geist

fxpansion

Contents

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Sample content

Content filename acronyms shown in square brackets – use these in the search function in the Browser.

Goldbaby http://www.goldbaby.co.nz [GB]
Groove Criminals http://www.groovecriminals.co.uk [GC]
Kevin Sawka http://kjsdrumline.com [KS]
Derik White http://www.dustedwilliamsounds.com [DW]
Haris Custovic http://hariscustovic.com [HC]
Dom Kane http://www.domkane.co.uk [DK]
Les Productions Zvon http://www.lesproductionszvon.com [ZV]
BHK Samples http://www.industrialstrengthrecords.com [BHK]

Presets

Goldbaby http://www.goldbaby.co.nz
Kickflip http://www.bogus-noise.co.uk
DJ Subject Ski Rize Studios http://myspace.com/skirizestudios
Sven 'borg64' Engdahl http://www.borg64.com
DJ Groovy http://www.djgroovy.com

Artist presets

7 Skies http://www.7skies-music.com
Armin Van Buuren http://www.arminvanbuuren.com
D Ramirez http://www.dramirez.com
Dean Coleman http://www.djdeancoleman.com
Jason Phats http://www.jasonphats.com
portion control http://www.portion-control.net
Sharooz http://www.sharooz.com
Shirobon http://www.myspace.com/shirobonmusic

www.fxpansion.com

1 Introduction to Geist

1:1 Introduction to Geist's architecture and interface

Geist is an advanced step-sequencer and sample-based drum machine realised in software. It's intended to be an ergonomic way to effortlessly build grooves and beats. While it includes an extensive set of advanced integrated features, its layout is faster and more intuitive than the process of accomplishing similar tasks within a complex DAW with too many usually unnecessary features and options that intrude upon the creative process.

Geist's architecture explained

The basic elements in Geist are as follows:

Layers:	The basic 'slots' for loading samples in Geist. There are 8 layers on each pad.
Pads:	There are 16 pads in each engine. Each pad contains 8 layers.
Patterns:	Each pattern features 16 tracks – one for each pad in the engine. There are 24 patterns in each engine.
Engines:	There are 8 engines in total. Each engine features 16 pads, and 24 patterns.

As well as the above elements, Geist also features the following features for arranging patterns:

Scenes:	Snapshots of the currently playing patterns in all engines, which can be performed to play the patterns on 8 engines at once.
Song:	A timeline-based 'arrangement' with 8 tracks – 1 for each engine – for pattern references.

Geist's interface
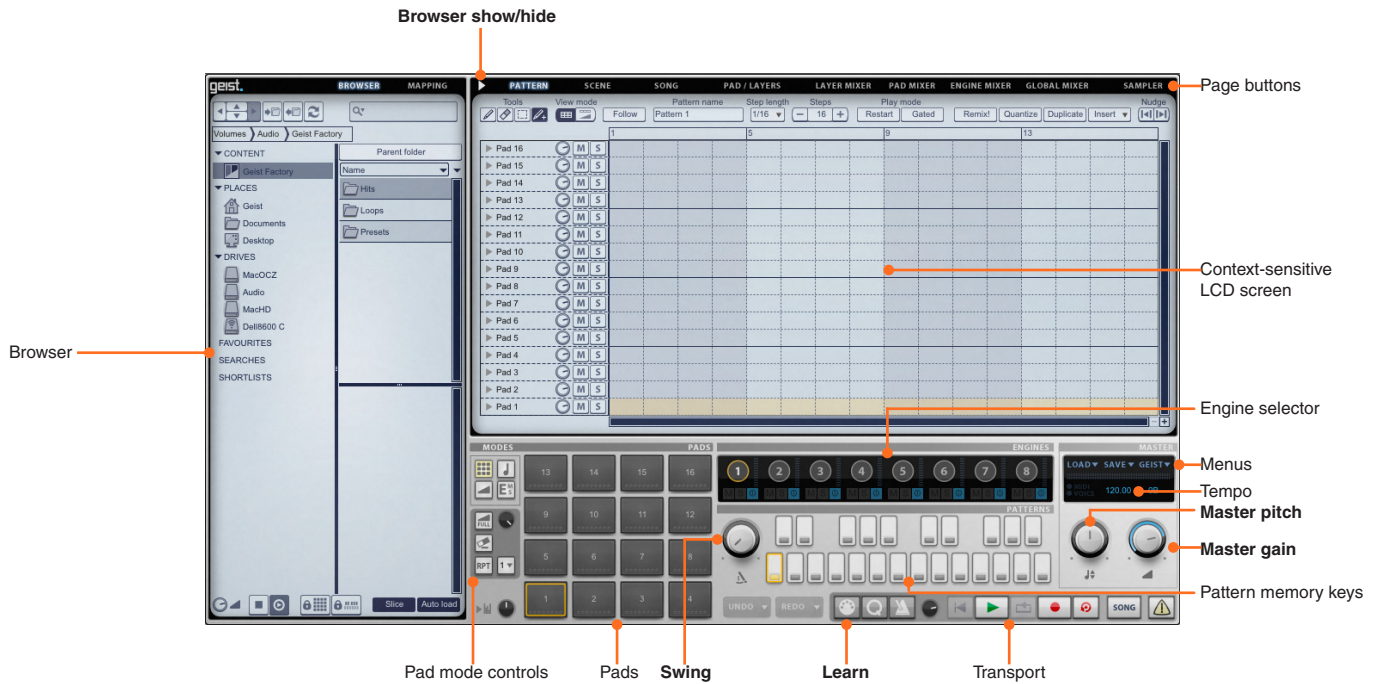
Browser

The Browser is the main method of loading sounds into Geist. The **Browser show/hide** button allows you to turn off the Browser on the interface.

