Crestron **CLS/CLSI-C6 & CLS/CLSI-C6M**
iLux® Integrated Lighting System
Operations Guide

This document was prepared and written by the Technical Documentation department at:

Contents

iLux Integrated Lighting System: CLS-C6/C6M & CLSI-C6/C6M

Introduction

The CLS/CLSI-C6 and CLS/CLSI-C6M iLux® units are complete, integrated wall-mounted lighting systems that can function as standalone devices or as part of a Crestron® solution total control system network. The units are intended for installation in boardrooms, auditoriums, home theaters, or anywhere versatile and cost-effective control of lighting and shades is required. The CLS-C6 and CLS-C6M are designed for 120 VAC installations; the CLSI-C6 and CLSI-C6M are designed for 230 VAC installations. All units are functionally identical, except that the CLS/CLSI-C6M units include a built-in motion sensor. For simplicity in this guide, the term "CLS-C6" is used except where noted.

Features and Functions

- Wall-mounted integrated lighting and shade control
- Six channels of dimming or switching
- Six groups of shade or drapery control
- Linkable for up to 54 lighting channels and 54 shade groups
- Up to 16 user-settable scenes
- Seven configurable "rocker" buttons with customizable label strip
- Large **ON** and **OFF** buttons
- Flip-up front cover reveals setup controls and programming port
- Six bar graphs show lighting levels and shade positions
- Easy setup from front panel or iLux Designer software
- Built-in motion detector (CLS/CLSI-C6M)
- Optional IR remote
- Supports multipoint control using up to 16 keypads
- Supports touch screen control using up to two touch screens
- Supports external occupancy sensors
- Supports room combining of up to 36 partitions
- Supports integration with building management system
- Supports multipoint control using up to 16 keypads
- Supports touch screen control using up to two touch screens
- Supports external occupancy sensors

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Features and Functions

(Continued)

- Supports room combining of up to 36 partitions
- Supports integration with building management system
- Master air-gap relay | 230V AC version available
- Integrates with 2-Series control systems via Cresnet®
- Energy saving ASHRAE 90.1/LEEDS compliant
- Available in almond, black, or white
- Supports Daylight Harvesting
- RS-232 Interface via C2N-IO

Six Channel Dimming

The CLS-C6 features six channels of dimming for LED*, incandescent, magnetic low-voltage, neon/cold cathode, and two-wire dimmable fluorescent loads. On/off switching of many non-dimmable lighting loads is also possible. Each channel handles up to 800 watts individually, with a total rating of 1920 watts at 120 VAC for CLS-C6/C6M (2300 watts at 230 VAC for CLSI-C6/C6M). Larger loads and additional load types can also be supported using Crestron CLS-EXP series expansion modules.

Six Group Shade Control

Using Crestron's networked shade and drapery controllers, the CLS-C6RF enables versatile control of a roomful of motorized window treatments, screens and lifts in up to six shade groups.

Energy Management

Using Crestron Green Light® technology the iLux line of integrated lighting systems allow for the management of demand response for load shedding and room occupancy sensing for maximum energy efficiency and cost savings.

Versatile Front Panel Controls

The deceptively clean front panel actually affords an extensive amount of control and customization to suit each unique room application. Large **ON** and **OFF** buttons provide instant access to the "On" and "All Off" scenes, while the six main buttons can be set up to recall additional scene presets, adjust shades, or perform a host of other functions. The buttons' "rocker" action enables intuitive, tactile control for adjusting lighting levels and shade positions. An additional "Up/Down" button is configurable for a variety of functions, including use as a master lighting or shade control, or as a "shift" button to expand the capabilities of the six main buttons.

With each new scene selection, window shades reposition and lights fade elegantly to their new settings. The selected scene is indicated by a white LED beside each button, and the customizable label strip allows each button to be clearly labeled using Crestron Engraver software or standard 3/8" tape labels. Dimming levels and shade positions are displayed graphically on 6 green LED bargraphs accessible behind the flip-up front cover. Additional controls and a numeric display hidden beneath the cover enable setup without requiring a PC. Enhanced customization is provided via the PC programming port using iLux Designer software.

* For a list of compatible ballasts, visit www.crestron.com/lightingcompatibility.

Built-in Motion Detector (CLS/CLSI-C6M)

The CLS/CLSI-C6M model provides the addition of a built-in infrared motion detector, enabling automated control based on room occupancy. Lights can be programmed to turn on and shades open automatically when someone enters the room, or turn off and close when the room is left empty. Remote motion detectors are also available to expand the coverage of the CLS/CLSI-C6M, or add occupancy sensing capability to the CLS/CLSI-C6M.

Daylight Harvesting

When used with an optional GLS-LOL photocell, the CLS-C6 is capable of reducing energy usage by employing "daylight harvesting". This technique allows the electric light levels to be reduced based on the amount of natural light available in the space.

The GLS-LOL may be connected to the CLS-C6 through either a GLS-SIM or the available input on a Cameo® "Pro" keypad. For more information, refer the latest version of the Crestron iLux Lighting Systems Installation Guide (Doc. 6394 for CLS-C6/C6M; Doc. 6413 for CLSI-C6/C6M), which is available from the Crestron Web site (www.crestron.com/manuals).

IR Remote Control

The CLS-C6 units are equipped with an onboard IR receiver to allow for wireless remote control using Crestron's optional infrared remote control (sold separately).

Multipoint Keypad Control

Up to 16 Crestron keypads may be connected to a single CLS-C6, providing versatile multipoint control for rooms with multiple entrances or work areas. Individual keypad buttons can be programmed to work through the master unit or can target specific slave units for maximum control and room management.

Touch Screen Support

The CLS-C6 can support up to two touch screens without the need of a centralized processor. Using the iLux Designer software, add touch screens to a standalone system with hard and soft button programming including two way zone status feedback.

Multi-Unit Expansion

A single CLS-C6 master supports up to eight additional units, enabling systems of up to 54 lighting zones and 54 shade groups. Scene recall, master dimming, and occupancy status are shared between the units. Each individual unit can still support a complete assortment of local devices including keypads, shade controllers, touch screens, and sensors.

Room Combining Support

When the application includes divisible rooms, the CLS-C6 has advanced room-combining features capable of supporting even the most complex layouts. When additional CLS-C6 slave units are linked to a master CLS-C6, advanced room combining of up to nine rooms become possible. The iLux Lighting System supports up to 36 room partitions, allowing for all possible room combinations. Room combining status (combined or separate) can be controlled via external partition sensors, via keypad or touch screen buttons, or via an external command from a Crestron control processor.

Building Management System Integration

Crestron CLS-C6 includes BMS integration capabilities for straightforward inclusion of building management systems as a component of managing energy demands.

Control System Integration

The CLS-C6 actually features two separate Cresnet® control networks, one for local devices and one for connection to a 2-Series control system.

Connecting the CLS-C6 to a control system allows its functions to be controlled from touch screens, RF wireless remotes, and even computers, supporting extensive flexibility for remote control and integration with other devices and systems.

Additional functions such as on-the-fly room combining and activating operations based on a real-time clock are also made possible by connecting the CLS-C6 to a control system.

Connecting to an Ethernet-networked control system provides a gateway to larger applications such as integration with facility-wide lighting, HVAC, security, and remote monitoring via Crestron RoomView® Help Desk software as well as third-party SNMP software.

RS-232 Interface via C2N-IO

The CLS-C6 can be controlled from a third party controller or a PC program via the ASCII command set. The Crestron serial convertor module, C2N-IO (sold separately), is used to route packets between the CLS-C6 and the third party controller. The serial converter module translates ASCII strings to Cresnet serial packets and Cresnet serial packets to ASCII strings.

Specifications

Specifications for the CLS-C6 are listed in the following table.

CLS-C6 Specifications

SPECIFICATION	DETAILS

Load Ratings
  CLS-C6/C6M
    Dimmer channels
    Max load per channel
    Min load per channel
    Max load per unit:
  CLSI-C6/C6M
    Dimmer Channels
    Max load per channel
    Min load per channel
    Max load per unit:
	
	6
	800 W/VA (6.7 Amps @ 120 VAC)
	15 W/VA (0.125 Amps @ 120 VAC)
	1920 W/VA (16 Amps @ 120 VAC)
	
	6
	800 W/VA (3.5 Amps @ 230 VAC)
	25 W/VA (0.108 Amps @ 230 VAC)
	2200 W/VA (10 Amps @ 220 VAC)
	2300 W/VA (10 Amps @ 230 VAC)
	2400 W/VA (10 Amps @ 240 VAC)

Load Types	LED[1], Incandescent, Magnetic Low-voltage, Neon/Cold Cathode, 2-Wire Dimmable Fluorescent, & Non-Dim Lighting (also: Electronic Low-voltage, 3 and 4-Wire Fluorescent, High-Inrush Switching, & 277V via CLS-EXP Series expansion modules[2])
Power Requirements	CLS-C6/C6M Line Power, 100 –127 VAC, 50 / 60Hz CLSI-C6/C6M Line Power, 220 – 240 VAC, 50 / 60Hz
Default Net ID	1F

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CLS-C6 Specifications (Continued)

SPECIFICATION	DETAILS
Control System Update Files [3, 4] 2-Series Control System	Version 2.004.CUZ or later
IR Receiver Reception Frequency	36 kHz Requires CLS-IRHT8 IR remote (sold separately).

Built-In Motion Detector
(CLS/CLSI-C6M only)
  Type
  Range
	
	Infrared
	20 to 30 feet at 4-foot elevation
	(6 to 9 meters at 1.2 meter elevation)

Firmware	V2.01.01 or later

Environmental
  Temperature
  Humidity
	
	32° to 104° F (0° to 40° C)
	10% to 90% RH (non-condensing)

Overall Dimensions:
  Height
  Width
  Depth
	
	4.48 in (114 mm)
	8.89 in (226 mm)
	2.47 in (63 mm) for CLS/CLSI-C6
	2.60 in (66 mm) for CLS/CLSI-C6M

Weight	1.43 lbs (0.65 kg)

Available Models:
  CLS/CLSI-C6A
  CLS/CLSI-C6B
  CLS/CLSI-C6W
  CLS/CLSI-C6MA
 	
  CLS/CLSI-C6MB
 	
  CLS/CLSI-C6MW
	
	iLux Integrated Lighting System, Almond
	iLux Integrated Lighting System, Black
	iLux Integrated Lighting System, White
	iLux Integrated Lighting System with Motion Detector, Almond
	iLux Integrated Lighting System with Motion Detector, Black
	iLux Integrated Lighting System with Motion Detector, White

Available Accessories
 	
  C2N-CBD-P/-CBF-P/-CBD-E
 	
  C2N-CBD-TS/CBF-T
  C2N-DB
  C2N-IO
  C2N-MNETGW
  C2N-MNETRPT
  C2N-SDC
  C2N-SDC-DC
  C2N-SSC-2
  C2NI-CB
  C2NX-B
  CLS-EXP-DIM
  CLS-EXP-DIMFDB
 	
  CLS-EXP-DIMFLV
 	
  CLS-EXP-DIMU
	
	Cameo Keypad, Standard Mount/Flush Mount
	Cameo Keypad, Standard Mount/Flush Mount
	Decorator Series Keypad
	Control Port Expansion Module
	infiNET Gateway
	infiNET Repeater
	Shade and Drape Controller (120V AC)
	Shade and Drape Controller (24V DC)
	Somfy® Shade Controller
	International Keypad (230 VAC)
	Designer Series Keypad
	iLux Dimmer Expansion Module
	iLux 3-Wire Fluorescent Dimmer Expansion Module
	iLux 0-10V Fluorescent Dimmer Expansion Module
	iLux Universal Dimmer Expansion Module

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CLS-C6 Specifications (Continued)

SPECIFICATION	DETAILS
Available Accessories (Continued)	
CLS-IRHT8	iLux IR Handheld Remote
CNPWS-75	Cresnet Power Supply
GLS-LOL	Crestron Green Light Photocell , Open-Loop
GLS-SIM	Sensor Integration Module
TPS-6L	Isys® 5.7" Wall Mount Touch Screen

1. For a list of compatible ballasts, visit www.crestron.com/lightingcompatibility.
2. Larger loads and additional load types can also be supported using Crestron CLS-EXP Series expansion modules (sold separately).
3. The latest versions can be obtained from the Crestron Web site. Refer to NOTE after last footnote.
4. Crestron 2-Series control systems include the AV2 and PRO2. Consult the latest Crestron Product Catalog for a complete list of 2-Series control systems.

NOTE: Crestron software and any files on the Web site are for Authorized Crestron dealers and Crestron Authorized Independent Programmers (CAIP) only. New users may be required to register to obtain access to certain areas of the site (including the FTP site).

Physical Description

This section provides information on the connections, controls and indicators available on the CLS-C6.

CLS-C6 Physical View

CLS-C6M Overall Dimensions

8.89 in
(226 mm)

2.38 in
(60 mm)

4.48 in
(114 mm)

1.88 in
(48 mm)

0.59 in
(15 mm)
CLS-C6/
CLSI-C6

0.72 in
(18 mm)
CLS-C6M/
CLSI-C6M
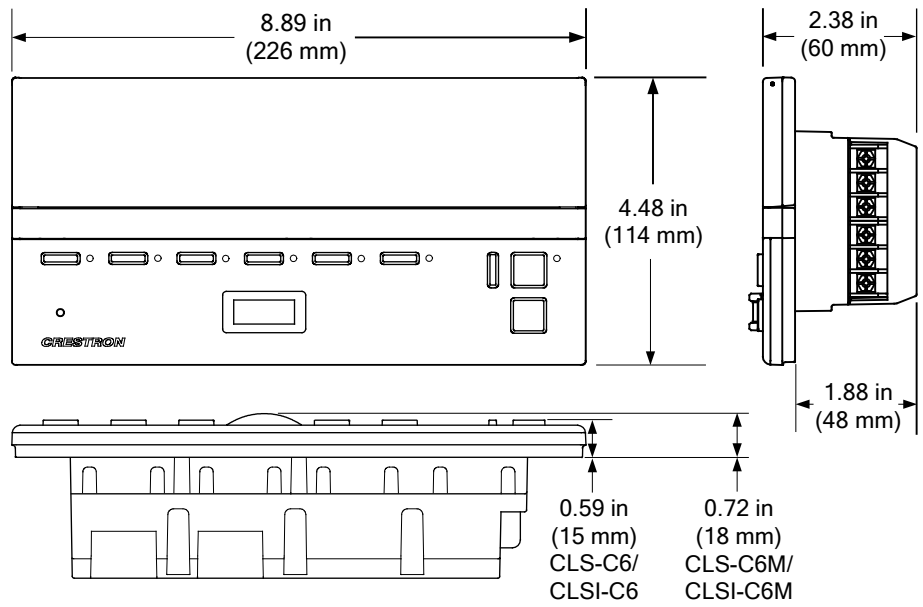
CLS-C6M Front Panel
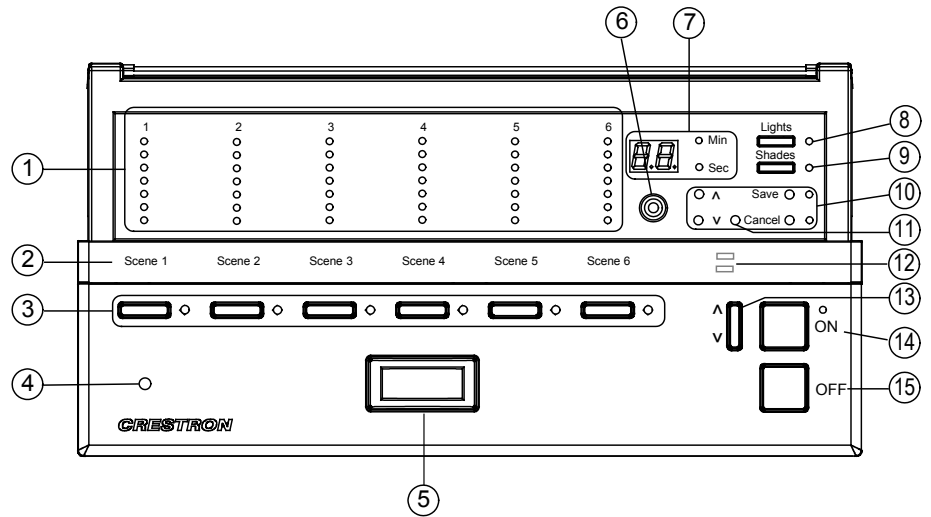
CLS-C6 Rear Panel
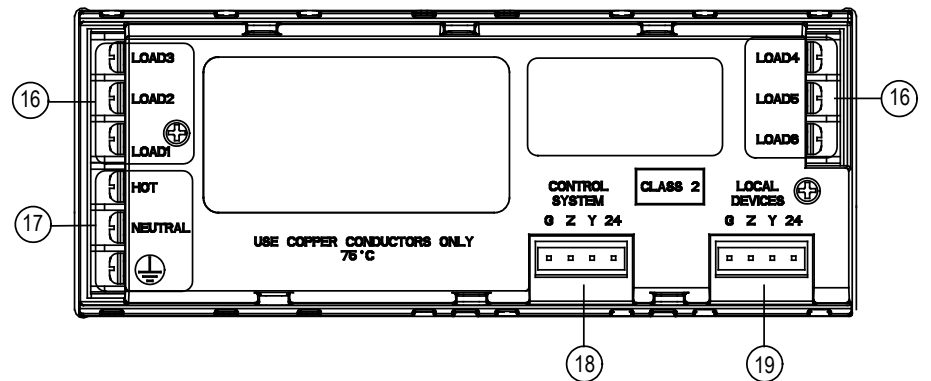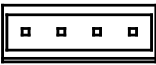
Connectors, Controls, & Indicators

#	CONNECTORS*, CONTROLS, & INDICATORS	DESCRIPTION
1	Bar Graphs	In *Standard* mode and *Lights* mode, the bar graphs, each a series of seven LEDs, indicate the current light intensity for the six lighting loads. When under photocell control, the top bar graph LED for a controlled load blinks. In *Shades* mode, they indicate the shade position for each of the shade groups. The bar graphs have other functions in *Setup* mode.
2	Label Strip	Customizable label for the six scenes.
3	Function Buttons and LEDs	In *Standard* mode, these buttons are typically used to select/recall scenes. In *Lights* mode, they are used to make temporary adjustments to the six lighting loads. In *Shades* mode they are used to make temporary adjustments to the shade groups. They can also be programmed to perform other functions.
4	IR Detector	The IR detector responds to commands from the optional Crestron remote control. The remote control can be used to recall Scenes 1 – 4, the On and Off scenes, and perform master raise and lower of the lighting loads.
5	Motion Detector (CLS/CLSI-C6M only)	The built-in motion detector can be used to activate a particular scene when there is activity in the room, and/or to activate a particular scene (typically Off) when there is no activity for a specified period. A limited number of actions are available when programmed locally; more are available using the iLux Designer software program.
6	Mini Phone Jack	Use this 3.5mm TRS mini-phone jack, located on the front panel, as an RS-232 programming port, to communicate with the iLux Designer and Crestron Toolbox™ to configure the unit, and to upgrade the unit's firmware.
7	Two-Digit Display	In *Standard* mode, the display is normally blank, except when showing scene fade time. The **Min** and **Sec** LEDs illuminate when the display is indicating time in minutes or in seconds, respectively. In *Setup* mode, the display uses a two-character mnemonic to indicate which specific aspect of the CLS-C6 that is being changed. As these are being adjusted, the display may indicate values. (Refer to "Setup Mode" on page 12 for details.)

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Connectors, Controls, & Indicators (Continued)

#	CONNECTORS*, CONTROLS, & INDICATORS	DESCRIPTION
8	**Lights** Button and LED	Use this switch to select the *Lights* mode. The LED illuminates when the mode is selected. Refer to "Lights Mode" on page 38 for details.
9	**Shades** Button and LED	Use this switch to select the *Shades* mode. The LED illuminates when the mode is selected. Refer to "Shades Mode" on page 39 for details.
10	^, v, **Save**, and **Cancel** Buttons	Use these push buttons to navigate and execute setup functions. The **Save** and **Cancel** LEDs indicate when these functions are active. Refer to "Setup Mode" on page 12 for details.
11	Reset Button	If the unit stops functioning and does not respond to button pushes, use a thin object such as a paperclip to activate this switch. The unit reboots (all lighting loads go off, the two-digit display shows "– –," and all lighting loads go to their previous state).
12	Shift LEDs	These LEDs are covered by the label strip, but are easily visible through the strip when they are illuminated. When the *Shift* mode is enabled via programming, there can be two functions defined for each of the six function buttons. The unit must always be in "upper" or "lower" *Shift* mode as indicated by the state of the LEDs.
13	**Up**/**Down** Push button	This three position "rocker" switch is programmable for master lights control (all lights or last scene), master shade control, or as a "shift" button to allow a second set of functions for the six function buttons.
14	**ON** Button	The **ON** button always acts as a recall scene button for the "On" scene. Refer to "Standard Mode" on page 33 for details.
15	**OFF** Button	The **OFF** button always acts as a recall scene button for the Off scene, which always turns all lighting loads off and open the air-gap relay. Refer to "Standard Mode" on page 33 for details.
16	**LOAD1** – **LOAD6**	Use these terminals to connect the CLS-C6 dimmer channel outputs to the appropriate lighting loads.
17	**HOT**, **NEUTRAL**, (Ground) ⏚	Use these terminals to connect the unit to the 120V (CLS-C6/M) or 230V (CLSI-C6/M) AC power source.
18	**CONTROL SYSTEM** G Z Y 24	Use this 4-pin terminal block to connect the CLS-C6, using standard Cresnet wiring, to a 2-Series control system network. In this configuration, the CLS-C6 acts as a standard Cresnet slave device. (The CLS-C6 does not draw power from Cresnet.).
19	**LOCAL DEVICES** G Z Y 24	Use this 4-pin terminal block to connect the CLS-C6, using standard Cresnet wiring, to local devices. In this configuration, the CLS-C6 acts as the Cresnet Master.

