

Softswitch128™ Switching System



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Introduction

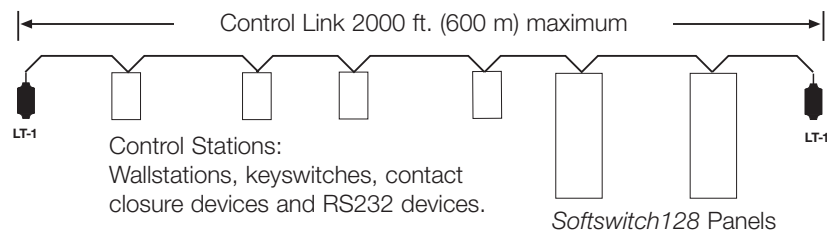
Thank you for purchasing a Softswitch128™ system. This guide will walk you through the steps necessary to program your system. Please read the guide completely before attempting to program the system. **For mounting and wiring information, please refer to the Installation Guide provided, Lutron P/N 032-130.**

When programming the *Softswitch128* system, it is important to know some key information:

- How many panels are in this system and how many circuits are in each panel?
- What is the load schedule?
- Where is each control station located and what should each button do?
- What should each Contact Closure Input do?
- What should the Time Clock do?

Tables are provided at the back of this guide to record the above information. Photocopy these as necessary, and leave them for the occupant after they are completed.

System Overview Diagram



Introduction

System Specifications

The *Softswitch128* system consists of up to 8 switching panels and up to 32 control stations. The *Softswitch128* system has a 128 circuit limit to be divided between eight panels. Control stations can be wallstations, keyswitch, contact closure input/output devices (OMX-AV, OMX-CCO-8) or a RS232 interface (OMX-RS232). All panels and control stations are connected by a digital communications link. Refer to the *Softswitch128* Installation Guide for wiring details. Other system specifications are shown below.

Time Clock

- 7 weekly schedules.
- Up to 40 holiday schedules.
- Each holiday schedule can be 1-90 days.
- Up to 500 time clock events.
- Maximum of 25 time clock events per day or holiday.
- For each time clock event, you can select which circuits turn on and which turn off.
- Time clock events can occur at a fixed time of day or at a time relative to sunrise or sunset (astronomical).
- Events can be placed on a weekly schedule (e.g. occurring every Monday) or a holiday schedule (e.g. occurring only on January 1).
- Holiday events override weekly events.
- Time clock events can begin and end afterhours mode. Afterhours is an energy saving mode, where lights that are set to be off will automatically, after a period of time, turn themselves off. Afterhours allows for a temporary override from any control station action. See STEP 4 for more information.

Control Station - Wallstation

- Wallstation buttons can be individually programmed to:
 - Toggle circuits on and off. Each press of the button will alternate between turning the circuits on and off. If the circuits are in a mixed state (some on and some off), the lights will turn on.
 - Select a pattern. A pattern can be used to turn a circuit or a group of circuits all on, all off, or to a mixed state. Each time the button is pressed, the circuits will go to the programmed pattern.
 - Turn off with a time delay. After the set amount of time, the assigned circuits will turn off.
- The keyswitch (NTOMX-KS) can be programmed for clockwise and counterclockwise turns to perform the same functions as a Wallstation button.

Control Station - Contact Closure Inputs

Two contact closure inputs are available on each *Softswitch128* controller and more are available by purchasing a Lutron OMX-AV control station (five inputs per OMX-AV that can be added anywhere on the digital control station link).

- The contact closure inputs can be programmed on the open and/or closure of the contact to:
 - Toggle circuits on and off. Each press of the button will alternate between turning the circuits on and off. If the circuits are in a mixed state (some on and some off), the lights will turn on.
 - Select a pattern. A pattern can be used to turn a circuit or a group of circuits all on, all off, or to a mixed state. Each time the button is pressed, the circuits will go to the programmed pattern.
 - Turn off with a time delay. After the set amount of time, the assigned circuits will turn off.

Introduction

Control Station - Contact Closure Outputs

Contact closure outputs can be added with either a Lutron OMX-AV control station (five outputs per OMX-AV) or with a Lutron OMX-CCO-8 (eight outputs per OMX-CCO-8). Either control can be added anywhere on the digital Control Station link.

- Each contact closure may be momentary or maintained.
- Each contact closure output can be assigned to a pattern that is programmed to a Wallstation button, contact closure input, timeclock event, or emergency state.

Integration through RS232

The *Softswitch128* system can be integrated with a building management system through the Lutron RS232 interface (OMX-RS232).

Emergency Power Mode

- When a panel is placed into emergency power mode (loss of normal power), circuits are set to an emergency pattern and remain at that setting until the controller exits emergency power mode (return of normal power). All control station inputs and time clock events are ignored while in emergency power mode.
- For more information on Emergency lighting applications, refer to Application Note #106 at www.lutron.com.
- Emergency power mode may be activated using:
 - Panel to panel emergency sense line. This method requires at least two panels to be in the system – a normal (non-essential) feed panel and an emergency (essential) feed panel. When power to the normal panel is interrupted, the emergency panel(s) will go into emergency mode. Note that the normal/emergency switches at the bottom of the controllers need to be set correctly.
 - The Lutron Emergency Lighting Interface (LUT-ELI-3PH), a UL 924 listed device, senses the normal (non-essential) line voltage on all three phases (3PH) of normal power. When one or more phases of power are lost, the LUT-ELI-3PH will send a signal to the *Softswitch128* controller. If the *Softswitch128* controller's normal/emergency switch is set to emergency, the emergency lighting pattern will be activated.

Introduction

Overview of System Programming

Programming your *Softswitch128* system is done in six steps. Depending upon your system, you may not need to perform all of these steps.

1. Panel Configuration

Required for systems with more than one panel. This step will assign each panel an address and configure the number of circuits in each panel.

2. Time, Date, and Location

Required if the time clock will be used. This step shows how to set the clock.

3. Control Station

Required if there is a remote Wallstation, contact closure, or RS232 device. This step is to configure their function.

4. Time Clock Events

Required if the time clock will be used. This step shows how to setup automatic control of lighting using the time clock.

5. Panel Contact Closure Inputs

Required if the panel contact closure inputs are used. This step will define what each input will do.

6. Emergency Power Mode

Required if an emergency pattern is needed when normal power is lost. Control station inputs and time clock events are ignored while in emergency power mode. This step will define if the panel has emergency circuits and how to configure the emergency pattern.

Notes:



Start-Up Notice

Softswitch128 System Start-Up Notice for Electrical Contractor

Important Note:

A Lutron Technical Support Specialist will assist by phone with the startup of the system. To ensure that the *Softswitch128* System is ready for Telephone Start-Up, please complete the following checklist. If excessive time or a visit to the job site is required due to incomplete installation, additional charges may be incurred.

- The *Softswitch128* panel(s) and Wallstation(s) have been mounted in accordance with the installation instructions.
- Wallstation(s) has been wired to the panel in accordance with installation instructions.
- Feed and load wiring to panel have been installed in accordance with the installation instructions.
- All load circuits have been activated in bypass mode (bypass jumpers installed) and are correctly and permanently lamped.
- Bypass jumpers have been removed.
- The charts in the back of this manual have been completed: Control Location Table, Panel Tables, Control Station Table, and the Time Clock Event Table.

Note: If any of the above conditions are not met when Telephone Start-Up begins, Start-Up may be rescheduled. For this reason any questions on the above checklist or the system can be directed to the Lutron Technical Support Center at (800) 523-9466 (ask for a *Softswitch128* System specialist). **When the above checklist is completed, please fax this sheet along with the completed tables to Lutron Field Service Scheduling at (610) 282-0298. To schedule a Telephone Startup, please call 800-523-9466. Please note that 24 hours advance notice is required for Startup.**

Signature: _____

Job Name: _____

Today's Date: _____

Lutron Job Number: _____

Printed Name: _____

Scheduled Startup Date: _____

Phone Number: _____

Scheduled Startup Time: _____

Fax Number: _____

Job Site Phone Number: _____

Bill of Material (Panels, Wallstations, etc.):

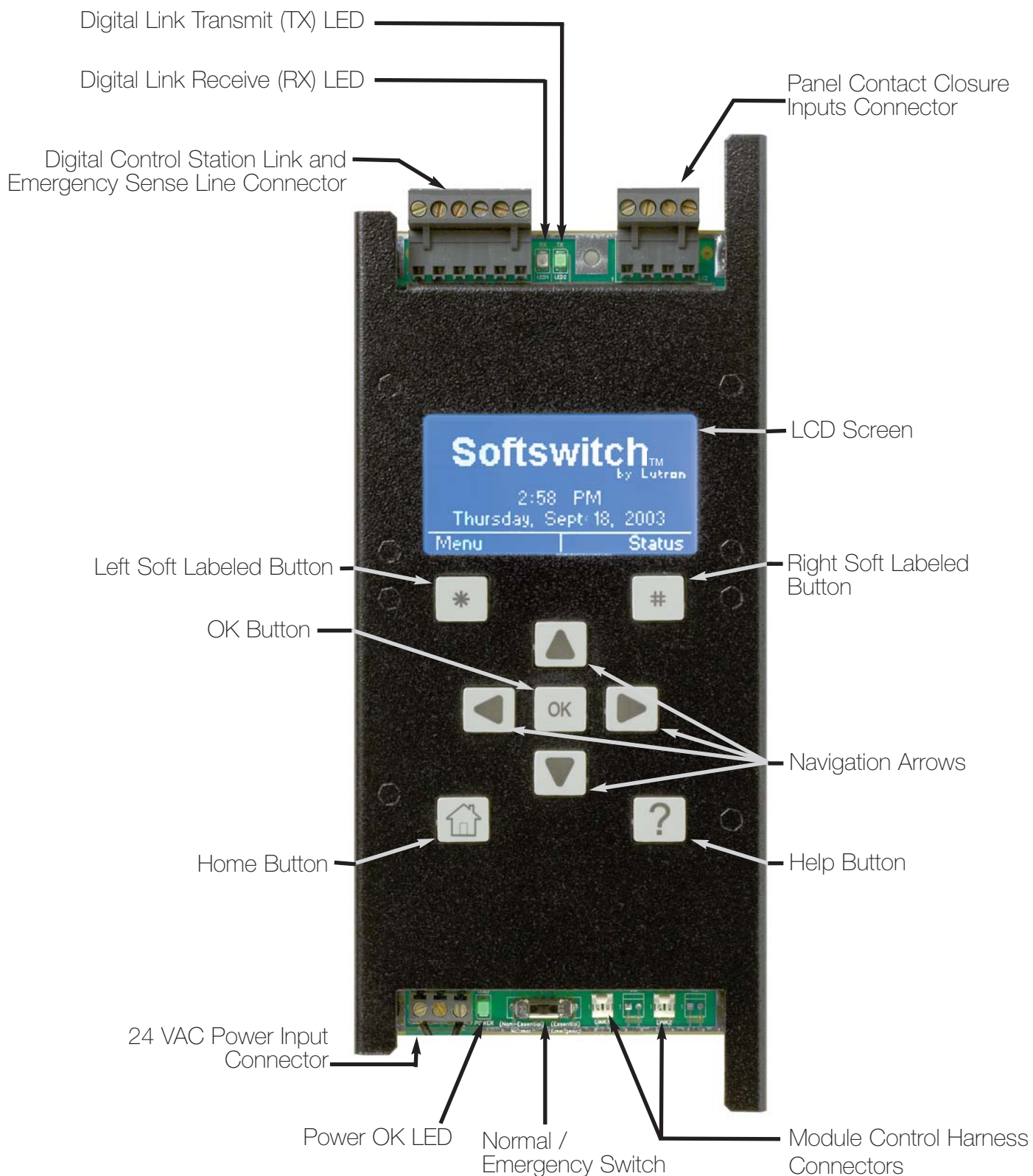
| | |
|------------------|------------------|
| _____ Qty. _____ | _____ Qty. _____ |
| _____ Qty. _____ | _____ Qty. _____ |
| _____ Qty. _____ | _____ Qty. _____ |

Lutron Electronics Company, Inc.
7200 Suter Road
Coopersburg, PA 18036-1299
Telephone: 800-523-9466 (Listen to menu for scheduling)



Controller Overview

Softswitch128 Controller Layout





Controller Overview

Navigation

The *Softswitch128* controller uses certain methods for navigating, selecting, setting values, etc. Please read this section carefully before using the controller to configure your system.

