



METALLURGY

Metallurgy Collection

Metallurgy: Doom

Metallurgy: Modern

Metallurgy: Thrash

Pilot's Guide ►

A guide to the features and functionality of the Line 6 Metallurgy plugins and standalone apps

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Welcome to Metallurgy

Thank you for purchasing the **Line 6® Metallurgy™** software, a focused collection of guitar amp, cab/IR, and effects models sonically engineered for metal guitar styles. Metallurgy software is available in three different versions: **Metallurgy: Doom**, **Metallurgy: Modern**, and **Metallurgy: Thrash**—available individually or bundled within the **Metallurgy Collection**. Each version runs as a plugin within all popular DAW host apps, or as a standalone application, on Mac and Windows® computers.



The Metallurgy: Modern Plugin - Amplifier View

This guide contains details covering all Metallurgy plugin and standalone application features and functionality as of version 1.01. Since the user interface and workflow is very similar for each of the three Metallurgy versions, all are described collectively here, with any unique features called out where applicable.

All behaviors are also the same on Mac and Windows computers, for all plugin formats (AAX, AU, and VST®3) and for the standalone apps, except where otherwise noted. For the most part, the many host DAW applications on the market work very similarly regarding how you insert and utilize effects plugins. However, each host may have some unique features and settings you'll want to take advantage of, so be sure to read through your host DAW application's user documentation as well.

Features

Although the Metallurgy titles are designed with a specific genre in mind, each is much more than a “one-trick” guitar plugin or standalone app. You can configure a full signal path, including your choice of stompbox effects, amp, multiple speaker cabs (or Impulse Responses), with options for mic types and positioning, EQ, and post-positioned time-based effects—all within a simple, but powerful, user interface.

- Specially curated HX amplifiers
- Expertly captured speaker cabinet IRs
- Mic models with adjustable positioning

- IR mixer with user IR loading
- Multiple stompbox effects and stereo post-amplifier effects
- Studio-grade noise reduction, room microphone simulation, and chromatic tuner
- High-quality, polyphonic pitch shifting “Capo” for up or down-tuning
- 4-band parametric equalizer
- Oversampling for superb audio quality
- Photorealistic graphics and modern design
- Custom presets crafted for producers, artists, and engineers
- External MIDI control support with MIDI Learn
- 64-bit plug-in for AAX, Audio Unit, and VST3 hosts
- Standalone application for “Plug & Play”

Requirements and Installation

Ready to jump in? The latest Metallurgy software installers for Mac & Windows computers can be downloaded from the [Line 6 Software page](#)—either individually or bundled within the Metallurgy Collection.* Once installed, a free 15-day trial is available, allowing you to fully try the software on your system. After 15 days, you are required to purchase and authorize the software to continue using it on your system. Please check the requirements below to make sure your computer and DAW software meet the minimum requirements.

System Requirements

To follow are the requirements to install and use the Metallurgy software on your DAW computer system. Note that all Metallurgy plugins are 64-bit and, therefore, require that your host DAW application supports 64-bit plugins.

Mac Computers:

- macOS 10.14 and later*
- For plugins: 64-bit AAX Native, Apple Audio Unit (AU), or VST3 host DAW software

Windows Computers:


- Windows 10 and Windows 11 (64-bit versions only)*
- For plugins: 64-bit AAX Native, or VST3 host DAW software


Minimum Hardware Requirements

- Core i5 2.6 GHz processor or faster
- 8 GB of RAM
- 200 MB of free disk space
- Internet connection required for license authorization and use of trial version
- DAW host software to support AAX, AU, or VST3 plugin
- Audio interface for DAW host app and the Metallurgy standalone apps (must include an ASIO® device driver for Windows)

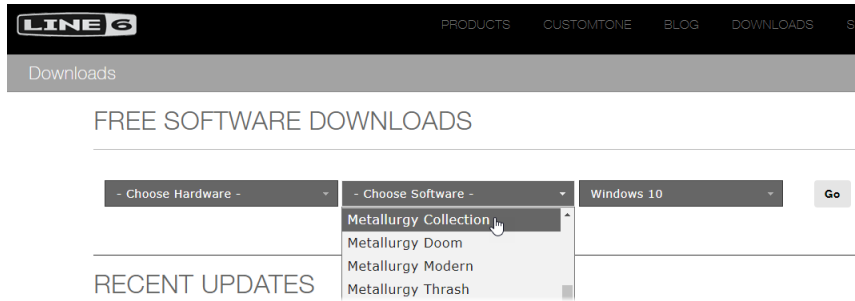
*Please refer to the Metallurgy installer's *Release Notes* and [Line 6 Support](#) for specific details about support with the very latest Mac and Windows operating system versions.

Installing Metallurgy

 The first step is to sign in to your **Line 6 User Account**. If you don't already have one, just go ahead and create one now at line6.com/account—all the cool kids have one, and it's free! Then follow the steps below.

 **NOTE:** An Internet connection is required for the computer on which you want to install and run the Metallurgy trial version, as well as for license authorization & deauthorization. License authorization on your computer is required for the use of Metallurgy plugins and standalone apps.

1. Once signed in, you can head directly to the [Line 6 Store](#) page and purchase your Metallurgy Collection or individual Metallurgy Doom, Modern, or Thrash license (see ["Purchasing the Software License" on page 3](#)), or proceed to the next step to install the Metallurgy software on your computer and optionally choose the 15-day free trial.
2. Go to the [Line 6.com/software](https://line6.com/software) page and download the full Metallurgy Collection software installer for your Mac or Windows system. (You can choose to install just Metallurgy titles using the Collection installer, or optionally download just the individual Metallurgy product installer.)



The line6.com software downloads page

3. Exit your host DAW and all other applications, then run the installer and follow its steps to complete the installation.

 **Attn. Mac Users:** During the installation or upon launch of the Metallurgy standalone apps, if prompted to allow Metallurgy to access the computer's microphone, click **OK**.



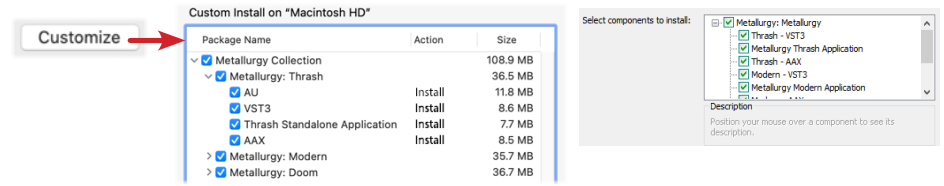
"Modern" would like to access the microphone.

This application requires microphone access for audio processing.

Don't Allow OK


You can also manually edit this setting within the Mac's System Preferences > Security & Privacy > Privacy tab - Microphone settings.

4. During installation, you can select only the plugin format(s) you require (AAX, AU, or VST3) for your particular host DAW application, and optionally whether you want to install the Standalone Application.



Mac - Custom install options
(click the Customize button to access options)

Windows - Custom install options

-  **NOTE:** The preceding image shows the Metallurgy Collection installer—if you're running one of the individual product installers, you'll see only the AU, VST3, AAX plugins and the Standalone app for the individual Metallurgy product.
5. Launch your host DAW application and it will scan and find the Metallurgy plugin(s) and list them within its audio plugin insert menus. Or, launch the Metallurgy standalone application.
 6. Insert the Metallurgy plugin on a track within your DAW project (see ["Quick Start" on page 7](#)). You'll see the license authorization screen on the initial launch of the plugin or standalone app.
 - **If You Have Already Purchased a Software License** - You'll be prompted to authorize the computer for this license—please skip ahead to ["Authorizing Your Computer" on page 4](#).
 - **If You Have Not Yet Purchased a Software License** - You can either choose to purchase now (see the next section), or start a 15-day free trial (see ["To Use Metallurgy in Trial Mode" on page 4](#)). Once the trial expires, it is necessary to purchase and then authorize on the computer with which you will be using Thrash, or the plugin/app will no longer be functional.

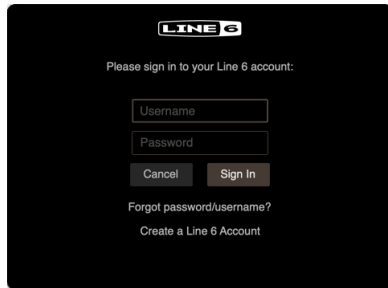
Purchasing the Software License

The full Metallurgy Collection or individual Metallurgy Doom, Modern, or Thrash license is available for purchase from the [Line 6 Online Store](#). Just add the software to your shopping cart, checkout, and, through the power of the Interwebs, a software license is immediately deposited into your Line 6 User Account. Alternatively, you can first download and install the software and then choose to purchase or run it as a free trial first (see the preceding section). Once you've purchased the license, use the Authorization screen on launch to authorize your computer, as covered in the following section.

Authorizing Your Computer

Before you can use the Metallurgy software, the computer on which you will be running must be authorized for your purchased software license. Authorization is accomplished within the plugin or standalone app's built-in Authorization screen, via an Internet connection directly from your DAW computer. Once you've installed the Metallurgy software, insert a plugin instance, or launch the standalone app. (See ["Quick Start" on page 7](#) .)

1. **Sign in - Once launched, the sign in screen is displayed, prompting you to sign in using your Line 6 User Account username and password. (Note that your username is typically the name you created when creating the account and *not* your email address!)**



The initial Authorization - Sign In screen

NOTE: Once a Metallurgy Collection or individual license is purchased and your computer successfully authorized, you will no longer be prompted to sign in on each use. Being actively signed in is then only necessary to deauthorize your computer, and to initially sync the license of any new purchases you might make from ["Line 6 Marketplace"](#)

- **If you have an existing Line 6 account but forgot your login** - Click the **Forgot password/username?** option and follow the steps to reset your login credentials.
 - **If you don't yet have a line 6 account** - Click the **Create a Line 6 Account** link to create one. Or you can do that right now by going [here](#)—it's free!
2. **Enter your username and password and click Sign In to proceed.**
 - **If you have already purchased your Metallurgy product's license with this Line 6 Account** - Upon signing in, select the **Authorize Computer** option and you should see confirmation that your computer is now successfully authorized.* You can now start using your Metallurgy software!
 - **If you have not yet purchased your Metallurgy product's license** - You'll be informed that no license was found on your Line 6 account, and you'll have the option to buy it now, or start a free trial.

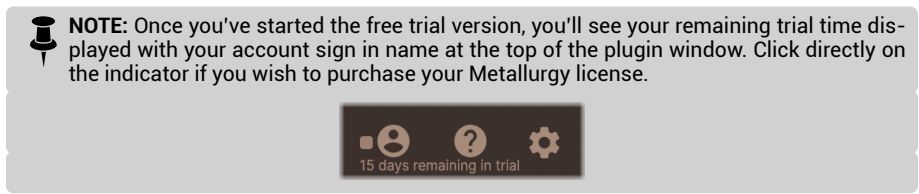
NOTE: Be sure to Sign In using the same Line 6 Account you used when making the license purchase!

To Purchase the Software License

Click the **Buy** button for either the full Metallurgy Collection or individual Metallurgy software and follow the steps on the secure Line 6 Online Store. Once complete, a software license will be deposited into your Line 6 account. Your purchased license will be found and your computer will be authorized to run the software.

To Use Metallurgy in Trial Mode

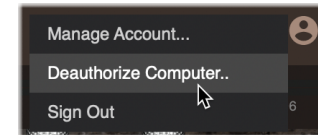
Click the **Start Free Trial** button for the Metallurgy software and you'll be able to use it without restriction on this computer for 15 days (an active Internet connection is required for the Trial Mode). You may be prompted to sign in for each session when using the software in trial mode. After the trial period expires, the Metallurgy plugins and standalone apps will no longer be functional unless you choose to purchase the software license.



Deauthorizing - Moving to Another Computer

Once you have purchased the software license and authorized your computer (or, when using the free trial version), if you wish to run the Metallurgy plugins or standalone apps on a different computer, it may be necessary that you first deauthorize your current computer.

Click on the Toolbar's Account button menu to Sign In to your Line 6 account, then choose **Deauthorize Computer** from this menu. (Also see ["Account" on page 17](#)).



Selecting Deauthorize Computer from the Account button menu

Once you've deauthorized the computer, authorize it again at any time by performing the **Sign In** to your account from the Account menu. In this scenario, since you had previously authorized this computer, it is automatically authorized upon a successful sign in.

NOTE: Be sure to Sign In using the same Line 6 Account you used when making the software license purchase!

Removing Metallurgy

Should you ever desire to remove Metallurgy from your computer system, first quit your host DAW or standalone application, then follow the instructions below.

Mac

To uninstall Metallurgy plugins and standalone apps, move the following files to the Trash.

Doom:

- **AU plugin:** /Library/Audio/Plugins/Components/**Doom.component**
- **VST3 plugin:** /Library/Audio/Plugins/VST3/Line 6/**Doom.vst3**
- **AAX plugin:** /Library/Application Support/Avid/Audio/Plugins/Line 6/**Doom.aaxplugin** (or, you can optionally drag the Doom.aaxplugin file into the /Plugins (Unused) folder)
- **Standalone:** /Applications/Line6/Doom/**Metallurgy Doom.app**

Modern:

- **AU plugin:** /Library/Audio/Plugins/Components/**Modern.component**
- **VST3 plugin:** /Library/Audio/Plugins/VST3/Line 6/**Modern.vst3**
- **AAX plugin:** /Library/Application Support/Avid/Audio/Plugins/Line 6/**Modern.aaxplugin** (or, you can optionally drag the Modern.aaxplugin file into the /Plugins (Unused) folder)
- **Standalone:** /Applications/Line6/Modern/**Metallurgy Modern.app**

Thrash:

- **AU plugin:** /Library/Audio/Plugins/Components/**Thrash.component**
- **VST3 plugin:** /Library/Audio/Plugins/VST3/Line 6/**Thrash.vst3**
- **AAX plugin:** /Library/Application Support/Avid/Audio/Plugins/Line 6/**Thrash.aaxplugin** (or, you can optionally drag the Thrash.aaxplugin file into the /Plugins (Unused) folder)
- **Standalone:** /Applications/Line6/Thrash/**Metallurgy Thrash.app**

Windows

To uninstall all plugin formats and the standalone application:

- Click the Start button, choose Settings > Apps & Features, and select the desired Metallurgy uninstaller.
- If you've installed the full Metallurgy Collection, select the **Line 6 Metallurgy Collection Uninstaller**
- If you've installed an individual Metallurgy software, select its uninstaller: **Doom Uninstaller**, **Modern Uninstaller**, or **Thrash Uninstaller**.
- Click Uninstall and follow the on-screen instructions to remove the software.

Line 6 Marketplace



Be sure to visit the [Line 6 Marketplace online shop](#), where you'll find 3rd-party add-on assets that further enhance the functionality of Line 6 software and hardware devices. Available now are professionally crafted presets and IRs that can be instantly purchased and added to your Metallurgy software. An Internet connection is required for the computer to use Metallurgy plugins and standalone apps to initially sync and authorize the licenses to use Marketplace premium assets.

NOTE: The authorization required for your Metallurgy Collection, Doom, Modern, or Thrash software license also covers the use of any Marketplace premium assets on up to four of your computers. Please see ["Authorizing Your Computer" on page 4](#).

Get Your Marketplace Assets

Access the Line 6 Marketplace website at <https://line6.com/marketplace/> and sign in to your Line 6 account.* When browsing the Marketplace site, simply choose the desired packs of presets or IRs, add them to your cart, and check out.

***NOTE:** Be sure to sign in to the same Line 6 user account with which you purchased your Metallurgy software license so that your Marketplace licenses are deposited into the same account!

Once you've made a Marketplace purchase, use the following steps to start using your new assets.

1. To download your purchased assets, click on the **Manage Account** command from the **Metallurgy plugin or standalone app Toolbar's Account menu** (or go directly to <https://line6.com/account/>), sign in to your account and select **Marketplace Downloads** from the **Hardware & Software** section at the left.

Hardware & Software
Registered Gear
Purchase History
Authorized Devices
Software Add-ons
Marketplace Downloads
Activations
iLok Deposits

Each Marketplace purchase is downloadable as a "zip" file that you'll need to "unzip" on your local hard drive once downloaded.

2. Licenses for your purchased assets are automatically added to your Line 6 account, and “synced” the next time you use an instance of your Metallurgy plugin (or next launch of your Metallurgy standalone app) when actively signed in to your Line 6 account from the Account menu.
3. Once you’ve signed in and authorized your computer for use with the Metallurgy software, your computer is also authorized for your premium Marketplace assets—your presets and IRs can then be imported and used just like any other presets and IRs.
4. Premium Marketplace presets and premium Impulse Responses appear with a golden guitar pick “badge” within the Metallurgy Presets and IR Browser windows. (See [page 12](#) and [page 35](#) for more about loading presets and IRs.)

Checking for Updates

Choose **Check for Updates** from the Help button menu to check if any new updates are available for your Metallurgy software. An active Internet connection is required for this check. It is highly recommended to always use the latest version to benefit from the latest features and the smoothest product functionality. The process is as follows.

1. **Sign In** - If you have not already done so, click the Toolbar's Account button and choose Sign In. Once signed in, click Help - Check for Updates.
2. If a newer software version is available, you'll be prompted.
3. Click OK in the prompt window to launch your browser and download the Metallurgy Collection or individual Metallurgy software installers from the line6.com website. (You may be prompted to sign in to your line6.com account on the website before downloading.)

Read the License Agreement, click OK to proceed, and choose your download location on your computer to start the download.

IMPORTANT! You must first exit any DAW host and Metallurgy standalone applications before running the downloaded installer.

4. Double-click on the downloaded Installer file and follow the installer screens' steps to install the new version.



The Metallurgy Collection installer (Mac)

Once the installation is complete, you are ready to put the newly updated Metallurgy software to use!

Quick Start

OK, we know you're eager to jump right in! To follow are steps for adding an instance of a Metallurgy plugin within a host DAW application's audio track to get you up and running.

NOTE: As their names suggest, the Metallurgy "standalone" applications require no host DAW application. You can simply launch them from your computer's Applications folder or menu—but you'll need to choose your audio interface options to initially get up and running. Please see "[Standalone Application](#)" on page 48.

You will find the Thrash plugin within your host DAW application's plugin insert menus along with all other audio effects plugins. The initial steps in any host DAW application are as follows.

1. Create a Session or Project in your DAW host application.
2. Create at least one audio track.

Depending on your host DAW application, it may offer options for "mono" or "stereo" type audio tracks, or just one common audio track type that can record or import either mono or stereo audio, depending upon the hardware input type you choose for the track. Either way, Thrash plugin can be added into the effects insert of your audio track.

3. Record some unprocessed "dry" guitar into the audio track, or import an existing recorded audio file into the track so you have something for playback.
4. Now you can proceed to insert an instance of Thrash on this track by selecting it from the host DAW track's effects insert menu. To follow we've provided examples on several popular host DAW applications.

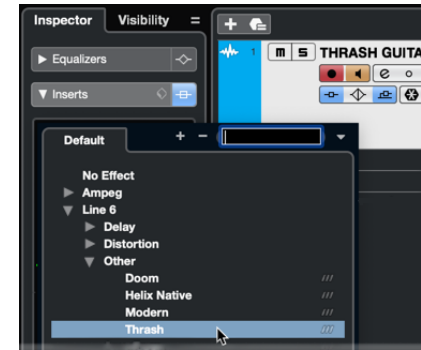
For the following host DAW examples, we'll load a Thrash plugin instance—the process is the same if you're using the Doom or Modern plugins.

Steinberg Cubase

The Cubase® application is offered for both for Mac & PC. Cubase supports the VST3 plugin format.

NOTE: These steps are also very similar with the Steinberg Nuendo® application.

1. Select your audio track within the Cubase project. Within the track's Inspector at the left of the track (or within the Cubase Mixer window's channel strip for this track), click on one of the slot's menus in the Inserts section.



