

RC4 Series-3 Wireless Dimmers

Quick Start:

Selecting Device Modes

Contents

Disclaimers.....	2
Not for Use Where Human Safety May Be At Risk.....	2
Not for Control of Pyrotechnical Devices	2
Product Safety	2
Start with Basic Wireless Dimming	3
The RC4 Series 3 User Interface	3
Restore Defaults.....	4
Set/Change Device Mode	4
Device Mode Indication.....	5
DMX DimA/B/C/D (Normal) [Blink AAA]	5
HSL -> DimA/B/C (RGB), DMX -> DimD [BAA].....	5
HSL -> DimA/B/C/D (RGBW) [ABA].....	5
Flkr -> DimA/B/C, DMX -> DimD [BBA].....	6
Flkr -> DimA/B/C/D [AAB]	6
Flkr -> HSL -> DimA/B/C, DMX -> DimD [BAB]	6
Flkr -> HSL -> DimA/B/C, Flkr -> DimD [ABB]	6
Flkr -> HSL -> DimA/B/C/D (RGBW) [BBB]	7
How to Reach RC4 Wireless.....	8
Physical Address.....	8
Telephone / Fax.....	8
Internet.....	8

Disclaimers

WIRING AND INSTALLATION OF BATTERIES, DIMMERS, AND LOADS MUST BE IN ACCORDANCE WITH APPLICABLE LOCAL AND NATIONAL ELECTRICAL CODES.

RC₄ Wireless devices and equipment are operated at the user's own risk and RC₄ Wireless accepts no liability, either direct or consequential, as a result of using this equipment.

Not for Use Where Human Safety May Be At Risk

RC₄ Wireless accepts no liability for direct, indirect, or consequential damages resulting from the use of any RC₄ Wireless product or group of products. RC₄ Wireless does not guarantee the suitability of any product for any purpose; user assumes all risk. RC₄ dimmers must be used strictly in accordance with manufacturer's instructions and cannot be used for unsupervised operation. RC₄ Wireless products must be installed and operated only by qualified technicians, as outlined in the manufacturer's documentation, and should be inspected and tested on a regular basis to ensure proper and safe operation.

Not for Control of Pyrotechnical Devices

RC₄ Wireless products should not be used to control pyrotechnics of any kind. A brief output surge on dimmer outputs during power-up could trigger these devices. RC₄ Wireless accepts no liability if RC₄ equipment is used for this or any other purpose.

Product Safety

RC₄ receiver/dimmers are capable of controlling very large currents at up to 35VDC. Dimmers should not be allowed to operate at dangerous temperatures. Appropriately sized wire and connectors must be used, along with suitable ventilation to dissipate heat, and external fuses rated for the load being operated.

This guide is not intended to provide comprehensive electrical safety instructions. RC₄ devices should be used only by qualified personnel.

Start with Basic Wireless Dimming

Before you can make use of this guide, you need your RC4 Wireless system up and running in basic wireless dimming mode. Find the companion Quick Start Guide for the system you are using at:

<http://www.theatrewireless.com/support/manuals/>

Start with one of these, depending on the devices you are using:

- RC4Magic Series 3 Quick Start Guide
- RC4 W-DIM4 / W-DIMm3 Quick Start Guide
- RC4 LumenDim4 / LumenDimM4 Quick Start Guide

Tutorial videos help you use and understand RC4 technology. Find them at:

<http://www.theatrewireless.com/category/support/video/>.

Seeing the process is often easier than reading a manual.

Wireless dimming, with professional and reliable results, is easy – *it's easier than you think!*

The RC4 Series 3 User Interface

The RC4 Series 3 User Interface consists of numerous LEDs and recessed pushbuttons. All LED are behind small round holes. All buttons are behind small slotted openings. A small tool, like a bent paperclip, is required to press the recessed buttons.

Never insert a tool into a round hole – buttons are only behind slotted holes.

Never insert a tool into a round hole – buttons are only behind slotted holes.
Poking tools into round holes can damage LED indicators and circuit-board traces.
Such damage is not covered under warranty.

Restore Defaults

If you are unsure of the settings in an RC4 Series-3 device, or if it is not responding as expected, you can restore default settings:

Hold the recessed *Func* button while you press and release the *SetA* recessed button. The DimA indicator will blink, and most settings will be cleared to defaults. Some firmware versions leave the PWM frequency and RC4 Digital Persistence™ setting unchanged after loading defaults.

