1 (largest button) on the new remote control **THREE TIMES**.
3. The light on the receiver should go **OFF**, indicating the remote has been learned.
4. If the light on the receiver stays **ON**, the remote has not been learned.
5. Remove and replace the harness, wait 15 seconds and follow these instructions again.

Fan Speed Controllers (Optional)

1. The FSC box may contain one or two FSC-4 controllers. If there are two FSC-4 boards, the low voltage connections will be daisy chained to both boards.

NOTE: If two boards are present, power both of the boards using a single 1600 ma Class II 12 volt transformer.

2. In the FSC metal box, connect the Class II 12 volt AC wires to pins 4 and 5 of each 6 pin connector. Note that pin 1 is the bottom pin, so pins 4 and 5 are the second and third pins from the top of the connector.
3. Connect the 22 gauge 6 conductor signal wire which goes to the MCP as follows:
4. Pin 1: White; Pin 2: Blue; Pin 3: Green; Pin 6: Black. If there are 2 FSC-4's in the box, then daisy chain the signal wire to both boards.
5. Set the dip switches to 2 different addresses (0 through 5). Note that up to 6 FSC-4's may be daisy chained to the same relay driver signal connector slot. Each must have a unique dip-switch address 0 through 5. Write down the addresses.
6. Place the wires inside the nylon clips in the can and snap the circular wire standoff to secure the wires in place.
7. Move to the MCP location and wire up the 6 pin connector color to color the same as on the FSC-4 end. Plug the relay driver connector into an available slot.
8. Test the controllers using the Centralite Elegance XL software for proper operation.
9. Low Voltage connector wiring:

Pin 1:	White	Reset
Pin 2:	Blue	Error
Pin 3:	Green	Data
Pin 4	X	12 Volts AC
Pin 5:	X	12 Volts AC
Pin 6:	Black	Signal Common

If more than one FSCB is to be connected to any of the MCP's relay driver outputs use the following wiring scheme to connect up to six (6) FSCB's to the output.

