

SAMPLEDEX

THE PRODUCER'S DESK REFERENCE



The complete user guide.

Quick answers. Complete workflows.

LOOPS / DRUMS / PIANO ROLL / 808 TUNING

AI SONGS / SOUND DESIGN / PLUG-INS

MIXING / MASTER / ROUTING / AUTOMATION

GUITAR & PIANO RECORDING / EXPORT / RECOVERY

Read first: current limitations and recording capabilities.

Then find your task in the quick tips or clickable contents.

VERSION 0.18.2 / BUILD 38 / APPLE SILICON / macOS 14+

September 2026 edition - Sampledex for Apple Silicon

Searchable text / linked contents / nested bookmarks / practical reference

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Read the limitations first, then use the quick tips or choose a task. Click any entry or use the PDF bookmarks. Every page footer returns here.

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READ FIRST

Sampledex 0.18.2 - User Guide

Make a beat from start to finish: choose sounds, draw drums and notes, develop patterns, arrange, mix, and export. This guide covers Sampledex 0.18.2 build 38 for Apple Silicon Macs running macOS 14 or later. It includes the current Dark/Light appearance, responsive editors, immediate send controls, explicit sound/pattern loading, mixed MIDI/audio selection delivery, AI Synth controls, timeline automation, and MP3/M4A audio import. The guide is included in the app and works without an internet connection. Existing Sampledex project and preset formats are retained; external plug-ins require compatible installed versions. Save an independent copy before moving an important project into this schema 11 release. Signing and notarization results belong to the exact final release verification record; they do not certify audio quality, hardware compatibility or every third-party plug-in.

Read first: capabilities and limits

- **Platform and plug-ins:** Apple Silicon, macOS 14 or later; native ARM64 VST3 and Audio Unit v2. VST2, Intel bridging and AUv3 are not supported. MIDI arrangements use 4/4.
- **Audio recording:** the system input records mono 44.1 kHz/16-bit takes. This is not a stereo/multichannel recorder or input-routing console. Use the recording chapter and a short test take before relying on an interface setup.
- **MIDI and live input:** software instruments use the arrangement playback path. Physical controller playing combined with fader dragging has not been verified for this release. Live Chord Display reads MIDI, not guitar or piano audio.
- **Export and routing:** separately processed stems may not sum exactly to a nonlinear Master mix. A combined partial audible selection that also needs the same track's full sidechain detector source is rejected; use separate stems, the full source selection, a dedicated detector or Sidechains Off. See the export chapter.
- **AI and projects:** AI is optional and proposals need review. AI Off preserves existing music and manual instruments. Portable projects retain media, not external plug-in binaries or their authorizations. Keep independent project backups.
- **Verification scope:** automated and device-free checks do not establish subjective sound quality, broad vendor compatibility, physical interface/MIDI reliability, or a clean-Mac installation result. Test your own signal path before an important session.

Find what you need

Choose a topic on the left, or type in **Search the guide**. Search matches all the words you enter anywhere in a topic. For example, search quantize, 808, sidechain, or export stems. Matching words are highlighted in the instructions. Clear the field to browse every topic again.

Use **Previous** and **Next** to move through the displayed topics. **A-** and **A+** adjust reading size. Resize the window to suit your screen; long chapters scroll vertically. You can select and copy text. **Command-F** focuses

search while this window is active.

Open this window any time from **Help > Sampledex User Guide**, or **Command-Option-G**. Closing the guide leaves your song open. **Command-1** or **Window > Show Timeline** brings the arrangement forward from another window. For short explanations as you work, leave **View > Hover Help LCD** open and move the mouse over a control.

When a smaller window leaves little room for notes, click **Beat Making** again to reset the workspace proportions, drag **Drag to resize timeline** upward, or click **Expand** above the piano roll. Resizing a window preserves its divider position.

Start here

- **Install Sampledex**: use the guided Mac installer and learn what is included for offline use.
- **Learn controls as you hover**: see the name, value and purpose of the control under your mouse.
- **Make your first beat**: choose a template and enter your first pattern.
- **Choose sounds**: add instruments, preview presets, and build your library.
- **Draw MIDI notes** or **program drum steps**.
- **Generate chords, melody and bass**: preview and keep an editable variation.
- **Arrange linked patterns**, then **mix and automate**.
- **Export a mix, loop or stems** and **save a portable project**.
- **Fix an audio or file problem**.

Choose an appearance and a comfortable workspace

Use **Sampledex > Appearance...** or the **Appearance** selector on the startup chooser to choose **Dark**, **Light**, or **Follow System**. The first upgrade uses Dark until you choose otherwise. Appearance is an application preference, shared across projects. Changing it repaints the workspace and built-in editors without replacing instruments or changing their parameters. Selected application controls use the red accent in both appearances, while saved track and clip colors remain their own colors. This does not change the macOS accent preference. Third-party plug-in editors and the separately bundled Sampledex Collection editors keep their own content and appearance controls; their Sampledex window follows your choice.

The arrangement stays above the active editor. **Timeline** always returns to it; **Beat Making** restores a useful starting layout without changing music. The lower tabs select **Piano**, **Sound** (instrument and effects), **Mixer**, **Audio** (audio clips), **Steps**, and **Automation**. Drag the divider to resize, or use **Expand / Restore** for detailed note work. The time and height sliders affect zoom; the scrollbars move the view. Steps scrolls through rows instead of making every row too small to click.

The sound browser and inspector share available space with the editor. When both would leave too little editing width, the panel used less recently becomes a labeled restore tab. Click the tab to bring it forward. Widening the window restores your preferred layout. This temporary collapse does not overwrite saved panel preferences. **Panels > Reset workspace layout** recovers a predictable layout, including after switching monitors. Floating windows are kept inside the current screen when reopened.

The active pattern header separately shows its source length and **Linked: N** placements. **Make Unique** makes the selected placement independent; **Pattern** provides naming, duplication and source-length commands. Long names do not replace the linked-count display.

Choose whether AI is shown

The project chooser has a large **AI is On · Turn Off / AI is Off · Turn On** button. The choice applies immediately and is remembered across projects and restarts. You can also change it from **Sampledex > AI Settings...** (Command-comma).

When AI is off, Co-producer, the AI and Loop panels, their menu commands, automatic loop buttons and AI sound-generation controls disappear. Running AI requests are cancelled, unkept proposals are discarded and audition returns to your existing music. Turning AI back on restores the tools; it does not restore a discarded proposal.

Your saved music, MIDI, audio, instruments, effects, presets and mix are unchanged. AI Synth keeps playing its saved sound and its manual controls remain usable. Drawing notes, steps, chord stamps, scale tools, recording, automation, mixing, importing and exporting remain available. Demo templates remain explicit choices; they load editable example music, not a background AI request.

Quick tips for everyday production

- **Hide AI completely:** choose **AI is On · Turn Off** on the project chooser, or **Sampledex > AI Settings...**
This does not delete tracks or instruments.
- **Back to your song:** press **Command-1** or click **Timeline**. Use **Beat Making** for an editing layout and **Panels > Reset workspace layout** to restore panels.
- **Free up space:** open **Panels** and choose a panel's **Hide**, **Float** or **Show / Dock** command. These change the view, not your music.
- **See the key:** the piano editor's **PROJECT KEY** badge follows the root and scale menus. **Highlight Current Key** changes row colors; **Snap to Scale** changes notes.
- **Make a loop:** open **AI > Loops**, choose **Chords**, **Melody**, **Bass**, **Drums** or **808**, set genre and length, then compare **Before / After** and **Keep variation**.
- **Make a song:** open **AI > Song**, select genre, BPM, key, length and included parts, then **Generate from controls**. Keeping the reviewed proposal is the step that changes your project.
- **Change one part:** right-click its track and choose **AI**. The Selected Part panel names the captured target. **Use current selection** deliberately binds a different target.
- **Lengthen a step:** select **Length** and drag its right edge, or right-click the hit and type **Length (beats)**. Changing the grid does not change the remembered new-note length.
- **Add a Master limiter:** open **Mixer**, find **Master**, and click **+ Limiter**. Its insert opens the sounding limiter; use its ceiling/release and compare at a sensible listening level.
- **Clear a sampler:** open its instrument window and click **Remove Sample**, or select a drum pad and click **Remove Pad Sample**. Undo restores it; the instrument and MIDI remain in place. Apply or Revert pending

settings first.

- **Remove an insert:** right-click its **Mixer** slot and choose **Remove Effect**, or use **Remove** in Sound & FX. The instrument and MIDI stay in place; Undo restores the effect and saved state.
- **Reorder or transfer an effect:** drag its Mixer slot above/below an insert, or onto another channel's effect-add button to append. Right-click **Move Up / Move Down** for precise ordering. Instruments are not dragged with effects.
- **Share a reverb:** use a track's **Add Send** and **New Shared Reverb**, or its **Send** port in **Routing > Wires**. A send adds a parallel path; Output chooses the main destination.
- **Export without deleting MIDI:** **Command-Shift-E** opens whole-song export; choose WAV or AIFF before choosing the destination. **Bounce to new audio tracks (keep MIDI)** adds audio while retaining the source. Use the source-muting choice deliberately when printing into the same song.
- **Select several tracks:** Shift-click a range or Command-click individual track names. Their context menu can combine them into one stem or export separate stems.
- **Add a track:** right-click a track header or blank timeline space and choose **Add Track**. The same choices appear in **Timeline** , **Part** and **File > Add Track**.
- **Mix from the timeline:** drag **VOL** or **PAN** below the track name and mute/solo buttons. Hold Shift for fine adjustment; double-click PAN to center it.
- **Draw movement on a track:** click its **A** button, then draw automation in that timeline row. A again returns the row to clip editing.
- **Tune an imported 808:** select the sampler, run pitch analysis, and set its root to the detected source note. The sample's root and the project key are different settings.

Accessibility and keyboard navigation

Visible notes, drum steps, timeline clips and track controls expose their names and values to macOS accessibility. Press selects an existing note or clip; an empty drum step draws using the current Length and velocity. Show Menu on a note opens exact properties. Track fader/pan accessibility changes use the same validated editing commands as the mouse. Locked and stale targets stay protected. Move the viewport to expose additional content.

Read the controls

Bold text names a control or menu item. An arrow, as in File > Save project, means open that menu and choose the item. Command, Option, Shift and Control are Mac keyboard modifiers. "Right-click" also means a two-finger trackpad click or a configured secondary click.

MIDI arrangements use 4/4. External plug-ins require native ARM64 VST3 or Audio Unit v2 versions; VST2, Intel bridging and AUv3 are not supported. The recording and effect chapters explain their specific capabilities. Save a named copy before making a major change to a song you want to preserve.

WORKFLOW & REFERENCE

Install Sampledex

1. Open the Sampledex DMG, then double-click **Install Sampledex.pkg**.
2. In the Mac installer, click **Continue**, read the license agreement, then choose **Agree** to proceed. Choosing **Disagree** prevents installation. Opening the DMG alone does not install anything.
3. Continue to the installation summary and click **Install**. macOS may ask for your administrator password to copy the application into Applications.
4. When installation finishes, open **Applications > Sampledex**. Eject the DMG when you are done.

Sampledex installs at **/Applications/Sampledex.app** and updates an existing application at that path. Quit Sampledex before installing. Keep a backup of the previous application if you need it, and save independent copies of important projects before opening them in this release: its schema 11 projects require this version or a newer compatible version.

The complete package includes the Sampledex logo, built-in instruments and effects, factory sounds, the Sampledex plug-in collection, the user guide, and the local AI model and runtime. You do not need Ollama, another LLM host, an API key, or an internet connection to use the included AI. Compatible external plug-ins can still be installed separately. Installation does not automatically launch the DAW or change your existing projects.

WORKFLOW & REFERENCE

Start a project and make your first beat

Sampledex is built around choosing sounds, drawing a pattern, repeating it in a song, mixing and exporting. You can complete that workflow with the mouse. A MIDI keyboard is optional. The instruments, starter sounds, instant loop generators and bundled AI work locally.

1. Choose **File > New project from template...** or press **Command-N**. The **Start creating - Sampledex** chooser also appears on an ordinary fresh launch.
2. Select **Loop Maker**, **Blank**, **Trap**, **Boom-Bap**, **Lo-Fi**, **House** or **Techno**. Enter a **PROJECT NAME**.
3. Leave **Include an editable demo loop** (or **demo beat** for a genre template) off to begin with empty patterns. Enable it when you want an editable example to explore. Blank always starts empty. Loop Maker also offers **4-bar loop / 8-bar loop** and **Add a drum track**, which starts off.
4. Click **Create loop** for Loop Maker, or **Create project** for the other templates. Start with **Keys / Chords** in Loop Maker. For a drum-first project, select **Drums**, open **Steps** with **Command-5**, and click cells to enter a rhythm. Use **Pattern** playback to hear only the active source, or **Song** with Loop on to hear all parts together.
5. Select a melodic track, open **Piano roll**, and draw notes with **Draw**. Alternatively, use **Chords**, **Bass** or **Melody**, audition the result, then choose **Keep variation**.
6. Switch to **Song**. Use the pattern commands to repeat your clips, make a variation for a fill, and remove some placements to create an intro or breakdown.
7. Choose **Mixer** to balance the parts. Save the project, then use **File > Export / Bounce** for a WAV loop, mix, aligned stems or MIDI. The export chapter explains the range and processing choices.

Loop Maker opens at 100 BPM in D natural minor with five melodic tracks: **Keys / Chords**, **Melody**, **Counter melody**, **Bass** and **Texture**. Its arrangement, independent source patterns and playback loop all span your chosen four or eight bars. **Shared Room** and **Shared Echo** provide ready-routed effects. **Add a drum track** adds a sixth instrument; leaving it off creates no drum track. Demo music remains a separate choice. You can add drums later from the browser, File menu or floating Channel Rack.

For a melodic loop, draw or generate chords first, then write a bass and melody that follow those chords. Add a sparse counter melody or texture, and use **Automation** with **Command-6** for movement. Export through **File > Export / Bounce > Active pattern as WAV loop...** for one source, or choose a WAV mix with the playback-loop range to capture all layers. **File > New Loop Maker project...** / **Command-Option-N** opens this starting point directly.

Blank provides an eight-bar arrangement, one drum-kit track and an empty four-bar pattern. Genre templates provide an eight-bar arrangement with five tracks - **Drums**, **Bass / 808**, **Chords**, **Melody** and **Texture** - and four-bar patterns. **Shared Reverb** and **Shared Delay** are already routed, with modest starting levels. The templates set these musical defaults:

- **Trap**: 140 BPM, F natural minor; Drum Synth, glide 808, chords, muted plucks and a pad.
- **Boom-Bap**: 90 BPM, D natural minor; dusty drums, warm bass, electric keys and mallets.

- **Lo-Fi:** 80 BPM, C major; room drums, soft bass, mellow keys and warm pads.
- **House:** 124 BPM, A natural minor; machine drums, mono bass, keys, plucks and wide synths.
- **Techno:** 130 BPM, D natural minor; pressure drums, acid bass, digital chords, lead and texture.

The chooser also contains **Open a recent project...**, **Open project...**, **Use one of my templates...**, and **Recover last session** when recovery is available. Opening an explicit project file or recovering an interrupted session takes precedence over the chooser. The startup message and spinner show when audio and instruments are being prepared. The chooser reports plug-in scan progress separately; you can start with built-in sounds while scanning continues.

Advanced setup... offers a project name, tempo, key and length, plus **Blank canvas** or **Generated first draft**. Choose the generated option deliberately when you want the older full-arrangement drafting workflow. It is not necessary for ordinary beat making.

Closing the main project, quitting, or replacing unsaved work with New, Open or Recover asks **Save / Don't Save / Cancel**. Save completes before leaving; cancelling its file picker or encountering a save failure keeps the current project open. Sampledex also checkpoints replaced sessions in **Project History**. Autosave and history do not clear the unsaved indicator or replace a named save. Finish recording, processing or exporting before creating a new project.

Make a beat with Night Circuit Vol. 1

Night Circuit is an optional Sampledex pack containing 12 four-bar loops, 16 one-shots, 28 editable source projects and 12 MIDI files. Its WAVs are stereo 48 kHz/24-bit. Keep the unpacked folder in a permanent local location, then choose **File > Library > Browse local sound folder...**. The browser searches subfolders. The supplied tutorial installation uses ~/Music/Sampledex/Sample Packs/Night Circuit Vol. 1; the pack is separate from the app and is not required to open other projects.

For an arrangement loop, choose **File > Import > Import Audio Files...**, select the WAV, choose a new audio track, set its named source BPM and enable **Follow project tempo**. For a playable one-shot, select an instrument track and use **Load Sound** or load it in **Sampledex Sampler**. Sound loading assigns an instrument sample; it does not place an audio clip. **Load Sound** preserves inserts; **Load Sound + FX** deliberately replaces the sound and its insert chain. Use **Import Pattern** when you want editable MIDI, then place that pattern explicitly.

The two matched loop sets are 140 BPM/F natural minor and 144 BPM/D-flat natural minor. **Skyline Music** already combines its chord and melody loops; **Crown Drums** already includes the matching percussion. Use the composite or its parts to avoid doubling them. Tuned one-shots identify their MIDI root in the filename and manifest; enter that root in the sampler before playing different notes. Drum/percussion loops are labeled unpitched.

The accompanying **Night Circuit - Tutorial Beat** is a 16-bar example at 140 BPM/F natural minor. It uses manually entered Drum Synth and 808 MIDI plus an imported Skyline Music loop. The first four bars form an intro; later placements repeat the groove, and the last drum placement is unique for a ratcheted hat variation. Open its portable .sdxp project to inspect notes, sample media, sends and Master limiter. The tutorial demonstrates project setup, drum entry, exact bass-note editing, audio import, arrangement, mixing, Save/Cancel/reopen and WAV/AIFF delivery. The original editable MIDI remains after export.

For the included stems, start all three WAV files at the same position. They include the selected track processing and shared returns but exclude Master processing. Their sum therefore is not expected to equal the Master-processed final mix. The finished WAV and AIFF mixes include the Master and a two-second effect tail.

Save your own starting template

Set up your instruments, effects, routing and project key, then choose **File > Save as reusable template....** Enter a new name and click **Save template**. It appears under **Use one of my templates...** the next time you create a project. Names cannot contain a slash or colon, and an existing template name is preserved rather than silently overwritten.

The template stores portable media and its musical content. With the demo checkbox off, it loads the sound setup with empty patterns; enabling the checkbox restores the saved notes, audio and automation. This lets you keep both a reusable studio setup and an editable demonstration in one template.

WORKFLOW & REFERENCE

Workspace, zoom and playback

The large **Timeline** button at the top returns to the arrangement from Mixer, an expanded editor or a side panel. **Command-1** does the same and brings the main window forward. The selected track or clip remains available in the editor below. Closing an AI/Loop preview restores your actual project sound and notes; the proposal stays available when you reopen its panel.

Click **Beat Making** or press **Command-0** for a comfortable layout with the sound browser, up to sixteen arrangement bars and a four-bar piano roll with taller note rows. It changes the view without generating or deleting music. Use Pattern/Song to choose playback independently.

Click a track name to select it. **Shift-click** another name selects the inclusive range; **Command-click** adds or removes individual tracks. **Command-A** while track headers have focus selects all tracks. Selection highlights the chosen headers without changing the music or creating Undo entries. Use **Export > Export Stems...** for those tracks; choose WAV or AIFF in its options.

To delete a track, right-click its **name in the timeline** and choose **Delete Track**, or click its header and press **Delete / Backspace**. With multiple track headers selected, the menu offers **Delete Selected Tracks** and Delete/Backspace removes the group. One Undo restores all removed tracks, their notes, clips, instruments and routing. Shared MIDI patterns remain in the browser. Typing in a field, selecting notes or selecting clips gives Delete to that editor; merely having a track selected elsewhere does not authorize track deletion. Locked tracks, active recording/processing and the last remaining track are protected with an explanation.

The transport runs across the top. The left **Browser** holds sounds and project patterns. The arrangement in the center holds placements on tracks. The lower editor switches between **Piano roll**, **Sound & FX**, **Mixer**, **Audio clips**, **Steps** and **Automate**. The right dock provides **Sound**, **AI** and **Loop** panels.

Choose the equivalent workspace from **View**: **Command-1** opens Timeline / Piano Roll, **Command-2** Sound & FX, **Command-3** Mixer, **Command-4** Audio clips, **Command-5** Step Sequencer, and **Command-6** Automation. **Command-R** opens the floating Channel Rack. **Command-J** opens the AI Coproducer; **Command-K** opens the optional live keyboard. **View > Command palette...** or **Command-Shift-P** searches commands. The palette groups commands, searches their names and aliases, and explains why an unavailable command is disabled. Use Up/Down to choose, Return to run, and Escape to close. It rechecks the selected source before executing; an old result cannot edit a changed project.

