Breadboard Tips

Pin Headers: 3 + 2 + 1 = 6

The set of 6 pin headers that come with the Analog Discovery board parts kit are not very practical to use with our breadboards, which have rows of only 5 pins. The headers are meant to be broken, and since we set up many circuits the same way, breaking the set into 3 pins, 2 pins, and 1 pin can be practical.

- 3 pins on a bus strip (side line) for ground
  - Analog Discovery ground (black) – To provide a reference voltage to circuits and scope
  - Analog Discovery 1- (orange/white) – To provide a reference voltage for scope channel 1
  - Analog Discovery 2- (blue/white) – To provide a reference voltage for scope channel 2
- 2 pins on a bus strip (side line) for source
  - Analog Discovery W1 (yellow) – To supply input to circuit
  - Analog Discovery 1+ (orange) – To monitor input to circuit
- 1 pin movable for output
  - Analog Discovery 2+ (blue) – To monitor circuit output on terminal strips (see Figure 2)

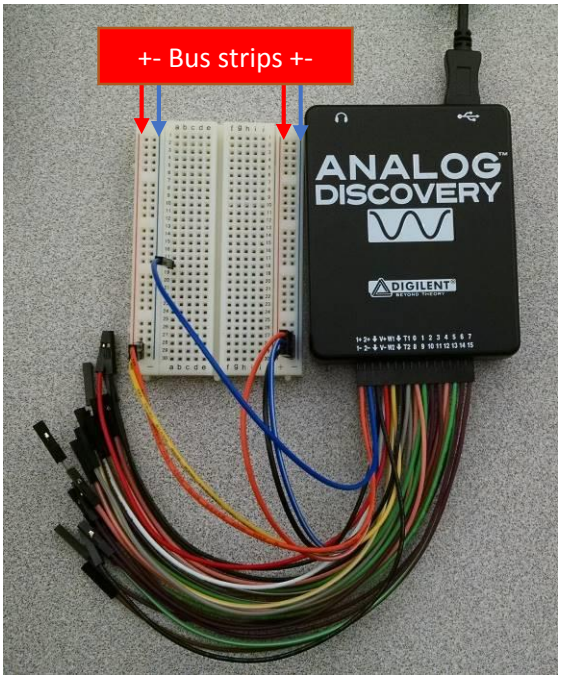

Figure 1- Breadboard without a circuit, identifying bus strips. Only two bus strips are used: the one on the far left for signal and the one on the far right for ground.

