



MINDALA 2

User Manual

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1. The Philosophy of MNTRA and MNDALA 2

At MNTRA, our guiding principle begins with nature and physical instruments—and from there, we leverage non-linear modulation and real-time parameter control (RTPC) to transform how sound design is created in a virtual instrument. Rather than confining sound to rigid, linear playback, we envision a fluid system that captures the organic dynamism inherent to acoustic sources—allowing each note, gesture, and sonic contour to breathe and evolve in real time.

Why Non-Linear Modulation Matters

Most traditional audio tools follow a predictable path: a note is triggered, it plays back, and then it ends. While effective, this linear approach can feel restrictive. Non-linear modulation, by contrast, opens the door to complex spontaneous variations in pitch, timbre, dynamics, and effects—mirroring the natural fluctuations of real-world instruments. In MNDALA 2, these evolving layers of control transform the instrument from a static playback device into an ecosystem that responds to every nuance of your performance.

Real-Time Parameter Controls (RTPCs)

Our RTPC philosophy takes inspiration from interactive audio in games and immersive media. In those fields, engines shape sound in the moment—blending footsteps, wind, and musical elements based on real-time feedback. MNDALA 2 embodies that same logic, giving you tactile authority over core parameters such as gain, pan, pitch, and various effects. Whether you move a MIDI controller or visually manipulate MNDALA's own X, Y, Z axes, your hands-on inputs immediately sculpt and reshape the sound in drastic or subtle ways.

Extended Resolution Audio (E.R.A)

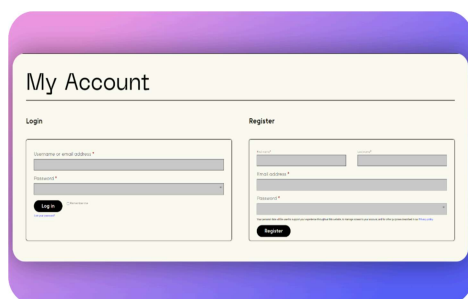
One of MNDALA 2's defining breakthroughs is its ability to handle Extended-resolution ultrasonic content. We've spent over a decade refining custom signal paths to capture frequencies beyond standard hearing—revealing hidden harmonics, subtle resonances, and tonal dimensions that traditional systems miss, and enabling the creation of instruments from sources that normally wouldn't be polyphonic. This Extended Resolution Audio (E.R.A) approach not only adds depth and richness but also opens creative possibilities that are simply inaccessible with conventional sampling methods. And because of our optimized engine design, all of this happens without placing an undue burden on your CPU, allowing you to explore these newly opened sonic worlds as intuitively as you would perform an acoustic instrument.

Building MNDALA 2 on These Principles

- **Expressive Depth:** Every sampler, sequencer, and effect in MNDALA 2 responds to real-time input, so even minimal control gestures can result in dramatic shifts in sound transformation and texture.
- **3D Axis Control:** The Perform View immerses you in a three-dimensional sound world where controlling X, Y, and Z simultaneously can yield richly interactive musical experiences. At its most basic, you can simply move the animated interface's axes to achieve instant sound variation; dig deeper, and you'll uncover more intricate shaping possibilities through the engine's underlying parameters.
- **AniMod Integration:** Our Global AniMod system draws inspiration from Animism and Game-Audio middleware, injecting life into every layer through multi-operator modulation, custom waveforms, and step sequencing.
- **Future-Forward Sound Design:** Our approach unites experimental sampling, custom instrument building, and an open-ended modulation architecture, pushing digital music creation beyond static playback into an ever-shifting sonic landscape.

We hope you find new depths of expression and creativity through this combination of non-linear modulation, RTPCs, real-time interaction, and Extended Resolution Audio. By harnessing frequencies and resonances that were previously out of reach, MNDALA 2 invites you to explore the full potential of the available sounds in a multi-dimensional form—unlocking an entirely new realm of intuitive performance and limitless compositional possibilities. Welcome to the MNTRA family!

2. Download and Installation of the Engine and the Instruments



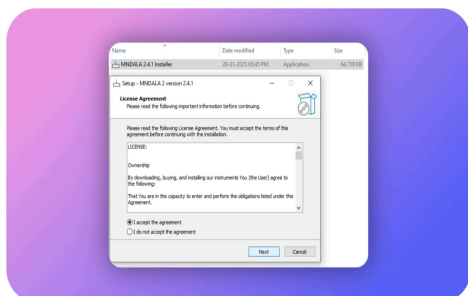
Create a MNTRA Account:

Go to [Account](#) to create a new account if you don't already have one. Make sure to verify your email to activate and be able to log in to MNDALA 2.



Download MNDALA 2:

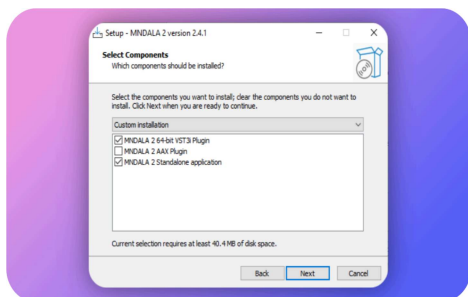
Download the [MNDALA 2 VST3, AAX, AU plugin](#) for free from our website.



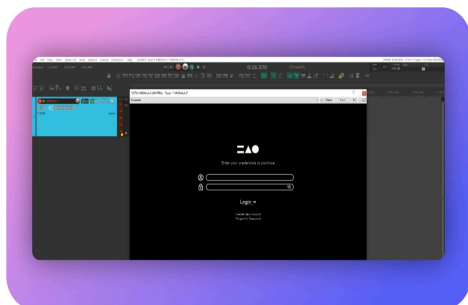
Run the installer:

Run the MNDALA 2 installer for your operating system.

3. MNDALA 2 Installation:



Continue through the installation process, we recommend leaving everything in its default location.



Open MNDALA 2 in your DAW of choice:

Upon first opening the Plugin you will be prompted to login to your MNTRA Account, or to [create a new one](#).

**MNDALA 2 is not currently compatible with Mixcraft 9 Pro*
**MNDALA 2 is fully supported and tested within DAWs and as a standalone. However, performance through separate plugin hosts may vary and cannot be guaranteed.*

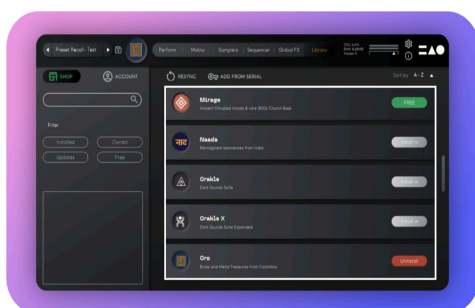


MNDALA 2 is now ready to go:

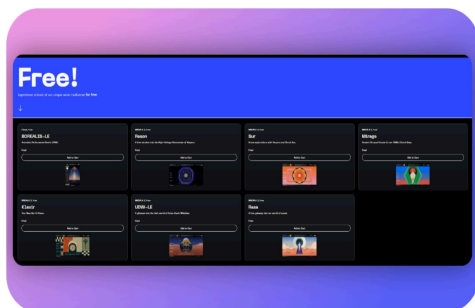
The next step is getting one of our instruments to use with the MNDALA 2 engine.

