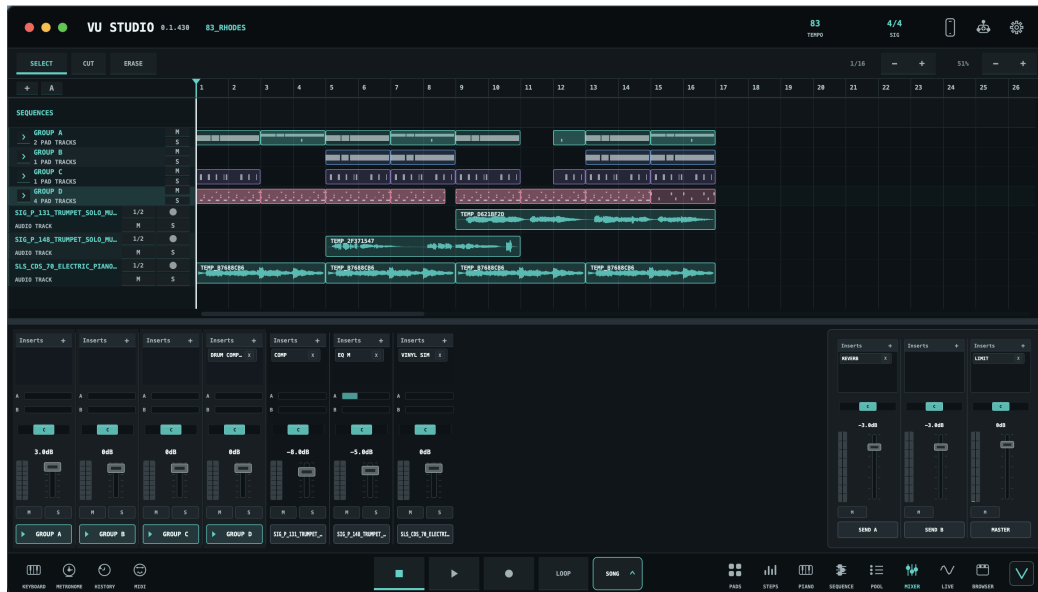


# VU Studio Desktop - User Guide

Fresh desktop workflow guide - Version: desktopHeaderBuildVersion 0.1.938, refresh 2026-07-22



VU Studio Desktop: SONG timeline, audio tracks, mixer, and transport

This guide was refreshed from the changes made after the previous user-guide release. It focuses on real desktop workflow: loading a source onto a pad, building patterns and sequences, arranging on the SONG timeline, editing audio tracks and MIDI tracks, mixing, separating stems, rendering, and working with an AI agent.

## 1. Fast Start

The easiest way to think about VU Studio Desktop:

- 1 Choose a sound source: sample, VST Instrument, or Midi Instrument.
- 2 Build pads inside groups A-H.
- 3 Create a pattern in STEPS or PIANO.
- 4 Combine patterns in SEQUENCE.
- 5 Arrange the full structure on the SONG timeline.
- 6 Add audio tracks or MIDI tracks when the arrangement should work like a DAW.
- 7 Polish the mixer, effects, stem separation, EXTRACT, and render.

The transport has three targets. PATTERN plays the active pattern, SEQUENCE plays the active scene, and SONG plays the timeline. If timeline audio clips or MIDI clips do not play, first check that the transport target is SONG.

## 2. App Map

The bottom bar opens the main workspaces: PADS, STEPS, PIANO, SEQUENCE, POOL, MIXER, LIVE, and BROWSER. The transport area includes the PATTERN / SEQUENCE / SONG target. Footer utilities on the left include KEYBOARD, METRONOME, HISTORY, and MIDI.

