



GE Lighting Control

LIGHTSWEEP SYSTEM SETUP

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LightSweep Lighting Control system

Communication protocols:

LightSweep system is using two communication protocols:

- CAN bus – communication between field devices:
 - o CLCDLS – touchscreen/scheduler
 - o CLCGSM8 – group switch input module – eight inputs
 - o CLCRM6/CLCRMS6 – relay modules – six relays
 - o CLCDIM4 – 0-10V dimming module – four dimming channels
 - o CLCSWTx – dataline switch stations – 12,4,8 buttons per station
 - o CLCBnet – BACnet controller – to the CAN bus port
- BACnet – using CLCBnet controller – offers communication to other sub-systems or computer front-end, integration to BMS
 - o BACnet Ethernet
 - o BACnet MSTP
 - o BACnet RS232
 - o BACnet UDP/IP

System setup:

In order to integrate the LightSweep lighting control system with the BMS, need to follow the process outlined below using the CLCDLS touchscreen programmer:

- Assign a unique address (range 0-99) to each device on the CAN bus.
- Verify the network integrity and device addresses via CLCDLS touchscreen (see [Network View](#))
- Define the relay panels – see [Relay Panel Setup](#)
- Configure the input types:
 - o Switch (default)
 - o Occupancy sensor
 - o Photocell
- Program the groups – dataline switches and group switch inputs
- Configure the dimming channels – setpoints, response rate.

Communication setup

Using the GELC software, setup the communication parameters on CLCBnet device. If there are multiple CLCBnet controllers in the system, configure each unit with a unique address. The CLCBnet default address is 100.

CLCDLS – programming instructions

Navigation

Button Icons

Button Icons

Home page (GE logo)



The home page can be accessed at any time by touching the GE logo. The logo is located in the top-left of each page. This will bring you back to the main page as seen in figure 1.0



Figure 1.0

Exit (X)

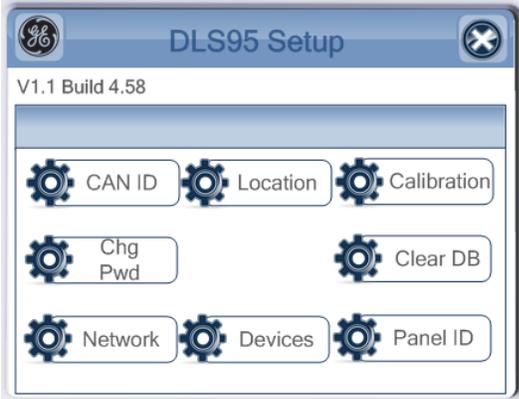


The X symbol, located in the top right of each page, exits the current page and return to you previous screen you were at.

Setup (Gear)



The gear symbol displays the setup page as seen below.



Look-up (Magnifying Glass)

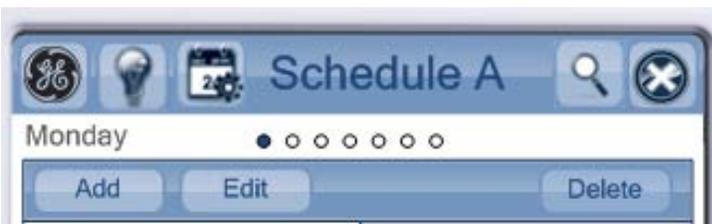


Touch the magnifying glass to access the look-up reference at relay level or schedule level. When doing look up at relay level it will display associated LC's the relays are assigned too, and at schedule level it will indicate LC's assigned to schedule.

Swiping pages

If multiple pages are available, swipe a finger from right to left, across the page, to advance to the next page. Swipe from left to right to return back to the previous page.

Multiple pages are indicated by a sequence of circles in the center of the screen. The number of circles indicates the number of pages available, and the filled circle indicates which page is currently displayed.



Status Icons

Schedules have color coding to provide additional information.



Schedule Color:



- Red – Schedule is On
- Light Gray – Schedule is Off
- Dark Gray – Schedule has no current entries.