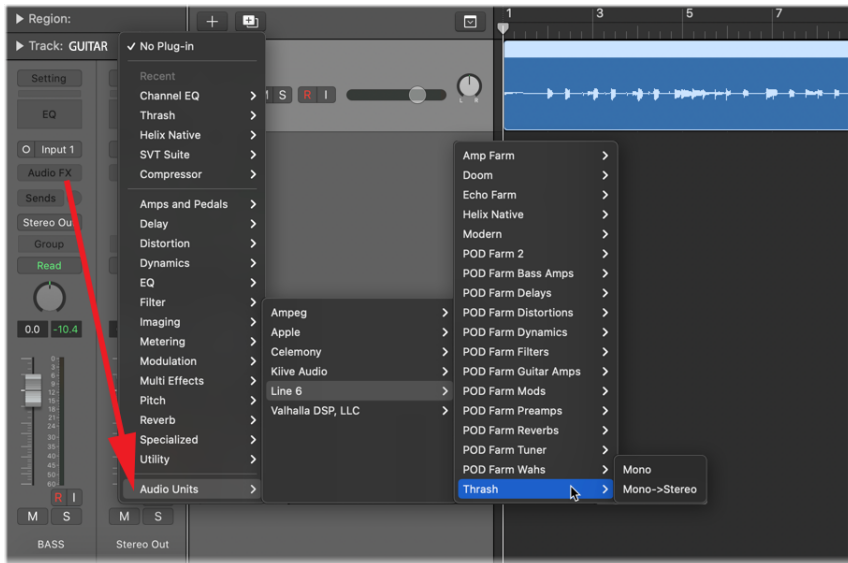
Inserting Thrash plugin on a Cubase Pro audio track

2. In the Effects menu, choose Line 6 > Other > Thrash. Note that Cubase offers both mono and stereo track types. You can simply choose the Thrash plugin and it will conform to your Cubase track type (see "[Mono and Stereo Track Plugin Functionality](#)" on page 9).
3. You will then see the Thrash plugin appear in the Effects Insert window. Turn your monitoring system to a low level, then choose a preset from the plugin's Preset Browser and hit Play to hear the results.

Apple Logic Pro

Logic Pro is an extremely popular host DAW for Mac. Logic Pro supports the Apple Audio Unit (AU) plugin format.

1. Select your audio track within the Logic Pro project. Within the track's Inspector channel strip (or within the Logic Pro Mixer window's channel strip for this track), click on the Audio FX track effects insert menu.



Inserting Thrash plugin on a Logic Pro X audio track

2. In the FX window, choose the Audio Unit (AU) plugin format type and select Line 6 > Thrash. Note that Logic Pro offers both mono and stereo input track types, therefore, you'll have different sub-options depending on your track's type. The Thrash plugin is available for mono and stereo track plugin type options (Mono, Mono-Stereo, Stereo, and Dual Mono).* Also, see ["Mono and Stereo Track Plugin Functionality" on page 9](#)).

***NOTE:** The Logic Pro **Dual Mono** insert plugin option, available on stereo tracks, inserts two mono instances of the plugin (each accessed via the L and R buttons at the top of the plugin window). Each instance processes the left and right audio channels of the stereo track independently. Using Metallurgy plugins in this dual mono format allows you to apply different tones to each the left and right audio channels for the track, but will also utilize 2x the CPU power.

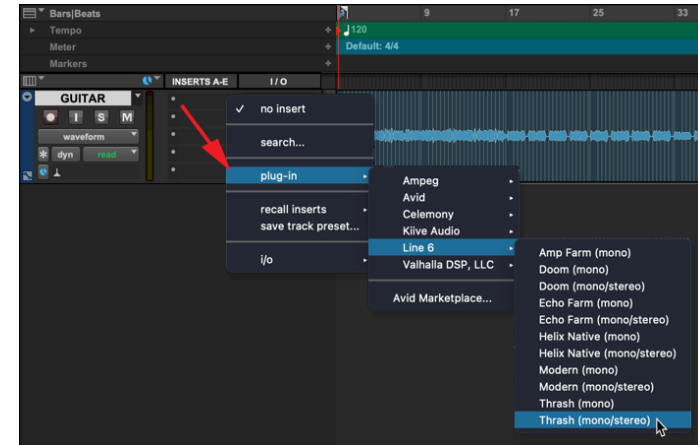
Note that some of the Metallurgy plugins' parameters do not support the Logic Dual Mono - **Couple** feature and, therefore, will not be "linked" for the L and R instances. These include Amp, Cab, Mic, & IR loading, and the Mixer's Room Mic and Mic/IR selectors.

3. You will then see Thrash appear within the plugin window. Be sure to turn your monitoring system to a low level, then choose a preset from the plugin's Preset Browser and hit Play to hear the results.

Avid Pro Tools

The Avid® Pro Tools® host DAW application for is available for Mac & Windows. Pro Tools supports the Avid AAX plugin format.

1. Select your audio track within your Pro Tools project. Within the track header at the left of the track (or within the Pro Tools Mixer window's channel strip for this track), click on one of the slot's menus in the Inserts section.



Inserting Thrash plugin on a Pro Tools mono audio track

2. In the plugin menu, choose Line 6 > Thrash. Note that Pro Tools offers both mono input and stereo input track types, therefore, you'll have different sub-options depending on your track's type. The Thrash plugin is available for all mono and stereo track plugin type options (Mono, Mono-Stereo, Stereo, and Multi-Mono).* Also, see ["Mono and Stereo Track Plugin Functionality" on page 9](#)).

***NOTE:** The Pro Tools **Multi-Mono** insert plugin option, available on stereo tracks, inserts two mono instances of the plugin (each accessed via the L and R buttons at the top of the plugin window). Each instance processes the left and right audio channels of the stereo track independently. Using Metallurgy plugins in this dual mono format allows you to apply different tones to each the left and right audio channels for the track, but will also utilize 2x the CPU power.

Note that some of the Metallurgy plugins' parameters do not support the Pro Tools Multi-Mono - **Link** feature and, therefore, will not be "linked" for the L and R instances. These include Amp, Cab, Mic, & IR loading, and the Mixer's Room Mic and Mic/IR selectors.

3. You will then see the Thrash plugin appear in the Effects Insert window. Turn your monitoring system to a low level, then choose a preset from the plugin's Preset Browser and hit Play to hear the results.

TIP: Most host DAWs also allow you to insert plugins on Send, Bus, or Aux track types. Host DAWs differ slightly in their naming and features of these track types, but their main purpose is to allow you to insert a single instance of your plugin and then route the output of any number of audio tracks into it to process them using the same effect. This is the preferred way of processing multiple tracks since, obviously, one instance of your plugin utilizes less CPU power as compared to inserting individual instances on each audio track! Please refer to your host DAW's documentation for details.

Mono and Stereo Track Plugin Functionality

The Metallurgy plugins are capable of being inserted on a mono or stereo audio track. Note that, when inserted on a stereo input track, the left and right input signals are collapsed to mono upon entering the plugin. The Cabinet and Post FX Views are capable of applying panning and stereo effects, which you'll hear in stereo exiting the plugin, assuming your track output and monitoring system are configured for stereo.

For DAW host applications that offer the option (e.g., Logic Pro or Pro Tools) to choose the mono, mono-stereo, or stereo version of the Metallurgy plugin for your track, the plugin will comply and provide mono or stereo output as expected. When inserting a mono output instance of any Metallurgy plugin in these host applications, all the plugin's Cabinet View - Mixer Pan controls and Post FX - stereo Pan and Delay options appear dimmed, indicating they are disabled to provide a mono plugin signal that is routed to the host track's mono output.

Mixer Pan controls are disabled in a mono output plugin instance



Example of a mono output plugin instance (Doom Mixer)

For DAW host apps that do not offer the mono, mono-stereo, or stereo plugin option (e.g., Reaper or StudioOne), Metallurgy plugins will typically conform to the track's input format.

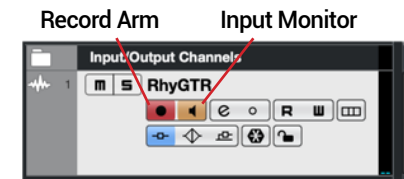
Live Input Monitoring Through the Plugin

Another great benefit of audio effects plugins is the ability to monitor your input signal through the plugin inserted on the track. This allows you to dial in the desired tone, such as a customized set of effects, amp, and cabs/IRs within the instance of your Metallurgy plugin, and then hear your guitar processed in real-time. Once you hit record, only your "dry" D.I. guitar signal is actually recorded into the track, which provides the huge benefit of being able to completely change the plugin settings at any time, right up until you do a final mix-down of the DAW project!

Live Input Monitoring is a function of your host DAW application, and is typically accomplished by the following steps. Each host DAW is slightly different, so be sure to consult your DAW application's documentation for details.

1. **Configure your audio track's input options to receive input from whatever audio interface input your guitar is plugged into.**

2. **Insert your Metallurgy plugin on the track, as described in the previous examples.**
3. **Set the track's Record Arm button to "on" so that the track receives audio input.**
4. **Activate the track's "Input Monitoring" feature. This is typically a button found near the Record Arm button. This feature allows the live track input to be fed through the DAW track and fed through all plugins inserted on the track.**



An audio track in Cubase configured with Record Arm & Input Monitoring active

NOTE: When utilizing your DAW track's "Input Monitoring" feature, you'll want to be sure to disable any "Direct Monitoring" signal on your audio interface (many interfaces offer an optional function that routes your input signal directly to its outputs, without going through the DAW software). This way you'll hear only the input signal fed through the plugin. See your audio interface's documentation for details.

5. **Now when you bash a chord on your guitar, you should hear your signal through the track with the glorious Metallurgy processing applied. You can hit the Record button and try a pass at recording your performance. Upon playback you can then experiment with tweaking the plugin settings even further!**

About Latency

Since your input signal is being fed round-trip—into your audio interface, through the DAW host and plugin software (or standalone app), and back out your audio interface's outputs—it is subject to some amount of "latency." Latency is the time between when you pluck a note on your guitar and hear the resulting audio output through your monitoring system. Latency is primarily a function of your audio interface, host DAW software, and the recording capabilities of your computer system. You can generally get the lowest latency by reducing your buffer size options for your audio interface driver within in your host DAW software's Preferences. Please see your DAW software's documentation for details. For the Metallurgy standalone applications, you can use the Buffer Size option within the app's Audio Settings window—see [page 48](#).

GUI Overview

The Metallurgy plugin's main window consists of two main sections, the **Toolbar**, with its collapsible **Utility Drawer**, and the **View Panel**.



View Panel

The Toolbar consists of two rows of controls which include the Preset browser, Command buttons, Metering, and View buttons. The Utility Drawer expands from the Toolbar and is shown by default (as pictured above), offering the Capo, Noise gate and Focus Filter options. These components provide easy access to all features of the plugin.

The View Panel panel displays the selected View's contents, the **Pre FX**, **Amplifier**, **Cabinet**, or **Post FX View**, as shown in the following images. Click on the Toolbar's View Selector button to display the desired view. This is where you can adjust any of the effects, amp, cab, and signal flow mix parameters to sculpt your tone. See the following chapters for details.



Click the View Selectors to choose between the four views

The Four Views



The Doom plugin



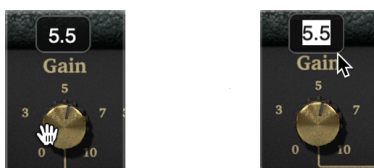
The Modern plugin



The Thrash plugin

Parameter Value Indicators

For most parameter controls throughout the plugin, you'll see a value indicator pop-up when hovering your mouse over and when adjusting the control, allowing you to see your exact settings. Double-click within the pop-up box once it appears and you can type in your desired value for precise edits. Note that for knob and slider type controls, you can double-click directly on the knob or slider to immediately display and edit the pop-up box value.



Parameter value indicator

TIP: For knobs—drag your mouse vertically to adjust knob controls (rather than try to drag and “turn” them with your mouse).

Coarse/Fine Parameter Adjust

For most knob and other continuous type controls, they will increment with a “coarse” adjustment when you click and drag with your mouse. When you want to make more detailed adjustments, hold the Command (Mac) or Control (Windows) key and click-drag with your mouse to adjust in “fine” increments.

Parameter Reset

For a handy shortcut to quickly “reset” any individual parameter to its initial default value, hold the Option key (Mac) or Alt key (Windows) and click on the knob, slider, or switch.

Tooltips

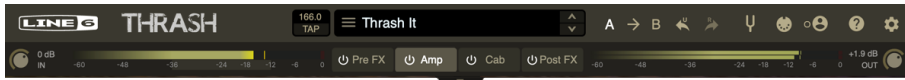
You'll see helpful text tooltips automatically displayed within the Status Bar, across the bottom of the plugin or standalone app's main window, when hovering your mouse cursor over and accessing the different options and parameters.



A descriptive Tooltip appears in the Status Bar when accessing controls

Toolbar Controls

The controls found within the Toolbar are always available, regardless of the currently loaded view or preset. These controls are common to Metallurgy Doom, Modern, and Thrash.



The Toolbar (Thrash)

The Toolbar consists of two rows of controls that are always visible. First we'll cover the controls in the top row of the Toolbar.



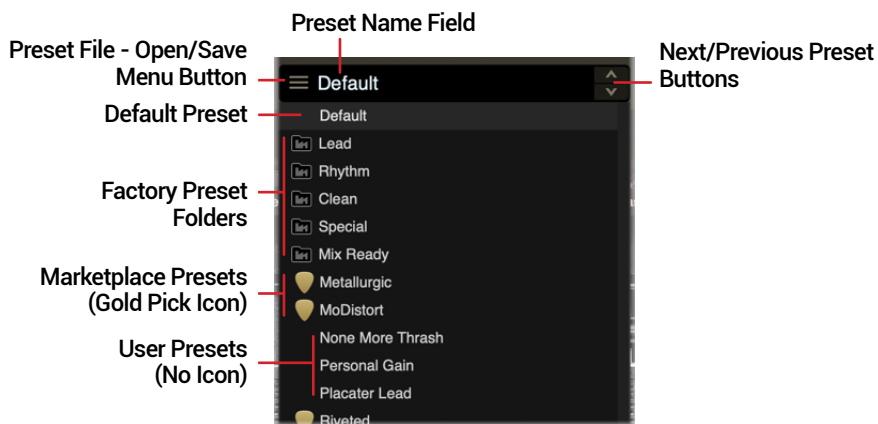
Preset Tempo (Standalone App)

Undo/Redo MIDI Learn Help

The Toolbar - top row controls (Thrash standalone app)

Preset Browser

The **Preset Browser** provides access to the included factory presets, as well as your own custom-created presets. Click on the Preset name field to open the Browser list, where you'll find the following preset types. Presets are compatible with both the plugin and standalone app for each individual Metallurgy product.



The Preset Browser

- **Default Preset** - The Default named preset is the one that loads automatically on launch of any new plugin instance. (The standalone app launches remembering your last-loaded preset, but you can choose the Default preset in the Browser anytime.) The Default preset is read-only.*
- **Factory Preset Folders** - A range of assorted factory presets are provided to get you started. Click to expand any Factory Presets folder to access its presets within. These presets are read-only.*
- **Marketplace Presets** - Premium Metallurgy presets purchased from the Line 6 Marketplace, once added into your Presets folder, appear with a gold guitar pick badge to their left. These presets are licensed for your Metallurgy use only and read-only.* Also see the following section.
- **User Presets** - Presets you've created and saved appear within the browser list with no icon. These can be edited and overwritten with the Save command.

*NOTE: The Default, Factory, and Marketplace presets are "read-only" and cannot be overwritten using the preset browser's Rename or Save commands. But you can edit any these presets as desired and use the browser's Save As command and rename the preset to save your edited copy. Marketplace presets created with Save As remain as licensed for your Metallurgy software use and computer authorization use only.

Line 6 Marketplace Presets

Looking for more presets? Be sure to visit the Line 6 Marketplace! Please see "[Line 6 Marketplace](#)" on page 5. You must initially have your Metallurgy plugin (or Metallurgy standalone app) signed in, and your computer authorized to initially open and load new Marketplace premium presets for their license synchronization. On subsequent uses of your Marketplace presets, being signed in nor an Internet connection are necessary.

You can manually copy your Marketplace premium presets into the respective Metallurgy Presets folder, which will then allow them to appear within the Metallurgy plugin or app Preset Browser windows. To do so, copy your Marketplace preset files into the following folder locations (Mac or Windows):

- **Marketplace Doom presets:** These preset files include the ".mtd" extension for their filename. They should be copied into **Documents > Line 6 > Doom > Presets**.
- **Marketplace Modern presets:** These preset files include the ".mtm" extension for their filename. They should be copied into **Documents > Line 6 > Modern > Presets**.
- **Marketplace Thrash presets:** These preset files include the ".mtt" extension for their filename. They should be copied into **Documents > Line 6 > Thrash > Presets**.

TIP: You can manually create your own custom named sub-folders within the above preset folder paths and move your individual presets into your sub-folders to organize them however you like.

Loading a Preset

There are a few ways to load a preset:

- Click on the Next/Previous arrow buttons to cycle through the complete preset list sequentially, without needing to open the Preset Browser's list.
- Click on the name field to pop open the Preset Browser List and click on the desired preset within the folder to load it. As you create and save your own presets, you'll see them appear in this preset list as User presets.
- Click on the Preset File - Open/Save menu button and choose Open. This provides direct access to all your own created User presets and any [Marketplace](#) premium presets you may have purchased, wherever they reside on your computer (also see the next section).

When a Marketplace preset is loaded, you'll see its title appear in gold text as an indicator.



A loaded Marketplace preset

Whenever the currently-loaded preset has been edited, its title within the Preset Browser appears in italics and followed by an asterisk. This lets you know to Save the preset (or do a Save As, if it is a read-only preset) to retain your edited settings—see the next section.

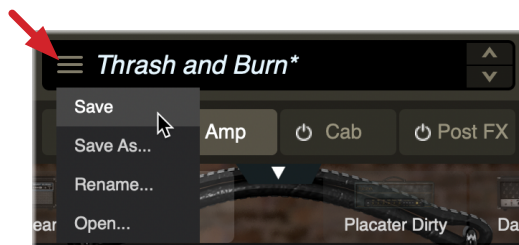


Preset in a "dirty" state

Saving a Preset

To save your preset, click the Preset File - Open/Save menu button and choose Save or Save As. The standard File - Save window is presented, where you can rename the preset as desired, then click OK. You can save a virtually unlimited number of User presets.

NOTE: The Default, Factory, and Marketplace presets are read-only and cannot be renamed or overwritten. You can use Save As for read-only presets.



The Preset Open/Save menu

Presets are saved into the designated Presets location (within your Mac or Windows Documents folder):

- **Doom presets:** Documents > Line 6 > Doom > Presets
- **Modern presets:** Documents > Line 6 > Modern > Presets
- **Thrash presets:** Documents > Line 6 > Thrash > Presets



TIP: It's a good idea to make backups once you start creating your own User presets. You can do so by simply *copying* the Presets folder to another location on your computer system.

The following settings are stored within a preset:

- Plugin Input & Output levels, Capo, Noise Gate, and Focus Filter parameter values and On/Off states
- On/Off states for the four Views
- All Pre FX parameter values and On/Off states
- Amplifier model selection and all amp parameter values and On/Off state
- All Cab, IR, Mic, Mixer, and EQ selections and their parameter values
- All Post FX parameter values and On/Off states
- Preset Tempo BPM (standalone app only, when configured for Preset tempo source)
- Custom preset name entered via the Preset Browser



NOTE: Some host DAW applications also offer their own preset library and Save options for plugins. Any such host application's presets are saved and managed independently—please refer to your host's documentation for details.

Preset Tempo Control (Standalone App)



The standalone app's Preset Tempo control

The "Tap Tempo" button and BPM indicator control are displayed in the Metallurgy standalone applications only, to provide a source tempo for the apps' Post FX Delay repeat times to follow. (The Metallurgy plugins' Post FX Delay times follow your host DAW project tempo as their source.) When the Tempo Source is set to Preset (Post FX) within the standalone apps' application Preferences, this Preset Tempo control becomes enabled, allowing you to "tap" in your desired tempo, or double-click on the BPM indicator to type in a precise tempo, which is saved per preset. Please see ["Application Preferences: Configuring Your Device & Tempo Settings"](#) on page 48 for details.

A/B Compare

The set of A/B Compare controls allow you to temporarily store all your current parameter settings as a starting point for further fine-tuning, and then easily compare new, edited settings with the original settings.



The A/B Compare controls

NOTE: DAW host applications often include their own A/B Compare feature for effects plugins. However, since Metallurgy software includes numerous models and parameters, it is recommended you use this A/B Compare for the plugin or standalone app settings.

These A/B Compare controls are also supported by Undo/Redo, allowing you to reverse the actions performed by the **A**, **B**, and **Copy To** buttons.

To follow is an example for how to use this feature.

1. Once you have loaded a preset or created a tone to your liking within the Thrash Signal Flow, click the middle Copy To (arrow icon) button.



Copy A to B

You'll see the B button flash a few times indicating the A settings have been copied to the B state. Copying A to B provides you with a stored "starting point" for further adjustments.

