DRUM REPLACER

Software User Manual

Software Version 1.2

EN 210601

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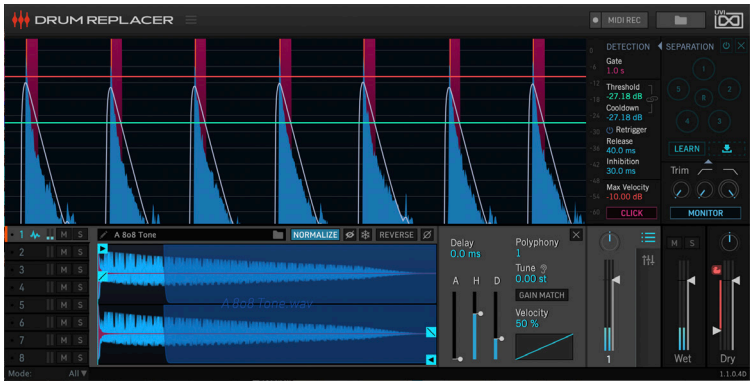
Introduction



DRUM REPLACER
INTELLIGENT DRUM TRIGGERING

OVERVIEW
Drum Replacer is a realtime, program-adaptive, drum replacement and processing utility, providing effortless audio component separation and triggering with a sophisticated feature set and elegant workflow. With Drum Replacer you can easily remove bleed from drum recordings, replace drums in a mix with your favorite samples or VSTi, add sub-bass, layer existing drum sounds, and more.

WORKFLOW
Utilizing machine learning-based analysis with realtime separation, Drum Replacer will examine and intelligently parse an incoming audio signal into discrete components Selected elements are then fed into a detection circuit to trigger up to 8 internally-hosted audio samples or virtual instruments simultaneously, sequentially, or randomly.

EASE OF USE
Drum Replacer was designed to provide users a sophisticated end result with minimal effort. Analysis, detection, and track customization can all be done with only a few clicks, making it easy to master and implement throughout your projects; integrated browsers with favorites combined with comprehensive preset support for all or individual tracks help make the most of your time.

MACHINE LEARNING
Drum Replacer works uniquely by using machine learning to create spectral models for each discrete sound it detects during analysis. This allows it to produce very accurate component isolation - with gain and velocity tracking - in realtime, opening up many new avenues for processing in mixing and remixing environments.

ANALYSIS
Analysis can be made at any time to the incoming audio signal by clicking 'LEARN', or from any audio file by way of drag-and-drop. Once analysis is complete, components are split and ordered numerically by overall energy level (numbered 1-5, greatest to least) with a remainder component designated as (R). Components will flash within the UI as they're triggered, making them easy to identify on-the-fly. They can be individually muted, and their sum can be further processed by way of trim, low-pass and high-pass filters, before being sent through to the outputs or into the detection engine.

TRIGGERING
Triggering is managed with the large central analyzer, and control panel immediately to its right. Prior to analysis this display shows the aggregate input signal, but once an analysis has been made it displays only the currently selected components - allowing you to easily focus on and fine-tune triggering to specific elements in a mix.

DETECTION
Configuring detection is straight-forward; set the Threshold (green line) so that it's triggered by the initial attack, and adjust the Cooldown (blue line) to prevent unwanted retriggering. Gate duration can be manually set in milliseconds, and note velocity range by way of Max Velocity (red line).

Detection creates a note trigger sent internally to all 8 tracks in Drum Replacer. Initially, changes to detection settings will be inaudible (until you've loaded a sample or VSTi), but enabling 'CLICK' will output a placeholder sound to help while you dial-in the desired response.

8 LAYERS
Drum Replacer comes with 8 tracks that can be loaded with either audio samples or your own virtual instruments. A built-in browser helps you to easily find local sounds and plugins (conveniently organized by maker). For quick access to your preferred samples and plugins, simply toggle the 'Star' icon to add them as favorites.

SAMPLE AND VSTI HOSTING
Both sample and instrument tracks provide basic mixing controls (level, pan, and lp/hp filter), velocity, and custom track naming. In addition each track has a configurable delay offset that allows you to adjust timing positively or negatively, making it easy to achieve perfect sync with the audio source or even pre-trigger your sounds and instruments.

Sample tracks provide an interactive waveform display with adjustable start and end time, sample reverse, phase invert, polyphony, an AHD amplitude envelope, gain matching, +/-48 semitone tune control, while offline pitch matching helps you achieve accurate blending and phase correlation with the source material. Instrument tracks provide access to your plugins' full GUI editors, along with MIDI channel and note selection.

AND MORE
Drum Replacer has extended track triggering options including all, sequential, and random, allowing for dynamic performances by alternating between different user samples and instruments. And to make the most of your time, Drum Replacer has verbose preset support, allowing you to template entire 8-track configurations, or individual tracks that you'd like to reuse in the future.

