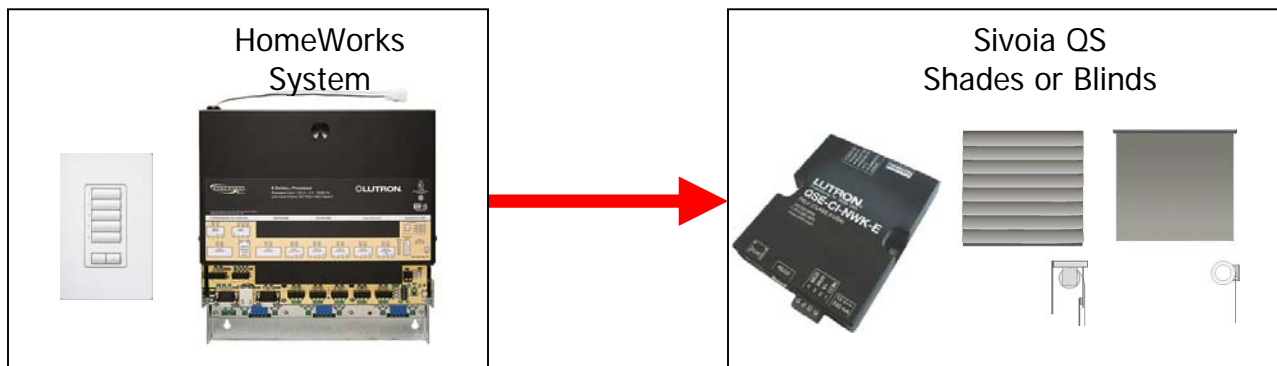


Interfacing HomeWorks® Illumination with Sivoia® QS Shades and Venetian Blinds

Overview

Lutron HomeWorks Illumination systems are fully compatible with and should be used with Sivoia QED shades. In some instances, a customer may have Sivoia QS shades or Venetian blinds installed and would like to have control of the shades or blinds from a HomeWorks Illumination system. It may be necessary to interface the HomeWorks Illumination system with the Sivoia QS devices. This application note addresses the above scenario and describes a solution for interfacing HomeWorks Illumination with Sivoia QS wired shades and Venetian blinds. Sivoia QS Wireless shades are not covered by this document.



1. What hardware do I need?

- A Lutron HomeWorks Illumination system with a P5 processor with one available RS-232 port.
- A null-modem RS-232 cable with male connectors on both ends.
- A Lutron QSE-CI-NWK-E interface.
- Lutron Sivoia QS shades / blinds and power supplies / power panels.

2. What software do I need?

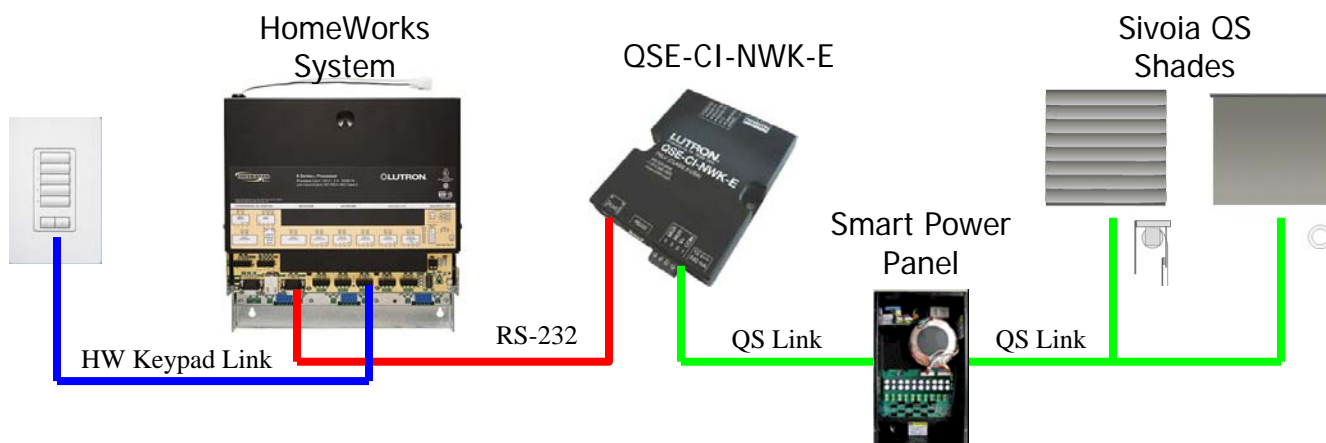
- Lutron HomeWorks Illumination
- QSE-CI-NWK-E Driver for HomeWorks (included with Illumination 1.60 and later)
- QSE-CI-NWK-E firmware revision 8.21 or later
- Sivoia QS Shade firmware revision 0.100 or later
- A telnet utility on the PC (for programming / configuring the QSE-CI-NWK-E)

3. How do I connect the systems?

The Sivoia QS shades / blinds and the QSE-CI-NWK-E should be wired together using the QS link wiring. The Sivoia QS shades and Venetian blinds must be

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powered using shade power supplies or power panels. These devices form the QS Shade network. The RS-232 connector on the QSE-CI-NWK-E must be connected to an RS-232 connector on the *HomeWorks* processor (Link 3 or Link 7) using the null-modem RS-232 cable.