The *Softswitch128* controller has nine buttons below the display. The table below explains their functions.

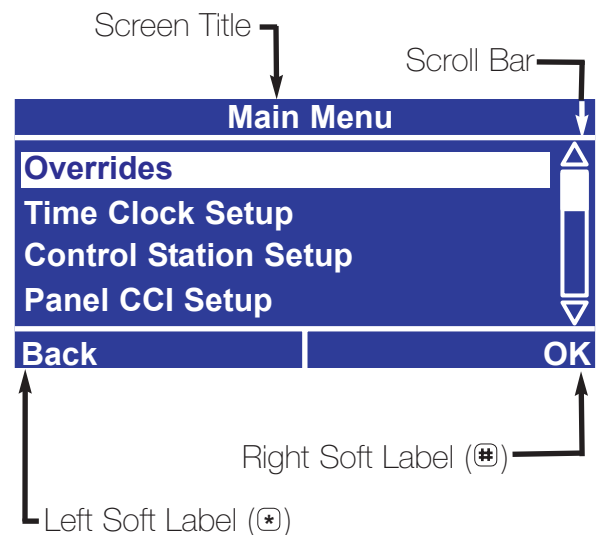
| Button | Function |
|--------|---|
| | Navigate the screen and change highlighted values |
| | Select an item |
| | Left Soft Labeled - Function defined on screen |
| | Right Soft Labeled - Function defined on screen |
| | Go to the Home Screen |
| | On Screen Help |

The Screen

All screens on the *Softswitch128* controller have a similar look with some common elements. These are:

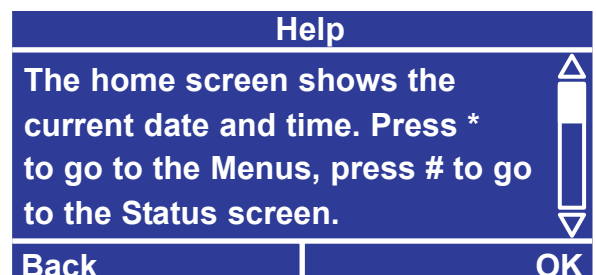
- A screen title
- Left and right soft button labels
- A scroll bar (only present if more information is available than will fit on the screen.)

The example shows the Main Menu. The scroll bar indicates that there is more information in the menu than will fit on the screen. Pressing repeatedly will scroll through the menu and show the other choices. The shaded slider on the scroll bar indicates what portion of the menu is being displayed.



Help

Help on the current screen is always available by pressing the button. If more information is available than will fit on the screen, use the up and down buttons to scroll through the text. Pressing either , or will return you to the screen you were on.





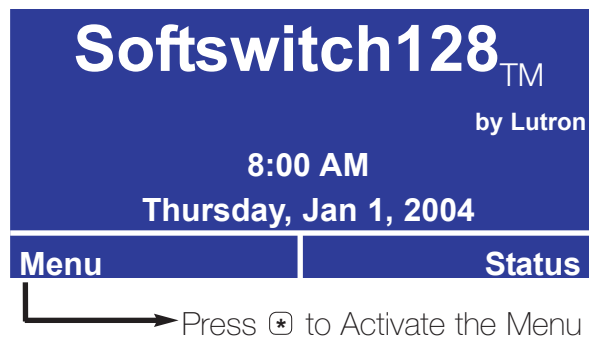
Controller Overview

Getting to the Home Screen

Pressing will always take you back to the home screen.

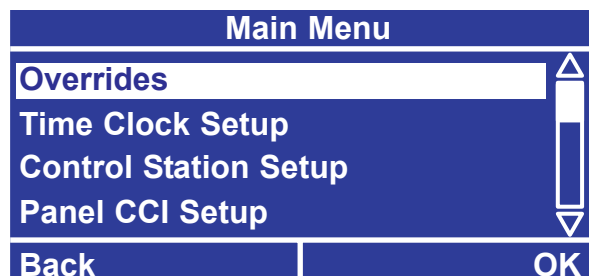
Main Menu Access

From the home screen, pressing will take you to the menu. If a password has been set, you will need to enter it before continuing (see locking / unlocking the controller in the referenced function section).



Navigating the Menus

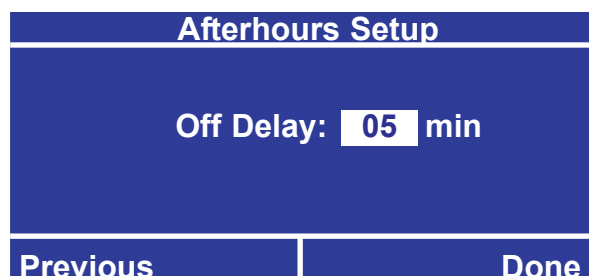
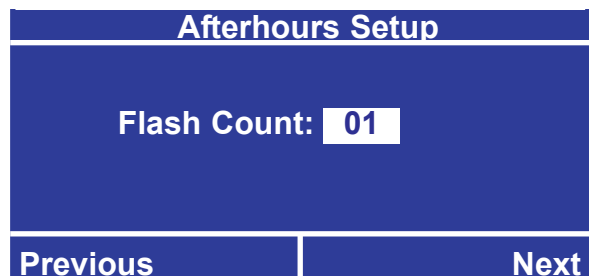
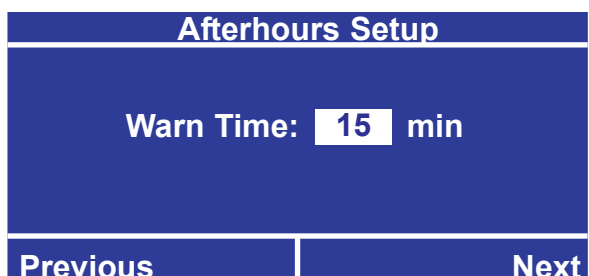
When in a menu, use and to change the highlighted item and press or (OK) to select that item. Pressing will provide help on that item. To go back to the previous screen, press (Back).



Entering Data

One or more screens will be used to program the information required for each feature. If only one screen is required, the screen will have the soft labeled buttons "Cancel" and "Done". If multiple screens are required, the first screen will have the soft-labeled buttons "Cancel" and "Next". The intermediate screens will have the soft-labeled buttons "Previous" and "Next", and the last screen will have the soft-labeled buttons "Previous" and "Done".

Note: The information is not stored until "Done" is selected.

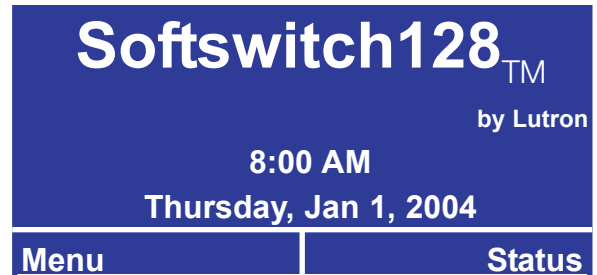




Controller Overview

Getting Started - The Home Screen

- When the controller is first powered or is not used for 20 minutes, the display will show the home screen. Pressing the home button will always take you back to this screen. On the home screen, pressing **⊕** will take you to the main menu and pressing **⊗** will bring up the status screen.
- The home screen shows the current day, date and time set on the controller. If either of these are incorrect, refer to Step 2 - set the date, time, and location.
- The backlight on the LCD will turn off after 25 minutes of no activity. Pressing any button on the control will turn the backlight on and display the home screen.



→ Press **⊕** to Activate the Menu

Unlocking the Controller

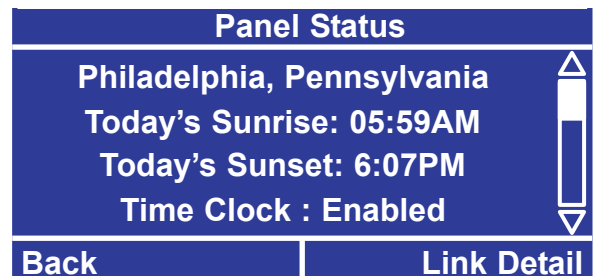
If the controller has been locked (see locking the controller), you will be prompted to enter the password before the main menu is activated. Use **⏪** and **⏩** to select the digit to change, **⏴** and **⏵** to change each digit. When you have entered the password, press **⊗**. If you have forgotten the password, contact Lutron technical support at 1 (800) 523-9466 to unlock the controller.



The Status Screen

The status screen contains several useful pieces of information. Pressing **⊗** from the home screen will bring up the status screen showing:

- Location.
- Whether control stations are enabled or disabled.
- Whether time clock events are enabled or disabled.
- Sunrise and sunset times for the current system date (note that the time, date, and location must be configured correctly).





Controller Overview

The Wallstation Status Screen

The status screen contains several useful pieces of information. Pressing **⊕** from the Panel Status screen will bring up the Wallstation Status screen:

- If the station is present and is recognized, the control is labeled by its type, e.g. “seeTouch”.
- If a station is not present, it is labeled as “No Station”. This could also indicate an address conflict.
- If the unit is present and is not a control that is known to the system, the control is labeled as “???”. This could also indicate an address conflict.

| Wall Station Status | |
|---------------------|--------------|
| A01 | - No Station |
| A02 | - seeTouch |
| A03 | - NT/KS/FOMX |
| A03 | - ??? |
| Back | OK |



STEP 1

Panel Configuration - Multi-Panel Systems Only

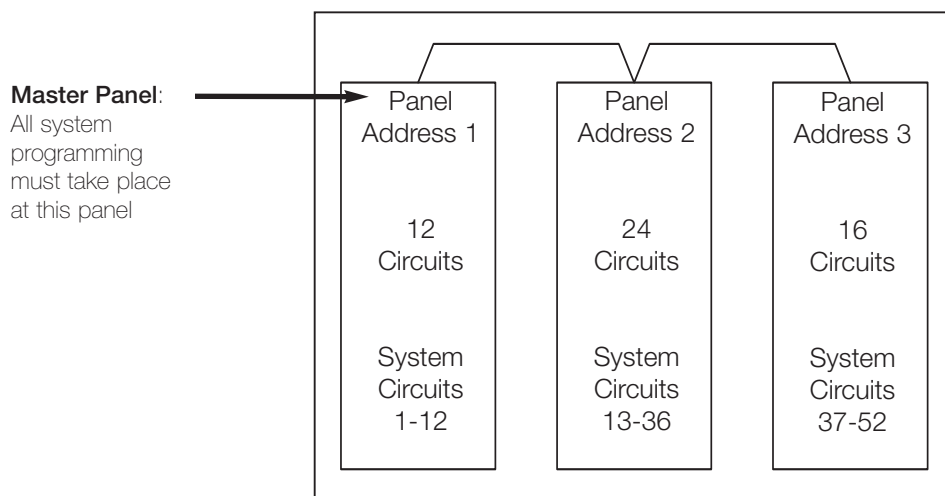
If there is more than one panel in the system, each panel in the system must have the following information programmed (If the system only has one panel, this step is not necessary and can be skipped):

- Panel address
- First system circuit number
- Number of circuits contained in the panel

Each circuit in the system is identified by a system circuit number. This number will be used to identify the circuit for programming purposes. For example, if Panel 1 has 12 circuits, the first circuit in Panel 2 will be circuit 13 on the *Softswitch128* controller. The figure below shows a sample system.

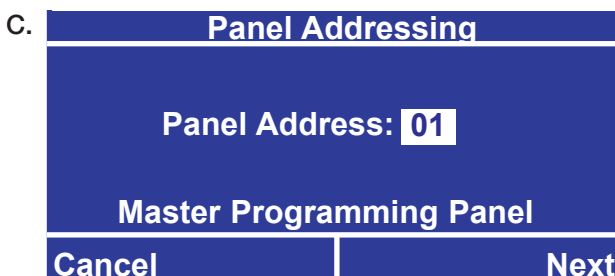
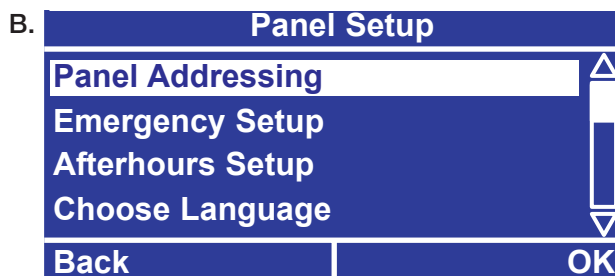
Before proceeding with this step, it may be helpful to complete the panel tables located in the back of this manual.

