

Window Systems Quiet Electronic Drives

Wiring and Programming Guide

045-101-12 rev A



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For information on placement and mounting of the EDU brackets, refer to the installation guide included with each roller blind and curtain.

Sivoia QED_m System Wiring

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Wiring | EDU wiring

FUNCTION:

Sivoia QED Electronic Drive Units (EDUs) are designed to function in four ways:

- A single EDU can be controlled individually by a keypad, IR transmitter, or contact closure interface (CCI).
- Multiple EDUs can be linked through programming to operate in groups and subgroups, regardless of location on the link. EDU groupings can be changed at any time simply by reprogramming the system.
- EDUs can be operated by larger entire-room or wholehouse lighting control systems such as Lutron's *GRAFIK Eye*, or *HomeWorks* systems.
- EDUs can also be operated by control systems made by other manufacturers.

GENERAL FACTS:

- Microprocessors are contained in the EDU, keypad, CCI and IR transmitter, allowing high-level programming from any source.
- The keypads are low-voltage and receive their power from the EDUs. EDUs receive their power via a 24 V~ power supply. One power supply is required per EDU.
- Keypads are wired directly to a communication link, which connects to one or more EDUs, CCIs and keypads. See Programming Section for more information on EDU grouping by function.
- A contact closure input is available, when required, to connect with an outside system. The contact closure input wires to the EDU communication link.

PLANNING YOUR INSTALLATION:

Taking time to plan out the wiring on paper will help enormously, especially in multiple EDU installations.

Some common questions to answer up front include:

• What are the power requirements?

Sivoia QED system operates on 24 V \sim and requires the use of a low-voltage power supply.

The specification of the power supply is provided on page 1.4.

Each EDU must be powered from its own power supply.

A certified electrician should install all of the line voltage power.

The keypads are all low-voltage and can be installed by a low-voltage system installer.

• What size of cable is needed?

Please refer to the charts on page 1.4.

• Can I expand the system later on?

A communication link can connect up to 96 total devices (EDUs, keypads or CCIs).

An external keypad power supply is required when the total number of keypads and CCIs in an installation exceeds the number of *Sivoia QED* EDUs.

Wiring single EDU wiring

Basic Installation (Plug-In Power Supply shown)



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Wiring wire and power supply specifications

WIRE TYPES

MAXIMUM WIRE LENGTH

 Communications Link 4 Conductor 1.0 mm² (#18AWG) (twisted and shielded) Maximum comm Link - 1220 m (4000 ft) GRX-CBL-346S-500 may be used for the Communication Link as long as the 1.0 mm² (18 AWG) conductors are used for the +12V and Common 	1 keypad - 305 m (1000 ft) 2 keypads - 150 m (500 ft) 3 keypads - 90 m (300 ft) 4 keypads - 60 m (200 ft)		
B Power Supply 3 Conductor 1.5–0.75 mm ² (#16–20AWG)	EDU to Panel 1.5 mm² (#16AWG) - 60 m (200 ft) 1.0 mm² (#18AWG) - 45 m (150 ft)		

Note: Power supply wires should NOT be in the same shielding as communication wires.

POWER SUPPLY

1) GENERAL REQUIREMENTS:

- a) MUST have independent 3rd party certification to Safety Isolating Transformer Standard EN61558-2-6.
- b) Manufacturer MUST be able to provide documentation supporting the 3rd party certification.
- c) The CE mark alone is NOT acceptable.
- d) One power supply is required per motor. (failure to do so may cause the system to function improperly)

2) ELECTRICAL RATINGS:

- a) Input Voltage: As Appropriate, 50/60 Hz
- b) Output voltage:
 - Nominal: 24 Volts AC RMS
 - Minimum: 22.5 Volts AC RMS at 3 Amps (Maximum Load on Secondary)
 - Maximum: 30 Volts AC RMS with No Load on Secondary.
 - 67 VA minimum at 90% Line Voltage
 - 100 VA maximum

3) OUTPUT PROTECTION:

- a) Fused Secondary
- b) Resetable or Non-Resetable

0.75 mm² (#20AWG) - 30 m (100 ft)

- 3 Amps Minimum
- 5 Amps Maximum

4) GENERAL INFORMATION:

- a) Depending on the weight and thickness of the fabric:
 - A 50 VA rated transformer will drive approximately 5 $m^2 \ (55 \ ft^2)$ of fabric.
 - A 100 VA rated transformer will drive approximately 10 m^2 (110 ft²) of fabric.

Wiring | wiring using individual power supplies



1.5

Wiring | wiring using individual power supplies

- One CCI counts as one keypad
- Number of keypads and CCIs not to exceed number of EDUs without the need additional power supplies.

For larger systems with more than four keypads, distribute keypads evenly on link - maximum one keypad between EDUs.



Up to four keypads and 120 m (400 ft) total length of communications wire, no requirement for even distribution.



WIRE TYPES

MAXIMUM WIRE LENGTH

 Communications Link 4 Conductor 1.0 mm² (#18AWG) (twisted and shielded)
 B Power Supply 3 Conductor 1.5–0.75 mm² (#16–20AWG)
 Power supply to EDU 1.5 mm² (#16AWG) - 60 m (200 ft) 1.0 mm² (#18AWG) - 45 m (150 ft) 0.75 mm² (#20AWG) - 30 m (100 ft)

1.6

Wiring | multiple EDU wiring

- Every keypad, CCl, and EDU is connected by the *Sivoia QED*_{TM} Communication Link.
- Wire each EDU to a separate power supply.
- Each EDU must be EARTH grounded.
- Each power supply, of any type, can power ONLY ONE EDU, regardless of blind size.

A	Communications Link	4 Conductors

B Power Wires

3 Conductors

Please refer to Tables on page 1.4 for details on these wires.



Sivoia QEDTM Quiet Electronic Drive Window System

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Wiring SV-CCI-8 wiring detail

Input channel will accept dry contact closures and open collector outputs (Vce \leq 0.3 V).

Do not apply voltage to any input channel.

