MATERIALS AND PROCEDURE

Materials List
- 1 P-N-P Bipolar Junction Transistor
- 1 N-P-N Bipolar Junction Transistor
- 2 Light Emitting Diodes
- 1 Light bulb
- 2 Silicon Resistor
- 1 photo resistor
- 1 Thermistor
- 1 Voltmeter

Procedure

Using the same set of BJTs with the same load resistance, we conducted an experiment to see if there would be any difference in the brightness of the LEDs. One of the requirements for this experiment was that the LEDs should be illuminated by the same number of photons. As a result, we used an LED that was already attached to the circuit board. The LED was set on a table that was adjustable in height to ensure that it was at the same height as the photo resistor. This was done so that the LED and the photo resistor would be at the same distance from the light source. The LED was then turned on, and the amount of light that the LED emitted was measured. The LED was then turned off, and the amount of light that the photo resistor detected was measured. This process was repeated several times to ensure that the results were consistent.

RESULTS

The PNP transistor is used in this experiment. The LED was used as a light source. Using the voltmeter, we measured the voltage at the base to be able to conduct electricity. The LED was then turned on, and the amount of light that the LED emitted was measured. The LED was then turned off, and the amount of light that the photo resistor detected was measured. This process was repeated several times to ensure that the results were consistent.

When the LED is illuminated, the LED emits light. The light emitted by the LED is detected by the photo resistor. The amount of light that the LED emits is determined by the amount of current that flows through the LED. The amount of current that flows through the LED is determined by the amount of voltage that is applied to the LED. The amount of voltage that is applied to the LED is determined by the amount of resistance that is connected in series with the LED. The amount of resistance that is connected in series with the LED is determined by the amount of current that flows through the LED.

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