4. Library View & Instruments Installation:

The Library View is where the user logs in their account to see, manage, buy and download new Expansions, which contain an Instrument and the samples associated.

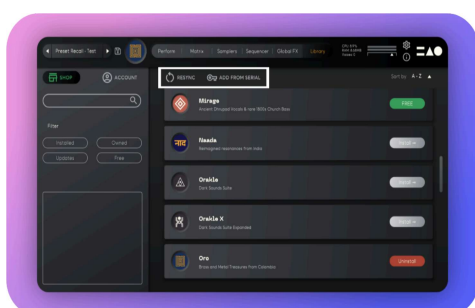


To use MNDALA 2 you will first have to buy one of our instruments, [or download one of our free instruments](#).



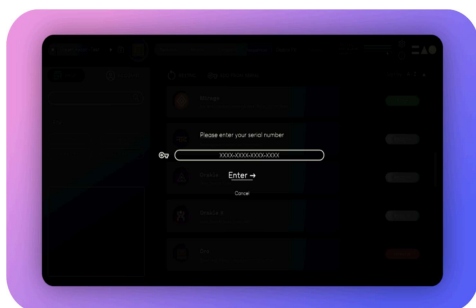
Our Free Libraries & Tools

Instruments licenses can be acquired whether [through our website](#), or from our distributors (ie. Plugin Boutique, Audio Plugin Deals).



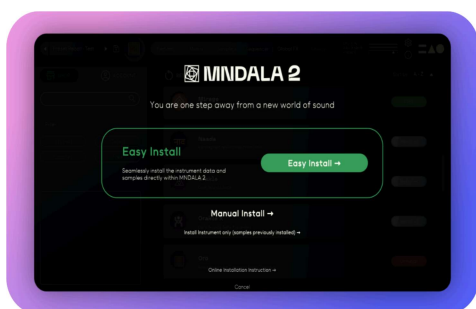
Add Licenses

After purchasing a license for one of our instruments, it will be ready to install from the library tab in MNDALA 2.



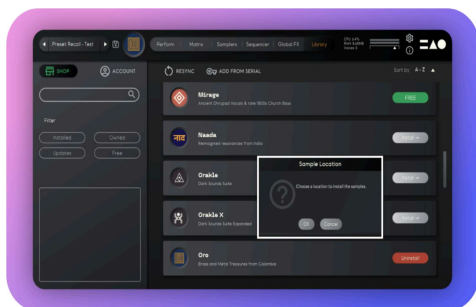
If you purchased an instrument from a distributor, go to the Library page, click **Add From Serial**, and enter your license key. This will sync the product with your MNTRA account. Once verified, click **Install** to begin the installation.

Easy & Manual Installations

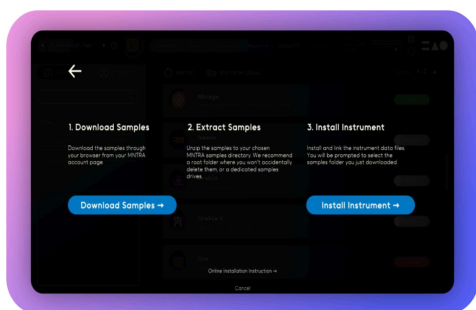


Easy Install downloads the samples needed to install the instrument.

The **manual install** is used when the samples have already been downloaded and saved and it is not necessary to start downloading from the server.

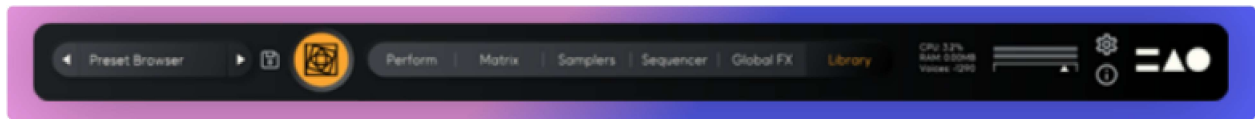


After pressing the Easy Install button, it will ask for a location to install the instrument's samples; we recommend a root folder where the samples won't be accidentally deleted, or a dedicated samples drive. Make sure you do not create a folder with the same name as the instrument, as the installer will create its own.



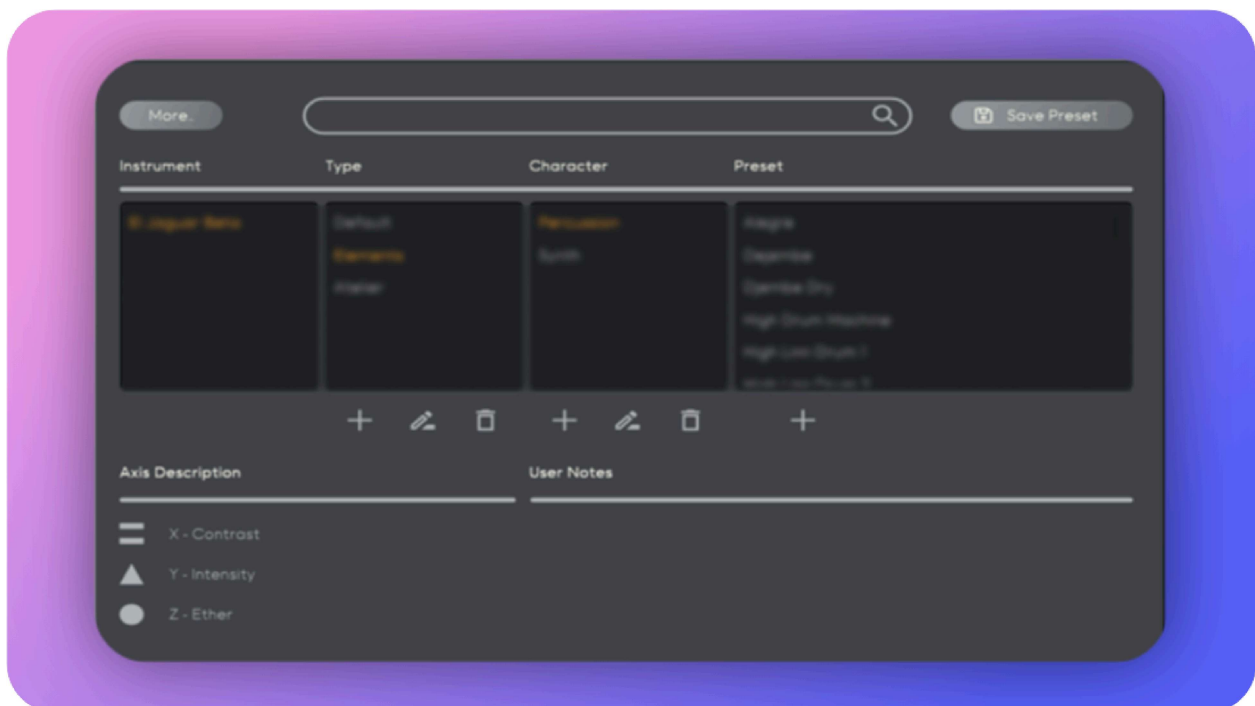
If choosing the manual installation option, it is important to follow the steps described; if the samples have already been downloaded and saved, proceed to step 2 as in the screenshot.