- By default all contact closures on a CCI operate the same group of EDUs.
- By default the CCI has Open, Close, Preset 1, Preset 2, Preset 3, Stop, Raise, and Lower inputs.
- LEDs provide feedback on contact closure state.

- Terminal blocks accommodate 1.5–0.5 mm² (14–22 AWG) wire.
- The CCI can be configured to control two groups with Open, Preset, Close, and Stop functionality, or with Open, Close, Raise, and Lower functionality.
- The CCI can be configured to control four groups with Open and Close functionality.



Wiring | infrared receivers

Remote IR Eye

Lutron offers a remote infrared eye for *Sivoia QED*. It is a small dome connected to the EDU by a thin 558 mm (22 in) cable.

The remote infrared eye plugs into a dedicated IR connector on the EDU. Extensions of 3 m (10 ft) lengths are available if the layout requires the IR eye to be located further from the EDU. The IR eye may be located up to 15 m (50 ft) away from the EDU. Unobtrusive mounting clips and adhesive tape are also provided.





1.9

or directly to EDU

Wiring | notes

WIRING

Sivoia QED System Programming

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Basic Programming system overview

Components

The components of a *Sivoia QED* system include: Electronic Drive Units (EDUs) operated by keypads, infrared (IR) transmitters, or contact closure inputs (CCIs). EDUs, keypads, and CCIs are connected directly to the *Sivoia QED* Communications Link.

Each keypad, IR transmitter, and CCI can be setup to operate all of the EDUs in the system, a single EDU, or any combination of EDUs in a user-defined group.

Keypads are wall mounted and provide open, close, preset, and momentary raise/ lower functions.

IR transmitters require an IR receiver that can be integral to a keypad or CCI, or connected to an EDU. IR transmitters provide open, close, preset, and momentary raise/ lower functions.

CCIs are mounted in a panel, and provide input to the *Sivoia QED* system from another automation system. CCIs provide open, close, preset, momentary raise/ lower, and stop functions.

Factory Defaults

As shipped from the factory, the *Sivoia QED* system will provide basic Open, Close, and momentary Raise and Lower functionality. This allows wiring to be verified before programming. As shipped from the factory, each keypad, IR transmitter, and CCI will operate every EDU in the system. Open and Close Limits will need to be set once the EDUs are installed. The system will need to be programmed in order to access all *Sivoia QED* features, including storing presets, assigning EDUs to keypads, IR transmitters and CCIs.

Planning

Before starting programming, determine which EDUs should be operated by each keypad, IR receiver, and CCI in the *Sivoia QED* system.

Programming

Program the system after all components have been wired, installed, and powered. Programming the system allows presets to be stored and recalled; limits to be adjusted from keypads, CCIs, and IR transmitters; and groups of EDUs to be assigned to keypads, CCIs, and IR receivers.

Programming the *Sivoia QED* system consists of addressing all of the components, setting an open and close limit for each EDU, and assigning EDUs to each keypad, IR receiver, and CCI.

Addressing – Addressing the *Sivoia QED* components is required for the system to function properly. Addressing can be accomplished from an EDU, a keypad, an IR transmitter, or a CCI. **After addressing a new system**, **keypads, CCIs, and IR transmitters will not operate any EDU.** Finish system programming by setting EDU limits and assigning EDUs to keypads, CCIs, and IR receivers.

<u>Setting Open and Close Limits</u> – The open and close limits must be set for every EDU. The open and close limits determine how far an EDU will travel. If desired, limits can be set using the buttons on the EDU before the system is addressed.

<u>Assigning EDUs</u> – Assignment is required and determines which EDU will be operated by each keypad, IR transmitter, and CCI. After addressing, no EDUs are assigned to keypads, CCIs or IR receivers. Assigning EDUs to keypads, CCIs, or IR receivers allows operation of an individual, a user-defined group of EDUs, or all EDUs as desired.

Basic Programming setting limits from the EDU

Setting Limits Overview

The Open and Close Limits can be set from the EDU, a CCI, keypad or IR transmitter with at least: an Open, Close, Raise and Lower buttons.

The advantage of setting limits remotely from a keypad, IR transmitter, or CCI, is that these components are generally easier to access. Setting limits at the EDU may be simpler, and can be done before addressing the system, depending upon the installation.

The Open and Close Limits determine how far an EDU will travel. When the open button is pressed on a keypad, IR transmitter, or CCI, the EDU will move to the Open Limit. When the close button is pressed on a keypad, IR transmitter, or CCI, the EDU will move to the Close Limit. The EDU will not move higher than the Open Limit or lower than the Close Limit.

Note: Setting the Open Limit lower than the Close Limit will cause the blind to move down when raise is pressed and up when lower is pressed.

As an alternative to setting limits from the EDU, limits may be set from a keypad, IR transmitter, or CCI after the system has been addressed. To set the limits from a keypad, IR transmitter, or CCI, address the system as on page 2.6 and then set the limits as described on page 2.10.

Setting the Open Limit from the EDU STEP 1

Tap the "Open Limit Button" (\square). The LED on a roller blind EDU will turn on (steady LED), indicating the EDU is in "Set Open Limit Mode." The display on a curtain track EDU will show ($\lfloor S \rfloor$).



External EDU

Basic Programming setting limits from the EDU

STEP 2

Adjust the position of the EDU to the desired Open Limit using the adjustment buttons ($\zeta \zeta$).



STEP 3

Press and hold the "Open Limit Button" (seconds. The LED on a roller blind EDU will flash for 2 seconds then go dark, indicating the current position has been stored as the Open Limit. The display on a curtain track EDU will flash (oL).



Basic Programming setting limits from the EDU

Setting the Close Limit from the EDU

STEP 1

Tap the "Close Limit Button" (\blacksquare). The LED on a roller blind EDU will turn on (steady LED), indicating the EDU is in the "Set Close Limit Mode." The display on a curtain track EDU will show ($\lfloor S \rfloor$). Do not hold the "Close Limit Button" for more than 1 second.



STEP 2

Adjust the position of the EDU to the desired Close Limit using the adjustment buttons (\fbox).



