



**Description**

The Crestron® CLW-DIMEX-E is a Cameo® Express wireless in-wall dimmer that features field-replaceable and engravable buttons that can be configured for various button layouts. The Cameo Express line makes it possible to bring controlled lighting to every room in the home or office. Wireless infiNET EX® communication technology brings proven reliability to the CLW-DIMEX-E.

CLW-DIMEX-E Specifications

SPECIFICATION	DETAILS
Power Requirements	120 Vac, 60 Hz, line power
Load Ratings	
Incandescent/Tungsten Halogen	750 W*
Magnetic Low Voltage	750 VA/750 W*
Minimum Load	25 W (with a neutral connected); 50 W (without a neutral connected)
Environmental	
Temperature	32° to 104°F (0° to 40°C)
Humidity	10% to 90% RH (noncondensing)
Enclosure	1-gang mountable in a 3-1/2" deep electrical box; Requires decorator style faceplate (sold separately)

\* Derating applies for multigang installations. Refer to "Multigang Installation" for more information.

**Additional Resources**

Visit the product page on the Crestron website ([www.crestron.com](http://www.crestron.com)) for additional information and the latest firmware updates. Use a QR reader application on your mobile device to scan the QR image.



**Important Notes**

**WARNING:** To avoid fire, shock, or death, turn off the power at the circuit breaker or fuse and test that the power is off before wiring!

**WARNING:** New installations should be checked for short circuits prior to installing a CLW-DIMEX-E dimmer. With the power off, close the circuit and restore the power. If the lights do not work or a breaker trips, check and correct the wiring or fixture (if necessary). Install the dimmer only when the short is no longer present. The warranty is void if the dimmer is installed and operated with a shorted load.

**CAUTION:** TO REDUCE THE RISK OF OVERHEATING AND POSSIBLE DAMAGE TO OTHER EQUIPMENT, DO NOT INSTALL TO CONTROL A RECEPTACLE, A MOTOR OPERATED APPLIANCE, A FLUORESCENT LIGHTING FIXTURE OR A TRANSFORMER SUPPLIED APPLIANCE.

**ATTENTION:** GRADATEURS COMMANDANT UN BALLAST-AFIN DE RÉDUIRE LE RISQUE DE SURCHAUFFE ET LA POSSIBILITÉ D'ENDOMMAGEMENT À D'AUTRES MATÉRIELS, NE PAS INSTALLER POUR COMMANDER UNE PRISE, UN APPAREIL D'ÉCLAIRAGE FLUORESCENT, UN APPAREIL OPÉRÉ DE MOTEUR OU UN APPAREIL ALIMENTÉ PAR UN TRANSFORMATEUR.

**NOTES:** Observe the following points:

- Installation: This product should be installed by a licensed electrician.
- Codes: Install in accordance with all local and national electrical codes.
- Wiring: Use copper wire only. For supply connections, use wires rated for at least 75°C.
- Lamp Type: For use with permanently installed incandescent, magnetic low voltage, or tungsten-halogen.
- Temperature: For use where temperatures are between 32° and 104°F (0° and 40°C).
- Electrical Boxes: Devices mount in standard electrical boxes. For easy installation, Crestron recommends using 3-1/2" deep electrical boxes. Several devices can be installed in one electrical box (multigang). This requires derating of the dimming device. For a smooth appearance, one-piece multigang faceplates (not supplied) can be installed.
- Switches: Mechanical 3- or 4-way switches will not work with CLW-DIMEX-E dimmers.
- Spacing: If mounting one device above another, leave at least 4-1/2" vertical space between them.

- Low-Voltage Applications: Use with core and coil (magnetic) low-voltage transformers only. Do not use any solid-state electronic low voltage transformers. Operation of a low-voltage circuit with all lamps inoperative or removed may result in current flow in excess of normal levels. To avoid transformer overheating and premature transformer failure, please observe the following points:
  - > Do not operate low-voltage circuits without operative lamps in place.
  - > Replace burned-out lamps as quickly as possible.
  - > Use transformers that incorporate thermal-protection or fuse-ransformer primary windings to prevent transformer failure due to overcurrent.