*   Interface connectors for **CONTROL SYSTEM** and **LOCAL DEVICES** ports are provided with the unit.

Setup

Network Wiring

When wiring the Cresnet network, consider the following:

- Use Crestron Certified Wire.

- Use Crestron power supplies for Crestron equipment.

- Provide sufficient power to the system.

  CAUTION: Insufficient power can lead to unpredictable results or damage to the equipment. Use the Crestron Power Calculator to help calculate how much power is needed for the system (www.crestron.com/calculators).

For networks with 20 or more devices, use a Cresnet Hub/Repeater (CNXHUB) to maintain signal quality.

For more details, refer to "Check Network Wiring" on page 41.

Identity Code

The MNET ID of the SortName has been factory set to **1F**. After an infiNET device is added to an infiNET network, its MNET ID must be changed to a value that can be addressed by the control system program (03 to 20). The MNET IDs of multiple SortName devices on the same gateway must be unique. MNET IDs are changed from a personal computer (PC) via Crestron Toolbox™ (refer to "Establishing Communication" on page 31).

When setting the MNET ID, consider the following:

- The MNET ID of each unit must match an ID code specified in the SIMPL Windows or D3 Pro®/SystemBuilder™ program.

- Each network device on the same gateway must have a unique MNET ID.

For more details, refer to the Crestron Toolbox help file.

Installation

Detailed installation procedures are provided in the latest version of the Crestron CLS-C6/C6M iLux Lighting Systems Installation Guide (Doc. 6394) and Crestron CLSI-C6/C6M iLux Lighting Systems Installation Guide (Doc. 6413).

Configuring the CLS-C6

The overall configuration of the CLS-C6 can be accomplished in two ways: using the front panel controls, or using the supplied iLux Designer application software, which can be downloaded from the Crestron Web site.

Configuring via the front panel controls is not as extensive as what can be done using the iLux Designer, but permits basic functional setup without having to use a PC.

In addition, some aspects of the CLS-C6's operation can be modified only via certain Crestron Toolbox console commands. (Refer to "Console Command Settings" on page 25 for details. Refer also to "Appendix B: Console Commands" on page 54 for details on all applicable console commands.)

NOTE: Toolbox does not distinguish between the CLS-C6/C6M and CLSI-C6/C6M devices. All report as CLS units.

Configuring With Front Panel Controls

Temporary changes can be made to accommodate a particular circumstance, or change scene presets and replace the originals, as described below. To make more extensive changes in the configuration of the CLS-C6 without using the iLux Designer software, use the "Setup Mode", as described beginning on page 12.

Temporary Changes/Adjustments

Temporary changes/adjustments to the lighting levels or shade presets can be accomplished as discussed in "Lights Mode" on page 38 and "Shades Mode" on page 39.

Changing Scene Presets

Scene Presets With Daylight Harvesting

If a photocell is present, Scenes 1 through 8 (plus the ON scene) automatically utilizes Daylight Harvesting. When this automatic behavior is enabled, the top bar graph LED for that load blinks.

NOTE: When editing scenes with photocell-controlled loads, photocell output is temporarily disabled. When the scene is recalled, photocell control resumes and light levels may change. To reduce the possibility of unintended scene behavior caused by photocell reaction to sunlight, edit scenes at night.

The CLS-C6 scene settings can be modified via the front panel controls without having to use a PC. Changes to the lighting load levels and shade presets for one or more scenes can be accomplished as follows:

NOTE: The iLux Designer or SIMPL Windows programs can lock a scene to prevent it from being changed using the front panel controls. If an adjustment is made to a scene that is, "Er" is displayed for 3 seconds. The scene remains in its existing state.

1. In *Standard* mode, press the function button of the scene to be modify and hold it for 5 seconds. (Make sure to press the center of the button so both sides make contact.)

2. The two-digit display first counts down as the lighting loads fade to their preset levels for that scene; it then begins flashing between **Sc.** and the scene number; the **Lights** LED illuminate, and the **Save** and **Cancel** LEDs flash.

3. Use the six function buttons to adjust the levels of the lighting loads for that scene. Press the left side of the buttons to lower the lighting loads; press the right side of the buttons to raise the lighting loads.

4. If there should be a certain lighting load to be unaffected by that scene recall, press and hold the center of the button (so both sides make contact) for 3 seconds. The top two and the bottom two LEDs of the associated bar

graph lights (and the display shows **- -**) to indicate that the level of the lighting load does not change when that scene is recalled.

5. To change the shade presets for that scene press the **Shades** button; the Shades LED lights.

6. Use the six function buttons to adjust the levels of the shade groups for that scene. Press the right side to raise the shades; press the left side to lower them. While the shades are moving, press any part of the button to stop. Note that for shades that are not "presettable," only full open or full closed positions can be recalled as part of a scene.

7. If there should be a certain shade group to be unaffected by that scene recall, press and hold the center of the button (so both sides make contact) for 3 seconds. The top two and the bottom two LEDs of the associated bar graph lights (and the display shows **- -**) to indicate that the level of that shade group does not change when that scene is recalled.

8. To adjust the fade time, press the **^** and **v** buttons. When going up, the value goes from 0 seconds to 59 seconds, and then 1 minute to 99 minutes. When going down, the value goes from 99 minutes to 1 minute, and then 59 seconds to 0 seconds. The Min and Sec LEDs light as appropriate. Adjustment to fade time can be made when either *Lights* mode or *Shades* mode is active.

9. When all the lighting loads are at the desired level and shades are at the desired position, press **Save** to save these settings as the new preset for that scene. If a mistake is made while changing a setting, press **Cancel** to discard changes and return to *Standard* mode before pressing **Save**.

10. Repeat the above procedures for all scenes that require changes.

Setup Mode

The *Setup* mode is used to change internal settings on the CLS-C6, including the scene presets as discussed in the previous paragraph.

*   To enter *Setup* mode, press and hold the **Save** and **Cancel** buttons for 5 seconds. The **Cancel** button LED blinks, and the first setup option (**Sc**) displays, to indicate that the unit is now in *Setup* mode.

    NOTE: While scrolling through the list of setup options, before an option is "locked", the **Save** button is not functional and its LED is off. However, the **Cancel** button LED blinks - since the button can be pressed to return the unit to *Standard* mode.

*   If the unit is connected to a Cresnet control system, *Setup* mode cannot be entered to adjust scene settings. The two-digit display indicates "Er" (error).

*   When the unit is in *Setup* mode, the two-digit display uses a two-character mnemonic to indicate which specific aspect of the CLS-C6 is changed. As these are being adjusted, the display may indicate values. The following is a list of the different *Setup* modes, and the corresponding mnemonic codes.

Setup Mode Mnemonics

TWO-DIGIT DISPLAY	DESCRIPTION
Sc	**Sc**ene Programming
Ld	Setup lighting load **Load** types
LE	Setup lighting load **L**ow-**E**nd limits
HE	Setup lighting load **H**igh-**E**nd limits
Lo	Setup *Lockout* mode
bF	**b**utton **F**unctions (i.e. recall scene, toggle scene, shades control, etc.)
ud	Set function of **up/down** button
oc	Setup **oc**cupancy sensing
Ad	Run **A**uto-**d**iscovery
AS	**A**ssign **S**hade groups
id	Set the Cresnet **id** of this unit
Ph	**Ph**otocell test
Pc	**P**hotocell **C**alibration
PL	Setup **P**hotocell lower **L**imit
Pr	Setup **P**hotocell **r**esponse time
Fd	Restore **F**actory **d**efault
Er	**Er**ror

- Press the **^** or **v** buttons to scroll through this list of available setup options. Once the desired setup option appears in the display, use the various buttons on the CLS-C6 to make adjustments, as described on the following pages.

- Once any adjustment is made, *Setup* mode is now "locked" into that particular option (this is indicated by lighting the period at the end of the mnemonic). Once locked in an option, the **^** and **v** buttons no longer scroll through the options; setup must be exited before choosing another option.

When the adjustments are complete, press **Save** to store the changes permanently, and exit *Setup* mode, or press **Cancel** to exit *Setup* mode without saving the changes. The unit reverts to *Standard* mode.

Scene Programming (Sc)

Scene Presets With Daylight Harvesting

If a photocell is present, Scenes 1 through 8 (plus the ON scene) automatically utilizes Daylight Harvesting. When this automatic behavior is enabled, the top bar graph LED for that load blinks.

NOTE: When editing scenes with photocell-controlled loads, photocell output is temporarily disabled. When the scene is recalled, photocell control resumes and light levels may change. To reduce the possibility of unintended scene behavior caused by photocell reaction to sunlight, edit scenes at night.

This setup option allows the user to adjust the scene parameters. This is another way to accomplish scene changes as discussed in "Changing Scene Presets" on page 11. This method also allows settings to be changed for scenes greater than scene 6.

Note that scenes can be turned off in addition to being recalled. When a scene is turned off, only the lighting loads are turned off. If the scene contains any shades, they are not affected. The fade time for turning the scene lights off is the same as for recalling the scene. Therefore, no additional parameters need to be set to define the off behavior.

Select the scene to be changed using the Up/Down button. While cycling through the list of scenes, the lights and shades do not change, and the bar graphs are off.

Set the lighting loads and shade positions for the scenes as discussed in "Changing Scene Presets" on page 11. As the scenes are set, note the following:

- When a lighting load reaches the HE (high end) limit, the lights stops. The two-digit display continues to rise. If lights reach the LE (low end) limit, the two-digit display continues to go down, but lights stay at the LE limit until they reach Off—at which point they turn off. If the scene setting is saved while the display is at a level below the LE limit, or above the HE limit, the

displayed value is be saved, but the light level is limited to the programmed limits.

- If a lighting load is defined as an "unused" load type, the bar graph for that lighting load has all LEDs off. If the lighting load is adjusted, the two-digit display shows "Er."

- To mark a lighting load as "not affected" (i.e., the lighting load's current state is not be changed by recalling the scene), press and hold the center of the corresponding button for 3 seconds. Adjustments made to such lighting loads cancel the "not affected" condition and start adjusting from the current light level.

- While adjustments are being made to the lights or shades, the two-digit display shows the level, just like in *Manual* mode. The level for loads that are not affected are shown as "—." In *Manual* mode, the display goes blank after 3 seconds; in this mode, it returns to the "Sc. ##" display.

- For SDC (or SDC-DC) shades, when the left or right side of the button is pressed, the two-digit display immediately shows full open or full closed as soon as the shade starts moving, and the preset is set to this full open or closed position even if the shade is stopped before reaching the full open or full close position.

- The iLux Designer or SIMPL programs can lock a scene to prevent it from being changed using the front panel controls. If the selected scene is "locked" in the configuration, when an adjustment is made, "Er" is displayed for 3 seconds, and the scene remains in its existing state.

- To adjust the fade time, while "Sc. ##" is displayed, press the **^** and **v** buttons to adjust the time. The first time a button is pressed, current fade time is shown, but not changed. Subsequent presses change the displayed value. Adjustment to fade time can be made when either *Lights* mode or *Shades* mode is active.

  When increasing the time, the value goes from 0 seconds to 59 seconds, and then 1 minute to 99 minutes. When decreasing the tiem, the value goes from 99 minutes to 1 minute, and then 59 seconds to 0 seconds.

- To save or cancel levels, press the **Save** button to save the new values and return to *Standard* mode. Press the **Cancel** button to return to *Standard* mode without saving – previously saved scene parameters are remembered.

Setup Lighting Load Types (Ld)

To set the load types for each lighting load, first enter *Setup* mode and scroll to the "Ld" option. The bar graphs immediately indicate the currently selected load type for each lighting load. Use the function buttons to change the load type, each load type indicated by a pattern of bar graph segments and a number on the two-digit display, as shown in the following table. Press the right and left side of the buttons to cycle through the available load types.

Load Type	Number	LEDs	Default LowEnd / HighEnd
Unused	0	all off	0 / 100
Incandescent – default	1	top 1 on	0 / 100
MLV	2	top 2 on	0 / 100
NCC	3	top 3 on	0 / 100
Fluorescent (2-wire)	4	top 4 on	10 / 100
Non-dim (On at start/Off at start)[1]	5	top 5 on	0 / 100
Non-dim (On at end/Off at start)[2]	6	top 6 on	0 / 100

1.   Whether going on or off, this load type switches at the start of the fade.

2.   If going off, this load type switches at the start of the fade; if going on, it switches at the end.

- When changing the load type using the rocker buttons, the two-digit display changes to reflect the current load type. It shows "L#." where # is the number from the table above. Whenever the two-digit display is showing a load type, the corresponding front panel LED is lit.

- During adjustment of this value, the lights do not change. If setup is exited without pressing the Save button, the original values are be retained. When the Save button is pressed, Setup mode is exited, the new values are saved, and the lights are updated to reflect the new curve type.

If the load type was changed, the LE and HE limits are automatically changed to the default value for the new load type, listed in the above table.

Setup Low-End Levels (LE)

Some lights can flicker at very low levels. To avoid this, specify the low-end limit accordingly. When adjusting lights to a level below this value, they stay at the low-end limit until they are turned off. To set the low-end levels for the six lighting loads:

- First enter *Setup* mode and scroll to the "LE" option (using the **^** and **v** buttons). At this point the lights do not change, but the bar graphs should immediately indicate the low-end levels for each lighting load. (In most cases this is 0%, which is indicated by all bar graph segments being off.) To set the low-end level, use the rocker button corresponding to that lighting load to adjust the level up or down. When the first adjustment is made, the light being adjusted jumps to the current low-end level, and start adjusting from there.

- The low-end level cannot be adjusted above 33%.

   NOTE: For non-dim and "unused" lighting loads, the low-end level cannot be adjusted (always at 0%). If adjusting this, the light and the bar graph does not change and the two-digit display shows "Er." to indicate an error.

If setup is exited without pressing the **Save** button, the original values are retained. For lighting loads where adjustment has been made, lights jump to the original low-end level. Light levels are not changed on lighting loads where no adjustment was made. When the **Save** button is pressed, *Setup* mode is exited, the new values are saved, and the lights do not change.

Setup High-End Levels (HE)

This option allows setting of the "full on" level of the lighting loads below their maximum brightness. To set the high-end levels for the six lighting loads:

- Enter *Setup* mode and scroll to the "HE" option (using the **^** and **v** buttons). At this point the lights do not change, but the bar graphs immediately indicate the high-end levels for each lighting load. (In most cases this is 100%, which is indicated by all bar graph segments being on.)

- To set the high-end level, use the rocker button corresponding to that lighting load to adjust it up or down. When the first adjustment is made, the light being adjusted jumps to the current high-end level, and start adjusting from there. As adjustments are made, the current light level for the lighting load being adjusted should appear in the bar graph and the two-digit display.

- The high-end level cannot be adjusted below 67%.

  > **NOTE:** For non-dim and "unused" lighting loads, the high-end level cannot be adjusted (always at 100%). If adjusting this, the light and bar graph do not change, and the two-digit display shows "Er" to indicate an error.

If setup is exited without pressing the **Save** button, the original values are retained. For lighting loads where adjustment has been made, lights jump to the original high-end level. Light levels are not change on lighting loads where no adjustment was made. When the **Save** button is pressed, *Setup* mode is exited, the new values are saved, and the lights do not change.

Setup Button Functions (bF)

This *Setup* mode is used to define the behavior of the buttons on the CLS-C6 unit itself, and on remote keypads if operation is desired other than the default. (Remote keypads must be ID'd, using auto-discovery, prior to this, which sets them to their default functions.) To enter this mode:

- First enter *Setup* mode and scroll to the "bF" option (using the **^** and **v** buttons). Then use the up/down button to scroll through the available button functions and values. This scrolls through all values for each function before proceeding to the next function.

- Press and hold the button to auto repeat. During auto-repeating, when it reaches the minimum or maximum value for that function, it stops. The next button push then increments/decrements to the next function.

  Available functions and values are as shown in the following table. (Other functions require a PC with iLux Designer software to configure them.)

BUTTON FUNCTION	CODE	POSSIBLE VALUES
Recall Scene	F1	oF,on,1-15
Toggle Scene	F2	on,1-15
Control Shade (open/stop/close/stop)	F3	AL, 1-6
Master Raise/Lower (last scene)	F4	uP, dn, ud (rockers only)

1. To assign a function to a certain button or buttons, first scroll to the desired function and value. Then, press each appropriate function button or remote button to assign the displayed function and value to that button.

When the button is released, the LED for that button should flash once to indicate that programming took place.

2. Next, use the up/down button to scroll to the next function and value to be assigned, and assign the desired buttons. Repeat this procedure for each function and value to be assigned.

3. After assigning all button functions, press **Save**, and the button function information is saved. If **Cancel** is pressed, or exit by some other mechanism (e.g., timeout), the state returns to what it was before *Setup* mode was entered.

> **NOTE:** The **ON** and **OFF** buttons on the CLS-C6 cannot be programmed. The operation of the up/down button is programmed using the "ud" setup function.

*   If an illegal button is programmed (e.g., the **ON** button, or program a remote keypad button as master raise/lower-up/down), LED flashes on three times to indicate that setting did not take place, and the two-digit display shows "Er."

> **NOTE:** Other button functions, including "shifted" functions, can be defined using the iLux Designer configuration program.

Setup Up/Down Button Function (ud)

To define operation of the up/down button, enter *Setup* mode and scroll to the "ud" option (using the **^** and **v** buttons).

*   Use the up/down button to select the desired mode. The display flips between "ud." and "#", where # is the mode, as defined in the following table.

FUNCTION	MODE
Lights (Last Scene) Master Up/Down	L
Shades Master Up/Down	S

*   The first function to be displayed is the current function. Since there are other functions that can be programmed via the iLux Designer, if the current function is not one of these, the display should show "ud.—". Pressing the up/down button then goes to mode L.

*   Press **Save** to save the new setting or **Cancel** to retain the original setting.

Setup Occupancy Sensing (oc)

To define operation of the Occupancy Sensing feature, enter *Setup* mode and scroll to the "oc" option (using the **^** and **v** buttons).

*   Use the up/down button to select the desired mode. The display alternates between "oc." and the mode number, as defined in the following table.

MODE	CODE
Do nothing on either exit or entry	0
Recall specified scene on exit, do nothing on entry	1
Recall specified scene on entry, do nothing on exit	2
Recall specified scenes on entry and exit	3

- The first mode to be displayed is the current mode.

- When programming from the front panel, exit time cannot be adjusted or displayed. If it has not been changed with iLux Designer, or SIMPL, it is the default of 30 minutes. Scenes to be recalled also cannot be changed from the front panel. If they have not been changed with iLux Designer, the OFF scene is recalled on exit (if enabled), and ON scene is recalled on entry (if enabled).

- Even if these items are changed with iLux Designer, they can still be enabled and disabled from the front panel without modifying the specified scenes or exit time.

- If **Cancel** is pressed, or *Setup* mode times out, the previous occupancy setting is restored. To have the new setting take effect, **Save** must be pressed.

> **NOTE:** In mode 0, even though nothing happens locally when occupancy state changes, the occupancy status is still reported to Cresnet.

> This mode can also be used to test the range of the occupancy sensor. While locked in the "oc." mode, each time motion is sensed, the middle LED on all six bar graphs blinks.

Run Auto-Discovery (Ad)

This *Setup* mode is used to find which remote devices are on the network, assign Cresnet IDs to new devices, and assign default functions to new panels and devices.

- To enter this mode, first enter *Setup* mode and scroll to the "Ad" option (using the **^** and **v** buttons). Then press the up/down button (either top, bottom, or both), and hold for 5 seconds. The auto-discovery process then starts. (If the button is released before 5 seconds are up, nothing happens, but "Ad." mode is locked in.) Once "Ad." mode is locked in, the **Cancel** button flashes.

- During Auto discovery, the "Ad." display flashes. When Auto Discovery is done, the two-digit display flashes between "Ad." and "##" where ## is the number of devices discovered on the network. The **Save** button also starts flashing. Press **Save** or **Cancel**.

> **NOTE**: If a C2N-IO (supplied separately) is connected to the system, set the rotary DIP switches to **00** or **D5** before auto-discovery is performed. If the C2N-IO is not configured properly the CLS-C6 does not recognize that the C2N-IO is connected and may result in an error.

- The CLS-C6 keeps a list of all devices on its local network. If the auto-discovery finds devices that match the list, it does not change anything about those.

- In addition to initially configuring the system, auto-discovery can be used to add or replace keypads or shade controllers. If adding a device, all previously assigned devices are not changed. The new device is added and assigned default functionality, if desired.

- To replace a device (because of defect or color choice), remove the device and replace with another device of the same type. When executing auto-discovery, the new device takes on the functionality of the original device. Use the "bF" option to change functionality, if desired.

