InTrigger

Drum Replacer

User Guide

Contents

Introduction

InTrigger Drum Replacer revolutionizes drum replacement. Its intelligent hit detection automatically identifies, categorizes, and isolates every drum hit while filtering out unwanted bleed. This eliminates the need for manual edits and adjustments, enabling engineers to focus on creative sound selection.

Designed for mixing engineers, music producers, and musicians, InTrigger streamlines the drum replacement process—everything from simple kick or snare reinforcement to managing complex performances with ghost notes and mic bleed.

How Does It Work?

InTrigger listens to the incoming signal, then identifies and categorizes the different hit types. The Detection section displays this categorization with pulsing circles—you can manually select a target or use the Learn feature to select one for you.

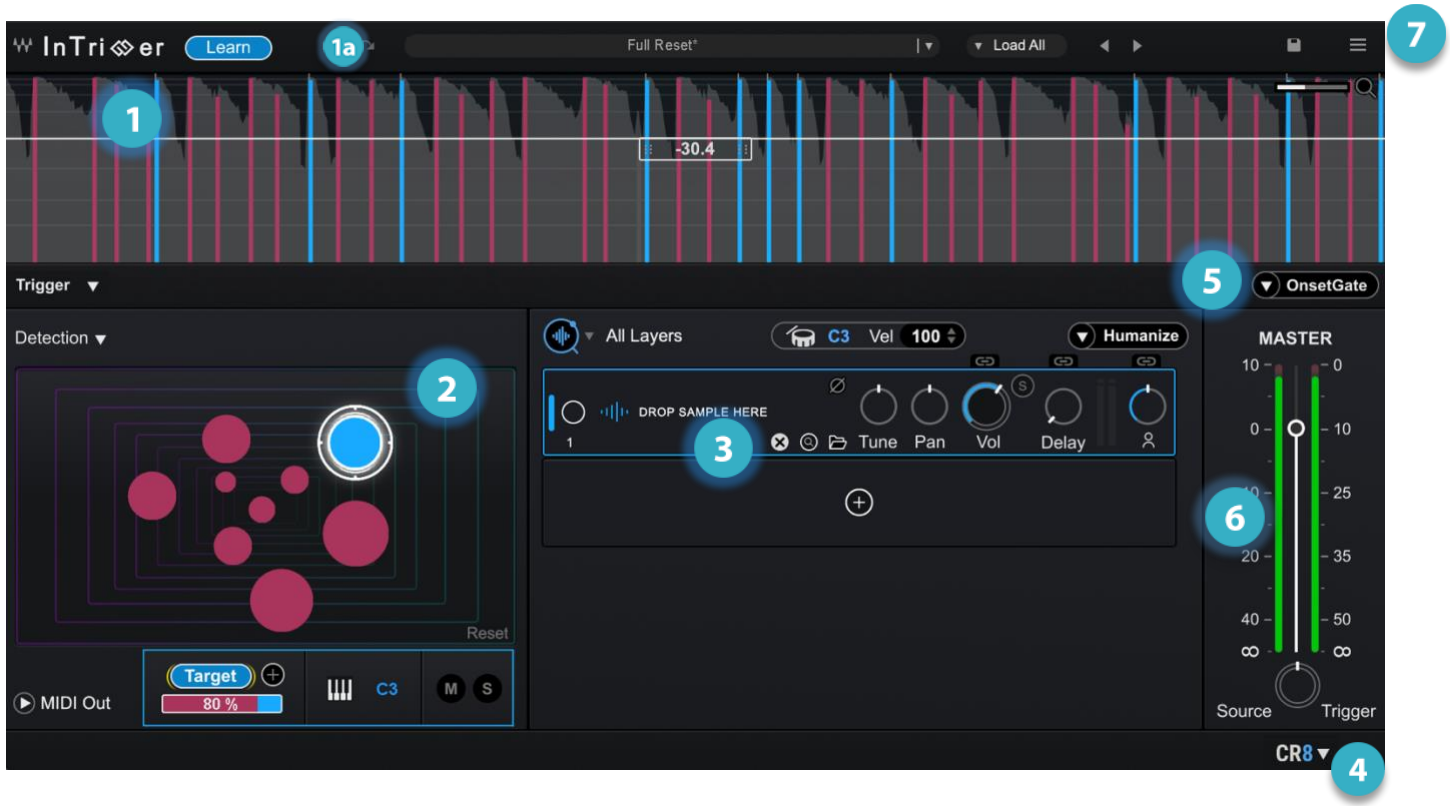
Once the Target is selected, it will appear as a blue circle on the graph and will trigger samples. You can adjust the percentage to allow more or fewer hit types into the target scope.

InTrigger also offers a Live component, with zero latency and a streamlined interface that's uniquely suited for live sound engineers. The live component does not offer the detection section and learn mechanism.

The Live component is described at the end of this manual.

Quick Start

This Quick Start guide should get you up to speed. You'll find more details in later sections.



Do this first:

- **Play** a representative section of your drum track and click the **Learn** (1a) button. This will auto-detect the prominent hit in the drum track. It will also set the Threshold and the Trigger Shift parameters. This provides a simple starting point, in which most of the values have been automatically set.
- **Drag and drop** the sample you'd like to trigger to Sample Layer 1 (3).

To further refine your results, try using these controls:

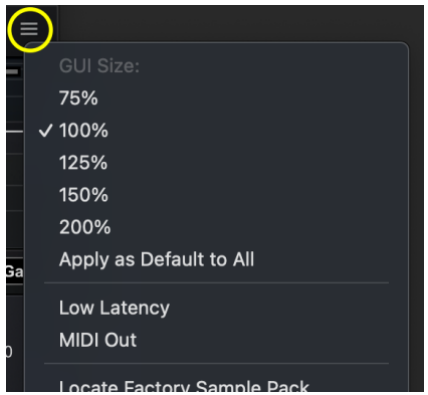
1	**Trigger Section**	Use the Trigger section to determine which drum hits will pass the OnsetGate and appear in the Detection section. You can adjust the **Threshold** to define the lowest-level hits that will pass to the **Detection Graph**. Hits currently playing are blue; hits not playing are red.
2	**Detection Section**	The Detection display visualizes the incoming signal as a cluster of circles. Each circle represents a hit type. During playback, each circle will flash to indicate detection. Click a hit type to see its properties at the bottom of the display. Click the arrow next to **Detection** to display the **Detection Menus:** These can be used for setting the Detection Focus, Hit Separation, and Filters.
3	**Sample Section**	Samples can be imported by drag-and-drop from COSMOS or from the OS browser. In COSMOS (when launched from InTrigger), you can double-click or click on the “Import” arrow next to any sample name. Up to eight sample layers can be loaded simultaneously, each with independent controls for gain, pan, width, tuning, and delay.
4	**CR8 Tab**	The integrated CR8 sampler provides deeper control over samples. Click the arrow next to **CR8** at the bottom-right of the interface to reveal the extended panel.
5	**Humanize**	Follows the source material’s amplitude and adds Randomization to the sample pitch. Click the Humanize button to turn the effect on/off. Click the arrow next to Humanize to expand the controls.
6	**Master Section**	Use the Master section to meter the current level, adjust the overall volume with the Master Fader or balance between the source signal and trigger output with the Source/Trigger knob
7	**Presets and Utilities**	The **WaveSystem Toolbar** at the top of the interface is used to store and recall factory presets and user presets.