5. Loading an Instrument & Preset Browser



The **Preset Browser** is located in the **top left corner** and is accessible from any view within the Engine.

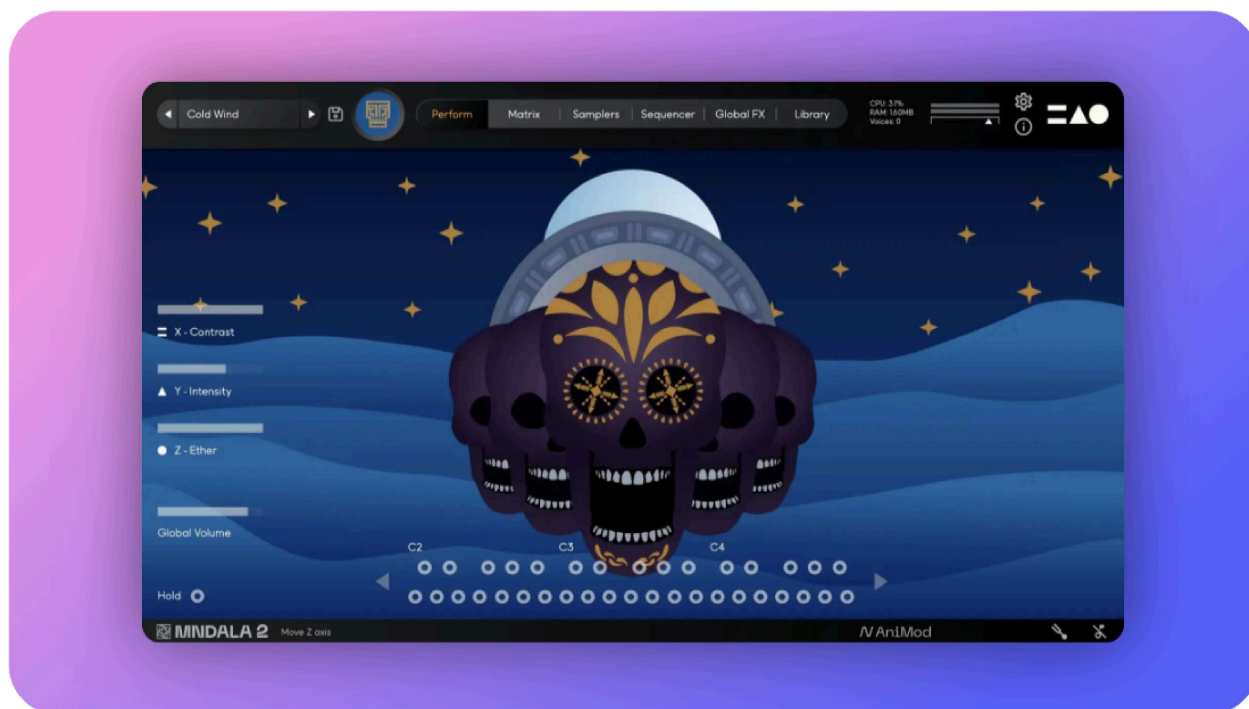
The **Preset Browser** is where you can choose which instrument you want to play (one per MINDALA instance), and which preset you want to use.



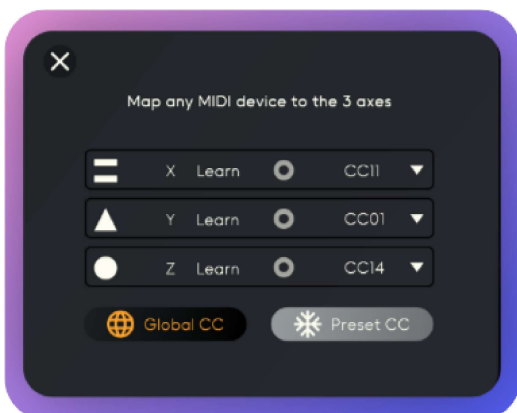
The user can create their own source, character and preset subfolders, with the icons situated under each column. The user can change the location, create and delete any preset.

Factory presets for a given Instrument can be recovered by re-downloading the Instrument.

6. Perform View



The **Perform View** visually represents the X, Y, and Z axes, with each instrument featuring a unique animation. These axes can be controlled via mouse or MIDI controller.



To configure MIDI CC values, click the **MNTRA logo** (top right) and select **'Learn'** to assign a controller to an axis.

Global CC Settings apply MIDI mappings to all presets.

Freeze CC makes mappings unique to the selected preset.



The 'Hold' button (bottom left) is mapped to CC 64 (sustain) and can be triggered via a sustain pedal, MIDI controller, or by clicking it. Global volume control is also available in the bottom left.

7. Matrix Page



The **Matrix page** features two pairs of columns representing **volume and pan controls** for the **X and Y axes**. Each **sampler** has its own row with a **gain and pan table** for both axes, acting as **RTPCs (Real-Time Parameter Controls)** to modulate gain and pan based on the X and Y positions.