System Requirements

Compatibility

Audio Units, VST, or AAX

Tested and Certified in :

Digital Performer 8+, Pro Tools 11+, Logic 9+, Cubase 7+, Nuendo 6+, Ableton Live 8+, Studio One 2+, Garage Band 6, Maschine 1 & 2, Tracktion 4+, Vienna Ensemble 5, Reaper 4+, Main Stage 3, FL Studio, Bitwig, Reason 9.5, MuLab 5.5+

Minimum System Requirements

- Mac OS X 10.9 or higher (64-bit)
- Mac Intel supporting the AVX instruction set (Intel Core i3, i5, i7, i9: SandyBridge, IvyBridge, Haswell, Broadwell, Skylake,...) or ARM (Apple Silicon) Processor, 4 GB RAM

Compatibility

VST or AAX

Tested and Certified in :

Digital Performer 8+, Pro Tools 11+, Cubase 7+, Nuendo 6+, Ableton Live 8+, Studio One 2+, Sonar X3+, Maschine 1 & 2, Tracktion 4+, Vienna Ensemble 5, Reaper 4+, Sonar X3, FL Studio, Bitwig, Reason 9.5, MuLab 5.5+

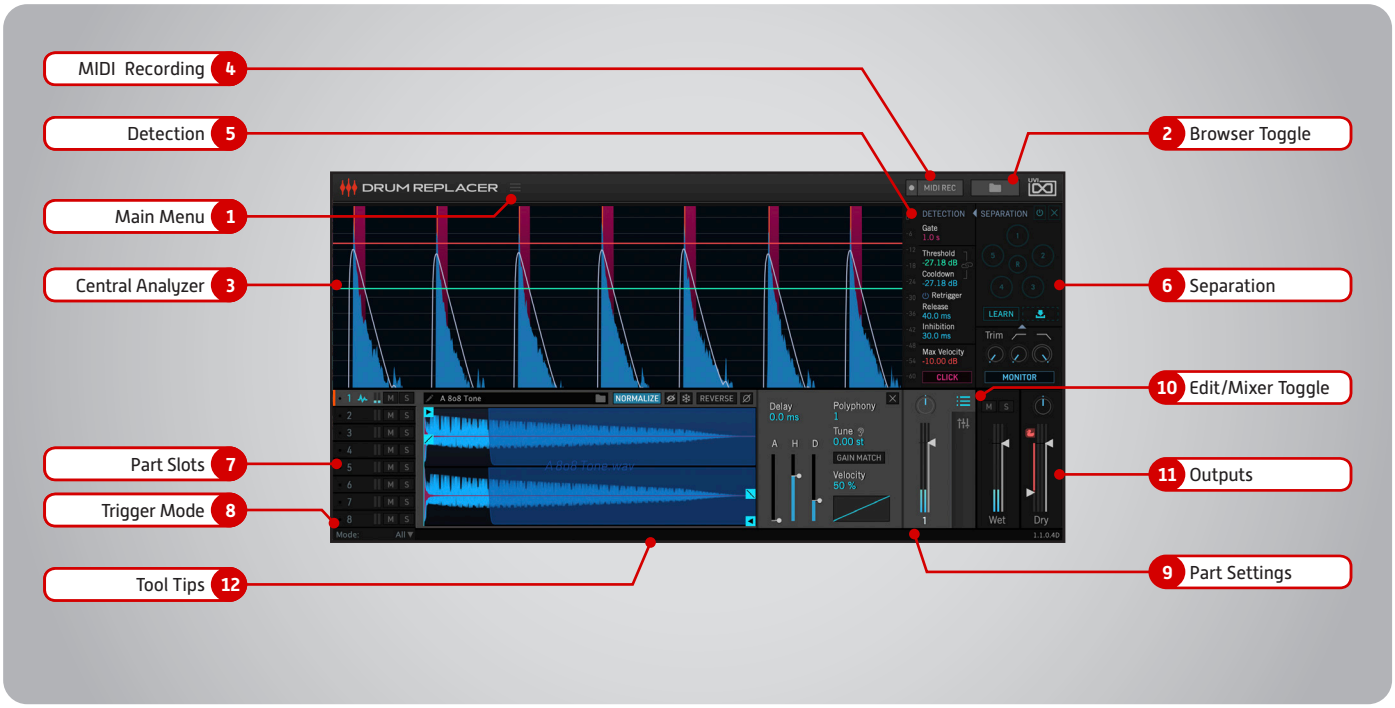
Minimum System Requirements

- Windows 8 or higher (64-bit)
- Intel Processor supporting the AVX instruction set (Intel Core i3, i5, i7, i9: SandyBridge, IvyBridge, Haswell, Broadwell, Skylake,...), 4 GB RAM

Flexible Authorization With iLok

All UVI licenses allow up to 3 concurrent activations on any combination of computer hard drives or iLok USB keys, easily managed through the iLok License Manager (ILok account required).

Interface - Overview



1 Main Menu

» **Load/Save Preset**
Manage global snapshots of all settings

» **Load/Save Preset Slot** [1~8]
Manage snapshots of individual tracks

» **Clear All Slots**
Initialize all tracks

» **Settings**
> See page 13 for detail

2 Browser Toggle

Click to open the built-in browser panel
> See page 8 for detail

3 Central Analyzer

Shows incoming signals in realtime, or loaded source audio, in learn mode. Shows trigger outputs and detection settings in playback mode

» Green line = Threshold level
» Blue line = Cooldown level
» Magenta block = Gate detection
» Red line = Max Velocity

4 MIDI Recording

Record and export trigger outputs as MIDI file
> See page 12 for detail

5 Detection

Trigger detection settings
> See next page for detail

6 Separation

Audio component analysis, separation, muting and activity HUD
> See next page for detail

7 Part Slots

Up to 8 track parts for hosting user samples or VSTi plugins

8 Trigger Mode

All: Trigger the tracks at once
Sequence: Trigger the tracks sequentially
Random: Trigger the tracks randomly
Velocity: Activates tracks based on detected trigger velocity, where the velocity range (1-127) is divided by the number of tracks configured, and allocated to them sequentially from lowest to highest.
For example, with tracks 1, 3, and 5 configured (3 tracks total), velocity will be divided by 3, into ranges of 1-42, 43-85, and 86-127. In this case, a detected trigger within the first range (1-42) will activate track 1, a trigger within the second range (43-85) will activate track 3, and so on.
With only 1 track configured all trigger detections will activate that track.

