TRAVELER



USER'S GUIDE 1.1

KEYSOLUTIONS
SOUNDS

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TRAVELER

USER'S GUIDE

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SYSTEM REQUIREMENTS.

TRAVELER supports AU, VST, VST3, AAX, and standalone formats for Windows 10 and Windows 11, and macOS 10.13 and above, with native support for Apple Silicon.

A free 14-day demo is available. Visit www.keysolutionssounds.com for additional product details, system requirements, videos, sound demos and testimonials.

WELCOME

TRAVELER was designed to take you on an exhilarating and creative sonic journey. The destination is not set: the paths are yours to define, explore and make your own. It is the culmination of my life in synthesizers, music and my dreams and goals for personal expression.

Thank you for coming on this voyage.

Mike Martin
Founder, KeySolutions Sounds

ABOUT KEYSOLUTIONS SOUNDS

KeySolutions Sounds was founded by Mike Martin as a sample-development company. Mike's KeySolutions Vol. 1 CD-ROM became one of the most popular libraries for Kurzweil's K2000, K2500, and K2600 series samplers.

Mike went on to a career in sales, marketing, and product management at companies including Sonic Foundry, Kurzweil Music Systems, Yamaha, TC Electronic, and Casio. He has also contributed to numerous Cherry Audio instruments and was the lead sound designer for Cherry Audio's Wurlybird. Traveler is KeySolutions Sounds' first software instrument, culminating a development journey Mike began 10 years ago.

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TRAVELER DEVELOPMENT SUPPORT

TRAVELER would not be possible if it weren't for the help and support of friends including: David Helpling, Jerry Kovarsky, Scott McAuley, Venus Theory, Tom Hammer, James Dyson, Chris Martirano and the team at Cherry Audio including James Terris, Robert Saint John, and Dan Goldstein.

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TRAVELER OVERVIEW

Traveler is an artist-built cinematic hybrid synthesizer with bold dreams and is centered around the one thing that sets us all on our way - Expression. From intimate to thunderous, it instantly rewards dynamics and carries with it a promise of endless musical journeys.

Crafted with passion for composers, producers, and sound designers, Traveler brings together the unmistakable gravity and depth of classic hardware instruments with the flexibility to forge entirely new sonic territory. Its familiar, immediate interface and emotionally rewarding sound engine deliver a unique yet unmistakable character, strong sympathetic harmonics and expansive width and motion, inviting sonic exploration from the very first touch.

KEY FEATURES

- Flexible Oscillator Core: Three continuously variable oscillators spanning six octaves with real-time waveform modulation. Oscillator 2 provides a seven-voice “Super” stack with Detune and stereo Spread, while Oscillator 3 adds wavetable synthesis, Duo stacking, stereo Spread, and support for as many as 4,096 user wavetables. The Wavetable Browser provides previews, Favorites, recent selections, and organized access to factory and user collections. Oscillator Sync and both linear and exponential FM are also available, while Vintage introduces controlled oscillator drift and other voice-to-voice variation.

- Modeled Filter Architecture: Multi-topology low-pass ladder filters (6, 12, 18, and 24 dB/octave) and NJM2069-style 12 and 24 dB/octave models, both with low-end bass compensation. Includes an independent high-pass filter with linked low-pass cutoff tracking, mixer feedback loop, and pre-filter drive.

- Immersive Stereo Path: Dual/stereo filter topology with Left/Right frequency spacing, plus a per-voice “Spread” parameter that alternates filter offset per note. Low Frequency Width parameter can keep bass locked to the center while treble expands wide, per-oscillator panning, per-key alternate panning, and assignable voice-pan modulation.

- Extensive Modulation: Driven by three polyphonic LFOs with 21 shapes and random motion, a dedicated Modulation Envelope, and a 21-bus Modulation Matrix with 144 destinations spanning synthesis, performance, sequencing, stereo, and effects parameters. Modulation can also be governed by performance controls, Release Velocity, Control Tracks, or any incoming MIDI CC from 0-127.

- Expanded Envelopes: Filter, amplifier, and modulation envelopes with switchable ADSR or ADBSSR shapes and graphical curve editing across all envelope stages. The Mod Envelope can also be triggered by modulation controllers for additional performance-driven movement.
- Control Track Sequencing and Arpeggiator: Dual 16-step control tracks with variable step lengths, smoothing, swing, gate control, and ping-pong modes. Integrated arpeggiator featuring 20 playback modes, selective oscillator targeting, and per-step envelope shaping.
- Studio Quality Effects: 3-band EQ to shape weight, focus, and sheen. Three-mode bucket brigade chorus for classic sonic coloration. Modulated Delay with Dual and Ping Pong modes delivers subtle echoes to wide rhythmic movement. Reverb with distinctive Room, Hall, and Space algorithms range from intimate reflections to vast, evolving atmospheres. All effects include graphic representation of sound output.
- Over 400 Meticulously Crafted Presets: Designed by artisan sound designers including Venus Theory, David Helpling, Scott McAuley, Drew Schlesinger, James Dyson, James Terris, Tom Hammer, Jerry Kovarsky and Mike Martin
- Expressivity: Supports Mono, Legato, and up to 16-voice Unison modes, polyphonic glide, separate up/down pitch bend settings, full MIDI CC learn, mono and polyphonic aftertouch support.
- Formats: Available in AU, VST, VST3, AAX formats and a Standalone version.



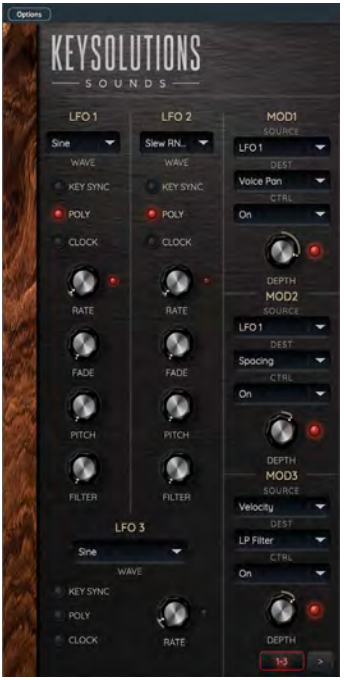
Traveler Panel

LFOS AND MODULATION

At the far left are Traveler's three LFOs and its 21-slot Modulation Matrix. Each LFO can operate globally or polyphonically, meaning every played voice can have its own independent modulation cycle. The LFOs include familiar sine, triangle, ramp, sawtooth, square, and sample-and-hold shapes, along with unipolar, exponential, and smoothly slewed random variations.

Immediately beside the LFOs is the Modulation Matrix. Three of its 21 modulation slots are visible at a time. Each slot combines a Source, Destination, Controller, and bipolar Depth setting, allowing simple routings such as velocity-to-filter cutoff as well as much more elaborate interactions between LFOs, envelopes, performance controls, Control Tracks, effects, and other parameters.

Don't let the number 21 scare you. You don't have to use all of them. Traveler will not revoke your sound design license if Mod Slot 17 remains empty.



LFOs and Modulation

OSCILLATORS

Traveler has three continuously variable oscillators. In their standard modes, each can morph smoothly from sine through triangle and sawtooth to square/pulse, making it easy to find timbres between the familiar waveform landmarks instead of being limited to a handful of fixed choices.

Oscillator 1 provides oscillator sync and linear or exponential frequency modulation using Oscillators 2 and 3.

Oscillator 2 can stack as many as seven copies of its current waveshape, with Detune and stereo Spread controls for sounds ranging from subtly enlarged to unapologetically enormous.

Oscillator 3 goes considerably further. In addition to normal oscillator operation, it can run without keyboard tracking, operate at low frequencies for modulation duties, stack a second oscillator in Duo mode, or

become a 2048-sample-resolution wavetable oscillator. User wavetables can also be imported in supported formats.

Together, the three oscillators can move easily between classic subtractive synthesis, dense stacked textures, frequency-modulated timbres, wavetable motion, and combinations of all of the above.



Oscillators

PRESETS AND CENTRAL DISPLAY

The upper-center section provides access to Traveler's preset system, along with the large multifunction display. The display can operate in several modes.

Scope provides visual feedback about the selected signal or modulation behavior.

X-Y turns the display into a two-dimensional performance controller whose X and Y axes can each be assigned to a different parameter. The X-Y pad can also be MIDI-mapped to compatible external controllers or joysticks for hands-on performance.

The **Settings** menu provides instrument configuration options, which are described later in this guide.



Central Display

MIXER

The Mixer combines Oscillators 1, 2, and 3 with the Noise source and provides additional Feedback and Drive controls.

This is an important part of Traveler's personality. The oscillator levels determine more than simple balance; the way signals are combined and driven into the filter section can have a significant effect on tone and character. Feedback and pre-filter Drive extend this further, ranging from subtle thickening to more aggressive harmonic coloration.

Later chapters explore gain staging here in more detail. For now, remember that the Mixer is part of the sound-design process, not simply a place to turn things up.



Mixer

FILTERS

Traveler's filter section combines a dual/stereo low-pass architecture with an independent high-pass filter.

Six low-pass filter models are provided: Ladder 6, Ladder 12, Ladder 18, Ladder 24, NJM 12, and NJM 24. The different slopes and filter characters provide a broad palette, from gentle tonal shaping to steep, resonant filtering.

Traveler's stereo architecture becomes particularly important here. Spacing creates a fixed cutoff difference between the left and right filter paths, while Spread introduces alternating per-voice filter offsets as notes are played. These controls can create anything from subtle stereo animation to dramatically separated filter movement.

The independent high-pass filter can also follow the Filter Envelope, and its cutoff can be linked to the low-pass filter so that a chosen frequency relationship is maintained as the low-pass cutoff moves or is modulated.



Filters

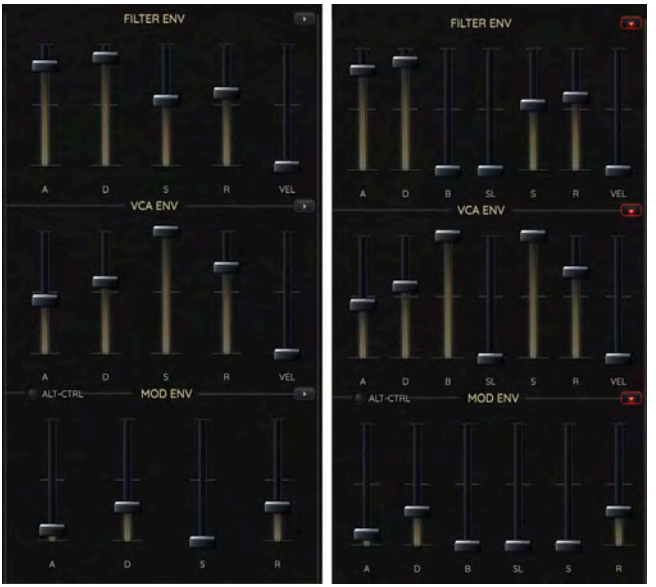
ENVELOPES

Traveler includes dedicated Filter, VCA, and Modulation envelopes.

At first glance, these appear as familiar envelope controls. Clicking the red triangle at the upper-right corner of an envelope expands it to reveal the complete A-D-B-SL-S-R architecture for more detailed contour shaping.

The Filter and VCA envelopes also include velocity sensitivity, while the Mod Envelope includes an alternate control mode that allows its action to depend on a performance or modulation event.

This means Traveler's envelopes can handle familiar fast attacks, plucks, pads, and fades, but they can also create more elaborate multi-stage motion when a conventional ADSR simply isn't enough.



Envelopes (standard and expanded view)

PERFORMANCE AND OUTPUT

The central Performance section provides Glide, Detune, separate downward and upward pitch-bend ranges, Mono, Legato, Poly operation, and voice-count settings.

In Mono mode, increasing the number of Voices creates a unison stack of as many as 16 voices. Detune can also be used in Poly mode for subtler voice variation, although large settings can quickly transform "vintage character" into "someone dropped the piano down the stairs."



Performance controls

Traveler's Output section includes overall level, pan, voice Pan Spread, randomized panning, LF Width, and Vintage behavior. LF Width uses keyboard tracking to progressively keep lower notes more centered beginning at F below middle C, helping preserve a strong, focused low end while higher notes remain spacious.

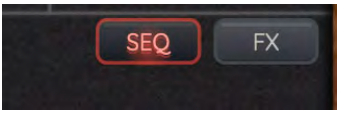
Vintage introduces controlled variations in oscillator pitch, filter behavior, envelope timing, and other per-voice characteristics, adding the small imperfections that can make a synthesized sound feel more organic.



Output

TWO LOWER PANEL VIEWS

The bottom portion of Traveler changes according to the SEQ and FX buttons at the lower-right corner of the main panel.



Sequencer and FX view tabs

SEQ VIEW

SEQ view displays Traveler's two 16-step Control Tracks along with the Arpeggiator.

The Control Tracks are modulation sequencers rather than conventional note sequencers. Each can generate a repeating series of control values and route that movement to a selected destination. Different step lengths, rates, smoothing, swing, randomization, and ping-pong operation make them particularly useful for rhythmic filter movement, wavetable animation, stereo motion, evolving effects, and other repeating modulation.

The Arpeggiator sits beside them and provides its own direction, range, speed, gate, swing, destination, latch, and pedal controls.

The two systems are designed to complement one another: the Arpeggiator can generate musical movement while the Control Tracks animate the sound around it.



Sequencer view

FX VIEW

Click FX to replace the Control Tracks and Arpeggiator with Traveler's effects section.

Four effects are available: a three-band EQ, three-mode chorus, modulated stereo delay, and reverb with Room, Hall, and Space algorithms. Each effect includes its own graphical display, making it easier to see as well as hear what it is doing.

The effects are intended to be part of the instrument rather than an afterthought. They can handle straightforward finishing duties, but they're equally useful as part of the synthesis process, especially because many effects parameters are available as modulation destinations.

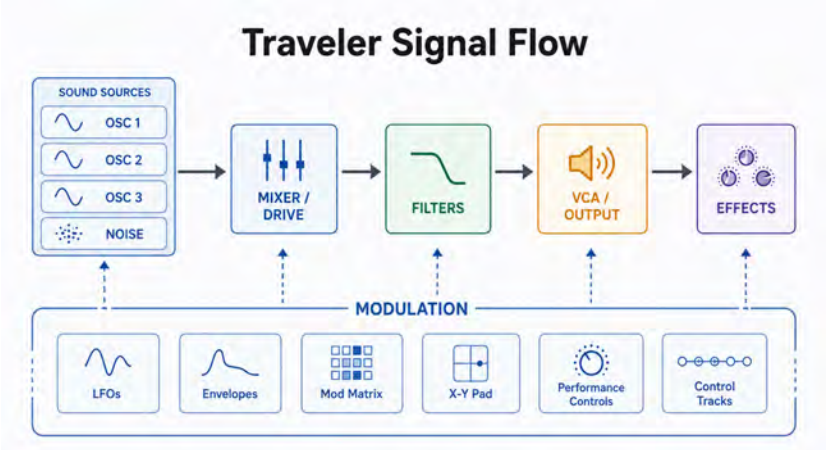


FX view

TRAVELER SIGNAL FLOW

At the broadest level, Traveler follows a familiar synthesizer path: its oscillators and noise source create the raw material, the Mixer combines and drives those signals, the filters shape their harmonic content, the envelopes and VCA shape their behavior over time, and the effects provide the final spatial and tonal treatment.

What makes Traveler less conventional is how freely those stages can interact through modulation, stereo processing, performance controls, and the Control Tracks.



Traveler Signal Flow

That combination of a familiar signal path and unusually deep movement is the basic idea behind Traveler. You can approach it like a classic subtractive synth and get useful results almost immediately, or keep following the modulation paths until the original sound is barely visible in the rearview mirror.

The chapters that follow explain each part of the synth in turn.

GETTING STARTED

Traveler can run as a standalone instrument or as a plug-in inside a compatible DAW. This chapter covers system requirements, installation, initial audio/MIDI setup, and the quickest route to making your first sound.

SYSTEM REQUIREMENTS

WINDOWS

- Windows 10 or above
- 64-bit operating system required
- 3.4 GHz Quad-Core computer with 16 GB RAM recommended
- 150 MB available hard disk space
- Internet connection for product download and activation

MACOS

- macOS 10.13 or above
- 64-bit operating system required

INTEL OR APPLE SILICON PROCESSOR

- 3.4 GHz Quad-Core or Apple Silicon CPU with 16 GB RAM recommended
- 450 MB available hard disk space
- Internet connection for product download and activation

INSTALLING TRAVELER

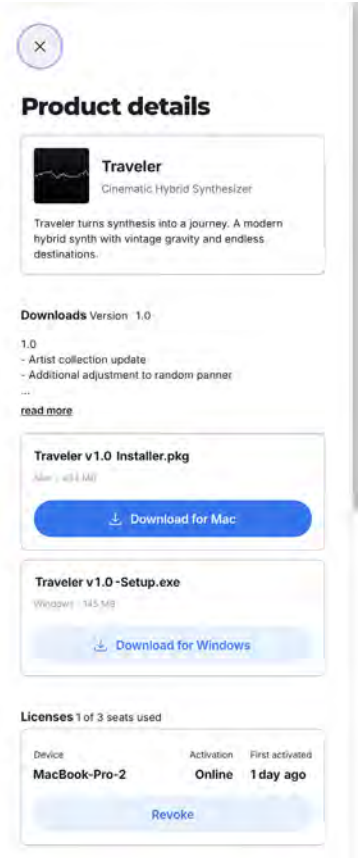
Download the appropriate Traveler installer for your operating system from the KeySolutions website.

TO DOWNLOAD AND INSTALL TRAVELER:

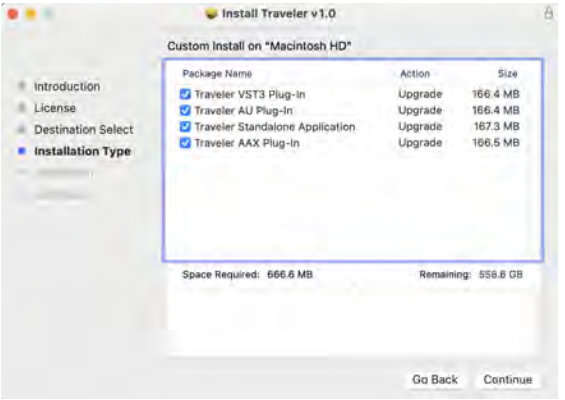
1. On the KeySolutions Sounds website, click Download for Mac or Download for Windows, depending on your operating system.
2. When the download is complete, locate the Traveler installer on your computer and double-click it to begin installation.
3. Follow the on-screen installation instructions.

4. When installation is complete, click Close or the equivalent command to exit the installer.

The installer filename may include Traveler's current version number, so the exact filename may differ from examples shown in this guide.



Downloading Traveler



Installing Traveler

ACTIVATING TRAVELER

Traveler requires an internet connection for product activation. When launching Traveler for the first time, follow any on-screen activation instructions that appear. Because the activation interface may change over time, always follow the instructions presented by the current version of Traveler.

USING TRAVELER AS A STANDALONE INSTRUMENT

The standalone version of Traveler can be used without a DAW. Before playing, make sure Traveler is using the correct audio output and MIDI input devices.

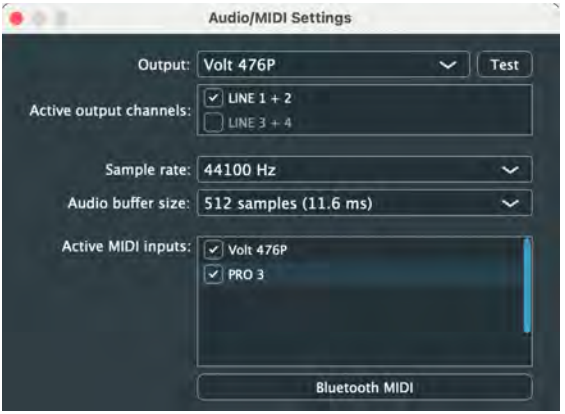


Traveler Standalone version

CONFIGURING AUDIO AND MIDI

TO CONFIGURE TRAVELER FOR STANDALONE USE:

1. Launch the Traveler application.
2. Click SETTINGS beneath the main display.
3. Choose Audio / MIDI Device Settings….
4. Select the desired Output Device.
5. Select the appropriate Output Channels.
6. Choose the desired Sample Rate and Audio Buffer Size.
7. Enable the MIDI controller you want to use under Active MIDI Inputs.
8. Play your MIDI controller and confirm that Traveler produces sound.



Setting up Audio and MIDI

AUDIO BUFFER SIZE

The Audio Buffer Size determines the balance between playing latency and processing stability.

- Lower buffer settings generally reduce the delay between playing a note and hearing the result, making Traveler feel more immediate when performing.
- Higher buffer settings give the computer more time to process audio and can help prevent clicks, dropouts, or other problems when working with complex patches or demanding sessions.

For normal playing, choose the lowest setting that operates reliably on your system. 512 samples is the default.

PLAYING TRAVELER WITHOUT A MIDI CONTROLLER

If you don't have a MIDI keyboard connected, Traveler can use your computer keyboard to trigger notes.

- Choose QWERTY Input from the Settings menu, or press Command-K on macOS.

This provides a convenient way to audition presets, test installation, or work with Traveler when a hardware controller isn't available.



QWERTY Keyboard Input

USING TRAVELER IN A DAW

Traveler can also be used as an instrument plug-in inside a compatible digital audio workstation. The exact procedure varies somewhat between DAWs, but the basic process is the same.

To use Traveler in a DAW:

1. Launch your DAW.
2. Create a new software instrument or instrument track.
3. Insert Traveler as the instrument plug-in.
4. Select or arm the track as required by your DAW.
5. Play your MIDI controller and confirm that Traveler receives MIDI and produces audio.

If Traveler doesn't appear in your DAW's plug-in list immediately after installation, quit and relaunch the DAW so it can scan newly installed plug-ins. Consult your DAW documentation if you need specific instructions for creating an instrument track or inserting a software instrument.

USEFUL EDITING SHORTCUTS

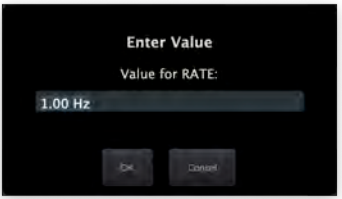
Traveler includes several shortcuts that make everyday sound design considerably faster.

- **Resetting a control**: Option-click a knob or control on macOS, or Alt-click it on Windows, to return the parameter to its default value.
- **Control menu**: Control-click a knob or control to open its contextual menu. Depending on the control's current assignment state, the menu can include commands for MIDI Learn or Enter Value (or if currently mapped to an external MIDI controller, Clear MIDI CC, Global MIDI CC, Clear Global MIDI CC).



Control-click a knob or other control to display this contextual menu

- E**nter Value**: Choose Enter Value when you want to type an exact numeric value rather than adjusting the control manually.



Enter Value Menu

KEYBOARD NAVIGATION AND ACCESSIBILITY

Traveler includes extensive keyboard-navigation and screen-reader support to make the instrument easier to operate without relying exclusively on a mouse. For example, TAB and SHIFT-TAB move forward or backward through controls across Traveler's main interface.

Traveler also supports keyboard navigation within the Preset Browser, including its Libraries, Artists, Categories, and Presets. Toggles, menus, sliders, envelope controls, and Control Track controls have been designed for improved keyboard operation.

In addition, screen-reader names and descriptions are provided throughout the interface. Within the Preset Browser, screen readers can announce information including the preset name, category, and Favorite status as you navigate the list.

USING MIDI LEARN

MIDI Learn provides a quick way to map a physical knob, slider, wheel, or other control on an external MIDI controller to a Traveler parameter.

This is especially useful when your external controller is itself a synthesizer with familiar oscillator, filter, envelope, and modulation controls. Mapping those hardware controls to their Traveler counterparts can make programming feel much more like working with a hardware instrument.

ASSIGNING A MIDI CONTROLLER

TO ASSIGN A HARDWARE CONTROL USING MIDI LEARN:

1. Control-click the Traveler control you want to map. For example, Control-click the Filter CUTOFF knob.
2. Choose MIDI Learn from the menu.
3. Move the knob, slider, wheel, or other control on your external MIDI controller that you want to assign.
4. Traveler learns the incoming MIDI CC and maps it to the selected on-screen parameter.
5. Move the hardware control again to confirm that the Traveler parameter follows it.

By default, a MIDI Learn assignment is retained for the current Traveler session only. If you close Traveler and reopen it, the assignment isn't automatically restored unless you make it global.

MAKING A MIDI ASSIGNMENT GLOBAL

If you want Traveler to remember a MIDI mapping the next time the instrument is opened, make the assignment global.

TO MAKE AN EXISTING MIDI ASSIGNMENT GLOBAL:

1. Assign the hardware control using MIDI Learn as described above.
2. Control-click the mapped Traveler parameter again.
3. Choose Global MIDI CC from the menu.
4. Traveler stores the assignment in its global settings.

The mapping will now be available the next time Traveler is opened.



Making a controller mapping Global

This gives you two useful ways to work:

- **Session MIDI assignment**: Use MIDI Learn by itself when you only need the mapping temporarily for the current session.
- **Global MIDI assignment**: Choose Global MIDI CC when you want that hardware-to-parameter mapping to become part of your regular Traveler setup.

Global assignments are particularly useful if you consistently use the same hardware controller with Traveler. Map its Cutoff knob to Traveler's CUTOFF, its resonance control to RES, its envelope controls to the corresponding Traveler parameters, and the instrument can begin to feel considerably more hands-on.

REMOVING MIDI ASSIGNMENTS

A mapped control can also be cleared from the same contextual menu.

- **Clear MIDI CC**: Removes the current MIDI CC assignment from the parameter.
- **Clear Global MIDI CC**: Removes the stored global MIDI CC assignment for the parameter.

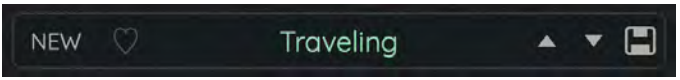
Use the appropriate command depending on whether you want to remove only the current mapping or the globally saved assignment.

Traveler also provides commands for managing global MIDI mappings from Settings > MIDI CC Assignments, as described in the *Settings and Global Controls* chapter.

YOUR FIRST SOUND

Once Traveler is running, the fastest way to get acquainted is simply to play it.

The preset area at the top of the interface lets you load sounds created to demonstrate Traveler's range. Click the preset name in the display to load and try out a few presets first, then begin adjusting the controls that have the most immediate impact on the sound.



Preset controls

A good first exploration might look something like this:

1. Load a preset that interests you.
2. Play notes and chords across several octaves.
3. Turn an oscillator WAVE control and listen to the waveform morph continuously.
4. Adjust the filter CUTOFF and RES controls.
5. Try a small amount of Filter SPACING or Output PAN SPREAD.
6. Select an LFO waveform and raise its FILTER amount.
7. Click the X-Y button below the main display and move the green dot in the X-Y pad.

8. Click the FX tab at the lower right of the panel to display the effects then experiment with Chorus, Delay, or Reverb.

9. If Oscillator 3 is using a wavetable, turn WT POS and listen to the timbre move through the table.

10. When something interesting happens, keep going.

Traveler is deep, but you don't need to understand every section before you start making useful sounds. Most of the important controls are deliberately exposed on the main panel, and the center display provides visual feedback when you adjust LFOs, envelopes, wavetables, and other parameters.

Start with what you can hear immediately. The more elaborate modulation, sequencing, and performance features will make considerably more sense once you already know the sound you're trying to move.

A FEW USEFUL STARTING POINTS

If you're new to Traveler, these controls provide especially quick ways to understand its personality:

- **Oscillator WAVE**: Morphs continuously through the oscillator's basic wave shapes.
- **Oscillator 3 WT**: Switches Oscillator 3 into wavetable mode.
- **WT POS**: Moves through the currently selected wavetable.
- **Filter CUTOFF** and **RES**: Provide the most immediate tonal shaping.
- Filter **SPACING**: Creates a frequency difference between Traveler's left and right filter paths.
- **LFO PITCH** and **FILTER**: Provide quick modulation routing from LFO 1 or LFO 2.
- **PAN SPREAD**: Distributes voices across the stereo field.
- **VINTAGE**: Introduces increasing voice-to-voice variation.
- **X-Y**: Gives you hands-on control of two assignable parameters. Filter cutoff and Resonance are the defaults.
- **CTRL TRACK 1** and **CTRL TRACK 2**: Create pitch sequences or stepped modulation patterns.
- **ARPEGGIATOR**: Generates conventional and more elaborate repeating note patterns.
- **FX**: Opens Traveler's EQ, Chorus, Delay, and Reverb controls.

You don't need to use all of them at once. In fact, we recommend that you don't. One oscillator, one filter, and one interesting modulation routing can take you surprisingly far.

IF YOU DON'T HEAR ANYTHING

If Traveler is running but you don't hear sound, check the following:

- Make sure your MIDI controller is enabled as an Active MIDI Input.
- Confirm that the correct audio Output Device and Output Channels are selected.
- Make sure AMP and MAIN are turned up.
- Check that the oscillator Mixer inputs you want to hear aren't muted.
- If using a DAW, make sure the Traveler instrument track is selected or armed appropriately.
- Confirm that your audio interface, speakers, or headphones are connected and operating normally.
- If necessary, choose MIDI Panic / All Notes Off from the Settings menu to clear stuck MIDI notes.

