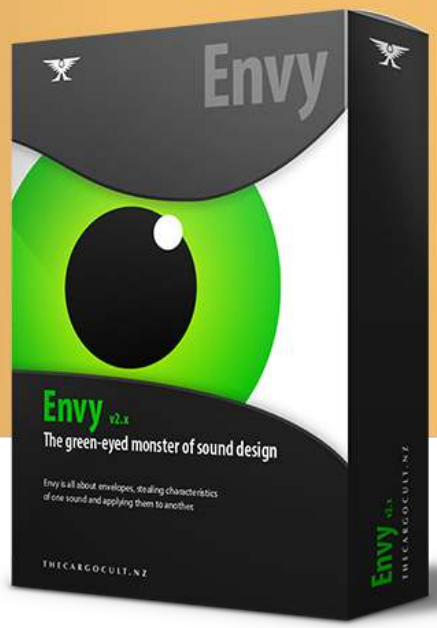
Envy 2.x

User Guide & Workshop Manual



Envy v2.1.7
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Contents

1. An Introduction to Envy

Envy is a sound design tool which applies a variety of envelope-based manipulations and mutilations to any sound, including creating entirely new textures to sweeten, replace, or design something entirely new.

It's kinda like a morph, but not exactly:
It can make a gunshot out of creature vocals.
It can make a leopard speak a line of dialog.
It can add a layer of snow to foley feet.
It can do weird vibrato and tremolo effects.
It can pitch bend absurd amounts, generating cool new sci-fi ideas.
It can be used to subtly affect intonation on dialog.
It can turn a small crowd into a large crowd.
It can play an existing drum loop using just explosions, or wind, or lion roars

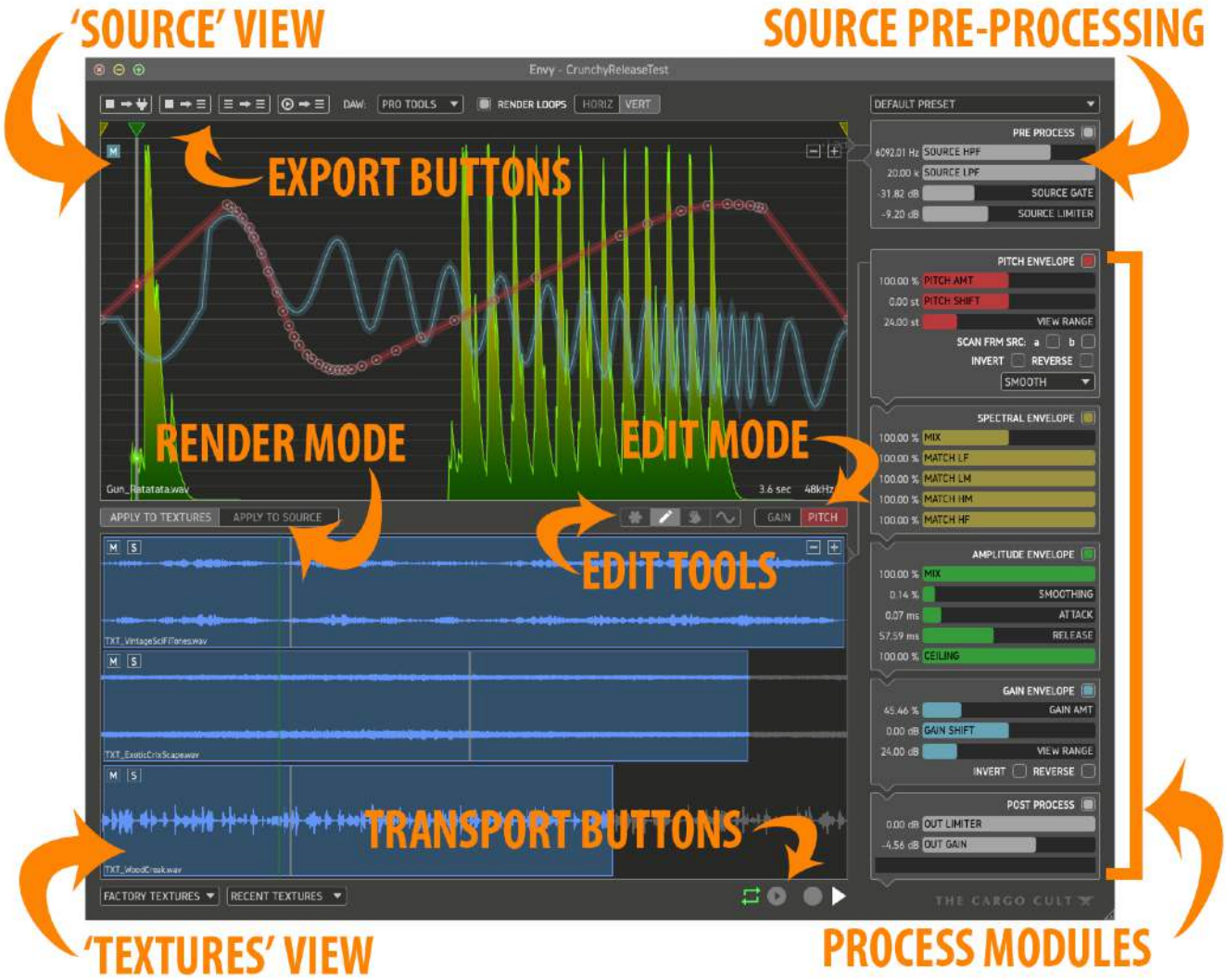
At the most basic level it has 2 tasks:
1. Pitch shift, bend, or gain modulate and existing sound (the source)
2. Apply characteristics of an existing sound to some other, unrelated sounds (the textures)

Envy is a standalone application for Mac and Windows, with integrations into some popular DAWs. You can send sounds from your DAW into Envy to be modified, or to generate some new sounds, and then send back to your DAW in a kind of "round trip" workflow.