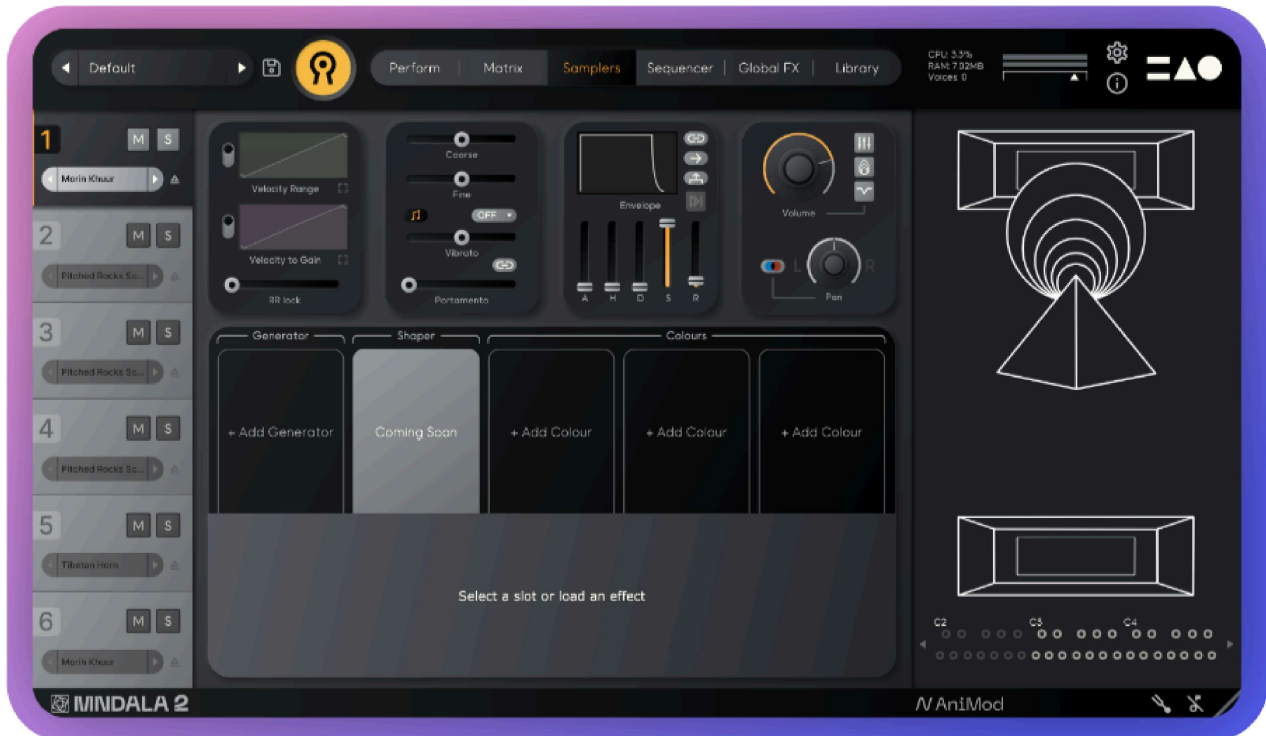
Edit RTPC Tables



The tables can be **enlarged** by clicking the **square icon** at the bottom right. The top bar provides **preset shapes**, and custom curves can be created by clicking and dragging with the middle mouse button.



8. Sampler Page



Samplers

MINDALA features **six samplers**, displayed in the **far-left column**. Each sampler can be **muted** or **soloed** and can load a different **Sample Map** from the instrument. Selecting the **Sample Map's name** opens a **browser**, allowing the selection of Sample Maps and dynamic articulations (if available).

Sample Maps with **multiple dynamics** include an **"All" option**, which loads all dynamic layers and can be controlled via the **Velocity Range table** or as **individual layers**. Clicking the **eject icon** removes the Sample Map from the sampler.



Controls

Each **sampler** includes a **dedicated sampler page** featuring **Multi Mic Positions mixer, AHDSR, coarse and fine tuning, pitch tracking, vibrato, portamento, round robin, volume, pan & velocity controls.**



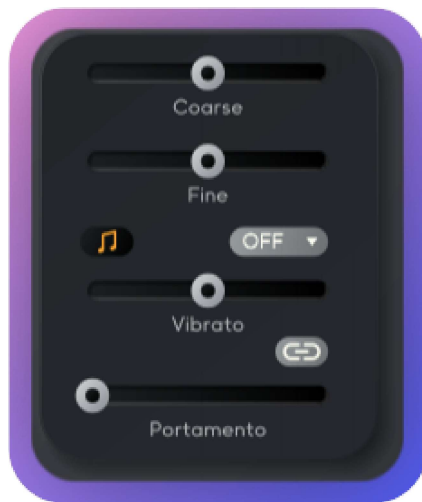
The **RR Lock slider** determines which **Round Robin variation** (a different performance/hit of the sample) the Engine plays. When set **fully left**, all Round Robins are available, and a **random variation** is triggered with each note. Setting **RR Lock** to **value 2** ensures that **performance #2** is played consistently for that note.



The **Velocity Range table** only works with **Sample Maps with multiple dynamics (Pianissimo, Mezzo Forte, Forte)**. This table determines **at what velocity each sample will play**. For instance, if set to a **linear ramp-up shape**, pressing **really hard** will cause the **loudest dynamic** (usually **Forte**) to trigger.

The **Velocity to Gain table** works for **all Sample Maps** and acts as a **gain modulator**, changing the **output volume** according to the **received MIDI velocity information**. If this table is set with a **ramp-up shape**, the **harder** a MIDI key is hit, the **louder** a sample will be played.

By simply **inverting the ramp** of one table, the **Pianissimo sample** could be made the **loudest one**.



The **Vibrato** can be controlled by using any one of the **Global Modulator (AniMods) LFOs** (**bottom right corner**) and has a range of **±2 semitones**. (Clicking the dropdown above allows selecting any of the AniMods.)

The **Portamento** can be **linked across all samplers** using the **link button**.

The **Pitch Tracking** (eighth note icon) above the **Vibrato** toggles the pitch of the samples on or off.



Volume Knob

The **Volume Knob** controls the **output level** of the selected sampler or effect.

Pan Knob

The **Pan Knob** adjusts the **stereo balance** of the signal

Stereo Swap Channel

The **Stereo Swap Channel** button reverses the **left and right channels**, flipping their positions in the stereo field.



The **AHDSRs (Attack - Hold - Decay - Sustain - Release)** can be **linked** to copy the envelope values across all samplers. The **One-Shot** icon **bypasses the release time**, triggering the entire sample. The **Note-Off** icon plays the sample when a **MIDI note-off message** is triggered (**releasing the key**), using the **release section** to determine its **decay**.

The **Sample Start Modulation** page can be opened by clicking the button (Forward icon) to the right of the **Envelope screen**.

Sample Start Modulation (SSM)



Sample Start Modulation (SSM) allows playback to begin at different positions within a sample, introducing natural variations and reducing repetitiveness.

SSM includes both **Velocity Mod** and **Random Mod**, providing dynamic control over the sample start position:

- **Velocity Mod** adjusts the start position based on MIDI velocity, enabling more expressive performances.
- **Random Mod** introduces unpredictability by shifting the sample start point with each trigger, preventing repetitive playback.

When **SSM is activated**, samples are **loaded into memory** instead of using **disk streaming**, ensuring **faster access** and **smoother playback**.



