Signal Perspective

GRINDBOX MK2



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Introduction

Grindbox is a distortion plugin that combines waveshaping techniques with unique filters, wrapped in a modern framework with 384kHz oversampling and a friendly interface.

It can be used as a simple amp simulator for bass and guitar or as a versatile saturator capable of adding slight coloration to the sound or completely destroying the signal.

Main features

The following features are distinctive of Grindbox Mk2:

- Continuous morphing between cabinet simulations
- Various static transfer functions and slew rate distortion
- Microphone/room basic simulation
- Variable topology settings
- 384 kHz oversampling
- Built-in limiter
- Resonant LPF
- Auto Gain
- Unique Tilt-EQ
- A “comments” area for making notes that are saved with the preset or plug-in instance state.

Installation

The Windows version comes with an installer application that copies the presets and the plugin files in the correct folders. Under macOS you need to move the plugin files and the presets files and folders manually to the appropriate folder:

```
macOS VST3 folder:          ~/Library/Audio/Plug-Ins/VST3

macOS AU folder:            ~/Library/Audio/Plug-Ins/Components

Windows VST3 folder:        C:\Program Files\Common Files\VST3

Presets folder:             User Documents Folder/Signal Perspective/Grindbox
```

Please note that the plugin is not digitally signed: if you have trouble running the plugin under macOS, try typing the following in the OS terminal or visit the product page for further instructions:

```
sudo xattr -d -r com.apple.quarantine ~/Library/Audio/Plug-Ins/VST3/Grindbox\ MK2.vst3

sudo xattr -d -r com.apple.quarantine ~/Library/Audio/Plug-Ins/Components/Grindbox\ MK2.component
```

The standalone application is portable, meaning that you can bring the executable wherever you want.

Signal Perspective toolbar

Most Signal Perspective plugins share a toolbar that lets you navigate presets and handle some common features, such as a tooltip system that lets you learn how to use the plugin without the need for a manual.



1. Undo button
2. Redo button
3. Preset name
4. Panic button (if present)
5. Preset menu
6. Load previous preset
7. Load next preset
8. Load specific preset file
9. Save preset file
10. Open this manual
11. Tooltip area / Editable preset comment
12. Zoom factor (reset to 100% if clicked)
13. Resizing handle

➤ Note about resizing:

Each time the plugin is resized it saves the current scale in a file so that new instances can already be scaled as desired. If you inadvertently get the plugin larger than the screen size (and therefore you can no longer resize the window) you can force it to open to 100% by deleting the settings file, which under Windows is:

```
%APPDATA%\Grindbox Mk2\Grindbox MK2.settings
```

and under macOS:

```
~/Library/Application Support/Grindbox MK2.settings
```

➤ Note about preset files:

In order to let the plugin/application see the preset files and show them in the preset menu, be sure to place them in the **user documents folder** under the `/Signal Perspective/Grindbox` subfolder, without altering the provided tree structure. The drop-down menu shows all the folders present as submenus, populated by the XML files contained in them. No further subdirectories are shown (i.e. there is no recursive search). The drop-down menu is repopulated after each preset saving and loading operation, and upon reopening the interface.

➤ Note about preset names:

The preset name is stored inside the preset file and is set to be the same as the file name when saving a preset, but if you rename the file, the actual preset name will remain unchanged.

Using Grindbox Mk2

Grindbox is a distortion plugin that can be used as a simple amp simulator for bass and guitar, or as a versatile saturator capable of adding slight coloration, acting as an exciter, or completely destroying the signal.

The plugin is organized into 3 sections:



1. **Saturation**: From here it is possible to define the non-linear behavior of the plugin:
    - **Trim** controls the input level;
    - **Lo-Fi** is a symmetrical soft-knee slew limiter, a distortion typical of cheap integrated circuits that distorts high frequencies resulting in a muffled, dark sound;
    - **Drive** combines a sigmoid static transfer function curve with other shapes defined by the *Bias*, *Snap* and *Fold* parameters (note that turning this all the way to the right will result in a square wave);
    - **Arrow** defines the processing order of the *Lo-Fi* and the *Drive* components;
    - **Erode** will ring-modulate the signal with a high-passed version of itself, resulting in a very bright and distorted sound, one octave higher than original pitch. The *Erode* brightening behavior works well together with the darkening behavior of the *Lo-Fi* control, allowing you to rebalance the spectral shape;
    - **Bias** introduces an asymmetry in the saturation, distorting the negative side of the signal more than the positive side, resulting in some more even harmonics;
    - **Snap** introduces an inverse sigmoid component to the saturation shape (so that the distortion occurs when the waveform is close to zero), this expands the dynamic range;
    - **Fold** introduces ripples into the static transfer function, resulting in FM-like sounds, boost the input trim to emphasize the effect;
    - **Analog** enables 384 kHz oversampling (equivalent to 8x oversampling at 48 kHz).

2. **Tone**: This is where you define the linear behavior of the plugin:
    - **Tone** is a tilt-equalizer that ranges from the behavior of a leak integrator to that of a derivative;
    - **Tone post** places the *Tone* processing after the distortion;
    - **Tone comp** applies the inverse equalization of the *Tone* control after the distortion (only when *Tone* is used before the distortion);
    - **LPF** is a resonant low-pass filter;
    - **LPF post** places the *LPF* processing after the distortion;
    - **Cab** is a cabinet simulator that lets you morph between different modeled cabinets (placed at integer values of the parameter). On the left are dark "American style" cabinets, while on the right are bright "British style" cabinets;
    - **Mic** is not exactly a mic/room simulator, but it can be thought of as that. This setting will introduces phase randomization across the signal spectrum, which reduces the "buzz" of high-gain distortion, and adds a very slight tail to the sound.
    - **Mic input** places the *Mic* processing before the distortion;
    - **Rand mic** randomly changes the seed of the *Mic* phase randomization;
    - **LPF** is a 40 Hz high-pass filter designed to remove infrasonic rumble that can be introduced under certain conditions, such as very high levels of *Lo-Fi*.
3. **Output**: This is the output stage of the plugin:
    - **Wet level** controls the signal level after the distortion;
    - **Auto** activates an auto-leveler that automatically adjusts the *Wet level* parameter in order to match the input signal loudness after each parameter change. Note that what is being matched is what you hear while tweaking the parameters, so adjusting the parameters while the track is not playing may result in incorrect level matching;
    - **Limit** enables a limiter after the *Wet level*, with a fixed ceiling at -0.5 dBfs, consider this as a safety measure (or push the signal against it to use Grindbox as a compressor!)
    - **Dry/Wet** allows you to blend the input signal with the processed signal. The input signal is picked up before the *Trim* processing.

Other details about each parameter are available as tooltips in the plugin.

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Disclaimer

This software was developed for non-commercial purposes by Giorgio Presti, we decline responsibility for any malfunctions that may cause loss of data or other inconveniences.

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