2. GUI Overview

The user interface is broken into 4 main sections:

1. The SOURCE view
2. The TEXTURES view
3. The Processing modules
4. The Preferences window



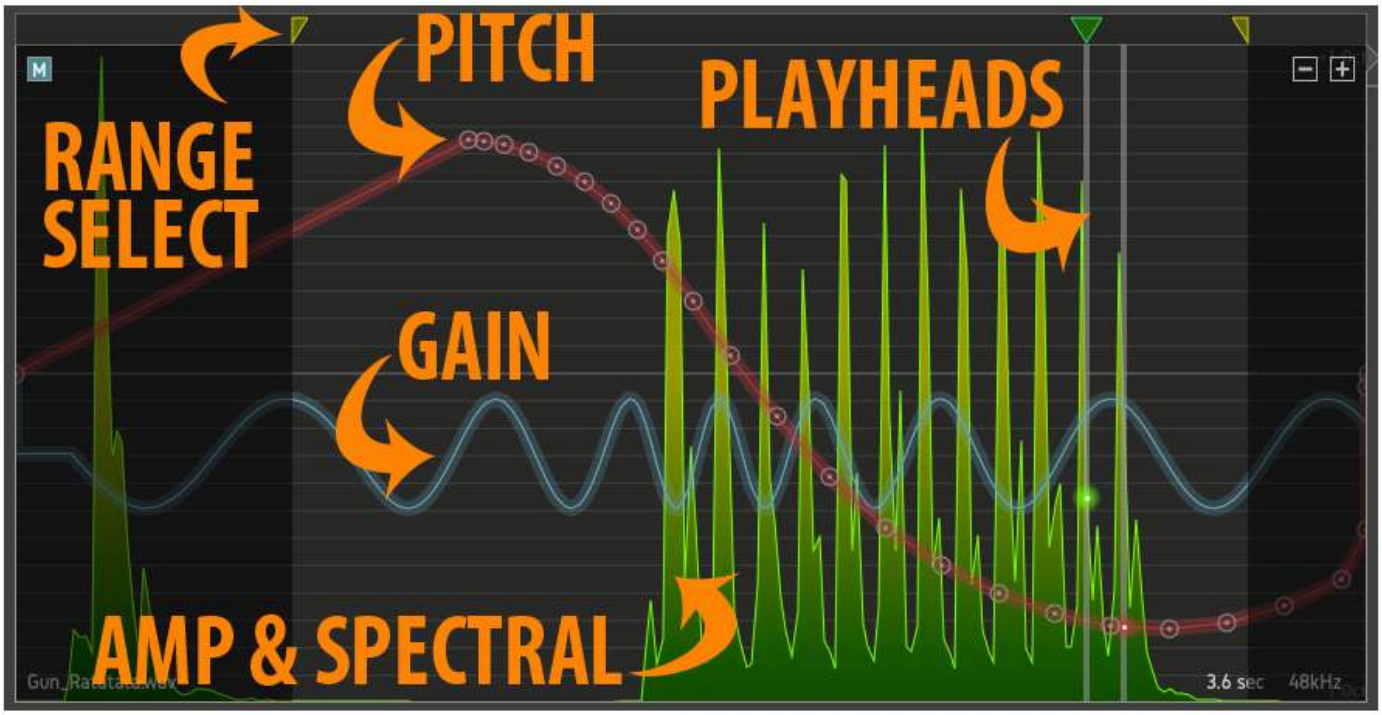
RENDER MODE

Selects which of the 2 fundamental modes to use.

APPLY TO TEXTURES will use the envelopes from the Source, and apply these to the audio in the Textures view.

APPLY TO SOURCE will cause the pitch and gain envelopes to apply directly to the Source audio, ignoring the textures entirely. In this mode several unnecessary modules are disabled, and the signal flow arrow switches to the Source view.

SOURCE VIEW
This view shows the various envelopes extracted from the Source audio or drawn by the user.



The Pitch and Gain lines use the colour corresponding to their process module and their respective Edit Mode buttons. Pitch is red or orange, gain is blue. The Amplitude envelope is represented by the bright green outline, whereas the Spectral envelope is represented by the green/yellow fill colour. When a module is turned off, its envelope path will become "greyed out".

There are 2 playheads - one for the amp & spectral envelopes, and one for the pitch envelope. Most of the time these are running together at the same speed, so you won't notice the pitch playhead. However, in VARISPEED mode, the pitch playhead will run at a different (variable) speed, so you'll see the two separate.

MODULATION EDIT TOOLS (L to R)

Smart tool
Pencil drawing tool
Grabber tool
Tremelo/Vibrato tool
Gain/Pitch editing mode

See the shortcuts guide in this document for a list of different options in each of these modes.

