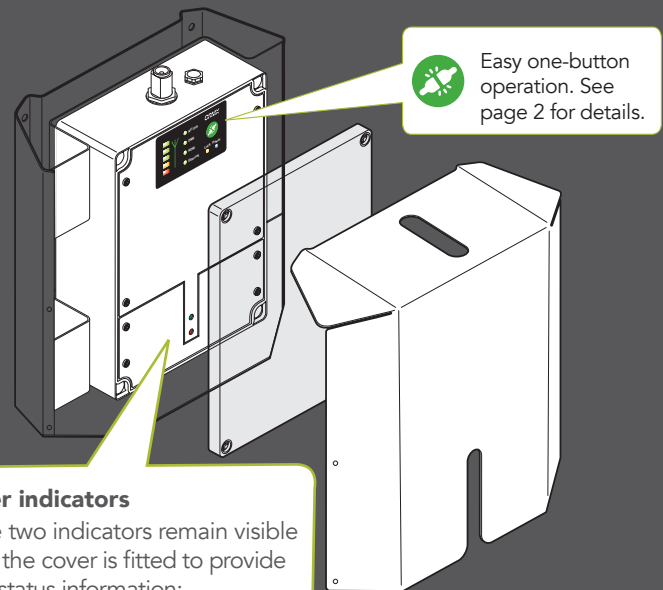


## INTRODUCTION

Thank you for buying a LumenRadio CRMX Outdoor product. This guide is intended to give you a quick start to experience the benefits of LumenRadio's CRMX system.

The CRMX products you just purchased are designed to give you the highest reliability on the market and are fully compatible with other CRMX products in entertainment lighting (CRMX Nova, CRMX Outdoor, CRMX Slim, CRMX OEM). Through this you are able to expand your wireless system with units from our other product lines as well as with those of our partners. For the latest updates please visit the LumenRadio website [www.lumenradio.com](http://www.lumenradio.com).

We hope that you will enjoy our products and that they will bring benefits and positive experiences.



### Lower indicators

These two indicators remain visible when the cover is fitted to provide basic status information:

**Green indicator:** On when linked and OK.

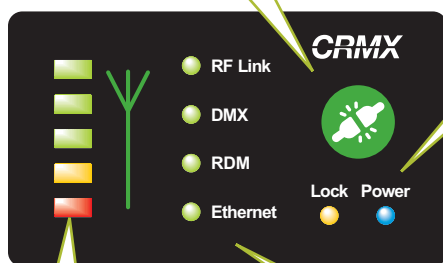
**Red indicator:** On if link lost or unlinked.

## CRMX OUTDOOR CONTROL PANEL

See the operation section for details on how to link and unlink CRMX Outdoor units.

**Link button** - press to link with, or unlink from, another unit.

**Power** - on when power applied.  
**Lock** - not used on outdoor models.



### Signal quality indicators

**Transmitter:**  
Not used/All off.

**Receiver/Repeater:**  
Top green = 80% signal quality.  
Mid green = 60% signal quality.  
Bottom green = 40% signal quality.  
Amber = 20% signal quality.  
Red = Link problem.

### Status indicators

**RF Link on Transmitter:**

On = Normal operation.  
Fast flashing (~3Hz) = Linking.  
Slow flashing (~1Hz) = Unlinking.

**RF Link on Receiver/Repeater:**

On = Linked with RF signal.  
Off = Unlinked.  
Fast flashing (~3Hz) = Linking or linked, but with lost RF signal.

**DMX:** On when DMX is present.

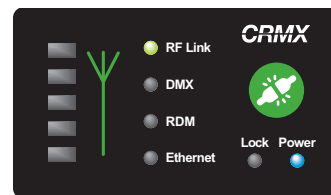
**RDM:** Flashes to RDM activity.

**Ethernet:** Flashes on Ethernet activity.

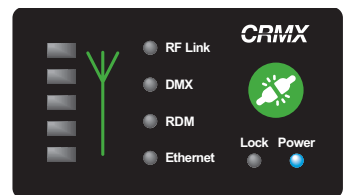
## CRMX OUTDOOR OPERATION INDICATIONS

When operating, the CRMX Outdoor units show different indications depending on its mode and link status:

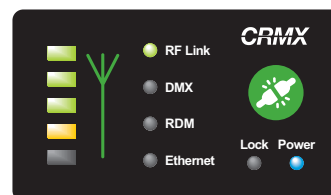
Transmitter  
(regardless of link status)



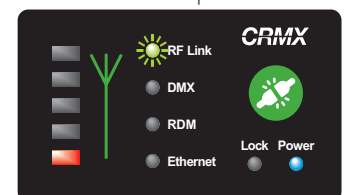
Receiver or repeater when not linked with a transmitter.



Receiver or repeater showing a healthy link with a transmitter.




