

## Re: Video Drivers, I admit I don't know much

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**Date:** 01/14/05

Date: Fri, 14 Jan 2005 03:01:08 -0000

<uvccet@juno.com> wrote in message  
news:41e71305\$1\$woehfu\$mr2ice@news.aros.net...

>

> Hi,

>

> *I don't know all that much about video and buffering it but am always  
> willing, and hoping to learn.*

>

> *I have two broadcast video feeds that I need to switch between, using an  
> analog switch. Assuming that all the gain and output loading requirements  
> of each feed are already dealt with behind the switch by the previous  
> designer, I think I just need a unity gain buffer on the output side of  
> the switch since the switch itself cannot drive any loads, and needs to be  
> protected from the outside world as well.*

>

> *I admit that don't know the best way to configure the output buffer. I am  
> picking up an existing design and trying to learn my way through it, as it  
> should be obvious I am not all that learned in such things. I do search  
> web sites and app notes, but its possible that this one is just too simple  
> for them to bother with, or I am not looking in the right place.*

>

> *I am figuring a EL2244 or equivalent. Does it require a feedback ckt, a  
> resistor between the output and the negative input, or just the output  
> tied back to the inverting input? (not very good at ascii art yet) Since I  
> seek unity gain, is it just a 750 ohm from output to inverting input, and  
> from there another 750 ohm to ground?*

>

> *I am looking at one schematic where the output of such an analog switch is  
> an LT1361 (righteous bucks for that! <g>) and it is just video into the +,  
> and a 750 ohm feedback to the - input. Not knowing what is going on back  
> upstream, I can't guess exactly why that value was chosen, and if it is  
> needed, or just a designer's method that works as well as other  
> configurations.*

>

> *I am doing is reading app notes, and looking at existing designs trying  
> to learn on the fly, and I am not seeing a lot of consistency in what is  
> done, so I gather there are many opinions, and they all work, but since I*

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- > *don't know the designers, I can't ask them what they were thinking, and*
- > *why they chose what they did.*
- >
- > *That leads me to this group, and hopefully its not too inane a question to*
- > *be asking.*
- >
- > *I like to hear about web sites I can learn this from, so pointers would*
- > *be gratefully accepted as well as opinions on how to configure this*
- > *buffer.*
- >
- > *Thanks for your consideration.*
- >
- > *John*

The cheap TSH94 quad video opamp (+/-5V supply) has two of its amps designed to be logic switchable to an 'on' or 'off' state. The logic 'standby' pins are opposite action, so if the two logic control pins are tied together, then a logic 0V will switch ON amp 1 and switch OFF amp 2 and vice-versa for a logic HIGH. The operation takes 200nS.

Therefore what we have here, is a direct acting video switch, that can be used for OSD insertion. I.e. 2 video feeds to the amps, one video out, a particular video selected by the logic level on the control pin. The 2 amps are just wired as voltage followers and then both their output pins wired together. 200nS is adequate for run of the mill NTSC or PAL signals and gives quite a clean 'edge' to the inset video.

As these are video amps anyway, then they can directly drive the 75ohms coax feeding a monitor or suchlike. The two spare amps could then be used as preamps or X2 amps back-terminated cable drivers etc.

[NB. If your "Broadcast Video Feeds" are 'real' broadcast studio quality then ignore the foregoing, as the switch over is not fast enough!].

regards

john