

Wireless Dimming | Wireless DMX | Wireless Motion

**RC4**  
Since 1991  
*Wireless*

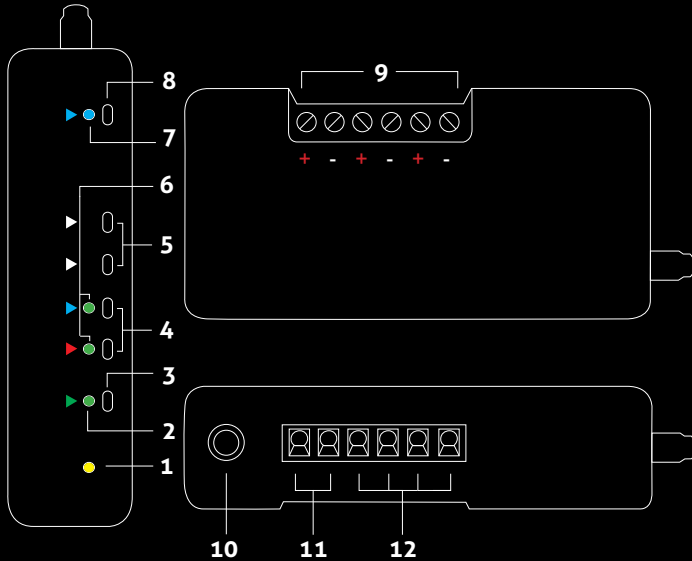
**LumenDimM2**

Quick Start Guide

Rev. 1.0

## RC4 LumenDimM2

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1. DMX Data Indicator
2. Function and COP\* Indicator
3. Function Button
4. SetA - SetB Buttons
5. Additional Option Buttons for Advanced Features
6. DimA - DimB Indicators
7. RF Connect Indicator for Transmitter Linking
8. RF Connect (Link) Button
9. Screwdriver Access for Connection Terminals
10. DMX In/Out Data Port
11. Power Connection Terminals
12. Load Connection Terminals (DimA +/- and DimB +/-)

\* COP means "Computer Operating Properly." This indicator always shows a blink pattern, proving that internal firmware is running. Different patterns indicate various modes and advanced settings.

## LumenDimM2 Quick Start Guide

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This guide will get you started using your RC4 LumenDimM2. Most LumenDimM2 users will find all the information they need right here.

Your LumenDimM2 also has a wide variety of expanded features for advanced users. You can find out more about all of them in the RC4 Knowledge Base at <http://rc4.info>.

## Registering Your Product

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Registering your LumenDimM2 is quick and easy. After registration, you'll be notified of new firmware updates, and warranty claims can be resolved more quickly.

Please complete your registration at:  
[www.rc4wireless.com/support/register/](http://www.rc4wireless.com/support/register/)

## LumenDimM2 System Components

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To use your LumenDimM2 wireless dimmer you will need:

- A DMX lighting console.
- A LumenRadio CRMX-compatible wireless transmitter like the RC4 LumenDimIO or the LumenRadio TX1.
- A battery or DC power supply for the dimmer and loads you will be operating with it.

## Screwdriver Size Matters

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**The ideal screwdriver for the screw terminals on your LumenDimM2 has a blade that is 2.5mm (0.1") wide.**

Forcing a screwdriver that is too big will enlarge the hole, so the terminal screws will fall out if you loosen them too much.

A screwdriver that is too small will not ensure a firm grip on the wires and may lead to the screw head being stripped.

## Performing a Factory Reset

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If someone else has used your LumenDimM2, or you just want to get back to a known configuration, performing a factory reset is easy:

Power on the device. The green COP indicator will be blinking.

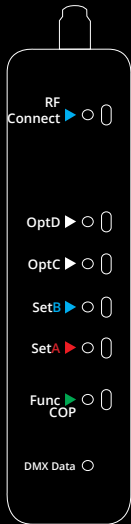
Press and hold Func, briefly tap (press and release) the SetA button, then release Func. The first four indicators will blink to confirm that factory settings are restored.

NOTE: This does NOT affect transmitter linking.

### PRO TIPS:

Bending a single paper clip into a U shape will enable you to easily reach and press both buttons together.

If you are not sure what mode or setting you may have selected, you can always get back to a known starting point by returning to factory default.



## Unlink the LumenDimM2

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If the blue RF Connect LED on the LumenDimM2 blinks continuously, it is looking for a transmitter that it was previously linked with.

