Re: Driving servos from a PC

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- *From*: et472@xxxxxxxxxxxxxxxxxx (Michael Black)

- *Date*: 14 Dec 2006 17:33:47 GMT

Pete Verdon (news@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx) writes:

> As part of a construction project for a charitable event, I need to
> build a number of big analogue dials (like an old−fashioned voltmeter)
> controlled by a series of PCs (each computer drives two dials). Accuracy
> isn't critical, but I do have a fairly strict budget restriction.

Why not pull some stepping motors out of junked inkjet printers (or dot matrix printers for that matter, though nowadays I find the former more likely to be found as junk), and use those? They would obviously be cheap and avaialble (you aren't likely to find RC servos lying in the garbage), and the driving is easy. Use a parallel port. Or, if this is from a dedicated computer, find an older one with an ISA bus, and put two parallel ports in there for more control lines. Some counter ICs would shift the needed control to hardware, and then it would only need a direction line and step line from the parallel port for each stepping motor. (They work by sending pulses to the windings of the motor, and each pulse makes the motor step one step; the direction is determined by which of the two windings you send the pulse to first.)

Michael

> One possibility seems to be to use an RC servo to move a big cardboard
> needle. I've not used servos before, but a little research suggests that
> the required position is commanded by altering the pulse width of a ~5v
> 50Hz square−wave signal a little either side of 2ms.
>
> As I said, I don't have much of a budget. I also have limited
> electronics knowledge. But is it totally unrealistic to consider
> controlling these servos via a soundcard output? I envisage putting one
> dial on each of the left and right channels, and getting the card to
> spit out an appropriate wave−form to each of them. I realise this won't
> be a proper square−wave, but am I likely to get close enough?
>
> What else have I missed? Do you have another (cheap) suggestion, whether
> involving servos or not?

Thanks,

Pete

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