

INSTALLATION GUIDE

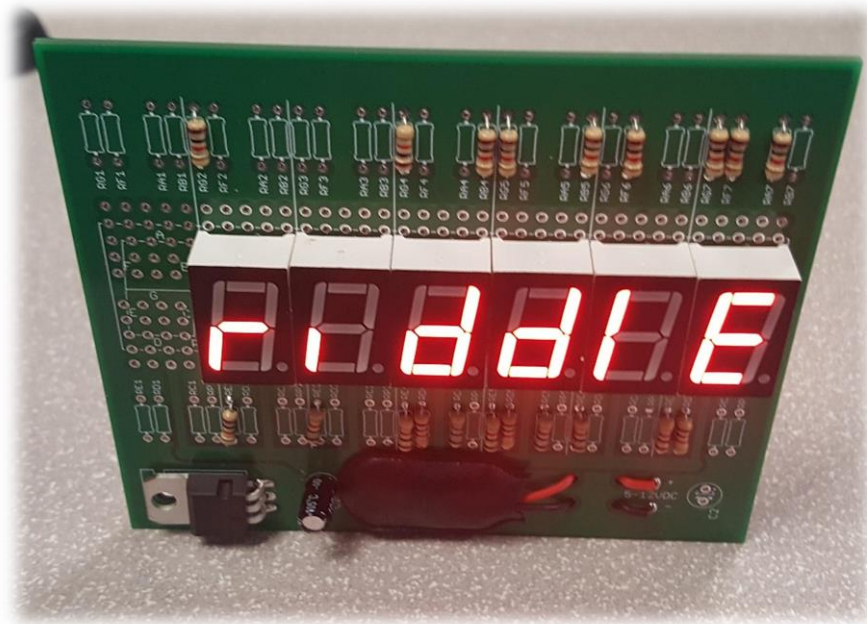


Figure 1. 7-Digit, 7-Segment LED Kit

Each Kit Includes:

- (7) 7-Segment Common Anode LEDs
- (56) 1k Ω carbon resistors
- 9V battery connector
- 7805 Voltage regulator
- 100 μ F, 16v electrolytic capacitor

7-Segment display:

Please note the two schematics in Figure 2 showing a 7-Segment LED display. Each LED display uses the same pinout. 5Volts will be connected to the LED at the 3rd and 8th pins, and an LED segment is illuminated when the circuit is completed, by soldering resistors in place. The top LED segment is marked “a”. On our circuit board, segment “a” will only be illuminated when a 1kΩ resistor is soldered between the pin “a” and ground.

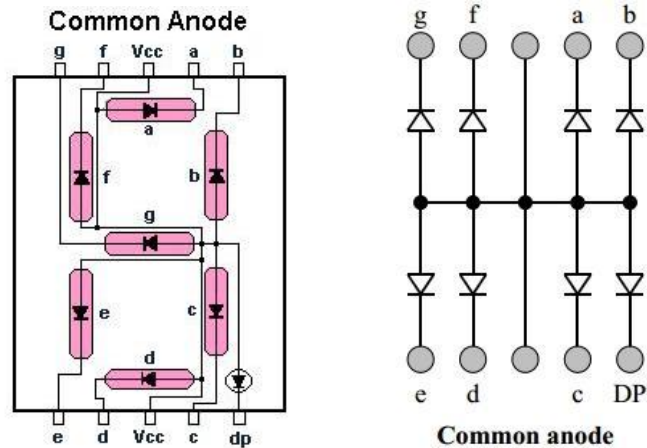


Figure 2 – Schematics of 7-Segment LED

Installation Instructions:

Step 1. Solder the LED digits onto the PCB:

Step 1a. Solder a 7-Segment LED in one of the 7 locations on the PCB. Note: Each LED digit can be installed in one of 5 different vertical positions to allow vertically offset characters. See Figure 3.

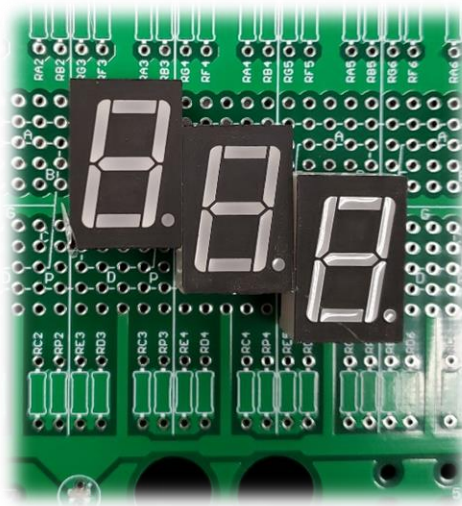


Figure 3 – LED segments installed offset vertically.

Step 1b. Once the LED digit is installed, 1kΩ resistors should be added to illuminate the desired segments. For example, to create a “1” digit, add resistors for the segments marked “b” and “c” as shown in Figure 4. The resistor for the ‘b’ segment is marked “RB4” on the circuit board. This designation shows that it is a (R)esistor, used for segment (B), at the (4)th digit location. Resistors can be installed with terminals in either direction, with no polarity.