2. Click the B button to load the B state and proceed to edit your tone to fine-tune it as desired. Note that you can make any type of edits you like within the plugin—adjust knobs and switches, change amp or cab models, load a different IR, or even load a different preset.
3. You can now switch between both settings by clicking the A/B buttons while playing your track and audibly compare between them.
4. Optionally, while the B button is selected, you can make further adjustments and continue comparing to your original A settings.
5. If you decide you still prefer your original settings, simply switch back to, and remain on, setting A.
If you decide you prefer your edited settings, with the B button selected, copy the B settings to the A location by pressing the Copy To A button.



Copy B to A

This allows you to have these settings now stored in both A and B as your new "starting point," from which you can repeat the steps 3-5 for further fine-tuning.

All your current settings for **A** and **B** remain stored within the plugin instance for the host DAW project. If your custom tone is one you want to keep permanently, save it as a preset—see ["Preset Browser" on page 12](#).

Undo and Redo

Undo and Redo are available for most edit actions performed within the currently-loaded plugin or standalone app preset, accessible via the Toolbar's Undo and Redo buttons. The Undo/Redo history is tracked per loaded preset and per instance of the plugin—the history is cleared when a new preset is loaded, when the Metallurgy plugin instance is removed, and when your host project is closed. The standalone app's history is cleared when a new preset is loaded, and when the app is exited.



The Undo and Redo buttons

Undo/Redo is available for most actions, including:

- Parameter changes in Pre FX, Amplifier, Cab, and Post FX views
- Amp and Cab model changes and IR file selection
- Input and Output Level settings
- Utility Drawer - Capo, Noise Gate, and Focus Filter parameter changes
- A/B Compare functions— Undo/Redo tracks edits made across both A and B slots, and tracks which A/B Compare slot is active (also see the previous section)

Actions not available for Undo/Redo include the following:

- Loading presets
- View selection changes
- Tuner window parameter changes (Tuner changes made in the Preferences window are global and are also not available for Undo/Redo)
- Edit actions written or performed via host automation or MIDI control
- MIDI assignments created or cleared using MIDI Learn
- Changes to any settings within the Preferences window (plugin and standalone app)

NOTE: Host DAW applications also typically offer their own Undo/Redo commands, and some also offer "A/B Compare" features as well. However, due to the complex architecture of Metallurgy, these types of host commands typically cannot track all actions performed within the plugin. Therefore, we suggest you use only the built-in Undo/Redo within your Metallurgy plugin for restoring its actions.

MIDI Control

The Metallurgy plugins and standalone apps support remote, external control of most parameters from connected MIDI controller devices (or MIDI software). MIDI control can be “mapped” to the parameters using the MIDI Learn function, as covered in the following steps.

Configuring MIDI Learn in the Plugin

You'll first need to configure your DAW host application to receive MIDI Control input from your external MIDI controller device(s) or MIDI software. These settings are most often found within the DAW application's Preferences. Additionally, it is often necessary to configure your DAW host track routing so that the external MIDI Controller data is fed directly to your desired plugin instance. Typically, this involves using a MIDI or Instrument track to receive the MIDI input and configuring the MIDI track output to be routed to the audio track on which the plugin is inserted. Please see your DAW host application's documentation for details.

NOTE: Your “learned” MIDI assignments within the plugin are retained by your DAW host's current session for the specific Metallurgy plugin instance in which you created them (MIDI assignments are not saved individually with your plugin presets).

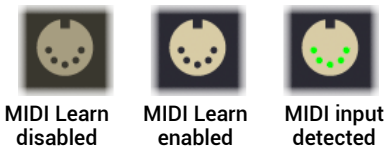
Configuring MIDI Learn in the Standalone App

For the app to receive MIDI Input, you'll first need to select your connected MIDI controller device(s) within the Metallurgy application's main menu - Preferences window. Please see [“Application Preferences: Configuring Your Device & Tempo Settings” on page 48](#) for details. Once your MIDI device(s) are configured, the following MIDI Learn steps and functionality are the same in both the plugin and standalone app.

NOTE: Your “learned” MIDI assignments created within the standalone app are retained globally within the application itself, until you choose to edit or remove them (MIDI assignments are not saved individually with your presets).

MIDI Learn Toolbar Button/MIDI In Indicator

The MIDI icon on the top row of the Toolbar toggles the MIDI Learn feature enabled/disabled. The icon also serves as a MIDI input indicator. It lights up green to indicate whenever it is detected that MIDI messages are entering the instance of the plugin or the standalone app. (This indicator is very helpful to let you know if you've routed MIDI correctly, and that the plugin/app is indeed receiving MIDI messages from your external controller.)



To Create a MIDI Controller Assignment via MIDI Learn:

For this example, we'll select the Thrash Pre FX Wah's Position parameter to be controlled via an external MIDI pedal controller, so it can be used just like a traditional wah. The steps are the same for any Metallurgy plugin or standalone app's continuous parameters. (See the end of this section for controlling switch-type parameters.)

1. **Configure your external MIDI controller device's pedal/knob (or software) to transmit whatever MIDI CC# you like. For our example, we will configure a pedal controller to send MIDI CC 7. The CC's full value range (0-127) maps to the full 0-100% of Thrash's continuous-type parameters.**
2. **Select the Pre FX View within Thrash and click on the MIDI Learn button to enable MIDI Learn mode. When enabled, you'll see the view dim slightly and all assignable knob and switch parameter “targets” within the view displayed with outline indicators. The status bar on the bottom of the window also informs you of the current MIDI Learn state and functions in each step.**



MIDI Learn Mode enabled (Thrash - Pre FX View)

NOTE: MIDI Learn is enabled for all parameters within the current View only (the Pre FX View in our example). When MIDI Learn is enabled, Toolbar options and View selectors are *locked*. To create a MIDI controller assignment for any other View or “Utility Drawer” parameters, click the button to disable MIDI Learn, then choose the desired View Selector or expand the Utility Drawer and enable MIDI Learn again.

3. **Click on the pedal surface of the Thrash Wah to “arm” the Position parameter—it appears with a red overlay to indicate the armed state.**



The Wah is armed for MIDI Learn

4. Thrash's armed Wah - Position parameter "listens" for an incoming MIDI CC message. Move your MIDI controller device's pedal to send its MIDI CC message into Thrash. When the MIDI CC message is received, MIDI Learn mode exits and you'll see the Thrash Wah display the "learned" CC 7. The assigned CC remains displayed on the Wah for reference.



Wah has Learned MIDI CC 7

The MIDI controller assignment for the Wah - Position parameter is now complete and should respond to your MIDI controller. You can repeat the preceding steps to configure any additional parameters for MIDI control.

5. To remove any existing MIDI controller assignment within the current tab's view, enable MIDI Learn and hover your over the assigned parameter—an "X" button appears. Click the "X" button to clear the MIDI assignment.



NOTE: The Thrash Undo/Redo does not track assignments made or removed via MIDI Learn.

MIDI Assignments for Switch-Type Parameters

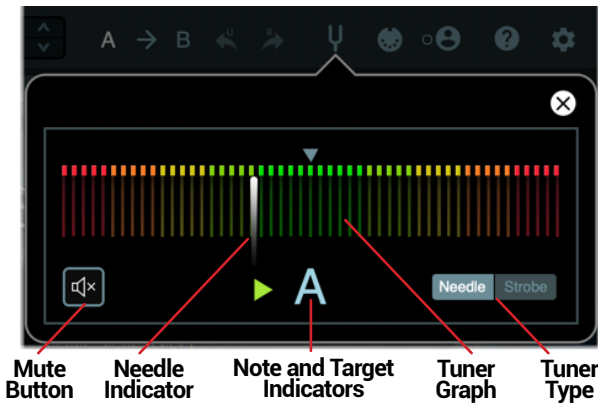
Metallurgy plugins and apps include several non-continuous, switch-type parameters, such as On/Off switches, multi-stage mode selectors on stompboxes, etc. You can also use MIDI Learn using the preceding steps to create assignments for these parameters as well—with the following configurations for your controller's MIDI CC messages:

- **For 2-state switches**, such as the On/Off of any stompbox - A CC with a value of 0-63 sets the switch Off, and 64-127 sets the switch On.
- **For multi-state switches**, such as the 3-state Mode selector on some Pre FX stompboxes, or the channel/jump switch on some amps, CC values map directly to the individual switch states, where value 0 selects position 1, value 1 selects position 2, value 2 selects position 3, etc.

Tuner

Now there's no excuse to not be in tune before capturing that otherwise perfect recording take! You can launch the pop-up Tuner window at any time in the plugin or standalone app and it will receive your live input signal and show the detected note, and your string's sharp or flat status.

NOTE: When the Capo feature is on and the Tuner's Mute is off, the Tuner automatically detects the Capo feature's current pitch setting, so that the tuner displays the "capo'd" note you're actually hearing at the output of the plugin or standalone app! See ["Capo" on page 21](#).

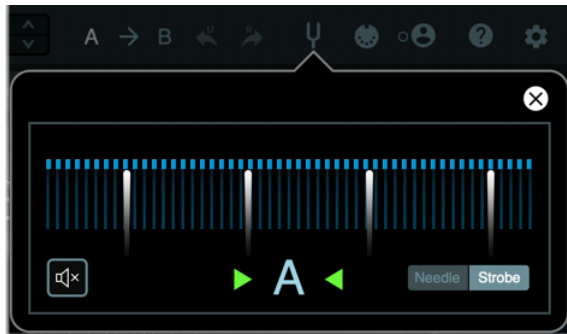


The Tuner (Needle tuner type)

The following Tuner options are available within the Tuner window and allow you to temporarily change the functionality while the Tuner window is open. Note that the Toolbar Settings button > ["Preferences"](#) window includes global Tuner options, which determine the default settings on each open of the Tuner window in *all* your Metallurgy Doom, Modern, and Thrash plugins and standalone app instances. Both the Tuner Window and Preferences Tuner options are described below.

- **Mute On/Off** - Toggle the Mute button to either hear your plugin or standalone app's output signal or completely mute it while the Tuner is open. (The Tuner automatically un-mutes when closed.)
- The Toolbar **Preferences - Mute On/Off** option sets the global default for the Mute state on each new open of the Tuner window (Mute On is the initial global default).
- **Note and Target indicators** - The tuner detects the note and displays its letter here. The target arrows illuminate to inform you if the string is flat, sharp, or in tune.
- **Tuning Graph** - When using the default Needle Tuner type display (as shown in the preceding image), the multi-color tuning graph helps you analyze your tuning, with the bright green area in the center indicating the "in-tune" range.


- **Needle/Strobe Display Type** - Changes the tuner between Needle and Strobe type displays. When in Strobe mode, the white vertical bars “strobe” left to indicate flat, and right to indicate sharp—when you get the vertical bars to appear still and the green arrows both appear lit, your string is in tune to the displayed reference pitch.
- The **Preferences - Mute Needle/Strobe** option sets the global default for the Tuner Needle/Strobe type on each new open of the Tuner window (Needle is the initial global default).




The Strobe tuner

- The **Preferences - Reference Frequency** option sets the Tuner's base reference frequency, from 425 to 455 Hz. **Note that changing this Reference Frequency within the Preferences applies the new value globally on all instances your Metallurgy plugins and standalone apps, and this value remains in use until edited again.** There is no option for this Reference Frequency within the Tuner window itself.

Using the Tuner

1. With your guitar signal routed into the DAW application's audio track where the Metallurgy plugin is inserted, activate the track's “input monitoring” feature (see [page 9](#)) and turn up your connected guitar to feed the live input through the plugin. If using the standalone app, simply turn up your connected guitar and go to the next step.
2. Click the Toolbar's Tuner button  to display the Tuner.
3. Optionally, click the Mute button to mute the output signal if you don't want to hear it while tuning. (Mute automatically deactivates when you close the tuner or when you close plugin window.)

 **TIP:** If you're using the “Capo” feature to change the audible tuning of your guitar, set the Tuner's Mute to **Off** and the Tuner will display the “capo'd” notes while tuning. (When Mute is **On**, the tuner will display the natural note detected from your guitar input.)

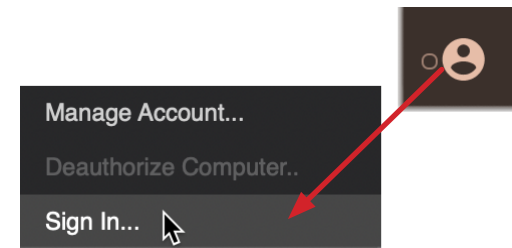
4. Pluck an individual string on your guitar and the detected target note is displayed—view the real-time tuner graph and indicators for your string's proximity to the target note pitch:

- **Using the Needle Tuner** - Tune your string to where the white Needle indicator appears in the center of the graph. The target arrow indicators also light up green to inform you if the string is flat (left arrow is lit), sharp (right arrow is lit), or in tune (both arrows are lit).
- **Using the Strobe Tuner** - The lit white vertical indicators “strobe” left to indicate when your string is flat, and right to indicate sharp—the slower the movement, the closer you are to being in tune. When you get the white indicators to appear still, and both the green arrows are lit, your string is in tune.

5. To exit the Tuner, click the Tuner button again or click on the X button.


Account

Clicking the Toolbar's Account button expands the menu which offers Sign In, computer Authorization, and management options for your Line6.com account.

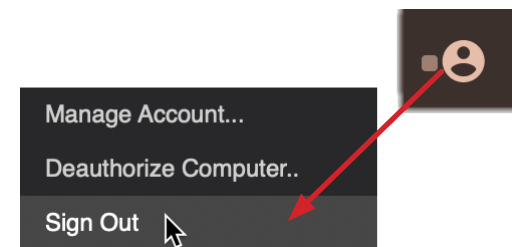


The Account menu (not signed in)

Sign In - (An Internet connection is required for sign in and authorization.) This option launches the sign in window where you'll need to enter your Line6.com account username and password (or you can choose to create an account if you haven't already). Creating an account, signing in, and authorizing your computer are necessary for initially authorizing and using the Metallurgy software. Please see “[Purchasing the Software License](#)” on [page 3](#) for details.

 **NOTE:** You'll also need to sign in after purchasing Metallurgy premium presets or IRs from the “[Line 6 Marketplace](#)”.

A sign in indicator to the left of the Account button “lights” when you are actively signed in. You can click on the button to Sign Out, or Deauthorize your computer.




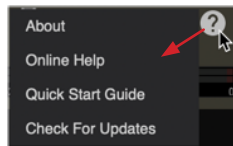
The My Account menu (signed in)

Authorize/Deauthorize Computer - Once signed in, your computer is authorized, which allows the Metallurgy plugins or standalone apps to run. While signed in, the Deauthorize Computer option is selectable. Deauthorizing is really only necessary to free up one of your four available authorizations, or if you're to be removing the Metallurgy software. Please see ["Authorizing Your Computer" on page 4](#).

Manage Account - Takes you to the line6.com/account web page where you can view and manage your account.

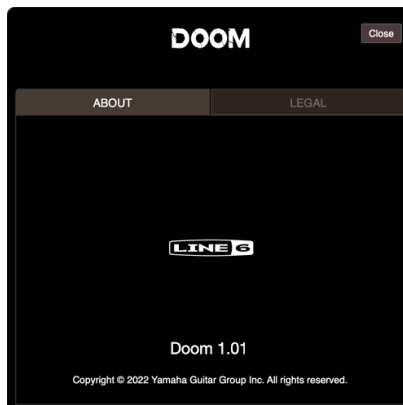
Help

Click on the  Help button to choose the options from the menu.



The Help menu

About - Launches the About window, containing version information (ABOUT tab) and legal information (LEGAL tab) for the software.




The About window (Doom)


Online Help - Takes you to the Support pages on the Line 6.com website.

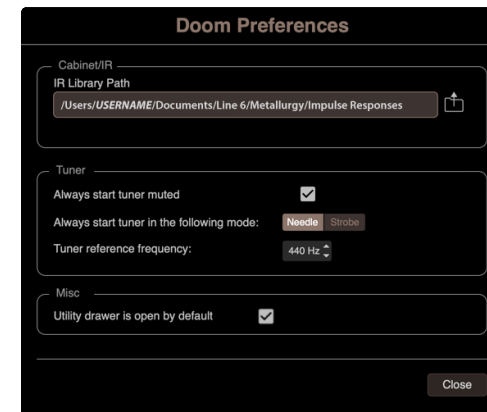
Pilot's Guide - Launches this PDF you are now reading.

Check for Updates - (Internet connection required) Checks the Line 6 website to see if a newer Metallurgy software version is available. See ["Checking for Updates" on page 6](#).


Preferences

Clicking on the little gear  button on the plugin window's toolbar launches the **Preferences** window.

 **NOTE:** The Metallurgy standalone apps include an additional **application Preferences** window, accessed from the main menu, where you can select and configure your audio & MIDI devices, as well as Tempo options—see [page 48](#).



The Preferences window


 **NOTE:** All options within the above Preferences window are global for **all** your installed Metallurgy plugins and standalone apps—that is, changes you make to these Preferences options within any Metallurgy Doom, Modern, or Thrash plugin instance or standalone app will be reflected in all of them!

Cabinet/IR Preferences

IR Library Path - This option defines the path where all Metallurgy plugins and standalone apps will look for IR files when using the Cabinet View's IR Browser (see ["Using Impulse Responses" on page 35](#)). By default, this is set to the following location (within your Mac or Windows login's Documents folder):

Documents > Line 6 > Metallurgy > Impulse Responses

You can optionally click the folder button and change this to your preferred computer directory. Wherever you have this path set is where you'll want to copy and store your third-party IR .wav files to allow your Metallurgy software to find and utilize them.

 **NOTE:** If you change this IR Library path, it is best to also copy or move any existing IR files from your original IR folder to your new folder, so that existing Metallurgy plugin instances and presets will be able to locate them.

Tuner Preferences

These Tuner options determine the default settings on each open of the Tuner window in your Metallurgy plugins and standalone app instances.

TIP: You can also access options within the Tuner window itself, which *temporarily* change the specific plugin instance or standalone app's Tuner behaviors while the Tuner window is open. Also, see ["Tuner" on page 16](#).

Mute - Configures the Tuner so that the plugin or standalone app's output is muted completely while the Tuner window is open (checked - True, the initial default), or so that you can hear your output signal (unchecked - False). The Tuner automatically un-mutes when the Tuner window is closed.

Needle/Strobe Display Type - Sets the Tuner for either Needle (the initial default) or Strobe type displays.

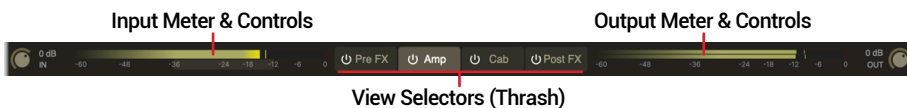
Reference Frequency - Sets the Tuner's base reference frequency, from 425 to 455 Hz (standard 440 Hz is the initial default). Note that there is no option for this Reference Frequency within the Tuner window itself—it can only be edited (globally) here in the Preferences.

Miscellaneous Preferences

Utility Drawer is open by default - The Toolbar's ["Utility Drawer"](#) can be shown or hidden manually at any time within the main window. This Preferences option allows you to show or hide it initially upon launch of the plugin and standalone app. By default, it is checked to show the Utility Drawer.

I/O Controls, Meters, and View Selectors

On the second row of the Toolbar, you'll find the Input and Output Level controls and meters, and the View Selectors.



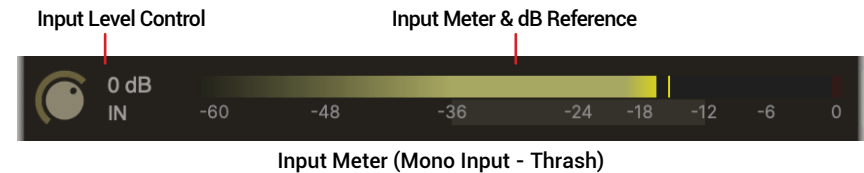
Clicking on one of the View Selector buttons determines what is displayed within the View Panel below: the Pre FX, Amplifier, Cabinet, or Post FX view, and also offer On/Off buttons for each view—see ["View Selectors" on page 20](#).

Input and Output Controls

The multi-color Input and Output meters provide real-time reference for the signal levels entering and exiting the plugin, with each also offering its own level knob. Each meter also includes a red clip indicator to show if the level exceeds the maximum—clipping does not produce the "good type" of distortion and should always be avoided to achieve the best sonic results.

NOTE: Input and Output level controls' settings are saved per preset.

Input



Note that if you've selected a mono input version of the plugin (if your DAW host offers this option), the Input meter appears as a single bar, as shown above; the meter has two bars when a stereo input version is in use. Also, see ["Mono and Stereo Track Plugin Functionality" on page 9](#).

