



TRAVELER v.1.0.0 owners manual

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Product Version: 1.0.0

Minimum System Requirements:

- Mac OS X 10.9, 4 GB Ram, Intel® Core™ i5 64-bit
- ILOK Version 2 or higher.

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1. INSTALLATION

After downloading simply unpack the ZIP archive using the Mac OS X Archive Utility, then launch the installer. It will guide you through the process. Files will be copied into the common VST2.4, AU or Pro Tools plug-in folders on your computer. Your host should recognize the plug-in automatically with the next restart and you will be asked to register TRAVELER with your iLok account.

1.1. MAC OS X

On Mac OS X you will find the standard plug-in folders in the system library folders. The paths are as follows:

Audio Units (AU): /Library/Audio/Plug-Ins/Components

VST/VST3: /Library/Audio/Plug-Ins/VST and /Library/Audio/Plug-Ins/VST3

AAX: /Library/Application Support/Avid/Audio/Plug-Ins

1.2. iLOK Registration

Authorization Wizard: The authorization wizard will open if the plugin is not yet authorized when you insert the plugin, or when it is scanned by your host application. You need to have an iLok account in order to use TRAVELER. Setting up an iLok account is free and easy. You will find all information on www.ilok.com. Choose whether to activate to your Computer or to an iLok 2 or later. Please note that first generation iLoks are not supported.

Please download the iLok Manager at www.ilok.com. After your purchase from TONSTURM, you receive an email from us containing the download link for the installer plus an iLok activation code: (i.e XXXX-XXXX-XXXX-XXXX-XXXX-XXXX-XXXX-XX)

Choose ACTIVATE. You will then be presented with the activation window, where you may enter your code. You should then copy paste the entire code into the entry form. Select your activation location: your computer or your iLok.

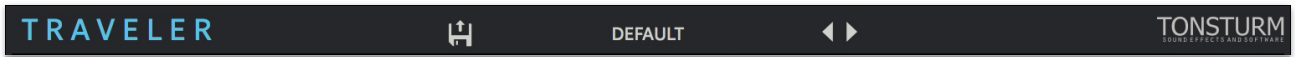
2. INTRODUCTION

TRAVELER is precisely modeling the acoustic phenomena of the Doppler Effect. A common example of Doppler shift is the change of pitch heard when a vehicle sounding a horn approaches and recedes from an observer. You will hear the sound as it is perceived from the listeners perspective.

TRAVELER features a fully fledged 2D path editor allowing you to precisely shape the motion path of the sound source. Further it is possible to freely position the listener in relation to the path. TRAVELER offers intuitive control over the speed of the sound source, path length and the overall doppler path duration. TRAVELER also comes with an onboard loop and granular sample player. The granular sample player allows synchronized playback to the doppler path. This makes it possible to playback the desired sound effect at different durations while remaining everything in perfect sync.

After being processed by the doppler effect engine TRAVELER features a powerful post effects section. Both, the parameters of the post effect engine and the parameters of the granular sample player, can modulated by the 4 individual multisegment LFO's that run in sync with the Doppler path duration. The Manual mode allows you to manually perform the powerful TRAVELER engine in realtime.

3. EXPLAINING THE UI ELEMENTS



3.1. THE TOP HEADER

The top header allows you to load and save presets or navigate through a list of presets in the currently selected preset folder.

3.1.1 THE DISC SYMBOL:

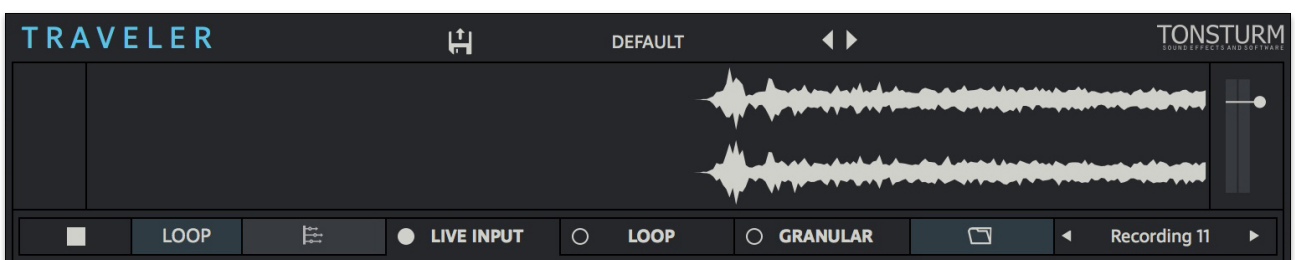
By selecting the DISC SYMBOL you can save the current state of the plugin as a preset file. We recommend saving your Presets to the USER folder.

3.1.2 THE PRESET NAME:

Here you see which preset is currently loaded. By clicking on the preset name you can select a preset file from the available folders: User or Factory.

3.1.3. THE LEFT / RIGHT ARROWS:

With these arrows you can quickly jump to the next or previous preset file inside the currently selected folder.



3.2 THE TOP SECTION



3.2.1 THE PLAY / STOP BUTTON:

With this button you can start or stop the motion path.