STEP 3

Press and hold the "Close Limit" button () for 5 seconds. The LED on a roller blind EDU will flash for 2 seconds indicating the current position has been stored as the Close Limit. The display on a curtain track EDU will show ([L).



After setting limits, address the system and assign EDUs to keypads, CCIs, and IR receivers.

Addressing from controls page 2.6 Addressing from an EDU page 2.32 Assigning EDUs to controls page 2.15 Assigning EDUs to multi-group IR transmitter page 2.20

Addressing Overview

Each keypad, EDU, and CCI in the system must have a unique address in order to store presets. Addressing the system gives each device a unique address number, which allows individual components to communicate properly.

Each device can be given a unique address automatically, by placing a single keypad, EDU, IR transmitter, or CCI in "Addressing Mode." The device in Addressing Mode will then allocate a unique address to every keypad, EDU, and CCI in the system.

The *Sivoia QED* system is addressed using a single keypad, EDU, CCI, or IR transmitter. It is not necessary to enter address mode on more than 1 device in the system. For convenience, address the system from the component that is easiest to access.

The system should be addressed each time new components are added. Addressing a previously programmed system will not erase any previous programming, addresses, limits, EDU assignments, or presets.

After addressing a new system keypads, CCIs, and IR transmitters will not operate any EDU.

Once the system has been addressed, EDUs need to be assigned to the appropriate keypads, CCIs and IR receivers.

Notes:

- The system should be addressed *after* all components have been installed, wired to the communications link, and powered.
- To add previously addressed components to an existing system, or to connect a previously addressed system to an existing system, return components to factory defaults before wiring them to the existing system (refer to Advanced Programming).
- The CCI can be configured to accommodate multiple groups of blinds (see page 2.44). Configurations other than the default have Open and Close inputs in locations other than inputs 1 and 5.

 Controls for integrating with other Lutron systems, including the SG-SVC/SO-SVC cannot address the *Sivoia QED* system or set limits. These controls operate every EDU.

Addressing only needs to be done from one device in the system. When a device is put into Addressing Mode, it will address all of the components in the system.

STEP 1

For the CCI, begin by setting switch 6 to OFF. Skip this step for keypads and IR transmitters.



ADDRESSING

STEP 2

Press and hold the Open (Open) and Close (Close) buttons simultaneously for 5 seconds. The LEDs next to the Open and Close buttons on the keypad or CCI will flash once per second.

STEP 3

Tap the Open (Open) button to enter "Addressing Mode." The LED next to the Close button will flash quickly (8 times per second), the LED next to the Close (Close) button will turn off. The system is now being addressed.



STEP 4

Wait for addressing to be completed. This will take approximately one minute. While addressing is in progress, each keypad and CCI will flash its Open (Open) LED quickly (8 times per second). Each EDU will flash its LED quickly (8 times per second).

When addressing has successfully completed, Open (Open) and Close (Close) LEDs on every keypad and CCI will flash slowly (once per second). The LED on the EDU will flash slowly (once per second).

Correct wiring can be confirmed by checking that each keypad, CCI, and EDU is flashing its LED. If a device does not flash its LED, wait for addressing to complete, check wiring, and re-address the system, entering addressing mode from the same device that was previously used to address the system.

Flashing LED

STEP 5

Press and hold the Open and Close buttons simultaneously for 5 seconds to exit "Addressing Mode."

Press and hold the Open (Open) and Close (Close) buttons for 5 seconds





Press and hold the Open (Open) and Close (Close) buttons

for 5 seconds



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STEP 6

For the CCI, return switch 6 to ON. Skip this step for keypads and IR transmitters.



After the system has been addressed for the first time, no EDUs will be assigned to, or controlled by keypads, IR transmitters, or CCIs. The keypads will have all LEDs lit brightly, indicating that no EDUs are assigned.

Setting limits from an EDU page 2.3 Setting limits from controls page 2.10 Assigning EDUs to controls page 2.15 Assigning EDUs to multi-group IR transmitter page 2.20

Setting Limits Overview

The Open and Close Limits can be set from the EDU, a CCI, keypad or IR transmitter with at least: an Open, Close, Raise and Lower buttons.

The advantage of setting limits remotely from a keypad, IR transmitter, or CCI, is these components are generally easier to access. Setting limits at the EDU may be simpler, and can be done before addressing the system, depending upon the installation.

The Open and Close Limits determine how far an EDU will travel. When the Open (Open) button is pressed on a keypad, IR transmitter, or CCI, the EDU will move to the Open Limit. When the Close (Close) button is pressed on a keypad, IR transmitter, or CCI, the EDU will move to the Close Limit. The EDU will not move higher than the Open Limit or lower than the Close Limit.

Notes:

- The system must be addressed in order to set limits from a keypad, CCI, or IR transmitter.
- When setting limits from a keypad, IR transmitter or a CCI, each EDU will move approximately 200–250 mm (8–10 in) as it is selected. Be certain each EDU can move this distance in each direction.
- Setting the Open Limit lower than the Close Limit will cause the blind to move down when raise is pressed and up when lower is pressed.
- Once EDUs have been assigned to keypads, CCIs, and IR receivers, limits can only be set on an EDU, using the keypads, CCIs, and IR receivers it is assigned to.
- Controls for integrating with other Lutron systems, including the SG-SVC/SO-SVC cannot address the *Sivoia QED* system or set limits. These controls operate every EDU.
- For information on how to set limits when using keypads that do not have Raise/Lower buttons, contact the Lutron Technical Support at +44-(0)20-7702-0657.

Setting limits from the keypad, IR transmitter, or CCI needs to be done on if the limits have not already been set. Setting limits can also be done from the EDU, see page 2.3

STEP 1

For the CCI, begin by setting switch 6 to OFF. Skip this step for keypads and IR transmitters.



STEP 2

Press and hold the Open (Open) and Raise buttons simultaneously for 5 seconds to enter "Limit Set Mode." For a keypad or CCI, the LED next to the Close (Close) button will flash quickly, and the LED next to the Open (Open) button will flash slowly.



