

LAVA STUDIO

Product Manual

Hardware setup, HILAVA system overview, and effects module reference for LAVA STUDIO.

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01 LAVA STUDIO Hardware Manual

STUDIO is equipped with an audio interface system and a hardware control panel. It can connect to instruments, headphones, and mixers, and transmit audio to a computer via USB.

1. Hardware Overview

Component	Description	
Touch Display	13.3-inch FHD, 0°–80° adjustable	
2.1 Speaker System	Subwoofer + Dual Tweeters, 50Hz–20kHz	
Power Button	Short press to sleep/wake, long press (3s) to power on/off	
Volume Knob	Controls the overall output volume	
Instrument Input	6.35mm Hi-Z, supports electric guitar/bass	
Line Out	2× 1/4" jack (L/Mono & R), connects to mixer/PA	
Headphone Jack	1/8" jack, stereo direct-through	
USB-C Port	Audio transmission	

2. How to Use the STUDIO Control Panel



LAVA STUDIO features a **large screen + minimal buttons** design: only two physical buttons, the **Power Button** and **Volume Knob**, are retained on the front. All other functions are controlled via the **13.3-inch touch display**.

2.1 The Flexible Touch Display

The screen interface dynamically adjusts based on functional needs, free from the limitations of physical buttons. You can control functions by tapping and swiping, just like using a smartphone.

The **touch display uses a 1920×1080 Full HD resolution**, supporting multi-touch and gestures. Even complex effects interfaces can display every parameter clearly.

2.2 How to Adjust the Screen Angle

The screen supports **0°–80° smooth angle adjustment**, allowing you to find the most comfortable viewing angle for different playing positions:

When playing seated, adjusting to **45°–60°** is recommended. This is a natural downward angle that prevents neck fatigue during extended use.

When playing standing, adjusting to **30°–45°** is recommended. This slightly downward line of sight makes it easy to operate the screen quickly while playing.

2.3 How to Use the Power Button

Short Press: Sleep/Wake Screen

- The device continues to run; audio effects are not interrupted
- Ideal for temporarily turning off the screen during a performance

Long Press (3s): Full Power Off / Power On

- Completely shuts down the device; all audio stops

2.4 How to Use the Volume Knob

Overall Volume Control: Adjusts headphone and line output volume simultaneously

Operation:

- Rotate clockwise: Increase volume
- Rotate counter-clockwise: Decrease volume

The system will remember independent volume settings for the two modes: when using an amplifier (via Line Out) or when headphones are plugged in.

3. What Instruments Can I Connect?

STUDIO's 6.35mm Instrument Input is designed for Hi-Z (High Impedance) unbalanced instruments, perfectly matching electric guitars, acoustic guitars, and electric basses.

What is Hi-Z and why does it matter? Hi-Z (High Impedance) is a technical specification designed specifically for instruments like electric guitars and basses. These instruments have **unbalanced signals** (single conductor + ground) that need special impedance matching to preserve signal quality. Simply connect your guitar/bass cable to the 6.35mm input jack—no extra equipment needed. The **Hi-Z input preserves your instrument's original tone** and signal strength without requiring DI boxes or impedance converters.

Other devices require the appropriate connection method based on their signal level.

3.1 Optimally Supported Instruments

Electric Guitar / Electric Bass: Plug in directly. The **Hi-Z input impedance is specially optimized** for these instruments.

Acoustic Guitar: Acoustic or classical guitars with pickups can be connected directly.

3.2 Situations Requiring External Equipment

Microphones: Direct connection is not recommended.

- **Dynamic Microphones:** The signal is too low; an external microphone preamplifier is required.
- **Condenser Microphones:** Require 48V phantom power + a preamplifier.
- **Solution:** Connect the line output from the preamplifier to the STUDIO.

Keyboards / Synthesizers: Input line level may be too high.

- **Problem:** A line level signal into the Hi-Z port may cause overload and distortion. This has the potential to damage the speaker, so be sure to read the following solution.
- **Solution:** Use a DI box, a line level attenuator, or connect directly to a mixer/PA system.

5. How to Output to External Devices?

STUDIO provides two audio output methods: the **6.35mm Line Out** on the back (for connecting to a mixer/PA system) and the **3.5mm Headphone Jack** on the front (for private monitoring). **Both outputs can be used simultaneously.**

5.1 How to Connect to a Mixer or PA?

Port Specs: 2× 6.35mm jack (L/Mono & R) on the back

Connection Steps:

1. **Locate the LINE OUT ports** on the back.
2. **Choose connection method:**
 - **Mono performance:** Connect only the L/MONO output.
 - **Stereo performance:** Connect both L + R outputs.
3. **Adjust volume for best sound quality:**
 - Set STUDIO main volume to **100%**.
 - Start with the mixer gain at its **lowest** and gradually increase it.

Goal: Achieve the best signal-to-noise ratio, avoiding background noise and distortion.

5.2 How to Use the Headphone Output?

Any headphone set with a 3.5mm stereo jack is compatible.

6. How to Use USB-C Audio?

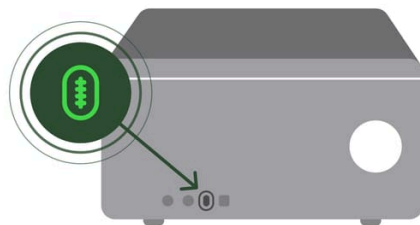
The best use case is for audio playback from a computer, such as playing backing tracks or reference audio.

You can record all audio signals into a computer. Recording has approximately 150ms of one-way latency. For latency-sensitive recording, using the 2× 6.35mm jack output ports on the back is recommended.

How to Connect?

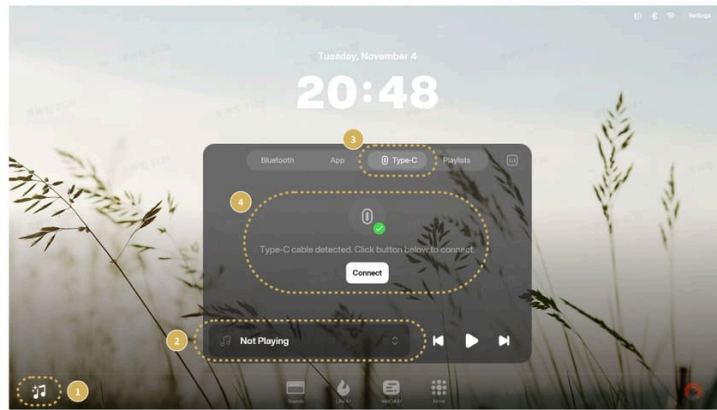
Connection Steps:

1. **Use the correct cable: USB-C (STUDIO) → USB-A (Computer)**



Please use Type-C connection

2. **Confirm connection on STUDIO:**



- When the cable is connected, back to **"Home"** on the STUDIO System
 - **Tap the music icon** on the far left of the screen
 - **Tap the "not playing"** status widget
 - **Tap "Type-C"** in the connection options
 - When the connection is successful, the system will display **"Connect"** to confirm the cable connection has been successfully established
3. **Set up audio on computer:** Open your computer's sound settings and set **LAVA STUDIO** as the audio **input/output device**.

Important Cable Selection Notice:

- **Recommended:** USB-C to USB-A cable
- **Avoid:** Dual USB-C cables (master-slave relationship is undefined, may be unstable)
- **For computers with only USB-C ports:** It is recommended to use a USB Hub to facilitate a USB-A connection.

7. How to Power the LAVA STUDIO?

STUDIO comes standard with a dedicated power adapter, ready to use out of the box. For portable use, you **must use** a power supply that supports **USB-C PD 20V output**. Standard power banks will not work.

7.1 Standard Power Adapter

Dedicated Power Adapter: Supplied with the appropriate plug for your region (US/UK/EU/CN standards).

Advantages: **Stable and reliable, ready to use out of the box**, no extra configuration needed.

7.2 Portable Power Requirements

Core Requirement: **Must support the USB-C PD (Power Delivery) protocol at 20V output.**

Power Specification: 60W–100W (20V/3A–5A)

Connection Cable: USB-C PD trigger cable (to trigger 20V output)

- DC Connector: 5.5×2.5×10mm
- Polarity: Center Positive (+), Outer Ring Negative (-)

Important Warning: **Standard power banks are not compatible** as they cannot provide the required 20V output voltage.

02 Understanding HILAVA

HILAVA is the operating system for LAVA STUDIO. It provides a complete software environment for your music creation. **After powering on and entering HILAVA, you can use all of STUDIO's software features:** effects, recording, backing tracks, lessons, etc.

Important Notes:

- **Network Dependency:** Most features require a WiFi connection.
- **Account System:** A LAVA Account is required to sync data and cloud content.

1. How to Start HILAVA for the First Time

1.1 How to Register a LAVA Account

Purpose of LAVA Account: To save your audio files, presets, recordings, and other data, enabling cloud synchronization.

New user registration is simple:

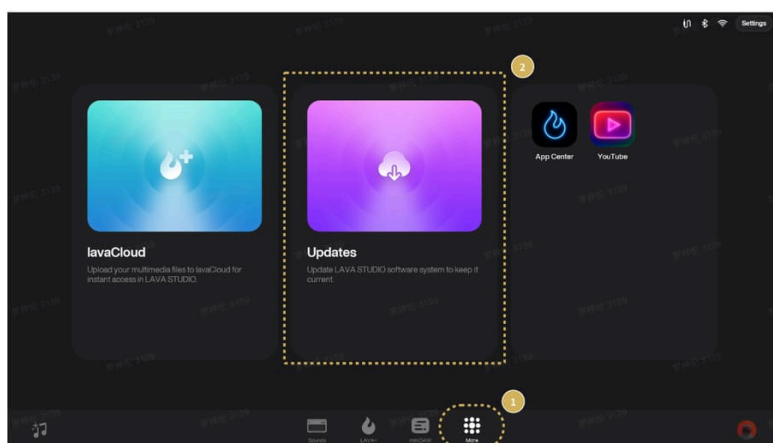
1. **Enter Email:** Use a frequently used email address.
2. **Set Password:** Enter the password twice to confirm.
3. **Optional Info:** Profile content can be skipped.
4. **Complete Registration:** Enter the HILAVA system immediately.

1.2 How to Log in with an Existing Account

Quick login for existing users:

- **Applicable situations:** Users who have previously used LAVA ME series guitars, LAVA Genie, or other products.
- **Login methods:** Two options: verification code login or password login.
- **Data Sync:** Automatically syncs previous account data after login.

1.3 How to Handle System Updates



Update process:

1. **Connect to WiFi** → System checks for updates.
2. **Download Firmware** → Tap "More / Updates" to check for and download the latest version.
3. **Tap Update** → Confirm the update operation.
4. **Device Restarts** → System upgrade is complete.

Note: Important updates will automatically remind you before login to ensure system features are complete.

2. How to Use the HILAVA Main Interface

2.1 Understanding the Bottom Navigation Bar

The navigation bar is HILAVA's core control, located at the bottom of the screen, containing 7 main entries:

Position	Module	Function
Far Left	Listening Module	Bluetooth/Type-C/Cloud audio source management + Dynamic wallpaper/Time display
Center	Sounds	Controls the LAVA STUDIO sound effects chain
Center	LAVA+	Backing track creation tools, lessons, and community
Center	miniDAW	A mini multi-track recording tool
Center	Sharing	Preset sharing for users to share and discover tone presets
Center	More	lavaCloud, System Updates, Third-Party Apps
Far Right	Personal Center	Account management

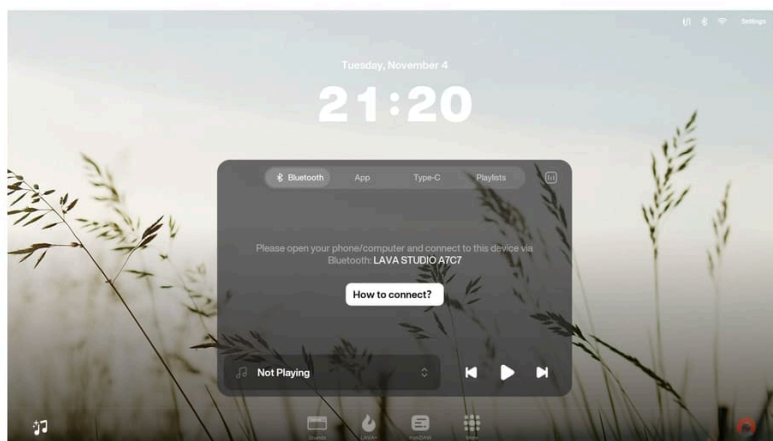
Default Home Page: The Effects module (Sounds) is the first interface, allowing you to adjust tones right after booting up.