LOOP

SINGLE

3.2.2 THE LOOP / SINGLE BUTTON:

With this toggle button you can choose between SINGLE or LOOP playback mode.

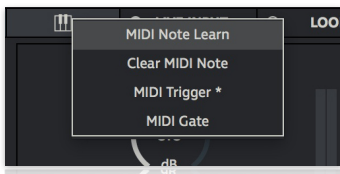
In SINGLE mode, the sampler and the motion path only play once after your HOST Playback is enabled.

In LOOP mode the sampler and the motion path are looped continuously while your HOST playback is running.



3.2.3 THE SYNC TO HOST OR MIDI BUTTON:

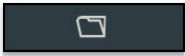
With this toggle button you can choose whether TRAVELER should playback in sync to the HOST playback or from a MIDI NOTE.



3.2.4 THE MIDI MODE MENU:

With a RIGHT CLICK on the MIDI MODE symbol you get the MIDI MODE pop up window. Here you can enable the MIDI LEARN mode. Further you can switch between MIDI TRIGGER and MIDI GATE playback behavior.

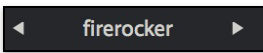
- **MIDI TRIGGER:** In TRIGGER MODE, TRAVELER runs when a MIDI key is just shortly pressed and stops when the same MIDI KEY is pressed again or when the end of the PATH DURATION has been reached.
- **MIDI GATE:** In GATE MODE, TRAVELER runs as long as the MIDI KEY is held and stops when the same MIDI KEY is released.



3.2.5 THE LOAD SAMPLE BUTTON:

By clicking on the FOLDER icon you can navigate to your computers file browser to load any SAMPLE into the LOOP / GRANULAR SAMPLER.

Please Note: If you save a PRESET that contains a SAMPLE which has been loaded through this button or via drag & drop, the SAMPLE has to stay at the same exact location if you want to reload the PRESET successfully.



3.2.6 SAMPLE NAME DISPLAY:

This display shows the name of the SAMPLE that has been loaded or recorded.

- LIVE RECORDED sounds all have the same file name, which is „RECORDING“ followed by a number.
- ANALYZED SOUND FILES that have been ANALYZED via AUDIO SUITE have the file name „ANALYSIS“ followed by a number. (Pro Tools only)
- The moment you save a PRESET containing a LIVE recorded or ANALYZED sound file, this sound file is saved to the SOUNDS/USER FOLDER location with the same FILE NAME as the PRESET file.



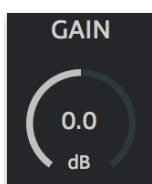
3.2.7 SAMPLE VOLUME METER AND GAIN:

This meter displays the volume of the sample that is currently played back. With the SLIDER to the right you can increase or decrease the volume if needed.



3.3. THE LIVE INPUT MODE

In LIVE INPUT mode TRAVELER works like an INSERT effect. It process the incoming audio from the audio channel.



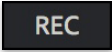
3.3.1 GAIN

The GAIN knob allows you to increase or decrease the volume of the incoming audio signal.



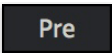
3.3.2 METER:

The meter indicates if you might be exceeding 0 dBFS with the incoming audio signal.



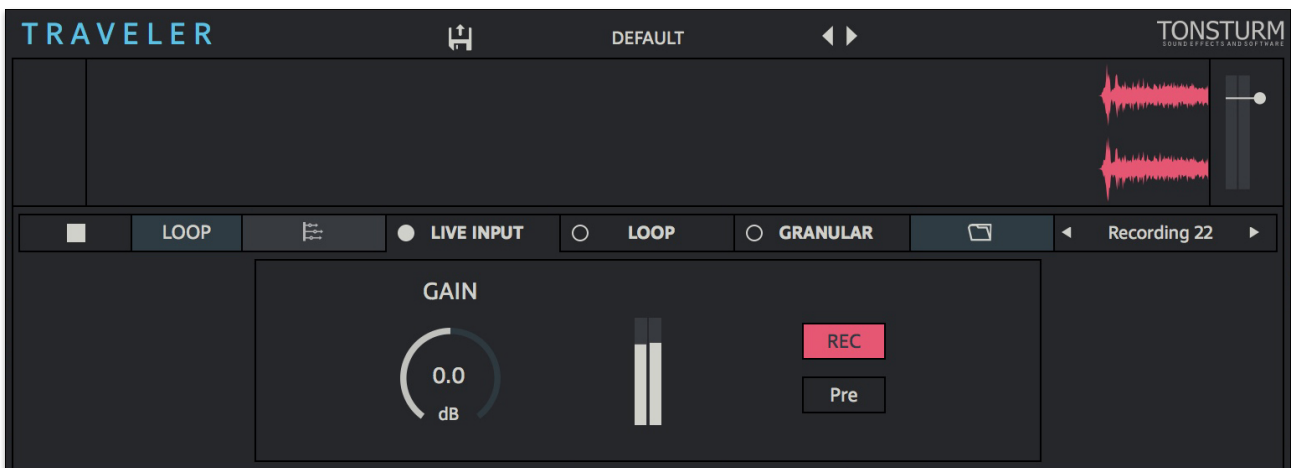
3.3.3 REC:

By activating the record button it is possible to record the incoming audio signal into the playback engine of TRAVELER. This procedure will be covered in the next chapter.