Tooltips

For your convenience, place your mouse cursor over any control to have its name and value shown in the lower-right corner of the interface.

Turn tooltips On or Off in the WaveSystem Toolbar drop-down menu, next to the Save button.

3-Bar (Hamburger) Menu



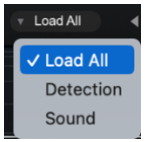
This menu contains InTrigger's settings, from resizing the graphic interface to plugin updates.
In addition, you'll find two important features here:

Low Latency mode has a very low latency of 1.5 ms, and is perfect for real-time monitoring. You can use this to toggle between recording sessions and mixing. Detection section and the Learn mechanism are not included to enable this mode.

MIDI Out is an On/Off toggle that will enable/disable InTrigger from transmitting MIDI messages. Default: On

Presets

InTrigger Factory presets are divided into two categories:



1) **Sound** presets loads only the Sampler parameters (Detection settings will remain intact).
2) **Detection** presets will load controls related to the Trigger and Detection sections, leaving sample-related settings intact.

Saved user presets will contain both Sound and Detection settings. When loading your saved presets, you can choose which of the two you'd like to recall. You can load both parts by selecting Load All.

If you'd like to transfer a preset containing samples to other workstations, pick the **Save With Samples As…** option when saving the preset. The samples will be saved in the folder containing the preset.

> NOTE: User presets always save the entire preset—Sound and Detection. The selector at the top allows you to choose what to load.

Fine-Tuning

To address more complex material, you may want to utilize InTrigger's advanced capabilities. This section describes how to get the most out of each section and learn how these sections interact.

Trigger Section

Waveform Graph

The Waveform Graph displays the incoming audio. It marks the detected onsets, with drum hits above the Threshold showing up as blue lines. Click the display to pause it. Then click Resume to return to real-time display mode.

1 Threshold Level Control

Sets the value (in dB) for detecting Onsets.

Hold **Cmd/Ctrl** on your keyboard—while moving the threshold—for fine adjustments. This action also zooms the waveform vertically.

You can also set the Threshold by double-clicking the control and entering a value.

Range: -100 dB to 0 dB

2 Onsets Color Coding

Hits are shown in matching colors in the Trigger and Detection sections.

Blue	A hit type that creates a Trigger event. All hit types are marked as blue if no Target was selected.
Red	A hit type that does not create a Trigger event. Regardless of Threshold, this hit type will not trigger, as it is not a part of the Target Scope.
White	The selected hit type.
White Dot	Red/blue hit types with a white dot have been edited.
Solid Gray	Onsets below the threshold (do not generate a hit type).

3 ReTrigger

Sets the minimum time between triggered hits (in ms).
Smaller values will produce more onsets, since very little time is required between them. At greater values, fewer onsets are seen and heard.
Range: 20 ms to 1000 ms

4 Sensitivity

Higher values will increase the number of created onsets, as the detector is more sensitive to transients.

Lower values may be needed to avoid double triggers if they occur. Range: 1 to 10

5 Trigger Shift

The Trigger Shift control enables you to move the trigger earlier by up to 30 ms.

Range: -30 ms to 0 ms, Default: -5 ms

6 ONSETGATE

Allows selective gating based on the chosen targets and Threshold. The gate creates an audible effect on the Source audio as it loads on a 50/50 mix between Source and Trigger. Click the OnsetGate button to enable/disable the effect.

Once a Target hit type has been set in the Detection section and the selected hit type—or hits similar to the target—are playing, the OnsetGate will trigger. These hit types are colored blue. Hit types colored red will not trigger the gate.

If no hit type has been selected as the Target, the OnsetGate will trigger for all hit types above the Threshold.

Gate Controls

Click on the arrow next to OnsetGate to expand the control.

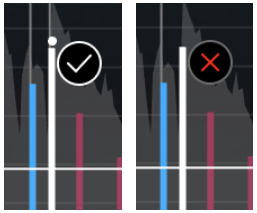
When the OnsetGate triggers, three controls are used to set the time characteristics of its behavior:

Attack	Controls the speed (time) of the gate fully opening. Range: 0.01 ms to 1000 ms
Hold	Controls how long the gate's gain is held unaltered. Range: 1.0 ms to 2000 ms
Release	Controls the speed (time) of the gate fully closing. Range: 1.0 ms to 1000 ms

While these are classic gate controls, this gate reacts to InTrigger's detected onsets rather than source level.

Note: The Hold value affects the generated MIDI Note Off event. Lower Hold values may affect the release time of the samples, even when Source/Trigger is set to 100% Trigger.

7 EDITING HITS



You can include or exclude specific hits from the waveform graph.

This works best when there is an errant hit, or when you want to remove a single hit for musical reasons.

Click on any hit in the waveform graph to edit its play status; it will turn white while it is selected.

Click on the hit to toggle its status between “allow to play” (white checkmark) and “prevent from playing” (red X).

A small white dot at the top of a hit indicates that this onset has been modified.

A pencil icon in the lower-left corner indicates that a hit has been edited on the waveform graph.

Clicking the pencil icon will remove all edited onsets.

Only one onset at a time can be selected for editing.

NOTE: You can edit as many onsets as you like, but if you find yourself editing the same hit type throughout the entire song, we recommend using the Detection section rather than repeatedly editing a hit.

8 HORIZONTAL ZOOM

A slider next to the magnifying glass icon is used to set the time range displayed on the graph.

Range: 2.5 sec to 30 sec, Default: 7 sec

9 LEARN

The Learn function will automatically select the hit types that will be targeted, as well as calculate the threshold and trigger shift values. When Learn is pressed, the plugin displays an animation to indicate it is learning.

We strongly recommend using the Learn function, even if you intend to edit some of the hit types manually or individually.

> Detection times may vary, since InTrigger waits five seconds after the loudest detected hit to conclude learning. If the drum hits in that period are relatively stable, it will finish learning quickly and you will see the results. If, however, the drum hits vary in velocity/volume, the learning process may continue a bit longer.
> Usually, a learning scan takes about five seconds.

Learn provides an excellent starting point and in most cases, it detects and displays all needed Trigger values.