- All shade controllers of a given type are assigned to a single shade group. Use the "AS" option to change them.

> **CAUTION:** If there are SSC shade controllers on the network that do not have a functional shade connected to channel 1, shade control may not operate properly. Therefore, any SSC shade controllers without any shades attached should be removed from the network before running Auto-discover. Also, if any SSC shade controllers have only one shade attached, it must be attached to channel 1.

- There are a number of possible error conditions that can occur during the discovery process (before Save is pressed). They are:

  ⇒ Corrupt data on network.

  ⇒ Two or more devices with same TSID number.

  ⇒ Invalid device type found on network. (CLS-C6 modules only support a limited number of device types.) Refer to "Appendix A: Supported Devices" for details.

  ⇒ Too many keypads found on network. (A maximum of 16 are supported.)

  ⇒ Too many shade controllers found on network. (A maximum of 16 are supported.)

  ⇒ (For future use.)

  ⇒ Too many slave CLSI units found on network. (A maximum of eight are supported.)

- If any of these errors occur, when the discovery process is done, the two-digit display flashes between "Ad." "##", and "E#", where "##" is the total number of devices discovered on the network (including invalid devices), and "E#" is "E1" through "E7", per the seven error types listed above. If more than one error is present, all error codes are displayed in sequence.

- In such case, the **Save** LED does not light (the **Cancel** LED remains flashing). The user must press **Cancel**, correct the error, and try again.

- In the case where there were no errors during the Auto-discover process, and the user presses **Save**, the CLSI updates the Network IDs for any devices which require it.

> **NOTE:** The case of duplicate TSIDs cannot always be accurately detected. If a get a Corrupt Data error is displayed, or the program reports fewer devices than actually exist on the network, this may also be a result of duplicate TSIDs. In any event, troubleshooting for these errors is essentially the same.

Assign Shade Groups (AS)

This *Setup* mode is used to define which channels on each shade controller are assigned to which shade group.

- To enter this mode, first enter *Setup* mode and scroll to the "AS" option (using the **^** and **v** buttons). Then use the up/down button to scroll through the shade groups. The display flashes between "AS." and " #", where # is the shade group to be assigned. The shade group number range is 1 – 6 plus 0 (zero). Enter a 0 to unassign a channel. (Alternatively, press any of the six

function front panel buttons to jump to a specific shade group.) The front panel LED corresponding to the selected shade group lights.

- While in *AS* mode, the bar graphs indicates the status of each of the six shade groups: if no controllers are assigned, all LEDs remain off; if SDC controller(s) are assigned, the bottom two LEDs light; if SDC-DC controller(s) are assigned, the bottom three LEDs light; if SSC controller(s) are assigned, the top two LEDs light.

- When a given "AS / #" is displayed, press the channel 1 or channel 2 up or down button on a shade controller to assign that channel of the shade controller to the current group. When the button is pressed, the **Setup** LED on that device flashes for 1 second to confirm that it has been assigned. The bar graph for that group also flashes off for 1 second.

- Go to a shade group and assign all channels. Then go to the next shade group and assign those channels. Repeat for all shade groups.

> **NOTE:** A given shade group can only have one type of shade controller (SDC, SDC-DC, or SSC). If a shade controller of a given type is assigned to a group that already contains shade controllers of the other type, the other controllers are removed from that group. Also, a given channel on a shade controller can only belong to a single group. So if a shade controller that belongs to one group is assigned to a new group, it is removed from the first group. Therefore, if a shade controller is accidentally configured to the wrong group go to the correct group and reassign it.

Once all shade controllers are assigned, press **Save** to save the assignments and return to *Standard* mode, or press **Cancel** to discard the assignments.

Display/Set MNET ID Of This Unit (id)

If this unit is to be connected to a Cresnet control system network, change its MNET ID. (When connected to another CLS-C6 unit's local network do not set the ID – running Auto Discovery on the master device does this automatically, as well as the Set ID process of the iLux Designer.) To do this:

1. Enter *Setup* mode and scroll to the "id" option, using the **^** and **v** buttons.

2. Press the up/down button. The display shows the current MNET ID. The *id* mode is now locked. A dot is shown to the right of the "id." The display alternates between "id" and the current MNET ID.

3. Use the up/down button to adjust the ID up or down (03-FE).

> **NOTE:** The valid address range is 03 – 20. If at any time the transceiver connection is lost because the serial jack was inserted, the "E1" error code is shown, the **Save** led turns off, and the **Cancel** led turns on. The Cancel button can be used to exit *Setup* and enter *Standard* mode.

4. If the button is held for more than 1/2 second, the unit auto-repeats and starts scrolling through the values. At the upper or lower limit, the unit pauses for 1/2 second and then wraps around.

5. Press the **Save** button to save the new value and return to *Standard* mode. Press the **Cancel** button to return to *Standard* mode without saving – the current MNET ID is retained.

Error Code:

"E1" = Cannot communicate with transceiver.

Photocell Test (Ph)

This *Setup* mode is used to test photocell output.

NOTE: Auto-Discovery must be performed before the CLS-C6 recognizes a GLS-LOL photocell. The photocell must also be installed and wired to a GLS-SIM or C2N-CBD-P Keypad.

To test photocell output:

- Enter Setup mode and scroll to the "Ph" option (using the **^** and **v** buttons). Press and hold either the top or bottom portion of the raise/lower button. The 2-digit display indicates the real-time output of the photocell in a percentage (0 to 99).

- Press the **Cancel** button to return to *Standard* mode.

NOTE: When in "Ph" mode, daylight harvesting shall be disabled.

Photocell Calibration (Pc)

This Setup mode is used to calibrate the photocell response when Daylight Harvesting is enabled. Photocell calibration is required to customize the lighting response to changes in daylight. The CLS-C6 allows each load to be calibrated independently for maximum performance. Typically, loads that are closest to sources of natural light are made more sensitive to daylight, and those that are furthest from daylight are made less sensitive. Loads that receive little or no daylight can be disregarded by the photocell.

NOTE: Photocell calibration is best performed on a sunny day, when all loads are above their minimum dim level, but below 80%. Performing photocell calibration when there is insufficient daylight may cause undesired operation on a bright day. Conversely, performing photocell calibration when there is excessive daylight may prematurely trigger loads to reach their minimum dim level (refer to "Photocell Lower Limit (PL)", on the following page), making calibration impossible.

NOTE: Loads configured with high sensitivity change more in response to changes in daylight. On a bright day, these loads are *lower*. Loads configured with low sensitivity respond less to changes in daylight. On a bright day, these loads are *higher*.

NOTE: Internal scene levels for all loads increase to 100% for calibration purposes while in this mode.

NOTE: Non-dim loads cannot be used with Daylight Harvesting.

To calibrate a photocell:

- Enter *Setup* mode and scroll to the "PC" option (using the **^** and **v** buttons). Press either the top or bottom portion of the raise/lower button. A period appears in the 2-digit display, indicating the mode has been selected.

- If a photocell is present, Scenes 1 through 8 (plus the ON scene) are automatically under photocell control. Scenes 9 through 16 ignore the photocell at all times.

- To enable/disable photocell control for a given load, press and hold both sides of its rocker button for 5 seconds. Loads that are not controlled by a photocell display a bar graph with only the top two and bottom two LEDs lit.

- Use the rocker buttons below each load to adjust each individual sensitivity level. Pressing the right-half of the rocker button lowers the sensitivity, increasing light output level. Pressing the left-half of the rocker button raises sensitivity, decreasing light output level. The 2-digit display indicates the current photocell level and the selected sensitivity. Light levels adjust automatically when the photocell reading changes.

- The following diagram illustrates the relationship between sensitivity, light output, and photocell level.
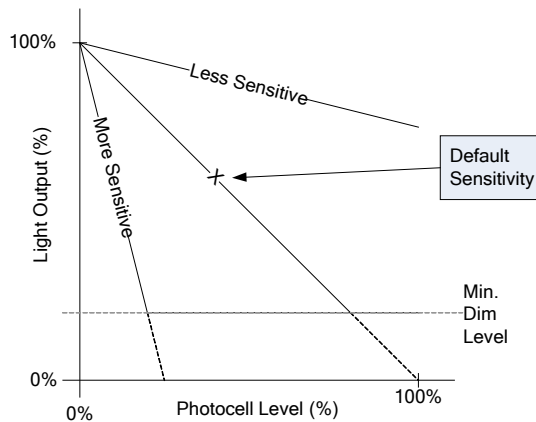
NOTE: It is not possible for loads to be adjusted from 0-100%. The range of actual light output is governed by the current photocell level, sensitivity and minimum dim level.

NOTE: Attempting to adjust the sensitivity for loads not controlled by a photocell causes the 2-digit display to flash "Er".

- Press **Save** to save the new settings or **Cancel** to retain the original setting.

Photocell Lower Limit (PL)

This *Setup* mode is used to adjust the lower limit for the photocell when Daylight Harvesting is enabled. This setting prevents the load from dimming below a specified level, regardless of the amount of available light. Valid values are 0 to 30%. The default value is 10%.

To adjust the lower limit for each load:

- Enter *Setup* mode and scroll to the "PL" option (using the **^** and **v** buttons). A period appears in the 2-digit display, indicating the mode has been selected. All lighting loads lower to the minimum dim level.

- Use the rocker buttons below each load to adjust each individual minimum dim level.

- Press **Save** to save the new setting or **Cancel** to retain the original setting.

NOTE: Attempting to adjust the lower limit for a non-dim or non-photocell controlled load produces no results and causes the 2-digit display to flash "Er".

Photocell Response Time (Pr)

This *Setup* mode is used to adjust the response time of the lights to a change in the photocell reading. Valid values are 10 seconds, 30 seconds, 1 minute, 2 minutes, 5 minutes. The default value is 1 minute.

To adjust the response time of the photocell:

- Enter *Setup* mode and scroll to the "Pr" option (using the **^** and **v** buttons). Press either the top or bottom portion of the raise/lower button. The 2-digit display indicates the response time.

- Use the **^** and **v** buttons (located next to save/cancel) to increase or decrease the response time.

- Press **Save** to save the new setting or **Cancel** to retain the original setting.

> **NOTE:** The CLS-C6 temporarily utilizes a faster response time when there are rapid changes in light (such as when shades or blinds are opened or closed). If daylight in the room has increased, the response time is increased to 10 seconds. If daylight in the room has decreased, the response time is 2 seconds. Under normal operation, the CLS-C6 implements a gradual response time.

Restore Factory Defaults (Fd)

This procedure is used to restore all settings to their factory defaults.

1. First enter *Setup* mode and then scroll to the "Fd" option (using the **^** and **v** buttons). Then press the up/down button (either top, bottom, or both), and hold for 5 seconds.

2. This procedure is locked in, and the **Save** LED flashes. (If the button is released before 5 seconds are up, nothing happens.) Press **Save** all configuration items are set to their factory default values. (Press **Cancel** and the unit exits *Setup* mode without changes.) The factory default configuration does not include any remote devices. To re-initialize remote devices, run Auto-discover after this function. Running the factory default function does modify the MNET ID of the CLS-C6.

3. The save process may take a few seconds. During this time, the **Save** LED is lit steady, and the two-digit display shows "—". When the process is complete, the LEDs extinguish.

Refer to "Appendix C: RS-232 Commands" on page 58 for a list of the system default values.

Configuring with iLux Designer

The Crestron iLux Designer program software supplied with all of the CLS-C6 series units configures the CLS-C6 as an independent, standalone device or as a network device in a Crestron network control system (Cresnet system).

To configure the CLS-C6 using the iLux Designer, use a direct serial connection as described in "Establishing Communication" on page 31.

> **NOTE:** Connecting the serial cable to the front panel of the CLS-C6 disconnects the control system network.

Configuring the CLS-C6 consists of setting the load schedule definition, the shade group configuration, the scene definitions, the CLS-C6 panel configuration and keypads configuration for each CLS-C6 device.

NOTE: Only one CLS-C6 can be configured at a time. If there are multiple CLS-C6 units in a system, each one must be individually configured.

The following are the minimum software versions required to use the iLux Designer program.

ILux Designer version 1.02.05 or later

Crestron Toolbox version 1.01.11 or later

Crestron Engraver version 2.5.0 or later*

Crestron Database version 17.3.0 or later*

*Required only if using Crestron Engraver to prepare custom labeling.

The following sections provide a brief description of the iLux Designer functions. Refer to the iLux Designer online help for detailed explanations.

Load Schedule

The "Load Schedule" screen allows identification of up to six lighting loads (circuits), add lighting load types for each channel; specify load type fixture wattage and quantity; specify the breaker size; specify the expected loss factor from magnetic transformers (magnetic low voltage, and neon/cold-cathode types only); specify upper and lower dimmer levels; and specify non-dimmer behavior.

The software issues warnings if the individual loads or total system wattage exceeds specified limits: 800 watts per load – 1920 watts system maximum with a 20A breaker (1440 watts maximum with a 15A breaker, and 1000 watts maximum with an Arc Fault breaker) for a 120 VAC installation; and 800 watts per load – 2200 watts system maximum for a 220 VAC installation, 2300 watts system maximum for a 230 VAC installation, and 2400 watts system maximum for a 240 VAC installation.

Shades

The "Shades" screen allows up to 16 shade controllers to be assigned, define up to six shade groups; enter appropriate values for jog time, maximum time and lockout time; and select the shade controller channels to be assigned to each shade group.

With SDC and SDC-DC shade controllers, there is no way for the system to recognize when the shade has reached the limits of travel and stopped. If the shade is commanded to go to full open or full close, the system assumes it is moving until the max time is reached. To set the max time effectively, measure the time it takes the shade to travel from full close to full open and the time to travel from full open to full close. Take the longer of these two times and set max time slightly more than that. Actual experience may require that a longer time is set.

Scenes

The "Scenes" screen allows 15 regular scenes to be defined (lighting levels and shade positions) in addition to the standard Off and On scenes. For all scenes, enter a fade time in seconds or minutes, and the desired level for each lighting load. (Select – – if a given load should not be affected by that scene.) Similarly, set the desired position for any shade groups. To prevent changing those settings from the front panel, check the Front Panel Lockout box.

CLS-C6

The "CLS-C6" screen allows entry of the the manual ramp rate used by the CLS-C6 when manually raising/lowering light levels; define the functionality of the six function buttons; define the behavior of the up/down button; specify if scene raise/lower is enabled; and define the entry action, the exit action, and motion sensor timeout when the motion sensor function is enabled. Crestron Engraver software can also be launched to create an engraver project for the CLS-C6 label.

NOTE: In systems with multiple CLS-C6 units that have the motion sensor function enabled, it is important to set the motion sensor timeout of each unit to the same value.

Keypads

The "Keypads" screen allows up to 16 remote keypads to be added; specify the remote keypad type; define the action type, action, and target of each button on that keypad. Crestron Engraver can also be launched to create an engraver project for each remote keypad.

NOTE: All keypads defined in the project must be installed and present on the CLS-C6 network before setting Network IDs via the Finish screen.

Touchpanel

The "Touchpanel" screen allows up to two touch screens to be added, enter unique names for the touch screen and buttons, and define the action type, action, and target of each button on that touch screen.

NOTE: All touch screen defined in the project must be installed and present on the CLS-C6 network before sending Touch screen projects or setting Network IDs via the Finish screen.

Finish

The "Finish" screen allows the project to be sent from the iLux Designer project to the CLS-C6; set the Net IDs for network devices; retrieve configuration information from the current CLS-C6 module; and print reports that give the spreadsheet data from each of the configuration screens.

Console Command Settings

Enabling/disabling IR reception, resetting the brightness level for the white and green LEDs, and resetting the *Glow* mode level can be done only via console commands.

By default, IR reception is enabled, the white and green LED brightness levels are set to 70 and 63, respectively, the white shift LED brightness level is set to 70, and the white LED *Glow* mode level is set to 7. If the settings are acceptable, continue with the configuring procedures. If these settings are not satisfactory, open the Crestron Toolbox and click **Tools | Text Console** to display the "Text Console" window, and follow the instructions given below.

IR Reception

1. At the **iLux**> prompt, type <**IR**> and press **Return** to display the current setting. The system displays:

```
IR reception is enabled (or disabled)
iLux>
```

2. To disable IR reception, type <**IR disable**> and press **Return**. The system displays:

```
IR reception is disabled
iLux>
```

3. To enable IR reception, type <**IR enable**> and press **Return**. The system displays:

```
IR reception is enabled
iLux>
```

LED Brightness

These settings are for the white LEDs next to the function buttons and the **ON** button, the shift LEDs, and the green bar graph LEDs.

1. At the prompt, type <**WHITELEDLEVEL**> or <**GREENLEDLEVEL**> and press **Return**. The system displays, for example:

```
White led brightness level = 70
iLux>
```

2. To change the brightness, type <**WHITELEDLEVEL ##**> or <**GREENLEDLEVEL ##**> where ## is any number from 1 to 100.

3. Press **Return**, the respective LEDs go to their new level.

Glow Mode Brightness

Glow mode is enabled when all lighting loads are turned off. In *Glow* mode, all the white LEDs turn on at a very low level to make it possible to find the unit in a darkened room.

1. Press the **OFF** button to select the Off scene (all lights off).

2. At the prompt, type <**WHITELEDGLOWLEVEL**> and press **Return**. The system displays:

```
White led glow level = 7
iLux>
```

3. To change the brightness, type <**WHITELEDGLOWLEVEL ##**> where ## is any number from 1 to 100.
    (The glow level should be much lower than the normal LED brightness.)

4. Press **Return**, the white LEDs go to their new level.

Replacing the Function Button Label

Each CLS-C6 is supplied with a pre-printed label sheet, in white, almond, or black to match the unit's color. The sheet contains two labels showing the standard Scene 1 – Scene 6 button labels, three labels with clear spaces that permit writing in single line button names, and three labels with clear spaces that permit writing in two-line button names to accommodate shift functions. The label sheet is micro-perforated to make it easy to separate the desired label from the sheet. Carefully fold the sheet along the perforations to snap them apart.

To replace the label on the unit:

1. Remove the front panel assembly by carefully pulling out and up from the bottom edge.

2. Carefully pull the label cover from the top edge at each side of the unit. Refer to the following illustration.

3. Remove the original label and replace it with the new label.

4. Replace the label cover, make sure the small tabs on the bottom edge are inserted in the slots on the unit cover, and snap into position.

5. Install the front cover assembly on the unit by lining it up at the top and pressing the bottom edge until it snaps into position.
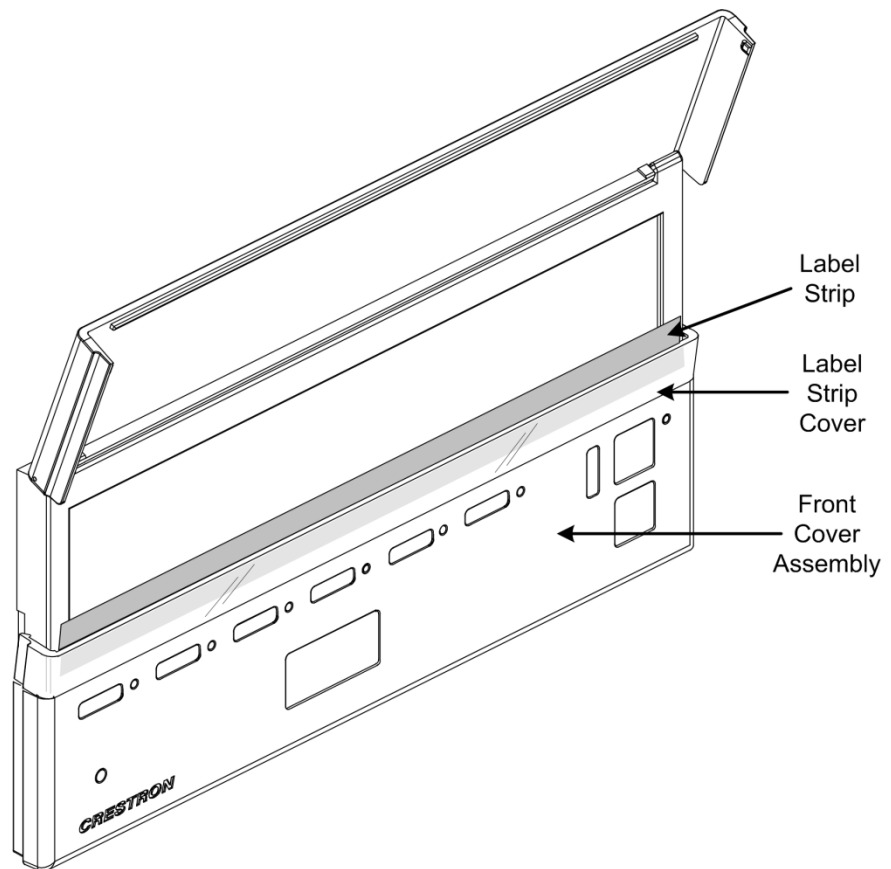
Programming Software

IMPORTANT NOTE: The procedures in this section relate to creating a program that can include the CLS-C6. It does not describe how to program the CLS-C6. As part of a 2-Series control system it must first be configure the unit using the iLux Designer program. Alternatively it may be configured manually using the front panel controls. After configuration is complete use SIMPL Windows, D3 Pro, or Crestron SystemBuilder to communicate with a 2-Series control system. Individual button functionality is not available except through configuring the CLS-C6 itself.