Status Color:



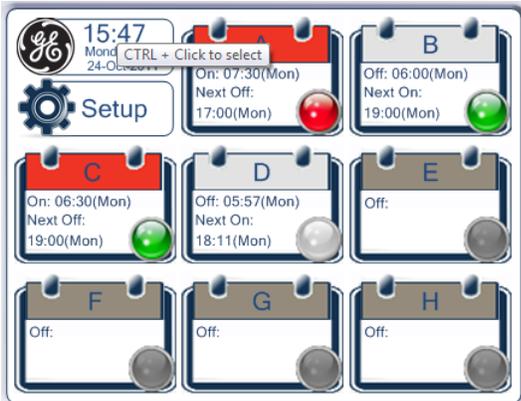
- Red – All lighting targets match active state
- Green – Some lighting targets match active state
- White – All lighting targets match inactive state.
- Yellow – Status of targets is unknown
- Grey – No targets defined
- Blue – Circular reference detected (Nested LC references have created a loop that will need to be fixed)

Basic Procedures

System Setup

System setup is done from the Setup screen, which is easily accessed from the system home page.

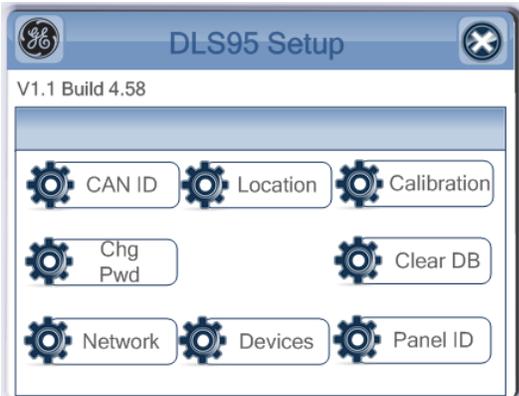
To modify the System Setup:



1. From the main screen, touch Setup.



2. The Setup page is displayed.



The following options are available:

- CAN ID – Displays network address of current scheduler (CLCDLS)
- Location – Setup your current location to calculate sunrise/sunset times for astronomical clock.
- Calibration – Local LC groups on network clock (CLCDLS)
- Chg Pwd – Setup main numerical password before allowing user to access any buttons on CLCDLS.
- Clear DB – Erase all programming on CLCDLS.
- Network – Status of network devices if they are online or offline.

- Devices – Configuration screen for group module (CLCGSM8), relay module (CLCRSM6), dimming module (CLCDIM) and network switches (CLCSWTx)
- Panel ID – Setup relay modules to be displayed as single lighting control panel (LCP).

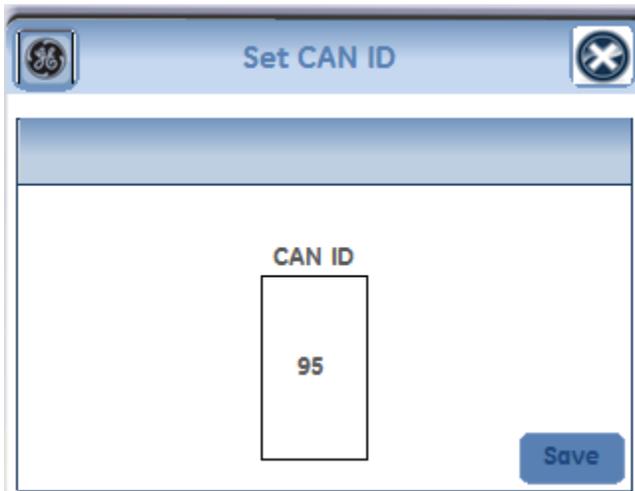
CAN ID

To setup or change the default address (99) of the network clock CLCDLS.

1. Touch the CAN ID from the setup menu.



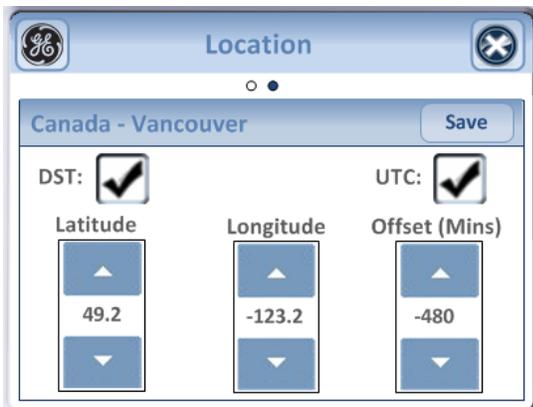
2. Use raise and lower buttons to change the address number and select Save.