Pads and Pad mode controls

The on-screen pads represent the 16 pads in the current engine. Each pad has a corresponding MIDI note.

Pattern memory keys

The pattern memory keys, or pattern keys, represent each of the 24 patterns in the currently selected engine.

Patterns are selected/played by clicking or holding down these keys. Each pattern memory key also has a corresponding MIDI note.

Engine selector

These buttons select 1 of the 8 engines for editing. It also contains **Mute**, **Solo** and **Pattern power** buttons for each engine.

Context-sensitive LCD screen

The LCD is used for displaying and editing the properties of each 'hardware element' such as the pads, pattern memories and layer/pad/engine/additional sound engine blocks. The contents of the LCD are dictated by the selected element, and also by the **Page buttons** at the top of the Geist interface.

Page buttons

These buttons control which page is shown on the LCD screen. Each page covers different aspects of sound design and sequencing in Geist.

Transport

The transport controls are vital in Geist – to play patterns and use their associated features, the transport must be running.

Learn

The Learn button is used for mapping Geist controls to MIDI continuous controllers or host automation parameters.

Swing, Master pitch and Master gain

The **Swing** control applies a syncopated swing/shuffle effect to the current engine's patterns. The **Master pitch** control adjusts the pitch/tuning of all elements within Geist simultaneously relative to their individual settings, while the **Master gain** control adjusts the gain of the Master channel.

Tempo

Geist's tempo is locked to the host when running it as a plugin. In the standalone application, click and drag the **Tempo** control up/down, or double-click it to type a new tempo.

Menus

The Save menu is used for saving your Geist projects, kits and other files. The Load menu offers another way of loading files, while the Geist menu contains a number of additional functions, including the Preferences panel.

Geist interface concepts

Being a very deep instrument, Geist's design attempts to expose only the most important controls as permanently visible parts of the interface.

Most of its editing functions are selection-dependent and shown on its LCD area, while more advanced functions are located on context menus, displayed by right-clicking on various areas and controls.

Selecting elements for editing

One of the main concepts used in Geist's interface is selecting an element for editing.

Selecting an engine

Only 1 of the 8 engines can be visible for editing at once. The other engines, however, are still active and can be triggered via MIDI or have patterns running.

Select the engine to edit by clicking one of the 8 engine selectors underneath the LCD (engine 1 is selected by default).

Selecting engine 2

Selecting a pad

The concept of the 'selected pad' is used for loading samples from the Browser in Auto load mode, and for editing in the Pad/Layers page and in the Pad mixer.

• Click a pad to select it and play its layers
• ALT-click a pad to select it without playing any audio

If the **Pad selection follows MIDI** setting is enabled in the Geist preferences, incoming MIDI notes also change the pad selection (see section 12:8).

Selecting a layer

In the Pad/Layers page, and in the Layer mixer, a layer must be selected for editing its sound design and FX parameters – see sections 5:1 and 6:2 for a guide to selecting layers.

Selecting pad 5

Selecting a pattern

Each of the 8 engines contains 24 patterns. Select the pattern for editing using either of the following methods:

• Click the pattern memory key
• Play the pattern memory key's corresponding MIDI note

What you will actually hear when you select a pattern depends on the state of the pattern's **Play mode** settings – for example, **Gated** mode requires the pattern's memory key or its corresponding MIDI note to be held down to be heard. See section 1:11 for more details of performing with patterns.
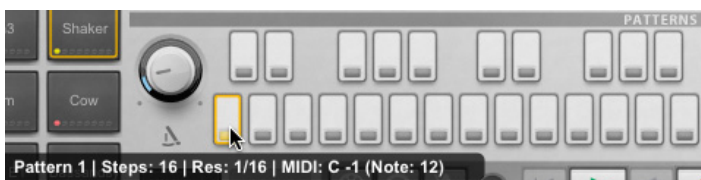
Selecting pattern 1

Context menus

Geist includes many additional functions on context menus, evoked via a right-click (or CTRL-click on Mac when using a single-button mouse) on the relevant area of the interface.

These are typically more powerful process and management functions which may not be needed very often – however, their functionality is always only a right-click away.

The various context menus are documented in full throughout this manual. It is highly recommended to try right-clicking in various parts of the interface and experiment with the extra functions that become available.
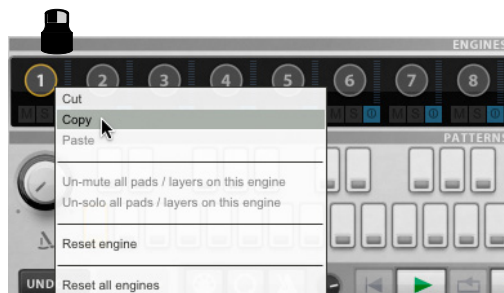
Right-clicking on the Engine selector to display the engine context menu

Controlling rotary/slider controls in Geist

Controls are adjusted by clicking slider or rotary controls and dragging up/down with the mouse.

In order to achieve finer control over a parameter, hold down the SHIFT key while making the adjustment.

Double-click any rotary or slider control to return it to its default value.

Tooltips

Tooltips are used for showing parameter values and other useful information in Geist. Hover over a control to display a tooltip containing information about the control's current value. Tooltips are shown while adjusting a control, with values updated in real time.

Adjusting the Master pitch control
Note the tooltip with the parameter's current value.

