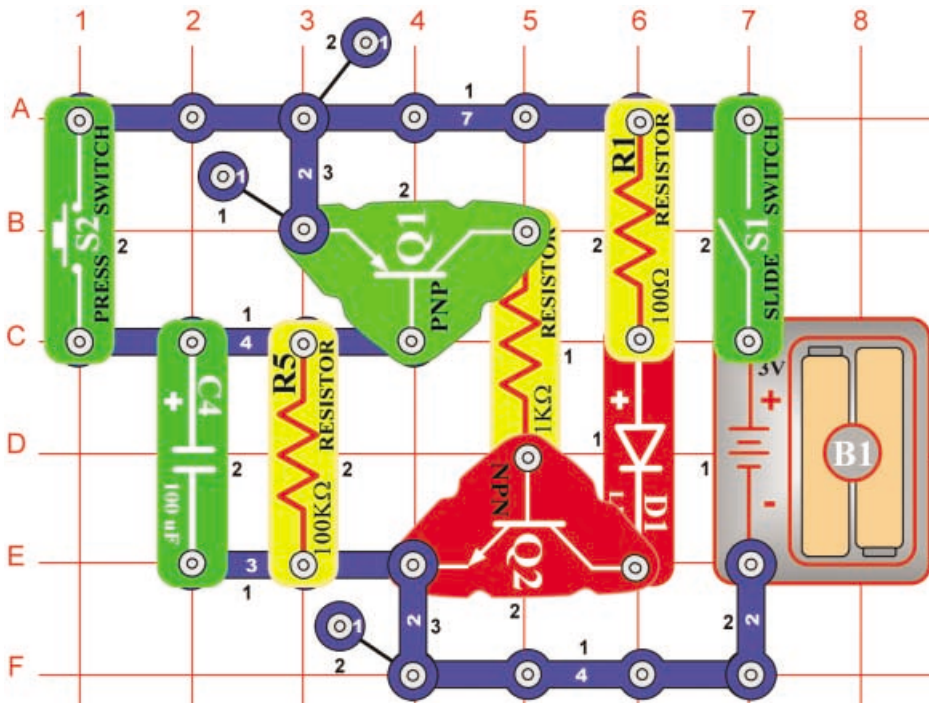


# Project #A41

# Turn Off Timer

**OBJECTIVE:** To build a circuit that turns off an LED for 4 seconds.



Turn on the slide switch (S1). Pressing S2 down increases the voltage at the base of Q1. This turns the Q1, Q2, and LED off as the capacitor charges up. As you release switch S2 the capacitor starts discharging through resistor R5. When the voltage from the discharging capacitor drops low enough, Q1, Q2, and the LED turns off for about 4 seconds. Now change the 100µF capacitor (C4) to 470µF (C5) and the LED should stay off for about 10 seconds.

Requires SC-300 or larger parts set.

# Project #A42

## Turn Off Timer (II)

**OBJECTIVE:** To modify project #A41 to use the 6V bulb.

Replace the LED and 100Ω resistor with a 3-wire snap and 6V bulb.

Requires SC-300 or larger parts set.

# Project #A43

## LED & Bulb Timer

**OBJECTIVE:** To build a circuit that turns off the bulb and turns on the LED for 4 seconds.

Modify the circuit from project #A42 by placing a 1-snap on top of the NPN transistor at base grid location E6 (on level 3). Then place the red LED over it, across base grid locations E4-E6 (on level 4), (+) is on E6. When you press S2 the bulb turns off and now the LED lights. When the voltage from the discharging capacitor drops low enough, Q1, Q2, and the bulb turn on and the LED turns off.

Requires SC-300 or larger parts set.