

Glitch v1.3 Documentation

Introduction.

- [Overview.](#)
- [Main Features.](#)
- [Concept.](#)

Getting Started.

- [Requirements.](#)
- [Hosts.](#)
- [Installation.](#)

General Usage.

- [How To Add Glitch To Your Project.](#)
- [MIDI Learn.](#)

Master Controls.

- [Enable/Disable MIDI.](#)
- [Enable/Disable Transport.](#)
- [Amount.](#)
- [Seed.](#)
- [De-click.](#)
- [Step Envelope.](#)
- [Overdrive.](#)
- [Master Filter.](#)
- [Master Output.](#)

Sequencer.

- [Chosen Effect.](#)
- [Editing The Pattern.](#)
- [Randomise Pattern.](#)
- [Pattern Templates.](#)
- [Pattern Bank + How To Change Patterns.](#)
- [Pattern Length.](#)
- [Pattern Shift.](#)

Effect Controls.

- [Effect Number Tag.](#)
- [Probability.](#)
- [Solo Toggle.](#)
- [Global Toggle.](#)
- [Effect Name Tag.](#)
- [Filter Controls.](#)
- [Output Controls.](#)

Introduction.

Overview.



Main Features.

- Realtime VST plug-in effect.
- 32-bit internal precision.
- 9 adjustable effect modules.
- Stereo panning, dry/wet mix and gain controls for each effect.
- Individual resonant filters for each effect plus a master filter.
- Adjustable length (64 steps max) effects sequencer with 16 custom pattern banks.
- Effects can be sequenced manually or triggered randomly.
- Every main parameter can be automated.
- Most important parameters can be mapped via MIDI learn function.

Concept.

Glitch is a realtime audio manipulation system which allows you to alter your music in a variety of ways ranging from quite subtle to extremely bizarre. It was originally created to help speed up the production of "glitchy" electronic beats, though it is really versatile enough to be applied to a wide range of musical styles. At its heart is a tempo-synched step sequencer which determines the selection of effects that are applied to your music. Effects can be either sequenced manually for full

control over the outcome, selected at random for exciting and unexpected results, or a mixture of both.

When allowing effects to be selected at random, the choices made by the plug-in are determined through a combination of the song's current position in time plus an additional random seed value. In other words, if Glitch randomly generates a specific sequence of effects at 2 minutes and 10 seconds into your song, that sequence will always occur at that particular point in time. This makes the plug-in more predictable and musically useful and allows you to get the same results each time, rather than being at the mercy of a completely random process which may never produce the same results twice. However, this does not mean that Glitch will produce exactly same results in every track you write. You simply have to change the seed parameter to create a completely new sequence of randomly selected effects.

Glitch was designed to be used realtime in the same way that you might apply a delay or filter effect to a channel, but it functions equally well as a tool for sample creation. Apply Glitch to the master channel of your song then bounce the whole thing to disk to create a huge palette of strange new sounds. Load the results into a sample editor, cut out the most interesting parts that you like and export these as new samples. You might find portions which can be looped and used as new backing rhythms for your song, or you might create a new drum kit entirely from weird single-shot sounds. You might even stumble upon a certain sequence or sound which leads you to create a completely new song that you would normally never think about. Used in this way Glitch can be a very useful tool for kick starting your creative flow, even if you weren't intending to use it in the first place.

Additional note:

Although it is easy to get pleasing results simply by allowing Glitch to do all the work for you, it was not created with this purpose in mind and was not intended to be a tool for lazy musicians. If you continuously use it this way you will simply end up with boring, generic results. Like most other plug-ins Glitch has its own characteristic sound - especially on the default settings - and it is very easy to spot a track which has used it under these conditions. The real power of the plug-in comes from using it thoughtfully as an extra layer to your own original creations. If nobody can figure out exactly how you made those crazy sounds in your music, then you're using Glitch correctly!

Getting Started.

Requirements.

- Windows.
 - A VST 2.3 compliant sequencer host.
 - 1024 x 768 display.
 - Memory usage depends on sample rate. (Roughly 32 MB @ 44.1 Khz/48 Khz, 64 MB @ 96 Khz.)
 - CPU usage is relatively low.
-

Hosts.

Here is a list of hosts which Glitch is known to have problems with, or which require a special configuration in order for Glitch to work correctly. If you cannot get Glitch to work in your host then please contact me and mention the host, version number, etc.