Using this manual

Geist is an advanced instrument, and it is recommended to read this manual carefully in order to make the most of its capabilities.

The main functionality is introduced in chapter 1, with chapters 2-12 comprising a reference guide to all the functions within the software.

1:2 Loading sounds for the first time

The Browser is the most immediate method of loading sounds into Geist. It is used for loading kits, samples and other files.

This section includes an introduction to loading sounds in the Browser. See section 1:5 for an introduction to the more advanced functions in the Browser, and chapter 2 for a full reference guide.

Working in Auto load mode

This section shows how to use the Browser in Auto load mode – with the **Auto load** button enabled. In this mode, click a file in the Browser to load it to the selected element. Note that you can also load sounds without Auto load mode enabled – see section 1:5.

Loading a kit
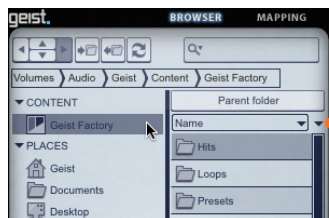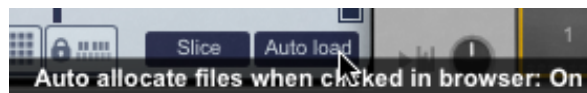
View options
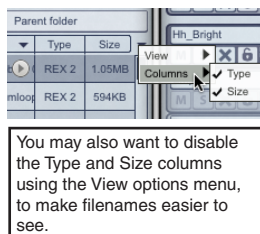
You may also want to disable the Type and Size columns using the View options menu, to make filenames easier to see.

1. Click on *Geist Factory* in the 'Content' section of the browser sidebar.

2. Double-click on the *Presets* folder.
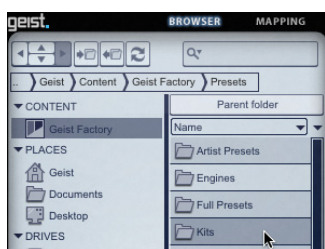
3. Double-click on the *Kits* folder.

4. Double-click on any folder and click on a kit to load it, such as *Dirty Old 808* in the *Goldbaby* folder. The kit is loaded to the current engine. Click the pads to hear the sounds!

Locking pads and loading another kit
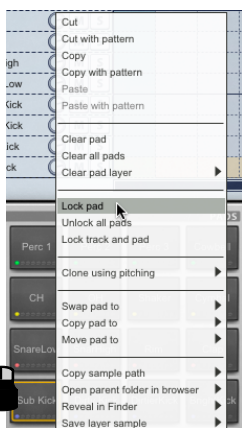
1. Right-click on a pad and use the **Lock pad** function in the pad context menu. Lock a few other pads.

2. Click on another kit in the *Goldbaby* folder from earlier, such as *4 Dirt Hop*.

3. You'll notice that the locked pads are not affected – only the unlocked pads are loaded with sounds from the new kit.

Each pad and pattern features its own lock function, available via right-click context menus. In addition, the Browser features buttons to lock/unlock all pads or all patterns in the current engine.

Lock / Unlock all pads

Returning to a previous state with the Undo function

If the Auto load functionality causes an undesired change, you can always use the multi-stage undo and redo to revert to previous states.
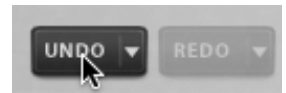
Replacing a pad with a new sound

1. Select a pad by clicking it.

2. Click on the **Geist Factory** section of the current folder path – this returns you to the *Geist Factory* folder.
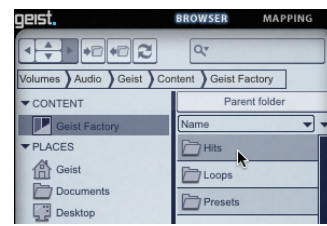
3. Double-click on the *Hits* folder.

4. Double-click on the *Snares* folder.
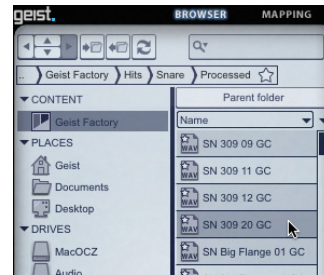
5. Double-click any folder and then click on a sample to load it, such as *SN 309 20 GC* in the *Processed* folder. The sample is loaded to the selected pad.

Layering multiple sounds on a single pad

1. Click on another sample in the folder while holding down the ALT key.

The sample is loaded to the next free layer on the pad.
Note the extra LED on the pad that is lit when the 2nd layer is loaded.
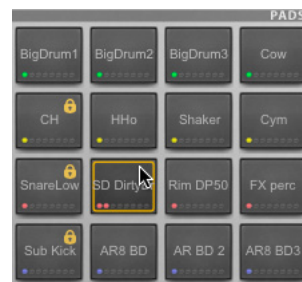
Click the pad to hear both samples played together.

By default, layered sounds on a pad are played together when the pad is triggered. By changing a pad's Layer Mode, its layers can be set to play depending on input velocity, or be cycled in a 'round-robin' or random order. The Layer Mode selector is located in the Pad Editor (select the pad in the Pad/Layers page).

Loading a preset

A Geist preset stores the entire contents of a Geist session. Presets are loaded by double-clicking, unlike other file types used in Geist.

