

# LEDBright Assembly Instructions (1.0)

## Thank you for your purchase!

You've bought one of the coolest kits on the internet: the **LEDBright Custom Retro Logo Sign**! I hope you have as much fun building and admiring it as Alex and I did designing it.

Please take pride in your work as you build your new, easy-to-assemble kit, and it will give you years of enjoyment.

## Safety Notes and Precautions

**Assembly of this project is at your own risk.** At no point will Joe Strosnider, Joe's Computer Museum or any affiliated partners or associates be held responsible for property damage or personal injury arising from your assembly of this project.

**You will be soldering with this project.** That means using a hot implement to melt metal. Carelessness can lead to property damage or personal injury. Use all appropriate precautions and personal protection equipment, like hand and eye protection.

**You will be cutting metal with this project.** That means using snips to cut component leads. These leads can be ejected from the work surface with enough velocity to cause personal injury. Use all appropriate precautions and personal protection equipment, like hand and eye protection.

**The USB Jack must be installed on the front of the board.** Installation on the back of the board will result in a direct short circuit of the supplied USB power adapter. This will cause damage to your board, USB cable, power adapter, and may result in fire, property damage or personal injury.

**Refunds for Project Failure caused by improper installation of components will not be issued.**



### ***Joe Strosnider***

Proprietor of Joe's Computer Museum and JCM-1.com

(whatever that's supposed to mean)

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## Tools Needed

- Soldering Iron
- Solder
- Flush Cut Snips (industry standard 170M style work best, but anything can be made to work.)
- Pliers
- #1 Phillips Screwdriver
- Sharp Knife or Sandpaper

## Included Parts

### LEDBright Kit

- One (1) LEDBright board.
- One (1) USB Jack

### Optional LED Kit

- If you chose, A number of LEDs to match the design you chose.
- If you chose, A number of 560 ohm and 2200 ohm resistors matching the number of LEDs
- If you chose one of the pre-made designs, you'll receive a helper grid.

### Optional Power Kit

- If you chose, One (1) USB A-B Cable and One (1) USB Power Adapter

### LEDBright Fashion Case

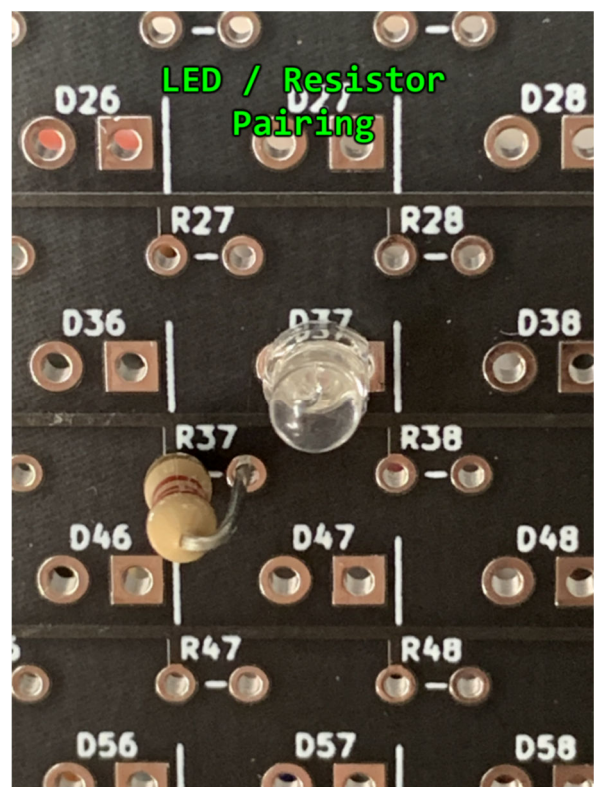
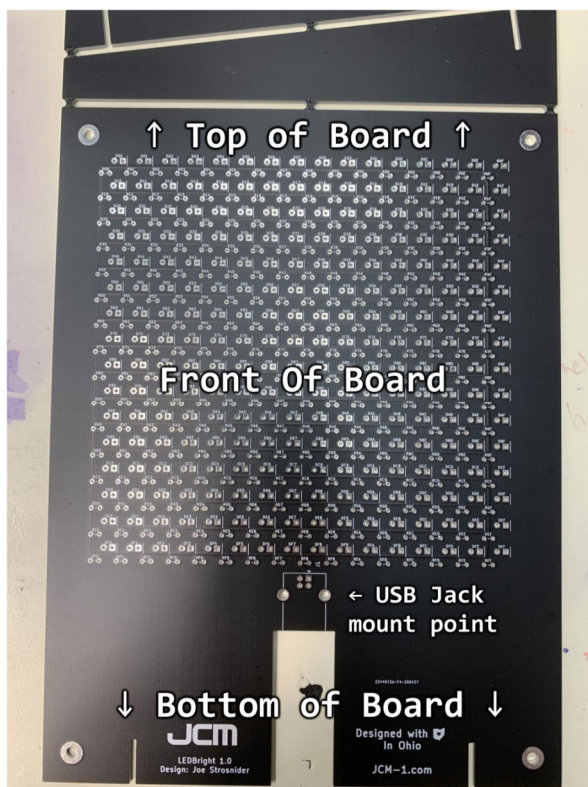
- One (1) Front Panel
- One (1) Rear Panel
- Two (2) Stands
- Four (4) Assembly screws

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## Preparation

Before you begin assembly, it's important that you examine the board and identify the features.