Detection Section

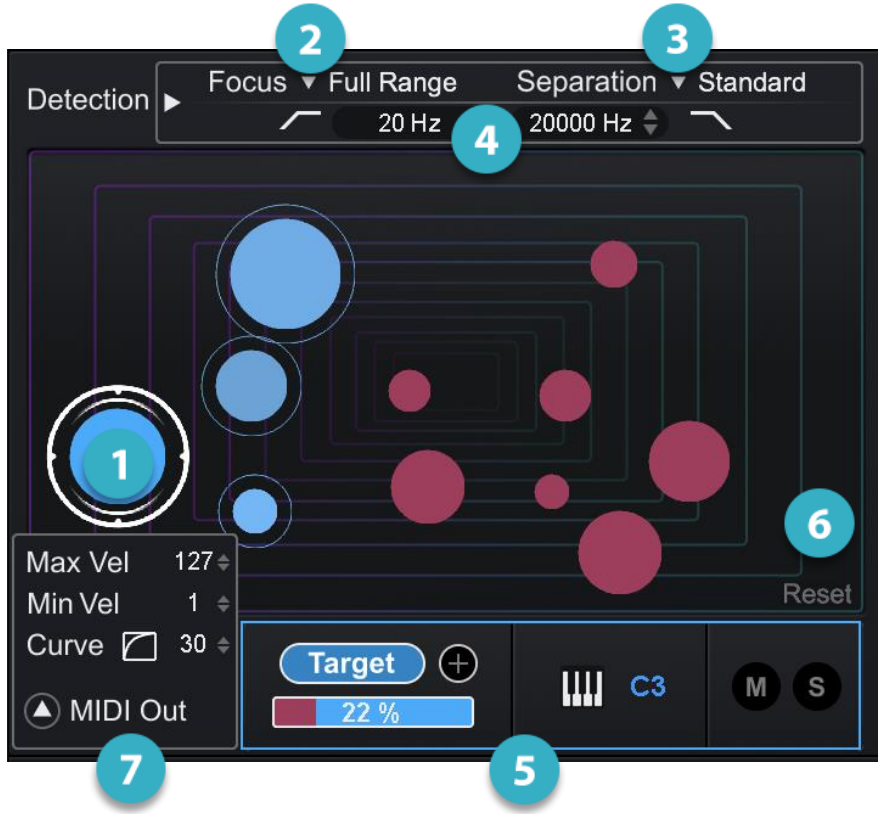
The display visualizes all hit types and allows control over them. The incoming hits are ranked by frequency, velocity, amplitude, and other attributes to categorize them into different circles on the Detection display. The Target is identified by the solid white Target icon surrounding it.

Some of these dots will play (blue) and others will not (red). This is determined by their similarity to the target, the target scope (%), and any manual edits you may perform.

Similar hits will be closer together in the cluster. Louder hits will be bigger.

The detection section outputs MIDI both to the internal sampler and outside the plugin (for an external sound generator).
When no target is selected, the detector will trigger all hits that pass the threshold.

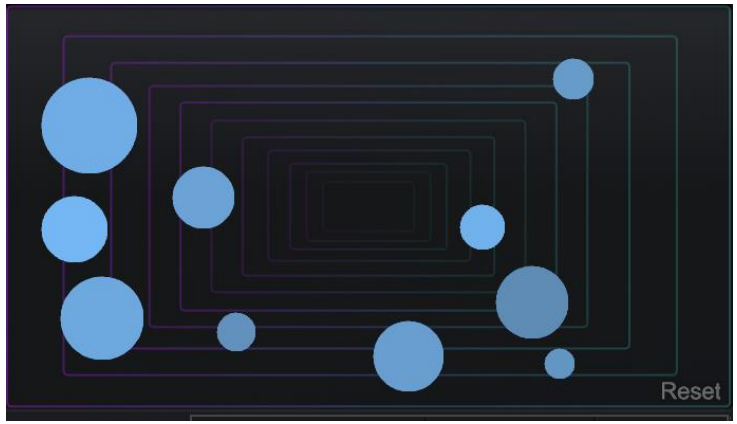
MIDI settings are available in the MIDI Out menu.



1 Detection Display

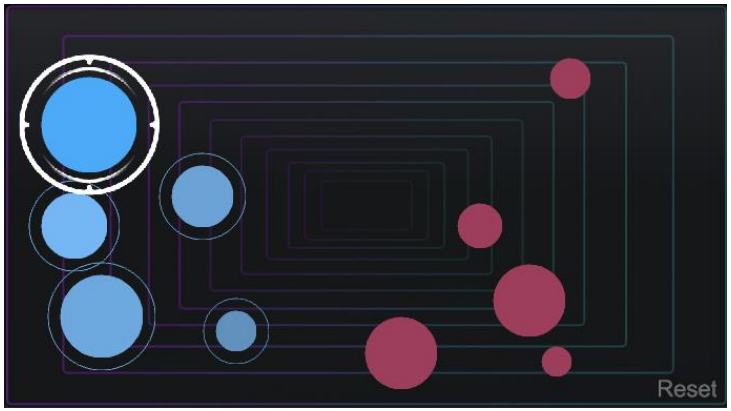
Let's have a look at how the detection graph behaves before and after setting a Target:

Before



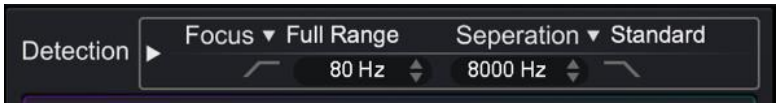
In this state, a Target has not been chosen in the Detection section.
Here, all onsets are blue, which means that all hit types create a trigger.

After



Once you assign a target in the Detection Section, all hits in the Target Scope will appear in the display as blue.
Hits outside the Target Scope will not play, even if they are above the threshold. These hits are red.

2 DETECTION FOCUS



Sets the frequency range that the detector will focus on when splitting up the hit types.

At Full Range, it is listening to the entire spectrum. Mid Range focuses on drum sounds such as toms and congas, while High Range focuses on hit types such as cymbals or hi-hats.
In most cases, Full Range is the best choice. Use Mid Range or High Range if you are looking for a specific kind of hit.

3 SEPARATION

Adjusts tolerance. Higher Separation keeps hits more distinct and creates more circles; lower Separation merges hits which results in fewer hit types. When set to Low, there is less distinction between the hit types, so fewer dots are generated. As settings get higher, differentiation between types is increased—there are more hit types and greater resolution. As the number of hit types increases, use the Target scope control in the hit type menu to include only the desired hit types.
The default Separation setting is Standard, which works well in most scenarios.

> Note: Changing settings for Focus or Separation resets the detection.
> Make sure audio is playing in order for the hits to show up in the Detection.

4 LOW-PASS/HIGH-PASS FILTER

You can adjust the frequency range of the audio feeding into the detection stage, in order to filter certain hit types from showing up in the detection graph.

While this is not usually needed, it can help can remove some congestion from the Graph window (e.g., in case you are seeing a lot of hit types for hi-hats, for example).

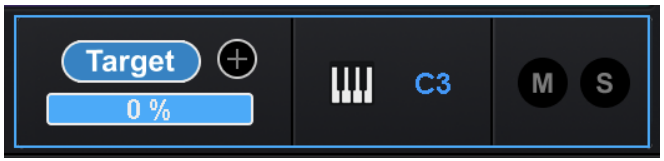
The High-pass and Low-pass buttons turn their respective filters on or off. Click and drag the value to adjust it.

High-pass range: 20 Hz to 500 Hz

Low-Pass range: 1000 Hz to 20,000 Hz

> **!** Turning a filter on/off will reset the detection. Please ensure audio is still playing for the hit types to show up in the detection display.