Click a track name to select its instrument and edit context. Click an assigned instrument or effect slot to open that plug-in. A normal track-name click does not create a track or export MIDI. **Option-dragging a MIDI track name** is the explicit drag-to-export gesture, so avoid holding Option when you only want to select a track.

Hide, dock and float panels

Open **Panels** beside the top AI controls. Each panel offers **Show / Dock**, **Float** and **Hide**. A floating panel's **Dock** button returns it to the main workspace; **Hide** and the close button hide the panel while retaining its content. Browser, Sound Inspector, AI, Loop Generator, Sound & FX, Mixer, Audio Clips, Piano / Steps and Routing share their existing editor state when moved. The Channel Rack has its own Dock/Float/Hide commands in the same menu.

A floating Piano / Steps editor provides tools, key highlighting, zoom and scroll controls for the same source. Hiding the lower editor leaves more arrangement space. **Reset workspace layout** brings the layout back without changing instruments, notes or Undo history. Floating window positions and sizes and the main divider/layout are application preferences, so they are independent of the project package.

Closing the AI or Loop panel stops proposal audition and returns to project playback. Reopen it to review a still-current proposal. A disconnected display's saved floating window is moved onto an available screen.

Add tracks from the arrangement

Right-click a track header or blank timeline space, then choose **Add Track. Timeline , Part and File > Add Track** provide the same choices: **Audio Track**, **MIDI / Instrument Track**, **Sampler Track**, **Drum Synth**, **Bass / 808**, **FM Keys**, **Poly Synth**, and **MIDI Track by Role**. New tracks are added independently and selected for editing. Stock instruments start with empty four-bar patterns; no notes are generated. A Sampler track is ready for **Load sample...** in its instrument panel.

Each accepted addition is one Undo operation. Track creation is unavailable while recording, processing audio, exporting or auditioning proposed changes, and at the 64-track limit. **Import Audio Files...** in these timeline menus creates one new track per file; it does not replace the selected track. See [Import music and record optional takes](#) for batch import and dropping files at a timeline position.

Keep the Channel Rack beside your work

Open **View > Floating Channel Rack** or press **Command-R**. Each row identifies the track, sounding instrument, source pattern, note count and linked-placement count. The sixteen overview positions summarize the whole source pattern; they are not sixteen editable drum steps. Click the overview to open that source in its editor, or use **Piano**, **Steps**, or **Sound / FX**. Narrow docked racks stack each row's controls instead of clipping them. Scroll vertically to reach more tracks; level, pan, mute/solo and editor buttons remain on their own visible row. Clicking a track name only selects it; clicking the sound opens its instrument.

Use the rack's **Level**, **Pan**, **M** and **S** controls to mix while viewing the channels together. Meters follow arrangement playback. Drag level or pan to listen to the change; release to keep one Undo operation, or press **Escape** during the drag to restore the starting mix. Returning to the original value creates no Undo entry. A control marked **READ** is driven by automation and shows the value applied during playback. Open **Mixer** with **Command-3**, then use that channel's **Level** or **Pan** menu to edit the lane or turn Read off. Locked channels, locked song sections and active recording/processing can also disable edits.

The rack's **+ Drums**, **+ Bass / 808**, **+ Keys** and **+ Synth** actions add an instrument with an empty pattern. Opening the rack or a pattern overview creates no music. Its **Timeline** button returns to the arrangement; closing the floating window leaves the project open. **Command-R** reopens it.

Find project, import and delivery commands

The **File** menu separates project saving from importing music and exporting deliverables. **Import** offers MIDI as editable tracks, audio as a timeline track, a sample for the selected instrument, and saved sound/pattern packages. **Instruments & Effects** adds stock tracks, loads compatible VST3/AU instruments or effects, and opens **Plug-in Manager / Scan...** **Library** handles local sound folders and saved sounds/patterns. **Project & Recovery** holds song length, autosave/history and missing-media recovery.

Export / Bounce and the top **Export** button share four primary choices: **Export Song...** (Command-Shift-E), **Export Loop / Selection...**, **Export Stems...**, and **Bounce Into Project...**. Choose WAV or AIFF in the options. Quick format presets retain direct song/stem/pattern choices, and **Advanced routing export...** supports buses and returns. Complete-song MIDI, synchronized MIDI stems and selected-track/section MIDI remain in the same menu. File exports preserve the original music; internal bouncing keeps its source and leaves the optional source-mute choice unchecked.

Make room for editing

- Drag the divider between the timeline and the lower editor up or down. A vertical resize cursor identifies the divider.
- Click **Expand** to maximize the lower editor, then **Restore** to bring the arrangement back.
- Use the browser chevron to collapse or expand the left side. Close the right panel with ✕, or use the inspector toggle to bring Sound back.
- At narrower window widths, opening the right dock may temporarily collapse the browser. Closing the dock restores the available editing space.
- Scroll inside Sound, AI and plug-in panels when their controls extend below the window.

Zoom is different from scrolling

Both the piano area and timeline have independent **Time** and **Height** sliders at their lower right. Drag a slider toward + to move closer, or toward - to see more. Piano Height makes pitch rows taller or smaller; timeline Height changes track-row height. Its minimum is 34 points so the track mixing controls stay visible. Neither transposes notes or changes their duration.

Piano Time supports continuous detail from a sixteenth-note-wide window through sixteen bars. **Tools > Time zoom** gives 1-, 2-, 4-, 8- and 16-bar choices. The timeline zoom menu includes **Fit song**, **16 bars**, **8 bars**, **4 bars** and **1 bar**, while its Time slider also supports intermediate spans.

The horizontal scrollbar moves the visible window without changing the zoom. Drag its thumb or click beside it to move a page. The piano scrollbar also works in Steps and the expanded editor. If the whole pattern or song fits, there is nowhere farther to scroll; zoom in first. The timeline page arrows provide another way to move through the arrangement.

With the pointer over a canvas, scroll vertically to move through pitches or tracks. Horizontal trackpad scrolling, or **Shift-scroll**, moves through time. **Option-scroll** adjusts horizontal zoom around the pointer. **Tools > Fit notes** brings notes into the piano view; **Timeline > Fit selected notes** also fits their time span. **Fit selected clips** and **Fit entire arrangement** are available for the timeline.

Timeline > Follow playhead pages the view during playback. Manual horizontal navigation turns Follow off so it does not pull the view away from your edit. Enable Follow again when you want the song to carry the view forward. Zooming, scrolling and resizing are view changes and do not use musical Undo history.

Use the transport

- **Play / Pause** resumes or pauses at the current position. **Space** does the same when a canvas has focus. Space remains a normal character when typing in a text field.
- **Stop** stops playback and returns to the start.
- **|Back** returns to the song start; **Play|** goes to its end.
- **BackBack** and **PlayPlay** move backward or forward one bar. Hold either button to continue moving.
- **Loop: on / off** enables or disables the song's playback cycle. Pattern mode loops the active source independently.
- **Click: off / on** toggles the metronome. Recording and live-keyboard controls are optional for mouse-based composition.

Drag the large handle at the top of the playhead, or drag anywhere in the timeline ruler, to seek. Playback pauses during the drag and resumes on release if it was already playing. **Escape** cancels the drag and restores its starting position. Ruler interaction moves the playhead; it does not draw MIDI.

Pattern / Song selects what plays. **Pattern** plays and loops the active MIDI source through the selected instrument, including a source with no song placements. **Song** plays the arrangement. If Pattern cannot be selected, first choose a MIDI instrument track and an active pattern.

Pattern playback auditions the full, untransposed source at the base project BPM with the selected track unmuted. Track, bus, return and master automation follow the selected placement's visible source cycle; trimming a loop into a later repetition keeps that cycle's automation aligned. Read and Off modes remain intact. An unplaced pattern uses automation from song bar 1. Hover over Pattern / Song to see where source bar 1 maps into the arrangement.

Pattern playback starts an isolated instrument and effect context. Earlier effect tails, other source tracks and their sidechain feeds are absent, and sends to omitted tracks are removed. A filter ramp or free-running effect can have different prior state when starting an isolated source. Use Song playback or an arrangement-range bounce to include that surrounding music and tempo changes. Source-pattern delivery keeps Pattern playback's local timing and pitch, but its captured placement reference and **Advanced** settings can retain required sidechain and return processing. Review those settings when comparing a delivered file with the isolated live Pattern preview.

LCD DISPLAY offers **Bars / beats**, **Clock**, **Seconds**, **Samples**, **Timecode 30** and **Time remaining**. This setting is independent of the timeline ruler's units. Timecode is 30 fps non-drop; Samples uses the current output sample rate. The arrangement uses 4/4.

Edit the transport BPM, or the piano-roll **BPM** field, and press **Return**. The supported tempo range is 40-240 BPM. **Escape** cancels an unfinished tempo edit. This changes the existing tempo segment at the playhead; it does not create a new tempo breakpoint. MIDI stays at its musical bar positions. Audio clips with **Follow tempo** enabled are stretched locally to keep their musical length while preserving pitch; fixed audio keeps its recorded duration. Follow-tempo processing prepares in the background, and the tempo change is committed as one undoable edit when ready. **Escape** cancels pending processing. A slower tempo may be rejected if it would exceed this release's ten-minute arrangement or retained-media limits.

WORKFLOW & REFERENCE

Patterns and arrangement clips

A **pattern** stores notes and controller events in its own musical time. A **placement**, also called a MIDI clip or region, puts that pattern on an arrangement track. The source can be reused many times. The selected instrument belongs to the track, so selecting a different instrument changes the sound without rewriting the pattern's notes.

The active-pattern selector displays the pattern name, its source length in bars, and **linked** with its linked-placement count. The **PROJECT PATTERNS** list in the Browser shows the same sources. Check the active name and count before editing: changing a linked source changes every placement of that source.

Double-click a MIDI clip to open its source in the piano roll. The piano ruler uses local pattern bars. Bar 1 is the beginning of the source even if the selected placement begins at song bar 17. Clicking the piano ruler seeks within that playback context. In Song mode, a trimmed-out source position cannot be sought through the selected placement; choose Pattern mode to hear that part of the source.

Create, repeat and vary a pattern

1. Select the destination MIDI instrument track.
2. Choose **Pattern > New empty four-bar pattern**, or **+ New empty pattern** in the Browser. This creates a source ready to edit without adding an unwanted song placement.
3. Draw notes or generate a loop. Rename the source and set its length using **Pattern name and length...**
4. In Song mode, move the playhead to the desired bar and choose **Place active pattern at playhead**. Placement snaps to a bar. In Pattern mode, this command uses the visible timeline bar instead.
5. Choose **Repeat active pattern to song end** to fill from the end of the selected track's last placement. The song's existing length is the boundary. Use **Song length...** first if you need more space.
6. To edit just one repetition, select exactly that placement and choose **Make selected placement unique**. Its new independent source becomes the variation you can change.

Ordinary duplicates, repeats and same-project clipboard placements stay linked. Deleting the final placement does not delete its pattern. To remove a source intentionally, select it and choose **Remove this unused pattern**; a pattern still used by a placement cannot be removed this way. **Favorite / unfavorite pattern** puts preferred sources first in the Browser.

Pattern name and length... changes the shared source, whereas trimming a placement changes only its visible window. Shortening a source or song is rejected when existing material would not fit. Use **+ 8 bars** above the track headers to add empty space, or the timeline menu for 8, 16 or 32 bars. The **END** handle above the ruler can also be dragged right; release applies one Undo operation and Escape cancels. Existing music stays in place. Dragging clip bodies or Option-dragging copies beyond the previous end grows the song when its playback limits allow it. Use + 8 bars first when another editing command needs additional room. This release supports up to 64 tracks and validates arrangement length against its playback limits.

Move, select, trim and split

With the timeline's **Select** tool, drag a clip body to move it and hover an edge to reveal trimming. **Move** explicitly chooses movement; **Trim** explicitly chooses edge resizing. **Option-drag a MIDI clip body** to make a linked copy. Hold **Command during a drag** to bypass the snap grid. Release to commit one edit, or press **Escape** while dragging to cancel.

Command-click adds or removes a clip; **Shift-click** extends selection between clips across time and lanes. Drag through empty lane space to marquee-select MIDI and audio together; add **Shift** or **Command** to extend the selection. Drag a selected clip body to move the group. Every destination must be a compatible, unlocked lane; incompatible moves are rejected together. Modifier-clicking a clip selects it even with **Erase** or another editing tool active.

MIDI edge trimming hides source material instead of deleting source notes. Extend that edge again to reveal the material. **Split** makes two source windows into the same linked pattern; it does not cut notes out of the pattern. **Erase** or **Delete** removes the selected placements. The **Fade**, **Slip**, **Clip gain** and **Time stretch** tools operate on audio clips; use MIDI velocity, automation or an audio bounce when you need similar changes to MIDI sound.

The timeline **Snap** menu offers straight, triplet and dotted grids, **Free**, and **Adaptive**. **Adaptive** changes grid density with zoom. The piano and timeline have separate snap settings. **Free** still uses the project's fine musical tick resolution; it does not remove MIDI timing boundaries entirely.

Clipboard, painting and sections

Use **Copy placements**, **Cut placements** and **Paste linked placements** in the **Pattern** menu, or **Command-C/X/V** while the timeline has focus. A combined MIDI/audio selection copies both media types and their relative timing/lane offsets. Select the first compatible destination lane before pasting; mismatched or locked lanes reject the whole paste. **Paste** uses the timeline's last clicked cursor position when it is focused, otherwise the playhead. Cross-project pastes copy independent pattern sources. Copying is harmless; cutting removes placements only when the edit can be committed.

Command-D duplicates the selected arrangement range immediately after itself. **Duplicate selected range** in the **Pattern** menu does the same for an arrangement phrase selected across tracks. It preserves the internal spacing of those placements. Keyboard duplication of selected MIDI or combined MIDI/audio ranges grows the song if the result fits its playback limits. Add **space** first for audio-only menu repeats.

Turn on **Paint active pattern** to lay linked placements while dragging through MIDI lanes. The source length sets the spacing. Release to keep the stroke as one edit. Turn the command off again before returning to ordinary clip selection; **Escape** cancels a stroke that is still in progress.

Move selected track up / down reorders a track. **Group selected tracks to bus** creates a shared mixer bus for the selected placement tracks, or the selected track when no placements are selected. This changes audio routing; it is different from merely selecting several clips together.

For focused MIDI placements, **Left/Right** nudges by timeline snap, **Command-Left/Right** nudges one tick, and **Command-A** selects MIDI and audio clips across the arrangement. Click the intended canvas before using keyboard commands so the piano roll and timeline do not compete for the same shortcut.

WORKFLOW & REFERENCE

Markers and playback loops

The arrangement header has three separate areas: a marker lane, a loop band, and the numbered ruler. Markers label musical moments without imposing a verse/chorus structure. A loop band defines what Song playback repeats; it does not duplicate clips.

Name and navigate song moments

1. Seek to a useful point and click **+ Marker**. Alternatively, double-click empty space in the marker lane to add a marker there.
2. Enter its name, choose its color and confirm. Names such as Intro, Drop, Fill and Outro make later arranging easier.
3. Click a marker to seek there. Drag it to change its position; hold Command to bypass snap.
4. Double-click a marker to rename it or change its color. Right-click for **Edit marker...** or **Delete marker**.
5. Open **Markers** for **Previous marker**, **Next marker** or a named marker in the list.

A focused marker can be nudged with Left/Right by the timeline snap amount, or Command-Left/Right by one tick. Delete removes the selected marker. Escape cancels an unfinished move.

Loop the section you are working on

Drag empty space in the loop band to set a cycle. **Shift-drag anywhere in the band** starts a new range. Drag its left or right edge to resize it, or its middle to move the entire range. Hold Command to bypass snap. A completed range edit enables looping. Double-click the band to toggle the cycle without moving its boundaries.

Select MIDI placements, audio clips or piano notes, then click **Selection** beside **Loop**, or choose **Loop selected regions / notes**. Check the highlighted endpoints, especially when working in local pattern time. Pattern playback is the direct way to loop an entire source independently of arrangement placement.

Loop also offers **Turn loop on / off**, **Loop selected section**, and **Use section boundaries again** for projects with generated sections. **Use section boundaries again** clears the custom range and turns looping off. In an ordinary pattern-based session, drawing a cycle in the band is the clearest way to choose its boundaries.

Right-click the numbered timeline ruler to choose **Bars and beats**, **Seconds**, **Output samples** or **Timecode · 30 fps non-drop**. The same menu provides fit and zoom commands. Changing the ruler format does not change the LCD display mode or the music.

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Draw and edit notes in the piano roll

Select a MIDI instrument track and an active pattern, then choose **Piano roll**. With **Draw** selected, click empty grid space once to add a note. The initial note length is one sixteenth and its velocity is 90. New notes remember the last entered length and velocity independently of the snap grid, so changing snap alone does not shorten the notes you draw next.

Click piano keys or notes to audition the track's assigned instrument and effects. Audition is separate from the arrangement's sustained notes. Holding and releasing an audition does not write new MIDI by itself.

Choose an editing tool

- **Draw:** click empty space to enter a note; drag an existing note body to move it; hover its edges to resize. Drag the new note before releasing when you want to adjust its initial length.
- **Select:** drag empty space for a marquee; drag selected note bodies to move them together. Double-clicking empty space in Select also creates a note, so use a single drag when the intention is a marquee.
- **Paint:** drag across cells to enter successive notes, useful for hats and repeated bass pulses. A completed stroke is one edit.
- **Erase:** click a note to remove it, or click one of several selected notes to remove that selection. For a broad area, marquee-select with Select first, then press Delete.
- **Trim:** resize the nearer edge of the clicked note. Smart edge trimming is also available in Draw and Select.
- **Velocity:** drag notes to adjust their velocity rather than their pitch or time.

Shift-click or Command-click extends or toggles note selection. Option-drag an existing note in Draw or Select to duplicate it. Hold Command during a note drag to bypass snap. Edge autoscroll helps continue a drag beyond the visible region. For very short notes, increase Time zoom before grabbing an edge, or use exact properties.

Drag a velocity stem below the notes to adjust it. Drag across empty velocity-lane space to make a ramp through the selected notes, or the visible notes when nothing is selected. Softer offbeats and ghost notes can make a mechanical rhythm feel more deliberate without changing its timing.

Escape cancels an in-progress gesture. One successful completed gesture creates one Undo operation; a cancelled or unchanged gesture does not. Locked notes, tracks and protected material are preserved. If an edit is blocked, check locks and the status message instead of repeatedly clicking. Keep or discard a Loop Maker preview before trying to edit its displayed notes.

New notes use the **Length** control independently of **Snap**. For example, a half-beat note can still start on a sixteenth-note grid. Drawing or selecting a different snap does not shorten existing sustained notes. The selected tool is highlighted; secondary operations are in **Tools**.

Exact properties and keyboard editing

Select one note and choose **Tools > Properties...** or right-click **Properties....** Set **START · BEAT, LENGTH · BEATS, MIDI PITCH** and **VELOCITY**. A quarter-note beat has 960 ticks; start beat 1 is the beginning of the active source when editing a pattern. Pitch uses integers 0-127 and velocity uses 1-127. For example, Length 0.25 is a sixteenth note; Length 4 is a full 4/4 bar.

The note context menu also provides **Lock / unlock note, Half note length** and **Double note length**. Use **Step properties** in the sequencer for timing offset, probability and ratchets.

With the piano roll focused:

- **Command-A/C/X/V**: select all, copy, cut and paste notes. **Paste notes at clicked position** uses the most recent piano-grid click as its anchor.
- **Delete**: remove selected notes.
- **Up/Down**: transpose selected notes by one semitone. Add **Shift** to transpose by an octave.
- **Left/Right**: move selected notes by the piano snap amount. Add **Command** for a one-tick nudge.
- **Option-Left/Right**: select the previous/next note without changing its music; the editor scrolls to it.
- **Return**: open exact properties for the selected note or step.
- **Command-Z / Command-Shift-Z**: Undo / Redo.

The fixed ruler above the piano grid stays separate from note drawing. It labels the visible musical position, including a view beginning partway through a bar. If expected notes disappear after folding, turn Fold off; if they are merely out of view, use Fit notes, zoom out or scroll before assuming they were deleted.

WORKFLOW & REFERENCE

Quantize, scales and musical note tools

Timing snap, quantization and scale tools solve different problems. Snap guides mouse placement; quantize edits existing timing; scale tools guide or change pitch. Key and scale changes do not automatically transpose music that is already in the project.

Quantize an existing performance

1. Select the notes you want to affect. If you want the whole active pattern, clear the selection.
2. Click **Quantize notes** or **Quantize pattern**. The button names the current scope, and the popover counts its unlocked notes.
3. Choose **1/4**, **1/8**, **1/16**, **1/32**, **1/8 triplet** or **1/16 triplet**. The initial choice is 1/16.
4. Choose **Note starts**, **Note ends** or **Note lengths**. Starts is the initial mode.
5. Set **Strength** · **0-100%**. At 100%, timing moves fully to the grid; lower values retain part of the original timing. Click **Apply quantize**.