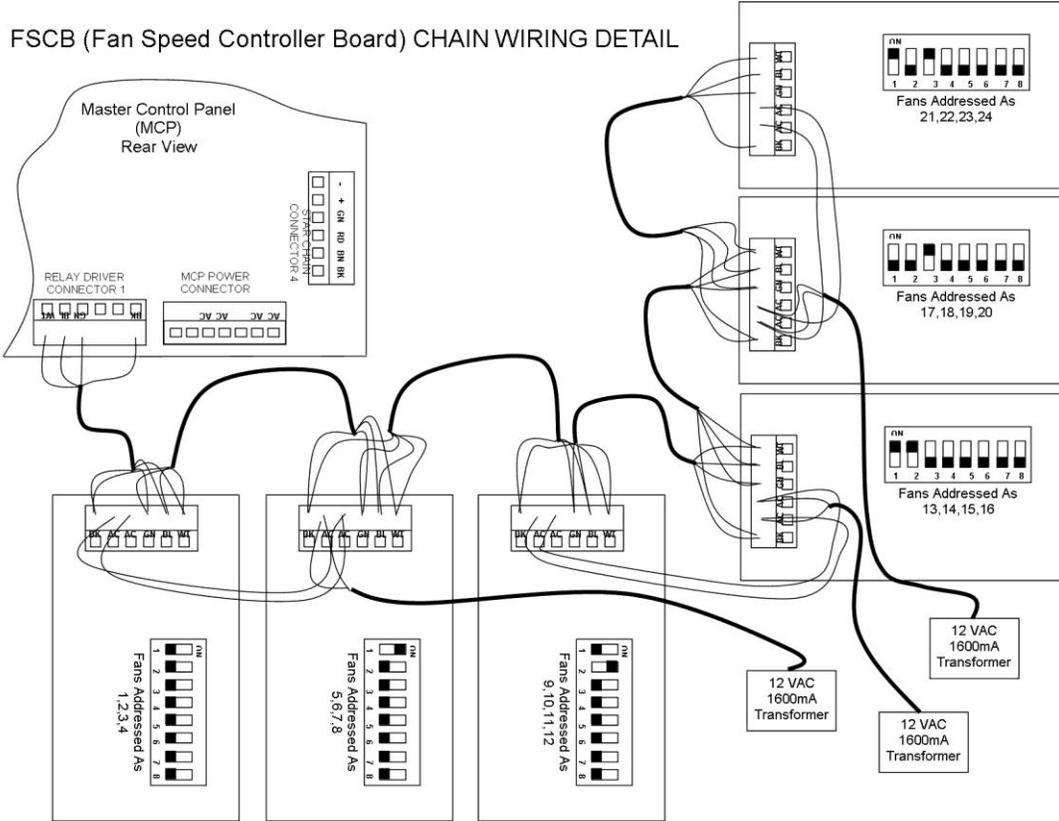
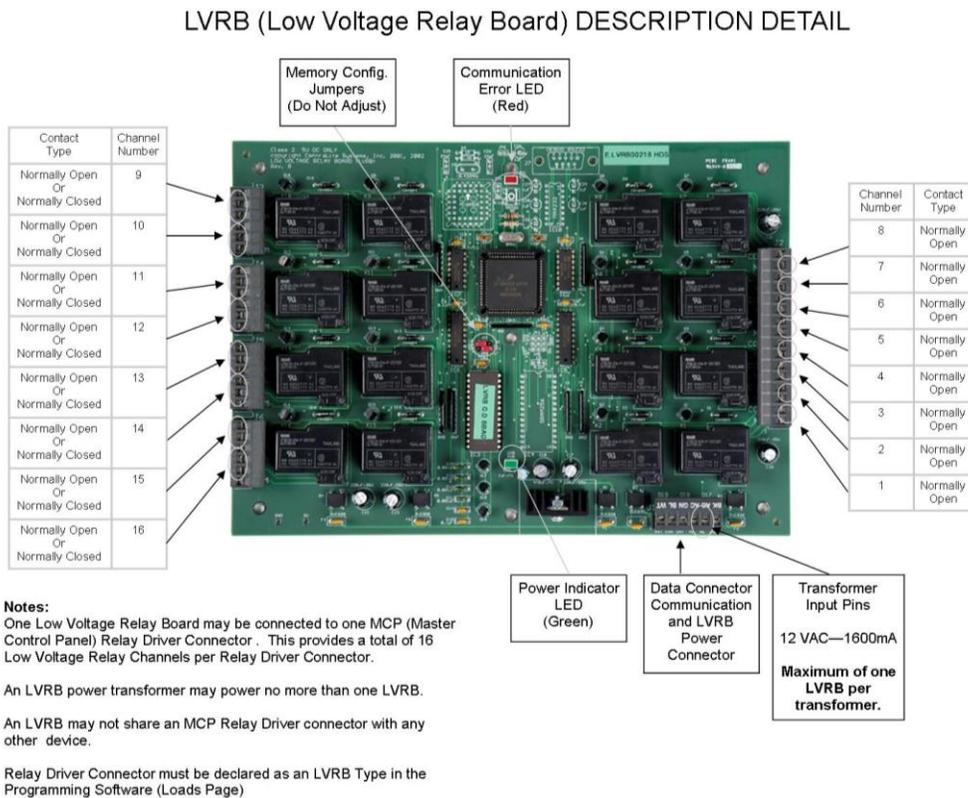


Figure 20
FSCB Chain Wiring

Low-Voltage Relay Boards (Optional)

If the system utilizes LVRBs connect the data cabling from the MCP relay driver output 2-8 to the LVRB's data connection.

Connect the 6-conductor 22AWG data cable and 2-conductor 18 AWG power cables to the Data Connector. The connections shown on the left and right of the figure below are the 16 low-voltage mechanical relays used to interface with low-voltage devices.



**Figure 21
LVRB Connections**

Program the system using a P.C. or laptop

Refer to the Elegance PC Programming Guide.

High-Voltage Relay Boards (Optional)

If the system utilizes HVRBs connect the data cabling from the MCP relay driver output 2-8 to the HVRB's data connection.

Connect the 6-conductor 22AWG data cable and 2-conductor 18 AWG power cables to the Data Connector. The connections shown on the left and right of the figure below are the 16 high-voltage mechanical relays used to interface with high-voltage devices.

