

## Re: Problem applying a mosfet

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- *From:* default <default@xxxxxxxxxxxxxx>
  - *Date:* Fri, 01 Feb 2008 11:29:17 -0500
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On Fri, 1 Feb 2008 07:57:45 -0800 (PST), a7yvm109gf5d1@xxxxxxxxxxx wrote:

On Jan 31, 9:45 am, default <defa...@xxxxxxxxxxxxxx> wrote:

I'm trying to use a logic level mosfet to switch on a camera. The camera is a 3 volt type designed for AAA batteries and works fine with NiMH down to about two volts and alkaline to about two volts.

The mosfet drops about 20 millivolts when operating the camera, yet for some reason the supply has to be greater than 3.5 volts with the mosfet in the circuit. Mosfet is IRLZ24 type, N channel in the ground or minus leg of the camera.

I've tried running it with nothing more than the mosfet grounded and gate tied to +3 volts and that won't work - grounding the drain (shorting the mosfet) will work the camera.

Something inside the camera doesn't like seeing a mosfet out there.

An LED from + to the mosfet drain is modulating - brightness varies a bit then the camera decides its had enough and goes into a high impedance state.

An incandescent lamp load on the drain will work if the camera isn't also connected and the LED doesn't vary brightness.

Any ideas on how to fool the camera into working? I've tried using large caps to lower the impedance of the power sources, and a small inductor in one lead. Or any ideas on ways to further zero in on the cause?

The high impedance state the camera goes into is apparently the same as its low battery turn off - can't tell because the display is off but low battery eventually leads to an off condition with no further loading (Hi Z) on the battery.

At 3.5 volts the mosfet will work the camera, as will a battery (no

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mosfet) down to ~1.9–2.0 volts.

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Nowhere in your post does it explicitly say what you are doing.

Do you have an external battery pack that you are hooking to the camera's external power jack, and switching it with a mosfet?

Do you have the batteries inside the camera and are trying to send a logic signal to something on the camera?

For that matter, what kind of camera? Are you tooling around inside or outside the camera?

And what kind of camera turns on just because there's power to it?

Don't you still have to press a button?

The little darling in question is a Saitek "Pocket Cam X" I opened it up soldered wires to the battery tabs and shutter button and ran them out the case to a connector.

Intent is to use a pair of D batteries external to the camera. No external power jack except it will accept 5 V via the USB cable – but that wastes a lot of power.

No, this baby and their megacam power up and initializes when batteries are put in – the reason there's so much radio control, aerial photo, stuff on the web for hacking into it – and the low price.

I'm running a battery life test on it now it has taken 257 pictures and still counting over 2 days on 3 AA NiMH cells. Camera takes ~7.5 seconds to power up and get straight, shutter actuates, 6.5 seconds for pix to go into memory, then every thing goes to sleep until the controller turns the mosfet on again.

Goal is 900–1200 pictures over a week during daylight for time lapse. Time delay per picture adjustable over the range of 1 minute to 8 minutes per pix.

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