

1 Introduction

Dyna is a VST virtual effect for Windows. It requires a VST compatible host to run. VST and Windows are trademarks of the respective owners.

2 General description

Vst is a mono/stereo channel strip with multiband saturation and dynamics functions.

It has four inputs (stereo pair + stereo sidechain) and two outputs even though it can work in a mono channel, too.

The interface has been kept as simple as possible, with an "analog" feel, by means of multi-function and graphical controls, but it is a very powerful effect.

Dyna contains ten dynamic filters with saturation. Each filter acts separately.

Filter are linked differently, based on "normal" or "brackets" mode (see below).

It can work like a common parametric equalizer on each track, when options are switched off.

3 Installation

Copy the dll file to your host's plugins directory.

No authorization procedure is needed. The software is custom licensed on order (reference on the right-lower part of the interface).

4 Interface

The interface is subdivided in:

- Graphical display/control. Drag points to change frequency and gain for each filter. Small circles indicate equalizer points (frequency and gain), text indicates parameters values (equalization and dynamics). Click on a small circle to get control that single filter making it "active" for controlling it by knobs.
- Buttons. The small squared buttons set on/off each filter (1 to 10).



- 3D Knobs and buttons. The knobs are active on the "active" filter. Click on the small circle for a single filter on the graphical display to put it in focus and set parameters by means of the knobs.

Knobs and buttons are divided in two groups:

- Filter and saturation
- Dynamics

5 Details

5.1 Equalization with saturation

Filters 1-10 are equivalent and can be switched on/off individually in any order.

This equalizer is not "linear phase". It is based on IIR (Infinite Impulse Response) filters and, while it can be quite "transparent", it is useful for "colouring" the sound.

Each filter is a bell-shaped peaking filter. Center frequency, quality factor (Q) and gain can be set for each filter, like for any fully parametric equalizer.

For lowshelf or highshelf use large bell filters.

For bandpass use "brackets" mode (below).

Each filter has a "static saturation" optional mode, switched on by means of the pushbutton. A "drive" knob sets the amount of saturation for the filter.

The saturation introduces harmonics contained in the filter's bell range.

5.2 Dynamics

An optional "dynamics" mode is available for each filter.

When switched on, it regulates the filter like a dedicated compressor.

This is dynamic equalization, different from multiband compression. The sound isn't split in frequency bands, while the gain of each filter is regulated by the automatic control chain, instead.

A separate saturation algorithm is available for "dynamics", for each filter. It is activated by means of the second pushbutton near the "drive" knob.

This mode introduces harmonics proportionally to the amount of gain reduction introduced by the compressor. These harmonics are in the same range as the filter's bell, like for static saturation.



When "Q" knob is all way left, the filter is replaced by the full band signal. The single filter is replaced by a common fullband compressor. Multistage compression can be obtained by setting minimum Q for several filter.

Please consider that the filters are linked in series ("Brackets" mode is different, see below), from 1 to 10. This is very important to know because dynamic control is a non-linear process.

5.3 Sidechain

When "sidechain" pushbutton is active, inputs 3 and 4 get control on the "dynamics" sections.

Each filter is regulated (if in "dynamics" mode) by the sidechain signal (through the same filter's bell, like for "normal" mode).

5.4 "Brackets" mode

When "brackets" pushbutton is active, each filter is a bandpass filter.

The filters are in parallel, so that different bands can be mixed together.

This is useful when separating frequencies in a complex mix.

Optional "dynamics" mode is different form the "normal" mode above.

Each filter acts like a separate parallel compressor (very complex parallel compression can be achieved).

Like in "normal" mode, the filter is set to full signal when Q knob is all way left.

This is useful for parallel full-signal compression.

5.5 Tips

- To get some harmonics without equalizing: set a filter with positive gain (amplification), switch "drive" on, set another filter with the same parameters but with negative gain (attenuation).
- Set both filter to full band to get the harmonics in the whole spectrum.
- Try to set "brackets" mode and select just parts of the sound in an additive way, instead of cutting parts with notch filters
- Set "brackets", set some filters to adjacent bands and activate dynamics for a multiband compressor

6 Feedback and assistance

Please refer to www.sknote.it.