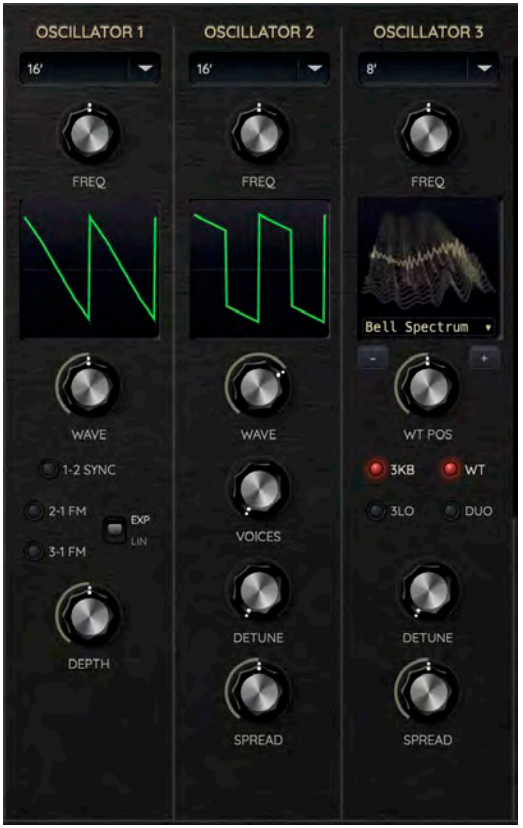
Once Traveler is producing sound, you're ready to start exploring the instrument in detail. The chapters that follow begin with the oscillators and work through Traveler's signal path, modulation, sequencing, performance controls, and effects from there.

OSCILLATORS

Traveler's three oscillators provide the raw material for everything that follows. At their simplest, they can behave like familiar analog-style oscillators, but each one brings its own set of possibilities. Oscillator 1 provides sync and frequency modulation. Oscillator 2 can expand into a seven-voice stereo stack. Oscillator 3 can operate as a conventional oscillator, a low-frequency modulation source, a dual-oscillator stack, or a full wavetable oscillator.

All three oscillators share Traveler's continuously variable waveform architecture. Instead of limiting you to a few fixed waveforms, the WAVE control morphs smoothly from sine through triangle and sawtooth to square/pulse.

That means the familiar waveform shapes are really landmarks rather than fixed destinations. The spaces between them can be just as useful, especially when the WAVE parameter is modulated.



Oscillators

SHARED OSCILLATOR CONTROLS

Several controls perform the same basic functions across Traveler's oscillators.

OCTAVE: (32', 16', 8', 4', 2', 1') Selects the oscillator's basic pitch range. Lower settings produce progressively lower pitches, while higher settings move the oscillator upward in octave increments.

FREQ: Adjusts the oscillator frequency within the selected octave range. Use this to create fine pitch offsets, interval relationships between oscillators, or fixed-frequency operation with Oscillator 3.

WAVE: Continuously morphs the oscillator waveform from sine through triangle and sawtooth to square/pulse. Intermediate settings combine characteristics of the neighboring waveforms, allowing you to fine-tune the harmonic content rather than selecting only fixed shapes. A sine wave provides the simplest harmonic starting point. Triangle adds more upper harmonic content, sawtooth becomes considerably richer, and square/pulse produces a more hollow character dominated by odd harmonics.

Try slowly modulating WAVE with an LFO, envelope, or Control Track. Small amounts of movement can make a sustained sound evolve without sounding obviously modulated.

OSCILLATOR 1

Oscillator 1 provides Traveler's oscillator sync and frequency-modulation controls. It can be frequency-modulated by either Oscillator 2 or Oscillator 3, and it can act as the sync master for Oscillator 2.



Oscillator 1

1-2 SYNC: (on/off) Enables oscillator sync between Oscillator 1 and Oscillator 2. Oscillator 1 acts as the master, forcing Oscillator 2's waveform cycle to restart in relation to Oscillator 1. This produces the bright, harmonically animated character associated with oscillator sync, particularly when Oscillator 2 is tuned above Oscillator 1 or its pitch is modulated.

2-1 FM: (on/off) Uses Oscillator 2 as the frequency-modulation source for Oscillator 1.

3-1 FM: (on/off) Uses Oscillator 3 as the frequency-modulation source for Oscillator 1.

The 2-1 FM and 3-1 FM buttons are mutually exclusive. Only one FM source can be selected at a time.

DEPTH: Sets the amount of frequency modulation applied to Oscillator 1 by the selected FM source. Low settings can add subtle harmonic complexity, while higher settings can produce metallic, bell-like, clangorous, or increasingly extreme timbres.

EXP / LIN: Selects exponential or linear frequency modulation. These two modes respond differently as modulation depth increases and can produce noticeably different harmonic and pitch behavior.

USING OSCILLATOR SYNC

To create a basic oscillator-sync sound:

1. Enable 1-2 SYNC.
2. Raise Oscillator 1 and Oscillator 2 to audible levels in the Mixer.
3. Set Oscillator 1 to the desired fundamental pitch.
4. Set Oscillator 2 to a higher pitch using its OCTAVE and FREQ controls.
5. Play sustained notes and adjust Oscillator 2's pitch.

The greater the pitch difference between the two oscillators, the more pronounced the sync harmonics become. For more animated movement, modulate Oscillator 2 pitch with an envelope, LFO, or Control Track.

OSCILLATOR 2

Oscillator 2 shares the same continuously variable waveform architecture as Oscillator 1, but adds a powerful seven-voice stacking system.



Oscillator 2

VOICES: (1-7) Sets the number of oscillator copies stacked within Oscillator 2. At 1, Oscillator 2 behaves as a single oscillator. Increasing the value adds additional copies of the currently selected waveshape.

DETUNE: Sets the pitch spread between the stacked Oscillator 2 voices. Low values create subtle thickening and beating. Higher values create increasingly obvious pitch separation.

SPREAD: (0%-100%) Sets the stereo width of the Oscillator 2 voice stack. At 0%, the stacked voices remain centered. Increasing the value progressively distributes the voices across the stereo field.

The combination of Voices, Detune, and Spread can move from barely noticeable thickening to enormous stereo textures.

For a wide but controlled pad, try four or five voices with modest Detune and medium Spread. Often the most musical settings make the source simply feel larger rather than sounding like several obviously separate oscillators. For basses and sounds that need a clearly defined fundamental, use Detune conservatively. A little goes a surprisingly long way.

OSCILLATOR 3

Oscillator 3 is Traveler's most flexible oscillator. It can function as a standard keyboard-tracked oscillator, run independently of keyboard pitch, operate at low frequency for modulation duties, stack a second oscillator in Duo mode, or switch into wavetable synthesis.



Oscillator 3

STANDARD OPERATION

With **WT** disabled, Oscillator 3 uses the same continuously variable sine-to-triangle-to-sawtooth-to-square/pulse waveform architecture as Oscillators 1 and 2.

3KB: (on/off) Enables or disables keyboard tracking for Oscillator 3. When 3KB is enabled, Oscillator 3 follows the notes played on the keyboard. When 3KB is disabled, Oscillator 3 no longer follows keyboard pitch. Its frequency is determined by the OCTAVE selection and FREQ control.

This is useful for fixed drones, unusual beating effects, special FM relationships, or any sound in which you want Oscillator 3 to maintain its own frequency regardless of the note being played.

3LO: (on/off) Switches Oscillator 3 into low-frequency operation. In 3LO mode, pitch is determined by the OCTAVE menu and FREQ control. This allows Oscillator 3 to function as an additional low-frequency modulation source when you want movement beyond the three dedicated LFOs. Because Oscillator 3 can also frequency-modulate Oscillator 1, 3LO opens up another route to slow, complex pitch and timbral movement.

DUO MODE

DUO: (on/off) Adds a second oscillator to Oscillator 3.

DETUNE: Sets the pitch difference between the two Oscillator 3 voices when Duo mode is enabled.

SPREAD: Sets the stereo separation of the two Oscillator 3 voices in Duo mode.

Duo mode is useful when you want Oscillator 3 to sound thicker or wider without using Oscillator 2's larger seven-voice stack. Small Detune values create gentle beating and stereo width, while larger settings create more obvious pitch separation.

Try using Oscillator 2 as the broadest stereo layer and Oscillator 3 in Duo mode with a smaller amount of Spread. Giving different sources different widths can create a more convincing sense of depth than spreading everything equally.

WAVETABLE MODE

Click WT to switch Oscillator 3 from its standard continuously variable waveform mode into wavetable mode. A wavetable contains a sequence of individual single-cycle waveforms, or frames. Instead of playing only one fixed waveform, Traveler can move through these frames to create timbres that evolve over time.

Traveler uses 2048 samples per frame, and each wavetable can contain up to 256 individual frames. When WT mode is enabled, Oscillator 3's WAVE control changes its label and function to WT POS.

WT: (on/off) Switches Oscillator 3 into wavetable mode.

WT POS: Sets the position within the selected wavetable. Moving WT POS scans through its available frames, allowing you to select a static timbre or create continuously evolving motion when the parameter is modulated.

Traveler provides storage for up to 4,096 user wavetables, making it practical to maintain substantial third-party and custom wavetable collections directly within the instrument.



Oscillator 3 in Wavetable mode

The real fun begins when WT POS moves. An LFO can create cyclical timbral motion, an envelope can sweep through part of the table during a note, and a Control Track can introduce rhythmic wavetable animation.

You can also assign WT Position to the X-Y pad or another performance source so that the wavetable responds directly to your playing.

SELECTING A WAVETABLE

When Oscillator 3 is in WT mode, the currently selected wavetable appears by name beneath the waveform display.

TO SELECT A WAVETABLE:

1. Enable Oscillator 3 WT mode.
2. Click the name of the currently selected wavetable, or click the small white arrow to its right.
3. Choose the desired wavetable from the menu that appears.

You can also use the + and - buttons beside the wavetable name to step forward or backward through the available wavetables.

WAVETABLE BROWSER

Traveler includes a dedicated Wavetable Browser for navigating its factory and user wavetable collections. Like the main Preset Browser, it is designed to make even a large library easy to explore.

The Wavetable Browser provides waveform previews, Favorites, and access to recently used wavetables. Imported user folders appear as nested groups, allowing existing wavetable collections to retain their organization instead of being presented as one enormous flat list.

Traveler supports up to 4,096 user wavetables, providing ample room for large custom and third-party collections. Traveler also loads only the wavetable currently in use rather than preloading the entire wavetable library. This substantially reduces memory usage, especially when working with large collections.



Wavetable Browser

IMPORTING CUSTOM WAVETABLES

Traveler supports two established wavetable formats for importing custom material.

STANDARD .WAV (SERUM FORMAT)

Traveler supports standard Serum-format wavetable WAV files with the following specifications:

- 2048 samples per frame
- Up to 256 frames per wavetable
- 32-bit floating-point

This format has become an industry-wide de facto standard and is used by many third-party wavetable libraries. Compatible instruments include Xfer Serum, Vital, Arturia Pigments, and Korg Modwave.

SURGE .WT FORMAT

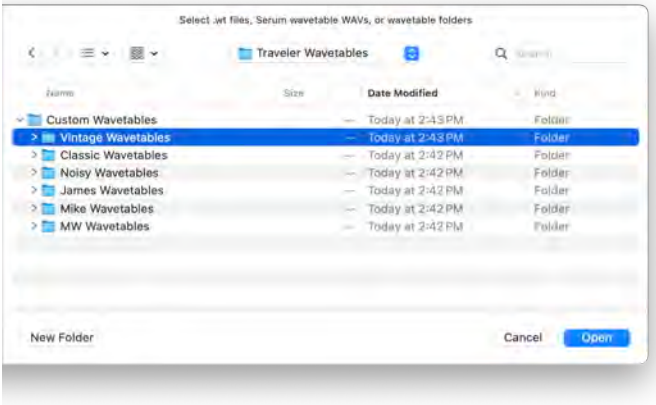
Traveler also supports Surge .WT files, a proprietary wavetable container developed for the open-source Surge synthesizer. The .WT format contains the same raw PCM wavetable data used in standard wavetable WAV files, but stores it using a different internal chunk structure. Surge .WT files are compatible with Surge XT and Bitwig Polymer/Grid.

IMPORTING WAVETABLES

To import custom wavetables into Traveler:

1. Make sure the custom wavetables are saved in a Traveler-compatible format.
2. With Oscillator 3 in WT mode, open the Wavetable Browser.
3. Choose Import Wavetables.
4. Navigate to the folder or files containing the wavetables you want to import.
5. Choose whether Traveler should keep the wavetable files in their existing location or copy them to Traveler's wavetable location.
6. Complete the import.

The imported wavetables appear in the Wavetable Browser and are available for selection.



Importing custom wavetables

CHOOSING WHERE IMPORTED WAVETABLES ARE STORED

Traveler gives you two ways to manage imported wavetable files.

Keep at Existing Location: Traveler references the wavetable files where they currently reside. This is useful if you already maintain an organized wavetable library elsewhere on your computer and don't want to create duplicate files.

Copy to Traveler Location: Traveler copies the imported files to its own wavetable storage location. This can be useful when you want Traveler's user wavetable collection to remain self-contained and easier to manage independently.

MAKING CREATIVE USE OF THE OSCILLATORS

There are many ways to combine Traveler's oscillator features for useful and unexpected results:

- Slowly modulate WAVE on one of the standard oscillators to create evolving harmonic movement before the signal even reaches the filter.
- Stack several Oscillator 2 voices with small amounts of DETUNE and SPREAD to create natural width before adding chorus or other effects.
- Use larger Oscillator 2 Detune and Spread settings for cinematic pads and broad textures, then use Traveler's LF WIDTH control later in the signal path to keep the lowest notes focused toward the center.
- Enable 1-2 SYNC and modulate Oscillator 2 pitch with an envelope for bright, animated sync sweeps.
- Select 2-1 FM or 3-1 FM, begin with a low DEPTH setting, and experiment with the FM source's pitch and waveform. Small changes can have a large effect on harmonic character.
- Disable 3KB and use Oscillator 3 as a fixed-frequency source against keyboard-tracked Oscillators 1 and 2. The changing interval relationships across the keyboard can produce unusual harmonic textures.
- Enable 3LO and use Oscillator 3 as an additional low-frequency modulation source when all three dedicated LFOs are already occupied.
- Use Oscillator 3 DUO with modest Detune and Spread to give a wavetable sound more width without creating a large unison stack.
- Modulate WT POS with a slow LFO for cyclical movement, with the Mod Envelope for evolving one-shot motion, or with a Control Track for rhythmic timbral changes.

- Assign WT POS to one axis of the X-Y pad and another parameter, such as filter cutoff or stereo spacing, to the other. A single gesture can then reshape both timbre and space in real time.

Traveler's oscillator section can behave like a straightforward three-oscillator subtractive synth when that's what the music calls for. But a few control changes can turn it into a stacked, frequency-modulated, stereo wavetable engine with several kinds of motion happening at once. Start simple. Then see where it takes you.

MIXER

Traveler's Mixer brings Oscillators 1, 2, and 3 together with the Noise source, then provides Feedback and Drive controls for shaping the combined signal before it reaches the filter section.

At its most basic, the Mixer determines how much of each sound source you hear. But it can do considerably more than that. Each oscillator has its own stereo pan control, the inputs can be muted individually, and the Feedback and Drive controls let you push the signal from clean and balanced into thicker, more harmonically aggressive territory.

This is also a good place to introduce one of Traveler's useful visual conventions: when a knob is being modulated, its normal gray value indicator is supplemented by a green modulation indicator that shows the range through which modulation can move the parameter.



Mixer



OSCILLATOR MIXER CONTROLS

Each of Traveler's three oscillators has its own level control, mute button, and pan slider.

OSC 1: Sets the level of Oscillator 1 in the mix. Use this to establish the primary tone or blend Oscillator 1 with the other sound sources.

OSC 2: Sets the level of Oscillator 2 in the mix. Because Oscillator 2 can contain as many as seven stacked voices, its perceived size can change considerably depending on its Voices, Detune, and Spread settings. Adjust its Mixer level accordingly.

OSC 3: Sets the level of Oscillator 3 in the mix. This controls Oscillator 3 whether it is operating as a conventional oscillator, in Duo mode, or as a wavetable oscillator.

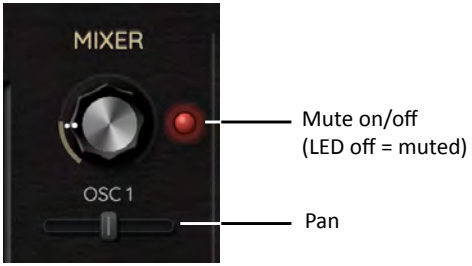
The level controls don't have to be equal. In fact, many of the most useful sounds come from making one oscillator dominant and using the others as supporting colors.

OSCILLATOR MUTE BUTTONS

The red LED/button beside each oscillator level control acts as a mute.

MUTE LED: (on/off) Click the button to mute the corresponding oscillator input. When the LED is illuminated, that oscillator is active. When the LED is not illuminated, that oscillator is muted. This is especially useful while programming a sound because it lets you isolate individual oscillators without changing their carefully adjusted Mixer levels.

When building a layered patch, mute all but one oscillator and shape each source individually. Then bring them back one at a time and adjust their levels in context.



Mixer controls

OSCILLATOR PANNING

The horizontal slider beneath each oscillator level knob controls that oscillator's position in the stereo field.

OSC 1 PAN: Sets the left/right stereo position of Oscillator 1. Center the slider for a centered signal, or move it left or right to place the oscillator elsewhere in the stereo field.

OSC 2 PAN: Sets the left/right stereo position of Oscillator 2.

OSC 3 PAN: Sets the left/right stereo position of Oscillator 3.

These controls are independent of the internal stereo-spread features found in Oscillators 2 and 3. For example, Oscillator 2 can have its seven-voice stack spread internally across stereo and then have the entire oscillator layer positioned with its Mixer pan control.

Because the oscillator pan parameters are modulation destinations, they can also be animated using Traveler's modulation system. Static panning is useful for separating layers. Slow modulation is useful when you want those layers to drift, orbit, or exchange places over time.

NOISE

Traveler includes a dedicated Noise source for adding broadband harmonic material to a sound.



Noise controls

NOISE: Sets the level of the Noise source in the Mixer. Low settings can add subtle texture or breath, while higher settings can become an important part of the sound itself.

WHT / PNK: Selects white or pink noise.

WHT provides white noise, with energy distributed broadly across the frequency spectrum. It tends to sound brighter and more obvious.

PNK selects pink noise, which places proportionally more energy in the lower frequencies and generally has a darker, smoother character.

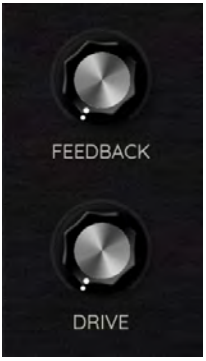
Noise is useful for much more than wind and special effects. A small amount can add articulation to plucks, breath to pads, grit to basses, or additional material for Traveler's filters and envelopes to shape.

FEEDBACK

FEEDBACK: Sets the amount of internal feedback in Traveler's mixer signal path. At lower settings, Feedback can add density and harmonic interest. Higher settings can make the sound increasingly resonant, aggressive, or unpredictable, particularly when combined with filter resonance and Drive.

Because feedback interacts with the sound already passing through the instrument, its effect depends heavily on the oscillator mix, filter settings, and playing dynamics.

Feedback is one of those controls where small movements can matter. If a patch suddenly develops teeth, check what Feedback is doing before blaming the oscillator.



Feedback and Drive

DRIVE

DRIVE: Sets the amount of pre-filter drive applied to the Mixer output. Increasing Drive pushes the combined oscillator and noise signal harder into the filter section. Lower settings can add subtle weight and harmonic coloration, while higher settings can produce a denser and more aggressive tone.

Drive is especially effective when the filter is partially closed, because the additional harmonics give the filter more material to shape.

The relationship between Mixer level, Drive, filter cutoff, resonance, and Feedback is highly interactive. There is no single “correct” gain structure. Cleaner sounds may benefit from restrained levels and Drive, while aggressive basses, leads, and effects may come alive when the signal path is deliberately pushed.

UNDERSTANDING TRAVELER'S MODULATION INDICATORS

Traveler provides visual feedback whenever a knob is being used as a modulation destination. The normal gray indicator around a knob shows the parameter’s current base value. When the parameter is being modulated, a green indicator appears. The green portion shows the range through which modulation can move the parameter relative to its current setting.



This visual feedback makes it much easier to see how a modulation routing affects a parameter without opening the Modulation Matrix.

If a control seems to be moving farther than expected, look for the green indicator. Traveler may simply be reminding you that somebody routed an LFO there ten minutes ago.

BALANCING A BASIC OSCILLATOR MIX

TO BUILD A THREE-OSCILLATOR MIX FROM SCRATCH:

1. Mute Oscillators 2 and 3, leaving only Oscillator 1 audible.
2. Adjust the Oscillator 1 level until it provides a comfortable foundation for the sound.
3. Unmute Oscillator 2 and gradually raise its level until it adds the desired amount of body or width.
4. Unmute Oscillator 3 and blend it into the sound.
5. Use the three oscillator pan sliders to establish the desired stereo placement.
6. Add Noise if the sound needs additional texture or high-frequency detail.
7. Increase DRIVE if you want additional weight or harmonic intensity.
8. Add FEEDBACK carefully if the sound needs more edge, resonance, or unpredictability.

Building the mix one source at a time makes it much easier to hear what each oscillator is contributing.

MAKING CREATIVE USE OF THE MIXER

The Mixer can do much more than simply balance levels:

- Use one oscillator as the central foundation and pan the other two slightly left and right. This creates stereo separation without relying entirely on effects.
- Combine Oscillator 2's internal SPREAD with its Mixer pan control. The oscillator can remain wide while its overall stereo image is shifted away from center.
- Keep a bass-focused oscillator centered while allowing brighter oscillators to occupy more of the stereo field. This can create a large sound without weakening the low-frequency foundation.
- Add a very small amount of Noise to plucks or percussion-like patches. A short filter or amplifier envelope can turn the noise into a convincing transient.
- Use pink noise behind pads to add a soft, diffuse texture that becomes more noticeable as the filter opens.
- Modulate an oscillator's pan position slowly with an LFO for gentle stereo movement, or use a Control Track for more rhythmic placement.

- Increase DRIVE before closing the filter. The added harmonic content can make low-cutoff sounds feel denser and more present.
- Combine moderate FEEDBACK with filter resonance for more complex harmonic behavior. Small changes to either control can produce surprisingly large tonal shifts.
- Try temporarily muting one oscillator in a finished patch. Sometimes the sound improves. Synthesizers, like committees, don't always benefit from adding another voice.

The Mixer sits between Traveler's sound sources and its filters, so decisions made here affect nearly everything that follows. A carefully balanced mix can sound polished before any effects are added, while deliberate imbalance, feedback, and drive can push Traveler into much rougher territory.

Both approaches are useful. The trick is knowing which journey the sound wants to take.

FILTERS

Traveler's filter section is where much of its tonal character, motion, and stereo personality comes into focus. It combines six low-pass filter models with an independent high-pass filter, envelope modulation, bipolar keyboard tracking, resonance compensation, and two different methods of creating stereo variation.

At its simplest, the filter behaves exactly as you'd expect: lower CUTOFF to darken the sound, add RES to emphasize frequencies around the cutoff point, and use the Filter Envelope to shape brightness over time.

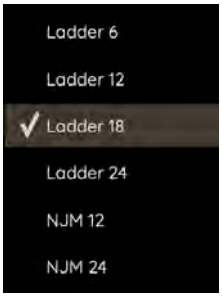
But Traveler goes considerably further. Its stereo filter architecture can offset the left and right cutoff frequencies by as much as three octaves, while a separate per-voice Spread control introduces additional left/right variation as different voices are played. Combined with keyboard tracking, envelopes, modulation, Drive, and Feedback, the filter can become one of Traveler's most expressive sound-design tools.



Filters

FILTER MODELS

Traveler provides six low-pass filter models with slopes ranging from a gentle 6 dB/octave response to a steep 24 dB/octave response.



Filter types

FILTER TYPE: (Ladder 6, Ladder 12, Ladder 18, Ladder 24, NJM 12, NJM 24) Selects the low-pass filter model and slope.

The four Ladder models provide progressively steeper versions of a classic transistor-ladder-style response. Shallower slopes allow more upper harmonic material through, while the 24 dB model produces a deeper, more decisive low-pass effect.

The NJM 12 and NJM 24 models offer a distinctly different flavor. They take their inspiration from the NJM2069, a Japan Radio Co. filter/VCA chip used by Korg in instruments including the DW-6000, DW-8000, Poly-800, and DSS-1 during the mid-1980s. Unlike a classic transistor-ladder design, the NJM2069 uses OTA-based circuitry, contributing to a character that is smoother, rounder, and somewhat more liquid than the Ladder models.

Musically, think of Traveler's Ladder filters as providing classic analog punch and growl, while the NJM filters are their smoother, silkier cousins. They're warm through the mids, slightly rounder on top, and particularly good when you want resonance to sing rather than snarl.

NJM 12 uses the gentler 12 dB/octave slope. It allows more upper harmonic content to pass through, giving it a brighter, airier, more open character.

NJM 24 uses the steeper 24 dB/octave slope for deeper, more focused low-pass filtering. At high Resonance settings, NJM 24 can be pushed into self-oscillation for clear, singing resonant tones.

If a patch feels overly dark, try changing the filter model before simply raising Cutoff. A shallower slope can preserve more of the oscillator's original harmonic character while still providing useful tonal shaping.

LOW-PASS FILTER CONTROLS

CUTOFF: (20 Hz to 20 kHz) Sets the cutoff frequency of the selected low-pass filter. Frequencies above the cutoff point are progressively attenuated according to the selected filter slope. Cutoff is one of Traveler's most useful modulation destinations and can be controlled by envelopes, LFOs, velocity, pressure, the X-Y pad, Control Tracks, and numerous other sources.

RES: (0 to 100%) Sets filter resonance. Increasing Resonance emphasizes frequencies around the cutoff point, ranging from subtle definition to pronounced resonant coloration. Higher resonance settings make cutoff movement considerably more obvious, particularly when Cutoff is being modulated.

BASS: (on/off) Enables low-frequency compensation for the selected filter model. This helps counteract the loss of bass energy that can occur as resonance is increased. BASS compensation is available with all six filter models and is particularly useful for basses, low pads, and other sounds where you want strong resonance without sacrificing too much weight at the bottom.

ENV AMT: (-100 to +100) Sets the amount and polarity of Filter Envelope modulation applied to the low-pass cutoff frequency. Positive values cause the envelope to move Cutoff in the positive direction, while negative values invert the envelope's effect. This makes it easy to create both conventional opening filter contours and inverted sweeps that become darker as the envelope develops.

The audible result depends on the relationship between CUTOFF, ENV AMT, and the envelope shape. If Cutoff is already set near the top of its range, a strong positive envelope may have relatively little room left to travel.

KB TRK: (-100 to +100) Sets the amount and direction of keyboard tracking applied to the low-pass cutoff. Positive values cause higher notes to receive progressively higher cutoff frequencies and lower notes progressively lower cutoff frequencies. This can help maintain a more consistent tonal balance across the keyboard.

Negative values reverse that relationship, causing higher notes to become progressively darker. This can be useful for unusual acoustic-like behavior, special effects, and patches where you deliberately want the upper register to lose brightness. At or near 0, filter cutoff remains largely independent of keyboard position. Negative keyboard tracking is easy to overlook, but it can produce wonderfully strange results. Try it on resonant plucks or sequences where you want the low notes bright and the high notes progressively softer.



Filters

STEREO FILTER SPACING

One of Traveler's defining features is its dual/stereo filter architecture.

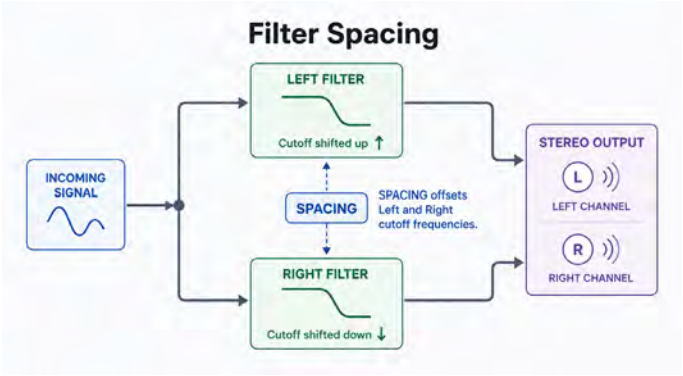
SPACING: (-3 octaves to +3 octaves) Sets a fixed frequency offset between the left and right low-pass filter paths. At small values, Spacing creates subtle stereo width and harmonic difference. At larger settings, the two sides of the stereo image can be filtered at dramatically different cutoff frequencies.

Because the range is bipolar, you can reverse the relationship between the two filter paths by moving through the center position.

Unlike conventional panning, Spacing doesn't simply change where a sound sits in the stereo field. Instead, it changes the harmonic content of the left and right channels independently. That distinction is important. A sound can remain centered in level while still appearing very wide because its left and right spectra are different.



Filter Spacing



Filter spacing

For subtle width, try a small amount of Spacing with moderate Resonance. The effect may not call attention to itself, but the sound often feels larger and more dimensional.

At more extreme settings, especially with high Resonance, Spacing can create dramatic stereo peaks that move together as Cutoff is swept.

PER-VOICE FILTER SPREAD

SPREAD: (0% to 100%) Sets the amount of per-voice left/right filter offset. At 0%, no additional per-voice offset is applied. Increasing Spread moves successive voices progressively farther toward opposing sides, with 100% reaching hard left/right. This introduces variation between played voices rather than sending every note through exactly the same filter placement.