The **Input** level knob at the left of the Input meter adjusts the signal level that is fed into the plugin. Note that the default setting is 0.0 dB (unity gain) and you can turn this knob to optimize the level as needed—or, double-click directly on the numerical dB value to type in a precise value.

Optimizing the Input Level

The level of the input signal entering the plugin can affect the overall gain and saturation of your tones, therefore, it is essential to "gain stage" accordingly. Metallurgy is designed to receive an "Instrument" level input signal, much like plugging a guitar directly into the same types of effects pedals or amps we've modeled. To follow are several tips for achieving the optimal signal level.

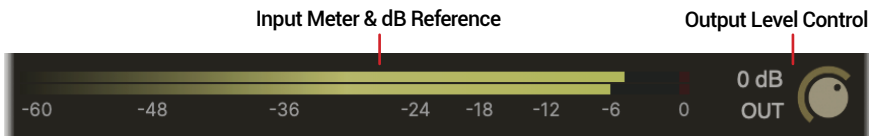
- For the most accurate results when direct recording electric guitar, we recommend that you use an audio interface with a "Hi-Z" or "Instrument" input.
- Guitars with active pickups may have a hotter output than traditional passive pickups. If your instrument utilizes active or especially high output pickups, set your audio interface or preamp's input "pad" to on, if available.
- Keep an eye on the Input Meter to reference the dB level measurement of your input signal (or the playback level of any clips within your DAW track). For best results, keep your input level between -36 dB to -12 dB, and try to avoid exceeding -12 dB too often. We've made this easy by marking this "safe zone" level range directly on the Input meter.



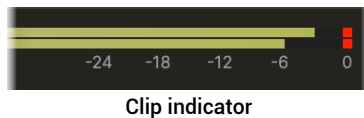
If your audio interface offers input level adjustment, it is typically best to adjust it there to keep the recording level entering the plugin within this optimal range. If needed, you can adjust the Input control at the left to fine-tune the level.

- Clipping, as indicated when the meter's red clip Indicator lights up, should **always be avoided** on the plugin or standalone app's input and output meters.
- Once you've optimized your input level, you can use the various Pre FX, Amp, and Cab/IR/Mixer's Gain, Volume, and Level controls, as well as the Output Level (see next) to adjust the output volume of the plugin.

Output



The main Output Meter is displayed at all times on the toolbar of the plugin, measuring the plugin's overall output level in real-time. Clipping, as indicated when any of the meters' red clip indicator light up, should **always be avoided**.



Clip indicator

The best practice is to “gain-stage” your levels throughout the plugin evenly. The various Pre FX, Amp, and Cab/IR/Mixer's Gain, Volume, and Level controls will all affect the output level of the plugin. Typically, you don't want to excessively drive any one of these views' levels, only then requiring you to turn the level way down in a later view or with the Output level control to prevent constant clipping.

Output Level

The **Output** level knob adjusts the volume of the processed (Pre FX + Amp + Cab + Post FX) signal leaving the plugin—turn this knob to optimize the level as needed, or double-click directly on the numerical dB value to type in a precise value.

View Selectors

These four View Selectors determine the content displayed within the View Panel of the plugin or app window. For the currently-selected View Selector, click the On/Off button to bypass/enable the entire view's processing in one click.



The Pre FX/Amplifier/Cabinet/Post FX View Selectors

Pre FX View - Displays the Pre FX view, where the pedalboard of stompbox effects can be enabled and tweaked as desired. See [“Pre FX View” on page 22](#).

Amplifier View - Displays the Amplifier view, where you can choose from the list of amplifier models and adjust front panel. See [“Amplifier View” on page 26](#).

Cabinet View - Displays the Cabinet view where you can select from the list of classic speaker cabinets and mic models, optionally choose the IR option to load your 3rd-party Impulse Responses, and use the Mixer to adjust the panning and levels, and optionally apply some room ambience and EQ. See [“Cabinet View” on page 32](#).

Post FX View - Displays the Post FX view, where the individual post-amplifier positioned effects can be enabled and adjusted to taste. See [“Post FX View” on page 39](#).

View On/Off



Using any of the view buttons' On/Off toggle can be a handy way to do things such as hear your preset with all your Pre FX stompboxes Off, without having to go manually turn Off each individual stompbox in the View Panel. This feature can also reduce CPU usage of the plugin instance or standalone app—if you know you won't be needing any models within a particular view for your current preset, toggle its button to Off. The views' On/Off states are saved per preset.

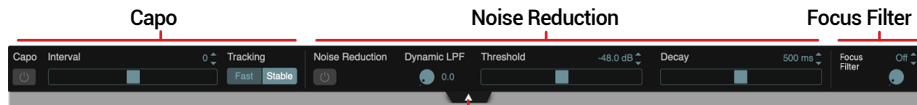
TIP: Use Option + click (Mac) or Alt + click on any View Selector, whether it is the current view or not, to toggle its On/Off state.

When a view is toggled Off, you'll see the View Selector button and the entire View Panel appear dimmed, and the signal from the preceding view(s) are passed through the bypassed view to the next view. When the view is toggled back On, its models are all returned to their previous individual On/Off states. **Be aware that volume levels may change when toggling a view On/Off, since the view's models or controls could potentially be raising or lowering your input signal significantly!**

NOTE: When toggling the Post FX View to Off, this performs a complete “hard bypass” of its processing, which means that any Post FX delay or reverb trails that might still be going on are immediately silenced. If you want your trails to remain audible until they fade out naturally after effect bypass, use the individual On/Off switch for the delay or reverb effects within the Post FX View.

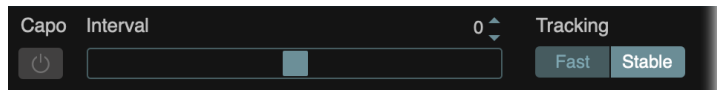
Utility Drawer

The Utility Drawer portion of the Toolbar is shown by default upon launch of the plugin or standalone app. Just click on arrow close button to hide it at any time (and you can set the ["Preferences"](#) to hide it by default). Included are controls for the Capo (polyphonic pitch-shifter), Noise Reduction, and Focus Filter features. All Utility Drawer features are Off initially, and their settings are saved per preset.



Close Button
The Utility Drawer (Modern)

Capo



The Capo settings

If you've ever wished you had a seven string guitar or find yourself constantly up or down-tuning your guitar for different tracks, you'll love this feature! The Capo is a polyphonic pitch shifter that changes all your strings' tuning simultaneously, much like a virtual capo, that can be applied to raise or lower your guitar's pitch as much as five semi-tones.

NOTE: The Capo utilizes high-quality, polyphonic pitch shifting, which increases the plugin's demand for computer resources.

Capo Parameters	
Parameter	Description
On/Off	Toggle the switch to turn the Capo On or Off.
Interval	Adjust the slider to choose the interval of polyphonic pitch-shifting that is applied—up to 5 semi-tones higher or lower in pitch. With the slider at 0, no pitch shifting is applied.
Tracking	Toggle the switch to determine how the pitch shifting engine reacts to your playing. The Fast option is better for playing fast single string runs and lead lines, and X Stable provides the fewest artifacts with complex chords.

Noise Reduction

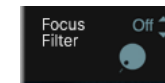


The Noise Reduction settings

Use the built-in Noise Reduction to curtail the audible hiss, hum, and other unwanted, low-level noise from your signal. Unlike common "noise gate" circuits that cut out or degrade your tone, the Metallurgy Noise Reduction acts more dynamically to attenuate audible noise, with minimal effect on the meat of your tone. Typically you'll want to avoid too high a Threshold and too short a Decay to prevent the abrupt cutting your signal decay on and off—unless that's the intended effect you're going for!

Noise Gate Parameters	
Parameter	Description
On/Off	Toggle the switch to turn the Noise Reduction On or Off.
Threshold	Adjust the slider to choose the signal level where the gate activates to reduce the noise.
Dynamic LPF	This Low Pass Filter dynamically gates the high end of your signal. Adjust the knob to the right to eliminate more high end noise.
Decay	Adjust the time in milliseconds for how long it takes for the gate to release.

Focus Filter



The Focus Filter settings

The Focus Filter is an adjustable, pre-amplifier positioned, high pass filter that cuts 12 dB/octave. As its title suggests, it allows you to reduce the low frequencies from 20 Hz to up to 400 Hz via the knob to reduce any "boominess," thus tightening up your guitar's low end. To disable the Focus Filter, click the selector to Off, or turn the knob to minimum.

TIP: All Utility Drawer parameters are available for automation and external MIDI control!

Pre FX View

Choose the View selector's Pre FX button to display the Pre FX View within the View Panel. Doom, Modern, and Thrash versions each include their own set of Pre FX View stompbox effects, as detailed in this chapter. Your input signal is routed through the effects from left to right (and from the Pre FX View into the Amplifier View).



The Pre FX View (Doom)

NOTE: A bypass button on the Pre FX View Selector allows you to optionally bypass all stompbox effects in one click as well as conserve CPU usage—see [“View Selectors” on page 20](#).

Pre FX Models and Parameters

Just like the original stompbox effects, these models are dead simple to use, and offer a wide variety of sounds and textures. Click and drag any knob to adjust its settings for the effect. You can reference the parameter value for while hovering over or adjusting any effect's knob—see [“GUI Overview” on page 10](#).

TIP: Option/Alt + click on any knob to return it to its default value, or double-click directly on the numerical value below any knob to type in a precise value.

To follow are descriptions of all Doom, Modern, and Thrash Pre FX stompbox models and their parameters.

Doom Pre FX Models

Bighorn Fuzz



Based on* the Electro-Harmonix® Big Muff Pi, 1973 “Ram’s Head” logo version. When it comes to fuzz pedals, this early Big Muff is still one of the most desired for its ultra-saturated sustain, thick body, and association with players such as David Gilmour and J. Mascis.

Bighorn Fuzz Parameters	
Parameter	Description
On/Off Switch	Toggles the effect On or Off. The LED is lit when On.
Level	Adjusts the overall output level. Set this to higher levels to boost the signal fed into the amplifier for more amp distortion and sustain.
Tone	Adjusts the EQ response. Higher knob settings enhance the high end and roll of the lows, while lower knob settings increase the low end thump and roll off the highs.
Sustain	Adjusts the amount of fuzz and sustain, from a bit of grind to a heavy dose of singing saturation.

Wringer Fuzz



Based on* the Boss® Hyper Fuzz FZ2. This Boss favorite was actually a take on the vintage Ultravox Super-Fuzz, with added EQ and dual fuzz circuit options. This one has quite a few flavors—flip between the circuits and twist the Gain knob to dial in to your personal taste.

Wringer Fuzz Parameters	
Parameter	Description
On/Off Switch	Press the lower half of the pedal to toggle the effect On/Off. The LED at the top of the pedal appears lit when On.
Volume	Adjusts the overall output level. Set this to higher levels to boost the signal fed into the amplifier for more amp distortion and sustain.
Bass	Adjusts the low end—at center the response is flat, turn right to boost the bass or left to cut it.
Treble	Adjusts the high end—at center the response is flat, turn right to boost the treble or left to cut it.
Gain	Adjusts the amount of fuzz and distortion for the selected Circuit, from mild grit to a wall of luscious fuzzy distortion.
Type Fuzz 1/Fuzz 2	Click directly on this switch on the side to select between the Fuzz 1 and 2 circuits. Fuzz 1 is a traditional fuzz-tone vibe, and Fuzz 2 is a more full-bodied fuzz & distortion combo.

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Vital Distortion



Based on* the EarthQuaker Devices® Life Octave/Distortion/Boost pedal. This unit was a limited-edition design collaboration between SUNN® and EarthQuaker Devices. With its octave inducing, Rat-like distortion, hefty output boost, and super tweak-able options, you can dial in some seriously wicked textures. This is like getting two pedals in one; the large Magnitude knob controls the Magnitude boost and all upper knobs control the Amplitude octave/distortion effect, with each having its own independent On/Off switch.

Vital Distortion Parameters	
Parameter	Description
Magnitude On/Off	The left footswitch toggles the boost On/Off (with the boost level controlled by the Magnitude knob). The LED above the switch is lit when On.
Magnitude	Adjusts the level of the boost. Hit the left footswitch to enable the boost, and crank this knob to slam your amp into further overdrive.
Amplitude On/Off	The right footswitch toggles the effect On/Off. The LED above the switch appears lit when On.
Octave	Blends in the octave effect. Try automating or controlling this parameter via a MIDI expression pedal to mix some texture into your drones.
Distortion	Adjusts the amount distortion for the selected Clipping mode circuit, from mild to nasty.
Clipping	This 3-way switch allows you to choose between clipping modes, Op Amp, Asymmetrical, or Symmetrical, which offer varying dynamics and compression qualities for the distortion.
Filter	Essentially a low pass filter, which rolls off the treble frequencies for sculpting your tone.
Amplitude	Adjusts the overall output level. Set this to higher levels to boost the signal fed into the amplifier for more amp distortion and sustain.

Pebble Phaser



Based on* the Electro-Harmonix® Small Stone phase shifter. The Small Stone was introduced in the early 70s, making it one of the earliest compact phase shifter effects, and widely adopted by guitarists of all genres.

Pebble Phaser Parameters	
Parameter	Description
On/Off Switch	Toggles the effect On/Off. The LED is lit when On.
Color	This switch provides two types of phase sweep; Off produces the more traditional, thick rotating speaker emulation warble, where On gets you into more intense, jet plane swoosh territory.
Rate	Adjusts the speed of the modulation.

Modern Pre FX Models

Rochester Comp



Based on* the Ashly® CLX-52 compressor. The original Ashly rack-mount compressor has long been popular in studios for applying to guitar and bass, and has also made into some players' live rigs. Its smooth, natural sounding compression makes it a great tool for smoothing out clean or distorted guitars, as well as for adding sustain and a level boost, if desired.

Rochester Comp Parameters	
Parameter	Description
On/Off Switch	The footswitch toggles the effect On/Off. The LED appears lit when On.
Makeup	Adjusts the overall output level after the compression is applied, to "makeup" any resulting reduction in output—can also be turned up to higher settings to boost your signal and drive the other stompboxes and amp harder.
Threshold	Sets the level where compression is applied. Compression is only applied when your input signal level passes above this threshold value. For example, if the Threshold level is set at -6 dB, only signal peaks that extend above that level will be compressed.
Ratio	Adjusts the amount of compression that is applied to your input signal that exceeds the Threshold setting. For a ratio of 2:1, an input signal that exceeds the threshold by 2 dB will be attenuated down to 1 dB above the threshold, or a signal that exceeds the threshold by 8 dB will be attenuated down to 4 dB above it, etc. Turn to higher settings for hard limiting.
Attack	Adjusts the amount of time it takes the compressor to kick in on an input signal that exceeds the Threshold. Use lower settings for a very fast attack, which can be best for taming fast, percussive strums. Slightly higher settings can sound more natural for smoother playing styles.
Release	Adjusts the amount of time for the compressor to disengage on the input signal. Use lower settings for fast release, which can be better for more percussive chord hits, or higher settings for smoother, more sustained notes and chords.
Mix	Adjusts the dry/wet balance. Keep this set fully clockwise for your entire input signal to be processed by the compressor. Or, turn counter-clockwise to blend in some of your uncompressed input signal in.

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Minotaur



Based on* the Klon Centaur overdrive pedal. Few pedals have reached the collectible status of the original Klon, due to its simple, but uniquely effective, overdrive tone and boost capabilities. Try it to add a light natural overdrive or a full, throaty midrange distortion to your signal.

Minotaur Parameters	
Parameter	Description
On/Off Switch	Toggles the effect On/Off. The LED appears lit when On.
Gain	Adjusts the amount of overdrive, from a slight sizzling breakup to a heavy roaring distortion.
Tone	Adjusts the EQ response. Higher knob settings enhance the midrange focus and adds high end clarity and lower knob settings soften the highs.
Volume	Adjusts the overall output level. Set this to higher levels to boost the signal fed into the amplifier for more amp distortion and sustain.

Caliper Drive



Based on* the Horizon Devices Precision Drive overdrive pedal. This isn't your dad's old green screamer-type, but a modern take offering a healthy amount of additional drive, EQ control, and even a built-in noise gate to keep that high gain noise floor under control.

Caliper Drive Parameters	
Parameter	Description
On/Off Switch	The footswitch toggles the effect On/Off. The LED appears lit when On.
Drive	Adjusts the amount of overdrive, from a slight sizzling breakup to a heavy roaring distortion.
Attack	Adjusts the onset of the distortion—at lower settings the lower-mids are accentuated. At higher settings picking is more defined for a modern sound.
Bright	Adjusts the high-end EQ response. Higher knob settings enhance the high-mids and add high end clarity.
Gate	Adjusts the amount of noise gate applied. Set to minimum to turn the Gate Off (knob goes dim). Lower knob settings apply less gate for a looser response, where the highest setting provides a fast, tight, modern gated signal.
Level	Adjusts the overall output level. Set this to higher levels to boost the signal fed into the amplifier for more amp distortion and sustain.


Thrash Pre FX Models

Throaty Wah



Based on* the Real McCoy Custom RMC®1 Wah. This wah has the classic character of those you hear on your favorite 60s and 70s recordings, but with a more musical sweet-spot and a slightly extended range, just to give you bit "more." The Throaty Wah can also be set to "Auto" mode, where it will respond to your picking attack.

Throaty Wah Parameters	
Parameter	Description
On/Off Switch	The upper switch on the left of the pedal toggles the effect On (up position) and Off (down position). The LED above the switch is lit when the Wah is On.
Auto Switch	The lower switch on the left of the pedal toggles the Auto mode for the wah On (up position) and Off (down position). When Auto mode is active, the wah effect is triggered by your picking dynamics and resulting input level fed into the wah—use the Sensitivity to adjust how it responds
Sensitivity	When the Auto mode is On, the Sensitivity to adjusts how the wah effect is triggered by your picking—at lower Sensitivity settings you need pick harder to trigger the wah.
Position	Use your mouse to work the "pedal" from the heel to toe positions. (Position is not functional when Auto mode is on.)
High Freq Limit	The upper knob on the right of the pedal adjusts the high frequency limit of the wah effect, from 5 kHz - 500 Hz.
Low Freq Limit	The lower knob on the right of the pedal adjusts the low frequency limit of the wah effect, from 20 - 500 Hz.

 **TIP:** Optionally, for the Thrash plugin or standalone app, you can configure an external MIDI Controller pedal or use your DAW host's parameter automation to control the plugin's Throaty Wah Position parameter in real-time, much like a standard wah—see "[MIDI Control](#)" on page 15.

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Pillars Overdrive



Based on* the EarthQuaker Devices® Plumes® overdrive pedal. A natural, tube-like overdrive with plenty of boost on tap to push the input of your amp for added drive and sustain.

Pillars Overdrive Parameters	
Parameter	Description
On/Off Switch	Toggles the effect On/Off. The LED appears lit when On.
Clipping Mode Switch	Determines the clipping mode for different distortion flavors: 1) Symmetrical LED - more crunch and compression, 2) OpAmp - no clipping, for clean boost, and 3) Asymmetrical Silicon Diode - transparent overdrive. Click directly on the switch to cycle it through the three modes.
Level	Adjusts the overall output level. Set this to higher levels to boost the signal fed into the amplifier for more amp distortion and sustain.
Gain	Adjusts the amount of overdrive, from a bit of grit to a heavy grind.
Tone	Adjusts the EQ response. Higher knob settings enhance the midrange focus and add high end clarity, while also tightening the low end. Lower knob settings add more low end girth and soften the highs.

Stupor O.D.



Based on* the Boss® Super OverDrive SD-1 pedal. Introduced in 1981, the Super OverDrive built upon the unique, asymmetrical clipping of the Boss OD-1, and delivered a warm, smooth distortion, yet with plenty of clarity retained for tight, higher gain rhythms.

Stupor O.D. Parameters	
Parameter	Description
On/Off Switch	Press the lower half of the pedal to toggle the effect On/Off. The LED at the top of the pedal appears lit when On.
Drive	Adjusts the amount of distortion applied to the input signal, from light overdrive to smooth distortion.
Tone	Adjusts the EQ—higher settings reduce the low end for tightness and increase the high end bite.
Level	Adjusts the overall output level, with higher settings boosting your signal level.

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Amplifier View

Choose the Amp View Selector to display to go to the Amplifier View. Here you can choose a Line 6 amplifier model and adjust its parameters.

NOTE: A bypass button on the Amplifier View Selector allows you to optionally bypass the entire Amplifier View, as well as conserve CPU usage—see [“View Selectors” on page 20](#).