**Installation**

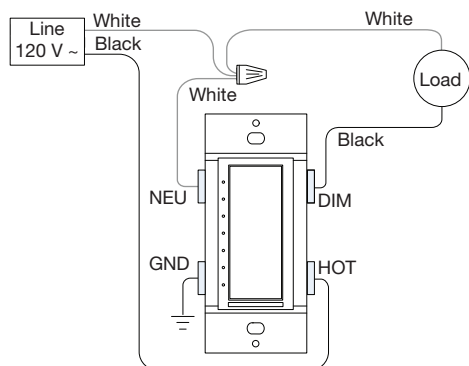
**WARNING:** Turn off the power at the circuit breaker. Installing with the power on can result in serious personal injury and damage to the device.

The following describes the installation of a CLW-DIMEX-E dimmer:

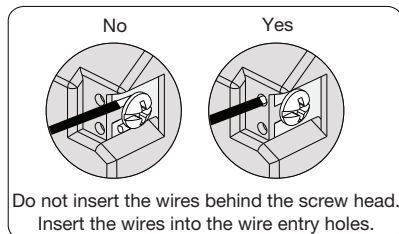
1. Turn the power off at the circuit breaker.
2. Wire the device as shown in the diagram.

**NOTE:** The dimmer can operate with or without a connection to a neutral wire.

**NOTE:** Switch mode requires connection to a neutral wire.



Make Connections to the CLW-DIMEX-E.



Do not insert the wires behind the screw head. Insert the wires into the wire entry holes.

**NOTE:** For optimal performance, the neutral should be connected. If the neutral is not connected, the minimum required load is 50 W.

3. Push all power wires back into the electrical box, and fasten the device to the electrical box with the provided screws.

**NOTE:** Use care when placing the device in the electrical box. Pinched wires may cause a short circuit.

4. Attach the decorative faceplate.
5. Ensure that all buttons, including the program button and air-gap switch, actuate without sticking.

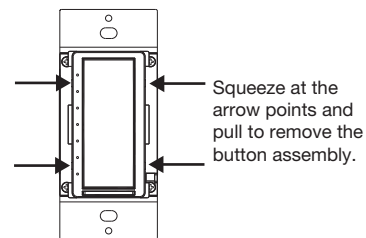
**NOTE:** To operate the device in Switch mode, follow the instructions in "Switching Between Dim Mode and Switch Mode" before restoring power.

6. Restore the power at the circuit breaker.

**Changing the Button Assemblies**

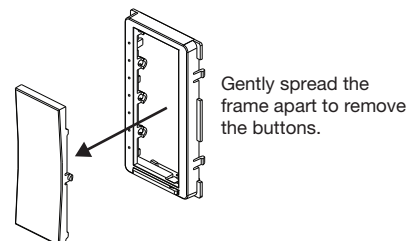
The button assembly can be removed and replaced with other button assemblies. To change the button assembly:

1. Remove the button assembly by squeezing the sides of the bezel near the bezel snaps.

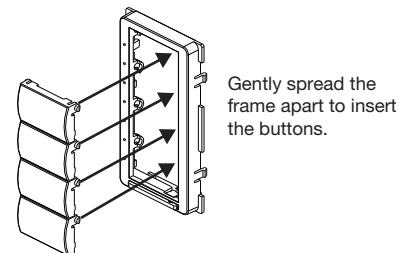


**NOTE:** When the button assembly is removed, power disconnects from the internal electronics and the connected loads. Power is still supplied to the HOT terminal.

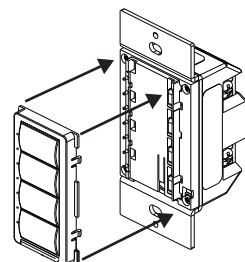
2. Remove the button from the front of the button assembly.