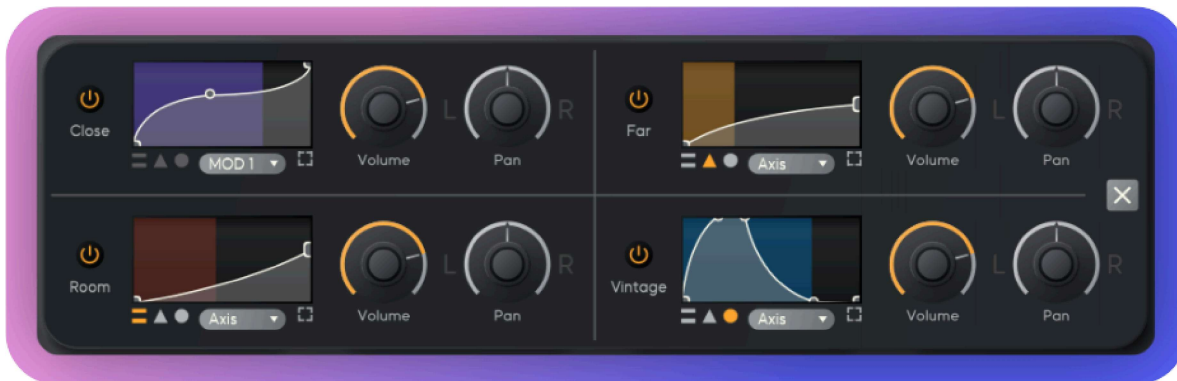
The **Multi Mic Mixers, Heat & EQ** pages can be opened by clicking the buttons to the right of the **sampler volume knob**.

Mixer icon - Multi Mic Mixers settings page

Heat icon - Heat or Saturation settings page

EQ icon - EQ settings page

Multi Mic Mixer - A **Sample Map** can contain up to **4 mic positions** (e.g., **Close, Far, Resonance**). The **gain** of each channel can be controlled by the **X, Y, or Z axes** or by the **Global (“Animods”) Modulators**. The **panning** is controlled by the **Pan knob**.



Heat or Saturation - Adds **saturation** to the sampler, providing control over **pre-colours** and **post-colours** processing. This means saturation can be applied **before (pre)** or **after (post)** the FX processing chain, allowing for different tonal characteristics and harmonic enhancement.

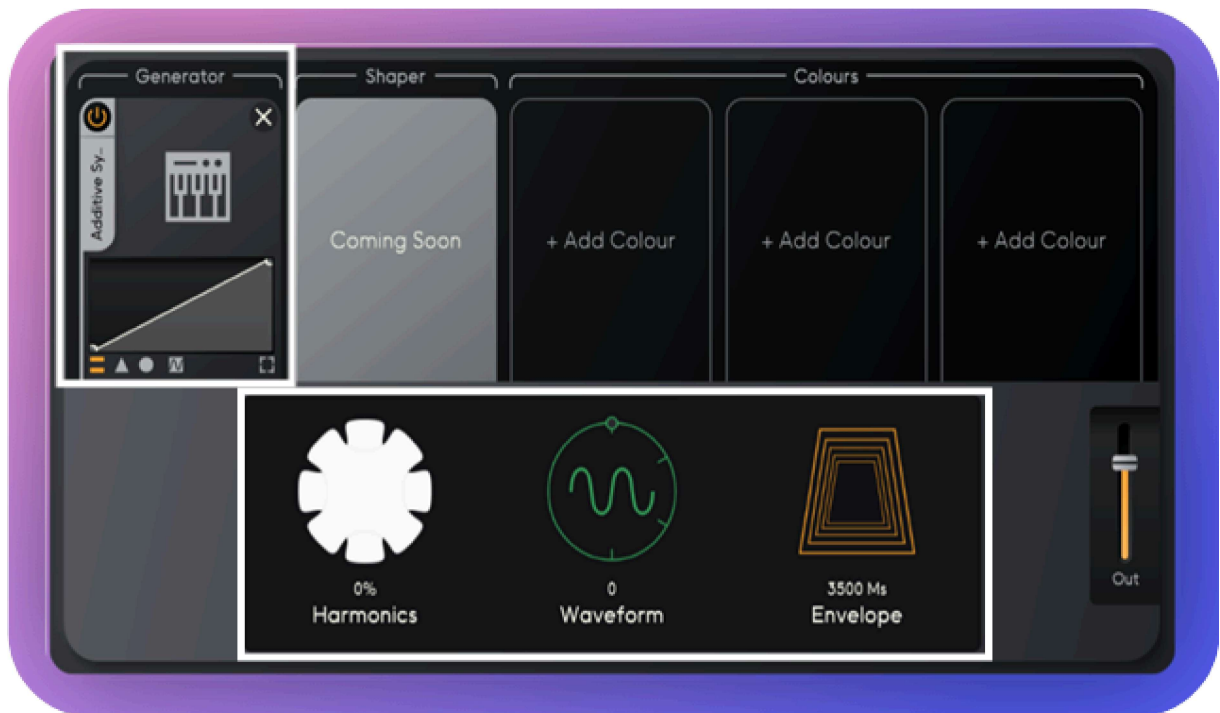


EQ Settings - Includes **Low Pass, High Pass, Low Shelf, High Shelf, and Peak filters**, providing detailed tonal shaping. These settings allow control over **pre-colours** and **post-colours** processing, meaning EQ adjustments can be applied **before (pre)** or **after (post)** the FX processing chain for greater flexibility in sound design.



Generator

A **soundwave generator** can be assigned to any **sampler**, even if no sample is loaded. This serves as a **sound source** and adds **textures** and **harmonics** to the preset.



Additive Synth

Simple additive synthesizer with up to 12 partials, sine, triangle, saw, and square waveform selection, and adjustable envelope. Perfect for creating rich, complex pads

FM Synth

Simple FM synthesizer with modulation oscillator amount and pitch control, selectable sine/triangle waveshape, and envelope control.

Simple Synth

Simple polyphonic single oscillator VA synth with sine, triangle, saw, square, and noise waveshapes

Effects

Each **sampler** can have a maximum of up to **5 effects** in series (three **stereo effects**, one **polyphonic effect** (effects tied to notes being played, like a key tracking filter), and one **sound generator**). The **dry/wet** of these effects can be controlled by the **X, Y, or Z axes** or **Animods** by clicking on their icons on the bottom left of each effect slot.