SEND TO DAW BUTTONS (L to R)

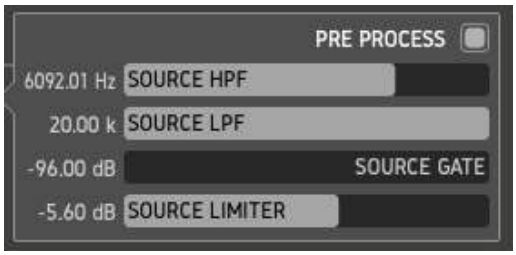
Return render to AAX Plugin
Send textures mixed to selection
Send textures mixed to tracks
Send texture split to tracks
Send last auto-record pass to track
DAW mode

LOOP HANDLING (L to R)

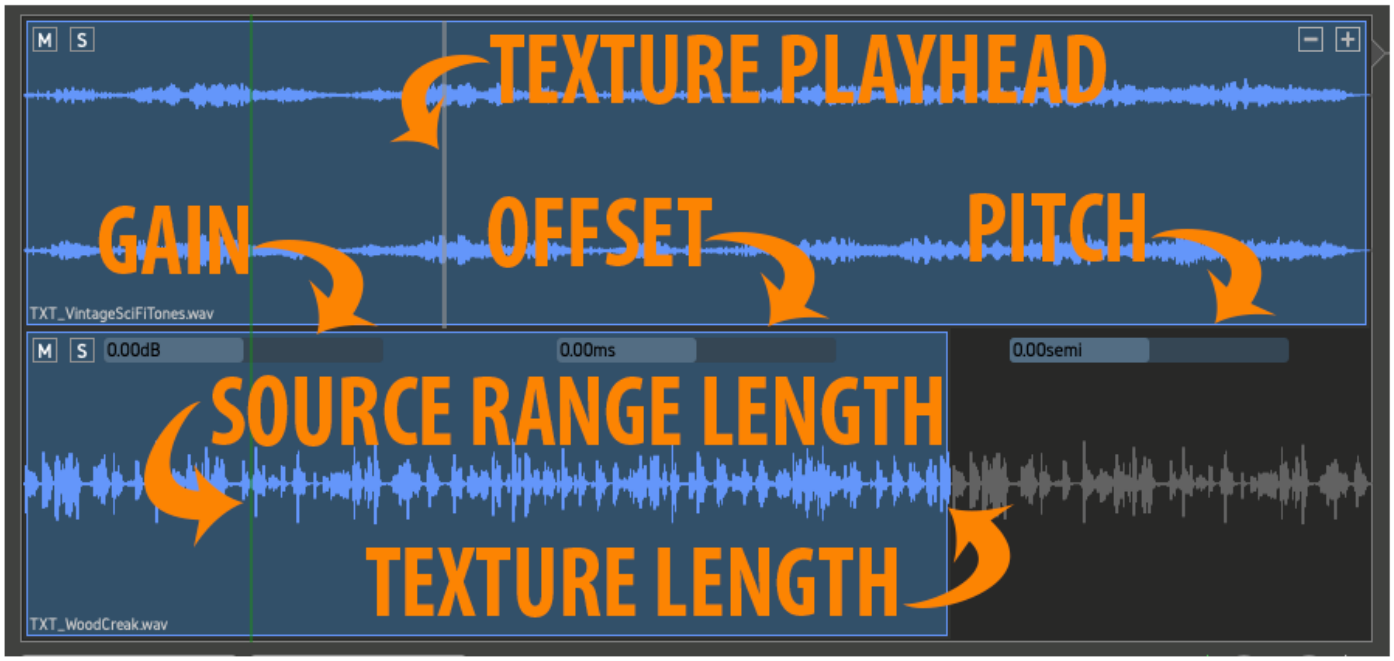
Enable rendering of loops when Texture is longer than Source
Spot loop sections horizontally (along track) or vertically (separate tracks) in DAW

PARAMETER PRESETS
Loads a preset file and sets all parameters (sliders, toggles and knobs). Does not recall any source or texture files.

SOURCE PRE PROCESS MODULE
Controls processing applied to the Source audio before envelope extraction takes place. Has no direct effect at all on the Texture audio, except where the Source envelopes change in response.



TEXTURES VIEW
The textures view is where you add, remove and modify multiple texture files
The textures view expands to fit the longest loaded texture, and shorter textures are shown as "looping" with a greyed-out waveform.



The Texture-specific sliders will show when you mouse over the texture, and disappear after a short delay.

The Gain slider adjusts gain for each texture.
The Offset slider slips the texture audio back and forwards in time so you can make fine adjustments to sync
The Pitch slider varispeeds the texture audio up or down, creating a shorter or longer audio clip and changing the pitch.

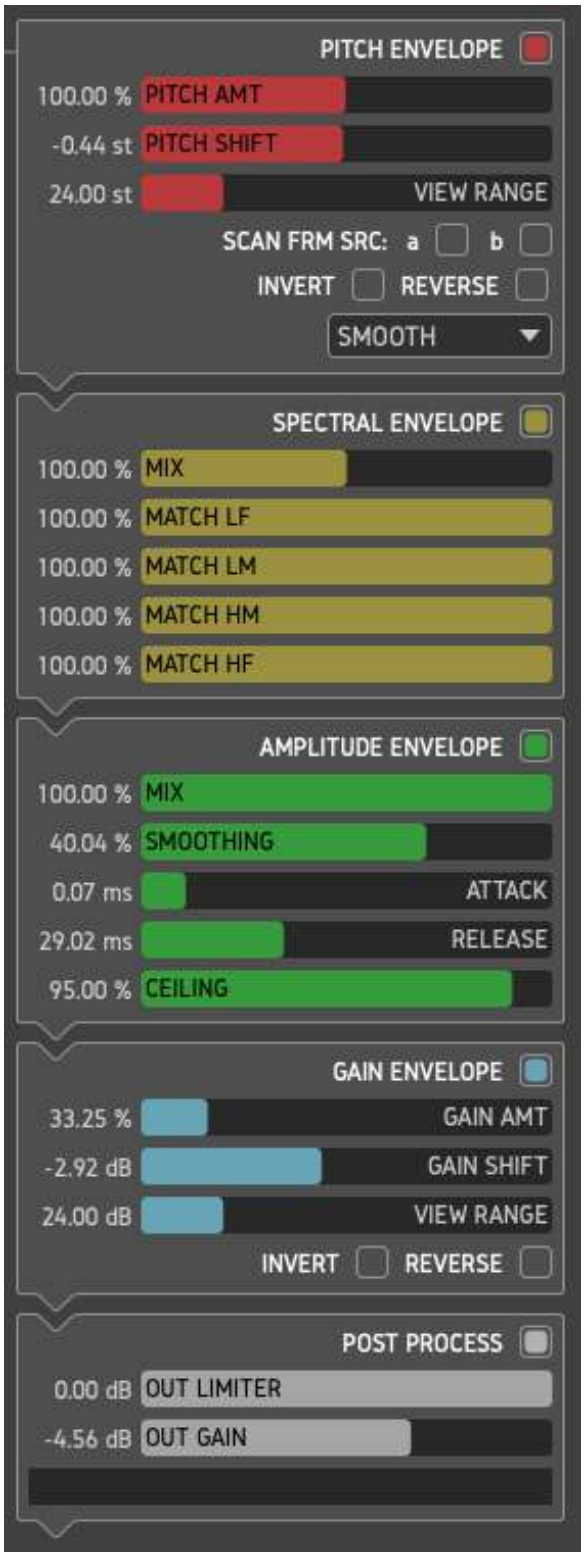
The Source Range Length marker shows the length of the source envelopes, or the range selected using the in/out markers.

