Pulsar Smasher
User Manual

www.pulsar.audio

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Introduction

This manual describes the features and operation of the Pulsar Smasher effect processor. To be sure you understand how to use your plugin and understand all its subtleties, please read it completely.

The information contained in this manual is believed to be correct at the time of publication. However, if an error has unfortunately crept into its contents, please let us know.

IMPORTANT: The prolonged use of amplified instruments, speakers or headphones may cause permanent hearing loss. Ensure you monitor your exposure level, and take regular breaks. In case of tinnitus or suspected hearing loss, please consult an ENT specialist.

Welcome

Our experience

Thank you for choosing Pulsar Audio quality!

With more than 15 years' experience in plugin development for the biggest names in the industry, we decided to create Pulsar Audio to push the quality requirements of our products even further.

For each product, our quest for excellence requires us never to rest on our technical achievements, and to expand our knowledge ever further.

Sound and science

With solid expertise in audio signal processing, but also in electronics, sound techniques and music practice, we take great care in modeling all the small details and imperfections of analog equipment that make the difference between a « mathematical » exact sounding algorithm and a rich, living and musical processing, and we produce this famous « 3rd dimension » sound so much sought after.

In addition, our close collaboration with music production professionals requires us to be rigorous in order to produce professional quality tools.

Our user interfaces

The user interface of a plugin is the link between the creative drive and the technical implementation; it must therefore be clear, intuitive, and as pleasant as possible to use. We take great care to create the most beautiful and fluid interfaces possible, with an emphasis on intuitiveness.

The search for the right equipment

Rarely do you find two analog machines that sound exactly the same. It is therefore important, when developing an emulation, to carefully choose the hardware units to be used as models. We only use units in perfect condition and measure them with the best recording equipment.

A final word

We hope you will enjoy this plugin as much as we enjoyed creating it. Be sure to visit our website www.pulsar.audio and find out about updates, new products, tips and other resources. There you will also be able to contact us to ask for help or simply to tell us about your experience!

The Pulsar Team

The « British Mode »

The 1176 is a vintage FET (field effect transistor) compressor. Based on an internal feedback configuration, these designs are known to be fast and colorful, capable from soft limiting to heavily saturated tones.

The original 1176 compressor has 4 selectable ratios. But it just so happens that all 4 buttons can be pressed at the same time, this is called “all buttons mode” or “British Mode”. Although probably an unanticipated feature, this mode has become very popular because of its distorted, explosive and highly compressed sound.

While prototyping FET compressor algorithms, we found a digital modification that could be made to the algorithm that models the British Mode, that adds definition to the low-frequency transients and makes the sound more aggressive.

Based on this idea, we developed the Pulsar Smasher, a very easy to use plug-in, consisting of an extreme and aggressive compressor, ideal for raising the level of ambiences in a drum bus, but also for adding presence to vocals, or warming up guitars or basses.

Quick start

Installation

Pulsar Smasher is available as a plugin in VST2, VST3, AU and AAX formats for use with all major DAW software such as Live, Cubase, Logic, Pro Tools, etc.

Installation from the supplied installer is automatic. The installer takes care of copying the different plugins as well as presets, manual, etc. into the appropriate locations.

Note: If you are using the VST2 format in Windows, you will be asked by the installer to specify the installation folders for the 32-bit and 64-bit VST2 plugins respectively. The paths that seem most appropriate for your computer will be recommended by default, but we advise you to check them before completing the installation. If the plugin is not installed in the same folder as your other possible plugins, your DAW software may not detect it.

Activation

All our plugins are protected by PACE's iLok system. For correct operation, we recommend you ensure that you have the latest version of the « iLok License Manager » software, available for free download at www.ilok.com .

