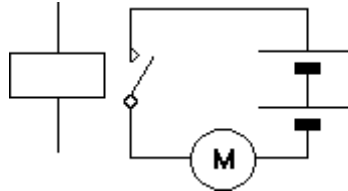


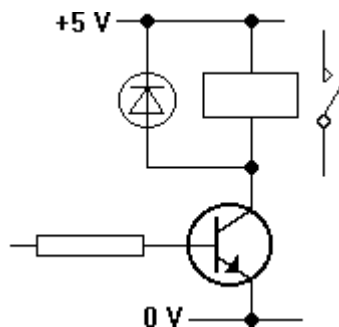
Driving a motor when it gets wet

You are going to design and assemble a circuit which makes a small d.c. motor spin when a pair of wires are dipped in water.

1. Connect the d.c. motor to a 3 V battery via a relay. Check that the motor operates when there is 5 V across the coil.



2. Use a BC107 to sink current from the coil. Use a 4.7 k Ω base resistor and don't forget the reverse-biased diode in parallel with the coil.



3. Use a 4069 NOT gate to control the transistor. Check that the motor only operates when the gate input is low.
4. Use a 1 M Ω resistor to pull the gate input high. Use a pair of wires to connect the input to 0 V via some water in a beaker. Verify that the motor only operates when the wires are wet.

