

Nothing is more revealing about an Oscillator's natural abilities to hold its own in the Heavyweight arena like a nice Sub Bass patch. We're going to take this one through its paces.

First we'll stack the sub + triangle. Send the mix for a nice rinse through the VCF, add some accents via the Power / MIDI's mod out, then finally shape the transient and overall W I D T H using the Envelope Generator.

Suggested settings: attack past 8 o'clock for "oomph", decay phase to taste, sustain depending on how much "width" the sound should occupy in the mix, release for a smooth "tail".

Optionally modulate the VCF's cutoff, using the modulation output on the Power / MIDI module. mod will convert MIDI CC 1 data, usually reserved for a modwheel or alternatively you can automate modulation from your DAW/Seq.

The VCO's range switch can be set to the 2nd or 1st range-position (lowest octave before lfo mode). In the 1st range position a detuning of approximately half-semitone from base-frequency is expected to occur due to the non-linearities of the VCO's core.

Suggested patching: sub almost all the way up, triangle to taste for some overtones. Alternatively experiment with saw and pulse for more "hair".

Toggle through the Envelope Generator's Curvature characteristics* by pressing **mode + time** toggles simultaneously. Experiment and listen. :)

Set VCF cutoff modulation depth to taste. Due to **normalization** between the VCA and cutoff modulation inputs on the Expander, a single CV signal will affect both circuits unless bypassed manually.

Set the VCA's modulation depth. Analog saturation will occur beyond certain values.

Suggested patching: Power / MIDI gate output to Envelope Generator trigger/gate input. Envelope output to Expander VCA modulation input.

Use supplied MIDI-to-3.5mm Adapter to convert external MIDI data** to analog Control Voltages.

*Green LED = Linear Characteristic (default).
**Power / MIDI is set to receive MIDI via CH1 by default.

As usual, the VCA modulation input is **normalized** to the cutoff modulation input on the Expander module. If you want to use a different modulation sources on the cutoff modulation input - use a "dummy cable" (plugged only on one side) to break normalization between the jacks.

VCF output is patched to VCA input on the Expander.

VCF input, consult the VCO's technical specifications for ranges.

Set the VCF mode switch to the UP position for classic LPF.

Experiment with sub-to-triangle ratios using the Mixer / Noise gain staging possibilities. Things get interesting beyond saturation points, also in combination with the VCA.

We're going to filter out a lot of the higher-frequencies to dial-in that hefty bottom, then add a bit of overtone for sparkle (triangle), as usual go by ear, whatever feels right. :)

The mixed (audio) signal is patched into the VCF input to be processed further.