9 Part Settings

Settings of the selected part
> See page 9 and 10 for detail

10 Edit/Mixer View

Click to toggle between Part Edit, and Mixer views
> See page 10 and 11 for detail

11 Outputs

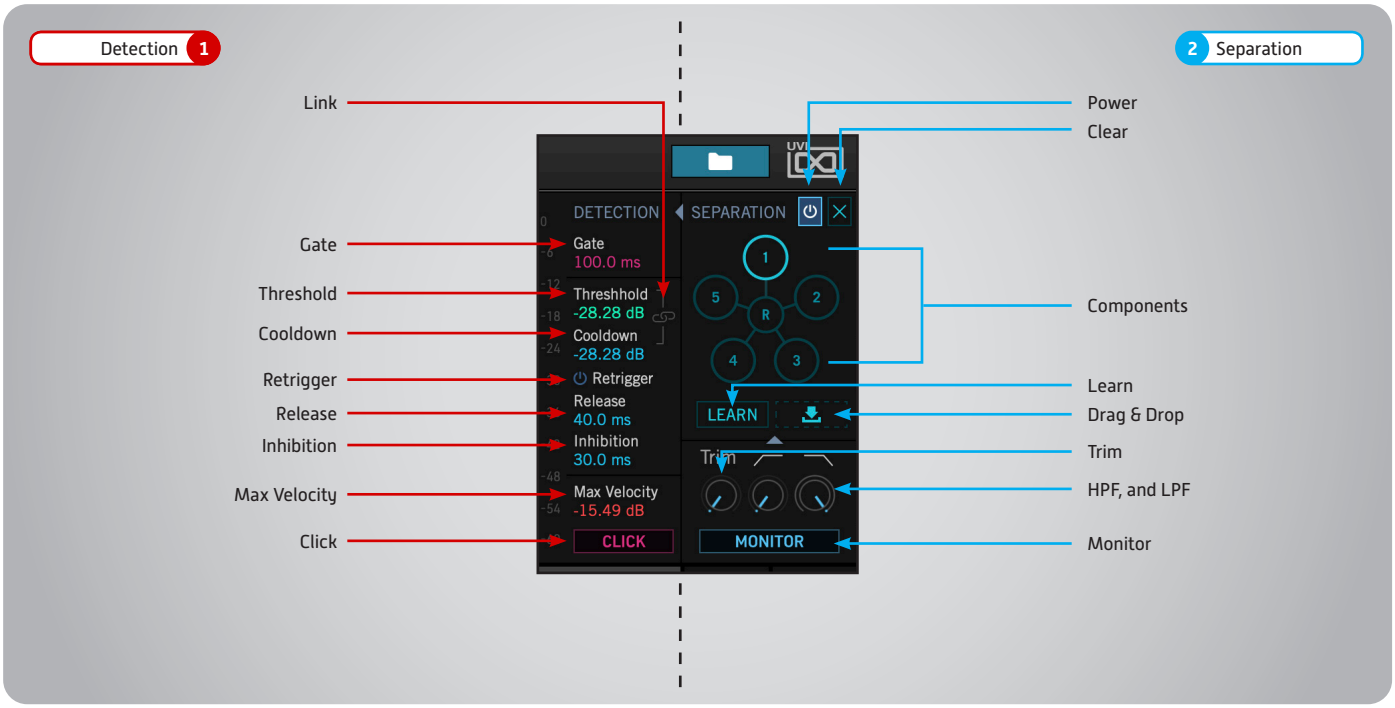
» **Wet**
Set the output level, mute and solo of the Part Mixer

» **Dry**
Pan: set the pan position of the dry signal
Duck: enable/disable ducking, ducks the dry signal level for every trigger event, envelope mode and times can be configured in Preferences
> See page 13 for detail
Duck Amount [slider]: set the gain reduction amount
Dry Level: set the dry signal level

12 Tool Tips

Display instructions for any parameter by hovering over it with your mouse

Interface - Detection and Separation



1 Detection

Trigger detection settings

» **Gate**:
Transient gate processor time

» **Threshold**
Sets the gate onset detection threshold
A trigger event can happen only if the RMS level is above the threshold. The setting is indicated in green line in the Central Analyzer

» **Cooldown**
Set the cool-down threshold, takes effect after a detection, it prevents any further detection until signal has reduced to below cool-down threshold
The setting will indicate as blue line in the Central Analyzer

» **Link**: Link the Threshold and Cooldown level

» **Retrigger**
Allows multiple trigger events to happen while the envelope is above the detection threshold (cooldown is then disabled). This is useful for drum rolls or very fast sequences, but can also detect too much events so use it with care
One can increase the release control to smooth unwanted envelope ripples, or on the contrary lower the release to be more reactive

» **Release**
Set the RMS envelope release time

» **Inhibition**
Sets the minimum time between two trigger events

» **Max Velocity**
Sets the reference RMS level that corresponds to maximum MIDI velocity 127 (MIDI)

» **Click**
Output a placeholder sound to help while setting the desired response

2 Separation

Settings of the Separation of the incoming signal or loaded audio file

» **Power**
Enables separation functions

» **Clear (X)**
Clear the analysis model

» **Components**
1~5: Components splits by analysis, ordered numerically by overall energy level (numbered 1-5, greatest to least)
R: Remainder component
Components will flash within the UI as they're triggered

» **Learn**
Click to enable analysis of the incoming signals, can be committed, paused or cancel while learning