5 HIT TYPE MENU

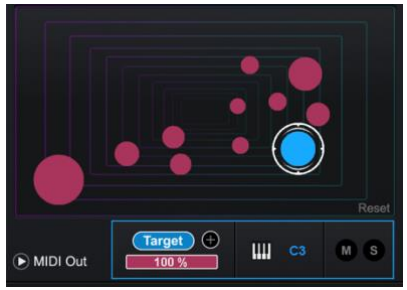


The Hit Type panel displays the state of a selected hit type, and allows you to make these adjustments:

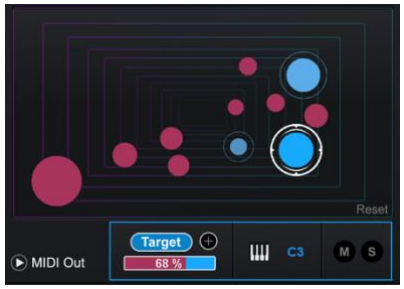
- Assign or reassign a Target
- Adjust the influence of the Target on nearby hit types
- Change the output MIDI note of the hit type
- Add a hit type to the Target group
- Mute or Solo a hit type

To select a Target, select the hit type (represented by one of the circles) and click **Target**.

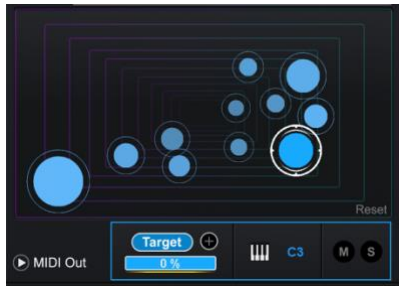
Use the Slider (beneath the Target button) to determine how many hit types will be in the Target Scope:



100% - Only the Target is in the group.



68% - More hit types join the Target group.



0% - All hit types are in the Target group.
When using higher separation values, some hit types might still be excluded (even at 0%).

Hit Type MIDI Note

You can select which MIDI Out note will be sent to any external instrument (like a Drum Synth or a Sampler).

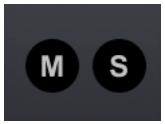
For example, let's say you have a Sampler with the Snare drum set to the note D2. Scroll this value until you see the note **D2** marked in the selection box.

From now on, every time the selected hit type triggers, the plugin generates a D2 MIDI Note and triggers the Snare drum on the Sampler.

Range: C-2 to G8

Default: C3

Solo and Mute



Press the M button to prevent the hit type from generating MIDI.

Press the S button to preview the hit type while silencing all others.

6 Reset button

Clears all hit types in the Detection section and restarts the process.
Remember to keep your drum track playing for the detection phase to pick up the hit types properly.

7 MIDI OUT PANEL

These controls adjust the overall MIDI behavior:

- Maximum MIDI Velocity: Generated MIDI will not pass above this value.
- Minimum MIDI Velocity: Generated MIDI will not dip below this value.
- MIDI Velocity Curve: Adjusts how the source dynamics are translated into the generated MIDI velocity.

  0 = Linear, 100 = upwards exponential, -100 = downwards exponential, Default = 30

Sampler Section

InTrigger allows you to assign up to eight Samples to be triggered.

In the Sampler section, you'll find all the essential controls for each Sample Layer—from setting the order in which the samples are played, to changing the sound and/or character of each Sample Layer.

1 LAYER ON/OFF

Click the blue bar button on the left to enable or disable the Sample Layer.

2 SAMPLE BOX

- The **Trigger** Indicator lights up in white when the sample is triggered.
- The **Sample Name** appears below the Waveform.
- **Remove** erases the sample from this layer.
- **COSMOS** shows the sample search results in COSMOS for this Sample Layer.
- **Load** opens the Browser window to load any sample from any location on your PC/Mac.
- **Phase Flip** inverts the phase of the sample (when in Stereo, inverts *both* left and right channels).

3 TUNE

Shifts the pitch of the sample by +24 (2 octaves up) or -24 (2 octaves down) semitones.

To fine-tune the pitch, check the CR8 expanded section at the bottom of the screen.

4 PAN

Sets the location of the sample in the Stereo Field

Range: -45 = Left, +45 = Right.

5 VOLUME

Sets the gain for the Sample Layer.

Range: -60 dB (inf.) to +12 dB.

6 SOLO

When enabled, only the selected sampler will play.

7 DELAY

Adds up to 25 milliseconds of delay to sample playback.

8 HUMANIZE AMOUNT

Follows the source material's amplitude and tone while adding randomization to the sample's pitch.

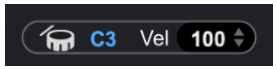
Fine-tune the settings in the Humanize panel above the Sample Layers.

9 LAYER PLAY MODE

Changes the play order of the layers.

- Play All: Plays all Sample Layers in unison every time a trigger is sent.
- Sequence (Round Robin) mode: Layer #1 plays on the first trigger, Layer #2 plays on the second trigger, and so on. Reset Sequence allows you to restart the sequence from Layer #1.
- Random: Every time a trigger hits, a different Sample Layer will play.
- Velocity: Triggers samples, based on intensity. Layer #1 is the strongest (highest Velocity values) and #8 being the weakest (lowest velocity values). This mode does not allow changing the assigned note to any note other than C3.

PREVIEW PANEL



- **Preview**: Sends a trigger to the Sample Layers in a specific MIDI Note and Velocity. This allows you to test your current Sample Layer configuration.
- **Note**: Selects the MIDI Note that will be sent to the Sample Layers section.
  Each Sample Layer can be set to trigger according to a different MIDI Note in CR8's Expand section (below).
- **Velocity**: Sends the trigger to the Sample Layers at the specified velocity value. This is a good way to check that lower/higher Sample Layers are playing as they should in the Velocity Play Mode.

10 HUMANIZE

When **Humanize** is engaged, the samples in the layers will be slightly modulated to achieve a more human-like performance. The modulation is applied to the pitch, volume, and tone of the played sample and is separated into two controls.

- **Random**: Adds variation to the samples' pitch and velocity. Default: 30
- **Follower**: Matches all sample layers Amplitude and EQ curves to that of the incoming audio track:
  For example, if the Snare in your Drum Track is short, Follower will play your Samples while matching the dynamic characteristics of that short snare in a way that 'mimics' the source audio.
  Default: 85
- **Humanize On/Off**: Click the Humanize label to enable or disable this feature.

11 LINKED CONTROLS

Click and drag the link icons to control the same parameter across all inserted layers (Volume, Delay, and Humanize).

12 COSMOS

Click the COSMOS button to open an instance of COSMOS Sample Finder. COSMOS scans the sample folders you choose and uses AI categorization and tagging to help you find the right sample for each purpose. From this window, you can drag and drop samples into any of InTrigger's sample layers (or double-click any sample name) to load into the selected sample layer in InTrigger.

To learn more about COSMOS, please visit the COSMOS product page.

Internal CR8 Sampler

Missing Sample Files

When you load a preset, InTrigger searches for the samples referenced by the preset in their original location. If the sample files are not where the preset expects them to be, you will be notified, as shown on the left.

Most often, “lost” samples are caused by moving the sample or folder, or by sharing presets with other users without saving the samples as well.

CR8 provides three ways to find and load these files and link them to the preset.

1	Click the Manual Find button (available only when CR8 section is expanded) and navigate to one of the missing files.
2	Check the “Locate All” box and CR8 will find and load the relevant samples in this folder. These files will be linked to the preset, so the next time you save it, the samples will load.
3	Use COSMOS Sample Finder to search for the samples in your scanned folders. Learn more about COSMOS at the end of this user guide.

CR8 Controls

CR8 is made up of four views: a **Sampler** view for adjusting the sample length and loop, a **Zones** view for determining how samplers interact with the generated MIDI; a **Mixer** that displays essential controls for each sampler; and a **Modulation** panel for controlling modulators and envelopes and assigning modulators to CR8 controls.