Have a question or comment about Crestron software?

Answers to frequently asked questions (FAQs) can be viewed in the Online Help section of the Crestron Web site. To post a question or view questions submitted to Crestron's True Blue Support, log in at www.crestron.com/support. First-time users must establish a user account.

Software Requirements for the PC

NOTE: The latest software can be downloaded from the Crestron Web site (www.crestron.com/software).

Crestron provides an assortment of Windows®-based software tools to develop a customized system. Use SystemBuilder, D3 Pro or SIMPL Windows to create a program to control the CLS-C6. Customers whose focus is on lighting systems may prefer to use the D3 Pro software since it is designed especially for creating lighting and environmental system control applications. Customers already familiar with SIMPL Windows who are including a lighting system as part of an overall control system project may prefer to continue using SIMPL Windows.

Programming with SystemBuilder

SystemBuilder is a comprehensive programming environment. Appropriate for most systems, it can quickly and easily generate a complete working program including both control processor logic and touch screen graphics.

Programming with D3 Pro

Crestron's D3 Pro lighting software provides all the tools necessary to create a complete Crestron lighting system for residential applications. The lighting system includes the control system logic program, touch screen projects and keypad programming, documentation and real-time lighting adjustment capabilities.

As with all Crestron software, D3 Pro provides extensive right-click and drag-and-drop functionality in addition to convenient keyboard shortcuts for frequently used functions and commands.

Programming is organized into six system **Views** of the lighting system, each providing a moveable toolbox of devices such as interfaces, fixtures and control modules. Devices can be added to the system simply by selecting it from one of the toolboxes and dragging it to a room. The available toolboxes differ depending on the View but all Views include a "General" toolbox that allows the addition of areas and rooms at any time.

Programming with SIMPL Windows

NOTE: While SIMPL Windows can be used to program the CLS-C6, it is recommended to use SystemBuilder for configuring a system.

NOTE: SIMPL Windows does not distinguish between the CLS-C6/C6M and CLSI-C6/C6M devices. All report as CLS units.

SIMPL Windows is Crestron's premier software for programming Crestron control systems. It is organized into two separate but equally important "Managers": Configuration and Program.

Configuration Manager

Configuration Manager is the view where programmers "build" a Crestron control system by selecting hardware from the *Device Library*.

1. To incorporate the CLS-C6 into the system, drag the CLS-C6 from the Lighting folder of the *Device Library* and drop it in the *System Views*.

   Locating the CLS-C6 in the Device Library
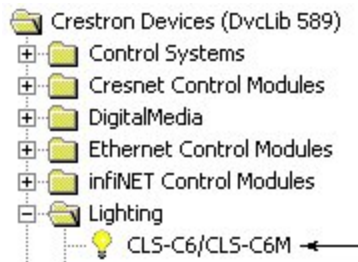
   The system tree of the control system displays the device in the appropriate slot with a default Net ID as shown in the following illustration.

   C2Net Device, Slot 9
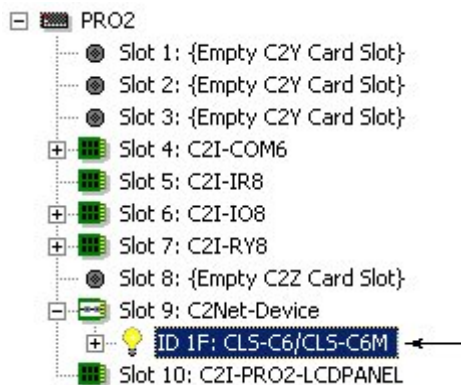
2. If additional CLS-C6 devices are to be added, repeat step 1 for each device. Each CLS-C6 is assigned a different Net ID number as it is added.

3. If necessary, double click a device to open the "Device Settings" window and change the Net ID, as shown in the following illustration.

"Device Settings: Crestron CLS-C6" Window
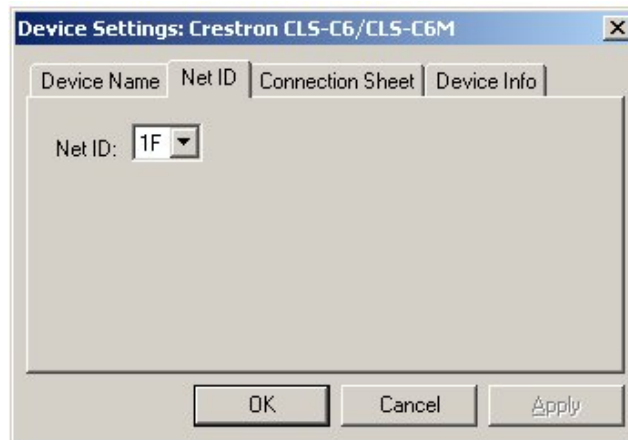
NOTE: The ID code specified in the SIMPL Windows program must match the Net ID of each unit. Refer to "Identity Code" on page 10.

Program Manager

Program Manager is the view where programmers "program" a Crestron control system by assigning signals to symbols.

The symbol can be viewed by double clicking on the icon or dragging it into *Detail View*. Each signal in the symbol is described in the SIMPL Windows help file (**F1**).

Uploading and Upgrading

Crestron recommends using the latest programming software and that each device contains the latest firmware to take advantage of the most recently released features. However, before attempting to upload or upgrade it is necessary to establish communication. Once communication has been established, files (for example, programs or firmware) can be transferred to the control system (and/or device). Finally, program checks can be performed (such as changing the device ID or creating an IP table) to ensure proper functioning.

Establishing Communication

Use Crestron Toolbox for communicating with the CLS-C6; refer to the Crestron Toolbox help file for details. There are two methods of communication: direct serial and indirect.

Direct Serial

NOTE: Required for initial setup of Ethernet parameters.

Direct Serial Communication
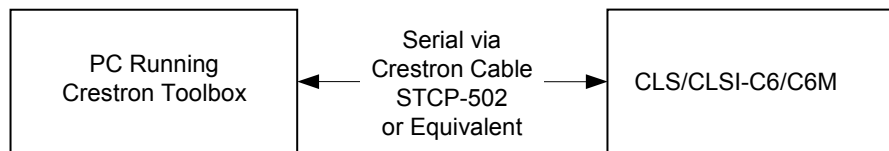
The **RS-232** (or **COMPUTER**) port on the CLS-C6 connects to the serial port on the PC via a serial cable (Crestron STCP-502 or equivalent):

1. Use the Address Book in Crestron Toolbox to create an entry using the expected serial communication protocol (RS-232, auto-detect baud rate, no parity, 8 data bits, 1 stop bit, XON/XOFF disabled, RTS/CTS disabled).

2. Display the CLS-C6's "System Info" window (click the [i] icon); communications are confirmed when the device information is displayed.

Indirect

Indirect Communication
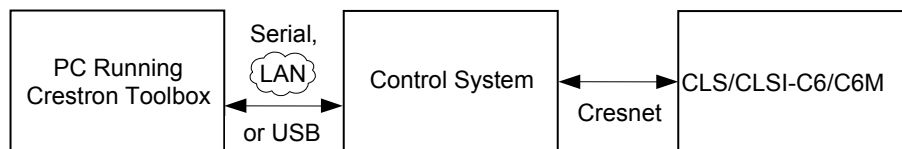
CLS-C6 connects to control system via Cresnet:

1. Establish communication between the PC and the control system as described in the latest version of the 2-Series Control Systems Reference Guide (Doc. 6256).

2. Use the Address Book in Crestron Toolbox to create an entry for the CLS-C6 using the expected communication protocol (indirect). Select the Cresnet ID of the CLS-C6 and the address book entry of the control system that is connected to the CLS-C6.

3. Display the CLS-C6's "System Info" window (click the [i] icon); communications are confirmed when the device information is displayed.

Programs and Firmware

Program or firmware files may be distributed from programmers to installers or from Crestron to dealers. Firmware upgrades are available from the Crestron Web site as new features are developed after product releases. One has the option to upload programs via the programming software or to upload and upgrade via the Crestron Toolbox. For details on uploading and upgrading, refer to the SIMPL Windows help file or the Crestron Toolbox help file.

SIMPL Windows

If a SIMPL Windows program is provided, it can be uploaded to the control system using SIMPL Windows or Crestron Toolbox.

Firmware

Check the Crestron Web site to find the latest firmware. (New users may be required to register to obtain access to certain areas of the site, including the FTP site.)

Upgrade CLS-C6 firmware via Crestron Toolbox.

1. Establish communication with the CLS-C6 and display the "System Info" window.

2. Select **Functions** | **Firmware…** to upgrade the CLS-C6 firmware.

Operation

The iLux always operates in one of four modes. The *Setup* mode is used to redefine many of the CLS-C6 settings. Details regarding the *Setup* mode are given in "Setup Mode" on page 12.

The following sections provide detailed descriptions of the *Standard*, *Lights*, and *Shades* modes. It is important to have a good understanding of these operating modes before attempting to take advantage of the extensive features available through the CLS-C6. (Refer also to "Appendix E: Button Functions" on page 74 for details on button functions.)

Standard Mode

Standard mode is the default mode; buttons are typically used to recall scenes, although they can be redefined to serve other functions.

Daylight Harvesting

The CLS-C6 supports use of a photocell to automatically reduce light levels when natural light is present (aka "Daylight Harvesting"). Each load can be set for a custom response to daylight levels, or set to not respond at all.

If a photocell is present, Scenes 1 through 8 (plus the ON scene) automatically utilize Daylight Harvesting. Scenes 9 through 16 ignore daylight harvesting at all times.

When under photocell control, the load level can change automatically based on the current photocell level and the scene setting. When this automatic behavior is enabled, the top bar graph LED for that load blink.

- By default, the six function buttons across the front panel are simple scene recall buttons. The buttons can be reprogrammed in *Setup* mode, or via the iLux Designer program, to perform different actions.

- The **ON** button function always recalls the "On" scene. The typical On scene is all lights at 100%; however, other value can be set just like any other scene.

- The **OFF** button function always recalls the "Off" scene. The "Off" scene always sets all lights to 0%; however, fade time and shade motor behavior are programmable.

- Whenever all the lighting loads are off (irrespective of how they are turned off), the "air-gap" relay opens (after a 2-second delay), to allow servicing of the lighting loads.

- The up/down push button can be defined to be either "lights master" or "shades master."

  ⇒ If defined to be lights master, it ramps the lighting loads included in the most recently recalled scene up and down. Non-dim loads are not affected.

  ⇒ If defined to be shades master, all shade groups are affected. Refer to "Shades mode" on page 39 for operating details.

  ⇒ Using the iLux Designer program, this button may be assigned to activate the Shift function rather than being a lights or shades master. Pressing the button toggles between "upper" and "lower" function sets.

  ⇒ Using the iLux Designer software, it is also possible to assign this button as "all lights" master, instead of "last scene" master.

- The six bar graphs indicate current intensity for each of the six lighting loads.

- The two-digit display is normally blank, except when a scene recall is in progress. It then shows the time remaining for lights to reach their target values.

Button Types

In *Standard* mode, the six function buttons can be programmed in *Setup* mode to be one of the following types. Using the iLux Designer software, other button functions

may be specified. (Refer to "Configuring With iLux Designer" on page 23 for details.)

- Recall-scene (specify scene number OFF, ON, 1-15). Refer to "Recall-scene buttons" below.

- Toggle-scene (specify scene number ON, 1-15). Refer to "Toggle-scene buttons" on page 35.

- Lighting master raise/lower (last scene). Refer to "Master (Last Scene) Raise/Lower buttons" on page 35.

- Lighting master raise (last scene). Refer to "Lighting Master (Last Scene) Raise buttons" on page 35.

- Lighting master lower (last scene). Refer to "Lighting Master (Last Scene) Lower buttons" on page 35.

- Shade control (open/stop/close/stop) (specify shade group: AL, 1-6). Refer to "Shade Control (open/stop/close/stop) Buttons" on page 35.

Recall-Scene Buttons

Scene Presets With Daylight Harvesting

If a photocell is present, Scenes 1 through 8 (plus the ON scene) automatically utilize Daylight Harvesting. When this automatic behavior is enabled, the topt bar graph LED for that load blinks.

NOTE: When editing scenes with photocell-controlled loads, photocell output is temporarily disabled. When the scene is recalled, photocell control resumes and light levels may change. To reduce the possibility of unintended scene behavior caused by photocell reaction to sunlight, edit scenes at night.

Used to recall a scene, i.e., have the specified lighting loads and/or shade groups go to their specified levels in the specified time. (Time only affects lighting loads; shade time is function of the shade motor.)

- During scene recall, the scene LED flashes until all affected lighting loads reach their target levels. After this, the LED remains on steady.

- Pressing a scene button while its LED is flashing performs a scene cut (lights immediately go to target levels).

- When a scene is recalled, the two-digit display initially shows the fade time of the scene, and then count down to 0 as the scene progresses.

- For the six dual buttons, if the Raise/Lower function is enabled on Recall-scene buttons via the iLux Designer software, and a scene is selected (LED on steady), the right and left sides of the function button can be used to raise and lower all dimmable lighting loads contained in that scene.

- The **ON** button always acts as a recall scene button for the ON scene, operating identically to other scene-recall buttons, except that items specific to dual buttons do not apply.

- The **OFF** button always acts as a recall scene button for the OFF scene, operating identically to other scene-recall buttons, except:

  ⇒ There is no LED associated with this button. Note that "cut" during fade still functions. Note also that a feedback LED for an OFF button on remote keypads acts as all other scene recall LEDs – it flashes while the off scene is being recalled, and is lit when the unit is in the OFF scene.

  ⇒ Items specific to dual buttons do not apply.

  ⇒ Note that if the last scene recalled was the OFF scene, the last scene master affects all dimmable lighting channels (since they are all included in the "last scene").

  ⇒ Any time all six lighting loads are off, all seven of these LEDs glow at a low intensity (to allow finding the CLS-C6 unit in the dark).

Toggle-Scene Buttons

- Used to alternately recall a scene or turn scene lights off (i.e., have the specified lighting loads go to off, in the specified time).

- The toggle scene function should not be assigned to any scene that includes shades.

- Note that the **ON** and **OFF** buttons are fixed recall scene buttons, and cannot be defined to be toggle. (However, a remote keypad button can be defined to toggle the ON scene, but not the OFF scene.)

- The LED is on if and only if ANY lighting load in the scene is above 0% (ignores state of shades).

- Pressing the button while all lights are off (LED off) recalls a scene. Pressing it while any lights are on (LED on) turns that scene's lights off.

- During scene recall, the scene LED flashes until all affected lighting loads reach their target levels. After this the LED remains on steady until all affected lights go off.

- During scene turn off, the LED flashes until all affected lighting loads reach 0%. After this, the LED is off until any affected light turns on.

- Pressing a scene button while its LED is flashing performs a scene cut (during either recall or turn off).

- Behavior of the two-digit display is the same as for scene recall.

Master (Last Scene) Raise/Lower Buttons

- Press the right side to raise lights, the left side to lower, release to stop.

- All dimmable lighting loads ramp up or down at a fixed rate, which is the same rate as used for individual up/down operation in *Lights* mode.

- Non-dim lighting loads are not affected.

- The feedback LED lights while the button is being pressed.

Lighting Master (Last Scene) Raise Buttons

- Same as Master Raise/Lower button, except that pressing any part of the button raises the lights.

Lighting Master (Last Scene) Lower Buttons

- Same as Master Raise – except lowers lights instead of raising them.

Shade Control (Open/Stop/Close/Stop) Buttons

- Used to control the specified shade group, or all shade groups.

- Press the right side of the function buttons to open the shades; press the left side to close them. Press the button while the shade is moving to stop it.

- The feedback LED is on only while a button is pressed.

IR Receiver

Functions can also be triggered through the built in RC5 IR receiver, using the optional CLS-IRHT8 remote or a third-party remote. Refer to "Appendix G: RC5 Code Expansion" on page 84 for details.

Occupancy Sensing

Occupancy sensing utilizing the built-in sensors (CLS-C6) may have specific actions specified for entry and for exit. Either or both of these may be disabled. A limited number of actions are available when programmed locally; more options are available when programmed using the iLux Designer program.

If motion is detected, or some other activity takes place, a room is considered occupied. If no activity takes place for a specified time (default is 30 minutes), the room is considered unoccupied.

When the state of the room changes from occupied to unoccupied, the exit function (if enabled) is executed. When the state of the room changes from unoccupied to occupied, due to motion detection, the entry function (if enabled) is executed. When the state of the room changes from unoccupied to occupied due to a button press or the receipt of a command, no function is executed.

NOTE: In systems with multiple CLS-C6 units that have the motion sensor function enabled on any of the units, it is important to set the motion sensor timeout of each unit to the same value. Otherwise, operation may not be as expected.

External partition sensors (provided by others) connected via the GLS-SIM product enable additional actions such as room combining. Refer to "Appendix F: Room Combining" on page 81 for additional details.

Setting a GLS-SIM to the designated Cresnet ID (0xC0 or 0xC1) causes this GLS-SIM to behave like an external occupancy sensor. Both inputs on the GLS-SIM are treated identically, allowing a total of up to six occupancy sensors (three wired in parallel on each input).

Refer to the latest version of the GLS-SIM Operations & Installation Guide (Doc. 6768) for detailed information.

Any/all external sensors are internally OR'd together with the internal motion sensor, if present.

The "Timeout" property, which is defined in iLux Designer, does not affect external sensors in any way. This property applies only to the internal sensor in the iLux, when present. External sensors are responsible for providing their own timeout.

Override Mode

iLux supports an *Override* mode, which can be triggered by a GLS-SIM or DIN-IO8. When *Override* mode is engaged, a special Override scene is recalled, and all local functionality of the iLux and associated keypads is locked out. By default, the Override scene is all lights at 100%, and supports a fade time of only 0 seconds.

The Override scene can be programmed locally on the iLux by entering *Scene Programming (Sc)* mode, and then cycling through the available scenes until "Or" appears on the display.

The Override scene cannot be set so that ALL loads are off.

When the *Override* mode is disengaged, all loads revert to their previous values. While in *Override* mode, all slave units are placed into *Override* mode as well, regardless of the room combining status.

While in *Override* mode, all Cresnet commands (whether sent by a control processor, or by a master iLux to a slave) shall be ignored, except for load level commands, which cause the new final value to be stored and thus recalled when the unit exits *Override* mode.

Override mode levels take precedence over any limits set by *Load Shed* mode.

Load Shedding (Demand Response)

The iLux can enter a *Load Shed* mode via an external input (such as into a DIN-IO8 or GLS-SIM).

When entering *Load Shed* mode, any loads that must have their levels reduced shall do so with a 1/2-second fade.

While in *Load Shed* mode, all loads must always be kept at or below their load shed level (the only exception being *Override* mode).

When exiting *Load Shed* mode, loads that were commanded to go to a level below their load shed level shall fade to the originally desired level in 1/2 seconds.

While in *Load Shed* mode, the 7-segment display shall flash "LS" at a rate of 1 second on, 1 second off, unless the display is actively showing something else.

Using iLux Designer, any value can be entered into the Load Shed Max field (0-100%). The default Load Shed Max value in iLux Designer is 80% for all loads.

Building Management System (BMS) Interface

A DIN-IO8 unit is supported for the purpose of providing a contact-closure interface to a Building Management System. A GLS-SIM is supported for the purpose of a very basic contact-closure interface to a Building Management System.

The DIN-IO8 is required to have a designated Cresnet ID in order to work properly in this capacity. The designated addresses are 0xD0 for normally open and 0xD1 for normally closed DIN-IO8 types.

The functionality of the DIN-IO8 and/or GLS-SIM is fixed and cannot be changed via *Setup* mode or iLux Designer.

The functionality provided by the DIN-IO8 is as shown in the following table:

DIN-IO8 BMS Functionality

PORT	FUNCTION
1	Recall On Scene (edge-triggered)
2	Recall Off Scene (edge-triggered)
3	Recall Scene 14 (edge-triggered)
4	Recall Scene 15 (edge-triggered)
5	*Override* Mode (level-triggered)
6	*Load Shed* Mode (level-triggered)
7	Defeat Occupancy. Sensors (level-triggered)
8	Lockout Front Controls (level-triggered)

Four unique Cresnet IDs are defined for the GLS-SIM to allow this unit access to the following functions (2 per ID):·

- Unit 1 (Cresnet ID 0xC5): Recall On/Off scene

- Unit 2 (Cresnet ID 0xC6): Defeat Occ Sensors/lockout front panel controls

- Unit 3 (Cresnet ID 0xC7): Recall scenes 14/15

- Unit 4 (Cresnet ID 0xC8): *Override* mode/load shed

For these units, DIP switches 0, 1, 2, and 3 determines whether the inputs are normally open, normally closed, active high or active low.

In order for the DIN-IO8 to be compatible with any model of BMS, one Cresnet ID treats the inputs as normally open. That is, a closure activates the function. Another Cresnet ID treats the inputs as normally closed.

When inputs are treated as normally open, port 8 shall cause a short to ground when the room is considered occupied.

When inputs are treated as normally closed, port 8 shall cause a short to ground when room is considered unoccupied.

Lights Mode

Manual Load Adjustment With Daylight Harvesting

When a load is under photocell control, the top bar graph LED for that load blinks slowly. Manual adjustment of the load is still possible using the raise and lower buttons.

