

# PhreePhuzz

*LVC-Audio*



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# License Agreement

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## Technologies Utilized

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- **VST** and **VST3** are technologies and trademarks of Steinberg Media Technologies GmbH.
- **Audio Unit** is a technology and trademark of Apple Computers, Inc.
- **RTAS** and **AAX** are technologies and trademarks of Avid, Inc.
- **iLok** is a technology and trademark of PACE Anti-Piracy, Inc.
- **WDL-OL**: Enhanced version of Cockos IPlug/WDL by Oli Larkin (<https://github.com/olilarkin/wdl-ol>)
- **Knobman** and **Skinman**: from g200kg ([http://www.g200kg.com/index\\_e.html](http://www.g200kg.com/index_e.html))
- **Ubuntu Font Family**: (<http://font.ubuntu.com/>)
- PhreePhuzz uses portions of **fmath.hpp** and **Xbyak** for fast math calculations. Both source codes Copyright © 2010, 2012, Mitsunari Shigeo under the BSD 3-Clause License. More information is available at <http://homepage1.nifty.com/herumi/soft/fmath.html> and [http://homepage1.nifty.com/herumi/soft/xbyak\\_e.html](http://homepage1.nifty.com/herumi/soft/xbyak_e.html).

## Welcome, Thanks, and Contact Information

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Thank you for installing and trying PhreePhuzz. We hope you find this a useful tool in your audio chain, and we would like to hear your suggestions for future enhancements. Please feel free to contact LVC-Audio with any ideas, problems, suggestions, or comments at [lvcaudio.com/contact/](http://lvcaudio.com/contact/). Please visit [lvcaudio.com](http://lvcaudio.com) for additional news about PhreePhuzz and other plugins. Additionally, you are welcome to join the LVC-Audio newsletter for the latest updates, new plugins, and sales events. To sign up for the newsletter, visit <http://lvcaudio.com/newsletter/>.

## Introduction

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PhreePhuzz is a saturation plugin. Although the controls are very simple to use, PhreePhuzz utilizes many underlying technologies used to create PreAMPed (a virtual preamp modeling plugin by LVC-Audio). PhreePhuzz has four distinct saturation settings. Each of these settings utilizes a distinctly tuned multiband saturation algorithm. All internal processing occurs using 4x oversampling to reduce the aliasing effects of saturation.

PhreePhuzz can be pushed into overt distortion; however, it excels at more gentle saturation effects. Each of the four saturation settings has emphasis on different frequency components. PhreePhuzz can be used to give a track low-end saturation without dulling the high frequencies, or it can be used to give a shimmering high-end sparkle without muddying the bass.

## Initial Setup and Requirements

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### WINDOWS (VST, VST3, RTAS, AND AAX FORMATS):

**System Requirements:** PhreePhuzz requires Windows Vista or later, as 32-bit or 64-bit host, and a processor that supports SSE2 (AMD or Intel processor from around 2004 or later).

**Installation:** To install the software, download and unzip the latest file from the LVC-Audio website. Double-click the installer file to begin the process. The installer will prompt you for the installation location of the VST 32-bit folder, and VST 64-bit folder. The 64-bit plugin will include an "x\_64" at the end of the filename. In most DAWs, this should help differentiate between the 32-bit and 64-bit plugins.

If VST3, RTAS, and/or AAX plugin formats are installed, they will be installed within the default folder(s) for each format. The RTAS format is 32-bit only. The AAX version is 64-bit only. AAX should

primarily be used within Pro Tools 11. In addition, the AAX plugin format requires the use of a registered iLok device.

## **OSX (AU, VST, VST3, RTAS, AND AAX FORMATS):**

**System Requirements:** PhreePhuzz requires OSX 10.5 or later, a 32-bit or 64-bit host, and an Intel Core2Duo (or better) processor.

**Installation:** To install PhreePhuzz, click to unzip the Zip file. Double-click on the Package file to start the installation process. By default, PhreePhuzz will be installed as Audio Units, VST, and VST3 Universal Binaries. Additionally, AAX and RTAS formats will also be installed. The RTAS format is 32-bit only. The AAX version is in the Universal Binary format, but may not work properly in Pro Tools version 10 or below. AAX should primarily be used within Pro Tools 11. In addition, the AAX plugin format requires the use of a registered iLok device.

Any of the plugin formats can be excluded from installation by unchecking the checkboxes during the installation process.