HVRB (High Voltage Relay Board) DESCRIPTION DETAIL

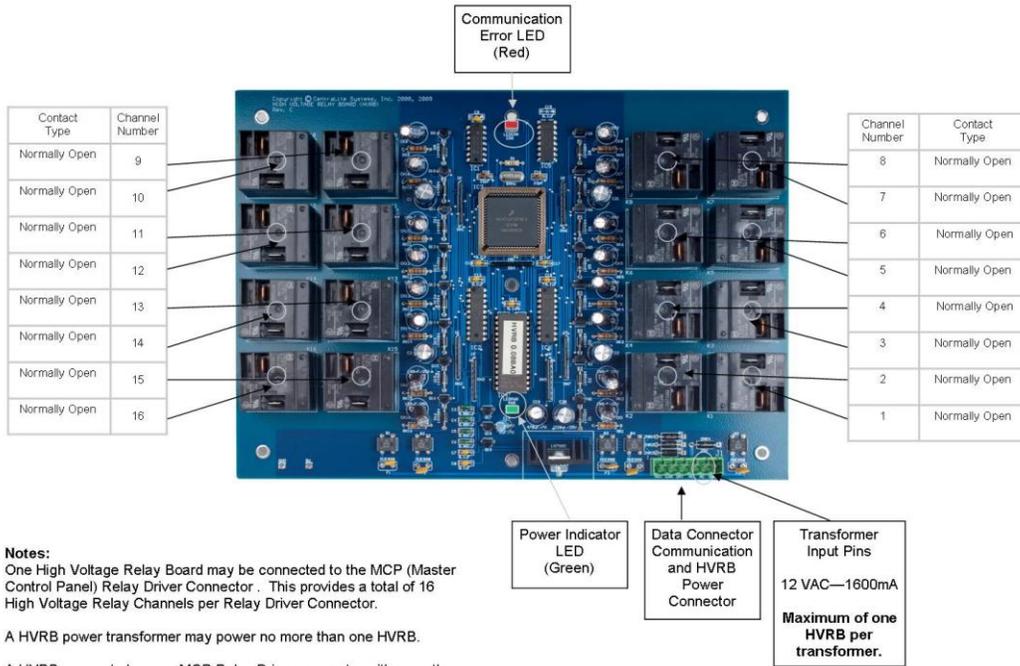


Figure 22
HVRB Connections

Program the system using a P.C. or laptop

Refer to the Elegance PC Programming Guide.