2.2 What are the Functions of Each Module?

Listening Module (Vision Music)

Music listening and home entertainment functions:

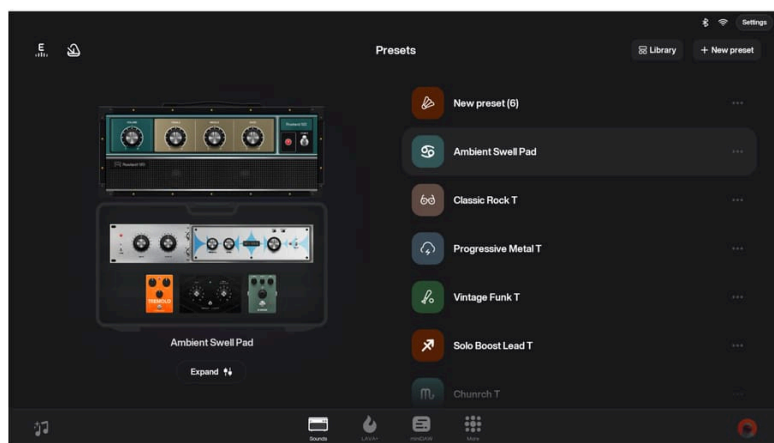
- **Multi-Source Management:** Supports Bluetooth, Type-C wired, third-party music apps, and lavaCloud personal music library.
- **Pro Audio Playback:** Provides high-quality audio output leveraging STUDIO's hardware advantages.
- **Immersive Home Experience:** Dynamic wallpapers, digital photo album functions.
- **Clock & Calendar Display:** Large font time display, date information.



Sounds (Effects System)

Tone processing and sound effects management:

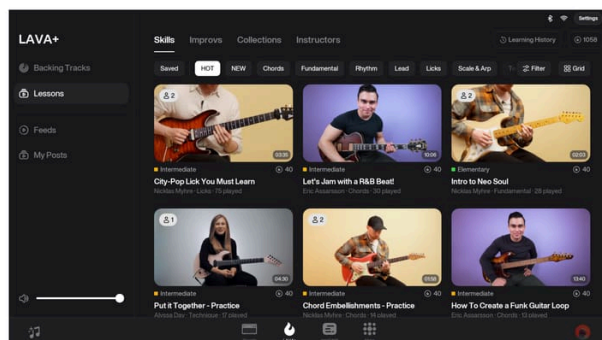
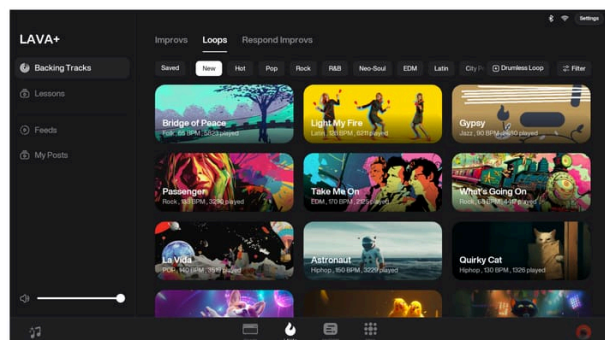
- **Preset List:** Easily browse and select presets for quick, one-tap switching.
- **Custom Effects Chain:** Freely combine AMP, CAB, and stompbox effects.
- **Cloud Preset Library:** Professionally tuned presets, ready to use out of the box, with online tone resources continuously updated.
- **Utility Tools:** Tuner, Metronome.



LAVA+ (Backing Tracks, Learning & Community)

Comprehensive music learning and creation platform:

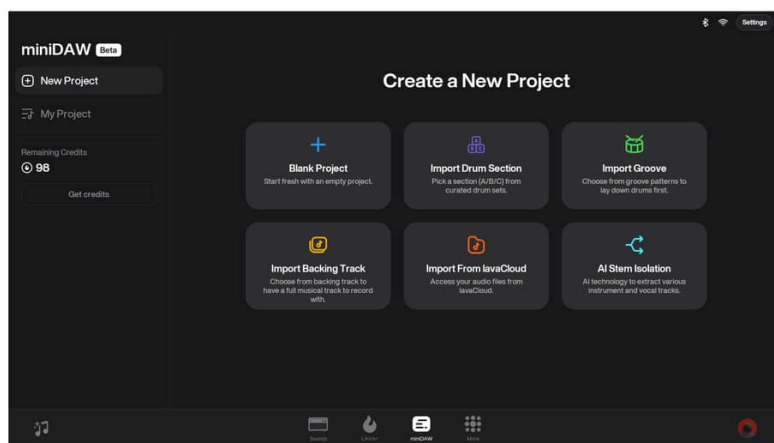
- **Backing Track Library:** Jam tracks and drum loops to inspire musical creation.
- **Recording Tools:** Multi-track recording function to quickly turn creative ideas into works.
- **Immersive Lessons:** Tutor video teaching and interactive tabs to continuously improve playing skills.
- **Global Music Community:** Share works and collaborate on creations, progressing together through interaction.



miniDAW (Recording Workstation)

A lightweight, professional workstation exclusive to players:

- **Project-Level Recording:** Supports up to 12 tracks, supports longer recording sessions.
- **Complete Production Workflow:** Project-level post-editing to meet deep creative needs.
- **Smart Asset Integration:** Backing track library + cloud assets to create complete musical works.
- **AI Smart Stem Separation:** Intelligent separation technology to split a full song into independent instrument tracks.
- **Focused and Concise:** Powerful yet focused on the instrument playing scenario.



Sharing

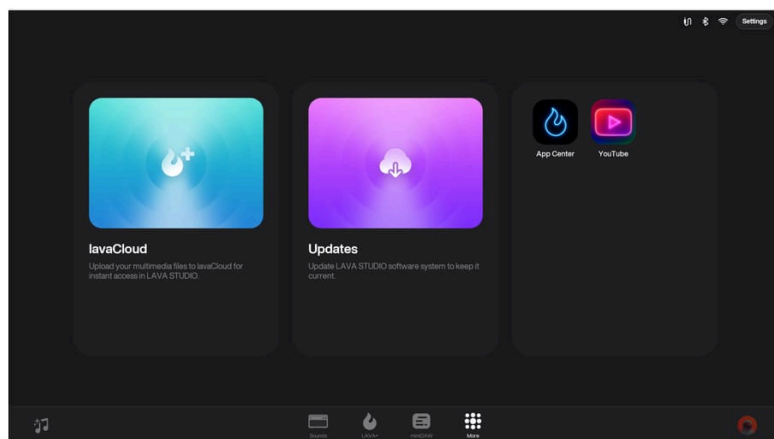
Preset sharing and tone discovery community:

- **Share Your Presets:** Share your own preset list so other users can discover the tones you create.
- **Browse Community Tones:** Explore presets shared by other STUDIO users and find sounds that match your playing style.
- **Demo Preview:** Listen to a demo before using a shared preset, so you can understand its sound in context.
- **Try Before Adding:** Try the preset directly with your own instrument, then add it to your personal preset library if you like it.

More (System Settings & Apps)

System management and extended functions:

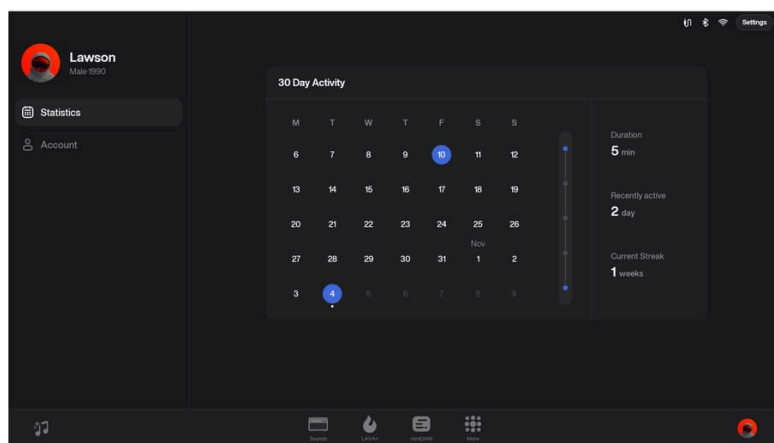
- **lavaCloud:** 5GB free cloud storage, cross-device file synchronization.
- **Updates:** System update management to keep features current.
- **Appcenter:** Third-party app store to expand functionality.
- **Installed Apps:** Manage and launch installed third-party applications.



Personal Center

Account management and personal data:

- **Account Info:** Manage personal profile and login settings.
- **Data Sync:** Check cloud synchronization status.
- **Usage Statistics:** Understand your music creation data.



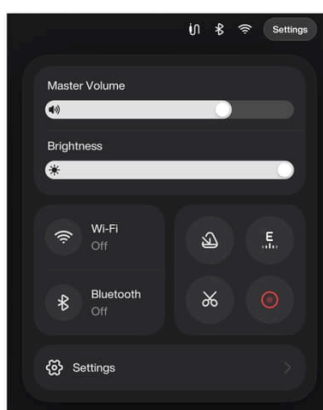
2.3 How to Use the Top Status Bar?

The status bar displays important information:



- **6.35mm Jack:** Shows if an instrument is correctly connected.
- **Headphone Status:** Shows headphone connection status.
- **Network Status:** Wi-Fi and Bluetooth switch status.
- **Settings:** Quick settings entry.

Settings Quick Panel Functions:



- **Volume Adjustment:** Master volume control.
- **Screen Brightness:** Brightness adjustment.
- **Network Management:** Wi-Fi/Bluetooth switch and settings.
- **Music Tools:** Quick access to Tuner and Metronome.

- **Recording Functions:** Screen Capture, Screen Recording (results saved to lavaCloud).
- **More Settings:** Enter the full settings interface.

Note: The Settings panel can be pulled up from any interface, providing global quick operations.

2.4 How to Use the More ?

**Detailed functions of the More :

lavaCloud (Cloud File Management):

- **File Upload:** Upload audio files via Cloud.lavamusic.com.
- **Cross-device Sync:** File synchronization across mobile, computer, and STUDIO.
- **5GB Free Storage:** Store a large amount of audio assets and works.
- **Format Support:** Supports all major audio formats.

Updates (System Updates):

- **Auto-Check:** Automatically checks for system updates when connected to the network.
- **Feature Updates:** Get new features and performance improvements.

Appcenter (App Store):

- **Third-Party Apps:** Browse and install music-related applications.
- **App Management:** View installed apps and update status.
- **Compatibility Check:** Ensures apps are compatible with the STUDIO system.

03 Effects Module User Manual

1. What are Effects?

The Effects system is the **core audio processing system of STUDIO**. It receives any input signal via the 6.35mm jack and applies amplifier modeling and various effects processing to it.

Professional Optimization + Wide Compatibility:

The Effects system is **primarily optimized and developed for electric guitars and basses**, which will achieve the best tonal performance. At the same time, **any instrument that can be plugged into the 6.35mm jack can use it**, such as acoustic guitars, electronic instruments, and even various innovative electro-acoustic instruments. As long as it has an output signal and can be connected, STUDIO can make it produce sound; as for the tonal result, each instrument will perform differently.

