

# MODEL 8

## User Manual



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# About Model 8

Welcome to Model 8.  
Model 8 is not a standard digital audio workstation. It is a meticulous, component-level physical simulation of an analog magnetic tape machine and inline studio console. It is designed to bring the weight, friction, and beautiful unpredictability of analog recording into the modern era.

In a digital world burdened by infinite choices and sterile perfection, Model 8 enforces a tactile, deliberate workflow. By combining the unpredictable, beautiful imperfections of analog recording with modern routing and plugin support, Model 8 is designed to let the medium shape your music.

I put a lot of time primarily into the physics and tape engines to make this DAW sound as realistic as possible. After trying every plugin on the market, I'm confident that this software can achieve what many others have been looking for - a wabi sabi approach to recording and making it fun again.

## Quick Start Guide

### Recording your first track

If you're already familiar with digital audio workstations and want to dive right in, here's a quick guide. If this is your first time working with audio software, consider skipping this bit and moving on to the next section.

**CRITICAL: MODEL 8 HAS NO UNDO!**  
**Model 8 operates destructively. There is no Cmd+Z for audio recording. If you record over a section, the previous audio is permanently erased. Use Snapshots (Save States) before executing risky punches to protect your work.**

#### 1. Set up your Audio Interface

Click SETUP from the drop-down menu. Choose your audio interface, sample rate, and buffer size.

#### 2. Click New Tape to create a new project.

#### 3. Route Your Input

At the very top of Track 1, click the dark grey I/O button. Under the Hardware Inputs submenu, select the channel your microphone or instrument is plugged into.

#### 4. Arm the Track & Set Levels

Click the R (Record Arm) button at the bottom of Track 1. Play your instrument. Use the grey TRIM knob at the top of the strip to set your incoming volume. Aim to have the track's VU meter peaking around 0 VU (or push it into the red for tape saturation).

#### 5. Monitor the Signal

Below the fader, locate the Monitor button. Click it until it displays IN (blue). This routes your live instrument directly through the console to your speakers. Note: For tracking, it is highly recommended to monitor directly through your audio interface to achieve true zero latency. See the Troubleshooting section on how to configure this.

#### 6. Record & Playback

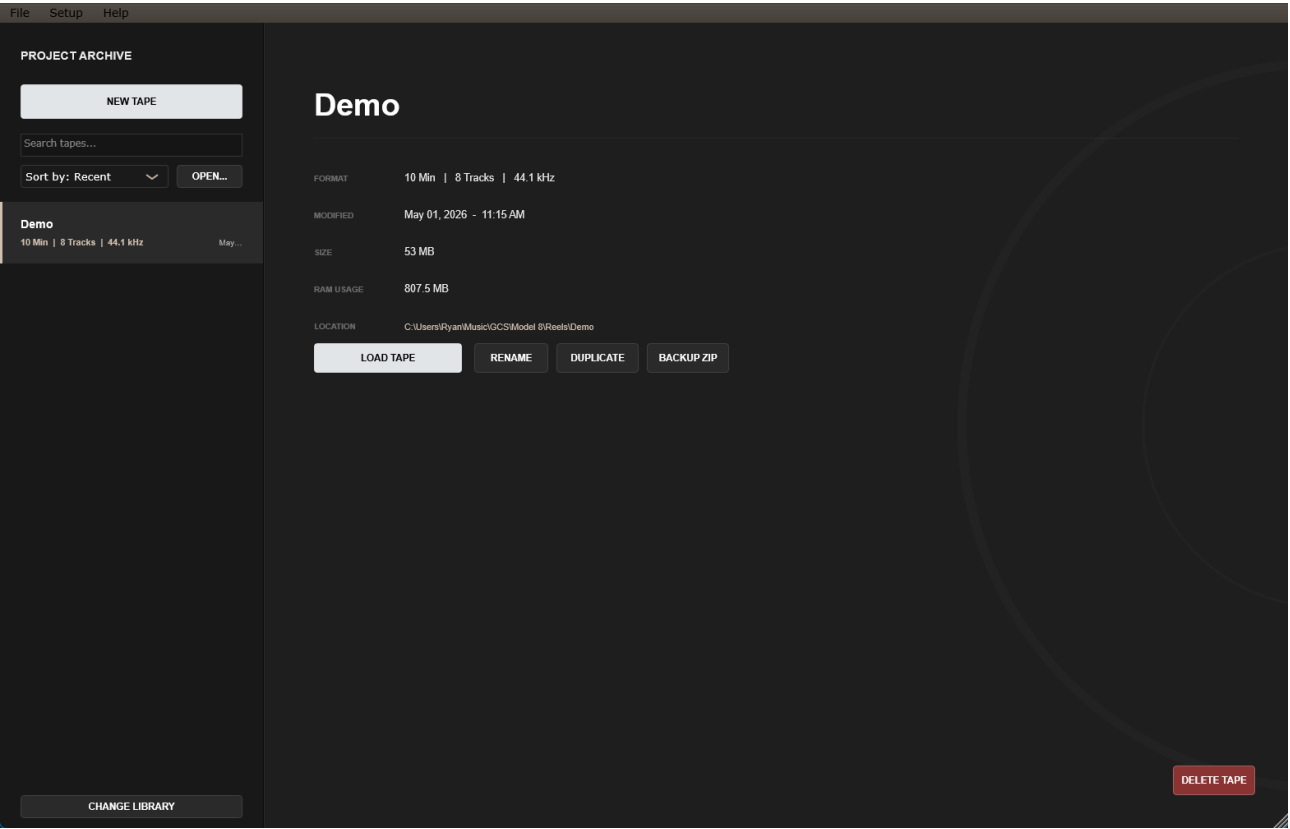
Click the Master Record Arm button (the red circle in the main transport at the top of the screen). Press Play (or Spacebar) to start the reels and print audio to tape. Press Stop when finished. To hear what you just recorded, switch the track's Monitor button back to T (Tape/Orange), Rewind, and hit Play.

