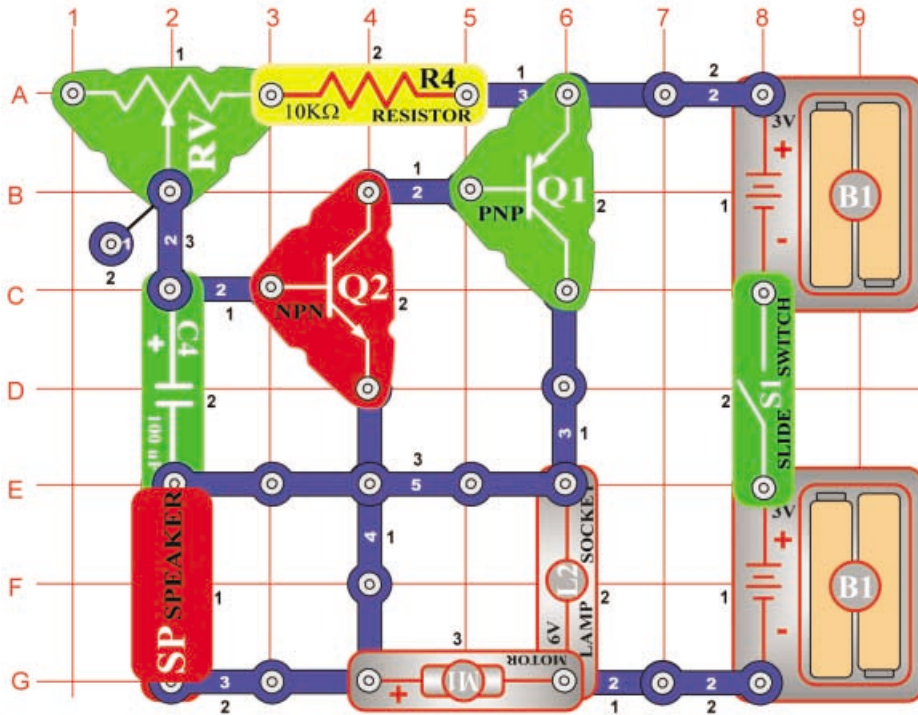


Project #A31

Motor Oscillator

OBJECTIVE: To experiment with oscillator circuits.



This circuit flashes the lamp and turns the motor about once a second. Moving the control lever on the adjustable resistor (RV) makes these occur more or less often. This works with the fan on or off the motor.

Nothing happens while the capacitor (C4) charges up through resistors RV and R4. Then the capacitor discharges in a burst that lights the lamp and turns the motor.

Requires SC-300 or larger parts set.

Project #A32 Motor Oscillator (II)

OBJECTIVE: To experiment with oscillator circuits.

Replace the 100µF capacitor (C4) with the larger 470µF capacitor (C5). Now the circuit activates less often, but the lamp flash is brighter and the motor turns farther. This is due to more capacitance. The adjustable resistor control works the same way, and the fan can be on or off the motor.

You can decrease the frequency of an oscillator circuit by increasing either the resistance or the capacitance.

Requires SC-300 or larger parts set.

Project #A33 Motor Oscillator (III)

OBJECTIVE: To experiment with oscillator circuits.

Now replace the 470µF capacitor (C5) with the smaller 10µF capacitor (C3). Now the circuit activates more frequently, but the lamp (L2) is dim and the motor (M1) jerks.

The adjustable resistor control works the same way, and the fan can be on or off the motor.

Requires SC-300 or larger parts set.