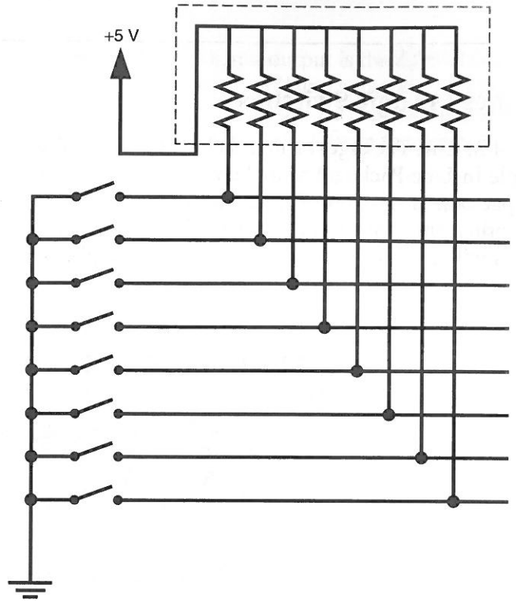


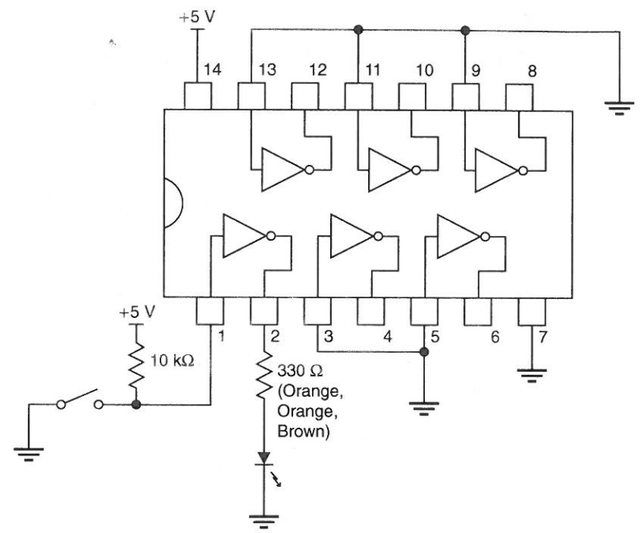
Figure 2.6 DIP Switches and SIP Resistors Used as Logic Switches

LED Operation

Connect the circuit shown in Figure 2.7. This circuit is similar to Figure 2.4. The device with six inverters is labeled 74LS04 or similar.

- Pin 14 of the inverter chip should be connected to the +5 V power supply.
- Pins 3, 5, 7, 9, 11, and 13 should be connected to ground.
- Connect one logic switch from the previous section of the lab to pin 1 of the inverter.
- Connect pin 2 of the inverter to one end of a 330 Ω resistor (identified by three colored bands that are in the order orange, orange, and brown).
- Connect the other end of the 330 Ω resistor to the anode of the LED.
- Connect the cathode of the LED to ground. (The LED case has a flat spot that marks the cathode of the LED. Have your instructor check the LED direction if you are unsure.)

Figure 2.7 LED Driver Circuit 1



Circle the correct answer:

The LED in Figure 2.7 lights when the output of the inverter is HIGH/LOW.

Close the logic switch connected to pin 1. Is the LED ON or OFF? (Circle one.) Measure the logic levels at pins 1 and 2 of the inverter with a logic probe or a voltmeter.

Pin Number	Logic Level
1	
2	

Instructor's Initials _____

Reverse the direction of the LED, connecting the anode to the 5 volt supply, as shown in Figure 2.8.

Figure 2.8 LED Driver Circuit 2