DSBK-24 Installation

DSBK24 (DIP Switch Backup) WIRING DETAIL

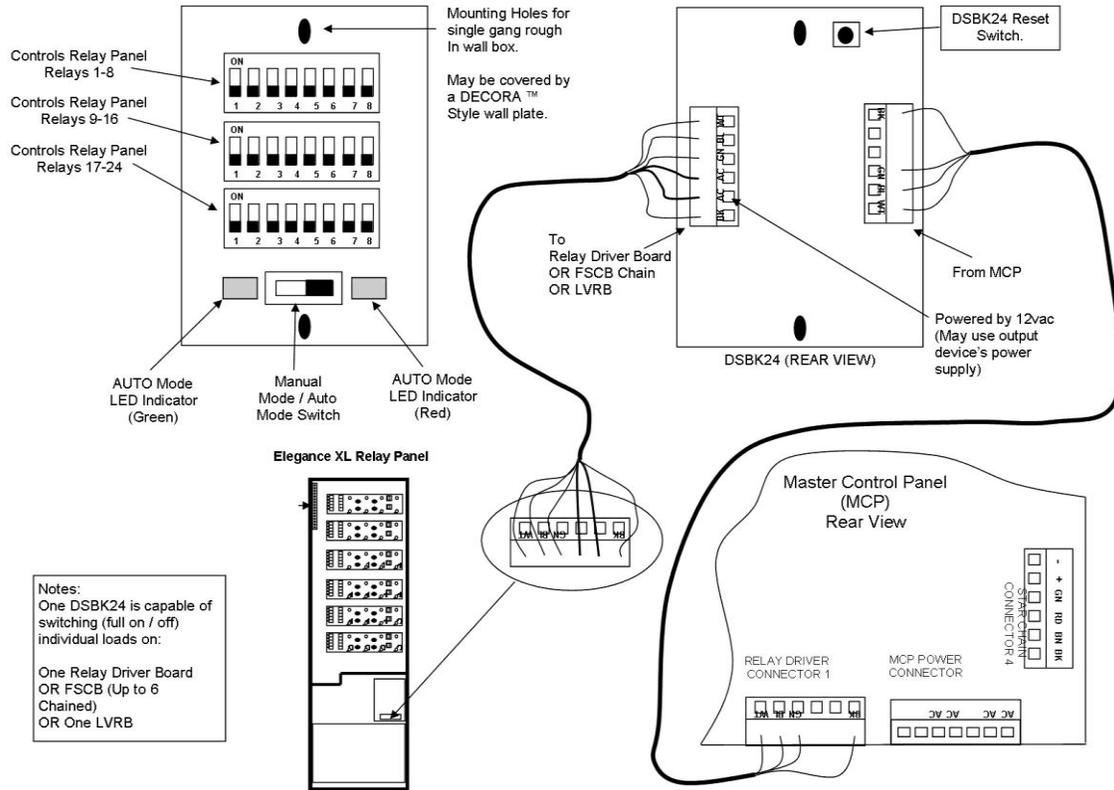


Figure 23
DBSK-24 Wiring

1. Run (1) 6-conductor 22AWG wire from the relay driver output of the MCP to the DSBK connector marked Elegance
2. Run (1) 6- conductor 22AWG from the DSBK connector marked relay driver to the appropriate relay driver board.

Quick Reference Checklist: Low-Voltage Rough-In

1. Plan locations for relay panels, keypad locations, remote control receiver and auxiliary STAR boards.
2. Install relay panels, keypad location back boxes if required and additional enclosures for optional auxiliary STAR boards, LVRBs or FSCBs.
3. Pull wire for all keypads and other system inputs. All wire is to be copper. Minimum of one #22 conductor per switch plus a common. Be sure to label both ends of each wire. Cover boxes with duct tape to protect wires and labels from sheet-rockers and painters. To provide for future expansion, it is a good idea to run a 6 conductor cable to each gang.
4. Pull data cables between the relay panels and the MCP. At least two (2) 6-Conductor 22AWG cables are required. The cables are used to connect STAR Chains and Relay Drivers.
5. Select a place for the key-fob remote control receiver unit, preferably as high as possible and near the garage or home entrance. The unit will work at least 100 feet from the install spot and often as far away as 300-400 feet. Pull 2- 6-conductor cables from this location to the relay panel. One to connect to the SuperSTAR, the other to the relay panel to provide DC power.
6. Install a single gang box to provide a vacation mode button.

Quick Reference Checklist: Trim-Out

1. At each switch location wire and install switches. Use the same color code for each switch location. The switch grounds are internally commoned, so you need only use a single common ground back to the STAR board from each set of switches.
2. At the STAR board locations, connect the commons, and connect each switch wire to a valid switch input on a STAR board.
3. Connect remote receiver wires to valid switch inputs on a STAR board. Don't forget the commons.
4. Connect low-voltage AC supplies. A single 1600 MA transformer can be used for the MCP and the first two chains (Pins 1 and 2 on the power connector). A 9-Volt DC or 12-Volt DC supply is required for the remote control unit.
5. When power is applied to the MCP, the green light should come on, and the red light should come on for no more than 30 seconds and then go off. If the red light is blinking, one or more switches are stuck closed. You can trouble shoot the location by running the programming software and selecting TOOLS from the main page. Then press the "Find Stuck Switches" button.
6. You must use a P.C. or laptop to program the system. Refer to the Programming Guide or use the help function in the Centralite programming software.
7. If keypad button engraving has not been ordered contact Centralite at 1-877-466-5483 or visit <http://www.centralite.com/engraving/> for further instructions.

Related Reference Materials

Elegance PC Programming Guide
Elegance Third Party Protocol

Please visit www.centralite.com/support for updated applications notes and installation tips.

Product Warranty

5 Year Limited Warranty

This Limited Warranty is extended by *Centralite Systems, Inc. (Centralite)* to the original end-user of the accompanying *Centralite* product and is transferable upon *Centralite* receiving original end-user warranty card information and upon *Centralite* receiving new end user warranty information within 30 days from date of property transfer. This Limited Warranty provides 100% parts coverage for defects in materials and workmanship for the product under normal use and service for a period of five (5) years from system start-up. Start-up is defined as the date in which the system is activated by an *Authorized Centralite Installer*.