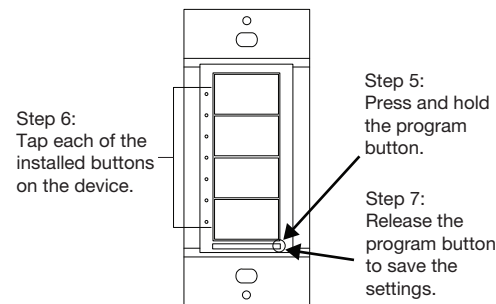
3. Insert the new buttons through the front of the bezel and snap them into place. Ensure that the LED strip is on the left side.



4. Attach the button assembly to the device. Ensure that the LED strip is on the left side.



5. Once power has been restored, press and hold the program button. After 5 seconds, the LEDs associated with the old button layout begin to flash. Continue to hold the button and proceed to step 6. Steps 5 through 7 are illustrated below.



6. While holding the program button, press each of the installed buttons in the new layout. The LED next to the pressed button lights.

**NOTE:** If the rocker switch is installed, press the top and bottom of the rocker.

7. After all of the buttons have been pressed, release the program button to save the settings.

**NOTE:** Changing the button configuration alters the device's behavior. Refer to "Default Button Functions" for details.

**Multigang Installation**

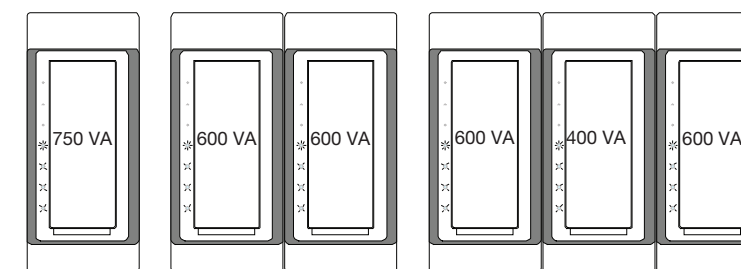
In multigang installations, several devices are grouped horizontally in one electrical box. For a smooth appearance, a one-piece multigang faceplate (not supplied) can be installed.

**NOTE:** When installing into a multigang box, do not fully tighten the devices to the box until the faceplate has been aligned.

The load capacity for each device in the electrical box must be derated. Refer to the diagrams for derating information.

**NOTE:** VA ratings are for input power to the transformer. If the input power requirements of the transformer are unknown, use the bulb's wattage rating to determine the proper rating.

Derating Information for CLW-DIMEX-E Dimmers



**Switching Between Dim Mode and Switch Mode**

The CLW-DIMEX-E is capable of operating in Switch mode. Toggling between Dim and Switch mode is useful if the load is not dimmable or if it is preferred not to have the load dimmed. To toggle between Dim and Switch modes:

1. Open the air-gap switch as described in "Disconnecting the Power."
2. While the power is off, press and hold the top and bottom button caps (regardless of button configuration) simultaneously while closing the air-gap switch.
3. After 5 seconds, the top LED will blink three times to indicate Dim mode or five times to indicate Switch mode.
4. To commit the new setting, release the buttons within the next 5 seconds.

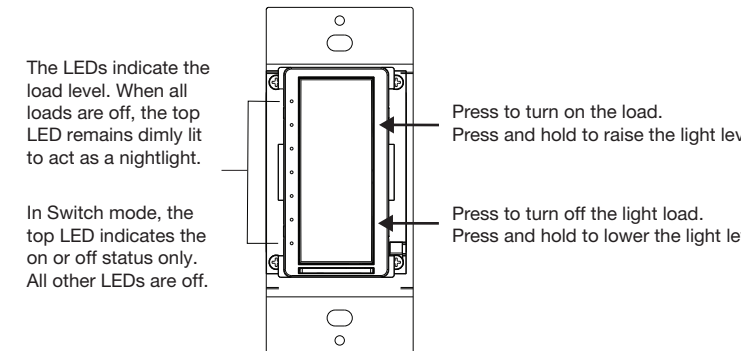
**Operation**

**NOTE:** Before using the CLW-DIMEX-E, ensure that the device is using the latest firmware. Check for the latest firmware for the CLW-DIMEX-E at [www.crestron.com/firmware](http://www.crestron.com/firmware). Firmware is loaded onto the device using Crestron Toolbox™.