4. How are the systems programmed to work together?

The QSE-CI-NWK-E has 100 phantom buttons that can be configured with shade groups or shade scenes. Each shade group or shade scene can be activated, raised, or lowered through RS-232 integration commands sent from the *HomeWorks* Illumination system. The QSE-CI-NWK-E driver for *HomeWorks* contains all of the commands that can be sent from a *HomeWorks* Illumination system. These commands can be assigned to button actions in the *HomeWorks* Illumination software, similar to programming a *HomeWorks* dimmer to go to a level. No feedback will be sent to the *HomeWorks* Illumination system from the *Sivoia* QS shades or Venetian blinds.

5. How do I program or configure the QS shade groups and shade scenes in the QSE-CI-NWK-E?

The QSE-CI-NWK-E Phantom Button User Guide describes how to program *Sivoia* QS shades and Venetian blinds to the phantom buttons on the QSE-CI-NWK-E. This document can be found here: [http://resi.lutron.com/Portals/3/Support/App Notes - FAQs/QSE-CI-NWK-E Phantom Button User Guide.pdf](http://resi.lutron.com/Portals/3/Support/App%20Notes%20-%20FAQs/QSE-CI-NWK-E%20Phantom%20Button%20User%20Guide.pdf)

For a complete list of all integration commands, refer to the Lutron Integration Protocol. This document can be found here: <http://www.lutron.com/TechnicalDocumentLibrary/040249f.pdf>

In order to use the *HomeWorks* RS-232 driver for the QSE-CI-NWK-E, the NWK should be given the name “nwk” using the following command:

```
#INTEGRATIONID,1,<nwk serial number>,nwk
```

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In the previous command, **<nwk serial number>** should be replaced with the actual serial number of the QSE-CI-NWK-E device. This can be found on a label affixed to the side of the device or by sending the **?DETAILS,ALL_DEVICES** command.

6. How do I get the HomeWorks QSE-CI-NWK-E Driver into HomeWorks Illumination?

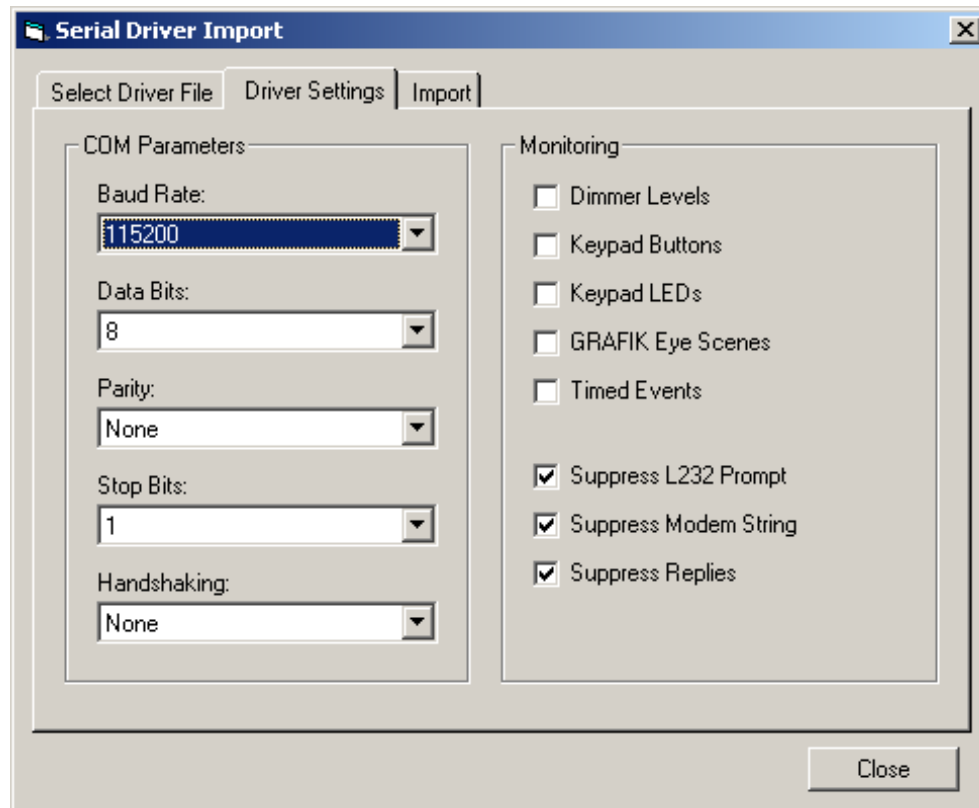
HomeWorks Illumination version 1.60 and later has the driver for the QSE-CI-NWK-E included in the RS-232 global drivers list. For older versions of HomeWorks Illumination, the driver can be downloaded from the <http://resi.lutron.com> website.

