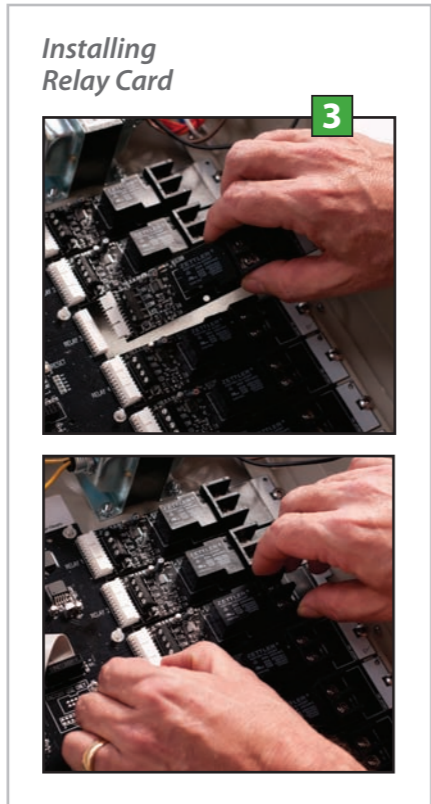
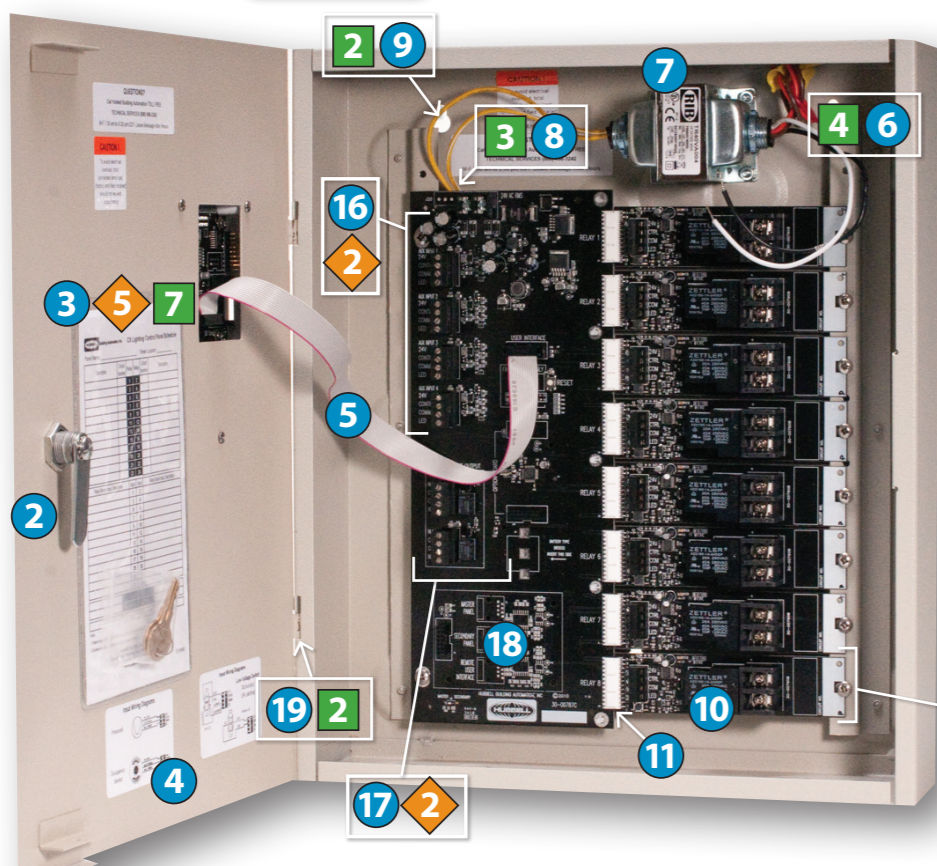


