Hubbell CXSW-1-WH

Hubbell CXSW-1-WH Programmable Wall Switch Instruction Manual

Model: CXSW-1-WH

1. Introduction

The Hubbell CXSW-1-WH Programmable Wall Switch is designed for efficient lighting control, compatible with Hubbell CX Control Panel Systems. This device features a single button for easy operation and is constructed from a rugged, high-impact, injection-molded polymer housing for durability. It is intended for indoor use and can be ganged with other decorator-type devices. Decorator-style wall plates are sold separately.

Figure 1: Example of a decorator-style wall plate with two switches.

2. Precautions

Please read and understand all instructions before installation and use. Failure to follow these instructions may result in damage to the product or personal injury.

- **CAUTION:** This is a Class 2, low voltage device. Do not use with Line voltage.
- Use only approved materials and components (e.g., wire nuts, electrical boxes) as appropriate for installation.
- Do not install if the product appears to be damaged.
- In retrofit applications, all excess cable MUST be removed from the wall box prior to installation. Connection between Cat5e/6 cable and switch station port must be straight through, true without interference or pressure from excess or misaligned cable.
- Prior to programming the CX panel/switch stations, all Cat5e/6 cables must be tested to ensure no breaks or cross connections exist on the category cable and/or RJ45 connectors.
- **SAVE THESE INSTRUCTIONS!**

Figure 2: Hubbell CXSW Installation Guide Page 1, showing precautions and initial setup information.

3. Product Description

Hubbell Control Solutions' (HCS) CX series switch stations (CXSW) are intended solely for use with the CX series lighting control panel, utilizing the dimming option card (CXDIMCONTRBD). The CXSW switches do not have the capacity to control relays, groups, and presets. They also have the ability to be programmed to provide continuous manual dimming. Flexible, programmable configurations of the buttons allow the user to "move" control points to other buttons if desired. Both the switch station and the CX panel require programming.

4. Specifications

- **Device Type:** Class 2 low voltage device
- **Connectivity:** RJ45 port located on the rear of the station
- **Usage:** Indoor use only
- **Operating Temperature:** 32°F to 122°F (0°C to 50°C)
- **Relative Humidity:** 10% to 90% (non-condensing)
- **Voltage:** 24 Volts
- **Dimensions (L x W x H):** 4.2 x 1.8 x 1.75 inches
- **Item Weight:** 1.5 pounds
- **Color:** White
- **Mounting Type:** Wall Mount
- **Manufacturer:** Hubbell Lighting
- **Part Number:** CXSW-1-WH
- **UPC:** 640181712080

5. Installation

1. Prepare the installation site as necessary. Switches may be installed in a single gang box or ganged into a multi-gang box.
2. Switches can be daisy chain wired in series using a Cat5e/6 cable with RJ45 connectors. Since the Dimming card has only 4 total switch input connectors, some installations will require switches to be daisy chained in order to achieve the desired functionality. Plan ahead before running the category cables for the switches.
3. Plug in a Hubbell Cat5e/6 series or a standard Cat5e/6 category cable into either connector on the back of the switch. Remove excess wire from the box so that undue pressure is not exerted on the switch when it is inserted into the box.
4. Plug the other end of the cable into an appropriate RJ45 port on the Dimming Option Card in the CX panel or to the next daisy chained CX switch station.
5. For ganging two or more switches in one switch box, use the Hubbell 3" Cat5 jumper cable supplied in the packaging of the switch station. All RJ45 ports located on the back of the switch stations run in parallel and either one can be an in or an out.
6. Do not install a cover plate on the switch until it has been programmed.
7. For installation of the CXSW switch station beyond 300ft, please consult with HCS Technical Services, (800)-888-8006.

6. Programming the Switch

The process of programming the switch is simple and straightforward. It does not require any special tools or software. The actual lighting control features to be performed by each button will be programmed at the CX panel. There are 6 control lines (wires) physically in the Cat5 cable used with the switch. The switch programming simply determines which of the 6 lines (A - F) that the button will affect when pressed.

1. The switch must be properly connected to the CX panel Dimming Option card and the panel must be powered up to program the switch.
2. Carefully remove the plastic switch bezel that surrounds the buttons. Use a small, narrow driver or similar to pry the bezel from the bottom of the switch housing using the detent in the housing at the bottom of the bezel.
3. Locate the config (programming) button along the right side of the printed circuit board near the center.
4. Gently remove button caps to have access to the config button and visually confirm LED status programming.
5. Locate an array of 6 LEDs on the printed circuit board above the config button. While not physically labeled, these represent lines A - F beginning with A at the top.
6. Press and release the config button. All 6 LEDs will begin to blink.
7. Press one of the control buttons. Note that only one of the LEDs will be illuminated. Tap the control button to advance the position of the illuminated LED up or down the LED array. This is the desired control line A - F is illuminated. Repeat for each button on the switch.
8. Press the config button for 2 seconds to exit the programming mode and save the program.
9. After completing the programming and exiting the program mode, press each control button and observe that the proper LED indicator illuminates when the button is pressed.
10. If the button does not control the proper line when pressed, repeat the programming process above.
11. Some switch models are supplied with alternate button caps for use with various functions. To change the button cap, carefully pull the button cap straight off the switch. Do not twist or flex the button shaft. Carefully press the new button cap onto the shaft.
12. Re-install the switch bezel by inserting the top tabs into the slots in the housing then press the lower tabs into their slots. Note that the openings and legends around the edges of the bezel are not used on this assembly and have no function.
13. Install standard face plate on the switch (not supplied).
14. Complete the programming of the CX panel per the project requirements.