## Overview

### The Project Archive

When you launch Model 8, you'll first be presented with The Project Archive. This is where you will create new Tapes (projects) and can browse and load existing ones.

Click on the desired tape and press Load Tape to load it into Model 8. Rename, Duplicate, and Backup Zip, and Delete Tape options are also presented here.



### Creating a new Tape

When creating a new Tape, you'll be prompted for a Tape Name, Length, and Track Count. You can choose from 8-, 12-, and 16-track Tapes.

You can also set up your audio device from this menu.

Upon loading a tape or creating a new one, you'll be taken to The Mixer.



# The Mixer



The Mixer is your home in Model 8, and where you'll spend most of your time tracking and mixing.

## Channels

Each channel of Model 8 behaves the same way. Once you learn one channel, you've learned them all!

**The signal path per channel is:**

**Input Source -> Trim -> (Pre-EQ) -> TAPE HEAD -> (Post-EQ) -> Channel Inserts -> Fader/Pan -> Main Mix**

## Channel features

### VU Meter

Displays the input volume of the channel in dB. Pushing the channel into the red (via the Trim control) will drive the tape a bit.

### Routing (I/O) Matrix

#### Hardware Inputs

✓ Input channel 1

#### Digital Routing

#### Internal Bounce

From Track 2

From Track 3

From Track 4

From Track 5

From Track 6

From Track 7

From Track 8

#### Aux Returns

From Aux 1 (Left)

From Aux 1 (Right)

From Aux 2 (Left)

From Aux 2 (Right)

Disconnect (Mute)

### Input assignment

Assign which input of your audio interface you want routed to the channel by clicking here. Options are presented for hardware inputs, Internal Bounces, and Aux Returns.

Internal Bounces allow you to record the audio from one track on another; for example recording your audio from Track 1 to Track 2.

Aux Returns record signals sent to Auxes 1 or 2.

#### Main Mix

✓ Main Mix (L/R)

#### Direct / Cue Outputs

(No extra outputs enabled)

Direct Outs Pre-Fader

**Output Destination |** By default, tracks sum to the Main Mix (L/R). You can also route tracks to Direct Hardware Outputs for external analog summing, toggled as either Pre-Fader or Post-Fader.

**Input Trim |** Pre-tape input gain. Turning this up drives the signal harder into the magnetic tape, creating harmonic saturation without altering your listening volume on the main fader.

## EQ

3-band EQ with a sweepable midrange.

**High Frequency Gain |** +/- 12 dB

**High Frequency Value |** Fixed high-shelf at 10 kHz

**Mid Frequency Gain |** +/- 12 dB

**Mid Frequency Value |** Sweepable from 250 Hz to 5 kHz

**Low Frequency Gain |** +/- 12 dB

**Low Frequency Value |** Fixed low-shelf at 100 Hz

**PRINT EQ (PRE)** | When this button is illuminated, your EQ adjustments are destructively recorded directly to the magnetic tape. When disabled, the EQ acts as a post-tape playback effect.

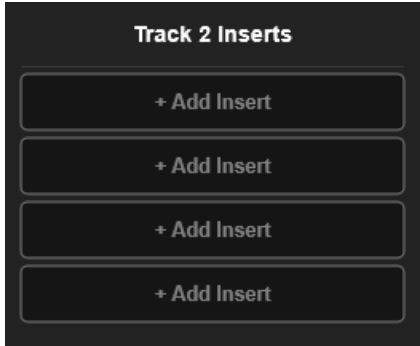
Aux and Pan

**Aux 1 and 2** | Controls the amount of post-fader signal sent to the Aux buses.  
**Pan** | Positions the channel's signal left to right in the Main Mix stereo image.

At default settings, Aux 1 sends to Reverb and Aux 2 to Delay. You can change these out to the plugin of your choice.

Channel Utilities

**Print EQ** | Prints the EQ settings of the channel during tracking.  
**INS** | Click to assign Track Insert effects. You can choose from the built-in effects or from any of your installed VST plugins.



**Automation** | Click to choose from four Automation options. Automation is covered in greater detail later in this guide.

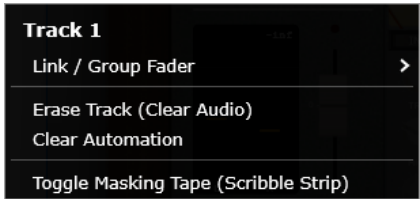


**Monitor (T/IN)** | Toggles between monitoring the live input signal (IN / Blue) or playing back the recorded audio off the Repro tape head (T / Orange).  
**Phase [Ø]** | Toggles channel's polarity inversion.  
**Mute** | Mutes the channel.  
**Solo** | Solos the channel.  
**Record Arm [R]** | Arms the track for recording.  
**Monitor Mode [T]** | Toggles between monitoring the input signal or the recorded tape signal.

**Fader** | Adjusts channel level on playback.  
**Scribble Strip** | Right-Click on any channel meter to toggle a masking tape overlay for naming your tracks.

Channel contextual menu

Right-click any channel's VU meter for a contextual pop-up menu.



**Link/Group Fader** | This allows you to assign tracks to Fader Groups, which are described in detail later in this guide.



**Erase Track** | clears all audio data from the Track.  
**Clear Automation** | Removes all Automation data from the Track.  
**Toggle Masking Tape** | Toggles visibility of the scribble strip tape at the bottom of the mixer. Click in the tape area to enter names for your channels if desired.

Mixer shortcuts:

**Play/Stop** | Spacebar.  
**Track Erase** | Right-Click a meter to erase all audio on that specific track from the pop-up menu.  
**Reset Controls** | Double-Click any knob or fader to reset it to its default value.  
**Manual Loop Points** | If Looping is active, you can drag the green (Start) and magenta (End) flags directly on the Tape Strip to adjust the loop.  
**Visualizer** | Don't like the waveform view? Toggle WAVE (above the strip) to switch between the damage map and the audio waveform.



## The Master Deck & Magnetic Physics



Model 8's tape, like real tape, can be physically manipulated to introduce pitch fluctuations and other sonic artifacts.

