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COMPRESSOR

Thank you for purchasing the WMD Compressor Eurorack module. We hope you enjoy crushing your audio.

Design

The Compressor is designed around the THAT Corporation's 4301 analog engine. However, it is much more than just the standard adaptation of that IC. We have voiced the Compressor to be very aggressive and versatile. It can be a transparent track thickener, or a supreme source of distortion, pumping, and mayhem.

Controls and I/O

Input Gain - Sets the input level on the Signal In jack. Range is +-12dB. 12 o'clock is unity gain. This level is normaled to the Side Chain input. Input level is indicated on the red In LED.

Input Saturation - This knob and control switch determine the amount of input side saturation. The circuit is a soft clipper that begins to clip at +-4 volt peaks. Switch must be up for knob to be enabled.

Threshold - This sets the input level where compression starts to happen. Its range from -14dB to +24dB covers the modular range. There is a CV input for this control that is added to the knob value. Th+ and Th- LEDs indicate whether the input signal is above or below the compression threshold.

Knee - This switch determines the threshold break point behavior. Hard knee will start compression at the specified ratio immediately at the break point. Soft knee starts compression slowly over the range of 3dB before the break point.

Ratio - Controls the amount of compression as a function of input level to output level. So, for every dB in level increase past the threshold, you get X level increase in the output. 4:1 ratio means 4dB input to get a 1dB change in output. ∞:1 is a limiter where the input signal is limited to the threshold level.

Detector Mode - This three position switch selects between RMS, Adaptive and Peak level detection modes. Peak detects transient responses very quickly but does not smooth out slow changes in amplitude. Adaptive is smooth like RMS but can detect fast transients as well.

A/R - This switch determines whether the manual Attack and Release knobs are activated, or if the Level Detector automatically controls attack and release times. Switch must be in Manual mode for Attack and Release knobs to be enabled.

Attack - This knob sets the amount of time taken for the onset of compression. Rotate clockwise for a slower attack. Attack may be affected by the CV input.

Release - Controls the amount of time to open the compressor after the input signal goes back below the current level of compression. Rotate clockwise for longer release. Release may be affected by the CV input.

Ratio Mode - This switch controls whether the compressor reduces output level as the threshold is crossed (Comp), or increases level by the Ratio as the threshold is crossed (Xpand). Beware that flipping to Xpand will greatly increase the volume at the output. Reduce Makeup Gain before engaging this switch.

Comp LED - This blue LED shows the compression level to give rough feedback as to how much compression is taking place.

Makeup Gain - This controls the amount of gain at the output stage. Range is -36dB to +36dB. Use higher settings to bring the level back up after high compression. If using Xpand mode, set this lower than 0 to avoid high output levels. There is a CV input to further control the amount of Makeup Gain.

Output Saturation - This switch must be enabled for the knob to have an effect. Soft LED saturation begins at 6 volt peaks.

Mix - This knob mixes the dry input signal with the wet output signal, allowing for simple parallel compression. Also use it as a way to compare input to output easily. This is the final output to the Signal Output jack. Its level is indicated on the red Out LED.

Side Chain - This input drives the level detector of the compressor. When nothing is plugged in, the Input signal is normaled through to the detector. This allows you to use the compressor as a ducker or expander with other signals.

Envelope **Out** - This output jack produces the Compressor's control signal for use in other places in your modular.

Link - If you have two WMD compressors, you can link them together with an 1/8" cable on the back. Flipping each Compressor's Link switch to Stereo will connect the two detectors together for true stereo bus compression. Knobs must be set the same for both channels to truly behave the same, as only the detector information is shared.

Other Notables

The Compressor is 12 HP wide.

Current consumption is +52mA and -40mA.

Signal inputs have no voltage restrictions.

Opamps used inside the Compressor are low-offset, high slew rate, low noise audio opamps. As a result, it has higher output drive than most modules. Output levels can reach +-11 Volts (22 Vpp).

The detector and gain control circuitry of the Compressor are temperature compensated.

The depth from the back of the panel is roughly 28mm with connectors. If stereo link is used, allow 55mm for a standard straight 3.5mm plug.

The Compressor is reverse polarity protected.

The Compressor is RoHS and CE compliant.

The Compressor is under warranty for 12 months after purchase. Please contact us if you ever have problems. We will take care of you.