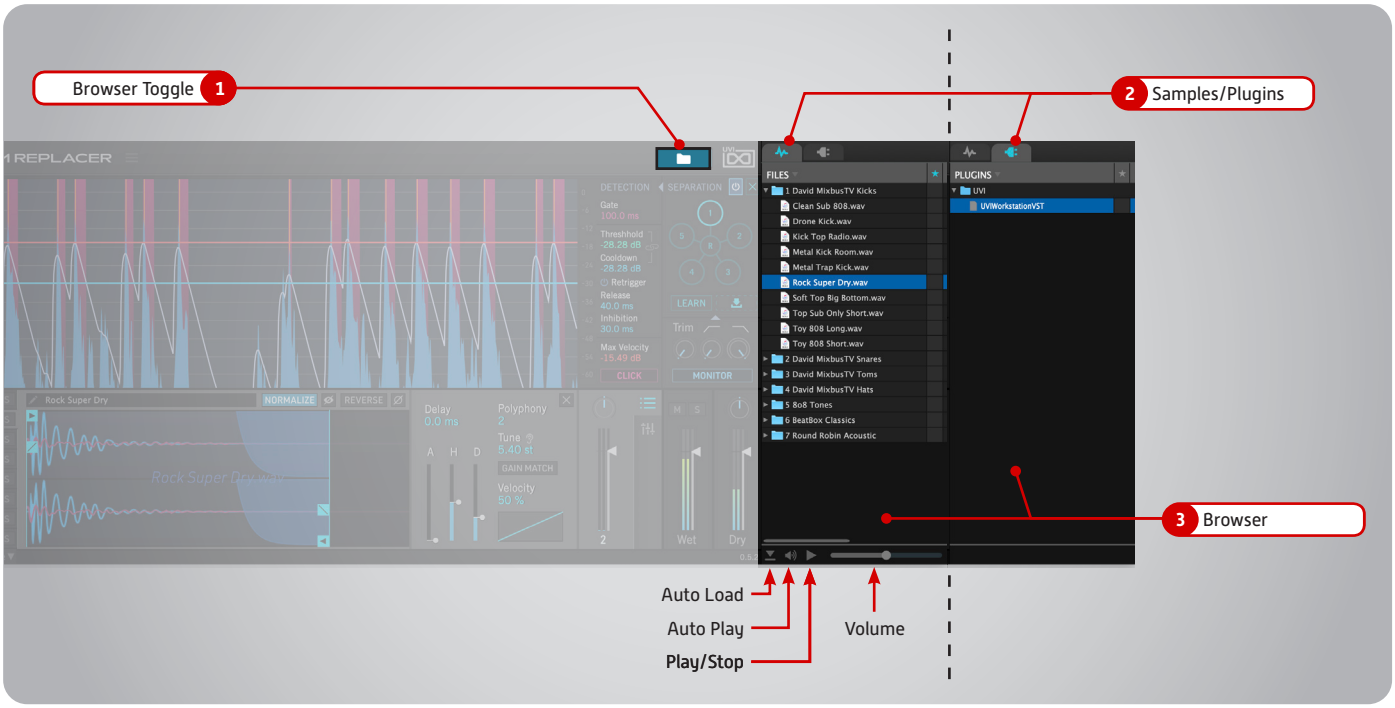
» **Drag & Drop**
Drag an audio file from your DAW or desktop to use for analysis

» **Trim**
Trim increase signal level if input signal is too low

» **High-Pass and Low-Pass Filters**
Improve detection by removing unwanted frequencies

» **Monitor**
Solo the output of the detection stage. Useful to isolate drum components, tune the transient gate time

Interface - Browse/Load Samples or Plugins



1 Browser Toggle
Click to open the built-in browser panel

2 Samples/Plugins Tab
Click the tab to show local samples or hosted VSTi plugins

3 Browser
Files and Plugins are organized into folders, and can be nested as many levels as needed

To click the Star icon to tag the sample or plugin as favorite

The Sample File browser also has some options at the bottom of the interface for quickly auditioning samples and adding them to a program.

» **Auto Load**
Loads samples automatically on selection. This is especially useful when you have already mapped, but would like to replace the sample file.