To unlink it, press and hold RF Connect for several seconds until the blue LED goes off and stays off.

If the RF Connect LED remains on, or is blinking, repeat the process until it stays off.

When the RF Connect LED is off, the LumenDimM2 is ready to be linked to your transmitter.

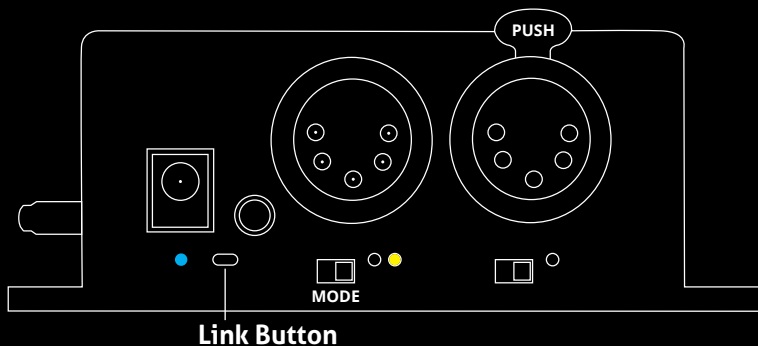
NOTE: Link status is not affected by performing a Factory Reset.

## Linking Transmitter and Receiver

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In this example, we're using an RC4 LumenDimIO transmitter. Have both devices powered on. Put the LumenDimIO Mode switch in the transmit position, then tap the Link button. The Link button is recessed under the small slot to the right of the blue RF Connect LED. Tap it with a small screwdriver or the end of a bent paperclip.

The blue RF Connect LEDs on both the LumenDimIO and the LumenDimM2 will flash for several seconds and then remain steady, indicating that they are linked.



## Test the Wireless Link with Default Address Settings

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When you receive your new LumenDimM2, or after restoring default settings, it will be set to DMX address 1 for dimmer A and address 2 for dimmer B.

**Before changing any dimmer settings, play with the DMX levels for these addresses and see your wireless dimmer outputs work.**

The DimA and DimB LED indicators on the side of the LumenDimM2 are directly connected to dimmer outputs: they show you exactly what the dimmers are doing.

## Setting the DMX Address

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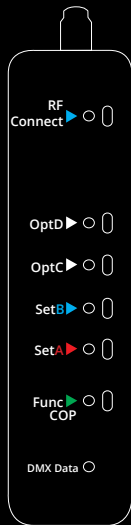
Assigning DMX channels and dimmer curves is easy using RC4 OneTouch™:

On your DMX lighting console, bring up one dimmer (DMX output channel) that will be your LumenDimM2 starting address. For example, if you want your first LumenDimM2 dimmer on DMX channel 60 with a curve that is optimized for LEDs, bring up 60 @ 30% at the console. Tap SetA and DimA indicator will come on @ 30%.

The level of 30% selects one of several different curves. This one is optimized for LEDs. Other curves are explained on Page 13.

## Subsequent Channel Assignment

When you set DimA, the other dimmer is automatically set sequentially. For example, if you have set DMX channel 60 to DimA, DimB is now assigned to channel 61.



## Non-Sequential Channel Assignment

Dimmers don't have to be sequential.

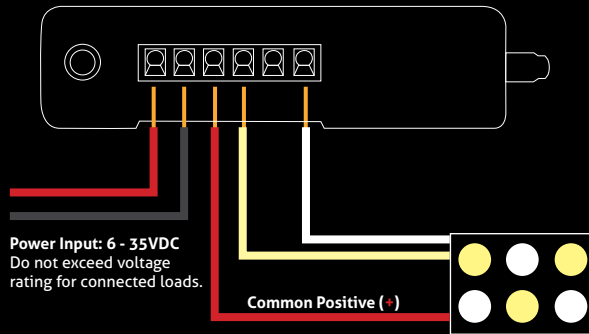
You can use RC4 OneTouch™ with the Set buttons for each individual dimmer. For example, if you want DimB to be set to DMX address 11, bring up 11 @ 30% (for the LED curve) at the board and press the SetB button.

**Remember:** SetA assigns the 2 dimmers sequentially. The other Set button works individually. Always use SetA first.

## Connecting Your Lamps, LEDs, Motors and More\*

To really use your LumenDimM2, you must connect a lamp, LED, motor, or other load to each dimmer. When you're connecting anything to your LumenDimM2, be sure that the LumenDimM2 is powered down. Connect everything first, then turn on power.

