

# Re: Win's next 10kV project, a 1us ramp

*Source:* <http://sci.tech-archive.net/Archive/sci.electronics.design/2006-01/msg01217.html>

- *From:* [kensmith@xxxxxxxxxxxxxxxx](mailto:kensmith@xxxxxxxxxxxxxxxx) (Ken Smith)
- *Date:* Sat, 7 Jan 2006 18:05:22 +0000 (UTC)

In article <dpkipk02rl3@xxxxxxxxxxxxxxxx>, Winfield Hill <Winfield\_member@xxxxxxxxxxxx> wrote:  
 [...]

> Now I'm challenged with a creating a moderately-precise (5%),  
 > programmable, fairly-fast 10kV ramp, of 1 to 50us in duration.  
 > It's floating on 3kV. The 1us-long, 3kV to 13kV ramp spec is  
 > tough, but may have a relaxed 5%-precision spec, provided it's  
 > repeatable. :-)

ASCII Art:

```

pivot 0=====0=====0
! # !
Copper plate ===== ### !!!!! Piston
Gap ### ! ===== ! assembly
Copper plate ===== ### =====
Non conductive !! ### !!
mounting !! ### X-X Steam valve
. ....### /\
.. ### !! Boiler
.. ### -----
.. Conductive
.. mounting
..
..
cam operated . . Lead wires
switch ! . GND
--- .
3KV -----O O-----+----- To load

```

Or, perhaps:

Some ceramic capacitors have decreasing capacitance for increasing voltage. You may be able to use these to straighten out an RC ramp reducing the problem to just one of switching.

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kensmith@xxxxxxxxx forging knowledge

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• *Follow-Ups:*

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    ◇ *From:* Joerg
- ◆ *Re: Win's next 10kV project, a 1us ramp*  
    ◇ *From:* John Larkin
- ◆ *Re: Win's next 10kV project, a 1us ramp*  
    ◇ *From:* Winfield Hill

• *References:*

- ◆ *Win's next 10kV project, a 1us ramp*  
    ◇ *From:* Winfield Hill

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