Start quantization includes a drum step's audible timing offset, then clears that offset as it writes the quantized start. End and length operations retain the offset. Velocity, probability, ratchets and unaffected notes are preserved. Notes already matching the result do not create an Undo entry.

If the button says **Reselect notes**, the previous selection no longer matches the source. Select the intended notes again. If the project changes while the popover is open, reopen Quantize rather than applying an old selection. Some musical transforms reject protected material rather than altering only an unexpected subset; read the status message and deliberately adjust your selection or locks.

Work in a key and scale

The root menu and scale menu beside the piano-roll BPM field set the project's musical guidance. Available scales are **Major**, **Natural minor**, **Harmonic minor**, **Melodic minor**, **Dorian**, **Phrygian**, **Mixolydian**, **Major pentatonic**, **Minor pentatonic** and **Minor blues**. Melodic minor consistently uses the ascending form.

- **Highlight Current Key** colors root notes and other scale pitches without editing anything. The persistent **PROJECT KEY** badge and root/scale controls support all twelve root notes and all ten scales.
- **Fold** shows only rows in the scale. Existing off-scale notes remain in the source and can still sound; unfold to see and edit them. Folding is not a corrective pitch operation.
- **Snap to Scale** moves the selected unlocked notes to nearby scale pitches, or applies to the active pattern when nothing is selected. An equally close lower and upper scale pitch resolves downward.
- **Step** - and its adjacent **+** move notes down or up one scale degree. This differs from semitone transposition and respects MIDI pitch limits.
- **Tools > Draw new notes in scale** constrains new melodic note entry. It does not rewrite existing notes. It is separate from Highlight and the Snap to Scale command.

Scale tools can change drum mappings when applied to drum-note pitches. For a drum kit, named pads and the step sequencer are usually more useful than melodic scale snapping.

Transform selected notes

The **Tools** menu and right-click menu contain **Split at clicked position**, **Join touching same-pitch notes**, **Legato to next selected onset**, **Trim same-pitch overlaps**, **Reverse selected time**, **Invert selected pitches**, transpose, quantize and humanize commands.

Join requires touching or overlapping notes of the same pitch and source ownership. Use Legato to fill gaps between selected onsets first when appropriate. Reverse mirrors timing inside the selected span; Invert mirrors pitches inside the selected pitch range. Neither is the same as reversing an audio sample.

Humanize timing adds a small variation of up to 1/64 beat; Humanize velocity varies values by up to 8. Select notes first. Use these after establishing the rhythm rather than as a substitute for choosing intentional strong and weak hits.

Tools > Chords / strum / arpeggiate offers **Repeat ×2**, **Repeat ×4**, **Strum up / down**, **Arpeggiate up / down**, **Major chord**, **Minor chord** and first-inversion commands. Select root notes before a chord stamp, or a chord before strumming or arpeggiating. Arpeggiation uses the current piano snap spacing. Repeats divide the selected notes into repeated events within their duration.

These musical transforms show a note preview and a **Keep / Discard** dialog. Keep commits one undoable edit. Discard leaves the source unchanged. The menu also contains a selected-note scale-snap preview. A preview is cancelled if its source or selection changes before it is kept.

Timeline > Piano ghost notes displays chosen MIDI tracks as visual references. Ghost notes are guides for aligning parts, not a second editable selection in the current track.

WORKFLOW & REFERENCE

Generate chords, melody and bass loops

The piano-roll **Chords**, **Melody** and **Bass** buttons and the Loop panel's additional **Drums** and **808** choices generate editable MIDI instantly using local musical algorithms. The optional **AI Variation** uses the bundled model for a further proposal. Instant loop generation does not need model inference. Keep **AI On** to show these generation tools; turning AI Off hides both instant generators and model-based AI controls.

1. Select a compatible melodic instrument track and, if applicable, the placement you want to vary.
2. Set project **BPM**, root key and scale in the piano strip. Choose **1 bar**, **2 bars**, **4 bars** or **8 bars**; the default is four.
3. Click **Chords**, **Melody** or **Bass**. The **LOOP MAKER** panel opens and immediately generates a preview. Read its destination line before keeping anything.
4. Adjust the musical controls, then click **Generate / Regenerate** to use those settings and a new seed.
5. Use **Play Before** and **Play After** to compare synchronized looping playback. After displays the proposed notes; they become editable only after Keep.
6. Choose **Keep variation**, **Keep new track** or **Keep shared edit**, as shown, to commit. Choose **Discard / Cancel** to leave the project unchanged.

On a suitable melodic track the generator uses the selected sound. If the track is a drum kit or audio track, the destination explicitly reads **New ... track** and prepares a role-appropriate bundled instrument. That track is created only on Keep.

Choose the musical controls

GENRE chooses Trap, Hip-Hop, Boom-Bap, Lo-Fi, House or Techno. **SWING** delays alternating grid positions to shape the groove. These guide the next generated proposal. **REGISTER** chooses the octave. Bass generally belongs lower than chords, and melody higher. **RHYTHM** offers **Straight**, **Syncopated**, **Half-time** and **Tresillo**. **DENSITY** changes how much musical activity appears; **VARIATION** changes its variation. Reduce density when a new part competes with an existing busy drum or melody pattern.

PROGRESSION offers **Pop** · **I-vi-IV-V**, **Minor** · **i-VI-III-VII**, **Jazz** · **ii-V-I**, and **Tonic groove**. Chords additionally provides **Close voicing**, **Open voicing** or **Sevenths**, with **Root**, **Inversion 1** or **Inversion 2**. Compare the result in the chosen project scale rather than assuming a progression label substitutes for listening.

For melody or bass, **FOLLOW CHORD PATTERN** can use a saved nonempty pattern instead of **Use project key / progression**. Generate and keep chords first, then select that chord pattern as the reference when generating bass and melody. The reference guides pitch choices; it does not create an automatic ongoing relationship after the generated MIDI is kept.

Protect linked placements

The default creates a separate pattern variation. When a placement is selected, Keep substitutes that placement's source with the variation; other linked placements retain the original. **Update all linked placements** is an explicit shared-source choice. Leave it off for a one-off fill or alternate melody.

If you edit the project while reviewing a proposal, the panel reports that the project changed and disables keeping the stale result. Click Generate / Regenerate to build a current proposal. A cancelled, invalid or unsuccessful generation does not alter the project.

AI Variation works on the instant proposal. You can continue manual work while the model runs, but those edits can make its result stale. If the model cannot produce a valid variation, the original instant loop remains available. Keep commits through the same Undo system as manual editing.

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Program drums in Steps

Open **Steps** with **Command-5**, select a MIDI instrument track and choose its pattern. Steps and Piano roll edit the same notes, so switching views preserves sustained and off-grid notes. Named kit rows appear alongside other pitches used by the pattern. Use the row arrows to reach additional rows; a note outside the usual kit mapping is retained.

1. Set a useful grid, usually 1/16, and zoom to one or two bars.
2. Choose **Draw** and click an empty cell for one hit. Draw uses the remembered velocity and length. Change the new-note length from **Len ... beat** under the row names.
3. Choose **Paint** and drag across cells to add repeated hits. **Erase** removes hits across a stroke.
4. **Select** selects notes or a group; Shift/Command extend the selection. Note bodies move with their selection. **Length** drags note ends; narrow end handles remain available for short notes. **Velocity** drags vertically to change strength.
5. Release a gesture to keep one Undo operation, or press **Escape** before releasing to cancel. Play in Pattern mode to hear the source, or Song mode to hear its placements in context.

Click a row name to audition its sound. Open the row's ... menu for row commands such as clear, duplicate, repeated fills and shifting. Confirm the named pitch before changing a row. These operate on the source pattern, so linked placements follow edits to that source.

Length, velocity, timing, ratchets and probability

Right-click or Option-click a hit for **Step properties**:

- **Length (beats)**: the note's musical duration, independent of grid spacing.
- **Velocity (1-127)**: hit strength.
- **Timing offset (ticks)**: audible advance or delay; 960 ticks is one quarter-note beat.
- **Repeats (1-16)**: ratchets within the note's duration.
- **Probability (%)**: deterministic play probability, shared by playback and export.

The lane under the steps can display **Velocity**, **Timing**, **Chance** or **Repeats**. Select notes to focus its editing, then drag their lane handles. A sustained line shows each note's length; the small offset mark identifies off-grid timing. Grid lines, cell hits and the ruler share the same timing at fractional scroll/zoom positions.

Start quantization includes and clears timing offsets. Partial strength can retain some looseness. Drum choke groups and envelopes belong to the instrument: an open hat can be cut by a closed hat even when its MIDI note is long. For editable per-pad mixer channels, use **Separate Drum Parts to MIDI Tracks** on a supported stock kit; see the routing chapter.

WORKFLOW & REFERENCE

Save, reopen and recover projects

Use **File > Save project** or **Command-S**. The first save opens a name and location dialog and creates an **.sdxp** project package. **Save project as...** or **Command-Shift-S** creates a separate named copy. Use this before a major alternate arrangement or sound-engine comparison.

Undo / Redo keeps up to **24 completed project snapshots**. One completed gesture or kept proposal is one operation; older steps leave that interactive history as new work is committed. Save named project versions when you want to revisit a longer sequence of musical decisions. Autosave and Project History provide separate recovery copies.

File > Save a copy... writes a portable snapshot without changing your active project's location. **Reveal project in Finder** locates its saved package. **Open Recent** lists recent project locations; use Open project if a file has moved. The background activity indicator reports project-copy preparation and other work without disguising it as plug-in scanning.

Named project saving includes notes, linked patterns, placement windows, instrument and effect states, mixer routing, automation and media. Save after editing a plug-in so its current sounding settings are captured. Opening another project starts its own Undo history; the old session's Undo stack is not a substitute for a saved copy.

Move a song to another location

Save first, then move or copy the entire **.sdxp** package. The package contains a versioned project description and lossless media used by clips, samplers, slices and frozen tracks. Do not move only its internal manifest or individual Media files. Reopen the package through **Open project...** or **Recent projects....**

Bundled sounds work without their original source folders. Third-party plug-in programs still need to be installed on the destination Mac; the package stores their saved state, not their installers or licenses. A missing plug-in assignment is retained for restoration instead of being silently replaced.

Older **.sdx** projects can be opened and migrated. Existing independent legacy regions remain independent patterns, preserving the audible material that survives in the file. Save the migrated result as a new **.sdxp** package; the older original is preserved. Notes that were destroyed in an earlier edit cannot be reconstructed by migration.

Autosave and Project History

Completed edits are coalesced into a background autosave. **File > Project & Recovery > Recover last autosave** loads the latest local recovery session, and the chooser may offer **Recover last session**. A recovered session is unsaved under a normal project name: use Save to give it a deliberate location.

File > Project & Recovery > Open Project History opens the checkpoint folder. Checkpoints are made when a session is replaced. Open a useful checkpoint with Open project, inspect it, and save a separate named copy. Autosave and history complement ordinary backups; they do not replace keeping important project packages somewhere recoverable.

A save failure is reported in the status or error dialog. If disk space or permissions caused it, correct the problem and save again or use Save project as to another writable destination. Do not assume a save succeeded merely because a dialog closed; look for the saved status and the absence of the document's unsaved indicator.

Recover missing project media

1. Choose **File > Project & Recovery > Relink missing project media....**
2. Select the damaged **.sdxp** package.
3. Select the original sample folder, or a backup project's Media folder, when asked to **Search for missing media**.
4. Choose a new recovered project name and location. The damaged package is preserved.
5. Let the scan finish, or use **Cancel recovery** to stop it. When successful, open and save the recovered project as needed.

Recovery requires checksum-identical audio. It cannot substitute a similarly named sample, a different edit, or a resampled copy. Use a focused search folder if a broad search reaches its limit. If you continue editing or recording during the background search, the completed recovery is saved separately and its path is reported instead of replacing your newer workspace.

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Choose sounds and build a local library

Start by selecting the track that should receive a sound. The Browser is the left-hand library; **Sound & FX** is the selected track's instrument and effect rack. In a narrow workspace the tab is abbreviated **Sound**.

Add a track or change its sound

1. Use **Add Drums**, **Add Bass / 808**, **Add Keys**, or **Add Synth** to create a new instrument track with an empty four-bar pattern.
2. Search with **Search patterns and sounds**, or choose **Drums**, **Bass / 808**, **Keys**, **Synth**, or **Effects** from the factory category menu.
3. Click the sound's triangular preview button to hear it. **PREVIEW LEVEL** controls browser audition volume. The factory **Stop** button and **Stop preview** stop the audition independently of song playback.
4. Click **Load** beside the chosen preset. An instrument replaces the selected MIDI track's sound while preserving its music and insert effects. An effect is appended to the selected track's insert chain.
5. Open **Sound & FX** or **Mixer** to confirm the instrument name and the loaded effect names.

Add creates a track; **Load** changes an existing track. Previewing a sound does not add notes or arrangement clips. An audio track accepts effects, while an instrument needs a MIDI track. Unlock a track before changing its sound.

The factory library contains 74 presets: the existing eight Drum Synth kits, twelve Poly Synth sounds, eight FM Keys sounds, eight 808 sampler presets and thirty effect presets, plus eight AI Synth presets. Click a star to favorite a factory entry. Choose **Favorite Favorites** or **Recent sounds** to return to frequently used sounds. **Show more** reveals further results.

Browse samples, save sounds, and reuse patterns

1. Click **Browse local folder...** and choose a focused folder of WAV, AIFF, MP3, M4A or saved Sampledex packages.
2. Under **LOCAL LIBRARY**, click the triangular button to audition a file separately from your song. Preview never adds notes to the project.
3. Click **Load...** and check the destination name. Choose an explicit action:
 - **Load Sound** replaces the instrument/sampler sound while preserving its insert effects, notes, patterns, placements and mixer settings.
 - **Load Sound + FX** also replaces the insert chain with the package's saved effects. Existing notes and placements remain intact.
 - **Add Track** creates a new instrument with one empty editable pattern. It does not import the package's notes into the song.
 - **Import Pattern** adds the saved pattern to the tray without changing any instrument, existing notes or arrangement placements. Place it deliberately afterward.
4. Star local entries to keep favorites first. Search narrows the list. For a large folder, choose a focused subfolder; local scanning has depth and file-count limits.

5. Use **Save sound...** for a portable sound package or **Save pattern...** to include the active pattern's music. Both use .sdxp packages. Put them in your local library folder to find them again.

The menu captures its named destination. Selecting another channel while a sound loads cannot redirect the operation. If the destination sound changes, becomes locked/frozen, or recording starts, the load is rejected safely. The new sound's processors get independent identities; sampler routes from another project are not attached to unrelated channels.

Factory instrument **Load** also preserves existing inserts. A stock plug-in's **Save preset** saves only that processor as an .sdxpreset file; load those files through the plug-in's **Load preset** control. Use the Browser for reusable sound/pattern packages.

Sampledex instruments... and **Sampledex collection** expose the bundled plug-in collection. These are additional sounds/effects alongside the directly built-in Drum Synth, Poly Synth, FM Keys, sampler, and stock effects. Bundled sounds work without a sample download.

WORKFLOW & REFERENCE

Edit stock instruments and presets

Open an assigned instrument by clicking its channel-strip slot, or choose **Edit preset** beside it in **Sound & FX**. This editor controls the sounding instance. Changes are immediately audible and are retained when you save the project.

Plug-in windows show the instrument/effect name and a clear **LIVE** or **PRESET** status. A LIVE editor changes the sounding track immediately. In an isolated PRESET editor, **Apply preset to track** keeps the edited state; closing without Apply keeps the previous track preset. The surrounding window can be resized, and oversized fixed plug-in interfaces can be reached with scrollbars. Supplied plug-ins retain their own controls and appearance inside this shared window.

Common editor controls

These controls describe Drum Synth, Poly Synth, FM Keys and the stock effects. AI Synth uses the dedicated sound-generation workflow described below.

Built-in editors follow Sampledex's Dark, Light or Follow System appearance with red accents, readable parameter cards and larger exact-value fields. Resize the window or scroll the parameter area to reach every control. Appearance changes preserve the current sound and unfinished numeric input.

- **Factory presets / current saved state** selects a preset for this instrument or effect. The < and > buttons step through its factory choices.
- Drag a knob to adjust it. Click its value box to type an exact value; double-click a knob to reset that parameter. Frequency, time, gain, and pan use readable units. Waveform, filter mode, delay division, and mono mode use named menus.
- **Output**, where shown on an instrument, adjusts its level. This is separate from the track fader. If a sound is too loud before its inserts, reduce instrument Output; use the track fader for the final balance.
- **Initialize** resets the processor's parameters to their defaults. It is different from selecting a factory preset.
- **Save preset** writes the active state to .sdxpreset. **Load preset** restores a compatible file for that processor. Loading an incompatible or invalid file reports an error.
- The status line shows **Modified** when the current parameters differ from the editor's reference state. Save a preset or the project to retain your work.
- Resize the editor and scroll its control area when necessary. Poly Synth has **Sound**, **Envelopes**, and **Motion / voices** pages; FM Keys has **Sound** and **Envelopes**.
- Group captions explain the signal path and the controls below. An inactive control retains its saved value: hover it to learn the dependency. For example, Delay enables Time in Milliseconds mode and Division in Tempo sync; Poly Synth enables Glide in mono and Voice spread in poly. Pulse width needs a pulse oscillator. Change the relevant mode to reactivate the setting.

Compare A and B

1. Set up the first sound on **A / B: A**.
2. Click **A / B**. The first switch copies A to B.
3. Edit B while the same phrase plays, then switch back to compare A.
4. Leave the preferred side active and save the project or save a preset.

A and B are working copies for the current editor session. Closing and reopening the editor does not preserve the two comparison slots; the project retains the active processor state. Match output levels when comparing so that a louder sound does not automatically appear better.

Studio and Classic engines

New stock instances and factory presets use **Studio engine**. Older projects restore **Classic engine** to preserve their earlier sound. The engine menu lets you deliberately change that instance. Save a separate project version before comparing an older song with Studio presets. Studio-specific controls are disabled in Classic with an explanation, retaining their saved settings for a later switch. Studio refinements in 0.13 improve mono onset/retriggering and saturation aliasing; an existing Studio preset can sound different even though its IDs and values are retained. Classic saturation retains its original transfer curve through one sample of host-compensated delay.

Sampledex Drum Synth

The Drum Synth contains sixteen synthesized pads at MIDI notes 36-51. It makes its sounds locally and does not need sample files. Select and hold a pad to audition it through the track; the selected pad's controls appear below the pad grid.

- **Engine** chooses Kick, Snare, Clap, Hat, Tom, Rim, Percussion, or Cymbal synthesis. A pad's displayed name and MIDI note identify its place in the kit; changing Engine changes the sound it generates.
- **Tune** changes pitch in semitones. Use small changes to fit a kick or tom to the song.
- **Decay** sets how long the hit rings. Shorten hats and percussion when a busy pattern becomes crowded.
- **Tone** shapes brightness. **Noise** changes the noisy component independently; both affect the Studio hats and cymbals.
- **Transient** emphasizes the beginning of the hit. **Drive** adds harmonic distortion.
- **Gain** and **Pan** balance each pad. Instrument **Output** changes the entire kit.
- **Choke group** makes pads in the same **Group 1-8** cut one another off. Use the same group for open and closed hats; **Off** leaves a pad ungrouped.

Choose a kit from the factory menu, then edit individual pads. Save a custom kit with **Save preset**. Program its MIDI in **Steps** or **Piano roll**. The Drum Synth retains its stereo output and supports shared-kit separation into individual pad tracks. The sample-based Drum Rack also offers per-pad bus routing.

Sampledex Poly Synth

Poly Synth is useful for basses, leads, plucks, chords, and pads.

1. On **Sound**, choose **Oscillator 1** and **Oscillator 2** waveforms: Sine, Saw, Pulse, or Triangle. Sine is simple and rounded; saw and pulse provide stronger upper harmonics. **Oscillator blend** balances the pair.
2. Adjust **Detune** for beating between the oscillators and **Octave 2** for octave layering. **Pulse width** changes the pulse shape. Add **Sub level** for weight or **Noise level** for texture.
3. Lower **Filter cutoff** to darken the sound; raise **Resonance** to emphasize the cutoff region.
4. On **Envelopes**, use **Attack**, **Decay**, **Sustain**, and **Release** for the amplitude shape. A short attack/decay with low sustain makes a pluck; a longer attack and release makes a pad. Sustain is a level, while the other three controls are times.
5. **Filter envelope**, **Filter decay**, and **Filter sustain** shape brightness separately from volume in Studio mode. **Filter key tracking** raises brightness with pitch; **Velocity to tone** makes stronger notes brighter.
6. On **Motion / voices**, choose Polyphonic for chords or Monophonic for a single-note bass/lead. **Glide** controls pitch travel between mono notes; the first Studio note starts at its own intended pitch. A new note during a release tail retriggers the envelopes, while overlapping held notes retain legato behavior. **LFO rate** and **Filter LFO depth** animate brightness; **Voice spread** distributes polyphonic Studio voices across the stereo image.