STEP 3

Tap the Open (Open) button to select the desired EDU. Each time the Open (Open) button is tapped, the next assigned EDU is selected. The selected EDU will begin raising and lowering over a short distance (fast cycle). Continue tapping the Open (Open) button until the desired EDU is selected. Tapping the Close (Close) button selects the previous EDU.



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STEP 4

SETTING LIMITS

Use the Raise and Lower buttons to move the selected EDU to the desired limit position. When the Raise or Lower buttons are pressed, the EDU will stop fast cycling and begin raising or lowering as long as the button is held.



STEP 5

Press and hold the Open (Open) button for 5 second to store the current EDU position as the Open Limit. The Open (Open) LED will turn on steady for 2 seconds.

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Press and hold the Close (Close) button for 5 second to store the current EDU position as the Close Limit. The Close (Close) LED will turn on steady for 2 seconds.



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STEP 6

Tap the Open (Open) button to select the next desired EDU. Adjust the limits using the Raise and Lower buttons as in step 4. Store the limits by pressing and holding the Open (Open) or Close (Close) button as in step 5.

STEP 7

Press and hold the Open (Open) and Raise buttons simultaneously for 5 seconds to exit "Limit Set Mode."



STEP 8

For the CCI, return switch 6 to ON. Skip this step for keypads and IR transmitters.



If EDUs have not yet been assigned to keypads, IR receivers, or CCIs, proceed to "Assigning EDUs" section.

Assigning EDUs to controls page 2.15 Assigning EDUs to multi-group IR transmitter page 2.20

Basic Programming assigning EDUs to controls

Assignment Overview

By default, after the system has been addressed, no EDUs are assigned to keypads, CCIs or IR Receivers.

Assignment determines which EDU will be operated by each keypad, IR transmitter, and CCI. Assigning EDUs to keypads, CCIs or IR Receivers is necessary to operate an individual, or a user-defined group of EDUs, or all EDUs.

Assigning EDUs to a single keypad, CCI or IR Receiver does not affect which EDUs are operated by other keypads, CCIs or IR Receivers in the system.

Note:

- Entering "Assignment Mode" causes every EDU in the system to move between its Open and Close limits. Make certain that limits have been set appropriately for each EDU in the system before entering "Assignment Mode."
- Controls for integrating with other Lutron systems, including the SG-SVC/SO-SVC cannot address the *Sivoia QED* system or set limits. These controls operate every EDU.
- For information on how to assign inaccessible EDUs to keypads that do not have Raise/Lower buttons, contact the Lutron Technical Support at +44-(0)20-7702-0657.
- The CCI can be configured to accommodate multiple groups of blinds (see page 2.44). Configurations other than the standard have Open and Close inputs in locations other than inputs 1 and 5.

STEP 1

For the CCI only, begin by setting switch 6 to OFF. Skip this step for keypads, and IR transmitters.



For multi-group keypads and CCIs, choose the group on the control to assign EDUs to. EDUs will need to be assigned to each group.

For more information on multi-group control from a CCl, refer to pages 2.44–2.45.

٥	Open	
٥	Preset	
٥	Close	
٥	Open	
٥	Preset	
0	Close	
	LUTRON	

Basic Programming assigning EDUs to controls

STEP 2

Press and hold the Open (Open) and Close (Close) buttons simultaneously for 5 seconds. The LEDs next to the Open (Open) and Close (Close) buttons on the keypad or CCI will flash once per second.



STEP 3

Tap the Close (Close) button to enter "Assignment Mode." The LED next to the Close (Close) button will flash slowly (once per second). The LED next to the Open (Open) button will turn off.

EDUs that are not assigned will move to their Open Limit. After the system is addressed for the first time, no EDUs are assigned to keypads, CCIs, or IR receivers.

EDUs that are assigned will move to their Close Limit. Assigned EDUs will be controlled by the keypad, IR receiver, or CCI.



Basic Programming | assigning EDUs to controls

STEP 4

To select an individual EDU to assign or un-assign; tap the Open (Open) button to select the desired EDU. Each time the Open (Open) button is tapped, the next EDU will be selected. The selected EDU will begin raising and lowering over a short distance (fast cycle). Continue tapping the Open (Open) button until the desired EDU is selected. Tapping the Close (Close) button selects the previous EDU. **Note:** If desired, all EDUs can be quickly assigned or unassigned from a keypad.

To **assign** all EDUs in the system to a keypad, press and hold the Close (Close) button for 5 seconds.

To **un-assign** all EDUs in the system from a keypad, press and hold the Open (Open) button for 5 seconds.



Basic Programming assigning EDUs to controls

STEP 5

Tap the Lower button to assign the EDU that is currently selected (fast cycling). The currently selected EDU will be assigned and will move to its Close Limit.

To un-assign the currently selected EDU, tap the Raise button, the EDU will be un-assigned and will move to its Open Limit.

For multi-group keypads and CCIs configured to operate multiple groups of EDUs that do not have Raise or Lower, tap the Open (Open) button for one of the other groups to un-assign, tap the Close (Close) button for one of the other groups to assign.

Tap Raise assign the OR Tap Lower the EDU	to un- EDU to assi	gn	۰ ا د ا ا	Open Preset Close	
Tap Raise assign the OR Tap Lower assign the	to un EDU to EDU ~				
)pen	Tap Ra assign OR Tap Lo assign	ise to u the ED wer to the ED	-un- 1U DU	



For single group keypads that do not have raise and lower, such as the SQA-2D and the SQA-3D, EDUs can be assigned or un-assigned by tapping any button on the EDU while the keypad is in assignment mode. Tapping any EDU button toggles between assigned and unassigned. The EDU will move to its Close Limit to indicate that it is assigned, or move to its Open Limit to indicate it is unassigned.



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Basic Programming | assigning EDUs to controls

STEP 6

Press and hold the Open (Open) and Close (Close) buttons simultaneously for 5 seconds to exit "Assignment Mode." Each EDU will return to the level it was at when assignment mode was entered.







STEP 7

For the CCI only, return switch 6 to ON. Skip this step for keypads, and IR transmitters.