Receiver or repeater warning about a link problem.





## LINKING

CRMX Outdoor units can link with any other CRMX units as well as legacy W-DMX™ (G2/G3/G4) transmitters (2.4 GHz only).

### TO LINK

1. Ensure the antenna is connected.
2. Power on the transmitter and receiver(s).
3. Ensure that the RF Link indicators on all receivers are off to indicate that the receiver(s) are ready to be linked. (If necessary, follow the unlink procedure.)
4. On the transmitter, press and release the  button.
5. The transmitter will search for any unlinked receivers. Its RF Link indicator will flash for 10 seconds and normal operation will resume.
6. The RF Link indicator will change to a steady on-state on successfully linked receivers.



### TO UNLINK




- **Unlink one:** On the receiver, press and hold its  button for more than 3 seconds to unlink it from a transmitter. The RF Link indicator will extinguish.
- **Unlink all:** On the transmitter, press and hold its  button for more than 3 seconds to unlink all of its receivers.




## MODE CHANGING (CRMX OUTDOOR FLEX ONLY)

Each CRMX Outdoor Flex unit offers the ultimate flexibility to operate as either as a transmitter, a receiver or a repeater. The mode can be changed in either of two ways:

1. Using the SuperNova software. Please refer to the SuperNova website at [www.lumenradio.com/supernova](http://www.lumenradio.com/supernova) for more information.
2. Using a special button press sequence on the CRMX Outdoor Flex unit.

1. Press and release the  button five times in succession. Then immediately press and hold the  button for three seconds until the Lock and Power indicators begin alternately flashing. One of the signal quality indicators will be on:

-  Green indicator on: Repeater mode selected
-  Amber indicator on: Receiver mode selected
-  Red indicator on: Transmitter mode selected

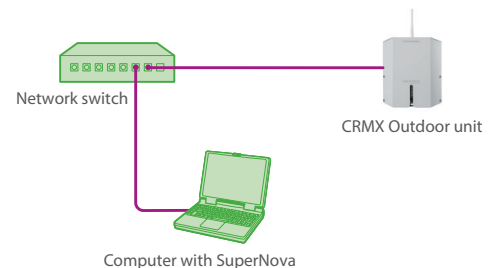
2. You can now change the Flex mode as required. Note that the unit will automatically revert to normal operation fifteen seconds after you last pressed the button.
  - To step between Flex modes: Press and release the  button to move to the next mode.
  - To save changes: Press and hold the  button for three seconds. The unit will revert to normal operation using the newly selected mode.
  - To exit without saving changes: The unit will revert to normal operation if you do not press the  button within fifteen seconds.

## SUPERNOVA

For configuration, management and monitoring of all CRMX units as well as RDM compatible devices, LumenRadio provides the software SuperNova free of charge. SuperNova is needed in order to configure network and port settings, manage frequency usage, etc.

SuperNova connects to any number of CRMX transmitters through Ethernet. For best performance, LumenRadio recommends using a network switch and straight through Ethernet cables. All CRMX units equipped with Ethernet are delivered with the default network setting on the right:

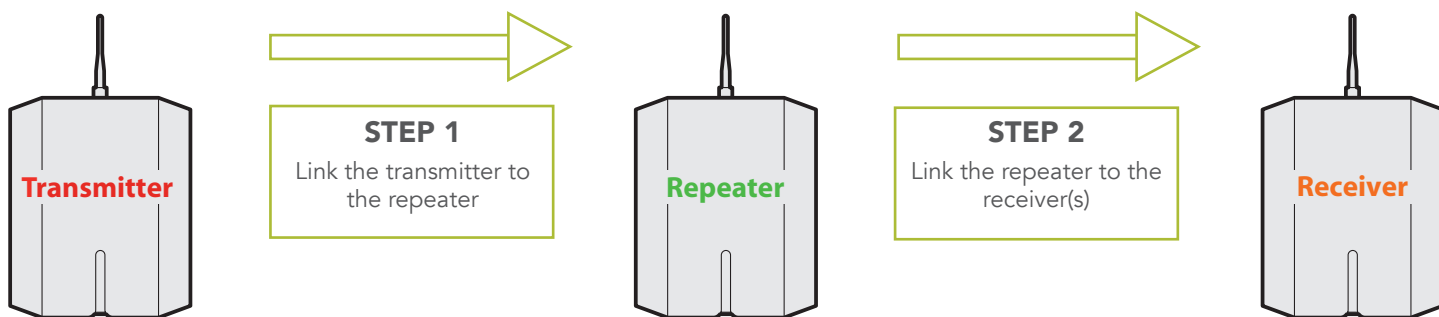
SuperNova runs on any Windows, Mac OS X or GNU/Linux computer with a Java runtime environment of at least version 1.6. The latest version of SuperNova as well as detailed user guides can be accessed at [www.lumenradio.com/supernova](http://www.lumenradio.com/supernova).