» **Auto Play**
Auditions samples upon selection

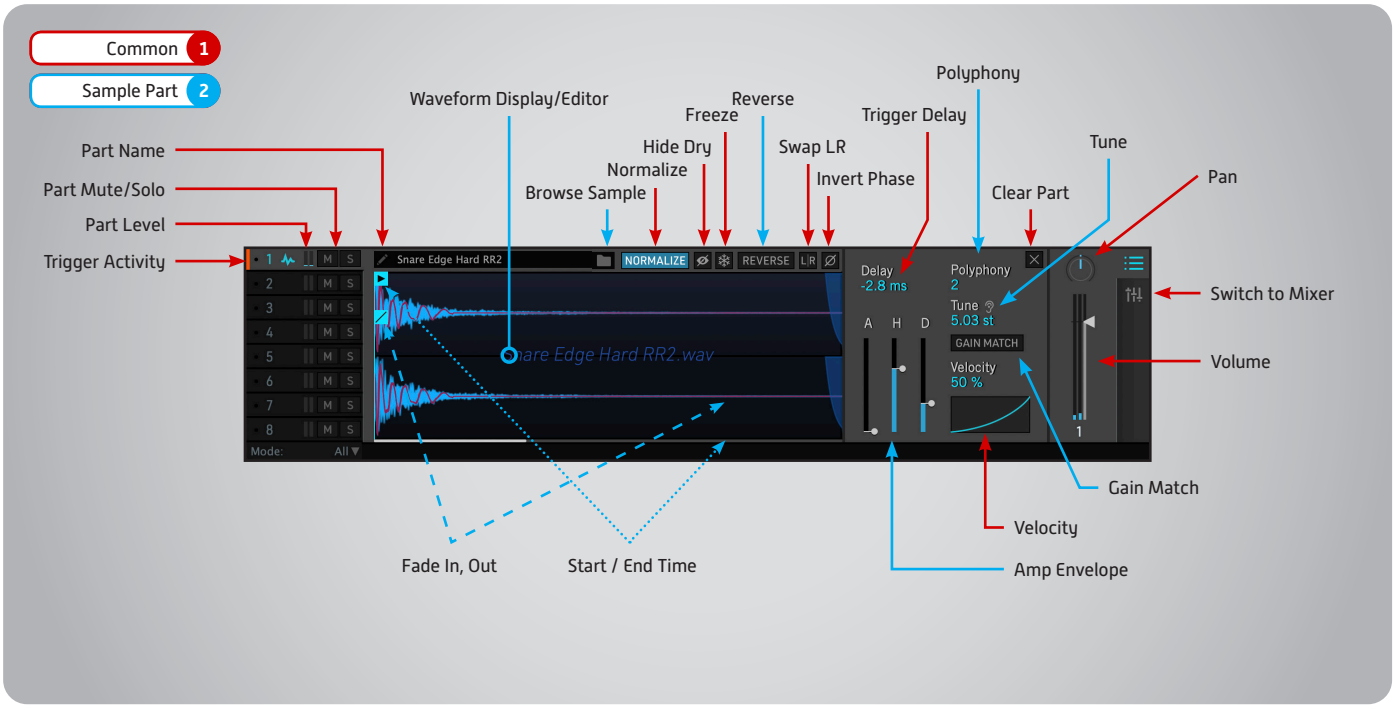
» **Play/Stop**
Start and stop sample playback manually

» **Volume Slider**
Sets the playback level

To load a sample or plugin from the Browser, drag and drop the item to the desired part.

Samples can also be drag & dropped directly on parts from the desktop or media browser of some DAWs

Interface - Sample Part



1 Common Part Controls

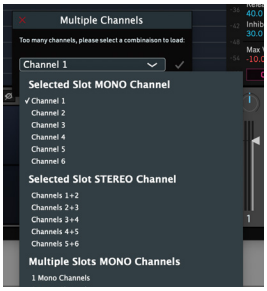
Parameters common all part types

- **Trigger Activity** - Lights blink when the part is triggered
  Click here to trigger manually the sample/plugin
- **Part Level** - Indicates the part output level
- **Part Mute / Solo** - Click to mute or solo the part
- **Part Name** - Display the part name
  Click the pencil icon to rename the part
- **Normalize** - Normalizes the display of the dry signal in the waveview (for easier matching)
- **Hide Dry Level** - Click to hide the source level (red)
- **Freeze** - Freese the display of the dry signal in the waveview (for easier matching)
- **Swap LR (L|R)** - Click to swap the L and R channels
- **Invert Phase (Ø)** - Click to invert the phase of the outputs
- **Clear (X)** - Clear the part
- **Pan** - Set the stereo pan position of the part
- **Volume** - Set the output level of the part
- **Trigger Delay** - Offset the trigger timing positively, or negatively
- **Velocity** - Percentage of part level to be dynamically controlled by trigger velocity
  Velocity Curve: Response curve of trigger velocity (soft, linear, hard)