Operation is done via the touch display. You can select tones directly from the preset library or create them from scratch. The system provides independent adjustment of AMP, CAB, and various stompbox effects. STUDIO also supports user-loaded NAM models and IR files, giving advanced users more ways to bring their own tone resources into the Effects system. The touch interface makes effects switching and parameter fine-tuning more intuitive.

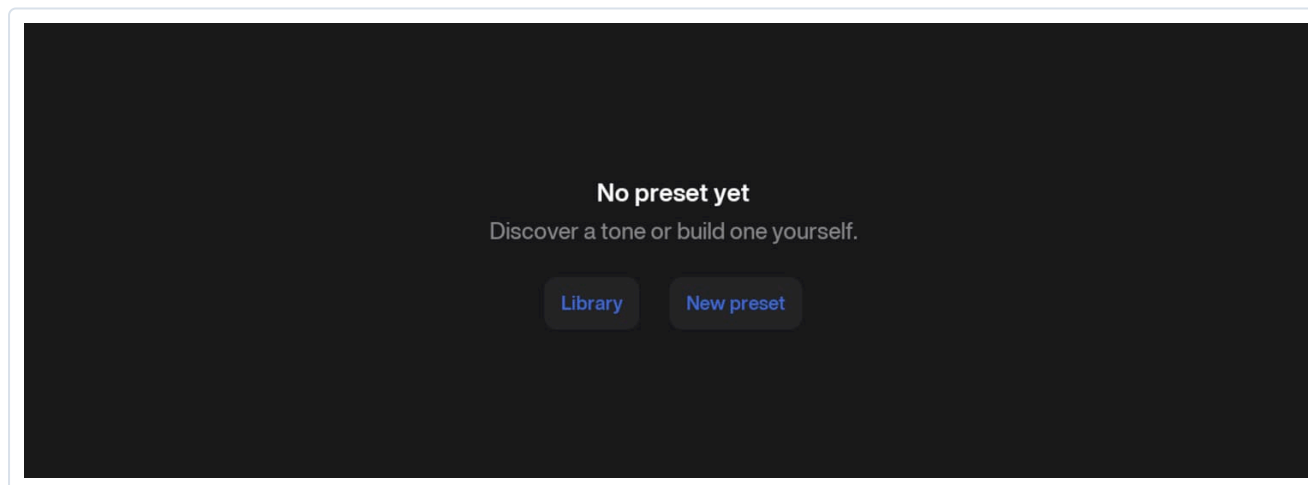
As a global function, Effects can be called up in all of STUDIO's modules. You can change your tone at almost any time according to your ideas.

2. What You Must Know About Effects

2.1 Getting Your First Presets

A preset is a complete configuration of a tone, including the amplifier, cabinet, and effects chain. When you open the Effects module for the first time, you'll see an empty preset list with a friendly prompt to get started.

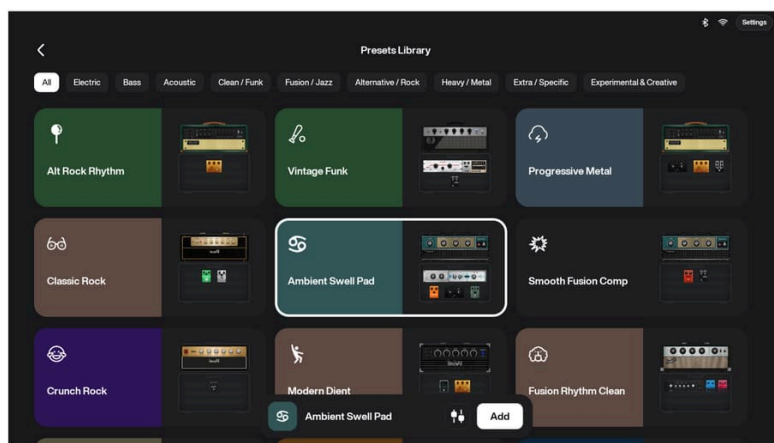
Three Ways to Build Your Initial Collection



Option 1: Browse the Preset Library

Tap the 'Library' button to browse our collection of professionally crafted tones.

What's Inside the Library? The **Preset Library** is your **infinite tone collection** powered by the cloud and continuously updated with new content—you'll always have fresh sounds to explore without any hardware upgrades.



The cloud library is organized to help you find exactly what you're looking for:

- **By Genre:** Rock, Metal, Blues, Jazz, Country, Funk, Indie, Ambient
- **By Instrument:** Electric Guitar, Bass, Acoustic Guitar

How to Add from Library: Tap any preset to audition it immediately. If you like it, tap 'Add' to save it to your local preset list. The system is organized by playing style and tonal characteristics—from clean Clean to high-gain Hi-Gain, from Funk rhythm to Metal distortion.

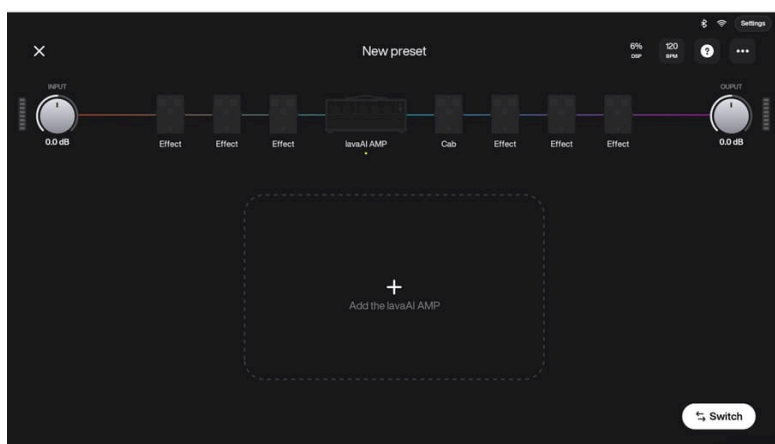
Advanced Library Features

Preview Before Adding: Every preset shows its complete signal chain. Tap any preset to hear it immediately, or enter the details page to preview individual components.

Your Modifications are Saved: When you find a preset you like, you can fine-tune any parameter before adding it to your list. Your modifications are automatically saved, so you can always return to your personalized version.

Option 2: Create Your Own

Tap the **New Preset** to enter the detailed editing page, where you can build your tone from scratch by adjusting the amplifier, cabinet, and effects one by one. Once you're satisfied with your creation, tap 'Save' to add it to your preset list.



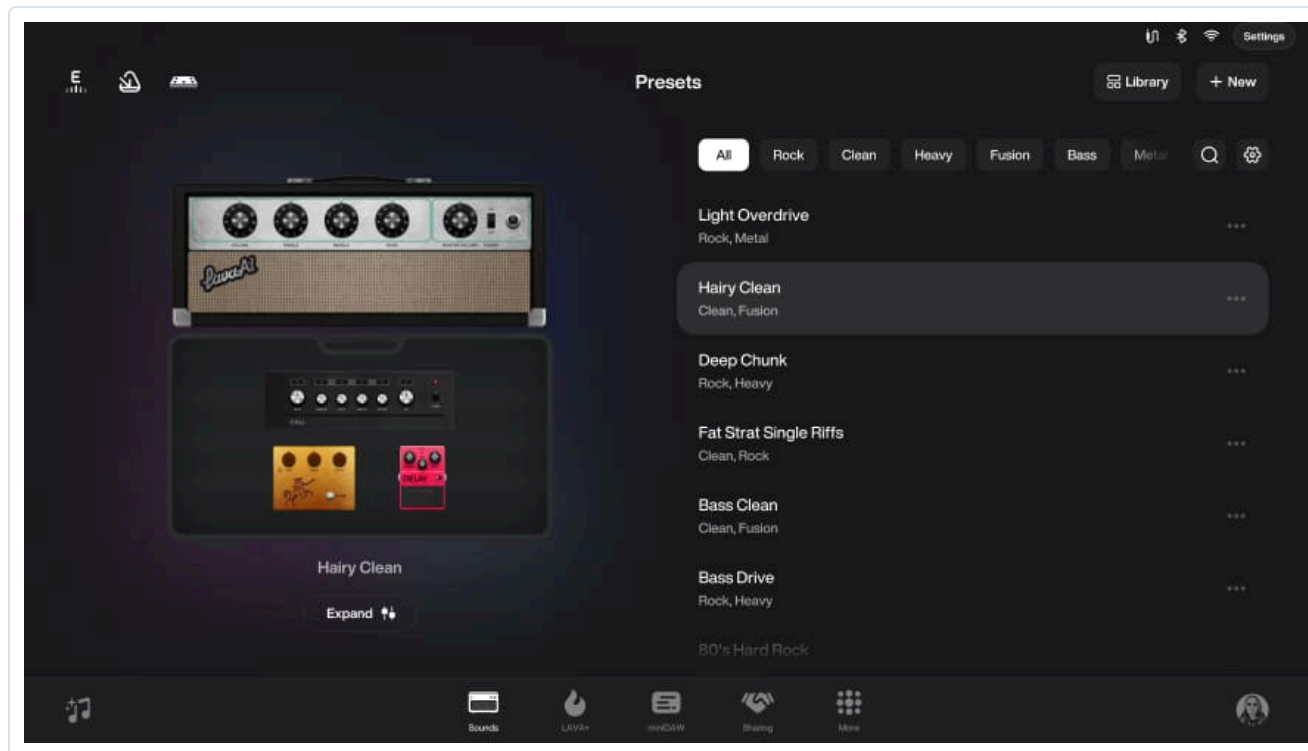
Option 3: Get Presets from Sharing

Open Sharing to browse tone presets shared by other STUDIO users.

Each shared preset can include a demo, so you can **listen to how the tone sounds before adding it**. If you want to feel the tone with your own instrument, **try it directly on STUDIO**. When you find a sound you like, tap 'Add' to save it to your personal preset library.

2.2 Managing Your Preset List

Your preset list grows with your collection. When you have many presets, **tags and search help you find the right tone faster.**



Switch tones instantly: Tap any preset on the list, and the tone switches immediately. The left side shows your signal chain. If it displays amplifier and effects icons, the chain is active; if it shows 'bypass', that effect is temporarily disabled.

Reorder Presets: In the preset list on the right, **long-press a preset and drag it up or down** to adjust its position.

Filter by Tags: Use the tag tabs at the top of the preset list to quickly narrow down your tones. **All** shows every preset. Other tabs, such as Rock, Clean, Heavy, Fusion, or Bass, show only presets with that tag.

