

Beef User Manual v1.0



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Equaliser



Beef has a parametric **Equaliser** module with four bands; **Sub**, **Low**, **Mid** and **High**. The section in total has 5 controls:

- The amount of boost/reduction for each frequency band is control-able via +/-15dB gain dials.
- The frequency of the mid band can be set with the sweepable **Mid Freq** control.

EQ information:

- The sub band is a low shelf, the high band is a high shelf whilst the low and mid are peak filters.
- All frequency bands are wide, this allows for effective tone shaping, not surgical EQ.
- The EQ is doubled in Beef's signal chain, once before the distortion and once after. The first instance boosts the frequency bands into saturation module whilst the second instance makes up for any gain reduction lost from clipping after the saturation module.

Tip - A low-end heavy kick will cut through your mix more effectively with a high frequency boost to emphasise the click of the transient in the saturation module.

Noise/Rate Modulation



The **Noise/Rate Modulation** module uses filtered white noise to control the playback rate of the incoming audio. It has 3 controls:

- **Freq** controls the frequency of the filter used on the noise.
- **Q** controls the q value of the filter used on the noise. Low q values will make a wide band filter whilst high q values will make the filter a thin band.
- **Amount** controls the amount that the noise affects playback rate.

The noise module uses rate modulation, meaning it doesn't directly add noise to an incoming signal. The noise signal is used as a control voltage to change the playback speed. Due to the rapidly changing nature of the modulation signal, noisy texture is added to the sound instead.

The effect achieved by using this technique creates a sound where the perceived noise becomes part of the sound and texture instead of something that has just been added on top.

Tip - 808s not coming through on mobile device speakers? Try adding High Freq & High Q Noise/Rate Modulation with a low percentage on Amount to add presence and significance on any sound system.

Saturation



Audio is driven into the **Saturation** module with the **Drive** parameter to add harmonics. The **Tone** control can then be used to tame high frequencies to prevent harshness. There are 6 different saturation modes, which are:

- **OD (Overdrive)** - Overdrive your sounds without removing headroom through clipping. Can be used for more subtle and less extreme effects.
- **Dist (Distortion)** - This setting boosts your sounds into softish clipping to create extensive harmonics.
- **Fuzz** - A bias is applied to a soft clipper to create extra even harmonics and a fuzzy sound.
- **Tube** - A distortion algorithm inspired by tube distortion (soft clipping with headroom).
- **Tape** - A warm algorithm inspired by our tape effects plugins.
- **Rect (Rectify)** - Alters the polarity of the negative wave. When selected the **Drive** parameter acts in a different way. When at -35dB the wave is unaffected, when at +35dB the negative amplitudes are fully inverted whilst there is a linear scale in between. This adds a huge amount of even harmonics.

Tip - Try Rectify on vocals with a low mix %. Altering the polarity of the negative wave can create some interesting formant sounding effects.

Crush and Shaping



Beef has a **Crush** module to apply distortion through digital artefacts.

- **Rate Divide** divides the sample rate by the chosen factor causing aliasing and a reduced frequency response.
- **Bit Depth** reduces the data size for each sample, reducing the number of available amplitudes and creating a bit crush effect.
- **Smoothing** applies smoothing ramps between the bit crushed amplitudes to make the sound less harsh. It can also filter out frequencies introduced from the **Rate Divide** control.
- **Amount** is a mix control for the crush module.

The **Shaping** module has two simple controls:

- **Attack** controls the gain of the attack section of the transient.
- **Sustain** controls the gain of sustained transients.

Tip - Experiment with the Attack & Sustain controls, you may be surprised which transients are emphasised in your track. Consider boosting Attack on a roomy drum mix to accentuate the drum hits.

Limiter and Output



Beef has a **Limiter** just before its output:

- **Gain** controls the volume of the signal going into the limiter
- **Release** determines how quickly the limiter stops working after the signal drops below the threshold (-0.03db).

There is an output **Gain** slider between the output LED meters. This controls the volume of the effected signal. This can then be mixed into the dry signal with the **Mix** parameter.

Tip - Driving the limiter with a short release time creates incredibly powerful sounds, however consider increasing the release time for some great pumping effects to add more interesting energy to your sounds.

Preset Mode



Beef's **Preset Mode** completely changes the user interface. This is designed for browsing presets and finding sounds with ease. When in this mode the **Mix** parameter will not change when a preset is changed, therefore allowing for easy comparison between presets.

Signal Chain