For a focused bass, begin with Round Mono Bass, Pure Sub from the 808 library, or another bass preset, and keep wide chord/pad layers out of the same low register. For a short melodic loop, start with Glass Pluck or Soft Triangle and set note lengths and release together.

Sampledex FM Keys

FM Keys uses one oscillator to modulate another. It covers electric keys, mallets, plucks, bells, and metallic textures.

- **Modulator ratio** changes the frequency relationship. Simpler relationships are useful for tonal keys; other ratios produce more complex metallic colors.
- **FM index** increases modulation and harmonic complexity. Reduce it when a sound is too glassy or sharp.
- **Tone** and **Tone key tracking** shape brightness across the keyboard. **Velocity to FM** changes how strongly note velocity affects modulation.
- **Attack**, **Decay**, **Sustain**, and **Release** control loudness. Studio **Modulator decay** and **Modulator sustain** let the bright attack decay independently of the held level.
- **Drive** adds harmonics; **Voice spread** controls stereo distribution. Match the instrument Output to the rest of the arrangement.

Start with Velvet Electric or Lo-Fi Tines for softer keys, and Crystal Bell or Air Chimes when a bell-like part is intentional. A preset is a starting point: lowering modulation, shortening a release, and changing the played register can transform its role in a beat.

Sampledex AI Synth

Show sound design / Hide sound design expands or collapses AI Synth's proposal tools, giving more space to the manual controls. Before/After and Keep/Revert remain available for a pending proposal. Collapsing the section does not change the sound. At very compact heights, increase the window height to reveal the sound-design controls.

Sampledex AI Synth is an additional stock instrument. Drum Synth, Poly Synth, FM Keys, the sampler, 808 presets and existing plug-ins remain available. Open the instrument catalog and search **AI Synth**, or load one of its eight factory presets from the browser.

Choose **Drums / 16 pads**, **808**, **Bass** or **Synth**. Switching modes recalls the patch you edited in each mode while this editor remains open; the first visit loads a starting sound. A factory-preset selection replaces the current patch, so save a custom preset before replacing a sound you want to reuse. Ordinary AI note variations leave the selected instrument intact.

The upper **Brightness**, **Weight**, **Punch**, **Length**, **Movement** and **Variation** sliders guide the next generated sound. They do not change the sounding patch until you Keep a proposal. The parameter controls below them edit the sounding instrument immediately. Use the **Quick controls**, **Oscillators / source**, **Pitch / glide**, **Filter / drive**, **Envelopes**, **Motion / mix** and **All parameters** pages to choose which controls are visible. Changing pages does not alter the sound. In Drums, the pages show the selected pad and kit output, without changing other pads. Type exact parameter values or double-click a slider to reset it. **Lock** retains that parameter during AI generation.

1. Choose a mode, optionally choose a factory preset, then adjust the six direction sliders.
2. Click **Design sound** or **New variation** for an instant proposal from those controls. These buttons do not interpret the text field. To use a written description, choose **Refine with local AI**; it runs the bundled model, displays progress and supports **Cancel**. Instant design and manual editing remain available when the model cannot run.
3. Use **Hold: Current** and **Hold: Proposal** to compare sounds with dedicated audition voices.
4. Click **Keep sound** to apply the reviewed patch, or **Revert proposal** to discard it. Editing the patch while a proposal is pending makes that proposal stale.
5. Use **Save preset...** for a reusable sound. Project saves retain complete realized parameters, so reopening and playback do not require generating the sound again.

In Drums, click and hold a pad to select and audition it. Choose **Generate selected pad only** to preserve the rest of the kit, or **Generate whole kit** deliberately. Each pad has body tuning, envelope, noise, transient, drive, gain, pan and choke settings. Shared-kit separation uses individual pad outputs from one instrument; its Drum mode stays fixed while those outputs are in use.

808 mode provides a tuned sustained body, pitch drop, harmonics, drive and glide. Bass and Synth provide oscillator/filter/envelope and modulation controls. The readout names an **Audition root**, **MIDI target** or drum **Body / tail pitch**, with its note, frequency and fine tuning. **MIDI target** follows the latest MIDI note; the project's root/scale remains a separate setting. Noise-based drums show **Unpitched / inharmonic - no single musical key**. A pitch envelope can move a tonal sound toward its displayed target; the readout describes the synthesis settings rather than analyzing an audio sample. Tune a tonal kick or 808 deliberately

against the song's bass and key.

WORKFLOW & REFERENCE

Sample, tune, and chop audio

The sample-based **Sampledex Sampler** and **Sampledex Drum Rack** are separate from the Drum Synth. Their sample data is collected in a saved project package.

Choose **Load instrument...**, search **Sampledex Sampler** or **Sampledex Drum Rack**, and load it just like a stock synth. These start with empty sample slots and preserve existing MIDI and inserts. The Drum Rack provides 16 empty pads.

Click the sampler instrument slot in the **Mixer**, its sound button in the **Channel Rack**, or **Edit Sampler... / Edit Drum Rack...** in **Sound & FX** to open its own instrument editor window, just like the stock synth. This window is independent of Sound & FX and the insert chain. Close it without removing the sound; clicking the instrument opens it again. Use **Apply** to keep a sound edit as one Undo operation or **Revert** to discard unapplied changes. **Load sample...**, waveform, tuning, looping and envelope controls belong to the displayed track; an empty sampler still opens with a visible loading button.

Load and tune a melodic sample or 808

1. Select a MIDI track and open **Sound & FX**.
2. Click **Load sample...** for a local mono/stereo WAV or AIFF, or choose **808 sampler / Load 808 sampler** for the bundled starter.
3. Click **Audition root** to hear the source at its assigned root note.
4. Open **Edit Sampler...** (or click the Mixer instrument slot). In **Tuning & Level**, set **Root Note** to the original recording's MIDI pitch. **Fine / Coarse Tune** adds a semitone offset. The older **Sample / loop / envelope...** dialog remains available in Sound & FX.
5. Set **Sample start** and **Sample end** in seconds. Enable **Loop** and set **Loop start** and **Loop end** within the source window for a sustaining sound. **Reverse** plays the retained source in reverse.
6. Shape **Attack**, **Decay**, **Sustain**, and **Release**. Choose **Mono / 808**, **Legato**, and **Portamento** for monophonic sliding bass lines. Draw overlapping or connected notes as appropriate for the desired phrase, then audition the result.
7. In the instrument editor, use **Apply Changes** to commit the staged settings as one Undo step, or **Revert** to discard them. **Audition** plays the applied sound through this track's effects. **Load Sample...** replaces its source. The older properties dialog uses **Apply**, **Replace sample...**, and **Cancel** for the same sampler state.
8. Click **Remove Sample** at the top of the instrument editor to empty the sample slot immediately, or select a drum pad and click **Remove Pad Sample**. Apply or Revert any pending settings first. Removal keeps the sampler, MIDI, effects, pad assignments and shaping settings; other pads and the original audio file stay intact. **Undo** restores the removed sample and its loop settings. The empty slot is ready for **Load Sample...**

Sample/loop positions, envelopes, and portamento use seconds in this dialog. Gain is a linear value from 0-4; pan ranges from -1 at the left to +1 at the right. Invalid windows or values are rejected rather than silently

changing the sound.

If the sampler panel says an external instrument is active, that plug-in is taking precedence. Remove that instrument to hear the saved sampler, or load the sampler sound again deliberately.

Detect an 808 sample's pitch and calibrate its root

Loading a melodic sample starts **Detect pitch** automatically in the background. The detector reads the selected sample frames, not the file name. Sound & FX shows the detected note, frequency, cents from equal temperament, and pitch-stability score. A single 808 has a musical pitch; this is not an estimate of a complete song's major/minor key.

Sample now includes the sampler's current tuning. **IN SCALE / OUT OF SCALE** compares that natural pitch with the project's key and scale; **NEEDS FINE TUNING** means the pitch is more than ten cents from the nearest note. Changing the project key updates this comparison without retuning the sample. Written MIDI notes determine the actual pitches played once the sampler root is calibrated.

Choose **Set detected root + fine tune** to set the MIDI root and compensate the detected cents offset. This explicitly replaces the current root/tuning in one Undo operation while preserving the media, MIDI notes and other sampler settings. Loading or analyzing a sample never retunes it automatically. Locked tracks cannot be calibrated.

Silence, noise, very short bass hits, changing pitch and ambiguous multi-note material show an unknown/uncertain result. Set the root by ear in **Sample / loop / envelope...** when no reliable result is available. **Detect pitch** repeats analysis; replacing the sample or changing its source window starts a fresh analysis. Analysis and all tuning work offline.

Build a sample-based drum rack

Each pad's **Sample / tune / envelope...** properties includes **Trigger MIDI note (0-127)**. Set this to the note sent by your controller pad. Duplicate trigger notes are rejected; existing pattern notes retain their original pitches. The pad button displays its trigger number and sound name.

1. Load **Starter drum kit** in Sound & FX, or **Load starter drum kit** in the Browser.
2. Click a pad's MIDI-note/name button to audition it through the track effects.
3. Open **Sample / tune / envelope...** below a pad. Use **Replace sample...** to assign a local hit.
4. Adjust that pad's root, tuning, source window, envelope, gain, and pan. **One-shot** is available for drum pads. A nonzero **Choke group** lets related pads stop one another.
5. To process a pad separately, first create a bus or return in the routing controls, then choose it in **Pad output**. **This instrument track** keeps the pad on the rack's normal output.

Chop a recording into playable slices

1. Load the source into the melodic sampler.
2. Choose **Chop at transients** for automatic attack-based cuts. This immediately converts the source into a Drum Rack.

3. For precise cuts instead, choose **Manual slices...**, enter up to fifteen positions in seconds separated by spaces, such as 0.25 0.5 0.9, then click **Slice to pads**. The original source start and end are included automatically.

4. Existing MIDI is preserved; edit the pattern to trigger the desired pads. Audition the pads and adjust their individual sample windows or envelopes if a cut includes an unwanted click or tail. Undo restores the previous sampler.

Chopping uses the full original sample, rather than a trimmed or reversed sampler window. Cut positions are measured from that original sample start. Save the package to retain the source and slices when moving the project.

WORKFLOW & REFERENCE

Load and manage VST3 and Audio Unit plug-ins

Audio plug-ins (also called plugins) extend the available instruments and effects. Sampledex supports compatible Apple Silicon VST3 and Audio Unit v2 instruments and effects. It does not bridge Intel-only plug-ins or load VST2/AUv3. Third-party instruments may still require their vendor's installation, authorization, or sample library; the host does not embed those dependencies in your project.

Scan installed plug-ins

The cached catalog is available immediately at startup. A background scan checks new or changed candidates while editing remains available. Built-in processors are ready without a binary scan. The project chooser shows the candidate name, completed count and cached-catalog status. The main window's background activity indicator also reports scanning; click it to open progress and Cancel in the Plug-in Manager. Other preparation, AI and rendering work receives its own activity label.

Open **View > Plug-in Manager...**, the Browser's **Scan...**, or **Plug-in Manager...** in a sound chooser.

- **Scan Changes** checks new or changed plug-in files.
- **Full Rescan** checks discovered external plug-ins again, useful after reinstalling or replacing a bundle.
- **Retry Failed** retries failed/unsupported entries and discovers changes.
- **Cancel Scan** stops further scanning and keeps completed results.
- **Add VST3 Folder...** adds a custom search location. **Remove Folder** removes the selected custom location from future scans.

The scan includes the bundled collection, standard user/system VST3 folders, and the installed AU v2 registry. Each external candidate is inspected in a separate helper with a timeout. A failed unchanged candidate is skipped until you retry it. Select an entry to read its status, architecture, version, location, and failure explanation.

Put a plug-in on a track

1. Select an existing track.
2. For an instrument, choose **Load VST3 / AU...**, **Load VST3 / Audio Unit...**, or **Load instrument...**. For an effect, click **+ Add effect...** in Sound & FX or an available channel insert slot.
3. Search by name, manufacturer, format, status, or bundle filename. **Favorites** and **Recent** narrow the chooser. Press Return to load the selected ready entry.
4. For a VST3 outside the normal locations, use **Browse VST3...**. If a bundle contains multiple classes, choose the intended instrument/effect entry.

5. Alternatively drag a ready catalog entry onto an existing MIDI track's instrument slot or onto an effect slot/track header. The drop indication identifies the target. Effect drops append to the chain.

6. Click the loaded name, **Edit preset**, or **Edit** to open the sounding editor. Save the project after changing parameters.

Sound & FX processes effects from top to bottom. Its **Up** and **Down** buttons reorder inserts; **Bypass / Enable** temporarily disables or restores a slot without deleting its saved state. **Remove** deletes that assignment. A track supports up to eight inserts. Bypassing an instrument can reveal the track's built-in fallback sound; use the track's Mute control when the goal is silence.

A missing plug-in remains stored in the project with its saved state. Restore the correct compatible installation, scan again, and reload/reconnect the audio engine as needed. Playback warnings can indicate fallback or skipped processing; resolve them before delivery because export stops on incomplete processing. A **Ready** scan result confirms discovery, not that every preset and editor of that vendor has been qualified. Loaded plug-ins run inside Sampledex, so their audio/editor failures are distinct from an isolated scanning failure.

WORKFLOW & REFERENCE

Use the bundled Sampledex collection

Sampledex includes three additional VST3 plug-ins: **Sampledex Indie Motion Synth 27.0.0**, **Sampledex Indie Verb 2.0.0**, and **Sampledex IndieRedline EQ 1.5.0**. These are bundled with the app and work alongside the built-in Studio instruments and effects. Each has its own editor; the Studio editor's A/B, engine selector, and .sdxpreset controls do not automatically apply to these separate plug-ins.

Load a collection instrument or effect

1. Select the track that should receive it.
2. Open **Sound & FX** and click **Sampledex collection**, or choose **Sampledex instruments...** in the Browser.
3. Select the desired plug-in in **Sampledex Collection**, then choose **Add to track**. Motion Synth becomes a MIDI track's instrument; Indie Verb and IndieRedline EQ become inserts.
4. Click the instrument/insert name in Mixer, or **Edit preset** / **Edit** in Sound & FX, to open the sounding editor.
5. Play a pattern, adjust the controls, then save the project to retain the active state.

You can also find these through the **Sampledex** filter in the VST3/Audio Unit chooser. The instrument slot needs a MIDI track; effects can process MIDI instruments or audio tracks. The effect chain runs top to bottom and supports **Up / Down**, **Bypass / Enable**, and **Remove** in Sound & FX.

Sampledex Indie Motion Synth

Motion Synth is an additional sound-design instrument for basses, chords, pads, leads, and moving textures. Its main controls cover a waveform bank, unison, tone shaping, a loudness envelope, movement, and built-in effects.

1. Start with its factory preset menu. Hover its controls to see the plug-in's own explanations. Its preset-saving control saves a user preset; project saving also retains the current sound.
2. Choose **Waveform**: Sine, Saw, Square, Pulse, or Tri. Sine is simple and rounded; Saw/Pulse/Square contain stronger harmonics; Tri is a softer starting shape.
3. Set **Unison** to Off, Dual, or Quad. **DETUNE** changes the pitch separation and **WIDTH** spreads voices across the stereo image. Start with less unison for a focused bass and more for a wide pad.
4. **PULSE** changes pulse width. **SUB** adds low-frequency weight; **NOISE** adds a noisy texture.
5. Choose **Filter Type**: LowPass, BandPass, or HighPass. **CUTOFF** sets the main tonal boundary, **RES** emphasizes its resonance, and **ENV AMT** controls how strongly a note triggers filter movement.
6. **ATTACK**, **DECAY**, **SUSTAIN**, and **RELEASE** shape the loudness envelope. Lower attack/decay and sustain for a short pluck; lengthen attack and release for a swell.
7. **LFO HZ** controls movement speed and **LFO DEP** its depth. **GLIDE** adds pitch sliding between notes.

8. **DRIVE** adds harmonic grit, **CHORUS** adds moving width, and **REVERB** adds ambience. **MASTER** controls the final output level.

The **DARK / LIGHT** control changes the editor's appearance. Tone controls change the sound; the appearance toggle does not.

For a bass, begin with a simple wave, moderate filter cutoff, limited width, and little reverb. For a moving chord texture, use unison and slow filter modulation, then balance the internal effects against any track inserts. Avoid adding a second large reverb unintentionally if the preset already includes ambience.

Sampledex Indie Verb

Indie Verb is a more detailed reverb alternative to the compact stock Reverb. Its controls cover the onset, body, tone, motion, and level of the reverberation. Factory examples include **Percussion Plate** and **Ethereal Shimmer**; choose by listening to the actual phrase rather than by the name alone.

- **Pre-Delay / PRE-DLY** separates the dry attack from the beginning of the reverb. Use it to retain definition on a snare or melodic phrase.
- **Size** and **Decay** shape the sense of space and tail persistence. **Damping** darkens the tail as it decays.
- **Low Cut** and **High Cut** limit the reverb's frequency range. Cutting unnecessary low end can keep an 808 or kick from filling the reverb with rumble.
- **Early Ref** changes the early-reflection contribution; **Width** changes stereo spread.
- **Mod Rate** and **Mod Depth** control movement in the reverb. **Grit** adds coloration.
- **Duck** controls reverb ducking, useful when the dry phrase should remain clearer while it plays. This is the plug-in's own control, separate from a DAW sidechain routing connection.
- **Mix** balances dry and wet sound. **Output** trims the result.
- **Freeze** is the reverb's tail-freeze control. It is unrelated to **Freeze / unfreeze selected instrument** in the DAW. Turn it off when you need a naturally decaying tail.

To use it as a track insert, begin with a modest Mix and balance it while the entire beat plays. A preset with a long tail can keep sounding after its MIDI note ends; include enough tail in Bounce/Export or shorten the reverb for an exact loop.

The collection shortcut adds Indie Verb to the selected track. The DAW's **Create reverb return** command creates its stock Reverb return; selecting that command does not substitute Indie Verb automatically.

Sampledex IndieRedline EQ

IndieRedline EQ provides a graph-based EQ editor for detailed tone shaping. Its **Default Flat** preset is a neutral starting point. Other named starting points cover vocals, drums, bass, keys, guitar, and mixes - for example **[DRM] Kick Thump**, **[DRM] Snare Crack**, **[BAS] Synth Bass Focus**, and **[MIX] Mud Removal**.

1. Select a band point on the graph.
2. Drag it horizontally to change **Freq** and vertically to change **Gain**.

3. Hold **Shift** while dragging to change **Q**, which sets the band's width. A narrower band targets a smaller frequency area.

4. Right-click a band to choose its **Type**.

5. Double-click a band to bypass it. Listen with and without the adjustment before deciding to keep it.

The editor displays the interaction reminder **Drag: Freq/Gain | Shift-Drag: Q | Right-Click: Type | Double-Click: Bypass**. Band frequency/gain/type controls describe the same EQ adjustments as the graph. Use the DAW slot's Bypass control to compare the entire plug-in, rather than only one band.

A preset such as "Master Polish" is an EQ starting point, not automatic mastering. A preset name containing "Glue," "Mono," or "Dist" does not imply that the EQ has become a compressor, stereo utility, or distortion processor. Make small moves, compare at a similar level, and choose the curve that fits the recording.

Save and reopen collection sounds

The project retains each loaded plug-in's identity and active preset state. The included collection resolves from the app's bundled resources when the app or project moves; you do not need to copy these three VST3 bundles to system plug-in folders. External plug-ins and their sample libraries remain separate installations.

If an assignment is missing or reports an identity mismatch, keep its stored state and restore the appropriate version rather than removing the slot immediately. Scan/reload as instructed by the warning. Check the loaded name and version when an installed plug-in has a similar name to a bundled one.

WORKFLOW & REFERENCE

Shape sounds with stock effects

Open **Stock FX** for EQ, Compressor, Saturation, Delay, Reverb, and Limiter. The Browser's **Effects** category also includes Chorus, Filter, Bitcrusher, and Rhythmic Gate presets. Load an effect preset to append it to the selected track, then open its editor from the insert name or **Edit**.

Stock effects use the same preset, Studio/Classic, Initialize, exact-value, and A/B controls as the instruments. Their wet mix balances processed and original signal. A fully wet shared return avoids adding a second dry copy through the send.

