

## Re: Current source design (tricky?)

**Source:** <http://sci.tech-archive.net/Archive/sci.electronics.design/2005-03/2074.html>

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**From:** Larry Brasfield ([donotspam\\_larry\\_brasfield\\_at\\_hotmail.com](mailto:donotspam_larry_brasfield_at_hotmail.com))

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Date: Fri, 11 Mar 2005 15:56:36 -0800

"Terry Given" <[my\\_name@ieee.org](mailto:my_name@ieee.org)> wrote in message  
news:qypYd.8841\$1S4.942601@news.xtra.co.nz...

> *Larry Brasfield wrote:*

...

>> *A number of op-amps on the market today are  
>> very tolerant of capacitive loading because they  
>> have a feature whereby that loading causes the  
>> gain-bandwidth of the part to drop, almost in  
>> proportion to the loading, such that the extra  
>> pole remains far enough above the unity gain  
>> crossover frequency that stability is preserved.  
>> The LM8261 suggested by Mr. Hill is a good  
>> example of this class.*

>

> *I have been bitten quite badly by a similar "feature" in  
> the LM6134 (its a slew-rate modification).*

The feature I mentioned above works by causing the effective value of an internal capacitance to increase. So it changes both the linear small-signal response (less GBW) and the slew limiting (slower).

The adaptive slewing feature that National (sort of) describes in the LM6134 datasheet is not the same thing at all. It operates by increasing the amount of current available for slewing under certain large signal input conditions.

As for the problem you had with it, I would not deem it a biting feature so much as a reason to not use it without understanding it better. I will say, however, that mode changing circuitry for the alleged benefit of large signal conditions is something that usually gives me the willys.

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--Larry Brasfield  
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sci.electronics.design: Re: Current source design (tricky?)

Above views may belong only to me.