The Texture playhead shows the position in the texture which is currently being played. This will loop back to the start of the texture when it reaches the end of the texture, or a point near the end which is a perfect multiple of the source selection length.

TEXTURE LOAD MENUS
Enable fast loading of factory textures or recently used textures (user or factory). The Factory Textures directory can be added to by the user. You'll find it at Documents/Envy/Textures

TRANSPORT BUTTONS (L to R)
Loop Playback
Auto-Record on Playback
Start Recording to Source Audio
Play/Stop

PROCESS MODULES
These are the processing stages which are applied to the source or texture audio (depending on which render mode you're using)



PITCH ENVELOPE
Applies Pitch shifting or bending in a variety of ways.
SCAN FROM SRC causes Envy to try and read a pitch envelope from the source file and create a pitch bend curve for you. Two modes are offered.

Multiple pitch modes are offered with Varispeed being a special mode in which the pitch playhead runs at a variable rate. Different

pitch modes display a difference dash pattern on the pitch curve, with Varispeed using an orange colour to make it obvious that time is not being respected.

SPECTRAL ENVELOPE
Controls the multi band spectral envelope set.
The 4 band-sliders control the extent to which the envelope for each band is applied or ignored. When set to 0% the band will pass through just as it was in the original texture audio.

The Spectral module is usually only used when the Amplitude module is also enabled.

This module is NOT available in APPLY TO SOURCE mode.

AMPLITUDE ENVELOPE
Controls the broadband amplitude envelope.
Smoothing reduces fine detail in the envelope. **Attack** reduces sudden transients. **Release** adds a slow release to falling envelopes. **Ceiling** reduces the maximum possible gain applied to the texture at any given moment.

This module is NOT available in APPLY TO SOURCE mode.

GAIN ENVELOPE
Controls the gain envelope curve drawn by the user.

POST PROCESS
Applies a brick-wall lookahead limiter and output gain stage to help control the final rendered audio.

3. Quickstart - How To Use Envy

Envy really does 2 different jobs

1. **Adding layers** to a sound or creating entirely new sounds (APPLY TO TEXTURES)
2. **Bending or manipulating** an existing sound, without adding anything new (APPLY TO SOURCE)

In both cases the first step is the same:

1. Get some audio (e.g. the line of dialog) into the Source View by either:

• Dragging from the finder,
• Sending from your DAW using one of the integrations described in the later chapters,
• Recording directly into the Source audio buffer.

Envy will analyze all the relevant envelopes and present them in the Source View. If the Pitch module is enabled and one of the SCAN FROM SRC options is checked, Envy will draw an editable pitch curve for you, estimating the pitch envelope of the Source audio.

The next steps are a little different in each of these modes so we'll show you how to use in Envy in each mode separately.

APPLY TO TEXTURES

We would use this mode if we wanted to take one sound and make it feel like some other sound. Or we might use it to generate some interesting new layers to a sound we're already working within our DAW. For example we might need to add some gravel to foley feet, a tonal element to a sci-fi weapon, a creature growl to some dialog, or a stadium crowd to a loop-group recording. This is also how we might replace music elements such as drum loops using atmospheric noise, or entirely unrelated instruments.

2. Load one or more Textures from the Factory Textures list, the Recent Textures List, drag/drop or send one from your DAW using one of the integrations described in the later chapters.

3. Turn on/off processing modules as required, or just call up one of the factory presets which give a good starting point for common tasks

4. Play with the Gain and Pitch sliders on each Texture

5. Draw some Pitch & Gain curves using the various tools which allow arbitrary scribbles as well as a variety of preset shapes.

6. Export a rendered version of your work to your DAW using one of the export buttons. From left to right, they are:

"Mixed to Plugin" renders a mix of all textures, through the processing and send it to the AAX Audiosuite helper plugin for rendering. (Pro Tools only)

"Mixed to tracks" spots a mix of all textures to a single track (or multiple tracks if you've set loops to spot vertically)

"Splits to tracks" spots each texture to it's own track so you can mix the layers in your DAW

"Auto Record to track" spots the most recent auto-recorded file. These are created any time you play/stop as long as the auto-record feature is enabled.

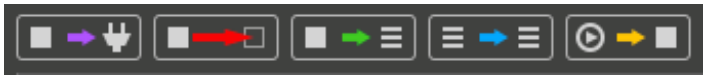
APPLY TO SOURCE

You might use this mode if you were working in your DAW and decided a sound needed a bit of a pitch bend. After all, what sound can't be made better with a little pitch envelope? Am I right? So in this mode we ignore the Textures entirely and Envy will apply any Pitch or Gain curves directly to our original Source audio. Other non-applicable modules will be disabled (pre, spec and amp).