- All system programming (covered in Programming STEPS 2-6) must be completed at **panel address 1**. In a **multi-panel system, panel address 1 becomes the master programming panel and all other panels are remote panels.**



Set Panel Configuration

- From the **Main Menu** use and to highlight **Panel Setup** and press or (OK).
- Use and to highlight **Panel Addressing** and press or (OK).
- Use and to change the **Panel Address** and press or (Next). The panel address must be different for each panel.
- Use and to change the **Circuit Offset**, the first system circuit number in this panel, and press or (Next).
- Use and to change the number of circuits in this panel and press or (Done) to update the database.

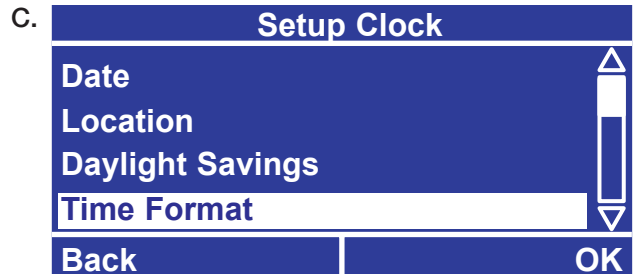




STEP 2

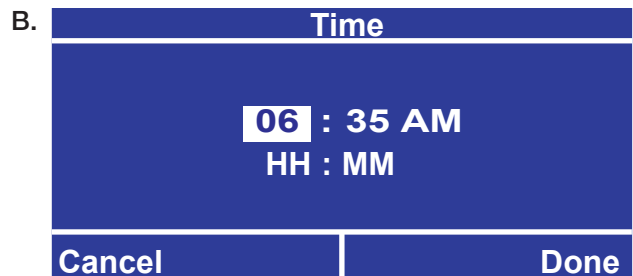
Time Format

- From the **Main Menu** use and to highlight **Time Clock Setup** and press or (OK).
- Use and to highlight **Setup Clock** and press or (OK).
- At the bottom of the Setup Clock menu, **Time Format** allows switching between 24hr. and 12hr. (AM / PM). Press or (Done) to save changes.



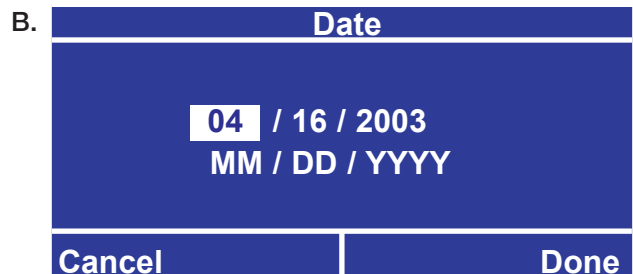
Time

- From the **Setup Clock** menu, use and to highlight Time and press or (OK).
- Use and to change the current time. Use and to alternate between hours and minutes.
- Press or (Done) when done to save changes.
- You are returned to the **Setup Clock** menu.



Date

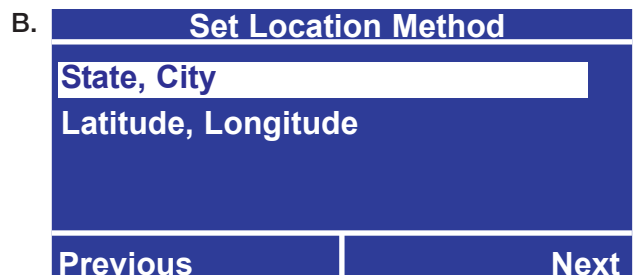
- From the **Setup Clock** menu, use and to highlight Date and press or (OK).
- Use and to change the current date. Use and to change between month, day, and year. The first 2 digits are the month, the middle 2 are the day, and the last 4 are the year.
- Press or (Done) when done to save changes.
- You are returned to the **Setup Clock** menu.



Location

Note: Location must be set if using time clock events relative to sunrise or sunset.

- From the **Setup Clock** menu use and to highlight **Location** and press or (OK).
- Use and to select whether you will be setting the location by city and state (recommended) or by latitude and longitude (if there are no nearby cities listed). Press or (Next) when done.





STEP 2 (continued)

Location (continued)

If setting by City and State

- C. Use and to select the **State** then press or (Next).
- D. Use and to select the **City** then press or (Next).

C. **Set State**

| | |
|----------------|------|
| Pennsylvania | |
| Rhode Island | |
| South Carolina | |
| South Dakota | |
| Previous | Next |

If setting by Latitude and Longitude

- C. Use and to select the digit and use and to enter the latitude and longitude of your location in degrees, then press or (Next).
- D. Use and to select the time zone for this location, then press or (Next). Values are listed as on offset from Greenwich Mean Time.

Example: If your location is 39 degrees 36 minutes north, enter 39.6N degrees. The minutes are converted to a decimal of a degree by dividing by 60.

C. **Specify Latitude Longitude**

| Latitude | Longitude |
|-----------|-----------|
| 39 . 6 N | 075 . 1 W |
| (DEGREES) | (DEGREES) |
| Previous | Next |

D. **Set Time Zone**

| | |
|-------------------------|------|
| GMT -5:00 Eastern Time | |
| GMT -4:00 Atlantic Time | |
| GMT -3:30 Newfoundland | |
| GMT -3:00 Brasilia | |
| Previous | Next |

Adjust Sunrise and Sunset

- E. Use this feature to shift all sunrise and sunset times by a fixed amount. This can be useful if there is a geographic feature (such as a mountain) that offsets the sunrise or sunset time for your location by a fixed amount. This can also be used to shift all time clock events that are relative to sunrise and sunset after they have been programmed. If no offset is required, leave the offsets at 0:00 (default). Press or (Done) to save changes.

Note: Do not use this function to compensate for Daylight Savings Time (see next page).

E. **Adjust Sunrise / Sunset**

| Sunrise | Sunset |
|-----------|-----------|
| + 00 : 00 | + 00 : 00 |
| Previous | Done |



STEP 2 (continued)

Daylight Savings Time

Use this feature to set whether or not your location uses Daylight Savings Time. If it does, you will be able to configure when it starts and ends. When Daylight Savings Time is used, the time will change automatically.

- A. From the **Setup Clock Menu** use and to highlight **Daylight Savings** and press or (Next).
- B. Use and to select whether or not your location uses daylight savings time, then press or (Next).
- C. If your location follows the **United States** rules for Daylight Savings Time (starts on the 1st Sunday in April, ends on the last Sunday in October at 2 AM, offset by 1 hour), then select United States. Otherwise select **Other**. Press or (Done) to save changes.
- D. If you select other, you will be prompted to enter the rules. The default rules will be set based on your location. You will need to know:
 - The start month, week, and day.
 - The end month, week, and day.
 - The time change, between 0 and 120 min.

B. **Daylight Savings**

Does this location use daylight savings?

Yes

Cancel **Next**

C. **Daylight Savings**

Current Setting

United States

Previous **Done**



STEP 3

Control Stations Overview

Before proceeding with this step, complete the control station table at the back of this guide. Record what each input (button, keyswitch, or contact closure) on each control station should do.

Control Stations

Control stations are connected to the *Softswitch128* panel via the digital control link. They can be Wallstations (with various numbers of buttons), keyswitches (NTOMX-KS), contact closure input and output devices (OMX-AV), contact closure output devices (OMX-CCO-8), or OMX-RS232 interfaces. Each one must be assigned a unique address. Addressing may be found in either the *Softswitch128* Installation Guide or individual device installation guides. Refer to the instructions for each device on how to set the address. Every Wallstation button or contact closure input may be assigned one of the listed functions:

- **Toggle** - Each press of the button, turn of the keyswitch, or contact closure input toggles the assigned circuits between on and off. If the assigned circuits are in a mixed state (some on and some off), the circuits will turn on.
- **Pattern** - Turns a circuit or a group of circuits on only, off only, or to a mixed state. Each time the button is pressed, the circuits will go to the programmed setting. If they are already at the desired setting, they will not change. A pattern can also be used to control contact closure outputs.
- **Timeclock** - Enables or disables the time clock. When the time clock is disabled, no time clock events occur. When enabled, scheduled time clock events occur. By default, time clock events are enabled.
- **Delay To Off** - The button press will turn the circuit(s) off, after the set amount of time (1 - 90 minutes).



STEP 3 (continued)

Configure the Wallstations

- From the **Main Menu** use \blacktriangle and \blacktriangledown to highlight **Control Station Setup** and press \square or \otimes (OK).
- Use \blacktriangle and \blacktriangledown to choose the **Address** of the Wallstation you would like to configure and press \square or \otimes (Next).
- Use \blacktriangle and \blacktriangledown to set the **Type** to **Wallstation** and press \square or \otimes (Next).
- Use \blacktriangle and \blacktriangledown to select the **Number** of buttons and press \square or \otimes (Next).
- Use \blacktriangle and \blacktriangledown to select which **Button** to program and press \square or \otimes (Next).
- Use \blacktriangle and \blacktriangledown to select the desired **Action: Toggle, Pattern or Delay To Off** and press \square or \otimes (Next). See the beginning of STEP 3 for a description of the different programmable actions.

If Programming a Toggle or Delay to Off Action

- The screen will show all of the circuits. Unassigned circuits are presented as numbers with hash lines going through them. Move the cursor to a circuit number and press \square to toggle between **Assigned** and **Unassigned** (dashed). All circuits can be toggled by pressing \square on the All option. When the circuits are programmed press \otimes (Done) to update the database.

Note: The circuits displayed can be configured only to show the circuits in your system by changing the system size. **System size** is found in **Panel Setup** from the **Main Menu**. System size is 128 by default.

B. **Control Station Setup**

| | |
|------------|------|
| Address 01 | |
| Address 02 | |
| Address 03 | |
| Address 04 | |
| Previous | Next |

D. **Address 03 Setup**

| | |
|-----------------------|------|
| Number of Buttons: 03 | |
| Previous | Next |

E. **Address 01 Setup**

| | |
|-----------|------|
| Button 01 | |
| Button 02 | |
| Button 03 | |
| Previous | Next |

F. **Address 03 Button 01**

| | |
|----------------|------|
| Action: Toggle | |
| Previous | Next |

G. **Assign Circuits**

| | | | |
|----------------------------|------|-----|-----|
| PRESS OK TO SELECT CIRCUIT | | | |
| ALL Circuits | | | |
| 001 | 002 | 003 | 004 |
| 005 | 006 | 007 | 008 |
| Previous | Done | | |



STEP 3 (continued)

If Programming a Pattern:

- H. The circuits will appear in a list. Use and to scroll through the list and and to change the setting for that circuit. The options are **On**, **Off**, and **---** (Unaffected). If a circuit is set to Unaffected, this Button will not change its state. To change the setting for all circuits, highlight All Circuits and use and to change the setting.

Note: The circuits displayed can be configured only to show the circuits in your system by changing the system size. **System size** is found in **Panel Setup** from the **Main Menu**. System size is 128 by default.

- I. This screen will only appear if control station devices with contact closure outputs (OMX-AV or OMX-CCO-8, covered later in STEP 3) have been entered into the system.

Use and to scroll through the list to select the output to be associated with the button being programmed. The letter "A" followed by a two digit number at the beginning of each line refers to the the address of the device. Use and to change the setting for that output between: **maintained open**, **momentary open**, **momentary close**, **maintained close** or **---** (unaffected). When the outputs are programmed press or (Done) to update the database.

Example:

A01 CCO3: is address1 contact closure output 3

H.

| Select Circuit | |
|----------------|-------|
| All Circuits | - --- |
| 01 | - OFF |
| 02 | - ON |
| 03 | - --- |
| Cancel | Next |

I.

| Select CCO Address | |
|--------------------|------------------|
| A01 CCO1 | -Maintained Open |
| A01 CCO2 | - --- |
| A01 CCO3 | - --- |
| A01 CCO4 | - --- |
| Previous | Done |

If Programming a Timclock Enable or Disable

- J. Enable or disable will appear in the highlighted box. Use and to select **Enable** or **Disable**. Press or (Done) to update the database.

J.