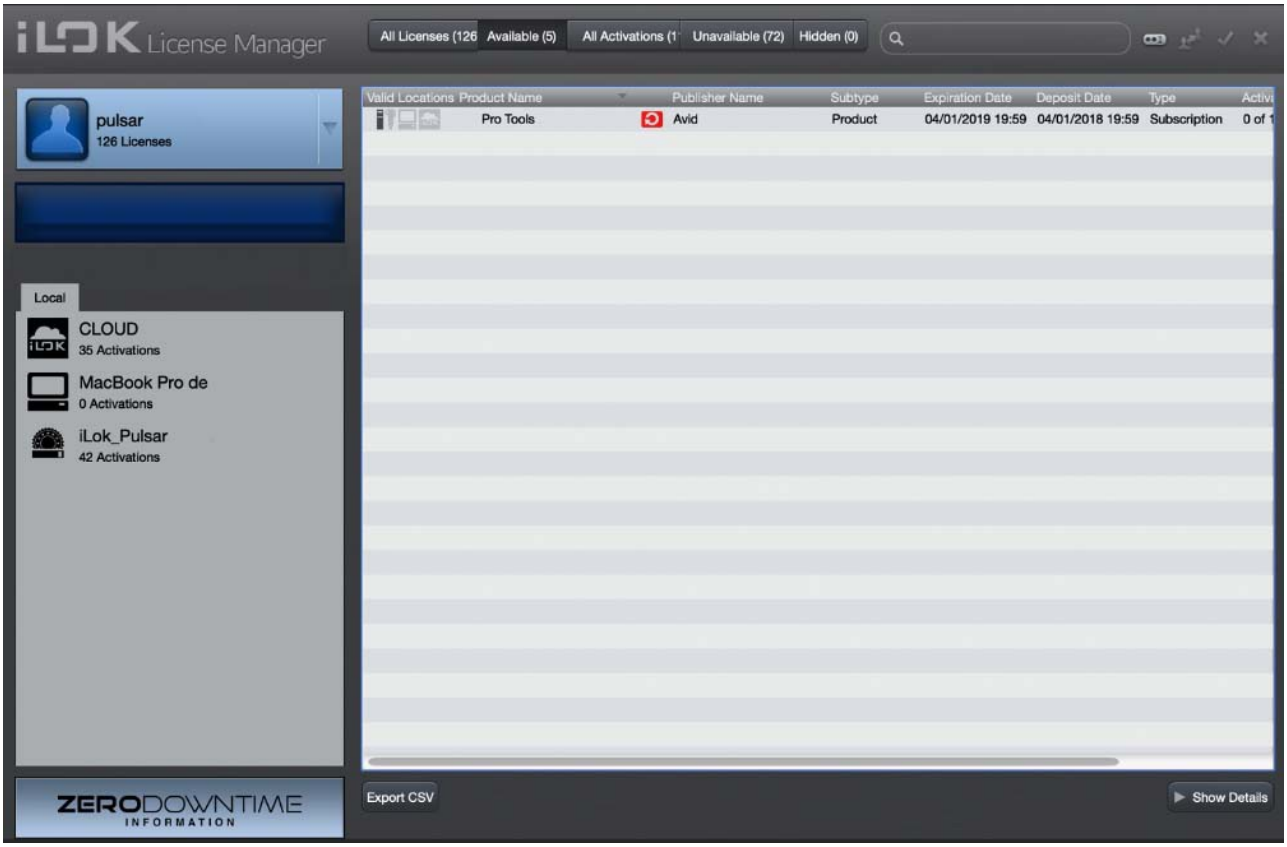
You can choose between three activation methods:

- Activation on a hardware USB dongle such as iLok 2 or iLok 3, which will enable you to use your plugin on several machines (you can order a dongle online at www.ilok.com or buy it from your music retailer)
- iLok Cloud activation which will enable you to use your plugin on several machines but requires a permanent internet connection
- Machine activation, which does not require a dongle or a permanent internet connection, but only activates your plugin on one machine

Important: If you choose the iLok Cloud system, you have to open a Cloud session on your computer by going to the « File > Open Cloud Session » menu of your iLok License Manager. If you choose an iLok 2 or 3 dongle, you have to connect it to your computer before any operation.