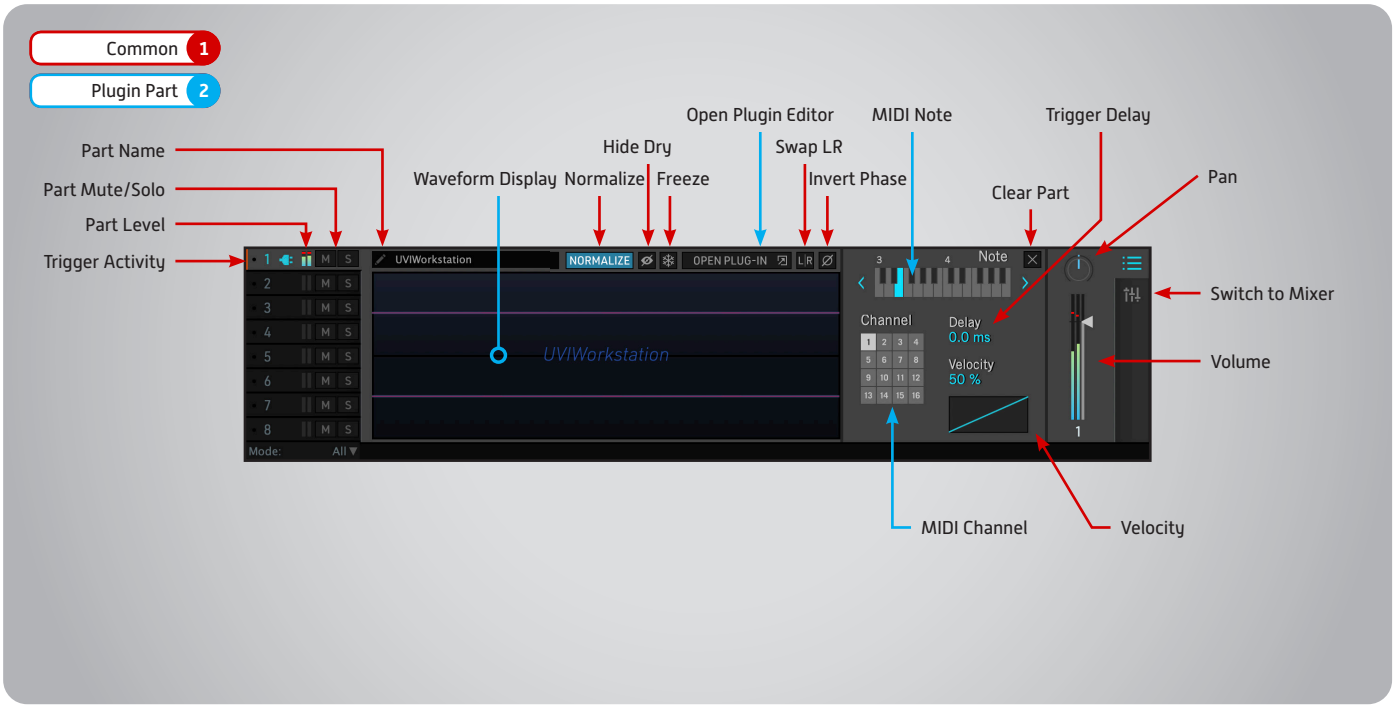
2 Sample Part

Parameters specific to Sample parts

- **Browse Sample** - Open the browser to the sample location
- **Waveform Display Editor** - Displays the Part (blue), and the Source (red), in realtime
  Start Time: Click-drag the left line to set the sample start
  End Time: Click-drag the right line to set the sample end
  Fade In: Shift-click-drag the left line to set the sample fade in
  Fade Out: Shift-click-drag the right line to set the sample fade out
  Zoom: Command-mouse wheel to zoom the display in/out
- **Reverse** - Click to reverse the sample
- **Amplitude Envelope (AHD)** - 3-stage (Attack, Hold, Decay) envelope editor to shape the amplitude
- **Polyphony** - Set the polyphony of the part
  Shift-drag to set the all sample parts at once
- **Tune** - Click the 'Ear' icon to start pitch matching with source component or manually set the pitch at numeric field (+/- 48 semitones)
- **Gain Match** - Click to set the trigger volume match the volume of the detected sound
- **Drag and Drop Option** - If you DnD a sample which have more 2 channels, the option will appears, allows to select only some channels of the sample and/or assign those to different tracks



Interface - Plugin Part



1 Common Part Controls

Parameters common all part types

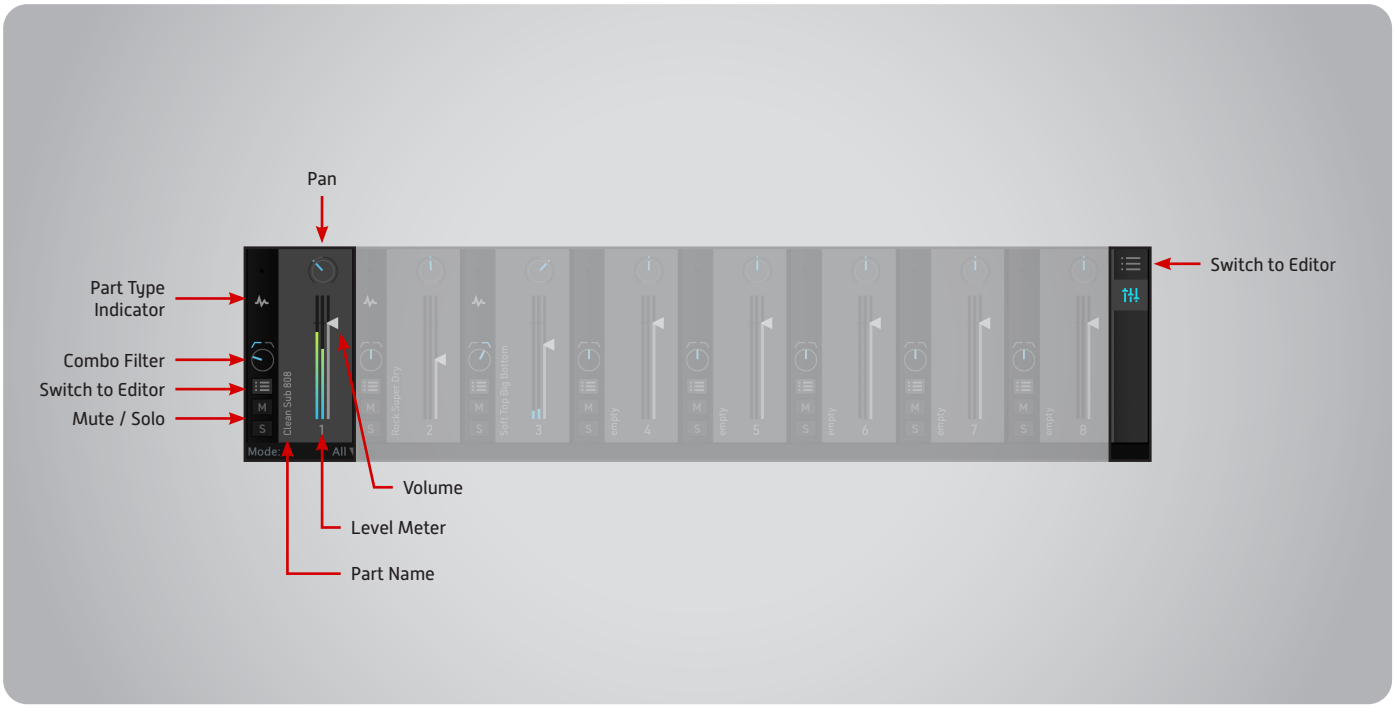
- **Trigger Activity** - Lights blink when the part is triggered
- **Trigger Activity** - Lights blink when the part is triggered
  Click here to trigger manually the sample/plugin
- **Part Level** - Indicates the part output level
- **Part Mute / Solo** - Click to mute or solo the part
- **Part Name** - Display the part name
  Click the pencil icon to rename the part
- **Normalize** - Normalizes the display of the dry signal in the waveview (for easier matching)
- **Hide Dry Level** - Click to hide the source level (red)
- **Freeze** - Freese the display of the dry signal in the waveview (for easier matching)
- **Swap LR (L|R)** - Click to swap the L and R channels
- **Invert Phase (Ø)** - Click to invert the phase of the outputs
- **Clear (X)** - Clear the part
- **Pan** - Set the stereo pan position of the part
- **Volume** - Set the output level of the part
- **Trigger Delay** - Offset the trigger timing positively, or negatively
- **Velocity** - Percentage of part level to be dynamically controlled by trigger velocity
  Velocity Curve: Response curve of trigger velocity (soft, linear, hard)