Note that loading a Geist preset means the previous contents of the session are discarded – this cannot be undone.
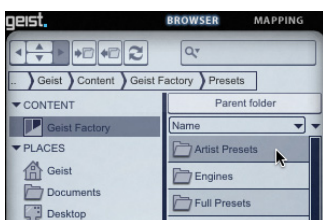
1. Return to the *Geist Factory* folder, and double-click the *Artist Presets* folder.
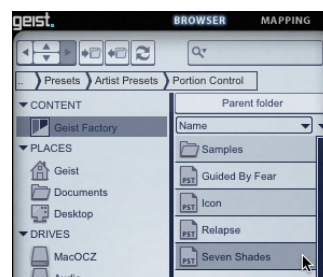
2. *Double-click* on any folder and then on a preset inside it, such as *Seven Shades* in the *Portion Control* folder.

3. Click the **Play/Stop** button on the transport, or start your host if running Geist as a plugin.

4. Click the pattern keys to hear the different patterns in the preset.

1:3 Playing the pads and recording a pattern

Geist is a *multitimbral* instrument. This means that it responds on more than 1 MIDI channel. Please do not confuse this concept with 'multiple outputs', which means that audio can be output from more than 1 stereo audio channel (although Geist is capable of this too).

Geist contains 8 'engines', each containing 16 pads and 24 patterns, which are all assigned to an individual MIDI note. Because there simply are not enough MIDI notes in a single MIDI channel, each of the 8 engines is assigned to a MIDI channel from 1-8. There are also several other MIDI channels to which Geist responds:

Channels 1-9: Channels 1-8: Engines 1-8
Channel 9: Currently selected engine
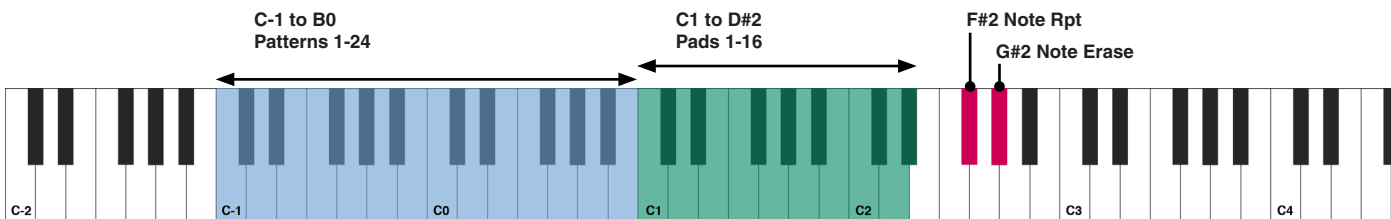
Channel 11: Scenes
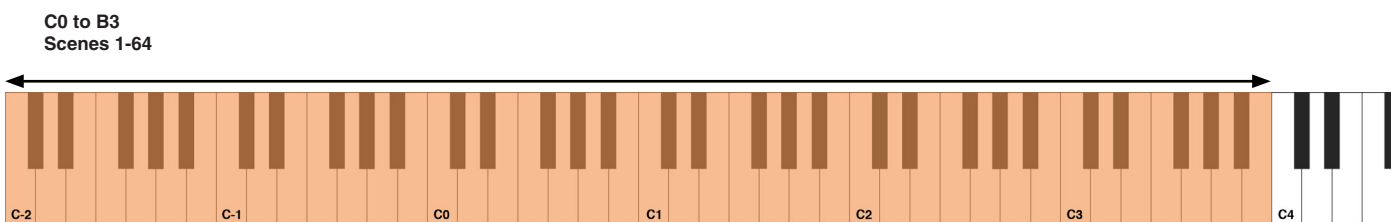
Channel 16: Current engine and scenes 53-64
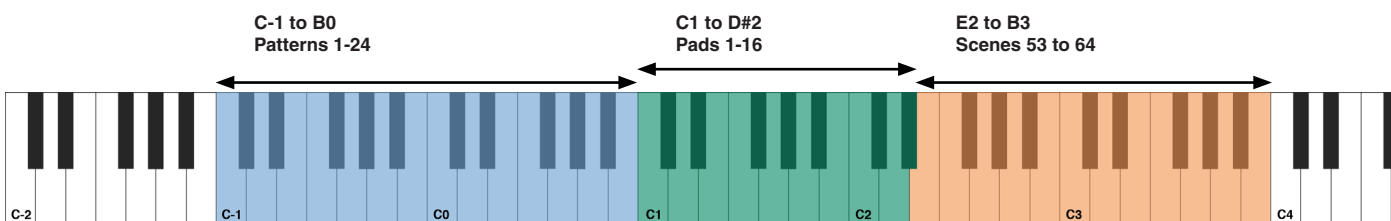
Channel 10: All pads in all 8 engines
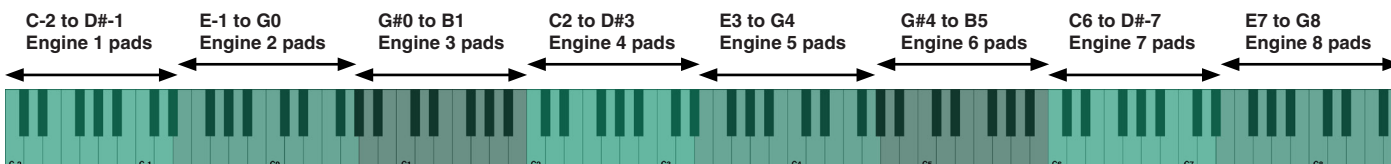
Real-time pad triggering

The 4x4 pad bank represents the pads in the current engine.

To play pads you can either:

• play their corresponding MIDI notes

• click the on-screen pads on the Geist interface

It is highly recommended to use a good MIDI controller to play the pads – playing the Geist interface pads with the mouse does not provide as good a response in terms of timing accuracy. The facility is provided for quick previewing.