a. The COM parameters for the QSE-CI-NWK-E should be configured as follows:

Baud Rate: 115200
Data Bits: 8
Parity: None
Stop Bits: 1
Handshaking: None

The “Suppress” checkboxes should be checked for L232 Prompt, Modem String, and Replies.

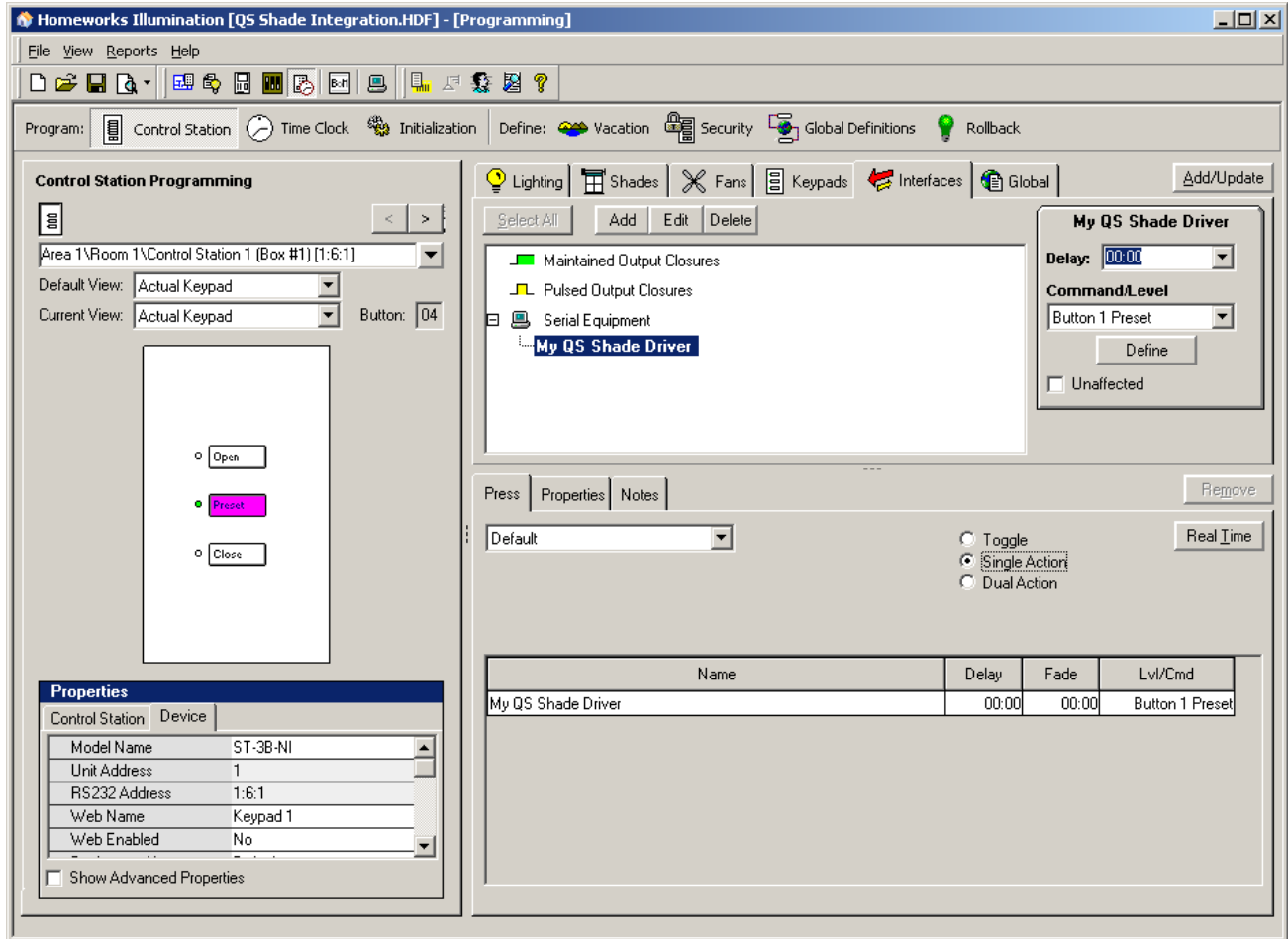
The driver settings tab should be configured as follows:



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- b. Refer to section 2.10 *Serial Strings* in the *HomeWorks Illumination Help File* to learn how to program the serial strings to buttons in the *HomeWorks Illumination* software.