Sampler Selection Tabs

Move between the samplers with the tabs at the top. You can select a sampler from any view.

1. Layer tab
2. Solo
3. Remove layer
4. Layer On/Off
5. Add/Duplicate layer
6. Zones tab
7. Mixer tab

Sample Layer

This is where each sample can be defined, shaped, and modulated.

1 **Expand/Collapse CR8**

2 **Waveform Display**
Start marker, end marker, fade-in and fade-out controls

3 **Sample Controls**
Set sample characteristics

4 **Filters Section**
Filter and shape each sample

5 **Select Modulator or Envelope Editor**

6 **Modulator/Envelope Editor Section**
This panel changes depending on the Selector choice

7 **Collapse Modulator Section**
Click a modulator or ADSR selector to expand

Waveform Display

Use the waveform to set the start, end, and loop locations.

Setting Start and End Times

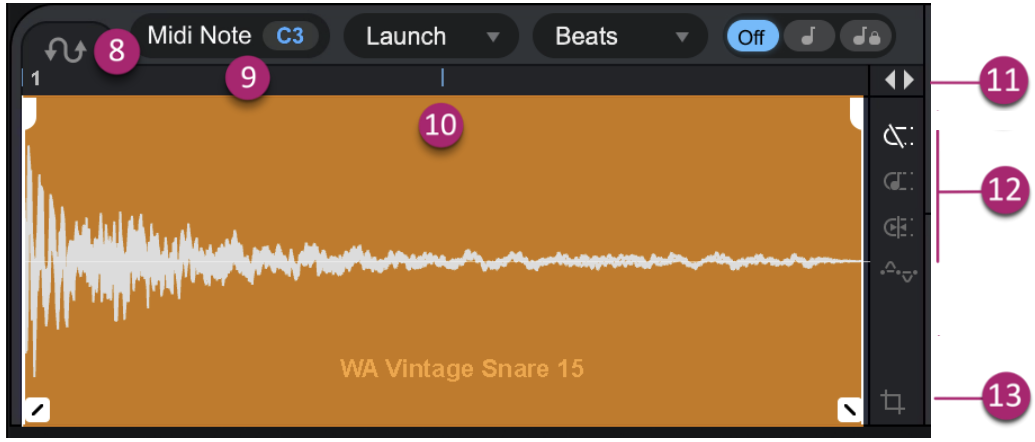
1. **Start Marker**
   Drag the marker to adjust playback start.
2. **Fade In**
   Drag this marker to create a fade in that begins at the Start Marker.
3. **End Marker**
   Drag the marker to adjust playback end. In Loop mode, the End marker is the Loop End marker.
4. **Fade Out**
   Drag this marker to create a fade out that ends at the End marker. In Loop mode, this marker controls the crossfade.

Defining a Loop

Click the Loop button to enable looping

5. **Loop Start Marker**
   When the Loop button is On, the Loop Start marker defines the beginning of the loop. Alt+click on the Start marker and it will become the Loop Start. The End marker is the end of the loop.
6. **Crossfade**
   In Loop mode, the fade-out icon becomes an “x” that controls the crossfade between the Loop Start and End markers. You cannot control the crossfade from the Loop Start.
7. **Loop Area**
   This blue line identifies the loop area. Drag anywhere in this area to move the loop position without changing its length.

Other Controls



8 SWAP SAMPLES

Click the tab in the upper-left corner to keep sample parameters when a new sample is added.

This includes markers, sample controls, filters, modulators, and ADSRs. It does not include Sample Gain, Key, BPM, or an un-synced Loop Length that is dependent on Sample Length. A blue frame indicates the Swap Samples mode.

9 MIDI Note

Each Sample Layer can be set to trigger according to a different MIDI Note.

10 RULER

Drag up or down on the Ruler to zoom. Drag the Ruler horizontally to pan left or right. If you cannot move horizontally, it's likely that you're looking at the entire sample.

11 GRID OFFSET

Repositions the grid without affecting playback.

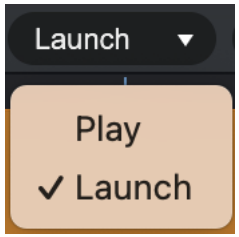
12 SNAP MODE

Sets grid snap-to behavior: no snap, snap to beats, snap to transients, snap to zero crossing.

13 CROP

Removes unused segments from the Sampler (i.e., audio outside the Start and End markers).

Playback Controls



PLAY MODE

This drop-down menu sets the playback behavior of a sample once a trigger is received.

Play: In this mode, the sample's playback length will be affected by the Onset Gate's Hold control and CR8's ADSR-1. Enables Loop and Freeze buttons.

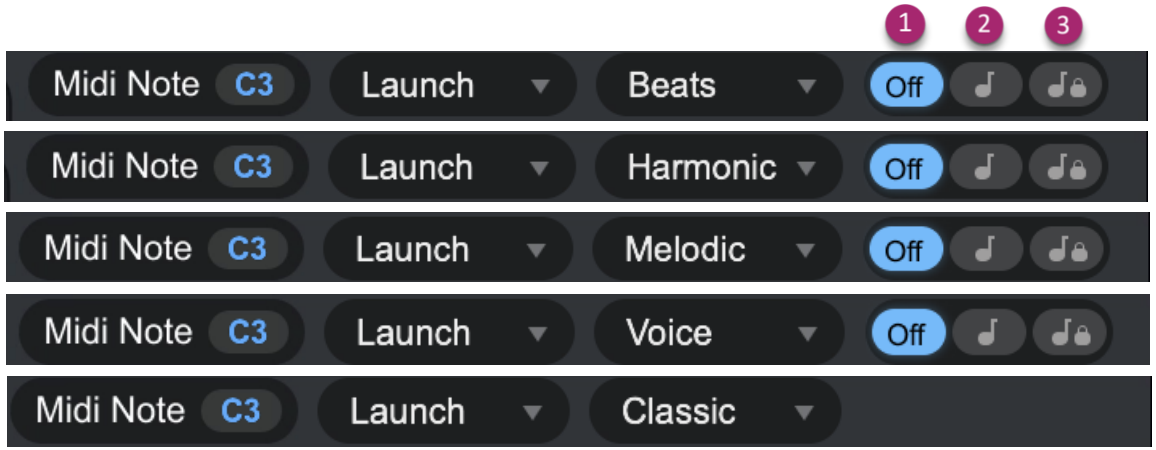
Launch (one-shot): In this mode, the sample is played in its entirety, from beginning to end. Loop and Freeze buttons are disabled.

Schemes (Stretch Algorithms)

Use this drop-down menu to choose how to time-stretch and pitch shift a sample. For the cleanest results, the time-stretching scheme should suit the content of the sample. You may need to try more than one scheme to achieve the best results.