NOTE: Manual adjustment of the load does not disable the photocell. The load changes in response to the photocell, but the level is shifted up or down according to an internal calculation that compensates for the amount of manual adjustment.

Lights mode is used to manually adjust any of the six lighting loads.

To enter *Lights* mode, raise the cover and press the **Lights** button. The corresponding LED lights, and the six function buttons can now be used to adjust lighting loads 1 through 6. Any scenes that are currently in the middle of a fade immediately goes to their target value. The seven white front panel LEDs go out. In this mode, these LEDs do not reflect the feedback status of the associated scenes. When returning to *Standard* mode, the LEDs return to their standard feedback indication.

Pressing the right side of one of the six function buttons raises the corresponding lighting load at the ramp rate. Pressing the left side of the button lowers the corresponding load at the ramp rate. When the button is released, the lights stop.

- The ramp rate is normally 5 seconds for going from full off to full on. This can be adjusted using the iLux Designer software. Non-dim lighting loads go immediately to full on or full off.

- The bar graphs indicate current light level.

- The two-digit display indicates the current percentage level of the lighting load being adjusted (oF, 01 to 99, on). This display goes blank 3 seconds after the last adjustment. While the front panel button is being pressed, the LED under the corresponding bar graph lights solid to indicate which light level is being reflected.

- The up/down button acts as an All Lights Master when in *Lights* mode, no matter what function is programmed for it. The top button performs a Master Raise (all dimmable lighting loads), and the bottom button performs a Master Lower (all dimmable lighting loads).

- The **ON** and **OFF** buttons on the CLS-C6 unit itself operates normally while in *Lights* mode as does any Scene Recall, Scene Toggle, and SceneLts_Off commands from remote panels and Cresnet. However, during the fade, the two-digit display does not show the fade time on the unit that is in *Lights* mode.

- All other inputs and commands from any remote devices, motion detector, and Cresnet control system are processed as usual while in *Lights* mode. If they affect the lighting load (or loads) being adjusted, the manual adjustment of that lighting load is terminated, and the new command takes precedence. To manually adjust this channel after that, release and re-press the button. The unit remains in *Lights* mode.

To exit *Lights* mode, press the **Lights** button again (or press **Cancel**), and the LED goes off. The unit returns to *Standard* mode. (Also, if no adjustments are made within 1 minute, the unit reverts to *Standard* mode.)

Pressing the **Shades** button automatically exits *Lights* mode and enters *Shades* mode.

Shades Mode

Shades mode allows manual control any of the six shade groups.

To enter *Shades* mode, raise the cover and press the **Shades** button. The corresponding LED lights, and now the six function buttons can be used to adjust shade groups 1 through 6. Any scenes that are currently in the middle of a fade immediately goes to their target value. The seven white front panel LEDs go out. In this mode, these LEDs do not reflect the feedback status of the associated scenes. When the unit is returned to *Standard* mode, these LEDs return to their standard feedback indication.

- The six function buttons act as open/stop/close/stop (rocker type) for each of the corresponding six shade groups.

- Operation is as described for the Shade Control button type in *Standard* mode (page 33.)

- For shade groups with C2N-SSC-2 controllers:

  ⇒ While in *Shades* mode, the bar graphs indicate the current shade position.

  ⇒ The two-digit display indicates the current percentage level of the shade group being adjusted (CL, 01 to 99, OP).

  ⇒ The two-digit display disappears (goes blank) 3 seconds after the shade stops moving (due to either a stop command or reaching a limit of travel).

  NOTE: The two-digit display only shows the shade level when being adjusted from front panel buttons in *Shades* mode or scene programming. It does not display when adjusting levels from a remote panel or Cresnet.

- For shade groups with C2N-SDC or C2N-SDC-DC controllers:

  ⇒ Bar graphs initially display nothing while a shade is not moving. While the shade is moving open, the bar graph LEDs scroll in an upward direction. While moving closed, the bar graph LEDs scroll in a downward direction. When the shade is stopped or the maximum time is reached, the bar graph turns off.

  ⇒ The two-digit display shows "OP" or "CL" accordingly.

  ⇒ The up/down button acts as a shades master when in *Shades* mode, no matter what function is programmed for it. Pressing the top while the shade is stopped sends it to full open; pressing the bottom while the shade is stopped sends it to full close; pressing anything while the shade is moving stops it. Pressing both while the shade is stopped causes the shade to move in the opposite direction.

  ⇒ The ON and OFF buttons on the CLS-C6 unit itself operates normally while in *Shades* mode. The same is true for all scene recall or scene toggle functions triggered by remote panel or Cresnet command.

  ⇒ Inputs/commands from any remote devices, motion detector, and Cresnet control system are processed as usual while in Shades mode. If they affect the group (or groups) being adjusted, the manual adjustment

of that shade group terminates, and the new command takes precedence. To manually adjust this channel after that, release and re-press the button. The unit remains in Shades mode.

To exit *Shades* mode, press the **Shades** button again (or press the **Cancel** button); the LED extinguishes and the unit returns to *Standard* mode. Also, pressing the **Lights** button automatically exits *Shades* mode and enters *Lights* mode.

If no adjustments are made for 1 minute, the unit automatically reverts to *Standard* mode.

Problem Solving

Troubleshooting

The following table provides corrective action for possible trouble situations. If further assistance is required, please contact a Crestron customer service representative.

CLS-C6 Troubleshooting

TROUBLE	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
Device does not function.	Unit is not receiving line power.	Verify that the unit is properly connected to the power line and that the circuit breaker is closed.
	Loads are not connected.	Verify that the loads are operational and that they are connected to the CLS-C6 unit.
Loads turn on and off, but do not dim.	Wrong load type settings.	Correct load type settings.
Lights flicker at low levels.	Incorrect low-end limit setting.	Change low-end limit setting.
In a multi-unit room configuration, commands from a remote IR controller cause loads to cut to their settings rather than fade.	More than one iLux unit picking up IR command.	Disable IR function on all but one unit.
Motion detector does not function.	Occupancy sensor function is not enabled.	Use iLux Designer or front panel setup function to enable occupancy sensor.

Check Network Wiring

Use the Right Wire

To ensure optimum performance over the full range of the installation topology, use Crestron Certified Wire only. Failure to do so may incur additional charges if support is required to identify performance deficiencies because of using improper wire.

Calculate Power

CAUTION: Use only Crestron power supplies for Crestron equipment. Failure to do so could cause equipment damage or void the Crestron warranty.

CAUTION: Provide sufficient power to the system. Insufficient power can lead to unpredictable results or damage to the equipment. Use the Crestron Power Calculator to help calculate how much power is needed for the system (www.crestron.com/calculators).

When calculating the length of wire for a particular Cresnet run, the wire gauge and the Cresnet power usage of each network unit to be connected must be taken into consideration. Use Crestron Certified Wire only. If Cresnet units are to be daisy

chained on the run, the Cresnet power usage of each network unit to be daisy chained must be added together to determine the Cresnet power usage of the entire chain. If the unit is run from a Crestron system power supply network port, the Cresnet power usage of that unit is the Cresnet power usage of the entire run. The wire gauge and the Cresnet power usage of the run should be used in the following equation to calculate the cable length value on the equation's left side.

Cable Length Equation

$$L < \frac{40,000}{R \times P}$$

Where: L = Length of run (or chain) in feet
R = 6 Ohms (Crestron Certified Wire: 18 AWG (0.75 mm^2))
or 1.6 Ohms (Cresnet HP: 12 AWG (4 mm^2))
P = Cresnet power usage of entire run (or chain)

Make sure the cable length value is less than the value calculated on the right side of the equation. For example, a Cresnet run using 18 AWG Crestron Certified Wire and drawing 20 watts should not have a length of run more than 333 feet (101 meters). If Cresnet HP is used for the same run, its length could extend to 1250 feet (381 meters).

NOTE: All Crestron certified Cresnet wiring must consist of two twisted pairs. One twisted pair is the +24V conductor and the GND conductor and the other twisted pair is the Y conductor and the Z conductor.

Strip and Tin Wire

When daisy chaining Cresnet units, strip the ends of the wires carefully to avoid nicking the conductors. Twist together the ends of the wires that share a pin on the network connector and tin the twisted connection. Apply solder only to the ends of the twisted wires. Avoid tinning too far up the wires or the end becomes brittle. Insert the tinned connection into the Cresnet connector and tighten the retaining screw. Repeat the procedure for the other three conductors.

Add Hubs

Use of a Cresnet Hub/Repeater (CNXHUB) is advised whenever the number of Cresnet devices on a network exceeds 20 or when the combined total length of Cresnet cable exceeds 3000 feet (914 meters).

Reference Documents

The latest version of all documents mentioned within the guide can be obtained from the Crestron Web site (www.crestron.com/manuals).

List of Related Reference Documents

DOCUMENT TITLE
2-Series Control Systems Reference Guide
GLS-SIM Operations & Installation Guide
iLux Lighting Systems Installation Guide

Further Inquiries

To locate specific information or resolve questions after reviewing this guide, contact Crestron's True Blue Support at 1-888-CRESTRON [1-888-273-7876] or refer to the listing of Crestron worldwide offices on the Crestron Web site (www.crestron.com/offices) for assistance within a particular geographic region.

To post a question about Crestron products, log onto the online help section of the Crestron Web site (www.crestron.com/onlinehelp). First-time users must establish a user account to fully benefit from all available features.

Future Updates

As Crestron improves functions, adds new features and extends the capabilities of the CLS-C6, CLS-C6M, CLSI-C6 and CLSI-C6M, additional information may be made available as manual updates. These updates are solely electronic and serve as intermediary supplements prior to the release of a complete technical documentation revision.

Check the Crestron Web site periodically for manual update availability and its relevance. Updates are identified as an "Addendum" in the Download column.
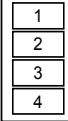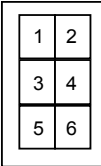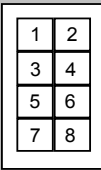
Appendix A: Supported Devices

The CLS-C6 local devices network supports up to 16 remote devices consisting of keypads, shade controllers, touch screens, and additional CLS-C6 units.

Keypads
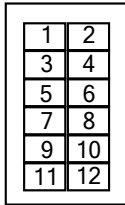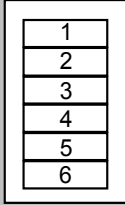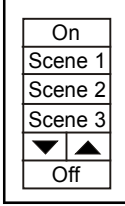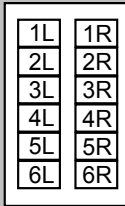
Up to 16 keypads can be added on the local devices network. The following table lists default button functions for the keypad types currently supported. These settings can be changed using the front panel *Setup* mode or via iLux Designer.

Supported Keypads

KEYPAD TYPE	BUTTON LAYOUT	BUTTON NUMBER	DEFAULT FUNCTION
CNX-B2		1	Recall ON Scene
		2	Recall OFF Scene
CNX-B4		1	Recall ON Scene
		2	Recall OFF Scene
		3	Last Scene Up
		4	Last Scene Down
CNX-B6 / C2N-DB6		1	Recall Scene 1
		2	Recall Scene 2
		3	Recall Scene 3
		4	Recall Scene 4
		5	Recall OFF Scene
		6	Recall ON Scene
CNX-B8 / C2N-DB8		1	Recall Scene 1
		2	Recall Scene 2
		3	Recall Scene 3
		4	Recall Scene 4
		5	Last Scene Down
		6	Last Scene Up
		7	Recall OFF Scene
		8	Recall ON Scene

(Continued on following page)

Supported Keypads (Continued)

KEYPAD TYPE	BUTTON LAYOUT	BUTTON NUMBER	DEFAULT FUNCTION
CNX-B12 / C2N-DB12	1 2 / 3 4 / 5 6 / 7 8 / 9 10 / 11 12	1	Recall Scene 1
		2	Recall Scene 2
		3	Recall Scene 3
		4	Recall Scene 4
		5	Recall Scene 5
		6	Recall Scene 6
		7	Recall Scene 7
		8	Recall Scene 8
		9	Last Scene Down
		10	Last Scene Up
		11	Recall OFF Scene
		12	Recall ON Scene
C2N-CBD / C2N-CBF	1 / 2 / 3 / 4 / 5 / 6	1	Recall On Scene
		2	Recall Scene 1
		3	Recall Scene 2
		4	Recall Off Scene
		5	Master Raise (last scene)
		6	Master Lower (last scene)
C2N-CBD-P / C2N-CBD-E / C2N-CBF-P	On / Scene 1 / Scene 2 / Scene 3 / ▼ ▲ / Off	1	On
		2	Scene 1
		3	Scene 2
		4	Scene 3
		5L	Last Scene Down
		5R	Last Scene Up
		6	Off
C2NI-CB / INETI-CB	1L 1R / 2L 2R / 3L 3R / 4L 4R / 5L 5R / 6L 6R	1L	Recall Scene 1
		2L	Recall Scene 3
		3L	Recall Scene 5
		4L	Recall Scene 7
		5L	Last Scene Up
		6L	Last Scene Down
		1R	Recall Scene 2
		2R	Recall Scene 4
		3R	Recall Scene 6
		4R	Recall Scene 8
		5R	Recall On Scene
		6R	Recall Off Scene

Shade Controllers

A maximum of 16 shade controllers can be added to the local devices network. The following shade controllers are currently supported (all sold separately):

- C2N-SSC-2*

- C2N-SDC

- C2N-SDC-DC

NOTE: The two channels on these shade controllers are labeled 1 & 2. SIMPL Windows cannot address the individual Shade Controllers. Only shade groups can be addressed.

Touch Screens

A maximum of two touch screens can be added to the local devices network. The following touch screens are currently supported (all sold separately):

- TPS-4L

- TPS-6L

The iLux auto-assigns the Cresnet ID for the touch screens if they are not already assigned to one of the designated IDs reserved for the touch screens.

Analog ramps are sent to the touch screens as Ramp Control Blocks, as opposed to discrete analogs. (In order to properly display analog levels, touch screen firmware supports Ramp Control Blocks natively.)

Touch screen display lists can be transferred to the touch screen via the programming jack on the iLux.

Through the use of the join map shown in the tables on the following page, in conjunction with D-Nav on the touch screen itself, a touch screen connected directly to an iLux provides the following functionality:

- Showing bar graphs indicating the current state of all loads on the master iLux

- Adjusting the level of each load via up/down buttons

- Recalling scenes on the master iLux (room combining determines if additional units are affected)

- Programming scenes on the master iLux

- Adjusting shades on the master iLux

A button link to the Engraver software is provided in iLux Designer for any touch screen that is engravable.

Using iLux Designer, only the hard buttons for the selected touch screen can be programmed. The command list is identical to that for keypads. All "soft buttons" on the display shall use dedicated join numbers for various functions.

The iLux Designer help file includes a table indicating all the "reserved" joins supported by the touch screens.

NOTE: These are not the standard reserved joins, but are the join numbers understood by the CLS-C6 for performing various actions.

* With firmware version 2.5.0 or later

Joins

Digital Command Joins

External functions and their feedbacks are only supported by the iLux master. The slave iLux(s) do not support external functions.

Programmable Joins 1-20 and partition joins and their feedback are only supported for the master iLux.

Digital Command Joins (from Touch Screen to CLS-C6)

JOIN	DESCRIPTION
1-20	Programmable via iLux Designer (no feedback)
100/101/102-116	Recall for Off Scene/On Scene/ Scene 1-15
133/134-148	Turn off loads in On Scene/ Scene 1-15
198/199-213	Toggle On Scene/Scene 1-15
232-243	Raise/Lower load 1-6 (z1 up, z1 dn, z2 up...)
244	Shade group 1 full open
245	Shade group 1 full close
246	Shade group 1 full stop
247	Shade group 1 open momentary
248	Shade group 1 close momentary
249	Shade group 1 open jog
250	Shade group 1 close jog
251	Shade group 1 full open /momentary open
252	Shade group 1 full close /momentary close
253	Shade group 1 full open/stop/close/stop
254-263	Shade group 2 control
264-273	Shade group 3 control
274-283	Shade group 4 control
284-293	Shade group 5 control
294-303	Shade group 6 control
304	Last Scene Master Raise
305	Last Scene Master Lower
306/307	All Lights Master Raise/Master Lower
308/309	On Scene Master Raise/Master Lower
310/311...338/339	Scene 1 Raise/Lower ... Scene 15 Raise/Lower
344	Quick save current light levels to scene specified in analog join 32 (no change to unaffected loads).
348/349	Program On Scene/Off Scene
350	Program scene by number
351	Save Edit Scene
352	Cancel Scene Programming
353-358	Remove load 1-6 from Edit Scene
359-364	Remove shade group 1-6 from Edit Scene
365	Lock Edit Scene
366	Unlock Edit Scene

Digital Command Joins (from Touch Screen to CLS-C6) (Continued)

JOIN	DESCRIPTION
367	Fade time up for Edit Scene
368	Fade time down for Edit Scene
370	Enable occupancy reporting
374	Enable entry scene
375	Disable entry scene
378	Enable exit scene
379	Disable exit scene
384	Internal sensor timeout minute up
385	Internal sensor timeout minute down
390-421	External Functions 1..32
423	Enter Override mode
424	Exit Override mode
426	Enter Load Shed mode
427	Exit Load Shed mode
430-566	Set partition 1-36 open
470-505	Set partition 1-36 closed
506	Photocell enable light zone 1
507	Photocell enable light zone 2
508	Photocell enable light zone 3
509	Photocell enable light zone 4
510	Photocell enable light zone 5
511	Photocell enable light zone 6
512	Photocell disable light zone 1
513	Photocell disable light zone 2
514	Photocell disable light zone 3
515	Photocell disable light zone 4
516	Photocell disable light zone 5
517	Photocell disable light zone 6
518	Photocell sensitivity level up light zone 1
519	Photocell sensitivity level up light zone 2
520	Photocell sensitivity level up light zone 3
521	Photocell sensitivity level up light zone 4
522	Photocell sensitivity level up light zone 5
523	Photocell sensitivity level up light zone 6
524	Photocell sensitivity level down light zone 1
525	Photocell sensitivity level down light zone 2
526	Photocell sensitivity level down light zone 3
527	Photocell sensitivity level down light zone 4
528	Photocell sensitivity level down light zone 5
529	Photocell sensitivity level down light zone 6
530	Photocell dim min level up light zone 1
531	Photocell dim min level up light zone 2

Digital Command Joins (from Touch Screen to CLS-C6) (Continued)

JOIN	DESCRIPTION
532	Photocell dim min level up light zone 3
533	Photocell dim min level up light zone 4
534	Photocell dim min level up light zone 5
535	Photocell dim min level up light zone 6
536	Photocell dim min level down light zone 1
537	Photocell dim min level down light zone 2
538	Photocell dim min level down light zone 3
539	Photocell dim min level down light zone 4
540	Photocell dim min level down light zone 5
541	Photocell dim min level down light zone 6
542	Photocell response time up
543	Photocell response time down
544	Get Photocell level
550-1099	Same as joins 100-499 and 506-541 but for CLS-C6 Slave 1
1100-1649	Same as joins 100-499 and 506-541 but for CLS-C6 Slave 2
1650-2199	Same as joins 100-499 and 506-541 but for CLS-C6 Slave 3
2200-2749	Same as joins 100-499 and 506-541 but for CLS-C6 Slave 4
2750-3299	Same as joins 100-499 and 506-541 but for CLS-C6 Slave 5
3300-3840	Same as joins 100-499 and 506-541 but for CLS-C6 Slave 6
3850-4391	Same as joins 100-499 and 506-541 but for CLS-C6 Slave 7
4400-4941	Same as joins 100-499 and 506-541 but for CLS-C6 Slave 8

Digital Feedback Joins

Digital Feedback Joins (from CLS-C6 to Touch Screen)

JOIN	DESCRIPTION
6000/6001/ 6002-6017	Recalling Off Scene/On Scene/Scene 1-15
6033/6034-6049	Turning off all loads in On Scene/Scene 1-15
6065/6066/ 6067-6082	Scene selected feedback for Off Sc./On Sc./Scene 1-15
6098/6099-6114	Any light on for On Scene/Scene 1-15
6132	Load 1 is on
6134	Load 2 is on
6136	Load 3 is on
6138	Load 4 is on
6140	Load 5 is on
6142	Load 6 is on
6144-6149	Load 1-6 is set to be non-dim
6150/6151/6152	Shade group 1 moving/last dir. Open/last dir. Close

(Continued on following page)

Digital Feedback Joins (from CLS-C6 to Touch Screen) (Continued)