Sequencing pad triggers into a Pattern

Geist allows you to record sequences of the pads being played – these sequences are recorded into any of 24 patterns in each engine. You can also program/edit pattern events directly onto the Geist interface.

An introduction to Geist's step-sequencing paradigm

It is important to remember that Geist is a *step-sequencer*. Its sequencing system is inherently based around a set grid, defined by the **Steps** and **Step Length** parameters. However, Geist can also accomodate deviations before or after straight grid divisions, using *Shift graph* values for each step.

graphs are introduced in detail later, but briefly, they provide step-based automation of various parameters for each step in each pattern. When using the Shift graph, positive values (above the centre line) result in the step's event being played late, and negative values (below the centre line) mean it is played early. Shift graph values can be programmed or edited visually, and they are also generated during realtime MIDI input recording of pattern events.

By default, each pattern is set to 16 **Steps**, with a **Step Length** of 1/16 (a 1/16th note). These two parameters establish the 'grid' of the step-sequencer pattern. Varying these parameters in the Pattern page changes the length of the current pattern and its 'step resolution'.

Graph record (see section 1:9)

Recording events to a pattern via MIDI

Once you have loaded some sounds onto the layers on the engine's pads, proceed as follows in order to record pattern events in real time:

1. Click on the Pattern page button to display the Pattern page.
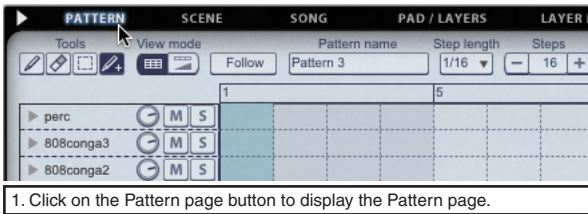
5. Click the **Metronome** button to hear a click on every beat.

6. Click the **Play/Stop** button (or start the host transport if using Geist as a plugin) to start the Geist transport and begin recording.
   Play the pads – events are recorded into the pattern as pad input is received.

Click the pads or play their corresponding MIDI notes

2. Select the desired pattern into which to record. You can use a new pattern, or add events to an existing pattern.

3. Set the required values for the **Steps** and **Step Length** parameters.

4. Click the **Record** button to 'arm' the recording function.
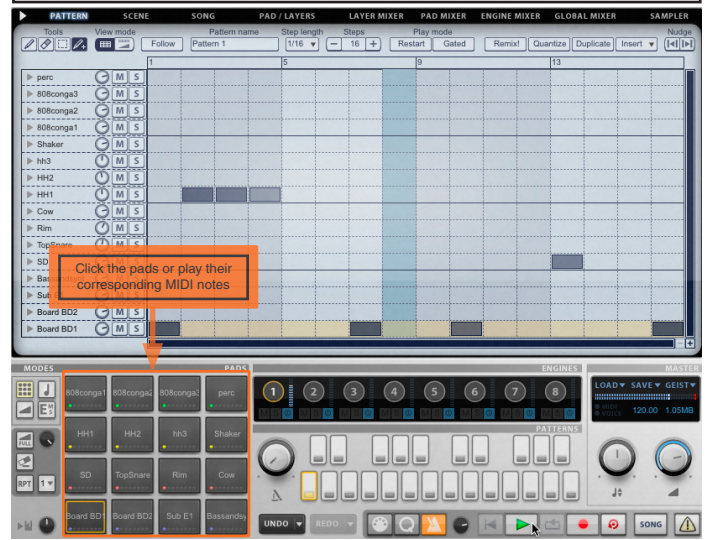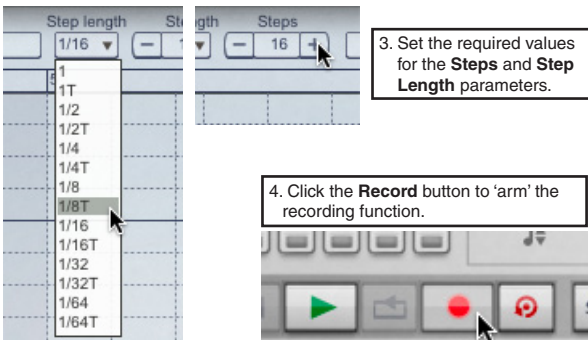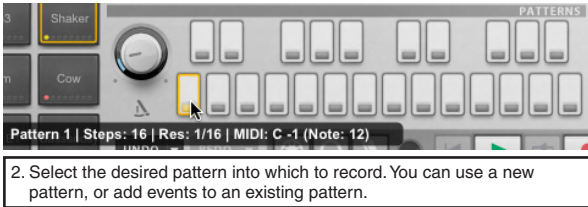
7. Click the **Record** button to disarm the recording function and return to playback mode.

Applying Swing to the engine's patterns

Each engine features individual swing/shuffle controls to apply a syncopated timing adjustment to the patterns within the engine.

Control the amount for the current engine with the **Swing** control on the interface.

You can also use the Engine mixer's Setup view to view and edit the Swing settings for all 8 engines (see section 1:7).

Pad modes

Geist features a number of additional modes for the pads, intended for performance and pattern recording via MIDI while the Geist transport is running.

Setting the **Note repeat** step period

Note erase and Rpt (Repeat)

Hold down the **Note erase** function and any pad while a pattern is playing back: if the playback position passes any events for the pad while the Note erase button is active, they are erased.

Holding down the **Rpt** (Repeat) function while playing a pad results in multiple steps being recorded in succession. The drop-down menu under this button dictates how often events are repeated.