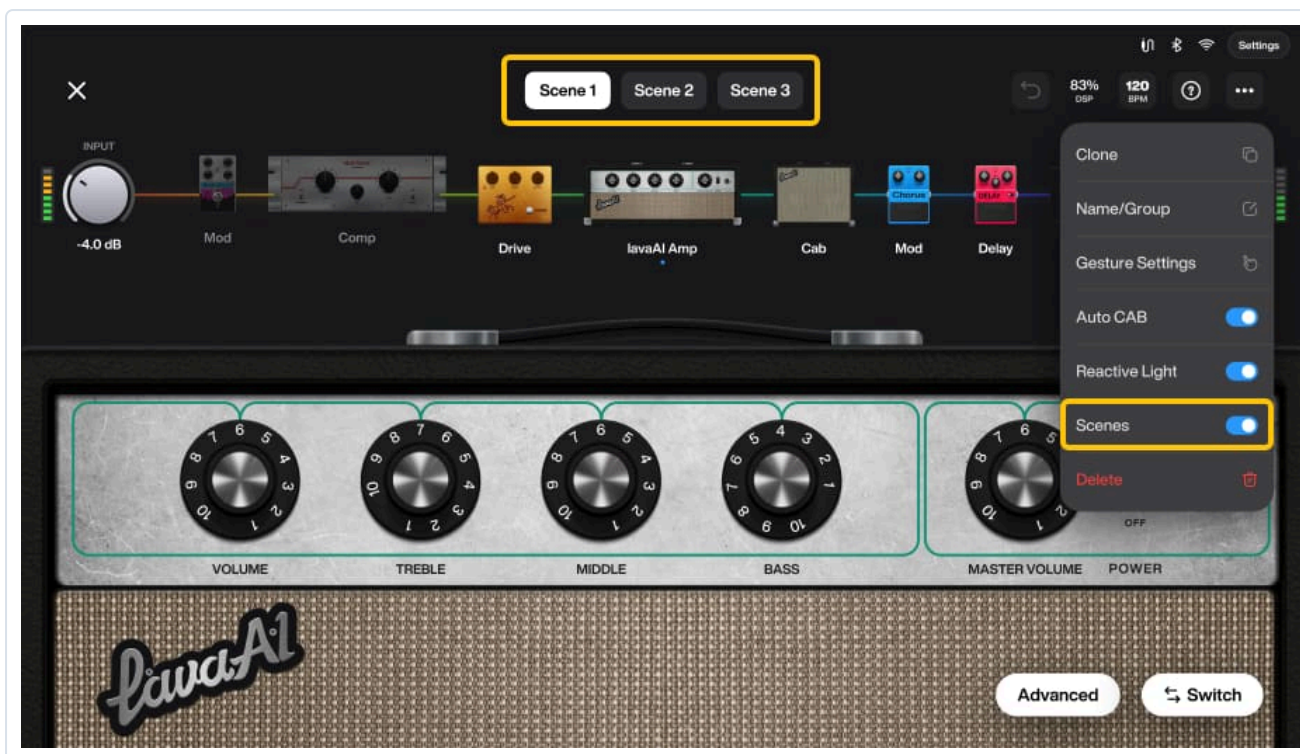
Search by Name or Tag: Tap the search icon to search your local presets. STUDIO matches both preset names and tags, so you can quickly find a tone even when you only remember its style or usage.

Manage Preset Tags: Use the tag settings entry to create, rename, delete, and sort tags. A single preset can have multiple tags, making it easier to organize tones by genre, instrument, gain level, or playing scenario.

Use Tags with the Effect Pedal: When switching presets with a connected Effect Pedal, STUDIO switches within the current tag group. If you are on **All**, the pedal cycles through the full preset list.

2.3 How to Use Scenes?

Scenes are useful when one song needs several tone states that must switch quickly. For example, you may want a dry rhythm sound for the verse, a wider delay sound for the chorus, and a louder lead sound for the solo, while still staying inside the same preset.



Each preset supports up to **3 Scenes**. Scenes are an advanced feature and are **off by default**. To turn them on, open the preset detail page, tap the **More** menu in the upper-right corner, and enable **Scenes**. This is a global switch: once enabled, Scene controls are available across presets.

You can switch Scenes directly on the STUDIO screen. The Effect Pedal can also switch Scenes, but it is not required.

How Scenes Work:

Scenes share the **same effects chain** inside one preset. The chain layout does not change: the AMP, CAB, and effect units stay in the same slots and keep the same order.

When you switch Scenes, STUDIO updates only the parameters or on/off states that are different between Scenes. Because the system does not need to rebuild the whole effects chain, Scene switching can feel fast and smooth during playing.

When to Use Scenes:

- **Verse / Chorus / Solo:** Keep one core tone and change gain, delay, reverb, or output level for different song sections.
- **Clean / Drive / Lead:** Use one preset as the base and prepare three performance-ready variations.
- **Practice and Recording:** Switch between tone states without leaving the current preset or interrupting your workflow.

What Scenes Cannot Do:

Scenes are not separate presets. They are variations inside the same preset, so their differences have limits.

- You cannot use a different AMP model in each Scene.
- You cannot use a different CAB or IR in each Scene.
- You cannot add, remove, or reorder effect units differently for each Scene.

If you need a completely different amp, cabinet, or effects chain layout, create or switch to another preset instead.

2.4 How to Use the Effect Pedal?

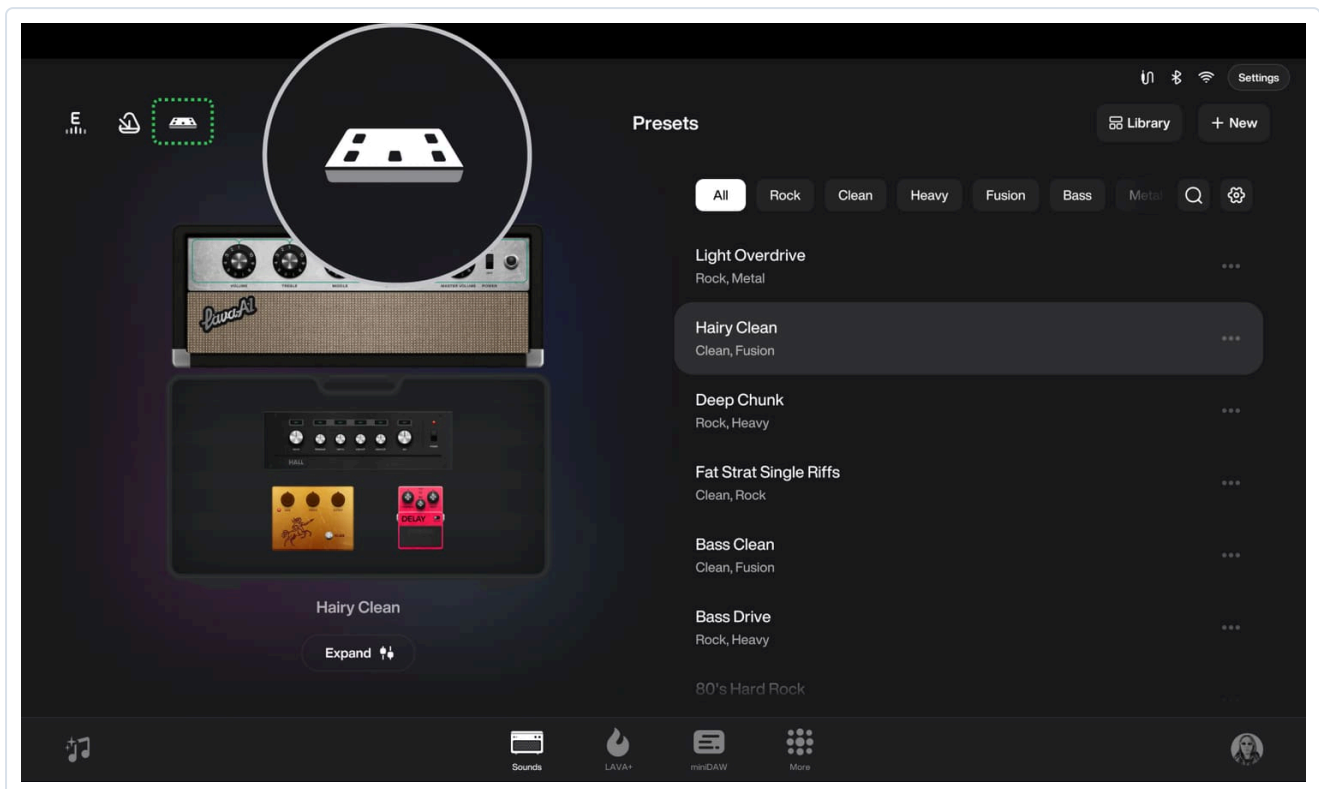
The **Effect Pedal for LAVA STUDIO** is an **optional accessory sold separately**. It lets you switch presets, scenes, and tags without touching the screen, which is useful during practice, recording, or performance.

How to Connect the Effect Pedal:

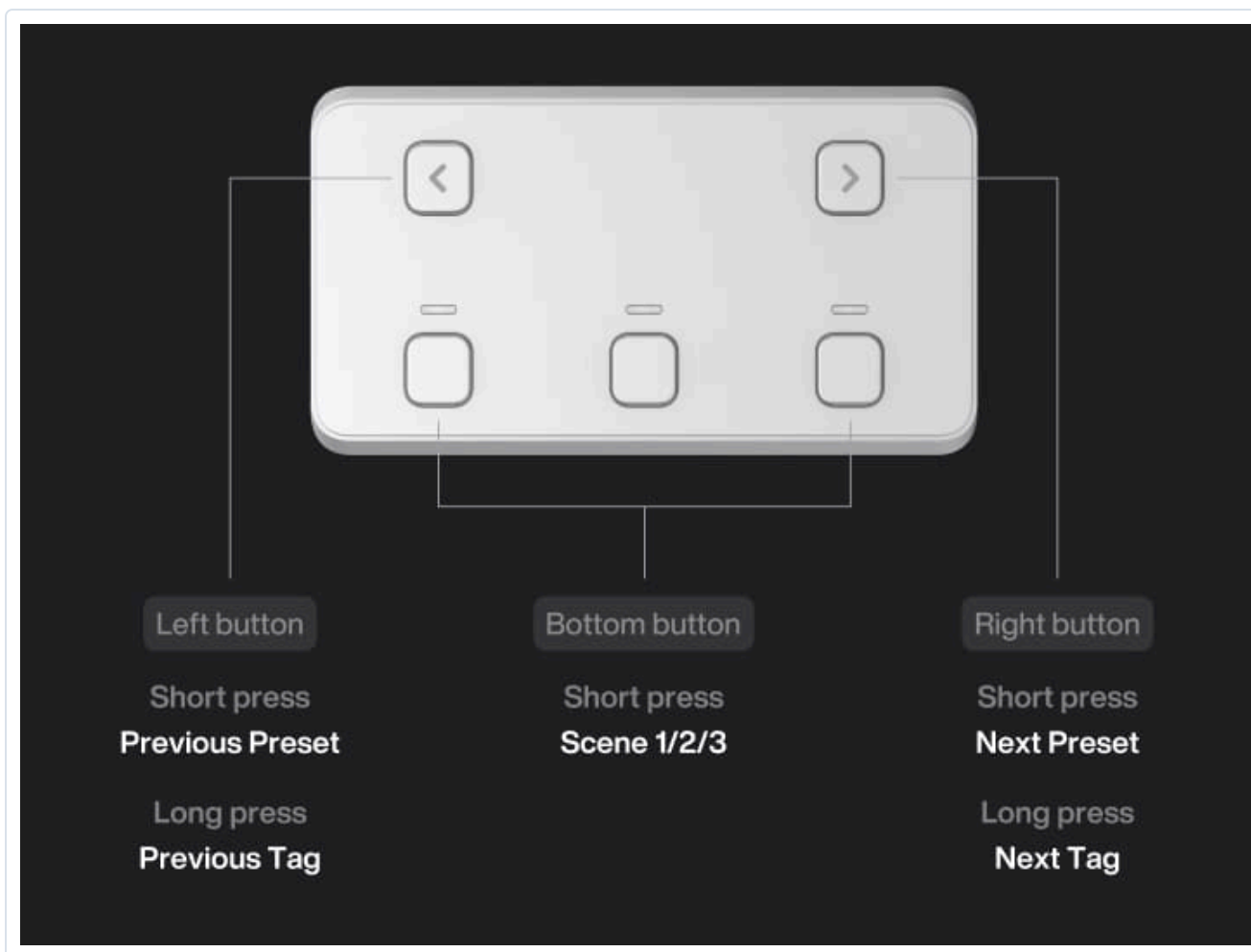
1. **Power on STUDIO** and make sure Bluetooth is enabled in the system settings.
2. **Power on the Effect Pedal** by pressing and holding its power button.

3. Open **Sounds** on STUDIO.

4. Tap the **Pedal Management** icon and follow the on-screen connection prompt.



What You Can Control:



- **Switch Presets:** Short press the left or right arrow button to switch to the previous or next preset. The system shows the current preset status in a floating window.
- **Switch Scenes:** Short press the three lower buttons to switch to Scene 1, Scene 2, or Scene 3 inside the current preset.
- **Switch Tags:** Long press the left or right arrow button to switch to the previous or next tag group.