Enter Assignment Mode for other keypads, CCIs, and IR transmitters in the system until all controls have EDUs assigned to them.

After EDUs have been assigned to all controls, set preset levels for controls.

Adjusting Individual Levels page 2.24 Storing Presets page 2.28. Assigning EDUs to multi-group IR transmitter page 2.20

Basicassigning EDUsProgrammingto multi-group IR transmitters

Assignment Overview

By default, after the system has been addressed, no EDUs are assigned to keypads, CCIs or IR receivers.

Assignment determines which EDU will be operated by each keypad, IR Transmitter, and CCI. Assigning EDUs to keypads, CCIs or IR Receivers to operate an individual, or a user-defined group of EDUs, or all EDUs.

Assigning EDUs to a single keypad, CCI or IR Receiver does not affect which EDUs are operated by other keypads, CCIs or IR Receivers in the system.

Notes:

1. Entering "Assignment Mode" causes every EDU in the system to move between its Open and Close Limits. Make certain that limits have been set appropriately for each EDU in the system before entering "Assignment Mode."

2. EDUs are assigned to IR Receivers, not IR Transmitters. For CCIs and keypads with IR Receivers, the IR Transmitter operates the same EDUs that the CCI inputs or keypad buttons operate.

3. The SVQ-4GD-IT operates a group of EDUs and 14 subgroups. The SVQ-4S2G-IT operates a group of EDUs and 2 sub-groups. The SVQ-4S2G-IT also operates Lutron *GRAFIK Eye, HomeWorks* and *Telume* lighting controls.

For SVQ-4GD-IT and SVQ-4S2G-IT Transmitters:

Assigning EDUs to an IR Receiver

The SVQ-4GD-IT and SVQ-4S2G-IT IR transmitters allow the user to operate a group of EDUs or select a smaller sub-group of EDUs to operate.

The SVQ-4GD-IT is designed to accommodate multiple windows with dual blinds (e.g. sheer and dark) or curtains. The buttons at the top of the transmitter allow the user to open, close, raise, or lower the selected blinds. The middle set of buttons is used to select either the sheer, dark, or both sheer and dark blinds to operate in a dual mount application. The lower set of buttons are used to select windows 1 through 4 or all windows that the EDUs are installed on.

The SVQ-4S2G-IT is designed to accommodate two groups of blinds and a Lutron lighting control system. The buttons at the top of the transmitter allow the user to open, close, raise, or lower the selected blinds. The middle set of buttons is used select blind sub-group 1 or 2, or both subgroups 1 and 2. The lower set of buttons are used to select a lighting scene on a Lutron lighting control system.

IR receivers are available:

FR.

SV-IR Infrared remote eye (connects to an EDU)



Keypad with IR

Receiver



Contact Closure Interface (CCI)

Basic assigning EDUs Programming to multi-group IR transmitters

STEP 1

Enter "Programming Mode" pressing and holding the Open (Open) and Close (Close) buttons on IR Transmitter simultaneously for 5 seconds.





STEP 2

Select the group to assign EDUs to. For the SVQ-4GD-OCIT press the All (All) and Both (Both) buttons. For the SVQ-4S2G-IT press the Both (Both) button.



SHADES OPEN
SHADES 1 Both 2
LIGHTS 1 2 Off 3 4
LUTTION,

SVQ-4GD-IT Press the All (All) and Both (Both) buttons

SVQ-4S2G-IT Press the Both (Both) button

STEP 3

Enter "Assignment Mode" by tapping the Close (Close) button. EDUs that are assigned to the IR Receiver in "Assignment Mode" will move to their Close Limit. EDUs that are not assigned to the IR Receiver in "Assignment Mode" will move to their Open Limit.

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Basicassigning EDUsProgrammingto multi-group IR transmitters

STEP 4

Assign or un-assign EDUs as desired. By default, no EDUs are assigned to IR Receivers.

In order to **assign** all EDUs in the system, aim the IR Transmitter at the IR Receiver and press and hold the Close (Close) button for 5 seconds.

In order to **un-assign** all EDUs in the system, aim the IR Transmitter at the IR Receiver and press and hold the Open (Open) button for 5 seconds.

STEP 5

To select an individual EDU to assign or un-assign; tap the Open (Open) button to select the desired EDU. Each time the Open (Open) button is tapped, the next EDU will be selected. The selected EDU will begin raising and lowering over a short distance (fast cycle). Continue tapping the Open (Open) button until the desired EDU is selected. Tapping the Close (Close) button selects the previous EDU.



Basicassigning EDUsProgrammingto multi-group IR transmitters

STEP 6

Assign or un-assign the currently selected EDU using the Raise and Lower buttons.

To **assign** an EDU, tap the Lower button.

To **un-assign** an EDU, tap the Raise button



STEP 7

Exit "Assignment Mode" by pressing and holding the Open (Open) and Close (Close) buttons simultaneously for 5 seconds. Each EDU will return to the level it was at when "Assignment Mode" was entered.



STEP 8

Press and hold Open (Open) and Close (Close) for 5 seconds.

STEP 9

Select a sub-group to assign EDUs to. For the SVQ-4S2G select sub-group 1 by pressing "Shades (Shades) 1". For the SVQ-4GD-OCIT, select "dark shades/window 1" sub-group by pressing the "dark shades" () and "Window (Window) 1" buttons.

STEP 10

Tap Close (Close) to enter assignment mode for the selected sub-group.

STEP 11

Press and release Open (Open) to select EDU to assign or unassign. Selected EDU will fast cycle.

STEP 12

To assign the selected EDU, tap Lower. To unassign the selected EDU, tap Raise.

STEP 13

Press and hold Open (Open) and Close (Close) for 5 seconds to exit assignment mode.

STEP 14

Select the next sub-group.

For SVQ-4S2G, repeat steps 9-13, this time selecting subgroup 2 in step 9.

For SVQ-4GD-OCIT, repeat steps 9-13, each time through selecting a different sub-group such as "sheer shades/window 1." Continue until EDUs have been assigned to each sub-group.