At subtle settings, Spread can contribute to the impression of independent analog voices. At larger settings, chords and arpeggios become noticeably more animated as successive notes receive different stereo filter treatment.

Spacing and Spread perform related but distinct jobs:

- Spacing creates a fixed frequency relationship between the left and right filter paths.
- Spread adds a per-voice left/right offset as different notes are played.

Used together, they can create a stereo image that feels both wide and dynamically alive. Try a small amount of Spacing with moderate Spread on sustained chords. The result can feel spacious and animated before you add a single chorus or reverb.

HIGH-PASS FILTER

Traveler includes an independent high-pass filter for removing low-frequency content or, when combined with the low-pass filter, isolating a more focused frequency range.

HP: (20 Hz to 20 kHz) Sets the cutoff frequency of the high-pass filter. Frequencies below the cutoff point are progressively attenuated. At low values, HP can remove unnecessary sub-bass or low-frequency buildup. At higher values, it can thin the sound dramatically or work with the low-pass filter to isolate a narrower band of frequencies.

HP ENV: (-100 to +100) Sets the amount and polarity of Filter Envelope modulation applied to the high-pass cutoff. Positive values move the high-pass cutoff in the positive direction as the envelope develops, while negative values invert the movement.

Because both ENV AMT and HP ENV are bipolar, the low-pass and high-pass filters can move in the same direction, move in opposite directions, or respond by different amounts to the same Filter Envelope. This makes it possible to create much more interesting spectral movement than a conventional single-filter envelope sweep.



High-Pass filter

LINKING THE LOW-PASS AND HIGH-PASS FILTERS

LINK: (on/off) Links the high-pass cutoff to movement of the low-pass Cutoff while preserving the frequency relationship established between them. To establish the relationship, first set the low-pass and high-pass cutoff frequencies independently. Then enable LINK.

Once linked, moving or modulating CUTOFF also moves the high-pass cutoff while maintaining the original offset. This effectively creates a movable spectral window.



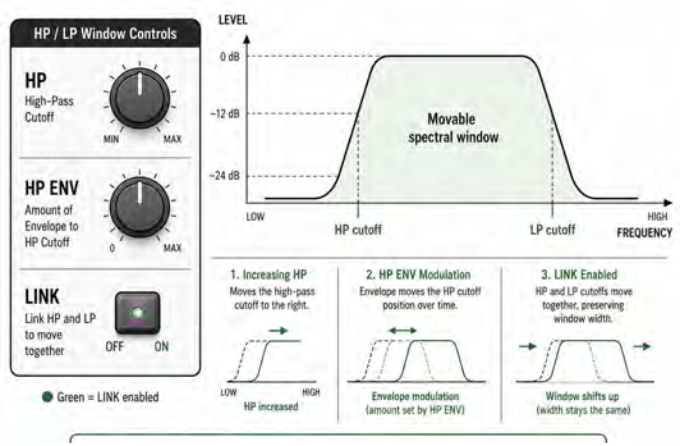
Link control

CREATING A LINKED FILTER WINDOW

TO CREATE A MOVING FREQUENCY WINDOW WITH THE LOW-PASS AND HIGH-PASS FILTERS:

1. Set CUTOFF to define the upper edge of the desired frequency range.
2. Set HP to define the lower edge.
3. Click LINK to preserve the relationship between the two cutoff frequencies.
4. Adjust the low-pass CUTOFF control.
5. Notice that the high-pass cutoff follows while maintaining the original offset.
6. Modulate CUTOFF with the Filter Envelope, an LFO, Control Track, X-Y pad, or other modulation source to move the entire frequency window dynamically.

This technique is useful for animated pads, rhythmic sequences, resonant sweeps, and effects where you want the sound to move through the spectrum without the filtered bandwidth continually changing.



Linked filters

FILTER ENVELOPE INTERACTION

Traveler's Filter Envelope is one of the most direct ways to animate the filters. Its effect depends on the envelope shape, ENV AMT, HP ENV, the initial cutoff settings, and any additional modulation being applied.

- For a traditional synth-bass contour, start with a relatively low Cutoff setting, a short Decay, moderate Sustain, and enough positive ENV AMT to create a pronounced opening transient.
- For inverted sweeps, use a negative ENV AMT value so the filter moves downward as the envelope progresses.
- For evolving pads, longer envelope stages combined with smaller modulation amounts often sound more natural than a dramatic sweep.

Because HP ENV is independently bipolar, the high-pass filter can move with the low-pass filter or in the opposite direction. One can open while the other closes, producing spectral shapes that expand or contract over time.

FILTER, DRIVE, AND FEEDBACK

Traveler's filters respond strongly to the harmonic content and level of the signal entering them.

- The Mixer's **DRIVE** control increases pre-filter saturation, adding harmonics before the signal reaches the filter section. This gives the filters more material to shape and can make low cutoff settings sound denser and more substantial.
- **FEEDBACK** introduces additional harmonic interaction and can push the filter response into more complex territory.

The relationship between Drive, Feedback, Resonance, and Cutoff is highly interactive. Small changes to one control can significantly affect how the others behave. If a filter sweep sounds too polite, try increasing Drive before simply piling on more Resonance. Sometimes the filter doesn't need more emphasis. It needs more to chew on.



Drive and Feedback controls (in the Mixer)

MAKING CREATIVE USE OF THE FILTERS

Traveler's filter section offers plenty of ways to move beyond the usual low-pass sweep:

- Use Ladder 6 or Ladder 12 when you want to soften a bright oscillator while retaining plenty of upper harmonic detail.
- Use Ladder 18 or Ladder 24 when you want stronger tonal shaping, deeper bass filtering, or more aggressive resonant sweeps.
- Compare the Ladder and NJM models at identical Cutoff and Resonance settings. The Ladder models generally emphasize classic analog punch and growl, while the NJM models provide a smoother, rounder, more liquid character.
- Try NJM 12 on pads, keys, and wavetable textures when you want to color the sound without heavily closing it down.
- Use NJM 24 when you want the same smoother NJM character with a deeper low-pass response. Push Resonance high enough and it can enter self-oscillation for clear, singing tones.
- Enable BASS when using substantial Resonance on bass-heavy sounds. This can help retain low-frequency authority while allowing the resonant peak to remain prominent.
- Use negative ENV AMT for inverted filter-envelope movement. This is especially effective for percussive sounds, effects, and patches that become darker immediately after the note begins.
- Try negative KB TRK on sequenced or arpeggiated patches. Higher notes become progressively darker, creating a response that is almost the reverse of a conventional keyboard-tracked filter.
- Add a small amount of SPACING to pads and sustained textures. Even a modest difference between the left and right cutoff frequencies can create useful width before any effects are added.
- Use larger Spacing values with Resonance for obvious stereo movement. Modulating Cutoff causes the resonant peaks to travel together while retaining their separation.

- Add SPREAD to chords so successive notes receive different left/right filter treatment. This can make repeated notes and sustained voicings feel less static.
- Combine moderate Spacing and Spread for sounds that are both stereo and voice-variable. Start small. It's remarkably easy to go from "beautifully dimensional" to "the left and right speakers are negotiating a separation agreement."
- Use the high-pass filter to remove unnecessary low-frequency energy from wide pads, effects, and layered sounds, leaving more room for bass instruments.
- Give ENV AMT and HP ENV opposite polarities. The low-pass and high-pass filters can move toward or away from one another over the course of a note, causing the audible frequency window to contract or expand.
- Set HP below the low-pass Cutoff and enable LINK to create a moving spectral window. Then modulate Cutoff with an LFO or Control Track for animated, band-limited movement.
- Route velocity or pressure to Cutoff so the filter responds directly to performance dynamics. Soft notes can remain dark while harder or more expressive playing opens the sound.
- Assign CUTOFF to one axis of the X-Y pad and RESONANCE, SPACING, or another filter parameter to the other. A single gesture can then reshape both tone and stereo character.
- Combine a slow Filter Envelope sweep with subtle LFO modulation. The envelope provides the large-scale contour while the LFO keeps the sound moving within it.

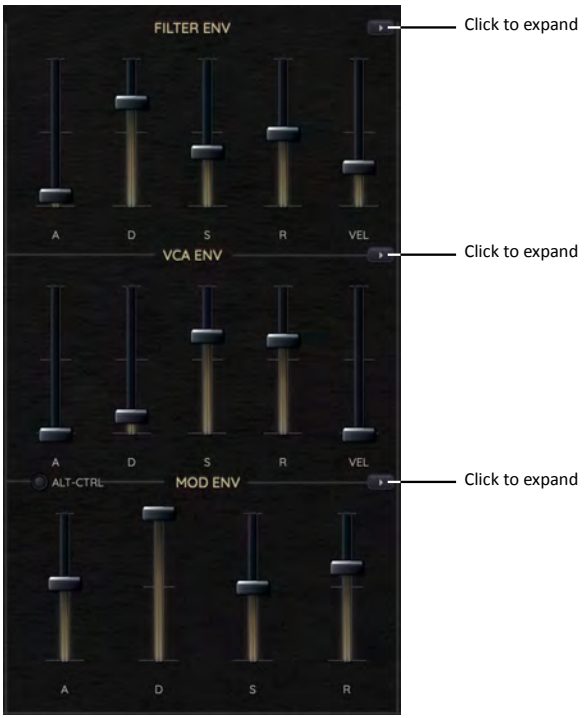
Traveler's filters can certainly handle familiar subtractive duties, but that's only the beginning. Between six distinct filter models, bipolar envelope and keyboard tracking, stereo Spacing, per-voice Spread, linked high-pass filtering, Drive, Feedback, and deep modulation, even a simple oscillator waveform can become a complex, evolving texture.

ENVELOPES

Traveler includes three dedicated envelopes: FILTER ENV, VCA ENV, and MOD ENV. In their normal collapsed state, they provide familiar ADSR control for quick, straightforward shaping. But each envelope can also expand into a more sophisticated ADBSSR contour, adding Breakpoint and Slope stages for sounds that need more than the usual attack-decay-sustain-release trajectory.

The result is a useful balance between immediacy and depth. For a bass, pluck, lead, or simple pad, the standard ADSR controls may be all you need. For evolving textures, cinematic swells, acoustic-style articulations, or sounds that change direction over time, the expanded controls provide considerably more flexibility.

Traveler also lets all three envelopes serve as modulation sources, so their usefulness extends far beyond their obvious roles. An envelope can scan wavetable position, alter oscillator pitch, move a sound through the stereo field, change effect levels, or control several destinations at once.



Envelopes

EXPANDING AN ENVELOPE

In its collapsed state, FILTER ENV and VCA ENV display A, D, S, R, and VEL. MOD ENV displays A, D, S, and R. Click the small red triangle at the far right of an envelope's name to reveal the complete A, D, B, SL, S, R control set. The Filter and VCA envelopes retain their VEL controls when expanded.



Expanded Envelopes

ENVELOPE CONTROLS

A (ATTACK): (2 ms to 20 seconds) for Filter and Mod; 0.1 ms for VCA) Sets the amount of time required for the envelope to rise from its starting level to its initial peak after being triggered. Short settings produce immediate attacks, while longer settings create gradual fades and swells.

D (DECAY): (2 ms to 20 seconds) Sets the time required for the envelope to move from the Attack peak to the Breakpoint level.

B (BREAKPOINT): (0 to 100%) Sets the intermediate level reached after the Decay stage. Breakpoint adds a second level target before Sustain, allowing the envelope to develop in more than one stage.

SL (SLOPE): (2 ms to 20 seconds) Sets the amount of time required for the envelope to move from the Breakpoint level to the Sustain level.

S (SUSTAIN): (0 to 100%) Sets the level maintained while a note remains held after the preceding envelope stages have completed.

R (RELEASE): (2 ms to 20 seconds) Sets the amount of time required for the envelope to return to its resting level after the note is released.

VEL: (0 to 300%) Sets velocity sensitivity for the Filter or VCA Envelope amount. Higher settings cause note velocity to have a greater influence on the envelope response.

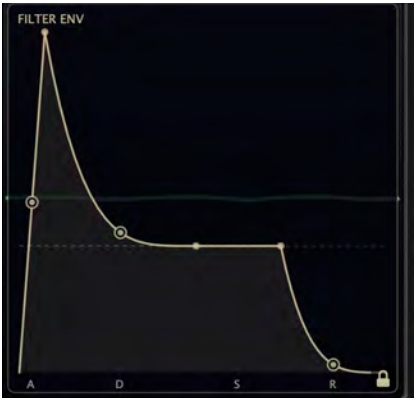
The Breakpoint and Slope stages are what turn Traveler's expanded envelopes into something considerably more flexible than a standard ADSR. Instead of attacking, decaying once, and settling at Sustain, the envelope can reach one intermediate level and then continue toward another over a separately adjustable period of time. Think of Breakpoint and Slope as a second chapter in the middle of the envelope. ADSR tells one simple story. ADBSSR gives you room for a plot twist.

CUSTOM ENVELOPE CURVES

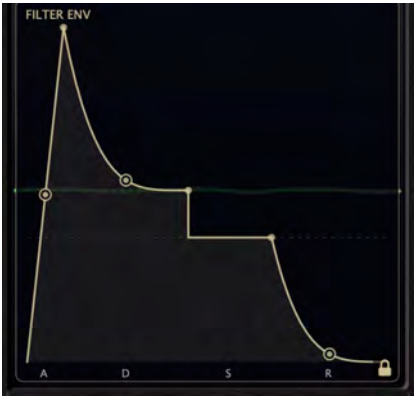
Traveler lets you edit the curvature of all envelope stages graphically. When you adjust an envelope control, the center display automatically shows the corresponding envelope shape. Stage points appear in the graph, and the curve of each editable segment can be reshaped directly in the display.

Changing the curve doesn't change the overall stage time set by its envelope control. Instead, it changes how the envelope travels through that amount of time. A stage can move evenly, rush through one part of its trajectory and ease through another, or take on a more pronounced exponential character.

This gives the envelope considerably more expressive range than timing controls alone. Two envelopes can use identical Attack, Decay, or Release settings and still feel very different because their curves deliver that movement differently.



Editable Envelope (Standard ADSR)



Editable Envelope (Expanded)

EDITING AN ENVELOPE CURVE

To graphically reshape an envelope stage:

1. Adjust the desired envelope control so its graphic appears in Traveler's center display.
2. Locate the editable point for the stage you want to reshape.
3. Click and drag the point to change the stage curvature.
4. Continue dragging until the desired shape appears.
5. Play the sound and fine-tune the curve by ear.

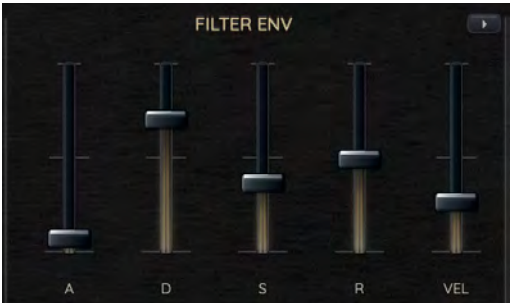
For percussive sounds, stronger Decay and Release curves can sharpen the sense of impact without simply shortening the stage. For pads, strings, and cinematic swells, gentler curves can make long transitions feel considerably more natural.The timing of the envelope stage remains defined by its slider setting. Changing the curve alters how the envelope travels through that time. This distinction is musically important. Two envelopes can have identical Attack and Decay times yet feel very different depending on whether their curves are linear, sharply exponential, or somewhere between.

FILTER ENVELOPE

FILTER ENV primarily shapes Traveler's low-pass and high-pass filters. Its effect is determined by the envelope itself along with the filter section's bipolar ENV AMT and HP ENV controls. Because both filter-envelope amounts can be positive or negative, the same contour can open a filter, close it, or move the low-pass and high-pass filters in opposite directions.

VEL: (0 to 300%) Sets velocity sensitivity for the Filter Envelope. At higher values, playing harder produces a stronger envelope response. This is particularly useful for expressive patches. Soft notes can remain subdued and dark, while harder notes produce brighter, more animated filter movement.

The expanded ADBSSR envelope is especially useful when the timbre needs to evolve in stages. For example, the filter can open quickly, fall to a lower Breakpoint, then continue closing slowly through the Slope stage before reaching Sustain. The reverse can be just as useful: an initial bright transient can fade quickly, then gradually brighten again before settling.



Filter Envelope

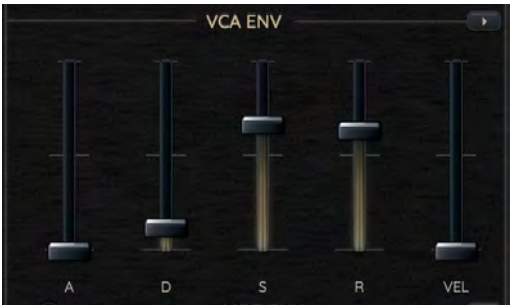
VCA ENVELOPE

VCA ENV shapes the amplitude of the sound: how quickly it appears, how its level changes while a key remains held, and how it fades after release. In the Modulation Matrix, this envelope appears as Amp Env.

VEL: (0 to 300%) Sets velocity sensitivity for the VCA Envelope, allowing playing dynamics to influence the resulting amplitude response. Short Attack and Release settings create tight, immediate sounds. Longer values produce pads, swells, and ambient textures.

With the expanded controls, the volume itself can evolve after the initial attack. A sound might hit strongly, pull back to the Breakpoint level, then rise gradually toward Sustain. Or it can begin softly, crest, and slowly recede while the note remains held.

For cinematic sounds, try giving the VCA and Filter envelopes noticeably different timing. The volume can emerge first while the harmonic content continues evolving behind it, or vice versa.



VCA Envelope

MOD ENVELOPE

MOD ENV is Traveler's dedicated general-purpose modulation envelope. Unlike the Filter and VCA envelopes, it isn't tied primarily to one section of the signal path. Select Mod Env as a Source in the Modulation Matrix and route it wherever you need a one-shot or note-shaped modulation contour.



MOD Envelope

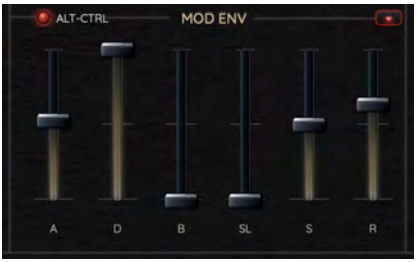
The Mod Envelope is especially useful for parameters that benefit from movement that happens once during a note rather than repeating continuously like an LFO. Typical destinations include oscillator pitch, Wave Position, filter parameters, Mixer levels, stereo movement, other modulators, and effects.

A single Mod Envelope can also be routed through multiple modulation slots at different depths and polarities, allowing several aspects of a sound to evolve together.

ALT-CTRL

The ALT-CTRL button beside the Mod Envelope provides an alternate way to trigger it.

ALT-CTRL: (on/off) When enabled, a qualifying Controller selected in a Mod Matrix routing can act as the event that triggers the Mod Envelope instead of relying solely on the normal note-trigger behavior. With Mod Env selected as the Source and Sustain selected as the Controller, engaging the sustain pedal can trigger the Mod Envelope when ALT-CTRL is enabled.



ALT-CTRL Option

TRIGGERING THE MOD ENVELOPE WITH A SUSTAIN PEDAL

TO TRIGGER THE MOD ENVELOPE FROM A SUSTAIN PEDAL:

1. Enable ALT-CTRL beside the Mod Envelope.
2. Select an unused Modulation Matrix slot.
3. Set SOURCE to Mod Env.
4. Select the desired modulation DEST.
5. Set CTRL to Sustain.
6. Set the desired bipolar DEPTH.
7. Engage the Sustain pedal to trigger the Mod Envelope.

This makes it possible to introduce a new modulation gesture while notes are already sounding. Hold a chord, for example, then press the sustain pedal to trigger a wavetable sweep, filter movement, stereo expansion, or effect bloom without playing another note.

ALT-CTRL separates “playing the note” from “making something happen to the note.” On sustained pads and cinematic textures, that can turn a static sound into something genuinely performative.



Using the Sustain pedal to trigger the Mod Envelope

ENVELOPES AS MODULATION SOURCES

All three Traveler envelopes can be selected as modulation sources:

- Filter Env
- Amp Env
- Mod Env

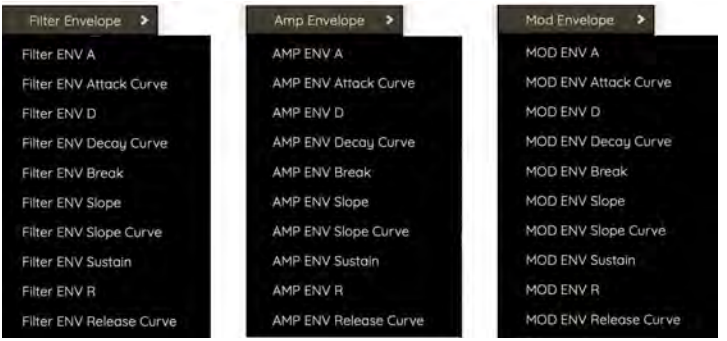
Once routed through the Modulation Matrix, the envelope names describe their normal jobs rather than their limitations. For example, the Filter Envelope can also scan Wave Position. The Amp Envelope can alter Pan Spread. The Mod Envelope can simultaneously move Filter Cutoff, oscillator pitch, and Reverb Mix.



Mod destinations

MODULATING ENVELOPE STAGES AND CURVES

Traveler also makes several envelope stages available as Modulation Matrix destinations. The Envelopes destination submenu includes:



Envelope Mod destination

This means Attack, Decay, and Release times don't have to remain fixed. Velocity could shorten or lengthen an envelope according to playing dynamics. Key Track could make envelope timing change across the keyboard. A Control Track could rhythmically alter the decay or release of repeated notes. Used subtly, this can keep repeated articulations from behaving exactly the same way every time.

MAKING CREATIVE USE OF THE ENVELOPES

Traveler's envelopes can do considerably more than ordinary ADSR shaping:

- Use B and SL to create a two-stage decay. Let the sound fall quickly after the Attack, then continue settling much more slowly toward Sustain.
- Create a double-blooming pad. Rise to the Attack peak, fall to a lower Breakpoint, then use a long Slope stage to climb gradually toward a higher Sustain level.
- Adjust the curve of a fast Decay instead of simply shortening its time. A curved envelope can create a sharper transient without making the entire decay unnaturally brief.
- Give Filter and VCA envelopes different Attack curves as well as different Attack times. One can arrive decisively while the other eases into place.
- Increase Filter Envelope VEL so softly played notes remain dark while harder notes open the filter more dramatically.
- Use the expanded VCA Envelope to create sounds that change level while a note remains held instead of simply settling at a fixed Sustain value.
- Route Mod Env to Wave Position for a one-shot wavetable scan. Unlike an LFO, the movement follows the life of the note rather than continually repeating.
- Route Mod Env to oscillator pitch with a small Depth for pitch scoops, falls, or subtle pitch settling at the beginning of a note.
- Route an envelope to Spacing, Pan, or another Stereo / Motion destination so the stereo image develops along with the note.
- Use an envelope to modulate an effect parameter such as Reverb Mix or Delay Mix, allowing the sound's ambience to evolve independently of its volume.
- Modulate an envelope's Attack, Decay, or Release time with Velocity or Key Track so articulation changes dynamically as you play.

- Use ALT-CTRL with the Sustain pedal to trigger a Mod Envelope during an already-held chord. Route it to WT Position for a timbral transformation, LP Filter for a spectral sweep, or Reverb Mix for a manually triggered atmospheric bloom.
- Route one envelope to several destinations using separate Mod Matrix slots. A single Mod Envelope can simultaneously alter Wave Position, Filter Cutoff, stereo Spacing, and an effect parameter so the entire sound evolves as one coherent gesture.

Traveler's envelopes can handle the familiar jobs of shaping brightness and volume. But the expanded ADBSSR architecture, customizable curves, modulation routing, variable envelope times, and alternate Mod Envelope triggering make them capable of much more.

LOW FREQUENCY OSCILLATORS

Traveler includes three highly flexible Low Frequency Oscillators, or LFOs, for creating repeating and continuously changing modulation. They can produce everything from familiar vibrato and filter sweeps to per-note animation, smoothly wandering random motion, rhythmic effects, and modulation fast enough to reach into the lower audio range.

All three LFOs share the same extensive waveform library and can operate either globally or polyphonically. LFO 1 and LFO 2 also include dedicated Fade, Pitch, and Filter controls for quick access to common modulation duties, while LFO 3 provides a streamlined third modulation source that can be routed wherever you need it using the Modulation Matrix.

LFO 1 also includes convenient pre-routed Mod Wheel control of oscillator pitch and low-pass filter cutoff. This Mod Wheel routing is independent of the dedicated PITCH and FILTER knob settings, as described later in this chapter.

The LFOs are easy to use for conventional tasks, but their polyphonic operation and less conventional waveforms make them particularly useful for the evolving, animated sounds Traveler was designed to create.



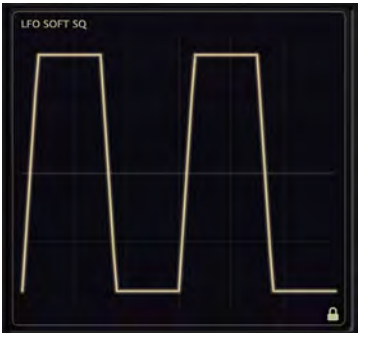
LFOs

LFO CONTROLS

WAVE: (Sine, Sine UNI, Tri, Tri UNI, Ramp, Ramp UNI, Ramp EXP, Ramp EXP UNI, Saw, Saw UNI, Saw EXP, Saw EXP UNI, Square, Square UNI, Soft Sq, Slew RND, Slew RND UNI, Slew RND Wide, Slew RND Wide UNI, S&H, S&H UNI) Selects the LFO waveform.

When you select a waveform, Traveler's main display automatically shows a graphical representation of the selected shape. This makes it easy to understand less familiar waveforms and see the difference between standard, unipolar, exponential, and random variations.





LFO waveshapes

KEY SYNC: (on/off) Restarts the LFO waveform each time a new note is played. This is useful when you want modulation to begin from a predictable point in the waveform rather than continuing freely from wherever the LFO happens to be in its cycle. For example, a slow sawtooth routed to filter cutoff can produce a repeatable filter sweep on every note when KEY SYNC is enabled.

POLY: (on/off) Switches the LFO between global and polyphonic operation. With POLY off, a single LFO cycle is shared by all played voices. With POLY enabled, each played voice receives its own independent LFO instance. This can make chords, pads, and other polyphonic sounds feel considerably more organic because every note can move independently rather than being swept by one global modulation signal.

CLOCK: (on/off) Synchronizes the LFO to Traveler's master or host tempo. When CLOCK is off, RATE is displayed in Hertz. When CLOCK is enabled, RATE selects tempo-synchronized rhythmic values instead.

RATE: (0.01 Hz to 200 Hz) Sets the LFO frequency when CLOCK is disabled. Very slow values are useful for long evolving motion, while higher values create increasingly rapid modulation. The small LED beside the RATE control flashes in time with the selected LFO rate, providing an immediate visual indication of modulation speed. At the upper end of its range, an LFO can move well beyond conventional slow modulation and into the lower audio-frequency range. This can produce much more complex timbral effects when routed to pitch, filter cutoff, wavetable position, or other destinations.

FADE: (0 to 20 seconds, LFO 1 and LFO 2 only) Sets how gradually the LFO modulation is introduced after a note is triggered. At 0 seconds, modulation is applied immediately. Higher settings cause the modulation to fade in progressively over the selected period.

Fade is particularly useful for vibrato. Instead of having pitch modulation present the instant a note begins, you can allow it to enter naturally after the note has been held for a moment.

PITCH: (0 to 2400 cents, LFO 1 and LFO 2 only) Sets the amount of direct LFO modulation applied to the pitch of Oscillators 1-3. At 0, no modulation is applied through this direct routing. Increasing the setting increases the pitch-modulation range. Small settings are ideal for vibrato and subtle pitch drift. Larger values can produce wide pitch sweeps, siren effects, octave-scale movement, and more extreme modulation.

FILTER: (0 to 100, LFO 1 and LFO 2 only) Sets the amount of direct LFO modulation applied to the low-pass filter cutoff. At 0, no modulation is applied through this direct routing. Increasing the value produces progressively deeper cutoff movement.

The PITCH and FILTER knobs are independent modulation-depth controls. LFO 1's pre-routed Mod Wheel behavior is a separate modulation path and does not scale these knob settings. The PITCH and FILTER controls provide a fast route to

two of the most common LFO destinations. For everything else, use Traveler's Modulation Matrix.



Pitch and Filter controls

LFO 1 AND THE MOD WHEEL

Traveler provides a dedicated performance shortcut for LFO 1: the Mod Wheel is pre-routed to introduce LFO 1 modulation to the pitch of Oscillators 1-3 and the cutoff frequency of the low-pass filter. This pre-routed Mod Wheel behavior uses its own preset modulation depths. It does not scale, multiply, or otherwise depend on the values of LFO 1's PITCH and FILTER knobs.

In other words, there are two separate ways to apply LFO 1 modulation to these destinations:

- The PITCH and FILTER knobs apply direct LFO 1 modulation according to their own settings.
- The Mod Wheel introduces its own pre-routed LFO 1 pitch and filter modulation as the wheel is raised.