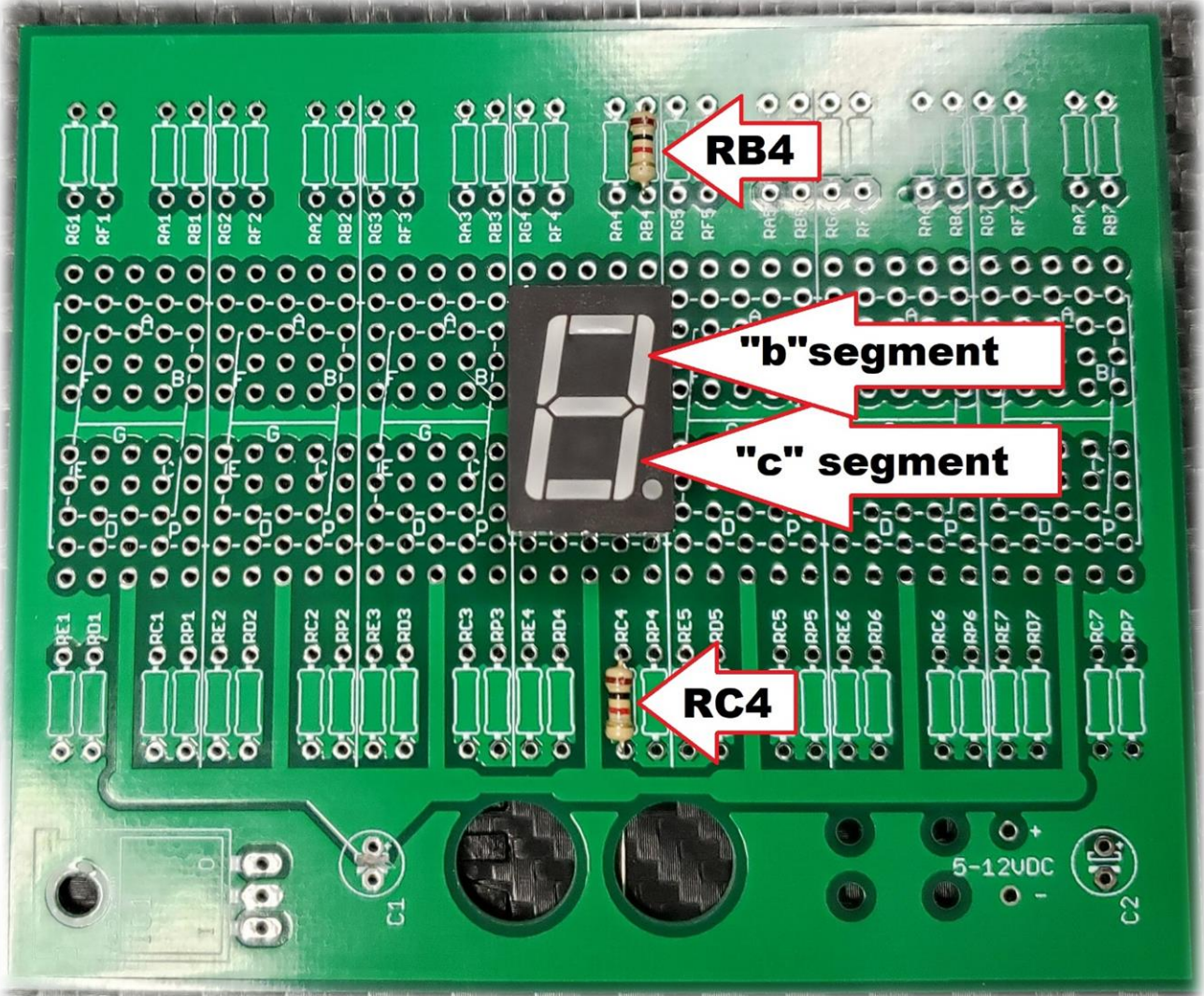


Figure 4 – Resistors installed in “RC4” and “RB4”

Step 1c. Repeat as desired for additional LED digits.

Step 2. Solder the battery connector and voltage regulator onto the PCB

Step 2a. Solder the 7805 voltage regulator onto the PCB, and bend it down so that the flat metal side is touching the PCB board.

Step 2b. Solder the capacitor into C1. Make sure to install the longest capacitor wire into the hole with the “+” symbol. The negative marking on the capacitor should face the bottom edge of the circuit board.

Step 2c. Route the battery connector wires through the holes as shown in the pictures (Figures 1 and 5). The red wire should be soldered to the “+” terminal, and the black wire soldered to the “-” terminal. When the battery is in its final position, it will also be used as a stand to hold the PCB in the upright position, as shown in Figure 5.

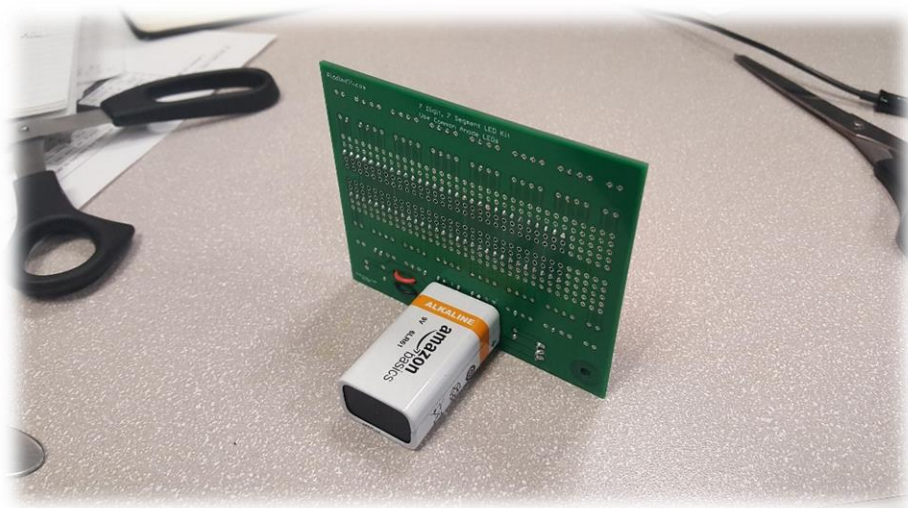


Figure 5 – Battery installed, also holding the PCB upright

If you need additional help: Please contact 7LED@riddledtv.com for assistance.