

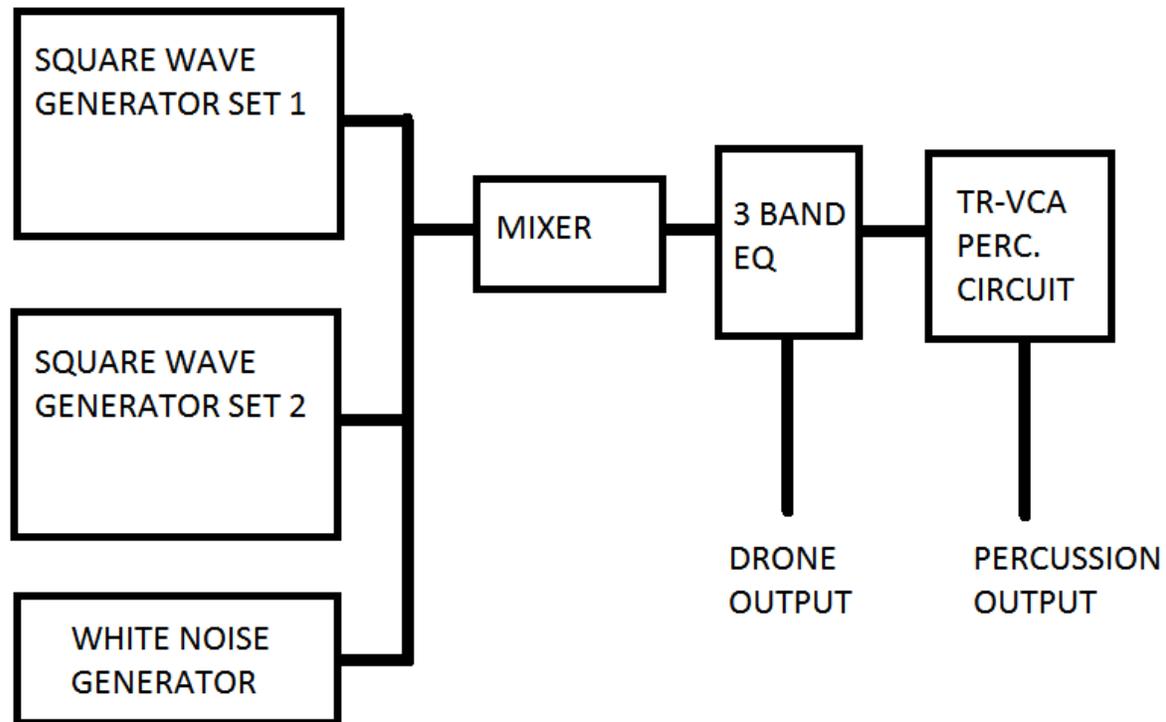
# SHIMMER GENERATOR REFERENCE GUIDE

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This guide is to quickly get you started and to show you what the trimmers on the back do. The module is straight forward and easy to use.

This module is used to generate metal sounds like, bells, cowbells, strikes, cymbals, etc. It can also be used to modulate external vco's.

Here is a picture of the block diagram showing you the internal flow of things.



The shimmer generator has 6 vco's split into two sets of three. The vco's only generate square waves. The vco's do not simple mix each other, but instead multiply or 'ring mod' each other. This produces metallic tones and 'shimmers' on higher frequencies. The vco's do not track at 1v/octave. This module is more of a percussive module. You can get some interesting sequenced tones when using the 'pcv' mode and an external sequencer or vc arpeggiator.