Beats	Use this scheme when preserving the transients of the sample is more important than preserving the sustain. Examples are drum loops and other percussive samples. The transients of the samples are kept in their position, while the audio between them is stretched up or down without further intervention by the algorithm. When stretching or pitch shifting to extremes, a short silence may occur before the transients.
Harmonic	Use this scheme on complex samples. It works works well on guitars, pianos, synths, strings, etc., and can also handle monophonic sounds.
Melodic	This scheme can successfully stretch and pitch shift melodies in monophonic instruments like bass, saxophone, or vocals. Because of the detector's accuracy, Melodic has a Flat switch, which forces the internal pitch changes in the sample to a single note.
Voice	This scheme is extremely useful for (you guessed it) human voice. Voice uses the same pitch detector as Melodic. It provides formant correction for pitch shifting that is less than two octaves up or down.
Classic	When there is no need to preserve the original length of the file or to sync it in time, choose the Classic scheme for simple sample rate conversion. There is no time stretching—as the pitch shifts up, the sample plays faster/shorter, and vice versa.

Sync and Voice Controls



1. SYNC ON/OFF
   When Sync is Off, the sample plays at its original speed (disregarding host BPM).
2. SYNCED TO HOST
   The sample playing speed is adjusted to fit to the host BPM (works with the analyzed BPM of the sample).
3. SYNC LOCK
   This works like Synced mode, with the addition that when a note is played to the sampler, CR8 waits for the next Beat (1/4 note) from the host before triggering it. This ensures that the sampler is always in sync with the host.

Sampler Controls Panel

Use this panel to adjust the pitch and tuning, tempo, playback behavior, and output signal characteristics of the current sample.

GAIN

Drag over this value box to adjust the gain of the current sample. When a sample is loaded, it is normalized to 0 dBFS. The value box shows how much gain offset was required to reach 0 dBFS. To reset this value to 0 dB, hold opt (Mac) or Alt (Windows) and click on the value box. *Range: -36 dB to +36 dB*

ROOT

Root is the center MIDI Note of a sample—the point at which no pitch shifting will occur.

Click the clef sign next to the value box to automatically set the Root to the pitch suggested by CR8's detector. Note that some files may have more than a single pitch or may be too complex to analyze.

Default Value: C3
Range: C-2 to G8

BPM

Sets the BPM of the sample for the time-stretching algorithms, adjusting the sample length to fit whole bars. The initial value is derived from a BPM analysis algorithm. Click the metronome icon to apply the analyzed BPM to the sample without adjustments.

Tune

Transposes the pitch of the sample in semitones. This control can be modulated.

Range: -24 semitones to +24 semitones

Fine

Used to fine tune the pitch (in cents). *Range: -100 cents to +100 cents*

Looping On/Off (only available in 'Play' mode)

Enables looping of the sample or a defined region of the sample. When Loop is On, the Loop Marker and Loop crossfades are visible. The sample will play from the Start marker, reach the End marker, and then loop between the Loop Start marker and the End marker.

Loop Length

Use the value box to adjust loop length (in musical notation), based on the sample/host BPM. When Loop is Off, Length Sync and Loop Length are disabled. *Range: 1/64T to 8 bars*

Length Sync

When the Note button is On, the Loop Length is determined by the host BPM. When Length Sync is Off, the length is determined by the sample's own BPM, as analyzed in the BPM setting.

Speed and Direction Controls

SPEED/OFFSET

Sets the speed at which the sample is played. When Freeze is On, the Speed control is replaced by the Offset control. Turn this knob back and forth to scrub the cursor and determine the Freeze point of the sample.

Range: ±64x sample's native playback speed

X2 *Multiplies the selected speed value by 2*
:2 *Divides the selected speed value by 2*

For synced samples, use the x2, and :2 controls to stretch the sample while keeping it in sync. This is not available in Classic algorithm mode.

FREEZE ON/OFF

Pauses the sampler's play head on a certain segment.

REVERSE ON/OFF

Sets the direction of play (start to end or end to start). When reversed, the sample starts playing from Sample End to Sample Start. When, in addition, Loop is on, the sample plays from Sample End to Loop Start.

SEE SAW

The sample plays back and forth. When Loop is Off, the sample will reach the End marker and then play in reverse until it reaches the Start marker and stops. When Loop is On, the sample will play back and forth within the Loop region.

Image and Volume Controls

Use **Width** and **Pan** to control the stereo image of the sample.

Width controls the size of the stereo image.
Range: 0 (mono), to 1 (sample's natural width), to 2 (very wide stereo image)

Pan *controls the position of the sampler in the sound image.*
Range: -45 to +45

Volume controls the playback volume of the sample.
Range: -inf to +12 dB

Filter Section

Filter On/Off

When off, the filter section is bypassed.

Filter Type

Sets the filter type.

Range: Lo-Pass, Hi-Pass, Band-Pass and Peak (only resonance)

Filter Slope

Sets the order of the filter.

Range: 12 dB or 24 dB per octave

Cutoff

Controls the filter cutoff frequency.

Range: 20 Hz to 20,000 Hz

Resonance

Controls the amount of filter resonance. Higher settings boost frequencies near the cutoff frequency.

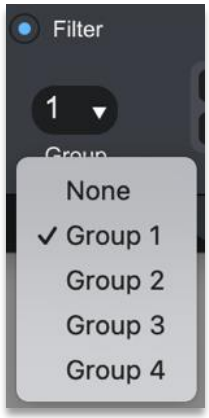
Range: 0 to 100

Drive

Controls the amount of overdrive added to the filter signal.

Range: 0 dB to 36 dB

Filter Groups



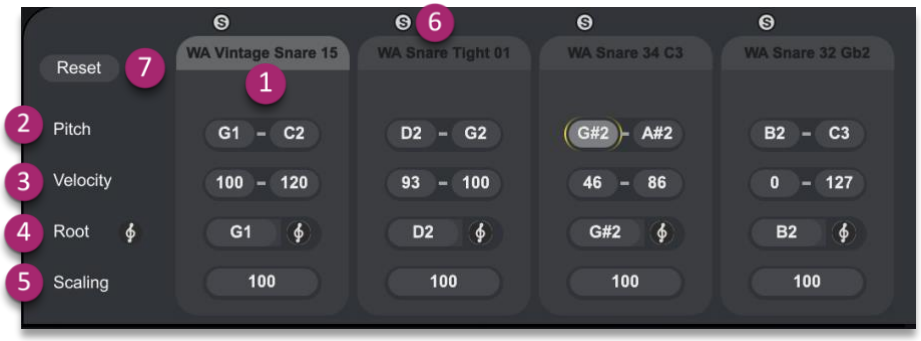
Groups link Filter controls across samplers. When filters from more than one sampler are assigned to a group, their filter parameter controls will move together. This lets you simultaneously control filter settings for several samplers simultaneously.

To create a Filter Group from scratch, follow these steps:

1) Select a sampler, adjust its filter settings as needed, and assign the sampler to a filter group.
2) Assign other samplers to this new group. The filter settings of the first member of the group (from step 1) will be copied to additional samplers as they are assigned to the group.
3) From this point on, any filter parameter changes made to any group member will be duplicated in all other members of the group.

Once a group is established, assigning a sampler to it applies the group's filter settings to the new sampler. All filter controls, including modulator assignments and depth, are controlled with the group.

Sampler Zones Controls



These controls are used to define the range of notes that will trigger the sampler.