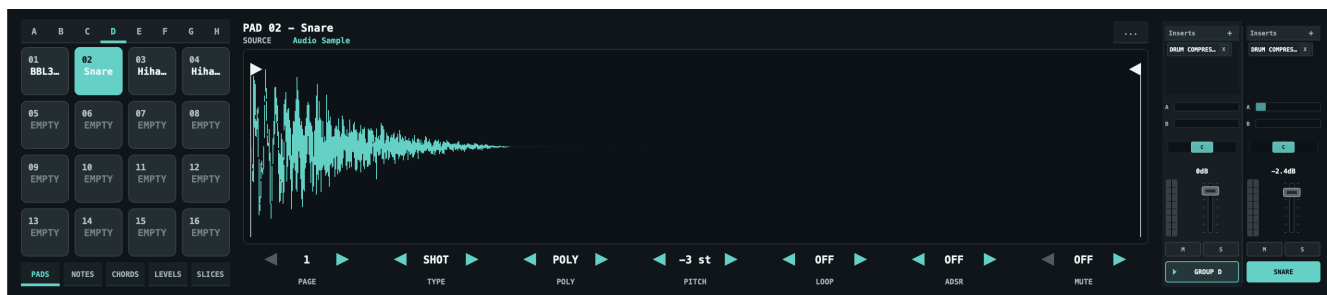
When you edit a MIDI clip in the lower workspace, transport and utility buttons no longer close the editor. STOP, PLAY, REC, LOOP, KEYBOARD, METRONOME, HISTORY, and MIDI can be clicked without leaving edit mode. Switching to another main workspace or pressing BACK exits clip editing.

The project hierarchy:

- Pad stores a sound source and playback settings.
- Pattern belongs to one group.
- Sequence combines patterns from several groups.
- SONG / Timeline arranges sequences, patterns, audio tracks, and MIDI tracks into a full song.

Tempo is global and stays in the header. The SONG timeline grid lives in the timeline toolbar next to zoom because it controls timeline editing. Settings is split into PROJECT, AUDIO, STEMS, MIDI, UI, VST, SHORTCUTS, and DIAG so device setup, AI stems, mappings, appearance, and diagnostics stay separate.

### 3. PADS: Sources and Playing



PADS: pad grid, waveform, source parameters, and mixer channels

PADS is where you prepare sounds. Each group has 16 pads, and each pad can be empty, an audio sample, a VST instrument, or a MIDI instrument.

Pad play modes:

- PADS plays pads 1-16.
- NOTES plays one pad chromatically.
- CHORDS plays chord intervals.
- LEVELS plays the same sound at different velocities.
- SLICES plays existing sample slices.

Choose the pad source through BROWSE, Browser drag-and-drop, or PAD TYPE / SOURCE. The ... menu exposes source-specific actions: RENAME, CLEAR PAD, RESAMPLE, REMOVE INSTRUMENT, and sample-only actions.

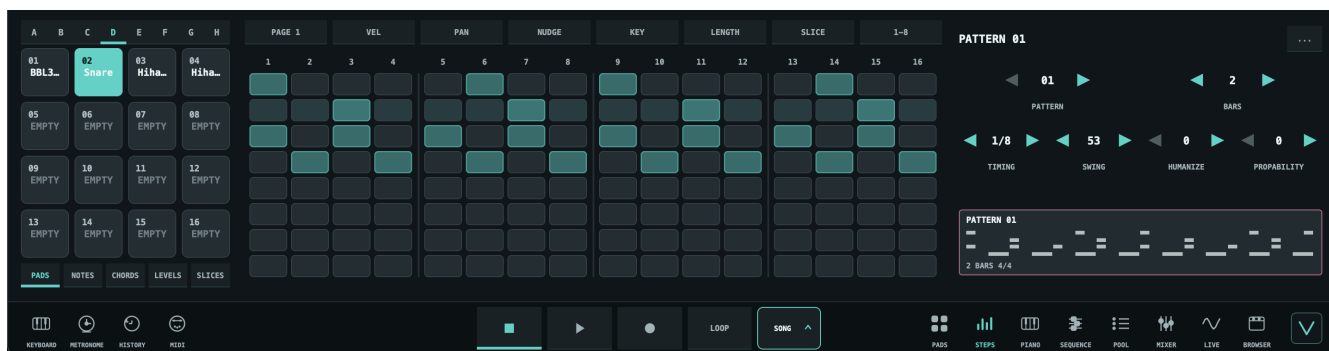
For samples, the waveform shows the source material, region, loop, ADSR, pitch, mute group, and CHOP. CHOP has MANUAL, SPLIT, and DETECT modes. MANUAL creates slices by hand, SPLIT divides the sample evenly, and DETECT finds transients using sensitivity.