**NOTE:** The device may be warm to the touch during operation. This is normal.

**Basic Operation**

The operations described in this guide assume that the CLW-DIMEX-E is operating in Local mode (without the use of a control system). The device can also operate in Remote mode, in which button behavior is dictated entirely by the control system program. The CLW-DIMEX-E is shipped with a rocker switch already installed. In this configuration, the unit functions as described below.



The LEDs indicate the load level. When all loads are off, the top LED remains dimly lit to act as a nightlight.

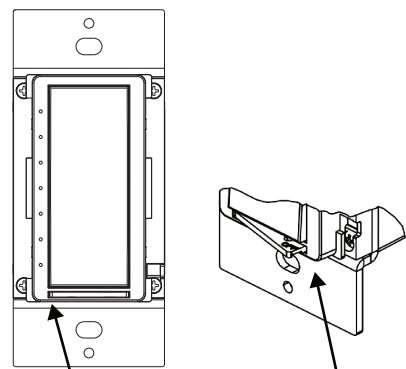
In Switch mode, the top LED indicates the on or off status only. All other LEDs are off.

Press to turn on the load. Press and hold to raise the light level.

Press to turn off the light load. Press and hold to lower the light level.

## Disconnecting the Power

Disconnect the power to the dimmer and load by pushing on the air-gap switch.



Push here to open the air-gap switch.

The air-gap switch is in the open position.

**NOTE:** If the dimmer remains powered after the air-gap switch is opened, the HOT and DIM terminals have been connected in reverse. Turn off the power at the circuit breaker or fuse and adjust the connections.

**NOTE:** When the button assembly is removed, power disconnects from the internal electronics and the connected loads. The power is still supplied to the HOT terminal. For instructions on removing the button assembly, refer to "Changing the Button Assemblies."

## Setting the Preset Levels

The CLW-DIMEX-E can recall and store up to three presets depending on the installed button configuration.

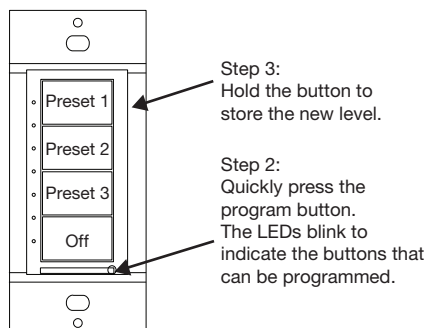
To set a preset level:

1. Adjust the light level to the desired level.
2. Enter the Programming mode by quickly pressing the program button. The LEDs blink beside the buttons capable of storing a preset.

**NOTE:** Programming mode is disabled when the load is off.

3. Press and hold the desired preset button for approximately 2 seconds.
4. Release the button to store the new level.

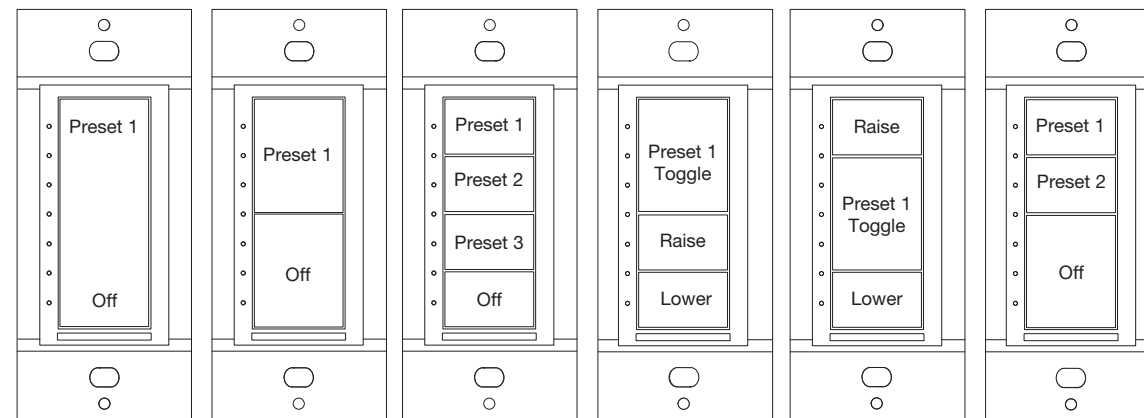
If a button is not pressed, the device exits Programming mode after approximately 5 seconds.