When you purchase your software, you will receive:

- A license deposited directly onto your iLok account. Just go to the « Available » tab and drag it to the destination of your choice (here CLOUD for a cloud license, or iLok_Pulsar for an iLok 2 or 3 dongle)
- An activation code. Simply paste it into the « Licenses > Redeem Activation Code » menu to receive the license on your account, and drop it off at the destination of your choice (CLOUD or iLok 2 or 3 dongle)



iLok License Manager's "available" license tab

First Steps

Load the Pulsar Smasher on a track of your choice in your DAW. A good starting point is to load a basic preset corresponding to the type of the track (voice, guitar, bass, drums...). From there:

- Start playback and observe the gain reduction being applied, looking at the VU meters
- Adjust the input gain to get the level of gain reduction suggested in the preset name. Hold down the Shift key on your keyboard while adjusting the Input Gain, and the Output Gain will automatically compensate
- Adjust the output gain so that the volume at the output of the compressor is the same as at the input. This can be done by ear, using the “Bypass” switch to temporarily disable the effect of the compressor
- If necessary, adjust the amount of compressed and uncompressed sound using the “Mix” knob

This way you can quickly review many of the available factory presets for inspiration without getting into technical considerations.

The user interface

The user interface

The user interface consists of 2 separate panels:

- The toolbar, common to all Pulsar Audio plug-ins (top)
- The control panel, specific to the Pulsar Smasher plug-in.

Note that in all Pulsar Audio plug-ins, you will find a resizing control in the bottom right corner of the plugin interface.

Use of parameter controls

The parameter control knobs have several modes of use:

- The normal editing mode (use a classic mouse drag, or the mouse wheel)
- The fine editing mode (hold the Ctrl or Cmd key while dragging or while using the mouse wheel, or drag with the right mouse button)
- The « reset to default » action (double-click, or click while holding the Alt key)
- The « menu » action (right-click, or click while holding the Ctrl key)
- Only for some controls, the alternate edition mode (hold Shift while dragging), which can have various functions, for example to temporarily link two parameters

Parameter locking

It is possible to lock certain parameters, so that they are not changed when loading a preset. For example, one possible use of this feature is to set the input and output gains of a compressor to achieve the desired amount of gain reduction, lock these parameters, and then scroll throught the list of factory presets to find the most appropriate tone.

Locking the Dual Input knob

To lock a control, right-click it with the mouse, or click while holding down the Ctrl key on the keyboard. If the control can be locked, a menu will appear offering to lock it. When a parameter is locked, a small padlock icon appears next to the control.

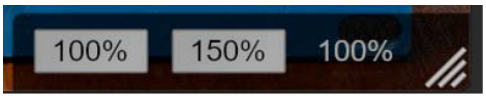
Using the GUI resize control

Located at the bottom right of the interface of all Pulsar Audio plugins, this control allows you to resize the plugin's interface to your liking. It comes in the form of three lines, like a classic resizing handle:

Resizing handle

Note that in some DAWs, this resizing can be problematic, depending on how the DAW developer has designed its windowing.

It is also possible, by clicking in the corner, to open a small popup window with buttons offering a choice of fixed size resizing (100% - 150%):



Resizing window

The Toolbar

Located at the top of the plugin interface, it contains all the functions relating to parameters, presets, communication with Pulsar Audio, etc.

The toolbar

Undo / Redo

The 2 arrow buttons on the left of the toolbar have the function Undo and Redo, i.e. respectively the cancellation and restoration of the last action. All parameter changes and more generally the state of the plugin are stored in a history. You can click on « Undo » at any time to return to the previous state (or to the nth previous state) and on « Redo » to return to the current state.

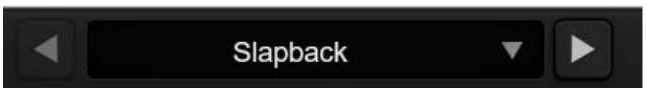
Note: a right-click on one of these buttons gives access to the list of stored operations.