The Limited Warranty period is for five (5) years from the original date of system start-up and there shall be no explicit or implied warranty after the expiration of the warranty period. The Limited Warranty period includes diagnosing problems, and repair or replacement of defective parts. In all cases, at the option of *Centralite*, serviceable used parts that are equivalent to new parts in performance may be supplied to replace defective parts. All exchanged parts and products replaced under this warranty will become the property of *Centralite*. All replaced parts and products are covered for the duration of the original warranty period.

This Limited Warranty does not extend to any *Centralite* product not purchased from *Centralite* or from an *Authorized Centralite Dealer or Distributor*. This Limited Warranty also does not extend to any product that has been damaged or rendered defective (a) as a result of accident, misuse, or abuse; (b) by operation outside the usage parameters stated in the Product's User's Guide; (c) by the use of parts not manufactured or sold by *Centralite*; (d) by modification of the Product, or (e) as a result of service by anyone other than *Centralite*, or an *Authorized Centralite Dealer or Distributor*. This Limited Warranty is valid only within the country in which the hardware product was purchased.

Centralite is not responsible for failure of the product, which results from accident, abuse, misapplication, or alteration of the product, and *Centralite* assumes no liability as to consequence of such events under the terms of this warranty. Incidental and consequential damages caused by malfunction, default, or otherwise with respect to the breach of this warranty are not the responsibility of *Centralite*.

Warranty Exclusions

Excluded from Coverage:

- ❑ Abuse, misuse or accident causing damage from:
 - 1) Use of incorrect line voltage or any electrical damage which results in system failure
 - 2) Failure to comply with Installation and Operation Instructions
 - 3) Failure to adhere to National Electrical Code and Underwriter's Laboratories codes and guidelines
 - 4) Vandalism or acts of civil unrest
 - 5) "Acts of God" and other factors beyond the control of *CentraLite*
- ❑ Replacement or cost of repair of components of equipment external to or incorrectly connected to *CentraLite* product
 - 1) Security equipment
 - 2) Audio Visual equipment
 - 3) Heating, ventilating, and cooling equipment
 - 4) Personal Computers
 - 5) Lighting devices
- ❑ Evidence of tampering, unauthorized repairs or adjustments
- ❑ Failure to contact *CentraLite* within 30 days of property purchase to transfer remainder of warranty period

Appendix A: Switch Placement Guide

This document is meant to be used as an aid in determining where to place low-voltage switches when roughing in a Centralite system. It should be used in conjunction with a review of the home's electrical plan, and in consultation with the home owner, builder, and electrical contractor. We also have included some helpful hints and suggestions as well as our recommendations regarding scenes to provide.

The process of locating switches generally begins with a review of the home's electrical plan. Using standard Centralite keypads, up to eight (8) buttons can be located in a single gang box.

As you are planning your keypad rough-in, bear in mind, that some keypad styles can be ganged, while others are available for single gang use only.

Each room should include at least one switch location for controlling the lighting in that room as well as any scenes or lights in other rooms. When placing switches near a door, always be aware of the direction that the door opens so that the door won't cover up the switches when it is opened.

Determine how wide the door trim is going to be so that the door trim won't take up the same space as the cover plate. Be sure to determine the height above the floor for the rough-in boxes based on local codes, the owner's wishes, and common sense. Normally, it is good practice to install a double gang box on either side of the master bed at the approximate height of the top of the bed so that switches may be operated while lying in bed. You should always provide an "ALERT" scene and a "GOODNIGHT" scene on either side of the bed. The ALERT scene should turn on all or most of the lights in the home. We generally will set this scene up to turn on every light except the master bedroom lights all at once so as to scare away potential intruders. The GOODNIGHT scene is used to slowly turn all the lights off at night.

It is a good practice to place at least one switch location beside each entranceway to a room. It is a good idea to provide a double gang box near each entry to the home. That allows for control of inside and outside lights as well as scenes such as: "WELCOME" and "GOODBYE".

Pathway scenes may be set up to provide a lighted pathway from one area of the house to another. A pathway button should be provided on each end of the pathway. The path may be turned on by touching the switch on either end, and turned off by pushing and holding the switch on either end.