To restore everything to original factory settings including PWM frequency and Digital Persistence:

Hold both the *Func* and the *SetA* buttons while powering on the device and hold them for more than 5 seconds. The COP indicator will light for 5 seconds in bootloader mode before reverting to normal operation. Hold the two buttons for this entire time.

Restoring defaults is easiest with two bent paperclips, one for each button.

Set/Change Device Mode

RC4 HotPatch™ provides eight basic device configurations. When using RC4Magic devices, dimmer source patching can be further customized using RC4MagicPC software.

Press and hold the Func button, then press and release (i.e. tap) the SetB button. The selected mode will increment, and the DimA and DimB indicators will provide a pattern of 3 blinks to indicate the newly selected mode. Each press of the SetB button while holding the Func button cycles to the next mode listed below, returning to the first mode after the last mode, around and around.

Device Mode Indication

When changing mode, the DimA and DimB indicators provide feedback to the user. This also causes loads connected to these outputs to blink. Only two indicators are used so that the same indication method can be used on all devices with 2 or more dimmers. There are 8 modes, indicated by different patterns of DimA/DimB blinks:

DMX DimA/B/C/D (Normal) [Blink AAA]

DimA	•	•	•
DimB			

This is the most basic and common mode, used for the majority of wireless dimming applications. Each dimmer is assigned a DMX channel, curve, PWM frequency, and RC4 Digital Persistence time.

HSL -> DimA/B/C (RGB), DMX -> DimD [BAA]

DimA		•	•
DimB	•		

The HSL color controller uses three DMX control channels for Hue, Saturation, and Level, and translates this information to dimmer levels for red, green, blue, and white light sources.

Connect red to DimA, green to DimB, and blue to DimC.

In this mode, DimD is not the HSL white channel. Instead, it is directly controlled by the DMX channel assigned for DimD. Thus, this mode provides a 3-color HSL engine and one general purpose dimmer.

HSL -> DimA/B/C/D (RGBW) [ABA]

DimA	•		•
DimB		•	

All 4 dimmers are controlled by the HSL engine. Connect red to DimA, green to DimB, blue to DimC, and white to DimD.

Flkr -> DimA/B/C, DMX -> DimD [BBA]

DimA			•
DimB	•	•	

The RC4 Wireless Flkr Engine drives DimA, B, and C. DimD is not controlled by the Flkr engine. Instead, it is directly controlled by the DMX channel assigned for DimD. Thus, this mode provides a 3-color Flkr effect, and one general purpose dimmer.

Flkr -> DimA/B/C/D [AAB]

DimA	•	•	
DimB			•

All 4 dimmers are controlled by the RC4 Wireless Flkr Engine. This is the most commonly used Flkr Engine mode.

Flkr -> HSL -> DimA/B/C, DMX -> DimD [BAB]

DimA		•	
DimB	•		•

The RC4 Wireless Flkr Engine modulates the HSL color controller. The HSL controller output drives DimA,B, and C for RGB control.

DimD is is directly controlled by the DMX channel assigned for DimD.

Flkr -> HSL -> DimA/B/C, Flkr -> DimD [ABB]

DimA	•		
DimB		•	•

The RC4 Wireless Flkr Engine modulates the HSL color controller. The HSL controller output drives DimA,B, and C for RGB control.

DimD is is directly controlled by the 4th output of the Flkr Engine, bypassing the HSL controller.

Flkr -> HSL -> DimA/B/C/D (RGBW) [BBB]

DimA			
DimB	•	•	•

The RC4 Wireless Flkr Engine modulates the HSL color controller. The HSL controller output drives all 4 dimmers for RGBW control.

In this mode, the 4th output of the Flkr Engine is not used.

Cool tip for the geeks in our world: RC4 Series 3 mode indication is a representation of binary counting. DimA is binary bit 0, DimB is binary bit 1. The 3 blinks are the 3 numeric places required to represent 8 binary values – the ones, the twos, and the fours. If more modes are eventually added, we'll expand the pattern to 4 blinks instead of 3 (adding the eights), to accommodate 16 different modes. Adding one binary bit doubles the number of options available.

Too much information? Oops. ☺

How to Reach RC4 Wireless

Physical Address

RC4 Wireless is a registered trade-name of
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