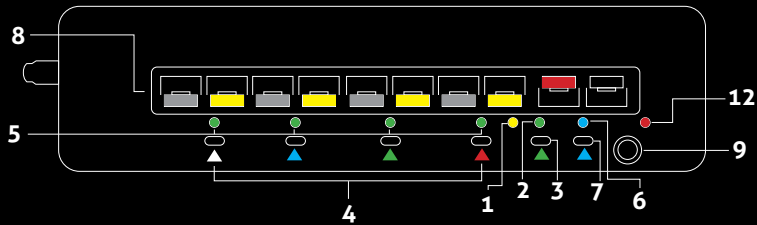
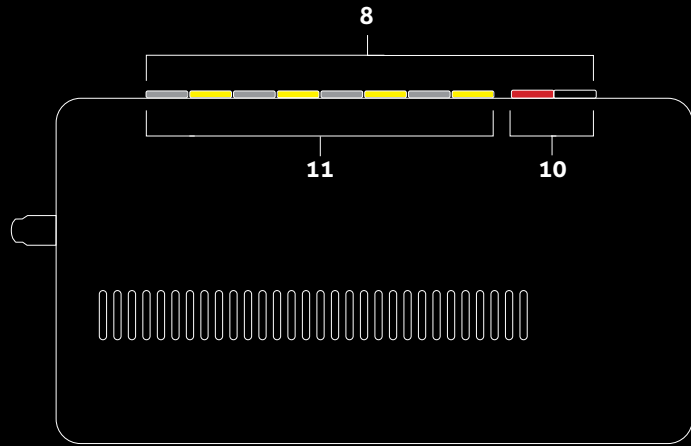


Wireless Dimming | Wireless DMX | Wireless Motion

**RC4**  
Since 1991  
*Wireless*

**LumenDim4**  
Quick Start Guide

Rev. 1.0



## RC4 LumenDim4

1. DMX Data Indicator
2. Function and COP\* Indicator
3. Function Button
4. SetA - SetD Buttons
5. DimA - DimD Indicators
6. RF Connect Indicator for Transmitter Linking
7. RF Connect (Link) Button
8. Anderson PowerPole Connections for Power and Outputs
9. DMX In/Out Data Port
10. Power Input Connections (45A PowerPole)
11. Load Connections (DimA +/- thru DimD +/-, 15A PowerPole)
12. Power Indicator

\* 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.

## LumenDim4 Quick Start Guide

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This guide will get you started using your RC4 LumenDim4. Most LumenDim4 users will find all the information they need right here.

Your LumenDim4 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 LumenDim4 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/)

## LumenDim4 System Components

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To use your LumenDim4 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.
- Anderson PowerPole shells and pins (one set has been provided with your LumenDim4), and a crimping tool for those pins.

## Anderson PowerPole Connectors

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PowerPole shells are available in a range of colors. Pins are available with 15A, 30A, and 45A ratings. If you are running your LumenDim4 at close to the maximum rated power handling, you **MUST** use 45A pins at the power input. Do not exceed 45A in total for the 4 combined dimmer loads.

Each dimmer output can deliver up to 12A of dimming power. Although 15A pins are more than adequate, you might want to use a larger pin size to best fit the gauge of wire you are using.

The legend on the back of your LumenDim4 provides part numbers of commonly used shells and pins. A complete set of shells and pins is also available directly from RC4 Wireless.

## Performing a Factory Reset

If someone else has used your LumenDim4, 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.

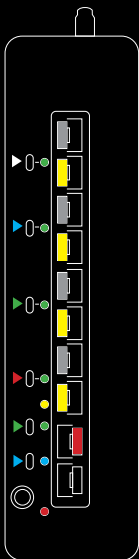
Press and hold Func, briefly tap (press and release) the SetA button, then release Func. The first four indicators will blink to confirm that factory settings are restored.

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 LumenDim4

If the blue RF Connect LED on the LumenDim4 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 LumenDim4 is ready to be linked to your transmitter.

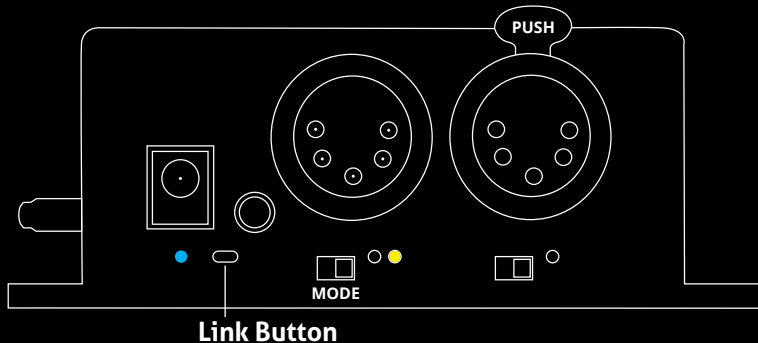
NOTE: Link status is not affected by performing a Factory Reset.