Sony ACID Pro 4/5 - [Transport](#) must be disabled in Glitch.

MadTracker 2 - Timing may not be 100% accurate.

Cakewalk Sonar 4 - Using the Cakewalk Adapter, Glitch must be configured as a DXi and then it will show up as a DX Synth rather than an Insert.

Installation.

To install Glitch simply open the zip file you downloaded and extract **dblue_Glitch_v1_3.dll** into your VST plug-ins directory. If you do not know where your VST plug-ins directory is located, please consult the user manual or help file for your chosen music application.

General Usage.

How To Add Glitch To Your Project.

Glitch is a VST plug-in effect - not an instrument - which should be used as a send/insert effect within your host (unless [special circumstances](#) require otherwise). In addition to standard VST parameter automation it can optionally accept MIDI notes and MIDI CC messages to control various functions within the plug-in. In order to function correctly it relies on constant timing information sent from a sequencer host such as Cubase, Renoise, FLStudio, etc., therefore it will not work correctly as an "offline" effect in applications such as SoundForge or Audacity.

MIDI Learn.

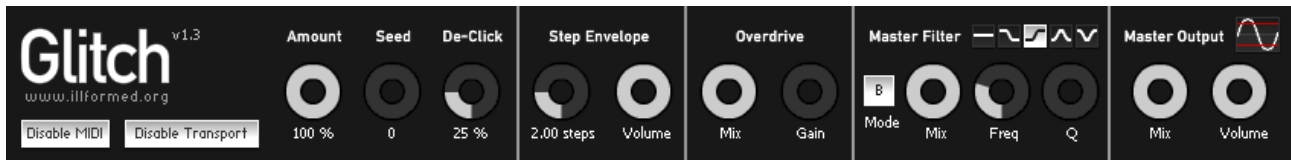
Almost all of the parameters in Glitch can be assigned to MIDI CC using the MIDI learn function. To activate the MIDI learn function you must first right-click on one of the parameters. When MIDI learn is active a white border will appear around the parameter itself, then you must turn a knob (or move a slider, push a button, etc) on your MIDI controller to assign that control to the parameter. When MIDI learn has been successful the white border will disappear and the parameter will begin reacting to your MIDI controller movements.

To clear a MIDI CC assignment you must right-click the parameter once as normal, then right-click a second time to clear it.

The following image highlights the parameters which can be assigned to MIDI CC:



Master Controls.



The parameters and effects located in this upper section of the interface affect the behaviour of the entire plug-in in some way.

Enable/Disable MIDI

Enable or disable Glitch's response to incoming MIDI messages.

Enable/Disable Transport

Enable or disable Glitch's response to the host's transport messages (Stop, Play, etc). Normally this should be enabled but certain hosts such as ACID Pro (which do not correctly report transport messages to VST plug-ins such as Glitch) require this to be disabled in order to work. Disabling the transport will force Glitch's sequencer to run regardless if the host is playing or not.

Amount

(Known as "Overall Probability" in earlier versions of Glitch)

This parameters determines how often a random effect step in the sequencer pattern will actually play a random effect, versus how often it will play the original, unaffected audio. This can provide a convenient way of adjusting the "glitchiness" of a pattern which is based mainly on random effect steps, without actually having to manually re-program the pattern itself. For example, you could automate this parameter from 0% to 100% over a certain period of time in your song, creating a sound which starts off clean then gradually becomes more and more affected by Glitch over time.

Note: This parameter only affects the outcome of random effect steps. Any other effects which you have manually programmed into the sequencer will play normally.

Seed

The seed parameter affects all of the random functions within Glitch. A simple change of the seed can produce entirely new sequences of randomly selected effects, though you do not actually need to constantly change this parameter to get a greater variation of random sounds. One setting is more than enough for an entire song.

De-click

This parameter determines the maximum amount of click removal that can be performed when the sequencer transitions from one effect to the next. On lower settings you may notice pops or clicks in the output as imperfect cuts in the audio are made, whereas on higher settings you may notice that very sharp attack sounds in your music become slightly dull sounding. The default setting is usually enough for most types of sounds but it cannot perform perfectly in every possible situation. It is up to you to find a setting which provides a satisfactory result.