1	Sample Name	Abbreviated sample name (10 characters).
2	Pitch	Range of MIDI Notes that will activate this sampler. This is illustrated by the width of the zones on the graph.
3	Velocity	Determines the note velocity values that trigger the samplers. This is represented by the height of the zones in the graph.
4	Root	Sets the note that will be the center point of the sampler's pitch. Click the clef sign on the sampler to reset the Root to the pitch suggested by CR8's detector. Click the clef next to the Root title (left) to automatically set the suggested pitch for *all* samplers at once.
5	Scaling	Defines the amount of pitch shifting that occurs while playing above or below the Root note. When scaling is set to 100%, (default) the pitch shifts by one semitone for every key on the keyboard. When scaling is set to 0%, there is no pitch shifting from the keyboard, and all the notes play the same pitch. Values greater than 100% increase the pitch shifting by more than one semitone per key. A value of 200% results in one whole tone per each key. Values less than 0% create an inverted scale, where the pitch decreases as you play higher keys.
6	Solo	Only this sampler will play.
7	Reset	Returns the Pitch and Velocity settings for all samplers to their default values. (Pitch=C-2 to G8; Velocity=0 to 127). As a result, all samplers play on every note.

Mixer View

The Mixer view provides a side-by-side overview of the critical controls of each sampler.

In the Mixer view, you can control several samplers in one view and link the controls.

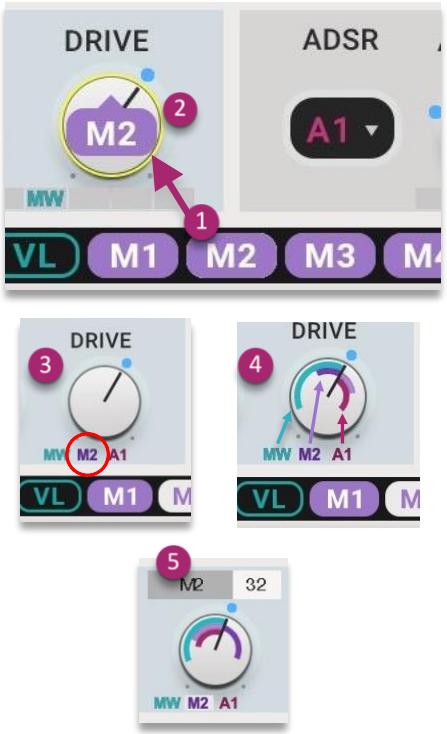
Hold the Shift key on your keyboard and click each of the controls you want to adjust together. The controls will move as a group until you click elsewhere.

Modulating the Controls

The CR8 section of InTrigger offers several ways to modulate most of its controls. There are four LFO/Sequencer modulators, four ADSR envelopes editors, and five MIDI keyboard modulators. Click any “M” or “A” button at the bottom of the screen to access the Modulation/Envelope section. To collapse the section, click the small arrow next to the A4 Modulator button.

There are two ways to assign a modulator to a control:

Drag a Modulator onto a Control



1. **Grab and move** a modulator’s label. The controls that are available for modulation will be highlighted.
2. **Drop** the label of the modulator onto any available control. In this example, M2 is being assigned to the Drive control. Once the modulator is dropped, it will appear in a modulation slot below the control. Each control has four modulation slots.
3. **Click and drag vertically** over this populated slot to adjust the modulation depth.
4. A small arc inside the modulated control knob indicates the applied depth for each modulator. The arcs are color-coded to match the modulator label. A dot outside the knob moves in real-time to indicate the knob position while modulated. It reflects the sum of all modulators assigned to the knob.
5. **Hover** over a modulator slot to see its numeric value.

Select a Modulator From a Control

You can also assign a modulator directly from a control. Click on a modulation slot—whether empty or populated—to open a list of available modulation sources. Select the desired modulator.

To remove a modulator assignment, select None.

Modulator Types

Click any of the “M” or “A” buttons at the bottom of the screen to access the Modulator/ADSR section. To collapse the section, click the small arrow next to the A4 button.

MODs 1–4

These modulators can be set to LFO or Sequencer. You can determine their Rate and Shape, and decide how they are triggered.

ADSR 1– 4

These act as traditional envelope modulators that are triggered by incoming notes. Note that A1 is normally connected to the gain of the internal oscillators and the noise generators, as they control the opening and shutting of synth voices.

Velocity (VL)

Applies modulation by the velocity value of any incoming hit type.

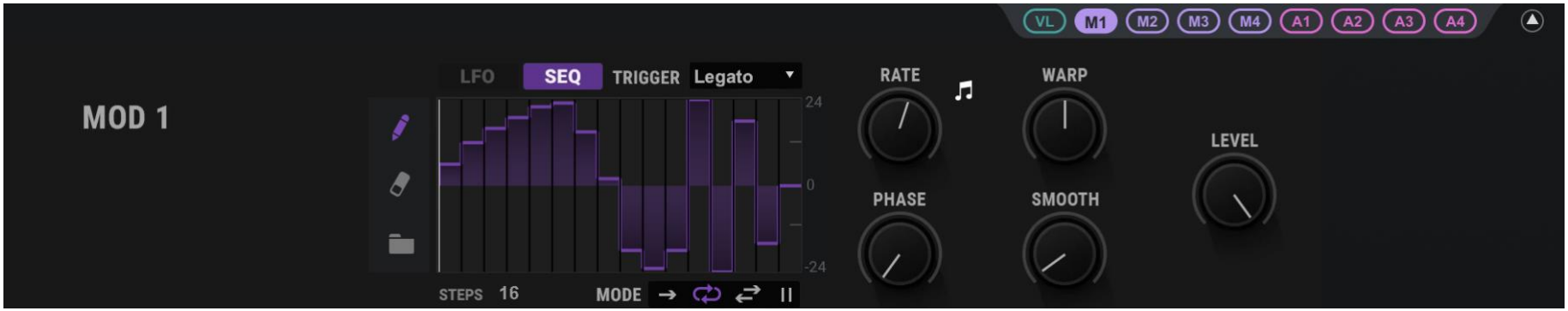
Frequency Response (FR)

Applies modulation according to the frequency content of your Drum Track. Lower frequency content (like kick drums) will generate lower values, while Higher frequency content (like hi-hats, snares, etc.) will result in higher values.

Amplitude Modulation (AM)

Applies modulation according to the strength of the incoming signal—stronger hits will generate higher values, while softer hits will generate lower values.

Modulators: LFOs and Sequencers



Type

You can change the behavior of a modulator by switching it between **LFO** and **Sequencer**. Most of the controls remain the same, but certain behaviors are different, depending on the Type selection.

The sequencer's values are quantized to whole numbers between -24 and +24. They represent semitones when the modulator is assigned to **Tune** or **Frequency** when the modulation depth is set to 100%.

When LFO is selected, Rate determines the time it takes to complete a full cycle. In Sequencer, it determines the time to complete a single step.

Shape Controls

There are several ways to shape the modulator:

Draw Mode (pencil) allows you to manually draw the shape you want.

Erase resets the currently loaded shape to **None**.

Click on the folder icon to **Browse:** a factory library of LFO shapes and sequencer patterns, depending on the current Type. Click a shape to replace the one you're currently using.

SAVE (DISK ICON)

Click disk icon (next to the trash can) to save the current user-drawn modulator shape to an empty cell. User shapes appear in blue. Factory shapes are purple. You can manage and access the saved shapes in the following locations:

Mac: /Users/Shared/Waves/Plug-In Settings/ORS Modulators

PC: C:\Users\Public\Waves Audio\Plug-In Settings\ORS Modulators

DELETE (TRASH CAN)

Click the Trash Can icon, followed by the user shape you wish to delete. You cannot delete factory shapes.

