

A9: Make a Rainbow with 5 LEDs

1001-act8 Introduction to Electronics

Summary

Now that you know how to wire a single LED circuit, you will learn how to make use of the USER pin blocks to expand this to 5 LEDs!

What You Need

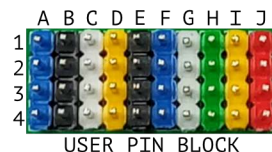
- JackBord
- JackBord TOP
- 10 x 10cm Jumper Wires

Instructions

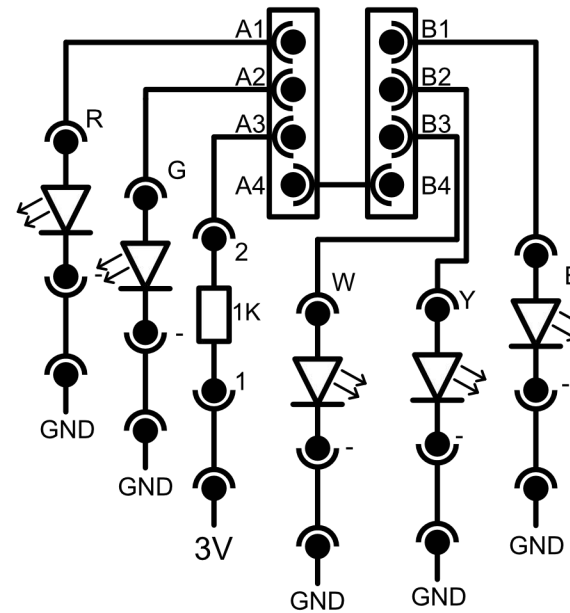
1. First, make sure that the JackBord TOP is already connected to the JackBord power pins and the two power LEDs are on (Check 1001-act5 if not). Turn off the JackBord.
2. Take one jumper and connect any one of the yellow 3V pins on the outer edge of the TOP to pin 1 of the 1K resistors.
3. Connect pin 2 of the 1K resistors to USER pin A3. Because you need to connect five LEDs at once, you will need to use another jumper to hook two rows of USER pins together to provide six connected pins. Do so by connecting USER pin A4 to B4.
4. USER pins refers to the 4 x 10 pin block at the bottom of the TOP. There is a diagram shown right that illustrates how the pins are referenced in grid reference from A to J horizontally, and 1 to 4 vertically.
5. To connect the LEDs, connect USER pins A1, A2, B1, B2, B3 to the red, green, blue, yellow, and white LEDs

NOTE

USER pins refer to the pins on the bottom half of the top. They are connected in columns of 4, but unconnected horizontally. They are referred to by grid reference. I.e. USER pin E2 refers to the second pin down in the E column.



Circuit Diagram



TOP 3V pin	1K pin 1
1K pin 2	USER pin A3
USER pin A1	Red LED pin R
USER pin A2	Green LED pin G
USER pin A4	USER pin B4
USER pin B1	Blue LED pin B
USER pin B2	Yellow LED pin Y
USER pin B3	White LED pin W
Red LED pin -	Ground
Green LED pin -	Ground
White LED pin -	Ground
Yellow LED pin -	Ground
Blue LED pin -	Ground

The table above contains the connections in the circuit diagram. Simply connect a jumper from the left column pins to the corresponding right column pin in the same row.

Completed Circuit

