


Using a motion sensor to start a small motor.

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marshallh



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I am building a motion sensor activated cat toy so my cat will spend a little less time annoying me. I have a PIR motion sensor. 5v-12v to power the sensor. The output however is only 3.3v. I have a 9v battery powering the sensor but the + to the motor is

supposed to flow through the sensor which again is only 3.3v. That is not enough juice to make the motor go. The motor will run when I connect the battery directly. If I remove the motor and attach an LED as a tester the light does come on. So I know the problem is simply not getting enough volts to the motor. I bought a relay but I cannot figure out how to connect it properly.

Any help would be greatly appreciated. Please keep in mind I am a novice. I am not an idiot  but this is my first project building a circuit.

MaxHeadRoom said:

Seems strange for an output of 3.3v what is the PIR unit?

Sounds like you might need a logic level Mosfet, what is the current requirements for the motor?

A little more detail on the various components helps.

Max.

The PIR is a OSEPP PIR-01. I could not find anywhere the requirements for the motor but like I said, when I connect the battery directly to the motor it runs fine. It is a Latrax 370. I don't know what a Mosfet is but I will research that now.

The PIR output is 5 volts it's max current is 10 mA it's active high


If you have tried to run a motor it probably don't work no more.

<http://www.ladyada.net/media/sensors/BISS0001.pdf>



Thank you all for your input. I have added a relay but it hasn't helped. I can light an LED in place of the motor but still won't run the motor. The output from the relay is 3.89v. I can connect the motor directly to a AA battery that is only 1.5v and it will run. This is making no sense to me why it's not working. Any more ideas would be awesome.

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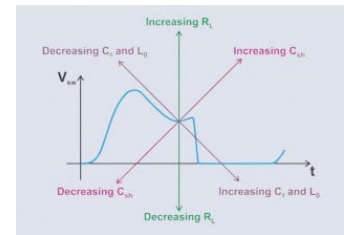
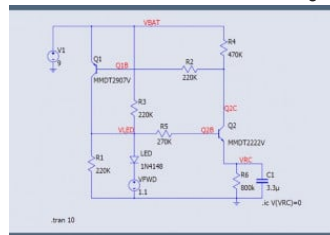
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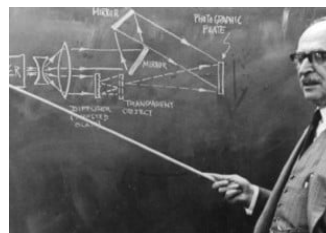
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