

Date: Sun, 22 Sep 2002 12:31:32 -0700
From: "p. hendricks"
Subject: **VCA6b question: clearer schematic?**

Hi, Is there a clear copy of the VCA6b schematic somewhere? I'm having trouble reading the low res one in the pdf.

thanks,

Phil

Date: Fri, 21 Feb 2003 12:05:33 -0500
From: harrybissell
Subject: **Re: speed of VCA6**

Dave Magnuson wrote:

> Hi list,
> I have 2 unfinished VCA6's sitting in a box in the workshop... and I
> think I came up with a neat way to use them.
> I really enjoy using DJ mixers to x-fade between 2 synth voices... and
> it would be nice if I could have a triple frac-rac sized "dj mixer" in
> the modular. What I'm picturing is having 2 pairs of stereo inputs and a
> stereo output. A single CV could then control the x-fade of the two
> sources.
> This would be ideal because the entire mixer is in the frac-rac, with
> only a small box containing the crossfader on the table in the studio.
> Also, no audio would be running through the xfader, so it'll be immune
> to scratchy pots.
> My question is: is the VCA6 fast enough that it won't thump when I throw
> the x-fader all the way to one side? I'd hate to go through the trouble
> of wiring the two together and find out it wouldn't be useable in this
> manner.
> Thanks everyone!
> Dave >
> PS: Am I suffering from some sort of addiction? I never pictured a
> homemade modular DJ mixer until now... but it seems ****SO**** appealing.
> As they say: realizing you have a problem is the first step towards
> recovery :)

If you null the DC offset pretty carefully... you should have no problem.
I bet you cant slap the slider from one end to the other in less than 10-
20ms which is really slow, as envelopes go.

For audio use... you probably want to engage the linearization diodes. The
idea there is to put some current into the diodes.. then use less
attenuation in the inputs to the OTA. This will lower distortion, increase
signal to noise ratio...and (imho) sound shitty if you drive it into
clipping. If you are going to overdrive,

leave it like it is...

H^) harry

Date: Fri, 21 Feb 2003 13:07:58 -0500
From: Dave Magnuson
Subject: Re: speed of VCA6

This is just the kind of info I was hoping to hear!! I'll probably try it without the linearization diodes... because I LOVE being able to drive VCAs (and VCFs) into clipping.

If I find that the audio quality is below my expectations, I'll try your suggestions. Do you know of any good app notes or schematics that show the diodes in use? I don't understand them enough to design from scratch (I understand how they work... just not enough to implement them with out another circuit to use as a reference).

Thanks as always!! I bet you know what I'll be doing this weekend...

Dave

Date: Tue, 13 May 2003 04:02:32 -0000
From: "darkboneus"
Subject: VCA 6b Gain increase

Does anybody know how to modify the VCA 6b to increase it's gain? Mine is way too quiet. It responds to CVs but it seems to have about 60% signal loss. Any ideas?

Date: Tue, 13 May 2003 00:12:02 -0400
From: harrybissell
Subject: Re: VCA 6b Gain increase

Make R8, R25 (was 47K) bigger. The bigger you make them, the higher the gain.

Also, check to see what the maximum current into the Gm bias pins is. Measure the voltage across R7 , R24 (10K) with the CV input at maximum. The current is equal to the voltage you measure (in volts) divided by the resistance (10,000) and the answer is in amps. The max for this part is about 1mA (.001A). If you are not near this value, you might want to play with the values for R15, R32 (make them smaller).

I'm suspicious of the value of R17 and R34... might be a little high. OTOH I have not looked at my board to see if I changed them.

You could also make any of the input resistors smaller... R1-4, R18-21 ... but this might increase distortion if you go too far...

H^) harry

Date: Tue, 13 May 2003 13:51:11 -0000
From: "darkboneus"
Subject: Re: VCA 6b Gain increase

Once again, thank you Harry!

Date: Wed, 14 May 2003 13:48:53 -0000
From: "darkboneus"
Subject: Re: VCA 6b Gain increase

Hi Harry.

I got the gain problem worked out, now I have a new problem. I can't seem to get the vca to close completely.

This was a problem from the start. If I adjust trimmer 5 to it's lowest voltage, it just increases the range on the Level pot before gain actually starts occurring. Is there a place where I can insert a pulldown resistor to close the VCA?

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Rob