CX Commercial Lighting Control Panels

Line Voltage Power Connections

- Always use and follow Installation Instructions.**
- Mount the panel enclosure** – Mount the CX panel securely to building structure in accordance with local code requirements. Remove panel door prior to mounting enclosure. All mounting holes are located such that no additional disassembly is required to complete mounting. Mounting keyhole location and dimensions are included in the CX Panel Installation Instructions.
- Install Individual Relay Cards as required** – When panels include combinations of different types of relays, these must be field installed. Control power must be disconnected to the panel motherboard prior to installing relay cards. Once installation of all cards is complete, restore control power to mother board. Read and follow installation instructions provided with the individual relay cards when installing.
- Connect CX Panel input power** – Select the appropriate input voltage leads to match the available line voltage input. Make connection to incoming circuit with appropriately sized twist-on wire connectors.
- Connect controlled lighting loads** – Each relay card is provided with terminal blocks for connection to lighting circuits to be controlled. Each terminal will accommodate two (2)-#10-#14 copper solid or stranded wire of the same size and type. Relays connected to the same supply circuit may be jumpered on the line side. All line voltage connections should be made with the circuit breaker feeding the load in the locked off position.

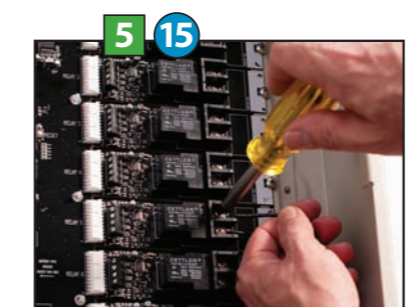
- Test controlled lighting loads** – Once circuits are connected to line and load sides of terminals, test each for shorts and proper grounding prior to energizing the circuit breaker feeding the load.
- Record controlled lighting loads in Panel Schedule** – After completion of all testing include in the panel schedule the name and/or location of the load controlled and the panel and circuit designation of the source line power.



CX Panel Components

- CX Panel User Interface** – LCD Display/Keypad allows access to all programming, system status, and manual control.
- Panel Door Lock** – The CX Panel is designed to be locked once the qualified electrician has completed all connections. Door should remain locked at all times.
- Panel Schedule** – Use this removable document to record line and low voltage connection data.
- Low Voltage Input Device wiring diagrams** – Located inside the panel door for easy reference.
- Interconnect Cable to User Interface** – This cable may be disconnected to allow for the removal of the door during the panel wiring process.
- Line Voltage Input Leads** – These leads are color coded based on the label on the transformer for various input supply voltages. All unused leads must be terminated with insulated wire connectors.
- Control Power Transformer/Power Supply** – This transformer has multi-tap input power or variable voltage input to be connected to line voltage power supply. Secondary voltage to the panel motherboard is 24VAC. Different voltage measured on the secondary terminals is indicative of misconnection of primary supply wiring.
- Control Power Disconnect** – A plug disconnect is provided for the low voltage control power to allow for safe removal and replacement of relay cards.
- Keyhole Mounting** – No disassembly is required to mount CX Panels.
- Individual Relay Card** – Relays are individually mounted for easy replacement and to allow for panels to include any mix of relay types.
- Relay Card Connector** – This connector fits into the socket on the panel motherboard to allow for control of relays by the panel.
- Relay Manual Override Button** – Allows for relays to be manually operated. Manual control of relays is also available through the User Interface.
- Relay Status Light** – Indicates relay operation status.
- Relay Board Input Terminal Block** – Any type of low voltage input including Switches, Motion Sensors or Photocells may be connected to any input. These are software assignable as to type and control. Any input can control any relay or group.
- Line Voltage Control Circuit Terminals** – Lighting circuits are connected to these heavy duty screw terminals. Each terminal will accommodate two (2) #14-#10 stranded or solid copper wire.
- Auxiliary Inputs** – The CX Panel is supplied with additional low voltage inputs to accommodate a wide variety of control scenarios that require more than one input for a relay or group. Any type of low voltage input including Switches, Motion Sensors or Photocells may be connected to any input. These