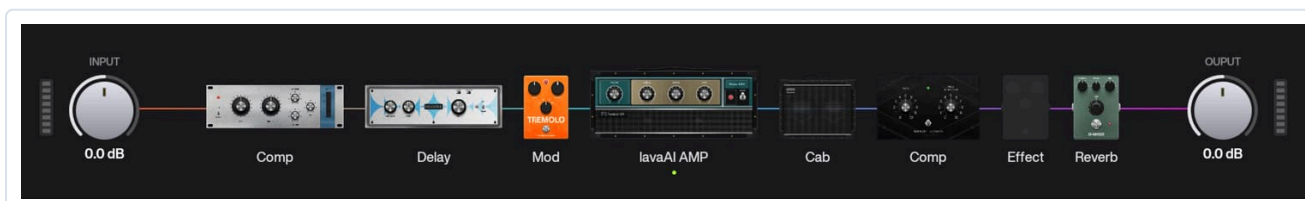
Important Notes:

- Scene switching works on screen and with the Effect Pedal. The pedal only gives you hands-free access to Scene 1, Scene 2, and Scene 3.
- When the Effect Pedal is connected, Scenes are forced on so the three Scene buttons can work correctly.
- Preset switching follows the current tag group. If you are on **All**, the pedal cycles through the full preset list.
- The Effect Pedal is not included with every STUDIO package. Please check your package contents or purchase channel before use.

2.5 How to Control Your Effects Chain?

Signal Chain: The Complete Path from Input to Output

Each tone is a **signal flow from left to right**. It starts at the 6.35mm input jack and ends at the output jack, passing through **10 freely configurable effect units** in the middle.

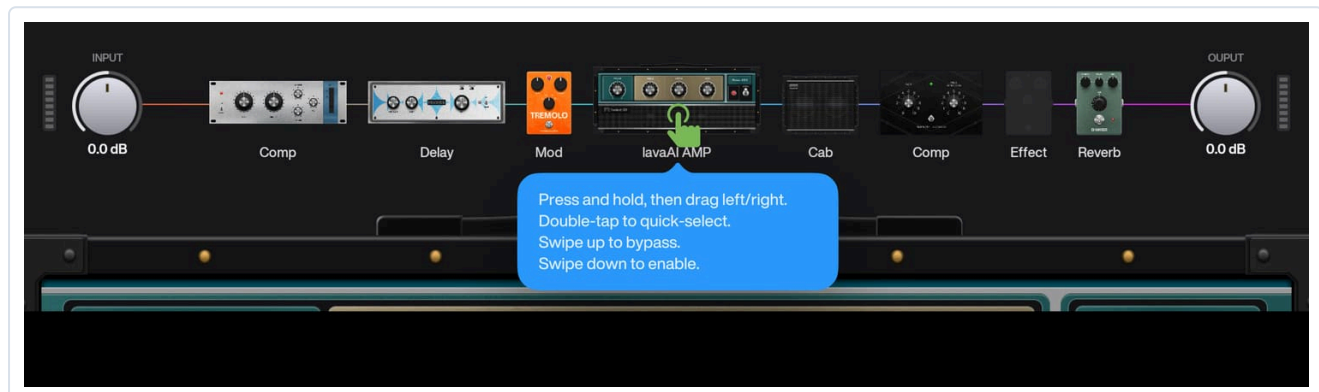


Of these 10 slots, it is recommended that **1 must be an AMP (Amplifier)**, which determines your basic tone—choose from built-in amplifier models or user-loaded NAM models. The **CAB (Cabinet)** that follows is responsible for shaping the final sound texture, using either a built-in cabinet or a user-loaded IR.

The **remaining 8 slots are your creative space**. You can choose to insert a compressor to tighten the tone, add distortion for more aggression, or place a delay to create spaciousness. You can also choose to leave them empty to keep the sound simple. **Over 50 effects** cover all the sound processing you might need.

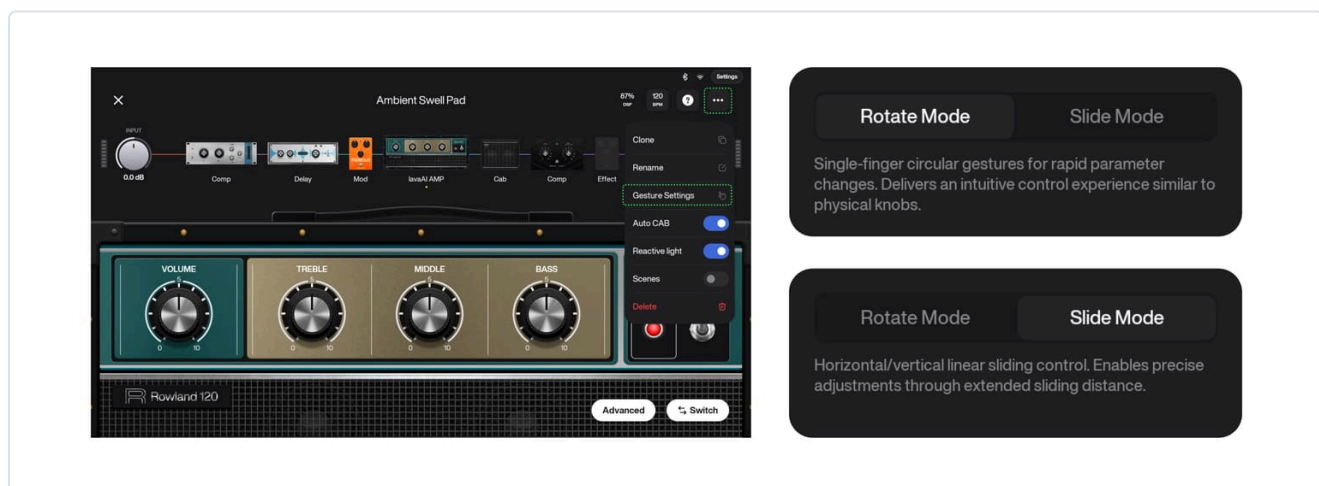
If you are not very familiar with the techniques of combining effects, it is **recommended to start with existing presets** and explore parameter changes or effect substitutions. Each preset is a complete referenced case; you can observe how professional tones are built, then gradually adjust parameters or swap effect units to understand the role and combination logic of different effects in practice.

Gesture Control: Control Sound with Your Fingertips



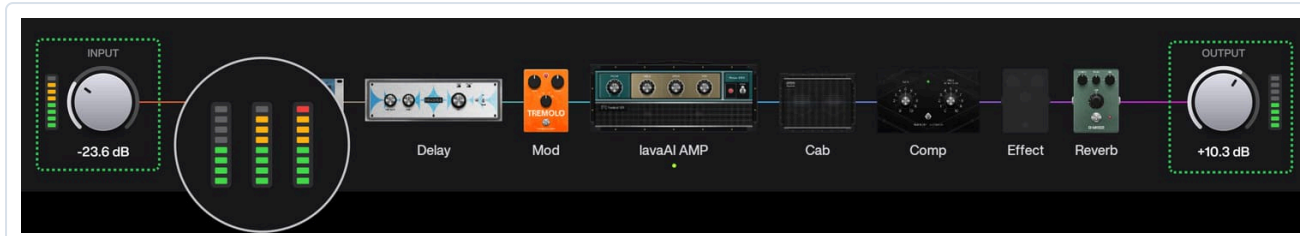
The **entire signal chain is controlled by touch**. **Long-press any effect unit, and you can drag it** to a new position, as intuitive as rearranging effects on a physical pedalboard. **Swipe up to temporarily bypass** an effect, **swipe down to re-engage**.

Double-tap an effect unit to quickly switch between different models of the same type. For example, double-tapping a distortion stompbox lets you quickly switch between classic models like Tube Screamer, Big Muff, and RAT. When adjusting specific parameters, you can use swiping for fine adjustment or a rotating gesture for quick changes. All parameters have carefully tuned default values, but you can fully customize them to your liking.



Volume Management: Maintain a Healthy Signal Level

Both ends of the signal chain are equipped with **real-time level meters**, using color to show the current signal status: **green for safe**, **yellow for a healthy working range**, and **red to warn you of potential clipping**.



What is Clipping and Why Should You Avoid It?

Clipping occurs when the signal level exceeds the system's maximum capacity—whether in the **digital recording layer** or the **analog power amplifier layer**. Think of it like a pipe that's too narrow for the water flow: the excess gets chopped off.

- **In the digital realm:** Clipping creates harsh, distorted sound and permanently damages the recording. Once clipped, you cannot recover the lost signal information.
- **In the analog power amp:** While tube amps can handle mild clipping gracefully (creating pleasant saturation), extreme clipping produces unwanted distortion and can potentially damage speakers.

Prevention is key: Keep your levels in the **green and yellow zones** for clean, pristine sound. The level meters are your best friends for maintaining healthy signal levels.

The **input adjustment is mainly used to match your instrument's level**. If you are using an electric guitar with passive pickups, you may need to boost the input slightly; if using active pickups or a bass, you may need to attenuate it. This adjustment does not affect the tone; it just ensures the signal is in the optimal processing range.

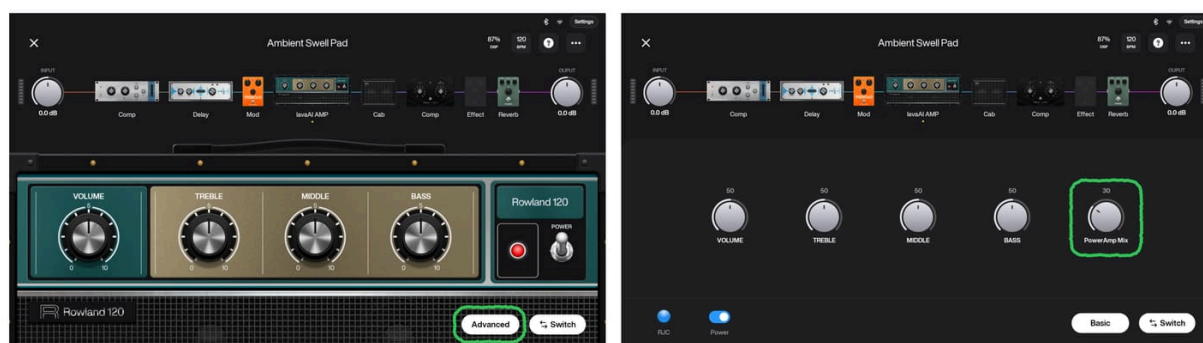
The output end is your overall volume control. It's important to note that many parameter adjustments within the signal chain can affect the volume. For example, increasing distortion gain usually makes the sound louder, and boosting low frequencies also increases perceived loudness. Therefore, it is recommended to use the **output volume for final level balancing** after you are satisfied with the tone. This maintains the desired tone while ensuring an appropriate output volume.

3. What Advanced Features Do Effects Have?

3.1 How to Access More Advanced Adjustments?

Some effect units provide an '**Advanced**' **toggle button**, located in the lower right corner of the interface. After switching to advanced mode, the simple parameter panel will expand to show more professional-grade adjustment options.

Take AMP as an example, the advanced panel provides an additional **Power Amp Mixer**. This can be used to adjust the characteristics of the power amp, affecting the overall dynamic response.



These parameters are preset to empirical values in the regular panel, suitable for most scenarios. When you need more detailed sound sculpting, the advanced panel provides you with professional-grade adjustment capabilities.

Usage Tip: It's **recommended to first familiarize yourself with the regular parameters** before gradually exploring the advanced options. Adjust one parameter at a time and feel the changes through real-time monitoring; this will help you

better understand the function of each parameter.