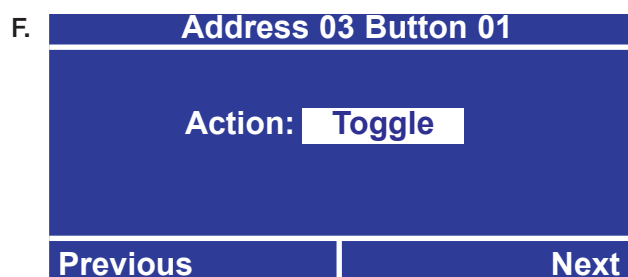
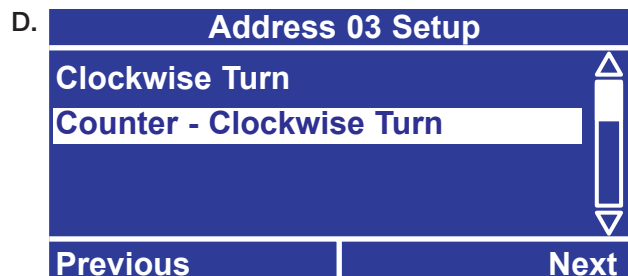
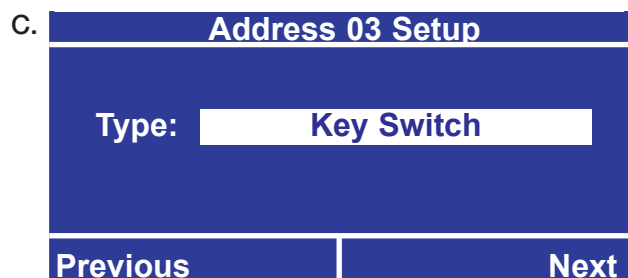
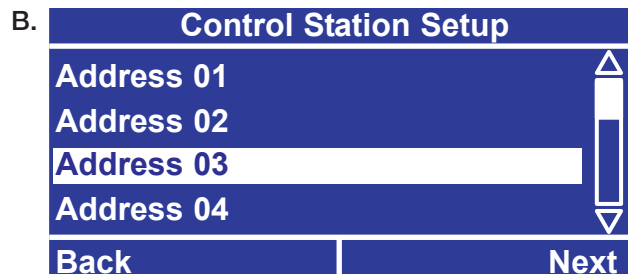
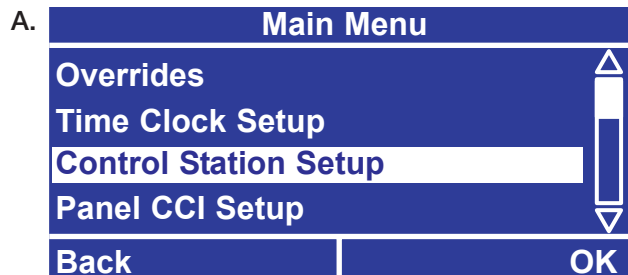
| Address 03 Button 01 | |
|----------------------|--------|
| Timeclock: | Enable |
| Previous | Done |



STEP 3 (continued)

Key Switch Wall Control (NTOMX-KS)

- From the **Main Menu** use and to highlight **Control Station Setup** and press or (OK).
- Use and to highlight the address of the **NTOMX-KS** you would like to configure and press or (Next).
- Use and to change control type to **NTOMX-KS** and press or (Next).
- Use and to highlight which turn direction to program and press or (Next). Each key switch can be programmed for a clockwise and/or counter-clockwise turn.
- Use and to select the type of action. The choices are **Pattern**, **Toggle**, **Delay To Off**, and **No Action**. Press or (Next). See the beginning of STEP 3 for an explanation of the various types.
- Program **Pattern**, **Toggle**, and **Delay to Off** using the same screen methods as configuring a button on a Wallstation. This is shown in more detail previously in STEP 3.





STEP 3 (continued)

Configure Contact Closure Inputs on OMX-AV

- From the **Main Menu** use and to highlight **Control Station Setup** and press or (OK).
- Use and to highlight the address of the **OMX-AV** you would like to configure and press or (Next).
- Use and to change control **Type** to **OMX-AV** and press or (Next).
- Use and to highlight which **Contact Closure Input (CCI)** to program and press or (Next). Each OMX-AV provides 5 inputs. Select no CCI's if only the CCO's are being used.
- Use and to select whether you will define an action for when the contact opens or when it closes and press or (Next).

Note: If there should be an action for both, first Setup the open action, then follow this procedure again but choose close action.
- Use and to select the type of action. The choices are **Pattern**, **Toggle**, **Delay To Off**, and **No Action** and press or (Next). See the beginning of STEP 3 for an explanation of the various types.
- Program **Pattern**, **Toggle**, and **Delay to Off** using the same screen methods as configuring a button on a Wallstation. This is shown in more detail previously in STEP 3.

A. **Main Menu**

| | |
|------------------------------|----|
| Overrides | |
| Time Clock Setup | |
| Control Station Setup | |
| Panel CCI Setup | |
| Back | OK |

B. **Control Station Setup**

| | |
|-------------------|------|
| Address 01 | |
| Address 02 | |
| Address 03 | |
| Address 04 | |
| Previous | Next |

C. **Address 03 Setup**

| | |
|---------------------|------|
| Type: OMX-AV | |
| Previous | Next |

D. **Address 03 OMX-AV**

| | |
|---------------|------|
| No CCI's | |
| CCI 01 | |
| CCI 02 | |
| CCI 03 | |
| Previous | Next |

E. **Address 03 CCI 2 Setup**

| | |
|--------------------|------|
| Open Action | |
| Closure Action | |
| Previous | Next |



STEP 3 (continued)

Integration through RS232

- From the **Main Menu** use and to highlight **Control Station Setup** and press or (OK).
- Use and to highlight the address of the **OMX-RS232** you would like to configure and press or (Next).
- Use and to change control **Type** to **OMX-RS232** and press or (Next).
- Use and to select **Yes** or **No** if this RS232 reports button actions and press or (Done).

Using the GRAFIK 6000 RS232 protocol.

The OMX-RS232 is packaged and shipped with a protocol document that details how to execute each command. Only a subset of the commands in that document work with the *Softswitch128* switching system and they are listed below:

Command Softswitch128 Function

| | |
|---------------------------|-------------------------------------|
| Fade to Level: | Sets a pattern or time delay to off |
| Multilevel: | Flash circuits |
| Get Level: | Request level |
| Simulate Press: | Simulate button press |
| Simulate Release: | Simulate button release |
| Enable Control Stations: | Enable control stations |
| Disable Control Stations: | Disable control stations |
| Set Clock: | Sets time and date |
| Time Now: | Request time |
| Astro Times: | Request sunrise / sunset times |
| Date: | Request date |
| Enable Timeclock: | Enable timeclock |
| Disable Timeclock: | Disable timeclock |

A. **Main Menu**

| |
|------------------------------|
| Overrides |
| Time Clock Setup |
| Control Station Setup |
| Panel CCI Setup |
| Back |
| OK |

B. **Control Station Setup**

| |
|-------------------|
| Address 01 |
| Address 02 |
| Address 03 |
| Address 04 |
| Previous |
| Next |

C. **Address 03 Setup**

| |
|------------------------|
| Type: OMX-RS232 |
| Previous |
| Next |

D. **Address 03 Setup**

| |
|---|
| Does this RS232 report button actions? |
| Yes |
| Previous |
| Done |



STEP 4

Time Clock Events Overview

Time clock events allow the system to turn circuits on or off automatically at either a specific time of day or at a time relative to sunrise or sunset. 47 schedules are available - one for every day of the week plus 40 holiday schedules. There can be a total of up to 500 events and no more than 25 on any day/holiday. Holiday schedules always override the weekly schedule.

Before proceeding with this step, complete the time clock event table located in the back of this manual. Record when each event should occur and what it should do. The options for time clock events are:

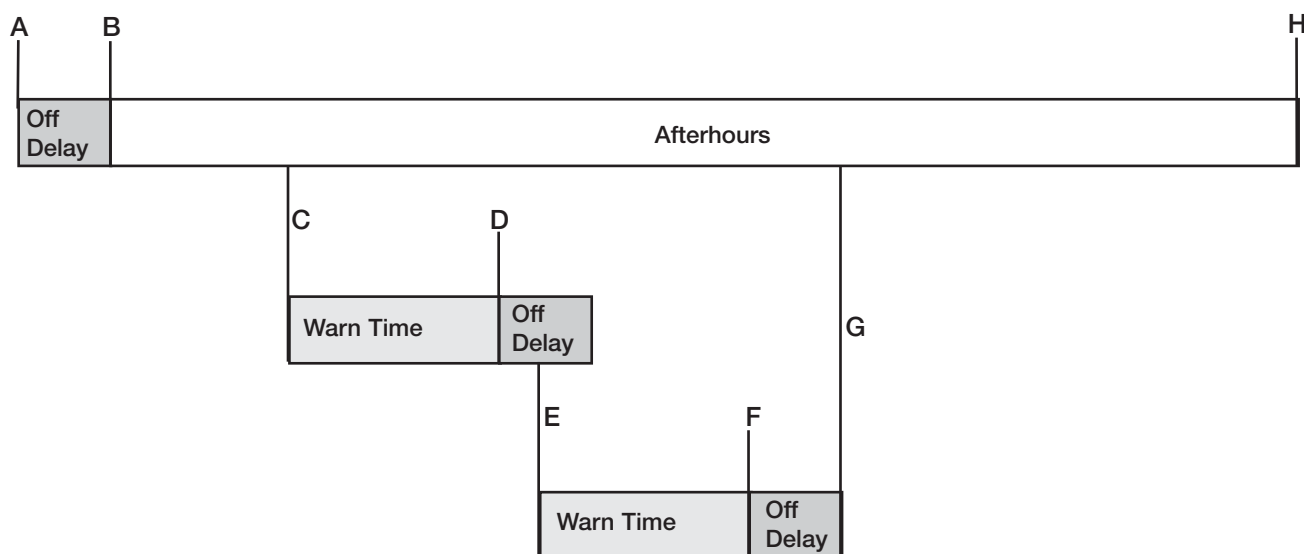
- **Pattern** - Turns a circuit or a group of circuits on, off, or to a mixed state.
- **Enable or Disable Controls**
- **Afterhours Start**- Starts an energy saving mode that is used to turn lights off at the end of normal hours until the beginning of the next day. First, a lighting pattern is recalled for the space (**Afterhours Start**). Lights can be programmed to turn **ON**, **OFF**, **OFF No Flash**, or remain unaffected '---'. Circuits programmed to turn **OFF** will flash to warn any occupants that they are about to turn off (the number of flashes specified by **Flash Count**). Lights remain on to allow the occupant a chance to press a button to keep lights on (length of time is programmed as **Off Delay**). Finally, if a button has not been pressed, lights turn off automatically. Circuits programmed to **OFF No Flash** follow a similar sequence except they will not flash.

If a button is pressed, occupancy sensor is tripped or another timeclock event occurs while the system is in **Afterhours** mode or in **Off Delay**, lights will turn on and remain on for the programmed number of minutes, (**Warn Time**) then flash (number specified by **Flash Count**) and then turn off after the **Off Delay**.

- **Afterhours End** - When afterhours is over the lights are left at their current state.

Example Scenario for Afterhours:

- Afterhours start event - afterhours pattern recalled. If not already off, the circuits that are going to turn off start to flash and Off Delay starts counting down.
- System enters Afterhours.
- Button is pressed to turn lights on.
- Lights flash notifying they will be turning off soon.
- Button is pressed to keep lights on.
- Lights flash notifying they will be turning off soon.
- Lights turn off.
- Afterhours end event.





STEP 4 (continued)

Adding Weekly Events

- From the **Main Menu** use and to highlight **Time Clock Setup** and press or (OK).
- Use and to highlight **Add Event** and press or (OK).
- Use and to highlight **Add Weekly Event** and press or (OK).
- Use and to select the **Day** to which you would like to add the event and press or (Next).
- Use and to select **Fixed Time** or at a time relative to **Sunset** or **Sunrise**. Press to adjust the time or offset. Adjust the time using and and press or (Next) to save changes.
- Use and to select the desired action (**Pattern**, **Enable/Disable Controls**, **Afterhours Start/End**) and press or (Next). See previous page for an explanation of the various types.