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Basic Programming adjusting individual levels

Individual Level Adjust Overview

Sivoia QED EDUs have the ability to store positions as presets that can be accessed from keypads, CCIs, and IR Transmitters. Pressing a preset button recalls stored levels for each of the EDUs operated by the preset button.

Sivoia QED keypads, CCIs, and IR Transmitters have the ability to adjust the levels of EDUs individually. This way, the user can push one preset button and recall unique preset levels for individual EDUs.

"Individual Level Adjust Mode" allows an installer to select individual EDUs that have been assigned to a keypad, CCI, or IR Receiver and change the EDU to the desired level. Once the EDUs are at the desired levels, the installer can then exit "Individual Level Adjust Mode" and store the current levels by pressing and holding a preset button.

Notes:

1. The system must be addressed and EDUs must be assigned to a keypad, CCI, or IR Receiver in order to use "Individual Level Adjust."

2. While using "Individual Level Adjust," each EDU can move approximately 200–250 mm (8–10 in) as it is selected. Be certain that the limits have been set appropriately.

3. For information on how to adjust the levels of individual EDUs when using keypads that do not have Raise/Lower buttons, contact the Lutron Technical Support at +44-(0)20-7702-0657.

STEP 1

For the CCI only, begin by setting switch 6 to OFF. Skip this step for keypads, and IR transmitters.



Basic Programming adjusting individual levels

STEP 2

Press and hold the Open (Open) and Lower buttons simultaneously for 5 seconds to enter "Individual Level Adjust Mode." For a keypad or CCI, the LED next to the Close (Close) button will flash quickly, and the LED next to the Open (Open) button will flash slowly.



STEP 3

Press Open

EDU

(Open) to select

Tap the Open (Open) button to select the desired EDU. Each time the Open (Open) button is tapped the next assigned EDU is selected. The selected EDU will begin raising and lowering over a short distance (fast cycle). Continue tapping the Open (Open) button until the desired EDU is selected. Tapping the Close (Close) button selects the previous EDU.









Press Open (Open) to select EDU

Basic Programming adjusting individual levels

STEP 4

Use the Raise and Lower buttons to move the selected EDU to the desired position. When the Raise or Lower buttons are pressed, the EDU will stop fast cycling and begin raising or lowering as long as the button is held.

STEP 5

Tap the Open (Open) button to select the next desired EDU. Adjust the position using the Raise and Lower buttons as in step 4.



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Basic Programming | adjusting individual levels

STEP 6

Press and hold the Open (Open) and Raise buttons simultaneously for 5 seconds to exit "Individual Level Adjust Mode."

STEP 7

For the CCI, return switch 6 to ON. Skip this step for keypads and IR transmitters.



After leaving "Individual Level Adjust Mode," refer to page 2.28 for information on how to store the current EDU positions as a preset.







Basic Programming | storing presets

Sivoia QED EDUs have the ability to store positions as presets, accessible from keypads, CCIs, and IR transmitters.

STEP 1

For the CCI only, begin by setting switch 6 to OFF. Skip this step for keypads, and IR transmitters.

STEP 2

Store the EDUs current position as a preset by pressing and holding the desired Preset (Preset) button for 5 seconds. The LED next to the Preset (Preset) button will flash, and then turn on, indicating the preset has been stored.

Note: Current position is stored as a preset only on the EDUs that are operated by that Preset (Preset) button.







Basic Programming storing presets

STEP 3

For the CCI only, return switch 6 to ON. Skip this step for keypads, and IR transmitters.



Basic Programming | locking presets

Presets can be "locked" to prevent accidental reprogramming of presets. All presets on every keypad can be locked from a single keypad.

Locking presets from a keypad

STEP 1

Lock presets by pressing and holding Open (Open) and Preset (Preset) 1 buttons for 5 seconds. All LEDs on the keypad will flash rapidly for one second (8 times per second), indicating presets have been locked.

Note: This locks all presets on every keypad in the system.

Unlocking presets from a keypad

STEP 1

Unlock presets by pressing and holding Open (Open) and Preset (Preset) 1 buttons for 5 seconds. All LEDs on the keypad will flash once, indicating presets have been unlocked.

Note: This unlocks all presets on every keypad in the system.







Advanced Programming | adding components

Components can be added to the *Sivoia QED* system at any time, up to a maximum of 96 total devices (EDUs, keypads, and CCIs). Adding components does not affect the programming of already installed components.

Note: Do not add previously addressed components, or combine two previously addressed systems without restoring all components to factory default settings.

To add a keypad or CCI to the system

STEP 1

Install the new keypad or CCI as described in the installation instructions. Connect the keypad or CCI to the communications link.

Note: When keypads or CCIs are added, they will operate all of the EDUs on the communication link until the system is addressed.

STEP 2

Address the system. Refer to the section of this manual on "Addressing," page 2.6 or 2.32.

Note: Addressing must be done with the entire system powered and wired to the communications link.

STEP 3

Assign EDUs to the keypad or CCI. Refer to the section of this manual on "Assigning EDUs to Controls," page 2.15.

To add an EDU to the system

STEP 1

Install the new EDU as described in the installation instructions. Connect the EDU to the communications link and power supply.

Note: When EDUs are added, they will not respond to any keypad or CCI on the communication link by default.

STEP 2

Address the system. Refer to the section of this manual on "Addressing," page 2.6 or 2.32.

STEP 3

Set the limits for the new EDU. Refer to the section of this manual on "Setting Limits," page 2.10.

STEP 4

Assign the new EDU to keypads, CCIs, or IR Transmitters. Refer to the section of this manual on "Assigning EDUs," page 2.15.

Basic Programming addressing from the EDU

Addressing Overview

Each keypad, EDU, and CCI in the system must have a unique address in order to store presets. Addressing the system gives each device a unique address number, which allows individual components to communicate properly.

Each device can be given a unique address automatically, by placing a single keypad, EDU, IR transmitter, or CCI in "Addressing Mode." The device in Addressing Mode will then allocate a unique address to every keypad, EDU, and CCI in the system.

