

RC4Magic DMX2flkr & DMX4flkr Flicker Effect Wireless Dimmers

Quick Start Guide

Devices can be switched between standard dimmer mode (DMX2dim, DMX4dim) and flicker effects engine mode (DMX2flkr, DMX4flkr). Press and release SetA and SetB buttons simultaneously. The unit will switch modes and restart. In dimmer mode the startup LED sequence will be the normal end-to-end chase. In flicker mode the indicator LEDs briefly alternate or wobble, rather than chase.

In flicker mode, only the first DMX channel for each unit can be set. The rest of the channels are a contiguous series. For the DMX2flkr, 8 channels are used. For the DMX4flkr, 12 channels are used. Channel assignment is done using the same method as the DMX2dim and 4dim, but only for the first dimmer, using the SetA button: bring up the desired channel to a level for the desired curve, and briefly press the SetA button.

In dimmer mode (not flicker mode), the remaining buttons operate as usual for a DMX2dim or DMX4dim (setting DMX channel/curve for each individual dimmer output). Channels and curves are stored separately for flicker and dimmer modes, so you can switch back and forth and previous settings for each mode are restored.

In flicker mode, the SetB button saves the currently running flicker effect. On subsequent power-up, the unit will execute the saved effect until it receives valid RC4Magic control data that alters it. On a DMX4flkr, SetC clears the saved flicker effect to all channels off. SetD toggles the mode between dimmer (DMX4dim) and flicker (DMX4flkr) modes (an alternative to pressing SetA and SetB together).

The best way to use the flicker engine from a smart lighting console is to create a fixture profile based on the channel functions described below.

If all DMX channels are at zero and you then raise only the master fader (the first DMX channel assigned), you will immediately see all dimmer channels slowly fading up and down. This is because the depth settings for the LFO

(low frequency oscillator) are center-off. To have all channels off, you need the base levels at zero and the LFO depth levels at 50% (center).

LFO depth is positive above center (50 - 100%), and negative below center (0 - 50%). If you send LFO positive to one channel and LFO negative to another, those channels will appear to cross-fade.

Several independent random number generators are provided. The first one is used to randomize the LFO frequency via the channel for random depth to LFO. Additional separate random values are used for each dimmer when using random depth to dimmers. That is, when you add randomness to dimmers, they are each individually random, rather than tracking together. That channel has come to be called the "shimmer" channel.

The channel for LFO frequency also controls the frequency of random number generation, at a rate that is 32 times faster than the LFO. Thus, it is also shimmer frequency.

Overall, this array of controls allows generation of a huge range of different effects, from slow smooth color rolling to bright buzzy arc welding. Further variation can be achieved by changing DMX control values in real-time as desired.

Following are the RC4Magic DMX2flkr & DMX4flkr DMX channel profiles.

RC4Magic DMX2Flkr 8-Channel DMX profile:

- Master Fader (base DMX channel)
- A base level (base+1)
- B base level (base+2)
- LFO triangle: depth to color A, CENTER-OFF (base+3)
- LFO triangle: depth to color B, CENTER-OFF (base+4)
- LFO frequency (base+5)
- random: depth to LFO frequency (base+6)
- random: depth to A, B (base+7)

RC4Magic DMX4Flkr 12-Channel DMX profile:

- Master Fader (base DMX channel)
 - RED base level (base+1)
 - GREEN base level (base+2)
 - BLUE base level (base+3)
 - AMBER base level (base+4)
 - LFO triangle: depth to color RED, CENTER-OFF (base+5)
 - LFO triangle: depth to color GREEN, CENTER-OFF (base+6)
 - LFO triangle: depth to color BLUE, CENTER-OFF (base+7)
 - LFO triangle: depth to color AMBER, CENTER-OFF (base+8)
 - LFO frequency (base+9)
 - random: depth to LFO frequency (base+10)
 - random: depth to R, G, B, A (base+11)
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