Note: For **Afterhours End**, this step is complete.

- For **Afterhours Start** or **Pattern**, circuits will appear in a list. Use and to scroll through the list, and to change the setting for that circuit. The options are --- (Unaffected), **On**, **Off**, and **Off No Flash**. Press or (Done) when finished to save changes.

Note: If a circuit is set to unaffected, this event action will not change the circuit's state. To change the setting for all circuits, highlight **All Circuits** and press and .

- This screen will only appear if this is a pattern event and control station devices with contact closure outputs (OMX-AV or OMX-CCO-8) have been entered into the system.

Use and to scroll through the list to select the output to be associated with the button being programmed. The letter "A" followed by a two digit number at the beginning of each line refers to the address of the device. Use and to change the setting for that output between: **maintained open**, **momentary open**, **momentary close**, **maintained close** or --- (unaffected). When the outputs are programmed press or (Done) to update the database.

Example:

A01 CCO3: is address 1, contact closure output 3.

- After pressing **Done**, you will be asked if you want to program another event on that day. Continue programming all Time Clock Events as desired or add/remove/edit time clock events at a future time.

B. **Time Clock Setup**

| | |
|----------------------|----|
| Setup Clock | |
| Add Events | |
| Copy Events | |
| View / Modify Events | |
| Back | OK |

E. **Event Time**

| | |
|----------|----------|
| Type | Time |
| Fixed | 08:00 AM |
| Previous | Next |

Event Time

| | |
|----------|-------------------|
| Type | Time |
| Sunrise | +00:15 HH : MM |
| Previous | Next |

G. **Assign Circuit**

| | | |
|--------------|----------------|--|
| All Circuits | ---- | |
| 01 | - OFF | |
| 02 | - ON | |
| 03 | - OFF No Flash | |
| Previous | Done | |

H. **Select CCO Address**

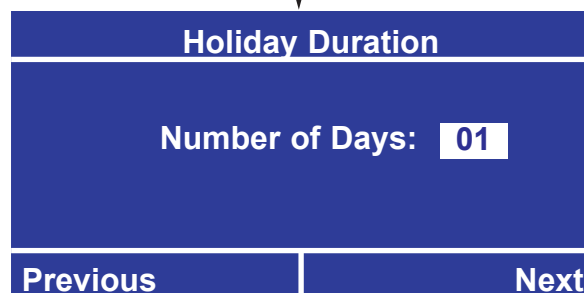
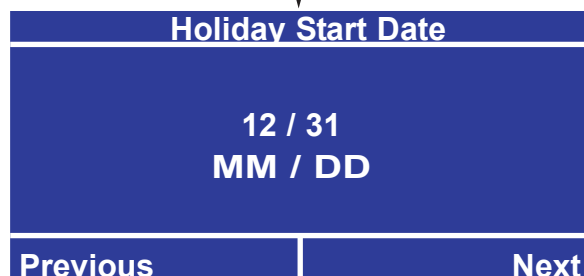
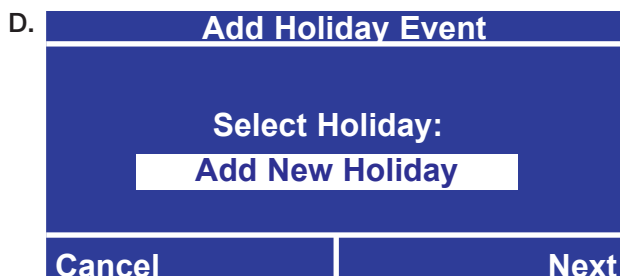
| | | |
|-----------------|------------------|--|
| A01 CCO1 | -Maintained Open | |
| A01 CCO2 | ---- | |
| A01 CCO3 | ---- | |
| A01 CCO4 | ---- | |
| Previous | Done | |



STEP 4 (continued)

Adding Holiday Events

- A. From the **Main Menu** use and to highlight **Time Clock Setup** and press or (OK).
- B. Use and to highlight **Add Event** and press or (OK).
- C. Use and to highlight **Add Holiday Event** and press or (OK).
- D. Use and to select the holiday you would like to add the event to and press or (Next).
 - If you need to define a new holiday, select **New Holiday**.
 - Enter the date for the holiday.
 - Enter the duration of the holiday. For example, New Year's might be defined as starting on December 31st and lasting 2 days (Dec 31 and Jan1).
- E. Continue through steps **E** through **I** for **Adding a Weekly Event** on the previous page.

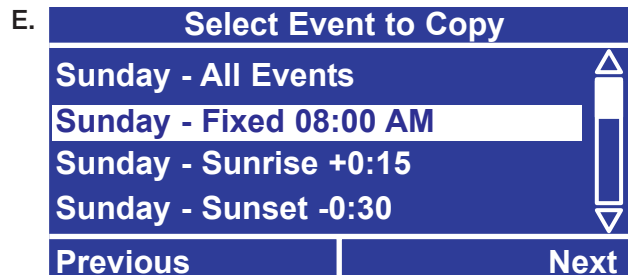




STEP 4 (continued)

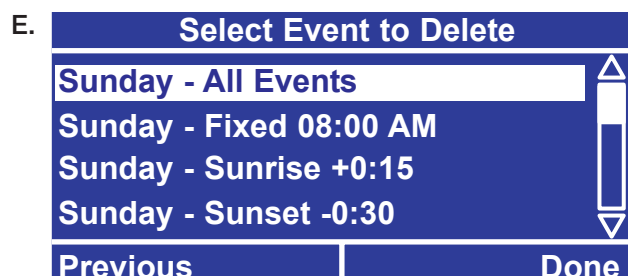
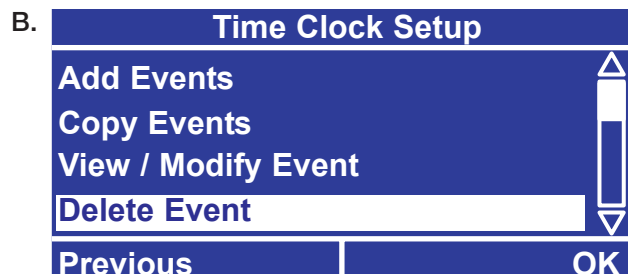
Copying Events

- From the **Main Menu** use and to highlight **Time Clock Setup** and press or (OK).
- Use and to highlight **Copy Event/Schedule** and press or (OK).
- Use and to highlight **Copy Weekly Event** or **Copy Holiday Event** and press or (OK).
- Use and to select the day of the week or the holiday schedule you would like to copy from and press or (Next).
- Use and to select the event you would like to copy and press or (Next). If you would like to copy all events for that schedule, select **All Events**.
- Use and to select the day you would like to paste to and press or (Next). Holidays appear after the weekdays in the list. If you would like to add a new holiday, select **New Holiday** at the end of the list.
- If you would like to paste this event or Schedule to another day, select **Yes** when prompted to "Paste Again?".



Deleting Events

- From the **Main Menu** use and to highlight **Time Clock Setup** and press or (OK).
- Use and to highlight **Delete Event** and press or (OK).
- Use and to highlight **Delete Weekly Event** or **Delete Holiday Event** and press or (OK).
- Use and to select the day of the week or the holiday schedule you would like to delete from and press or (Next).
- Use and to select the event you would like to delete and press or (Next). If you would like to delete all events for that schedule, select **All Events**.
- You will be asked to confirm deleting the event(s). To confirm press **Yes**, otherwise press **No**.
- If you would like to delete another event from that schedule, select **Yes** when prompted to "Delete Another?".

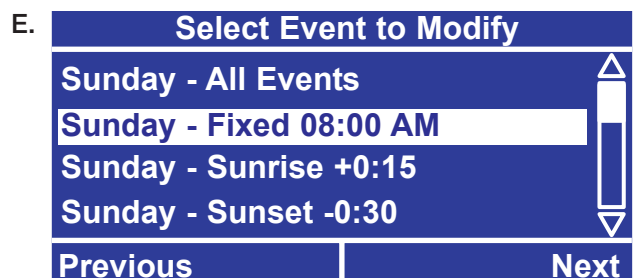
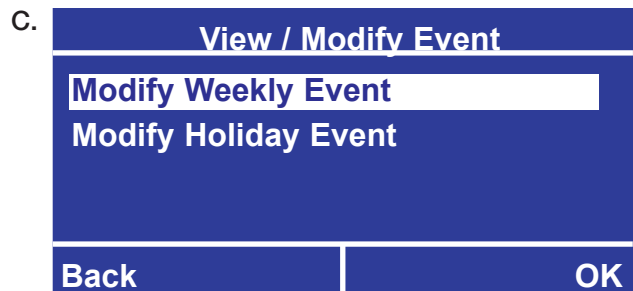
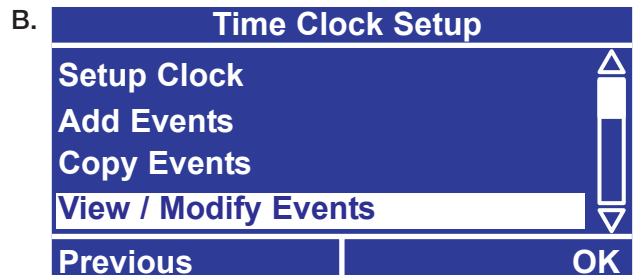




STEP 4 (continued)

Viewing / Modifying Events

- From the **Main Menu** use and to highlight **Time Clock Setup** and press or (OK).
- Use and to highlight **View/Modify Event** and press or (OK).
- Use and to highlight **Modify Weekly Event** or **Modify Holiday Event** and press or (OK).
- Use and to select the day of the week or the holiday schedule you would like to view or modify and press or (Next).
- Use and to select the day you would like to view or modify to and press or (Next).
- You will now have the opportunity to modify this event. Refer to **Adding Weekly Events** or **Adding Holiday Events** for more details on how to do this.

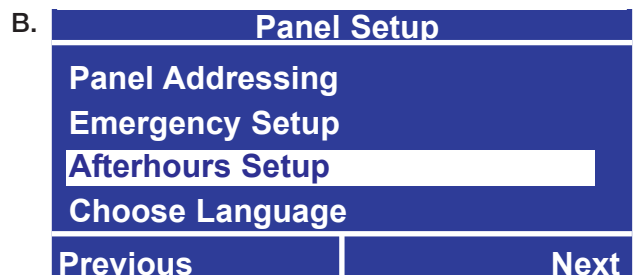
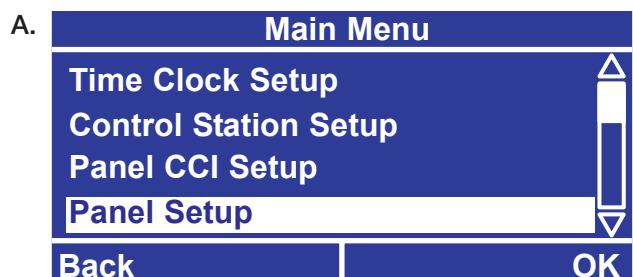


Afterhours Setup

Note: See page 26 for an explanation of Afterhours.

- From the **Main Menu** use and to highlight **Panel Setup** and press or (OK).
- Use and to choose **Afterhours Setup** and press or (OK).
- Use and to enter **Warn Time**, from 1 to 180 minutes and press or (Next).
- Use and to enter **Flash Count**, from 1 to 15 flashes and press or (Next).
- Use and to enter **Off Delay**, from 1 to 180 minutes and press or (Done).

Note: 120 minutes is the maximum allowable off delay in California Title 24.





STEP 5

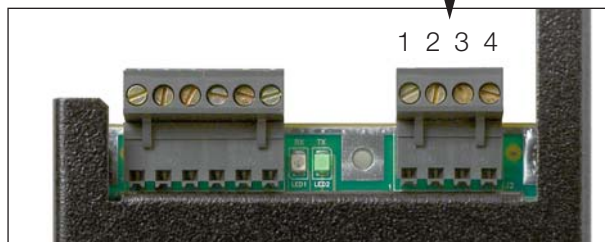
Panel Contact Closure Inputs

Before proceeding with this Step, complete the control station table located in the back of this manual. Record how each local contact closure should function. Designate them: Panel 1 CCI 1 Opening, Panel 1 CCI 1 Closing, Panel 1 CCI 2 Opening, Panel 1 CCI 2 Closing, and continue for Panel 2 through Panel 8 as required. The *Softswitch128* controller has two contact closure inputs, see picture below. Separate actions can be defined for the opening and closing of the contact. The choices are:

- **Toggle** - Each press of the button (or contact closure) toggles the assigned circuits between on and off. If the assigned circuits are in a mixed state (some on and some off), the circuits will turn on.
- **Pattern** - A Pattern can be used to turn a circuit or a group of circuits on only, off only, or to a mixed state. Each time the button is pressed, the circuits will go to the programmed setting. If they are already at the desired setting, they will not change. A pattern can also be used to control contact closure outputs.
- **Delay To Off** - The button press will turn the circuit(s) off after the set amount of time (1 - 90 minutes). If the button is pressed again before the delay has expired, the circuit(s) will turn off.