LFO TRIGGER

Determines when the modulator resets its position. It has five states:

Sync locks the modulator to the host. It syncs to BPM, as well as transport position.
ReTrigger resets the modulator every time a new note is received.
Legato resets the modulator whenever a new note is received, unless another note is already playing.
Poly triggers a new modulator per voice for each new note. When patched to polyphonic destinations (e.g., the internal synth controls), an independent modulation will be applied to each voice.
Free sets the modulator to be free running—never reset.

PLAY MODE

Sets LFO playback characteristics. Select a playback mode from the MODE panel.

One Shot: the modulator completes a single cycle and stops running.
Loop: the modulator plays continuously in a loop.
See Saw: the modulator moves back and forth within its cycle.
Hold: the modulator pauses at its current location. You can use the Phase control to alter its relative position.

STEPS (*ONLY IN SEQ MODE)*

Determines the number of sequencer steps.
Range: 2 steps to 16 steps

RATE

Sets the rate of the modulator. Display units and range are dependent on the Rate Sync setting.
Range: 0.06 Hz to 30 Hz or 1/64 bar to 8 bars

RATE SYNC ON/OFF

Toggles the Rate knob values. When On, the rate of the LFO is calculated by the host BPM and displayed in musical notation. When Off, values are displayed in Hz.

PHASE

Controls the starting position of the modulator.

WARP

Warps the speed of the modulator but keeps the overall timing of the cycle. When Warp value is lower than 1, modulation will start at a slow pace and increase its speed toward the end of the cycle. When set above 1, the pace is fast at the start and then slows down at the end. Essentially, this is applying pulse width modulation on the cycle of the modulator.

Range: 0.1 to 100 (a value of 1 is linear)

SMOOTH

Applies smoothing to the modulation curve. Low settings result in distinguishable onsets and may result in clicks. High settings smooth the overall modulation curve, and in some settings may result in very low energy.

Range: 1 ms to 1000 ms

LEVEL

The overall level of the modulator. When the Level of a modulator is set to 0, no modulation takes place.

Range: 0 to 1

Envelopes: ADSR 1–4

Four traditional ADSR envelopes triggered by incoming notes provide control over the Attack, Decay, Sustain, and Release of a note and its curves.

ADSR values can be adjusted with the control knobs or by dragging the ADSR graph.

Attack

Sets the attack time of the ADSR envelope.
Range: 0.1 ms to 10,000 ms

Decay

Sets the decay time of the ADSR envelope.
Range: 0.1 ms to 10,000 ms

Sustain

Sets the sustain level of the ADSR envelope.
Range: 0 to 1

Release

Sets the release time of the ADSR envelope.
Range: 0.1 ms to 10,000 ms

Curve

(available for Attack, Decay, and Release)

Sets the curve of the time function. A setting of 1 results in linear behavior. Values lower than 1 yield exponential curves. Values higher than 1 display logarithmic behavior. Range: 0.1 to 10

> **Pitch and Frequency Modulations**
> When any modulator is assigned to a pitch or frequency-related control (e.g., Tune, Cutoff) and the modulation depth is set to 100%, maximum movement will be precisely two octaves up and two octaves down.

Other Controls

Legato On/Off

Determines whether to reset or continue the envelopes when playing samplers.

Legato Off: Each note retriggers a new ADSR and all of the samplers attached to it.

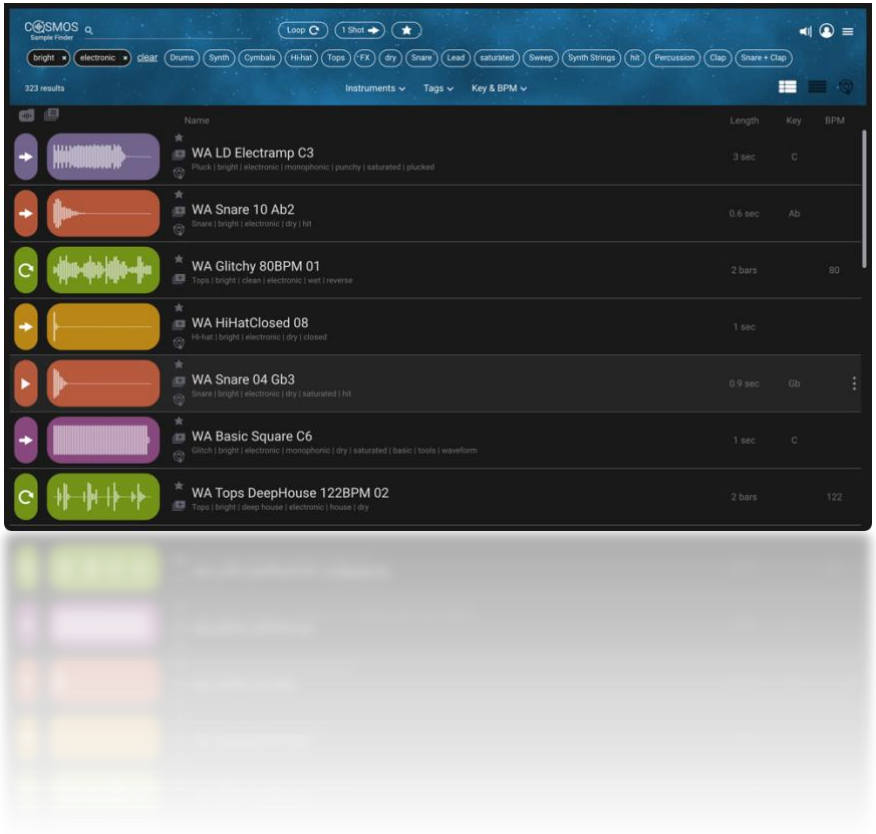
Legato On: While holding more than one note, new notes join the ADSR and sample positions without retriggering.

Velocity

Determines how a hit type's velocity affects the ADSR. A velocity setting of 100% means that the ADSR will have the same dynamic behavior as the keyboard. If set to zero, every note will exhibit the same velocity, regardless of how it is played.

Range: -100% (inverse velocity correlation) to 100% (complete correlation)

COSMOS Sample Finder



To experience InTrigger Drum Replacer at its best, combine it with the COSMOS sample finder. Together, they help you find, audition, and load samples in your session. COSMOS automatically classifies the recorded instruments and creates sample-specific search criteria. One click on a sample in COSMOS and it's loaded in CR8, along with its metadata.

To learn about COSMOS, download the COSMOS User Guide from the Waves Manuals page.

InTrigger - Live Component

The live component of InTrigger is suitable for processing at live shows or events. To achieve this, we've made a few changes:

- Plugin Latency: 0 ms
- Detection Latency: 1.5 ms
- Only the Threshold is responsible for generating Triggers (as the Learn function and Detection graph are unavailable)
- Sample section has 4 layers (instead of 8)
- CR8, COSMOS integration and MIDI OUT have been disabled
- Editing of individual hits is disabled

For best results in live scenarios, we recommend using Acoustic Drum Triggers as a source instead of microphone input.