**Dust Cover** | The deck starts covered. Click anywhere on the glass to lift it off. To put it back, Right click anywhere in the Tape Interface area.

**Tape Type (Format Badge)** | Click the badge (e.g., 1" MASTER) to physically swap the tape formulation. Options include 1" Master, 1/2" Studio, 1/4" Home, and Cassette. Changing formats alters the frequency response, tape hiss floor, head-bump resonance, and physical motor inertia.

**Left Reel (Flange)** | Click and hold the left reel to apply physical friction. The motor will organically slow down (tape stop effect). Release it, and the motor will naturally ramp back up to speed based on its inertia.

**Right Reel (Scrub)** | Click and drag the right reel in a circular motion to disengage the motor and manually scrub the playhead across the tape, like a DJ turntable.

**Tension arms** | Grab the spring-loaded tension arm on the left side of the head block. Dragging it left or right pulls the tape taut against the heads, creating a smooth, physical pitch-bend.

**Reverse** | Double-click the empty space in the tape bay (between the reels) to instantly reverse the motor direction.

## Transport Controls



**RTZ** | Return to Zero. Winds tape to zero (00:00) marker. Default location is the beginning of the tape; clicking the counter display allows you to type in an exact timestamp to jump to.

**Zero** | Click to set a new zero point in the tape for use with RTZ.

**Rewind** | Rewind the tape.

**Stop** | Stop the tape.

**Play** | Play the tape.

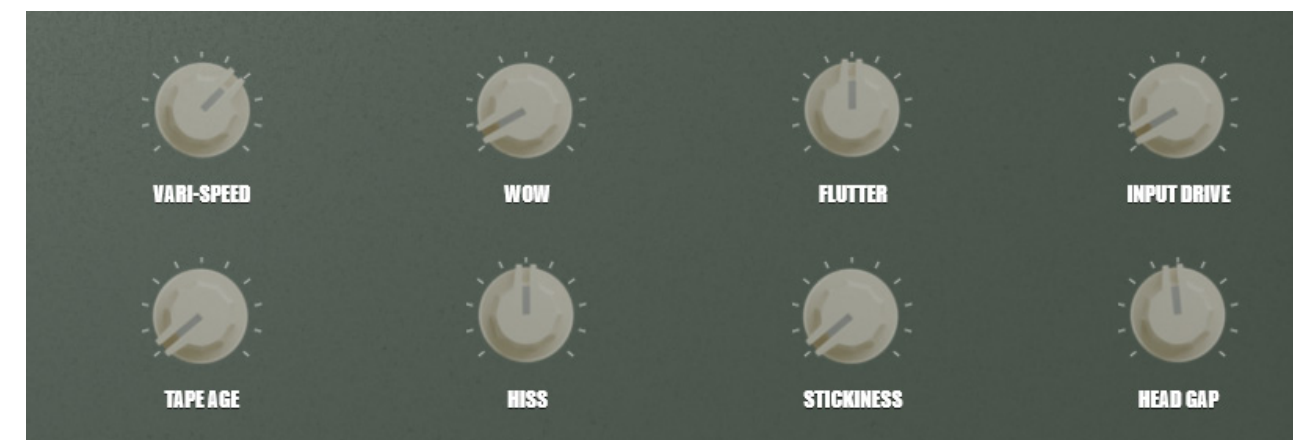
**Rec** | Record. Tracks must be armed for recording before the record button will take effect.

**Fast Forward** | Fast forward the tape.

**Momentary Transport** | Enabled in the Settings menu, this requires you to physically hold down Rewind or Fast Forward to spool the tape, stopping instantly when released.

## Tape Machine Controls

Model 8 gives you deep control over tape behavior. Tape physics are permanently baked into the audio upon recording. If the motor wobbles while you are tracking, the resultant pitch wobble is recorded to the file.



**Vari-speed** | Controls motor speed of the tape machine. Increasing the speed raises the pitch and speed of recordings; slowing it lowers the pitch and speed. Hold Command (Mac) / Ctrl (PC) while dragging the Varispeed knob to snap to 10% musical increments (half-speed, double-speed, etc.).

**Note: You can enforce musical snapping (e.g., locking to a Perfect 5th or -1 Octave) via Menu > Transport > Snap Varispeed to Musical Intervals.**

**Wow** | Controls the amount of wow applied to the tape signal, similar to an LFO pitch modulation. Slow, low-frequency motor drift and pitch wobble caused by power fluctuations and worn belts.

**Flutter** | Controls the amount of flutter applied to the tape signal; a high-frequency capstan jitter and scrape flutter..

**Input Drive** | Controls the amount of distortion applied to the overall mix going to tape, simulating tape saturation ranging from nuanced to full-blown distortion.

**Tape Age** | Controls the amount of simulated tape age, introducing High-end frequency roll-off, oxide shedding, flutter, and mechanical stickiness physical pitch wobbles/stumbles as the tape catches on the heads.

**Hiss** | Controls the amount of hiss noise

**Stickiness** | Controls the frequency of tape sticking, introducing stops and starts with coincident pitch fluctuation.

**Head Gap** | Controls the amount of space between the record head and the playback head. The further the tape head is away from the record head, the more drastic the tape effects like wow and flutter become. Shorter distances reduce these artifacts.

*Why this matters:* This dictates how far the tape physically travels through space. The further the tape travels between heads, the more the mechanical imperfections (Wow, Flutter, Stickiness) are compounded. A 500ms gap will sound significantly more warped than a 50ms gap.

Note that Head Gap is largely intended as a playback feature; the timing is set to 0ms during recording to avoid tricky timing issues and monitoring delays caused by the Head Gap setting. If you want to monitor off tape with a delay, you can adjust the Head Gap size after pressing Record.

## A Tip for Maximum Flexibility

If you want pristine recordings that you can manipulate later during mixdown, set the format to 1" MASTER and turn WOW, FLUTTER, and STICKINESS down to zero while tracking. This yields a near-digital recording that you can aggressively degrade later.