This makes it easy to build a patch with a small amount of constant LFO movement using the panel controls, while retaining the Mod Wheel as an independent performance gesture. The pre-routed Mod Wheel behavior applies to LFO 1 only. LFO 2 and LFO 3 can respond to the Mod Wheel when you create an appropriate routing in the Modulation Matrix.

LFO 3

LFO 3 provides the same waveform choices, KEY SYNC, POLY, CLOCK, and wide RATE range as LFO 1 and LFO 2, but it omits the dedicated FADE, PITCH, and FILTER controls. Instead, route LFO 3 through the Modulation Matrix.

This makes LFO 3 an excellent general-purpose source when LFO 1 and LFO 2 are already handling conventional pitch or filter duties. It can animate Wave Position, stereo placement, effect parameters, oscillator levels, another modulator, or virtually any other compatible destination. LFO 1 and LFO 2 can also be routed through the Modulation Matrix whenever their direct Pitch and Filter routings aren't enough.



LFO 3

UNDERSTANDING THE LFO WAVEFORMS

Traveler's LFO menu includes familiar periodic waveforms along with unipolar, exponential, and random variations.

STANDARD WAVEFORMS

Sine: Produces smooth, symmetrical modulation with no abrupt changes. It is especially useful for vibrato, gentle filter motion, stereo movement, and other effects where you don't want the modulation shape itself to draw attention.

Tri: Produces a linear rise and fall. Triangle modulation is smooth but more geometrically regular than a sine wave, making it useful for predictable vibrato, panning, filter sweeps, and repeated motion.

Ramp: Produces rising modulation followed by an abrupt reset.

Saw: Produces the complementary falling motion followed by an abrupt reset.

Ramp and Saw are particularly useful when you want a parameter to repeatedly travel in one direction rather than oscillate smoothly back and forth.

Square: Alternates abruptly between two modulation levels. This is useful for trill-like pitch changes, rhythmic filter movement, alternating stereo positions, or any modulation that benefits from distinct switching between two values.

Soft Sq: Provides a softer square-wave variation for less abrupt movement.

S&H: Produces sample-and-hold-style random modulation, creating abruptly changing random values rather than a continuously repeating waveform.

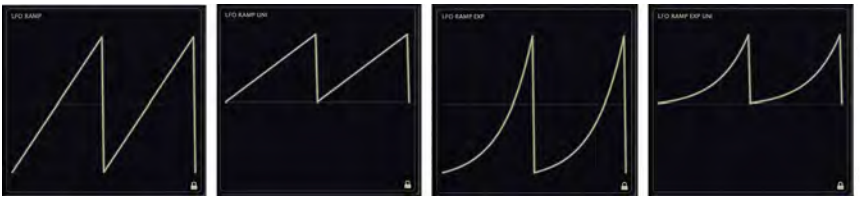
UNI WAVEFORMS

Waveforms marked UNI are unipolar. Instead of moving equally above and below zero, the modulation remains on the positive side of the modulation range. This distinction can be musically important. A bipolar sine routed to pitch, for example, moves above and below the original pitch. A unipolar sine moves only in the positive direction from the starting value.

UNI variants are available for many of Traveler's LFO shapes, including Sine, Triangle, Ramp, Saw, Square, Slew Random, and Sample & Hold. Use a UNI waveform when you want modulation to move away from a parameter's current setting and return to it rather than traveling equally on both sides.

EXP WAVEFORMS

The Ramp EXP and Saw EXP waveforms use exponential rather than linear curvature. Instead of moving at a constant rate through the cycle, the modulation accelerates or decelerates along a curved trajectory. This can make repeated movement feel considerably different from a conventional straight Ramp or Saw, especially when controlling filter cutoff, pitch, or wavetable position. Try comparing Ramp and Ramp EXP at the same Rate while modulating filter cutoff. The destination and modulation amount can remain identical, yet the different shape can completely change the rhythmic feel.



Ramp wave in standard, UNI, and EXP formats

SLEW RANDOM

Traveler provides two smoothly changing random LFO types.

Slew RND: Randomly selects destination values distributed evenly across the entire modulation range, then glides linearly from one value to the next. Unlike Sample & Hold, which jumps abruptly between random values, Slew RND produces continuous random movement. This makes it excellent for subtle pitch drift, wandering filter motion, evolving stereo position, or any parameter that benefits from unpredictability without obvious steps.

Slew RND Wide: Uses a center-weighted random distribution. Most destinations remain relatively close to zero, but occasional values can approach either extreme. As with standard Slew RND, Traveler glides linearly between destinations. The result is a center-weighted random wander: mostly subtle motion, punctuated by occasional broad excursions.



Slew Random and Random Wide

This distinction makes the two random shapes useful for different jobs. Slew RND explores the modulation range more evenly, while Slew RND Wide tends to hover near the center before occasionally wandering much farther away.

For evolving cinematic textures, Slew RND Wide is particularly effective at low Rates. Most of the time the patch moves gently, then occasionally something unexpected happens. Traveler considers this a feature.

CREATING DELAYED VIBRATO

LFO 1 and LFO 2 can create delayed vibrato directly from their panel controls without using a Modulation Matrix slot.

TO CREATE DELAYED VIBRATO:

1. Select Sine or Tri as the LFO waveform.
2. Set RATE to the desired vibrato speed.
3. Raise PITCH slightly to set the vibrato depth.
4. Increase FADE to delay the onset of the modulation.
5. Play and hold a note while adjusting RATE, PITCH, and FADE to taste.

For a natural performance effect, use a relatively small Pitch amount. The goal is usually movement, not seasickness.

If you use LFO 1, the Mod Wheel provides an additional independent way to introduce pre-routed pitch modulation while performing.

CREATING A TEMPO-SYNCHRONIZED FILTER SWEEP

TO SYNCHRONIZE AN LFO FILTER SWEEP TO THE SONG TEMPO:

1. Select the desired LFO waveform.
2. Enable CLOCK.
3. Set RATE to the desired rhythmic division.
4. Raise FILTER to set the cutoff modulation depth.
5. Enable KEY SYNC if you want the modulation cycle to restart with each new note.
6. Play the sound and adjust RATE and FILTER until the movement fits the rhythm.

Use a smooth waveform for flowing sweeps, Ramp or Saw for one-directional motion, or Square for more obvious rhythmic switching.

CREATING INDEPENDENT PER-VOICE MOVEMENT

To create polyphonic LFO modulation:

1. Select the desired waveform.
2. Enable POLY.
3. Set the desired RATE.
4. Route the LFO to the desired parameter using the direct PITCH or FILTER control, where available, or through the Modulation Matrix.
5. Play a chord or overlapping notes.

Each played voice now receives its own LFO instance rather than sharing one global modulation cycle.

Polyphonic LFO operation can be particularly effective with pads and sustained chords because individual notes can breathe and move independently.

MAKING CREATIVE USE OF THE LFOS

Traveler's LFOs can do considerably more than vibrato:

- Use a slow Sine or Tri wave with a small FILTER amount to create gentle harmonic movement in pads and sustained textures.
- Use FADE with Pitch modulation so vibrato develops naturally after the initial attack rather than appearing immediately.
- With LFO 1, use the direct PITCH or FILTER control for a fixed amount of modulation, then use the Mod Wheel independently as a performance gesture. Because these are separate paths, one doesn't have to do the other's job.
- Enable POLY and route an LFO to Wave Position. Each note in a chord can then travel independently through the oscillator waveform or wavetable, creating much more complex motion than a single global sweep.
- Route a very slow Slew RND to oscillator pitch at a tiny depth to introduce subtle, continuously changing tuning variation.
- Use Slew RND Wide for parameters such as Spacing, Pan, filter cutoff, or effect depth when you want mostly restrained movement with occasional larger changes.
- Route a slow LFO to OSC1 PAN, OSC2 PAN, or OSC3 PAN to let individual oscillator layers drift through the stereo field.

- Send different LFOs to different oscillator pan destinations at slightly different Rates. The layers will gradually move in and out of alignment, creating a constantly changing stereo image.
- Use a UNI waveform when you want modulation to move in only one direction from a parameter's current value. This is useful for upward-only filter movement, one-sided pitch effects, or modulation where crossing below the base setting would be undesirable.
- Compare Ramp and Ramp EXP when modulating WT Position. The linear Ramp scans evenly through the range, while the exponential version spends different amounts of time in different regions of the wavetable.
- Route S&H to pitch for stepped random notes or to filter cutoff for classic random electronic effects.
- Use a high LFO Rate with small modulation depth to introduce complex harmonic coloration. Traveler's 200 Hz maximum rate extends well into territory where modulation starts behaving more like timbral shaping than conventional vibrato.
- Use LFO 3 as the utility LFO. Let LFO 1 handle vibrato, LFO 2 handle filter movement, and send LFO 3 through the Mod Matrix to effects, stereo parameters, or wavetable position.
- Modulate an LFO Rate with another LFO, envelope, or Control Track. Traveler's Modulation Matrix exposes LFO 1, LFO 2, and LFO 3 Rate as destinations, allowing modulation speed itself to become part of the sound.
- Modulate an LFO Gain destination to make modulation depth evolve dynamically rather than remaining fixed.
- Use different POLY settings for different LFOs. One global LFO can provide a shared rhythmic pulse while another polyphonic LFO adds independent movement to each played voice.

Traveler's LFOs can provide the familiar cyclical modulation duties found on a classic synthesizer, but their polyphonic operation, unusual waveform variations, broad frequency range, and access to the Modulation Matrix make them capable of much more.

MODULATION MATRIX

Traveler's Modulation Matrix is where the instrument really opens up.

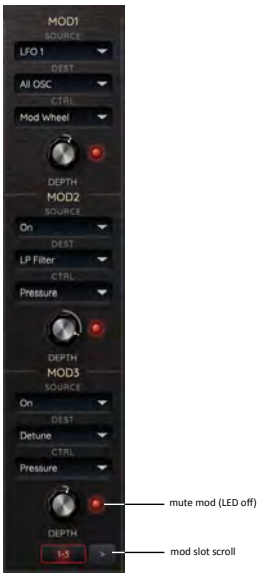
The front panel provides plenty of direct modulation paths for everyday tasks, but the Mod Matrix lets you connect sources, controllers, and destinations much more freely. LFOs can animate wavetable position. Envelopes can reshape effects. Velocity can influence stereo width. Control Tracks can move filter cutoff. An oscillator can even become a modulation source.

Traveler provides 21 modulation slots and 144 available destinations, covering oscillator behavior, filtering, mixing, envelopes, stereo movement, LFOs, sequencing, performance parameters, effects, and more.

Each slot contains four basic elements:

- **SOURCE** determines what generates the modulation.
- **DEST** determines which parameter is being modulated.
- **CTRL** provides an optional secondary controller that scales or governs the modulation.
- **DEPTH** sets the amount and polarity of the modulation.

Once you understand those four ingredients, even elaborate routings become fairly straightforward.



NAVIGATING THE MODULATION MATRIX

Traveler contains 21 modulation slots, but only three are displayed at one time. Use the small arrow control at the bottom of the Mod section to move through the additional slots. Each slot operates independently, so a single source can be routed to one destination in one slot and somewhere entirely different in another. This makes it possible to build modulation gradually. Start with one useful routing. Add another when the sound needs it. There's no prize for filling all 21 slots before lunch.

MODULATION SLOT CONTROLS

- SOURCE: Selects the signal or performance value that generates the modulation.
- DEST: Selects the parameter that receives the modulation.
- CTRL: Selects an optional secondary controller that governs the amount of modulation produced by the Source.
- DEPTH: (bipolar) Sets the amount and direction of modulation applied to the selected Destination. Positive and negative settings move the destination in opposite directions.

The Controller is especially important because it lets one modulation source be influenced by another. For example, you can route LFO 1 to filter cutoff, then select Mod Wheel as the Controller. The LFO remains the modulation source, but the Mod Wheel determines how strongly that modulation is allowed to affect the destination. This is one of the easiest ways to turn an automatically moving patch into something you can actively perform.

MODULATION SLOT MUTE

Each Mod Matrix slot includes a red LED/button beside the Depth control. This both indicates that modulation has been routed on that slot, and also functions as a "mute" for the automation.

MUTE LED: (on/off) Click the LED to temporarily disable the modulation routing. When the LED is illuminated, the modulation slot is active. This works much like the mute buttons in Traveler's Mixer and is extremely useful when programming more elaborate patches. You can temporarily remove one modulation path, hear exactly what it contributes, then restore it without changing any of its settings.

TIP: If a patch seems to be behaving strangely, mute modulation slots one at a time.



Modulation controls

MODULATION SOURCES

Traveler provides modulation sources from several different parts of the instrument.



Mod sources

AUDIO SOURCES

Traveler's audio generators can themselves be used as modulation sources. Because these signals can operate much faster than a conventional LFO, they can create complex timbral effects when routed to suitable destinations.

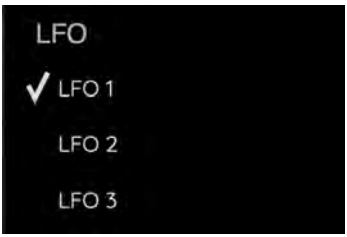
This is particularly useful for experimental sound design, audio-rate modulation, and adding harmonic complexity to parameters that would normally be moved by slower sources.



Mod Sources - Audio

LFO SOURCES

Any of Traveler's three LFOs can be routed through the Modulation Matrix, regardless of whether their direct panel routings are also being used.



Mod Sources - LFO

ENVELOPE SOURCES

All three envelopes are available as modulation sources. Their names describe their usual jobs, not their limitations. A Filter Envelope can modulate Wave Position. The Amp Envelope can control stereo movement. The Mod Envelope can animate effects.



Mod Sources - Envelopes

PERFORMANCE SOURCES

On is especially useful when you want the Controller itself to drive a destination directly, as described later in this chapter.



Mod Sources - Performance

CONTROL TRACK SOURCES

Traveler's two Control Tracks can function as modulation sources, allowing their programmed step values to animate parameters throughout the instrument. This is one of the most powerful links between the Control Tracks and the rest of Traveler's synthesis architecture.



Mod Sources - Control

CONTROLLERS

The CTRL menu provides a secondary way to govern a modulation routing. Available Controller choices are:



With CTRL set to On, the modulation Source operates continuously at the amount determined by Depth. Select another Controller when you want the modulation amount to respond dynamically.

For example:

- LFO 1 → LP Filter, controlled by Mod Wheel lets the LFO generate the movement while the Mod Wheel determines how much of that movement reaches the filter.
- Mod Env → Wave Position, controlled by Pressure allows the Mod Envelope to create the contour while keyboard pressure governs its influence.

The Controller effectively becomes a second layer of expression placed between the Source and Destination.



Pressure controls LFO 3 modulation of Wave Position

ADDITIONAL MODULATION CONTROLLERS

Traveler's Modulation Matrix can also use any MIDI CC from 0 through 127 as a modulation-bus Controller. This greatly expands the number of external knobs, sliders, pedals, and other MIDI controls that can be incorporated into a patch.

ASSIGNING A MIDI CC AS A CONTROLLER

TO ASSIGN A MIDI CC AS A MODULATION CONTROLLER:

1. Click the small white triangle beside the CTRL field to open the Controller menu.
2. Choose Enter MIDI CC….
3. In the Enter MIDI CC dialog, enter the desired MIDI controller number from 0 to 127.
4. Click OK.

The selected MIDI CC now appears as the Controller for that modulation bus. Incoming values from that CC govern the strength of the routing according to the bus's SOURCE, DEST, and DEPTH settings.

This makes it easy to dedicate a hardware knob, slider, pedal, or other MIDI control to the expressive depth of a modulation routing rather than simply mapping it directly to a single parameter.



Assigning a MIDI CC as a modulation controller



Typing a MIDI CC

USING A PERFORMANCE CONTROLLER DIRECTLY

Sometimes you don't want an LFO or envelope involved at all. You simply want the Mod Wheel, Expression pedal, Pressure, or another controller to move a parameter directly. Traveler provides a particularly clean way to do this: select On as the Source. In this configuration, the Controller itself becomes the practical performance driver of the destination.



Mod Sources - Control

ASSIGNING THE MOD WHEEL TO A PARAMETER

To control a parameter directly from the Mod Wheel:

1. Select an unused Modulation Matrix slot.
2. Set SOURCE to On.
3. Set DEST to the parameter you want to control.
4. Set CTRL to Mod Wheel.
5. Adjust DEPTH to set the amount and direction of the movement.
6. Move the Mod Wheel while playing and adjust Depth to taste.

The same method works with other performance controllers such as Expression, Pressure, Breath, or Foot control. This routing is especially useful for parameters such as Filter Cutoff, Wave Position, Spacing, effects levels, or any control you want to manipulate directly while performing.

CREATING A BASIC LFO ROUTING

To route an LFO through the modulation matrix:

1. Select an unused modulation slot.
2. Choose LFO 1, LFO 2, or LFO 3 as the SOURCE.
3. Select the desired DEST.
4. Set CTRL to On for continuous modulation.
5. Adjust the bipolar DEPTH control.
6. Play a note and adjust the LFO settings and Depth until the desired movement is heard.

Use a negative Depth value when you want the modulation to move the destination in the opposite direction.

ADDING CONTROLLER SCALING

To place the mod wheel under control of an existing LFO routing:

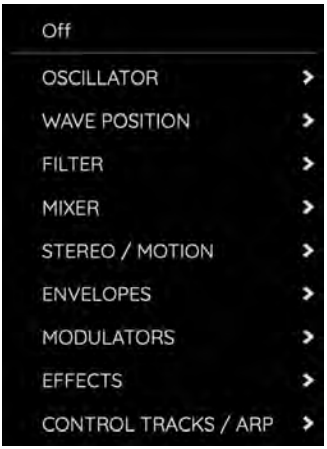
1. Create an LFO routing as described above.
2. Set CTRL to Mod Wheel instead of On.
3. Set the desired DEPTH.
4. Move the Mod Wheel while playing.

The LFO still determines the modulation shape and speed, but the wheel now determines how strongly that movement affects the destination. This is excellent for vibrato, filter motion, wavetable scanning, or effects that you want to introduce gradually during a performance.

MODULATION DESTINATIONS

Traveler provides 144 modulation destinations, covering nearly every major part of the instrument. In addition to oscillator pitch, wave position, filter, mixer, stereo, envelope, and effects parameters, the expanded destination list includes controls such as stacked-oscillator Detune and Spread, filter envelope amounts, filter keyboard tracking, LF Width tracking, LFO amounts and fades, Arpeggiator Gate and Swing, Control Track Swing, additional Delay and Reverb parameters, Vintage, and more.

All supported destinations include Traveler's modulation-range overlays, so you can see both the parameter's base setting and the range through which modulation can move it.



Mod Destinations

OSCILLATOR PITCH

This allows the Mod Matrix to target the pitch of one or more oscillators. Grouped destinations such as Osc 1-2 make it easy to modulate several oscillators together without using multiple Mod Matrix slots. For example, route an envelope to All OSC for a global pitch sweep, or target OSC 1-2 while leaving Oscillator 3 unchanged.



Mod Destinations - Oscillator

WAVE POSITION

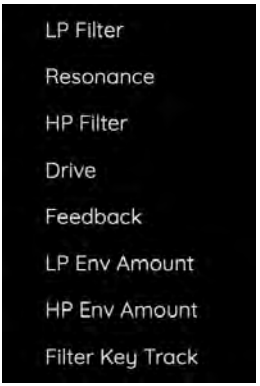
Wave Position modulation is especially useful because Traveler's continuously variable oscillator waves and Oscillator 3 wavetables become far more animated when their positions change over time.



Mod Destinations - Wave Position

FILTER

This lets the Mod Matrix reach beyond ordinary cutoff modulation. Resonance, Drive, and Feedback can all become dynamic parts of a patch.



Mod Destinations - Filter

MIXER

Mixer allows the Mod Matrix to target the level of individual sound sources or groups of sources, including Oscillators 1–3, Noise, and the overall AMP level. Grouped destinations such as OSC 1-2 make it easy to animate several sources together while leaving others unchanged. For example, route an LFO to OSC 1 Vol for tremolo on a single oscillator, use an envelope to fade OSC 1-2 together, or modulate Noise Vol independently to add rhythmic bursts of noise.



Mod Destinations - Mixer

STEREO / MOTION

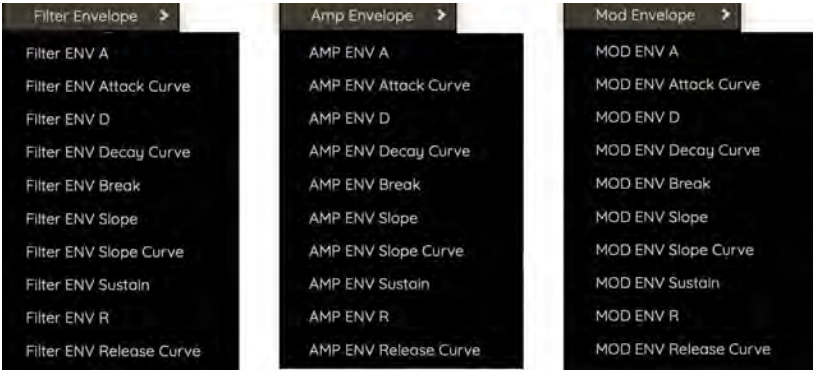
These destinations are central to Traveler's spatial character. Modulating Pan, Voice Pan, Spacing, or individual oscillator pan positions can create movement before the signal ever reaches the effects section.



Mod Destinations - Stereo Motion

ENVELOPES

This allows Attack, Decay, and Release times themselves to be modulated. An envelope doesn't have to remain static from note to note. Velocity, Key Track, an LFO, or a Control Track can alter its timing dynamically.



Mod Destinations - Envelopes

MODULATORS

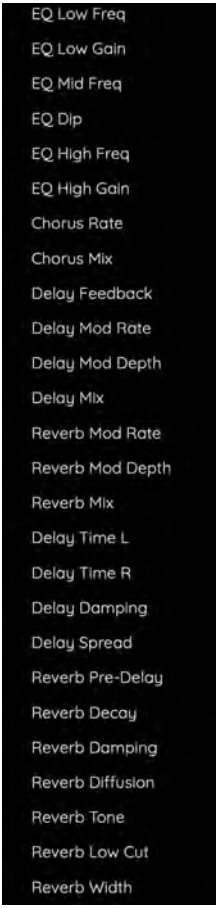
This is where the Mod Matrix becomes particularly deep. You can modulate an LFO's Rate, change an LFO's Gain, alter the Depth of a Control Track, or even modulate the Depth of another Mod Matrix slot. In other words, modulation itself can be modulated. Used carefully, this allows movement to evolve rather than simply repeat at a fixed amount.



Mod Destinations - Modulators

EFFECTS

Effects don't have to remain a static finishing stage. They can become part of the synthesis architecture itself. An envelope can increase Reverb Mix over the life of a note. A Control Track can rhythmically change Delay Feedback. An LFO can move Chorus Rate or modulation depth. This is one of the easiest ways to turn effects into part of the sound rather than something merely placed after it.



Mod Destinations - Effects

CONTROL TRACKS/ARP

These destinations let the Mod Matrix animate the rhythmic behavior of Traveler's Arpeggiator and Control Tracks. You can modulate Arp Gate or Arp Swing to change articulation and groove dynamically, or target CT1 Swing and CT2 Swing independently to make the two Control Tracks shift their rhythmic feel over time. For example, route an envelope to Arp Gate for notes that gradually become shorter or longer, or use an LFO to vary Swing for a pattern that subtly loosens and tightens as it plays.



Mod Destinations - Control Tracks/Arp

MODULATION DEPTH AND VISUAL FEEDBACK

Traveler provides visual feedback on controls that are being modulated. A parameter's normal gray indicator shows its base setting. When that parameter is a modulation destination, a green indicator shows the range through which modulation can move it relative to the current value.

This is extremely useful when several modulation paths are active because you can see the potential movement directly on the parameter itself. If a parameter is moving farther than expected, the green range indicator can often tell you why before you even open the Mod Matrix.



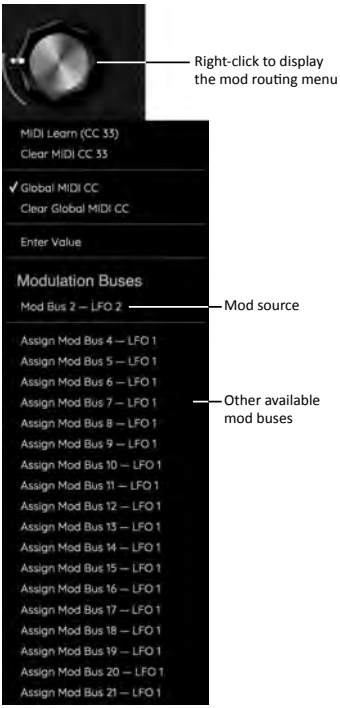
FINDING MODULATION ROUTINGS FROM A CONTROL

As patches become more elaborate, the difficult part of modulation programming is sometimes not creating a routing, it's remembering where the routing came from. Traveler lets you inspect modulation assignments directly from the parameter being controlled.

TO LOCATE A MODULATION ROUTING:

1. Right-click a modulatable Traveler control.
2. If the parameter is already being modulated, the contextual menu shows the Modulation buses assigned to it.
3. Select the desired bus.
4. Traveler automatically displays the Mod Matrix page containing that bus and briefly highlights the routing.

This works even when the responsible Mod bus is located on one of the currently hidden Mod Matrix pages. Instead of paging through all 21 buses looking for the culprit, you can go directly from the affected parameter to the routing that controls it.



Right click a modulated parameter to see its mod routing

CREATING A ROUTING FROM A PARAMETER

The same contextual menu can also help you build a routing. When a modulatable control doesn't currently have an assignment, right-click it to see Modulation buses that are available for that destination. Select an available bus and Traveler assigns the parameter as its destination, opens the appropriate Mod Matrix page, and highlights the new routing.

This makes modulation considerably more immediate. You can begin with the parameter you want to move, rather than beginning in the Mod Matrix and working outward.

MODULATION BUS INDICATORS

Traveler's Modulation-bus indicators reflect whether a routing is active even when that bus's Depth is itself being controlled by another Mod bus or by a Control Track. This makes it easier to follow nested modulation routings in patches where one modulation source is changing the strength of another.



Mod Bus indicator LED

MODULATING MODULATION

One of the most powerful features of Traveler's matrix is the ability to use Mod Bus Depth as a destination. For example, imagine Mod Bus 1 routes a slow LFO to filter cutoff. A second modulation slot can then target Mod Bus 1 Depth, causing the amount of that filter movement itself to change over time.

An envelope might slowly increase the LFO depth as a note develops. Velocity might determine how much modulation is allowed through. A Control Track could turn a smooth modulation into a repeating pattern of stronger and weaker movement. This is modulation with another layer placed around it, and it can create sounds that evolve in ways a single LFO-to-destination connection cannot.

Start modestly. Twenty-one modulation buses provide ample ways to create something beautiful, but also enough rope to tie a fairly impressive knot.

MAKING CREATIVE USE OF THE MODULATION MATRIX

The Mod Matrix is where many of Traveler's most distinctive sounds begin:

- Set SOURCE to On, choose Mod Wheel as CTRL, and route it to Wave Position for direct hands-on timbral control.
- Use Expression as the Controller for LP Filter or AMP so an expression pedal can shape dynamics while both hands remain on the keyboard.
- Route Velocity to Wave Position so harder notes begin with a different harmonic character than softer notes.
- Use Pressure to control Spacing or Pan Spread. Pressing into a held chord can make the sound physically widen rather than merely become brighter.
- Route LFO 1 to LP Filter and use Mod Wheel as the Controller. The LFO supplies the motion while the wheel determines how much movement reaches the filter.
- Route a slow Slew RND LFO to OSC1 Pan and another to OSC2 Pan at a different rate. The two oscillator layers will wander independently through the stereo field.
- Use CT 1 as a Source for Filter Cutoff and CT 2 for Wave Position. Different Control Track lengths can create complex repeating relationships between rhythm and timbre.
- Route Mod Env to several destinations at once: Wave Position, Spacing, and Reverb Mix. One envelope can transform timbre, width, and ambience as a single coherent gesture.
- Modulate LFO Rate with an envelope so an effect speeds up or slows down during the life of a note.
- Modulate LFO Gain instead of the destination itself. This lets the underlying LFO continue running while another source determines how strongly it is heard.
- Route a Control Track to Mod Bus Depth so another modulation path becomes rhythmically stronger and weaker over time.
- Use an audio source such as OSC 3 to modulate a suitable destination at audio rate. Low Depth values can add subtle complexity; larger settings can move quickly into much more experimental territory.

- Modulate Delay Mix, Delay Feedback, or Reverb Mix with an envelope so ambience appears only after the dry portion of the sound has developed.
- Route Key Track to a parameter other than pitch. Higher and lower notes can have different Wave Positions, stereo widths, or effect depths.
- Use the mute LED beside a modulation slot while designing a patch. Switching individual routings in and out is one of the fastest ways to decide whether a clever modulation idea is actually helping.

PERFORMANCE AND OUTPUT CONTROLS

Traveler's Performance and Output sections sit at the final stage between programming a sound and actually playing it.

The Performance controls determine how notes interact, how pitches glide and detune, how many voices are involved, and how far the pitch wheel can bend in either direction.

The Output section handles final VCA level, master level, stereo placement, voice spread, low-frequency width, Vintage behavior, and limiting. These controls can substantially change the personality of a patch. A single-voice lead can become a 16-voice unison wall. A static chord can spread across the stereo field. A huge pad can stay expansive in the upper register while keeping its low notes firmly anchored in the center.