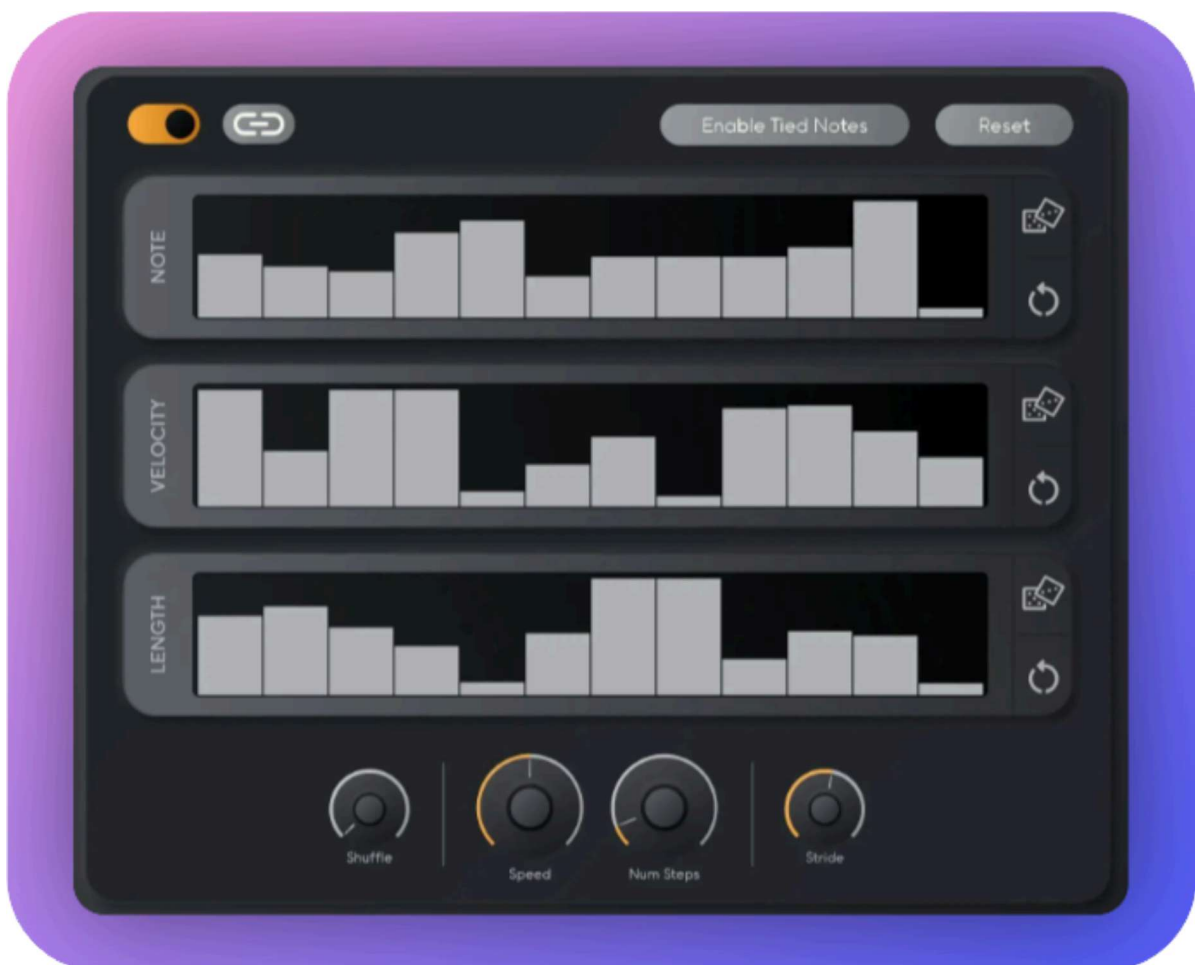


Each effect has a maximum of **3 parameters**, and **2 toggle buttons**, descriptions, as well as a general **CPU load rating** can be found in the **effect browser**. Each effect also has a **volume in** and **out control**.

9. Sequencers

Each **sampler** has its own **Sequencer**. The **Sequencer's toggle on/off button** is located at the top right of the Sequencer page. Like the sampler's parameters, the **Sequencers** can be linked by pressing the **Link button** to the right of the Sequencer's toggle button. When activated, the **Velocity, Note, and Length parameters** of the Sequencer will be copied over to the other Sequencers, even if they are not activated. The other Sequencers won't be activated, and the **Speed, Num Steps, and Stride** parameters won't be affected.

Each Sequencer offers control over **speed (tempo-synced)**, **Steps**, **Shuffle**, and **Stride** (stride defines the number of sequencer steps that are between this note and the next ⇒ if you set 'Stride' to 2, the sequencer will play every other note, 1 will play every sequencer note). Individual step **notes, velocity, and length** can also be set by the user, or be **randomized** or **reset** with the buttons to the right of their respective tables.



10. Global FX

The **Global effects (Colours)** section operates similarly to the sampler effects. The **Global FX section** consists of **5 stereo effects**. Individual parameters of a selected effect can be controlled through the three topmost tables by using any **Axis or Animod source**.



11. AniMod Global Modulation System

AniMod is MNDALA 2's advanced Global modulation System, accessible by pressing the **AniMod icon** in the bottom right corner of the interface. Inspired by animism and game audio middleware, **AniMod** enables deep sound modulation through **non-linear control** and **3D modulation**.



AniMod includes **six modulation operators**, each offering the following modulation shapes: **Sine, Triangle, Square, Random, Custom, and Stepped**.

Shape

The **Shape section** provides controls for selecting the **modulator type** (**Sine, Triangle, Square, Random, Custom, Stepped**), along with a **waveform viewer** that also serves as the **custom waveform** and **step editor**. It includes adjustable **smoothing**, **fade-in control** (active when **Retrigger** is enabled), **phase offset control**, and toggles for **Retriggering** and **Legato-style retriggering** of the modulation wave.

When a Custom **waveform** is selected, users can **draw points** on the viewer to define their desired **waveshape**. To adjust the segments, users can **two-finger scroll** on a trackpad or use the **middle mouse wheel** to **curve the segments**.

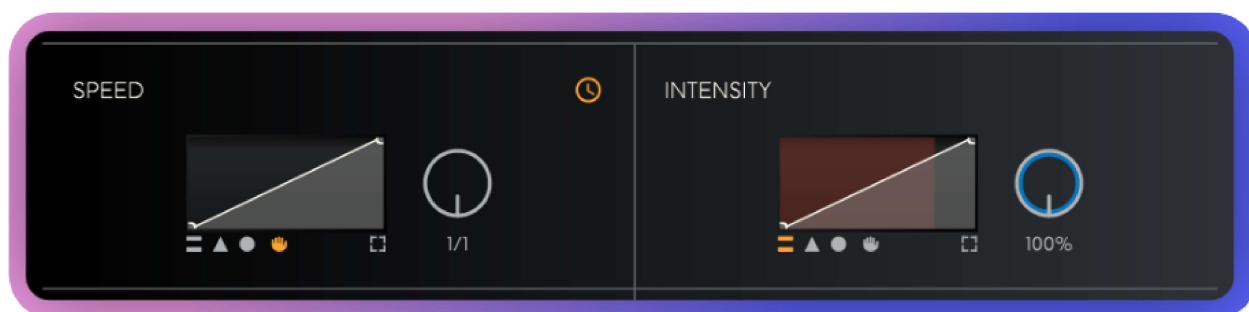


The **Stepped modulation mode** functions as a **parameter step sequencer**, where users can set the number of **steps** and each step's **value**. It is ideal for **rhythmic modulation** or experimenting with **smoothing** to create a more **fluid waveform**.

The **Retrigger** toggle restarts the **modulator waveform** with every key press, useful for creating **pseudo envelopes**. Enabling the **Legato** toggle ignores chained notes, triggering the reset only with the first note. Adjust the **Fade-in** parameter to control how long it takes for the modulation to take effect after a note is pressed.

Speed and Intensity

AniMod offers complete control over the **speed** and **intensity** of each modulator. By clicking the **clock icon**, you can choose between **free-running** (ranging from **0.01 Hz to 20 Hz**) or **synchronizing** with your **DAW's BPM**. You can monitor your settings in **real-time** through the **waveform viewer**.