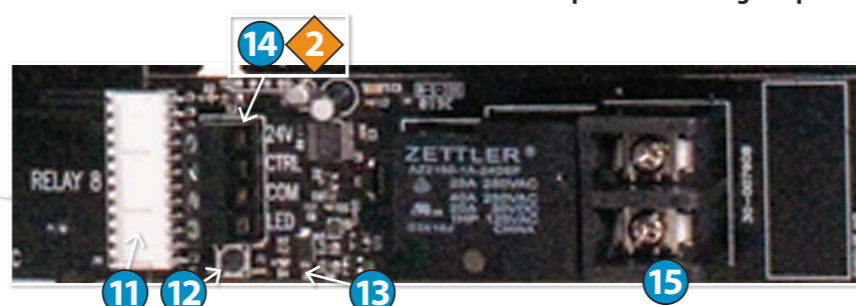
- Dry Contact Output Terminals** – Each Output Terminal allows for the CX Panel to signal other systems with N.O./N.C. momentary or maintained contacts.
- Master/Secondary Panel Interface Card Connector** – Cards provided with the secondary panel allow easy connection with CAT5, CAT5e or CAT6 cable.
- Door Hinge** – The CX Panel door hinge is designed to allow removal of the door during installation of line and low voltage wiring for easier access and protection of the user interface. Relay manual override button will operate relays with User Interface cable not attached to motherboard provided control power is connected.



Connect Controlled Lighting Loads

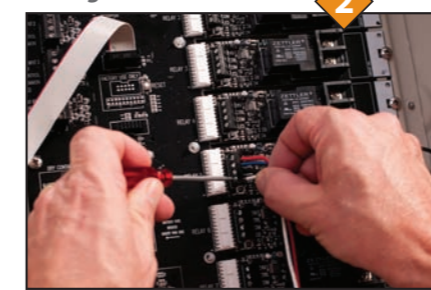
Low Voltage Input/Output Connections

- Always use and follow Installation Instructions.**
- Connect Low Voltage Inputs** – There are low voltage inputs, one each on each relay card and auxiliary inputs on the motherboard. Any device can be connected to any input. All inputs are software assignable to any type of device, including low voltage switches, motion sensors, or photocells. Any input can control any relay, group or output. Wiring diagrams for each type of device are indicated inside the panel door and in this document. Each panel provides enough device power for one device per relay, including devices that may be wired in parallel to a single input.
- Inputs should be connected based on zone control** – Where relays are controlled by single devices, inputs should be connected to the input terminal on that specific relay. Even though any input can be mapped to any relay or group, it is easier for programming and future modifications if inputs and relays are aligned.
- Switches or Sensors that control the same zone should be connected in parallel to a single input** – Low voltage switches and motion sensors can be connected in parallel for like devices when more than one device controls the same zone.

