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# TECH BULLETIN # 1030

## **Products Affected:**

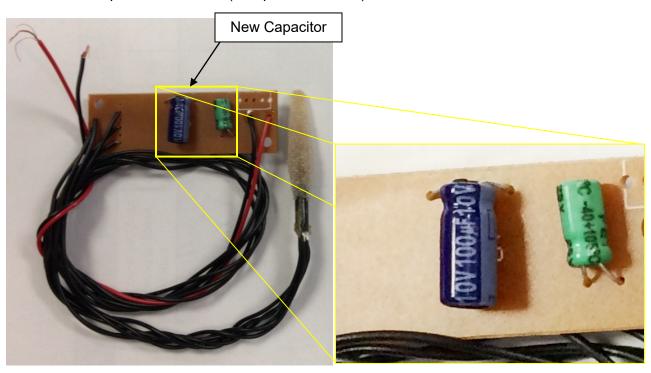
CTI# 3450, 3451, 3470, 3471, 3472, 3473 Candle Kits/Sticks

#### Overview:

It is desired to dim our candle kits from low voltage PWM dimmers, but our kits were designed to run from a steady DC Supply of 9V from a battery or power supply. When connecting to a PWM dimmer it was possible to set a PWM frequency that allowed acceptable dimming, but this caused the circuit to fail prematurely. A capacitor was added to the PCB circuit board. Users must now set the PWM output frequency to 1KHz or 1.2KHz, depending on model.

It is important to note that these modified candles cannot operate above 9vDC with 12v dimmers.

If you have candles with the following City Theatrical part numbers, check the purchase date: 3450, 3451, 3470, 3471, 3472, 3473. If the candle was purchased before 06/14/2017, then do NOT use the procedure below. This setup procedure is ONLY for modified candles. If you're not sure when the candle was purchased, open up the plastic tube to inspect the PCB inside. If the PCB has the capacitor, then it has been modified. There is a third version of the candles that have been updated from the factory. This version does not require modification. (See pictures below.)



**Modified Candle** 







Factory-Made Candle

### **Details:**

CTI added a 100uF 10V electrolytic capacitor (City Theatrical part number 101-00059) between J7 (+) and J3 (-) on the candle PCB. Set your dimmer PWM output frequency to 1KHz or 1.2KHz, depending on model.

To use City Theatrical's dimmers with the new modified candles, you must set the Curve and the Mode to the proper settings. The section below explains how to set the dimmers to work effectively with the modified candles.

## **How to Set Up CTI Dimmers for Modified Candles**

## 5620 QolorFLEX 3x10A Dimmer (previously D3 Dimmer)

Curve: In the Menu, go to Curve Selection. Set LED TV/Film Mode to 1.



# 5720 QolorFLEX 2x5A Dimmer (previously D2 Dimmer)

# 5722M QolorFLEX 2x5A SHoW DMX Neo® Dimmer (previously D2 SHoW DMX Neo Dimmer)

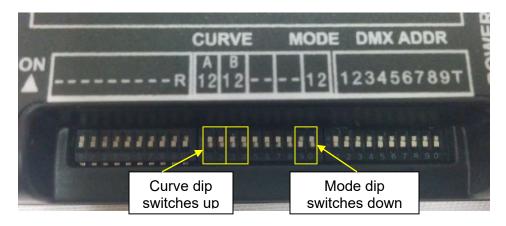
Note: These models can only support 5 candles per output, due to short circuit protection sensing.

<u>Curve</u>: The Curve must be set to LED. Select Dimmer Curve section. Whether you're using dimmer A or B, both switches must be ON.

Mode: Must be in TV/Film Mode 1, which is both mode switches in off position.







See manual for more information.