### UNIT FACTORY DEFAULTS

IP Address: 192.168.0.162  
Netmask: 255.255.255.0


## USING CRMX OUTDOOR FLEX AS A REPEATER



### STEP 1 - TO LINK THE TRANSMITTER TO THE REPEATER



Follow linking procedure on page 2.

### STEP 2 - TO LINK THE REPEATER AND RECEIVER(S)




- 1 Power on the receiver(s).
- 2 On the repeater, press and release its  button. The repeater will search (for a period of ten seconds) for any unlinked receivers. Its RF Link indicator will flash.

At the end of the search period, all located receivers will be linked to the repeater, which is in turn linked to the transmitter. The RF Link indicators will be on and the current signal quality will be shown by the indicators on the left of the display panel.

### TO UNLINK RECEIVER(S) FROM A REPEATER

- **Unlink one:** On the receiver, press and hold its  button for more than 3 seconds to unlink it from a repeater. The RF Link indicator will extinguish.
- **Unlink all:** On the repeater, press and hold its  button for more than 3 seconds to unlink all of its receivers.

### TO UNLINK REPEATER FROM A TRANSMITTER

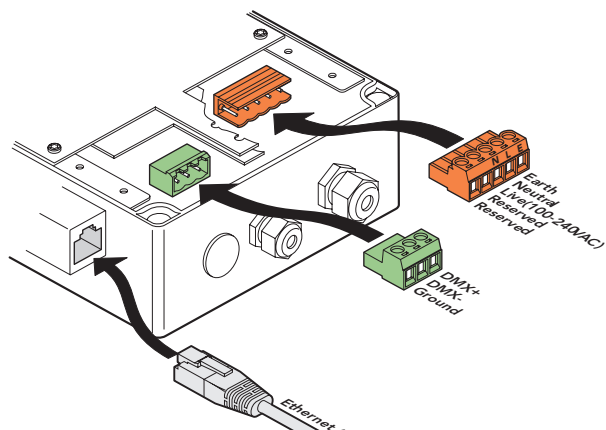
- **Unlink one:** On the repeater, press and hold its  button for more than 3 seconds to unlink all of its receivers. The RF Link indicator will flash. Within 5 seconds of the RF Link indicator has stopped flashing, press and hold the  button for 3 seconds to unlink the repeater from the transmitter.
- **Unlink all:** On the transmitter, press and hold its  button for more than 3 seconds to unlink all of its repeaters and receivers. Note that unlinking a repeater from a transmitter will also unlink any receivers that are linked to the repeater.

### PLEASE NOTE THE FOLLOWING GENERAL POINTS:

- It is not recommended to use more than one repeater per universe. For more information, please contact LumenRadio.
- The transmitter and repeater must always be linked first before any receivers are added to the repeater.
- Switch off all receivers that are in range until the transmitter and repeater have been successfully linked.
- On any repeater or receiver that is about to be linked to a transmitter, ensure that the RF Link indicator is off. This indicates that the unit is not already linked to another transmitter. If necessary, follow the unlink procedure.

## POWER AND SIGNAL CONNECTORS

Remove the outer and inner covers of the unit and then remove the lower cover plate to gain access to the connectors. Power and data connections are made via the two (or three, if needed) cable glands in the underside of the main enclosure.