These 2 functions feature MIDI key mappings in the default keymaps.

Pad playback mode

If the **Chromatic playback** button is enabled, the currently selected pad is placed on all notes +12 and -12 from the selected pad, at different pitches a semitone apart. When events are recorded for pad performances in this mode, the different pitches of the pads are converted to Pitch graph events on a single pad track in the pattern. When in this mode, notes for patterns and scenes which may use this set of 48 notes are inactive – all the notes are used for the chromatically pitched pad.

With **Velocity playback** enabled, the currently selected pad is placed on all pads at different velocities. Velocity graph information is captured when recording a performance in this mode. Unlike **Chromatic playback** mode, This mode only uses the 16 pads, with velocity proportionally ascending from the lowest velocity on pad 1.

The **Engine Mute/Solo** mode is slightly different to the other modes, as performances in this mode cannot be recorded. With this mode enabled, the first 8 pads mute engines 1-8, while pads 9-16 solo engines 1-8. This mode is intended for live performance only.

Click the **Sample playback** mode button to return to regular pad triggering operation.

Engine mute/solo mode

Chromatic playback mode

Sample playback mode

Velocity playback mode

Full level mode

Note erase

Note repeat

Full level mode

When this button is enabled, the velocity of all received notes is forced to the value set by the control to the right of the button.

Patterns and sequencing in more detail

Patterns and sequencing are explored in more detail starting from section 1:8.
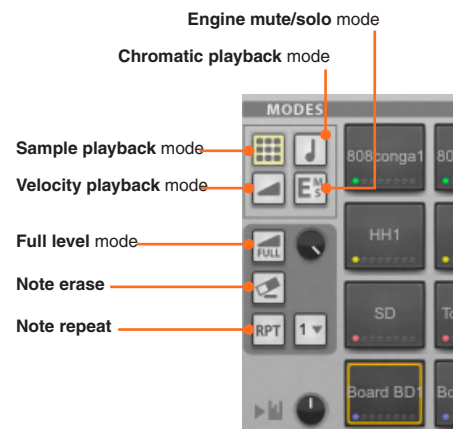
1:4 Pad Classification and Slicing

Introduction to Classification in Geist

The 16 pads in each engine are *classified* into 4 'pad rows':

- 13-16 – percussion*
- 9-12 – hihats
- 5-8 – snares
- 1-4 – kicks

*In Geist, the Percussion group is defined as percussive sounds that fall outside the kick, snare and hihat categories.

This *classify* system is used throughout Geist as a way of standardizing patterns and kits so that elements can quickly be swapped out for fast, creative brainstorming of sound and sequence design. The classify system is used in several ways within Geist, and is a way of speeding up certain tasks and situations. It's entirely up to you whether you choose to stick to the classify system or not. Any type of sound can be loaded to a pad layer, and Geist is not limited to using percussive sounds.

Percussion pads — Clave 1, Clave 2, Perc, Cymbal
Hihat pads — Hat 1, Hat 2, Hat 3, Hat 4
Snare pads — Main Snare, Alt Snare, Snare, Snare 2
Kick pads — Main Kick, Alt Kick, Alt Kick 2, Alt Kick 3
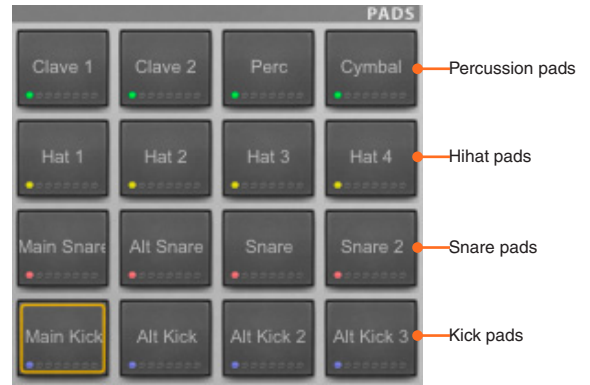
Factory sounds

All factory kits, loops, engine files, patterns and so on have been created using the pad row system described above as a guideline, meaning that it is very easy to mix and match between them.

Slicing a breakbeat with Geist

Geist features a Slicer panel which can be considered as an extension of the Browser. It is displayed when clicking on a file while the **Slice** button is enabled in the Browser, and it allows you to non-destructively 'cut up' loops and breakbeats and extract the following:

- The audio slices to the current engine's pads
- The analysed 'score' of the loop to the current pattern

Note that the factory loops supplied with Geist are in RX2 format and pre-sliced so you don't have to find their slice points. However, the Slicer can be used with any WAV or AIFF format samples.

Also note that, as with any slicing tool, it is usually necessary to perform some degree of fine-tuning to optimize all slice points for a loop.

Slicing with Auto-load enabled

1. Initialize Geist by using the **Reset Geist** function on the Geist menu.

2. Enable the **Slice** button in the Browser.

3. Navigate to the *Geist Factory/Loops/ Hip Hop* folder. Click on the *080 Elecbeat 01 KS* loop.

4. Click or play the pads – the slices are already assigned to the pads. Note the playback indicator on slices when they are played.

Playback indicator

5. Since the Geist loops are already pre-sliced with their slice points locked, the **Sensitivity** control won't affect them until the slice points are unlocked.

When slicing your own loops, use the **Sensitivity** control to adjust the threshold for detecting transients in the loop.

