

Date: Fri, 18 Apr 2003 11:10:13 -0000
From: "synthhead2003"
Subject: wav 1b question

Just finished the wav 1b board. The sub divider worked great But having a little problem in the wave shaping area. Has anyone had any problems with this board , I couldn't find much after searching the message page which leads me to think the board must be bug free. The only thing I can think of is if I have made a mistake with the shape pots. the schematic has them going to +12, have I read this right ?

Any help would be greatly appreciated

Chris

Date: Fri, 18 Apr 2003 12:26:19 -0000
From: "darkboneus"
Subject: Re: wav 1b question

Did you use 3.3M resistors for R6 and R14? If you use the 330k as called for in the parts list, the shape knob will have an effect for about 1/8th of a turn and then go silent. Let me know if this helps. By the way, anybody know why my sub octave generator only puts out sub octaves if I feed it a sine? Saws wont work.....

-Rob Currier

Date: Fri, 18 Apr 2003 15:44:18 -0000
From: "superlpaul"
Subject: Re: wav 1b question

Hi Rob,

Conceivably, it is because of the following reason (I have NOT referred to any schematics so I may be goofing totally here).

An EFM saw is usually something like + 7.5 to 0 volts, i.e. it is NOT symmetrical around the zero line. A sine usually is symmetrical, so comes below zero as well. The first step of the sub octave generator is probably a comparator, to change any input into a pulse wave of some description. If in that comparator, you are comparing input to 0 or something below zero, a saw will most likely not trigger the comparator. However, a sine well might. So you might well test exactly what was being compared to what inside that comparator...

Hope this is of some use!

Paul

Date: Fri, 25 Apr 2003 13:20:51 +0100 (BST)
From: paul smith
Subject: Re: Re: wav 1b question

Rob,

There's a simple way - don't use the saw output directly, but through a capacitor. The wave form will then automatically center upon its musical average - in the case of a saw, the point midway between top and bottom will become the zero line.

For a demonstration, simply hook a (something like) 470 nF capacitor between the saw output of a VCO and the input of the wav module.

Disadvantage of this: because of the capacitor between the two modules, you have basically introduced a high pass filter. Even some averagely-designed commercial synths lose bass power in the oscillators because of this limitation. If you really want to do this, use a serious capacitor - something like an elco, 25 uF, plus towards the VCO.

Your other option is to mix the "lopsided" VCO saw with the negative of half its top-top voltage. For instance: saw goes from 0 to 10 Volts, so you mix in a -5 steady voltage. The output of the mixer now goes from (0 - 5 =) -5 V to (10 - 5 =) +5 V. Symmetrical saw!

Hope this helps a bit... The second option is what you'd use if you need accuracy (or low frequency signals). For audio symmetry, just use a sufficiently large capacitor.

Hope this helps!

Kind regards,

Paul