3.3.4 PRE:

The PRE button allows you to monitor the incoming audio signal directly from the input stage before it is routed to the DOPPLER engine or POST EFFECTS. This is convenient if you want to quickly check what you are actually feeding into TRAVELER.



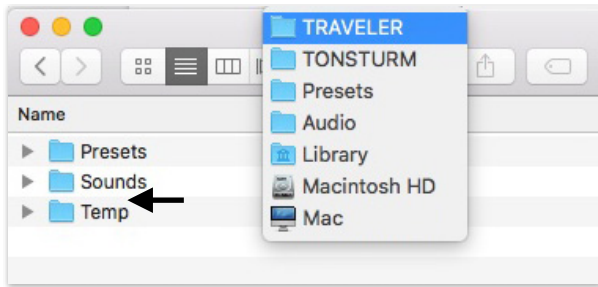
3.3.5 RECORDING - LIVE INPUT MODE:

By enabling the RECORD button in LIVE INPUT mode it is possible to directly record the incoming audio signal into the TRAVELER sampler engine. The following scenarios are possible:

- If the HOST is not running: TRAVELER will be in a PAUSE-RECORD mode waiting until you start the HOST playback. TRAVELER will start recording the incoming audio as

soon as the HOST playback is enabled and will finish the recording when the HOST playback is stopped. This behavior is very convenient if you want to precisely record a selected audio clip or region from the timeline of your DAW. Your Host should not be set to LOOP playback mode for this workflow.

- If the HOST is running already and you enable the RECORDING mode, TRAVELER will immediately start the recording of the incoming audio.
- Any LIVE recorded or ANALYZED (Audio Suite) audio file, will be saved into the TEMP file folder which has been created during the installation of TRAVELER.



- The LIVE recorded audio file will remain in the TEMP file folder until you save a PRESET or until you initiate a new audio file recording. Saving a PRESET will replace the filename of the TEMP audio file with the filename of the preset and relocate the audio file to a matching folder inside the SOUNDS folder. Simply recording a new audio file without saving a PRESET will delete the last recorded TEMP audio file from the TEMP file folder.
- After a LIVE recording is finished TRAVELER will automatically switch to the LOOP SAMPLER playback mode which we are going to explain in the next chapter...



3.4 THE LOOP SAMPLER:

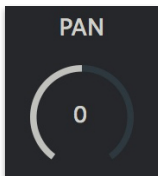
The LOOP Sampler is simply playing back the previously LIVE recorded audio file or any other audio file that has been imported via Drag & Drop or ANALYZED (Audio Suite).

3.4.1 PITCH:



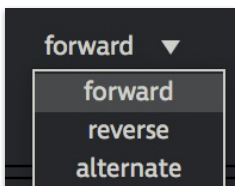
A simple VARI PITCH that allows you to PITCH the sample up or down by a factor of 5.

3.4.2 PAN:



Allows you to pan the sample playback between left and right stereo channel.

3.4.3 PLAYBACK DIRECTION:



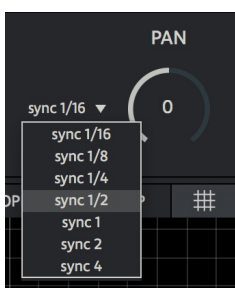
Here you can define the playback direction for the currently loaded sample: Forward, Reverse, Alternate.

3.4.4 THE SYNC MODE:



The LOOP sampler in sync mode triggers at the start position of the DOPPLER PATH. In FREE RUN mode it is synced just once at the very beginning and is freely looping away from then on.

3.4.5 THE SYNC MODE IN BEATS MODE:



In BARS & BEATS MODE it is possible to reset the LOOP sampler at specific BEAT measures. This is very helpful if you want to experiment

with drum loops for example.



3.5. THE GRANULAR SAMPLER

The GRANULAR SAMPLER playback mode allows you to synchronize the playback duration of the sample to the master duration of TRAVELER and therefore the DURATION of the DOPPLER PATH.

The GRANULAR SAMPLER allows you to alter the GRAIN- PITCH, SIZE, DENSITY, PANORAMA, and POSITION. For each of these controls you can introduce a JITTER randomization. Finally there is a JITTER knob to control the overall amount of that jitter randomization and a popup menu to choose between 3 different GRANULAR envelope shapes.

3.5.1 THE CONTROLS:



PITCH, SIZE, DENS, PAN and JITTER controls share the same functionality:

1.) The inner yellow ring allows you to directly alter the VALUE of the labeled parameter.

2.) If you have assigned one of the 4 LFO's to this field, you have the possibility to increase or decrease the amount of LFO modulation by clicking and dragging the mouse up or down. It is also possible to invert the modulation.

3.) The blue ring indicates the modulation amount.