Load a file into Source as we did in step (1) above. Then…

2. Draw or shift the Pitch and Gain envelopes using the editing tools offered. Modifier keys provide further options within each tool (see shortcuts reference for details)

3. Export as a file or send back to our DAW using one of the buttons provided. (see "Textures" above for explanations)



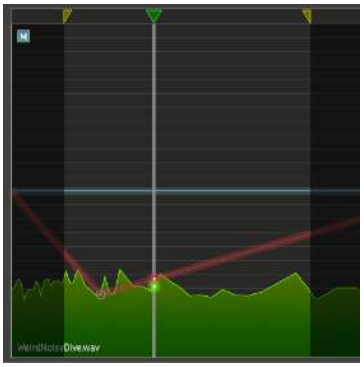
In both TEXTURES and SOURCE modes, any time you make changes, you'll notice the UI displays the text "RENDERING IN BACKGROUND". While Envy is still rendering you won't be able to hear your recent changes, but they'll become live as soon as rendering finishes. This all happens seamlessly so there's no need to stop/start playback to hear the changes.

4. Timelines & Looping

Time is a fluid concept in Envy and it can be useful to understand how its timelines and looping behaviours work.

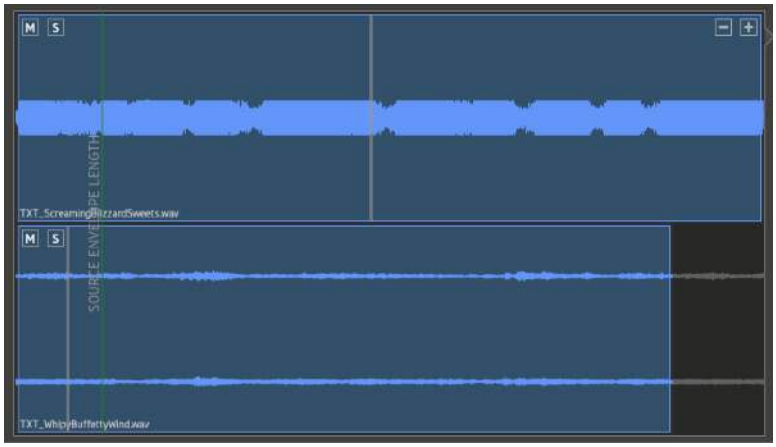
TIMELINES

The Source audio determines the length of the envelopes that will be applied to the Textures - or more accurately, the selected range within the Source view is the official "source length".



The Textures can be any length at all, and Envy will simply use them as raw "textures" upon which the envelopes from the Source will be applied.

If the Texture is longer than the Source then Envy will apply the source envelopes over and over until it runs out of Texture audio - at which point it loops back to the start. In order to keep sync for rhythmic patterns, Envy will often loop back to the start of a Texture before it reaches the absolute end of the file, looking for a nice multiple of the source length as its loop point.



You can see the playback position within the texture using the little grey playhead within each texture clip.

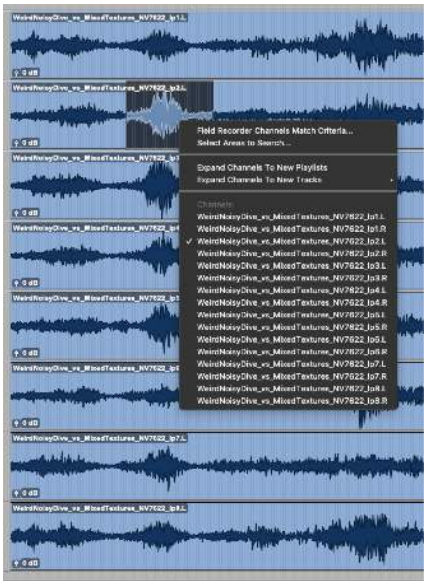
The Source Length can be seen inside the Textures view as a thin green line.

If a texture is shorter than the source, Envy will internally extend it for you.

RENDERING LOOPS

When rendering out to files (or spotting to your DAW) Envy will often be able to make more than one loop of the Source duration out of your chosen Textures.

You have the option to create these additional loops or ignore them, exporting only the first. When spotting to a DAW you can choose whether these loops should be spotted horizontally (along the track) or vertically (at the same location, but on tracks below).



Spotting loops vertically is a great way to create dozens of options and quickly audition them for the best "take". The files all include common metadata so in Pro Tools it is possible to use the field recorder workflow shortcuts to switch out subsections of a clip for a piece from a different "take". You may find this especially useful when creating creature vocals from animal Textures.

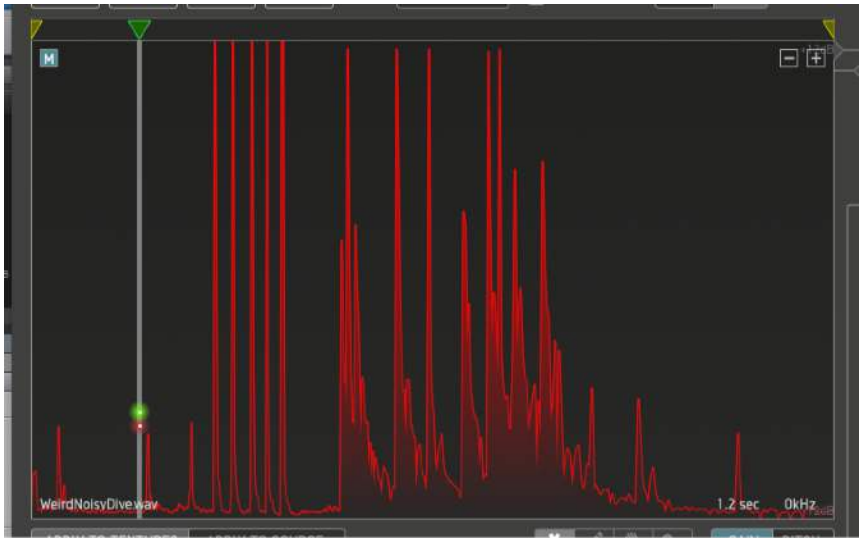
Sending the rendered audio back to the Pro Tools Envy Connect plugin will result in a single continuous audio file with all loops joined together.