Location Setup

Time adjustments for daylight savings are handled automatically by configuring the system location coordinates. This can be done manually or automatically.

To manually set the Location Coordinates:



1. From the Location page, adjust the Longitude and Latitude for the current location.

Latitude	Longitude	Offset (Mins)
▲ 49.2 ▼	▲ -123.2 ▼	▲ -480 ▼

- Use the checkboxes for DST (daylight savings time) or UTC (Coordinated Universal Time) if needed.

DST: <input checked="" type="checkbox"/>	UTC: <input checked="" type="checkbox"/>
--	--

- Touch Save to set the location.

If the exact longitude and latitude are not known, select a city from the included list that is nearest the current location.

To automatically set the Location Coordinates:

- From the Regions page, select a Region.

Regions	
Canada	Western USA
Central USA	Eastern USA
Central America	South America
Eastern Europe	Western Europe
Far East	

- Select a specific City from the Region. Swipe left or right to view the complete list of available cities.

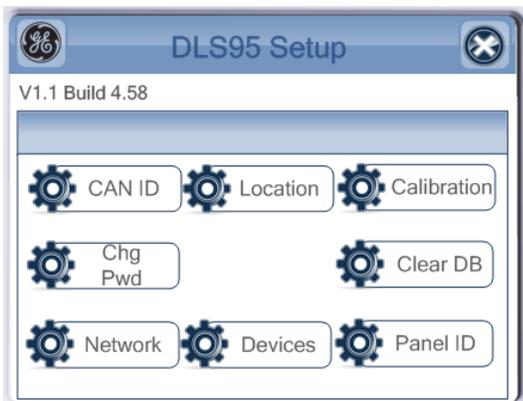


- If the specific location is not available, select a nearby city. Since the location is used primarily for Time Zone purposes, an approximate location is usually sufficient.

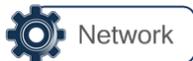
Network View

Network configuration is accessed from Setup menu. The network page displays a list of all devices connected to the system.

To access the Network View:



- Touch Network from the Setup menu.



- The Network page appears. It will display the network address of the devices and if device is offline it will highlight them in red. Below are the devices that may reside on your network.
 - DMx – Dimming module (CLCDIM)
 - GSx – Group switch module (CLCGSM8)
 - SWx – Network switch (CLCSWTx)
 - RMx – Relay module (CLCRMS6)

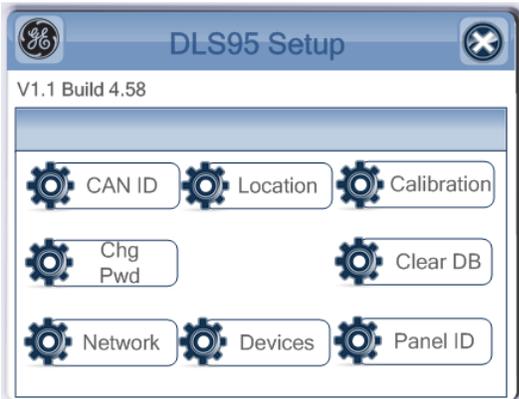
- e. DLSx – Network scheduler (CLCDLS)
- f. Bnet – BACnet module (CLCBNET).

3. The cleanup button allows you to remove any offline device from the network screen if it has been disconnected from the network.

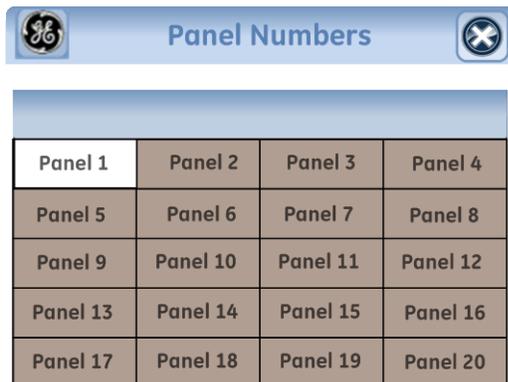


Relay Panel Setup

Create Relay panel configuration



From the Setup Screen select Panel ID



Highlight the relay module position in the panel 1 through 8)

Click the Add button and select the relay module CAN address in that position ->Add.