## Tape Tools



Here you can use familiar paint tools to add character to your recordings in the style of old tape. Unlike old tape, however, you get to choose when and where these artifacts occur.

Choose the desired tool, and then Click and drag directly on the Tape Strip to paint defects onto the tape.

The Tape Strip represents the entire length of tape used in your session. The flags in the Tape Strip indicate the following points in relation to the tape.

**Blue** | Play head

**Red** | Record head

**Green** | Punch-in point

**Purple** | Punch-out point

**PTR** | Choose this to drag the play head left and right manually across the Tape Strip. Cannot be used simultaneously with Brush.

**Brush** | In Model 8, you can physically paint damage onto the tape strip. Click the **Brush** tool to select a defect type, then click and drag on the tape:

**Dropout (Beige)** | Scrapes oxide off the tape, causing volume drops and dullness.

**Crinkle (Red)** | Physically wrinkles the tape, causing harsh noise and dropouts.

**Drag (Purple)** | Applies localized tension to the tape, dragging it against the playhead for a temporary pitch drop.

**Flutter (Blue)** | Injects localized, high-frequency motor jitter.

**Splice (Razor)** | Cuts the tape vertically, leaving a physical tape joint (audible as a subtle thump when passing the head).

**CLR** | Clears all edits painted to the tape.

**Click** | Toggles click track. Click is not rendered to a track.

**Mon** | Toggles send of tape edits to monitor bus.

**Wave** | Toggles visibility of waveform display. Right click the Tape Editing area to choose which Track waveform is displayed.

**Auto-Select Waveform** | If enabled in the View menu, touching a fader or knob on any channel automatically switches the visualizer to display that specific track's waveform.

**Zoom** | Use the ZOOM knob (or vertical mouse scroll) to scale the visualizer from a 30-second wide view down to a microscopic 2-second view.

**Punch** | Activates Punch-in recording mode.

**Sound on Sound (S.O.S.)** | disengages erase head for sound-on-sound recording. This allows you to record on top of existing audio infinitely without erasing previous takes. When combined with Loop Playback, the tape becomes a degrading tape looper.

**Wear** | Slowly degrades the tape over time while playing.

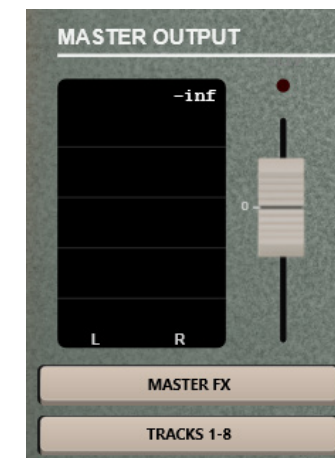
**CLR** | Clears all loop points and brush edits on the current track

**In** | Sets In marker for punch-in recording.

**Out** | Sets Out marker for punch-in recording.

**Loop** | Toggles playback of loop between in and out markers. Good for repeating a section to get the perfect take.

## Master Output



The Master Output section contains a master level Fader as well as metering for your main output level. From here you can add Master FX as well as choose your track bank view.

**Master FX** | Click to choose effects applied to the Master Bus; you get four slots.

**Tracks Bank** | On configurations with more than eight tracks, you can cycle the track view by clicking here.



## Instruments, Inserts, and Auxes



Model 8 includes a robust suite of virtual instruments and effects, and is also compatible with your existing collection of plugins.

**To add an Instrument**, click +Load Instrument and choose from the drop-down menu.

**To add an Effect**, click +Add Insert FX and choose from the drop-down menu.

**To add an Aux Effect**, click Load Aux and choose from the drop-down menu.

Included instruments and effects are explored in detail later in this guide.

## Fader Groups

Fader Groups allow you to control multiple faders from a single fader; useful for stereo instruments like drum overheads or keyboards. Moving one fader moves all faders in the same Group. You can have up to four groups, organized by color.

Note that Fader Groups do not have to all be at the same level. The level relationship between the faders in a Group will be locked in when you create a Group.

To assign a channel to a Group, right click on its VU Meter and choose Link / Group Fader.

## Aux Returns

Any effect can be instantiated as an Aux Return, simply click the slot to add a plug-in. Right click to remove.

## Automation

### Fader Automation

Click the **AUTO** button on any channel or Aux return to configure fader automation. Right-click the track meter to *Clear Automation* for that track.

**Off:** Fader acts normally.

**Read:** Faders move automatically, following recorded data.

**Touch:** Faders read data until clicked. While held, they write new data. When released, they snap back to the recorded data.

**Latch:** Faders read data until clicked, write new data while held, and stay at their last dropped value when released.

**Write:** Continuously overwrites data. (Automatically downgrades to Latch when the transport stops).

## VCA Grouping

Model 8 features 12 VCA (Voltage Controlled Amplifier) groups. Right-click any track meter to assign it to a color-coded group. By default, Mute, Solo, and Fader movements will automatically link among grouped tracks.

**Workflow Tip:** Hold Cmd/Ctrl while dragging a grouped fader to slip its relative volume without moving the rest of the group.

**Open Menu > Groups > Group Settings** to customize whether Pan, EQ, and Trim are also linked within a specific group.

## MIDI Learn and Hardware Control

Many of Model 8's features can be controlled with a MIDI controller. To map your controller:

**Click the MIDI LEARN** button in the top header.

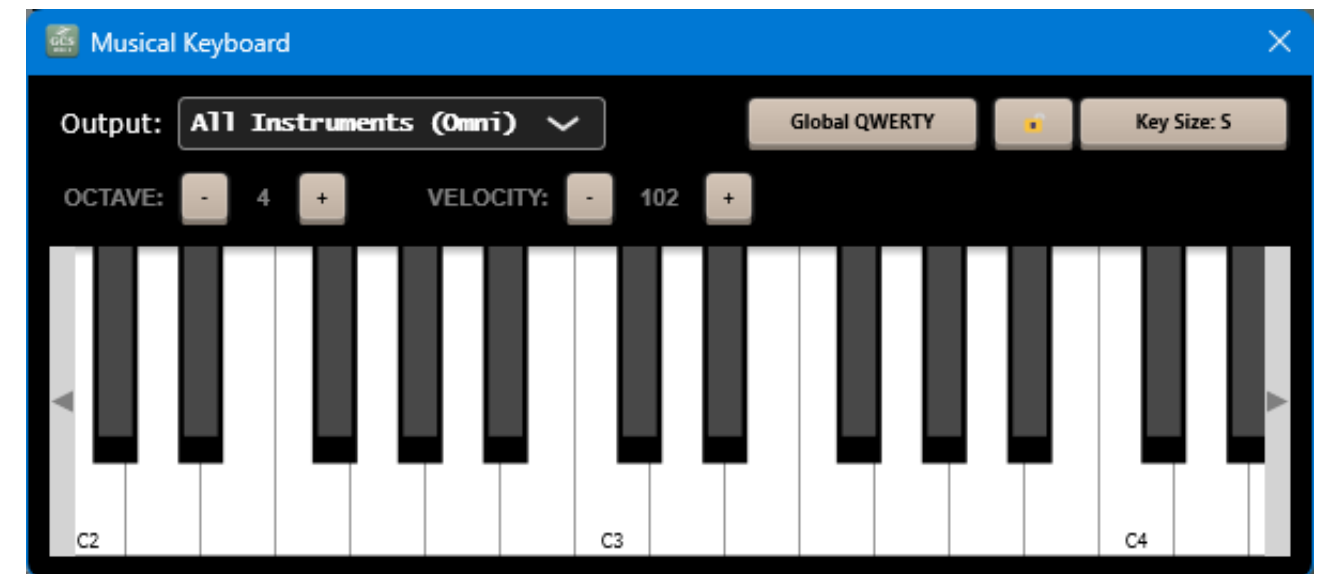
**Click any parameter** on the console or an instrument. The UI component will glow white.

**Move a knob or press a button** on your physical MIDI controller to bind it to the desired parameter

**Click MIDI LEARN again** to exit.

To unlearn a specific control, right-click the knob. To clear all mappings globally, right-click the MIDI LEARN button.

## Musical Typing & Keyboard Shortcuts



**Musical Typing:** Press Cmd/Ctrl+K (or Menu > View > Musical Keyboard) to play virtual instruments using your computer's QWERTY keyboard.

**Padlock:** Click the Padlock icon to lock OS focus to the keyboard, allowing you to click around the mixing board with your mouse while still playing notes.

**Global QWERTY:** Toggle this ON to allow playing notes even when the keyboard window is closed.

**Custom Shortcuts:** Go to Settings > Shortcuts to rebind QWERTY keys for Transport, RTZ, Full Screen, Menu paging, and Snapshot loading.



# Import, Export & Internal Bouncing

## Importing Audio

Drag and drop WAV, MP3, FLAC, or AIFF files directly onto the Model 8 window. A dialog will prompt you to:

- Target a specific track.
- Choose Mono Mixdown, or Split Stereo (which consumes two tracks).
- Auto-Name & Auto-Group:** Automatically rename the channel's scribble strip and link the L and R channels if importing stereo.
- Print Tape Physics:** Bakes wow, flutter, tape hiss, and any drawn crinkles directly into the imported audio file.
- Print Track Gain & EQ:** Bakes the channel's current Trim, EQ, and Fader volume into the imported audio.
- Batch Import:** Dragging multiple stems at once will cascade them down the console tracks consecutively.

## Mixdown (Exporting)

Click **MIXDOWN** in the top header to bounce your session.

- Offline Export:** Renders the mix faster than real-time to a WAV file.
- Live Mix:** Records the output to a WAV file in real-time while you manually manipulate faders, dub echoes, and ride the tape physics knobs for a performed mix.
- Export Stems:** Renders every individual track and Aux return as separate WAV files into a dedicated "Stems" folder.

## Bounce to Tape (Internal Summing)

Located inside the Mixdown menu. This allows you to internally sum multiple tracks through the master bus and print them directly to an unused track on the current reel (e.g., bouncing tracks 1-6 down to a stereo pair on tracks 7 & 8).

# System Preferences & File Management

Access global preferences via SETUP or Menu > Setup.

## Tape Reels & Sharing Projects

In Model 8, projects are managed as folders in your Library.

- Understanding .reel files:** A .reel file is a session pointer (similar to a Pro Tools .ptx file). It does not contain the actual audio.
- Sharing Projects:** To send a project to a collaborator or move it to another computer, go to the Tape Room and use the Backup option (which zips the entire tape folder including audio), or manually copy the project's entire folder from your Reels directory.
- Change Library Folder:** Define the root directory where Model 8 stores its tape reels and audio files.

- **Default Tape Length:** Define the physical length of a new tape reel (5, 10, 20, 30, 45, or 60 Minutes).

## Snapshots & Crash Recovery

Model 8 safely manages your audio data using 4 distinct State Slots per reel.

- Slot 1 (Auto-Saver):** Automatically saves your session in the background (interval selectable in Settings).
- Slots 2, 3, and 4 (Snapshots):** Manual save slots. Save and load alternative mixes or takes via the Menu > Edit tab without overwriting your main mix.
- Crash Recovery:** If the app quits unexpectedly, the background auto-saver leaves a .lock file. On the next boot, Model 8 detects this and prompts you to restore your unsaved audio.

## Audio Settings & Calibration

- Driver Error Calibration:** Modern audio interfaces report imperfect latency to the operating system, causing overdubbed tracks to drift out of phase.
  - Auto:** Connect a physical cable from Output 1 to Input 1 on your interface and click Run Auto-Calibration. Model 8 will ping the cable and correct the offset.
  - Manual:** If auto-calibration isn't perfect for your exact routing setup, you can manually adjust the Driver Error Offset slider to shift your recorded audio by exact samples until it aligns perfectly.
- Tape Calibration Mode:** Choose between Modern (Hi-Fi), Studio (Warm), or Vintage (Dark) to alter the frequency response and head-bump EQ curve of the machine.
- DAW Sync Lock (Zero Drift):** Analog tape motors fluctuate. When Sync Lock is enabled, Model 8 engages a Phase-Locked Loop (PLL). This forces the motor simulation to mathematically lock to absolute time over long periods, preventing your tape from drifting out of time with a digital grid when exporting stems.
- MIDI Clock Out:** Broadcast MIDI SPP (Song Position Pointer) to external hardware sequencers. Adjust the PPQN resolution and offset the clock in milliseconds.