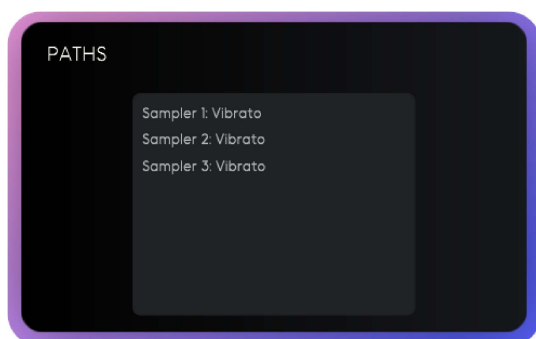


Three-Dimensional Modulation:

Speed and **Intensity** modulators can be linked to the **X**, **Y**, and **Z axes** (via the shape icons below the table). This allows for the creation of intricate, evolving modulations, as the preset control is dynamically integrated with the axes. With **axis modulation** selected, the control knob sets the **maximum**, and the **table shape** defines the modulation's travel. Experimenting with **non-linear shapes** can yield exciting results!

The integration of speed and intensity with the axis controls enables direct modulation control from the **Perform View**, the animated front-end scene. This facilitates **visual modulation adjustment** alongside other parameters within **MINDALA 2**, creating a unified control ecosystem.

Paths:



This section provides detailed **assignment information** for each modulator, indicating the **parameter modulated** (including the **sampler number**, if applicable), as well as the **Global FX section**, **FX Dry/Wet Mixes**, and the **Multi-Mic Mixer**.

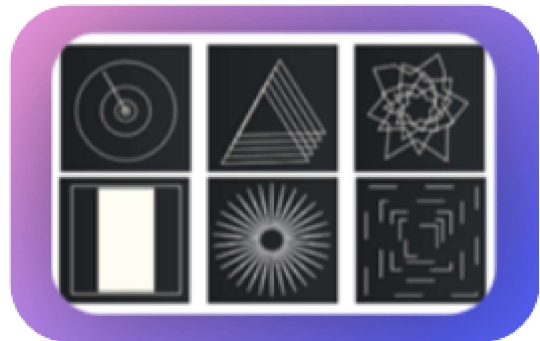


To **activate the modulator** and apply **automation** to a specific parameter, it is important to **turn on** and configure the modulator of interest, then **select the modulator number** in the **mapping table** to proceed with its selection.

Metering:

The **visual display** of modulator **speed** and **intensity** is enabled when the modulator is on.

Depending on the position of the **shape**, **velocity**, and **intensity** parameters, the dynamic display changes between **6 different shapes**, modeled in real-time.



Expressive Vibrato Control:



AniMod seamlessly links to each sampler's **vibrato** (pitch modulation), providing extended control over **vibrato intensity** and **frequency**. This integration allows the creation of distinctive and expressive vibratos. Adjustments to **Random Waveform Smoothing** introduce subtle **pitch fluctuations**, enhancing expressive subtlety and introducing nuanced pitch movement.



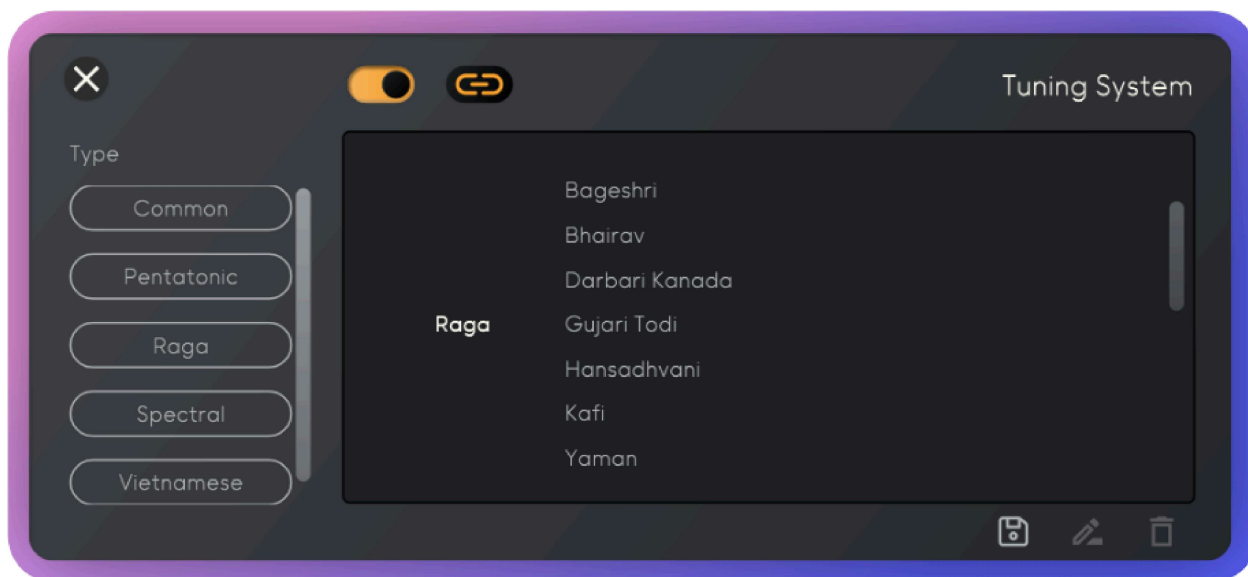
12. Tuning System



Each sampler has its own **tuning system**, with the **toggle on/off button** located at the top right of the **Tuning System** page. Like other sampler parameters, it can be linked using the **Link** button. When active, custom tuning systems can be created by adjusting each note of the tempered system by **semitones** or **hundredths of a semitone**. By default, **semitone adjustments** appear in **white**, while enabling the **ST** option allows fine-tuning in **hundredths of a semitone**, displayed in **blue**.

Tuning Presets

The tuning systems pre-installed in MINDALA 2 can also be selected:



Common:

- Equal Temperament
- Just Temperament

Spectral:

- Harmonic Spectrum

Vietnamese/Pentatonic:

- Bac
- Don Ca
- Ho Mai Nhi
- Sa Mac
- Vong Co

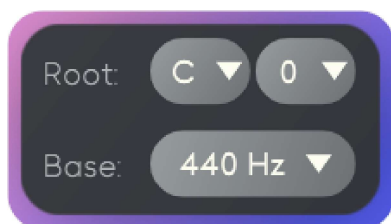
Raga:

- Bageshri
- Bhairav
- Darbari Kannada
- Gujarati Todi
- Hansadhvani
- Kafi
- Yaman

Editor View Window

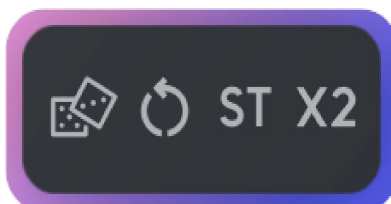


The **tuning system** can be adjusted manually by raising each step, with the modified values displayed in the **top right** of the tuning box. **Octave navigation** is possible by selecting a number for the desired pitch or using the **right/left arrows**.