4.) Through the blue slider at the bottom it is possible to introduce JITTER randomization to the parameter.

Please Note: The main JITTER knob has to be at a value higher than 0 otherwise the JITTER amount sliders (4) do not have any effect.

3.5.2 THE POSITION CONTROL:



- 1.) The green ring controls the OFFSET of the GRANULAR playhead.
- 2.) By clicking here you can cycle between the three available playback modes: Forward, Backward, Alternate
- 3.) Through the blue slider at the bottom it is possible to introduce JITTER randomization to the parameter.

3.5.3 THE JITTER CONTROL:

The JITTER knob controls the amount of randomization that is fed to each of the five blue JITTER AMOUNT sliders.



- 1.) The inner yellow ring allows you to directly alter the MAIN JITTER amount.
- 2.) If you have assigned one of the 4 LFO's to this field, you have the possibility to increase or decrease the amount of LFO modulation by clicking and dragging the mouse up or down. It is also possible to invert the modulation.

3.) The blue ring indicates the modulation amount.

4.) The blue arrow simply is a visual indication that the MAIN JITTER amount is passed on to the five individual blue JITTER AMOUNT sliders.

3.5.4) THE ENVELOPE SHAPE SETTINGS:



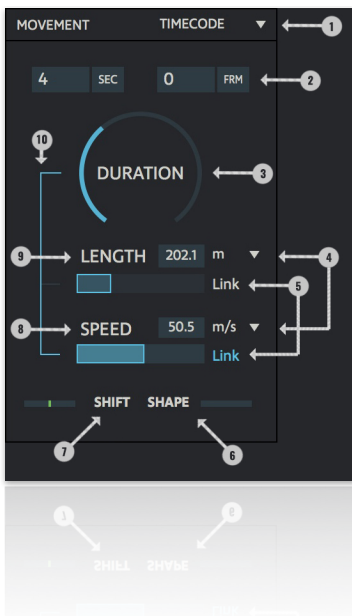
Through this pop up you can choose between there different GRAIN fade envelope settings:

- SMTH** = Smooth Envelope
- SEMI** = Semi Smooth Envelope
- SHRP** = Sharp Envelope

3.6 THE MOVEMENT SECTION

The movement section is the heart of TRAVELER. Here you can define the DURATION of the doppler path, the SPEED of the object and the actual path LENGTH. Let's say you are doing the sound for a car that is passing by and have selected a range or an audio clip in the timeline of your DAW that is in sync to the scene in your video. You can now precisely enter the exact DURATION values of the range you have selected into the DURATION field of TRAVELER. Traveler is designed in a way that when you now alter the SPEED of the moving object you never change the defined DURATION. ALTERING the SPEED only changes the LENGTH of the path and altering the LENGTH also changes the SPEED of the object. But the DURATION value is not affected by this. This always guarantees that you stay in sync to the audio clip or duration range you have selected in your DAW.

3.6.1 TIMECODE, SECONDS AND BARS & BEATS MODE



1.) With this pop up menu you can select whether the DURATION is measured in TIMECODE-, SECONDS, BARS & BEATS or if you want to perform TRAVELER in MANUAL MODE.

2.) The number displays give you information of the exact DURATION of the doppler path. You can also click into the number fields to directly type in the desired DURATION value. Also: When using TRAVELER as the (Pro Tools) AUDIO SUITE version, you can Analyze a sound clip and the DURATION setting will automatically match to the sound clip DURATION.

3.) The DURATION knob lets you define the desired DURATION of the doppler path. Altering the DURATION of the doppler path will always have effect on the overall LENGTH of the path or the SPEED of the object. So before altering the DURATION you have to decide if you want it to be LINKED to the LENGTH or SPEED slider.

4.) The popup menu next to the LENGTH display lets you switch between LENGTH displayed in meters or feet. The popup menu next to the SPEED display lets you switch between SPEED displayed in m/s, km/h or mph.

5.) Here you can select whether you want to link either the SPEED or the LENGTH to the DURATION parameter.

- When LENGTH is linked to the DURATION parameter the SPEED setting remains untouched while altering the DURATION knob. However, to stay physically correct the overall Path Size has to adapt to the DURATION setting.

- When SPEED is linked to the DURATION parameter the LENGTH setting remains untouched while altering the DURATION knob. However, to stay physically correct the object's SPEED has to adapt to the DURATION setting. TRAVELER has a maximum SPEED of 339 m/s. If the SPEED slider reaches its maximum possible SPEED the LINK setting will switch to the LINK LENGTH mode in order to allow shorter DURATION settings.

TIP: If you want to do a lot of shaping and editing in the PATH EDITOR we recommend to switch to the LINK SPEED mode before you start editing. In link to SPEED mode the PATH will not constantly rescale to maintain its path LENGTH.

6 & 7.) With the SHIFT and SHAPE slider you can introduce SPEED SHIFT over the course of the doppler path. By moving the SHIFT slider to the right the object will approach more slowly and leave faster. By moving the SHIFT slider to the left the object will approach faster and leave slower. This results in a longer tail at the end of the doppler path. The SHAPE parameter effects the curve of the transition from sharp to rounded.