3.2 How to Know the Effects' Limits?



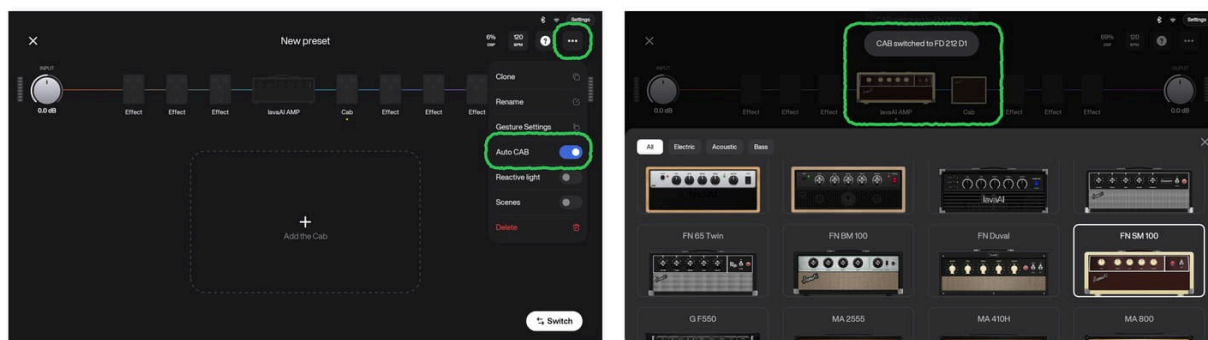
In the upper right corner of the preset details page, there is a **prominent DSP percentage display**, which shows the current processing load in real-time. The **DSP (Digital Signal Processor)** is the core of STUDIO's sound processing, dedicated to processing every instant of your tonal changes in real-time. **Think of it as a car's tachometer**—the higher the number, the more 'horsepower' is being used, and the less power is left.

Different effect units have vastly different DSP workload requirements: **AMP**, as the core of the entire tone based on lavaAI neural network modeling, needs to handle complex non-linear calculations and **typically occupies about 60%** of the processing power. Spatial effects like **Reverb** are also quite 'greedy', taking up **9%-18%** of resources. In contrast, simple **compressors or EQs... usually only occupying a single-digit load**.

The **96% limit acts like a seatbelt**, protecting your system. When this number approaches the upper limit, the system will gently refuse to add new effects. No need to panic; just like organizing a suitcase, you can temporarily put away some less-used effect units or **choose less resource-intensive alternatives**. For example, using a simpler Digital Delay instead of the resource-heavy Tape Delay.

This resource management makes the creative process more relaxed, as you always know how much potential your system has left to explore.

3.3 How to Freely Mix and Match Cabs?



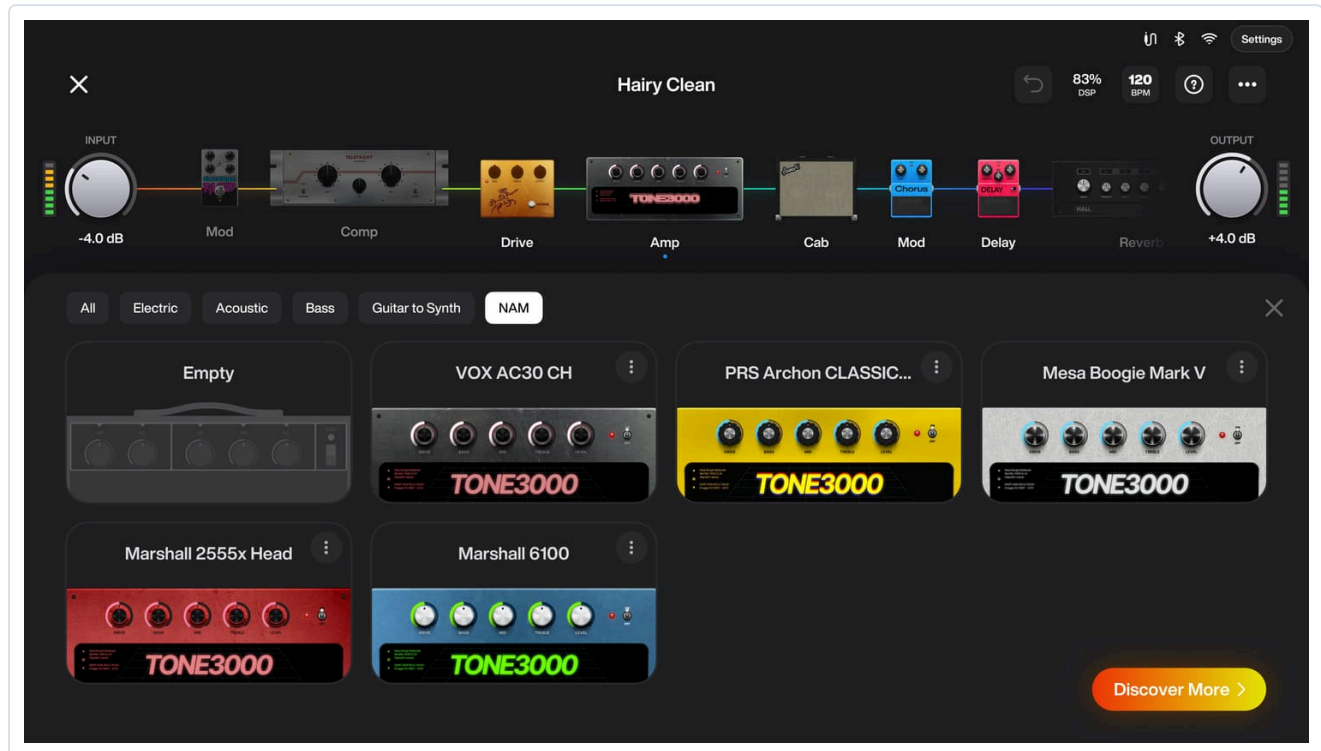
Each AMP has a recommended Cab pairing, and the system enables the **auto-cab feature by default**. When you switch AMPs, the Cab will change automatically to ensure you get classic tone combinations.

If you want to select a Cab manually: Click the menu (⋮) in the upper right corner and **turn off the 'Auto CAB' switch**.

Once disabled, the **Cab** will **no longer change automatically** when you switch AMPs, allowing you to freely try different combinations. For example, using a high-gain head with a small cabinet, or running a clean amp through a large cabinet for a fuller sound.

3.4 How to Use NAM Loader?

NAM Loader lets you quickly call up **NAM amp models inside STUDIO**. It is not the NAM sound file itself. Think of it as a shortcut: it points to a NAM file in your local NAM library and lets you add that NAM sound into the current preset.



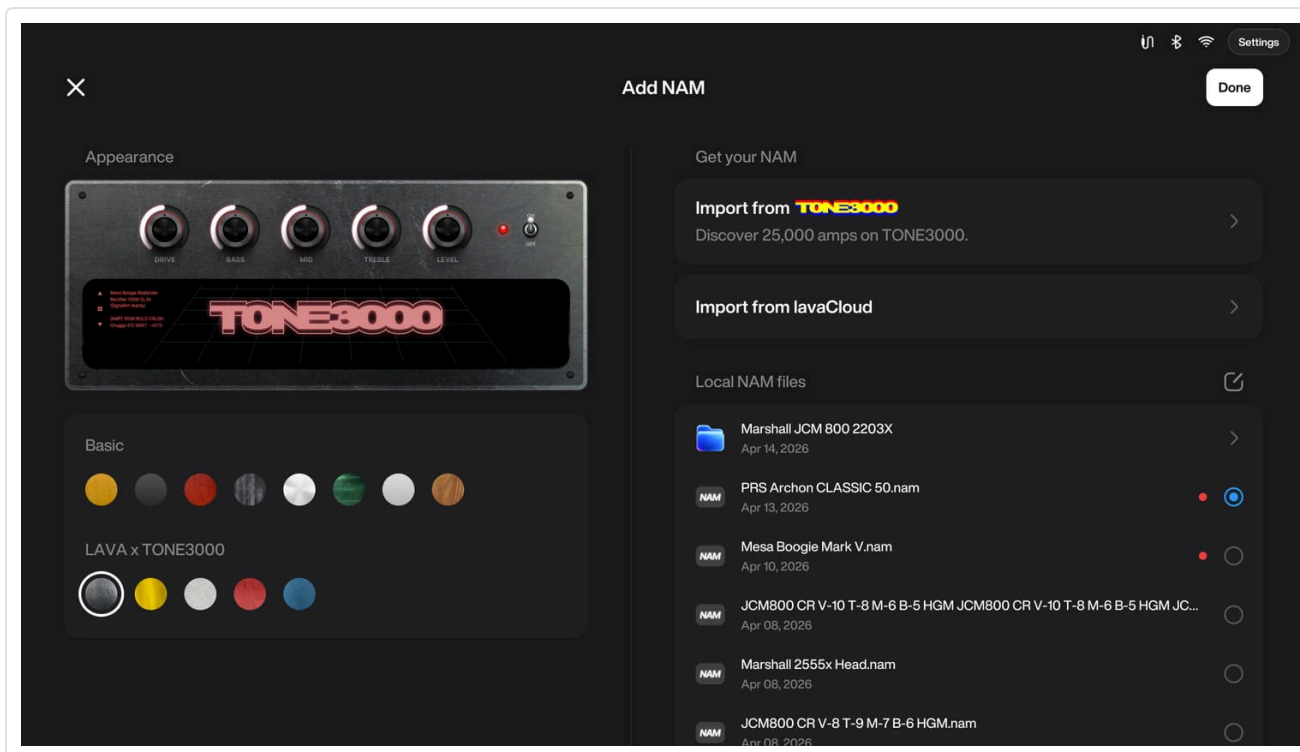
What You Need to Know First:

- **Preset:** The complete tone you save and use. A preset can contain NAM data, so it can still run even if the original Loader entry is not available.
- **NAM File:** The actual local NAM amp model resource. You can add NAM files to your local library from Tone3000, lavaCloud, or a preset you added from Sharing.
- **NAM Loader:** The interface entry used to quickly select and reuse a NAM file. It helps you manage and call up NAM files, but it is not the NAM file itself.

Recommended Use: Create NAM Loaders for the NAM files you like most. This makes it easy to reuse the same NAM files across different presets without browsing your file library every time.

How to Use a NAM Loader:

1. **Open a preset** and enter the effect chain editing page.
2. **Select the AMP slot.**
3. **Open the NAM tab** in the AMP list.
4. **Select a NAM Loader.** STUDIO loads the NAM file linked to that Loader and adds the NAM data to the current preset.
5. If you need more NAM models, **download supported NAM models from Tone3000**, add NAM files from Sharing, or upload NAM files to **cloud.lavamusic.com** from a computer or phone and then add them to your local NAM library on STUDIO.



About Tone3000: Tone3000 is LAVA's partner and the world's largest NAM sharing platform. Before downloading NAM resources from Tone3000, sign in to your Tone3000 account first.

Trying Different NAM Files in the Loader Panel:

The NAM Loader panel is also where you adjust the NAM model's amp parameters. While editing a preset, you can use this panel to quickly try different local NAM files before deciding which one fits the tone.



From the Loader panel, you can:

- **Switch to the previous or next NAM file** in the same folder as the current NAM file.
- **Check the NAM file path shown in the panel.** It displays the folder name and file name of the current NAM file.
- **Open the file folder** and directly select the NAM file you want to use.

After you select a different NAM file, the current preset may now use a NAM file that is different from this Loader's default file. In this release, the change belongs to the **current preset only**. Other presets using the same Loader will not be changed.