Root: Select the **root** or **beginning** of the **tempered scale**.

Base: Selecting the **tempered tuning** in **Hertz**.



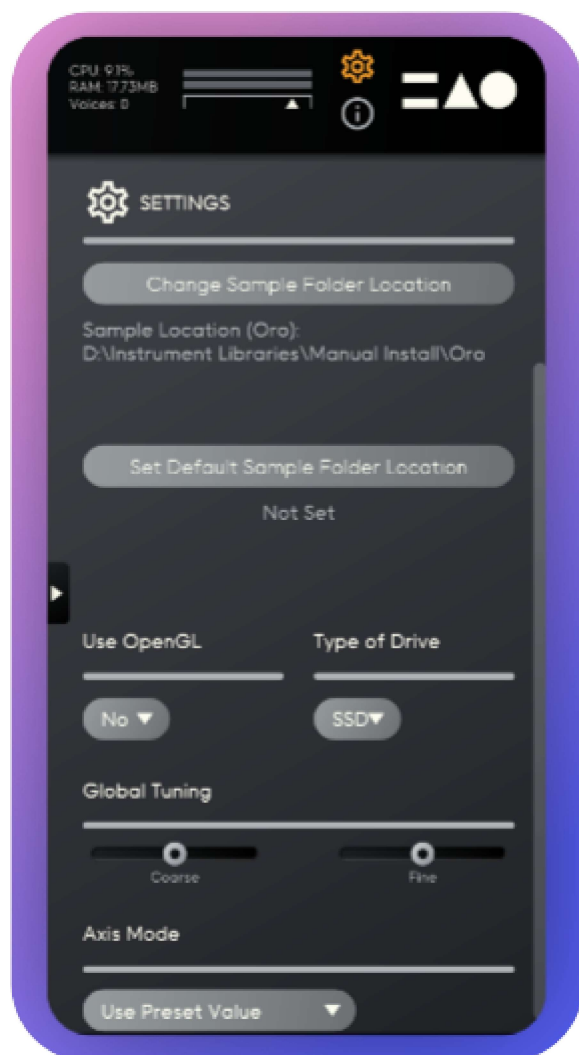
Randomize tuning or **Reset** tuning to **equal temper**.

ST: Switch in between **coarse** and **fine tuning** (semitones or cents).

X2: Switch in between **one** and **two octaves** view.

13. Settings

MNDALA's settings can be accessed by clicking on the Gear icon in the top right corner of the Engine window.



Sample Folder

In this tab, the **instrument's sample folder** can be relocated. If samples are stored on an **external drive**, the sample directory can be configured by selecting **HDD or SSD storing**. The **Global Fine and Coarse tuning** affects all samplers, modifying the **triggered MIDI notes**.

Lazy Load Samples

When enabled, samples are **loaded into RAM only when needed**, optimizing memory usage.

Type of drive

When enabled, samples are **loaded into RAM only when needed**, optimizing memory usage.

Global Tuning

Select the global tuning by varying by semitones using **Coarse** or by tones changing **Fine**.

Axis Mode

Use Preset Value: The value of the axes will not change when loading a preset.

Lock Across Presets: MNDALA 2 will use the presets embedded axis values.

14. Uninstalling MNDALA 2

Step 1: Remove the program

On Win:

- ❖ Navigate to Control Panel → Programs → Uninstall a program → MNDALA 2, right-click on **MNDALA 2**, select **Uninstall**, and click **Yes** to remove it.
- ❖ Navigate to C:\Users\'USER FOLDER\AppData\Roaming\MNTRA
- ❖ **Delete MNDALA 2 folder and Credentials.json.**

On Mac:

- ❖ Navigate to your Root Folder: Go to Library → Application Support → MNTRA → MNDALA 2
Alternatively, go to Root Folder → Users → 'username' → Library → Application Support → MNTRA → MNDALA 2

Please Note: Sometimes the "Library" folder might be hidden. Kindly press CMND + SHIFT + PERIOD to view the hidden files.

- ❖ **Delete MNDALA 2 folder and Credentials.json.**

Step 2: Remove the expansions

Also delete the instrument expansions of MNDALA 2 from the VST3 & components folder.

PC: "C:\Program Files\Common Files\VST3\MNDALA 2.vst3 (VST3 Plug-in File)"

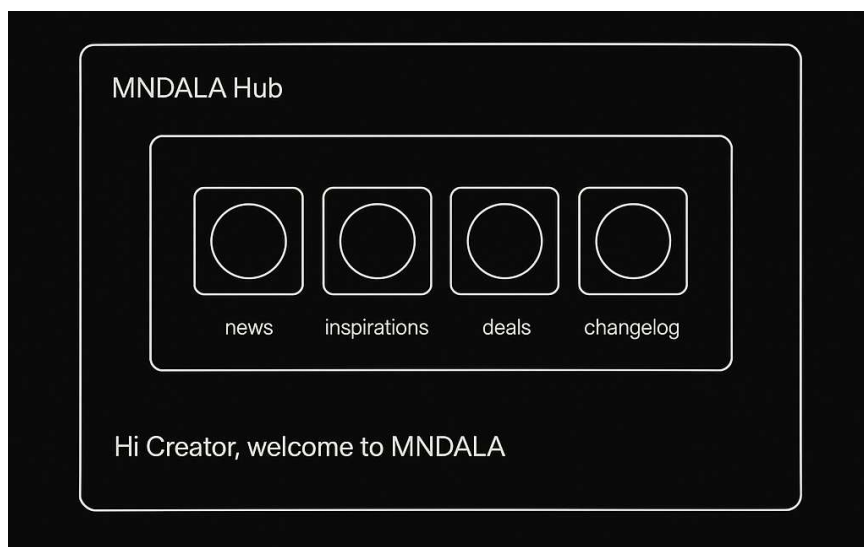
Mac:

"Macintosh HD ▸ Library ▸ Audio ▸ Plug-Ins ▸ Components"

"Macintosh HD ▸ Library ▸ Audio ▸ Plug-Ins ▸ VST3"

15. MNDALA 2 Hub

A new addition to MNDALA 2. This interactive space, built with our latest frameworks, offers real-time updates, exclusive tips, and special offers to ignite your sonic creativity. This is just the beginning of many exciting features we’re crafting to enrich your creative journey.



You can always access the MNDALA 2 Hub by clicking the “i” icon (information) in the top right of the engine.



16. Community

In the Info Hub, click the “**Community**” tab on the left panel to be taken directly to mntra.io/community. Join the MNTRA community to share your thoughts and grow with us — this space is for listening, exchanging, and evolving together.

This is just the beginning — we’re building many more exciting features to support your creative journey!

Enjoy creating 🎵 with MNDALA 2