A sample pad can also use SEPARATE STEMS. This is the same AI STEMS workflow used on the timeline, but it starts directly from Pad Details and returns the result to free pads. If there is no room for the result, VU Studio shows a message such as **FREE TWO PADS TO SEPARATE STEMS**.

RESAMPLE renders the active pad through its pad insert effects and the current LIVE effects into a new asset, then assigns the result back to the same pad. After a successful resample, the pad gets a fresh audio source and the pad insert chain is cleared. External plugin inserts are rejected in this flow so the result stays predictable.

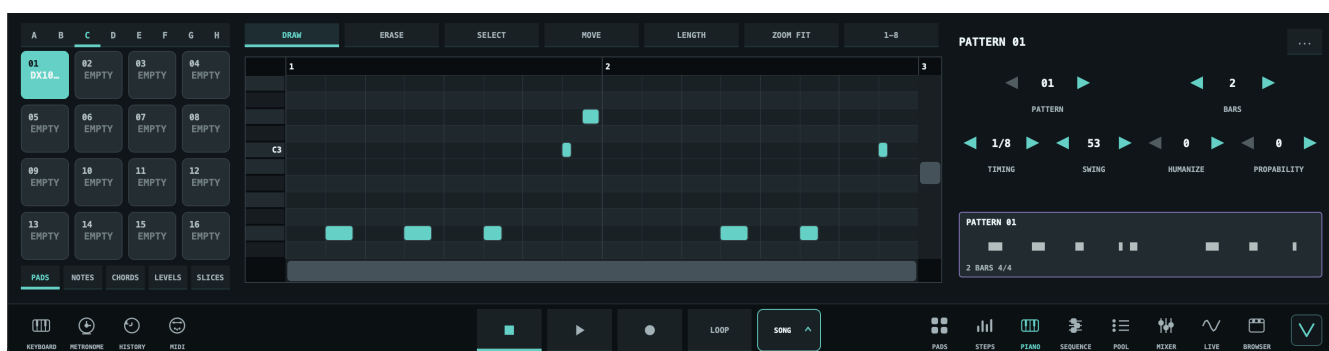
To copy a sound between groups, hold Shift and drag a pad. Hover another group for about half a second, keep dragging to the target pad, and release. The operation copies the pad source and settings and is recorded in history as a semantic copy action.

### 4. STEPS and PIANO: Building a Pattern



STEPS: fast grid programming for the active pattern

STEPS is fastest for drums, short triggers, and step-sequencer style programming. A pattern belongs to the current group, so a group A pattern does not mix with a group B pattern.



