

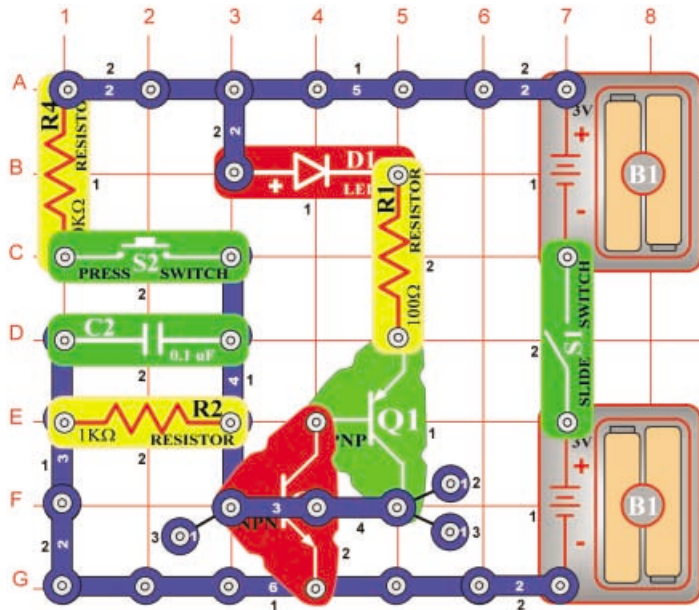
# Project #A49

# The SCR

**OBJECTIVE:** To use two transistors to make an SCR.

The transistors are connected so when the base of Q2 goes high, both Q2 and Q1 turn on. They will remain on until the switch (S1) is turned off. Turn on the switch (S1) and the LED should not light. Now press the switch (S2) and the LED lights. Turn the LED off by turning the switch (S1) off.

The two transistors act as an electronic device called an SCR (Silicon Controlled Rectifier). A three-pin device that once its base is triggered, remains on until the current flow through it stops.



Requires SC-300 or larger parts set.

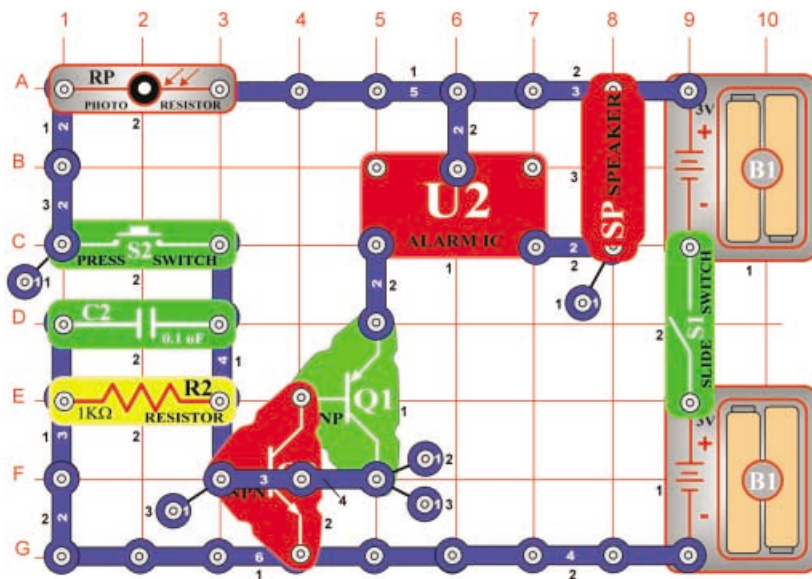
# Project #A50 Light-controlled SCR

**OBJECTIVE:** To modify project #A49 to use the photoresistor (RP).

Replace resistor R4 with the photoresistor (RP). The LED will only light when S2 is pressed and there is enough light on the RP. Turn S1 on and place your finger over the RP. Press S2 and the LED should not light. Remove your finger and press S2 again, the LED should light now.

# Project #A51 Light-controlled SCR (II)

**OBJECTIVE:** To build a circuit that sounds only when there is light in the room.



This circuit operates the same way as project #A50, only now the alarm IC will sound when the switch (S2) is pressed and the room is lit.

Requires SC-300 or larger parts set.

# Project #A52 Light-controlled SCR (III)

**OBJECTIVE:** To modify project #A51 to use the music IC U1.

Replace the alarm IC (U2) with the music IC (U1). Turn on switch S1 and the music IC will sound when S2 is pressed and the room is lit.

Requires SC-300 or larger parts set.