

# Prop and Scenery Lights, LLC

[www.propscenerylights.com](http://www.propscenerylights.com)

## Application Note

### Flicker Effects Control – LED Lighting

P/N: FEC1



The FEC Flicker Effects Control has 6 dynamic effects modes and one static dimming mode. The FEC is intended for simulation of flame and ember sources such as candles, lanterns, oil lamps, fires, coals and wood embers. Each of the 6 modes is distinguished by the average light level, the maximum depth of the flicker trough, and a different flicker pattern. Modes with the softest flicker appearance have lower flicker trough depth (to 70%). Modes of greatest flicker appearance will have greater flicker troughs, 80% to 90% maximum. All dynamic modes have 10 speed steps. (step #1 fast – flame flicker) to (step #10 slow – ember glow ).

Mode #	Average Light Level	Flicker Trough – Depth Max.	Ref. Application
1 flicker med - low	68.5%	60%	candle / lantern
2 flicker med - hi	60.0%	70%	candle / lantern
3 flicker - low	82.5%	50%	candle / lantern
4 flicker - hi	62.0%	80%	fire / ember (*)
5 surge fade - med	75.5%	80%	fire / ember (*)
6 surge fade – hi	62.0%	90%	fire / ember (*)
7 static dimming	0% to 100%	N/A	dimming

(\*) For fire simulation it is best to use fill and flicker light using multiple FECs and light sources. Fill light is typically a complementary light that provides an increased level of ambient light and moderates the depth of the flicker trough. The FEC is capable of a very slow rate of change in all the modes to provide fill light with more of a surging and fading glow appearance than a flicker.

For more dynamic or a faster flicker appearance multiple FECs, in different modes and (or) speeds may be used with multiple LED light sources. For burning coal and ember glow simulation the slower speeds (6-10) of the FEC may be used in any of the modes.

The FEC is for use with LED light sources only. The FEC operates from 5 to 24 volts DC and a maximum of 4 amps. The FEC retains the last setting when turned off or disconnected.

The FEC has 3 tactile buttons:

- 1) **Mode:** (6 total dynamic, one static)
- 2) **Speed - On/Off:** (10 speed steps, and 12 steps of dimming, 3 second hold for On/Off)
- 3) **Light:** used to change to static dimming mode only (10%-95% dimming range 12 steps via the Speed- On/Off button)

Applications:

- Themed entertainment and dark rides
- Theatrical and decor candles and torches
- Vintage lantern and oil lamp replicas
- Faux fireplaces and glowing coal and embers
- Props and stage scenery fire simulation

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