JOIN	DESCRIPTION
6160/6161/6162	Shade group 2 moving/last dir. Open/last dir. Close
6170/6171/6172	Shade group 3 moving/last dir. Open/last dir. Close
6180/6181/6182	Shade group 4 moving/last dir. Open/last dir. Close
6190/6191/6192	Shade group 5 moving/last dir. Open/last dir. Close
6200/6201/6202	Shade group 6 moving/last dir. Open/last dir. Close
6205/6206	Last Scene Master Raise/Lower feedback
6207/6208	All Lights Master Raise/Lower feedback
6209/6210	On Scene Master Raise/Lower feedback
6211-6240	Scene 1-15 Master Raise/Lower feedback
6245	In Setup mode
6248	Programming the On Scene
6249	Programming the Off Scene
6250	Programming Scene by number
6254-3959	Lighting load 1-6 is in Edit Scene
6260-6265	Shade group 1-6 is in Scene
6266	Edit Scene is locked
6269	Fade time shown is in minutes
6270	Motion activity
6271	Function activity
6272	Current occupancy state
6274	Entry scene enabled
6278	Exit scene enabled
6280-6311	Not supported (note: external button fb is sent at same join number)
6312	In Override mode
6313	In Load shed mode
6320-6355	Partition 1-36 is open (rooms are combined)
6358	Photocell enable feedback light zone 1
6359	Photocell enable feedback light zone 2
6360	Photocell enable feedback light zone 3
6361	Photocell enable feedback light zone 4
6362	Photocell enable feedback light zone 5
6363	Photocell enable feedback light zone 6
6364	Photocell active feedback light zone 1
6365	Photocell active feedback light zone 2
6366	Photocell active feedback light zone 3
6367	Photocell active feedback light zone 4
6368	Photocell active feedback light zone 5
6369	Photocell active feedback light zone 6
6400-6799	Same as joins 6000-6355 but from Slave 1 --> touch screen
6800-7199	Same as joins 6000-6355 but from Slave 2 --> touch screen
7200-7599	Same as joins 6000-6355 but from Slave 3 --> touch screen
7600-7999	Same as joins 6000-6355 but from Slave 4 --> touch screen

(Continued on following page)

Digital Feedback Joins (from CLS-C6 to Touch Screen) (Continued)

JOIN	DESCRIPTION
8000-8399	Same as joins 6000-6355 but from Slave 5 --> touch screen
8400-8799	Same as joins 6000-6355 but from Slave 6 --> touch screen
8800-8199	Same as joins 6000-6355 but from Slave 7 --> touch screen
9200-9599	Same as joins 6000-6355 but from Slave 8 --> touch screen

Analog Command Joins

Analog Command Joins (from Touch Screen to CLS-C6)

JOIN	DESCRIPTION
1	bitmask to subscribe to slave messages (bit1=slave 1, etc.)
20-25	set level for lighting zone 1-6
26-31	set position for shade group 1-6 (Somfy shades only)
32	set scene number for "Program Scene By Number"
33	Set occupancy timeout, hours (ignored?)
34	Set occupancy timeout, minutes
40-59	same as joins 20-39 for slave 1
60-79	same as joins 20-39 for slave 2
80-99	same as joins 20-39 for slave 3
100-119	same as joins 20-39 for slave 4
120-139	same as joins 20-39 for slave 5
140-159	same as joins 20-39 for slave 6
160-179	same as joins 20-39 for slave 7
180-199	same as joins 20-39 for slave 8

Analog Feedback Joins

Analog Feedback Joins (from CLS-C6 to Touch Screen)

JOIN	DESCRIPTION
20-25	current light levels for loads 1-6
26-31	current position for shade group 1-6 (Somfy shades only)
300	bitmask indicating which slaves are connected (b1=slave1...)
332	Fade time for Edit Scene when in Program mode
333	Edit Scene number when in Program mode
334	Occupancy timeout hours (should always be 0)
335	Occupancy timeout minutes
40-59, 340-359	Same as joins 20-39, 300-339 for slave 1
60-79, 360-379	Same as joins 20-39, 300-339 for slave 2
80-99, 380-399	Same as joins 20-39, 300-339 for slave 3
100-119, 400-419	Same as joins 20-39, 300-339 for slave 4
100-119, 400-419	Same as joins 20-39, 300-339 for slave 4
120-139, 420-439	Same as joins 20-39, 300-339 for slave 5
140-159, 440-459	Same as joins 20-39, 300-339 for slave 6
160-179, 460-479	Same as joins 20-39, 300-339 for slave 7

Analog Feedback Joins (from CLS-C6 to Touch Screen) (Continued)

JOIN	DESCRIPTION
180-199, 480-499	Same as joins 20-39, 300-339 for slave 8
500	Photocell sensitivity level feedback light zone 1
501	Photocell sensitivity level feedback light zone 2
502	Photocell sensitivity level feedback light zone 3
503	Photocell sensitivity level feedback light zone 4
504	Photocell sensitivity level feedback light zone 5
505	Photocell sensitivity level feedback light zone 6
506	Photocell level feedback
507	Photocell Dim min level feedback light zone 1
508	Photocell Dim min level feedback light zone 2
509	Photocell Dim min level feedback light zone 3
510	Photocell Dim min level feedback light zone 4
511	Photocell Dim min level feedback light zone 5
512	Photocell Dim min level feedback light zone 6
513	Photocell response time feedback
520-539	Same as joins 500-512, but for CLS-C6 slave 1
540-559	Same as joins 500-512, but for CLS-C6 slave 2
560-579	Same as joins 500-512, but for CLS-C6 slave 3
580-599	Same as joins 500-512, but for CLS-C6 slave 4
600-619	Same as joins 500-512, but for CLS-C6 slave 5
620-639	Same as joins 500-512, but for CLS-C6 slave 6
640-659	Same as joins 500-512, but for CLS-C6 slave 7
660-679	Same as joins 500-512, but for CLS-C6 slave 8

Bidirectional Serial Joins

Bidirectional Serial Joins (to/from CLS-C6 and Touch Screen)

JOIN	DESCRIPTION
1-16	Scene 1-16 name as defined in iLux Designer
101-106	Lighting load 1-6 names as defined in iLux Designer
111-116	Shade group 1-6 names as defined in iLux Designer
121	Password as defined in iLux Designer
131	Photocell response time feedback string
331	Photocell response time feedback string for slave 1
531	Photocell response time feedback string for slave 2
731	Photocell response time feedback string for slave 3
931	Photocell response time feedback string for slave 4
1131	Photocell response time feedback string for slave 5
1331	Photocell response time feedback string for slave 6
1531	Photocell response time feedback string for slave 7
1731	Photocell response time feedback string for slave 8
200-220	same as 1-120 for slave 1
400-520	same as 1-120 for slave 2
600-720	same as 1-120 for slave 3
800-820	same as 1-120 for slave 4
1000-1020	same as 1-120 for slave 5
1200-1220	same as 1-120 for slave 6
1400-1420	same as 1-120 for slave 7
1600-1620	same as 1-120 for slave 8

Appendix B: Console Commands

Console commands are available through the Crestron Toolbox program.

1. Select **Text Console** from the **Tools** menu.

2. At the prompt, enter HELP ALL and press **Return**. The system displays:

```
iLux>HELP ALL

?                   display list of common commands
CNETID              display or set the cresnet id
GETCONFIG           get project file from iLux
GREENLEDLEVEL       display or set the green leds brightness level
HELP                display list of available categories
INFO                display additional device information
IR                  display or enable/disable IR reception
MOTIONSENSORLEVEL   display/change the internal motion sensor level
                    threshold
PROJECTINFO         display detailed project file information
PUTCONFIG           load project file to iLux
REBOOT              reboot the iLux
REPORTCRESNET       show all devices on the local network
RESTORE             set all parameters to factory default
SYSTEM              load firmware to iLux
UPLOAD              load firmware to cresnet device on the local
                    network
VERSION             display firmware version number
WHITELEDLEVEL       display or set white leds brightness level
WHITELEDGLOWLEVEL   display or set white leds glow brightness level

iLux>
```

The commands are presented alphabetically in the following listing. Details about each command include a description of the command, a list of help menus that contain the command, the proper syntax for entering the command, and definitions of parameters that may be included in the syntax. Note that the console commands are case insensitive.

?

Description:	This command produces a list of the most used common commands.
Help Menu(s):	Main, Common
Syntax:	?
Parameters:	None

CNETID

Description:	Use this command to set or display the Cresnet ID of the CLS-C6 as a slave device.
Help Menu(s):	System, Common
Syntax:	CNETID <ID> CNETID
Parameters:	<03…FE> to set the ID none to display the current ID

GETCONFIG

Description:	Use this command to get project file information from the CLS-C6.
Help Menu(s):	File
Syntax:	GETCONFIG PROJECT
Parameters:	PROJECT to get the project file from iLux

GREENLEDLEVEL

Description:	Use this command to display or set the green LED level on the CLS-C6. Refer to "LED Brightness" on page 26 for details.
Help Menu(s):	Device
Syntax:	GREENLEDLEVEL <0..100> set the green leds brightness to level <0..100> GREENLEDLEVEL display the green leds brightness level <0..100>
Parameters:	<0…000> - to set the green LED brightness level None – to display the current green LED brightness

HELP

Description:	Use this command to display a list of help categories.
Help Menu(s):	Main, Common
Syntax:	HELP HELP ALL HELP [CATEGORY] - show list of commands in category
Parameters:	ALL - to display a list of all commands CATEGORY - to show a list of commands in that category None - to display a list of all categories

INFO

Description:	Use this command to display additional device information. For example, this command would produce information similar to the following:
	
	`Application version : 1.01.02`
	`Loader version     : 1.16.00`
	`Config data version : 1.1`
	`User data version  : 1.0`

Help Menu(s):	Common, System
Syntax:	INFO
Parameters:	None

IR

Description:	Use this command to display or enable/disable IR reception. Refer to "IR Reception" on page 25 for details.
Help Menu(s):	Device
Syntax:	IR <ENABLE…DISABLE>
Parameters:	ENABLE to enable the IR receiver DISABLE to disable the IR receiver None to display the current state

MOTIONSENSORLEVEL

Description:	Use this command to display and change the internal motion sensor sensitivity level.*
Help Menu(s):	Device
Syntax:	MOTIONSENSORLEVEL
Parameters:	Higher values make the motion sensor less sensitive. Default is 78; valid range is 0…255

PROJECTINFO

Description:	Use this command to display the project file name, the date and time it was compiled, version and change flags. For example, this command would produce information similar to the following:
	
	`Project file name  : Conference Room.ilx`
	`Date              : 9/9/05`
	`Time              : 3:13:21  PM`
	`Config data version : 1.1`
	`User data version   : 1.0`
	`Change flags        : 00000000`

Help Menu(s):	Device
Syntax:	PROJECTINFO
Parameters:	None

PUTCONFIG†

Description:	Use this command to load the project file to the CLS-C6
Help Menu(s):	File
Syntax:	PUTCONFIG PROJECT
Parameters:	PROJECT – The only valid parameter value

REBOOT

Description:	Use this command to reboot the CLS-C6
Help Menu(s):	Common
Syntax:	REBOOT
Parameters:	None

REPORTCRESNET

Description:	Use this command to report devices on the local network
Help Menu(s):	Common
Syntax:	REPORTCRESNET <ID> REPORTCRESNET ALL
Parameters:	<03…FE> to identify a specific device ALL – To show all devices on the network

RESTORE

Description:	Use this command to set all project configuration and parameters to the factory default settings.
Help Menu(s):	System
Syntax:	RESTORE ALL
Parameters:	ALL the only valid value for this parameter

SYSTEM∗

Description:	Use this command to load firmware to the CLS-C6.
Help Menu(s):	File
Syntax:	SYSTEM
Parameters:	None

UPLOAD∗

Description:	Use this command to load firmware to the slave device on the local network.
Help Menu(s):	File
Syntax:	UPLOAD <ID> FIRMWARE
Parameters:	<03…FE> FIRMWARE – the only valid value for this parameter

VERSION

Description:	Use this command to display the firmware version number. For example, this command would produce information similar to the following:
	`CLS-C6M Lighting Controller with Motion [v1.00.04,`
	`#FFFD6899]`

Help Menu(s):	Common
Syntax:	VERSION
Parameters:	None

WHITELEDLEVEL

Description:	Use this command to display or set white LEDs brightness level. Refer to "LED Brightness" on page 26 for details.
Help Menu(s):	Device
Syntax:	WHITELEDLEVEL <nnn> WHITELEDLEVEL
Parameters:	<0..100> to set brightness level none to display current brightness level

WHITELEDGLOWLEVEL

Description:	Use this command to display or set white LEDs glow brightness level. Refer to "Glow Mode Brightness" on page 26 for details.
Help Menu(s):	Device
Syntax:	WHITELEDGLOWLEVEL <nnn> WHITELEDGLOWLEVEL
Parameters:	<0 100> to set glow level none to display current glow level

*   This function is typically done using Crestron Toolbox or iLux Designer menu commands.

Appendix C: RS-232 Commands

Connect the third party controller to the serial port of the C2N-IO. Connect the C2N-IO to the CLS-C6s **Local Devices – G Z Y 24**. ASCII commands received by the serial convertor module are sent to the CLS-C6 slave Cresnet port. The CLS-C6 Cresnet serial packets are forwarded as ASCII strings to the third party controllers.

Only one C2N-IO device is allowed on the local Cresnet network. The Cresnet ID for the C2N-IO should be set to **00** so that the iLux can assign **D5** when auto-discovery is run.

NOTE: When connecting the C2N-IO serially to the PC ensure proper wiring. The Tx pin of the C2N-IO serial connector must connect to the Rx pin of the serial connector on a PC. Additionally, the Rx pin of the C2N-IO serial connector must connect to the Tx pin of the serial connector on a PC, and then ground.

NOTE: If the PC is connected to the CLS-C6 and the C2N-IO (serially) at the same time, then choose a different port for the C2N-IO since the serial connection is not shared (COM1, COM2, … COM6). This can be performed in the Crestron Toolbox Address Book when selecting the communications settings for the C2N-IO.

Command Format

All packets from the third party equipment shall be in ASCII character set range 0 to 127. Extended ASCII characters higher than 127 are not supported. All command and reply packets for the third party controller between the CLS-C6 and C2N-IO devices are in Cresnet serial packet type 0x12 format. The serial packet payload contains the ASCII command or reply strings form the third party controllers.

Serial Port Configuration Packet to C2N-IO

CRESNET ID	LENGTH	CMD	STRING NUMBER	PAYLOAD DATA 0..X
1-Byte	1-Byte	1-Byte	1-Byte	x-Bytes
XX	07	12	80	00 25 00 00 00

Refer to the "Cresnet II Packet" document for more information on this command.

Serial Packets Between CLS-C6 and C2N-IO

CRESNET ID	LENGTH	CMD	STRING NUMBER	PAYLOAD DATA 0..X
1-Byte	1-Byte	1-Byte	1-Byte	x-Bytes
XX	LL	0x12	0x80	00..XX

Refer to the Cresnet protocol specifications for more details on this packet.

Serial Command String Format to Third Party Controllers.

ILUX CONTROLLER	COMMAND	PAR1…X	CARRIAGE RETURN	LINE FEED
Refer to "iLux Controller Code Table" which starts below for a list of available options.	Refer to "RS-232 Command Table" which starts on the following page which provides a description of available commands and the required syntax.	A list of available variables that can be entered into the command. The brackets should be removed from the command. [Par1] [……..] [Parx]	0Dh	0Ah

Serial Command String Format From Third Party Controllers.

STATUS	NUM	CARRIAGE RETURN	LINE FEED
Response packet type 1			
This response packet is returned if command fails or is invalid			
ERROR	X=Error Code	0Dh	0Ah
Response Packet Type 2			
This response packet is returned if command requires status or reply packet from the controller			
Response	Par1 - Parx	0Dh	0Ah
Response Packet Type 3			
This response packet is returned if there was no packet error and a status or reply packet response is not required			
OK		0Dh	0Ah

iLux Controller Code Table

CONTROLLER CODES	DESCRIPTION
M	Commands the iLux Master Controller
S1 - S8	Commands the iLux Slave Controller 1 through 8

When entering a command to control the iLux replace [ILUX] in the "RS-232 Command Table" with the specified controller code listed in the "iLux Controller Code Table" above. Possible entries are: M, S1, S2, S3, S4, S5, S6, S7 or S8.

Refer to the following "RS-232 Command Table" for a list of possible commands that can be sent to the iLux. Information contained within braces (e.g. [ILUX] or [X|ALL]) should be replaced with the appropriate command minus the braces. To turn the echo command on for a master controller ([ILUX] ECHO ON|OFF) enter "M ECHO ON".

When a lighting load is declared as unaffected in iLux Designer the text console reports "—" as the value.

RS-232 Command Table

COMMAND		COMMAND	RESPONSE
DESCRIPTION	**CATEGORY**		
Control	Echo Cmd	[ILUX] ECHO ON|OFF	
Light zone Control	Set Light zone Level	[ILUX] LZ [X|ALL] LVL [LEVEL] [FADETIME]	
Light zone Control	Get Light zone Level	[ILUX] LZ [X|ALL] LVL ?	[ILUX] LZ [X|ALL] LVL [LEVEL1][…][LEVEL6]
Light zone Control	Raise Light zone	[ILUX] LZ [X|ALL] UP [FADETIME]	
Light zone Control	Lower Light zone	[ILUX] LZ [X|ALL] DN [FADETIME]	
Light zone Control	Stop Light zone	[ILUX] LZ [X|ALL] STOP	
Light zone Control	Light zone toggle	[ILUX] LZ [X|ALL] TOG [FADETIME]	
Light zone programming	Read Light zone type	[ILUX] LZ [X|ALL] TYPE ?	
Light zone programming	Read Light zone min level	[ILUX] LZ [X|ALL] MIN ?	[ILUX] LZ [X|ALL] MIN [LIMIT1][…][LIMIT6]
Light zone programming	Read Light zone max level	[ILUX] LZ [X|ALL] MAX ?	[ILUX] LZ [X|ALL] MAX [LIMIT1][…][LIMIT6]
Light zone programming	Read Light zone names	[ILUX] LZ [X] NAME ?	[ILUX] LZ [X] NAME [LABEL]
Shade group Control	Set Shade group position	[ILUX] SZ [X|ALL] POS [LEVEL]	
Shade group Control	Get Shade group position	[ILUX] SZ[X|ALL] POS ?	[ILUX] SZ [X|ALL] POS [LEVEL1][…][LEVEL6]
Shade group Control	Shade group Open	[ILUX] SZ[X|ALL] OPEN	
Shade group Control	Shade group Close	[ILUX] SZ[X|ALL] CLOSE	
Shade group Control	Shade group Stop	[ILUX] SZ[X|ALL] STOP	
Shade group Control	Jog Shade open	[ILUX] SZ[X|ALL] JOPEN	
Shade group Control	Jog Shade Close	[ILUX] SZ[X|ALL] JCLOSE	
Shade group Control	Open/Stop/Close/Stop	[ILUX] SZ[X|ALL] OSCS	
Shade Group programming	Read Shade name	[ILUX] SZ[X] NAME ?	[ILUX] SZ [X] NAME [LABEL]
Shade Group programming	Read shade type	[ILUX] SZ[X|ALL] TYPE ?	[ILUX] SZ [X] TYPE [CODE]
Scene Control	Scene recall	[ILUX] SC [XX] RECALL	
Scene Control	Scene Raise	[ILUX] SC [XX] UP	
Scene Control	Scene Lower	[ILUX] SC [XX] DN	

(Continued on following page)

RS-232 Command Table (Continued)

COMMAND		COMMAND	RESPONSE
DESCRIPTION	**CATEGORY**		
Scene Control	Stop scene raise/lower	[ILUX] SC [XX] STOP	
Scene Control	Toggle scene	[ILUX] SC [XX] TOG	
Scene Control	Turn off lights in scene	[ILUX] SC [XX] OFF	
Scene Control	Read Scene state Active	[ILUX] SC [XX|ALL] STATE ?	[ILUX] SC [XX] [LZx] [LVL] [LEVEL]
Scene programming	Scene quick save	[ILUX] SC [XX] SAVE	
Scene programming	Read Scene light level	[ILUX] SC [XX] LZLVL ?	[ILUX] SC [XX] LZLVL [LEVEL1][…][LEVEL6]
Scene programming	Read Scene shade level	[ILUX] SC [XX] SZLVL ?	[ILUX] SC [XX] SZLVL [LEVEL1][…][LEVEL6]
Scene programming	Set scene light mask	[ILUX] SC [XX] LZMSK [VALUE]	
Scene programming	Read scene light mask	[ILUX] SC [XX] LZMSK ?	[ILUX] SC [XX] LZMSK [VALUE]
Scene programming	Set scene shade mask	[ILUX] SC [XX] SZMSK [VALUE]	
Scene programming	Read scene shade mask	[ILUX] SC [XX] SZMSK ?	[ILUX] SC [XX] SZMSK [VALUE]
Scene programming	Read scene name	[ILUX] SC [XX] NAME ?	[ILUX] SC [XX] NAME [LABEL]
Combine / Uncombined	Combine rooms	[ILUX] COM [ILUX1] [ILUX2]	
Combine / Uncombined	Uncombined rooms	[ILUX] UNCOM [ILUX1] [ILUX2]	
Combine / Uncombined	Combine room status	[ILUX] COM ?	[ILUX] COM [ILUX1/ILUX2 […] [ILUXx/ILUXy]
Override control	Set override	[ILUX] OV ON	
Override control	Clear override	[ILUX] OV OFF	
Override control	Read override state	[ILUX] OV ?	[ILUX] [OV] [STATE]
Load shed control	Set Load shed state	[ILUX] LS ON	
Load shed control	Clear Load shed state	[ILUX] LS OFF	
Load shed control	Get Load Shed state	[ILUX] LS ?	[ILUX] [LS] [STATE]
Occupancy	Set occupancy	[ILUX] OC [SET|CLEAR]	
Occupancy	Clear occupancy	[ILUX] OC [SET|CLEAR]	

(Continued on following page)

RS-232 Command Table (Continued)

COMMAND		COMMAND	RESPONSE
DESCRIPTION	**CATEGORY**		
Occupancy	Read occupancy state	[ILUX] OC ?	[ILUX] OC [STATE]
Photocell	Read Photocell active state	[ILUX] PH [X|ALL] ACTIVE ?	[ILUX] PH [X] ACTIVE [STATE1][…][STATE6]
Version	Read version number	[ILUX] VER ?	[ILUX] VER [ID STRING]

NOTE: Command and response parameters are separated by blank space characters.