## User Interface

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**Button and Selector Features:** The main controls of PhreePhuzz are adjusted by using various knobs and buttons. For buttons such as Bypass or Solo, clicking the button one time will enable the feature. Clicking a second time will disable the feature. Some buttons, such as Oversample, contain more than two different settings (i.e., more than on and off). Each click of the button will cycle the control through all of its settings.

**Knob Control Text Entry:** [not available for RTAS format] For each of the knobs in PhreePhuzz, the text value is displayed below. Manual entry of values can be entered by clicking on the text field, and typing in the desired value. If a value is entered that is greater than the control's maximum value, the control will automatically be set to the maximum value. Conversely, values that are less than the control's minimum will be set to the control's minimum value. When entering a value on a control which ranges from negative to positive numbers (e.g., -6 to +6), a negative/minus must be used. For controls that have a maximum value of 0 (e.g. -44 to 0), the negative/minus sign can be omitted.

**Knob Control Scrolling and Dragging:** When hovering over a knob, the mouse wheel can be used to increase or decrease the value of the control. Scrolling produces large changes in the knob's value. If finer control is needed, the Alt key can be held down while scrolling. When more subtle adjustment is needed, the Shift key can be held down for minute changes.

Similarly to using the scroll wheel to adjust a knob, the control can be set by clicking and dragging the knob up and down. This produces large changes in the control's value. For finer control, the Alt key can be held down while dragging the control. Additionally, the Shift key can be held down for very small changes.

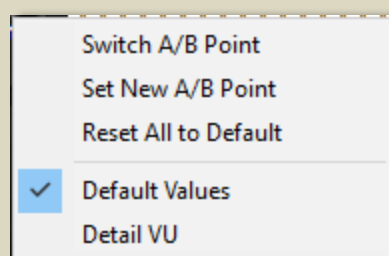
*Please note: RTAS and AAX plugins have slightly different key modifiers based on how typical Pro Tools plugins operate.*

**Knob Control Reset and A->B Features:** Double-clicking (or clicking while holding the Control key) on any knob or slider will return the control to the default value. At the same time, the previous value of the control is stored. Double-clicking the control again will change the control from the default value back to the previous setting. Using this double-click feature, it is very easy to make A->B type comparisons on each of the controls.

Sometimes it might be desirable to compare two values that are not the default value. This can be accomplished by right-clicking on the control. Right-clicking on a control will set a new default value. After this is done, the knob can be readjusted. After double-clicking on the control, the control will be reset to the newly defined default value.

Each time right-click is used on a knob, a new default value will be established. If it is necessary to reset a knob to the factory default value, this can be accomplished by holding down the Shift key while right-clicking on a knob. The knobs default value will be reset to the factory default.

*Please note: Knob A/B values are not saved, and are separate for each instance of the plugin. When the plugin is closed or a saved session is reloaded, each knob's A and B values will be reset to the factory default values.*

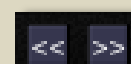


**Knob Control Drop-Down Menu and Alternate Settings:** Each knob control features a drop-down menu that can be used to compare two values, to reset the knob, or to set an alternate knob range. To access the drop-down menu, use the right mouse button to click on the knob. In some DAW software, the right-click button is not accessible by the plugin. It can also be accessed by holding the Control and Shift keys down while clicking the left mouse button. The first three items are the same features that are also accessible by using the mouse and

keyboard modifiers (see Knob Control Reset and A->B Features).

For certain controls, alternate settings are also accessible. Alternate settings are different settings for the knob's default value, minimum value, maximum value, precision (i.e. number of decimal points), and scale (e.g., linear versus logarithmic). Selecting one of the items from the menu will change the settings of the control.

**Undo/Redo:** At the bottom of the plugin interface are the Undo and Redo buttons. The Undo button looks like an arrow that points to the left, and the



Redo

button looks like an arrow that points to the right. Clicking the Undo button will undo the last user change to the plugin. The undo history holds up to 100 different user changes. Conversely, clicking the Redo button will reapply the last changed setting. If the Undo or Redo buttons are grey, it means that no Undo or Redo is possible.



**A/B Plugin Comparison:** The A/B Comparison buttons also appear on the bottom of the plugin interface. The buttons provide a quick and easy method to compare two different plugin configurations. These configurations are the "A" state, and "B" state.

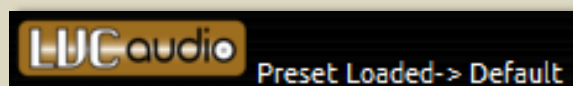


Clicking the A button will save the current plugin configuration to the A state, and then load the B state plugin settings. The button will change to indicate the letter B. Clicking the button again will save the current plugin state, and reload the A state. Any number of controls can be changed, as they are automatically saved before the plugin switches to the other plugin state.