Follow the steps for all relay modules in the panel then repeat for all relay panels in the system.

Panel 1 

Add Remove

1	2
3	4
5	6
7	8

Panel 1 

Add Remove

1	2
RM62	
3	4
5	6
7	8

System Programming

Devices are programmed from the Device List.

To view Devices:

 DLS95 Setup 

V1.1 Build 4.58

 CAN ID
  Location
  Calibration

 Chg Pwd
  Clear DB

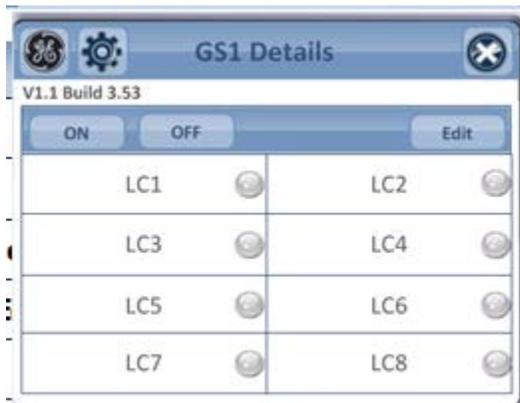
 Network
  Devices
  Panel ID

1. Touch Devices from the Setup menu.



2. The Device List appears. To program the group switch module (CLCGSM) select the GS module and select details button. It will display the eight inputs that can program to control any number of relays in the network

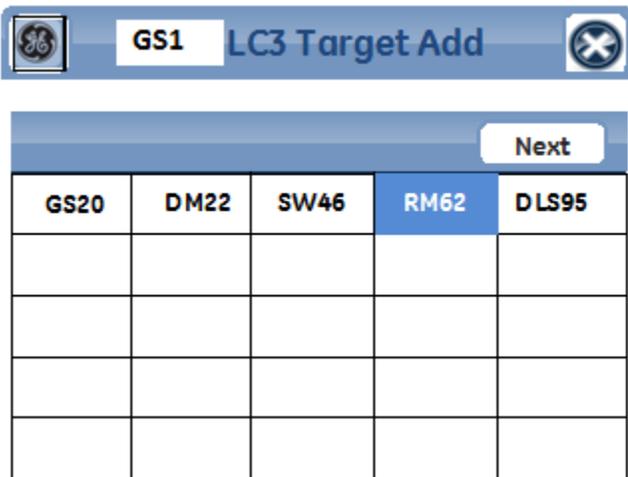
GS



3. To program LC3 highlight the group and select edit from the menu.



1. Highlight the relay module you want to add or LCP panel if Panel ID was used.



2. Highlight relays to add to group, and either if you want to function as ON/OFF, ON only, or OFF only.



RM

1. To configure flick warn time for individual relays select the relay module and highlight relay. Select the edit button which will give the relay details to making adjustments.



Flick Warning

The Flick Warning provides a visible warning (by quickly flicking the lights on/off) that the scheduled end time is approaching, and that the lights will be turning off.

Flick Duration

The Flick Duration determines how long before the scheduled end time the Flick Warning occurs.

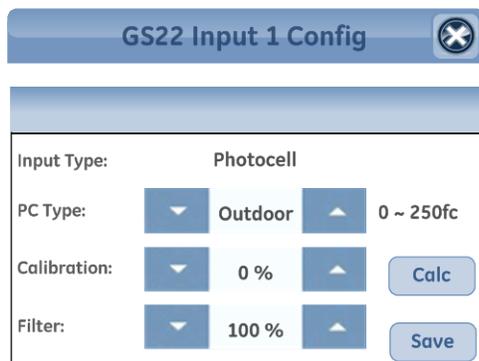
Min ON Time

The Minimum On Time establishes the minimum time that the lights will remain on.

Max ON Time

The Maximum Off Time establishes the maximum time that the light will remain on.

Inputs setup



Programming Schedules

Date/Time

Time and date are set from a common page, easily accessed from the system home page.

