

Purple Knobs and Jack. This is the core vco, with its 1v per octave input jack. Use these to control the frequency of the vco and to externally control it musically with your midi to cv converter.

Red and Yellow Knob section. These are the mixer portion of the synth. Yellow is the Triangle Wave Form. Red Knob is the Subharmonics Pulse wave form that is sub divided from the main core. Use the SEL Button to select a division: A B C D

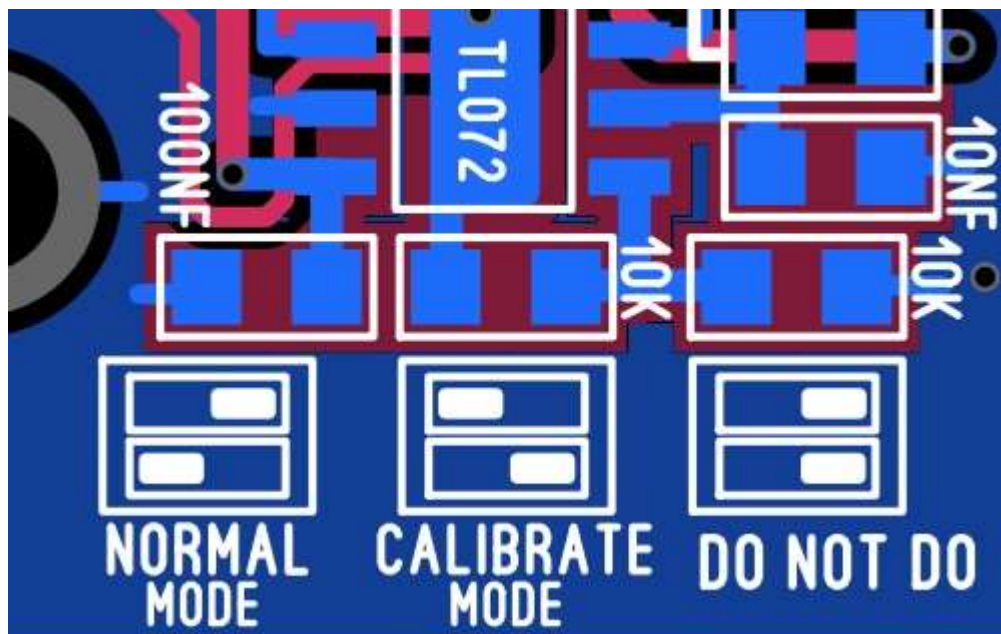
Green Section. This is the Shift Register Section of the vco. This is being clocked by the main vco. The output of the Shift Register is internally patched to a High Pass Filter. Use the HPF to remove bass frequencies from the Shift Register.

Green Toggle Switches. You can select a random sequence, or a locked jitter/stutter sequence. The sequence refers to the Shift Register. It is happening at audio rate. The EXT input jack is a 'move along' external input. This manually shifts the sequence to something else. You can here the harmonics since all of this is happening at audio rate. You can patch an LFO, VCO, or manual trigger type module to the EXT input jack. Random sequence makes the output sound like Arcade Noise.

Orange Section is the internal synth Decay and VCA section. Trigger input, Trigger Input Button, DKCV, and the Decay knob are all involved with the synth section. OUT synth is the output used to monitor and hear the output of the synth section.

Drone Output is a direct output at full volume level happening after the internal mixer section. The Decay and VCA section has no affect and not involved with this output jack. Use this if you wish to make your own custom synth voice. For example, this can be patched to an external VCF + VCA +Envelope Generator. You can also use this output for modulation on an external module.

Calibration is only for the 1V per Octave adjustment. There is only 1 parameter for this, it is the trimmer on the front panel. You have to turn off the shift register and only have the triangle on the drone output. You will have to have the triangle knob fully clockwise, and the harmonics knob fully counter clockwise. On the back there is a tiny dip switch section. Please use the labels to put the module into calibration mode.



Calibration mode turns off the shift register section of the module. When you are done put the module back to NORMAL MODE. If you leave the module in Calibration Mode, the shift register will always start silent on power on of your modular. You will need to patch a trigger on the EXT input put jack to fire up the 'loop' on the shift register. If this is something you rather prefer, you can leave the Module in Calibration Mode. Just don't have both of the dip switches on the same side, like on the DO NOT DO label.

I ship out the module in NORMAL Mode.

BLM CSVCO

Width: 8hp

Current: +150mA, -140mA

What does this module do?

This is a complete mini synthesizer that only requires CV and Gate from your midi to cv converter. You can use an AKAI Mini Keyboard or Arturia KeyStep for example. As long as the product has CV and GATE outputs, you can musically control the CSVCO module. This is a great first-time module, or a great percussive voice to add to your electronic singer section.

The CSVCO is similar to the 'toy' algorithm on the mutable braids module, and the wiard noise ring (kinda). These are the only two modules I was able to confirm that use the same related approach of using many pulse harmonics to sculpt the sound. There is no firmware, or simulation happening on the CSVCO. The module is an analog and cmos logic hybrid module. There are many modular sections involved to make this happen. It would take many modules to attempt to make your own CSVCO patch on your modular. You would need the following: Triangle VCO, x2 clock generator, Shift Register module, High Pass Filter, VCA, Envelope Generator, Sub Division Pulse Generator Module, Logic xor, Logic AND, Logic Invert modules, and a mixer module. This would easily take up 64-84hp. Such a complicated patch on your system would probably not work as good as the CSVCO.

The CSVCO is a Bright in Sound. This module is not good for bass. It resembles cheap toy electronics from the 1980's. The CSVCO excels at higher frequency 'piano' like sounds. It can also be used for bright percussive sounds. All of this tracks +5 octaves, musically.

The CSVCO contains so many over tones (mathematically sub divided), that it is indeed producing chords. The EXT trigger input 'rolls the wheel of chance', and changes the over all tone of the shift register.

The CSVCO seems to sound more 'Minor' at times, it gives a more creepy, spooky set of chords. I can't confirm this, but that is the impression I get from changing up the shift register.