Amp Model Selectors

Amp model selectors appear across the top of the Amplifier View, which you use to load the preferred amp model.



The Amp model selectors (Doom)

Amp Models and Parameters

All Metallurgy plugins/apps include four amplifier models, providing a wide range of clean, mid-gain, and blistering high-gain tonal options.

TIP: Option/Alt + click on any knob to return it to its default value, or double-click directly on the numerical value below any knob to type in a precise value.

To follow are descriptions of all Doom, Modern, and Thrash Amplifier View models and their parameters.

Doom Amplifier Models

Moo)))n - Brite and Normal Channels



Based on* the Sunn® Model T. The original Sunn Model T amplifier from the 70s is known for high headroom and big, bold low-end, making it perfect for stacking distortion and fuzz effects. It includes two channels, Brite and Normal, which can be selected individually or “jumped” for a bold combination of tones.

Moo)))n Parameters	
Parameter	Description
Channel/Jump Switch	Three-way switch toggles between the amp's individual Brite and Normal channels, or “Jumped” to use both. When jumped, both the Brite and Normal Volume knobs can be used to blend them as desired. TIP: Click on the brt , jump , and nrm labels to select the desired channel option, or click directly on the switch to cycle through the three settings.
Bright Volume	Controls the volume level of the amp's Brite channel. Note that even when the Channel Switch is set to the Normal channel and Jump is off, adjusting the Brite Volume still has a bit of “bleed” which can change the Normal channel's tone and distortion—just like the original amp!
Normal Volume	Controls the volume level of the amp's Normal channel.
Bass	Adjusts the low frequency response (common for both amp channels).
Mid	Adjusts the midrange frequency response (common for both amp channels).
Treble	Adjusts the high frequency response (common for both amp channels).
Presence	Adjusts the upper midrange and high frequencies for the power amp section.
Master	Adjusts the overall volume level of the amplifier.

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Mandarin Rocker



Based on* the Gain channel of the Orange® Rockerverb 100 MkIII The original Orange Rockerverb was introduced in 2014, as Orange's first ever "high gain" amp. The MkIII version expanded on the features of the earlier models, including greater headroom for even bigger and bolder tones. This one may change your idea about what "British Gain" sounds like.

Mandarin Rocker Parameters	
Parameter	Description
Gain	Adjusts the amount of gain—higher settings add more distortion.
Bass	Adjusts the low frequency response.
Mid	Adjusts the midrange frequency response.
Treble	Adjusts the high frequency response.
Master	Adjusts the overall volume level of the amplifier.
Effects	
Reverb	Adjusts the amount of spring reverb added to your amp tone.

Doom



A Line 6 original concoction, created especially with doom/sludge players in mind. This one combines a Marshall® JCM800 preamp with a Hiwatt® power amp, each tweaked slightly provide plenty of gain, a bit more sag, and some big, fat low end.

Doom Parameters	
Parameter	Description
Drive	Adjusts the amount of gain - higher settings add more distortion.
Bass	Adjusts the low frequency response.
Mid	Adjusts the midrange frequency response.
Treble	Adjusts the high frequency response.
Presence	Adjusts the upper midrange and high frequencies for the power amp section.
Master	Adjusts the overall volume level of the amplifier.

Mail Order Twin



Based on* the Silvertone® 1484 Twin Twelve. Now considered a "pawnshop prize," this 35 watt beauty was offered from 1963-1967 by Silvertone as their flagship combo amp via the Sears mail order catalog. It offered up a range of tones from creamy, smooth drive to full rock and roll crunch. Also built right in are a nice drippy spring reverb and dual-control tremolo for even more vintage flavor. Hit it with some of the included Pre FX distortion and fuzz to create your own shades of doom.

Mail Order Twin Parameters	
Parameter	Description
Drive	Adjusts the amount of gain - higher settings add more distortion.
Bass	Adjusts the low frequency response.
Mid	Adjusts the midrange frequency response.
Treble	Adjusts the high frequency response.
Presence	Adjusts the upper midrange and high frequencies for the power amp section.
Master	Adjusts the overall volume level of the amplifier.
Effects	
Reverb Depth	Adjusts the amount of spring reverb added to your signal. Set to 0.00 for no reverb.
Tremolo Strength	Adjusts the intensity of the amplitude-based tremolo effect. Set to 0.00 for no tremolo.
Tremolo Speed	Adjusts the rate of the tremolo effect.

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Modern Amplifier Models

Archetype - Clean and Lead Channels



Based on* the Paul Reed Smith® Archon® 50, Clean and Lead channels. Back in 2009, Paul Reed Smith became enamored by Dallas, Texas amp builder Doug Sewell's custom-built amps and convinced him to join the PRS team to develop its new line of top quality tube amps. In 2013, PRS introduced the Archon, featuring five gain pre stages and 6L6 power tubes to provide a full, lush distortion with plenty of punch. Not stopping there, the Archon also offers a high headroom clean channel for loud, rich & clear tones that sound great on their own or pushed with pedals.

Archetype Parameters	
Parameter	Description
Channel Switch	Toggles between the Clean and Lead channels of the amp. Each of the following controls control the currently selected channel, with the exception of the Bright switch.
Bright Switch	Toggles the Bright mode On/Off for the Clean channel only. Enable to add some upper end sparkle to your cleans.
Drive	Controls the volume and gain level of the current amp channel.
Bass	Adjusts the low frequency response.
Mid	Adjusts the midrange frequency response.
Treble	Adjusts the high frequency response.
Presence	Adjusts the upper midrange and high frequencies for the power amp section.
Depth	Adjusts the lower frequencies for the power amp section. Use along with the Bass to achieve your desired clean or distorted low end contour.
Master	Adjusts the overall volume level of the amplifier.

Revv Generator - Purple and Red Channels



Based on* the Revv® Generator 120. Revv is one of the newer tube amp makers to enter the market, and their flagship Generator 120 has quickly become a modern metal favorite. We've included models of both the amp's "Purple" and "Red" high gain channels. The Purple channel is slightly lower gain, with a bit tighter & clearer feel that some prefer for rhythms, while the Red channel serves up a fatter, more saturated tone many players pick for leads. But either can certainly be dialed in for huge, crushing distortions, and offer plenty of voicing options.

Revv Generator 120 Parameters	
Parameter	Description
Channel Switch	Toggle between the Red and Purple amp channels. You'll see the Channel LED and "Revv" name plate change color to indicate the current channel. All following parameters function for either channel.
Drive	Adjusts the level of the preamp gain; distortion and saturation increase as you turn up.
Bass	Adjusts the low frequency response.
Mid	Adjusts the midrange frequency response.
Treble	Adjusts the high frequency response.
Presence	Adjusts the upper midrange and high frequencies for the power amp section.
Resonance	Adjusts the amount of "damping" applied to lessen speaker cone vibration—damping decreases as you turn the knob up, which results in more low end at higher settings.
Aggression	Selects between three aggression levels: least saturation, tight saturation, & highest/fattest saturation. These aggression levels also interact with the Drive knob, and offer many options for rhythm and lead distortions.
Master	Adjusts the overall volume level of the amplifier.

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Vitriol - Crunch and Lead Channels



Based on* the Peavey® Invecitive® 120, Crunch and Lead channels. Peavey designed this 6L6 tube-powered monster in collaboration with Misha Mansoor of Periphery, with the goal of offering no-compromise, high-gain performance and flexibility. We've offered both the Crunch and Lead channels to cover a plethora of metal rhythm and lead flavors.

Vitriol Parameters	
Parameter	Description
Channel Switch	Toggle between the Crunch and Lead amp channels.
Pre Gain	Adjusts the amount of gain and distortion from the preamp circuit of the amp.
Bass	Adjusts the low frequency response.
Mid	Adjusts the midrange frequency response.
Treble	Adjusts the high frequency response.
Post Gain	Adjusts the volume level of the current Crunch or Lead channel. You can achieve additional distortion setting both the Pre Gain ad Post Gain to higher levels and using the Master to control the overall volume.
Presence	Adjusts the upper midrange and high frequencies for the power amp section.
Depth	Adjusts the amount of "damping" applied—damping decreases as the knob is turned up, which results in more low end at higher settings.
Master	Adjusts the overall volume level of the amplifier.

Badonk



This Line 6 original creation is all about massive gain and big bottom. The Badonk is a single channel design with straight-forward parameters. It's huge low end is especially well suited for low-tuned guitars and heavy riffing. Crank up the Depth to rattle the walls.

Badonk Parameters	
Parameter	Description
Drive	Adjusts the amount of gain—higher settings add more distortion.
Bass	Adjusts the low frequency response.
Mid	Adjusts the midrange frequency response.
Treble	Adjusts the high frequency response.
Presence	Adjusts the upper midrange and high frequencies for the power amp section.
Depth	Adjusts the lower frequencies for expanded low end girth.
Master	Adjusts the overall volume level of the amplifier.

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Thrash Amplifier Models

Rivet Clean



Based on* the Roland® Jazz Chorus 120, clean channel. This solid-state classic was introduced by Roland, Japan in 1975 and quickly gained popularity for its shimmering clean tone, as well as its spacious built-in reverb and luscious chorus effects. Our Rivet Clean model includes all these features, making it a great amp to use for those ultra clean moments—or to drive mercilessly into oblivion using the Pre FX View overdrive and distortion pedals!

Rivet Clean Parameters	
Parameter	Description
Bright Switch	Toggles the Bright circuit On (up position) or Off.
Volume	Controls the volume level of the amp.
Bass	Adjusts the low frequency response.
Mid	Adjusts the midrange frequency response.
Treble	Adjusts the high frequency response.
Effects	
Reverb	Adjusts the amount of spring reverb added to your signal. Set to 0.00 for no reverb effect.
Depth	Adjusts the amount of chorus effect that is added to your signal. Set to 0.00 for no chorus effect. †
Speed	Adjusts the modulation speed of the chorus effect.

† **NOTE:** Just like the original amp, the chorus effect is stereo—but you'll need to pan the Mixer Channels 1 & 2 Pan controls opposite to create the left and right spread (see "Channel 1 & 2 Strips" on page 34), and increase the Rivet's Depth knob setting to achieve the desired effect. When the mono version of the Thrash plugin is used, the Chorus is strictly mono.

Cali IV - Rhythm and Lead Channels



Based on* the Mesa/Boogie® Mark IV. It was the early 70s when engineer Randall Smith's California company, Mesa/Boogie, introduced the first compact 1x12 combo tube amps. Their first Mark I amplifier featured a unique cascading gain stage preamp that provided large amounts of gain, and soon it seemed every pro player in California wanted one. Mesa/Boogie's Mark IV amplifier was introduced in 1990, expanding the "Mark" series, including 3 channels: Rhythm 1 (Clean), Rhythm 2 (Crunch), and Lead. Our Cali IV model includes the features of the Crunch and Lead channels, providing anything from a light overdrive to heavily saturated distortion to cover your gain requirements. We've even thrown in the ubiquitous Mesa/Boogie 5-band graphic EQ.

Cali IV Parameters	
Parameter	Description
Channel Switch	Toggles between the Rhythm (Crunch) and Lead amp channels.
Rhythm Drive	Adjusts the amount of drive for the Rhythm channel, from light overdrive to heavy crunch.
Lead Gain	Adjusts the amount of gain for the Lead channel. This first gain stage feeds into the second (Lead Drive knob) gain stage, allowing you to push it even harder.
Lead Drive	Adjusts the amount of gain for the Lead channel, from mid to heavy distortion. This second gain stage is fed by the first gain stage (Gain knob), which can also be used to drive this stage harder.
Bass	Adjusts the low frequency response for the current channel.
Mid	Adjusts the midrange frequency response for the current channel.
Treble	Adjusts the high frequency response for the current channel.
Presence	Adjusts the upper midrange and high frequencies for the power amp section.
Master Volume	Adjusts the overall output level of the amplifier.
5-Band Graphic EQ	
80 Hz	Adjust any of the five sliders to apply a boost (from center to top position) or cut (from center to bottom) up to 9 dB at the respective frequency. Note that there is no On/Off switch for this EQ. Use Option+-click (Mac) or Alt+click (Windows) on any slider to reset it to 0 (center position) and no frequency boost or cut is applied.
240 Hz	
750 Hz	
2200 Hz	
6600 Hz	

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Placater Dirty



Based on the Friedman BE-100. After spending the past few decades modifying Plexi-style amps for many A-list guitarists, Dave Friedman started building his own masterpieces. The BE-100 builds upon the classic 100 Watt EL-34 Plexi with separate clean and dirty channels, a larger but tighter low end, smoother high end, and lots more gain on tap. Our model is of the BE-100's Dirty (BE/HBE) channel, which takes you from classic British crunch to searing high gain.

Placater Dirty Parameters	
Parameter	Description
Gain	Adjusts the level of the preamp gain—lower settings provide lighter breakup and crunch, with distortion and sustain increasing as you raise the level.
Bass	Adjusts the low frequency level of the amplifier.
Mid	Adjusts the midrange frequency level of the amplifier.
Treble	Adjusts the high frequency level of the amplifier.
Presence	Adjusts the upper midrange and high frequencies for the power amp section.
Master	Adjusts the overall volume level of the amplifier.
Fat Switch	Toggles Fat mode On/Off. Engage the fat mode for a bolder low and mid response, such as to fatten up a single coil equipped guitar.
C45 Switch	Toggles the C45 mode On/Off. C45 is a custom EQ voicing that adds a bit more girth.
HBE Switch	Toggles the HBE mode On/Off. The HBE mode adds more mids and gain.
Saturation Switch	Toggles Saturation mode On/Off. Designed to be enabled with the HBE or C45 modes active to add gain, compression, and saturation. (It is normal for the volume to drop slightly when active.)

Das Benzin - Mega and Lead Channels



Based on* the Diezel VH4. Becoming dissatisfied with the tone and features on available amps at the time, in 1994, Peter Diezel decided to design and build his own amp. The result was the 4-channel, 100 Watt, KT77 tube-powered VH4, which quickly became one of the most in-demand amplifiers for the hard rock and metal guitar slingers of the 90s—and continues to be to this day. Our model is of the VH4's Mega and Lead channels, which delivers Diezel's trademark heavy rhythm to blistering solo tones.

Das Benzin Parameters	
Parameter	Description
Mega/Lead Channel Switch	Toggles between the Mega and Lead channels. The Mega is the trademark Diezel heavy crunch, where the Lead carries over with even more gain, compression, bottom, and smoother high end.
Gain	Adjusts the level of the preamp gain—with lower settings having less distortion and more punch, and higher settings having more distortion and greater compression. It is recommended to start with a 50% knob setting and then dial in for your preferred setting.
Treble	Adjusts the high frequency level of the amplifier.
Mid	Adjusts the midrange frequency level of the amplifier.
Bass	Adjust the low frequency level of the amplifier.
Master	Adjusts the overall volume level of the amplifier.
Presence	Adjusts the upper midrange and high frequencies for the power amp section.
Deep	An active bass control for the power amp section that adds low end punch centered at 80 Hz.

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Cabinet View

Click the Cab View selector on the top Toolbar to display this view. Actually, “Cabinet View” is a rather simplified name, since this screen allows you to choose your speaker cabinet, microphone types and placement, 3rd party IRs, apply room ambience, filters and EQ, and then mix all these elements exactly how you like them! The Cabinet View is divided into two main sections: the Cab and Mixer panels.



The Cabinet View (Modern)

NOTE: The On/Off button on the Cabinet View selector allows you to optionally bypass all cab, mic, and mixer components within this view in one click, as well as conserve CPU usage—see [“View Selectors” on page 20](#).

You can independently choose the source for your Mixer Channels 1 & 2: one or both of the microphones that you see in the Cab panel, to capture the sound of your selected Cab model, or your choice of third-party IRs from your IR Library. These options are covered in the following sections.

TIP: Looking for some professionally crafted IRs? Be sure to check out the [“Line 6 Marketplace” on page 5](#).

Cab View Workflow

When you select an amp model within the Amplifier View, you can select your desired speaker cabinet model here in the Cabinet View, as well as your desired mic models, which are fed into the Channel 1 & 2 strips of the Mixer Panel. Additionally, the Room Mic channel and Parametric EQ are available for adding additional realism and tone sculpting. To follow are workflow tips to get you going in the Cabinet View.

Try a different speaker cab: Click on the menu on the of the cabinet image within the Cab Panel and select the desired cab model. Two mic models for the cab can be selected and controlled using the Mixer’s Channel 1 & 2 strips. See the following [“Cab Panel Options”](#) section.

To adjust the mic positions: Click directly on either of the cab mic’s stands and drag them left/right for center/edge speaker cone placement, or up/down for close/distant positioning. See the following [“Cab Panel Options”](#) section.

Try a different mic: When the Mixer Panel’s Channel 1 or 2 strip is set to **Mic**, click in the menu at the top of the strip to open the Mic Browser and select your desired cab mic model. Adjust the channel strip’s Pan and Level to blend the mic signal as desired. See [“Channel 1 & 2 Strips” on page 34](#).

Use an IR instead of a cab mic: For either or both the Channel 1 & 2 strips, you can toggle the Mic/IR switch on the strip and load an IR from the IR Browser. (Note that you’ll first need to import your IR files into the Metallurgy IR Library folder first for IRs to be available within the IR Browser.) Once your IR is loaded, use the channel strip’s Low Cut, Pan and Level options to get your desired mix. See [“Using Impulse Responses” on page 35](#).

Add room ambience: Using the Mixer Panel’s Room Mic channel strip, choose between two different room mics and adjust the Level slider to blend in the desired amount of room signal. Use the Damping and Low Cut switches to EQ the tone of the room for your mix. See [“Room Mics Channel Strip” on page 37](#).

Apply some EQ: In the Mixer Panel’s EQ channel strip, flip the EQ’s switch to On and adjust any of the four EQ bands and Low and High Shelving controls to precisely sculpt your Mic/IR tone. See [“Parametric Post EQ Controls” on page 38](#).

Adjust the overall level: In the Mixer Panel’s Mix Bus channel strip, adjust the slider to optimize your Cab View’s overall level. See [“Mix Bus Channel Strip” on page 37](#).

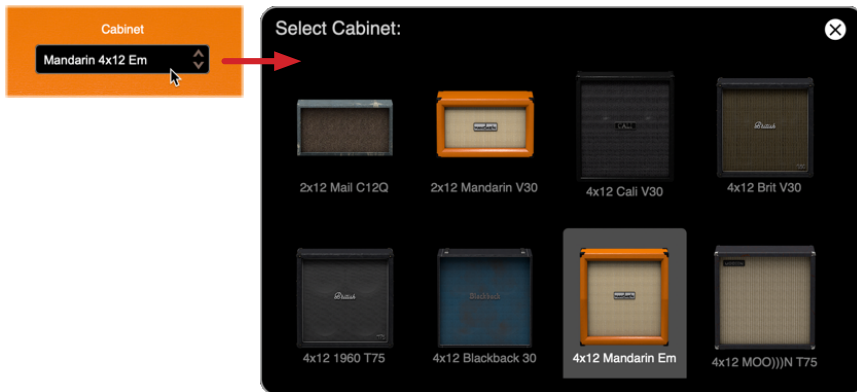
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Cab Panel Options



The Cab Panel (Doom)

- Cabinet menu:** Click the menu here to launch the Cabinet Browser, where you can select from the list of Line 6 crafted speaker cabs. Clicking once on any Cab within the browser loads it as the active cab, leaving the browser window open so you can optionally select and audition other cabs. Double-clicking on a cab loads the cab and closes the browser window. Optionally, you can click on the up/down arrow buttons at the right of the menu to load the next/previous mic model. The cabs available within each of the Metallurgy plugins & apps are listed in the following table.



Choosing a Cab from the Cabinet Browser (Doom)

NOTE: If both the Mixer's Channel's 1 & 2 are set to "IR" for their sources, the Cabinet menu within the Cab panel will be inaccessible, until at least one of the Mixer channels is set to the "Cab" source—see the following "[Channel 1 & 2 Strips](#)" section.

- Mic 1 and 2:** The left and right mics are fed to the Mixer panel's Channels 1 and 2, respectively, when these channel strips are set to the Cab source. See the following "[Channel 1 & 2 Strips](#)" section.

- Mic Distance and Position:** You can drag each cab mic independently to configure its positioning in relation to the cab's speaker. You'll see the distance and position value pop-ups appear as you drag the mics for reference.
- Drag either mic stand up/down to set the proximity of the mic to the speaker cab. Moving the mic farther from the speaker results in reduced low end and a less focused tone.
- Drag either mic stand left/right to set the horizontal placement of the mic on the speaker cone. Closer to the edge of the speaker cone results in a darker tone, where closer to the center of the cone produces a tighter, brighter tone.