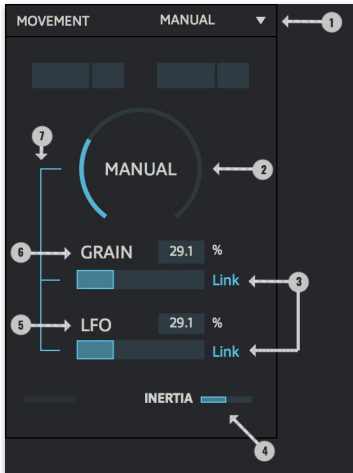
8.) With the SPEED slider you can select the exact SPEED of the object. When this slider is linked it is not directly movable as it is linked to the DURATION knob.

9.) With the LENGTH slider you can define the exact path LENGTH. When this slider is linked it is not directly movable as it is linked to the DURATION knob.

10.) The thin blue line just helps to see whether SPEED or LENGTH is currently linked to the DURATION knob.

TIP: If your sequencer supports Timecode mode, TRAVELER is automatically detecting what frame rate you have selected in your session setup. So you can precisely enter the desired DURATION in seconds and frames.

3.6.2 MANUAL MODE



1.) With this pop up menu you can select if the DURATION operates in TIMECODE-, SECONDS, BARS & BEATS or MANUAL MODE.

2.) The MANUAL knob allows you to move the sound source along the path manually in realtime.

3.) With the two link switches you can link the GRAIN and LFO slider to the MANUAL knob.

When linked: The GRAIN slider and LFO slider move in sync with the MANUAL knob. This means you can perform the movement of the sound source along the doppler path, the position of the GRANULAR playhead and the phase of the LFO (1-4), all in sync to each other by moving the MANUAL knob.

When unlinked: The three controls: GRAIN slider, LFO slider and MANUAL knob, now can be performed independently. This means with an X,Y,Z midi controller you could perform the movement of the sound source along the path, the position of the GRANULAR playhead and the phase of the LFO (1-4), independently.

4.) The INERTIA slider does introduce a lagging behavior to the value changes of the MANUAL knob so you can always get smooth sounding results even when quickly performing the MANUAL knob.

5.) The LFO slider controls the phase of all 4 available LFO's at once. So you can scan through all modulations and manually perform them.

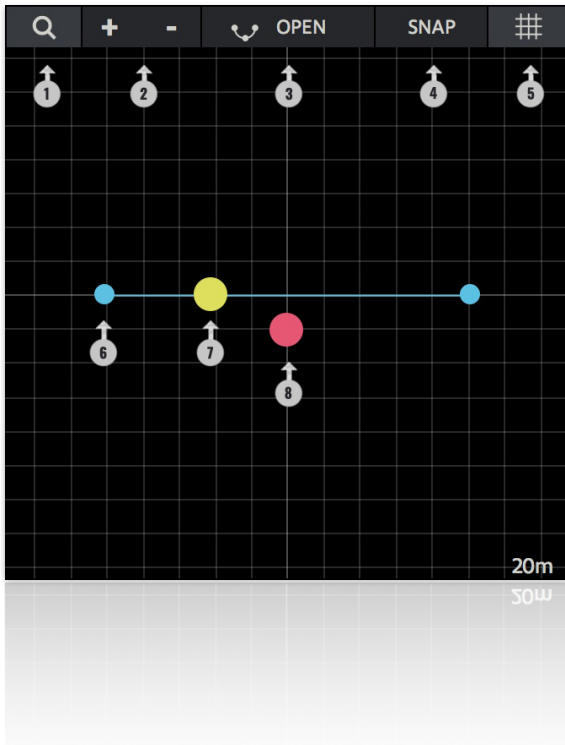
6.) The GRAIN slider allows you to manually perform the playback position of the GRANULAR playhead.

7.) The thin blue line visually helps to see whether the LFO or GRAIN slider is currently linked to the MANUAL knob.

Please Note: The MANUAL mode adopts the SPEED or LENGTH LINK setting made in the TIMECODE, SECONDS or BARS & BEATS mode. If you want to conveniently edit and

reshape the path we recommend being in LINK SPEED before switching to the MNUAL mode as the path does not constantly resize to maintain it's LENGTH value while being modified.

3.7 THE PATH EDITOR



1.) AUTO ZOOM: We recommend to leave this switched on. This ensures that you will always have a good overview of the path. You can manually trigger an auto zoom command by right clicking anywhere inside the path editor.

2.) ZOOM In & Out: With the PLUS and MINUS symbols you can manually ZOOM in and out of the path. You can also use the scroll wheel of your mouse to zoom in and out while your mouse is positioned above the path window.

3.) OPEN- / CLOSE PATH: With this button you can switch between OPEN and CLOSED PATH. Please note that for a closed PATH your path needs to contain three blue path dots or more.

4.) SNAP TO GRID: If SNAP to grid is enabled the blue path dots will always snap to the current visible grid.

