

Date: Sat, 19 Oct 2002 11:57:08 +0200
From: ">>>marjan
Subject: Re: Wildcat & Tomcat pricing

> Second, would there be any benefit to using a 2SC1583 for the NPN pair
> in the Tomcat VCA? Or would that be overkill?

This is great little VCA considering few components it's made of. Sure it'd be better to use matched pair esp as you don't have trimmers in there, but pair of hand matched and glued together npns or 3046 work ok - tried both and results are similar, but dc offset will go up with temperature if you don't match them. I did use balance and input trimmers. Balance trim goes between r61/62 and vcc. If you use two trannies use something like 10 or 22k, for matched pair use 1k to trim the resistor tolerance. Input trim just adds voltage to input. Maybe not needed here. Only real downside is rather high cv bleed from sharp envelopes, at least it as on my design. Input signal bleed is otoh trivial. Used tl082 for opamp and had to tame it with 100p across the feedback resistor. Later I tried 072 but there were no oscillations, eh? Anyway if you have spare 1583 use it (maybe to save it for vcoss) otherwise use 3046.

marjan

unknown poster and date
Subject: Re: Tomcat resistors.

> I know you're in the middle of the Wildcat docs, but I'm just
> curious about which resistors were changed on the Tomcat.

Hi Rich.

- o If there is too much res - change R51 from 100K to 120K....or just wire in a 100K and 10K (22K) in series. (you might like it like it is, it's nasty....;-)
- o Hi-scale trim is flat - change R43 from 10K to 4.7K
- o Attack and Decay pots are connected backwards - cut the trace connecting the center pad to the right pad and jump the center pad to the left pad on both pots.
- o Slide up/dn is uneven - add a 1M resistor from the gate of Q1 (2N5460) to U7 Pin-1.
- o Slide is too short - change C14 from .47uF Mono cap to 1.0uF Mono Cap.
- o My 1/4" pc-board mounted jack acts like it's connected wrong. I haven't had time to verify it yet but I suspect we will have to cut the trace and swap output terminals to use a board mounted jack.

I think that's it....I think...anyway let me know if you have more problems, I'm getting the rev3 boards ready to run and expect them December-January....Wildcat rev3's too...

Tom

In EFM_Synth@y..., prcamann@a... wrote:

> What are the recommended pots (and their source) to use on the Tomcat?
>Paul Camann

Hi Paul,

I used Xicon/Alpha pots, from Mouser (<http://www.mouser.com>). The part numbers: Glide pot, 1M linear taper, #317-2091-1M; Tune, mix, cutoff, resonance and envelope, 50K linear taper, #317-2091-50K; Attack and decay, 1M Audio taper (you may prefer linear, matter of taste), #317-2081-1M; And volume, 50K audio, #317-2081-50K.

One small caution: when installing R46, move it away from the board's front edge a little, otherwise the mix pot will not seat securely.

Spent a little more time tinkering with my Tomcat... seems the DAC scale trimmer is having no effect, as the voltage stays at about -11.20V no matter how much I adjust the trimmer. I'll tackle this after I get some sleep.

Rich

Date: Thu, 21 Nov 2002 01:55:01 -0800

From: "tomg"

Subject: Re: Tomcat Is Purring!

The power jack is 163-5003 Jack Power 2.1mm. You will need to drill out the back pad a little or break the terminal eyelet and crimp the terminal a little to get it in the hole.

I think a 16P-J509 1/4" pcb mount will do but I'm not sure. I have 1/4" jacks in stock and will send you one. Please drop Kim a note so she can write it up. efmorders@hotmail.com

Tom

Date: Sat, 23 Nov 2002 01:16:36 -0000

From: "metamaticdiy"

Subject: Altering A Tomcat

Hi Everyone,

I've finished the Tomcat, and I have to say I'm mightily impressed. I had grand plans to implement mods and put in patch points, but for the time being I've settled on this:

1. Building an additional attack/release generator (probably the one from the NFS), and putting in a switch to select between the existing attack/decay and the new a/r to the VCA. The connection would be broken between U13 pin 7 and R73.

2. A switch to select between lowpass and bandpass on the VCF. Here, I'd break the connection between U12 pin 9 and R59 (beyond the point where pin 9 connects to R57, of course), and add a switch that selects between pin 9 (lowpass) and pin 8 (bandpass).

3. Taking the outputs from the VCO and suboctave divider at pin 7 of U10 and pin12/9 of U11, adding attenuating resistors as appropriate, and adding a switch, an attenuator, and an appropriate attenuating resistor to the VCF cutoff summing node at the base of Q8, for selectable audio frequency modulation of VCF cutoff.

4. an additional jack and attenuating resistor to the VCF cutoff summing node, for an additional CV input.

If anyone sees any reason why any of this shouldn't work, please let me know. Incidentally, most of these mods are inspired by memories of my first real synth, the MicroMoog, another remarkable 1 VCO synth.

Thanks,

Date: Sat, 23 Nov 2002 04:53:53 -0800

From: "tomg"

Subject: Re: Altering A Tomcat

I don't see any problem with your plans...but you might think about a 2r panel with a row of normalized I/O jacks under the controls. This way you don't really build on to the synth risking the things that doing that means. You can still use it like it is and have access to the separate modules too.

Tom