- **EQ:** Low gain, Mid gain, and High gain cut or boost three bands. **Mid frequency** moves the middle band. This is a compact tonal EQ, not a graph with draggable parametric bands. Try reducing a crowded frequency area before boosting another sound.
- **Compressor:** **Threshold** sets where gain reduction begins; **Ratio** controls its strength. **Attack** sets how quickly it responds and **Release** how quickly it recovers. **Makeup** compensates level. Studio **Knee** softens the transition, **Wet mix** blends parallel compression, and **Detector highpass** reduces low-frequency energy in the detector. The status line reports gain reduction. An assigned sidechain detector send can make another channel trigger compression.
- **Saturation:** **Drive** adds harmonic distortion, **Wet mix** blends it, and **Output** trims level. Studio uses antiderivative antialiasing to reduce folded distortion components; it does not eliminate every alias. Both engines declare one sample of latency, keeping dry/wet and parallel routing aligned. Compare at matched volume to judge tone. It is a creative color control, not a guarantee that clipping elsewhere in the mix has been repaired.
- **Delay:** Choose **Milliseconds** for a fixed **Time**, or **Tempo sync** with **Division** for whole/half/quarter/eighth/sixteenth, eighth-triplet, or dotted-eighth repeats. The unused time/division control is disabled while retaining its value. **Feedback** controls repeat persistence; **Wet mix** controls level. Studio changes to delay time crossfade the taps, including rapid retargeting consistently across buffer sizes. Keep a tail when exporting audible echoes.
- **Reverb:** **Room size**, **Damping**, and **Stereo width** shape the space. **Wet mix** controls how much is heard. Use a return when several tracks should share one space.
- **Limiter:** **Ceiling** limits sample peaks and **Release** controls recovery. It uses lookahead and reports gain reduction. It is a sample-peak limiter, not a true-peak limiter; check the master true-peak reading separately.
- **Chorus:** **Rate**, **Depth**, and **Wet mix** add moving width and pitch coloration. Use it subtly on chords or more strongly for an obvious effect.
- **Filter:** Choose Low-pass, High-pass, or Band-pass. **Cutoff**, **Resonance**, and **Wet mix** shape the result. Automating cutoff can create an intro or transition.
- **Bitcrusher:** **Bit depth** reduces amplitude precision and **Sample hold** reduces temporal detail. **Wet mix** blends the deliberately degraded sound.
- **Rhythmic Gate:** **Division** sets the tempo-synchronized cycle; **Open fraction** sets how long it stays open. **Depth** sets attenuation between openings, **Beat offset** shifts the phase, and **Smoothing** softens edges.

WORKFLOW & REFERENCE

Mix, route, and automate

Mix directly in timeline track headers

Every MIDI and audio track has **VOL** and **PAN** controls in its timeline header. PAN sits beneath **M** and **S**; **M** mutes and **S** solos the track. The small circle beside the track name toggles its lock. Hover over a control to see its purpose and current value.

Drag VOL or PAN horizontally to hear the change during playback. Hold **Shift** for fine adjustment, or double-click **PAN** to center it. Release to keep one Undo operation; **Escape** restores the starting value. A stationary click or a drag back to its starting value adds no history. These controls keep the sounding instruments running. Option-dragging a mixing control still adjusts the mix; only an explicit Option-drag on the track name exports MIDI.

Locked tracks or song sections and active recording/processing prevent mix edits. A nonempty **Read** automation lane owns its volume or pan value and blocks that manual control independently. Click **A** to edit its lane or turn Read off. Manual fader motion does not record automation.

Edit automation in the timeline

Click **A** in a track header, choose **Show / Hide Track Automation** from **Timeline**, or press **A** while the timeline or a track header has keyboard focus. One track's automation is visible at a time, in place of its clip view. Click A again to return that row to clips. Showing or hiding the lane changes no music and adds no Undo entry. Text fields and other editors keep their own keyboard input.

Click the lane label, or right-click the lane, for **Volume**, **Pan**, existing send/MIDI/plugin lanes, **Draw points**, **Move points**, **Erase points**, curve choices, and **Read automation / Turn automation off**. **Point properties...** on a point edits its exact musical position and value with one Undo. **Open full automation editor...** gives the lane more space; **Add send, MIDI or plug-in parameter...** exposes other targets.

With Draw selected, click to add a point and drag to set its time and value. The first accepted point creates the lane. Drag an existing point to move it; hold **Command** to bypass the timeline snap grid. **Option-click** a point, use Erase, or select the point and press **Delete / Backspace** to remove it. Delete belongs to the automation point while the lane has focus. Release commits one edit and **Escape** cancels an unfinished drag. Locked content and stale project state remain protected. Turning Read off preserves the points and restores the stored manual mix setting.

Read the mixer

Choose **Mixer**. **Master stays pinned on the right** while tracks, buses and returns scroll. Scroll inside the Master strip to reach its lower controls when the window is short. Select a channel, or click its send button, to see its sends in the footer. Each track strip shows the track name, sounding instrument, ordered inserts, pan, fader, mute/solo controls, meters, sends, and output destination. Clicking a name selects the channel. The instrument name identifies the loaded sound; an insert name opens that effect.

Set instrument/pad levels first, then balance channels with the faders. Drag a manual level or pan control to hear the change. Releasing the mouse keeps one Undo operation; **Escape** during the drag restores the starting mix. Returning to the starting value makes no edit. These rules also apply to the timeline track headers, Inspector and floating Channel Rack. Track level ranges from silence to 0 dB; bus/return level can reach about +6 dB. Pan shows **C** for center or **L / R** with the amount toward that side. **M** mutes a track and **S** solos it. Buses and returns have mute controls; bus/return solo is not supported in this release.

Controls remain attached to their channel when tracks are reordered. If a channel, automation lane or plug-in changes while its controls are open, reopen the control instead of reusing the old action. Locked tracks or song sections prevent whole-channel mix and sound changes, including replacing an instrument, changing sampler settings or modifying its effects. Unlock the protected passage before changing a sound that plays across it. Inspecting a control alone does not add an Undo entry.

Accepted parameter edits update the sounding plug-in instance. If a live editor change is rejected because its project state is locked or stale, Sampledex restores the saved sound after the editor callback returns. That recovery rebuilds the playback graph; ordinary accepted parameter edits and manual mix changes keep their instances running.

Check mute/solo and routing if a channel meter moves but the master remains silent. The **Master output** strip displays sample peak, true peak, and momentary, short-term, and integrated loudness. Live Keyboard input uses this same mix path and appears in the channel, bus and Signal Flow meters. True peak estimates peaks between samples; integrated loudness describes the measured passage rather than only the current hit. Measurements restart when the audio graph is rebuilt.

The enabled metronome also contributes to master output measurements. Turn it off when assessing the mix's loudness. Exported audio excludes the metronome.

Manage plug-ins directly in the Mixer

Right-click a loaded instrument or insert slot to open its menu. **Open Plug-in Editor** opens the sounding editor. **Bypass Plug-in / Enable Plug-in** compares the sound without losing its saved settings. **Remove Effect** or **Remove Instrument** unloads that assignment; **Command-Z** restores it. Removing an insert does not remove the channel's instrument, notes, clips or plug-in installation. Instruments stay assigned unless you explicitly remove or replace one.

Effect menus also provide **Move Up** and **Move Down**. Inserts process from top to bottom, so moving an EQ before a compressor can change what the compressor responds to. A first insert cannot move up, and a last insert cannot move down.

Drag an effect slot to reorder it or move it to another track, bus, return or the Master. The upper half of a destination insert means **before**; the lower half means **after**. The insertion highlight shows the proposed position. Drop on the destination's effect-add button to append to its chain, including an empty chain: **Add effect** on tracks, **VST3 / AU** on buses/returns, or **VST3 / AU Effect** on Master. Moving an effect carries its saved settings. Hold **Option** while dragging to copy it instead; the drop cue distinguishes Copy from Move. **Copy Effect To...** in the slot menu copies to the chosen channel without dragging, including a second independent copy on the same channel. A copy gets its own plug-in and automation identities while preserving settings; the source stays in place. Instrument slots do not support this effect-drag gesture.

Press **Escape** during a drag, or release outside a valid target, to cancel. An accepted move or copy creates one Undo operation. A move to the same position makes no edit. Locked tracks or song sections, outdated controls, active recording/processing and a full destination chain can prevent a change. Each chain holds up to eight inserts. Unfreeze a frozen track before changing its chain. Moving or copying between channels is also blocked when the source or destination receives a sidechain send, because changing the insert destination could change its detector signal. Keep the effect on that channel, or deliberately remove/reroute the sidechain first. A rejected move leaves the source effect in place; reopen the Mixer controls after a project or channel change instead of repeating an old action.

Put effects on the Master

Open **Mixer** with **Command-3**. The **Master** strip is pinned on the right. **+ Limiter** adds the stock limiter directly. **+ Stock FX...** chooses another stock processor; **+ VST3 / AU Effect...** opens the effect catalog. Click an insert's name to open its sounding editor. Separate **Bypass** and **Remove** buttons appear under each insert. The insert also supports the Mixer right-click menu and effect-drag controls described above. For a parameter lane, open **Automation > + Parameter... > Master > insert > parameter**.

Track and return outputs are summed, passed through Master inserts, then through the Master fader/pan and final meters. A Master volume automation lane controls that fader; plug-in parameter lanes target the saved insert's stable identity. Master inserts and state are saved in the project. Existing Mix Bus routing is retained, so effects already placed on a Mix Bus still run before the Master.

For a finished stereo delivery, set **Master > Include · finished mix**. For an internal printed stem that will play through this Master again, choose **Exclude · reusable stems** to avoid applying the same processing twice. A bus/return capture is taken at that node, before downstream Master processing. Turning off Master processing for delivery does not remove its inserts from your project.

Adjust an existing send while listening

Select a channel in Mixer, or click its send button. The footer shows destination, amount, **Pre / Post, On / Bypass**, and **Read / Off** automation state. Drag an enabled send's amount to hear it immediately. Release commits one Undo operation; **Escape** cancels the preview, and returning to the original value creates no edit. Bypassed sends retain an edited level for later use. A nonempty Read lane takes precedence: use **Read > Turn Read off** before manually changing its level. **Off** here refers to automation, not the send's separate bypass state. The same menu opens or creates the send's automation lane.

Use **Edit Routing...** in the footer to add a send or change its destination, pre/post position, bypass or other routing topology. These changes remain in the validated routing draft until **Apply Routing**; closing or cancelling it discards unapplied changes. The existing-send fader and its Read-mode menu do not need Apply. Select a wire in Routing to emphasize its path and read the connected channel names. Audio processing uses the same validated routing graph for playback and export.

Mix with Read automation

In the Mixer or Inspector, open **Level** or **Pan** beside the control. The menu offers **Create automation lane** when none exists. For an existing lane, choose **Edit automation lane**, **Turn Read off**, or **Enable Read**. Editing or creating a lane brings the Automation editor forward; use **Command-3** to return to Mixer.

A nonempty Read lane displays **READ** and disables its manual fader or pan control. During arrangement playback, the slider and level/pan readout follow the value actually applied by that lane. For example, an automated -6 dB level is shown even when the saved manual fader level is 0 dB. If no rendered value is available, start playback to inspect the applied value; the Read badge still identifies which control belongs to automation.

Choose **Turn Read off** to hear and adjust the stored manual setting. This preserves the automation points; **Enable Read** restores their playback. An empty or Off lane permits manual mixing. Volume automation affects the level control independently of pan, mute and solo, so it does not disable unrelated controls. A fader drag does not record automation: draw points in the lane for a changing mix.

Route channels and create a group bus

Channel strips show **Output > destination** and either **+ Add Send...** or the first named send destination. A (+N) badge means the channel has more sends. **Output > destination** opens **Channel Routing & Sends** directly. The send button reveals that channel's Mixer send footer; choose **Edit Routing...** there to open the routing sheet.

The **Channel** menu chooses the source you are editing. **Output** is its main signal path after inserts and the channel fader. **Sends** are additional parallel connections. You can stage changes for several channels in this sheet; **Apply Routing** keeps them together as one Undo operation, and **Cancel** discards the draft. New routes and send amounts become audible when you apply them. A project that changed while the sheet was open must be reopened in the routing sheet, so an old draft cannot overwrite newer edits.

1. Open the source channel's **Output** control.
2. Click **+ Group into New Bus**. A new **Group Bus** is created in the draft and that source's output is connected to it.
3. Choose another source under **Channel**, then choose the same bus under **Output**. Repeat for the channels in the group.
4. Click **Apply Routing**. Alternatively, **Group selected tracks to bus** in the arrangement clip menu groups the selected placement tracks directly.
5. Mix the group with its bus fader. Click the bus name to rename it. **+ Stock insert...** adds bundled processing. **+ VST3 / AU...** opens the cached effect catalog for that bus or return: search, select a compatible effect, then press Return or **Add effect**. **Browse VST3...** opens the native file picker and scans the chosen bundle. Click an installed insert to edit the processor you hear.

Use the bus strip's fader, pan and **Level / Pan** automation menus to shape the group. Its name button also provides removal controls. Removing a bus returns its input channels to Stereo Master and removes sends to that bus; Undo restores its routing. Sampledex rejects connections that would create feedback cycles. A locked or frozen source must be unlocked or unfrozen before its routing can change. This also protects a downstream bus or return fed by that source. Unlock protected song sections before making whole-channel routing changes.

Follow audio through the routing

Open **View > Signal Flow / Routing Meters**, **Timeline > Signal Flow / Routing Meters...**, or **Signal Flow** in the mixer master strip. This floating window shows named main outputs, pre/post sends, detector sends, and sampler-pad destinations. Muted and solo-suppressed sources are labeled.

ROUTED IN measures summed connections before a bus's inserts and mute. **OUTPUT** measures the channel after inserts, fader and pan. **SIDECHAIN** measures the separate detector feed; a moving detector meter proves that signal arrived, while the compressor's gain-reduction display shows its effect. Ordinary instrument tracks generate their own audio, so their routed-input meter can be silent while their output moves. Peak readings fall at 24 dB per second to keep short drum transients visible.

The **Meters** view follows the sounding graph, including isolated Pattern playback and AI Before/After audition. **Wires** shows the editable project connections. **Back to Timeline** returns to editing without changing music or Undo. The mixer and channel rack meter by stable channel identity; bus and return strips have stereo output meters.

OVER indicates a level above digital full scale. Reduce levels or use a suitable limiter before delivery. Internal routing and float export retain headroom above full scale; physical device output is limited to -1...+1. Valid sample levels below full scale are not attenuated by that protection.

Routing commands protect locked source tracks. Removing a bus also checks its dependent track outputs, sends and sampler-pad routes; unlock the affected track before changing its signal path. Reapplying an unchanged output/send does not add an Undo operation.

Connect a send with wires

Open **Signal Flow / Routing**, then select **Wires**. Tracks, buses, returns and Master have named cards. The right side of a source card has separate **Output**, **Send** and **Sidechain** ports; the input is on the destination's left.

- Drag **Output** to a destination to change the main path.
- Drag **Send** to a return or bus to add a parallel path.
- Drag **Sidechain** to a compressor's channel for a detector feed.

Release on a valid destination to commit one routing edit. **Escape** cancels a drag; feedback connections are rejected. Open a card or its connection to inspect the routing/send settings. The same saved routes appear in channel-strip send controls. Use **New Shared Reverb** or **New Shared Delay** when a ready-to-use return is easier than building one from scratch.

Separate a drum kit into editable parts

Select a supported Sampledex Drum Synth, AI Synth in Drum mode, or sample-based Drum Rack. Choose **Separate Drum Parts to MIDI Tracks** from its arrangement/Steps menu. Review the occupied pads and names, then **Create Editable MIDI Parts**.

The original kit becomes the shared instrument owner and group. Its child tracks hold separately editable pad notes and receive individual pad audio from that one instrument. Edit the shared kit's instrument to change

sounds. Child levels start at unity; their individual inserts and sends can be added normally. Recorded MIDI controllers feed the shared instrument and can affect the whole kit. Author MIDI CC/pitch-bend automation on its owner; child volume, pan and effect automation remain independent. Record new notes on a named pad child, rather than the inactive source owner. The original kit effects, sends and automation run once on the combined group, preserving cross-pad choke behavior.

Original placements are retained as inactive source backups to prevent double triggering. **Restore Original Kit MIDI...** restores them and removes the separated child tracks after its review. Their pattern variations remain available. One Undo can restore the conversion or restoration. The 64-track limit and locks still apply.

Use the audio-rendering alternative when you want printed parts, including when a third-party stereo instrument cannot expose independent editable pad outputs. Splitting a mixed stereo recording into isolated drums is a different operation; this feature works from the kit's MIDI notes and sounding outputs.

Add shared reverb or tempo delay

1. Click **+ Add Send...** or the named **Send >** button on the track's strip, then **Edit Routing...** in the Mixer send footer.
2. In **Channel Routing & Sends**, choose **+ Add Send... > New Shared Reverb · ready to use** or **New Shared Delay · tempo synced**. This creates the effect return and connects the send in one step. The original channel output stays connected.
3. Adjust the send's dB slider. The initial amount is about -14 dB; far left is silent, 0 dB is unity, and the maximum is about +6 dB. Click **Apply Routing** to hear the result.
4. To share that effect with another track, open its routing controls and choose the existing named return from **+ Add Send....** Adjust each track's send independently.
5. In the Mixer, use the return fader for the overall effect level and click its insert to edit the effect. New shared effects are fully wet. The delay follows the project tempo; its division can be changed in the effect editor.

Each send row identifies its destination, dB level, enabled checkbox and **Remove** button. **Post-fader · follows level** is the default for shared effects: lowering the channel also lowers its send. **Pre-fader · independent** takes the signal before that fader; both modes still respect channel mute. A **Detector >** label identifies a sidechain feed, which does not add audible signal to the receiving channel.

A nonempty Read automation lane disables the send's manual level slider and labels it **READ automation controls level**. The dB amount shown there is the stored manual baseline; use the Automation editor for the changing level, or turn its lane Off to adjust a fixed amount. Removing a send preserves its authored automation as an unresolved target; Undo restores the original connection and identity. Adding a connection that already exists does not create a second copy; edit or enable its existing row instead.

Duck a bass from a kick

1. Put a Sampledex Compressor on the bass track.
2. Open the kick track's send controls. In **+ Add Send... > Sidechain detector only**, choose the bass track.

3. The new row is labeled **Detector > bass name** and defaults to a pre-fader, 0 dB detector feed. Click **Apply Routing**.
4. Play the phrase. Open the bass compressor and adjust threshold, ratio, attack, and release while watching gain reduction.

The detector controls the compressor; it does not mix the kick directly into the bass output. If a whole drum kit feeds the send, every audible part of that source can affect the detector. Use an isolated kick source or a routed sample-rack pad when only the kick should trigger it. Routing compensates reported processor latency across converging paths; a plug-in that changes its latency can require an audio-engine reload.

Draw automation

1. Choose **Automate** or **View > Automation**, or press **Command-6**.
2. Use **+ Volume** or **+ Pan** for the selected track, or **+ Parameter...** to choose a track/bus, an existing send, MIDI CC/pitch bend, or a stable exposed plug-in parameter. Choosing an existing target reveals its lane.
3. Choose **Draw** and click empty lane space to add a point, or drag an existing point. Its horizontal position is song time; its height is the parameter value. The view follows the timeline's visible range. **Move** selects/draggs existing points without drawing; **Erase** removes clicked points.
4. Hold Command while dragging to bypass time snap. Option-click a point or use **Delete point** to remove it. Escape cancels an active drag. **Point...** opens exact bar position and value: gain uses dB, pan/pitch bend/plug-in values use percent, and MIDI CC uses whole numbers 0-127.
5. The **Linear / Hold / Smooth** selector sets the selected point's outgoing transition, or the default for new points when none is selected. **Lane tools > Linear ramps / Hold values / Smooth curves** applies that curve to every point in the lane.
6. Use **Read / Off** to toggle playback. Off retains the points without applying them. **Lane tools > Copy visible range** and **Paste at range start** reuse an automation passage in the visible arrangement range.

Shapes offers fade in/out, quarter-note ducking, eighth-note pulse, and pan/parameter sweep. A shape replaces automation within the currently visible arrangement range; zoom/scroll to that range first. One Undo restores the previous lane. Quarter-note ducking is a drawn repeating envelope; use a compressor with a sidechain send when ducking should respond to the actual kick signal.

Automation is drawn explicitly; recording a MIDI take does not record plug-in-knob movement as automation. An unresolved plug-in/send target keeps its stored data. Restore the original target instead of assuming the lane will map to a different effect. Each completed point edit is undoable.

Freeze an instrument to reduce CPU load

Select its track and choose **Freeze / unfreeze selected instrument** in the arrangement clip menu. Freezing prints the instrument and a release tail to audio, preserving the original MIDI, instrument state, and routing for restoration. Track mix controls, inserts, and sends remain available on the printed track. Select the frozen track and use the same command to unfreeze; those mixer edits carry back to the restored source.

Use **Cancel freeze** to abandon an in-progress freeze. A sample rack with separate pad outputs must be bounced through its routing rather than frozen as one instrument. Freeze is for releasing instrument CPU while retaining an editable source; use Bounce when you want files or explicit dry/wet delivery choices.

WORKFLOW & REFERENCE

Bounce loops, stems, and complete songs

The top-bar **Export** menu and **File > Export / Bounce** offer four delivery actions. Each shows the captured **Source, Range, Output**, file format and a summary before you choose a destination. **Advanced** opens sample rate, tail, insert processing, shared returns, sidechains and Master options.

