

Re: switch debouncing

Source: <http://sci.tech-archive.net/Archive/sci.electronics.design/2005-10/msg02289.html>

- *From:* Spehro Pefhany <speffSNIP@xxxxxxxxxxxxxxxxxxxxxxxxxxxx>
 - *Date:* Mon, 17 Oct 2005 11:54:08 -0400
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On Mon, 17 Oct 2005 14:26:30 GMT, the renowned Fred Bloggs
<nospam@xxxxxxxxxxx> wrote:

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>>
>> If it's going into a microcontroller, firmware is almost always the
>> best way.
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>> Best regards,
>> Spehro Pefhany
>
>Well, if you can arrange things with external hardware so that the
>switch input is always valid, that is just that much less the firmware
>has to do— especially if the switch input is a very infrequent occurrence.

Timer-interrupt driven periodic (in the 100–500Hz range) polling uses negligible bandwidth of a modern processor for any reasonable number of keys. Even if its a frequent occurrence. And it can filter out electrical noise and momentary contact breaks due to shock or vibration as well, if you choose to write it to do so.

There is reason to add some external hardware (especially to deal with ESD issues and possibly with the miserably small and variable current that on-board pullups typically deliver) but not for the debouncing. Even a crummy on-board RC clock will yield debouncing times accurate within a few percent at zero additional cost, and less need to test the board for missing parts.

Best regards,
Spehro Pefhany

—
"it's the network..." "The Journey is the reward"
speff@xxxxxxxxxxx Info for manufacturers: <http://www.trexon.com>
Embedded software/hardware/analog Info for designers: <http://www.speff.com>
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- **References:**

- ◆ **switch debouncing**
 - ◇ *From:* Mac
- ◆ **Re: switch debouncing**
 - ◇ *From:* Spehro Pefhany
- ◆ **Re: switch debouncing**
 - ◇ *From:* Fred Bloggs

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