2 Plugin Part

Parameters specific to Plugin parts

- **Open Plug-in** - Click to open the plugin editor
- **Waveform Display** - Displays the Part (blue), and the Source (red), in realtime
- **MIDI Note** - Set the note on the keyboard display
  Click the cursor buttons left or right of the keyboard to shift the octave
- **MIDI Channel** - Set the MIDI channel to send the trigger to the plugin

Interface - Mixer



1 Part Mixer

» **High and Low-Pass Combo Filter**
A one-knob combo filter, cut lows (left), or cut highs (right)

» **Switch to Editor**
Switch to part Edit view

» **Mute**
Click to mute the part

» **Solo**
Click to Solo the part

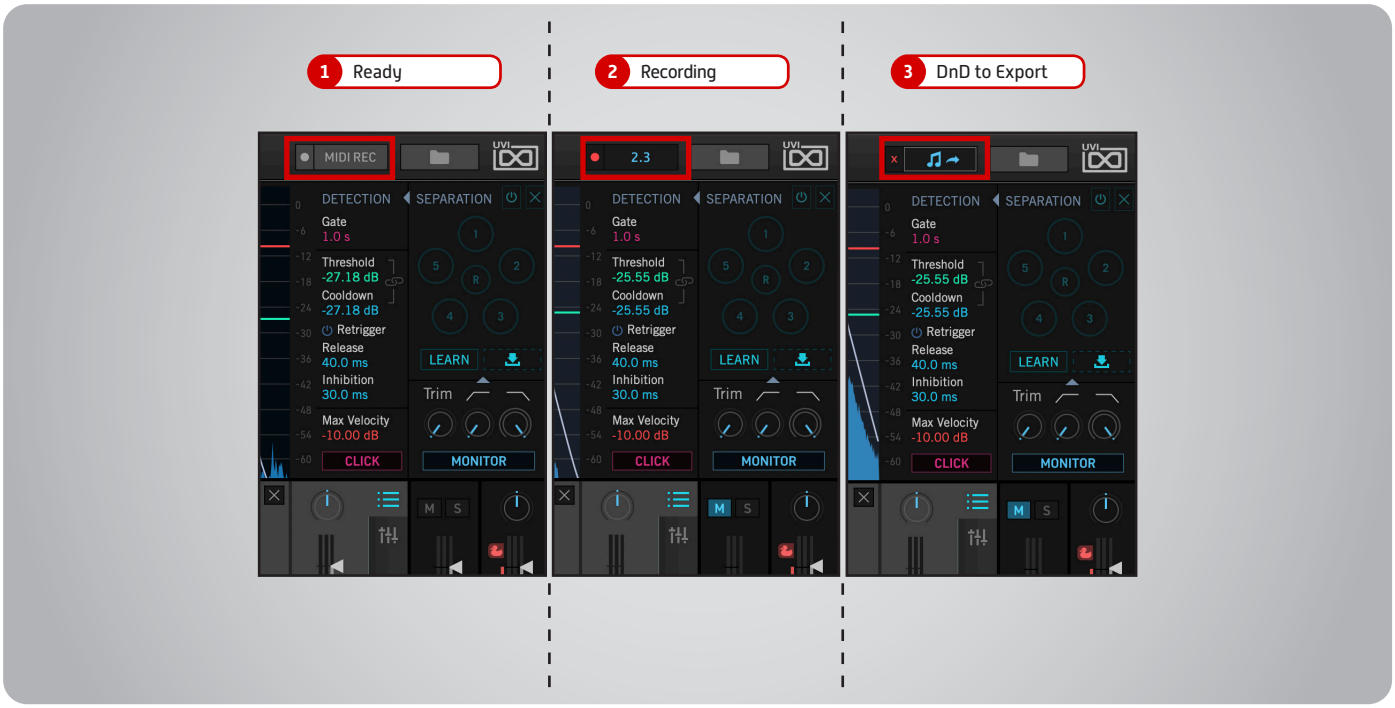
» **Pan**
Set the stereo pan position of the part

» **Part Name**
Display the part name

» **Volume**
Set the output level of the part

» **Level Meter**
Indicates the part output level

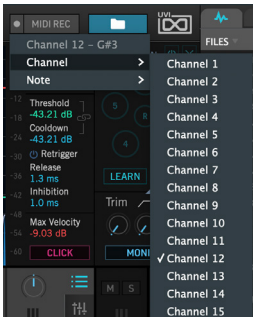
Interface - MIDI Record



1 Ready

The default state

- Click to begin recording
- Right click the button to set the MIDI note and channel



The MIDI note and channel can be configured in the Settings section of Preferences panel