Panel CCI Terminal Markings

- 1: 15VDC or 24VDC CCI 1
- 2: Common CCI 1
- 3: 15VDC or 24VDC CCI 2
- 4: Common CCI 2



Softswitch128 Controller Top



STEP 5 (continued)

Configure Contact Closure Inputs

- From the **Main Menu** use and to highlight **Panel CCI Setup** and press or (OK).
- Use and to choose which Contact Closure Input you would like to configure and press or (OK).
- Use and to select whether you will define an action for when the **Contact Opens** or for when it **Closes** and press or (Next).
- Use and to choose the type of Action. The choices are **Pattern**, **Toggle**, **Delay To Off**, and **No Action**. See beginning of STEP 5 for description of the different types.
- When programming a toggle or delay to off action, the screen will show all of the circuits. Unassigned circuits will appear with lines through the numbers. Use , , , and to move the cursor over the circuit to be selected. When the circuit number is highlighted, press to toggle between **Assigned** and **Unassigned**. All circuits can be toggled by pressing on the all option. When the circuits are programmed, press (Done) to update the database.
- When programming a pattern, the circuits will appear in a list. Use and to scroll through the list, and to change the setting for that circuit. The options are **On**, **Off**, and **---** (Unaffected). If a circuit is set to unaffected, this button will not change its state. To change the setting for all circuits, highlight all circuits and change the setting. When the circuits are programmed, press or (Done) to update the database.
- This screen will only appear if programming a pattern and control station devices with contact closure outputs (OMX-AV or OMX-CCO-8) have been entered into the system.

Use and to scroll through the list to select the output to be associated with the button being programmed. The letter "A" followed by a two digit number at the beginning of each line refers to the address of the device. Use and to change the setting for that output between: **maintained open**, **momentary open**, **momentary close**, **maintained close** or **---** (unaffected). When the outputs are programmed press or (Done) to update the database.

Example:

A01 CCO3: is address 1 contact closure output 3.

B.

C.

E.

Toggle and Delay to Off Assign Circuits Screen

F.

Pattern Programming Screen

G.

CCO Programming Screen - for Patterns Only



STEP 6

Setup Emergency Power Mode

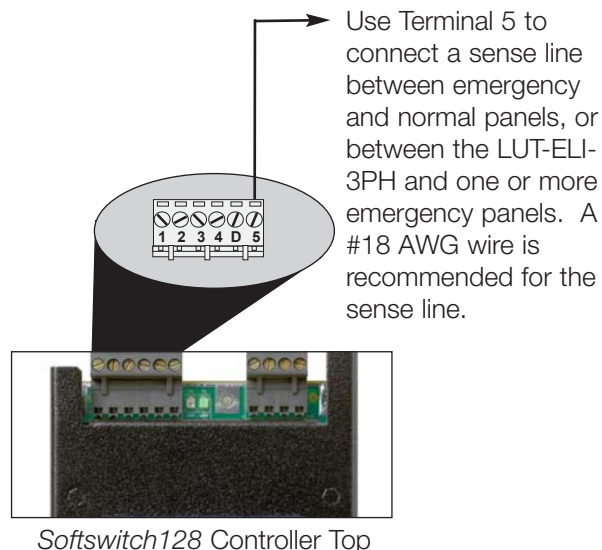
This step is only performed if an emergency pattern is needed when normal power is lost. All control station inputs and time clock events are ignored while in emergency power mode. This step will define if the panel has emergency circuits and how to configure the emergency pattern.

- Identify panels fed by normal (non-essential) power. Move their **emergency switches** to the left position (see illustration below).
- For all the emergency (essential) lighting panels, move the **emergency switches** to the right position (see illustration below).
- The essential and non-essential panels must be connected by a sense line wired to **terminal 5** on the link connector on the *Softswitch128* controller (see illustration below). For wiring details, see the Installation Guide.

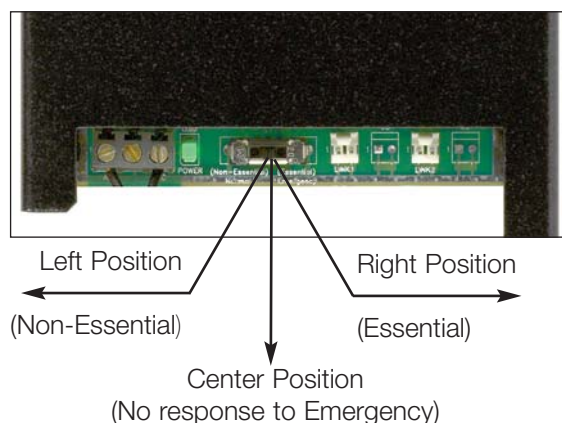
In this configuration, the emergency (essential) lighting panel will “sense” the normal panels’ power. When normal power is lost, the emergency panel will go to the emergency pattern (factory set to all circuits On). When normal power is restored, lighting circuits and contact closure outputs return to their previous state.

Notes:

- If UL 924 certification is required, the Lutron Emergency Lighting Interface (LUT-ELI-3PH) may be used to meet code. The LUT-ELI-3PH senses the normal (non-essential) line voltage on all three phases (3PH) of normal power. When one or more phases of power are lost, the LUT-ELI-3PH will send a signal to **terminal 5** on the *Softswitch128* controller(s). When the **emergency switch** is set to the right position (essential) the emergency pattern will be recalled. The LUT-ELI-3PH can be used with one or multiple panel systems.
- Loss of normal power can be simulated by turning off all connected normal (non-essential) panels’ control breaker.
- When the emergency switch is in its center position (as shipped), terminal 5 the panel does not respond to emergency.



Three position **Emergency Switch** is located at the bottom of the *Softswitch128* controller.





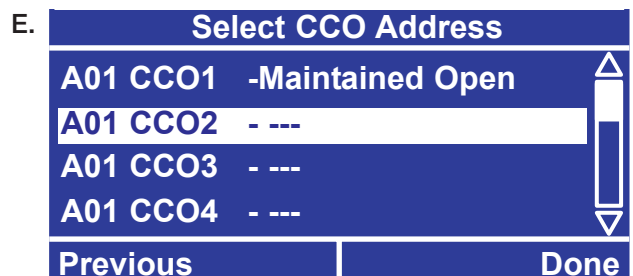
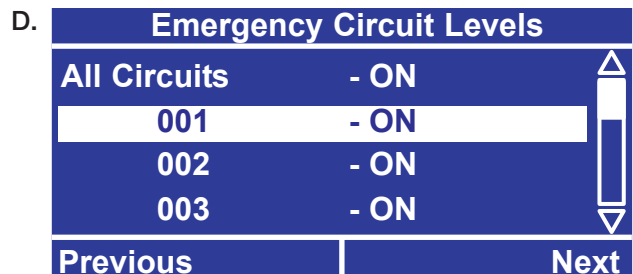
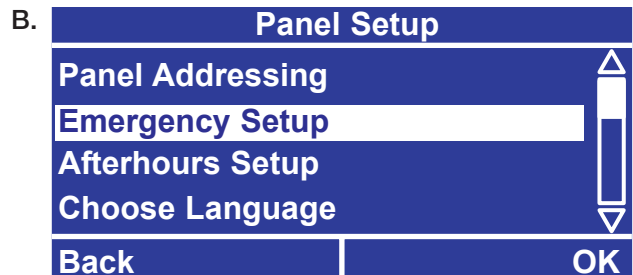
STEP 6 (continued)

Changing the Emergency Override Levels

- A. From the **Main Menu** use and to highlight **Panel Setup** and press or (OK).
- B. Use and to choose **Emergency Setup** and press or (OK).
- C. Use and to select **Yes** when asked if the panel has Emergency Functionality press or (Next).
- D. Use and to scroll through the list, and use and to change the setting for that circuit. The options are **On**, **Off**, and **---** (Unaffected). To change the setting for all circuits, highlight All Circuits.
- E. This screen will only appear if control station devices with contact closure outputs (OMX-AV or OMX-CCO-8) have been entered into the system.
Use and to scroll through the list to select the output to be associated with the button being programmed. The letter "A" followed by a two digit number at the beginning of each line refers to the address of the device. Use and to change the setting for that output between: **maintained open**, **momentary open**, **momentary close**, **maintained close** or **---** (unaffected). When the outputs are programmed press or (Done) to update the database.

Example:

A01 CCO3: is address 1 contact closure output 3.



Congratulations!

Your switching system
is ready to use!

Now:

Keep the Control Location Table Directory
with each *Softswitch128* Panel.

Give the customer a copy of this Manual.

The rest of this guide is
REFERENCE MATERIAL.

Lutron is very interested in your comments regarding this Setup
Guide and its products. Please call (800) 523-9466 with any
comments or suggestions. Thank you for your help.



Overrides

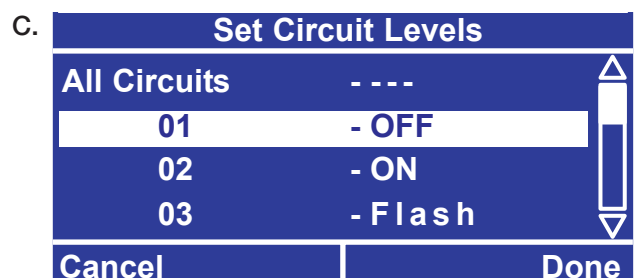
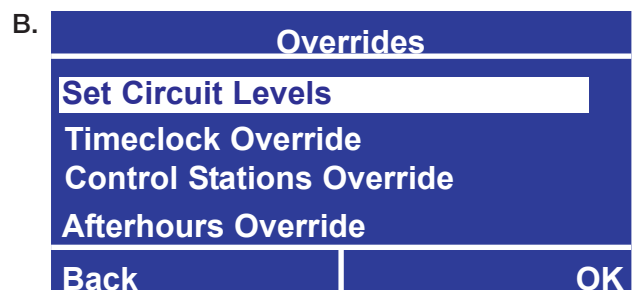
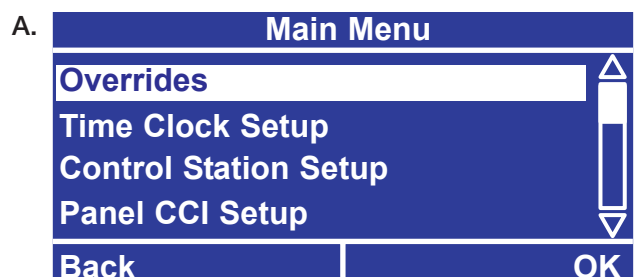
Overrides

The *Softswitch128* controller allows three types of overrides:

- **Circuit Level Override** - Directly set whether a circuit is on or off. Override occurs immediately and remains in effect as long as the **Set Circuit Levels** screen is displayed on the controller. Pressing **DONE** to exit the **Set Circuit Levels** screen will keep the circuits at the override setting until they are changed by a control station input or time clock event. Press **CANCEL** to exit the **Set Circuit Levels** screen and the lights will return to the previous state.
- **Time Clock Override** - Enable or disable all time clock events. When the time clock is re-enabled, missed events do not occur; control starts with the next scheduled event.
- **Control Station Override** - Enable or disable all control stations. When control stations are re-enabled, button presses or contact closures will be processed again.