PIANO: note and pitch editing for the active pattern

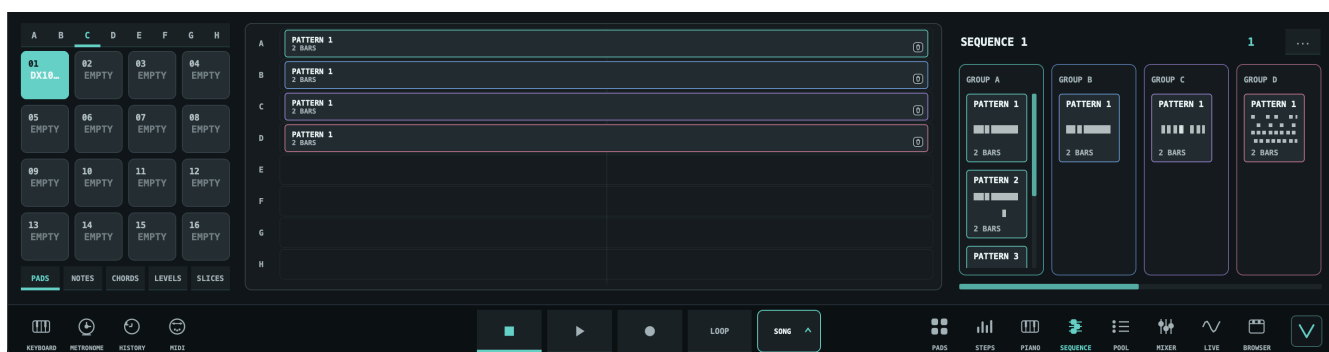
PIANO is for notes, lengths, pitches, and velocity. Use it for melodic parts, bass lines, VST/MIDI instruments, and precise note editing inside a pattern.

The velocity lane under the piano roll shows notes as vertical bars. Dragging a bar changes velocity, and notes that start at the same position can be edited together.

Practical rule:

- Working on one group's rhythm: use STEPS.
- Working on pitch, note length, and velocity: use PIANO.
- Auditioning only the current pattern: set transport to PATTERN.

## 5. SEQUENCE and POOL: Scenes from Patterns



SEQUENCE: patterns from several groups combined into one scene

SEQUENCE is a scene. It collects patterns from groups A-H so you can hear them together. It is a good level for INTRO, VERSE, DROP, BREAK, or any reusable arrangement block.



POOL: pattern and sequence library for arrangement work

POOL shows available patterns and sequences. Treat it as a library of song parts. Pattern pool is grouped by A-H, while sequence pool shows complete scenes that can be moved into SONG.

Practical rule:

- Pattern describes what one group plays.
- Sequence describes which patterns play together.
- SONG describes when that scene, MIDI clip, or audio track appears in the full song.

## 6. SONG Timeline

SONG timeline is the highest arrangement level. It holds sequence blocks, pattern clips, pad clips, audio tracks with waveforms, and MIDI tracks with MIDI clips.

Timeline tools:

- SELECT for selection, move, trim, gain, fade, and timestretch.
- CUT for splitting an item at the clicked position.
- ERASE for deleting an item with a normal left click.
- LISTEN for quickly auditioning timeline items.
- BEND for dragging a point inside an audio clip and offline-timestretching the part before that point.
- DRAW for drawing MIDI clips on MIDI tracks.

The SONG timeline grid affects move, trim, and cut. Hold CMND/CTRL while moving or resizing to work outside the grid. Shift selection adds items, and multi-select lets you move several items together.

Add an audio track with the **+** above the timeline list or by right-clicking empty sidebar space. Rename a track inline with double-click. Track buttons use a 2x2 layout: INPUT, REC, MUTE, and SOLO. INPUT chooses the input pair for that track in the current UI session, and REC arms the track for recording.

Add a MIDI track from the same menu with ADD MIDI TRACK. A MIDI track has its own mixer channel, can share VST instruments used by pads, and lets you draw or record MIDI clips without leaving the SONG timeline.

Double-click empty space in the MIDI track sidebar to reopen the active instrument editor when an instrument is already assigned.

## 7. Audio Clips, EXTRACT, and AI STEMS

Audio tracks are for loops, stems, vocals, references, long samples, and input recordings. Dropping an audio file onto empty SONG timeline space creates an audio track, lane, and clip. Dropping onto an existing audio track uses that track's mixer channel.

Important audio clip gestures:

- Drag a clip horizontally to move it in time.
- Drag a clip vertically to move it to another audio track.
- Drag the left or right edge to trim the visible source range.