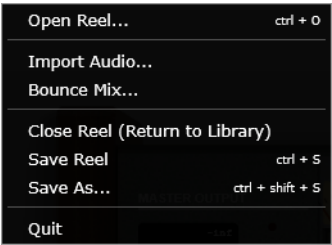
## UI Customization

- Minimal vs Vintage UI:** Switch between the Skeuomorphic (3D Vintage) and Modern (Flat Minimalist) UI via the View menu.
- Edit Minimal Theme Colors:** Fully customize the colors of the chassis, channel strips, accents, and text in the Modern UI.
- Show Dust Cover:** In the Vintage UI, toggles the skeuomorphic glass dust cover over the reels.
- Disable Button SFX:** Turns off the mechanical solenoid "thunks" and UI button clicks.
- Show Tooltips:** Toggles the hover-help text across the UI.

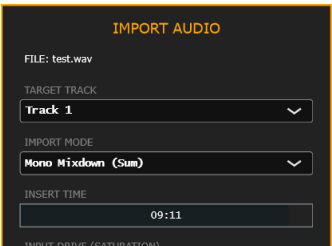
# The drop-down menu

Many of Model 8's features are controlled via an intuitive drop-down menu located at the top of the screen.

## File



**Open Reel** | Loads an existing project in to The Mixer.  
**Import Audio** | Imports existing audio files to the track(s) of your choice.

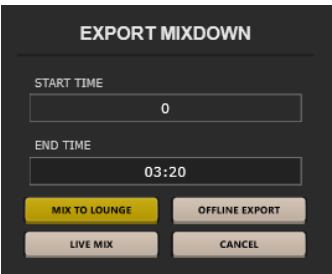


When importing audio, you can assign the desired track as well as the Import Mode - a Mono Mixdown or a Split Stereo.

You'll also be presented with an option to drive Model 8's inputs for Tape Saturation. Drag across the Input Drive UI to adjust the amount of saturation to taste.

Click Print to Tape when your desired settings are complete.

**Bounce Mix** | Creates a stereo 2-track mixdown of your project.



Choose your start and end times, and one of the following options.  
**Offline Export** | Exports a non-realtime mixdown of your project to the desired location in WAV format.  
**Bounce to Tape** | Exports a non-realtime mixdown to mixer tracks, including all instantiated insert effects and Tape Machine Control settings like Varispeed, Tape Age, etc. Choose the tracks you wish to bounce to from the menu.  
**Live Mix** | Exports a realtime mixdown of your project to the desired location in WAV format. Adjustments made to the project during mixdown will be rendered to the mixdown in real time!

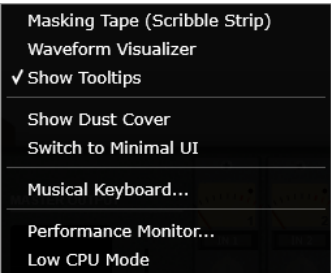
**Close Reel** | Returns to the Library / Project Organizer  
**Save Reel** | Saves your current work.  
**Save As...** | Saves your current work to a new filename/location of your choice.

## Edit



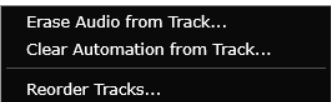
**Snapshots** | Allows for quick save and recall of mixer settings including EQ, Pan, Aux Sends, etc.  
**Clear Loop Points** | Removes all loop points from the project  
**Clear All Tape Defects** | Removes all Tape Defects from the project  
**Clear MIDI Map** | Removes all MIDI Mapping

## View



**Masking Tape (Scribble Strip)** | Renders the Masking Tape strip at the bottom of the mixer for naming your channels.  
**Waveform Visualizer** | Renders the waveform of the current project in the tape UI.  
**Show Tooltips** | Toggles visibility of pop-up tooltips that appear when hovering the mouse over most mixer controls.  
**Switch to Minimal UI** | Changes the Mixer layout to a clean, modern layout. Available in light or dark modes, with a customizable color palette option.  
**Musical Keyboard** | activates an on-screen keyboard for triggering virtual instruments. Can be mapped to QWERTY keys.  
**Performance Monitor** | Reveals details about CPU performance.  
**Low CPU Mode** | Optimizes performance for slower CPUs by...

## Track

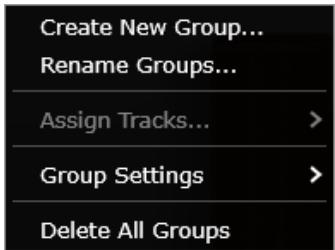


**Erase Audio from Track** | Choose one or many tracks to erase completely.  
**Clear Automation from Track** | Choose one or many tracks to clear automation from.  
**Reorder Tracks** | Re-arranges your tracks into the desired sequence. Drag and drop the tracks vertically in the UI to assign to slots 1-8.

**Note that some users are reporting bugs with Reorder Tracks as of version 2.6. These will be fixed in a forthcoming release.**

# Groups

The Groups menu allows you to configure fader group behavior. Groups are useful for stereo sounds that occupy two channels or mult-channel instrumens like drums.



- Create new Group** | Create and name a new Fader Group.
- Rename Groups** | Change your Group names
- Assign Tracks** | Configure which Tracks are assigned to which Groups.
- Group Settings** | Configure which Channel controls are included in a Group’s behavior, including Mute, Solo, Pan, EQ, and Trim.
- Delete all Groups** |Deletes all Groups.