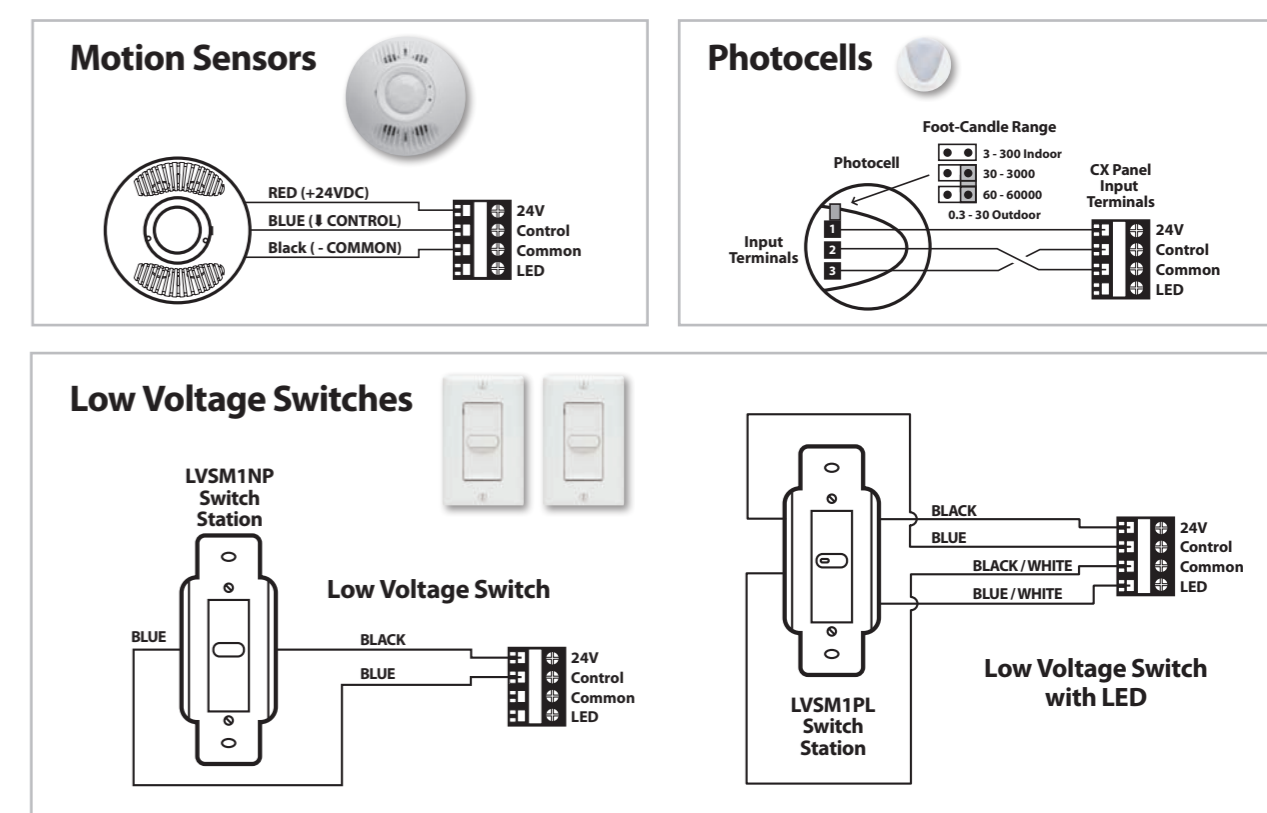


Individual Mounted Relay Card

Low Voltage Input Wiring



Low Voltage Device Input Wiring Diagrams



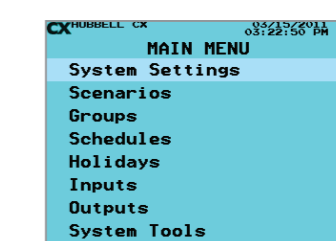
NOTE: All wiring is required to be #18 ga insulated CLASS 2 copper conductor. Number of wires varies by device type.

CX User Interface Functions

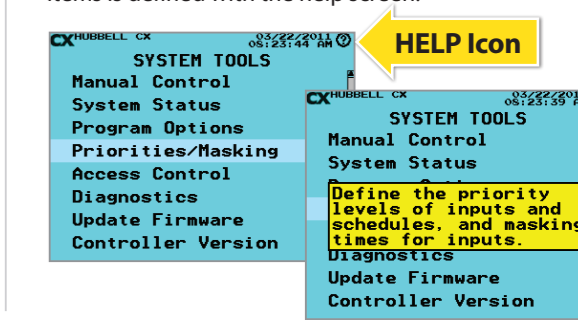
- Function Keys** – These keys provide programming choices in various screens. Key labels appear on-screen when keys are available.
- Navigation Keys** – Allows user to navigate Up/Down/Right/Left/Toggle through editable fields to select program choices.
- Enter Key** – Use this key to make selections.
- Help Key** – This key will bring up help screens in specific locations driven by the field that is highlighted.
- Color LCD Display** – Allows for most programming to be completed in a single screen. Right side scroll bars appear when more choices are available than are currently visible.
- Alpha-Numeric Keypad** – This keypad is used to populate names and numeric values while programming. Tap/Scroll operation is similar to that used for cell phones.
- Escape Key** – This key takes the user to the previous screen. Warning prompt appears when changes have been made, but not saved.

CX Main Menu

The CX Main Menu provides access to all programming functions in order of the next needed input. Press ENTER from the home clock display page to begin.