To Override the Circuits

- From the **Main Menu** use and to highlight **Overrides** and press or (OK).
- Use and to choose **Set Circuit Levels** and press or (OK)
- The circuits are listed with their current state displayed (On or Off). Use and to scroll through the list, and to change the setting for that circuit. The options are **On**, **Off**, and **Flash**. Flash cycles the circuit between On and Off once every few seconds - useful for locating a circuit in the space. To change the setting for all circuits, highlight All Circuits and change the setting. When the circuits are programmed press or (Done) to update the database.
Note: Changes take effect immediately. As long as this screen is visible, the circuits will stay at the set state. This setting overrides all other inputs (Time Clock Events, Button Presses, Contact Closure Inputs, etc.). Pressing **DONE** to exit the **Set Circuit Levels** screen will keep the circuits at the override setting until they are changed by a control station input or time clock event. Press **CANCEL** to exit the **Set Circuit Levels** screen and the lights will return to the previous state.
- To exit the **Set Circuit Levels** screen and keep the changed settings, press or (Done). If you would like the circuits to go back to what they were before using the **Set Circuit Levels** screen, press (Cancel).

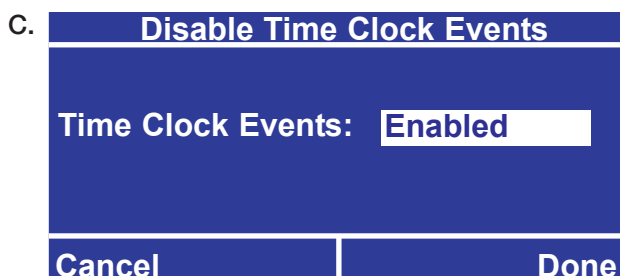
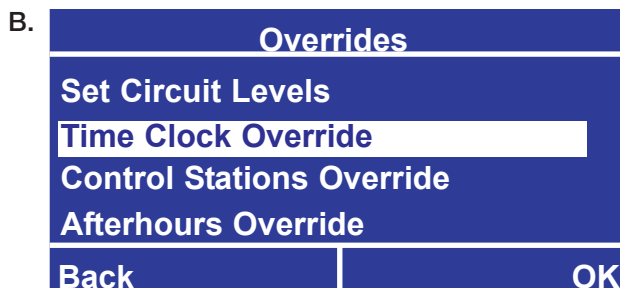




Overrides (continued)

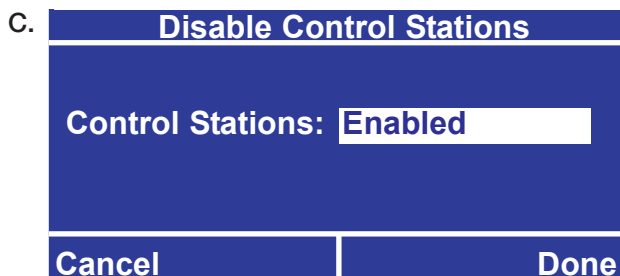
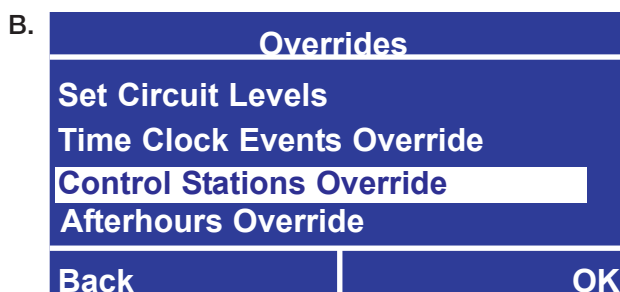
To Disable or Enable all Time Clock Events

- From the **Main Menu** use and to highlight **Overrides** and press or (OK).
- Use and to choose **Time Clock Override** and press or (OK).
- Use and to change the setting to **Disabled** or **Enable** and press or (Done).



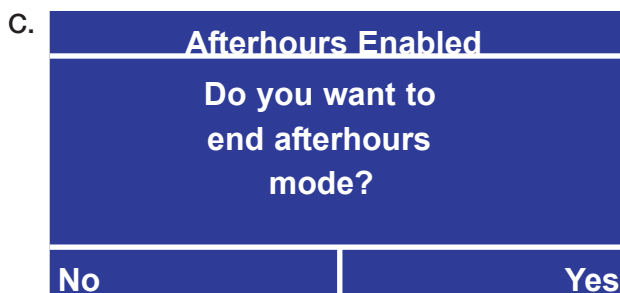
To Disable or Enable all Control Stations

- From the **Main Menu** use and to highlight **Overrides** and press or (OK).
- Use and to choose **Control Stations Override** and press or (OK).
- Use and to change the setting to **Disabled** or **Enable** and press or (Done).



To End Afterhours Mode

- From the **Main Menu** use and to highlight **Overrides** and press or (OK).
- Use and to choose **Afterhours Override** and press or (OK).
- The title says Afterhours Enabled or Afterhours Disabled. To end afterhours mode press or (Yes).





Locking the Controller

Locking The Controller

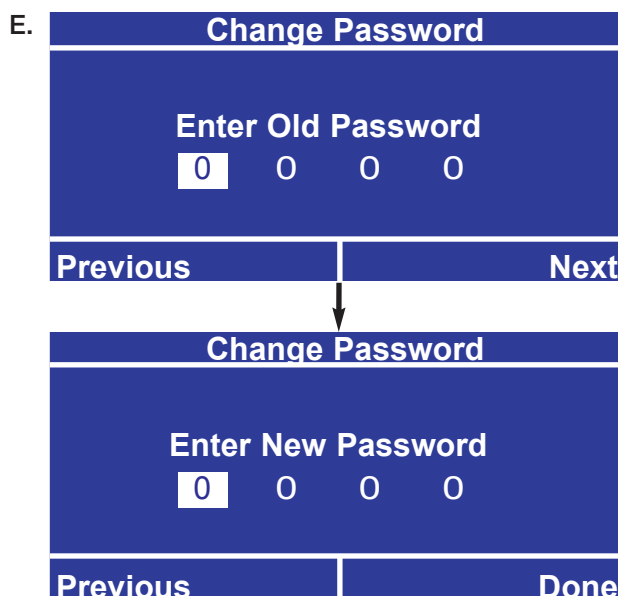
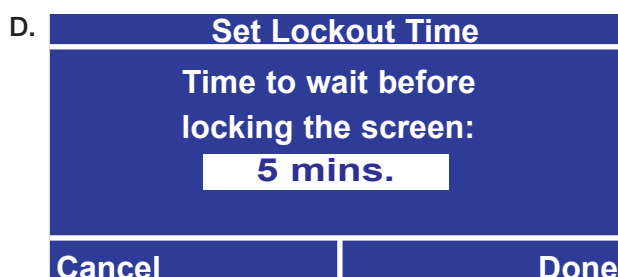
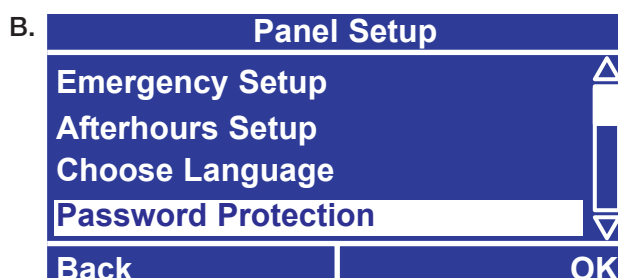
The *Softswitch128* controller can be password protected to prevent unauthorized changes to settings such as time clock events, control station assignments, etc. After no button presses for the lockout time, the controller will automatically lock. A 4-digit password must be set when locking is configured. This password must be entered before any of the menus can be accessed when the controller is locked. This password must also be entered to change the password.

To Set the Controller to Lock

- From the **Main Menu** use and to highlight **Panel Setup** and press or (OK).
- Use and to choose **Password Protection** and press or (OK).
- Use and to select either **Change Password** or **Set Lockout Time** and press or (OK).
- If **Set Lockout Time** is selected, use and to set the time of inactivity (no button presses on the controller) to wait before locking and press or (Next). If you do not want the controller to lock, select **Do Not Lock**.
- If **Change Passwords** is selected, enter the current password (default is 0 0 0 0). Use and to select the digit to change, and to change each value. When you have entered the password press or (Next). Enter the new password, then press or (Next). Then re-enter the new password for confirmation and press or (Done).

The controller will now lock after the set amount of time.

Note: If you have forgotten the Password, contact Lutron Technical Support to unlock the controller.





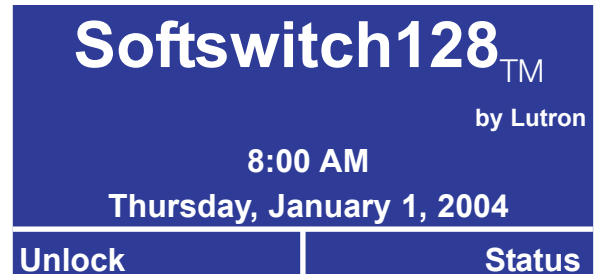
Locking the Controller (continued)

Unlocking the Controller

If the controller has been locked (see Locking the Controller), you will be prompted to enter the Password before the Main Menu is Activated.

- A. Press **⓪** (Unlock)
- B. Use **⏪** and **⏩** to select the digit to change, **▲** and **▼** to change each value. When you have entered the Password, press **⓪** or **Ⓜ** (OK). If you have forgotten the Password, contact Lutron Technical Support at 1(800) 523-9466 to unlock the controller.

B.




C.





Troubleshooting



| Symptom | Likely Cause | Action(s) for Remedy |
|-----------------------------------|---|--|
| Circuits always ON or always OFF. | (a) Bypass jumpers have not been removed. | (a) Visually inspect the terminal blocks. If the metal bypass jumpers are installed, see the Softswitch128 Installation Guide for proper circuit test and jumper removal procedure. |
| | (b) Controller is not powered. | (b) The 'POWER' LED at the bottom of the controller should be lit (see the Controller Overview section of this guide for location). If it is not, there is no power, and the feed should be checked. |
| | (c) Controller is in the override screen. | (c) Press the  home button to exit the override screen. |
| | (d) Emergency is active. | (d) Disable the emergency function by sliding the emergency switch at the bottom of the controller to the center position on all panels. |
| | (e) Circuit breaker is OFF. | (e) Turn the breaker on to verify proper power supply to each circuit. The breaker could be inside the <i>Softswitch128</i> panel or in a separate distribution panel if the <i>Softswitch128</i> panel is a feed-through type. |
| | (f) Duplicate panel addresses. | (f) Check that all panel addresses are unique. The panel address is listed on the home screen. To change addresses, see STEP 1 in this guide for more information. |
| Circuit breakers are tripping. | (a) Circuits are overloaded. | (a) Check load continuity (between SH and N) with a meter, and verify that there is not a short. If shorted, repair the miswire or load failure. If not shorted, reset the breaker and measure the current on the circuit. If greater than 16A, the circuit is overloaded and should be remedied by re-lamping to smaller loads or by "splitting" the circuit. |



Troubleshooting




| Symptom | Likely Cause | Action(s) for Remedy |
|---|---|---|
| Control station buttons do not work. | (a) Link has a panel or control address conflict. | (a) Check all control station addresses, and ensure that there are no duplicate settings. See the Softswitch128 Installation Guide for more information. |
| (and / or) Control station LED's are flashing. | (b) Control station is addressed incorrectly. | (b) Check the address of the non-working control station for correctness and uniqueness. See the Softswitch128 Installation Guide for more information. |
| (and / or) Control station buttons or CCI's work sporadically. | (c) Button is not programmed. | (c) Program the button's function at the controller. See STEP 3 in this guide for more information. |
| (and / or) Control station LED's do not turn on. | (d) Control stations are disabled. | (d) Enable the control stations using the LCD. See the Overrides section in this guide for more information. |
| | (e) Control station link is mis-wired. | (e) See the Softswitch128 Installation Guide for proper wiring. If a T-tap was created to wire a control to the control station link, it should be no longer than 8 ft. (2.44m). |
| | (f) Emergency is active. | (f) Disable the emergency function by sliding the emergency switch at the bottom of the controller to the center position on all panels. |
| Panel contact closure inputs do not work. | (a) Input closure/opening is not occurring. | (a) Check that the device controlling the input is opening or closing properly. |
| | (b) Input is programmed incorrectly. | (b) Program the contact closure input function on the controller. See STEP 3 in this guide for more information. Note that open and closure actions can be programmed to conflict with each other, and this may cause undesirable results. |
| | (c) Input is mis-wired. | (c) See the Softswitch128 Installation Guide for proper wiring. If a T-tap was created to wire a control to the control station link, it should be no longer than 8 ft. (2.44m). |