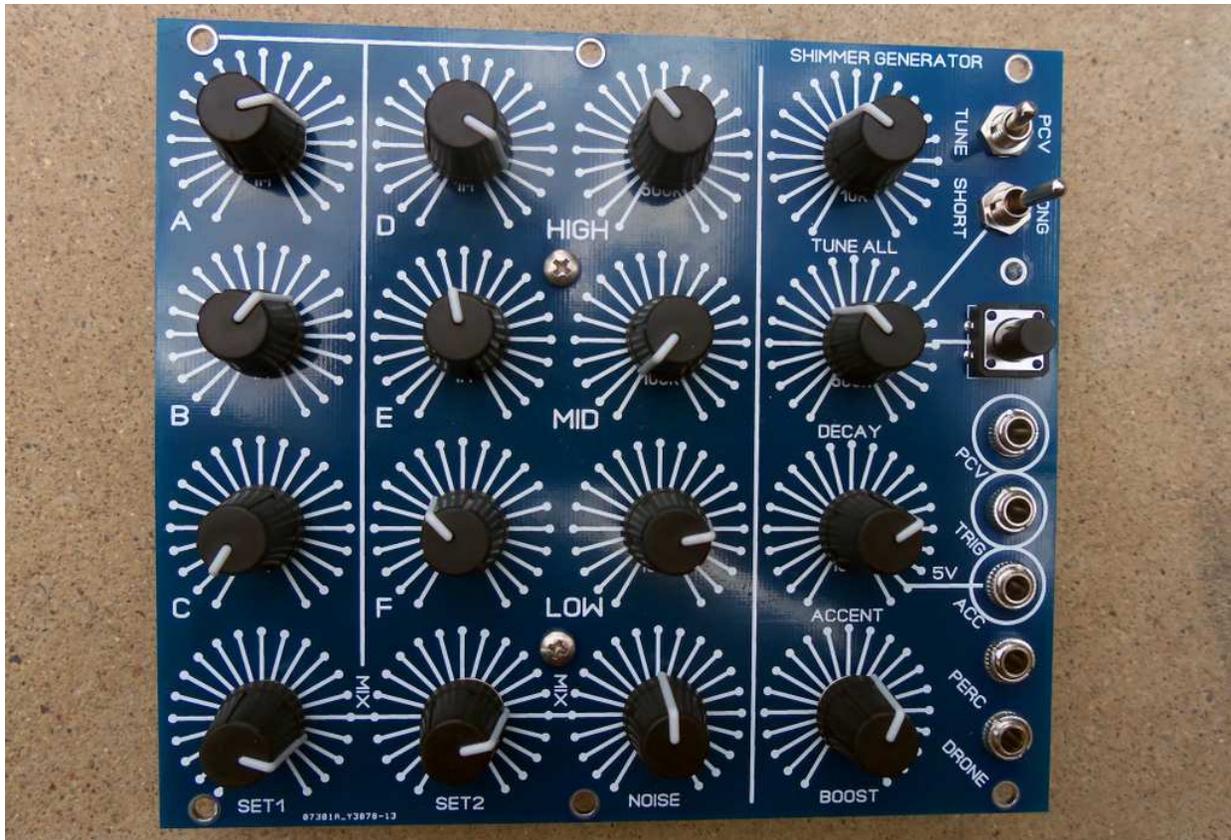
There are two modes of operation for the core vco's: tune & pcv. Tune mode will enable use of the tune knob for you to adjust all 6 vco's pitches at once. It is not possible to individually control each vco with external signals. PCV mode disables the tune knob and if nothing is patches into the 'pcv' jack the sound will probably go silent. Patch an lfo, vco, sequencer, etc., here to get some sound going.

There is an onboard three band equalizer to adjust the tone. To bypass the eq just put all the bands in the 12'o clock position.

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There are two outputs: Direct 'DRONE' and Perc. (Percussive) out. Drone output will allow you to patch to an external filter, use as a modulation source, vca, etc. Percussive output uses the crude TR-808 vca found in the snare drum, maracas circuit, etc. It produces a distinct dirty sound unique to vintage roland products. That circuit is the last column on the right of the module: decay knob, accent knob, boost knob. The decay has two selectable modes: short and long. A gate or trigger signal will open the vca. I included a convenient push button to manually trigger the decay.

Here is a picture of the module so that you can see what I have mentioned.



The accent jack input expects 0-5v gate. It is okay if you input higher like 0-10v. I installed a schottky diode barrier to protect from any high accidental input voltages so that it would not harm the transistor.

The boost knob adds some grit to the percussive output.

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Trimmer notes: (these were done by me already, these notes are useful if you got this module second hand)

Starting from the top-----

100k Perc Adjust trimmer. This trimmer determines the loudness of the TR-VCA circuit. By default I turn the trimmer fully counter clockwise, and adjust to (12) turns clockwise.

20k Tune Range trimmer. This trimmer determines the high range of the tune knob. By default I turn the trimmer fully clockwise, and give it (17) turns counter clockwise.

Bottom 1M Noise Level Trimmer. This adjusts the loudness of the white noise circuit. It is your preference. I like to adjust to about the same level as an external vco on the modular.