Blink
Learn to Solder Kit

Parts

A. Blink PCB
B. Red LED
C. Green LED
D. Blue LED
E. Resistors (x3)
F. Push Button Switches (x3)
G. 3V Coin Cell Battery
H. Battery Holder

Tools

A. Soldering Iron
B. Solder
C. Helping Hands (Optional)
**Technique**

The best technique to create a good solder joint is to heat both the parts that you want to solder and then introduce the solder. By heating the parts first and then introducing the solder you will avoid creating weak joints or “globbing” the solder instead of making a clean connection. As soon as you see the solder melt into the join slowly remove both the soldering iron and the solid solder you are feeding into the joint. Be patient, it may take a few times to get it right but with enough practice it will become second nature.

**Step 1**

Start with the resistors. Remove resistors from tape on ends. Bend the legs of the resistor so it can easily fit through the printed circuit board holes. Put the legs through the holes, it does not matter which way the resistor is rotated, resistors are bi-directional.
Step 2

Next is soldering! Turn on your soldering iron, be careful it will be hot! Give yourself a length of solder. Hold the solder in one hand and your soldering iron in the other. Place the tip of the soldering iron on the leg of the resistor. Slowly feed in your solder to the part. Viola! One solder complete! Do the same on the other resistor leg. Use snips or scissors to cut the extra length of resistor leg that is not needed. Be careful, don't cut too close, you want to maintain the integrity of the solder joint. Follow the same process for Resistor 2 and Resistor 3.
Next you will add the push button switches. The switches are slightly rectangular and should only fit in the board rotated a specific way. Hold up your switch and note the legs on the left and right should be bending towards each other, this is how you want to place your switch (see figure C).

Align the legs of the switch with the PCB holes and press the switch into the board until it snaps into place. This can take some amount of force. Be careful to not hold your fingers behind the holes because when the switch pokes through it will hurt your figures (those legs are sharp!). If you’re having trouble bend the switch legs more straight than angled and try again.

Press all the buttons into their correct place. Then flip the board over and solder all 12 connections on the switches.
Step 4

All switches and resistors are now attached and soldered. Next comes the battery holder. Place the legs of the battery holder through the PBB holes. Flip the PCB over and solder the connections.
Now for the LEDs. Note the direction of the LED leads does matter. There is a small flat portion of the LED cap, that should align with the flat edge of the LED outline on the PCB. Another way to tell the direction is looking at the length of the leads. The long lead should go through the square outlined hole.
Step 6

Now that you have gotten this far you can test your connections. Insert the coin cell battery into the battery holder positive (+) side up. Press the button and watch it light up! If you’re LED doesn’t light up don’t worry. There may be a connection that was missed. Double check all the connections on the back of the board. Are that are not fully completed? Fill them in and try again.
Step 7

Follow Step 6 for the Green and Blue LEDs. Once you have completed soldering the LEDs, snip the LED leads and enjoy your new light up PCB.

Questions? Comments?
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