An export captures the current source. Later editing does not rewrite a job already in progress. Exporting files leaves MIDI, audio, instruments, patterns, Mute/Solo and Undo history unchanged.

Export a complete stereo mix

1. Choose **Export Song...**, or press **Command-Shift-E**.
2. The source is fixed to **All tracks · current Mute / Solo mix**, the range to **Entire source**, and the output to **One stereo mix**. This uses the full arrangement even while you edit a few notes or play a pattern.
3. Choose **WAV · 24-bit PCM**, **AIFF · 24-bit PCM**, or **WAV · 32-bit float**. In **Advanced**, review the sample rate and tail. Song export starts with instrument/inserts, shared returns, sidechains and Master processing included, plus a two-second tail.
4. Click **Choose destination...**, set the file name and location in the native macOS Save panel, then click **Export**.
5. Sampledex renders the instruments and audio directly and reveals the file in Finder. You do not need to create audio tracks first.

All tracks honors current track Mute/Solo. Explicit selected-source delivery renders those sources independently of other tracks' Solo and of the selected tracks' Mute. Confirm the source names and range in the summary.

Export a loop, mixed clips, or selected notes

Choose **Export Loop / Selection...** A focused timeline selection can contain both MIDI placements and audio clips, including clips on different tracks. They are captured together; overlapping clips you did not select do not become audible in the export. Selection bounds run from the earliest selected start to the latest selected end, retaining exact audio edges.

A focused selection in **Piano** or **Steps** exports only those source-pattern notes. A delivery captures one editor's selection: source-pattern notes and arrangement clips are separate choices, while timeline clips can mix MIDI and audio. Note-selection bounds run from the first selected start to the last selected note end. The file uses the same local source timing and pitch as Pattern playback. Automation uses the selected placement's source reference; an unplaced source uses song start. This differs from exporting a cropped, looped or transposed arrangement placement: select that placement in the timeline when you want its arranged performance.

With no focused clip or note selection, the action starts from the playback loop. In Pattern mode this is the active source pattern; in Song mode it is the arrangement loop. Review **Source** when you want all tracks,

selected tracks or the active pattern instead.

Loop delivery starts with **Exact range · no tail**. An exact loop ends at that boundary. If the last note release or echo should continue, open **Advanced** and add a two- or ten-second tail. Test the exported loop at its intended tempo.

Export aligned stems

1. Choose **Export Stems....** Its output is fixed to **Separate aligned stems**.
2. Review **Source**. The captured clip/note selection, active pattern, selected track headers or all tracks can define the batch. Select **Entire source** for full-song track files, or **Playback loop** for the active range.
3. Choose one file format and, under **Advanced**, one sample rate, tail and processing policy for the batch.
4. Click **Choose destination...** and choose a containing folder. Sampledex creates a new delivery folder with the aligned files and **Bounce.txt**.

All stems in a batch use one common start and the same frame count, including silence before a selected part enters. A partially selected track includes only its chosen clips in its audible stem. Required sidechain detectors remain available to the processors without being added to the audible mix. Shared returns include the selected source's contribution.

A combined selected mix cannot use the same track both as a partially selected audible source and as a different, full-content sidechain detector. Sampledex rejects that request rather than silently changing its ducking. Choose separate aligned stems, select every clip on that detector source, use a dedicated detector track, or turn off **Sidechains** in **Advanced**.

The **Quick format presets** submenu retains the earlier named WAV/AIFF song, all-track stem, selected-track stem and active-pattern-loop actions. Their source/range presets retain their established behavior. **Advanced routing export...** in that submenu also offers named bus and return outputs, captured after the selected node's fader and before downstream/Master processing. Use separate node files for nested buses to avoid counting shared audio twice.

WAV and AIFF 24-bit PCM require a mix level that avoids clipping. **WAV · 32-bit float** preserves values above full scale for later mixing. Files are not automatically mastered or loudness-normalized. Shared dynamics and nonlinear processing can make separately rendered stems sum differently from one combined mix.

Choose processing deliberately

- **Instrument and inserts** includes insert processing. **Instrument only** removes inserts and, for track sources, bus/send processing. It still renders the instrument, fader and pan; it does not export MIDI.
- **Shared returns** includes or excludes the selected source's contribution to shared effects.
- **Sidechains** includes or excludes detector inputs. Excluding them changes triggered effects such as bass ducking.
- **Master** includes the final inserts, fader, pan and automation for a finished mix. Exclude it for reusable stems that will return through the same Master path.

- Sample rate and tail apply consistently to the entire batch. Internal audio retains float precision regardless of the selected file format.

Print audio back into the project

Choose **Bounce Into Project...**, review the captured source and range, and click **Add audio tracks**. MIDI notes, linked patterns, placements, sounds and existing audio remain intact. The new audio is unmuted, selected and visible in the timeline, and playback switches to Song. It joins any active Solo group so it remains audible.

The summary identifies the insertion position. For source-local notes it maps through the active placement's source offset; an unplaced pattern uses song start as its reference. A source window that would insert before the arrangement cannot be added there: select an appropriate placement or export a file instead.

Adding audio layers it over the originals. **Mute source tracks after adding audio** appears only for this internal action and starts off. Enable it deliberately when you want to hear only the new render. Mutes apply only after the entire bounce succeeds, and Undo restores the exact previous project in one step. Bounce never deletes source MIDI.

Cancel a rendering job from its activity control, or press **Escape**. Cancellation leaves existing destination files and the source project unchanged, and removes unfinished files/folders. If the project changes before an internal bounce can be applied, Sampledex rejects the stale result rather than replacing different music.

Join clips or combine tracks

Select MIDI placements on the same track, right-click, and choose **Join Selected MIDI Clips**. The new independent pattern materializes the selected audible clip windows, including source offsets, repeats, transposition, overlaps, controllers and gaps. Other placements that referenced the original patterns stay unchanged. Original source patterns remain available.

For audio on one track, **Join Audio Clips** uses recoverable consolidation. It retains source history and float precision, with a render rate at least as high as every selected source. Use **Revert last audio processing** or Undo to restore the original clips.

Render Selected Clips to One Audio Stem... prints a selected passage. **Combine Selected Tracks to One Audio Stem...** renders those channels together through the graph, including their interactions and chosen processing. Choose separate stems when you need one file per source. Rendering MIDI keeps its notes and instrument; it does not replace them destructively.

Export MIDI for another instrument or DAW

Open **File > Export / Bounce** or the top-bar **Export** menu to choose a MIDI export scope.

The export menu includes **Complete song MIDI...**, **Synchronized MIDI stems...**, **Selected track MIDI...**, and selected-section choices that retain original position or start at bar one. MIDI carries notes/controllers and musical timing rather than rendered instrument sound. Audio tracks are omitted; use WAV or AIFF for recordings or audio clips. Internal tracks do not have to share the sixteen-channel limits of one MIDI port, so MIDI export handles its routing separately.

Hold Option while dragging a MIDI track name to Finder or another DAW to export that track from the common song origin. A normal track-name click selects; Option-dragging a MIDI arrangement region instead duplicates music inside the song.

WORKFLOW & REFERENCE

Edit audio clips with timeline tools

Audio timeline tools operate on waveform clips, including imported recordings and printed MIDI stems. Choose an audio lane or **Audio clips**; the compact tab is **Audio**. Right-click a waveform for **Audio clip editing** and its **Clip tools** submenu. These tools are separate from the piano roll's note tools.

Select, move, and duplicate

1. Choose **Select · direct handles**. Click a waveform to select it. Command-click adds/toggles clips; Shift-click selects a range between clips. Dragging empty audio-lane space creates a marquee and time range. Grouped clips select together.
2. Drag the clip body to move the selection in time. Drag vertically to another existing audio lane to change the destination track and its processing. Every selected clip must land on a compatible, unlocked audio lane; relative lane offsets are preserved.
3. Hold **Option** when starting a body drag to duplicate the selected clips instead of moving the originals.
4. Hold **Command** during the drag to temporarily bypass time snap and magnetic snapping. Release to commit one undoable edit; press Escape before release to cancel.

The audio clip menu's **Mix overlapping clips** allows overlaps to sum. **Prevent new overlaps** rejects an edit that would create a conflicting overlap. Neither is a ripple or overwrite mode. A group with an incompatible or locked destination is rejected as a whole.

Trim an edge or reveal retained source

With **Select · direct handles**, hover the left/right clip edge for a resize cursor, then drag it. Trim changes the source window; it does not time-stretch the audio. Extend a trimmed edge to reveal retained source audio again. It cannot extend beyond the available source or create an empty clip.

For a tiny clip, zoom in with timeline **Time** or choose the explicit **Trim** tool so you do not have to catch a narrow handle. A tiny clip retains a body target for moving. Trim affects the clicked clip, even if other clips are selected.

For exact values, select the clip in **Audio clips**, enter **SOURCE OFFSET · SECONDS** and **LENGTH · SECONDS**, then click **Apply trim**. Change **START BAR** and click **Move clip** for exact musical placement. These commands use the selected clip, not every selected waveform.

Fade in, fade out, and crossfade

1. With **Select**, drag a directional handle at the top of an audio clip to change its fade length. The rising handle controls fade-in; the falling handle controls fade-out. When they meet, the fade-out handle moves below the fade-in handle so you can still grab either one. **4** selects the dedicated Fade tool.
2. Hold **Option** for tenfold fine adjustment. Fade dragging is continuous, independent of the musical snap grid, and the status line shows the duration in milliseconds and current curve. Release commits one Undo

operation; Escape cancels.

3. Right-click the selected audio clip(s) and choose **Fades...**, or click **Fades...** in the Audio panel. Set each end's duration in **milliseconds** and choose **Linear**, **Equal power**, **Slow**, or **Fast** independently. The graph previews the gain envelope. **5 ms de-click** adds a short linear fade to that end; **Remove both fades** drafts zero durations. **Apply** commits; **Cancel** leaves the project unchanged.

4. For several selected clips, blank fields and **Mixed / unchanged** keep each clip's existing setting. Changing only fade-in leaves every fade-out intact. The preview shows the first selected clip; the maximum duration is limited by the shortest clip. A locked or invalid clip prevents the entire edit.

5. To crossfade, overlap two clips on the **same audio track**, select both, then right-click > **Crossfade selected pair**. Sampledex sets the outgoing fade-out and incoming fade-in to equal-power curves across the overlap, keeping their outside fades. One Undo restores both. Audition the transition; correlated material can still get louder. Reapply after moving or trimming either clip: this creates editable fades, not a continuously linked crossfade.

Fades never rewrite the source audio. Overlapping fade-in/out regions inside one clip multiply. Each fade must fit its clip; reduce a fade before trimming or splitting away the length it requires. Very short clips retain their move target; use closer zoom or **Fades...** for exact editing. The original seconds fields and **Apply fades** remain available in Audio clips, and the legacy **Fade curves** menu applies one curve to both ends.

Gain, slip, repeat, split, and erase

- **Clip gain:** drag the top-center gain grip vertically with Select, or choose **Clip gain**. Up increases gain; down decreases it. The preview displays dB. Clip gain occurs before track processing and is different from waveform display zoom or the channel fader.
- **Slip source:** choose the tool and drag horizontally. The audio inside the clip moves while its arrangement position and duration stay fixed. The retained source must cover the new window.
- **Loop / Repeat:** drag Select's bottom-right repeat handle, or choose the explicit tool and drag. Extending creates separate repeated clips and can end with a partial copy. Dragging inward trims the clicked clip. One gesture can add at most 256 repeats.
- **Split / Razor:** click an interior position to split the clicked clip immediately. **B** selects this tool when the audio canvas has focus. **Split selected clips at edit cursor** acts across the selected clips at the cursor; Command-T invokes it.
- **Erase:** click a waveform to remove that clip immediately. Use **Delete selected clips** or Delete/Backspace to remove the selected group. Undo reverses an immediate split/erase.

Move-body gestures affect the selected group. Direct trim, fade, gain, slip, repeat, and stretch gestures affect the clicked clip. The gain and repeat handles appear only when the clip is wide enough; explicit tools or closer zoom are useful on short clips.

Make an audio loop follow the project BPM

Use this when an imported WAV loop should fit the grid and stay in time as you change the transport BPM. The source tempo must describe the recording itself. Sampledex does not guess or detect that tempo automatically.

1. Select the audio clip and open **Audio clips**, or choose **Tempo sync / Fit loop...** from its timeline context menu.
2. Enter the recording's original **Source BPM** (20-400), then enable **Follow tempo** or choose **Set BPM**. For example, set Source BPM to 90 for a loop recorded at 90 BPM, even if your project is at 120 BPM. Both actions apply the entered source tempo and enable following.
3. If you know its musical length instead, choose **1 / 2 / 4 / 8 / 16 bars** and click **Fit loop**. Use the complete intended loop: choosing four bars for an eight-bar recording changes its phrasing and playback rate.
4. Choose **Snap start** to align the clip's beginning to the current timeline snap grid. This adjusts placement, separately from its tempo or length.
5. Play in **Song** mode. Change either the transport LCD BPM or piano-roll BPM and press Return. Following audio keeps its musical length as the project tempo changes, with pitch-preserving processing.

These controls act on every selected audio clip. Set BPM assigns the same source BPM to each, and Fit loop assigns the same bar count to each. Select clips separately when their source tempos or intended lengths differ.

Wait for processing to finish before judging the new timing. The song and the previous audio remain intact until the complete result is ready. Escape cancels a pending operation; a stale or unsuccessful result is not applied. Undo restores a successful tempo or fit edit. Large stretches can affect transients and texture, so audition the result in the mix.

The project retains the immutable original source and its musical mapping alongside the latest rendered audio. Repeated BPM changes render from that retained original instead of repeatedly stretching an already stretched result. Saving a portable project includes both sources, including retained processing history. Moving the saved package does not require the original WAV folder. Reopened projects prepare any outdated render before playback.

Fixed recordings remain useful for one-shots, freely timed vocals, ambience and material that should retain its duration in seconds. Turn Follow tempo off for this behavior. Older projects open with their audio fixed until you explicitly enable following or fit a loop.

Stretch timing while preserving pitch

1. Choose **Stretch · preserve pitch**, or hold **Option at an edge** while using Select.
2. Drag the left or right edge to the new timing boundary. The opposite edge stays fixed. Read the preview, then release.
3. Wait for the local audio processing to complete and audition the result. Undo restores the previous source; **Revert last audio processing** can restore retained processing history later.

Stretch supports half to twice the current duration and requires enough source frames. Very short material can be rejected. Spectral stretching may introduce artifacts, particularly on complex transients; compare the result rather than assuming it is transparent. This is an explicit duration edit. For a loop that should track future project BPM changes, use **Follow tempo** or **Fit loop** above. These controls use a source BPM or known bar length; they do not perform automatic beat detection or provide warp-marker editing.

Copy, paste, group, and repeat a section

- **Copy clips / Cut clips** use the audio clipboard. Command-C/X do the same when the audio canvas has focus.
- Click the intended edit position and select the first destination audio lane, then use **Paste clips at edit cursor** or Command-V. If a selected time range is active, its beginning is used. All copied lane offsets need matching existing audio tracks.
- **Select all audio clips** or Command-A selects the audio clips. This is separate from selecting MIDI placements.
- **Group clips** / Command-G makes clips select together. **Ungroup clips** / Command-Shift-G releases that grouping.
- **Repeat selection once** / Command-D places one repeat after the full selected extent. **Duplicate after** in the Audio clips panel duplicates its chosen clip immediately after that clip.
- **Rename clip...**, **Clip color**, **Mute clips**, and **Lock clips** organize and protect the selected material. Clip mute is separate from channel mute.

The audio clipboard is internal to Sampledex. Copying clips does not create a WAV on the system clipboard; use Bounce/Export for portable rendered audio.

Normalize, consolidate, and restore processing

Normalize to -1 dBFS adjusts the audible sample peak, including clip gain and fades, to the target. A fixed clip bakes its gain, fades and reversal into derived audio, then resets those baked controls. A tempo-following clip keeps its musical mapping and editable gain, fades and reversal; normalization scales copies of its retained source and current render. Later BPM changes use that normalized source, while processing history retains the prior source for Revert. Normalization does not measure or equalize musical loudness, and it cannot normalize complete silence.

Consolidate clip processing / Join Audio Clips combines selected clips from one audio lane into one stereo float source at the current project timing, at the highest selected source sample rate or 44.1 kHz, whichever is higher. It includes their gaps, overlaps, clip mutes, gain, fades, and reversal. The consolidated clip has fixed duration: it does not inherit tempo following. Use Set BPM or Fit loop explicitly if the resulting recording should follow future tempo changes. The track's fader, pan, and insert effects stay live; use Bounce/Export when those must be printed. Consolidation supports up to 256 clips in one operation within the audio limits.

Revert last audio processing restores the latest retained processing state. Reverting a consolidation can restore its original multiple clips, including each clip's tempo-follow setting and original source mapping. Source history is bounded; save project versions when you need long-term alternatives rather than relying on

unlimited per-clip history.

While stretch, normalization, or consolidation is running, Escape or **Cancel applying audio processing** abandons applying the result. Computation already underway may finish in the background, but a cancelled result does not replace the project. Editing the project before processing completes also invalidates that result. Original sources and completed project edits remain intact.

WORKFLOW & REFERENCE

Import music and record optional takes

Mouse editing is sufficient to build a beat. The following routes let you bring in existing performances or record when wanted.

Import editable MIDI

1. Choose **File > Import > MIDI as editable tracks...**, press **Command-Shift-I**, or use **+ Import MIDI**, and select .mid/.midi files.
2. Leave **Destination** on **Add new editable MIDI tracks** to preserve existing tracks.
3. Set **Start at bar**. Enable **Use selected instrument and effects for melodic tracks** if the selected sound should be reused. This is off by default for a drum source so pitched MIDI does not accidentally trigger a kit.
4. Import, inspect the new tracks, then edit their notes or bounce them to audio. Song length extends if necessary within the supported limits.

The project retains its current tempo/key choices. Imported CC and pitch-bend data travel with the imported material. **Replace selected part (locked import)** is an explicit replacement path for one file; its notes are protected with locks, so unlock the material before editing. Invalid or oversized imports leave existing work unchanged.

Import audio clips

Choose **Import Audio Files...** from a track-header or blank-timeline context menu, **Timeline** or **Part**. **File > Import > Import Audio Files...** opens the same file picker. Select one or several files: each file creates an independent new audio track at the indicated start, preserving existing tracks. The menu uses the clicked timeline position or current edit/playhead position; the picker displays its starting bar.

You can also drag local **MP3, M4A, WAV or AIFF** files from Finder onto the timeline. The horizontal drop position determines their common start, snapped down to the current timeline grid. Each file gets its own new track even when dropped over an existing track. The arrangement extends to include the complete imported clips.

Import accepts nonempty, non-DRM mono/stereo audio at **8-192 kHz**. Each source must fit **ten minutes** and **256 MiB of decoded float audio**; the input file must also fit 256 MiB. A compressed MP3/M4A file can be small on disk and still exceed the decoded limit. The complete project remains limited to **64 tracks, 4,096 bars**, ten minutes of playback and its retained-media budget. Decoding retains float precision and headroom; importing a sample for a MIDI instrument remains a separate destination.

Follow project tempo · preserve pitch is off by default, so recordings keep their duration. Enable it for a loop that should follow the song tempo, then enter its original **Source BPM** (20-400), or choose **Fit to 1 / 2 / 4 / 8 / 16 bars**. A bar-count choice ignores the BPM field. The initial BPM value is the current project BPM, not an automatic tempo estimate. These options apply to every file selected in that import; Finder drops keep fixed timing.

Files decode and optional tempo processing runs in the background. The complete batch commits together as one Undo operation when ready. Press **Escape** to cancel applying an import. A failed file, exceeded limit, cancellation or project change discards the whole pending batch, leaving existing music unchanged; decoding already in progress may finish in the background.

In **Audio clips**, select a clip and edit its placement, source offset, length, fades, lock and tempo behavior. Use **Source BPM > Set BPM** or a known bar count with **Fit loop** to establish correct timing, and **Snap start** to align its placement. Follow-tempo clips retain musical length when project BPM changes; fixed clips retain seconds. Timeline tools still move, trim, slip, stretch and fade clips, and retained source material remains available for nondestructive trims. See [audio clip tempo controls](#).

Record MIDI with Live Keyboard

Live monitoring uses the arrangement's sounding instrument, inserts, buses, sends, sidechains, automation and output device. Opening the keyboard does not create another instrument or change the hardware buffer. Manual level, pan and mute changes reach the same mix smoothly; Read automation and solo apply to live input too. Finish an active recording take before making mixer edits.

The keyboard follows the current **Pattern** or **Song** playback context. Recording switches to Song. If the selected channel is frozen or absent from the active playback context, monitoring reports that condition instead of playing a different instrument. Physical MPK held-key playing combined with fader dragging has not yet been verified for this release.