Figure 3: Hubbell CXSW Installation Guide Page 2, showing programming steps and switch diagrams.

6.1 Programming Logic

A button can perform a non-dimming action as a Dimmer Input. A button can only perform one action, whether On, Off, Toggle, Preset or a Raise or Lower Action.

CXSW Button Dimmer Input Control Points (A, B, C, D, E, F)

CXSW	1	2	3	4	5	6

CXSW	1	2	3	4	5	6
Dimmer Input Switch Types	On, Off, Toggle, Preset	On, Off, Toggle, Preset	On, Off, Toggle, Preset	On, Off, Toggle, Preset	On, Off, Toggle, Preset	On, Off, Toggle, Preset
		On, Off, Toggle, Preset	On, Off, Toggle, Preset	On, Off, Toggle, Preset	On, Off, Toggle, Preset	On, Off, Toggle, Preset
			On, Off, Toggle, Preset	On, Off, Toggle, Preset	On, Off, Toggle, Preset	On, Off, Toggle, Preset
				On, Off, Toggle, Preset	On, Off, Toggle, Preset	On, Off, Toggle, Preset
					On, Off, Toggle, Preset	On, Off, Toggle, Preset
						On, Off, Toggle, Preset

A button can perform manual continuous dimming; however, the raise/lower functions are static to the control point association. A can only be a Raise. The A control point can be on the first button or the second button or the third button and so on. It is user defined.

CXSW Dimmer Configurations Control Points (Raise/Lower SW)

A	B	C	D	E	F
Raise	Lower	Raise	Lower	Raise	Lower

- A + B are always associated raise/lower switches.
- C + D are always associated raise/lower switches.
- E + F are always associated raise/lower switches.

Figure 4: Hubbell CXSW Installation Guide Page 3, showing programming logic tables.

6.2 Programming Notes

1. There can only be 6 Control Points per RJ45 port per dimming card (A, B, C, D, E, and F).
2. By default a CXSW-1 is an A control point, a CXSW-2 first button is an A and second button is a B control point.
3. Dimmer inputs are configured in the Dimmer Inputs section of programming.
4. Dimming channels and Dimmer inputs must not share the same control point.
5. Switch types are defined as On, Off, Toggle, Preset, Raise and Lower.

6. Buttons can be programmed to any switch type.
7. Wall station button control points can be reconfigured using the config button located under the bezel.

6.3 Programming Examples

1. A 6-button switch station would occupy all 6 control points from the RJ45 port it is connected. Any additional switch stations daisy chained from this or to this 6-button station would function to provide 3-way support functionality.
2. A 4-button and 2-button switch station connected in a daisy chain fashion from the same RJ45 port but performing separate controls would occupy all 6 control points. Any additional switch stations daisy chained from this or to this 6-button station would function to provide 3-way support functionality.
3. Six 1-button switch stations daisy chained off a single RJ45 port would be able to accommodate 6 unique switch types. Any additional daisy chained switch stations would serve as 3-way buttons to the original programmed stations.
4. If you want to utilize a 4-button CXSW station to perform On, Raise, Lower and Off, then you should use 4 control points and are only capable of programming 2 more actions (i.e., you can only use 1 ONLO on that RJ45 port). Any additional daisy chained switch stations would serve as 3-way buttons to the original programmed stations.
5. To provide individual on/off and dimming control of all eight dimming channels on a single dimming card requires using eight 3-button switches with two daisy chained on each RJ45port.

7. Operating the Switch

Once the Hubbell CXSW-1-WH Programmable Wall Switch has been properly installed and programmed according to the instructions above, its single button will perform the assigned lighting control action (e.g., On, Off, Toggle, Preset, Raise, or Lower). Simply press the button to activate the programmed function.

8. Maintenance

No specific routine maintenance is required for the Hubbell CXSW-1-WH Programmable Wall Switch beyond keeping the device clean and free from dust. Ensure the device is not exposed to excessive moisture or extreme temperatures outside its operating range.

9. Troubleshooting

If the switch does not operate as expected after programming, review the programming steps in Section 6. If a button does not control the proper line when pressed, repeat the programming process for that button. For persistent issues, refer to the support contact information provided in Section 11.

10. Warranty Information

The Hubbell CXSW-1-WH Programmable Wall Switch comes with a**5-Year Limited Warranty**.
Hubbell Control Solutions (HCS) warrants that its products will be free from defects in material and workmanship for a period of five (5) years from the date of the certificate of building occupancy or proof of installation. If neither is available, the warranty period begins from the product shipment date.
This warranty is subject to certain exclusions, including but not limited to, improper installation, misuse, unauthorized alterations, normal wear and tear, and acts of nature. The sole remedy for a defective product

under this warranty is repair or replacement at HCS's discretion. This warranty is non-transferable and HCS disclaims all other warranties, express or implied, including warranties of merchantability or fitness for a particular purpose. Liability for incidental or consequential damages is limited.
For complete details regarding the warranty terms, exclusions, remedies, and limitations of liability, please refer to the full Hubbell Control Solutions Limited Warranty document.

Figure 5: Hubbell Control Solutions Limited Warranty Document - Page 1.

Figure 6: Hubbell Control Solutions Limited Warranty Document - Page 2.

11. Support

For technical assistance or further inquiries, please contact Hubbell Control Solutions Technical Services:

- **Phone:** (800)-888-8006
- **Website for Resources:** www.hubbelllighting.com/resources