5.) GRID: Show and hide the GRID. Every GRID square corresponds to the LENGTH declaration given in the lower right corner.

6.) BLUE PATH DOT: Every path has at least two PATH DOTS. By double clicking on the blue PATH LINE you can enter new PATH DOTS. The amount of the PATH curvature can be altered with the CURVE knob in the PROPAGATION section. By right clicking on a specific PATH DOT it gets deleted. The most convenient mode to freely edit the shape of the PATH is the link to SPEED mode. In this mode the PATH is not constantly resizing to retain it's path LENGTH. After you have edited your desired PATH shape you can switch to LINK LENGTH mode and define the appropriate SPEED for the moving sound source.

7.) THE MOVING OBJECT:

The yellow dot shows you the exact position of your sound source along the doppler path.

8.) THE LISTENER: The red dot represents the listener and it can be freely repositioned where ever you want. The position of the listener in relation to the path has a big impact on the final sound. Imagine you are 5 meters away from a car that passes by with 150 mph or 200 meters away.

Please Note: We precisely modeled the physical accurate doppler shift and the distance based gain and air absorption filtering for all possible speeds, distances and listener positions. We chose to NORMALIZE the volume of the final output stream of the DOPPLER engine to optimize the dynamic range. So if you want the more distant positions to the PATH to be quieter you can always do that manually after having rendered or recorded the clip or via TRAVELERS, NORMALIZE or MASTER VOLUME knob.

3.8 THE PROPAGATION SECTION



1.) Here you can BYPASS the PROPAGATION modeling with one button: DOPPLER SHIFT, ATTENUATION, DAMPENING and STEREO.

2.) Here you can switch between our painstakingly modeled physical accurate doppler effects mode: PHYSICAL or the CLASSICAL mode. CLASSICAL is the model most DOPPLER audio effects are based on. We strongly recommend using the PHYSICAL mode but thought it would be interesting to have the CLASSICAL mode available so you can always hear the difference.

DOPLR: Let's you attenuate the amount of DOPPLER SHIFT that is introduced to the sound source. If set to 100 the DOPPLER SHIFT is processed physically accurate. Everything below 100 is an attenuation.

ATTEN: Let's you attenuate the amount of ATTENUATION of the sound sources distance based gain modeling. If set to 100 the ATTENUATION is processed physically accurate. Everything below 100 is an attenuation.

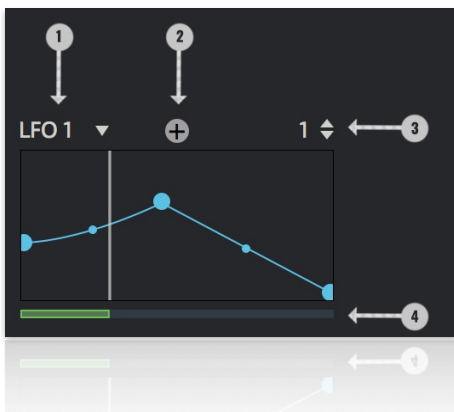
DAMP: Let's you attenuate the amount of DAMPENING that is introduced to the sound source. If set to 100 the DAMPENING is processed physically accurate. Everything below 100 is an attenuation.

STEREO: Let's you attenuate the amount of STEREO POSITIONING of the sound source. If set to 100 the STEREO POSITIONING is processed physically accurate. Everything below 100 is an attenuation.

AIR DEL: The amount of time it takes before the first sound wave reaches the observer.
Please Note: If you place the listener far away from the initial start position of the sound source and pick the highest speed setting the Air Delay can get close to 30 seconds.

CURVE: The curve knob affects the amount of curvature of the PATH.

3.9 THE LFO SECTION



1.) With this popup menu you can select between one of the four available multi segment LFO's.

2.) By clicking on the currently selected LFO's „PLUS“ symbol a red dot appears. You can now drag that red dot to your desired modulation destination.

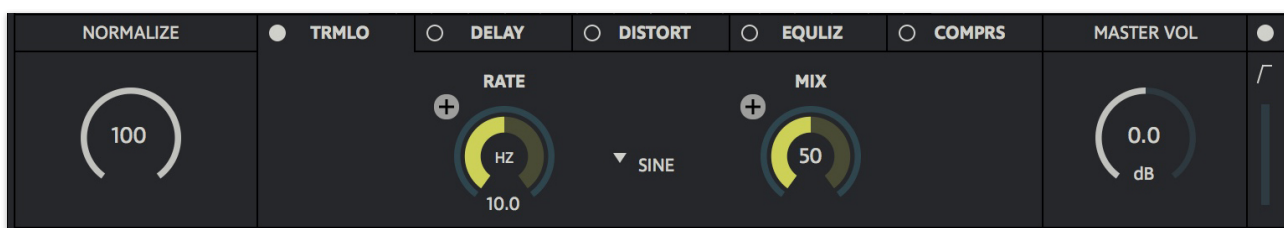
3.) The LFO speed multiplication spinner: In default mode the LFO's are synchronized to the length of the doppler path. By click & drag up the multiplication SPINNER you can multiply the LFO speed by up to 32x max.