5. Record & Auto-Record

RECORDING INPUT TO SOURCE

Envy allows you to record directly into the Source audio buffer from a microphone, instrument or any other audio device.

This presents some interesting opportunities for creating creature vocals, performing drum patterns on the table-top, or using your voice to create the shape of a sound effect.



Simply hit the RECORD button or type CMD-SPACE and the Source view will switch into live recording mode.

When you're finished, hit SPACE to stop, and then trim up the Source Range Selection using the little yellow handles at the top of the view.

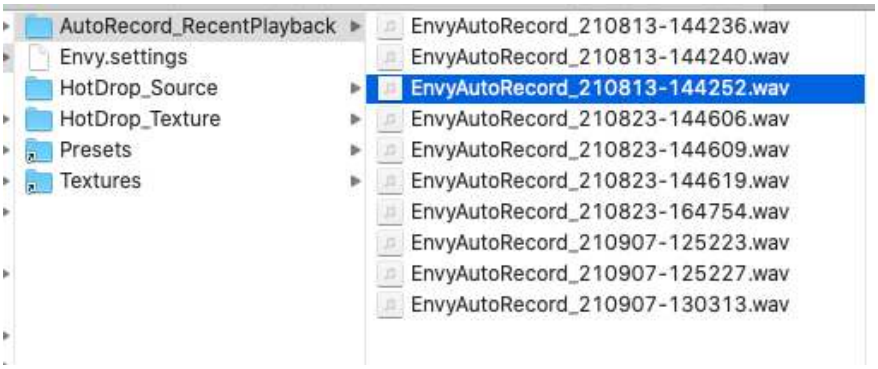
AUTO-RECORD ON PLAYBACK

When experimenting with Envy you will often do something quite remarkable and unexpected, and after stopping you may wish you'd kept a copy of your grammy-winning performance. Fear not:

When enabled, this feature will cause Envy to record every playback pass to a file on disk. They'll be stored in Documents/Envy/AutoRecord_RecentPlayback and you'll be able to access the last 10 playback passes before they are deleted from disk.

The recordings are made in whatever channel format your hardware output is using.

If you want to access an auto-record file, you can drag the file from the directory, or use the "Spot last auto-record" button to send it directly to your DAW.



6. File Management

Envy stores it's current state in one of 2 file types:

Envy Session File (.envy)
This stores the complete state of Envy including file references, parameters settings and envelopes. Note that the actual audio files themselves are not stored. If any file is missing upon reloading the .envy file, you will be alerted and the parameters will load regardless.

Envy preset File (.envypreset)
This stores the state of just the parameters in Envy (knobs, sliders etc).
Audio File references and envelopes are not recalled. Presets enable you to recall a particular setup without overwriting the files already loaded into envy. E.g. you may be attempting to add an air release to a gunshot, then decide to use a previously saved setup for the AMPLITUDE module.

Importing Sounds
Envy offers a number of ways to get sounds into, and out of, the app.

You can drag & drop directly onto the Source or Textures views to load .envy, .envypreset or audio files. WAV and FLAC files are the currently supported audio formats.

You can send audio from your DAW using one of the integrations described in the later chapters.

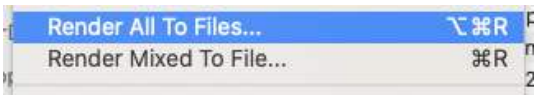
You can copy files into the HotDrop folders which Envy constantly monitors. If files are detected in one of the directories, Envy will load them immediately, then move them to the _recentImports directory. You may want to consider clearing out these directories once in a while. Saved .envy files will reference the _recentImports folder so if you want to make a more permanent copy of the file, be sure to save it elsewhere.

There are separate folders for Source and Textures:

```
/Users/[user]/Documents/Envy/HotDrop_Source
/Users/[user]/Documents/Envy/HotDrop_Texture
```

Exporting Sounds
The usual method of export is to use one of the "Send to DAW" buttons, the specifics of which are detailed in the later chapters pertaining to each supported DAW.

You can also export directly to WAV files if your DAW is not supported or you wish to simply add them to a library.



7. Workflow with Pro Tools

For Pro Tools integration, Envy2 uses the Envy Connect Audiosuite plugin. Envy Connect is used to send a selected audio region to the main Envy application, but audio can be returned to Pro Tools in a few different ways.

You can send to Envy as either Source or Texture audio. Simply select which mode you want and hit the SEND button.

The Envy application will open and load the audio you've just sent. The plugin interface will also change to let you know that audio has been sent to Envy and the plugin is waiting for audio to be returned.

Once you've done your work in Envy and wish to return the audio to Pro Tools, you have a number of different options:

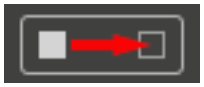
SEND MIXED RENDER BACK TO HELPER PLUGIN

This option renders the audio in Envy and sends a copy to the Envy Connect plugin. You might use this mode if you're just applying a pitch bend to a clip, using APPLY TO SOURCE mode.

Once audio is received, the plugin UI will change to reflect that it's ready to render. You can then render the audio to the timeline using the RENDER button. This allows you to make a different selection to the one you analyzed, or render over top of the audio you send.