Adding C2N-IO Device to CLS-C6

To add a C2N-IO module to CLS-C6 connect the module to the CLS-C6 Cresnet slave network port and run the auto-discover from CLS-C6 front panel. CLS-C6 adds the device to its network list. The CLS-C6 then polls and configures the C2N-IO serial port.

The C2N-IO serial port baud rate settings are 9600, 8 data bits, 1 stop bit, XON/XOFF disabled, RTS/CTS disabled.

Echo Control Command

This command is used to enable/disable character echo.

Syntax: `[ILUX] Echo [ON|OFF]`

Light Zone Commands

Light Zone Operation Commands

Light zone Level Command

The following command is used to set the light zone levels:

Syntax: `[ILUX] LZ [X|ALL] LVL [LEVEL] [FADETIME]`

X=1 - 6 light zone

ALL = ALL light zones

FADETIME=0 - 594000 in 0.01 second steps (e.g. 100=1 seconds)

LEVEL:

LEVEL IN PERCENT	DESCRIPTION
0	Level off
1 to 100	Level On

Light zone Level Recall Command

The following command is used to get the light zones level:

Syntax: `[ILUX] LZ [X|ALL] LVL?`

X = 1 - 6 light zone

ALL = ALL Light zones

Reply packet

`[ILUX] LZ [X|ALL] LVL [LEVEL1] [….] [LEVEL6]`

LEVEL x = 0 - 100 (for light zone 1 through 6)

Light Zone Lower or Raise Command

The following command is used to lower or raise the light zone control. Internal fade time is used if fade time is not entered or if command is for slave iluxes:

Syntax: `[ILUX] LZ [X|ALL]  [UP|DN]  [FADETIME]`

X = 1 - 6 light zone

ALL = All Light zones

UP = Raise light level

DN = Lower light level

FADETIME = 0 - 594000 in 0.01 second steps (e.g. 100 = 1 seconds)

Light Zone Stop Command

The following command is used to stop the light zone control:

Syntax: [ILUX] LZ [X|ALL] [STOP]

X = 1 - 6 light zone

ALL = All Light zones

STOP = Stop light level

Light Zone Toggle Command

The following command is used to toggle the light zone. Internal fade time is used if fade time is not entered:

Syntax: [ILUX] LZ [X|ALL] TOG [FADETIME]

X = 1 - 6 light zone

ALL = All light zones

FADETIME = 0 - 594000 in 0.01 second steps (e.g. 100 = 1 seconds)

Light Zone Programming Commands

Light zone Lower Limit Command

The following command is used to get light zone min limit. This command is not supported for slave CLS-C6 controllers:

Syntax: `M LZ [X|ALL] MIN  ?`

X = 1...6 light zone

ALL = All light zones

Reply packet

`[ILUX] LZ [XX|ALL] MIN [LIMIT1] [….]  [LIMIT6]`

LIMITx = 0 - 100 (for light zone 1 through 6)

Light Zone Upper Limit Command

The following command is used to get light zone maximum limit. This command is not supported for slave CLS-C6 controllers:

Syntax: M LZ [X|ALL] MAX ?

X=1...6 light zone

Reply packet

```
M  LZ  [X|ALL]  [MAX] [LIMIT1] [….]  [LIMIT6]
```

LIMITx = 0 - 100 (for light zone 1 through 6)

Light Zone Load Type Command

The following command is used to get load types. This command is not supported for slave CLS-C6 controllers:

Syntax: M LZ [X|ALL] TYPE ?

X=1...6 light zone

Reply packet

```
M  LZ  [X|ALL]  TYPE [CODE1] [….]  [CODE6]
```

CODEx = refer to table below (type code for light zone through 6):

Light Zone Load Type Codes

SUPPORTED TYPES CODE	DESCRIPTION
0	Unused
1	Non dimmer
2	Incandescent
3	Magnetic low voltage
4	Cold Cathode
5	Fluorescent 2 wire
6	Fluorescent 3 wire
7	Fluorescent 010V
8	Electronic Low Voltage

Light Zone Name Query Command

The following command is used to read light zone name:

Syntax: [ILUX] LZ [X|ALL] NAME ?

X=1...6 light zone

Reply packet

```
[ILUX] LZ [X] NAME [LABEL]
```

LABEL = Light zone name

[ILUX] LZ ALL NAME [LABEL1], […], [LABEL6]

LABELx = Light zone names separated by comma

Shade Group Commands

Shade Group Position Command

The following command is used to set shade group position:

Syntax: `[ILUX] SZ [X|ALL]  POS  [LEVEL]`

> $X = 1 - 6$ Shade group
>
> ALL = All Shade groups
>
> LEVEL = 0 - 100

Shade Group Position Query Command

The following command is used to get shade group position. This command is not supported for slave CLS-C6 controllers and is applicable for Somfy shades only:

Syntax: `M SZ [X|ALL] POS  ?`

Reply packet

> `M  SZ  [X|ALL]  POS [LEVEL1]  [….]  [LEVEL6]`
>
> LEVELx = 0 - 100 for shade group 1 - 6

Shade Group Open, Close and Stop Command

The following command is used to open, close or stop shade group(s):

Syntax: `[ILUX] SZ [X|ALL] [OPEN|CLOSE|STOP]`

> $X = 1 - 6$ Shade group
>
> ALL = All shade groups

Shade Group Jog Open and Close Command

The following command is used to jog open or jog close the shade group(s):

Syntax: `[ILUX] SZ [X|ALL] [JOPEN|JCLOSE]`

> $X = 1 - 6$ Shade group
>
> ALL = All shade groups

Shade Group Open/Stop/Close/Stop Command

The following command is used to stop shade if running, open shade if last operation was closing and close if last time operation was opening:

Syntax: `[ILUX] SZ [X|ALL] [OSCS]`

> $X = 1 - 6$ Shade group
>
> ALL = All shade groups

Shade Group Name Query Command

The following command is used to query shade group name:

Syntax: `[ILUX] SZ [X|ALL] NAME ?`

> X=1...6 Shade group

Reply packet

> [ILUX] SZ [X] NAME [LABEL]

LABEL = Shade zone name

[ILUX] SZ ALL NAME [LABEL1], […], [LABEL6]

LABELx = Shade group names separated by comma

Shade Type Query Command

The following command is used to query shade type. Command is not supported for slave CLS-C6 devices.

Syntax: M SZ [X|ALL] TYPE ?

> X = 1...6 Shade group

Reply packet

> M SZ [X|ALL] TYPE [CODE1] […] [CODE6]

CODEx = Shade types codes for shade group 1 - 6

Shade Type Codes

CODE	SHADE TYPES
20	Somfy shade controller
21	SDC 4 relay shade controller
22	SDC DC shade controller

Scene Commands

Scene Recall

The following command is used to recall scene:

Syntax: [ILUX] SC [XX] RECALL

Recall Scene Commands

SCENE NUMBER (XX)	DESCRIPTION
ON	On Scene
OFF	Off Scene
1 - 15	Scene 1 - 15

Scene Raise, Lower and Stop Command

The following command is used to raise, lower or stop the scene light zone levels which can use a scene fade time:

Syntax: [ILUX] SC [XX] [UP|DN|STOP]

> XX = OFF, ON, 1 - 15 Scenes

> UP = Raise, DN = Lower, STOP = Stop scene raise/lower

Scene Toggle Command

The following command is used to toggle scene lights. Command is not support for OFF scene:

Syntax: M SC [XX] [TOG]

XX = ON, 1 - 15 Scenes

Scene Turn Off Lights Command

The following command is used to turn off scene lights:

Syntax: `[ILUX] SC [XX] OFF`

XX = ON, 1 - 15 Scenes

Scene State Query Command

The following command is used to read scene states. This command is not supported for slave CLS-C6 devices.

Syntax: `M SC [XX|ALL] STATE ?`

XX = OFF, ON, 1 - 15 Scenes

Reply packet

`M  SC [XX] STATE [S]`

S = 1/0 Scene state (1 means scene selected, 0 means scene not selected)

`M  SC [ALL] STATE [MASK]`

MASK = Bit mask Bit0 - Bit16

(Bit0 = off scene state, Bit1 = On scene state,
Bit2 - Bit16 = Scene1 - Scene15)

*Scene Programming
Commands*

Scene Quick Save Command

This command is used to save current light levels for selected scene:

Syntax: `[ILUX] SC [XX] SAVE`

XX = ON, 1 - 15 Scenes

Scene Query Light Zone Level Command

This command is used to read light level in scenes. This command is not supported for slave CLS-C6 devices.

Syntax: `M SC [XX] LZLVL ?`

XX = OFF, ON, 1 - 15 (Scenes)

Reply packet

`M  SC [XX] LZLVL [LEVEL1] [….] [LEVEL6]`

LEVELx = 0 - 100 for light zone1 through light zone6

Scene Query Shade Group Level Command

This command is used to read shade level in scenes. This command is not supported for slave CLS-C6 devices.

Syntax: `M SC [XX] SZLVL ?`

XX = OFF, ON, 1...15 (Scenes)

Reply packet

`M  SC [XX] SZLVL [LEVEL1] [….] [LEVEL6]`

LEVELx = 0 - 100 for shade zone1 through shade zone6

Scene Light Add/Remove Mask Command

This command is used to remove or add light zones to scenes. This command is not supported for slave CLS-C6 devices.

Syntax: M SC [XX] LZMSK [VALUE]

>   XX= OFF, ON, 1 - 15 (scene)

>   VALUE=0...63 (1=Add, 0=Remove)

>>   (bit0...bit5=Light zone 1...Light Zone6)

Scene Light Mask Status Command

This command is used to read light mask in scenes. This command is not supported for slave CLS-C6 devices.

Syntax: `M SC [XX] LZMSK ?`

>   XX= OFF, ON, 1...15 (Scenes)

Reply packet

>   `M  SC [XX] LZMSK [VALUE]`

Scene Shade Mask Command

This command is used to remove or add shade group to scenes. This command is not supported for slave CLS-C6 devices.

Syntax: `M SC [XX] SZMSK [VALUE]`

>   XX=OFF, ON, 1...15 (scene)

>   VALUE=0...63 (1=Add, 0=Remove)

>   (bit0...bit5=Shade group 1...Shade group6)

Scene Shade Status Command

This command is used to read shade group mask in scenes. Command is not supported for slave ilux.

Syntax: `M SC [XX] SZMSK ?`

>   XX= OFF, ON, 1...15 (Scenes)

Reply packet

>   `M SC [XX] SZMSK [VALUE]`

Scene Name Query Command

The following command is used to query scene name:

Syntax: `[ILUX] SC [XX] NAME ?`

>   XX = OFF, ON, 1 - 15 Scenes

Reply packet

>   `[ILUX] SC [XX] NAME [LABEL]`

>   LABEL=Scene name

Room combining commands

Combine Rooms

This command is used to combine room controllers. This command is not supported for slave CLS-C6 devices.

Syntax: `M COMBINE [ILUX1] [ILUX2]`

ILUXx = M for master, S1 - S8 for slaves

Un-Combine Rooms

This command is used to un-combine room controllers. This command is not supported for slave CLS-C6 devices.

Syntax: `M UNCOMBINE [ILUX1] [ILUX2]`

ILUXx = M for master, S1 - S8 for slaves

Query Combine Status

This command is used to query room combine status. This command is not supported for slave CLS-C6 devices.

Syntax: `M COMBINE [ILUX1] [ILUX2]?`

Reply packet

`M  COMBINE [STATUS]`

[STATUS] = YES/NO

Override Commands

Override Mode

Override On Command

The following command is used to turn on override:

Syntax: `[ILUX] OV ON`

Override Off Command

The following command is used to turn off override:

Syntax: `[ILUX] OV OFF`

Override Status Command

The following command reads the override status.

Syntax: `[ILUX] OV ?`

Reply packet

`[ILUX] [OV] [STATE]`

STATE = ON/OFF Override On/Override Off

Load Shed Commands

Load Shed On Command

The following command is used to turn on load shed:

Syntax: `[ILUX] LS ON`

Load Shed Off Command

The following command is used to turn off load shed:

Syntax: `[ILUX] LS OFF`

Load Shed Status Command

The following command reads the load shed status:

Syntax: `[ILUX] LS ?`

Reply packet

> `[ILUX] [LS] [STATE]`
>
> STATE = ON/OFF Load shed on/Load shed off

Occupancy Commands

Occupancy Operation Commands

Occupancy State Set/Clear Command

The following command is used to set or clear occupancy state. All occupancy sources are ORED together. Command not supported for slave ilux. If master and slave(s) iluxes are linked the occupancy state is forwarded to all iluxes:

Syntax: M OC [SET|CLEAR]

Occupancy State Query Command

The following command is used to query occupancy state:

Syntax: `[ILUX] OC ?`

Reply packet

> `[ILUX] OC [STATE]`
>
> STATE = OCCUPIED/UNOCCUPIED

Photocell Commands

Photocell Operation Commands

Photocell Enable Command

The following command is used to query photocell active state:

Syntax: `[ILUX] PH [X|ALL] ACTIVE ?`

> X = 1 - 6 light zone

Reply packet

> `[ILUX] PH [X] ACTIVE [STATE]`
>
> STATE = ON/OFF
>
> `[ILUX] PH [ALL] ACTIVE [STATE1][….][STATE6]`

Version command

The following command is used to query version string. This command is not supported for slave CLS-C6 devices.

Syntax: `M VER ?`

Reply packet

```
M VER CLS-C6M TEST VER [v2.01.02, #12345678]
```

Appendix D: Factory Default Values

Factory Default Values

ITEM	DEFAULT VALUE
All lighting load types.	Incandescent
All Low End limits	0%
All High End limits	100%
Function buttons	recall scenes 1-6
Up/Down button	lights (Last Scene Master).
Occupancy sensing	OFF scene on exit - disabled
	ON scene on entry - disabled
	Timeout = 30 minutes
Photocell	Sensitivity = 50% (All loads)
	Minimum dim level = 10% (All loads)
	Response time = 1 min (All loads)
Off scene	2 second fade, no shades. (lighting loads fixed at 0%)
On Scene	2 seconds fade, all 6 lighting loads to 100%, no shades.
Scene 1	2 seconds fade, all 6 lighting loads to 15%, no shades.
Scene 2	2 seconds fade, all 6 lighting loads to 30%, no shades.
Scene 3	2 seconds fade, all 6 lighting loads to 45%, no shades.
Scene 4	2 seconds fade, all 6 lighting loads to 60%, no shades.
Scene 5	2 seconds fade, all 6 lighting loads to 75%, no shades.
Scene 6	2 seconds fade, all 6 lighting loads to 90%, no shades.
Scene 7	2 seconds fade, all 6 lighting loads to 15%, no shades.
Scene 8	2 seconds fade, all 6 lighting loads to 30%, no shades.
Scene 9	2 seconds fade, all 6 lighting loads to 45%, no shades.
Scene 10	2 seconds fade, all 6 lighting loads to 60%, no shades.
Scene 11	2 seconds fade, all 6 lighting loads to 75%, no shades.
Scene 12	2 seconds fade, all 6 lighting loads to 90%, no shades.
Scene 13	2 seconds fade, all 6 lighting loads to 15%, no shades.
Scene 14	2 seconds fade, all 6 lighting loads to 30%, no shades.
Scene 15	2 seconds fade, all 6 lighting loads to 45%, no shades.
Scene front panel lockout	All scenes not locked out
Raise/Lower on scene recall buttons	Disabled
Shade jog time	0.05 sec
Shade max time	1 minute
Shade lockout time	1 sec.
Scene programming	Unlocked for all scenes.
Scene mastering	Disabled
Manual Fade Rate.	Set to 5 seconds (for full travel)

(Continued on following page)

Factory Default Values (Continued)

ITEM	DEFAULT VALUE
Green LED brightness level	63
White LED brightness level	70
White LED glow level	7

The Cresnet ID (default=1F) in the configuration memory is not be affected by the Fd function (unless configuration data is corrupt).

Appendix E: Button Functions

Following is a list of button functions, in table format, one function per table. Each table lists Behavior, LED Action, Applies to, Rocker behavior, and Notes. Some topics may not apply to certain button types; this is defined in the "Applies to" row.

There are four classes of buttons to be considered:

- **Standard Rocker**: the six function buttons on the front panel of the CLS-C6, while the CLS-C6 is in *Standard* mode and the shift flag is not set.

- **Shifted Rocker**: the same physical buttons as the Standard Rocker, but are active when the shift flag is set.

- **Up/Down Rocker**: this is the vertical button on the face of the CLS-C6.

- **Remote Button**: the single-action (i.e. non-rocker) buttons located on remote keypads.

Function name	Recall Scene (off, on, 1-15)
Behavior	Fades specified lights to specified levels in the specified time. (Non-dim loads switch at the beginning or end of the specified time, as determined by the Load Type option for each load.)
	Also, sends specified shades to specified positions, (the time is determined by the motor).
	Note that the off scene is special in that it cannot specify which lighting loads are affected, or what their target levels should be – all lighting loads go to full off (definitely causing air-gap relay to open). Fade time and shade behavior can still be specified.
LED action	Flash while lights are actively fading, Scene-interlocked* afterwards. (Note that for Recall Off Scene, LED is on when all lights are off.)
	*LED goes on when scene is recalled. LED remains on until another scene is recalled (or Lights_in_Scenex_Off is executed) which has overlapping lighting load or shade group programming. That is, a scene which affects at least one common lighting load or shade group.
Applies to	Standard Rocker, Shifted Rocker, Remote Button
Rocker behavior	If the "Enable Raise/Lower on Scene Recall Buttons" option is set in iLux Designer, the right and left rockers perform "Scene Raise" and "Scene Lower" functions if, and only if, the scene feedback LED for that button is lit.
	If the "Enable Raise/Lower on Scene Recall Buttons" option is not set, then the right, left, and center press all do the same thing.
Notes	The **ON** and **OFF** buttons always recall the On and Off Scene, respectively. The assigned functions cannot be changed.

Function name	Turn Off Scene Lights (on, 1-15)
Behavior	Same as Recall Scene button, except:
	a) All lights affected by the scene go to off level.
	b) Shades are not affected.
	Note that the list of unaffected lighting loads and the fade time are the same as for the Recall Scene function.
LED	Flash while lights are fading, off when fade is done.
Applies To	Remote Button
Rocker Behavior	N/A
Notes	N/A

Function name	Toggle Scene (on, 1-15)
Behavior	Alternates between "Recall Scene" and "Turn Off Scene Lights" actions for the specified scene. In determining which action should be executed, the CLS-C6 checks the state of all lights programmed in the scene. If any light in the scene is on, this function causes the lights to go off. If all lights in the scene are off, this function recalls the scene.
LED	Flash while lights are actively fading (either direction). On when any light in scene is on, while not fading.
Applies To	Standard Rocker, Shifted Rocker, Remote Button
Rocker Behavior	If the "Enable Raise/Lower on Scene Recall Buttons" option is set, then the right and left rockers perform "Scene Raise" and "Scene Lower" functions, whether or not scene feedback LED for that button is lit. To toggle the scene, center of button must be pressed. If the "Enable Raise/Lower on Scene Recall Buttons" option is not set, then the right, left, and center press all do the same thing.
Notes	Toggle function intended only for scenes that do not affect shades.

Function name	Raise Lighting Load (1-6)
Behavior	The specified lighting load raises as long as the button is held – it stops when button released. Rate is the global ramp rate. If they hit the High End limit, the lights stop at that point, but the bar graph display continues to rise. If going up from OFF, lights immediately go to the Low End limit, and the bar graph display starts rising from 0. When the display (i.e.: the internal ramp value) reaches the Low End limit, the light start moving up in sync. For non-dim load, lights immediately go to full on.
LED	On while button is pressed
Applies To	Remote Button
Rocker Behavior	N/A
Notes	This is same as pressing the right side of front panel function button when in *Lights* Mode.

Function name	Lower Lighting Load (1-6)
Behavior	Specified lighting load lower as long as button is held –stop when button is released. Rate is the global ramp rate. If loads hit the Low End limit, the bar graph continues to go down, but lights stays at Low End limit level until reach OFF – at which point they turn off. If starting from above the High End limit, the bar graph starts to go down, but lights stay at High End limit level until display reaches the High End limit – then the light and bar graph starts moving in sync. For non-dim load, lights immediately go to full off.
LED	On while button is pressed
Applies To	Remote Button
Rocker Behavior	N/A
Notes	This is same as pressing the left side of front panel function button when in *Lights* Mode.