## 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 LumenDim4 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 LumenDim4, or after restoring factory settings, it will be set to DMX address 1 for dimmer A, address 2 for dimmer B, etc.

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

The DimA, DimB, DimC, and DimD LED indicators on the side of the LumenDim4 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 LumenDim4 starting address. For example, if you want your first LumenDim4 dimmer on DMX channel 60 with a curve that is optimized for LEDs, bring up 60 @ 30% at the console. Tap SetA and the 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 dimmers are automatically set sequentially. For example, if you have set DMX channel 60 for DimA, DimB is now assigned to channel 61, DimC is on 62, and so on.

## 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 all 4 dimmers sequentially. The other Set buttons work individually. Always use SetA first.

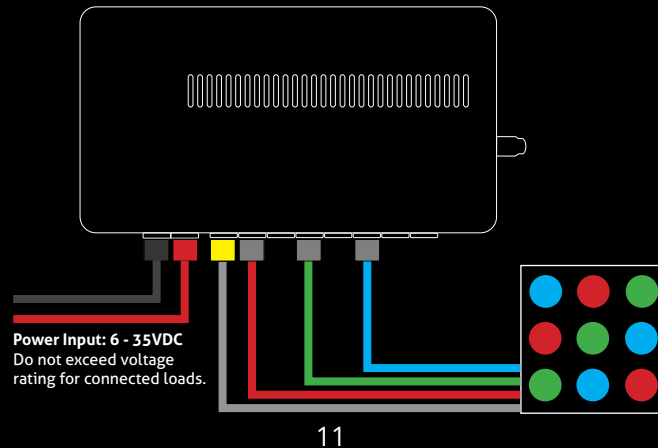
## Connecting Your Lamps, LEDs, Motors and More\*

To really use your LumenDim4, you must connect a lamp, LED, motor, or other load to each dimmer. When you're connecting anything to your LumenDim4, be sure that the LumenDim4 is powered down. Connect everything first, then turn on power.

The **yellow** output connections are positive (+), the **grey** connections are negative (-).

**Dimming occurs on the negative side. The positive connections are all connected together inside the LumenDim4.**

\* The LumenDim4 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 an RGB color mixing LED device. There are 4 wires: a black wire for the 12V common positive (+), and three colored wires, red/green/blue, for the three unique negative leads. The color of the common positive may vary, it is not always black.

The common positive should be connected to the **yellow** terminal of DimA. All of the (+) terminals, red and yellow, are connected together inside the LumenDim4. Using the DimA connection is recommended because it is closest to the power input (+) connection, reducing heat and resistance along the positive leg of the circuit.

Dimming happens on the negative (-) connections.

The red wire should be connected to the **grey** (-) connection for DimA.  
The green wire should be connected to the **grey** (-) terminal for DimB.  
The blue wire should be connected to the **grey** (-) terminal for DimC.

If using an RGBA or RGBW fixture, the fourth wire (usually yellow or white) should be connected to the **grey** (-) terminal for DimD.

## Choosing Other Dimmer Curves or Profiles

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The LumenDim4 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 LumenDim4 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 LumenDim4 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 LumenDim4 for cinema (motion picture capture), PWM frequencies can be adjusted for the smoothest dimming without banding or other camera artifacts.
- The LumenDim4 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.
- An HSL (Hue/Saturation/Level) processor can be enabled, making it easy to find a specific color and dim it up and down without color variation.

## Caring for Your LumenDim4

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- **The LumenDim4 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 power handling of the LumenDim4, which is 45A. That is 500W at 12V, 1000W at 24V, shared across the four 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 40A fuse, use wire that can safely carry 40A.
- The LumenDim4 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 LumenDim4 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 LumenDim4 at your own risk.**



## Get in Touch

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1-866-258-4577

1-919-229-9950

+44 (0)20 3289 8765

1-866-237-6641

**Toll Free, North America**

**North Carolina, USA, Local**

**London, UK**

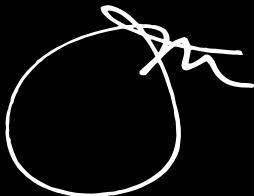
**Toll Free Fax, North America**

**Email:** [support@theatrewireless.com](mailto:support@theatrewireless.com)

**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**

President and Chief Product Designer

RC4 Wireless