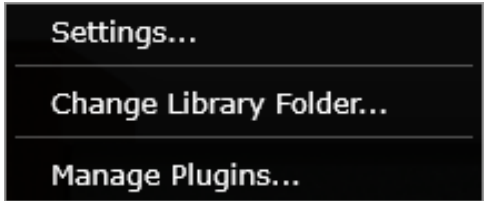
# Transport



- Loop Playback** | Toggles loop playback.
- Metronome (Enable)** | Toggles metronome sound.
- Metronome Settings...** | Configure the BPM, Volume, and Time Signature of the metronome.
- Direct Monitor (Mute Input)** | Toggles Direct Monitoring from the Mixer’s Input
- Sound on Sound** | Toggles the erase head, allowing for sound-on-sound recording
- Auto-Wear Tape** | Toggles wear of tape over use and recording time.
- Print Tape Hiss** | Toggles printing of Tape Hiss to your recordings.
- Reverse Tape** | Flips the tape over - backwards is now forwards!
- Momentary Rewind / FFWD** | Toggles Rewind/Fast-Forward buttons to behave in a latched or momentary (click and hold.) behavior
- Snap Varispeed** | Toggles Varispeed behavior to musically relevant intervals
- Disable Auto-Disarm on Stop** | Toggles disarming of record arm when the Stop button is cilcked.

# Setup

Configure the Audio/MIDI setup, Metronome, System Settings, and Shortcuts from here.



- Settings** | Configure Audio and MIDI devices, the Metronome, System settings, and keyboard shortcuts.
- Change Library Folder** | Choose a location for storing your Tapes.
- Manage Plugins** | Choose folder locations for your plugins and enable/disable them here.

# The punch-in recording process

Punching in / out allows you to make multiple attempts at recording a particular section of a track rather than the whole thing. This is ideal for solos or difficult vocal passages that might require multiple takes to get just right - while saving you the trouble of re-recording an entire track.

1. Advance the tape to the point at which you want to begin recording and click In.
2. Advance the tape to the point at which you want to begin recording and click Out.
3. Arm the desired track and rewind the tape a little bit ahead of the In point. 2-4 bars is usually fine.
4. Press Rec. Model 8 won’t start recording until it reaches the In marker, and will stop recording when it reaches the Out marker.

## Punch-in monitoring

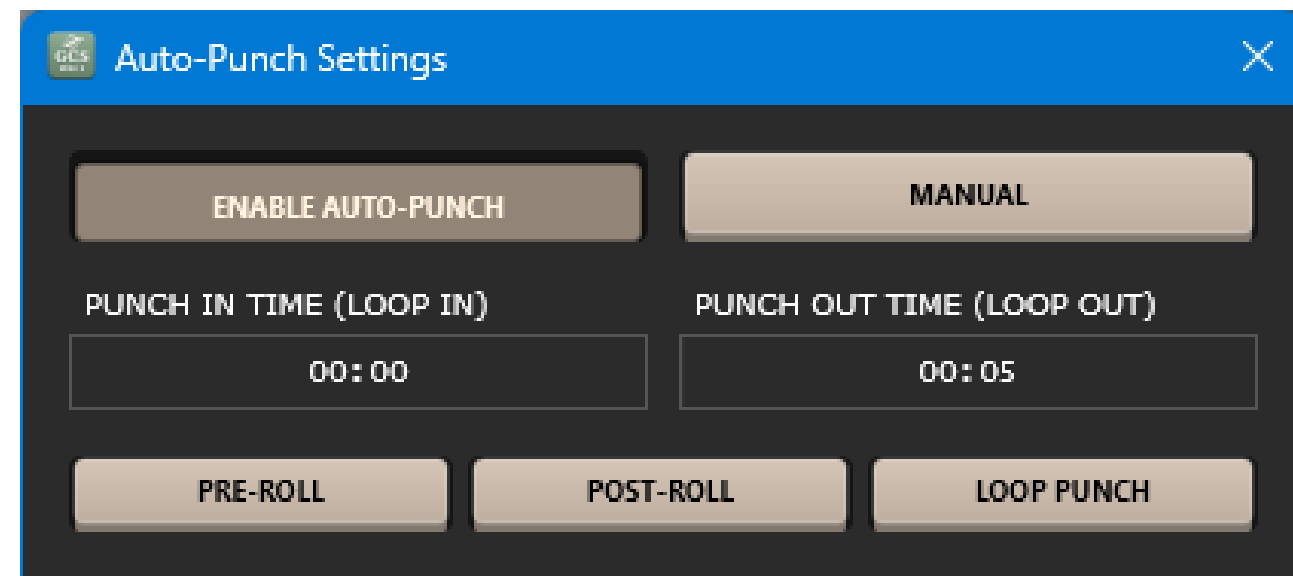
Real 3-head tape machines have a physical gap between the Record and Playba-ck heads. If you listen to a pre-recorded track while trying to record a new one, the gap causes a distracting delay. Model 8 provides two solutions:

- Manual Punch-In (0ms Delay)**  
If you prefer to manually click Record mid-take, toggle the PUNCH button on the main deck. This temporarily forces the head gap to 0ms. You can now moni-tor off the tape seamlessly, with zero delay and zero phase-cancellation.



### Auto-Punch Studio

Right-Click (or long-press) the PUNCH button to open the Auto-Punch Studio. Model 8 uses your Loop In/Out flags to execute flawless, automated overdubs.



**Pre-Roll** | Automatically jumps the tape back a specified number of seconds before your punch-in point to give you a musical run-up to the take.

**Post-Roll** | Keeps the tape rolling after the punch-out point so your performance decays naturally.

**Loop Punch** | Continuously loops the Auto-Punch zone, allowing you to play multiple takes hands-free.

**Auto X-Fade** | Applies an analog-style crossfade at the punch points (adjustable from 1ms to 100ms) to ensure seamless, click-free edits.

## Using Virtual Instruments and Effects

Model 8 acts as a fully-featured host for third-party VST3 and AU plugins (Mac/Windows) and AUv3 (iOS), alongside its own suite of zero-latency native processors.

Model 8 includes a robust suite of virtual instruments and effects, and is also compatible with your existing collection of plugins.

