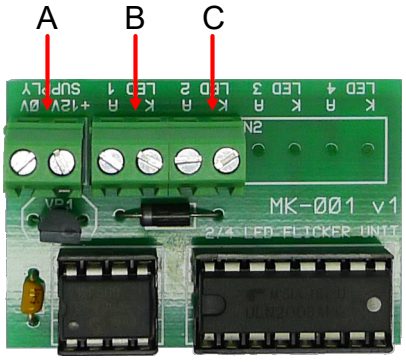
# Microminiatures MK-001 Fire & Candle Simulator Instructions

## Description

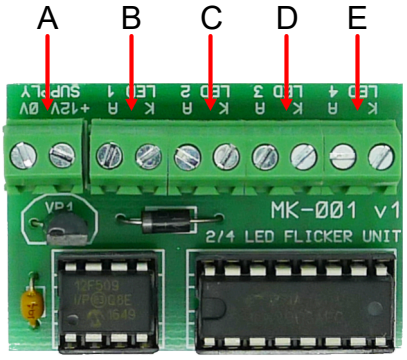
The MK-001 Fire and Candle simulators are available in 2 or 4 Channel versions, both are connected and operate the same way except for the number of outputs. All outputs operate independently to each other and therefor can operate up to 4 candles/fires in a close vicinity all with different effects.

The MK-001 operates from a regulated 12V DC power supply. Up to 2 50mA bulbs or 5 LEDs can be connected in parallel to each output. Note each LED should have it's own resistor connected in series.

2 Channel Version




4 Channel Version




A) 12V Regulated DC Input

B) Output 1

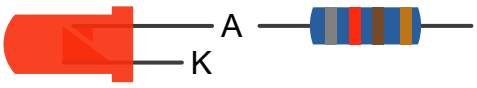
C) Output 2

D) Output 3 (4 Channel version)

E) Output 4 (4 Channel version)

## Connections

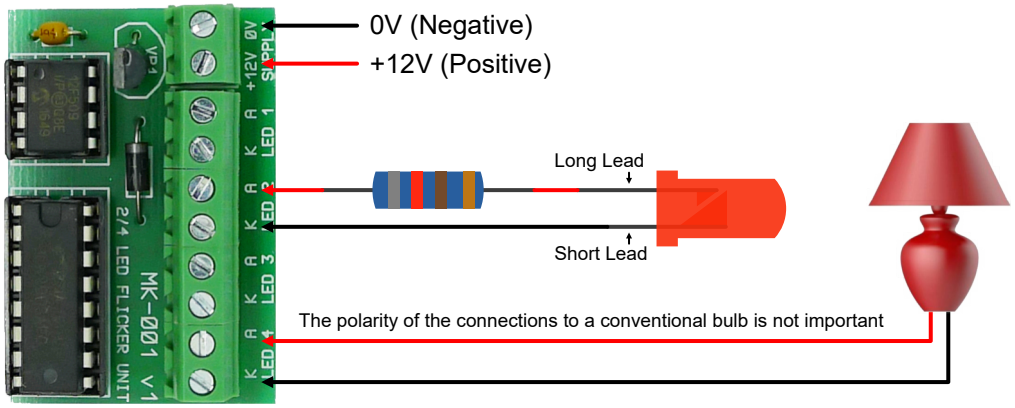
When connecting a conventional bulb to an output, the wires may be connected either way round, however the polarity of LEDs must be observed as below.




The longer lead of the LED is the Anode (A) and is the positive lead.

The shorter lead is the Kathode (also spelt Cathode), this is the negative connection. This lead is also denoted by the flat side on the LED.

Do not connect an LED directly to an output unless the LED has an inbuilt resistor to operate at 12 volts. An 820 Ohm resistor should be connected between the A output and the Anode of the LED as shown above. If there is more than 1 LED connected to a single output then they should also have an individual resistor connected in series.




Shown are outputs 2 and 4 connected to an LED and a conventional light respectively.

Additional LEDs and bulbs can be added in parallel to each output. Up to a maximum of 5 LEDs and 2 bulbs per channel. Each LED must have it's own resistor.

**For correct operation, the MK-001 Power Supply must display this symbol on the label.**

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LEDs, resistors and bulbs are not included with this unit

MK-001 Part Numbers **DHDRC-02698/02699/02700/02701**