Undo / redo buttons

Preset Selection

The preset selection area, located in the center of the bar, allows you to:

- Read the name of the current preset. If an asterisk appears after the preset name, it means that the state of the plugin no longer matches the saved preset
- Select a preset from the list of available presets, arranged in sub-banks
- Delete the current preset (« Delete Preset » option)
- Rename or move a preset to another sub-bank (« Move / Rename Preset » option)
- Set the current preset as the one that will be loaded by default when creating a new instance of the plugin (« Set This Preset As Default » option)
- Open the presets directory. This can be handy for making backups of your preset files and restoring them. Note that renaming and reorganizing presets must be done from the plugin menu, not by using your system's file explorer.
- Restore factory presets. This will also overwrite any changes you have made to your factory presets
- Quickly navigate between the presets to find inspiration, using the left and right arrows



The preset selection area

Save / Save As

The Save button saves the current preset.

The Save As button saves the current state of the plugin under a new preset name.

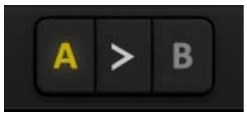
Save and Save As buttons

A / B

This section allows you to compare 2 different states of the plugin, or 2 different presets. Slots A and B, accessible through these 2 buttons, represent 2 completely independent states.

For example, when state A is active, you can load a preset and/or make settings from the interface, then click on button B; then load another preset and/or make other settings; buttons A and B now allow you to quickly switch between the two states and easily compare the 2 presets or sets of settings.

It is also possible to copy the state A to B or vice versa using the > or < buttons located between A and B.



A, B and Copy buttons

Menu Button

The button located on the far right of the bar encompasses various options.

The Menu button

Oversampling settings

The first menu item is used to set the oversampling. Oversampling allows the sound to be processed at a higher sampling rate within the plugin, in return for higher latency and CPU consumption. Oversampling is disabled by default, as all Pulsar Audio products use advanced technologies that allow in most cases to process the sound without oversampling, with no compromise on quality. This makes oversampling useful mainly when you saturate a lot.

Please note that Pulsar Audio products use very high-quality linear phase upsampling and downsampling filters. This means that the x2 oversampling will generally be of higher quality than the x2 setting in a competitor's product, but will also be more CPU intensive.

Oversampling options

The "Offline oversampling" option allows you to choose an oversampling setting for final rendering (and other non-real-time processing) independent of the setting applied in real time. This enables to reduce the CPU consumption during the use of the plugin, while having the best quality during the final rendering.

Disable Static Noise option

All analog equipment introduces a hiss, mainly caused by thermal noise in the electronic components, the amplitude of which differs from one model to another.

In some Pulsar plugins, we assumed that modeling this noise was appropriate, although at a lower level than in real life (often around -90 dBFS), because it contributes slightly to the character of the original device.

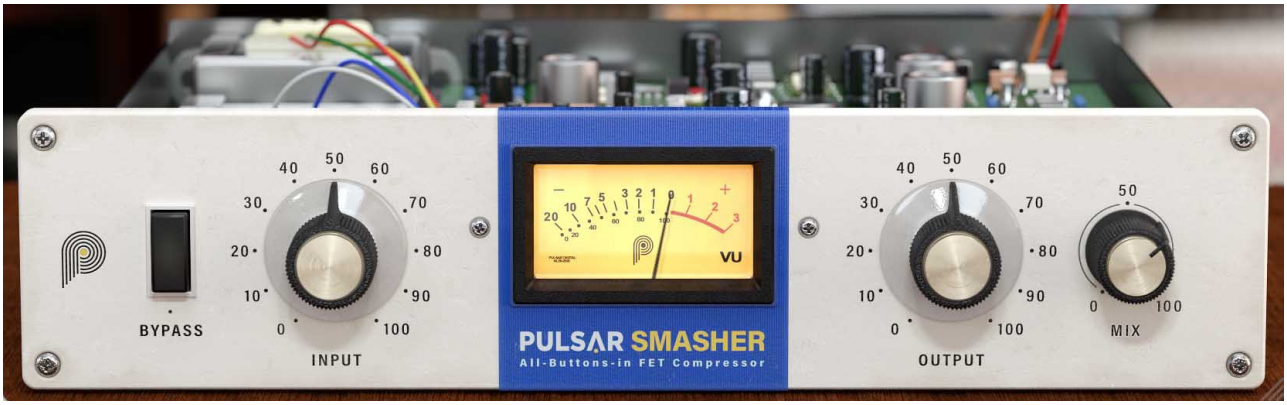
In some cases (if the output of the plugin is strongly amplified), this noise can become audible and undesirable, so it is possible to deactivate it using the "Disable Static Noise" option.