PERFORMANCE CONTROLS



Performance controls

GLIDE

GLIDE: (1 ms to 8 seconds) Sets the amount of time Traveler takes to move from one played pitch to another. Very short settings create barely perceptible transitions, while longer settings produce obvious portamento sweeps between notes.

Traveler supports polyphonic glide, so the effect isn't limited to conventional monophonic lead sounds. Used gently, Glide can soften transitions within chords and pads. Used more dramatically, it can turn chord changes into large, evolving pitch movements. For leads and basses, try a short Glide time that is felt more than heard. For ambient or cinematic patches, longer polyphonic Glide settings can make the transition between notes part of the sound itself.

DETUNE

DETUNE: (0 to 24 cents) Adds pitch variation between voices. In Mono mode, Detune becomes particularly useful when multiple voices are stacked in unison. Small values thicken the sound while retaining a strong pitch center. Larger values create increasingly obvious separation and beating.

Detune is also active in Poly mode, where it can introduce pitch variation between polyphonic voices. Use higher settings carefully here. A little variation can make a patch feel organic. Twenty-four cents can make it sound as though the tuning department has gone home for the weekend.

PITCH BEND RANGE

Traveler provides independent bend ranges for downward and upward pitch movement.

BEND-: (0 to 24 steps) Sets the maximum downward pitch-bend range.

BEND+: (0 to 24 steps) Sets the maximum upward pitch-bend range.

Because the two directions are independent, pitch bend doesn't have to be symmetrical. For a conventional performance setup, set both controls to the same range. For more unusual playing techniques, set different values. You might use a small upward bend for expressive phrasing and a much larger downward range for dramatic dives. Independent bend ranges are especially useful for sound effects and cinematic patches. There's no rule saying the pitch wheel has to travel the same distance in both directions.

VOICE MODES

Traveler provides three note-assignment modes: MONO, LEGATO, and POLY.

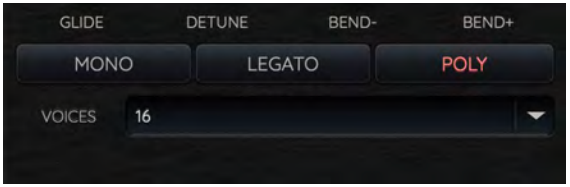
MONO: Plays monophonically. When VOICES is increased above 1, Mono mode stacks multiple voices in unison.

This is how Traveler creates its large unison sounds. Increase the voice count, add some Detune, and a single played note can become a considerably larger event.

LEGATO: Enables monophonic legato behavior. This is useful for leads and basses where overlapping notes should behave differently from separately articulated notes. Legato performance is particularly effective in combination with Glide, allowing connected lines to move smoothly from pitch to pitch.

POLY: Enables polyphonic operation for chords and overlapping notes.

VOICES: (1 to 16) Sets the voice count. In Mono mode, increasing VOICES creates a unison stack of up to 16 voices.



Voice modes

CREATING A UNISON SOUND

TO CREATE A BASIC UNISON PATCH:

1. Select MONO.
2. Increase VOICES above 1.
3. Raise DETUNE slightly.
4. Play a note and continue adjusting VOICES and DETUNE until the desired amount of thickness is achieved.
5. Add GLIDE if the sound will be used for leads or bass lines.

Sixteen voices can sound enormous, but more isn't automatically better. Four slightly detuned voices may sit beautifully in a mix where sixteen politely consume everything in their path.

OUTPUT AND STEREO CONTROLS

Traveler's Output section provides the final gain stages, master limiting, overall pan position, voice spread, low-frequency width control, and Vintage behavior. Because Traveler can generate a great deal of stereo movement before the effects section is even involved, these controls are particularly useful for keeping the final sound balanced and manageable.



Output controls

AMP

AMP: (0 to 100%) Sets the final output level of Traveler's VCA. In gain-staging terms, AMP comes before the master output stage. It controls how much level leaves the VCA and is passed onward to MAIN. This makes AMP the appropriate place to adjust the final level of the synth voice itself before the signal reaches Traveler's master output control.

MAIN

MAIN: (-24 dB to +6 dB) Sets Traveler's overall master output level. MAIN comes after the VCA/AMP stage and provides the final level adjustment for the instrument. This separation between AMP and MAIN can be useful when gain staging a patch. AMP establishes the output level of the synth voice, while MAIN lets you trim or boost the final master level without changing the VCA setting.

MAIN LIMITER

MAIN LIMITER: (on/off) Enables or disables Traveler's master output limiter. The limiter operates at the master-output stage after the VCA/AMP section and can help contain peaks produced by dense voice stacks, high resonance, feedback, or other aggressive settings. When the LED is illuminated, the limiter is active. To disable the Limiter, click on the LED.



Main Output and Limiter

PAN

PAN: (L 100 to R 100) Sets the overall left/right position of Traveler's output. At the center position, the output remains centered. Move the control toward L or R to shift the complete sound toward the corresponding side.

Remember that this global Pan control works in addition to Traveler's many other stereo controls. Individual oscillators can have their own pan positions, filters can be separated with Spacing and Spread, and voices can be distributed using Pan Spread. The final Pan position is therefore only one part of Traveler's stereo picture.

PAN SPREAD

PAN SPREAD: (0 to 100%) Sets the width of per-voice panning across the stereo field. At low settings, voices remain closer to the center. Increasing the value allows voices to occupy progressively wider positions across the stereo image. This is especially effective with chords, pads, and other polyphonic sounds because individual notes can occupy different stereo positions rather than piling up directly on top of one another.



Pan Spread and Random controls

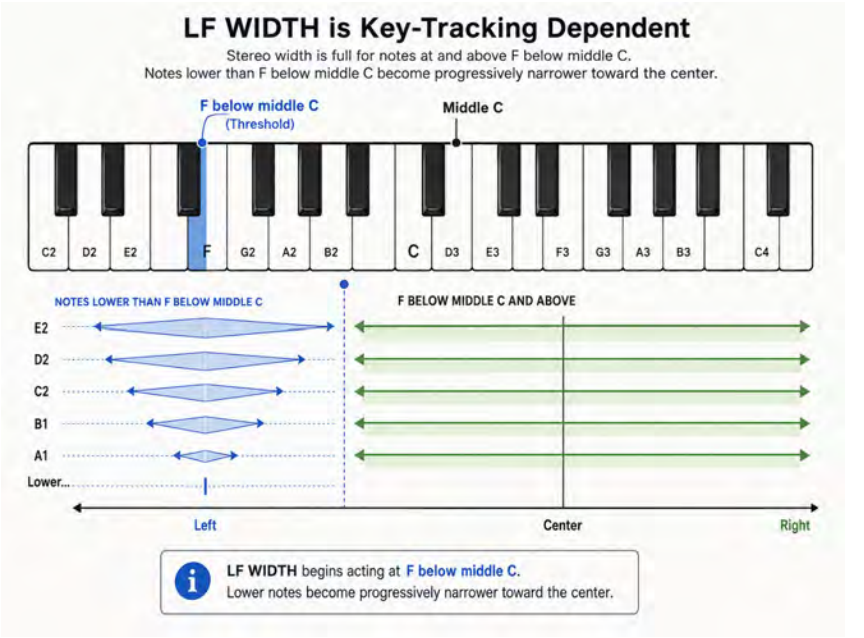
RANDOM VOICE PANNING

RND: (on/off) Randomizes each voice's pan position within the width established by PAN SPREAD. With RND enabled, newly played voices can appear at different positions within the selected stereo range. At modest settings, this creates subtle spatial variation. At high Pan Spread values, notes can move much more dramatically across the stereo field.

For natural width, try a moderate PAN SPREAD setting with RND enabled. Small differences between notes can often sound more convincing than hard left/right separation.

LF WIDTH

LF WIDTH: (0 to 100%) Uses keyboard tracking to progressively keep lower notes closer to the center of the stereo field. The effect begins at F below middle C. As notes descend below that point, Traveler increasingly keeps them centered rather than allowing the lowest notes to remain as widely spread as the upper register. This is especially useful for large stereo pads, stacked oscillators, and cinematic sounds. High and midrange notes can remain expansive while the bass stays focused and stable in the middle.



LF Width tracks the keyboard

USING LF WIDTH TO CONTROL A WIDE PATCH

To keep the low end centered while preserving stereo width:

1. Create a wide sound using Oscillator Spread, Filter Spacing, Pan Spread, or other stereo controls.
2. Play notes across the keyboard and listen to the lowest register.
3. Increase LF WIDTH.
4. Continue playing downward from F below middle C.
5. Adjust LF WIDTH until the bass feels centered and stable while the upper register retains the desired width.

This can be especially helpful when programming presets intended to work across a large keyboard range. A sound that is gorgeous around middle C can become surprisingly vague several octaves lower if every component remains spread widely across stereo. LF WIDTH lets Traveler rein things in where it matters.

VINTAGE

VINTAGE: (0 to 200%) Introduces increasing amounts of per-voice variation into Traveler's synthesis engine. Vintage affects oscillator pitch, filter behavior, envelope timing, and other voice-to-voice characteristics. At lower settings, these variations can add subtle individuality and movement. Higher settings make the differences between voices increasingly pronounced.

Unlike chorus or other conventional effects, Vintage changes the behavior of the individual synth voices themselves. This makes it particularly effective on chords and repeated notes, where small differences between voices help prevent every event from behaving with exactly the same mathematical precision. Start low. Vintage usually works best when you notice the sound becoming more alive before you notice exactly why.

STEREO MOTION THROUGH THE MODULATION MATRIX

Traveler's stereo architecture becomes even more flexible when combined with the Modulation Matrix. This means stereo placement and performance behavior don't have to remain static. An LFO can move one oscillator while another remains fixed. Pressure can widen Pan Spread. A Control Track can change filter Spacing rhythmically. An envelope can alter Detune over the life of a note.

Available Stereo / Motion destinations include:

- Pan
- Voice Pan
- Pan Spread
- OSC1 Pan
- OSC2 Pan
- OSC3 Pan
- Detune
- Spacing
- Glide

MAKING CREATIVE USE OF THE PERFORMANCE AND STEREO CONTROLS

Traveler's Performance and Output controls provide plenty of ways to make a patch feel larger, more playable, or more responsive:

- Use MONO with four to eight voices and a small amount of DETUNE for a large lead or bass without immediately reaching for all 16 voices.
- Combine Unison with GLIDE for sweeping mono leads. Longer Glide times can turn note transitions into part of the composition.
- Set different BEND- and BEND+ ranges. A modest upward bend combined with a much larger downward range works particularly well for effects, lead sounds, and dramatic pitch falls.
- Add a small amount of DETUNE in Poly mode to reduce the machine-perfect relationship between played voices. Keep it subtle if pitch definition matters.
- Use PAN SPREAD instead of chorus when you primarily want separation rather than additional pitch modulation.
- Enable RND with moderate Pan Spread for chords where each note should occupy its own slightly different stereo position.
- Combine individual oscillator panning with Pan Spread. One oscillator can provide a centered foundation while brighter layers move around it.
- Use LF WIDTH on large pads and stacked sounds so upper notes remain spacious while bass notes progressively gather toward the center.
- Combine Oscillator 2 SPREAD, Filter SPACING, and Output PAN SPREAD at moderate settings rather than pushing any one control to its maximum. Several smaller stereo differences often create greater depth than one enormous effect.
- Increase VINTAGE slightly on pads, brass, strings, and other polyphonic sounds where repeated voices benefit from small differences in pitch, filtering, and envelope timing.
- Route Pressure to Pan Spread so pressing into a chord causes it to widen.
- Route a slow LFO to Voice Pan for continuous stereo motion, then use LF WIDTH to keep the lowest notes from wandering too far from the center.
- Modulate DETUNE with an envelope so a sound begins tightly focused and gradually becomes less stable, or does the opposite.
- Use AMP to establish the final VCA level of the patch, then use MAIN for final output trimming. If the patch produces large peaks, enable MAIN LIMITER rather than simply turning every preceding stage down.

X-Y PERFORMANCE PAD AND DISPLAY

Traveler's large center display serves several different purposes depending on what you're doing. It can act as a context-sensitive visualization system, become an assignable X-Y performance controller, or provide access to global Settings.

Three buttons beneath the display select its primary modes:

- **SCOPE** shows graphical information about the parameter or feature currently being edited.
- **X-Y** turns the display into a two-dimensional performance pad with independently assignable X and Y parameters.
- **SETTINGS** opens Traveler's global configuration menu.

The display is designed to provide useful visual feedback without requiring you to leave the main panel. Select an LFO waveform and you can see its shape. Adjust an envelope and its contour appears. Choose a wavetable and Traveler displays its spectral character. Move to X-Y mode and the same display becomes a hands-on performance surface.



Traveler display

SCOPE VIEW

SCOPE is Traveler's context-sensitive visualization mode. When nothing requiring a special graphic is being edited, the Scope shows a neutral waveform display. As soon as you select or adjust a parameter with a useful graphical representation, the display updates automatically to show it.

For example:

- Selecting an LFO waveform displays that waveform.
- Adjusting the Filter, VCA, or Mod Envelope displays the current envelope contour.
- Editing envelope curves updates the envelope graphic in real time.
- Selecting an Oscillator 3 wavetable displays a spectral representation of the wavetable.
- Turning WT POS moves through the wavetable's spectral content as the position changes.

This makes the Scope especially useful for controls that are easier to understand when you can see what they are doing.



Traveler Scope showing an Oscillator waveshape

LFO VISUALIZATION

Selecting a waveform from any of Traveler's three LFOs causes the Scope to display the selected shape. Standard, UNI, EXP, Slew Random, and other waveform variants are shown graphically, making differences between them immediately visible.

This is particularly helpful for less familiar shapes such as exponential ramps and Slew Random variants. Instead of relying entirely on their names, you can see the modulation contour directly.

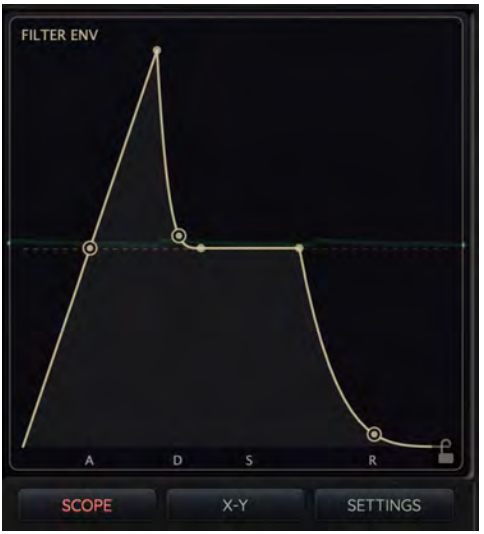


Traveler Scope showing LFO waveshape

ENVELOPE VISUALIZATION

Adjusting any Filter, VCA, or Mod Envelope control causes its current shape to appear in the Scope. The display shows the envelope stages as a continuous contour, including the expanded Breakpoint and Slope stages when ADBSSR mode is being used. As described in the Envelopes chapter, circled points in the display can also be dragged to change the curvature of individual envelope segments.

The combination of the front-panel sliders and graphical display makes envelope editing especially immediate. The sliders establish the timing and levels, while the Scope lets you see how those stages fit together as a complete shape.



Traveler Scope showing Envelope shape

WAVETABLE VISUALIZATION

Traveler also uses the Scope to visualize Oscillator 3 wavetables. Click the waveform graphic in Oscillator 3's mini display, or choose a wavetable from the wavetable menu, and the Scope displays an FFT-style spectral representation of the selected wavetable.

Turning WT POS moves through the wavetable and updates the spectral display as the selected position changes. This provides a useful visual indication of how the harmonic structure changes across the table. The display is informative, but your ears still get the final vote. Two neighboring wavetable positions may look similar and sound surprisingly different once filters, modulation, and effects enter the picture.



Traveler Scope showing a wavetable

SCOPE OVERLAY TIMER

By default, contextual Scope graphics remain visible temporarily, then return to the normal display once the Overlay Timer expires. The duration is set using SETTINGS > Overlay Timer.

OVERLAY TIMER: (1 to 10 seconds; factory default = 6 seconds) Sets how long a contextual Scope graphic remains visible before the display returns to its normal selected view.

For example, if the Overlay Timer is set to six seconds and you select an LFO waveform, the LFO shape remains visible for six seconds. If no further contextual parameter is selected, the display then returns to the normal Scope graphic. The Overlay Timer affects temporary Scope visualizations only. It does not change the operation of the X-Y pad.



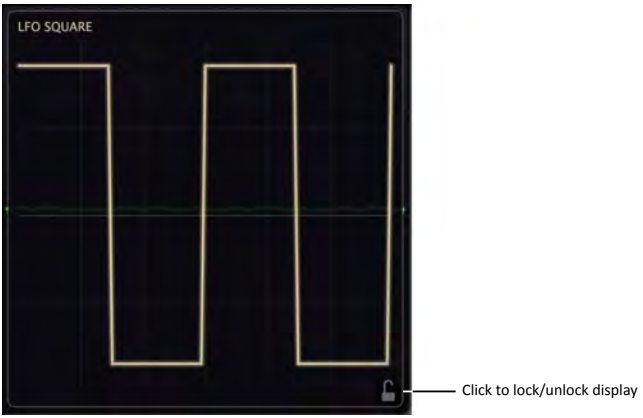
Setting the Overlay Timer

LOCKING THE SCOPE DISPLAY

A small Lock icon appears at the lower-right corner of contextual Scope graphics.

LOCK: (on/off) Overrides the Overlay Timer and keeps the current contextual Scope visualization displayed until another relevant parameter is selected or the lock is disabled. When Lock is enabled, the graphic doesn't fade away after the selected Overlay Timer duration.

Importantly, Lock does not permanently freeze one particular image. If the Scope is locked while displaying an LFO waveform and you then adjust the Filter Envelope, the display changes to the Filter Envelope graphic and keeps that new graphic visible instead. Think of Lock as saying, "Keep showing me the current useful graphic until I ask to see something else."



Locking display

KEEPING A SCOPE GRAPHIC VISIBLE

TO KEEP A CONTEXTUAL SCOPE DISPLAY FROM TIMING OUT:

1. Select or adjust the parameter you want to visualize.
2. Wait for its graphic to appear in the Scope.
3. Click the Lock icon at the lower-right corner of the display.
4. Continue editing the parameter as needed.
5. Select another parameter with a contextual graphic when you want the Scope to display something else.
6. Click the Lock icon again to return to normal Overlay Timer behavior.

This is especially useful when editing LFO shapes, envelope curves, or wavetable positions and you want the visual reference to remain available while you work.

X-Y PERFORMANCE PAD

Click X-Y beneath the display to turn Traveler's center screen into a two-dimensional performance controller.

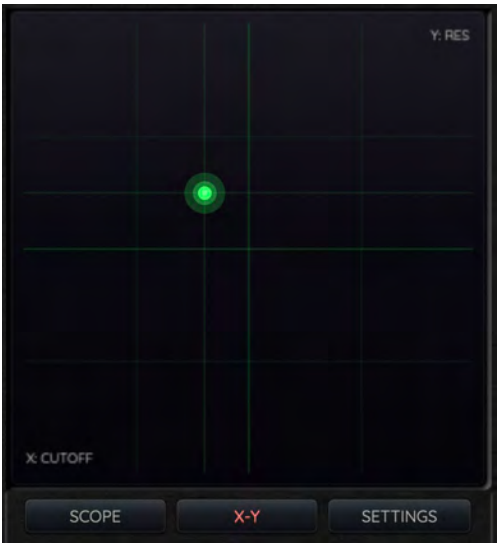
The green position dot can be clicked and dragged anywhere within the pad. Horizontal movement controls the assigned X Parameter, while vertical movement controls the assigned Y Parameter.

The full physical range of the pad is used, with the lower-left corner representing the minimum value for both axes.

By default:

- X PARAMETER: Filter Cutoff
- Y PARAMETER: Filter Resonance

This creates a familiar performance setup in which horizontal movement changes brightness while vertical movement increases or decreases resonance. But the X and Y axes can each be assigned to other Traveler parameters.

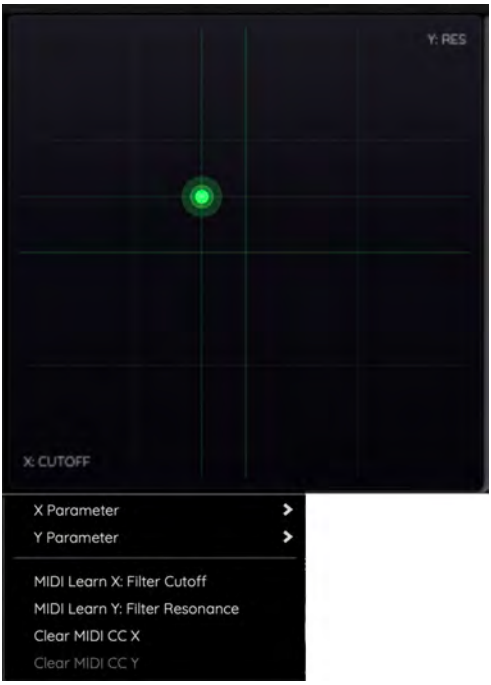


X-Y Pad

ASSIGNING X AND Y PARAMETERS

Right-click the green X-Y position dot to open its assignment menu. The menu provides separate X Parameter and Y Parameter submenus, along with MIDI Learn and MIDI CC clearing commands.

Available parameter categories include Oscillator/Noise, Wavetable, Filter, Mixer, Stereo/Motion, Envelopes, and Modulators.



Locking display

ASSIGNING PARAMETERS TO THE X-Y PAD

TO ASSIGN PARAMETERS TO THE X AND Y AXES:

1. Click X-Y beneath Traveler's center display.
2. Right-click the green position dot.
3. Choose X Parameter.
4. Select the desired parameter from the submenu.
5. Right-click the green position dot again.
6. Choose Y Parameter.
7. Select the desired parameter.
8. Click and drag the green dot around the pad to control both parameters simultaneously.

A single gesture can now change two aspects of the sound at once. For example, X might scan Wave Position while Y changes filter cutoff. Or X could control Spacing while Y increases Reverb Mix.

MIDI CONTROL OF THE X-Y PAD

Traveler's X-Y pad can also be controlled from compatible external MIDI hardware such as an X-Y pad or joystick. When external MIDI control is mapped to the X and Y axes, Traveler's onscreen green position dot follows the incoming controller movement. The right-click menu provides dedicated commands for learning each axis:



Assigning X-Y Pad parameters

The menu also identifies the parameter currently assigned to each MIDI Learn function.

MIDI MAPPING THE X-Y PAD

TO ASSIGN AN EXTERNAL MIDI CONTROLLER TO THE X-Y PAD:

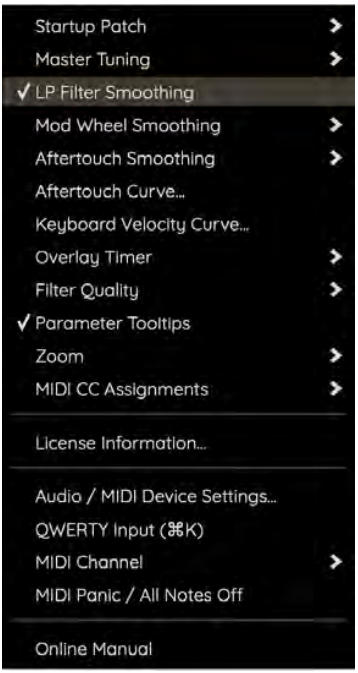
1. Select X-Y mode.
2. Right-click the green position dot.
3. Choose MIDI Learn X.
4. Move the hardware control you want to use for horizontal movement.
5. Right-click the green position dot again.
6. Choose MIDI Learn Y.
7. Move the hardware control you want to use for vertical movement.
8. Move the external X-Y controller or joystick and confirm that Traveler's onscreen position follows it.

To remove an assignment, use Clear MIDI CC X or Clear MIDI CC Y from the same menu. This can turn Traveler's X-Y pad into a genuine performance surface rather than something you operate only with a mouse.

SETTINGS

Click SETTINGS beneath the display to open Traveler's global Settings menu. The Settings menu contains options for startup behavior, tuning, smoothing, response curves, display timing, filter quality, tooltips, zoom, MIDI assignments, audio/MIDI configuration, tempo, MIDI channel, and other global functions.

Most of these settings are covered later in the MIDI/Options and Global Settings chapter. For this chapter, the most relevant command is Overlay Timer, because it determines how long contextual Scope graphics remain visible when the display isn't locked.



Settings menu

MAKING CREATIVE USE OF THE X-Y PAD AND DISPLAY

Traveler's display can be much more than a visual reference:

- Assign Wave Position to X and LP Filter to Y. Moving diagonally across the pad can transform both the harmonic source and the filter response with one gesture.
- Assign Spacing to X and Pan Spread to Y for direct control over stereo width and spectral separation.
- Use OSC1 Pan and OSC2 Pan on opposite axes to move two oscillator layers around one another.
- Assign Detune to one axis and Wave Position to the other for dramatic transitions between focused and unstable timbres.
- Put LP Filter on X and Drive on Y. Moving toward a brighter sound can simultaneously increase harmonic intensity.
- Assign an envelope Attack or Release parameter to one axis so the articulation changes while another sound parameter is being manipulated.
- Put an LFO Rate on one axis and a tonal parameter on the other. One movement can change both the sound and the speed at which it evolves.
- Use the default Cutoff/Resonance pairing for classic expressive filter sweeps. There's a reason this combination has survived several decades of synthesizer design.
- Map the X-Y pad to an external joystick and use it while playing sustained chords. This is particularly effective for cinematic sounds where timbre and space need to evolve continuously during a performance.
- Lock the Scope while editing LFOs or envelope curves so the graphic remains visible while you listen and fine-tune.
- Increase the Overlay Timer when programming complex sounds and you want more time to study each visualization before it disappears. Reduce it when you prefer the display to return quickly to its normal state.
- Use the Scope while scanning Oscillator 3 WT POS to see where significant spectral changes occur, then let your ears decide which positions are worth exploiting.

Traveler's center display is designed to do two complementary jobs. The Scope helps you understand what the instrument is doing, while the X-Y pad lets you reach in and change two parts of the sound at once.

ARPEGGIATOR

Traveler's Arpeggiator can handle the familiar job of turning held notes into repeating patterns, but it goes considerably further than a conventional up/down arp.

Twenty Direction modes range from straightforward ascending and descending patterns to fixed 16-step figures such as Staircase, Helix, Anchor, Spiral, and Pinwheel. You can spread patterns across as many as four octaves, alter their rhythmic feel with Gate and Swing, latch them for hands-free playback, and even decide which of Traveler's oscillators participate in the arpeggio.

That last feature is particularly useful. Traveler can arpeggiate one oscillator while another continues to sustain the chord you're holding. Add the optional MOD ENV articulation and an arpeggiated layer can behave almost like a separate instrument inside the patch.



Arpeggiator (Traveler standalone version)

ARPEGGIATOR CONTROLS

ARP ON: (on/off) Enables or disables the Arpeggiator. When enabled, held notes are played according to the selected Direction, Range, Speed, Gate, and Swing settings.

LATCH: (on/off) Keeps the current arpeggiator note pool active after the keys are released. This allows an arpeggio to continue playing while you remove your hands from the keyboard to adjust controls, change parameters, or prepare another chord. Changing the held or latched notes rebuilds the note pool, but Traveler keeps the running pattern musically continuous at the next step boundary rather than restarting the clock every time the chord changes.

PEDAL: (on/off) Allows a sustain pedal or compatible footswitch to participate in arpeggiator capture and hold behavior. With PEDAL enabled, pressing the pedal can latch the arpeggiator so the pattern continues without requiring the notes to remain physically held. This is particularly useful for performance because it lets your feet handle the housekeeping while your hands move on to something more interesting.

DIRECTION: (Up, Down, Up/Down, Down/Up, Up/Down R, Down/Up R, Skip Up, Skip Down, Order, Random, Repeat, Staircase, Bounce, Helix, Switchback, Cascade, Leapfrog, Anchor, Spiral, Pinwheel) Selects the order or pattern in which the held notes are played.

RANGE: (1 Oct, 2 Oct, 3 Oct, 4 Oct) Sets the octave range used by most arpeggiator modes. Some Direction modes handle Range differently, as described later in this chapter.

SPEED: (1/1, 1/2, 1/2T, 1/2D, 1/4, 1/4T, 1/4D, 1/8, 1/8T, 1/8D, 1/16, 1/16T, 1/16D, 1/32, 1/32T, 1/32D) Sets the rhythmic rate of the arpeggiator. Values marked T are triplets. Values marked D are dotted.

DEST: (All Osc, Osc 1, Osc 2, Osc 3, Osc 1+2, Osc 1+3, Osc 2+3, Noise, Osc 1+Noise, Osc 2+Noise, Osc 3+Noise)Selects which sound sources are played by the Arpeggiator.

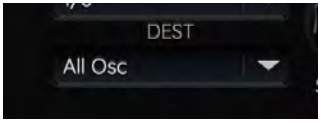
GATE: (1% to 100%) Sets how much of each arpeggiator step is occupied by the played note. At 100%, the note lasts for the full step. At 50%, it lasts for half of the step before releasing. Lower values produce shorter, more percussive articulation.

SWING: (50% to 75%) Adds progressively greater rhythmic swing to the arpeggiator pattern. At 50%, timing is straight. Increasing the value delays alternating steps to produce a more pronounced shuffle or swing feel.