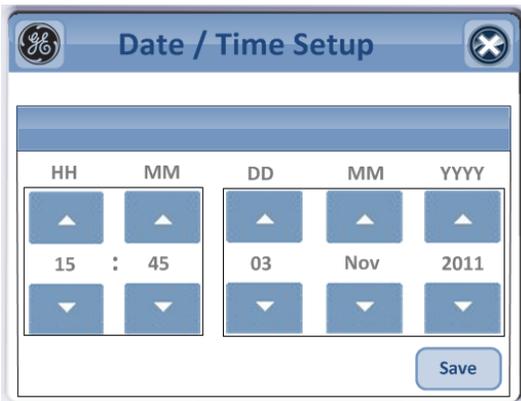
To set or change the Time and Date:



4. From the main screen, touch the Date/Time icon on the display.



5. The Date/Time Setup page appears.



Schedule configuration

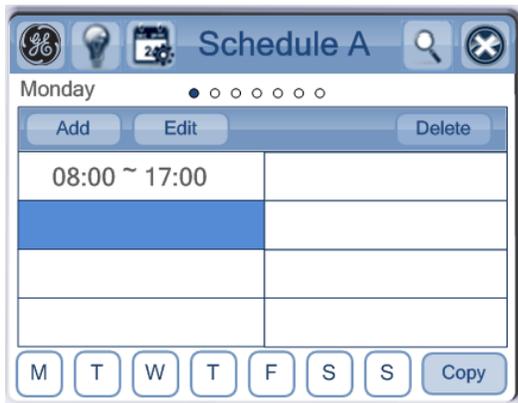


Selecting a Schedule

Schedules are selected from the Main Screen. There are eight schedules available, identified as A to H.

Active Schedules display their current status (On or Off) and the next time an On/Off event is scheduled to occur.

Touch a Schedule to view the Schedule details and options.



Options:

- Return to Main Screen
- Targets
- Exceptions
- Look up
- Cancel

Daily Schedule setup

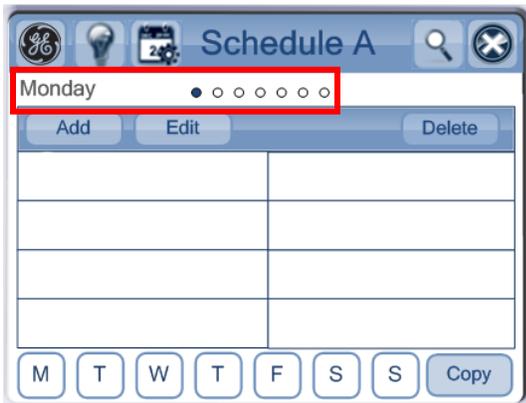
When viewing a Schedule, the screen displays the current day's Schedule. Swipe left or right to change the day being displayed. There are seven pages, one for each day of the week.

To create a new Schedule:

6. Touch an empty Schedule on the Main Screen.



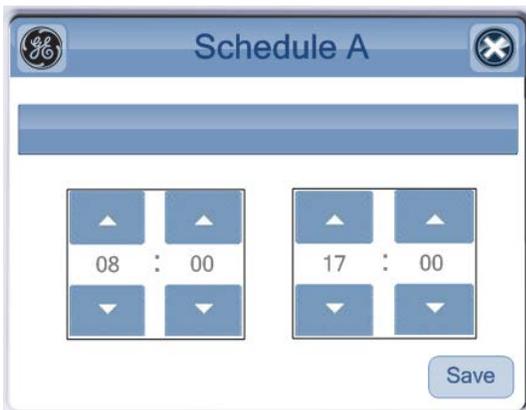
7. Swipe left or right to select the correct day in which to add the Schedule entry. For Schedules entries that are expected to for multiple days, simply select one of the days.



