CALIBRATION ADDENDUM FOR ANTONUS 2600

Internal Clock

Init. frequency
01) Monitor the internal clock output with an oscilloscope
02) Put rate slider at max
03) Adjust INIT trimmer so the square wave doesn't disappear at max rate setting

Pulse width
01) Monitor Internal clock output with an oscilloscope
02) Put RATE slider at max
03) Adjust WIDTH trimmer for 50% duty cycle

VCO2 WAVESHAPER

VCO-2 Wave shape adjustments Symmetry
01) Monitor triangle output with oscilloscope
02) Adjust the "SYM R115" trimmer for best triangle waveform (you move the waveform to an triangle - you find at the waveform a spike which must be moved to get a sharp peak/top notch

DC offset adjust for the Sine Wave

01) Monitor sine wave output with oscilloscope

02) Adjust " TRI OFFSET R125" trimmer so the peaks of the triangle waveform is not flat or either end - (the waveform voltage for -/+ Volt must be balanced to get the best waveform balance)

LEVEL adjust
01) Monitor sine wave output with oscilloscope
02) Adjust LEVEL R128 for 10Vpp output

Mostly this step is combined with ROUND - sometimes you have to give more than 10VPP to start the bending of an triangle to an Sine Wave

Purity adjust
01) Adjust R121B ROUND for best sine waveform
It might b e necessary to readjust calibrations after performed in the order listed.

note: if you don`t get a SINE wave , but often its just an failure from the calibration method - if you have trouble change the gain to 12-15VPP, then turn the ROUND trimmer)

but sometimes is a faulty 2N3958 the problem, mostly cheap Chinese fakes

Internal MIDI and CV MIXER.

Use a perfect calibrated voltage source, split the signal using a multiple and connect at CV input at the Side panel and leave the another cable for measure.

Measure at the non connected cable and check that you can reach from 0v to 5v at least measuring the tip of the cable patch. This is measuring as standard way, ground and tip voltage difference. This is the main source voltage reference.

Then connect another cable to the front panel KBD CV output connector. If you measure the signal in this cable you will notice a voltage difference in milivolts between main CV source reference and this ouput.

Let's go to measure the difference between two signals connect one probe of tester at the tip of the voltage source cable and connect another tip to the KBD CV ouput cable. You should measure a difference 0.xxx milivolts. Is very important to use here a good measure tool with milivolt resolution. Take this reading as reference for the following step

Put the reference voltage in 5v. This milivolt difference will increase as you increase the voltage at the CV source, so more difference is at 5v of source and the minimum difference at the 0v in source.

With 5v at source use the internal trimmer R405 CV Scale and adjust to match the same milivolts difference as when the reference was at 0v.

Return to 0v and check that if the initial milivolt difference reference has changed. If changed then repeat the procedure again with 5v and adjusting with the same trimmer to reach no difference in milivolts between when is on 0v and when is on 5v. The tolerance must be around 2mv of difference for be optimal.

If you are using the Antonus duophonic MIDI interface you can use the voice 1 cv out with a proper MIDI controller connected at MIDI in.

So you only need to connect a cable at the CV output of voice 1 and measure at the tip of this cable.

As there is internal bus connection you don't need to connect nothing more than the related cable to the KBD CV socket at front panel for make the measures and adjust of milivolt difference between the two cables.

Use the note MIDI 48 "C3" for 0v reference and then press note 108 "C8" Check in your keyboard were is the C3 key and then play with 5 octaves higher at this test.