The Copy-to button (appearing as an A->B in the picture), copies the current plugin state to the other plugin state. For example, if the plugin is in the A state and the A->B button is pressed, the current plugin state will be copied to the B state. If the plugin is switched to the B state after pressing the Copy-to button, the settings will appear to remain the same because the A and B states are identical.

*Please note: When a preset is loaded from the LVC-Audio Preset Menu, it will be loaded and saved into the current state. The other plugin state should not be affected. This may not be the case when saving and loading settings from the DAW (i.e., both plugin states may be copied over with the loaded settings).*

**Messaging:** During certain times, PhreePhuzz will display information at the top of the plugin. Typically, messages relate to saving and loading presets or alternate knob settings. The message will appear for a few seconds before disappearing.



**About Box:** Clicking on the LVC-Audio logo at the top of the plugin will display the About Box. The About Box displays basic information, including the plugin name, plugin version, DAW, plugin format, architecture (32- or 64-bit), and registration file location (if applicable). Furthermore, a button at the bottom of the About box provides a link that will check for the latest version of the plugin. This loads the PhreePhuzz plugin page in your default web browser. To close the About box, click the Close button, or anywhere within the plugin's GUI.

## VU METERS

**VU and Peak Program Meters:** The audio meter on PhreePhuzz displays information about the output levels. The output meter shows the final level of audio as it leaves the plugin.

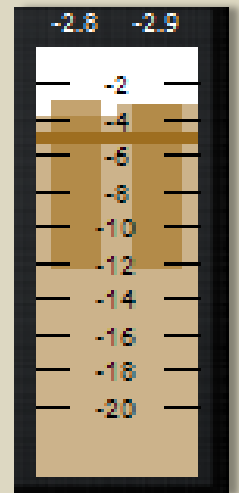
The meter bars responds similarly to traditional VU meters, but with a quicker rise time (near instantaneous integration time, and 300ms to decrease -20 dB). The dash meter responds more closely to a Peak Program Meter (PPM), with a slower rise and fall (5ms integration time, and 3 seconds to decrease -20 dB). All meters are calibrated as 0dBFS, meaning that any signal that maximizes the meters represents digital clipping.

**Loudness Output Meter:** An additional feature of the Output meter is a loudness indicator. This is the smaller rectangular area within the output VU bar. This indicates the relative loudness of the output. The top of the area is determined by the peak output level. The bottom of the area is determined by the RMS value of the output. The peak output is determined using a meter that has a fast attack time, with a long decay time (i.e., near instantaneous attack time, with a 2.5 second decay time). The bottom RMS point of the meter uses a 750 millisecond time for both attack and release.

The height of the bar relates to the dynamic range of the material. Under heavy saturation, clipping and/or the output levels approach 0dBFS, the loudness meter will be shorter (i.e. representing little difference between the peak of the audio and the RMS value). Audio with more dynamic characteristics will have a relatively broader loudness meter. Although this can be useful in determining the overall level of dynamic range, the meter is less accurate at lower audio levels.

*Please note: The Loudness Output Meter will vary greatly depending on the dynamic nature of the source material. Naturally, loud and compressed signals (e.g., distorted guitars) will have a limited dynamic range prior to any processing that is occurring with PhreePhuzz.*

**Output Level Text:** Above the Output meter is a text readout of the current output levels in decibels. These numbers have an instantaneous integrations time, and a long decay time. The numbers will only display volume levels above -60dB. Signal levels below -60dB will not be displayed. Any signal that is above 0dBFS will be displayed in **red text**, indicating digital clipping. To reset the values, click on the numbers. This will automatically reset the numbers to the default -60dB value.



## MAIN CONTROLS



The main interface for PhreePhuzz is very simple. It includes three knobs for altering the saturation and gain. Additionally, there is a bypass switch, selector switch for the saturation types, and a preset import/export button.

**In Gain Control:** The In Gain control is the first step in the processing chain. This control alters the input gain to the remainder of the plugin.

**Out Gain Control:** The Out Gain controls the level of the signal leaving the plugin. PhreePhuzz now includes an internal clipping function that holds the maximum output level to 0 dBFS. Depending on the desired effect, it may be necessary to increase or decrease the Out Gain in order to avoid (or hit) the digital clipper.