Troubleshooting




| Symptom | Likely Cause | Action(s) for Remedy |
|---|--|---|
| Time clock events do not occur. (and / or) Sunrise or sunset events do not occur at the correct time. | (a) Controller is in the override screen. (b) Timeclock is disabled. (c) Time is not set. (d) Date is not set correctly. (e) Location is not set correctly. (f) Holiday schedule is in effect. | (a) Press the  home button to exit the override screen. (b) Enable the timeclock. See STEP 4 in this guide for more information. (c) Set the time. See STEP 4 in this guide for more information. (d) Set the date. See STEP 4 in this guide for more information. (e) Set the location. See STEP 4 in this guide for more information. (f) Check if there is a holiday on the date the event is not occurring. See STEP 4 in this guide for more information. |
| Circuits are flashing erratically. | (a) Duplicate panel addresses. (b) Duplicate control station addresses. (c) Contact closure input is controlling the circuits. (d) Control station link is mis-wired. (e) Time clock events are occurring. (f) Afterhours mode is active. | (a) Check that all panel addresses are unique. The panel address is listed on the home screen. To change addresses, see STEP 1 in the this guide for more information. (b) Check that the address of the non-working control station is correct and unique. See the Softswitch128 Installation Guide for more information. (c) Confirm that the contact closure input into the system is in a steady state. Verify this at every panel contact closure input and at every OMX-AV. (d) See the Softswitch128 Installation Guide for proper wiring. If a T-tap was created to wire a control to the control station link, it should be no longer that 8 ft. (2.44m). (e) Check the time clock events for the day or holiday that coincide with the time of the erratic behavior. Holiday schedules override the 7 daily schedules. See STEP 4 of this guide for more information. (f) Afterhours mode may cause the lights to flash. See STEP 4 of this guide for more information. |



Troubleshooting



| Symptom | Likely Cause | Action(s) for Remedy |
|--------------------------------------|--|--|
| Contact closure outputs do not work. | (a) Controller is in the override screen. | (a) Press the  home button to exit the override screen |
| | (b) Control Stations are disabled. | (b) Enable the controls. See STEP 3 in this guide for more information. |
| | (c) Link has an address conflict. | (c) Check all control station address switches, and ensure that there are no duplicate settings. |
| | (d) Link is mis-wired. | (d) See the Softswitch128 Installation Guide for proper wiring. If a T-tap was created to wire a control to the control station link, it should be no longer than 8 ft. (2.44m). |
| | (e) System is programmed incorrectly. | (e) Check the action that is to cause the output, and ensure that it is programmed correctly. See STEP 3 in this guide for more information. |
| Emergency does not work. | (a) Sense lines are not connected. | (a) For emergency to work, the right most pin on the 6-pin connector at the top of the controller must be wired between panels. See the Softswitch128 Installation Guide for more emergency sense wiring information. |
| | (b) Emergency switch is not set correctly. | (b) Essential Emergency panels must have their emergency switch set to the rightmost position. Non-Essential Normal panels must have their emergency switch set to the leftmost position. |
| | (c) There must be at least one non-essential panel and at least one essential panel. | (c) Essential Emergency panels sense the presence of non-essential panels. Therefore, there must be at least one of each for emergency to work. |
| | (d) Emergency levels are not programmed. | (d) Emergency levels must be programmed using the LCD screen. To program the emergency levels, see STEP 6 in this guide for more information.. |
| LCD backlight is OFF. | (a) Screen saver is on. | (a) Press any button on the controller. |
| | (b) Controller is not powered. | (b) The 'POWER' LED at the bottom of the controller should be lit. If it is not, there is no power, and the circuit should be checked for power. |



Troubleshooting



| Symptom | Likely Cause | Action(s) for Remedy |
|---------------------------------|--|--|
| RS232 commands do not work. | (a) Baud rate is wrong. (b) See 'Control station buttons do not work' symptom of this troubleshooting section. | (a) Check that the baud rate switches on the OMX-RS232 are correct. The baud rate on the OMX-RS232 must match the baud rate of the sending device. |
| OMX-CCO8 is not working. | (a) Option switch on the OMX-CCO-8 is not set correctly. (b) See 'Control station buttons do not work' symptom of this troubleshooting section. | (a) All Option switches should be in the ON position. |
| OMX-AV outputs are not working. | (a) DIP switch 8 is not set correctly. (b) No external power supply on the outputs. (c) See 'Control station buttons do not work' symptom of this troubleshooting section. | (a) Set DIP switch 8 to ON. This sets the unit to handle maintained or momentary closures. (b) The OMX-AV requires the outputs to be powered by an external power supply (30VDC max). |
| Password is unknown. | (a) Contact Lutron Technical Support to unlock the controller. | (a) Contact information for technical support may be found at the end of this guide. |



Maintenance



Wallstations

Clean front surface with a soft towel moistened with a mild soap solution (non-ammonia based). Clean approximately every six months.



Caution! Do not spray cleaning solution onto Wallstation as it may reach internal components.

Softswitch128 Panels

1. Clean any dirt from air vent openings with a vacuum and check for any obstructions which may block air flow. Keep 12 in. (30.5 cm) above and below panels unobstructed.
2. If any extra wiring is brought into the power panel, thoroughly remove all metal chips, wire strands, insulation and other debris before reapplying power.
3. In the unlikely event of damage to switching equipment, turn off breakers, replace bypass jumpers, and turn on breakers. This will apply full power to fixtures and bypass the switching modules.



Glossary of Terms



- **Addressing** - how the controls on a link identify each other. Control stations are assigned an address between 1 and 32, using addressing switches 1 through 5 on the unit. Refer to the *Softswitch128* Installation Guide or control station instructions for further information.
- **Afterhours Mode** - a time clock mode typically used for turning selected lights off at the end of a building's normal business hours. The system first warns occupants that the lights are going to turn off by flashing the lights (flash count), then waits for a period of time (off delay) before automatically turning the lights off. If an occupant wants the lights to remain on (or turn back on), they can press a Wallstation button that controls those lights. The lights then remain on for a set amount of time (warn time) and the process repeats. This process continues until an afterhours end time clock event occurs.
- **Contact Closure Input (CCI)** - an input provided to the system in the form of two contacts completing a circuit (dry contact closure). This input could be from a button or a relay controlled by another system (fire alarm, building management system, etc.)
- **Open Action vs. Closed Action** - a CCI into the *Softswitch128* can be programmed to respond to the opening or closing of the contact.
- **Contact Closure Output (CCO)** - an output provided from the system in the form of two contacts completing a circuit (dry contact closure). This output could be from a OMX-AV, OMX-CCO-8, button, or time clock event.
- **Maintained vs. Momentary** - a CCO from the *Softswitch128* can be programmed to be a pulse (momentary) or constant (maintained) output.
- **Control Link** - the daisy-chained link of control stations wired to the *Softswitch128* panel(s).
- **Control Station** - a device located on the control link that provides low-voltage inputs and/or outputs, typically a Wallstation, keyswitch, OMX-CCO-8, OMX-RS232, or OMX-AV.
- **Emergency Mode** - a mode where all inputs to the system are disabled and circuits are turned on or off as set in the emergency mode setup. Activated via the emergency sense line.
- **Flash Count** - the number of times the lights will flash to warn an occupant that the lights are going to turn off automatically.
- **Holiday** - a special time clock schedule that is set to start on a specific date and last a set number of days. Overrides the normal weekly schedule.
- **Holiday Event** - a time clock event that is set to occur on a holiday.
- **LCD (Liquid Crystal Display)** - the graphical display built into the *Softswitch128* controller that is used to configure the system.
- **LED (Light Emitting Diode)** - an illuminated indicator to help in diagnosing the controller and control station operation.
- **OMX-AV** - a control station that is connected to the control link and accepts up to 5 contact closure inputs and 5 contact closure outputs.
- **OMX-CCO-8** - a control station that is connected to the control link and accepts up to 8 contact closure inputs.
- **NTOMX-KS** - a control station that requires a key. The key switch can be programmed for clockwise and counter-clockwise turns.
- **OMX-RS232** - a control interface device that facilitates building management integration through RS232 commands.
- **Toggle** - Each press of the button switches the assigned circuits between on and off. If the assigned circuits are in a mixed state (some on and some off), the circuits will turn on.
- **Pattern** - predetermined state for one or more circuits, creating an effect that can be recalled by pressing a single button.
- **Delay to Off** - up to a 90 minute delay can be programmed for a group of circuits before turning the light off, recalled by pressing a single button.
- **Time Clock Event** - an action that is set to occur at a particular time of day or at a time relative to sunrise or sunset (astronomical).
- **Wallstation** - a control that mounts on the wall, contains one or more buttons, and wires to the control link. The buttons can be used to activate patterns, toggle circuits, etc.
- **Warn Time** - the amount of time a light can be turned on by a Wallstation or CCI before automatically being turned off in afterhours mode.
- **Weekly Event** - a time clock event that is set to occur on a specific day of the week (Sunday - Saturday).



Notes:



Control Location Table

- How to Use this Table:**
- For each control station, fill in the number of buttons and brief description / location

| Address | Number of Buttons | Location / Description |
|---------|-------------------|------------------------|
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |
| 6 | | |
| 7 | | |
| 8 | | |
| 9 | | |
| 10 | | |
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| 31 | | |
| 32 | | |



Panel Table

How to Use these Tables:

- For each panel, fill in a description for each circuit. Label all spares.
- Cross out the circuits that do not exist.
- Fill in the system circuit numbers.

| Panel 1 | | |
|---------------|----------------|-------------|
| Panel Circuit | System Circuit | Description |
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |
| 6 | | |
| 7 | | |
| 8 | | |
| 9 | | |
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| Panel 2 | | |
|---------------|----------------|-------------|
| Panel Circuit | System Circuit | Description |
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |
| 6 | | |
| 7 | | |
| 8 | | |
| 9 | | |
| 10 | | |
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Panel Table

How to Use these Tables (continued):

- Circuit 1 in panel 1 is system circuit 1. The circuit number is continuous from panel to panel. Continue numbering panels 2 through 4 (if present).

| Panel 3 | | |
|---------------|----------------|-------------|
| Panel Circuit | System Circuit | Description |
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |
| 6 | | |
| 7 | | |
| 8 | | |
| 9 | | |
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| Panel 4 | | |
|---------------|----------------|-------------|
| Panel Circuit | System Circuit | Description |
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |
| 6 | | |
| 7 | | |
| 8 | | |
| 9 | | |
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Control Station Table

- How to Use this Table:**
- Fill in a line for each button or contact on each control station.
 - Fill in a circuit description at the head of each column.
 - For each button or contact, record the control type and circuits they control.

| Control Station / Button | | | Control Type | | | Sample | | | System Circuit / Description | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------|------------------------|--------------------|--------------|---------|--------------------------|-----------------------|-------------------|-----------------------|------------------------------|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|
| Address | Location / Description | Button / Contact # | Toggle | Pattern | Delay to Off (Time, min) | 1 Kitchen Overhead | 2 Kitchen Sink | 3 Janitor's Closet | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| 1 | " | 2 | | * | | O ₁ | O ₂ | | SAMPLE | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Janitor's Closet | 1 | | | 5 | | | * | | | | | | | | | | | | | | | | | | | | | | | | | |



Control Station Table

| System Circuit / Description | |
|------------------------------|--|
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SAMPLE



Time Clock Event Table

- How to Use this Table:**
- Fill in a line with the day and time of each time clock event.
 - Fill in a circuit description at the head of each column.
 - For each event, record the control type and which circuits turn on or off.

| Day / Holiday | Time | | Control Type | | | Sample | | | System Circuit / Description | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | Fixed / Sunrise / Sunset | Time | Pattern | Afterhours Start | Afterhours End | 1 Kitchen Overhead | 2 Kitchen Sink | 3 Janitor's Closet | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | | | | | | | | | | | | | | | | | | | | | | | | |
| Monday | SR | -0:15 | | | * | On | Off | | S A M P L E | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Monday | SS | +0:15 | | * | | Off | On | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| New Year's | F | 08:00 | * | | | Off | On | Off | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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Time Clock Event Table

| | | System Circuit / Description | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | SAMPLE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | | | | | | | | | | | | | | | | | | | | | | | | | | |

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