The *Sivoia QED* system is addressed using a single keypad, EDU, CCI, or IR transmitter. It is not necessary to enter address mode on more than 1 device in the system. For convenience, address the system from the component that is easiest to access.

The system should be addressed each time new components are added. Addressing a previously programmed system will not erase any previous programming, addresses, limits, EDU assignments, or presets.

After addressing a new system, keypads, CCIs, and IR transmitters will not operate any EDU.

Once the system has been addressed, EDUs need to be assigned to the appropriate keypads, CCIs and IR receivers.

Notes:

- The system should be addressed *after* all components have been installed, wired to the communications link, and powered.
- To add previously addressed components to an existing system, or to connect a previously addressed system to an existing system, return components to factory defaults before wiring them to the existing system (refer to Advanced Programming).

Addressing from the EDU needs to be done only if the system has not already been addressed from a keypad, CCI, or IR transmitter.

STEP 1

Enter "Addressing Mode" by pressing and holding the "Close Limit Button" (■) on the EDU for 5 seconds. The LED on a roller blind EDU will flash quickly for two seconds then turn on (steady LED), indicating the EDU is ready to begin addressing. The display on a curtain track EDU will show (--).



External EDU

Basic Programming addressing from the EDU

STEP 2

Initiate system addressing by taping the "adjust anticlockwise button" (ζ) button. The LED on roller blinds will begin to flash quickly (8 times per second). The display on curtain tracks will flash (R_d) (8 times per second). The system is now automatically addressing.



STEP 3

Wait for addressing to be completed. This will take approximately one minute. Proper communications between devices can be confirmed during the addressing process.

While addressing is in progress, each keypad and CCI will flash its Open (Open) LED quickly (8 times per second). Each roller blind EDU will flash its LED quickly (8 times per second). Each curtain track EDU display will flash (Rd) (8 times per second).

When addressing has successfully completed, Open (Open) and Close (Close) LEDs on every keypad and CCI will flash slowly (1 flash per second). The LED on the EDU will flash slowly (1 flash per second).

Correct wiring can be confirmed by checking that each keypad, CCI, and EDU is flashing its LED. If a device does not flash its LED, wait for addressing to complete, check wiring, and re-address the system, entering addressing mode from the same device that was previously used to address the system.



ADDRESSING

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Basic Programming addressing from the EDU

5

STEP 4

Exit "Addressing Mode" when addressing is complete by pressing and holding the "Close Limit Button" on the EDU for 5 seconds. LED will turn off.



After the system has been addressed, set the limits if they have not already been set. After addressing the system and setting limits, assign EDUs to each keypad, CCI, and IR receiver.

Setting limits from the EDU page 2.3 Setting limits from controls page 2.10 Assigning EDUs to controls page 2.15 Assigning EDUs to multi-group IR transmitter page 2.20

Advanced restoring keypads Programming and CCIs to default settings

Restoring a keypad, CCI, or EDU to its Factory Default Settings will erase all current programming for the device. *Do not* do this unless you are certain that it is necessary. For more information contact the Lutron Technical Support at +44-(0)20-7702-0657.

Returning an EDU to its Factory Default Settings does not erase the upper and lower limit settings. All other programming in the EDU is erased when it's returned to the Factory Default Settings.

Returning a Keypad or CCI to its Factory Default Setting

STEP 1

For the CCI only, begin by setting switch 6 to OFF. Skip this step for keypads.

STEP 2

Simultaneously press and hold the Open (Open) and Close (Close) buttons for 5 seconds. The LEDs next to the Open (Open) and Close (Close) buttons will flash.







Advancedrestoring keypadsProgrammingand CCIs to default settings

STEP 2

Press and hold the Open (Open) button for 5 seconds. The LEDs next to the Open (Open) and Close (Close) buttons will flash quickly for 2 seconds then flash slowly.



Press and hold the Close (Close) button for 5 seconds. The LEDs next to the Open (Open) and Close (Close) buttons will flash quickly for 2 seconds then flash slowly.







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Advanced restoring keypads Programming and CCIs to default settings

STEP 4

Simultaneously press and hold the Open (Open) and Close (Close) buttons for 5 seconds. The LEDs will turn ON steady then turn OFF. The keypad is now restored to Factory Default Settings.





STEP 5

For the CCI only, return switch 6 to ON. Skip this step for keypads.



Advanced restoring Programming entire system to default settings

Returning the entire system to Factory Default Setting

Restoring the entire system to its Factory Default Settings will erase all current programming for every device on the communications link. *Do not* do this unless you are certain that it is necessary. For more information contact the Lutron Technical Support at +44-(0)20-7702-0657.

Returning the entire system to its Factory Default Settings does not erase the Open and Close limit settings. All other programming is erased. The system will need to be addressed, and EDUs assigned to controls after it has been restored to Factory Default Settings.

Restoring the entire system to Factory Default Settings from a keypad or CCI is intentionally difficult to do in order to prevent accidentally restoring the system to Factory Default Settings.

STEP 1

For the CCI only, begin by setting switch 6 to OFF. Skip this step for keypads.



STEP 2

For keypads, remove the wallplate and set switch 8 to OFF. For CCIs, set switch 8 to OFF. The LEDs will begin to scroll. Place the wallplate back onto the keypad.





Advanced restoring Programming entire system to default settings

STEP 3

Simultaneously press and hold the Open (Open) and Close (Close) buttons for 5 seconds. The LEDs next to the Open (Open) and Close (Close) buttons will flash once per second.



STEP 4

Press and hold the Open (Open) button for 5 seconds. The LEDs next to the Open (Open) and Close (Close) buttons will flash quickly for 2 seconds, then return to flashing once per second.





AdvancedrestoringProgrammingentire system to default settings

STEP 5

Press and hold the Close (Close) button for 5 seconds. The LEDs next to the Open (Open) and Close (Close) buttons will flash quickly for 2 seconds, then return to flashing once per second.