TIP: Also see the **Mic Angle** option in the following section for setting the mic as on-axis versus off-axis on the cab.

The following table lists the speaker cabinet models available within each Metallurgy product, and the actual cabs and speakers on which each is based.

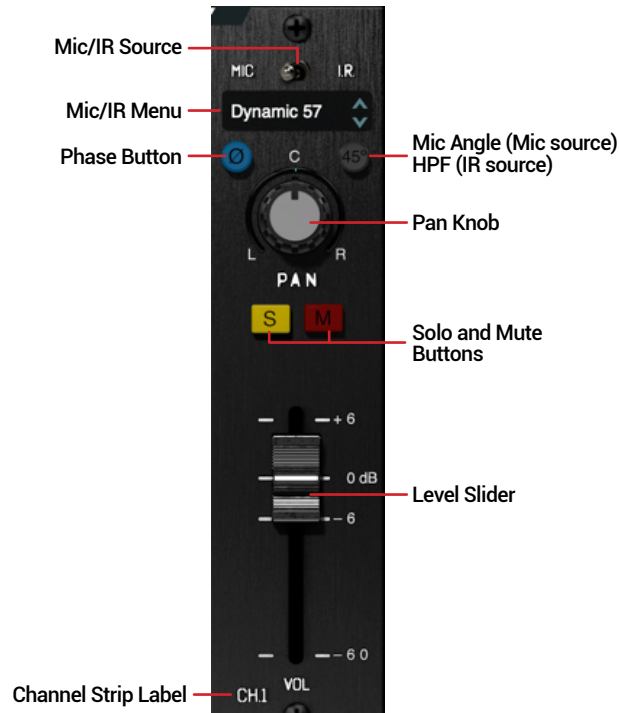
Speaker Cabinet Models				
Model	Based On*	Doom	Modern	Thrash
2x12 Mail C12Q	Silvertone® 1484 2x12 combo, Jensen C12Q speakers	✓		
2x12 Rivet	Roland Jazz Chorus 2x12			✓
4x12 Cali V30	Mesa/Boogie 4FB, Celestion® Vintage 30 speakers	✓	✓	✓
4x12 Brit V30	Vintage Marshall® 1960AV, Celestion Vintage 30 speakers	✓	✓	✓
4x12 1960 T75	Vintage Marshall 1960A, Celestion G12T-75 speakers	✓	✓	✓
4x12 Blackback 30	Vintage Park® 75, Celestion G12H-30 Blackback speakers	✓		
4x12 Uber T75	Bogner® Überkab T75, Celestion G12T-75 speakers		✓	✓
4x12 Uber V30	Bogner Überkab, Celestion Vintage 30 speakers		✓	✓
4x12 Mandarin Em	Vintage Orange®, Eminence® speakers	✓		✓
2x12 Mandarin V30	Orange PPC 212, Celestion Vintage 30 speakers	✓	✓	
4x12 XXL V30	Engl® 412XXL, Celestion Vintage 30 speakers		✓	✓
4x12 MOO)))N T75	Sunn® 412, Celestion G12T-75 speakers	✓	✓	

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Mixer Panel Options

Channel 1 & 2 Strips

You can select the source that is fed to the Mixer's Channel 1 & 2 strips independently by toggling the **Mic/IR Source switch**, as covered below.



The Channel 1 and 2 Strip Parameters
(Channel 1, Mic Source pictured)

Channel 1 & 2 Strip Controls

- **Mic/IR Source Switch:** You can select the source that is fed to the Mixer's Channel 1 & 2 strips independently by toggling this switch. Its setting determines the function **Mic/IR menu** at the top of the strip, allowing you to choose the Mic type (for the currently loaded speaker cab shown in the Cab Panel) or IR (for which you can select an IR file from your IR library). See ["Selecting a Mic" on page 35](#) and ["Using Impulse Responses" on page 35](#).
- **Mic/IR Menu:** Once you've selected the Channel's source (see the previous **Mic/IR Source switch** description), click on this menu to choose the Mic type (for the Mic source) or the IR file (for the IR source). See ["Selecting a Mic" on page 35](#) and ["Using Impulse Responses" on page 35](#).

- **Phase Button:** When using different mics and/or IRs simultaneously, you can sometimes encounter *phase cancellation*, where the combined signal results in a "thin" or "hollow" sound. If you encounter this audible issue, try enabling **one** of the Channel strips' Phase buttons to invert its phase and listen to hear if it corrects the problem.
- **Mic Angle Button:** (Available when the Mic source is selected.) Allows you to set the angle of a mic in relation to the speaker. Activating the switch sets the mic to a 45° angle ("off-axis") to the speaker, which accentuates the midrange and attenuates higher frequencies as compared to the default 90° angle.
- **HPF Button:** (Available when the IR source is selected.) Toggles the high pass filter for the IR processed signal,
- **Pan Knob:** Pan your Channel 1 and 2 strips individually to create a stereo image with Mic/IR outputs. (This knob is disabled on Mono output instances of the plugin.)
- **Solo and Mute Buttons:** When fine tuning one channel's settings, it can help to enable the **S** (Solo) button, which effectively mutes the opposite Channel 1 or 2 strip and the Room Mic channel, allowing you to hear just the current strip's Cab or IR source. Or, you can enable the **M** (Mute) button to silence the current channel if you want to hear the opposite Channel 1 or 2 and Room Mic channel.

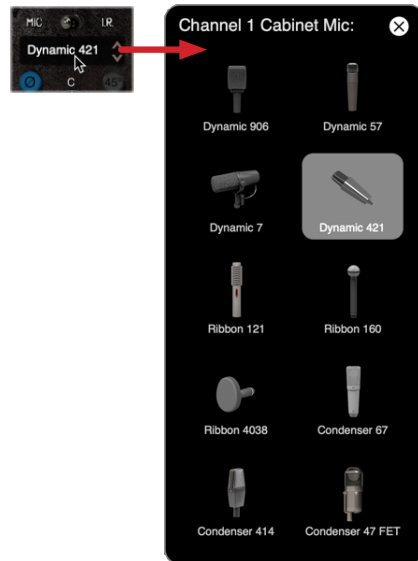
NOTE: If Solo is currently enabled on the channel strip, enabling Mute will mute the channel strip. If Mute is currently enabled, enabling Solo will disable Mute and Solo the channel.

- **Level Slider:** Adjust the channel's individual volume level from -60 to +6 dB. 0 dB is unity gain.
- **Channel Strip Label:** Identifies the channel as either Channel 1 or Channel 2.

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Selecting a Mic

When the Mic source is selected on the Channel 1 or 2 strip, the Mic Model menu appears in the menu at the top of the strip. Click to open the Mic Browser and choose one of the mic models, as shown below. Clicking once on any mic within the browser loads it, leaving the browser window open so you can optionally select and audition other mics. Double-clicking on a mic loads it and closes the browser window. Optionally, you can click on the up/down arrow buttons at the right of the menu to load the next/previous mic model.



Selecting a Cab Mic from the Mic Browser

The following set of Mic models are available in all Metallurgy plugins and standalone apps.

Mic Models	
Model	Based On*
Dynamic 906	Sennheiser® e906
Dynamic 57	Shure® SM57
Dynamic 7	Shure SM57B
Dynamic 421	SennheiserMD421
Ribbon 121	Royer® R121
Ribbon 160	Beyerdynamic® M160
Ribbon 4038	Coles 4038
Condenser 67	Neumann® U67
Condenser 414	AKG® 414
Cond 47 FET	Neumann U47 FET

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Using Impulse Responses

What are IRs?

Third-party Impulse Responses (or “IRs”) that can be used in Metallurgy are audio files that are the result of capturing the sound of a test tone (frequency sweep) through a speaker cabinet, which has been de-convolved with the original tone signal. This represents the frequency response of the speaker and cabinet and can be used to simulate the way it alters the sound. This is similar to a convolution reverb, but with a much shorter decay.

You can choose an IR as an alternative for either, or both, of your Cab View Channel 1 & 2 signals as an alternative to using the Cab and Channel 1 & 2 mics to provide speaker cabinet simulations for the current amp model.

Adding IRs to your IR Library Folder

The Metallurgy plugins and standalone app allows you to manually add IR .wav files or [“Line 6 Marketplace”](#) IRs into the designated IR library folder for use within the software. Once you’ve obtained IR files, drag them into your designated IR folder and you will see them appear within the IR browser of all instances of your Metallurgy plugins and standalone apps.

TIP. By default, the IR library folder is located at (Mac or Windows) Documents > Line 6 Metallurgy > Impulse Responses. If you happen to own other Line 6 Metallurgy plugins, they default to using this same folder—The same IR files can be utilized by all Metallurgy software (and are also supported for use with Line 6 Helix® Native, HX™ Edit, and POD® Go Edit applications).

Supported IR Formats

The Line 6 Metallurgy software supports the use of WAV (.wav) file IRs, sold separately by various vendors (as well as Marketplace IRs—see the next section). Most IR producers and vendors typically offer IRs within the .wav format. It is possible to import a mono or stereo .wav file IR, regardless of its bit depth, length, or sample rate frequency. Once imported into your IR library folder, files are automatically conformed to the compatible IR properties (48kHz, 32-bit float, mono, and 2048 samples). Please be careful to import only .wav files that were created specifically for use as IRs, not just any audio .wav file, or you may experience unexpected sonic results.

Line 6 Marketplace IRs

Be sure to visit the Line 6 Marketplace for premium IRs! Please see [“Line 6 Marketplace” on page 5](#). You must initially have the Metallurgy plugin or standalone app signed in and your computer authorized to initially load and use new Marketplace IRs for their license synchronization (see [“Authorizing Your Computer” on page 4](#)). On subsequent uses of your Marketplace IRs, no sign in or an Internet connection are necessary.

When premium Marketplace IRs (.hir files) are copied into your Metallurgy IR Library folder, they are indicated by a gold pick badge at their left within the IR Browser window—see the IR Browser image in the following section. Marketplace IRs can be selected from the IR Browser and utilized just like any other IR.

Once you've loaded a Marketplace IR, you'll see its name appear in gold text within the Channel's IR menu.

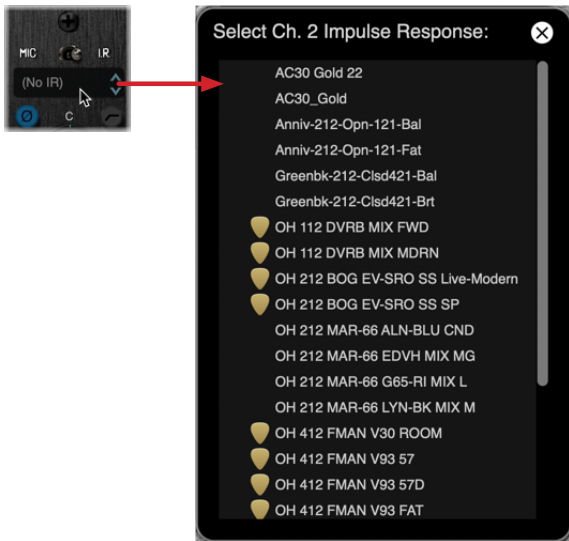


A loaded Marketplace IR

To Load an IR Using the IR Browser

Once you've added IR .wav files into your designated IR library folder (as covered in the preceding section), you can then use the IR Browser to choose an IR for one or both of your Cab View - Channels 1 & 2.

When the IR source is selected, the IR menu appears at the top of the strip. Click to open the IR Browser and choose an IR file from your IR Library, or click on the up/down arrow buttons at the right of the menu to load the next/previous IR.



Selecting an IR from the IR Browser

While the IR Browser is open, click on any IR within the list—if you're playing audio through the plugin or app, you'll hear your signal with the selected IR, allowing you to preview and find the desired IR file. Alternatively, you can click the up/down arrow buttons at the right of the channel strip menu to load the next/previous IR without even opening the Browser.

Once an IR is loaded, you'll see the IR filename abbreviated within the IR menu slot at the top of the Channel Strip, where the last twelve characters of the name are displayed (since the end of most IR filenames typically include the unique identifying portion of the name!). If you hover your mouse cursor over the IR menu, the full IR filename is also displayed for your reference.

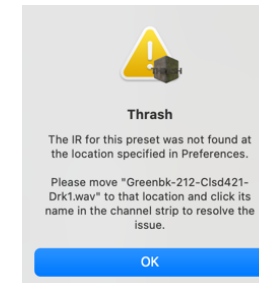


Loaded IR in Channel Strip - full IR filename appears on hover

Once an IR is loaded, use the channel strip's controls to achieve your desired pan and level to blend with the opposite Mic/IR channel—see ["Channel 1 & 2 Strips" on page 34](#).

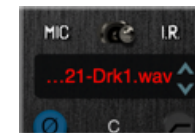
Missing IR File

If you load a preset that had an IR saved which is no longer within your IR Library folder, you'll see an error pop-up alerting you, with the name of the missing IR file. If you encounter this error, copy the missing IR .wav or .hir file back into your specified IR Library folder, and select the IR again from the IR Browser. Alternatively, you can choose a different IR from the IR Browser, and save your preset with the new IR to resolve this error.



Missing IR error (Trash)

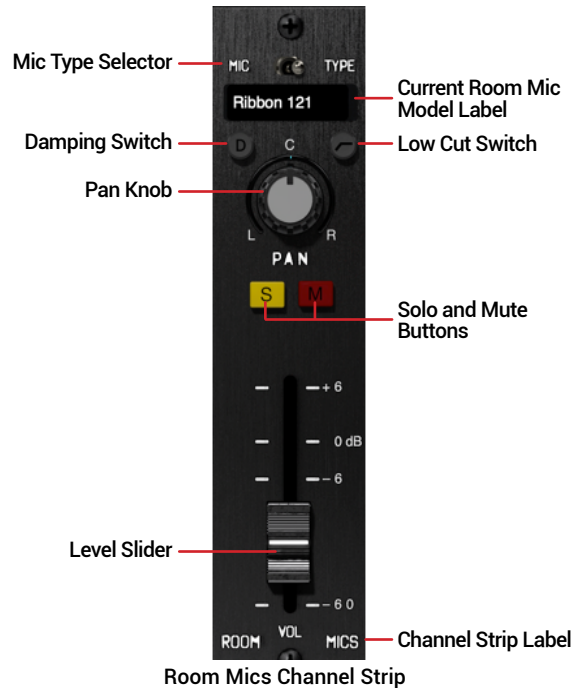
When the loaded IR is missing, its filename also appears in red text within the Channel 1 & 2 strips' IR menu, to indicate the channel does not currently have a functional IR loaded.



Missing IR indicated by red text in Channel Strip IR menu

Room Mics Channel Strip

The Room Mics channel strip allows you blend in a distant mic, to add some ambience to your Channel 1 & 2 signals.



Room Mics Channel Strip

- **Room Mic Type Switch:** Choose between a condenser or ribbon type Room Mic for different room sounds.
- **Room Mic Model Label:** Displays the Room Mic type currently selected via the above switch.
- **Damping Switch:** Click to toggle the damping applied to the room reflections, for 8 kHz (dim-less damping) or 3.7 kHz (lit-more damping). Damping reduces the higher frequencies of the room reflections, much like the effect of adding carpeting and absorbing panels in the room.
- **Low Cut Switch:** Set to On to reduce the lower frequencies of the room reflections (6 dB per octave, up to 320 Hz), which can lessen boominess.
- **Pan Knob:** Pan the Room Mic signal left or right in the Cab View mix. (This knob is disabled on Mono output instances of the plugin.)

TIP: As with most controls, you can double-click on the Pan knob to directly type in a precise value. But for Pan, you'll need to type "L" or "R" with your 1-100 value (e.g., "L100" or "100L" for 100% left panning), or type "C" or "0" for centered.

- **Solo and Mute Buttons:** Enable the **S** (Solo) button to mute the Channel 1 & 2 strips, allowing you to hear just the Room Mic signal. Or, you can enable the **M** (Mute) button to silence the Room Mic signal and hear the Channel 1 & 2 signals.

NOTE: If Solo is currently enabled on the channel strip, enabling Mute will mute the Room Mics channel. If Mute is currently enabled, enabling Solo will disable Mute and Solo the channel.

- **Level Slider:** Adjust the amount of Room Mic signal that is blended with your Channel 1 & 2 Mic/IR signals. Start with a low slider setting and raise it up to the desired level. When the slider is at minimum, the room mic signal is essentially Off.

Mix Bus Channel Strip

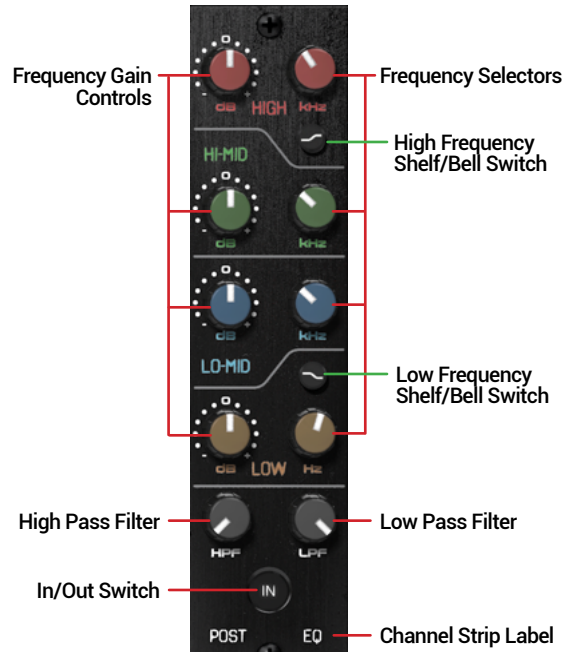
The final channel strip within the Mixer Panel is the Mix Bus, which offers an overall level control for your mixed Cab View elements. This controls the signal level that is fed into the Post FX View of the plugin.



The Mix Bus Channel Strip

Parametric Post EQ Controls

The Parametric Post EQ offers a low cut, a high cut, and four bands (Low, Low-Mid, High-Mid, and High) which you can use to surgically shape your Cabinet View tone. The Parametric Post EQ features an automatic Q (the frequency band's width) parameter on each band, where the Q value narrows as the band's Gain is increased.



The Parametric Post EQ

Parametric Post EQ Parameters		
Parameter	Range	Description
Hi-Mid Freq	400 Hz - 4 kHz	Selects the high-midrange frequency, which can then be boosted or cut using the High Mid Gain knob.
Hi-Mid Gain	± 15 dB	Boosts or cuts the high-midrange frequency, as selected via the Hi-Mid Freq knob.
Lo-Mid Freq	100 Hz - 1 kHz	Selects the low-midrange frequency, which can then be boosted or cut using the Lo-Mid Gain knob.
Lo-Mid Gain	± 15 dB	Boosts or cuts the low-midrange frequency, as selected via the Lo-Mid Freq knob.
Low Freq	20 Hz - 200 Hz	Selects the low frequency, which can then be boosted or cut using the Low Gain knob. When Low Freq Shelf/Bell switch is set to Shelf, this knob determines the cutoff frequency for the shelving filter.
Low Gain	± 15 dB	Boosts or cuts the low frequency, as selected via the L-Freq knob.
Low Freq Switch	Shelf/Bell	This button allows you to change the Low Freq band between a shelf versus bell curve type filter. The shelf type acts on everything below your selected Low Freq value, where the bell type is best for acting on a narrow freq. band.
Low Pass Filter	1kHz - OFF	Adjusts the 6 dB per-octave Low Pass Filter.
High Pass Filter	OFF - 1kHz	Adjusts the 12 dB per octave High Pass Filter.
In/Out Switch	On/Off	Toggles the EQ In (enabled) or Out (disabled).

Parametric Post EQ Parameters		
Parameter	Range	Description
High Freq	1.8 kHz - 18 kHz	Selects the high frequency, which can then be boosted or cut using the High Gain knob. When High Freq Shelf/Bell switch is set to Shelf, this knob determines the cutoff frequency for the shelving filter.
High Gain	± 15 dB	Boosts or cuts the high frequency, as selected via the High Freq knob.
High Freq Switch	Shelf/Bell	This button allows to you change the High Freq band between a shelf versus bell curve type filter. The shelf type acts on everything above your selected High Freq value, where the bell type is best for acting on a narrow freq. band.

Post FX View

In addition to the pedal effects found in the Pre FX View, we've also included two stereo, time-based effects here in their own Post FX View. As this view's name suggests, these effects are after ("post") the amp and cab within the signal chain. All Post FX parameters are editable and saved per preset, with most also automatable (in the plugin) and accessible via external MIDI control. Metallurgy Doom, Modern, and Thrash each include their own specific Post FX models, as listed in this chapter.