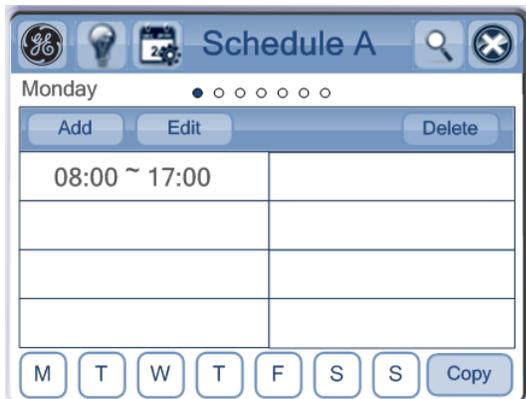
8. Touch Add.



9. Select a start and end time.

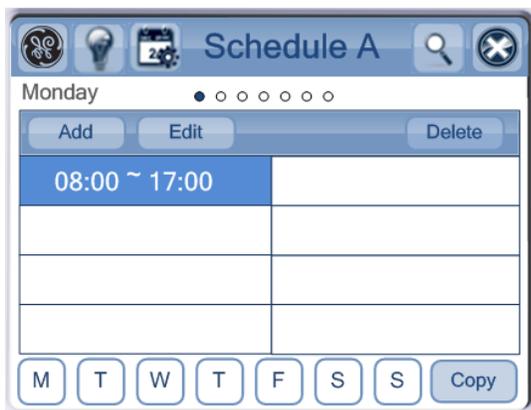


10. Touch Save. The new Schedule entry is created.



To copy a Schedule entry to other days:

11. Select the desired Schedule entry.



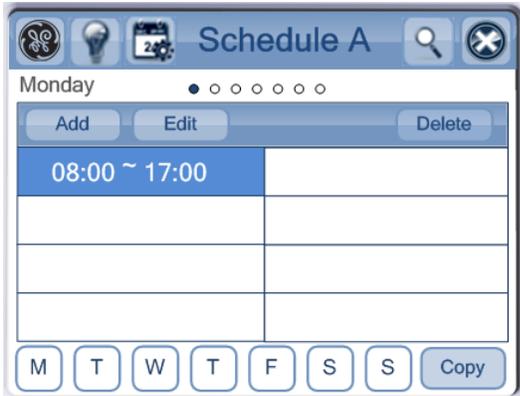
12. Use the days of the week buttons along the bottom to select which days the Schedule entry applies to. Select as many as necessary. Selecting the current day isn't required.



13. Touch Copy to copy the Schedule entry to the selected days.

To edit a schedule entry:

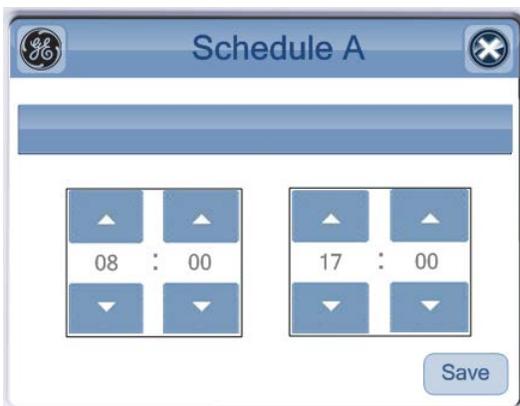
14. Select the desired Schedule entry.



15. Touch Edit.



16. Make changes as needed. Touch Save.



Special days

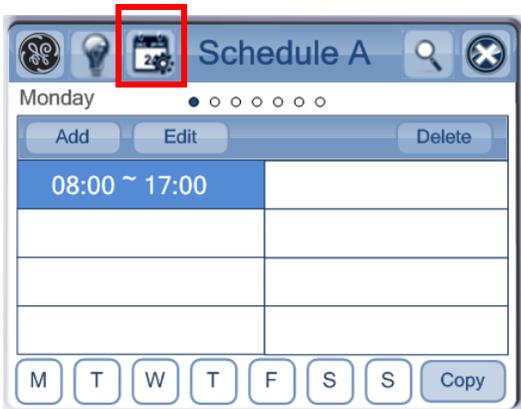
Exceptions entries can be added to a schedule for days when the normal schedule entries should not apply.

There are three types of exceptions that can be created.