Planned Loader Management Options:

Some Loader management options, such as resetting a Loader change, saving the current NAM file as a Loader default, or creating a new Loader from the current NAM file, are planned for a future update. For now, save the preset if you want to

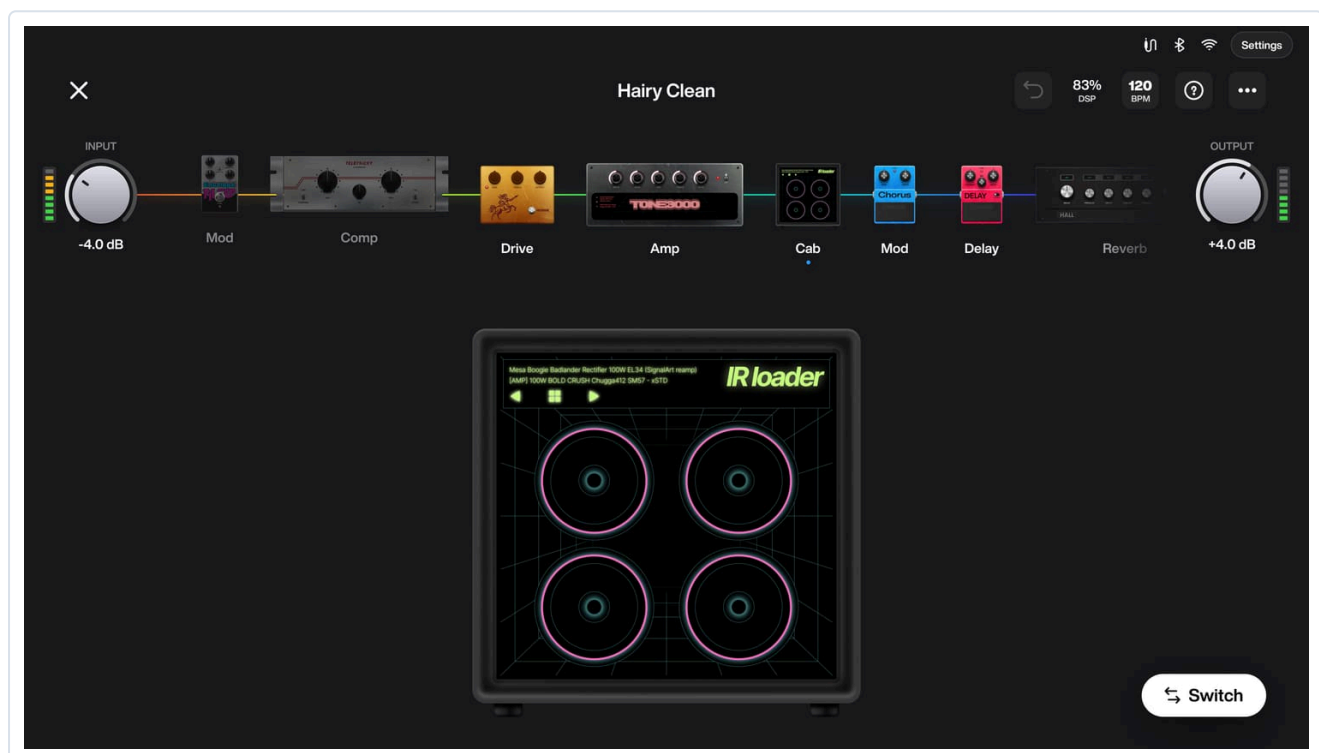
keep the selected NAM file in the current tone.

Important Notes:

- NAM models are used as **AMP models**, not as separate stompbox effects.
- To help you get started, STUDIO includes **6 default NAM Loaders** and **6 local demo NAM files** in the local Demos folder.
- Compared with built-in lavaAI Amp models, NAM files may take slightly longer to load.
- Saving a preset keeps the selected NAM file in the current tone, but does not change the Loader's default file.
- A preset that already contains NAM data can still run even if its original Loader entry is missing.
- If a Loader's default NAM file is missing, choose another NAM file for the current preset.

3.5 How to Use IR Loader?

IR Loader lets you use your own cabinet impulse responses in the CAB slot. This is useful when you already have favorite IR files and want STUDIO to reproduce your preferred cabinet sound.



IR files work through a local IR library on STUDIO. First, upload your IR files to **lavaCloud** from a computer or phone. Then, on STUDIO, add the lavaCloud IR files to your local IR folder so they can be used by the IR Loader.

How to Use Your Own IR:

1. **Upload your IR file** to **cloud.lavamusic.com** from a computer or phone.
2. On STUDIO, **add the lavaCloud IR file** to your local IR folder.
3. **Open a preset** and select the **CAB slot**.
4. **Open the IR Loader**.
5. **Select the local IR file** you want to use.
6. When loading is complete, the IR becomes the active cabinet sound for the preset.

Important Notes:

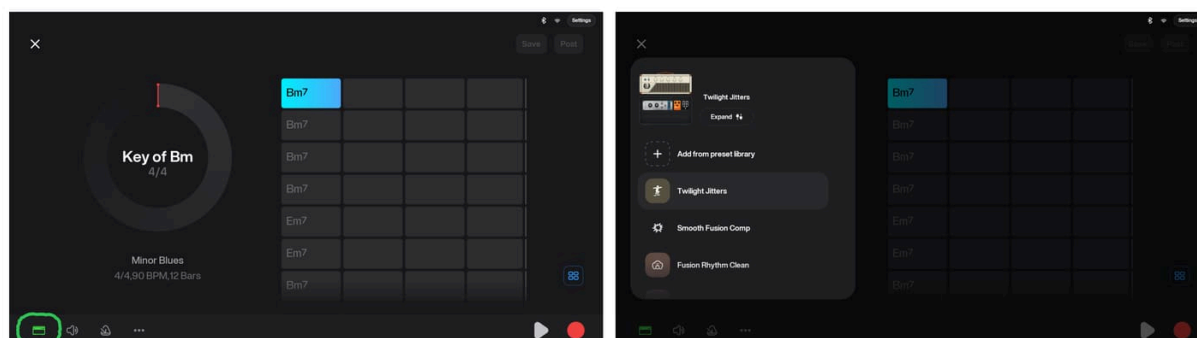
- User IR is loaded through the **CAB slot**, not through an additional effect slot.
- STUDIO currently provides **one IR Loader**.

- At this stage, IR files can only be added to STUDIO through **lavaCloud**.
- STUDIO currently supports **.wav** IR files.
- After an IR file has been added to the local IR folder, it can be selected from the IR Loader.
- When sharing a preset that uses your own IR, make sure you have the right to share that IR.

4. How to Use Effects in Other STUDIO Functions?

4.1 Can I Switch Tones at Any Time?

No matter which interface you are in, the **Effects module is always one tap away**. Click the Effects icon on the main interface, or click the obvious effects entry point in other modules, to bring up the preset panel for quick tone switching without interrupting your current workflow.

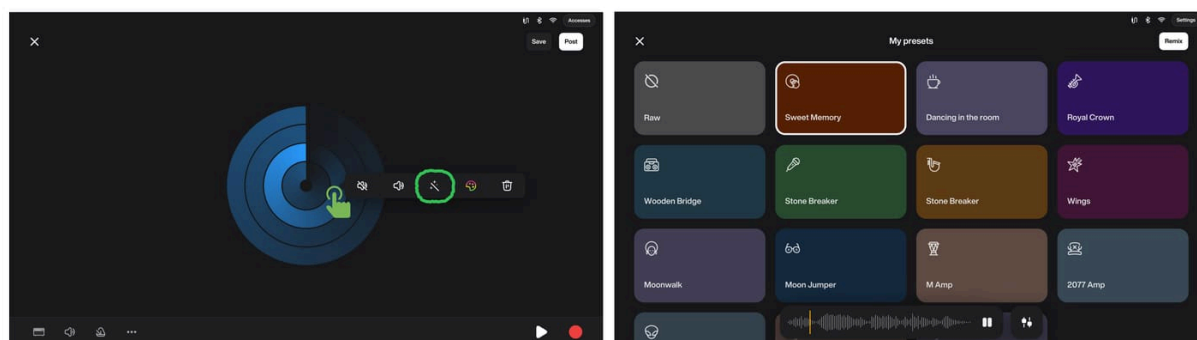


4.2 How to Use Effects for Internal Recording?

All STUDIO recording functions support internal recording with effects. The Loop and Jam recording in LAVA+ will automatically apply the current effect, and you will hear the processed tone in real-time when recording in miniDAW. **No interface setup is required**—what you hear is what you get.

4.3 Can I Re-process the Tone of a Recording Later?

STUDIO uses **non-destructive recording**, **always saving the original dry signal**. After recording, you can change to any preset or adjust effect parameters, then re-export. The original recording is never lost and **supports unlimited re-processing**.



5. Available Effects Catalog

Why Reference This Catalog?

This catalog lists the current built-in resources shown in STUDIO's formal release catalog. Use it as a reference when you build custom tones, read preset details, or look for a specific AMP, CAB, or effect type.

How to Use This Guide: Each item is organized by category with its **Name**, **Base On** information, **Type**, and **Characteristics**. The names below use the latest **showName** values from the product catalog.

Note: This catalog includes only resources marked as **2=Available and Shown** in the formal environment. User-loaded NAM models and user-loaded IR files depend on your own downloads and uploads, so they are not included in the built-in catalog below.

AMP

Name	Base On	Type	Characteristics
V RK50	Victory Amps Richi Kotzen	AMP/Electric	Single-channel EL34 Tube; thick mids with a simple tone knob
VX 30 Boost	VOX AC30	AMP/Electric	Legendary classic British bell-like cleans, bright highs, full-bodied overdrive top boost channel
V VX100	Victory Amps Kraken VX100	AMP/Electric	Modern high gain; tight lows with switchable UK/US voicing
V VS100	Victory Amps Sheriff VS100	AMP/Electric	Classic British crunch, sweeping from Plexi to JCM800 territory
V VC35	Victory Amps Copper	AMP/Electric	EL84 chime in classic AC30 style with switchable bass-cut
V V40	Victory Amps Duchess V40	AMP/Electric	Anglo-American clean blend with highly responsive feel
V V130	Victory Amps Jack VC35	AMP/Electric	Covers sparkling cleans through to high gain
V DEP	Victory Amps Deputy	AMP/Electric	British-voiced cleans that edge into bluesy breakup when pushed
RJC	Roland JC120	AMP/Electric	Stereo solid-state cleans; crystal clarity with zero transformer saturation
P Arc	PRS Archon	AMP/Electric	High gain yet articulate; excellent note separation, glassy cleans
OR R100	Orange Rockerverb 100 MK II	AMP/Electric	Rich British crunch, warm cleans, and a saturated high-gain channel that works for both heavy rock/metal and lush ambient tones
ME Mark	Mesa Boogie Mark V	AMP/Electric	A flagship amp known for its versatility, offering everything from sparkling Fender-like cleans to the legendary Mark series singing lead tones and aggressive metal crunch
ME DR-RS	Mesa Boogie Roadster	AMP/Electric	A versatile high-gain tube amp with four channels, from warm cleans to crushing modern distortion, great for rock and metal.
MA 900	Marshall jcm 900	AMP/Electric	Modern rock voice; higher gain, tighter low end than JCM 800
MA 410H	Marshall JVM 410H	AMP/Electric	Four-channel chameleon—from Plexi-like cleans to modern high gain, we modeled OD channel.
MA 2555	Marshall Jubilee 2555	AMP/Electric	Anniversary British crunch; thick low-mids, switchable 50/100 Watt
FN SM 100	Fender showman	AMP/Electric	Surf staple; massive clean headroom & deep spring reverb
FN Duval	Fender Deville	AMP/Electric	Stage-ready cleans, glassy highs, huge headroom
FN BM 100	Fender bassman	AMP/Electric	Vintage glassy cleans, warm mids; creamy breakup when cranked
FN 65 Twin	Fender twin reverb 65	AMP/Electric	Iconic sparkling cleans with lush spring reverb; great for jazz & country
EN Rage 120	Engl savage 120	AMP/Electric	German high-gain amp; tight lows, razor-sharp mids/highs
5000	Peavy 5150	AMP/Electric	Van Halen signature tone; aggressive mid-range bite
BC C5	Bad Cat	AMP/Electric	Small-combo drive with chimey highs and touch-sensitive breakup
BG Self	Bogner Atma	AMP/Electric	Compact boutique voice with tight gain, warm mids, and clear note separation
FN Concert	Fender Concert	AMP/Electric	Clean headroom, bright highs, and tight low end
LN LH	Laney LionHeart	AMP/Electric	Class-A style chime with warm breakup and a responsive vintage feel
MA 800	Marshall jcm 800	AMP/Electric	1980s hard-rock benchmark; pronounced mids, gritty distortion
MA JMP 50	Marshall JMP50 "Plexi"	AMP/Electric	Classic Plexi roar; warm overdrive ideal for blues-rock
ME TR-SH	Mesa Boogie Triple Rectifier	AMP/Electric	Metal beast; massive low end, crushing punch
ML IN 35	Matchless - the independence 35	AMP/Electric	Boutique chime with rich harmonics, open highs, and dynamic breakup