### Effects Rack Architecture

**Track Inserts (INS)** | Click INS on any channel strip to open its dedicated pop-out rack. You can stack up to 4 plugins post-tape. Drag and drop plugins to swap their order.

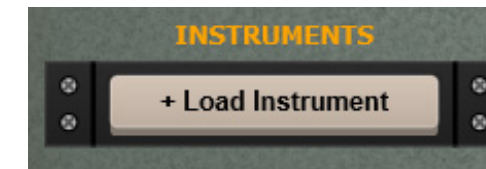
*High-Latency Warning* | Because Model 8 does not use digital Plugin Delay Compensation (to preserve true tape timing), inserting a plugin with more than 5ms of lookahead latency on a Track Insert triggers a warning. Save heavy limiters for the Master FX.

**Aux Returns** | Two global auxiliary effect sends.

**Master FX** | Click MASTER FX on the console to access the master bus rack (processed pre-fader).

**Analog Headroom Pad** | The main mix bus is internally scaled down by -9dB before hitting the Master Inserts. This ensures mastering plugins receive a healthy analog-style operating level rather than a clipping 32-bit summed signal. The Master Fader scales from 0 to +12dB to overcome this pad.

To add an Instrument, click +Load Instrument and choose from the drop-down menu.



### Built-in Instruments



**GCS A-1 Mono Synth** | Thick analog bass/lead synth with two oscillators and adjustable glide.

**GCS Voxtone Rhythm** | 10-part analog drum machine. Includes a 16-step programmable matrix breakout window, a drum pad window, and the ability to drop custom WAV/AIFF samples into the LCD screens.

**GCS A-10 Poly Synth** | Polyphonic analog emulation featuring hard sync and Poly Mod.

**GCS Glissandio** | A continuous-pitch ribbon synthesizer.

**GCS Stage Keyboard** | Physical modeling of vintage electromechanical keys (Rhodes, Wurlitzer, Tonewheel, etc.).

Click the green LCD screen on any built-in instrument to save, load, or delete user presets. Each instrument features dedicated pop-out performance windows.

## Built-in Effects



**Analog Reverb** | Spring, Plate, Hall, and Dream algorithms.

**Tape Echo** | Features Age degradation, BPM sync, and analog input drive.

**Opto Comp** | Classic LA-2A style optical compression with a responsive VU meter.

**FET-76** | Ultra-fast limiting. Set the ratio to “ALL” for all-buttons-in pumping.

**Parametric EQ** | A 5-band interactive display. Drag glowing phosphor nodes to change frequency and gain. Use your mouse scroll wheel (or pinch on a touchscreen) to adjust the Q-factor.

**Multi-Modulator** | Phaser, Flanger, Chorus, ADT, Distortion, Vibrato, and Tremolo.

## Settings

### Latency calibration

Because latency is different for every recording system, we recommend calibrating your recording setup the first time you launch Model 8 for optimal performance.

**To get perfect sync when overdubbing:**

1. Go to SETUP > SYSTEM.
2. Connect your interface Output 1 -> Input 1 with a cable.
3. Click Run Auto-Calibration. The machine will fire a test tone to measure your exact round-trip latency and compensate for it automatically.

### Advanced Plugin Manager

Go to Menu > Setup > Manage Plugins... to open the scanner.

**Custom Folders** | Define custom VST folders and toggle “Use Custom VST Folders Only” to bypass bloated system directories.

**Rescan Failed** | If a plugin crashes or times out (e.g., waiting for an iLok authorization), it is blocked to protect your session. Click “Rescan Failed” to try loading it again.

## Troubleshooting & Optimization

**I hear a delay when trying to record my guitar/voice.**

**You are double-monitoring.**

1. **First, check the T/IN monitor button below the fader.** Ensure it is set to IN (Blue). If it is set to T (Tape), you are hearing the audio after it travels across the physical head gap, resulting in a delay.
2. **Second, it is highly recommended to monitor your inputs directly via your hardware interface’s mixer** (Zero-Latency Monitoring). If you are doing this, open Model 8’s Settings and check “Mute Input Monitor (Direct Mon)”. This mutes the software input path entirely so you don’t hear your interface and the software at the same time.

**I’m hearing pops, crackles, or dropouts.**

Model 8 relies heavily on your system’s RAM and fast disk streaming. Audio dropouts occur when the computer cannot process or stream data fast enough.

3. **Open the Audio Device Settings** and increase your Buffer Size (e.g., 256 or 512 samples).
4. **Check your free disk space.** Because Model 8 manages large, contiguous audio files on the fly, a nearly full hard drive can cause severe audio dropouts and clicking. If you have to delete files to clear space, restart your computer afterward to clear OS memory caches.
5. **Close web browsers** and other background applications to free up RAM.

**Model 8 is running slowly on my older laptop/iPad.**

Open the Settings menu and enable Low CPU Mode. This reduces GUI overhead by disabling animations, smooth metering, and the physics visualizer. This en-

sure stable audio performance on older hardware without altering the sound quality.

**My plugins aren't lining up in time.**

Because Model 8 does not use digital Plugin Delay Compensation (to preserve true tape timing), any plugin you load into a Track Insert that uses lookahead (like a linear phase EQ or heavy limiter) will cause phase cancellation with the rest of the board. Move high-latency plugins to the Master FX rack instead.

**My external synth/drum machine phrasing sounds off.**

Because Model 8 simulates mechanical tape, built-in sequencers (like the Vox-tone Rhythm) and external MIDI Clock sync to the speed of the tape (including Wow, Flutter, and Varispeed), but they do not lock to an absolute grid position. Because of the mechanical motor ramp-up when you press play, the phrasing/downbeat of your sequencer will float slightly relative to previously recorded audio (like a printed click track). For strict grid-based phrasing, print your drum machine sequences to tape early in the session.

**How do I Undo a mistake?**

You don't. Model 8 operates exactly like physical tape—recording overwrites whatever was previously on the reel. To protect yourself before a risky overdub, use Menu > Edit > Save State to Slot 2. If the take fails, simply reload Slot 2.

# Acknowledgements and Copyright

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