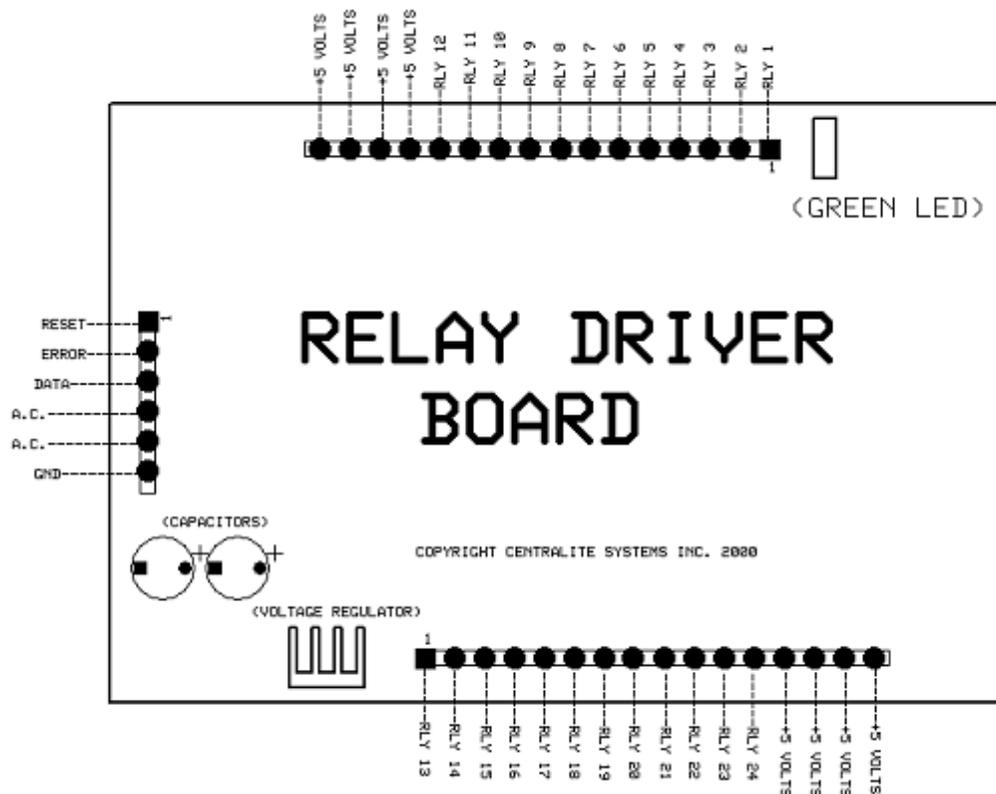
You should provide as many switches as needed, but don't overdo it! We have seen installations where there were all-ons, all-offs and scene buttons all over the house which made it very difficult for the homeowner to use. The purpose of a Centralite system is to simplify, not complicate the homeowner's life.