\* The LumenDimM2 can control a variety of devices including solenoids, relays, servo motors, and much more.



## Dimming and Controlling Multicolor LEDs

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The illustration on the previous page shows a 2-color LED device. There are 3 wires: one for the 12V common positive (+), and two wires for the unique negative leads. The common positive color is shown as red, but may vary.

Dimming happens on the negative (-) terminals. All of the (+) terminals are connected together inside the LumenDimM2. The common positive should be connected to the (+) under DimA. The other wires connect to the negative (-) terminals under DimA and DimB.

## Cross-Fade Mode for Warm/Cool White Control

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One popular 2-color device is a warm-white/cool-white LED panel. Cross-fading between warm and cool produces a range of color temperatures, allowing you to find the exact rendering of white that you need. This is particularly useful for motion-picture applications.

The LumenDimM2 includes a color Cross-Fade mode (sometimes called X-Fade). In Cross-Fade mode, one DMX channel controls color temperature, and another DMX channel controls total brightness. This ensures that the selected color temperature does not change when the level is adjusted.

Cross-Fade and many other features can be explored further at <http://rc4.info/> or by asking us for help at [support@rc4wireless.com](mailto:support@rc4wireless.com).

## Choosing Other Dimmer Curves or Profiles

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The LumenDimM2 default is the ISL dimmer curve, which is best for LEDs. This is also the curve that is selected with RC4 OneTouch™ when the DMX level is at 30%.

There are dimmer curves for different kinds of lamps, motors, and more. Detailed information can be found online by searching dimmer curves at <http://rc4.info/>.

The most common curves are selected using these DMX channel levels and RC4 OneTouch™ with the Set buttons as outlined on page 9:

<b>Non-Dim</b>	<b>100%</b> (80% or higher) Use for relays, solenoids, air valves, etc.
<b>Linear</b>	<b>70%</b> (60 - 79%) For incandescent, halogen, tungsten lamps.
<b>ISL Fast</b>	<b>50%</b> (40 - 59%) For LEDs when fast blinks and flashes are required. RC4 Digital Persistence™ is disabled.
<b>ISL Slow</b>	<b>30%</b> (20 - 39%) Best for typical LED applications, with RC4 Digital Persistence™ For super smooth 19-bit dimming. (default setting)

## Advanced Features

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The LumenDimM2 is a multifaceted device for users of all experience levels. The features below can be explored further at <http://rc4.info/> or by asking us for help at [support@rc4wireless.com](mailto:support@rc4wireless.com):

- Using a small adaptor cable, the LumenDimM2 can be used as a wireless data receiver to deliver DMX to other devices. It can also be used as a wired DMX dimmer: the miniplug DMX port becomes an input when the device is not linked to a transmitter.
- When using the LumenDimM2 for cinema (motion picture capture), PWM frequencies can be adjusted for the smoothest dimming without banding or other artifacts.
- The LumenDimM2 has a wide variety of dimmer curves that can ring telephones, position servo motors, and more.
- Using the RC4 Flkr Effects Engine™, you can create many unique effects including candle flicker, analog tv screen noise, welding spark, and much more.

## Caring for Your LumenDimM2

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- **The LumenDimM2 should not be used with AC power or with any voltage higher than 35VDC.** Doing so will severely damage the device and is extremely dangerous for the operator.
- Do not exceed the maximum total power handling of the LumenDimM2, which is 16A. That is 200W at 12V, 400W at 24V, shared across the two dimmer channels.
- Always use a fuse or circuit breaker at the source of power and always use an appropriate wire size for the fuse rating. For example, if using a 15A fuse, use wire that can safely carry 15A.
- The LumenDimM2 should be kept away from excessive heat, cold, dust and moisture.
- Do not immerse in water or other fluids.
- Dimmers generate heat when operating. Allow space for air to move around the unit for cooling, especially when using high-current loads.

**The LumenDimM2 is a high-power, high-current device. Failing to observe appropriate safety precautions can result in fire or other risk. RC4 Wireless cannot be held responsible or liable in such cases. Operate the LumenDimM2 at your own risk.**



## Get in Touch

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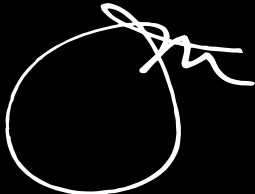
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**Website:** [www.rc4wireless.com](http://www.rc4wireless.com)

**Knowledge Base:** <http://rc4.info>

We're here to help you at any time.



**James David Smith**

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RC4 Wireless