TEMPO: (20 BPM to 300 BPM) Standalone version only. Sets Traveler's internal tempo, allowing the Arpeggiator to run at the desired BPM without an external clock source. In the DAW plug-in version, the Arpeggiator follows the host DAW tempo instead.

SELECTIVE OSCILLATOR ARPEGGIATION

The DEST control is one of Traveler's most useful Arpeggiator features because the entire synth doesn't have to participate in the pattern. Select Osc 1, for example, and Oscillator 1 can play the arpeggio while Oscillators 2 and 3 continue to sustain the held notes normally. That makes it possible to build layered patches in which one oscillator provides a stable pad, drone, or chord while another creates motion around it.



Arp Destination



Arp Destination

CREATING A SUSTAINED PAD WITH AN ARPEGGIATED LAYER

To create a sustained layer beneath an arpeggio:

1. Create a patch using at least two oscillators.
2. Set one oscillator to provide the sustained pad or chord layer.
3. Set DEST to a different oscillator.
4. Enable ARP ON.
5. Hold a chord.
6. Adjust DIRECTION, SPEED, GATE, and RANGE to shape the arpeggiated layer.

The unselected oscillator can remain sustained while the selected oscillator supplies the moving pattern. This is one of the easiest ways to make a single Traveler patch sound like two coordinated synth parts.

MOD ENVELOPE ARTICULATION

When DEST is set to anything other than All Osc, Traveler displays an additional MOD ENV button. MOD ENV: (on/off; unavailable when DEST = All Osc) Uses Traveler's Mod Envelope as the amplitude envelope for the arpeggiated destination. This gives considerably more control over the articulation than Gate alone.

Gate determines the basic length of each arpeggiated step, while the Mod Envelope can shape the actual amplitude contour of the arpeggiated sound.

A short Mod Envelope can create tight plucks or percussive hits. A longer contour can create swelling or evolving arpeggiated layers that overlap the underlying sustained sound.



Arp - Mod Env option

CREATING A SHORT ARPEGGIATED LAYER OVER A PAD

To create a percussive arpeggio over a sustained sound:

1. Set one oscillator to create a sustained pad.
2. Set DEST to another oscillator or oscillator combination.
3. Enable MOD ENV.
4. Set the Mod Envelope to a short Attack and Decay with a low Sustain value.
5. Enable ARP ON.
6. Adjust SPEED and GATE to establish the rhythm.
7. Fine-tune the Mod Envelope until the arpeggiated layer has the desired articulation.

Because the sustained oscillator isn't being shaped by the Mod Envelope in this configuration, the two layers can behave very differently while remaining part of the same preset.

USING NOISE IN THE ARPEGGIATOR

Noise can also participate in arpeggiator patterns. The DEST menu includes Noise as well as Osc 1+Noise, Osc 2+Noise, and Osc 3+Noise.

Noise has no conventional pitch, so its usefulness here is primarily rhythmic. When combined with MOD ENV, short envelope shapes can turn the Noise source into something resembling a percussive or drum-machine-style layer. For example, Oscillator 1 can provide a pitched arpeggio while Noise adds a short burst to each step.

Try a very short Mod Envelope Decay with an oscillator-plus-Noise destination. The noise transient can add attack and rhythmic definition without requiring an external percussion sound.



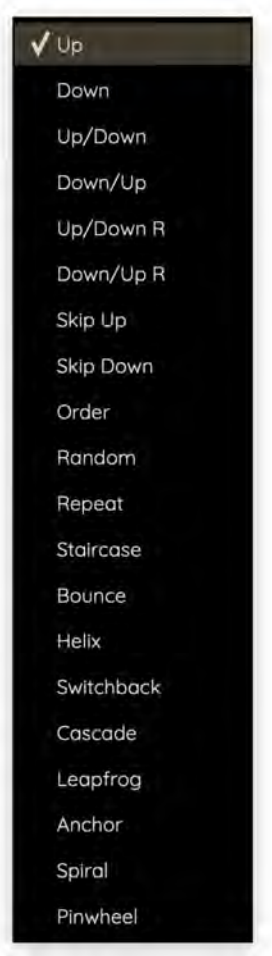
Noise as a Destination

DIRECTION MODES

Traveler provides twenty Direction modes. The first group works directly with the held-note pool, while the later modes use fixed 16-step index patterns that reinterpret the held notes in more elaborate ways. To make the examples easy to follow, imagine five held notes numbered from lowest to highest:

1 = lowest, 2, 3, 4, 5 = highest

A number followed by ↑ means that held-note position one octave higher.



Arp Direction

1 → 3 → 2 → 4 → 3 → 5

NUMBERED NOTE POOL

1 lowest · 2 · 3 · 4 · 5 highest

Numbers identify held-note positions from low to high, independent of chord or key. A number followed by ↑—for example, 1↑—means that same held-note position one octave higher.

How to use this guide. Choose a mode by contour first, then shape its rhythm with Speed, Gate, and Swing. The example sequence shows one complete cycle; a vertical bar separates four-step groups.

Important for pattern figures. Staircase through Pinwheel use a fixed 16-step index shape. The examples assume five held notes at Range = 1 Oct. With smaller chords, the same fixed indices wrap through the available positions and alternate between the original and +1 octave.

Direction and performance modes

These modes traverse the held-note pool directly, preserve the order in which notes were played, choose randomly, or re-trigger the complete chord.

MODE	WHAT IT PLAYS	MUSICAL EFFECT / USE
Up	Lowest to highest, then wraps to the bottom. 1 → 2 → 3 → 4 → 5	A clear rising line; dependable for basses, plucks, and parts that need forward lift.
Down	Highest to lowest, then wraps to the top. 5 → 4 → 3 → 2 → 1	A falling contour with a strong reset; useful for descending hooks and darker motion.
Up/Down	Climbs and falls without repeating either turning note. 1 → 2 → 3 → 4 → 5 → 4 → 3 → 2	A smooth pendulum. The top and bottom feel fluid because the endpoints occur once.
Down/Up	Falls and climbs without repeating either turning note. 5 → 4 → 3 → 2 → 1 → 2 → 3 → 4	The reverse pendulum; begins with weight at the top and then opens upward.
Up/Down R	Climbs and falls with repeated endpoints. R means repeat. 1 → 2 → 3 → 4 → 5 → 5 → 4 → 3 → 2 → 1	Accents both turns. The last 1 is followed by the next cycle's 1, so the bottom repeats too.
Down/Up R	Falls and climbs with repeated endpoints. 5 → 4 → 3 → 2 → 1 → 1 → 2 → 3 → 4 → 5	A reverse pendulum with deliberate pauses at the bottom and top.
Skip Up	Walks overlapping two-note skips through the ascending pool. 1 → 3 → 2 → 4 → 3 → 5	A light, interlocking climb. With two or fewer available notes it behaves like plain Up.
Skip Down	Applies the same overlapping skip shape to the descending pool. 5 → 3 → 4 → 2 → 3 → 1	A tumbling descent that preserves direction while avoiding adjacent-note predictability.
Order	Repeats notes in the order the keys were entered, not in pitch order. If played 3 → 1 → 4 → 2 → 5, that exact order repeats.	Best for deliberately performed motifs, rolled chords, and patterns whose rhythm follows fingering.
Random	Chooses a new note at random from the held notes across the selected Range. Each step is any current pool note; the result is different on every pass.	Unpredictable pitch motion with regular timing. Gate, Speed, and Swing still remain deterministic.
Repeat	Re-triggers the entire held chord together on every step. [1 + 2 + 3 + 4 + 5] → the same chord again	Rhythmic chord stabs and octave pulses. Its Range menu selects Fixed or Up/Down 1–4 Oct.

Fixed 16-step pattern figures

These repeatable figures reinterpret the held notes through a fixed index sequence. Change the chord size or voicing and the same shape produces a different melodic result.

MODE	WHAT IT PLAYS	MUSICAL EFFECT / USE
Staircase	Uses overlapping four-step windows that keep shifting upward. 1 2 3 4 | 2 3 4 5 | 3 4 5 1↑ | 4 5 1↑ 2↑	A visibly climbing sequence whose window advances one note at a time.
Bounce	Returns to the fourth pool position, then plays the first three; repeats that cell four times. 4 1 2 3 | 4 1 2 3 | 4 1 2 3 | 4 1 2 3	A strong recurring high anchor followed by a compact upward rebound.
Helix	Interleaves skips, rises into wrapped notes, then unwinds back toward the start. 1 3 2 4 | 3 5 4 1↑ | 1↑ 4 5 3 | 4 2 3 1	A braided, symmetrical-feeling line with a clear outward-and-return motion.
Switchback	Mixes short reversals, repeated pivots, and two octave-wrapped jumps. 1 2 3 2 | 3 4 3 4 | 5 4 5 1 | 1↑ 2 3 4	Restless, syncopated movement that keeps changing direction without becoming random.
Cascade	Runs overlapping four-note windows downward from the upper wrapped pool. 2↑ 1↑ 5 4 | 1↑ 5 4 3 | 5 4 3 2 | 4 3 2 1	A long falling wash; the descending counterpart to Staircase's rising windows.
Leapfrog	Alternates lower and farther-ahead pool positions, then repeats the eight-step cell. 1 4 2 5 | 3 1↑ 4 2↑ | 1 4 2 5 | 3 1↑ 4 2↑	Wide interval jumps and energetic call-and-response motion.
Anchor	Plays the lowest held note every other step while the partner note keeps rising. 1 2 1 3 | 1 4 1 5 | 1 1↑ 1 2↑ | 1 2 1 3	A pedal-tone effect: stable root weight under an expanding upper figure.
Spiral	Rotates through alternating pool positions, including wrapped notes, in a continuous orbit. 1 3 5 2↑ | 2 4 1↑ 1 | 3 5 2↑ 2 | 4 1↑ 1 3	Circular motion with changing register; less directional than Staircase or Cascade.
Pinwheel	Alternates low and high spokes, folds toward the center, then fans outward again. 1 3↑ 2 2↑ | 3 1↑ 4 5 | 4 1↑ 3 2↑ | 2 3↑ 1 5	The widest, most dramatic figure; excellent for sparkling multi-octave textures.

How Range changes the result

Range changes pitch coverage, but its exact role depends on the selected mode. These distinctions prevent the most common surprises.

MODE FAMILY	RANGE BEHAVIOR
Up, Down, bidirectional, Skip, Order, Random	Traveler builds the available note pool across 1–4 octave blocks, then applies the selected traversal. Random may choose from any note in that expanded pool.
Staircase through Pinwheel	The complete 16-step figure runs once per selected octave block. Its own wrapped indices may already reach one octave above the played chord before extra Range blocks are added.
Repeat	The normal octave Range is replaced by Fixed, Up 1–4 Oct, or Down 1–4 Oct. Each step re-strikes the full held chord; transposition advances through the chosen octave offsets.
All modes	Changing the held or latched notes rebuilds the pool. Traveler keeps a running pattern musically continuous at the next step boundary instead of restarting its clock on every chord edit.

PERFORMANCE NOTE
Latch preserves the captured pool after key release. Pedal lets sustain participate in capture and hold behavior. Destination can send the arp to all oscillators, a single oscillator, an oscillator pair, Noise, or an oscillator-plus-Noise combination, so a sustained layer can remain underneath the moving pattern.

SHAPING THE RHYTHM

Direction determines the pitch contour, but SPEED, GATE, and SWING determine how that contour feels.

- A familiar Up pattern can become radically different depending on these three controls.
- Short Gate settings create clipped, percussive articulation.
- Long Gate settings produce more connected motion.
- Triplet or dotted Speed values can pull the pattern away from straightforward subdivisions.
- Swing can move even a very simple pattern into a looser rhythmic pocket.

When auditioning the more complicated Direction modes, simplify the rhythm first. Start with straight eighth notes, moderate Gate, and no extra Swing. Once you understand the pitch contour, start bending the rhythm.

MAKING CREATIVE USE OF THE ARPEGGIATOR

Traveler's Arpeggiator becomes especially interesting when you stop treating the entire patch as one sound:

- Set DEST to Osc 1 and leave Oscillators 2 and 3 sustaining underneath it. A single preset can provide both pad and arpeggio.
- Enable MOD ENV on the arpeggiated oscillator and use a very short envelope for tight, percussive notes while the unselected oscillators retain long VCA envelope settings.
- Use Osc 1+Noise with MOD ENV enabled to add a short noise transient to every arpeggiated note. With a fast envelope, this can create almost drum-machine-like articulation.
- Try Noise by itself with a short Mod Envelope. The Arpeggiator becomes a surprisingly useful rhythmic noise generator.
- Use Order mode and deliberately play notes in an unusual sequence. The pattern follows your fingering rather than automatically sorting the chord.
- Use Anchor on bass-oriented patches. The repeating lowest note can provide a stable foundation while the upper part of the pattern moves around it.
- Try Staircase or Cascade with two or three oscillators spread across stereo. Their built-in directional motion becomes even more dramatic when the sound itself occupies a wide field.
- Use Helix, Spiral, or Pinwheel with Oscillator 3 in wavetable mode. Then route a Control Track or LFO to WT POS so pitch and timbre evolve independently.
- Set DEST to only one oscillator, then use a different waveform family on the sustained layer. For example, a bright wavetable arpeggio can move over a darker analog-style pad.
- Use Repeat with a short Gate to create rhythmic chord stabs rather than a conventional broken-chord arpeggio.
- Increase RANGE on Pinwheel or Leapfrog for very wide interval movement, then use LF WIDTH to keep the lowest notes from becoming too diffuse in stereo.
- Use LATCH when sound designing. Let the pattern continue while you adjust filter settings, wavetable position, effects, or modulation routings with both hands free.

- Use PEDAL in performance so the arpeggio can continue while you move to another chord, change a control, or play another part.
- Pair the Arpeggiator with the Control Tracks. The Arpeggiator can determine the notes while CT1 and CT2 independently animate filter cutoff, Wave Position, stereo placement, or effects.
- Give the Arpeggiator and Control Tracks different rhythmic relationships. A simple arpeggio can become much more complex when timbral modulation cycles against it rather than resetting at the same interval.

Traveler's Arpeggiator can certainly produce the familiar rising and falling patterns found on countless synthesizers. But selective oscillator targeting, Mod Envelope articulation, Noise integration, fixed 16-step figures, and interaction with the Control Tracks make it capable of behaving more like a small performance system inside the synth.

CONTROL TRACK SEQUENCER

Traveler's Sequencer consists of two independent 16-step Control Tracks, CTRL TRACK 1 and CTRL TRACK 2. Despite the name, these tracks can do considerably more than play conventional note sequences. A Control Track can sequence oscillator pitch like a traditional step sequencer, or it can be routed to parameters such as Filter Cutoff, Wave Position, Pan, LFO Rate, effects, and many other destinations throughout Traveler.

That means CTRL Track 1 might play a melodic pitch pattern while CTRL Track 2 slowly scans a wavetable. Or one track can create rhythmic filter movement while the other moves the sound through the stereo field. Each track has its own Steps, Time, Destination, Swing, Gate, Depth, smoothing, direction, step values, and preset controls. Because the two tracks are independent, they can also run at different lengths and rates, creating much longer evolving patterns from relatively simple sequences.



Control Tracks

STARTING A CONTROL TRACK SEQUENCE

Sequence/Control Track playback is triggered from the keyboard.

ON: (on/off) Arms the selected Control Track. Once armed, press and hold a note on your external MIDI controller to begin playback. The sequence continues for as long as the triggering note remains held. When a Control Track is sequencing oscillator pitch, middle C acts as the reference note. Play a higher or lower key and Traveler transposes the entire sequence accordingly.

You can also play chords. In this case, the programmed sequence is applied to every note in the chord. This makes a pitch Control Track behave less like a fixed pattern and more like a sequence you can actually play from the keyboard.

CONTROL TRACK PARAMETERS

SWING: (50% to 75%) Adds rhythmic swing to the Control Track. At 50%, playback is straight. Increasing the value progressively delays alternating steps for a more pronounced shuffle or swing feel.

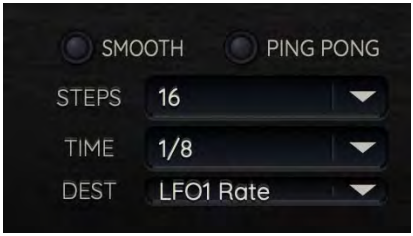
GATE: Controls the length of each sequenced event relative to the selected TIME setting. The available Gate range changes according to the current Time value. Shorter Gate values create clipped, percussive articulation, while longer settings produce more connected steps.

DEPTH: (0% to 100%) Scales the overall amount of all step values in the selected Control Track. At 100%, the programmed step values are applied at their full amount. Lower values proportionally reduce the entire sequence without requiring you to edit every step. When sequencing oscillator pitch, set Depth to 100% for pitch-accurate playback of the values programmed into the individual steps.

Depth is equally useful with modulation destinations. You can deliberately program an exaggerated filter or wavetable sequence and then reduce Depth until the movement sits comfortably in the patch.



Control Track Sequence controls



Control Track Sequence controls

STEPS: (1 to 16) Sets the number of active steps in the Control Track.

Because CTRL Track 1 and CTRL Track 2 have independent Steps settings, they can use different pattern lengths.

TIME

TIME: Sets the basic timing behavior of the Control Track. Values marked T are triplets. Values marked D are dotted.

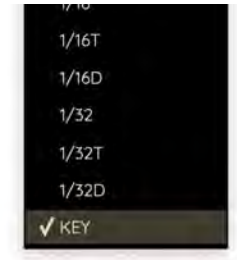


Choosing Time value

KEY TIME MODE

When TIME is set to KEY, the Control Track doesn't advance according to a clocked note value. Instead, it advances one step each time you press a key on your external MIDI controller. This turns the sequence into something you can step through manually as part of a performance. For example, a Control Track routed to Wave Position could advance to a new timbre with every played note. Or a pitch sequence could move to its next programmed interval each time you strike a key, regardless of tempo.

KEY mode is particularly useful when you want a sequence to follow your phrasing instead of asking your phrasing to follow the sequence.

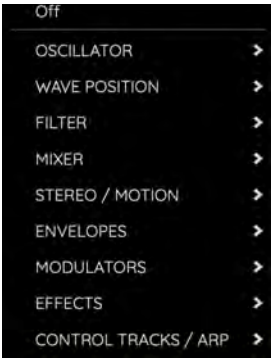


Choosing Key as the Time mode

DESTINATION

DEST: Selects the parameter controlled by the selected Control Track. This is what makes Traveler's Control Tracks more than conventional note sequencers. The same row of 16 step knobs can become a pitch sequence, filter sequence, stereo-motion pattern, wavetable animation, or rhythmic effects controller simply by changing DEST.

The Destination menu is organized into the following categories:



Destination menu

STEP KNOBS

STEP 1-16: Sets the value of the corresponding sequence step. The available range changes according to the selected Destination. When oscillator pitch is selected as the Destination, each step provides a range of -48 to +48 steps. When LP Filter is selected, the step range is -12 octaves to +12 octaves. Other destinations use ranges appropriate to the parameter being controlled.

For precise entry, Option-click a step knob on macOS or Alt-click it on Windows, then enter the desired numeric value. This is particularly useful for pitch sequences or any modulation pattern where exact values matter.



Step Knobs

PER-STEP DURATION

The small LED beneath each step knob also lets you alter the duration of that individual step relative to the track's main TIME value. This means a Control Track doesn't have to consist of 16 identical rhythmic subdivisions. Individual steps can be shortened, dotted, or lengthened to create a much more varied rhythm.

- With the LED in its normal state, the step uses the duration selected by TIME.
- Click the LED once and a half-circle appears around it. The step now uses half the selected Time value.
- For example, if TIME is 1/8, that step becomes a 1/16 note.
- Click the LED a second time and a three-quarter circle appears. The step now uses the dotted version of the selected Time value.
- Click the LED a third time and a full circle appears. The duration is doubled.
- For example, if TIME is 1/8, the step becomes a 1/4 note.



Per=step duration

CREATING RHYTHMIC VARIATION WITHIN A TRACK

To vary individual step durations:

1. Set the Control Track TIME to the desired base value.
2. Program the sequence using the step knobs.
3. Leave a step LED unchanged when you want that step to use the base Time value.
4. Click a step LED once to halve that step's duration.
5. Click it twice to use the dotted version of the base duration.
6. Click it three times to double that step's duration.
7. Play the sequence and adjust individual step durations until the rhythm feels right.

This feature is especially useful for turning a simple repeating pattern into something less mechanical without changing its actual step values.

SMOOTH

SMOOTH: (on/off) Smooths the transition from one step value to the next rather than jumping immediately between discrete values. With Smooth disabled, each new step snaps directly to its programmed value. With Smooth enabled, Traveler interpolates between consecutive values. The musical result depends on the selected Destination.

When controlling oscillator pitch, Smooth creates a portamento-like glide between programmed pitches. When controlling Filter Cutoff, Wave Position, Pan, or another continuous parameter, it converts abrupt steps into flowing modulation. Turn Smooth off for stepped, sample-and-hold-style movement. Turn it on when you want the same values to flow instead of jump.



Smooth option

PING PONG

PING PONG: (on/off) Plays the Control Track forward until it reaches the final active step, then reverses direction and plays backward. This creates a continuous back-and-forth pattern instead of jumping directly from the last step to Step 1. Ping Pong works well for pitch contours, wavetable scans, filter patterns, stereo motion, and other destinations where a return journey is more musical than an abrupt reset.



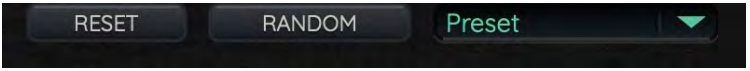
Ping Pong option

RESET AND RANDOM

RESET: Resets the step values in the selected Control Track. To reset an individual step, Option-click the step on macOS or Alt-click it on Windows.

RANDOM: Generates random values for the steps in the selected Control Track.

Random is particularly useful as a starting point for modulation sequences. Generate a pattern, then reduce Depth, enable Smooth, or adjust individual steps until the result becomes musically useful. Random doesn't necessarily mean chaos. Sometimes it just means not having to turn sixteen knobs before finding something interesting.



Reset and Random

CREATING A BASIC CONTROL TRACK SEQUENCE

To create and play a control track sequence:

1. Click ON to arm CTRL Track 1 or CTRL Track 2.
2. Set STEPS to the desired sequence length.
3. Set TIME to the desired base step duration.
4. Choose the desired DEST.
5. Adjust the step knobs to create the sequence values.
6. If desired, click the LEDs beneath individual steps to vary their durations.
7. Press and hold a note on your MIDI controller to begin playback.
8. Adjust SWING, GATE, and DEPTH to refine the sequence.
9. Enable SMOOTH if you want the values to glide between steps.
10. Enable PING PONG if you want the pattern to reverse when it reaches its final active step.

CREATING A PITCH SEQUENCE

When an oscillator-pitch Destination is selected, the Control Track can function much like a traditional step sequencer. The step knobs establish pitch offsets, while the played keyboard note determines the transposition of the complete sequence.

PLAYING A PITCH SEQUENCE FROM THE KEYBOARD

To create a playable pitch sequence:

1. Arm the desired Control Track.
2. Set DEST to the desired oscillator-pitch destination.
3. Program the pitch values with the step knobs.
4. Set DEPTH to 100% for full playback of the programmed values.
5. Hold middle C to hear the sequence at its reference pitch.
6. Play another key to transpose the complete sequence.
7. Play a chord to apply the sequence to every note in the chord.

This makes a single programmed sequence surprisingly flexible. Instead of creating a separate pattern for every harmony or key, you can perform its musical context directly from the keyboard.

USING A CONTROL TRACK AS A MODULATION SEQUENCER

Pitch is only one possibility. Set DEST to LP Filter, and the same 16 step knobs become filter offsets. Choose Wave Position, and they become a timbral sequence. Choose Pan, and they create a stereo-motion pattern. Choose an Effects destination, and the Control Track can animate an effect parameter rhythmically.

This is one of Traveler's central ideas: sequencing and modulation aren't separate systems. A sequence can be melodic, rhythmic, timbral, spatial, or several of those things at once.

USING BOTH CONTROL TRACKS

CTRL Track 1 and CTRL Track 2 operate independently, allowing two different sequences to affect the sound simultaneously. One track might sequence pitch while the other moves Filter Cutoff. One might scan Wave Position while the other changes Pan. And because the two tracks can use different STEPS and TIME settings, their patterns don't have to repeat on the same cycle.

For example, run a 15-step filter pattern alongside a 16-step Wave Position pattern. The relationship between them shifts on every pass before eventually returning to its original alignment. This is one of the easiest ways to create long evolving movement from two relatively short patterns. Let the tracks disagree politely about where "one" is.

USING KEY MODE WITH TWO TRACKS

KEY mode can create particularly interesting interactions when used differently between the tracks. One Control Track can advance according to a clocked Time value while the other advances only when you play a new key. Or both can use KEY with different sequence lengths, so every note you perform steps two different modulation patterns forward simultaneously.

This can make each played note alter several aspects of the patch without relying on conventional rhythmic sequencing at all.

CONTROL TRACKS AND THE MODULATION MATRIX

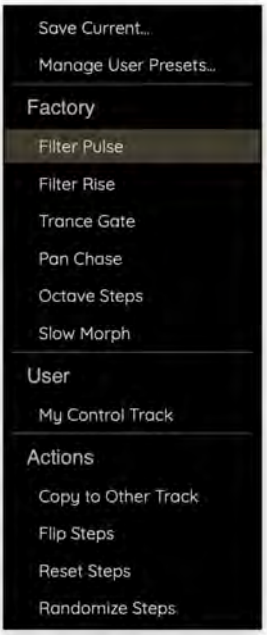
CTRL Track 1 and CTRL Track 2 are also available as Sources in Traveler's Modulation Matrix. The Mod Matrix additionally provides destinations for:

- CT1 Depth
- CT2 Depth
- Gate CT1
- Gate CT2

This means the Control Tracks themselves can be modulated. An envelope could gradually increase a sequence's Depth. An LFO could alter its Gate behavior. A performance controller could vary how strongly a Control Track affects the patch. This is where a simple 16-step pattern can begin behaving much less like a conventional sequencer.

MANAGING CONTROL TRACK PRESETS

Each Control Track includes a Preset menu beside the RANDOM button. The menu lets you save and manage your own sequences, load factory patterns, and perform several useful sequence operations.



USER PRESET COMMANDS

Save Current… Saves the current Control Track sequence as a user preset.
Manage User Presets… Opens the controls for managing saved Control Track presets.

FACTORY PRESETS

Traveler includes several factory Control Track presets:



Control Track presets

These provide ready-made patterns and useful examples of how differently a Control Track can behave depending on its Destination. Loading a preset designed for one purpose and changing its Destination is also an excellent way to discover new ideas. A filter pattern may become an interesting pan sequence. A pitch pattern might turn into a wavetable scan. The sequence doesn't know what it was originally hired to do.

ACTIONS

The Preset menu includes several utility commands:



Utility commands

Copy to Other Track: Copies the entire current Control Track, including its sequence and settings, to the other Control Track. This includes the step values and track configuration such as STEPS, TIME, DEST, and the remaining track settings. Choose this command from CTRL Track 1 to copy the complete track to CTRL Track 2, or from CTRL Track 2 to copy it to CTRL Track 1. This is especially useful when you want two tracks to begin identically and then diverge.

- **Flip Steps**: Reverses the order of the sequence steps.
- **Reset Steps**: Resets the sequence step values.
- **Randomize Steps**: Generates random values for the sequence steps.

CREATING A VARIATION WITH COPY TO OTHER TRACK

TO CREATE A VARIATION OF AN EXISTING SEQUENCE:

1. Program CTRL Track 1 as desired.
2. Open its Preset/Utility menu.
3. Choose Copy to Other Track.
4. CTRL Track 2 now contains the copied sequence and settings.
5. Change CTRL Track 2's DEST, step values, Time, Steps, or other parameters.
6. Run both tracks together.

This provides a quick way to create related patterns whose timing or contour begins from the same source but controls something completely different.

MAKING CREATIVE USE OF THE CONTROL TRACKS

Traveler's Control Tracks become especially powerful when you stop thinking of them only as note sequencers:

- Use CTRL Track 1 for oscillator pitch and CTRL Track 2 for LP Filter. The melodic contour remains recognizable while the filter follows a separate pattern.
- Give the two tracks different STEPS values. A 15-step pattern against a 16-step pattern creates a composite cycle much longer than either track alone.
- Set one track to Wave Position and enable SMOOTH. Instead of jumping between timbres, the sequence becomes a programmable waveform or wavetable morph.
- Turn Smooth off on the same pattern and those identical values become stepped, rhythmic timbral changes.
- Use PING PONG with Wave Position so Traveler travels outward through a timbral sequence and then retraces the route.
- Sequence Pan or individual oscillator pan destinations for rhythmic stereo movement without using an LFO.
- Use the per-step duration LEDs to break up an otherwise regular pattern. A few half-duration, dotted, or doubled steps can radically change the groove.
- Click RANDOM, then reduce DEPTH. Random sequences often become far more useful when their overall range is restrained.
- Combine RANDOM with SMOOTH for unpredictable but continuously flowing modulation.
- Use KEY Time with Wave Position so every played note advances Traveler to the next timbral step.
- Use KEY Time with a filter or effect destination to turn your keyboard performance into a manual modulation sequencer.
- Put one track in KEY mode and leave the other clocked. Your playing can advance one sequence while the other continues running independently.
- Use a Control Track on Filter Cutoff with abrupt step values, then enable Smooth to transform the same sequence from rhythmic pulses into fluid sweeps.
- Sequence an effect parameter such as Delay Feedback or Reverb Mix so ambience becomes part of the rhythmic pattern rather than remaining static behind it.