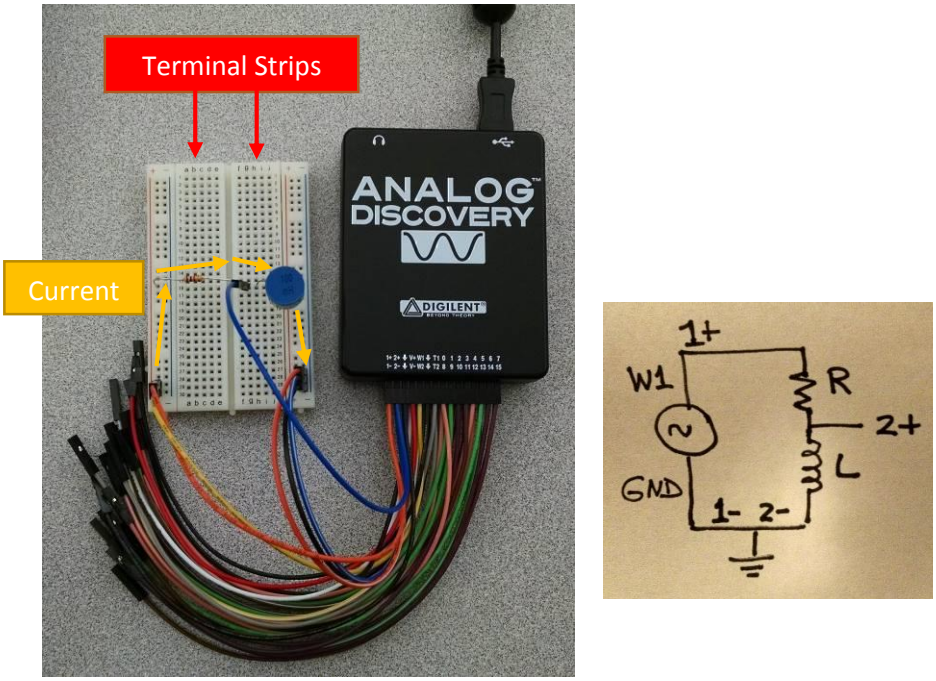

Figure 2- Connecting components directly to bus strips and visualizing the flow of current through the circuit. Only a single terminal strip is used to connect the resistor to the inductor and monitor the inductor voltage.

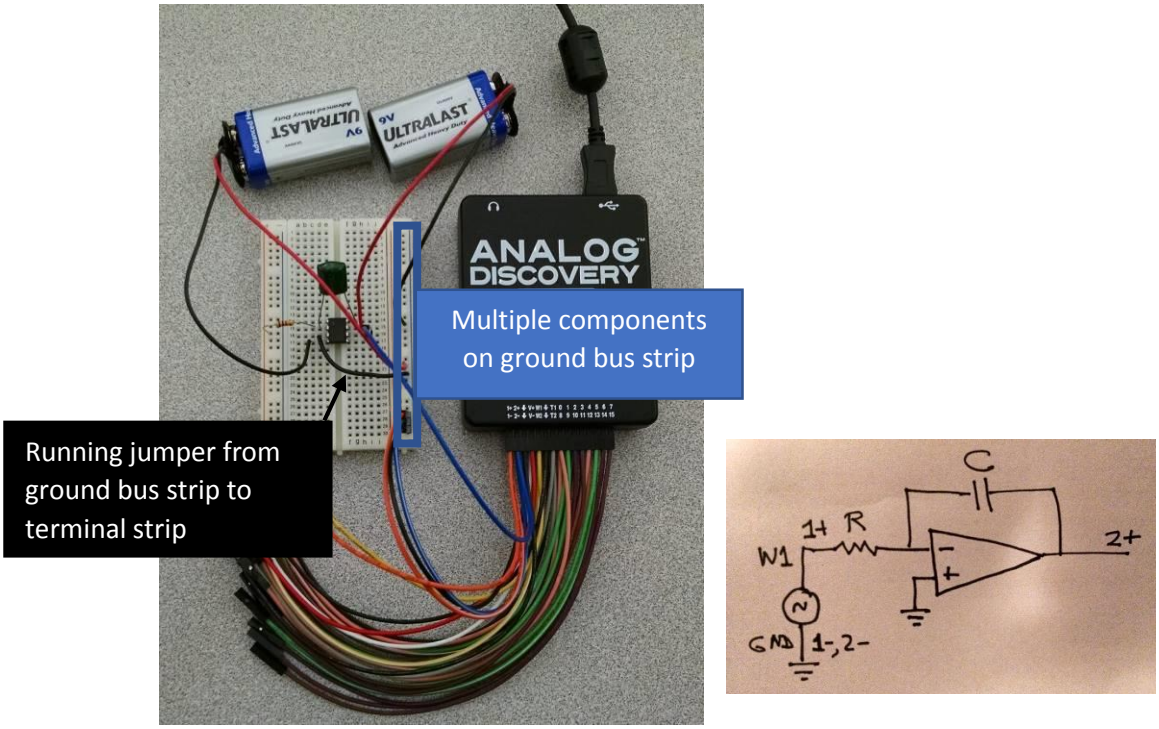

Figure 3 - Connecting multiple components to the ground bus and running a jumper from the ground bus to a terminal strip. One wire from each battery is grounded, the negative from one battery connects to pin 4 and the other positive to pin 7 of the IC.