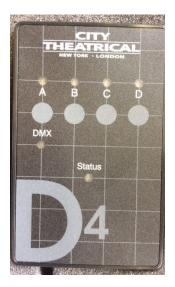
# 5742M QolorFLEX 4x2.5A SHoW DMX Neo® Dimmer (previously D4 SHoW DMX Neo Dimmer) 5740 QolorFLEX 4x2.5A Dimmer (previously D4 Dimmer)

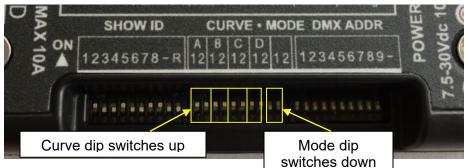
Note: These models can only support 5 candles per output, due to short circuit protection sensing.

<u>Curve</u>: The Curve must be set to LED Select Dimmer Curve section. Whether you're using dimmer A, B, C, or D, both switches must be ON.

Mode: Must be in TV/Film Mode 1, which is both mode switches in off position.



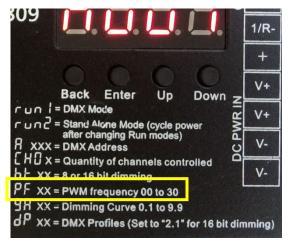




### 5809, 5810, 5821, 5823, & 5825 (previously the B-Series Dimmers)

Using the control buttons (pictured below), go to PF Frequency Settings. Hit Enter. Use Up/Down buttons to reach PF01. Hit Enter. Hit Back. (see pictures below)

[Please note the change in control interface from QolorFLEX & B-Series dimmers.]





New QolorFLEX Dimmer

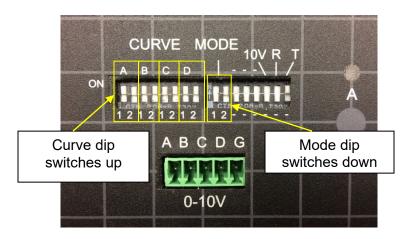


# 5750 QolorFLEX 4x10A Dimmer 12V Terminal Block (previously D4 HP 12V Dimmer) 5754 QolorFLEX 4x10A Dimmer 24V Terminal Block (previously D4 HP 24V Dimmer)

Note: These models can only support 5 candles per output, due to short circuit protection sensing.

Curve: The Curve must be set to LED. Select Dimmer Curve section. Whether you're using dimmer A, B, (or C & D if applicable), both switches 1 & 2 must be ON.

Mode: Must be in TV/Film Mode 1, which is both mode switches in off position.



5942 QolorFLEX® 5x2.5A 900MHz/2.4GHz Multiverse® Dimmer

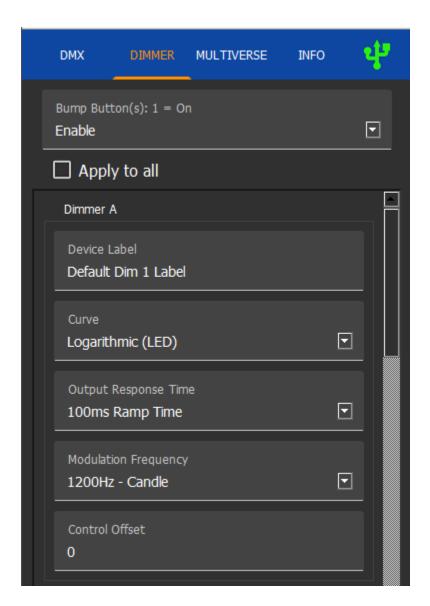
5943 QolorFLEX® 5x2.5A 2.4GHz Multiverse® Dimmer

5916 QolorFLEX 2x2.5A 2.4GHz Multiverse® Dimmer

5917 QolorFLEX 2x2.5A 900MHz Multiverse® Dimmer

<u>Note</u>: These models only support 24 LED candles or 14 incandescent candles per channel <u>Curve</u>: The curve can be set to Logarithmic (LED) for LED candles or Square Law (Incan.) for incandescent candles

Modulation Frequency: Must be set to 1200HZ - Candle



For more details on how to configure our dimmers, please look at the products manuals.