- Hold Shift while resizing to run offline timestretch.
- Hold Shift + CMND/CTRL while resizing to timestretch without grid snapping.
- Drag the top edge to change gain for that clip only.
- Drag the top-left or top-right corner to set fade-in or fade-out.
- Right-click an audio clip to use BOUNCE TO NEW TRACK, BOUNCE HERE, REVERSE, SEPARATE STEMS, or EXTRACT.

REVERSE works on one audio clip and does not create a new file. The clip plays the same source range backwards, and the waveform shows the reversed direction. Fade-in and fade-out remain tied to the timeline axis.

Audio recording happens in SONG. Arm an audio track, choose INPUT, arm REC in the transport, and press PLAY. During recording, VU Studio shows a red live waveform. After STOP, the recording lands as an audio clip. Punch-in replaces the recorded range on the armed track.

SEPARATE STEMS sends the selected audio clip or track range to LALAL.AI and imports the result below the source track. VU Studio uses a bring-your-own-key model: save your key in Settings > STEMS > AI STEMS. Stem separation neutralizes mute/solo only in the offline render prepared for separation, so the current monitoring state should not create empty stems.

EXTRACT creates MIDI from an audio clip. The UI menu currently offers CHORDS and MELODY; the result is added as a new MIDI clip on a new MIDI track at the same timeline position as the source audio clip. During analysis, use CANCEL in the custom overlay if needed.

## 8. MIDI Tracks and MIDI Clip Editing

MIDI tracks are for instrument parts on the SONG timeline: basses, leads, chords, VST layers, and external instruments controlled through MIDI. Add one with ADD MIDI TRACK from the + menu or by right-clicking the timeline sidebar.

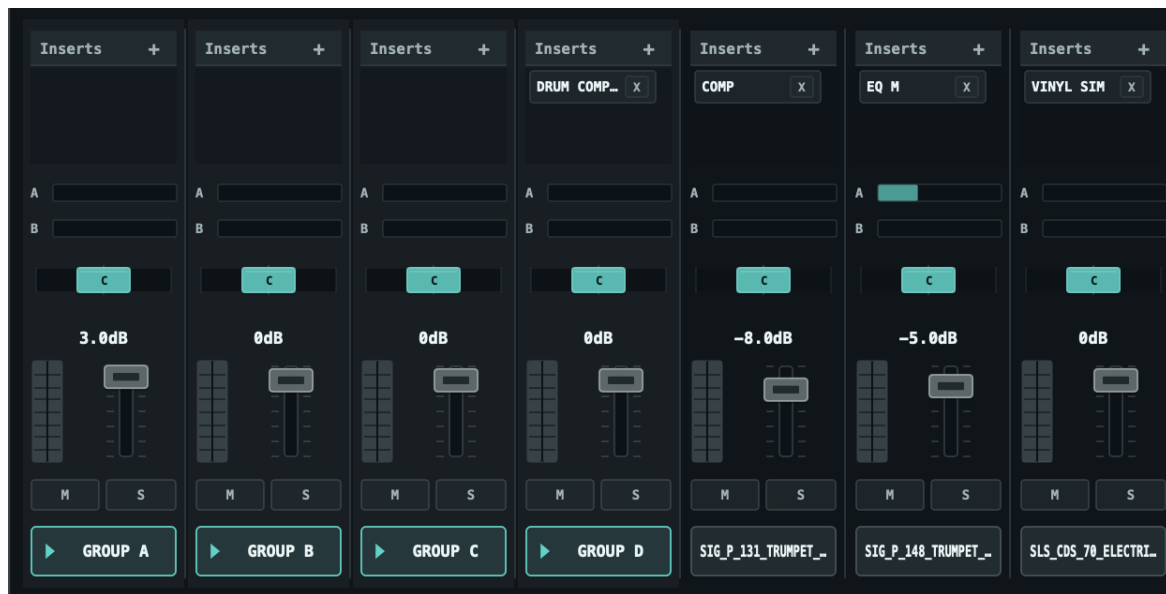
Basic workflow:

- choose or add an instrument through INPUT / ADD INSTRUMENT;
- arm ARM if you want to play from the on-screen keyboard or MIDI input;
- use DRAW to create an empty MIDI clip on the track;
- double-click or right-click the MIDI clip to open piano roll edit mode;
- use BOUNCE TO NEW TRACK when you want to render MIDI/instrument playback to audio.