The Post FX View (Doom)

NOTE: A bypass button on the Post FX View Selector allows you to optionally bypass both effects within this view in one click, as well as conserve CPU usage—see ["View Selectors" on page 20](#).

Setting the Post FX View to Off will immediately silence any delay or reverb trails, since it is performing a "hard bypass" of the view's processing. (Toggling the individual effects' On/Off switches allow trails to decay naturally after bypass, depending upon the Feedback or Decay length parameter settings.)

Doom Post FX Models

ADT (Automatic Double Tracking)



The practice of "double-tracking" guitars has long been commonplace on recordings to add depth and stereo imaging to a guitar part. In the early days of studio recording, engineers recorded onto two separate tape decks simultaneously, achieving all kinds of interesting side effects by driving the inputs and manipulating the speed of the decks differently. You can emulate these effects with just your one guitar input by using the ADT!

ADT Parameters	
Parameter	Description
On/Off Switch	Toggles the effect On or Off. The light at the top of the effect is lit when On.
Delay 1	Adjusts the delay time for the deck 1 signal, from 0 ms to 20 ms.
Delay 2	Adjusts the delay time for the deck 2 signal, from 0 ms to 200 ms. Use this to create an offset from the deck 1 signal. Lower time values create phasing, flanging, and chorusing, and longer times create slapback.
Pan 1 †	This knob allows full left-right panning for the deck 1 output signal. Try panning one or both of the decks for different stereo imaging results!
Pan 2 †	This knob allows full left-right panning for the deck 2 output signal. Try panning one or both of the decks for different stereo imaging results!
Saturation 1	Adds tape saturation, as you'd get driving a hot signal into a tape deck. This saturation is applied to deck 1, and will also be heard on the deck 2 signal, to emulate the deck 1 signal being "recorded" to deck 2.
Saturation 2	Adds tape saturation, as you'd get driving a hot signal into a tape deck. This saturation is applied only to deck 2.
LFO Rate	Adjusts the speed of the pitch modulation added to deck 2, from slow to fast.
LFO Depth	Adjusts the intensity of the pitch modulation, which is applied to deck 2. For no modulation, set the knob to minimum.
Envelope Depth	Adjusts both the sensitivity for triggering the envelope, and the depth of the envelope which, when triggered, lengthens the delay time of deck 2. When set to minimum, the envelope is not triggered. As you increase the knob setting, the envelope is triggered by your pick dynamics more easily, and increases the deck 2 delay time for a more extreme effect.
Deck 2 Polarity	Inverts the polarity of the deck 2 signal. If you encounter phasing issues when both decks are panned center, or when outputting to mono, set this option to Inverted to remedy the problem.
Volume 1	Adjusts the output level individually for deck 1.
Volume 2	Adjusts the output level individually for deck 2.

† NOTE: These parameters are disabled on Mono output instances of the plugin to provide a mono output.


Adriatic Delay



Based on* the legendary Boss® DM-2 analog delay pedal introduced in 1981, this little box utilized “Bucket Brigade” (BBD) chips to achieve its warm delays and included all the wonderful sonic quirks for which BBD-based delays are coveted by guitarists. Not stopping there, Line 6 sound-design guru Ben Adrian modded this model, virtually adding more BBD chips to expand the delay time and several other tweaks for even more delay colors.

Adriatic Delay Parameters		
Parameter	Delay Mode	Description
On/Off Switch	All	Toggles the effect On or Off. The LED to the right is lit when On.
Mode †	All	Toggle the switch to select between the three delay modes: CLASSIC - A vintage digital style delay. The TIME LEFT & RIGHT knobs and Delay Sync controls are always “linked” in this mode—adjusting either results in common delay times for both the left and right output. PING PONG - Your input flows serially from the left into the right delay, and back and forth like an auditory game of ping pong. DUAL - Your signal is fed in parallel into the left and right delay lines, each with independently adjustable delay times for more complex stereo effects.
Mix	All	Adjusts wet/dry balance from 0-100%. Completely dry at 0%, half wet/half dry at 50%, and completely wet at 100%.
Delay Sync Left	All	This set of buttons allows you to select the behavior between ms (milliseconds) or note subdivision (beat) values for the TIME LEFT knob. (Note that when in Ping Pong or Dual Mode, this controls the left delay independently.) When set to a note subdivision, the delay time follows your DAW host’s project tempo for the plugin (or, follows the Tap Tempo for the “Standalone Application”). See the following TIME LEFT parameter description, as well as “Using the Delay Sync Options” on page 43 .
Delay Sync Right †	Ping Pong, Dual	This set of buttons allows you to select the behavior between ms (milliseconds) or note subdivision (beat) values for the TIME RIGHT knob. (Note that when in Classic Mode, these controls are disabled.) When set to a note subdivision, the delay time follows your DAW host’s project tempo for the plugin (or, follows the Tap Tempo for the “Standalone Application”). See the following TIME RIGHT parameter descriptions, as well as “Using the Delay Sync Options” on page 43 .
Time Left (ms)	All	(When Delay Sync Left is set to ms.) Independently adjusts the time for the left channel delay, from 20 - 1,800 milliseconds.
Time Left (BPM)	All	(When Delay Sync Left is set to beat.) Independently adjusts the time for the left channel delay—choose the desired note subdivision that is applied to the current tempo.

Adriatic Delay Parameters		
Parameter	Delay Mode	Description
Time Right (ms) †	Ping Pong, Dual	(When Delay Sync Right is set to ms.) Independently adjusts the time for the right channel delay, from 20 - 1,800 milliseconds.
Time Right (BPM) †	Ping Pong, Dual	(When Delay Sync Right is set to beat.) Independently adjusts the time for the right channel delay—choose the desired note subdivision that is applied to the current tempo.
Link †	Ping Pong, Dual	Toggling the switch to the “up” position turns Link On, which links the TIME LEFT & RIGHT knobs and Delay Sync controls so that —adjusting either results in common delay times for both the left and right output. (When the MODE is set to Classic, Link is always On.)
Spread †	Classic	Creates a wider stereo image in Classic mode by offsetting the right channel of the delay from 0 to 20 ms.
Feedback	All	Adjusts the number of delay repeats heard.
Modulation	All	Toggles a pitch modulation effect for your delay repeats On/Off, with the light to the right of the switch lit when On. Modulation adds a chorus type effect and thickens the tone. Note that the modulation is also influenced by the Diffusion and Character knobs.
Diffusion	All	Adjusts the amount of diffusion applied—higher settings smear more of the repeats’ attacks and transients, resulting in a smoother, less prominent tone to the repeats.
Character	All	Adjusts the BBD size and noise of the analog delay. As this knob is turned to the right, these BBD size decreases (which results in audio quality degradation) and the noise increases to add some vintage analog vibe to your repeats.
High Pass	All	Adjusts the reduction of low frequencies, from Off (20 Hz) up to 500 Hz. Reducing some of the low end can clear up muddiness in your delay repeats.
Low Pass	All	Adjusts the reduction of high frequencies, from Off (20kHz) down to 500 Hz. Reducing the high end can reduce harshness and make your delay repeats blend more pleasantly with your input signal.

 **† NOTE:** When using a mono output instance of the plugin, “Classic” is the only Mode type offered, and all other † indicated parameters are disabled to provide a mono output.

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Modern Post FX Models


Mod Chorus Echo



This Line 6 Original echo model offers more than warm delay repeats, namely the ability to slather some thick chorus or warbly vibrato modulation to your repeats. Further sonic control is provided via the Classic, Dual, and Ping Pong delay modes, stereo imaging, tempo sync, and low and high cut EQ shaping.

Mod Chorus Echo Parameters		
Parameter	Delay Mode	Description
On/Off Switch	All	Toggles the effect On or Off. The LED is lit when On.
Mode †	All	Click the Mode button to select between the three echo modes: CLASSIC - A vintage digital style echo. The TIME LEFT & RIGHT knobs and Delay Sync controls are always “linked” in this mode—adjusting either results in common delay times for both the left and right output. PING PONG - Your input flows serially from the left into the right delay, and back and forth like an auditory game of ping pong. DUAL - Your signal is fed in parallel into the left and right delay lines, each with independently adjustable delay times for more complex stereo effects.
Mix	All	Adjusts wet/dry balance from 0-100%. Completely dry at 0%, half wet/half dry at 50%, and completely wet at 100%.
Delay Sync Left	Ping Pong, Dual	This set of buttons allows you to select the behavior between ms (milliseconds) or note subdivision (beat) values for the TIME LEFT knob. (Note that when in Ping Pong or Dual Mode, this controls the left delay independently.) When set to a note subdivision, the delay time follows your DAW host’s project tempo for the plugin (or, follows the Tap Tempo for the “Standalone Application”). See the following TIME LEFT parameter description, as well as “Using the Delay Sync Options” on page 43 .
Delay Sync Right †	Ping Pong, Dual	This set of buttons allows you to select the behavior between ms (milliseconds) or note subdivision (beat) values for the TIME RIGHT knob. (Note that when in Classic Mode, these controls are disabled.) When set to a note subdivision, the delay time follows your DAW host’s project tempo for the plugin (or, follows the Tap Tempo for the “Standalone Application”). See the following TIME RIGHT parameter descriptions, as well as “Using the Delay Sync Options” on page 43 .
Time Left (ms)	All	(When Delay Sync Left is set to ms.) Independently adjusts the time for the left channel delay, from 10 - 4,000 milliseconds.

Mod Chorus Echo Parameters		
Parameter	Delay Mode	Description
Time Left (BPM)	All	(When Delay Sync Left is set to beat.) Independently adjusts the time for the left channel delay—choose the desired note subdivision that is applied to the current tempo.
Time Right (ms) †	Ping Pong, Dual	(When Delay Sync Right is set to ms.) Independently adjusts the time for the right channel delay, from 10 - 4,000 milliseconds.
Time Right (BPM) †	Ping Pong, Dual	(When Delay Sync Right is set to beat.) Independently adjusts the time for the right channel delay—choose the desired note subdivision that is applied to the current tempo.
Link	Ping Pong, Dual	Toggling the switch to the “up” position turns Link On, which links the TIME LEFT & RIGHT knobs and Delay Sync controls so that —adjusting either results in common delay times for both the left and right output. (When the MODE is set to Classic, Link is always On.)
Spread †	Classic	Creates a wider stereo image by offsetting the right channel of the delay from 0 to 20 ms.
Feedback	All	Adjusts the number of delay repeats heard.
Type Switch	All	Toggles between a Chorus versus Vibrato style modulation effect for your echo repeats. The modulation speed and intensity are determined by the Rate and Depth knobs.
Rate	All	Adjusts the speed of the Chorus or Vibrato modulation (as selected via the Type switch) from a slow sweep to a fast warble.
Depth	All	Adjusts the intensity of the Chorus or Vibrato modulation (as selected via the Type switch) from none to pitch bending wobble.
High Cut	All	Adjusts the reduction of high frequencies, from Off (20 kHz) down to 500 Hz. Reducing some of the high end can reduce harshness and make your echo repeats blend more pleasantly with your input signal.
Low Cut	All	Adjusts the reduction of low frequencies, from Off (20 Hz) up to 500 Hz. Reducing some of the low end can clear up muddiness in your echo repeats.

 **† NOTE:** When using a mono output instance of the plugin, “Classic” is the only Mode type offered, and all other † indicated parameters are disabled to provide a mono output.

Dynamic Hall Reverb



When the need for adding some large, smooth ambience to your Modern guitar tone, this Line 6 crafted reverb is just the thing. The Dynamic Hall includes numerous adjustable parameters to attain your desired medium to massive sized hall tones, with adjustable decay up to 45 seconds!

Dynamic Hall Reverb Parameters	
Parameter	Description
Enable Switch	Toggles the effect On or Off. The LED is lit when On.
Decay	Determines the length of the audible reverb tail, from 100 ms to 45 seconds.
Room Size	This 3-way switch selects the size of the hall space for your reverberations: 10, 20, or 30 meters. Click on the labels to choose the size, or click directly on the switch to cycle through the three options.
Predelay	Determines the amount of time before the early reflections and reverb tail are heard, from 0 to 200 ms. Higher settings can allow more clarity to the attack of your picking.
Diffusion	Adjusts the amount of diffusion applied—higher settings smear more of the reverb reflections and transients, resulting in a smoother tone to the reverb tails.
Damping	Adjusts the amount of "damping" applied to the reverb tail above the selected frequency, from 500 Hz to 20 kHz. Lower slider settings darken the reverb tone, while higher value settings apply damping only to the highest frequencies.
Mix	Adjusts wet/dry balance from 0-100%. Completely dry at 0%, half wet/half dry at 50%, and completely wet at 100%.
Low Freq	This knob sets the frequency below which the Low Gain slider's setting is applied
Low Gain	Sets the reverb time for frequencies below the Low Freq knob's value. Values below 0.0dB mean the bass frequencies decay faster than the treble frequencies; values above 0.0dB mean the bass frequencies decay slower than the treble frequencies.
Low Cut	Adjusts the reduction of low frequencies, from Off (20 Hz) up to 1 kHz. Reducing some of the low end can clear up muddiness in your reverb.
High Cut	Adjusts the reduction of high frequencies, from Off (20 kHz) down to 500 Hz. Reducing some of the high end can reduce harshness and make your reverb blend more pleasantly with your input signal.
Mix	Adjusts wet/dry balance from 0-100%. Completely dry at 0%, half wet/half dry at 50%, and completely wet at 100%.

Thrash Post FX Models

ADT (Automatic Double Tracking)



See ["ADT \(Automatic Double Tracking\)" on page 39](#) for details.

Vintage Digital Delay



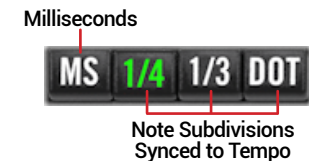
Not just a simple echo effect here! The Post FX - Vintage Digital Delay offers fully adjustable stereo delays, tempo sync with selectable note subdivisions, modulation, and Classic, Dual, and Ping Pong delay modes. See parameter descriptions in the following table—note that, as indicated by the Delay Mode column, some parameters are dedicated to specific modes only.

Vintage Digital Delay Parameters		
Parameter	Delay Mode	Description
On/Of Switch	All	Toggles the delay On or Off. The LED to is lit when On.
Mode †	All	Click on the Mode button to select between the three delay modes: CLASSIC - A vintage digital style delay. The TIME LEFT & RIGHT knobs and Delay Sync controls are always "linked" in this mode—adjusting either results in common delay times for both the left and right output. PING PONG - Your input flows serially from the left into the right delay, and back and forth like an auditory game of ping pong. DUAL - Your signal is fed in parallel into the left and right delay lines, each with independently adjustable delay times for more complex stereo effects.
Mix	All	Adjusts wet/dry balance from 0-100%. Completely dry at 0%, half wet/half dry at 50%, and completely wet at 100%.
Delay Sync Left	All	This set of buttons allows you to select the behavior between ms (milliseconds) or note subdivision (beat) values for the TIME LEFT knob. (Note that when in Ping Pong or Dual Mode, this controls the left delay independently.) When set to a note subdivision, the delay time follows your DAW host's project tempo for the plugin (or, follows the Tap Tempo for the "Standalone Application"). See the following TIME LEFT parameter description, as well as "Using the Delay Sync Options" on page 43 .

Vintage Digital Delay Parameters		
Parameter	Delay Mode	Description
Delay Sync Right †	Ping Pong, Dual	This set of buttons allows you to select the behavior between ms (milliseconds) or note subdivision (beat) values for the TIME RIGHT knob. (Note that when in Classic Mode, these controls are disabled.) When set to a note subdivision, the delay time follows your DAW host's project tempo for the plugin (or, follows the Tap Tempo for the "Standalone Application"). See the following TIME RIGHT parameter descriptions, as well as "Using the Delay Sync Options" on page 43.
Time Left (ms)	All	(When Delay Sync Left is set to ms.) Independently adjusts the time for the left channel delay, from 10 - 4,000 milliseconds.
Time Left (BPM)	All	(When Delay Sync Left is set to beat.) Independently adjusts the time for the left channel delay—choose the desired note subdivision that is applied to the current tempo, from 1/64 to 4/1.
Time Right (ms) †	Ping Pong, Dual	(When Delay Sync Right is set to ms.) Independently adjusts the time for the right channel delay, from 10 - 4,000 milliseconds.
Time Right (ms) †	Ping Pong, Dual	(When Delay Sync Right is set to beat.) Independently adjusts the time for the right channel delay—choose the desired note subdivision that is applied to the current tempo, from 1/64 to 4/1.
Link	Ping Pong, Dual	Toggleing the switch to the "up" position turns Link On, which links the TIME LEFT & RIGHT knobs and Delay Sync controls so that —adjusting either results in common delay times for both the left and right output. (When the MODE is set to Classic, Link is always On.)
Spread †	Classic	Creates a wider stereo image for the Classic mode by offsetting the right channel of the delay from 0 to 20 ms.
Feedback	All	Adjusts the number of delay repeats heard.
Modulation	All	Toggles a pitch modulation effect for your delay repeats On/Off, with the light to the right of the switch lit when On. Modulation adds a chorus type effect and thickens the tone. Note that the modulation is also influenced by the Diffusion and Character knobs.
Diffusion	All	Adjusts the amount of diffusion applied—higher settings smear more of the repeats' attacks and transients, resulting in a smoother, less prominent tone to the repeats.
Character	All	Adjusts the sample rate and bit depth. As this knob is turned to the right, the sample rate and bit depth of your repeats decrease, which results in fidelity degradation (which can be a good thing).
Low Cut	All	Adjusts the reduction of low frequencies, from Off (20 Hz) up to 500 Hz. Reducing some of the low end can clear up muddiness in your delay repeats.
High Cut	All	Adjusts the reduction of high frequencies, from Off (20 kHz) down to 500 kHz. Reducing the high end can reduce harshness and make your delay repeats blend more pleasantly with your input signal.

Using the Delay Sync Options

The Metallurgy plugins' Post FX Delay and Echo models include the functionality to sync to your host DAW project's tempo. The Delay Sync Left and Right selectors allow you to choose the behavior independently for each the left and right delay line's Time parameters, between milliseconds (ms) or Note Subdivision (1/4 note, Triplet, or Dotted) values.



Post FX Delays - Delay Sync control

- When set to ms, both the delay repeats follow the time you set via the TIME LEFT and TIME RIGHT knobs, regardless of your DAW host project tempo.*
- When set to a Note Subdivision, the delay repeats sync to the DAW host project tempo as the tempo source.* You can choose one of the three note subdivision types (1/4 note, Triplet, or Dotted) from 1/64 to whole note.
 - **1/4:** Allows the TIME knobs to set standard note subdivisions, from 1/64 at minimum to 1/1 at max.
 - **1/3:** Allows the TIME knobs to set triplet note subdivisions, from 1/64 triplet minimum to 1/2 triplet max.
 - **DOT:** Allows the TIME knobs to set to dotted note values, from 1/64 dotted minimum to 1/2 dotted max.
- When using the Post FX delays' PING PONG or DUAL Modes, you can adjust the TIME LEFT and TIME RIGHT knobs independently to achieve two different synced note subdivision values. (When in Classic mode, the Delay Sync Right selector and TIME RIGHT knob are disabled.)

NOTE: If you're using a Metallurgy standalone app... Rather than a DAW project tempo to follow, you have a few options to choose and configure your Source Tempo (a global application tempo or per preset tempo). When selecting a Note Subdivision option for the Delay, it is applied to the current Source Tempo in use, which you can set within the standalone app's File > Preferences window. See "[Application Preferences: Configuring Your Device & Tempo Settings](#)" on page 48.

† **NOTE:** When using a mono output instance of the plugin, "Classic" is the only Mode type offered, and all other † indicated parameters are disabled to provide a mono output.

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Plugin Parameter Automation

The Metallurgy plugins support your host DAW application's features to read, write, and edit parameter automation, where the DAW can control the plugin's parameter values over time using editable track envelopes. Most parameters within the plugin, including those for the Utility Drawer, Pre FX, Amps, Cabs, Post FX, and Mixer are automatable, providing a tremendous amount of control in your DAW projects!

Most DAW applications additionally allow you to record parameter automation in real-time, where you enter an automation "write" mode and changes to the selected plugin parameters are instantly recorded and displayed on the track as adjustable envelopes. This allows all these plugin parameter changes to be played back (using the host's track "read" mode option) and incorporated into your project's mix-down.

Typically the list of automatable parameters for a plugin are available in the host DAW app by way of an automation parameter menu, specific to the audio or aux track where you have inserted the plugin. Metallurgy plugins follow this standard, and you'll find all automatable parameters accessible in the host application's parameter automation menus and windows.