- Use the Control Tracks with the Arpeggiator. Let the Arpeggiator determine note order while CTRL Track 1 moves Wave Position and CTRL Track 2 animates filter or stereo placement.
- Play a pitch sequence with chords rather than individual notes. Traveler applies the pattern to every held note, turning one programmed contour into moving harmonic structures.
- Use DEPTH as a global intensity control. Program large step movements, then reduce Depth until the sequence sits naturally inside the patch.
- Copy one Control Track to the other, then change only the Destination. Identical patterns applied to two different parameters can create a tightly coordinated modulation gesture.
- Copy a track, change one track to 15 Steps and the other to 16, then edit only a few values. The two sequences begin as relatives but gradually move out of alignment.
- Route a Control Track through the Mod Matrix to Mod Bus Depth so the sequence changes the strength of another modulation routing instead of controlling a synth parameter directly.
- Start with one of Traveler's factory Control Track presets and simply change its Destination. A sequence intended for Filter Cutoff can become something entirely different when applied to Wave Position, Pan, an envelope time, or an effect.

EFFECTS

Traveler's synthesis engine can already cover a great deal of sonic territory before effects enter the picture, but its four built-in effects give you another set of tools for shaping space, movement, color, and dimension.

The effects section includes EQ, Chorus, Delay, and Reverb, each with its own graphical display and dedicated controls. They can be used conventionally to polish a finished sound, but they're equally useful as part of the patch itself. Chorus can turn a simple oscillator texture into a broad ensemble. Delay can become a rhythmic extension of an arpeggio or Control Track. Reverb can transform a short pluck into a vast atmospheric event. EQ can reshape the tonal balance before any of those effects begin adding space.

And because many effects parameters are available as Modulation Matrix and Control Track destinations, the effects don't have to remain static. Delay Feedback can change over the course of a phrase, Reverb Mix can bloom with an envelope, or Chorus Rate can slowly evolve under LFO control.

In other words, Traveler's effects can finish a sound, but they can also become part of what makes the sound work in the first place.



Traveler's Effects chain

EFFECTS AT A GLANCE

EQ: A three-band tone-shaping section for controlling low-end weight, midrange focus, and high-frequency presence. Use it for subtle correction, broad tonal sculpting, or deliberately emphasizing the frequencies that give a patch its character.

CHORUS: A three-mode modulation effect for adding width, movement, and the familiar richness associated with classic chorus circuits. It can range from gentle thickening to more obvious ensemble-style motion.

DELAY: A stereo delay with Dual Delay and Ping Pong Delay modes, independent left and right timing, feedback, stereo spread, filtering, and modulation. It can create anything from subtle echoes to wide rhythmic patterns and evolving repeats.

REVERB: Provides Room, Hall, and Space algorithms for placing sounds in environments ranging from intimate ambience to large, atmospheric spaces. Its modulation and tone-shaping controls make it equally useful for natural depth or expansive cinematic textures.

The following sections examine each effect in detail, including its controls, parameter ranges, presets, and practical sound-design applications.

EQ

Traveler's EQ provides a straightforward three-band tone-shaping stage for adjusting the weight, focus, and brightness of a patch. The large graphical display shows the resulting EQ curve as you adjust the controls.



EQ

The LOW and HIGH bands each provide adjustable frequency and boost/cut controls, while the MID band is designed for subtractive shaping with its dedicated DIP control. Together, they're useful for adding weight or air, reducing muddiness, taming harsh frequencies, and helping complex Traveler patches sit more comfortably in a mix.

Traveler's EQ doesn't include a separate Q or bandwidth control. Instead, the bandwidth changes automatically according to the amount of boost or cut being applied. The more strongly you boost or cut, the narrower the affected frequency band becomes. At gentler settings, the EQ curve is broader and more subtle. This makes the EQ quick to use because frequency, amount, and bandwidth work together naturally rather than requiring a separate Q adjustment.

EQ ON/OFF

ON: (on/off) Enables or disables the EQ. When the red LED is illuminated, the EQ is active.

Use this to compare the processed sound with the original signal without changing any EQ settings.

LOW BAND

LOW: (20 Hz to 1.0 kHz) Sets the center frequency of the low-frequency EQ band. Lower settings focus the adjustment on deep bass frequencies, while higher settings allow the band to reach into the low-midrange.

GAIN: (-10 dB to +10 dB) Sets the amount of boost or cut applied at the selected LOW frequency. Positive values add weight or fullness. Negative values reduce low-frequency energy. As the absolute amount of boost or cut increases, the affected frequency band becomes progressively narrower. Smaller changes create broader tonal shaping, while more extreme settings produce more focused correction or emphasis.

TIP: If a patch feels thin, a modest low boost can add body. If it sounds impressive in isolation but turns the mix into soup, the same control works just as well in the other direction.

MID BAND

MID: (150 Hz to 7 kHz) Sets the center frequency of the midrange cut.

The wide frequency range allows the Mid band to target anything from low-mid buildup to nasal, boxy, honky, or aggressive upper-mid frequencies.

DIP: (0 to -10 dB) Sets the amount of attenuation applied at the selected MID frequency. At 0 dB, no midrange cut is applied. Increasing the amount of Dip progressively reduces the selected frequency region. As the amount of cut increases, the affected band becomes narrower, allowing deeper settings to target problem frequencies more precisely.

Because the Mid band is cut-only, it's especially useful for corrective shaping. Instead of adding more frequencies to make a sound work, you can often improve clarity simply by removing the part that's getting in the way.

FINDING AN UNWANTED MIDRANGE FREQUENCY

To reduce a problematic midrange frequency:

1. Increase DIP enough to make the EQ effect easy to hear.
2. Slowly turn MID through its frequency range.
3. Listen for the point where the unwanted nasal, boxy, harsh, or muddy quality becomes most obvious.
4. Leave MID at that frequency.
5. Reduce DIP until the correction sounds natural.

As the Dip amount is reduced, the affected region also becomes broader and less severe. The goal usually isn't to hear the EQ working. It's to notice that the sound behaves better when you bypass it.

HIGH BAND

HIGH: (1.5 kHz to 15 kHz) Sets the center frequency of the high-frequency EQ band. Lower settings affect more of the upper-midrange and presence region. Higher settings focus the adjustment toward the top end and can be useful for adding or reducing brightness and air.

GAIN: (-8 dB to +8 dB) Sets the amount of boost or cut applied at the selected HIGH frequency. Positive values add brightness, presence, or air. Negative values soften the upper frequencies.

As with the Low band, increasing the amount of boost or cut also narrows the affected bandwidth. Gentle adjustments produce broader tonal shaping, while larger values create more focused emphasis or attenuation.

High-frequency boost is especially useful for dark pads and filtered sounds that need a little more openness after the main synthesis has been shaped. Conversely, cutting the High band can tame aggressive wavetable material, excessive resonance, distortion, or effects that have become too bright.

EQ PRESETS

Traveler includes several factory EQ presets as useful starting points.

Open the EQ Preset menu to access factory settings or save and manage your own. The Preset field displays the name of the currently selected EQ preset, making it easy to keep track of the starting point as you edit its settings.



EQ Presets

SAVE CURRENT...: Saves the current EQ settings as a user preset.

RESET: Returns the EQ to its default state.

MANAGE USER PRESETS...: Opens the controls for managing saved EQ presets.

These presets are useful both as ready-made corrections and as examples of how the three bands can work together.

MODULATING AND SEQUENCING THE EQ

Traveler's EQ isn't limited to static settings. Several EQ parameters can be sequenced or modulated using either the Control Tracks or the Modulation Matrix. An LFO can slowly shift the Mid frequency. A Control Track can rhythmically alter Low Gain. An envelope can brighten or soften the High band over the life of a note. This makes the EQ useful for movement as well as correction.

Available EQ modulation destinations include:

- EQ Low Freq
- EQ Low Gain
- EQ Mid Freq
- EQ Dip
- EQ High Freq
- EQ High Gain

MAKING CREATIVE USE OF THE EQ

Traveler's EQ is simple enough to use quickly, but it can make a surprisingly large difference to a finished patch:

- Add a small LOW GAIN boost to basses and leads that need more weight without changing the oscillator balance.
- Cut the LOW band instead when large pads or effects are competing with the bass in a mix.
- Use modest boost/cut amounts when you want broad tonal shaping. Because the bandwidth remains wider at smaller settings, subtle EQ changes can reshape a patch without sounding surgical.
- Use stronger boost or cut values when you need a more focused adjustment. As the amount increases, the affected band narrows automatically.
- Use the MID/DIP band to remove muddiness from dense multi-oscillator patches. The problem often lives somewhere in the low mids rather than in the actual bass frequencies.
- Sweep MID with a stronger Dip setting to identify nasal or harsh frequencies, then reduce the amount of cut once you've found the problem area.
- Use a gentle HIGH GAIN boost at a relatively high frequency to add air to dark pads or softened analog-style patches.

- Reduce the High band when wavetable movement, filter resonance, or Drive makes a patch overly sharp.
- Shape the synth first with Traveler's filters, then use the EQ for smaller corrective adjustments. The filter defines the sound; the EQ helps it behave.
- Try the Mild Mud Remover preset on large pads or heavily reverberated sounds, then adjust the Low and Mid frequencies to suit the patch.
- Use a Control Track to sequence EQ Mid Freq or EQ Dip for rhythmic tonal movement that feels different from conventional filter sequencing.
- Route a slow LFO to EQ High Gain for subtle changes in brightness over time.
- Modulate EQ Low Gain very gently on cinematic textures to create slow shifts in perceived weight without changing the oscillator levels.

CHORUS

Traveler's Chorus adds width, motion, and the impression of multiple voices moving slightly independently within the stereo field. It can be used subtly to thicken pads, strings, keys, and leads, or pushed harder when you want the modulation itself to become an obvious part of the sound. Traveler provides three Chorus types, ranging from the more angular movement of Type I to the smoother response of Type II, with D combining characteristics of both.

The large graphical display shows the Chorus modulation pattern, making it easy to see the difference between the three types as well as the effect of changing Rate.



Chorus

CHORUS ON/OFF

ON: (on/off) Enables or disables the Chorus effect. When the red LED is illuminated, Chorus is active. Use this to compare the chorused sound with the dry signal without changing any Chorus settings.

CHORUS TYPE

The three-position slider selects the character of the Chorus modulation.

- **I:** Selects a classic Chorus with a more angular modulation shape. Type I produces a more clearly defined sense of movement and works especially well when you want the modulation itself to be noticeable.
- **II:** Selects a classic Chorus with smoother modulation. Type II produces a more flowing character and is particularly useful when you want additional width and richness without drawing as much attention to the modulation.
- **D:** Combines characteristics of Types I and II. This creates a more complex modulation pattern that blends the more angular movement of Type I with the smoother response of Type II.



Chorus Type

When choosing a Chorus Type, don't think only in terms of "more" or "less" chorus. The shape of the modulation can change the personality of the movement just as much as Rate or Mix.

CHORUS CONTROLS

RATE: (0.05 Hz to 8.0 Hz) Sets the speed of the Chorus modulation. Low values produce slow, broad movement that works well for pads, strings, and evolving textures. Higher values create increasingly obvious animation and can move the effect from gentle thickening toward more pronounced modulation. Very slow rates are particularly effective when you want the sound to feel larger without making the Chorus immediately identifiable as an effect.

MIX: (0 to 100%) Sets the amount of Chorus effect blended with the dry signal. At lower settings, Chorus adds subtle width and movement while preserving the character of the original sound. Increasing Mix makes the modulation progressively more noticeable. Because Chorus changes pitch and stereo placement over time, a little can go a long way. On already-wide Traveler patches, relatively low Mix settings may be all that's needed.

MODULATING AND SEQUENCING THE CHORUS

Traveler's Chorus doesn't have to remain a fixed effect. Both of its main parameters can become part of the patch's modulation architecture.

Available Chorus modulation destinations include:

- Chorus Rate
- Chorus Mix

This means an LFO, envelope, Control Track, performance controller, or other modulation source can change the Chorus dynamically. For example, route the Mod Envelope to Chorus Mix so a note begins relatively focused and becomes wider as it develops. A Control Track can change Chorus Rate rhythmically, creating movement that follows the pattern rather than repeating at a constant speed.

You can also assign Chorus Mix to a performance controller or the X-Y pad, allowing the amount of stereo animation to become part of the performance itself.

MAKING CREATIVE USE OF THE CHORUS

Traveler's Chorus can do considerably more than simply make a patch wider:

- Use Type II with a slow RATE and low MIX for pads that need additional size without sounding obviously chorused.
- Try Type I on plucks, keys, or rhythmic patches when you want the modulation movement to have more definition.
- Use D when Type I or Type II feels too predictable. Its combined modulation character can create a richer, more complex sense of movement.
- Keep RATE very slow on sustained sounds. Gentle Chorus movement can create the impression of several slightly independent voices rather than an obvious modulation effect.
- Increase RATE while keeping MIX relatively low for faster animation without overwhelming the dry sound.
- Combine moderate Chorus with Traveler's oscillator SPREAD and Filter SPACING rather than pushing any one stereo control to its maximum. Several smaller sources of width often create more depth than one enormous one.
- Use Chorus sparingly on bass-heavy patches, then let LF WIDTH keep the lowest notes focused toward the center.
- Route the Mod Envelope to Chorus Mix so a note begins focused and gradually becomes wider as it develops.
- Use a Control Track to modulate Chorus Rate for rhythmic changes in movement that differ from the usual constant-rate Chorus effect.
- Assign Chorus Mix to the X-Y pad or another performance controller so you can move between a dry, focused sound and a wider chorused version while playing.

DELAY

Traveler's Delay provides two related stereo delay types, Dual Delay and Ping Pong Delay, for creating everything from subtle stereo thickening and short echoes to tempo-locked rhythmic patterns and long, evolving repeat trails.

Both delay types share the same control set, including independent left and right delay times, Feedback, stereo Spread, delay-time modulation, repeat filtering, and wet/dry Mix. Delay times can operate freely in milliseconds or synchronize to Traveler's tempo using straight, dotted, and triplet note values.

The large graphical display shows left and right delay activity independently, making it easy to see the timing and decay of the two sides.



Delay

DELAY ON/OFF

ON: (on/off) Enables or disables the Delay effect. When the red LED is illuminated, Delay is active.

Use this to compare the delayed and dry versions of a patch without changing any Delay settings.

DELAY TYPES

Use the Delay Type menu to select Dual Delay or Ping Pong Delay.

DUAL DELAY: Provides separate left and right delay lines, allowing TIME L and TIME R to create independent stereo and rhythmic relationships. Dual Delay is particularly useful when you want two complementary echoes rather than a single repeating pattern. Different left and right times can make even a relatively simple delay feel wider and more rhythmically interesting.

PING PONG DELAY: Creates a stereo delay pattern in which the repeats move across the stereo field. Ping Pong Delay is a natural choice when stereo movement is an important part of the effect. The independent TIME L and TIME R controls remain available, so the movement can follow simple or more complex rhythmic relationships.

SYNC

SYNC: (on/off) Determines whether TIME L and TIME R are set freely in milliseconds or synchronized to tempo. With SYNC disabled, the Delay times operate continuously from 1 ms to 4.5 seconds. With SYNC enabled, TIME L and TIME R select rhythmic note divisions instead. In Traveler's standalone version, these synchronized values follow Traveler's TEMPO setting. When Traveler is running as a DAW plug-in, they follow the host DAW tempo.

This makes it easy to move between free-running echoes and delays that lock precisely to the music.

DELAY TIME CONTROLS

TIME L: (1 ms to 4.5 seconds with SYNC off; 1/1, 1/2D, 1/2, 1/2T, 1/4D, 1/4, 1/4T, 1/8D, 1/8, 1/8T, 1/16D, 1/16 with SYNC on) Sets the delay time for the left channel.

TIME R: (1 ms to 4.5 seconds with SYNC off; 1/1, 1/2D, 1/2, 1/2T, 1/4D, 1/4, 1/4T, 1/8D, 1/8, 1/8T, 1/16D, 1/16 with SYNC on) Sets the delay time for the right channel. Values marked D are dotted. Values marked T are triplets.

Different left and right settings are one of the quickest ways to create stereo rhythmic interplay. For example, try a quarter-note delay on one side and a dotted eighth on the other. The echoes interlock rather than simply repeating in unison.

With SYNC disabled, very short delay times can create doubling, comb-like coloration, and chorus-like effects, particularly when combined with Delay modulation. Longer values produce conventional echoes and spacious repeat patterns.

FEEDBACK

FEEDBK: (0 to 95%) Sets how much of the delayed signal is returned to the Delay input to create additional repeats. Low values produce only a few echoes. Increasing Feedback creates progressively longer repeat trails. At high settings, the repeats can persist for a long time and become a significant part of the overall texture.

Feedback is one of those controls where the last few percent can make a surprisingly large difference. Approach 95% with curiosity and perhaps a hand near the volume control.

SPREAD

SPREAD: (0 to 100%) Sets the amount of stereo spread applied to the delayed signal. Lower values create a more focused stereo image. Increasing Spread progressively emphasizes the separation of the repeats across the stereo field.

Spread can be especially effective when TIME L and TIME R use different values because the rhythmic differences between the two delay lines become more spatially apparent.

As with Traveler's other stereo controls, maximum width isn't automatically the most interesting setting. Moderate Spread often leaves more room for the oscillator, filter, and output-stage stereo movement already present in the patch.

DELAY MODULATION

Traveler includes built-in delay-time modulation for adding movement, pitch variation, and vintage-style instability to the repeats.

MOD RT: (0.01 Hz to 10 Hz) Sets the rate of Delay modulation. Slow settings create gradual pitch drift and tape-like movement. Higher values produce faster and increasingly obvious modulation.

MOD DP: (0 to 10 ms) Sets the depth of delay-time modulation. Small amounts introduce subtle movement into the repeats. Larger values create increasingly obvious pitch and timing variation.

The interaction between MOD RT and MOD DP can move the Delay from barely perceptible animation through chorus-like movement and into pronounced wow-and-flutter effects. For subtle vintage movement, start with a slow MOD RT and very little MOD DP. If you can clearly hear the modulation as an effect, try backing it down until you mostly notice it when it's gone.

DELAY FILTERING

LP/HP: (LP 200 Hz to HP 2.0 kHz) Shapes the frequency content of the delayed repeats, moving between low-pass and high-pass filtering.

Move toward the LP side to progressively darken the echoes and reduce high-frequency content. Darker repeats tend to sit farther behind the original sound and can prevent a long delay trail from competing with the dry signal.

Move toward the HP side to remove increasing amounts of low-frequency energy, producing thinner, lighter repeats. This is particularly useful on basses, large pads, and other sounds where repeated low-frequency energy could quickly make the mix feel crowded.

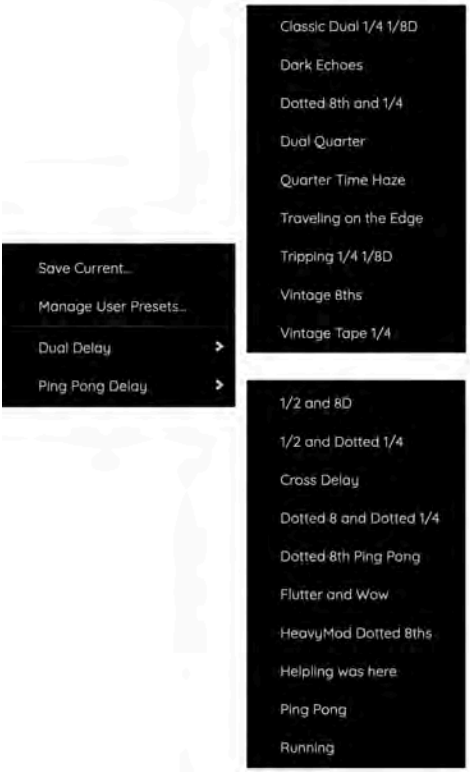
Repeat filtering becomes especially useful at higher Feedback settings. The echoes can remain long and spacious without occupying exactly the same frequency range as the source.

MIX

MIX: (0 to 100%) Sets the balance between the dry signal and the Delay effect. Low values place subtle echoes behind the original sound. Increasing Mix makes the Delay progressively more prominent. Delay Mix is also available as a Modulation Matrix destination, allowing the amount of delay to change dynamically during a note, performance, or sequence.

DELAY PRESETS

Traveler includes separate factory preset collections for Dual Delay and Ping Pong Delay. Open the Delay Preset menu to select a factory setting or save and manage your own. The Preset field displays the currently selected Delay preset, making it easy to keep track of the starting point as you edit its settings.



Delay presets

Together, these provide useful starting points ranging from straightforward tempo-synchronized stereo echoes to darker repeats, vintage-style treatments, and more obviously modulated delay effects.

SAVING DELAY PRESETS

SAVE CURRENT...: Saves the current Delay configuration as a user preset.

MANAGE USER PRESETS...: Opens the controls for managing saved Delay presets.

Saving Delay settings independently is useful when you create a favorite rhythmic, stereo, or modulated delay treatment that you want to reuse with other Traveler patches.

MODULATING AND SEQUENCING THE DELAY

Traveler's Delay can become an active part of the instrument's modulation architecture rather than simply repeating whatever the synth sends into it.

Available Delay modulation destinations include:

- Delay Feedback
- Delay Mod Rate
- Delay Mod Depth
- Delay Mix
- Delay Time L
- Delay Time R
- Delay Damping
- Delay Spread

These parameters can also be animated with Traveler's Control Tracks. An envelope can gradually increase Delay Mix as a note develops. An LFO can change Mod Depth so the repeats drift in and out of pitch instability. A Control Track can alter Feedback rhythmically, causing selected portions of a pattern to leave longer echo trails than others.

MAKING CREATIVE USE OF THE DELAY

Traveler's Delay is equally useful for rhythmic echoes, stereo movement, and more experimental sound design:

- Set TIME L to 1/4 and TIME R to 1/8D for a classic stereo rhythmic relationship that creates movement without sounding like a single repeated tap.
- Combine straight and triplet delay values for more complex rhythmic interplay against the song tempo.
- Try Ping Pong Delay with moderate SPREAD when you want the echoes themselves to become part of the stereo movement.
- Reduce FEEDBK for short rhythmic accents rather than long echo trails. A single repeat can sometimes add more groove than six of them.
- Increase Feedback and move LP/HP toward the low-pass side so successive echoes feel softer and more distant.
- Move LP/HP toward high-pass filtering on large pads and bass-heavy patches to keep the repeats from crowding the low end.
- Disable SYNC, use very short TIME L and TIME R settings, and add a small amount of MOD DP for doubling or chorus-like effects.
- Use a slow MOD RT with subtle MOD DP to add tape-style drift or instability to longer echoes.
- Push Delay modulation harder for deliberately obvious wow-and-flutter effects. The factory Flutter and Wow preset provides a useful starting point.
- Route the Mod Envelope to Delay Mix so the dry sound appears first and the echoes emerge later in the note.
- Use a Control Track to modulate Delay Feedback, allowing selected portions of a repeating sequence to generate longer echo trails.
- Modulate Delay Mod Depth with an LFO or Control Track so the repeats move between relatively stable and increasingly unstable pitch behavior.
- Assign Delay Mix to the X-Y pad or another performance controller so echoes can be brought forward during sustained notes, transitions, or dramatic moments.

- Combine a relatively short Delay with Reverb instead of relying entirely on one large ambience. Delay can provide rhythmic depth while Reverb supplies the surrounding space.
- Use different TIME L and TIME R values on a patch that already contains oscillator, filter, or output-stage stereo movement. Several independent forms of motion can create a wide, constantly shifting sound without requiring extreme settings anywhere.

REVERB

Traveler's Reverb provides three distinct algorithms, Room, Hall, and Space, for adding everything from subtle ambience to enormous, evolving environments. The Reverb includes controls for pre-delay, decay, damping, diffusion, stereo width, low-frequency filtering, tonal balance, modulation, and wet/dry Mix. This makes it equally useful for giving a dry sound a believable sense of space or turning ambience into an important part of the patch itself.

A graphical display provides visual feedback as the Reverb settings are adjusted.



Reverb

REVERB ON/OFF

ON: (on/off) Enables or disables the Reverb effect. When the red LED is illuminated, Reverb is active. Use this to compare the reverberated sound with the dry signal without changing any Reverb settings.

REVERB TYPES

Use the Reverb Type menu to select one of three algorithms:

- **ROOM**: Creates smaller, more intimate reverberant spaces. Room is useful when you want ambience and depth without surrounding the sound in a long, obvious reverb tail. It works particularly well with plucks, keys, basses, percussion-like patches, and other sounds that benefit from a sense of physical space while remaining relatively close and focused.
- **HALL**: Produces a larger, more spacious reverberation with a broader sense of scale. Hall is a natural choice for pads, leads, keys, orchestral-style textures, and sounds that need a more obvious acoustic environment.
- **SPACE**: Creates Traveler's most expansive and atmospheric Reverb character. Space is particularly well suited to cinematic textures, evolving pads, sound effects, and patches where the ambience becomes an important part of the sound itself.

The three algorithms provide different starting characters rather than simply different amounts of the same effect.

TIP: If a patch doesn't seem to be sitting in the right environment, try changing the Reverb Type before adjusting a dozen other parameters. Sometimes one menu choice gets you most of the way there.

REVERB CONTROLS

PRE: (0 to 500 ms) Sets the amount of pre-delay between the dry sound and the beginning of the reverberated signal. At low settings, the Reverb follows the source almost immediately. Increasing PRE creates a more obvious gap between the original sound and the start of the ambience. Pre-delay is especially useful for preserving the attack of plucks, leads, percussion-like sounds, and other patches that need to remain clear while still occupying a large space.

DECAY: (0.10 to 60 seconds) Sets how long the reverberation takes to fade away. Short values create tight ambience and compact spaces. Longer settings produce increasingly sustained tails and a greater sense of scale. At the upper end of the range, Decay moves well beyond conventional room simulation and into long, atmospheric textures.

DAMP: (0 to 100%) Controls high-frequency damping in the reverberated signal. Increasing Damp causes high frequencies to fade more quickly, producing a darker, softer Reverb tail. Lower values retain more upper-frequency energy and produce a brighter response. Damping is particularly useful when a long Reverb competes with the dry signal or causes an already-dense patch to become overly bright.

DIFF: (0 to 100%) Sets the amount of diffusion in the Reverb. Lower values allow the individual reflections to remain more distinct. Increasing Diff causes those reflections to blend into a denser, smoother reverberant field. Higher settings are particularly useful for lush pads and sustained textures, while lower settings can preserve more texture and definition.

WIDTH: (0 to 140%) Sets the stereo width of the reverberated signal. Lower values create a more focused stereo image. Increasing Width makes the Reverb progressively broader. Traveler provides additional range above 100% when an especially expansive stereo effect is desired.

Because Traveler can already create substantial width through oscillator Spread, Filter Spacing, Pan Spread, and other stereo controls, Reverb Width doesn't always need to be pushed to its maximum. A slightly narrower Reverb surrounding an already-wide patch can sometimes create a greater sense of depth.

LOW CUT: (50 Hz to 1000 Hz) Sets the cutoff frequency of a high-pass filter applied to the reverberated signal. Increasing Low Cut removes progressively more low-frequency energy from the Reverb while leaving the dry sound unaffected. This is one of the most useful controls for keeping large reverbs clear. Removing unnecessary bass from the Reverb tail can preserve an enormous sense of space without turning the bottom end into fog.

TONE: (-100% to +100%) Adjusts the overall tonal balance of the reverberated signal. Negative values produce a darker character, while positive values make the Reverb brighter and more prominent. Tone can help position the ambience relative to the dry sound without changing the patch itself. Darker Reverb often feels farther away, while brighter settings tend to bring the reverberated sound more noticeably forward.

MOD RT: (0.02 Hz to 4.0 Hz) Sets the rate of modulation within the Reverb. Low values produce slow, gentle movement. Higher settings create increasingly obvious animation in the Reverb tail.

MOD DP: (0 to 100%) Sets the depth of Reverb modulation. Small amounts can add subtle movement and help long tails feel less static. Higher settings create a more obviously modulated and effect-like character.

The interaction between MOD RT and MOD DP is particularly useful on long Hall and Space settings, where a small amount of movement can keep a sustained Reverb tail from feeling like a frozen background.

MIX: (0 to 100%) Sets the balance between the dry signal and the reverberated signal. At 0%, the signal is effectively dry. Increasing Mix makes the Reverb progressively more prominent. Because Reverb Mix is also a modulation destination, the apparent distance and size of a sound can change dynamically rather than remaining fixed.

REVERB PRESETS

Traveler includes factory preset starting points for each of the three Reverb types. Open the Reverb Preset menu to select a factory setting or save and manage your own. The Preset field displays the currently selected Reverb preset, making it easy to keep track of the starting point as you edit its settings.



Reverb Presets

ROOM PRESETS

Traveler's Room presets include:

- Dark Chamber
- Just a Tiny Splash
- Small Room
- Tight Room

These are useful when you want a sense of physical space without adding a long or obviously reverberant tail.

HALL PRESETS

Traveler's Hall presets include:

- Bright Hall
- Chorus Verb
- Large Hall
- Medium Hall

Hall presets provide useful starting points for sounds that need a larger, more spacious acoustic environment.