Slicing with **Auto load** and **Classify** enabled means that the following occurs with a single click:

- The loop is sliced
- Its slices are extracted to the pads
- Its analysed pattern is extracted to the current pattern slot

To confirm the changes, you can click the **Done** button. If you want to tweak the slicing further, the Slicer panel contains a number of functions to adjust slice points exactly as you require.

You can also slice loops without **Auto load** enabled – see section 3:3 for more details.

Confirm slicing

Working with the slicer

Upper part of waveform: click to audition

Central part of waveform: click/drag to zoom/ scroll

Zoom / **Scroll**

Lower part of waveform: click/drag slice to pad manually

Right-click to use the **Lock/Unlock slice** functions

Move a slice point by click/dragging it left/ right

Click in the waveform ruler to add a slice point

ALT-click to delete a slice point, or use the slice context menu

Slice 9 - Engine 1 Pad 6 Layer 1 Type Snare

Extraction summary

If any slice has been extracted to a pad layer, it is shaded more brightly than unused slices. Hovering the mouse over a slice for a few moments displays specific information about the pad assignment – the engine, pad and layer to which it is assigned, as well as its classify status.
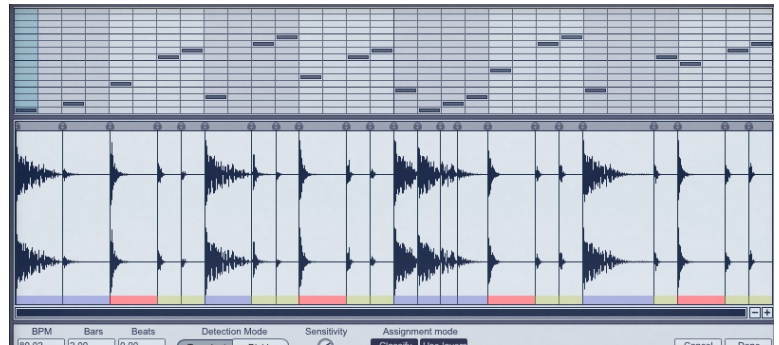
Use layers

Clicking the **Use layers** button results in all slices in the loop (up to a maximum of 128) are used and assigned to additional layers on the pads.

If the pattern is extracted, information about the layers required is also extracted with it, and stored in Force layer graph values for the pattern's tracks – see section 1:9.

Classify

In the Slicer, the classify function can be used to assign suitable slices to each pad row – in other words, the kick, snare, hihat and percussion pads. It is designed to allow you to browse through loops or other audio material and quickly extract kick, snare or hihat sounds for use as a 'kit', and to extract a pattern that resembles the original loop as closely as possible.

Geist's detection algorithm makes an intelligent attempt to classify slices. However, even a human can find it difficult to make these choices in some situations, especially when dealing with heavily processed, sculpted or esoteric sounds. Therefore, you can override classification where needed, still arriving at the desired end result more quickly.

Classification indicators

The small colour strips at the bottom of the waveform display provide information about the classify status of each slice. The colours used correspond to the each pad row's layer LEDs.

Manual classification

To reclassify a slice, right-click on it in the waveform display and classify it as Kick, Snare, Hihat or Percussion in the slice context menu.

Recreating loops accurately

Slicing with the classify function necessitates some compromises:

• not all slices in the loop may be extracted
• the timing and accuracy of the extracted pattern may not be preserved in their entirety

The end result is that the extracted loop may not sound exactly the same as the original audio file. This is unavoidable because the Classify function is designed to extract 'kits' from audio material quickly – with a single click in many cases.

If you want to preserve the loop as accurately as possible, you should disable the **Classify** button, additionally enabling the **Use layers** button when working with more than 16 slices. This disregards the pad classification system, instead sending slices to the pads *sequentially*.
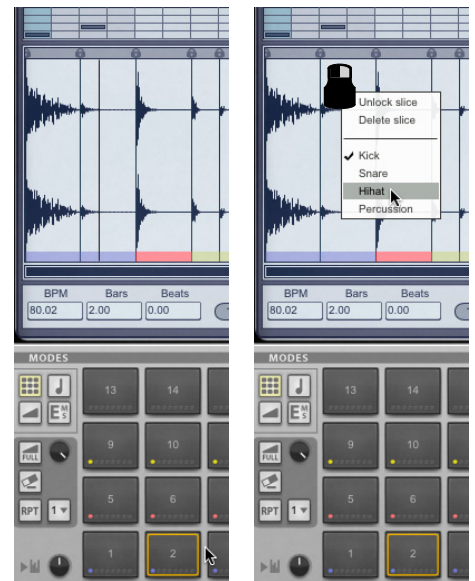
The second kick pad features a hihat instead of a kick, due to the bass energy in the tail of the kick preceding it.

To reclassify the slice as a hihat, right-click on the slice in the waveform display and click on **Hihat** in the slice context menu that appears.
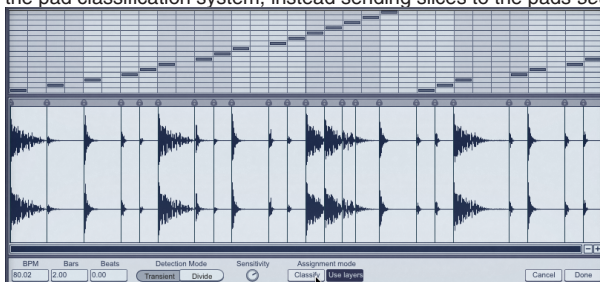
Disabling the **Classify** button results in slices being mapped to pads sequentially. This example shows the **Use layers** button enabled in order to extract all slices from the loop.