Step Envelope

The step envelope allows you to gradually fade out the volume of each step triggered in the sequencer. It's a very simple effect but it can help to create a more interesting and rhythmic sound. The first parameter controls the length of the envelope - how long it takes to fade out to its final volume level. The **Volume** parameter sets the level which the envelope will fade out to. When volume is set to its maximum amount the envelope will have no effect on the sound.

Overdrive

This applies a simple wave-shaper overdrive effect which can be used to give a general boost in volume, or pushed to the limits for a very distorted sound. **Mix** controls the dry/wet mix of the effect. **Gain** controls the amount of volume gain. A nice way to give your sounds a little more "bite" - especially material such as breakbeats or other percussive sounds - is to set the gain parameter quite high to create some distortion, then set the mix parameter quite low so that only a small amount of the distortion can be heard on top of the original sound.

Master Filter

As the name implies, the master filter is applied to the entire output of the plug-in. The filters themselves are based on the excellent algorithms found in the Audio EQ Cookbook by Robert Bristow-Johnson. **Mode** toggles between two possible modes: mode A where the filters behave in a non-resonant manner, and mode B where the filters behave in a resonant manner. **Mix** controls the dry/wet mix of the filter. **Freq** controls the center/cutoff frequency. **Q** controls the bandwidth/resonance. A quick word of warning: in resonant mode things can get quite noisy very easily, so be careful!

Filter Types:



Off



Low Pass



High Pass



Band Pass



Notch

Master Output

This is the final stage before the plug-in's output is sent back to your sequencer host. Here it is possible to adjust the dry/wet mix of Glitch's final output as well as the overall volume if necessary. It is also possible to select the clipping method used to handle peaks in the output which are too loud (usually introduced by a resonant filter).



No clipping is performed. Peaks will be handled by plug-ins which are positioned after Glitch in the host's effect chain, or ultimately by the sequencer host itself.

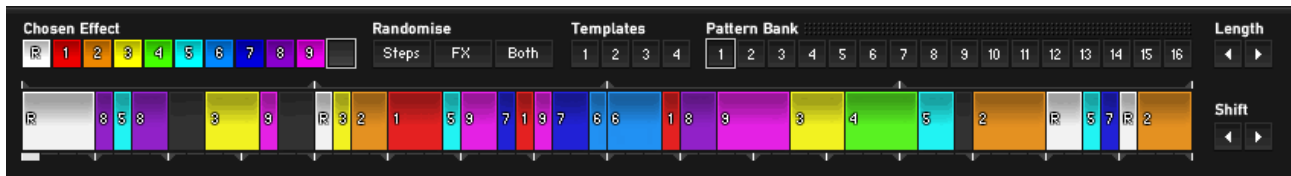


Soft clipping (saturation) is performed. The peaks will be limited by a wave-shaper function resulting in a softer (but still technically distorted) sound.



Hard clipping is performed. Any peaks will simply be cut off, resulting in a more harsh sound.

Sequencer.



Chosen Effect.

Here you can choose the effect to use when editing the sequencer pattern. This is similar to a colour palette - you choose your effect and then "paint" over the steps of the pattern with that effect.



- These correspond to the 9 different effect units.



- Random effect step. A random effect will be chosen based on the [probability levels](#) of each effect.



- Blank step (Previously known as Passthru). The audio will pass through clean/unaffected.

Editing The Pattern.

Left-click a pattern step to paint with the current chosen effect. Use the right mouse button to erase a step. If your mouse has a middle button you can also use this as a shortcut to insert a blank/passthru step.

Randomise.

There are 3 possible methods for randomising the sequencer pattern. **Steps** randomises the position of the steps but does not alter the actual effects, while **FX** randomises the effects but does not alter the position of the steps. Finally, as you can probably guess, **Both** randomises both the effects and the step positions.

Templates.

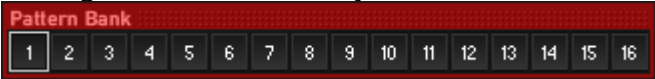
There are 4 simple pattern templates available which can give you a head start on creating your own unique patterns. Clicking any of the four buttons will erase the current pattern and replace it with one of the templates.

Pattern Bank.

The are 16 patterns available which you can customise. To load a pattern simply click on its corresponding number with the left mouse button. It is possible to copy patterns by left-clicking one pattern number, then right-clicking a different pattern number.

Changing patterns via MIDI CC.