4.) The green slider below the LFO editor window allows you to offset the starting point of the LFO's phase.

Tip: By right clicking into the LFO multi segment editor you can „RESET“ the LFO's shape.

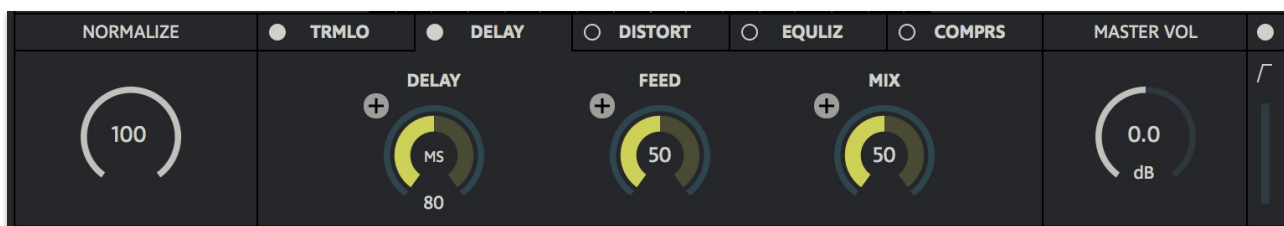
3.10 THE POST EFFECT SECTION

3.10.1 TREMOLO:



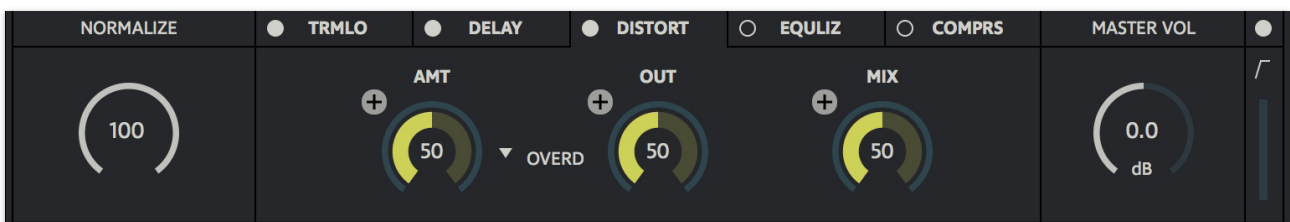
TREMOLO effect offers control over RATE and MIX. Both controls can be modulated via the LFO's. It is also possible to choose between three different LFO shapes for the TREMOLO. By clicking on the HZ symbol in the center of the RATE knob you can choose between HZ or BPM synchronized speed. The Mix knob allows you to blend between the processed and unprocessed signal.

3.10.2 DELAY:



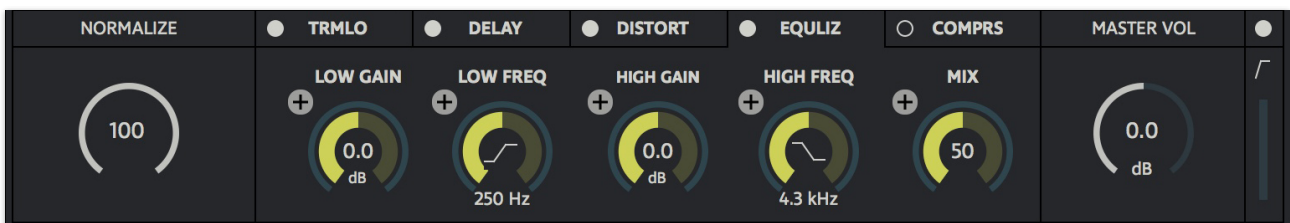
DELAY offers control over DELAY, FEEDBACK, and MIX. All three parameters can be modulated via the LFO's. The DELAY is suited well for very short delays below 80 ms which produces nice comb filtering effects. By clicking on the MS symbol in the center of the DELAY knob you can choose between MS or BPM synchronized speed. The Mix knob allows you to blend between the processed and unprocessed signal.

3.10.3 DISTORTION:



DISTORTION You can select between OVERDRIVE and SATURATION mode. All three parameters can be modulated via the LFO's. The AMT (amount) knob allows you to dial in the DISTORTION effect. The OUT (Output) knob allows you to compensate the volume. High amounts of distortion will increase the overall volume. The Mix knob allows you to blend between the processed and unprocessed signal.