1. Connect the Akai MPK mini with a USB data cable. Select the MIDI track whose sound you want to play, then open **Live keyboard** or press **Command-K**. Choose a synth, keys or 808 track for pitched playing; choose Drums for pads.
2. Check the **MIDI input** menu. Select the MPK entry shown by macOS, which may include a model name such as **MPK mini play**. Sampledex remembers your choice. With no saved choice, it selects an available MPK input, or the sole connected input; with several other inputs, select the one you want. **Computer keyboard / mouse** is an explicit choice that disables external MIDI input.
3. Play a key and watch the connection, incoming-note status and channel/bus meters. The display identifies received notes and velocity, helping distinguish an input problem from a sound or volume problem. Incoming MIDI plays the selected track through its full mix. Matching the controller's channel to the DAW track is not required.
4. Move the song playhead to the desired start. Enable **Click: on** for a metronome, then press **Record take**. Recording uses **Song** playback and suspends looping. It records the selected sound as an independent take; selecting another track during capture does not redirect that take.
5. Perform, then press **Finish take** or Stop. **Finishing take...** waits for the audio callback to retain the final notes and releases. A new independent pattern and placement appear on the armed track, with the recorded notes open in the piano roll. The pattern covers the recorded span, including performances longer than four bars. Existing linked patterns remain intact. **Undo** removes the completed take; **Redo** restores it.

The take stays on its sounding channel, retaining the instrument or sampler, plug-in settings, inserts, level, pan, output, sends and automation. It has its own pattern and placement, so editing its notes does not change the original pattern. Recording onto an existing channel works even when the project already has 64 tracks.

Save the project to retain the recording and collected sampler media; use **Bounce / Export...** when you want an audio stem.

Capture includes note pitch, timing, velocity and audible MIDI controller changes. Live sustain is folded into recorded note lengths so one input's pedal cannot sustain unrelated notes from another input. Pitch-wheel messages become **Pitch bend** automation on the armed track. Pitch automation uses arrangement time: when moving or repeating the take's MIDI placement, edit the corresponding automation range too. A controller-only performance can also be retained. Nonempty Read automation owns its target; a competing live controller does not override it.

Note-only overdubs can layer existing unlocked notes. Channel-wide controller and pitch-bend changes need more care: conflicting existing notes or automation can make an overdub ambiguous. Sampledex retains that take and explains the conflict instead of overwriting existing music. Pending takes can be archived in **Project History > Unplaced takes** when changing projects. Locked or changed sound paths also retain the take for recovery.

MPK knobs send MIDI controller data. A knob affects sound when the selected instrument responds to that CC or provides a matching MIDI Learn assignment. Recording a knob does not automatically map it to an arbitrary VST/AU parameter. For direct plug-in parameter automation, use the DAW's explicit automation tools. Use **All notes off** if a played note keeps sounding.

Aftertouch, channel pressure and program changes reach compatible instruments live, but are not stored in recorded patterns in this release. Finishing such a take reports that limitation. Save the intended instrument preset after a program change before relying on subsequent playback or export.

Refresh inputs rescans available MIDI connections. Sampledex also checks for connection changes while Live Keyboard or Live Chord Display is open. If the selected device disappears, the window shows that it is waiting for that input; reconnect it or choose another input. Your saved choice is retained instead of silently switching to a different controller. If the MPK is absent from the menu, check the data cable, USB adapter or hub, then check whether macOS Audio MIDI Setup can see the device. USB MIDI input does not need microphone permission.

For computer playing, select **Computer keyboard / mouse** and use the piano or the key row shown in the window. **Z / X** changes the computer piano's octave. The hardware controller's octave buttons change its transmitted notes independently. Live Keyboard is a separate monitoring window; closing both it and Live Chord Display ends idle monitoring. Finish an active take before ending the session.

See the chord you play

Open **Live keyboard (Command-K)** for the built-in **LIVE CHORD** LCD, or **View > Live Chord Display** for a floating display beside the timeline. Select a MIDI instrument track and choose your USB keyboard through **MIDI input / keyboard....** The chord display itself creates no notes or project edits.

The display follows currently held and sustain-held notes. It names sevenths, ninths, elevenths, thirteenth, altered extensions, suspended, diminished and augmented chords, and slash-bass inversions. Octave doubling does not create a different chord. Project key guides spelling/ranking without changing the played notes.

Some voicings support several valid names: a sixth chord can also be a minor-seventh inversion, and rootless jazz voicings can have several implied roots. **Also** lists alternatives; **Ambiguous voicing** or **Partial voicing** explains uncertainty. Unrecognized note clusters show their pitch names instead of an invented confident chord label. Single notes and intervals remain readable too.

Pedal-held notes remain in the displayed harmony after you release the keys. Releasing sustain, **All notes off**, switching inputs or disconnecting clears the appropriate live state. Instrument release tails and pitch-wheel detuning are not additional MIDI chord notes. The display identifies the keyboard input, not harmony generated internally by an arpeggiating plug-in or an audio recording.

The floating display offers **Timeline** without closing the display. **MIDI input / keyboard...** opens the keyboard controls. Closing one live panel leaves monitoring available while the other is open; closing both ends idle monitoring. MIDI recording remains under **Record take / Finish take**.

Match MPK pads to drum sounds

Pad programs can send different note numbers. Watch the received-note display, then compare it with the MIDI number on the drum sound's pad. The starter drum rack uses these common assignments:

Sound	MIDI note number
Kick	36
Snare	38
Clap	39
Closed hat	42
Open hat	46
Rim	37
Crash	49
Ride	51

Use the loaded kit's displayed numbers as the reference. If a pad is silent while received-note status changes, it may be sending a note with no assigned drum sound. Change the controller's pad assignment to a sound's MIDI number, or choose a kit that uses the incoming pad-note numbers. Recording preserves the notes actually sent by the controller; Sampledex does not silently remap every pad to a different sound. Octave names vary between instruments, so use MIDI numbers when comparing mappings.

Record microphone audio

1. Add/select an **Audio track** and position the playhead.
2. Press **Record take** and grant macOS microphone access if asked.

3. Perform, then press **Finish take** or Stop. The recording becomes a new audio take track with editable clip placement.

This microphone recorder uses the system input and captures mono 44.1 kHz/16-bit audio. It is not a multichannel recording console or an input-routing matrix. Configure the intended system input in macOS. If access was denied, enable Sampledex under System Settings > Privacy & Security > Microphone. A take that cannot be committed is retained and its error explains how to recover it; do not assume a failed save means the captured performance was discarded.

WORKFLOW & REFERENCE

Work with the offline AI coproducer

Open **AI Coproducer** with **Command-J**. **Song**, **Loops** and **Selected Part** have distinct destinations and controls. Instant musical algorithms prepare a starting song or loop; optional written direction and variations use the bundled local runtime. You can keep producing manually while AI prepares a proposal.

Build a song with controls

1. Choose **Song**, then **Create new song** or **Remake current song** deliberately. **Arrange current patterns** uses existing patterns; **Balance Mix** proposes conservative channel balances instead of rewriting notes.
2. Select Trap, Hip-Hop, Boom-Bap, Lo-Fi, House or Techno. Set project **BPM**, one of twelve root keys, and a supported scale. BPM follows the transport's tempo-edit behavior; key/scale guide subsequent generation and do not transpose existing notes automatically.
3. Choose the song length, arrangement profile, density, variation, energy and swing. Enable the desired drum, bass/808, chord, melody and texture parts. A new song defaults to 64 bars.
4. Click **Generate from controls**. Read the named action and review the proposed changes. Use **Before / After** to compare synchronized playback.
5. **Keep** applies the reviewed result as one Undo operation. Creating a replacement song uses the unsaved-work prompt before leaving the current project. **Discard / Cancel** restores normal playback and leaves the project unchanged.

The six profiles use different drum placement, rhythmic articulation and starting sound palettes. Generated songs retain editable MIDI patterns and track instruments. Balance Mix is a starting balance, not audio-aware mastering: use the Mixer, effects, Master processing and your listening judgment to finish the track.

Make one loop

Choose **Loops**, then **Chords**, **Melody**, **Bass**, **Drums** or **808**. Select 1, 2, 4 or 8 bars, genre, swing, rhythm, density, variation and register. Chords adds progression, voicing and inversion; bass/melody can follow a chosen chord pattern.

The destination line states the current compatible track or a proposed new instrument track. New tracks are created only on Keep. Default **Keep variation** creates an independent source for the chosen placement; other linked placements stay unchanged. **Update all linked placements** is an explicit choice. See the Loop chapter for the complete controls and optional **AI Variation**.

Revise a selected part

Right-click a track and choose **AI · Work on This Track...**, or a MIDI placement and choose **AI · Work on This Clip...**, to open the floating Selected Part panel. Its **PINNED PART** badge names the captured track, source pattern, scope and range. Pattern ranges use local bars; whole-track scope uses song bars. Detailed fractional positions use bar.beat.tick. Clicking another track does not silently redirect that request. Use **Use current selection** when you intend to bind the panel to a new target.

Choose **Make variation**, **Add fill**, **Humanize**, **Quantize starts**, **Snap to Scale**, **Simplify** or **Intensify**, and adjust the relevant amount. Choose whether the operation covers the captured placement/pattern or the track. **Change this part's sound...** opens sound controls; **Export this part as a stem...** opens the bounce workflow. Generating or opening these panels does not delete an instrument.

Keep local edits as a separate variation unless a shared-source change is explicitly selected. Notes, tracks and sections that are locked remain protected. A project edit after capture or generation can make the proposal stale; rebind/regenerate against the current source instead of applying old data.

Optional additional direction and safe review

Written direction is optional. Use it for a concrete adjustment such as make the hats sparser, turn the 808 down 3 dB, or a focused musical variation. The local model converts supported instructions into validated edits; it cannot perform arbitrary audio repair, install plug-ins or create recorded vocals. Unsupported requests return an explanation without changing your project.

Before / After is audition, **Keep** is the edit, and **Discard / Cancel** abandons it. Closing a panel stops its preview and restores actual project playback; reopening can retain a pending review. Explicitly switching to another production mode abandons that mode's pending result so Song and Loop proposals cannot be mixed up. Newer edits, missing destinations, cancelled work and invalid outputs cannot silently replace your music.

WORKFLOW & REFERENCE

Controls, full-song drafting and generated sections

Controls in the left sidebar opens the earlier rules-based composition workflow. It provides a written musical direction, reproducible seed and musical settings for a generated arrangement. It is optional: the Browser, linked patterns, piano roll, Steps and Loop Maker are sufficient for building a beat manually.

Use **Advanced project... > Generated first draft** in the new-project chooser when you want to begin with generated sections such as verses and choruses. The section workflow described here applies to projects that already have those sections. A Blank or genre beat template uses patterns and an independent song length; use its pattern commands or **Arrange selected patterns** in the AI panel to develop that arrangement.

Interpret a direction and review pending settings

1. Expand the left sidebar if necessary and click **Controls**.
2. Write a concise direction under **DESCRIBE THE MUSIC**, then click **Interpret direction**. For example, describe a restrained verse, a busier chorus, a tempo or a musical key.
3. Read the mapping summary beneath the button. It shows which supported directions were interpreted; its tooltip provides additional details and any unsupported requests.
4. Review **TEMPO**, **KEY / MODE**, **STRUCTURE** and **REPRODUCIBLE SEED**. The structure choices are **Classic song structure** and **Include a bridge**. Enter a seed using digits only, or click **Repeat** to choose another seed.
5. Scroll to the musical sliders and adjust them to suit the draft you want.

Interpret direction uses a local rule parser. It fills pending controls; it does not start model inference, rewrite the music or change playback on its own. The sliders also remain pending until an applicable composition command uses them. For an immediate tempo change during ordinary editing, use the transport BPM or piano-strip BPM field instead of the Controls tempo field.

The controls describe the generator's musical direction:

- **Energy**: reserved through intense.
- **Rhythmic density**: spacious through busy.
- **Variation**: stable through evolving phrases.
- **Swing**: straight through shuffled timing.
- **Timing tightness**: loose through precise timing.
- **Melodic complexity**: simple through intricate melodic activity.
- **Harmonic complexity**: basic triads through more extended harmony.

- **Motif repetition:** exploratory phrases through more recurring motifs.

The seed makes a rules-generated result reproducible with the same source and settings. A new seed changes the generation choices. A text request for a longer song does not replace the deliberate arrangement-length controls: use the new-project length or the appropriate pattern/section commands to change available space.

Compose song replaces the draft immediately

Compose song applies the Controls direction as a full MIDI recomposition. It is an immediate edit when validation succeeds: there is no Before/After proposal or Keep button for this command. Save a separate project first when you want to retain the current arrangement as another version. **Command-Z** restores the previous project state after a successful composition.

Recomposition rebuilds the generated MIDI performance and chord plan, and resets the tempo map to the chosen base tempo. It retains the project and track setup rather than adding another set of instrument tracks. Existing audio tracks are retained. Following clips keep their musical length and prepare a refreshed render when needed; fixed audio keeps its recorded duration. A tempo change that would make retained audio exceed the song or processing bounds is rejected.

For a generated-section project, the existing section layout is used unless changing the bridge template explicitly selects another layout. Changing that template requires a supported 32-, 64-, 96- or 128-bar arrangement. Keep the current bridge choice for a custom section layout. A failed validation leaves the current music unchanged; read the error and use the pattern tools for a pattern-based arrangement rather than repeatedly applying an incompatible structural operation.

Full composition requires unlocked material. Track locks, note locks, section locks, harmony locks and locked audio clips can prevent replacement. Finish recording before composing. Use the AI Coproducer when you want a proposed variation to review before changing the project.

Refine part follows the current editing context

Select the intended track and click **Refine part**. In the current pattern workflow, this opens the **AI Coproducer** with **Make variation** selected. Its scope defaults to the selected placement, or the active pattern when there is no selected placement. Enter the desired change in that panel, generate a proposal and use Before/After, Keep or Discard as described in the AI chapter. The pending Controls sliders are not automatically translated into that AI request.

For an older arrangement context with no active pattern, Refine part instead uses the rules generator on the selected part's edit range and applies a successful change immediately. That path preserves the existing tempo, key, structure and chord plan; harmonic-complexity changes are reserved for Compose song. It retains locked notes and locked sections, and avoids replacing notes that cross the chosen range boundary. Unlock a locked part first if you deliberately want to refine it.

Use the resulting panel and status message to identify which path you entered. **Refine part** in a pattern project prepares a reviewable AI variation; **Compose song** is the full replacement command. Undo remains available for committed changes.

Manage tracks and their locks

Select a track through its name, the track selector, or a mixer channel name. The **Sound** inspector displays the selected channel's instrument, inserts, pan, level, mute/solo, record and routing controls. **Sound & FX** opens the larger rack. These sound controls affect the sounding track; the Controls sliders describe generation and do not substitute for mixer levels.

Open **Part** for **Add MIDI / instrument part**, **Rename part...**, **Remove part**, **Mute / unmute** and **Solo / unsolo**. The add submenu provides Kick, Snare & fills, Hats & cymbals, Bass, Chords, Lead hook, Pad and Arpeggio roles, plus **Audio track**. A role tells the rules generator what kind of part it is. Browser **Add Drums**, **Add Bass / 808**, **Add Keys** and **Add Synth** are the faster choices when you want their bundled sounds ready immediately.

Lock part / Unlock part protects or releases the selected track for editing. A note can be locked separately through its piano-roll context menu. Unlock the track before changing an individual note's lock. Linked pattern sources may also be protected by a locked placement elsewhere; inspect the placement and source rather than assuming a selected track is the only possible lock.

Removing a part removes its arrangement contribution and associated routing/automation ownership. The command is refused when its protected material would be lost. Keep at least one part in the project, and unfreeze an instrument before removing its linked source or rendered track. Use Mute for a reversible listening comparison and Remove only when you intend to delete the part; Undo restores a successful removal.

Work with generated sections and harmony

Generated projects show colored section blocks above the marker lane. Select a section using its block or the section selector. Double-clicking a section block seeks to its beginning. These structural sections differ from markers: a marker labels one moment, while a section represents a span of the generated arrangement.

Right-click a section for its commands:

- **Audition this section** seeks to the section start and plays. Use **Loop selected section** when you want it to repeat.
- **Lock / unlock section** protects or releases its material. **Lock / unlock harmony** protects or releases the chord plan.
- **Resize section...** accepts 4-32 bars in multiples of four. It regenerates that section's MIDI and moves later sections; it is not a nondestructive MIDI clip trim.
- **Duplicate section** inserts a copy after the section.
- **Move section earlier / later** swaps it with the neighboring section.
- **Remove section** removes that span. At least one section must remain.
- **Replace chord at this section...** changes the section's first chord in the generated chord plan. Enter a root MIDI pitch from 48-71 followed by **major** or **minor**, such as 57 minor. Existing notes remain until an applicable regeneration uses that harmony; the command does not transpose them immediately.

Structural and chord-plan changes are blocked while protected material could move or be overwritten. The older section editor also rejects controller-automated songs, tempo maps with changes, and audio clips that cross section boundaries. Trim or split an audio clip first when that is the reported obstacle. Section resizing/reordering has its own limit of 256 bars. Use linked-clip arranging for ordinary beat development and for workflows that do not fit these generated-section constraints.

For pattern-based harmony, generate or draw a chord pattern and choose it as **FOLLOW CHORD PATTERN** for melody or bass. That is separate from the older generated chord plan. Use **Make selected placement unique** before writing a one-off variation when other linked placements should remain unchanged.

WORKFLOW & REFERENCE

Audio setup and troubleshooting

Choose the output and buffer

Open **File > Audio output / buffer settings...** or **Audio output and diagnostics...** in the Browser. Select an available output device, set **Sample rate (Hz)** and **Buffer (samples)**, then choose **Apply**. Use a rate and buffer the device supports; the hardware may choose its available configuration. **Reconnect** attempts to recover a disconnected/lost device.

A smaller buffer can improve response but gives the computer less processing time. A larger buffer is useful when a dense arrangement or demanding plug-in cannot meet the callback deadline. Note edits should not need a device reset; instrument/routing/device changes can rebuild audio processing. The diagnostics dialog reports graph loads, device starts, processor counts, callback blocks, deadline misses, longest callback, and resident memory.

No sound or the wrong sound

1. Confirm the output device and Mac output volume. Try a bundled sound on a MIDI track.
2. Check track/instrument/pad levels, Mute/Solo, and the output destination. A pre-fader send or separate bus can explain sound that survives a lowered track fader.
3. Check Pattern/Song mode: Pattern plays the active source, while Song plays its arrangement placements. An empty source or a source without a placement can explain silence in the chosen mode.
4. Inspect the named instrument and bypass state in Sound & FX. An active plug-in takes precedence over a saved sampler. Verify the MIDI register or drum-note mapping.
5. Read playback/plugin warnings. Restore missing plug-ins or sample media, then use **Reconnect** or **Reload audio engine** when required.
6. If a browser sound keeps playing, use **Stop preview**; if Live Keyboard has held notes, use its **All notes off**.

Crackles, overloads, or export differences

Check diagnostics for deadline misses, increase the buffer if appropriate, freeze a demanding instrument, and identify unusually expensive or failing inserts. Reduce gain before the stage that clips; a final limiter cannot undo distortion already printed upstream. Compare export with the same Pattern/Song scope, range, Mute/Solo behavior, returns, sidechains, and tail settings. Independently randomized third-party instruments may differ between live and offline instances.

If an exported loop has a cut-off reverb or release, either shorten that sound for a true loop or export a stem tail. New printed audio tracks are unmuted. Check the selected track, playback mode and routing; mute the original source when comparing its printed audio without doubling.

Missing files, plug-ins, or offline dependencies

Save and move the entire .sdxp package, not just its manifest. Packages collect audio clips, sampler sources, slices, and frozen audio. External plug-in binaries and vendor libraries must be installed separately. The built-in sounds, included content, and bundled AI runtime work locally; a third-party plug-in can have its own authorization requirements.

Use **File > Relink missing project media...** for a missing/corrupt package media file. Select the package, then a focused folder containing the original WAV/AIFF files or backup Media folder, and save a new recovered package. Recovery requires checksum-identical audio and preserves the damaged original. Use **Recover autosave** and **Open Project History** for interrupted sessions. Keep named project saves as well as autosave.

Finish an active recording, import, bounce, or processing job before starting an incompatible operation. If a dialog says the destination changed, select the current track/source and reopen it; the stale-operation guard protects edits made while the dialog was open. The project has a 64-track limit, eight inserts per channel, and bounded audio/song sizes. A limit error should be resolved by simplifying or splitting the work rather than repeatedly applying the same operation.

WORKFLOW & REFERENCE

Musical terms and keyboard reference

Source BPM is the tempo of an audio recording before Sampledex adapts it. **Project BPM** is the song's current playback tempo. **Follow tempo** keeps an audio clip's musical length as Project BPM changes while preserving pitch; **fixed audio** keeps its duration in seconds. **Fit loop** assigns a known bar length, while **Snap start** moves its starting position to the timeline grid.

