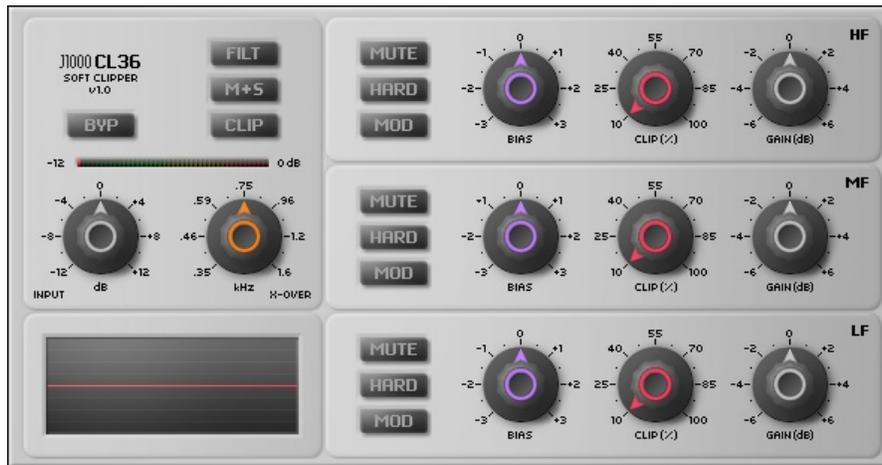


# CL36 v1.0

## THREE-BAND SOFT CLIPPER

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### INTRODUCTION

CL36 shares the layout and crossover network with SX36. Audio signal gets separated into three frequency ranges – low (LF), mid (MF) and high (HF). Each range has identical controls and internal processing: you can set the clipping amount, bias and gain. Also, you can choose between normal and hard clipping and apply random LFO modulating signal. After signal gets mixed back to full-range you can filter it and pass it through one more clipping stage that always keeps peak levels below 0dBFS. Optional Mid+Side mode produces more wider sound. CL36 is great for taming transients like those produced by percussive sounds or instruments with very low attack/decay times. It can also be used on full mixes before final limiter.

- Three-band soft-clipping with waveshapers;
- Two waveshaping curves – normal and hard;
- Additional full-range soft-clipping stage keeping levels below 0dBFS;
- Waveshaping bias control with optional LFO modulation;
- Mid+Side processing mode;
- Output filtering of low and high ends of spectrum;
- Second order (12dB/oct) crossover to preserve spectrum continuity;
- Zoomable waveform display showing combined channels output;
- 32-bit internal precision with zero latency and low CPU consumption;

### USAGE

You can use CL36 two ways: simple (just full-range) and advanced (multiband). In first case you just activate output clipping stage with button labeled CLIP and bring input level up right before distortion becomes obvious. That's it. Otherwise, if you wanna use the full potential of this plugin, you should first set crossover frequency with orange knob. It controls both LF/MF and MF/HF crossovers. Lower frequency is at  $F/4$  and higher at  $F*4$ , so when knob is at default position (0.75kHz) they are at 188Hz ( $750/4$ ) and 3kHz ( $750*4$ ). Next, you can mute two frequency ranges and adjust clipping amount for the third, active one. Bias makes clipping asymmetric, applying it more on positive or negative side of signal. Sounds gets crunchier, with more even harmonics, as you increase bias amount either way. Optional MOD button introduces subtle random LFO signal for more natural effect. Button labeled HARD activates harder clipping curve and should be used only when normal mode isn't enough. M+S button changes internal channel routing to Mid+Side which usually introduces slightly more distortion than normal stereo mode. Filtering (FILT) should be activated when using higher sampler rates or if output sound gets too bright. On the lower-left part of GUI there is a waveform display. You can zoom it by clicking on it and dragging up/down. It always shows output signal in mono. Use CTRL+mouse for fine adjustment of every knob and double-click, including waveform display, to reset them to default positions.