

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

Source: <http://sci.tech-archive.net/Archive/sci.electronics.design/2006-07/msg00181.html>

- *From:* "Luhan" <luhanis@xxxxxxxx>
 - *Date:* 2 Jul 2006 08:11:59 -0700
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mp__@xxxxxxxxxxxx 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

I've done this before without any problems. The camera was 12 volts and the servos were powered from a 7805 regulator with about 100uf on both the input and output. You don't need a fancy low-dropout regulator for this application.

Also, watch out for any common ground connections, run both back to the battery separately. Or, try physically moving the servos away from the camera to see if the coupling is inductive from the motor coils.

Good luck,
Luhan

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