Terms used in the DAW

- **BPM**: beats per minute. One beat is a quarter note; four beats make a bar in this release's 4/4 arrangements.
- **Grid / snap**: spacing used when drawing or moving material. Quantize moves existing note timing toward a chosen grid.
- **Pattern / source**: reusable musical data in local time. A pattern can exist without being placed in the song.
- **Placement / MIDI clip / region**: an instance of a pattern on the arrangement. Linked placements share edits to their source; Make Unique creates an independent source.
- **Track / channel**: the instrument or audio lane and its mixer path. Selecting a track chooses the editing context.
- **Velocity**: a note's MIDI strength (1-127), often affecting both loudness and tone. It differs from the channel fader.
- **Envelope / ADSR**: Attack, Decay, Sustain and Release shape a sound over time. Sustain is a level; the other controls are times.
- **Insert**: an effect in a channel's processing chain. Order changes the result.
- **Bus / return / send**: a bus combines channels; a return commonly holds a shared effect; a send routes some signal to another destination.
- **Sidechain**: a separate signal used to control a processor, such as a kick triggering bass compression.
- **Automation**: time-based changes to a parameter, drawn on a lane. Read plays its data; Off leaves it inactive.
- **Freeze**: a reversible render that reduces instrument processing while retaining editable source information.
- **Bounce / render**: calculate audio from the project. A stereo mix combines the song; aligned stems export separate parts with a common time origin.
- **Tail**: extra time after the musical range for releases, reverb and echoes. A seamless loop may need different tail choices from song stems.
- **dBFS / peak / true peak / LUFS**: digital level, sample peaks, estimated reconstructed peaks, and perceived loudness. Watch the meters while balancing parts; a louder mix is not automatically a better mix.

Application shortcuts

- **Command-N / Command-O**: New project from template / Open project.
- **Command-Option-N**: New Loop Maker project.
- **Command-S / Command-Shift-S**: Save project / Save project as.
- **Command-Z / Command-Shift-Z**: Undo / Redo in the DAW.
- **Command-1**: Arrangement & piano roll.
- **Command-2**: Sound & FX.
- **Command-3**: Mixer.
- **Command-4**: Audio clips.
- **Command-5**: Step Sequencer.
- **Command-6**: Automation.
- **Command-0**: Beat Making layout. **Command-R**: Floating Channel Rack.
- **Command-Shift-I**: Import MIDI as editable tracks.
- **Command-Shift-E**: Open Export Song for a complete stereo WAV or AIFF.
- **Command-J / Command-K**: AI Coproducer / Live keyboard.
- **Command-Shift-P**: Command palette.
- **Command-Option-G**: User Guide. **Command-F** searches when the guide has focus.

Editing shortcuts depend on focus

Click the timeline, its ruler or a track header, then use these unmodified keys. Tool changes do not change the song or add Undo entries. Switching tools cancels a drag still in progress.

Key	Timeline tool
1	Select / direct handles
2	Move
3	Trim
4	Fade
5 or B	Split / Razor
6	Erase
7	Slip source

Key	Timeline tool
8	Clip gain
9	Loop / Repeat
0	Time stretch
P	Paint active pattern on / off (MIDI lanes)

P toggles linked placement painting for the active MIDI pattern; press it again to return to Select. Choosing another timeline tool also leaves Paint mode. The **Paint active pattern** item in the MIDI clip menu shows the shortcut and current state.

Fade, Slip, Gain, Loop and Stretch require an audio lane. Select, Move, Trim, Split and Erase also work on MIDI placements. Toolbar tooltips and the **Clip tools** menus show these keys. The shortcuts leave text entry, the piano roll and the live computer keyboard alone; Command-number workspace shortcuts are unchanged.

Click the intended canvas first. **Command-A/C/X/V** selects, copies, cuts and pastes notes in the piano roll or MIDI placements in the timeline. **Delete** removes that canvas's selection. **Space** starts or pauses playback when the canvas has focus. Text fields keep ordinary typing behavior.

In the piano roll, **Up/Down** changes pitch by a semitone; **Shift-Up/Down** changes an octave. **Left/Right** nudges notes by snap, or one tick with Command. In the MIDI timeline, **Command-D** duplicates selected placements. Timeline marker keys operate on the focused marker.

Escape cancels a gesture still in progress. **Shift-click** or **Command-click** adjusts selection. **Option-drag** duplicates a MIDI note/clip, while Option-drag on a MIDI track name explicitly exports MIDI. Read the individual editor chapters before using modifiers on audio edges, where they perform different operations.

For pointer navigation, **Shift-scroll** moves through time and **Option-scroll** zooms horizontally around the pointer. The Time and Height sliders change zoom; scrollbars move the visible region. View changes do not alter the musical data.

WORKFLOW & REFERENCE

Hover Help LCD

Hover Help LCD explains the control under your mouse in a separate window beside the DAW. It appears by default. Show or hide it through **View > Hover Help LCD**, or press **Command-Option-I**. The LCD and all of its explanations work offline.

Learn a control before using it

1. Move the pointer over a button, slider, menu, note, clip, ruler, drum step or mixer control. You do not need to click.
2. Read its name, the area it belongs to, and what it does. Where available, a separate value line shows the current setting, note information or musical position. A disabled control still explains its purpose and shows **Unavailable**.
3. Rest the pointer over a supported control for its native tooltip, or read the longer explanation in the LCD.
4. Choose **Read in User Guide** to open the corresponding chapter. Some general controls open the guide without a specific chapter.

For segmented controls, the LCD describes the segment under the pointer, even when another segment is selected. For example, hovering **Paint** explains note painting without switching out of **Draw**. The timeline and piano roll explain the hovered musical object or tool target, including clip edges and note velocity areas.

In Studio stock instrument and effect editors, hover a knob, choice, preset command or drum pad for its purpose. Parameters show their current formatted value, such as milliseconds, hertz, decibels or a named setting, when that processor exposes it. Instrument output is separate from the DAW channel fader. The help also identifies settings whose effect requires the Studio engine.

A third-party plug-in may draw its own interface without exposing individual control descriptions. Sampledex displays available labels, tooltips and values; otherwise it identifies the plug-in and explains that detailed control help is unavailable. Use that plug-in's visible labels or manual for those controls.

Keep the explanation beside your work

Drag the LCD's title bar to place it where it suits your workspace. Resize its edges for a larger reading area; long explanations scroll. The panel does not take keyboard focus from your DAW editor.

Moving the pointer onto the LCD keeps the current subject visible, so you can read it or use **Read in User Guide**. Enable **Hold** to freeze that explanation and its displayed value while moving elsewhere. **HELD EXPLANATION** confirms that updates are paused. Turn Hold off to follow the pointer again.

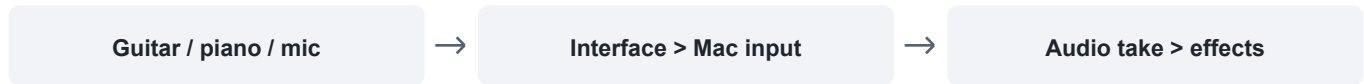
Closing the LCD leaves the project open. Reopen it with **View > Hover Help LCD** or **Command-Option-I**. Sampledex remembers whether you left it visible, plus its window placement and size. If a remembered display is no longer connected, the panel is kept on an available screen.

Hovering is read-only: it does not select a track, draw a note, load a sound, change a parameter, start playback or add an Undo step. Hold freezes the help display; it does not pause the music.

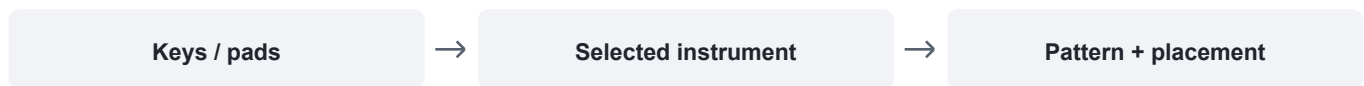
WORKFLOW & REFERENCE

Record guitars, microphones and pianos through an interface

AUDIO



MIDI



Audio: hardware direct monitoring. MIDI: hear the actual software instrument path.

Sampledex offers two different recording paths. Select an **Audio track** to capture actual sound through the Mac's input. Select a **MIDI/instrument track** to capture keyboard notes that play a software instrument. The top **Record take** button chooses its path from the selected track type; it does not ask you to choose the type afterward.

Choose the right path

What you want to capture	Connection and selected track	What you receive
Electric guitar or electric bass	Guitar into an interface's instrument/Hi-Z input; select Audio track	Mono recorded audio, editable as a clip
Acoustic guitar, voice or acoustic piano	Microphone into interface mic preamp; select Audio track	Mono recording of the microphone, including room sound
A digital piano's own sound	Keyboard line output into interface line input; select Audio track	Mono audio of the keyboard's selected patch
Editable piano notes playing a Sampledex/VST/AU instrument	USB MIDI, or keyboard MIDI OUT through a MIDI interface; select MIDI/instrument track	Notes and supported controllers, with an independent pattern/placement

USB is only a connector. A keyboard can expose MIDI, audio, both or neither through a particular socket. Check its documentation. A USB MIDI-only controller such as an MPK mini does not send an audio recording of a piano tone. An acoustic piano needs a microphone unless you use a separate MIDI-equipped system.

Know the recorder before connecting

The audio path records **one mono 44.1 kHz/16-bit take**, using the macOS-selected system input. Sampledex has no per-input channel selector or stereo/multichannel capture, and does not offer software monitoring of that incoming audio through its inserts. It also has no input-level meter, punch range, automatic count-in or take-lane comping. These are current product limits, not settings hidden in another panel.

An interface with many inputs does not make this recorder multitrack. Use your interface's control application, when supported, to present the intended mono source to the system input. A physical input number is not guaranteed to match the signal this system recorder receives. Do a short isolated take before recording the whole performance; if your interface cannot present the required input, this recording path cannot select it for you.

For a true stereo keyboard or stereo piano-microphone recording, capture stereo with a suitable recorder and import the WAV/AIFF, or use a mono source here. Two different mono performances do not recreate one stereo performance. Do not use a passive Y cable to combine powered outputs; use the keyboard's documented L/Mono output or an appropriate mixer/interface routing feature.

Set up the Mac and headphones

1. Connect and power the interface. Install any manufacturer-required driver/control application, then verify that macOS recognizes it. Connect headphones to the interface and begin at a comfortable low output level.
2. Open **Apple menu > System Settings > Sound > Input**, then choose the interface as the input. If it has its own routing software, choose the intended source there. Apple's [sound-input instructions](#) describe the system selection.
3. In Sampledex, choose **File > Audio output / buffer settings....** Select the interface for playback, choose a supported sample rate and buffer, then **Apply**. These are output settings. Start with the working device defaults; 256 samples is a useful MIDI-playback starting point when the hardware supports it.
4. Turn on **Direct Monitor** or the equivalent hardware input-to-headphone mix in the interface. Blend it with DAW playback so you can hear yourself and the song. This direct path bypasses Sampledex inserts. Consult the interface's manual; [Focusrite's direct-monitoring explanation](#) illustrates the principle.
5. Play the loudest part and set input gain using the interface's input meter. Leave headroom; avoid its clipping indicator. Where a calibrated digital input meter is available, peaks around -12 to -6 dBFS are a practical starting range, not a required target. The Sampledex track fader changes playback and cannot repair clipped capture.
6. On the first audio take, allow macOS microphone access. If denied, open **System Settings > Privacy & Security > Microphone**, enable Sampledex, and reopen the app if macOS requires it. This permission also applies to audio-interface input. USB MIDI alone does not need it.

With a microphone, use headphones and keep playback speakers out of the mic's pickup path. If other software also monitors the interface, disable the duplicate monitoring path to avoid an echo or doubled sound. Bluetooth monitoring adds delay; wired interface headphones are preferable for performing to a beat.

Record a first audio test

1. Save the song with **Command-S**. Finish any import, bounce or other recording. Leave room for a new take track within the 64-track limit.
2. Add an **Audio track** through **Part > Add MIDI / instrument part > Audio track**, or select an existing audio track. Name it for the source, such as Guitar setup. Click its track name to select it.
3. Set the song's tempo before the take. Put the playhead at the intended recording start, in **Song** mode, with enough empty song space. Turn the transport **Click** on if you want a timing reference. There is no automatic count-in; start at an earlier bar and leave that lead-in yourself.
4. Click **Record take**. Grant input access if asked and wait for the recording state before playing. Record a few seconds, including a clear transient or short chord.
5. Click **Finish take** or Stop. Wait for capture/import to finish. The new audio take appears on a **new track**, at the captured start position; it is not written destructively over the selected audio track.
6. Mute other parts briefly and listen to the new clip. Confirm that the intended source was captured, both loud and quiet playing are usable, and the take begins where expected. If it is wrong, use **Undo**, correct the hardware/system input and repeat. Save a successful test before the real take.

The finished audio track copies the selected track's gain, pan and inserts, but does not inherit its output/send setup. Check the new channel in **Mixer** and set its output and sends explicitly. Inserts process the recorded clip on playback; they were not printed into the raw input recording. Do not assume an amp simulation on the setup track was heard or captured while recording.

Electric guitar or bass: direct input

Connect the guitar with an instrument cable to an interface input that supports **Inst / Instrument / Hi-Z**. Select that mode. If the input only supports line level, use appropriate equipment such as a DI/preamp according to its manual. A mic, a line output and a passive guitar pickup require different input handling; **Focusrite's input-level guide** explains the distinction.

Tune the guitar before recording, set input gain while playing hard, then follow **Record a first audio test**. Use direct monitoring to hear the clean input. A direct guitar can sound bright or plain; that is the dry capture. Sampledex does not include a dedicated guitar amp/cabinet modeler in this release.

After the take, select the new audio track and open **Sound & FX** with **Command-2**. Add a compatible ARM64 VST3/AUv2 amp/cabinet effect if you have one, or shape the sound with stock EQ, compression, saturation, delay and reverb. Save the effect state with the project. Choose **Bypass** to compare processing; use **Remove** on an effect slot to remove that assignment while retaining the recording.

If you want a hardware amp/modeler's tone in the take, feed a documented recording/line output into a suitable interface input, or mic the amplifier. **Never connect an amplifier's speaker output directly to an interface input.** Follow the amplifier/interface instructions for any load box or recording output. Direct monitoring will hear whatever tone is already present in the incoming signal.

Acoustic guitar, voice or an acoustic piano

Connect a microphone to the interface's mic preamp. Enable phantom power only when that microphone requires it and the connected equipment permits it; follow the microphone/interface instructions. Keep gain low while connecting and setting up.

For acoustic guitar, begin with the microphone aimed near the neck/body junction rather than pressed against the sound hole, then listen and adjust. For voice, use a comfortable distance and a pop filter if available. For an acoustic piano, use one microphone for this mono recorder; place it where the bass and treble balance naturally, avoiding mechanical noise and excessive room sound. Placement is a listening decision, not a fixed DAW setting.

Record a short test at the loudest expected level, play it back, and move the microphone or adjust gain before the real take. The recorded room/reverb and clipping are part of the audio; the DAW cannot turn a poor capture into an isolated instrument automatically. Use one source at a time if you need separate editable tracks.

To layer a second part, keep the first take playing quietly in headphones, return the playhead to the chosen start and record another take. Each successful audio take creates a new track. There is no automatic comping: keep alternate takes on separate tracks, mute the alternatives, and use clip trim/split/move/fade tools to assemble the chosen phrases manually.

Digital piano: record its own sound as audio

Use the piano's documented **L/Mono line output** into an interface **Line** input for a mono recording. Choose the piano patch and any onboard effects before the take because those are part of its audio. Follow the general setup and test-take steps, checking the interface gain with loud two-handed chords.

If the keyboard exposes USB audio, it may appear as a macOS input device. Select it in the system input settings and verify it with a short take; a USB MIDI entry alone is not an audio source. When using its headphone output instead of a line output, follow the manufacturer's cable/level guidance and start with modest output gain.

This path records the actual keyboard tone but leaves an audio waveform. You can trim, fade, move and process it. You cannot change its individual notes with Piano roll or identify its chords with Live Chord Display. To keep individual notes editable, use MIDI instead. If you need the keyboard's full stereo image, import a stereo recording captured with suitable equipment.

Piano or MPK: record editable MIDI

1. Connect USB MIDI, or connect the keyboard's **MIDI OUT** to a compatible interface's **MIDI IN**. Select a **MIDI/instrument track** in Sampledex. Load the software sound you want, such as FM Keys, a sampler piano or a compatible installed piano instrument. FM Keys is a synthesized electric-key sound, not an acoustic grand-piano sample library.
2. Open **Live keyboard** with **Command-K** and select the keyboard/interface port in **MIDI input**. **Computer keyboard / mouse** disables external input, so change that choice when using hardware. **Refresh inputs** rescans connections.

3. Play a note. Check the received MIDI note/velocity and channel meters, then listen. MIDI goes through the selected track's actual instrument, inserts, buses, sends and output. A hardware instrument's Local Control can also play its own internal sound; adjust that setting or its audio level if you only want to hear Sampledex.
4. Position the song playhead, turn **Click** on if needed, then **Record take**. Recording uses Song mode and suspends looping. It stays bound to the sounding track even if selection changes. Leave your own lead-in because there is no automatic count-in.
5. Play, then **Finish take** or Stop. Wait for **Finishing take...** A new independent pattern and arrangement placement appear on the same MIDI track. Existing linked sources remain intact.
6. Open the take in **Piano roll**, inspect notes, and use Quantize at a modest strength first if preserving performance feel matters. Use **Undo** to compare. Save, then export directly to WAV or choose **Bounce to new audio tracks (keep MIDI)** when you also want a printable audio version.

Sustain is captured in audible note lengths. Recorded CC travels with the take pattern and its placements. Recorded pitch bend becomes a separate song-time automation lane; move/copy that lane's range when moving/repeating the MIDI placement. Separately drawn CC automation also uses song time. Conflicting existing controller material or locks can leave a take pending for recovery instead of overwriting music. Aftertouch, channel pressure and program changes can affect the live instrument but are not stored in recorded takes. Save the intended preset after a program change.

MIDI input latency depends on the output buffer and processing in the selected sound path. Try a smaller supported buffer if response is late, or temporarily bypass high-latency inserts after stopping recording. Increase the buffer again for a demanding mix if necessary. Direct audio monitoring does not remove the software instrument's MIDI latency because that sound is generated in the DAW.

Edit, mix and export the recorded result

Select the audio take and open **Audio clips** with **Command-4**. Trim unwanted lead-in/tail, add short fades where needed, and drag its body to place it. Use **Time** zoom for precise alignment. If the take sounds late against the click, compare a known attack and nudge the clip as needed; automatic hardware input-latency calibration is not provided.

Keep a freely timed take's **Follow tempo** off. To deliberately turn a recorded phrase into a musical loop, first trim a known bar length. Enter **Source BPM** and click **Set BPM**, or choose its known bar count and click **Fit loop**; either action enables **Follow tempo**. Listen at the new tempo; extreme stretching can produce artifacts. Changing LCD BPM does not make an incorrectly defined source tempo correct.

Set the new track's level, output and sends, then add appropriate effects. A shared reverb return is useful for placing a dry guitar/piano in the same space as MIDI instruments. Use the automation chapter for volume rides, and the bounce chapter for aligned stems. **Command-Shift-E** exports the complete song, including both recorded audio and MIDI instruments, without deleting the MIDI.

Save the **whole .sdxp package**. It collects recorded audio with the project. For a separate file to send to someone, export the take's track as WAV; copying only the manifest is not a usable audio delivery.

Recording troubleshooting and recovery

Symptom	What to check
The Mac microphone was recorded instead of the interface	System Settings > Sound > Input; then test the intended source by itself
Direct monitoring is audible, but the take is silent/wrong	Permission, the interface's system-input mapping and a short recorded test; direct monitoring alone does not prove that the Mac receives that source
No input meter in the DAW	This recorder has none. Use interface meters and audition the recorded test
Recorded sound clips despite a low track fader	Lower hardware input/preamp gain; clipping happened before the DAW playback fader
The guitar is audible but has no plug-in effects while playing	Audio input uses hardware/direct monitoring; add effects to the finished take for playback
MIDI arrives but there is no piano	Select a MIDI track with a sounding instrument; check mute/solo, frozen status, active playback context and output
A keyboard records notes but not its own tone	You chose MIDI. Connect its audio output and select an Audio track to capture its hardware sound
Stop did not immediately create a take	Wait for finish/import. Read the error/pending-take message; do not start deleting tracks or changing projects
A take cannot be committed	Keep the current session open. Follow the retained-take/recovery message; pending takes can be archived under Project History > Unplaced takes when appropriate

Do not assume a failed commit discarded the performance. Preserve the original project and any retained take location. Complete or recover pending work before New/Open. Audio takes stop at the current arrangement end, and the recorder has a ten-minute maximum. Extend the arrangement before capture; divide a longer session into separate projects or recordings.