Other options

Other functions accessible through this menu are:

- Enabling / disabling the help balloons
- Access to the website
- Access to social media
- Access to communication with technical support
- Link to this user manual

The control panel



The Smasher's control panel

The Smasher's control panel is inspired by the « blue stripe » version of a famous hardware machine, but with a reduced number of controls.

Bypass

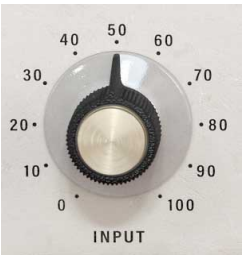
The Bypass switch toggles between the sound processed by the plug-in (Active mode) and the unprocessed input sound (Bypass mode).

Bypass switch

Input

The Input knob adjusts the gain that is applied to the input signal from -24 dB to +24 dB. This parameter must be chosen according to the sound level of the track you are processing, and according to the desired effect. The higher this gain, the greater the effects of compression and saturation (or even distortion) will be.

Note: If the Shift key is pressed when adjusting this knob, the output gain knob will be adjusted in the opposite direction.

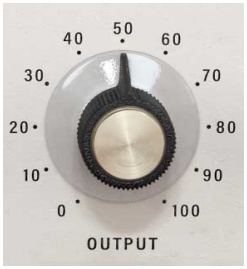


Input Gain knob

Output

The Output knob adjusts the gain applied after the compression stage. This is not a digital gain applied at the output of the plug-in, but a model of the compressor output stage: above a certain level, increasing this potentiometer will induce saturation.

Note: If the Shift key is pressed when adjusting this knob, the input gain knob will be adjusted in the opposite direction.



Output Gain knob

Mix

The Mix knob is used to dose the amount of compressed signal (100%) and unprocessed original signal (0%). It will be very useful given the aggressive nature of the Smasher: indeed, on many sources where using 100% would be too extreme, it is still possible to use the Smasher using a small percentage of Mix.

Mix knob

Minimum Configuration

This plugin is compatible with all major sequencers on the market (Cubase, Nuendo, Pro Tools, Logic Pro, FL Studio, Ableton Live, Bitwig, Digital Performer, Studio One, Reaper, Adobe Audition...)

Available formats:

- VST 2.4 (Windows: 32/64-bit, Mac: 64-bit only)
- VST 3 (Windows: 32/64-bit, Mac: 64-bit only)
- AAX (Windows: 32/64-bit, Mac: 64-bit only)
- Audio Unit (64-bit).

Windows

- CPU: Intel Core i3 / i5 / i7 / Xeon
- Memory: 4 GB RAM / 1 GB free disk space
- Operating system: Windows 7 and higher
- GPU: OpenGL 2.0 compatible GPU with up-to-date drivers
- Screen resolution: minimum 1024×768 / recommended 1280×1024 or 1600×1024

MacOS

- CPU: Intel Core i3 / i5 / i7 / Xeon / Apple Silicon (M1)
- Memory: 4 GB RAM / 1 GB free disk space
- Operating system: 10.9 and higher
- GPU: OpenGL 2.0 compatible GPU with up-to-date drivers
- Screen resolution: minimum 1024×768 / recommended 1280×1024 or 1600×1024

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Activation

Pulsar Audio will not be held responsible for any failure to activate PACE's iLok protection system / license.

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Pulsar Audio offers a 14-day trial license, starting at the time of transfer of the license to an iLok key. After expiration, the plugin can no longer be used, and in the event that no permanent license is acquired, it must be deleted.

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