To activate [MIDI learn](#) on the pattern number you must right-click on the area which is highlighted red in the image below. Once MIDI learn is active you may assign a controller to it as usual by moving a knob or slider on your MIDI device.



Changing patterns via MIDI notes.

It is also possible to change patterns by sending certain MIDI notes to Glitch:

MIDI Note Number	49	51	54	56	58	61	63		
Note & Octave	C#3	D#3	F#3	G#3	A#3	C#4	D#4		
Glitch Pattern Number	2	4	7	9	11	14	16		
	1	3	5	6	8	10	12	13	15
Note & Octave	C-3	D-3	E-3	F-3	G-3	A-3	B-3	C-4	D-4
MIDI Note Number	48	50	52	53	55	57	59	60	62

Length.

The pattern length can be adjusted between 4 and 64 steps to accommodate different personal styles and time signatures. The length is a global setting which applies to all 16 patterns. Click the arrows to decrease or increase the pattern length one step at a time. For faster adjustments you can left-click and hold the mouse button down, then drag your mouse to the left or right.

Shift.

This function allows you to simply shift all steps in the pattern to the left or right, which can come in handy during editing or when making new pattern variations. Click the arrows to shift the pattern left or right one step at a time.

Effect Controls.

Effect Number.



You can left-click here as a shortcut for setting the [chosen effect](#).

Probability.



Each effect has a probability level which determines how likely that effect is to be chosen by a random effect step in the [sequencer](#). This can be slightly misleading at first because 100% does not actually mean that the effect will then be chosen 100% of the time, it is simply a way of balancing that effect against the others. If all 9 effects are set to 100% it means that each effect then has an equal 1 in 9 chance of being chosen. If retrigger is lowered to 50% and all other effects remain at 100%, retrigger then has a 1 in 17 chance of being chosen while the others have a 1 in 9 chance. If retrigger is lowered again to 25% it then has a 1 in 33 chance of being chosen, etc, etc.

Hint: Drag this parameter up/down to change it.

Right-click to enable [MIDI learn](#).

Middle-click to reset this parameter to its default value.

Solo Toggle.



When an effect is soloed only that particular effect will be triggered by the sequencer - all steps will behave as if they were set to that particular effect. This is useful if you want to preview an effect while adjusting its parameters in realtime. The status of this function gets saved with the current sequencer pattern so it is possible to use it creatively at certain points in your song, turning it on and off from pattern to pattern.

Right-click to enable [MIDI learn](#).

It is also possible to solo an effect by sending MIDI notes to Glitch. The effect will stay soloed for as long as you hold down the note:

MIDI Note Number	73	75	78	80		
Note & Octave	C#5	D#5	F#5	G#5		
Solo Effect Number	1	2	3	4	5	6
Note & Octave	C-5	D-5	E-5	F-5	G-5	
MIDI Note Number	72	74	76	77	79	

Global Toggle.



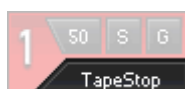
The global effect is applied to the audio after any normal, sequenced effects (or the soloed effect if that is enabled) have been processed, basically allowing you to play 2 effects simultaneously if you wish. The status of this function gets saved with the current pattern in the same way as the solo function.

Right-click to enable [MIDI learn](#).

It is also possible to trigger this function by sending MIDI notes to Glitch:

MIDI Note Number	85	87	90	92		
Note & Octave	C#6	D#6	F#6	G#6		
Global Effect Number	1	2	3	4	5	6
Note & Octave	C-6	D-6	E-6	F-6	G-6	
MIDI Note Number	84	86	88	89	91	

Effect Name.



Right-click on the effect's name tag to randomise all of its parameters. Middle-click to reset the parameters back to their default values.

Filter Controls.



Each effect has its own separate filter which functions in the same way as the [Master Filter](#), although it does not have a dry/wet mix parameter.

Output Controls.



Here you can adjust the stereo panning, dry/wet mix and gain levels of the effect. The gain parameter goes up to 200%, allowing you to raise the overall volume of the effect past its normal level if you need to.

Credits & Acknowledgements.

Original C++ VST SDK by Steinberg (<http://www.steinberg.net>)

Original VST SDK Delphi translation by Frederic Vanmol (<http://www.axiworld.be>)

VST Template code by Tobias Fleischer/Tobybear (<http://www.tobybear.de>)

VST Plug-In Technology by Steinberg Media Technologies GmbH