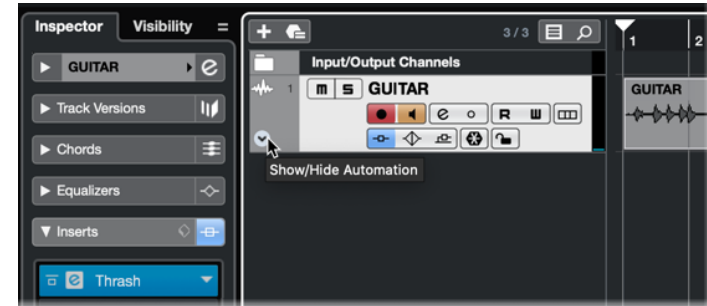
TIP: All parameters that are available for DAW host automation are also available for external MIDI control within both the plugin and standalone app!

Automating a Parameter

Once you've inserted an instance of your Metallurgy plugin on any track within your host DAW application, all automatable parameters appear within the track's automation menu or window. Note that how you choose and configure plugin parameters for automation can differ quite a bit among host DAW applications, so we've provided a few examples to follow using the Metallurgy: Thrash plugin—the steps are the same using the Doom or Modern plugins as well. Be sure to consult your host software's documentation for its specific instructions and parameter automation capabilities.

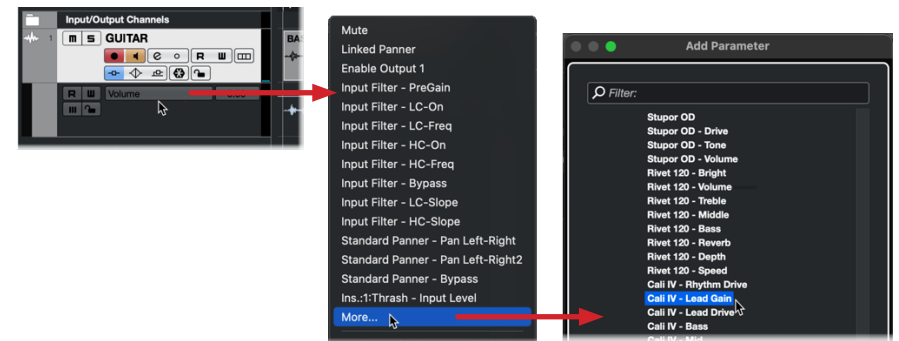
1. **Start by recording or importing an audio clip into your host DAW app's audio track, and insert an instance of the Thrash plugin on the track. See ["Quick Start" on page 7](#) for more information, if needed.**
2. **This next step of selecting the specific Thrash automation parameter differs among DAW hosts, so we've described the process in several popular apps.**

- a. **In Cubase: Hover your mouse cursor over the bottom left area of the track header so that you see the Show/Hide Automation down arrow button appear, as shown below. Click this button to show an automation lane.**



Cubase - The track's Show/Hide Automation button

- In the automation lane that appears, click on the parameter assignment field (where it defaults to the track's own Volume parameter), choose More, to open the Add Parameter window.**



Cubase - Choosing the Thrash plugin automation parameter for the track

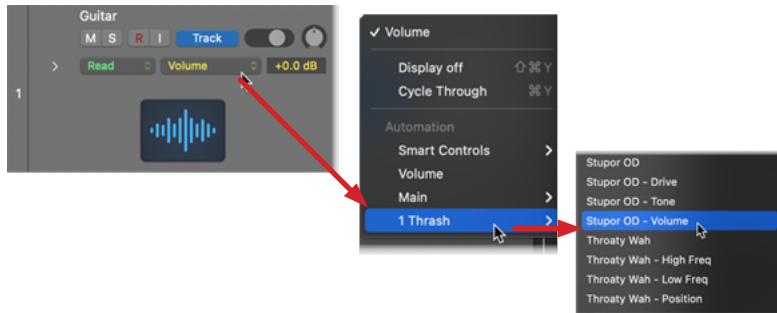
- Within the Add Parameter window, expand the Ins. (Inserts) folder, then the Thrash folder to see all the plugin's automatable parameters. As you can see, practically every Thrash Utility Drawer, Pre FX, Amp, Cab and Post FX parameter is available here for automation. For this example, we'll choose Cali IV - Lead Gain to automate the Cali IV amplifier Lead Gain knob. Click OK. Note that you can repeat these steps in Cubase to add additional automation tracks and choose a different, additional Thrash parameter for each.**

- b. In Logic Pro: Click and enable the Show/Hide Automation button at the top of the Logic Pro main window to show the automation controls within the track view.



Logic Pro - Select the Show/Hide Automation button

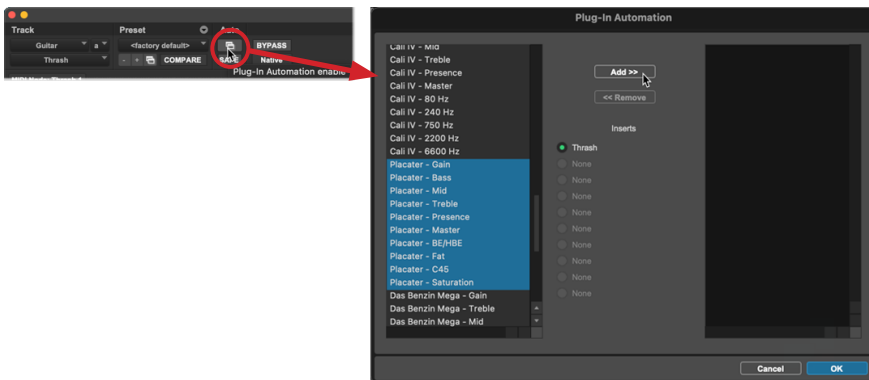
Within the header of your track, click on the Automation Parameter menu and choose 1 Thrash > Stupor OD - Volume, for this example, to automate the Stupor Pre FX View - Stupor pedal's Volume knob.



Logic - Choosing Thrash automation parameter for the track

Note that you can click the arrow in the Logic track header to add additional automation tracks and choose a different, additional Thrash plugin parameter for each.

- c. In Pro Tools: Within the top header of the Thrash plugin window, click the Plug-in Automation Enable button. In the left column of the Plug-in Automation window, choose any of the Thrash parameters you want to automate—for this example, select all of the Placater amp's parameters, and click the Add button to add them to the window's right column, which enables them for automation within your Pro Tools session.



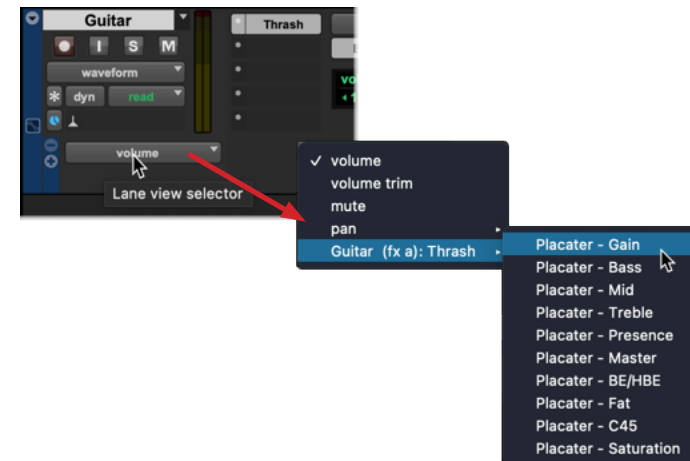
Pro Tools - Add the desired Thrash parameters for automation

In the Pro Tools Edit window, click the arrow button at the left of the track header to show an automation lane below the audio waveform track.



Pro Tools - Show automation lane

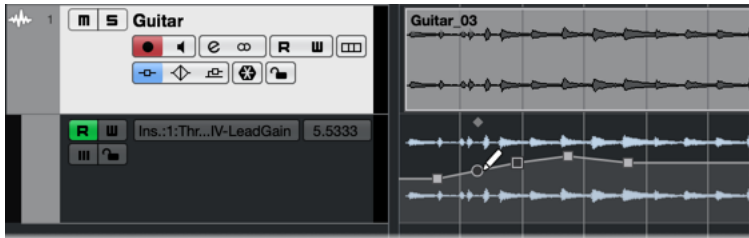
In the automation lane that appears, click on the Lane view selector (where it defaults to the track's own Volume parameter), choose your track name/effect instance (in this case, "Guitar" is our track's name) and then Thrash > Placater - Gain, for this example, to automate the Placater amp's Gain knob.



Choosing a Thrash automation parameter for the lane

Note that you can click the + button in the lane header to add additional automation lanes and choose a different, additional Thrash parameter for each.

- In your DAW app, you'll now see the selected Thrash plugin parameter assigned for the automation lane. Move your mouse cursor within the automation lane and click to create an edit point, then drag the edit point up/down to adjust the parameter's level as desired at the time location. Repeat to add more edit points to shape the automation envelope as needed. (Optionally, you can click and drag to "draw" the envelope line, then adjust the edit points.)



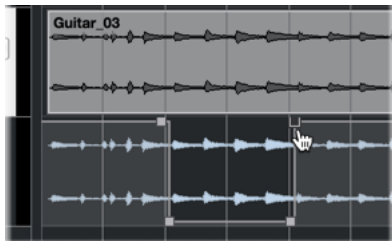
Automation lane - editing the automation envelope

- Open the Thrash plugin window, view the Amplifier View (or whichever view your automated parameter's block resides), and hit play to listen to the track. Watch and listen as the parameter's knob "reads" your automation envelope, and readjust your edit points to fine-tune automation as needed.

NOTE: You may need to enable the automation lane's **Read** option, typically found in the track or automation lane header, otherwise the automation envelope is ignored by your DAW host on playback.

You can repeat the above steps to add additional automation lanes, and automate an additional Thrash parameter within each.

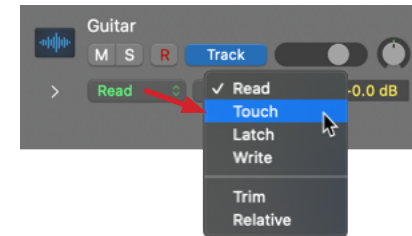
NOTE: When selecting a switch type parameter (for example, a Thrash Pre FX or Post FX On/Off switch), you'll see that its automation envelope edit points adjust to only two corresponding positions—at maximum for On and minimum for Off, as shown below.



Automation envelope for a switch parameter

Writing Parameter Automation

Most host DAW apps also provide several "Read/Write" modes for parameter automation, which typically appear as a set of options on the track (Off, Read, Write, Latch, Touch, etc.).



The track automation Read & Write mode options in Logic Pro

When set to Read (typically the default), the track will actively "play back" the automation envelope edits on the track.

When one of the Write options (Touch, Latch, or Write) is set as active on the track, you can then play the track and manually adjust any automatable switch, knob, or slider within the Thrash plugin window, and your moves are recorded to the track in real-time. Typically you'll be able to access the parameter's envelope in an automation lane, edited with the adjustments that you have written, and you can manually drag individual edit points to edit the envelope further as desired.

Standalone Application

This chapter covers features unique to the Line 6 Metallurgy standalone applications' operation. Note that all other features are identical in operation to those of the Metallurgy plugin, so please review the preceding chapters for details covering other features.



The standalone application (Modern - Amplifier View)

For any Metallurgy software, the standalone application is installed by default along with all its plugin formats, and is authorized to run on your computer once you've completed the Authorization steps. For info on these steps, see ["Requirements and Installation" on page 2](#).

To launch your installed Metallurgy standalone applications, you'll find them in these locations:

Metallurgy: Doom

- **Mac:** /Applications/Line6/Metallurgy Doom.app
- **Windows:** Start button menu > Programs list > Line 6 > Metallurgy Doom

Metallurgy: Modern

- **Mac:** /Applications/Line6/Metallurgy Modern.app
- **Windows:** Start button menu > Programs list > Line 6 > Metallurgy Modern

Metallurgy: Thrash

- **Mac:** /Applications/Line6/Metallurgy Thrash.app
- **Windows:** Start button menu > Programs list > Line 6 > Metallurgy Thrash

NOTE: If you have not yet performed the authorization steps within your Metallurgy plugin, you'll be presented with the Authorization/Sign In screen upon launch of the your Metallurgy standalone app. You must authorize your computer to run the application—see ["Authorizing Your Computer" on page 4](#) for details.

Just as with any DAW host application, the Metallurgy standalone applications require that you have an audio interface connected to your computer, capable of low latency operation.* You'll also need speaker monitors or headphones connected to your interface. This allows you to use your computer as a virtual guitar amp & effects rig for jamming along with music on your computer, or with the output of your interface routed to an amplifier or PA for live performance.

***NOTE:** On a Windows computer, Metallurgy standalone apps only support and list audio devices that include an installed ASIO type driver, since this provides you with the required low-latency audio performance. This driver is provided by your audio device's manufacturer—please check your device's documentation for details. You'll also need to exit any other audio application that is utilizing your ASIO device before launching your Metallurgy standalone app, since ASIO does not permit use by more than one application at a time.

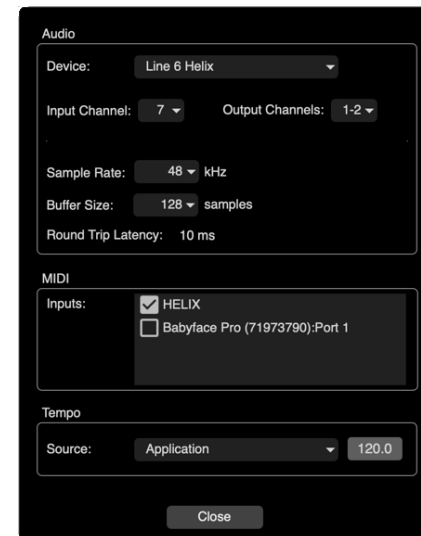
Application Preferences: Configuring Your Device & Tempo Settings

IMPORTANT! It is recommended to connect and power on your audio and MIDI device before launching the Metallurgy standalone app, and to never disconnect or power off your device while currently in use by the Metallurgy standalone app.

Be sure to first turn the volume level all the way down on your audio interface and monitoring system before making the following settings to avoid any potential unexpected loud bursts of audio.

Within the main application menu's **Preferences** window, you'll find options to select and configure the audio interface and MIDI controller devices to use with the app. You can additionally set the Tempo options to which the app's Post FX Delays can sync.


On Mac, this Preferences window command is found within the **Metallurgy: Doom**, **Metallurgy: Modern**, and **Metallurgy: Thrash** main menu, or on Windows within the **File** main menu.



The standalone app - main menu Preferences (Mac)

Audio Device Settings

- **Audio Device:** *You'll need to set this option before the other Audio settings will be available.* Choose your connected audio interface that you wish to use for audio input and output.
- **Input Channel:** All available mono inputs of your selected **Audio Device** are available here. Choose the input into which you are connecting your guitar. For best results, you'll typically want to plug your electric guitar into a high impedance or "Instrument" type input on the device. Also, see ["Input and Output Controls" on page 19](#) for tips about input levels.
- **Output Channels:** Choose the two outputs of your Audio Device to which you are connecting your speakers or monitoring system. If you only need one output, such as to connect to a mono amp or monitoring system, you can use either output.

 **NOTE:** If you plan on only using one of your audio device's outputs to route to a mono amp, it is best to set all Cab View - Mixer Channels' Pan controls to center, and Post FX Left and Right Time controls to common settings, to optimize for a "mono" output signal.

- **Sample Rate:** Your audio device's supported sample rates are available here for you to choose. The higher the sample rate value, the higher the audio quality. However, higher sample rates also increase the demands on your computer's processor. Typically, 48,000 Hz is a good choice.
- **Buffer Size:** The lower the buffer size, the lower latency performance you will have with your standalone app. However, lower buffer sizes also increase the demands on your computer's processor and can result in audible dropouts or clicks & pops in the audio output. Typically, 128 Samples is a good starting value. If you encounter dropouts, choose a higher buffer size.
- **Round-Trip Latency:** Once you've selected your Audio Device and above settings, you'll see this latency indicator appear in the window, reported from your device. It denotes the time (in milliseconds) it takes your guitar signal to travel from entering your audio device's input, be processed by the standalone application, and exit the device's output. Use the Buffer Size setting to optimize the latency on your computer.

MIDI Device Settings

MIDI Inputs: Your Metallurgy standalone app can receive MIDI commands from one or multiple MIDI devices to remotely control practically any parameter (see ["MIDI Control" on page 15](#)). Check the box for the connected MIDI device(s) from which you want to receive MIDI CC messages. Note that you must also have an Audio Device selected before the standalone app can receive MIDI from your selected MIDI devices. If you do not intend to use MIDI control, your Metallurgy application will function just fine without any MIDI device connected, or without any connected MIDI device's box checked in this window.

Tempo Settings

These Tempo options allow you to set a "Tap Tempo" to which the Metallurgy stand-alone app - Post FX delays can sync when utilizing the delay's note subdivision options. (Also, see the following ["Post FX Delays - Tap Tempo and Note Sync" section](#).)

- **Source:** Choose the Tempo source to which your Post FX Delay's time can sync.
- **Application** - Select this option to allow you to set a global "system" tempo to which the app's Post FX Delay repeats can follow, regardless of the loaded preset. You'll see a Tap Tempo button appear to the right when this option is selected, which you can "Tap" rhythmically to define the tempo BPM—or right-click on the button to type in a precise tempo value.
- **Preset (Post FX)** - Choose this option if you prefer to have your Post FX Delays sync to an individual tempo that is stored per preset. When this option is selected, you can use the Tap Tempo button that appears on the app's Toolbar—see the next section. View to "Tap" in your desired BPM, or right-click the button to type in a precise tempo value. Remember to save your preset to retain your tempo.

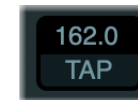
Once all your settings are complete, click **Close** to exit the window.

Post FX Delays - Tap Tempo and Note Sync

As mentioned in the preceding Preferences window section, when you've set the Tempo - Source option to **Preset (Post FX)**, the preset's Tap Tempo control becomes enabled. (This toolbar Tap Tempo control appears dimmed when the Preferences Tempo - Source is set to **Application**, and shows the current global Application BPM.) When enabled, you can "Tap" rhythmically on the Toolbar Tap Tempo button to define the BPM for the current Preset—or right-click on the button to type in a precise tempo value. Be sure to Save your preset to retain your entered tempo value.



Application Tempo disabled



Preset (Post FX) Tempo enabled

The standalone app's toolbar Tempo control (Modern)

The Post FX Delay's - Time Left or Right values, when set to use a note subdivision, will then sync to your defined Preset Tempo BPM. Also, see the plugin's sections covering the Post FX delay models for more about using the Delay Sync and Note Subdivision options.

- **Doom:** ["Adriatic Delay" on page 40](#)
- **Modern:** ["Mod Chorus Echo" on page 41](#)
- **Thrash:** ["Vintage Digital Delay" on page 42](#)

Application Menus

At the top of your computer screen (Mac) or top of the application window (Windows), you'll find the application menu. To follow are descriptions of the application menu commands for Mac and Windows.

Metallurgy: Doom, Metallurgy: Modern, or Metallurgy: Thrash (Mac only)

- **Preferences** - Launches the application's Preferences window, where you can select and configure your audio interface and MIDI controller device, as well as the Tap Tempo options (see the preceding section).
- **Quit (*Doom/Modern/Thrash*)** - Exits the application. You can also quit the application via the red close button at the top left of the window.

File (Windows only)

- **Preferences** - Launches the application's Preferences window, where you can select and configure your audio interface and MIDI controller device, as well as the Tap Tempo (see the preceding section).
- **Quit** - (Windows only) Exits the application. You can also exit the application via the red "X" close button at the top right of the window.



NOTE: For Help, Updates, and Preferences, please click the Toolbar's Help and Settings buttons—see ["Toolbar Controls" on page 12](#).

Additional Resources

Looking for more info? We've got plenty of online resources, just a click away.

- Download additional documentation covering Line 6 software and other gear from the [Line 6 Product Manuals](#) page.
- Check out the [Line 6 Support](#) page for access to helpful tips, videos, discussion forums, or to contact Line 6 Technical Support.
- Stay up to date with the latest updated version of Thrash and all your other Line 6 applications, available from the [Line 6 Software](#) page.
- Looking for some professionally crafted presets and Impulse Responses for your Metallurgy plugin or standalone app? Check out the [Line 6 Marketplace](#), and be sure to check back often for news and product announcements.
- Can't get enough Line 6 Gear & accessories? Head on over to the [Line 6 Store](#).

