

Re: Source Sealed Potentiometers?

Source: <http://coding.derkeiler.com/Archive/General/comp.arch.embedded/2006-10/msg00615.html>

- *From:* "Robert Adsett" <sub2@xxxxxxxxxxxxxxxxxxxxxxxxxxxx>
 - *Date:* 10 Oct 2006 20:52:01 -0700
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Frnak McKenney wrote:

On 9 Oct 2006 12:15:19 -0700, Robert Adsett <sub2@xxxxxxxxxxxxxxxxxxxxxxxxxxxx> wrote:

Frnak McKenney wrote:

--snip--

<http://www.taosinc.com/downloads/pdf/encoderdesign4b.pdf>
<http://www.taosinc.com/downloads/pdf/IOSDN1.pdf>

--snip--

I'm also having trouble translating the "tracked" approach out of the optical domain and into the magnetic... um, "field" (oooog!) to satisfy the OP's concerns regarding outdoor use. It's not that I think that this translation couldn't be done, it's that I get stuck at the part where I picture my rather clumsy fingers trying (for the third time) to glue 256 magnets of two different widths around the circumference of the OP's platform in the correct pattern.

Hm. What if I wrapped one flexible magnetic strip around the platform's rim and then covered it with a carefully punched strip of metal? Will enough of the strip's magnetic field get through so that a linear Hall Effect sensor can tell the difference between a narrow and a wide slit? I suspect I can print-and-paste-and-punch a pattern more reliably than I can glue individual itsy-bitsy

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magnets... I need to think about this.

Reverse the set up a bit, put the magnet on the sensor and just leave the punched pattern on the table. That's essentially how gear tooth detecting hall sensors work, at least some of them incorporate the magnet into the sensor assembly. Building an array of them to achieve the desired resolution I'll leave to you ;)

By "leave the punched pattern on the table" did you mean not use it? Or that I should attach my oh-so-laboriously punched metal strip to the rim of the platform ("table")?

The latter, sometimes English is just too flexible :)

Oh, and just to stir the pot a bit more, in my search for an array of Hall Effect sensors I ran across the Honeywell HMC1512 magnetic sensor:

I've usually used Allegro sensors (linear sensors to measure current) The one time I used a Honeywell sensor it had entirely too much drift. Linear hall sensors in general are rather inaccurate and need calibration before use. I think you'd need a rather gross pattern to use them.

Ah, well... It's been fun, but I have to go do some RealWork(tm).
Sigh.

Well, that's no fun!

Robert

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