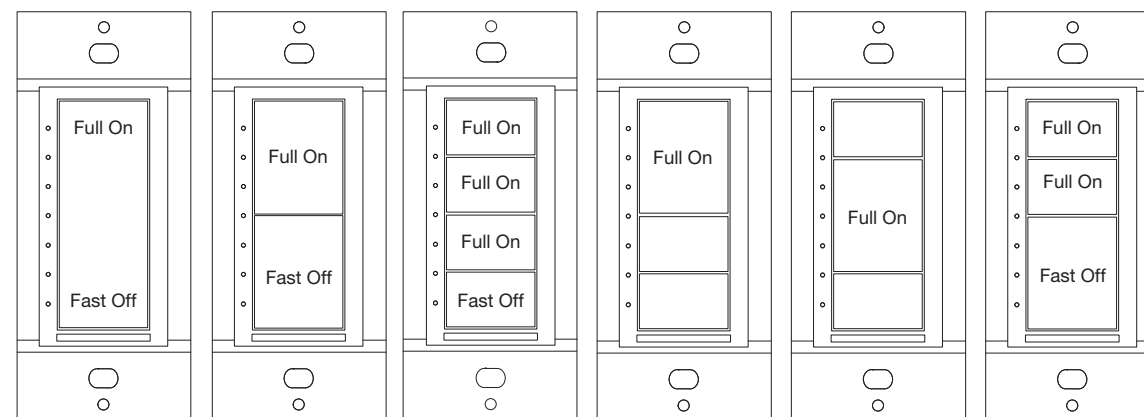
## Default Button Functions

The figures below illustrate the default functions available for each physical button configuration and tap or hold actuation sequence.

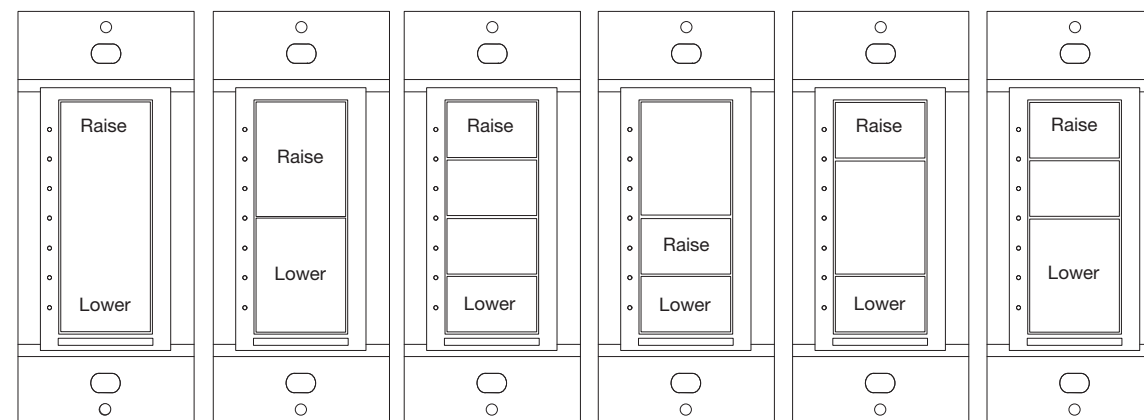
### Single Button Press



### Double Button Press (Press twice within 1/2 a second.)



### Single Button Press and Hold (Hold for more than 1/2 a second.)



## Wireless Communications

The device connects to the Crestron network via the infiNET EX communications protocol. Use the procedures outlined below to join or leave an infiNET EX network and to verify communications between the device and the control system.

