

Re: Powering a 5V and a 9V circuit from one 9V battery -- isolation help?

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- *From:* jalegris@xxxxxxxxxxxxx
 - *Date:* 2 Jul 2006 06:34:35 -0700
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mp__@xxxxxxxxxxxxx wrote:

For size/weight reasons, I'm hoping to use a single 9V battery plus mic2950 5V regulator to power a mini video camera (9V) and some RC servos (5V). Unfortunately, every time the servos move, there's a burst of interference on the video signal. There's no interference when the camera and the servos are powered by separate batteries.

The circuit is simple: 9V battery, mic2950, camera, and RC stuff, just wired together the obvious way. I tried adding a capacitor between output and ground of the regulator, but that didn't have any effect.

Is there any way to eliminate the interference?

Or, is there a 5 or 6V power source that's smaller than 4AA cells, or an alternate 9V battery that's smaller than the usual?

Thanks for your attention.

Michael

It's tried-and-true solution to have separate power supplies for the motors and the control circuitry. Your system has already demonstrated that it works well this way, so if you go with the flow, you can optimize the batteries for each subsystem. Your control circuit and video might be able to get by with a couple of lightweight lithium cells @ 3 volts each. Meanwhile, your servo motors could run on some sort of rechargeable cells because that's where the bulk of your power is being consumed. This also allows you to maintain full control and video even when the servo motor batteries are getting low.

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Joe Legris

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