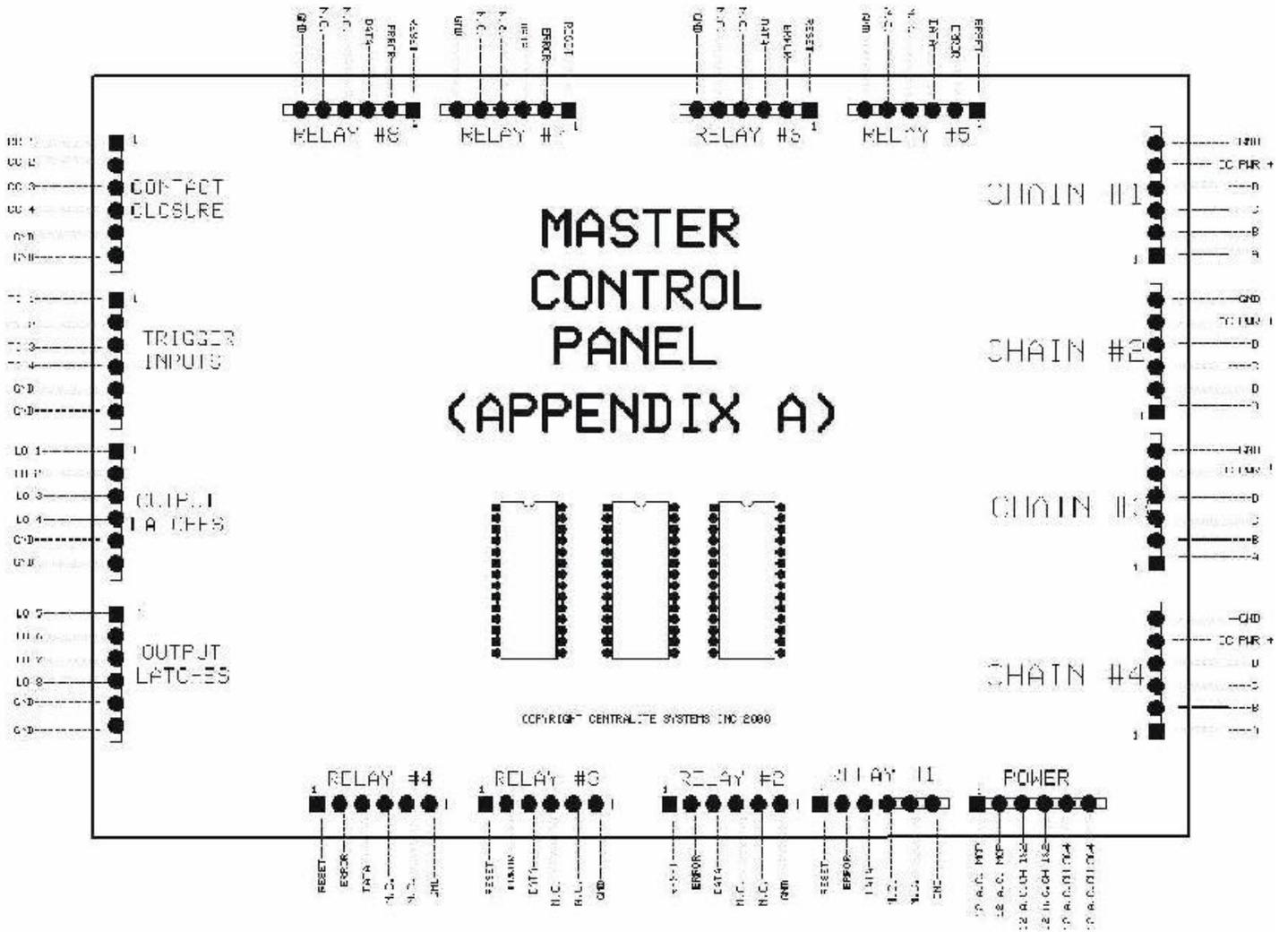
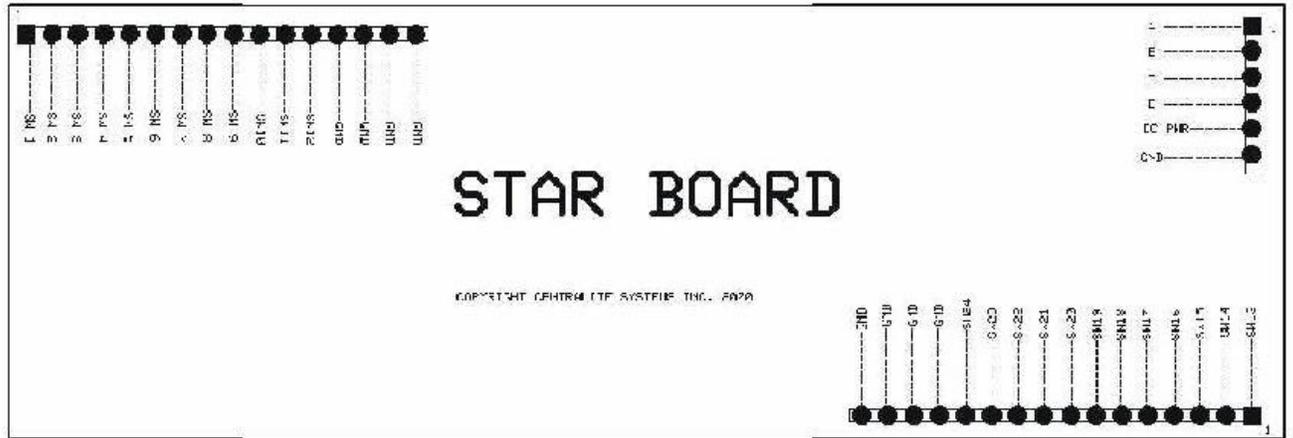
This table shows some of the commonly used scenes in CentraLite installations. It is by no means a comprehensive list, but is meant to be used as a starting point.