### Joining an infiNET EX Network

Before a device can be used in a lighting system, it must first join an infiNET EX network. To join an infiNET EX network, the device must be acquired by an infiNET EX gateway.

**NOTE:** A device can be acquired by only one gateway.

1. Put the infiNET EX gateway into Acquire mode from the unit itself or from Crestron Toolbox. Refer to the gateway's manual at [www.crestron.com/manuals](http://www.crestron.com/manuals) for details.

**NOTE:** In an environment where multiple gateways are installed, only one gateway should be in Acquire mode at any time.

2. Put the device into Acquire mode:
  - a. Tap the top button three times, and then press and hold it down (tap-tap-tap-press+hold) until all of the LEDs on the device blink once (this can take up to 10 seconds).
  - b. Release the button to start the acquire process. The top LED blinks slowly to show that the device is actively scanning the infiNET EX network.
    - The top LED turns on for 5 seconds to show that the device has been successfully acquired by the infiNET EX network.
    - The top LED blinks fast to indicate that the device was not successfully acquired by the infiNET EX network. Tap the top button to acknowledge the failure. Ensure the gateway is in Acquire mode and within range before attempting the acquire process again.
3. Once all devices have been acquired, take the gateway out of Acquire mode. Refer to the gateway's manual for details.

### Leaving an infiNET EX Network

To leave an infiNET EX network, put the device into Acquire mode, as described in "Joining an infiNET EX Network" above, when no gateway is in Acquire mode.

### Verifying Communications Status

To check the communications status of the device, tap the top button three times, and then press and hold it down (tap-tap-tap-press+hold) for up to 2 seconds. The top LED blinks to indicate the communications status. Refer to the following table for details.

LED	COMMUNICATIONS STATUS
Turns on for 5 seconds	The device is communicating with the control system.
Blinks three times	The device is communicating with the gateway, but the gateway is not communicating with the control system.
Blinks twice	The device was previously joined to the network but is not communicating with the gateway.
Blinks once	The device is not joined to the network.

## Troubleshooting

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

### CLW-DIMSWEX-E Troubleshooting

TROUBLE	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
The dimmer does not function.	The dimmer is not receiving line power.	Verify that the dimmer is properly connected to the power line, and verify that the circuit breaker is closed.
	The load is not operational.	Verify that the load works and the air-gap switch is closed.
	The dimmer is in Remote mode.	Check the program to determine or change the operating mode.
The dimmer does not dim.	No neutral connection exists, and all attached lamps are burned out.	Connect the neutral and replace the burned-out lamps.
	The dimmer is in Switch mode.	Remove the power from the device. Reapply the power and press and hold the top and bottom buttons for 5 seconds. If the LED blinks 3 times, the device is in Dim mode; if it blinks 5 times, it is in Switch mode.
The dimmer remains powered and air-gap switch is opened.	The HOT and DIM terminals are wired in reverse.	Turn off the power at the circuit breaker or fuse and adjust the connections.
The dimmer cycles off occasionally when near full brightness.	The load connected is less than 25 W.	Increase the load on the circuit to at least 25 W. A neutral wire is required for loads less than 50 W.
	The load connected is less than 50 W.	Connect the neutral to the dimmer.

This product is Listed to applicable UL Standards and requirements by Underwriters Laboratories Inc.



### Federal Communications Commission (FCC) Compliance Statement

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

**CAUTION:** Changes or modifications not expressly approved by the manufacturer responsible for compliance could void the user's authority to operate the equipment.

**NOTE:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

### Industry Canada (IC) Compliance Statement

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference and (2) this device must accept any interference, including interference that may cause undesired operation of the device. Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

### Industrie Canada (IC) Déclaration de conformité

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement. Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante.

The product warranty can be found at [www.crestron.com/warranty](http://www.crestron.com/warranty).

The specific patents that cover Crestron products are listed at [patents.crestron.com](http://patents.crestron.com).

Certain Crestron products contain open source software. For specific information, please visit [www.crestron.com/opensource](http://www.crestron.com/opensource).

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