Keep in mind that Envy Connect will render exactly the duration of audio that was sent to it, ignoring the length of your selection, so you may want to disable the "RENDER LOOPS" option in Envy to avoid long renders caused by long textures.

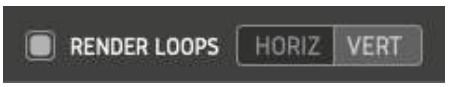
SPOT MIXED RENDER TO SELECTION IN DAW



This option mixes down all your textures (assuming you're in TEXTURES mode) to a single audio stream and spots the audio directly to the current selection location in Pro Tools.

SPOT MIXED RENDER TO TRACKS IN DAW

This option mixes down all your textures (assuming you're in TEXTURES mode) to a single audio stream and spots the audio directly to a Pro Tools track. In most cases you will be sending a Source clip to Envy, so we assume that you'll prefer the returned audio to be spotted to the track directly underneath.



Where the Textures are longer than the Source audio, Envy will loop around the source range, making separate files for each loop. These can be optionally spotted either horizontally along the track, or vertically to tracks below. Just make sure you have enough tracks created for this purpose.

SPOT INDIVIDUAL RENDER TO TRACKS IN DAW

This option creates separate audio layers for each of the textures active in Envy, allowing you to mix and edit them as layers in Pro Tools. As with the "Mixed Render" option, loops can be spotted horizontally or vertically, though horizontal makes a lot more sense in this case.

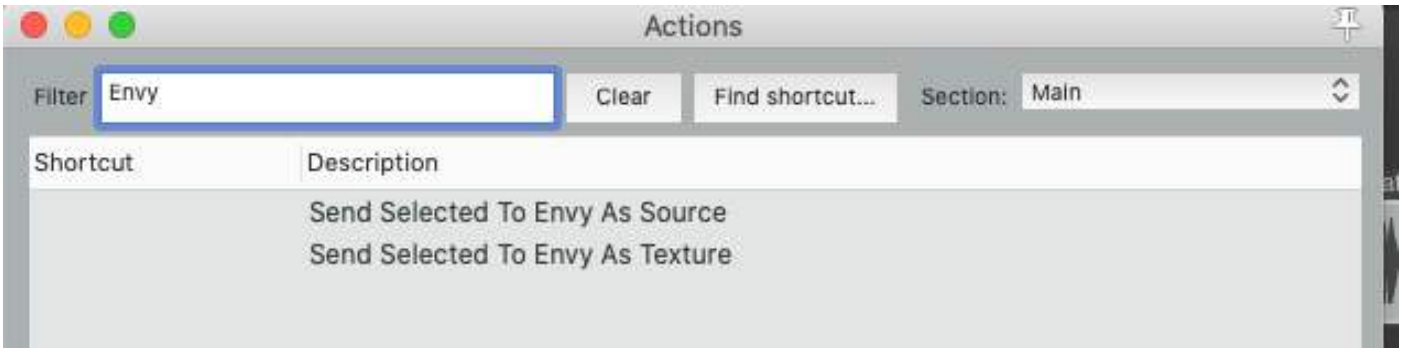
SPOT LAST AUTO-RECORD PASS TO DAW

This option finds the most recent file auto-recorded during playback, and spots it to the track below your selection.

8. Workflow with Reaper

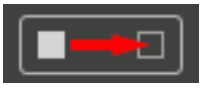
For Reaper integration, Envy uses a Reaper extension which is installed to the standard Reaper UserPlugins location.
Mac: /Library/Application\ Support/REAPER/UserPlugins/reaper_envy_extension.dylib
Win: C:\Users\username\AppData\Roaming\REAPER\UserPlugins\reaper_envy_extension.dylib

This provides 2 new actions in Reaper which allow you to send the selected audio to Envy, either as Source or as textures. You can assign shortcuts to these actions and/or add them as triggers on your Reaper interface.



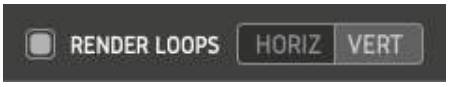
Envy will automatically open and load the audio you sent. Once you've performed your magical transformations, you can send the results back to Reaper in a few different ways:

SPOT MIXED RENDER TO SELECTION IN DAW
This option mixes down all your textures (assuming you're in TEXTURES mode) to a single audio stream and spots the audio directly to the selection location in Reaper.

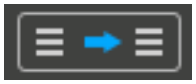


SPOT MIXED RENDER TO TRACKS IN DAW
This option mixes down all your textures (assuming you're in TEXTURES mode) to a single audio stream and spots the audio directly to a new Reaper track.

Where the Textures are longer than the Source audio, Envy will loop around the source range, making separate files for each loop. These can be optionally spotted either horizontally along the track, or vertically to new tracks below.



SPOT INDIVIDUAL RENDER TO TRACKS IN DAW
This option creates separate audio layers for each of the textures active in Envy, allowing you to mix and edit them as layers in Reaper. As with the "Mixed Render" option, loops can be spotted horizontally or vertically, though horizontal makes a lot more sense in this case.



SPOT LAST AUTO-RECORD PASS TO DAW
This option finds the most recent file auto-recorded during playback, and spots it to a new track in Reaper

9. Workflow with Nuendo

For Reaper integration, Envy uses a Nuendo extension which is installed to the Steinberg Components directory:

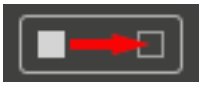
Mac: /Library/Application Support/Steinberg/Components/EnvyConnect_Nuendo.bundle
Win: C:\Program Files\Common Files\Steinberg\Shared Components\EnvyConnect_Nuendo.dll

For send audio from Nuendo to Envy, open the Envy Connect plugin window from the Project menu, select some audio clip/s and Send As Source, or Send As Texture.

