Re: Simple but precise ramp/triangle generator

Source: http://sci.tech−archive.net/Archive/sci.electronics.design/2004−09/3323.html

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From: Rich Grise (*null_at_example.net*)
Date: 09/15/04

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Date: Wed, 15 Sep 2004 21:02:56 GMT
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On Monday 13 September 2004 12:22 pm, Spehro Pefhany did deign to grace us
with the following:

> On Mon, 13 Sep 2004 19:01:39 GMT, the renowned Joerg
> <notthisjoergsch@removethispacbell.net> wrote:
>
>>Hi Tilmann,
>>
>>The only pretty sawtooths that I designed were all consisting of a
>>current source and a very good film capacitor. For the current source a
>>simple two−transistor setup would work.
>>
>
> I'd use a BJT current source and a capacitor and a comparator for a
> 50kHz sawtooth. The amplitude can be nice and stable, and I assume for
> this application you don't care if the frequency varies a bit, so a
> ceramic cap would work.
>
Just a nitpick, but does a ceramic cap actually vary, or is it just
that with their wide tolerance, your absolute freq. could be off
from design freq, which, of course would have some "variance" from
unit to unit.

Or is an individual ceramic cap really unstable? I know they're leaky,
and have crap TC, and +70−20 tolerances, but that's what makes them
good bypasses.[0] :−)

Thanks,
Rich

[0] or, of course, decoupling caps, depending on the phase of the moon. ;−)