ADVANCED PROGRAMMING

Sivoia QEDTM Quiet Electronic Drive Window System 2.40

STEP 6

Press and hold the Open (Open) button for 5 seconds. The LEDs next to the Open (Open) and Close (Close) buttons will flash quickly for 2 seconds, then return to flashing once per second.





Advanced restoring Programming entire system to default settings

STEP 7

Simultaneously press and hold the Open (Open) and Close (Close) buttons for 5 seconds. The LEDs next to the Open (Open) and Close (Close) buttons will flash once per second on all keypads and CCIs. EDUs will flash green LED.

(Note: This step must be repeated - see step 8)



STEP 8

Simultaneously press and hold the Open (Open) and Close (Close) buttons for 5 seconds. All LEDs on the control will turn on briefly.



Advanced restoring Programming entire system to default settings

STEP 9

For keypads, remove the wallplate and set switch 8 to ON. For CCIs, switch 8 should be set to ON. The LEDs will stop scrolling. Place the wallplate back onto the keypad.

0 0 C

STEP 10

For the CCI only, return switch 6 to ON. Skip this step for keypads.



The entire *Sivoia QED* system has now been returned to factory defaults. Address the system, and assign EDUs to controls.



Advanced Programming | restoring EDU to default settings

Returning an EDU to its Factory Default Setting STEP 1

Press and hold the Close Limit button on the EDU for 5 seconds. The LED on the EDU will flash then turn ON steady.



Press and hold the Open Limit button for 5 seconds. The

STEP 2

STEP 3

Press and hold the clockwise button for 5 seconds. The LED on the EDU will flash then turn ON steady.



STEP 4

Press and hold the anti-clockwise button for 5 seconds. The LED on the EDU will flash. The EDU is now restored to Factory Default Settings.



Advanced Programming | multiple groups with the CCI

Controlling multiple groups from a single CCI

As shipped, the CCI allows control of a single group of EDUs from an external device using the functionality shown below. A single CCI can be configured to operate multiple groups of EDUs.

Notes:

1. Changing a CCIs configuration will erase the current programming.

2. The IR receiver on the CCI is disabled in any configuration other than the Standard Configuration.

STEP 1

Determine the desired functionality.

Standard Configuration: This provides three presets and raise/lower, but can only operate a single group of EDUs.

Open/Close Configuration: This will enable the CCI to Open or Close up to four groups of EDUs, but does not provide presets or raise/lower.

Open/Close/Raise/Lower Configuration: This will enable the CCI to Open, Close, Raise, and Lower up to two groups of EDUs, but does not provide presets.

Open/Preset/Close/Stop Configuration: This will enable the CCI to Open, Close, or Stop up to two groups of EDUs, as well as having access to a single preset for each group, but does not provide raise/lower.

STEP 2

Set the switches.

Locate the switches on the CCI. The switch position will determine the configuration options. Set the switches according to the diagrams below and on the next page.

Standard Configuration



Open/Close Configuration



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Advanced Programming | multiple groups with the CCI

STEP 2 (continued)

Open/Close/Raise/Lower Configuration



Open/Preset/Close/Stop Configuration



STEP 3

Apply the new configuration.

Follow the steps in the section "Restoring keypads and CCIs to Default Settings" on pages 2.35–2.37, in order to apply the new configuration. Make sure to use the *new* Open and Close buttons.

STEP 4

Program the Sivoia QED system.

The CCI has now taken on the new configuration. Address the *Sivoia QED* system, set limits if they have not already been set, and assign EDUs to each group on the CCI. For configurations other than the standard CCI configuration, use each group's Open/Close inputs to enter "Assignment Mode" for each individual group.

Note: For Open/Close and Open/Preset/Close/Stop configurations, the Open and Close buttons of the other groups can be used to Unassign or Assign EDUs (in the absence of the Raise or Lower buttons).

Advanced Programming | notes

Troubleshooting

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Troubleshooting

Electronic Drive Unit (EDU) will not move

- EDU is not powered check EDU power
- Roller blind fabric is caught on something Check that roller blind fabric is not caught on something or binding
- EDU is not assigned to keypad, IR transmitter, or CCI
- Limits are set to the same position

EDU does not fully open or fully close

- · Presets have been set incorrectly try using raise and lower buttons
- Limits have been set incorrectly refer to "setting limits" on page 2.3 or 2.10
- Roller blind fabric is caught on something free roller blind

Roller blind moves up when pressing lower button, and down when pressing raise button

• Open and close limits have been reversed - refer to "setting limits" on page 2.3 or 2.10

Fabric not level

- · Adjust using level adjustment screw
- Check that brackets are mounted level
- · Check that fabric is tracking correctly on the roller blind tube

Fabric not centred over window

- · Centre roller blind using centre adjustment
- Check that brackets are centred
- · Check that fabric is tracking correctly on the tube

Roller blind does not move smoothly

Check for binding of roller blind fabric on side channels, fascia, etc

Check fabric tracking

Keypad LEDs are off, keypad will not control any roller blind

· Check that keypad is powered

Keypad LEDs are lit, but keypad will not operate any blind

- All presets have been set to same height try using raise/lower buttons at keypad
- Communications Link not wired to EDU check wiring
- EDU has been un-assigned from keypad refer to "assignment" section

Keypads will not operate blind, IR works properly

- Check that keypad is powered
- Keypad is not wired correctly check wiring
- EDU has been un-assigned from keypad. Refer to "assignment" section
- Presets are all programmed to same location, try using raise/lower at keypad

Cannot store presets

- Preset lock is enabled
- Presets are being accidently re-programmed set presets, enable preset lock

Keypad does not operate all the blinds it is assigned to

- EDU has been unassigned from keypad refer to "assignment" section
- EDU has all presets set to same height, try raise/lower

EDU is not wired correctly

Keypad is not wired correctly

IR controls will not operate blind, keypads work properly

- IR transmitter does not have line of sight to IR receiver
- Out of range move to within 9 m (30 ft) of IR receiver
- EDU has been unassigned to IR receiver refer to "assignment" section
- IR receiver not properly installed on EDU

Blinds in a room move on their own

• EDUs are assigned to control in another room - refer to "assignment" section

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