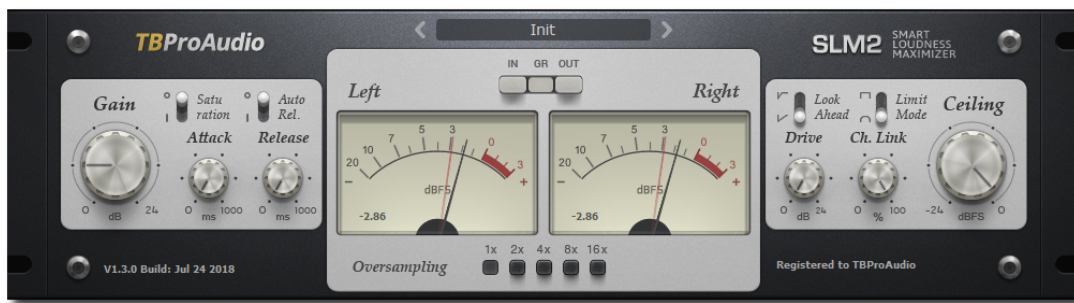# SLM2

Manual

TBProAudio 2020

1   Introduction

Welcome to **SLM2**, a smart stereo loudness maximizer including "analog spice" and 16x over-sampling.
The goal of the design was to maximize the loudness of the audio signal while maintaining transparency.

2 Features

SLM2 offers following features:

- highly transparent brick-wall-limiter
- saturation of input signal
- fully control of attack and release
- switchable look ahead
- switchable saturation
- 2 limiter modes
- additional drive/clip stage
- stereo link
- over-sampling, up to 16x
- easy to use GUI
- preset manager
- large and accurate live meters
- supports all sample rates

Note: This plugin adds latency to the audio path, which is usually compensated by the DAW (PDC).

3 Design

SLM2 lets you reach the maximum possible volume with minimal sound degradation.

The **SLM2** DSP analyses every sample of the incoming stereo signal within a defined time frame and calculates the optimal volume increase. This guarantees maximum possible transparency.
The overall loudness can be further increased by the following, optional clipper stage.
Signal aliasing can be reduced by enabling over-sampling.

SLM2 is used in all limiting situation like track/bus and master limiting.

4 Minimum System Requirements

- Windows XP SP3 or newer
- Mac OS X 10.9 or newer
- Win: 32/64 Bit VST, 32/64 Bit VST3, 32 Bit RTAS, 32/64 Bit AAX
- OS X: 32/64 Bit VST, 32/64 Bit VST3, 32/64 Bit AU, 32 Bit RTAS, 32/64 Bit AAX
- Tested with: Cockos Reaper, Steinberg Cubase/Nuendo/Wavelab 6/7/8/9/10, FL Studio 12.x/20.x, PT10/12/2018, Reason 9.5/10, Studio One, Ableton Live

5 Plugin Controls

Mouse usage:

Click and drag horizontally changes parameter value
Ctrl click and drag changes parameter value faster
Shift click and drag changes parameter value slower
Alt click rests to default value
Double click or right click open value edit box, finish with enter.

5.1 Preset Management

Preset menu loads and saves user presets. Presets stored to %localappdata%/SML2
(Windows) or /Users/xxx/Library/Application Support/SML2 (Mac OSX) are imported as
user presets. Prev and next button step trough all presets. Preset menu lets you store default
settings.

5.2 Gain

"Gain" controls the input stage of the brick-wall limiter. Please to note that the input stage
adds a small amount of saturation for "analog spice".
0 – 24dB, default 0dB.

5.3 Attack

"Attack" controls how much of the transients are passed to the internal clipping stage. Higher
values make the signal more clipping.
0 – 1000ms, default 0 ms.

5.4 Release

Release time controls how fast the limiter recovers to the constant gain after a peak is
detected. Depending on application different release times can be used.
0 - 1000 ms, default 0.0 ms.

5.5 Saturation

Enables gain depended saturation.

5.6 Auto Release

"Auto Release" calculates constantly the release curve depending on the audio material.

5.7 Over-sampling

Incoming signal could be over-sampled up to 16 times. As **SLM2** uses highest quality up/down-sampling algorithms for *low aliasing* operation significantly more CPU resources are used.

5.8 Look-Ahead

"Look-Ahead" controls the length of the time window of the signal analysis. Longer time window ensures less sound degradation.
Short/long, default short.

5.9 Limiter Mode

"Norm" is the standard limiter mode, while "Smooth" enables extra anti-clipping function.
Norm/smooth, default norm.

5.10 Drive Clipper

SLM2 has a second gain stage with a clipper. It can be used to increase loudness even further.
0 - +24 dB, default 0.0 dB

5.11 Channel Link

If set to 100 % the gain reduction is calculated from highest peak of both stereo channels, set to 0 % both channels are processed fully independent.
0 - 100 %, default 100 %

5.12 Ceiling

Ceiling sets the maximum level output signal can reach.
-24 - 0 dBFS, default 0.0 dB

5.13 Meters

Meters for input signal (L/R Input), output signal (L/R Output) and gain reduction (L/R GR).

5.14 Plugin info

Click on the SLM2 logo for more information about the plugin, open online manual and open online changelog.

6 Demo mode versus Registered mode

In demo mode (without registering) the plugin mutes audio every 90 seconds for a short period. This could be circumvented by clicking on the "TBProAudio" logo within 90 seconds.

You can register at http://www.tb-software.com\tbproaudio.

7 Registration/Activation

This plugin must be registered and activated in order to be fully functional. You can purchase the license key here: http://www.tb-software.com\tbproaudio.
After purchase, you will receive the license key packed in a zip file by email. Unzip the license file to a suitable location on your PC (e.g. desktop). The license file is called "product name.license". Add the plug-in to any track in your DAW, click on the text "Demo: Click here to activate it" and select the license file. Remove the plug-in in your DAW and add it again. The GUI now says "Registered to your name".

8 Conclusion

So finally if you have any questions or suggestions just let us know. And have fun with our tools.

Your team from TBProAudio :-)