7. What does the programming look like in HomeWorks Illumination for activating a phantom button in the QSE-CI-NWK-E?



In the above example, the *HomeWorks* keypad button is programmed as a single-action button to activate the Button 1 Preset on the QSE-CI-NWK-E interface.

Frequently Asked Questions:

Can I address and program *Sivoia* QS shades and Venetian blinds in a *HomeWorks* Illumination system?

No, *Sivoia* QS shades and Venetian blinds are not natively compatible with a *HomeWorks* Illumination system and must be addressed and programmed independently using the QSE-CI-NWK-E network interface. It is recommended to use *Sivoia* QED wired or wireless shades with a *HomeWorks* Illumination installation to simplify system setup, programming, control, and feedback.

What are the benefits to using *Sivoia* QS shades and Venetian blinds instead of *Sivoia* QED shades with a *HomeWorks* Illumination system?

There are several benefits to using QS shades and Venetian blinds over QED shades, but there are also some disadvantages (see next question). Here are the benefits:

- Simplified wiring (QS shades and Venetian blinds require 4 wires, QED shades require 7 wires)
- More flexible power supply requirements.
- Future-proof shading solutions. QS Shades and Venetian blinds are forward compatible with *Lutron HomeWorks* QS.
- *Lutron* Venetian Blinds are only available as a *Sivoia* QS device.

What are the disadvantages to using *Sivoia* QS shades and Venetian blinds instead of *Sivoia* QED shades with a *HomeWorks* Illumination system?

Although QS shades and blinds have many benefits (see previous question), they also have several disadvantages when used with a *HomeWorks* Illumination system.

- Additional equipment will be required to interface a *HomeWorks* Illumination system with *Sivoia* QS shades and blinds, adding to the cost and complexity.
- *HomeWorks* Illumination will not receive feedback (LED updates, shade levels, etc) from the *Sivoia* QS shades and blinds.
- *HomeWorks* Illumination will be limited in the number of shade scenes that can be activated (100 phantom buttons).
- Programming scenes for the *Sivoia* QS shades and blinds will be a manual process requiring information to be typed into a terminal window.

How can I determine the firmware version of my QSE-CI-NWK-E and *Sivoia* QS shades and Venetian blinds?

Wire the *Sivoia* QS shades and Venetian blinds to the QSE-CI-NWK-E, then send the **?DETAILS,ALL_DEVICES** command to the QSE-CI-NWK-E. All devices on the QS Link, including the *Sivoia* QS shades, Venetian blinds, and QSE-CI-NWK-E will report information including the firmware versions.

What is required to use *Sivoia* QS Venetian Blinds with a *HomeWorks* Illumination system?

This application note describes everything you need to interface *HomeWorks* Illumination with *Sivoia* QS Shades and Venetian blinds. Venetian blinds are programmed to the QSE-CI-NWK-E phantom buttons the same way that other *Sivoia* QS shades are programmed, with the exception that Venetian blinds support additional programming parameters for lift and tilt (other shades only have lift). The QSE-CI-NWK-E must have firmware version 8.21 or later for Venetian blind programming support.

How can I get LED feedback on my *HomeWorks* Illumination keypads?

The HomeWorks Illumination system does not receive status updates from the QSE-CI-NWK-E indicating the state of the programmed shades, and therefore cannot update the keypad LEDs. State variables can be used in the HomeWorks Illumination system to make the LEDs turn on or off if this feature is desired.

How can I adjust the lift and tilt of a Venetian with a single phantom button press?

Venetians should be programmed to phantom buttons using action number “5” if both lift and tilt are to be adjusted from a single button press. Refer to the QSE-CI-NWK-E Phantom Button User Guide for details. [http://resi.lutron.com/Portals/3/Support/AppNotes - FAQs/QSE-CI-NWK-E Phantom Button User Guide.pdf](http://resi.lutron.com/Portals/3/Support/AppNotes-FAQs/QSE-CI-NWK-E%20Phantom%20Button%20User%20Guide.pdf)

What happens when I raise or lower a phantom button that has a Venetian blind programmed to it?

The effect of raising or lowering a phantom button that has a Venetian blind programmed to it will depend on how that button is programmed. If the Venetian blind was programmed with action “1” or “7” (lift level only), raise or lower will only affect the lift level of the Venetian blind. If the Venetian blind was programmed with action “5” or “6” (lift & tilt or tilt only), raise or lower will affect the tilt level only.

Help and Support:

For additional support and information regarding interfacing *HomeWorks* Illumination Systems with *Sivoia* QS Shades and Venetian blinds, please contact systemsupport@lutron.com.