For Send As Source, you can only have 1 audio file selected. For Send As Texture you can have multiple files selected.

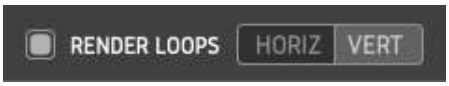
Envy will automatically open and load the audio you sent. Once you've performed your magical transformations, you can send the results back to Reaper in a few different ways:

SPOT MIXED RENDER TO SELECTION IN DAW
This option mixes down all your textures (assuming you're in TEXTURES mode) to a single audio stream and spots the audio directly to the selected clip location in Nuendo. If no clip is selected, the last selected track will be chosen.



SPOT MIXED RENDER TO TRACKS IN DAW
This option mixes down all your textures (assuming you're in TEXTURES mode) to a single audio stream and spots the audio directly to a new Nuendo track.

Where the Textures are longer than the Source audio, Envy will loop around the source range, making separate files for each loop. These can be optionally spotted either horizontally along the track, or vertically to new tracks below.



SPOT INDIVIDUAL RENDER TO TRACKS IN DAW
This option creates separate audio layers for each of the textures active in Envy, allowing you to mix and edit them as layers in Nuendo. As with the "Mixed Render" option, loops can be spotted horizontally or vertically, though horizontal makes a lot more sense in this case.

SPOT LAST AUTO-RECORD PASS TO DAW
This option finds the most recent file auto-recorded during playback, and spots it to a new track in Nuendo

10. Workflow with Soundminer

The workflow with Soundminer is pretty simple.

Files (or sections of files) can be dragged out of Soundminer using the little hand icon, and then dropped onto either the Source or Textures views in Envy.

Once you've done your mutations in Envy, you can export the rendered files to a folder and manage the databasing as usual in Soundminer.

11. Shortcuts Reference

Note: Unless otherwise specified in brackets, the CMD modifier should be read as CTRL for Windows users.
The following are less obvious shortcuts - more are available in the application menus.

GENERAL

	SPACEBAR	Play/Stop
CMD (START)	SPACEBAR	Start Recording to Source
SHIFT + CMD	L	Toggle Loop mode
SHIFT + CMD	R	Toggle Auto-Record In Playback
	F1	Enable Pre-Process Module
	F2	Enable Pitch Module
	F3	Enable Spectral Module
	F4	Enable Amplitude Module
	F5	Enable Gain Module
	F6	Enable Post-Process Module

SOURCE VIEW

CMD	1	Smart Edit Tool
CMD	2	Pencil Edit Tool
CMD	3	Grabber Edit Tool
CMD	4	Modulation Edit Tool
	A	GAIN editing mode
	S	PITCH editing mode
	BACKSPACE	Delete Selected Breakpoints

SMART EDIT MODE

	Left Mouse	Draw Envelope
CMD	Left Mouse	Box Selection & Breakpoint move
OPT	Left Mouse	Clear Breakpoint
CTRL	Left Mouse	AMT Parameter
SHIFT	Left Mouse	SHIFT Parameter
	Right Mouse	Draw Triangle Modulation
OPT	Double-Click	Clear All Drawn Envelopes

PENCIL EDIT MODE

	Left Mouse	Draw Envelope
SHIFT	Left Mouse	Draw Modifier shape (multiply a shape with existing envelope)

GRABBER EDIT MODE

	Left Mouse	Box Selection & Move Breakpoint
SHIFT	Left Mouse	SHIFT Parameter for All Breakpoints
OPT-SHIFT	Left Mouse	Move Selected Breakpoints
OPT-SHIFT	Left Mouse	Delete Nearest Breakpoint
	Double-Click	Add New Breakpoint
OPT	Double-Click	Clear All Drawn Envelopes

MODULATION EDIT MODE

	Left Mouse	Triangular Modulation
SHIFT	Left Mouse	Sinusoidal Modulation
CMD	Left Mouse	SQUARE Modulation
OPT-SHIFT	Left Mouse	Delete Nearest Breakpoint
OPT	Double-Click	Clear All Drawn Envelopes

TEXTURES VIEW

CTRL	Left Mouse	Scrub Playheads
OPT	Left Mouse	Mute Texture
	Left Mouse	Select Texture
SHIFT	Left Mouse	Add Texture To Selection

12. Specifications, Supported Formats etc

HOST PLATFORMS
Mac OS 10.12 or greater. Universal Apple Silicon & Intel binaries.
Windows 10.

PRO TOOLS
Minimum version = 12.0

INPUT FILE FORMATS
Audio in BWAV or FLAC format - mono thru 7.1.2

OUTPUT FILE FORMATS
.envy - the complete Envy "session"
.envypreset - all parameters (knobs, checkboxes and slider) without any audio or envelope data.
WAV audio files.

SAMPLERATES
44.1kHz thru 192kHz are supported though higher samplerates are not recommended due to CPU load.
The Source audio determines the internal samplerate and that of any exported files.
Textures can be supplied in any samplerate but will be internally resampled to suit. Consider CPU load before using high resolution Textures.

CHANNEL FORMATS
Envy supports most standard cartesian file formats - mono-thru 7.1.2
Texture audio will be converted to your audio device channel format for playback, but rendered in its original format for export.
A fixed up and downsampling matrix is used when translating between formats.
Multichannel audio used as Source is internally treated as mono, though will be presented in its original format during playback.

COPY PROTECTION & AUTHORISATION
Copy protection is provided by PACE Anti-Piracy in the form of the iLok system.
Any use of the Envy software requires an account with iLok.com though a hardware dongle is not necessary.
Authorisation is enabled to the iLok dongle, the host computer, or the iLok Cloud.