A MIDI clip can be cut, muted, trimmed from either side, and extended past its original length. During **REC + PLAY** recording, the clip grows while notes are held, and after STOP it closes to the end of the bar containing the last note.

The lower piano roll edit mode has its own DRAW, ERASE, SELECT, MOVE, and LENGTH tools, its own grid, and its own zoom. The velocity lane under the piano roll shows notes as vertical bars; dragging changes velocity, and notes starting at the same position are edited together.

## 9. Mixer, Inserts, and Audio/MIDI Tracks



MIXER: group, pad, audio track, send, and master channels

MIXER brings together group, pad, audio track, MIDI track, send, and master channels. An audio track or MIDI track on the timeline has its own mixer channel, so audio files and timeline instruments can be mixed next to pads and groups.

Each channel can have:

- level and pan,
- mute and solo,
- sends A/B,
- insert effects,
- meter.

VST instrument pads play through the pad bus and then follow the normal group and mixer path. MIDI instrument pads send MIDI OUT and appear in the mixer when AUDIO IN is selected as an audio return.

External plugin windows can be opened from instrument pads, MIDI tracks, or inserts. Plugin windows have PIN, and effect windows have BYPASS. Instrument editor windows do not show BYPASS because the instrument is the source, not an insert effect.

Settings > AUDIO shows audio block size, effective process size, input/output latency, and PLUGIN COMP status. This is useful when working with plugins that introduce latency or when setting a smaller buffer for recording.

## 10. Browser, Samples, and Instruments

Browser has two main categories: FILES and INSTRUMENTS. FILES is for folders and samples, while INSTRUMENTS lists scanned instrument plugins.

In Browser you can:

- pin a folder to one of 10 slots,
- filter samples with search,
- audition samples in the preview panel,
- click the preview waveform to move the preview playhead,
- tag samples,
- run ANALYZE TAGS for a folder,
- drag samples onto pads or the SONG timeline,

- drag an instrument plugin onto a pad,
- use a Browser instrument as a MIDI track source.

Tags are useful for large libraries. Default tags include KICK, SNARE, HIHAT, BASS, and PIANO, and you can add custom tags. One audio file can carry up to two tags.

## 11. Keyboard, Metronome, and MIDI



METRONOME and KEYBOARD: footer utilities for playing, count-in, and monitoring

KEYBOARD opens the on-screen keyboard. METRONOME opens click, count-in, grid, and accent-volume settings. The metronome can run during REC, PLAY, PLAY + REC, or be disabled. COUNT IN can be 4 BEATS, 8 BEATS, or NO COUNT IN.

MIDI in the footer shows external message state and supports MAP MIDI. Mappings for the PADS view are contextual: the same hardware control can edit the currently selected pad or group instead of being locked to one fixed pad.

Settings > MIDI supports **.vumidimap** presets:

- LOAD PRESET loads the selected file and keeps an internal copy.
- SAVE PRESET writes a shareable file and an internal copy.
- REMOVE PRESET removes only the internal copy, not the user's exported file.

On a MIDI track, ARM moves MIDI focus from pads to the instrument track. Right-click ARM to choose the recording source, including a MIDI device or Internal Keyboard.

## 12. Projects, Import, and Render

VU Studio projects are **.vustudio** packages. The app stores projects in the managed library at **Documents/VU Studio Projects/**. Export creates a portable **.vustudio** file containing manifest, project JSON, assets, previews, and renders.