**Saturation Control:** The Saturation control determines the overall amount of saturation. This works in conjunction with the saturation type control in determining the specific amount of applied distortion to the low and high frequency bands.

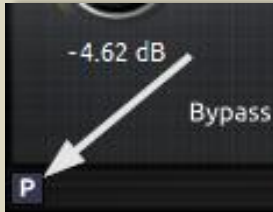
*Please note: The input level, In Gain, and Saturation controls may alter the overall EQ response of the plugin. At extreme settings, EQ boosts in the low and high frequencies are common.*

**Saturation Type Button:** PhreePhuzz has six different saturation types (A, B, C, D, E, and F). The selector switch toggles through these six settings. Each saturation type has a number of internal settings associated with it. This includes saturation levels applied to the low and high frequencies, saturation algorithms, hysteresis-like effects, EQ adjustments, and crossover frequencies.

**Bypass Button:** The Bypass control temporarily bypasses all audio processing for PhreePhuzz. In addition, the Bypass button will inform the host DAW that the plugin latency has returned to zero.

## LVC-Audio Preset Menu

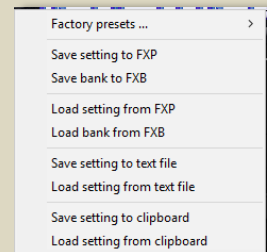
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Although all audio hosts provide a way to store and recall presets, these methods are different depending on the host and plugin format. The LVC-Audio Preset Menu is a standardized way for loading factory presets, importing presets, and exporting presets.

To access the Preset Menu, click the “P” button in the lower-left corner of the plugin. The Preset Menu provides several options for loading, exporting, and importing presets.

**Factory Presets:** The first menu item listed is factory presets. This includes several factory presets for PhreePhuzz. Selecting any of the presets will automatically load the settings.



**Saving and Loading FXP Presets:** FXP presets are a standard format for VST plugins; however, they can be used for any other plugin format (i.e., AU, VST3, RTAS, and AAX). The FXP format saves the settings of the plugin into a file with the FXP extension. This file can be used to recall a certain preset in the same DAW, in another DAW, and/or with a different plugin format (e.g., VST to AU).

To save a FXP file, click “Save setting to FXP.” A file prompt will open that allows naming of the FXP file, and selecting where the file is saved. To recall a preset, click “Load setting from FXP.” Navigate and select the appropriate FXP file to recall the saved preset.

**Saving and Loading banks (FXB):** In the VST format, PhreePhuzz has 20 slots for user presets. Each of these preset slots can be modified and recalled from within the DAW. Additionally, the entire bank of 20 presets can be saved and reloaded. To save a bank of presets, choose “Save bank to FXB” from the preset menu. Conversely, to load a bank of presets from an FXB file, choose “Load bank from FXB.”

*Please note: The factory preset banks are typically only included within the VST format. Therefore, saving and loading from FXB may not be useful with different plugin formats.*

**Saving and Loading with Text Files:** As a means to standardize compatibility across plugin formats, PhreePhuzz can save and load a preset using a plain text file. The individual settings are stored in the text file, which also makes it easy to share presets. To save the plugin’s current settings, click on “Save setting to text file.” A file prompt will open that allows naming of the text file, and choosing the file’s location. To load a preset from a text file, click “Load setting from text file” and select the appropriate file.

When settings are saved as text files or to the clipboard (see below), they look like this:

```
PhreePhuzz_MakePresetFromNamedParams("preset",5, kInGain, -4.615385, kOutGain, -  
1.230769, kSaturation, 5.548519, kBypass, false, kPresetSat, 5);
```

The text involves a series of parameters and values separated by commas. Of notable importance is the first few characters of the text string that involve the name of the plugin. If the name of the plugin does not appear in the exact format (e.g., PhreePhuzz\_xxxxxxx), then the plugin will not load correctly. When loading a preset from the Clipboard (i.e., from an email, forum post, etc.), it is important to select and copy all of the text in order for the preset to load.

**Saving and Loading with the Clipboard:** Similarly to saving and loading from a text file, presets can be saved directly to the clipboard. This allows for easy sharing by pasting into an email, forum post, etc. Clicking "Save setting to clipboard" will copy the current plugin's settings into the clipboard. Once a preset is copied into the clipboard (e.g., from the internet or email), clicking "Load setting from clipboard" will load the preset into PhreePhuzz. **Saving and loading to the clipboard uses the same exact text format as saving and loading to a text file. Therefore, text can be copied from within a previously saved preset text file and loaded with the clipboard loading function.**