The **HELP** ICON in the upper right of the screen appears when help information is available. Each of the main menu items is defined with the help screen.



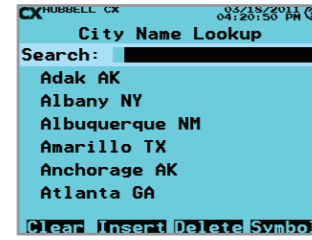
CX Panels – Programming Guide

General System Settings

The CX Panel System offers a wide variety of settings that allow for different uses of the system. The basic settings required for most systems are **Time and Date**, **Time Zone**, and **Astro Clock Settings**. These are input as follows:

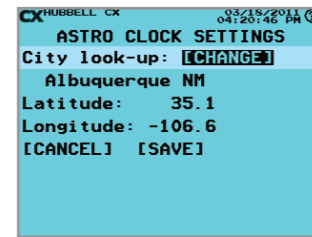
Time and Date

1. From the Main Menu SELECT System Settings, and then press ENTER
2. SELECT Set Date/Time, and then press ENTER.
3. Enter the Date and Time in the appropriate fields using the alpha-numeric keypad.
4. Scroll down to [SAVE] and press ENTER to finish



Time Zone

1. From the Main Menu SELECT System Settings, and then press ENTER.
2. SELECT Set Date/Time Preferences, and then press ENTER.
3. SCROLL down to the Time Zone field and use the RIGHT and LEFT arrow keys to select the appropriate time zone for your area.
4. Scroll down to [SAVE] and press ENTER to finish



Astro Clock Settings

1. From the Main Menu SELECT System Settings, and then press ENTER.
2. SELECT Astro Clock Settings, and then press ENTER.
3. Press the ENTER key and use the alpha-numeric keypad to enter the first letter of a major city near your location. A list will appear that can be scrolled to find the city of your choice. Press ENTER to auto-populate the longitude and latitude values.
4. Alternately, if you know these values SCROLL to each field and enter the data for your area.
5. Scroll down to [SAVE] and press ENTER to finish

Use of Scenarios

The Scenarios Menu allows for the application of pre-programmed Indoor and Outdoor templates. The User only needs to input unique information related to the selected Scenario. The Scenario then auto-populates data related to specific chosen behavior and then significantly shortens the time necessary to complete programming. Additionally, Scenarios have been tested for proper performance and assure the User that all required settings will work correctly.

EXAMPLE SCENARIO: Manual Switch ON/ Auto Motion OFF – 5 EASY STEPS

1) Select Scenario

2) Select Switch Input

3) Select Motion Input

4) Select Relay or Group

5) Save ALL Selections

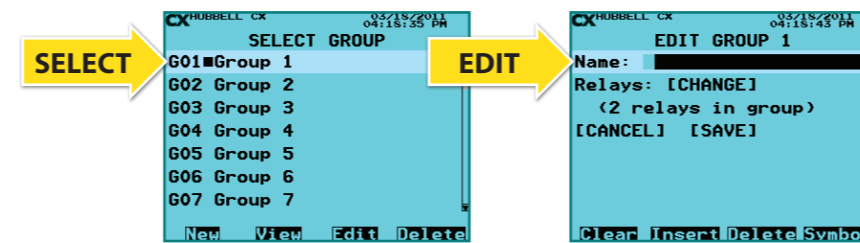
CX Panels – Programming Guide (continued)

Basic Programming Functions

The CX Panel System basic programming functions used most often for typical installations are **Groups**, **Schedules**, and **Inputs**. These are programmed as follows:

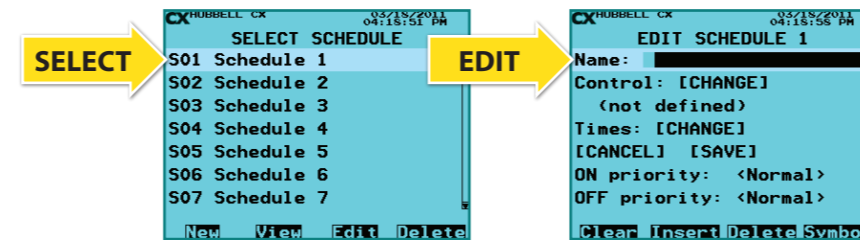
Groups

1. From the Main Menu SELECT Groups, and then press ENTER
2. SELECT a group, and then press ENTER. The solid box next to the group number indicates that it has been programmed.
3. Edit the name field using the alpha-numeric keypad. Press ENTER to select from name list.
4. SELECT [CHANGE] in the Relays field
5. Select the relays to be included in the group, and then Press ENTER
6. Scroll down to [SAVE] and press ENTER to finish



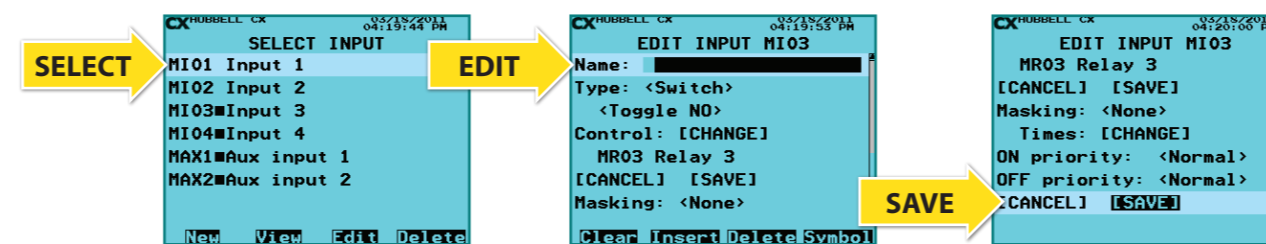
Schedules

1. From the Main Menu SELECT Schedules, and then press ENTER.
2. SELECT a Schedule, and then press ENTER. The solid box next to the group number indicates that it has been programmed.
3. Edit the name field using the alpha-numeric keypad.
4. SELECT [CHANGE] in the Control field
5. Select the Relay or Group to be controlled and then Press ENTER
6. SELECT [CHANGE] in the [Times] field
7. Input the schedule times in the appropriate fields, and then Press ENTER
8. Scroll down to [SAVE] and press ENTER to finish



Inputs

1. From the Main Menu SELECT Inputs, and then press ENTER
2. SELECT an Input, and then press ENTER. The solid box next to the group number indicates that it has been programmed. MI01 would be the master panel relay card 1 input. MAX1 would be the master panel auxiliary input 1.
3. Edit the name field using the alpha-numeric keypad.
4. SELECT <Switch> in the Type field
5. Use the RIGHT and LEFT arrow key to toggle to the desired input type.
6. SCROLL down and populate the associated settings for the selected input
7. SELECT [CHANGE] in the Control field
8. Select the Relay or Group to be controlled and then Press ENTER
9. Scroll down to [SAVE] and press ENTER to finish



QUICK START

Installation & Programming Guide



PRECAUTIONS

- **READ AND FOLLOW ALL SAFETY INSTRUCTIONS.**
- **CAUTION - RISK OF ELECTRICAL SHOCK.** To prevent electrical shock, turn off power at the circuit breaker before installing or servicing unit. Never wire energized electrical components.
- **NOTICE:** For installation by a licensed electrician in accordance with National and/or local Electrical Codes and the following instructions.
- **CAUTION: USE COPPER CONDUCTOR ONLY.**
- Be sure to read and understand all instructions before installing or servicing unit
- Do not mount near gas or electric heaters.
- Disconnect switch or a circuit breaker must be provided and marked as the disconnecting device.
- The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition.
- Confirm that device ratings are suitable for application prior to installation.
- No user serviceable parts contained inside unit. Refer all service related questions to the factory. All servicing shall be performed by qualified service personnel.
- Equipment should be mounted in locations and at heights where it will not readily be subjected to tampering by unauthorized personnel.
- Use only approved materials and components (i.e. twist on connectors, electrical box, etc.) as appropriate for installation.
- **NOTICE:** Do not install if product appears to be damaged.
- If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.
- Do not use this equipment for other than intended use.