SPACE PRESETS

Traveler's Space presets include:

- 86 Dreams Space
- Bloom
- Dark Cloud
- Into the Deep
- Wide Space

These presets explore Traveler's most atmospheric Reverb territory and are particularly useful for pads, cinematic textures, effects, and sounds where ambience is intended to become part of the instrument itself.

SAVING REVERB PRESETS

SAVE CURRENT: Saves the current Reverb configuration as a user preset.

MANAGE USER PRESETS: Opens the controls for managing saved Reverb presets.

Saving Reverb settings independently is useful when you create a favorite Room, Hall, or Space treatment that you want to reuse with other Traveler patches.

MODULATING AND SEQUENCING THE REVERB

Traveler's Reverb can become part of the instrument's modulation architecture rather than remaining a fixed ambience at the end of the signal path.

Available Reverb modulation destinations include:

- Reverb Mod Rate
- Reverb Mod Depth
- Reverb Mix
- Reverb Pre-Delay
- Reverb Decay
- Reverb Damping
- Reverb Diffusion
- Reverb Tone
- Reverb Low Cut
- Reverb Width

An envelope, LFO, Control Track, performance controller, or other modulation source can therefore change the character or amount of Reverb dynamically. For example, route the Mod Envelope to Reverb Mix so a note begins close and focused, then gradually recedes into a larger space. Use a Control Track to create rhythmic bursts of Reverb on selected steps. Or modulate Reverb Mod Depth so a long atmospheric tail becomes progressively more animated.

You can also assign Reverb Mix to Pressure or the X-Y pad, allowing ambience to become a performance gesture rather than a fixed setting.

MAKING CREATIVE USE OF THE REVERB

Traveler's Reverb can do considerably more than simply make a sound bigger:

- Use a short Room with low MIX for plucks, basses, and keys that need just enough ambience to feel grounded in a space.
- Increase PRE on leads and percussive sounds so the dry attack remains clear before the Reverb blooms behind it.
- Use LOW CUT aggressively on large pads. Removing bass from the Reverb tail can preserve the scale of the effect without muddying the low end.
- Try a very long Space DECAY with surprisingly little MIX. A small amount of an enormous space can often sound more convincing than a large amount of a medium one.
- Use DAMP and TONE together to push the ambience behind the dry signal. Darker reverbs tend to feel more distant and leave more room for the source.
- Add a small amount of MOD RT and MOD DP to long reverbs so the tail shifts and breathes instead of remaining perfectly static.
- Keep Traveler's oscillator and filter stereo controls relatively restrained, then let WIDTH provide much of the final spatial expansion.
- Try the opposite approach: build width into the synth itself and keep Reverb Width narrower. This can make the Reverb feel like an environment surrounding an already-wide instrument.
- Route the Mod Envelope to Reverb Mix so the dry sound begins close and gradually recedes into the ambience.
- Route a Control Track to Reverb Mix for rhythmic bursts of space that appear only at selected points in a sequence.
- Assign Reverb Mix to Pressure or the X-Y pad during performance. A held note can begin relatively dry and become increasingly atmospheric as you press harder or move the controller.
- Modulate Reverb Mod Rate, Reverb Mod Depth, or Reverb Mix from Traveler's Modulation Matrix so the ambience evolves along with the underlying sound.
- Combine long Space Reverb with Noise, slowly scanning wavetables, or extended Mod Envelope contours. In this context, the Reverb stops behaving like a room and starts behaving like another layer of synthesis.

WORKING WITH PRESETS

Traveler ships with an extensive collection of expressive factory presets designed to show off the instrument's unusually broad sonic range. The presets are useful in three different ways. First, they're ready-made sounds you can drop directly into a project. Second, they're excellent starting points for creating your own patches. And third, they can be treated as sound-design lessons. Load a preset you like, then examine its oscillator choices, filter settings, modulation routings, Control Tracks, Arpeggiator, and effects to see how the sound was constructed.

You don't have to rebuild every interesting idea from scratch, either. Traveler's effect and Control Track preset systems let you save useful settings or sequences from factory sounds and reuse them in your own patches. The preset controls are located along the top of Traveler's center section.



Preset controls

PRESET CONTROLS

NEW: Starts a new patch for creating a sound from scratch.

FAVORITE: Click the heart button to add the currently selected preset to your Favorites collection. Favorite presets can then be accessed quickly from the Preset Browser.

PRESET NAME: Displays the name of the currently loaded preset. Click the preset name to open the Preset Browser.

PREVIOUS/NEXT: Click the up and down triangle buttons to step backward or forward through the currently selected preset collection. This is especially useful when auditioning a group of sounds in the same Library or Category without reopening the browser after every selection.

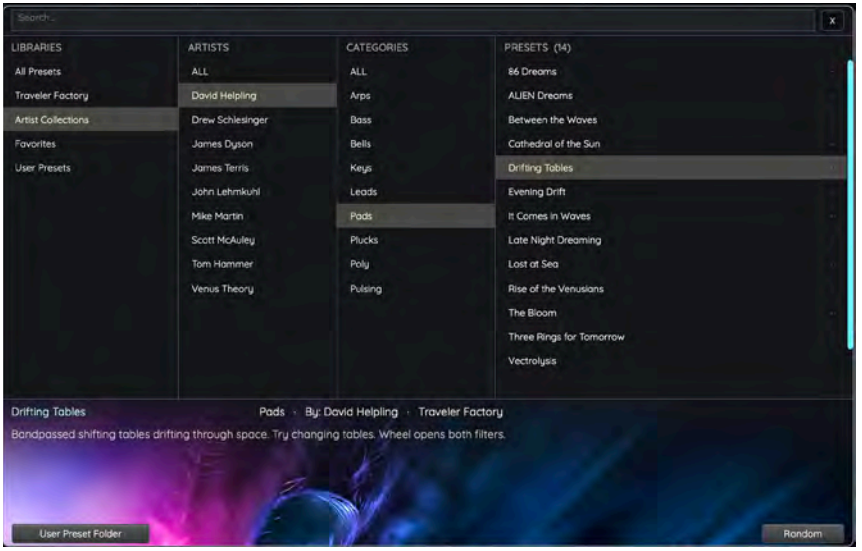
SAVE: Click the disk icon to save the current sound as a user preset.

If you modify a preset, an asterisk appears after its name to indicate that the current settings differ from the saved version.

PRESET BROWSER

Click the current preset name to open Traveler's Preset Browser. The Browser is divided into three main columns: Libraries, Categories, and Presets. A Search field at the top provides another way to quickly locate sounds.

The **Random** button at the bottom right of this Browers selects a preset at random from Traveler's Preset Browser. Use this when you want to skip the scrolling and let Traveler make the choice for you. It's a quick way to audition sounds you might otherwise overlook, break out of familiar browsing habits, or simply introduce a little surprise into the creative process.



Preset Browser

LIBRARIES

The Libraries column lets you choose the source collection you want to browse. Available collections shown in Traveler include:

All Presets displays sounds from all available libraries.

Traveler Factory contains the main preset collection included with Traveler.

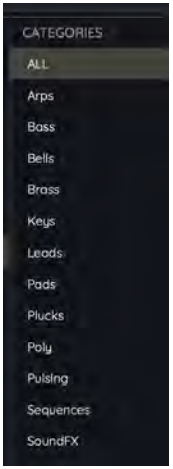
Artist Collections contains sounds contributed by featured sound designers.

Favorites displays presets you have marked with the Favorite button.

User Presets contains sounds you have created and saved yourself.

CATEGORIES

The Categories column narrows the current Library by sound type. Categories include:



Preset Categories

Select All when you want to browse the complete Library, or choose a Category to focus the preset list on a particular type of sound. For example, select Traveler Factory > Pads to browse only factory pad sounds.

PRESET LIST

The Presets column displays the sounds that match the currently selected Library and Category. Click a preset name to load it. Traveler also displays the preset's Category alongside its name, making it easier to identify the intended sound type when browsing a larger collection.



Preset list

SEARCH

Use the Search field at the top of the Preset Browser to locate presets by name or other searchable preset information. Search is especially useful when you remember part of a preset name but not where it lives in the Library structure.

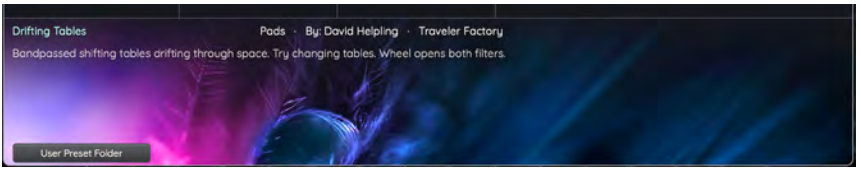


Preset Search

PRESET INFORMATION

The lower section of the browser displays information about the currently selected preset, including its:

- Preset name
- Category
- Author
- Library
- Description



Preset information

This can be useful when browsing Artist Collections or studying factory sounds because the description may provide additional context about the preset's character or intended use.

In the example shown, *Drifting Tables* is identified as a Pad by David Helping from the Traveler Factory library, with a short description explaining the inspiration for the sound. Preset descriptions are worth reading. Sometimes they tell you what the sound is supposed to do. Sometimes they tell you why it's called that. Both can save time.

CUSTOM PRESET LIBRARIES

Traveler displays custom user-preset libraries as separate choices in the Preset Browser. This makes it easier to maintain distinct personal collections for different projects, instruments, genres, or sound-design libraries rather than treating every user-created sound as part of one undifferentiated collection.

Traveler also remembers the selected custom library when the Preset Browser is closed and restores it the next time the Browser is opened. If you're working through a particular collection, you can pick up where you left off rather than navigating back to it each time.

LOADING PRESETS

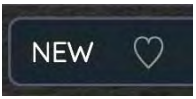
To load a preset from the Browser:

1. Click the current preset name to open the Preset Browser.
2. Select the desired Library.
3. Select a Category, or choose All.
4. Scroll through the Preset list.
5. Click the desired preset to load it.
6. Close the Browser when you're finished.

You can then use the Previous/Next triangle buttons on the main panel to continue stepping through the current preset set.

FAVORITES

Favorites provide a quick way to build a personal collection of sounds you use frequently.



Favorites button

TO ADD A PRESET TO FAVORITES:

1. Load the desired preset.
2. Click the heart button beside NEW.
3. Open the Preset Browser.
4. Select Favorites in the Libraries column to view your saved favorites.

Use Favorites for sounds you regularly return to rather than trying to remember which collection contains “that one pad that sounded perfect three Tuesdays ago.”

SAVING A USER PRESET

Traveler remembers the most recently entered Author name and the preset’s current Library, reducing repetitive entry when saving several sounds in succession. You can still change either field whenever a preset should be saved under a different author or collection.

Click the Save button (the floppy disk icon) to open Traveler’s Save Preset window. The Save Preset window includes the following fields:

PRESET NAME: Enter a descriptive name for the sound.

AUTHOR: Enter the name of the preset creator.

DESCRIPTION: Enter a brief description of the sound, its intended use, or any other information that may be useful later.

LIBRARY: Selects the Library where the preset will be stored. User-created sounds can be saved to User Presets.

CATEGORY: Assigns the preset to a sound category such as Leads, Pads, Bass, Arps, or another available category.



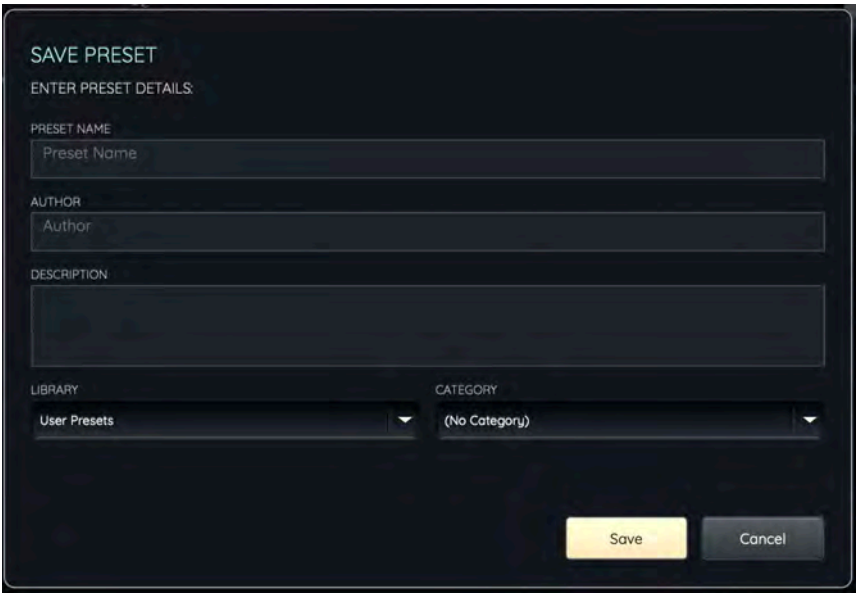
Preset controls

SAVING A PRESET

To save a sound as a user preset:

1. Create or modify the sound as desired.
2. Click the Save button.
3. Enter a Preset Name.
4. Enter the Author name.
5. Add a useful Description if desired.
6. Select User Presets as the Library.
7. Choose the appropriate Category.
8. Click Save.

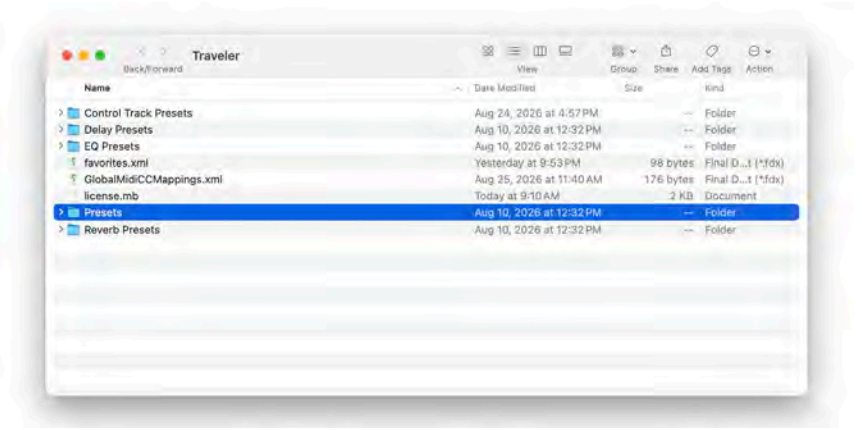
The preset is now available from the User Presets Library in the Preset Browser.



Saving a Preset

USER PRESET FOLDER

The Preset Browser includes a User Preset Folder button at the lower-left corner. Use this to access the location where Traveler stores your user-created presets.



Saving a Preset

This can be useful for backing up your own sound library or managing preset files outside Traveler when necessary.

USING FACTORY PRESETS AS STARTING POINTS

Traveler's factory presets are intended to be played, but they're also meant to be explored. If you find a preset that's almost what you need, there's no reason to begin again from an initialized patch. Change the oscillator Wave or wavetable. Alter the Filter. Reduce the effects. Change the Control Track destination. Replace a modulation source. Then save the result as your own user preset.

This is often one of the fastest ways to learn a complex synthesizer because you're studying working examples rather than isolated features.

LEARNING FROM A PRESET

When you find an interesting factory sound, try examining:

- Which oscillators are active
- Whether Oscillator 3 is using a standard waveform or wavetable
- How the oscillators are panned and spread
- Which filter model is being used
- Filter Spacing and Spread
- Envelope shapes and curves
- LFO waveforms and Poly settings
- Modulation Matrix routings
- Control Track destinations and sequences
- Arpeggiator settings
- Effects choices and modulation

You don't need to understand everything at once. Find the one thing that makes you think, "Oh, that's why it does that." Then steal the idea from the preset. It won't mind.

REUSING EFFECTS AND CONTROL TRACK SETTINGS

Traveler's Effects and Control Tracks each include their own preset systems. That means useful elements from a factory sound can be saved independently and reused elsewhere. For example, if you discover a particularly effective Delay configuration in a factory preset, save the Delay settings as an effect preset. You can then load that same Delay into one of your own sounds without recreating every parameter.

The same approach works with EQ, Reverb, and Control Track sequences. This is especially valuable because some factory sounds contain programming ideas that are useful well beyond the original patch. A preset doesn't have to donate the whole sound. Sometimes you only want its delay.

Effect and Control Track preset menus continue to display the name of the currently selected preset, making it easier to keep track of which starting point or pattern is in use.

PRESETS AS SOUND-DESIGN LESSONS

Traveler's preset library is also one of the best ways to learn the instrument.

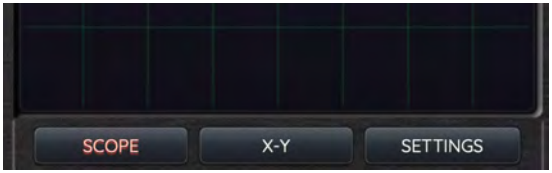
- Load a sound that seems unusually animated or expressive and work backward.
- Mute modulation slots one at a time.
- Disable an LFO.
- Turn off a Control Track.
- Bypass an effect.
- Solo the role of an individual oscillator by muting the others.

The difference you hear often explains the programming more clearly than reading a parameter description ever could. Then turn everything back on and listen to how the pieces work together. Traveler includes a lot of synthesis power, but its factory presets provide something equally useful: hundreds of examples of what to do with it.

SETTINGS AND GLOBAL CONTROLS

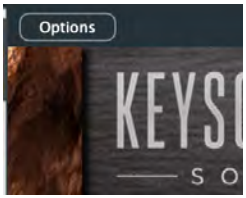
Traveler includes several global controls that affect how the instrument behaves rather than the sound of an individual preset.

The **Settings** menu beneath the main display contains options for tuning, controller response, display behavior, processing quality, MIDI configuration, and other preferences.



Settings button

The **Options** menu at the upper-left corner provides application-level state and Audio/MIDI commands. Finally, four buttons at the upper-right provide Undo, Redo, A/B Compare, and Revert functions for everyday sound-design work.



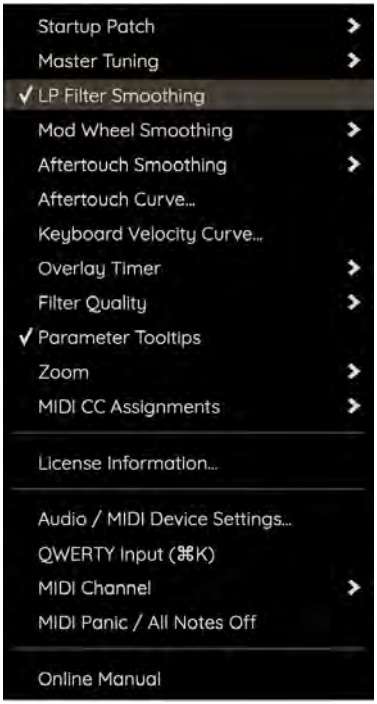
Options menu

Taken together, these controls let you tailor Traveler to your controller, computer, display, and preferred workflow.

SETTINGS MENU

Click SETTINGS beneath Traveler's main display to open the global Settings menu.

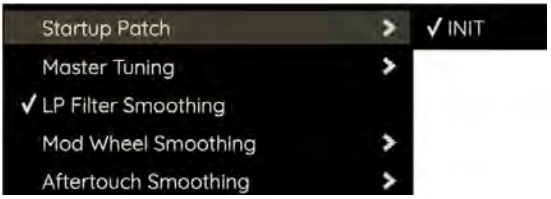
The menu includes:



Settings Menu

STARTUP PATCH

STARTUP PATCH: Selects the patch Traveler loads when the instrument is launched. Choose INIT when you want Traveler to open with a clean starting point for sound design.



Startup Patch

MASTER TUNING

MASTER TUNING: Sets Traveler's global tuning reference. The standard setting is 440 Hz, but alternate tuning references can be selected when required. Choose Enter Value... when you need a tuning reference that isn't included in the menu.



Master Tuning

LP FILTER SMOOTHING

LP FILTER SMOOTHING: (on/off) Enables or disables smoothing for changes to the low-pass filter. This can be useful when cutoff is being moved rapidly by automation or controller input and you want the response to transition more smoothly.

MOD WHEEL SMOOTHING

MOD WHEEL SMOOTHING: (Off, 5 ms, 10 ms, 20 ms, 50 ms, 100 ms, 200 ms) Applies smoothing to incoming Mod Wheel movement. Lower settings produce a more immediate response. Higher values progressively soften abrupt controller changes. If your controller sends visibly or audibly stepped Mod Wheel data, a small amount of smoothing can make movement feel more natural without making the wheel sluggish.



Mod Wheel Smoothing

AFTERTOUCH SMOOTHING

AFTERTOUCH SMOOTHING: (Off, 5 ms, 10 ms, 15 ms, 20 ms, 30 ms, 50 ms) Applies smoothing to incoming aftertouch data. This is useful when your controller produces abrupt or uneven pressure values. Start with relatively low values. The goal is usually to remove unwanted jumps without making expressive pressure changes feel delayed.



Aftertouch Smoothing

AFTERTOUCH CURVE

Choose Aftertouch Curve... to open Traveler's graphical Aftertouch Curve editor. The editor lets you alter the relationship between incoming key pressure and Traveler's aftertouch response. The diagonal reference line represents a linear relationship. Drag the editable curve to change the response. A firmer curve requires progressively more pressure to generate higher aftertouch values, while a different curve can make Traveler respond more readily to lighter pressure. This is especially useful because aftertouch behavior varies considerably between MIDI keyboards.



Aftertouch Curve

ADJUSTING THE AFTERTOUCH CURVE

1. Open SETTINGS.
2. Choose Aftertouch Curve….
3. Drag the curve until Traveler responds naturally to your playing style.
4. Play sustained notes while applying different amounts of pressure.
5. Continue adjusting until the response feels comfortable and predictable.

The right curve is the one that matches your controller and your hands. There isn't a universally correct setting.

KEYBOARD VELOCITY CURVE

Choose Keyboard Velocity Curve… to open the graphical Velocity Curve editor. This determines how incoming MIDI velocity is translated into Traveler's internal velocity response. If your controller tends to produce low velocities unless you play unusually hard, you can adjust the curve to make Traveler respond more readily. Conversely, if the instrument reaches high velocities too easily, the curve can be adjusted for a firmer response.



Keyboard Velocity Curve

ADJUSTING THE VELOCITY CURVE

1. Open SETTINGS.
2. Choose Keyboard Velocity Curve….
3. Drag the curve to alter Traveler's response.
4. Play softly, moderately, and firmly across the keyboard.
5. Adjust the curve until the full dynamic range feels natural.

Velocity curves are worth setting up properly. A synth can have the greatest modulation architecture in the world and still feel strangely lifeless if the controller response doesn't match the player.

OVERLAY TIMER

OVERLAY TIMER: (1 to 10 seconds; factory default = 6 seconds) Sets how long contextual graphics remain visible in Traveler's SCOPE display.



Overlay Timer

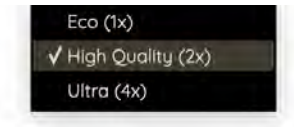
For example, selecting an LFO waveform causes its shape to appear in the display. Adjusting an envelope displays its current contour. With the Overlay Timer set to six seconds, the graphic remains visible for six seconds before returning to the normal Scope view. As described in the X-Y Performance Pad and Display chapter, clicking the Lock icon overrides the Overlay Timer and keeps contextual Scope graphics displayed until another relevant graphic replaces them or Lock is disabled.

FILTER QUALITY

FILTER QUALITY: (Eco 1x, High Quality 2x, Ultra 4x) Selects Traveler's filter processing quality.

- **Eco (1x**) provides the lowest processing load.
- **High Quality (2x)** increases processing quality while requiring more CPU.
- **Ultra (4x)** provides the highest available filter quality and places the greatest demand on the processor.

For normal use, High Quality provides a sensible balance. Ultra can be useful when maximum filter quality matters more than CPU efficiency, while Eco may help in particularly large or processor-heavy sessions.



Filter Quality

PARAMETER TOOLTIPS

PARAMETER TOOLTIPS: (on/off) Enables or disables parameter tooltips. When enabled, Traveler displays parameter information while you work. Tooltips are especially helpful while learning the instrument and can be disabled later if you prefer a cleaner interface.

ZOOM

ZOOM: (75%, 100%, 105%, 110%, 120%, 130%, 150%, 175%, 200%) Sets the size of Traveler's user interface. Choose a larger value on high-resolution displays or when you want controls and text to appear larger. Choose a smaller value when screen space is limited.

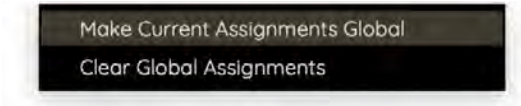


Zoom

MIDI CC ASSIGNMENTS

MIDI CC ASSIGNMENTS: Opens commands for managing global MIDI controller assignments. The submenu includes:

- **Make Current Assignments Global**: Makes the current MIDI CC assignments global.
- **Clear Global Assignments**: Removes the current global MIDI CC assignments.



MIDI CC Assignments

This is useful when you've created a controller layout that you want Traveler to retain as a standard working configuration rather than rebuilding the assignments for individual sounds.

AUDIO / MIDI DEVICE SETTINGS

AUDIO / MIDI DEVICE SETTINGS...: Opens Traveler's audio and MIDI configuration controls. These controls are described in more detail in the *Getting Started* chapter. In standalone mode, use this window to select:

- Output Device
- Output Channels
- Sample Rate
- Audio Buffer Size
- Active MIDI Inputs



Audio Midi Device Settings

QWERTY INPUT

QWERTY INPUT: Enables Traveler's computer-keyboard input mode. On macOS, you can also press Command-K. This allows you to trigger notes and audition sounds without a connected MIDI keyboard.



QWERTY Input keyboard

MIDI CHANNEL

MIDI CHANNEL: (Omni, Channel 1 through Channel 16) Sets Traveler's MIDI receive channel. Choose Omni when you want Traveler to respond to MIDI data arriving on any channel. Choose a specific MIDI channel when Traveler needs to respond only to that channel.



MIDI PANIC / ALL NOTES OFF

MIDI PANIC / ALL NOTES OFF: Sends an All Notes Off command to silence stuck MIDI notes. It's the musical equivalent of turning something off and back on again, except less disruptive and considerably faster.

LICENSE INFORMATION

LICENSE INFORMATION...: Opens Traveler's license information.

ONLINE MANUAL

ONLINE MANUAL: Opens Traveler's online documentation.

OPTIONS MENU

Traveler's Options menu is located at the upper-left corner of the interface. It contains several application-level commands that are separate from the Settings menu.



Options menu

SAVE CURRENT STATE

SAVE CURRENT STATE...: Saves Traveler's current application state. This is different from saving a preset. Presets store individual sounds, while Save Current State preserves the current application state for later recall.

LOAD A SAVED STATE

LOAD A SAVED STATE...: Loads a previously saved Traveler application state.

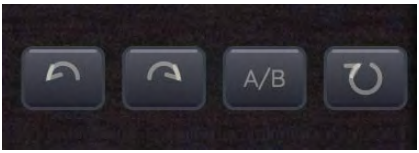
RESET TO DEFAULT STATE

RESET TO DEFAULT STATE: Restores Traveler's application state to its default configuration. To save an individual Traveler sound, use the Preset Save controls described in the Presets chapter.

UNDO, REDO, A/B COMPARE, AND REVERT

Four global buttons at the upper-right corner of Traveler provide quick control over edit history and patch comparison.

These are extremely useful during sound design because they let you experiment freely, compare your work with the original patch, and recover quickly when an edit turns out to be less inspired than it seemed thirty seconds ago.



Undo, Redo, A/B Compare, and Revert

UNDO

UNDO: Reverses the most recent edit or preset change. Repeatedly clicking Undo lets you step backward through previous edits. This is particularly useful after making several experimental changes and deciding that the sound was better somewhere along the way.

REDO

REDO: Restores the most recent change removed by Undo. Use Redo when you've stepped backward and decide that the previous edit was worth keeping after all. Undo and Redo make it much easier to experiment aggressively because you can move backward and forward through your recent work without manually reconstructing settings.

A/B COMPARE

A/B: Compares the current edited version of the patch with the original patch. Use A/B while sound designing to determine whether your changes have actually improved the sound or simply made it different. This becomes especially valuable after a long editing session. Human ears are remarkably good at adapting to gradual changes, including occasionally terrible ones.

COMPARING AN EDITED PATCH WITH THE ORIGINAL

1. Load a preset.
2. Make the desired edits.
3. Click A/B to compare the edited sound with the original patch.
4. Switch between the two states while listening carefully.
5. Continue editing if you prefer the current version.

This is one of the quickest ways to keep perspective while programming.

REVERT

REVERT: Discards the current edits and restores the original patch.

Unlike Undo, which moves backward through individual changes, Revert returns the patch to its original loaded state. Use Revert when you've explored an idea far enough to know that you don't want to keep any of the changes. A/B lets you ask, "Was this better?" Revert lets you answer, "Apparently not."

MAKING TRAVELER FEEL LIKE YOUR INSTRUMENT

Traveler's global settings won't necessarily make a patch sound dramatically different, but they can make a substantial difference in how the instrument feels to use.

Spend a little time adjusting the Velocity Curve and Aftertouch Curve to match your keyboard. Add just enough controller smoothing to eliminate unwanted stepping. Choose an interface Zoom level that makes the panel comfortable to work with. Set Filter Quality appropriately for your computer and session. Then use Undo, A/B Compare, and Revert freely while programming.

The goal of these controls is simple: fewer obstacles between an idea and the sound you're trying to make. Once Traveler responds naturally to your controller, your screen, and your working habits, you can mostly forget these settings exist. Which is generally the sign that you set them up correctly.