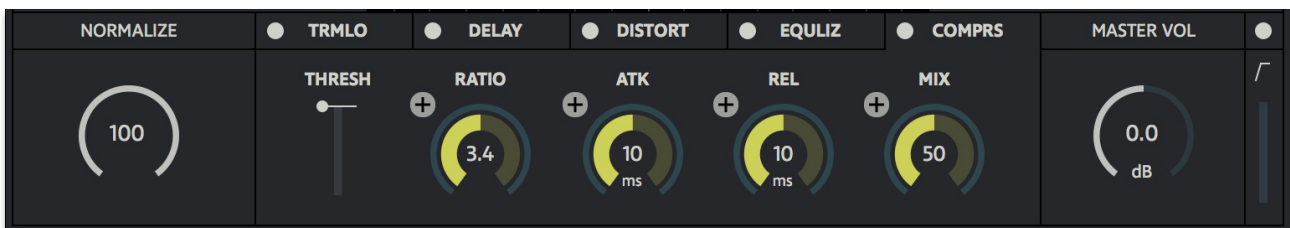
3.10.4 EQUALIZER:



EQUALIZE is a basic HIGH and LOW shelf equalizer. You can select a specific HIGH- or LOW FREQUENCY value and increase or decrease it's GAIN. By clicking on the SHELF symbol inside the HIGH or LOW FREQUENCY knob, you can switch from SHELVEING FILTER to a CUTOFF FILTER. In CUTOFF mode the GAIN knobs have no functionality.

The Mix knob allows you to blend between the processed and unprocessed signal. All parameters can be modulated via the LFO's.

3.10.5 COMPRESSOR, NORMALIZE & MASTER VOL

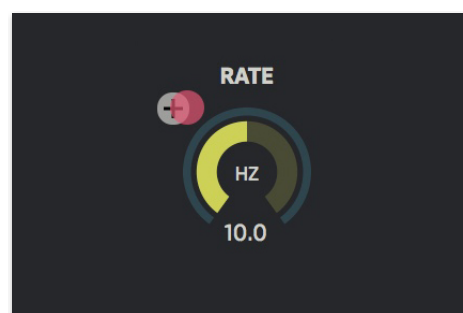
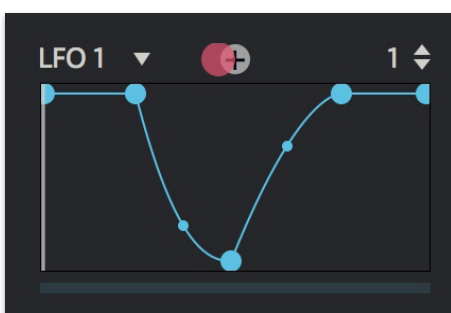


COMPRESSOR offers control over threshold, ratio, attack and release time. Aside from the THRESHOLD all parameters can be modulated via the LFO's. The Mix knob allows you to blend between the processed and unprocessed signal.

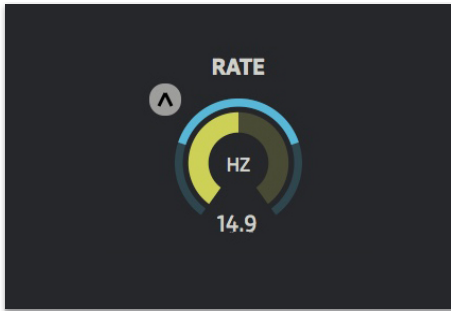
NORMALIZE We chose to NORMALIZE the volume of the final output stream of the DOPPLER engine to optimize the dynamic range. So if you want the more distant positions to the PATH to be quieter you can always do that manually after having rendered or recorded the clip or via TRAVELERS, NORMALIZE or MASTER VOLUME knob.

MASTER VOL Here you can increase or decrease the final output volume of TRAVELER. We also added a optional limiter directly behind the Output stage so you know that your Output signal never exceeds 0 dBFS. But by clicking the white button you can simply bypass that final limiter.

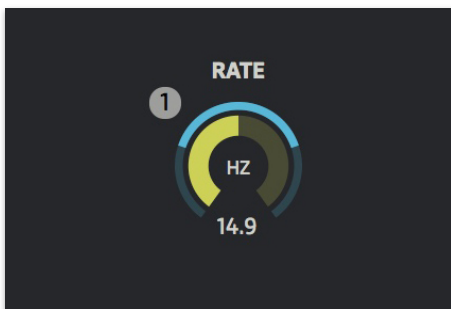
3.11 PARAMETER MODULATION



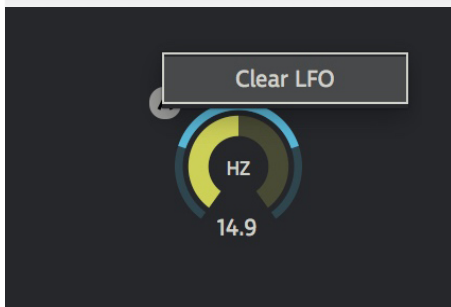
To assign one of the four available LFO's to a modulation source simply click & drag the red circle from the LFO's PLUS symbol to the modulation source PLUS symbol.



After a LFO has been assigned to a desired parameter the PLUS symbol changes to an arrow. By click & drag you can adjust the desired modulation amount.



If a modulation source is modulated by LFO 1 but you have currently selected LFO 2, the modulation source will display the number 1, so you always see by which LFO the parameter is being modulated.



With a right click to the modulation assignment knob you can clear the assigned LFO modulation.

3.12 MIDI LEARN



You can MIDI learn almost any parameter of TRAVELER. Simply right click on a control select MIDI learn and send midi data from a controller knob or device of your choice. The MIDI learn configuration saves with a PRESET.