Function name	Raise/Lower Lighting Load (1-6)
Behavior	Pressing left side of button acts the same as Lower Lighting Load. Pressing right side of button acts the same as Raise Lighting Load.
LED	On while left or right button is pressed
Applies To	Shifted Rocker
Rocker Behavior	Described in Behavior
Notes	N/A

Function name	Master Raise Lighting Loads (Last Scene, All Lights, On scene, Scenes 1-15)
Behavior	Same as Raise Lighting Load, except acts on all dimmable Lighting Loads affected by specified scene. All lights ramp at the same rate. Non-dim loads are not affected. Shades are not affected.
LED	On while button is pressed
Applies To	Standard Rocker, Shifted Rocker, Remote Button
Rocker Behavior	Left, right, and center all do the same thing.
Notes	N/A

Function name	Master Lower Lighting Loads (Last Scene, All Lights, On scene, Scenes 1-15)
Behavior	Same as Lower Lighting Load, except acts on all dimmable Lighting Loads affected by the specified scene. All lights ramp at the same rate. Non-dim loads are not affected. Shades are not affected.
LED	On while button is pressed
Applies To	Standard Rocker, Shifted Rocker, Remote Button
Rocker Behavior	Left, right, and center all do the same thing.
Notes	N/A

Function name	Master Raise/Lower Lighting Loads (Last Scene, All Lights, On scene, Scenes 1-15)
Behavior	Pressing left side of button act same as Master Lower Lighting Loads. Pressing right side of button act same as Master Raise Lighting Loads. For up/down button: bottom button = left button => lower. top button = right button => raise.
LED	On while button is pressed
Applies To	Standard Rocker, Shifted Rocker, up/down (Last Scene and All Lights only)
Rocker Behavior	As specified under "Behavior"
Notes	N/A

Function name	Toggle-Dim Scene (on, 1-15)
Behavior	Similar to the "Toggle Scene" function, except that a maintained press of the button causes the lights to enter "cycle-dim" mode. That is, all lights programmed in the specified scene either raise or lower until the button is released. (Behavior is the same as Raise Scene function.) A subsequent maintained button press causes the lights to dim in the opposite direction. If the button is "tapped" instead of held down, it behaves identically to the "Toggle Scene" function.
LED	On when any light in scene is on
Applies To	Remote Button
Rocker Behavior	N/A
Notes	This function intended for use only on scenes that do not affect shades.

Function name	Open Shades Full (All, Group 1-6)
Behavior	Sends the specified shades to Full Open position.
LED	On while button is pressed
Applies To	Remote Button
Rocker Behavior	N/A
Notes	Shade commands with "All" parameter only affect all the shade groups connected to the given CLS-C6 module. They do not pass from one CLS-C6 module to another (either when directly connected or when linked through a Cresnet system). If all shades are to open in a multi-unit system, define a scene to do that.

Function name	Close Shades Full (All, Group 1-6)
Behavior	Sends the specified shades to Full Closed position.
LED	On while button is pressed
Applies To	Remote Button
Rocker Behavior	N/A
Notes	Shade commands with "All" parameter only affect all the shade groups connected to the given CLS-C6 module. They do not pass from one CLS-C6 module to the other (either when directly connected or when linked through Cresnet system). If all shades are to close in a multi-unit system, define a scene to do that.

Function name	Stop Shades (All, Group 1-6)
Behavior	Stops the specified shades at current position.
LED	On while button is pressed
Applies To	Remote Button
Rocker Behavior	N/A
Notes	Shade commands with "All" parameter only affect all the shade groups connected to the given CLS-C6 module. They do not pass from one CLS-C6 module to the other (either when directly connected or when linked through Cresnet system). To accomplish this function for all shades in a multi-unit system, use SIMPL programming.

Function name	Open Shades Momentary (All, Group 1-6)
Behavior	Specified shades move toward the Open position for as long as the button is pressed. Movement stops when button is released.
LED	On while button is pressed
Applies To	Remote Button
Rocker Behavior	N/A
Notes	Shade commands with "All" parameter only affect all the shade groups connected to the given CLS-C6 module. They do not pass from one CLS-C6 module to the other (either when directly connected or when linked through Cresnet system). To accomplish this function for all shades in a multi-unit system, use SIMPL programming.

Function name	Close Shades Momentary (All, Group 1-6)
Behavior	Specified shades move toward the Closed position for as long as the button is pressed. Movement stops when button is released.
LED	On while button is pressed
Applies To	Remote Button
Rocker Behavior	N/A
Notes	Shade commands with "All" parameter only affect all the shade groups connected to the given CLS-C6 module. They do not pass from one CLS-C6 module to the other (either when directly connected or when linked through Cresnet system). To accomplish this function for all shades in a multi-unit system, use SIMPL programming.

Function name	Jog Shades Open (All, Group 1-6)
Behavior	Specified shades move toward the Open position for the specified jog time, and then stop.
LED	On while button is pressed
Applies To	Remote Button
Rocker Behavior	N/A
Notes	Jog time defaults to 0.05 sec. Other values can be set in iLux Designer. Shade commands with "All" parameter only affects all the shade groups connected to the given CLS-C6 module. They do not pass from one CLS-C6 module to the other (either when directly connected or when linked through Cresnet system). To accomplish this function for all shades in a multi-unit system, use SIMPL programming.

Function name	Jog Shades Closed (All, Group 1-6)
Behavior	Specified shades move toward the Closed position for the specified jog time, and then stop.
LED	On while button is pressed
Applies To	Remote Button
Rocker Behavior	N/A
Notes	Jog time defaults to 0.05 sec. Other values can be set in iLux Designer. Shade commands with "All" parameter only affects all the shade groups connected to the given CLS-C6 module. They do not pass from one CLS-C6 module to the other (either when directly connected or when linked through Cresnet system). To accomplish this function for all shades in a multi-unit system, use SIMPL programming.

Function name	Open Momentary/Open Full (All, Group 1-6)
Behavior	A quick tap of the button performs a "Full Open". A maintained press performs a "Momentary Open" until the button is released.
	If the shade is already moving in the open direction, a tap stops it. If the button is tapped once, it starts moving to full open; then if tapped again, it stops.
	If the shade is moving in the close direction, a tap sends to full open. A longer press performs a "Momentary Open" until the button is released.
LED	On while button is pressed
Applies To	Remote Button
Rocker Behavior	N/A
Notes	When changing direction, there may be a short time when the shade is stopped before it starts moving in the opposite direction. This is the "lockout time" for the shade controllers. This time is fixed for the C2N-SSC shades; it can be changed for the SDC and SDC-DC controllers via iLux Designer.
	Shade commands with "All" parameter only affects all the shade groups connected to the given CLS-C6 module. They do not pass from one CLS-C6 module to the other (either when directly connected or when linked through Cresnet system). To accomplish this function for all shades in a multi-unit system, use SIMPL programming.

Function name	Close Momentary/Close Full (All, Group 1-6)
Behavior	Same as "Open Momentary/Open Full Shade Group 1-6", except Close.
LED	On while button is pressed
Applies To	Remote Button
Rocker Behavior	N/A
Notes	Same as "Open Momentary/Open Full Shade Group 1-6."

Function name	Open/Stop/Close/Stop (All, Group 1-6)
Behavior	Function alternates between the "Full Open", "Stop" and "Full Close" commands for the specified shade group(s) each time the button is pressed.
LED	On while button is pressed
Applies To	Standard Rocker, Shifted Rocker, Remote Button, up/down (All only)
Rocker Behavior	Pressing center of the button acts the same as non-rocker open/stop/close/stop. Pressing only one side of the button while stopped always send it in specified direction – rather than in opposite of last direction. Pressing any part of the button while the shade is moving stops it.
	For up/down button bottom button = left button => close.
	top button = right button => open.
Notes	Shade commands with "All" parameter only affects all the shade groups connected to the given CLS-C6 module. They do not pass from one CLS-C6 module to the other (either when directly connected or when linked through a Cresnet system). To accomplish this function for all shades in a multi-unit system, use SIMPL programming.

Function name	External Function (1-32)
Behavior	Activates the corresponding "press" digital signal (press1 – press32 on the External Functions slot) on the Cresnet system connected to the CONTROL SYSTEM port. Signal remains high for as long as the button is pressed.
LED	On when the corresponding "fb" digital signal (fb1 – fb32 on the External Functions slot) from the control system is high.
Applies To	Shifted Rocker, Remote Button
Rocker Behavior	Left, right, and both all do the same thing
Notes	Note that these should only be assigned to a CLS-C6 unit that is directly connected to a Cresnet control system, or to keypads connected to that unit's local devices network.

Function name	Dual External Function (1/2 …31/32)
Behavior	Activates the corresponding "press" digital signal (press1 – press32 on the External Functions slot) on the Cresnet system connected to the CONTROL SYSTEM port. Signal remains high for as long as the button is pressed. The left button corresponds to the lower number. The right button corresponds to the higher number.
LED	On if feedback for either join number is high, off if feedback for both join numbers is low.
Applies To	Shifted Rocker
Rocker Behavior	See "behavior" above
Notes	Note that these should only be assigned to CLS-C6 unit that is directly connected to Cresnet control system. If assigned to unit that is connected to the local devices network of another CLS-C6 unit, they do not function.

Function name	Shift
Behavior	If Shift function is assigned to the up/down button in iLux Designer, pressing this button alternates between lower and upper functions for the six front panel function buttons
LED	N/A
Applies To	up/down
Rocker Behavior	Top, bottom, and both all do the same thing
Notes	N/A

Appendix F: Room Combining

The CLS-C6 supports a room combining concept, whereby two "adjacent" rooms are considered separate when a partition is closed, and combined when the partition is open. Refer to the figures on page 81 for examples of room combining.

In a system that can include a master CLS-C6 and up to eight slave CLS-C6 units, there are 36 possible partitions between rooms. These are:

- Master/Slave1
- Master/Slave2
- ...
- Master/Slave8
- Slave1/Slave2
- ...
- Slave1/Slave8
- Slave2/Slave3
- ...
- Slave7/Slave8

Partition sensing is accomplished using the GLS-SIM device (one partition per device) and a third-party partition sensor.

In order to indicate which partition is being attached to a given GLS-SIM, each of the 36 possible partitions is given a specific Cresnet ID (for the GLS-SIM). Refer to the table on page 66.

The DIP switches on the GLS-SIM allow it to work with various partition sensors. Refer to the latest version of the GLS-SIM Installation and Operations guide (Doc 6768) for details on how to set the DIP switches appropriately. Keep the following in mind:

- Use only input channel 1 on the GLS-SIM when used for partition sensing
- When using "normal polarity", the presence of a contact closure (or voltage below threshold) indicates that a partition is CLOSED (rooms are separated). Adjust the GLS-SIM's polarity DIP switch accordingly based on the partition sensor's behavior.

Two CLS-C6 units (either master/slave or slave/slave) that are in rooms separated by a closed partition have no effect on one another when functions are triggered on either unit.

In the absence of a partition separating two CLS-C6 units, (i.e. there is no GLS-SIM present at the appropriate Cresnet ID) the two CLS-C6 units are always combined.

If two CLS-C6 units are separated, and then become combined at some later time, there is no immediate change. A combinable function must first be triggered on either unit in order to see an effect on the other unit.

The following are combinable functions:

- Recall — Off Scene, On Scene, Scene1..15
- Raise/Lower — Master, scene1..15, last active scene
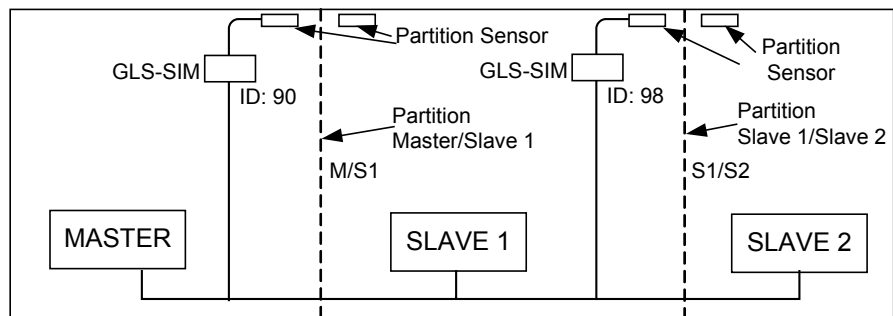- Occupancy motion and activity joins

- Override is shared for all combined/uncombined rooms (when triggered from master CLS-C6)

A CLS-C6 that is combined with another CLS-C6 that is, in turn, combined with a third shall be considered combined with that third CLS-C6.
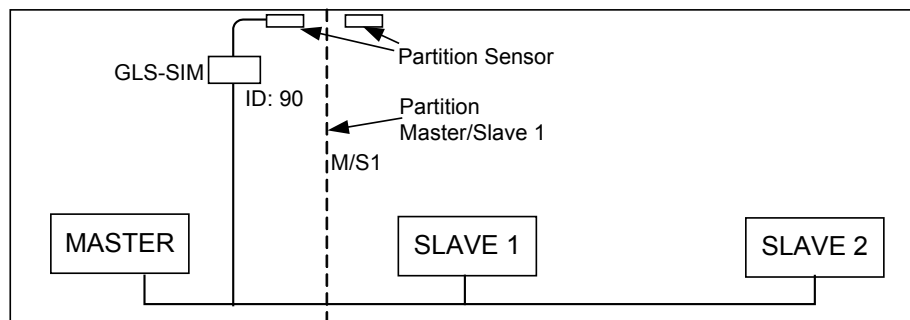
Example 1: Two Rooms
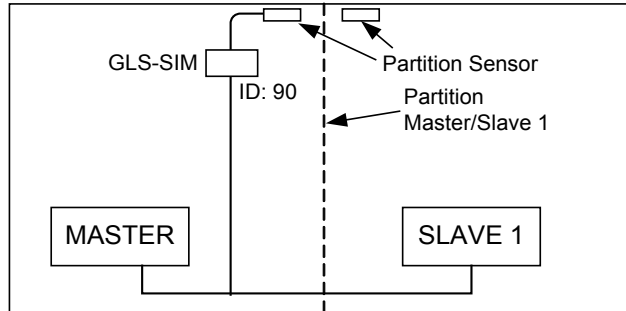
Example 2: Three Rooms

Example 3: One Small and one Large Room

In example 3, above, since there are no partitions separating Slave 1 and Slave 2, or Master and Slave 2, iLux Designer software must be used to indicate the default status of these missing partitions. In this case, the following defaults should be set:

- Master/Slave 1 default can be set to either Open or Closed, as the physical partition sensor determines the actual state anyway

- Master/Slave 2 default must be set to Closed since they are not directly partitioned (we are assuming that Master and Slave 1 are separated by the partition)

- Slave 1/Slave 2 default must be set to Open since they are physically located in the same room and thus must always be combined

Refer to iLux Designer help for more details.

Room Combining Possible Partition Combinations

PARTITION BETWEEN	GLS-SIM CRESNET ID
Master & Slave 1	0x90
Master & Slave 2	0x91
Master & Slave 3	0x92
Master & Slave 4	0x93
Master & Slave 5	0x94
Master & Slave 6	0x95
Master & Slave 7	0x96
Master & Slave 8	0x97
Slave 1 & Slave 2	0x98
Slave 1 & Slave 3	0x99
Slave 1 & Slave 4	0x9A
Slave 1 & Slave 5	0x9B
Slave 1 & Slave 6	0x9C
Slave 1 & Slave 7	0x9D
Slave 1 & Slave 8	0x9E
Slave 2 & Slave 3	0x9F
Slave 2 & Slave 4	0xA0
Slave 2 & Slave 5	0xA1
Slave 2 & Slave 6	0xA2
Slave 2 & Slave 7	0xA3
Slave 2 & Slave 8	0xA4
Slave 3 & Slave 4	0xA5
Slave 3 & Slave 5	0xA6
Slave 3 & Slave 6	0xA7
Slave 3 & Slave 7	0xA8
Slave 3 & Slave 8	0xA9
Slave 4 & Slave 5	0xAA
Slave 4 & Slave 6	0xAB
Slave 4 & Slave 7	0xAC
Slave 4 & Slave 8	0xAD
Slave 5 & Slave 6	0xAE
Slave 5 & Slave 7	0xAF
Slave 5 & Slave 8	0xB0
Slave 6 & Slave 7	0xB1
Slave 6 & Slave 8	0xB2
Slave 7 & Slave 8	0xB3

Appendix G: RC5 Code Expansion

RC5 codes are now assigned for all CLS-C6 functions that can be accessed via SIMPL Windows. Refer to the following table.

RC5 Codes Function Table

CODE	FUNCTION
Key 1	Off Scene
Key 2	On Scene
Key 3	Scene 1
Key 4	Scene 2
Key 5	Scene 3
Key 6	Scene 4
Key 7	Scene 5
Key 8	Scene 6
Key 9	Scene 7
Key 10	Scene 8
Key 11	Scene 9
Key 12	Scene 10
Key 13	Scene 11
Key 14	Scene 12
Key 15	Scene 13
Key 16	Scene 14
Key 17	Scene 15
Key 18	Light zone 1 up
Key 19	Light zone 1 down
Key 20	Light zone 2 up
Key 21	Light zone 2 down
Key 22	Light zone 3 up
Key 23	Light zone 3 down
Key 24	Light zone 4 up
Key 25	Light zone 4 down
Key 26	Light zone 5 up
Key 27	Light zone 5 down
Key 28	Light zone 6 up
Key 29	Light zone 6 down
Key 30	N/A
Key 31	N/A
Key 32	N/A

RC5 Codes Function Table (Continued)

CODE	FUNCTION
Key 33	N/A
Key 34	Last active scene up
Key 35	Last active scene down
Key 36	All lights up
Key 37	All lights down
Key 38	N/A
Key 39	N/A
Key 40	N/A
Key 41	Slave 1 Light Zone 1 Up
Key 42	Slave 1 Light Zone 1 Down
Key 43	Slave 1 Light Zone 2 Up
Key 44	Slave 1 Light Zone 2 Down
Key 45	Slave 1 Light Zone 3 Up
Key 46	Slave 1 Light Zone 3 Down
Key 47	Slave 1 Light Zone 4 Up
Key 48	Slave 1 Light Zone 4 Down
Key 49	Slave 1 Light Zone 5 Up
Key 50	Slave 1 Light Zone 5 Down
Key 51	Slave 1 Light Zone 6 Up
Key 52	Slave 1 Light Zone 6 Down
Key 53	Slave 2 Light Zone 1 Up
Key 54	Slave 2 Light Zone 1 Down
Key 55	Slave 2 Light Zone 2 Up
Key 56	Slave 2 Light Zone 2 Down
Key 57	Slave 2 Light Zone 3 Up
Key 58	Slave 2 Light Zone 3 Down
Key 59	Slave 2 Light Zone 4 Up
Key 60	Slave 2 Light Zone 4 Down
Key 61	Slave 2 Light Zone 5 Up
Key 62	Slave 2 Light Zone 5 Down
Key 63	Slave 2 Light Zone 6 Up
Key 64	Slave 2 Light Zone 6 Down

Return and Warranty Policies

Merchandise Returns / Repair Service

1. No merchandise may be returned for credit, exchange or service without prior authorization from Crestron. To obtain warranty service for Crestron products, contact an authorized Crestron dealer. Only authorized Crestron dealers may contact the factory and request an RMA (Return Merchandise Authorization) number. Enclose a note specifying the nature of the problem, name and phone number of contact person, RMA number and return address.

2. Products may be returned for credit, exchange or service with a Crestron Return Merchandise Authorization (RMA) number. Authorized returns must be shipped freight prepaid to Crestron, 6 Volvo Drive, Rockleigh, N.J. or its authorized subsidiaries, with RMA number clearly marked on the outside of all cartons. Shipments arriving freight collect or without an RMA number shall be subject to refusal. Crestron reserves the right in its sole and absolute discretion to charge a 15% restocking fee plus shipping costs on any products returned with an RMA.

3. Return freight charges following repair of items under warranty shall be paid by Crestron, shipping by standard ground carrier. In the event repairs are found to be non-warranty, return freight costs shall be paid by the purchaser.

Crestron Limited Warranty

Crestron Electronics, Inc. warrants its products to be free from manufacturing defects in materials and workmanship under normal use for a period of three (3) years from the date of purchase from Crestron, with the following exceptions: disk drives and any other moving or rotating mechanical parts, pan/tilt heads and power supplies are covered for a period of one (1) year; touch screen display and overlay components are covered for 90 days; batteries and incandescent lamps are not covered.

This warranty extends to products purchased directly from Crestron or an authorized Crestron dealer. Purchasers should inquire of the dealer regarding the nature and extent of the dealer's warranty, if any.

Crestron shall not be liable to honor the terms of this warranty if the product has been used in any application other than that for which it was intended or if it has been subjected to misuse, accidental damage, modification or improper installation procedures. Furthermore, this warranty does not cover any product that has had the serial number altered, defaced or removed.

This warranty shall be the sole and exclusive remedy to the original purchaser. In no event shall Crestron be liable for incidental or consequential damages of any kind (property or economic damages inclusive) arising from the sale or use of this equipment. Crestron is not liable for any claim made by a third party or made by the purchaser for a third party.

Crestron shall, at its option, repair or replace any product found defective, without charge for parts or labor. Repaired or replaced equipment and parts supplied under this warranty shall be covered only by the unexpired portion of the warranty.

Except as expressly set forth in this warranty, Crestron makes no other warranties, expressed or implied, nor authorizes any other party to offer any warranty, including any implied warranties of merchantability or fitness for a particular purpose. Any implied warranties that may be imposed by law are limited to the terms of this limited warranty. This warranty statement supersedes all previous warranties.

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