LOAD can import **.vustudio**, **.vu202**, and **.koala** projects. Import does not edit the external file directly. It first copies or extracts the project into managed storage, validates it, and only then replaces the active session.

Open SONG render from Settings > PROJECT > RENDER, CMND/CTRL+SHIFT+R, or the File menu. Render can be:

- MASTER as one file.
- STEMS as separate group, pad, and audio-track files.
- LOOP for the exact loop range.
- ALL for the full song with effect-tail detection.
- WAV or MP3 on desktop.

Bounce and render are separate paths. Bounce is for internal timeline work and renders the exact selected range. Render export is for final masters or stems and can include effect tails for ALL.

## 13. Appearance, Diagnostics, and Settings

Settings > UI has palette presets: DARK, LIGHT, DARK 2, and LIGHT 2. A preset changes the full application palette, and individual colors can still be adjusted manually. On desktop, changing the preset is written to UndoRedo, so it can be undone.

Settings > STEMS stores AI STEMS configuration. This is the separate place for the LALAL.AI key, TEST KEY, and MINUTES LEFT; Settings > AUDIO remains focused on devices, channels, buffer size, latency, and audio status.

Settings > VST is for scanning and browsing plugins. VU Studio separates instruments from effects: instruments go to Browser > INSTRUMENTS, pads, and MIDI tracks, while effects go to mixer inserts. Settings > DIAG collects diagnostics useful for crashes, plugin scanning, and support bundles.

## 14. Undo, History, and Shortcuts

Most UI changes go into UndoRedo with semantic descriptions, such as metronome changes, audio-track rename, CHOP TYPE, MIDI mapping, mute/solo, timeline edits, Browser tags, palette presets, or AI STEMS key changes. HISTORY shows the list, CMND/CTRL+Z undoes, and CMND/CTRL+Y redoes.

Useful shortcuts:

- Space: play / pause.
- CMND/CTRL+S: save.
- CMND/CTRL+SHIFT+S: save as.
- CMND/CTRL+SHIFT+R: render SONG.
- CMND/CTRL+B: bounce selection to new track.
- CMND/CTRL+SHIFT+B: bounce here when the selection contains an audio clip.
- CMND/CTRL+R: reverse one selected audio clip.
- CMND/CTRL+C and CMND/CTRL+V: copy/paste timeline selection.
- 1-5: quick workspace navigation.

Default shortcuts can be changed in Settings > SHORTCUTS.

## 15. Working with an AI Agent through MCP

VU Studio Desktop exposes many actions as MCP tools for AI agents. An agent can inspect project state, work with Browser, load samples and instruments onto pads, copy pad sources, add audio tracks and MIDI tracks, draw MIDI clips, open instrument editors, arm recording, bounce, set reverse, run EXTRACT, separate stems, render master/stems, manage MIDI mappings, update metronome settings, and set the UI palette.

Practical rule: the agent should read the current project state first, then mutate with the expected generation number. That keeps AI operations and manual user edits from working on stale state.

## 16. Current Scope and Limits

Current boundaries to remember:

- This guide covers the desktop workflow.
- Audio clip timestretch and BEND are offline renders on the SONG timeline.
- Per-audio-track INPUT and REC are UI session state, not durable project data.
- Per-MIDI-track ARM and MIDI input are also UI state.

- Bounce does not add effect tails; render ALL can detect them.
- RESAMPLE rejects external plugin inserts.
- SEPARATE STEMS requires your own LALAL.AI key and uses minutes from your account.
- EXTRACT in the UI menu shows CHORDS and MELODY; DRUMS is not currently shown in the desktop audio-clip menu.
- MP3 on desktop requires an available LAME encoder.
- Koala import creates pads and sequences, but does not synthesize a SONG arrangement.

These are intentional limits or current implementation stages. The safest workflow is to save the project before large imports, bounce, resample, stem separation, or render operations.