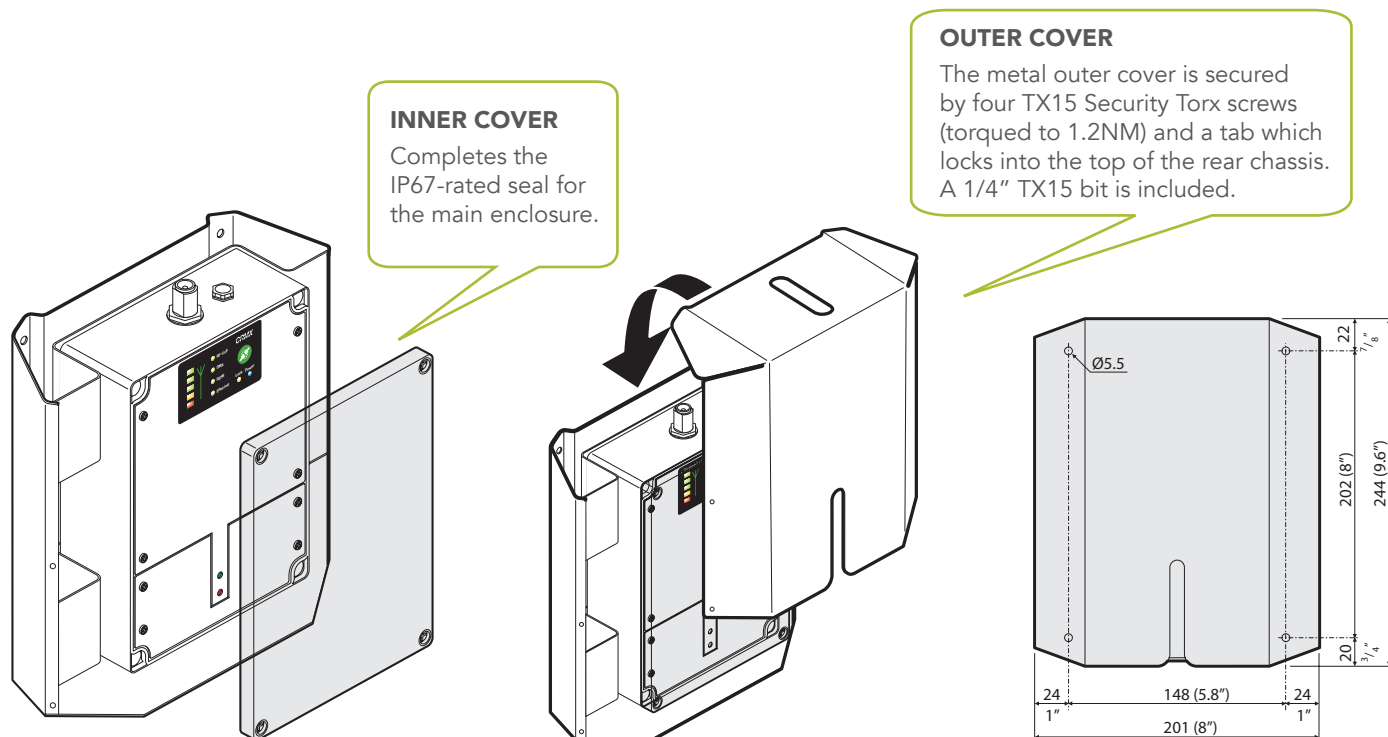
#### NOTE

Flex models also support Power over Ethernet (PoE) as an alternative to a mains power input (5W load).

#### WARNING

Ensure that the power supply is switched off before the casing is opened. A readily accessible UL Listed Circuit Breaker rated 20A shall be incorporated in the building installation wiring.

## HOUSING



**INNER COVER**  
Completes the IP67-rated seal for the main enclosure.

**OUTER COVER**  
The metal outer cover is secured by four TX15 Security Torx screws (torqued to 1.2NM) and a tab which locks into the top of the rear chassis. A 1/4" TX15 bit is included.

## SPECIFICATIONS

Power requirements:	100-240VAC/8 Watts*
Operation temp. range:	-20°C to +40°C (-4°F to 122°F) (ambient)
Environmental:	IP67 with tamper-proof locking hardware
Dimensions (w x h x d):	201 x 244 x 78mm (8" x 9.25" x 3.1") without antenna and cable glands
Weight:	2kg (4.4lb)
Frequency range:	2.402 to 2.480 GHz
Output power levels:	300mW (25dBm) (Permitted only in North America), 100mW (20dBm), 35mW (15dBm), 10mW (10dBm)
PoE operation:	Equipment to be used in Network Environment 0 per IEC 62101. The PoE port is to be connected only to PoE networks without routing to the outside plant.
Cable glands:	M20 7-13mm, 0.27 - 0.51" Diameter M16 4.5-10mm, 0.18 - 0.39" Diameter

## MOUNTING

Secure the rear chassis in the vertical orientation shown above to a solid surface using the four mounting holes which are accessible once the outer cover is removed. To ensure moisture protection, ensure that the inner enclosure is correctly sealed, the antenna is facing upwards and the cables are trailing downwards.

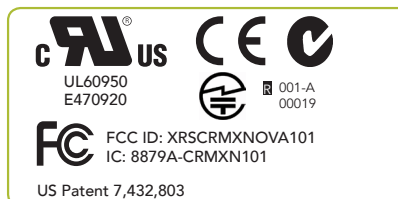
## FCC statement

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.

## EU Declaration of Conformity

These products comply with the RED (Radio Equipment Directive) of the European Union (2014/53/EC). This equipment meets the following conformance standards:  
ETSI EN 301 489-1 V2.1.1; ETSI EN 301 489-3 V2.1.1;  
ETSI EN 300 328 V2.2.1; EN 60950



Release 6.0 December 2018

\* UL approved for 115V +/- 10% operation

CRMXTM, CRMX NovaTM, CRMX OutdoorTM, CRMX SlimTM, CRMX OEMTM and CRMX SuperNovaTM are trademarks of LumenRadio AB. W-DMXTM is a trademark of Wireless Solution Sweden AB. CRMX is patented by LumenRadio, CE, FCC, ICES, SRRC, ARIB STD-T66 approved and UL recognized.