Name	Base On	Type	Characteristics
TK R	Tone King Imperial MK II	AMP/Electric	Shimmering American-style cleans with sweet, harmonically rich breakup
VT Ultra	VHT Pitbull	AMP/Electric	Hard-rock precision; sharp mids and ultra-fast attack
VX 30 Normal	VOX AC30	AMP/Electric	Legendary classic British bell-like cleans, bright highs, normal channel
U DC 75	Udo - DC 75	AMP/Acoustic	Crystal-clear voicing with huge dynamic headroom
A C60	AER - Compact 60	AMP/Acoustic	Fingerstyle favourite; high-fidelity, natural acoustic reproduction
HRS Buddy	Henriksen - the Bud	AMP/Acoustic	Warm mids with clear, open highs
SMR LazyMan	SWR workingman 2004	AMP/Bass	Hi-fi voicing; flat response, smooth upper mids—great for studio or small gigs
AG TH500	Aguila Tong Hammer 500	AMP/Bass	Tight low end, articulate mids & highs; AGS circuit adds tube-like warmth
AM Pro 7	Ampeg SVT 7 Pro	AMP/Bass	Classic SVT heft; thick lows, biting mids, great stage punch
G F550	GK Fusion 550	AMP/Bass	Lightning-fast transients, cutting mids; versatile stage workhorse
Guitar to Synth		AMP/Guitar to Synth	Converts guitar input into synth-style tones for pads, leads, and experimental layers

CAB

Name	Base On	Type	Characteristics
FN 110	Fender Princeton Reverb 1×10	CAB/Guitar	Chimey highs, slight mid scoop, sweet low-watt compression
VX 212	Vox AC30 2×12 (Alnico Blue)	CAB/Guitar	Jangly chime, bright highs, full-bodied overdrive
VH 412	VHT Deliverance/FatBottom 4×12	CAB/Guitar	Lightning attack, tough mids, tight lows
TK 112	Tone King Imperial 1×12	CAB/Guitar	Tweed-flavored warmth, sweet breakup
RJC 212	Roland JC-120 2×12	CAB/Guitar	Ultra-clean and flat; glassy highs, zero transformer color
OR 412	Orange PPC412 4×12	CAB/Guitar	Thick low-mids, smooth highs, signature Orange roar
ME 412	Mesa Rectifier 4×12	CAB/Guitar	Classic Recto wall of sound; thunderous lows
ME 212 V2	Mesa Rectifier Traditional 2×12	CAB/Guitar	Focused mids, tighter lows, precise imaging
ME 212 V1	Mesa Rectifier Oversized 2×12	CAB/Guitar	Wide lows, aggressive upper mids, huge punch
MA 412 V3	Marshall 1960A 4×12 (G12T-75, Alt.)	CAB/Guitar	Balanced spectrum with extra bite
MA 412 V2	Marshall 1960A 4×12 (G12T-75)	CAB/Guitar	Deeper lows, bright highs, scooped mids
MA 412 V1	Marshall 1960A 4×12 (G12M)	CAB/Guitar	Woody mids, vintage crunch, mellow highs
FN 212 V2	Fender Hot Rod DeVille 2×12 (D2)	CAB/Guitar	Fuller mids, lively response—stage staple
FN 212 V1	Fender Hot Rod DeVille 2×12 (D1)	CAB/Guitar	Warm mids, loose lows, glassy highs
5000	EVH 5150 III 4×12	CAB/Guitar	Tight lows, focused mids—built for high-gain riffing
BG 212		CAB/Guitar	Thick low-mids with a focused 2×12 response and smooth upper bite
BG 412	Bogner 4×12 (Vintage 30)	CAB/Guitar	Thick lows, prominent upper mids, crisp highs
BM 410	Fender Bassman 4×10 (Jensen P10Q)	CAB/Guitar	Classic tweed chime, warm low-mids, lively dynamics
EG 412		CAB/Guitar	Modern 4×12 punch with tight lows and aggressive mids
EG EM 412		CAB/Guitar	Extended-range 4×12 voice with tight lows and sharper attack
FD 412	Friedman 4×12	CAB/Guitar	Thick lows, tight mids, modern British roar
HW 412	Hiwatt 4×12 (Fane 50)	CAB/Guitar	Glassy highs, wide dynamics, articulate bite
MT 112		CAB/Guitar	Compact 1×12 response with clear highs and focused mids
MT 212	Matchless ESD 2×12	CAB/Guitar	Bell-like highs, complex harmonics, warm mids
OR 212		CAB/Guitar	Thick low-mids and smooth highs in a tighter 2×12 format
PM 412	Darkglass DG810 8×10	CAB/Guitar	Modern hi-fi cab; extended highs, fast transients
RD 412		CAB/Guitar	Full 4×12 rock cabinet voice with strong projection and firm lows
VL 210	Fender Vibrolux Reverb 2×10 (Jensen P10R)	CAB/Guitar	Bell-like cleans, sweet mids, airy breakup
AM 810	Ampeg SVT-810E 8×10	CAB/Bass	Tight lows, punchy mids, huge stage punch

Name	Base On	Type	Characteristics
AM 115	Ampeg SVT-115 1×15	CAB/Bass	Deep lows, rounded mids, vintage thump
AM 410	Ampeg SVT-410HLF 4×10	CAB/Bass	Round lows, punchy mids, classic rock bass punch
DE 115	Generic 1×15 bass cab	CAB/Bass	Deep bass extension with strong low-mid weight
EV 112	Electro-Voice EVM12L 1×12	CAB/Bass	High-power clarity, flat response, huge headroom
HK 410	Hartke 410XL 4×10	CAB/Bass	Bright aluminum tone; sparkling highs, scooped mids—great for slap
SA 610	Generic 6×10 bass cab	CAB/Bass	Fast bass response with punchy mids and extended low end
SUN 215	Sunn 200S 2×15 (JBL D140F)	CAB/Bass	Massive low end, deep reach, vintage rock vibe

Effect

Name	Base On	Type	Characteristics
Noise Gate		EFFECT/Gate	classic gate with variable open/close speed
Smart Gate		EFFECT/Gate	gate that use noise profile to find the different and eliminate the noise
NoiseGate Invader		EFFECT/Gate	gate that use original signal to compare the different and eliminate the noise
Red Comp	MXR dyna comp	EFFECT/Comp	Noticeable squash, long sustain, slight grit
LA Studio 2A	universal audio LA-2a	EFFECT/Comp	Optical compression; warm, smooth, slow attack
LA Studio 3A	universal audio LA-3a	EFFECT/Comp	Solid-state opto; faster, punchy and clear
LA Studio 76	universal audio 1176	EFFECT/Comp	FET compressor; ultra-fast, explosive punch with variable ratio
VCA Comp		EFFECT/Comp	Fast, controlled compression for tight dynamics and clean punch
Muff Distortion		EFFECT/Drive	Creamy sustain, thick lows, smooth highs
Silver Horsie	klon centaur	EFFECT/Drive	Transparent drive with sweet mid-hump, touch-sensitive
Muff Fuzz		EFFECT/Drive	Light vintage fuzz; gritty sparkle
Cat Drive	pro co rat	EFFECT/Drive	Gritty distortion, mid bite, strong attack
Tube 808	Ibanez TS-808	EFFECT/Drive	Mid-hump, smooth soft-clip; flight low end cut
Fuzzy Drive		EFFECT/Drive	Vintage fuzz texture with gritty sustain and rough-edged attack
Orange Dist	boss ds-1	EFFECT/Drive	Classic '80s crunch; bright top, scooped mids
Synth Fuzz +		EFFECT/Drive	Synth-like fuzz with aggressive sustain and rich harmonic texture
D95	dunlop 95	EFFECT/Wah	Classic Cry Baby sweep; cutting highs
C McCoy	vox Clyde McCoy	EFFECT/Wah	Vintage vocal-like wah with rich mids
Cycle Pumper		EFFECT/Wah	Rhythmic volume movement for pulsing swells and sidechain-style motion
Parametric EQ	API 550A	EFFECT/EQ	3-band selectable frequencies; musical tone shaping
Graphic EQ	Boss GE-7	EFFECT/EQ	7-band ±15 dB for quick stage shaping
Retro Chorus	Juno chorus	EFFECT/Mod	Thick stereo swirl; iconic '80s chorus
Tremolo		EFFECT/Mod	Amplitude wobble from smooth to choppy
NEO Flanger		EFFECT/Mod	Stereo digi-flange; wide image
Chorus		EFFECT/Mod	Classic analog chorus; warm swirl
Envelope Filter		EFFECT/Mod	Auto-wah quack for funk riffs
Phase 90	mxr phse 90	EFFECT/Mod	Iconic one-knob orange swirl
Flanger		EFFECT/Mod	Jet-plane sweep with metallic resonance
Pitch Shift		EFFECT/Mod	Octave & harmony shifter for layering
Phase 10		EFFECT/Mod	Warm 4-stage sweep; '70s vibe
ROTARY		EFFECT/Mod	Rotating speaker-style modulation with moving stereo character
Realtime Transpose +		EFFECT/Mod	Real-time pitch transposition for quick key changes and layered intervals
Tri Chorus		EFFECT/Mod	Wide three-voice chorus with lush movement and a broad stereo feel
Univibe		EFFECT/Mod	Swirly phaser-vibe; purple psychedelia
Vibrato		EFFECT/Mod	Pure pitch wobble; seasick sway
Analog Delay	boss dm-2	EFFECT/Delay	Warm repeats, max ~300 ms

Name	Base On	Type	Characteristics
Reverse Delay		EFFECT/Delay	Backwards echoes for dreamy swells
Tape Delay		EFFECT/Delay	Tape saturation, wow & flutter, classic vibe
Digital Delay		EFFECT/Delay	Pristine repeats with long times
Ping Pong Delay		EFFECT/Delay	Bouncing stereo echoes
Lofi Delay		EFFECT/Delay	Degraded repeats, vintage grit
Slap Back Delay		EFFECT/Delay	Short 80-120 ms single slap; rockabilly staple
Bright Reverb		EFFECT/Reverb	Sparkling reflections, airy tail
Hall Reverb		EFFECT/Reverb	Long cathedral tail, grand space
Mod Reverb		EFFECT/Reverb	Subtle modulation for floating tails
Room Reverb		EFFECT/Reverb	Small-room ambience, natural proximity
Cathedral Reverb +		EFFECT/Reverb	Expansive reverb with a long, spacious tail for ambient sounds
Chamber Reverb		EFFECT/Reverb	Medium chamber, balanced decay
Plate Reverb +		EFFECT/Reverb	Smooth plate-style reverb with bright reflections and dense decay
Shimmer Reverb +		EFFECT/Reverb	Octave-up sheen for ambient pads
Spring Reverb		EFFECT/Reverb	Classic spring tank splash with bright attack and vintage drip