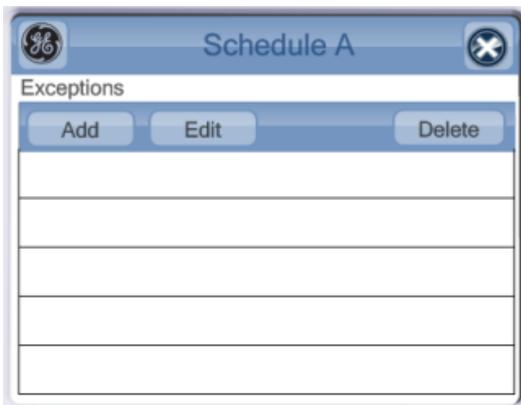
- Single Recurring Date
- Date Range
- Recurring Week/Day

To create an exception entry:

17. From the Schedule screen, touch the Exceptions button.



18. The Schedule Exceptions screen appears.



19. Touch Add

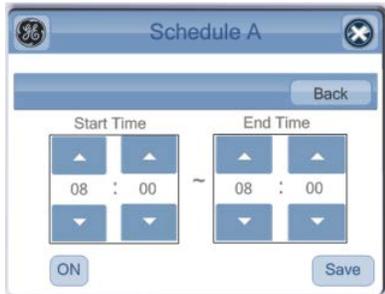


20. Select the Exception type by swiping left or right.



- Single/Recurring Date – Best used an exception that applies on a specific day. Either a day each month, or a day every year. For example, a Christmas Schedule can be set up to apply every December 25th.

- Date Range – Used for exceptions that apply for a specific amount of time. Both a start and end date must be defined. For example, an exception could be created for a temporary closure.
- Recurring Week/Day – Used for exceptions which occur on specific days (not dates) of the month. For example, an exception could be set up for every Monday in January.
- Select a start and end time.



21. Touch Save.



To edit an Exception schedule:

22. Select an exception entry from the list.

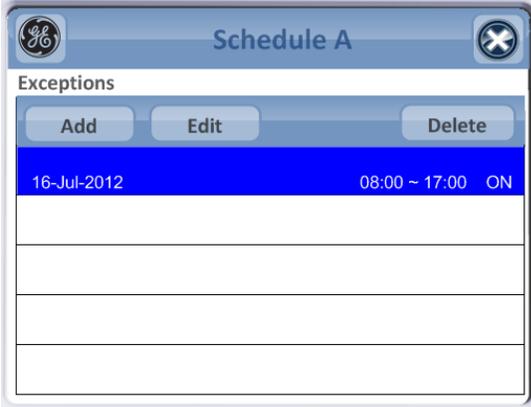


23. Touch Edit and make the necessary changes. Then touch Save.

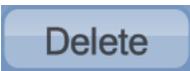


To delete an Exception entry:

24. Select an exception entry from the list.



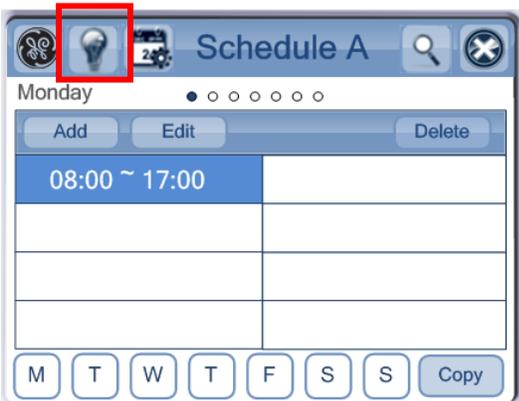
25. Touch Delete.



Assign targets

To assign targets

26. Touch the Targets icon.



27. The Targets page appears.



28. Touch Add.
29. The Target Add page appears.



30. Select a target type, and touch Next.

Assign targets



RM



1. Select RM
2. Touch one or more Rly options to select it them.

3. Use the Up/Down arrow to choose between the Standard ON/OFF, or scene control On Only or Off Only.
4. Touch Next

Astronomical -



The Astro settings allow the lights to be turned off/off with the Sunrise/Sunset

- Toggling the Lights On/Off for either Sunrise or Sunset will automatically toggle the action of the opposite setting.





- Toggling the Lights On/Off for either Sunrise or Sunset will automatically toggle the action of the opposite setting.

Sweep



- When Sweep is On, it commands its target lights Off when the Sweep Time has elapsed, (if no other control wants the lights on)