Scene name	What it does	Recommended Switch Location	When Used
All On	Turns on all lights	Master bedroom	Almost always
All Off	Turns off all lights	Master bedroom	Almost always
Alert	Turns on everything except master bedroom	Next to master bed	Almost always
Goodnight	Slowly turns all off	Next to master bed	Almost always
Welcome home	Turns on lights when the owner enters the home	Next to entry doors	Almost always
Goodbye	Turns off all lights except a security light	Next to entry doors	Very common
Entertain	Sets up lights at dim levels appropriate for entertaining	Master bedroom or dining area	Very common
Party	Same as Entertain, except it may be used to lock out some or all other switches	Master bedroom	Common
Evening scene	Used to provide soft lighting for evening relaxation.	Master bedroom or den	Common
Romance	Used to provide soft light for a romantic atmosphere	Bedroom	Common
Bath scene	Used to set lights for a relaxing bath	Bathroom	Common
Dining scene	Used to set lights in the dining room, kitchen, and adjacent hallways and areas for dining atmosphere	Dining room	Common
Scene name	What it does	Recommended Switch Location	When Used

Art scene	Used to simultaneously turn on artwork lights in different areas	Art area	Rare
Late night	Dimly lights up hallways to allow movement in the house without waking people	Master bedroom	Fairly common
Midnight path	Used to illuminate a path from the master bed to the kitchen or bathroom	Master bedroom and kitchen or bathroom	Common
Landscape	Turns on all landscape lights		
Outside	Turns on all outside lights		
Pool scene	Lights up pool lights and other outside lights near the pool	Next to door near pool	Rare
Good Morning	Used to slowly turn on lights before getting out of bed	Next to master bed	Rare

Appendix B: Connector List





Appendix C: Load Schedule Worksheets (complete for each relay panel)

	Load Number	Name	Dimmer?	Soft On?	Soft Off?	Dim Rate	Soft Rate	Preset Level	Load Type Incandescent, Magnetic Low-Voltage, Electronic Low-Voltage, Fluorescent	Amperage	Feeding Circuit Number
Panel _ Module 1	1										
	2										
	3										
	4										
Total Relay Module Current:											
Panel_ Module 2	5										
	6										
	7										
	8										
Total Relay Module Current:											
Panel _ Module 3	9										
	10										
	11										
	12										
Total Relay Module Current:											
Panel _ Module 4	13										
	14										
	15										
	16										
Total Relay Module Current:											
Panel _ Module 5	17										
	18										
	19										
	20										
Total Relay Module Current:											
Panel _ Module 6	21										
	22										
	23										
	24										
Total Relay Module Current:											
Do NOT Exceed Panel Specifications 120V load maximum is 8A per relay; 16A per relay module; 72A per panel. 240V load maximum is 7A per relay; 14A per relay module; 63A per panel.										Total Relay Module Current:	
										Total Enclosure Current:	

Appendix D: Keypad Assignment Sheets (complete for each available SuperSTAR)

SUPERSTAR Input Planning Guide			Section: <u>A</u>			
Input Number	Location	Button Name	Load or Scene	Load or Scene Number	Engraving Label	Notes
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						

SUPERSTAR Input Planning Guide			Section: <u>B</u>			
Input Number	Location	Button Name	Load or Scene	Load or Scene Number	Engraving Label	Notes
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						

SUPERSTAR Input Planning Guide			Section: <u>C</u>			
Input Number	Location	Button Name	Load or Scene	Load or Scene Number	Engraving Label	Notes
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						

SUPERSTAR Input Planning Guide			Section: <u>D</u>			
Input Number	Location	Button Name	Load or Scene	Load or Scene Number	Engraving Label	Notes
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						

Auxiliary STAR work sheet:

STAR Input Planning Guide			STAR: _____			
Input Number	Location	Button Name	Load or Scene	Load or Scene Number	Engraving Label	Notes
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						