> See Next Page for detail

2 Recording

Recording in-progress

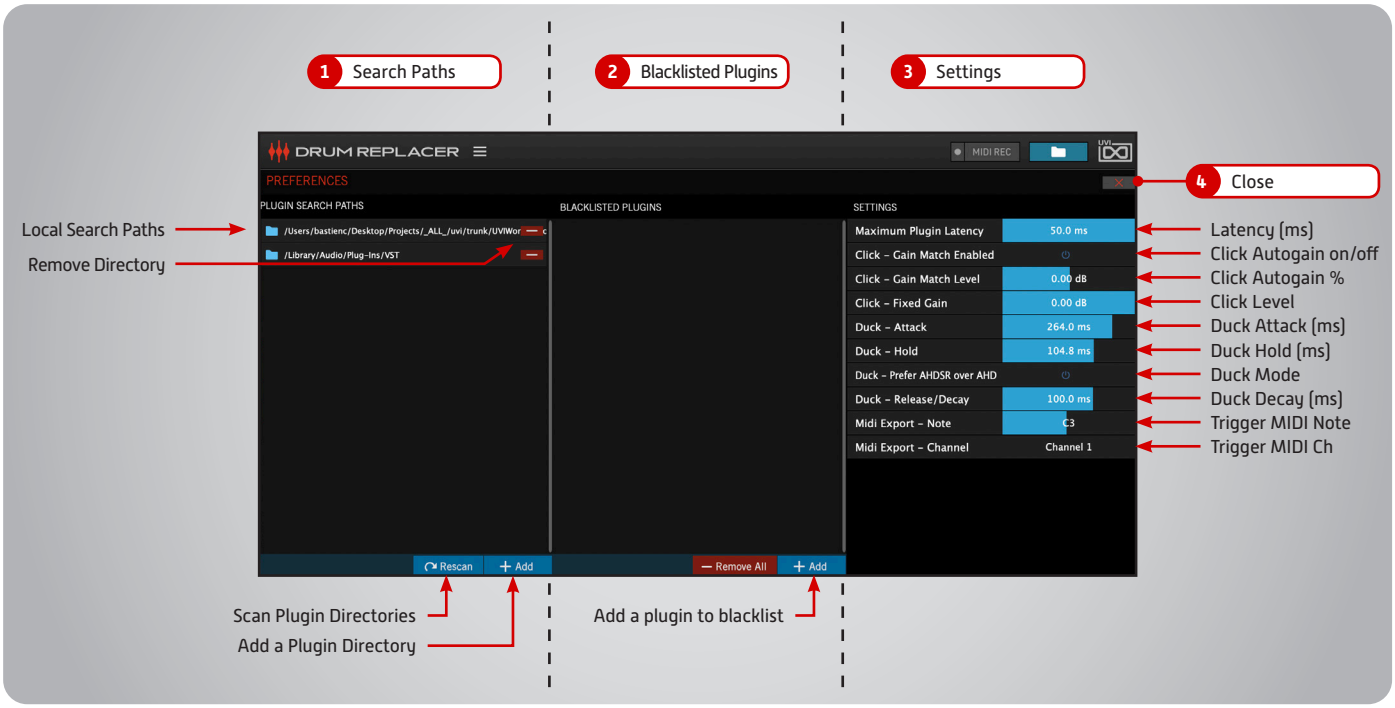
- Displays elapsed time
- Click to stop recording

3 DnD to Export

Recording complete, ready to export

- Drag-n-drop the button to a MIDI track in your DAW, or to your desktop
- Click [X] to delete the recording and reset

Interface - Preferences



1 Plugin Search Paths

Local file paths where Drum Replacer should search for VSTi plugins

» **Add Directory**
Add new local plugin location

» **Remove Directory (-)**
Remove local plugin location

» **Rescan All Directories**
Scan all search paths for VSTi plugins

2 Blacklisted Plugins

A user-manageable list of plugins that should be omitted from the [Browser]

» **Add**
Add a plugin to the list

3 Settings

» **Plugin - Latency (MS)**
Lookahead time (up to 50ms)
Higher values allow for larger negative trigger delay settings at the cost of overall latency

» **Click - Gain Match Enable**
Activate dynamic [Click] volume

» **Click - Gain Match Level**
Set the percentage of [Click] volume to be dynamically set (based on incoming audio level)

» **Duck - Attack**
Set the attack time of dry output ducking

» **Duck - Hold**
Set the hold time of dry output ducking

» **Duck - Prefer AHDSR over AHD**
Switch ducking envelope mode between AHDSR or AHD ('Enabled' for AHDSR)

» **Duck - Release/Decay**
Set the release or decay time of dry output ducking

» **MIDI Export - Note**
Set the MIDI note for realtime output and MIDI recording

» **MIDI Export - Channel**
Set the MIDI channel for realtime output and MIDI recording

4 Close Button (X)

Click to close the panel and return to the main view

Links

UVI

Home	uvi.net/
UVI Portal	uvi.net/uvi-portal
Effect Installation Guide	installing_uvi_effects_en.pdf
FAQ	uvi.net/faq
Tutorial and Demo Videos	youtube.com/
Support	uvi.net/contact-support

iLok

Home	ilok.com/
iLok License Manager	ilok.com/ilm.html
FAQ	ilok.com/supportfaq

DRUM REPLACER

Credits and Thanks

Produced by UVI

Software
Bastien Commelongue
Rémy Muller
Olivier Tristan

GUI
Anthony Hak
Nathaniel Reeves

Preset Design
Louis Couka
Alain Etchart
Rémy Muller

Documents
Rémy Muller
Nathaniel Reeves
Kai Tomita

UVI™

UVI.NET