- The front of the board is the side with the JCM logo.
- The bottom of the board is the edge with three cutouts adjacent to the JCM logo.
  - If you are assembling with the fashion case, all electronic components **must** be inserted through the **front**, and face you while you see the JCM Logo.
  - If you are assembling without the fashion case, you may install the resistors on the back side of the board if you choose, at the cost of more difficult assembly.
- All LEDs and Resistors are installed with their legs on horizontal planes.
- LEDs are inserted into the larger pairs of pads that include the square pad. These points are identified as Dxx, where xx is a hexadecimal number from 00 to FF.
- Resistors are inserted into the smaller pair of pads **↓below↓** and to the **←left←** of each LED. These points are identified as Rxx, where xx is a hexadecimal number from 00 to FF.
- The LED and Resistor identification numbers match. For Example, LED number D7F is matched up to Resistor R7F.
- The triangular pieces are legs. If you have purchased the board without the fashion case, use these to make the board stand up!



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## Board Assembly

1. Snap off the top triangular pieces, and separate them from each other. Use knife, sandpaper or pliers to remove the “mouse bites” from the edges of the boards. Place these to the side.
2. Install the USB Jack on the **FRONT** of the board, and solder it on the **BACK**.
  - a. The side legs of the jack are designed to spring clip into the board and hold the jack into place for easy soldering.

### **IMPORTANT SAFETY NOTE**



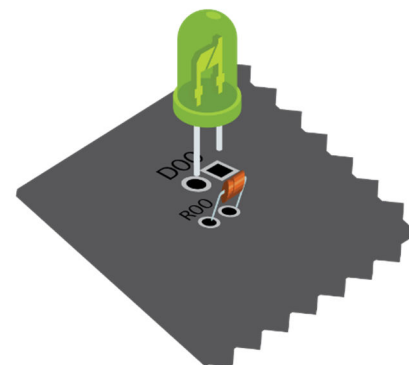
The USB Jack ***must*** be installed on the ***front*** of the board. Installation on the back of the board will result in a direct short circuit of the supplied USB power adapter. This ***will*** cause damage to your printed circuit board, USB cable, power adapter, and may result in ***fire***, property damage or personal injury.



3. Using the included grid as a guide, install the resistors through the **FRONT** of the board in the holes marked “R” and solder them on the **BACK**.
  - a. White, Pink, Blue, Green LEDs use 2200 Ohm resistors with red bands.
  - b. Red, Orange and Yellow LEDs use 560 Ohm resistors with Green | Blue | Brown bands.
4. Install **one** LED through the **FRONT** of the board in the matching holes marked “D”.  
**Do not solder it yet.**
  - a. To help remember the orientation, just use the “**L**” Rule

The **L**ong **L**ED **L**eg goes to the **L**eft

- b. Each resistor gets one LED in its matching point. These points are **↑above↑** and to the **→right→** of each resistor.
5. Power on the board with the USB cable. Wiggle your LED in the holes. Does it light? If so, you can proceed to solder it. Repeat Steps 4 and 5 for the remaining LEDs.
  6. Install the Legs
    - a. If you are not using the Fashion Case, slot the legs into the bottom of the board in the two stand slots.
  7. Plug in and enjoy!



# LEDBright Assembly Instructions (1.0)

## Fashion Case Assembly

1. Assemble the board first.
2. Use a sharp knife, pliers or sandpaper to remove the rough “mouse bites” from the top of the board.
3. Install the board front side down into the faceplate.
4. Add the backing plate and screw into place.
5. Insert the 3D Printed feet into the bottom slots. They may be tight. This is normal.
6. Plug in and enjoy!

## Modifications?

- Not using the Fashion Case? Try installing the resistors on the back for superior aesthetics.
- Fill in open spaces with a single color to give your logo a great background.
- Put slow color change LEDs in the corners for a flashy effect.
- Throw in a smattering of “flickering” LEDs to make your logo shimmer.

## Credits

### Product Concept and Board Design by Joe Strosnider



@MuseumJoe



@JoesComputerMuseum



youtube.com/JoesComputerMuseum



inanis.net

### Board Cleanup, Fashion Case Design and fitment testing by Alex Jacocks



@CaliphAlexander



he-insanity.blogspot.com