1:5 More about browsing and saving your work

Disabling Auto play and loading-in-context in Auto load mode
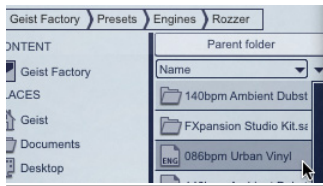
1. Initialize Geist and load an engine file into the first engine, such as *086bpm Urban Vinyl* in the *Geist Factory/Presets/Engines/Rozzer* folder. This loads sounds and patterns into the engine.
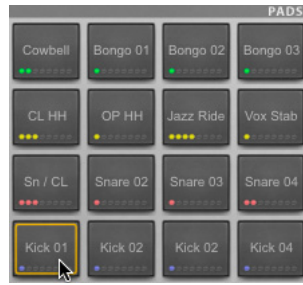
2. Click the first kick pad to select it.

3. Disable the **Auto play** button at the bottom of the Browser.

4. Start the Geist transport by clicking the Play/Stop button.
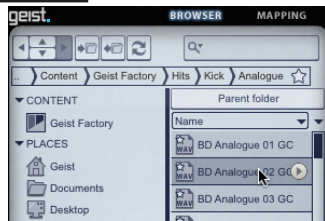
5. Navigate to the *Geist Factory/Hits/Kick/Analogue* folder, and click on a sample. The sample is not previewed, but it is loaded to the pad and heard when triggered by pattern events.

6. Now navigate to **Geist Factory/ Presets/Pattern Banks/Hip Hop** and click on one of the pattern banks in the folder. The patterns replace the existing 24 patterns in the engine.

Note for GURU users

The Auto load system replaces the preview-in-context system from GURU 1.x (the 'Auto' button with OK/Cancel confirmation), as it is faster for most purposes. However, the 'OK/Cancel' behaviour from GURU is still present within Geist's Slicer, which can be considered as an extension of the Browser.

Previewing sounds before loading with Auto play disabled

If **Auto play** is disabled, you can preview sounds before loading by clicking the **Preview play** button which appears at the right of the file.

Any preview (automatic or manual) can be stopped with the **Preview stop** button, located next to the **Auto play** button.

Loading GURU 1.5 format files and other files

There are a number of other file types supported in Geist's Browser, such as GURU 1.5 format files which can be imported into Geist. See section 2:5 for a guide to using GURU files and all other file types supported in Geist.

Working with Auto load mode disabled

If the Auto load button is disabled, clicking a loadable element does not result in it being loaded automatically – instead, you must add sounds via drag and drop.

Loading samples, kits and patterns

While dragging and dropping samples, pads, kits and patterns/pattern banks, you can hover over any other engine selector button in order to switch the currently selected engine. This means you do not have to abandon the drag and drop operation to change the current engine before loading the file.

• Samples

1. Disable the **Auto load** button at the bottom of the Browser if it is enabled.
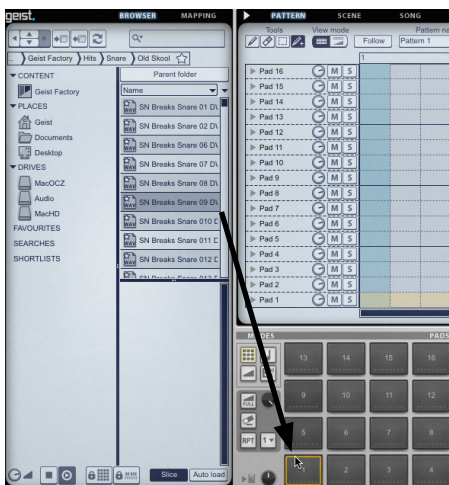
Drag and drop a sample to a pad to load it to the pad. Any previous samples on the pad are removed first.
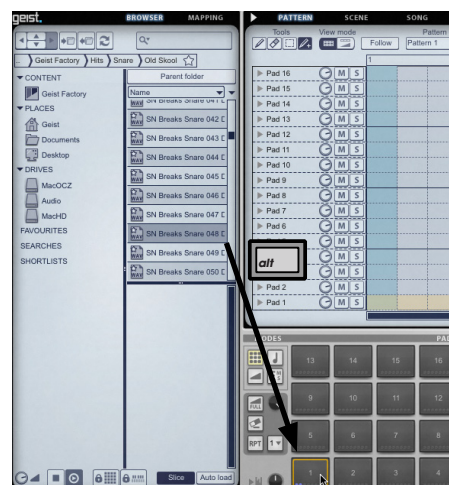
Drag and drop a sample to a pad while holding down the ALT key to load it to the next free layer.
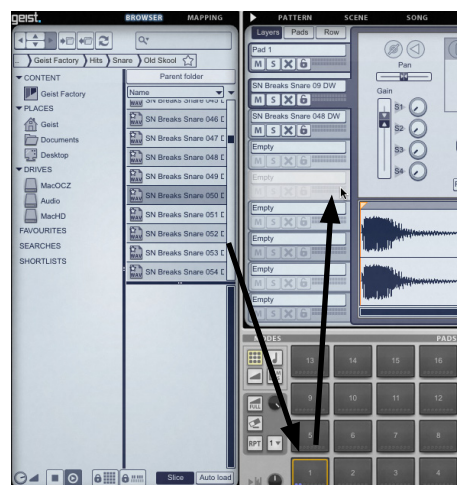
You may notice that if you hover the mouse over the pad for a few moments, the Pad/layers page is opened, allowing you to load a sample to a specific layer.

• Kits, patterns and engines

Drag and drop kit files onto the pads.
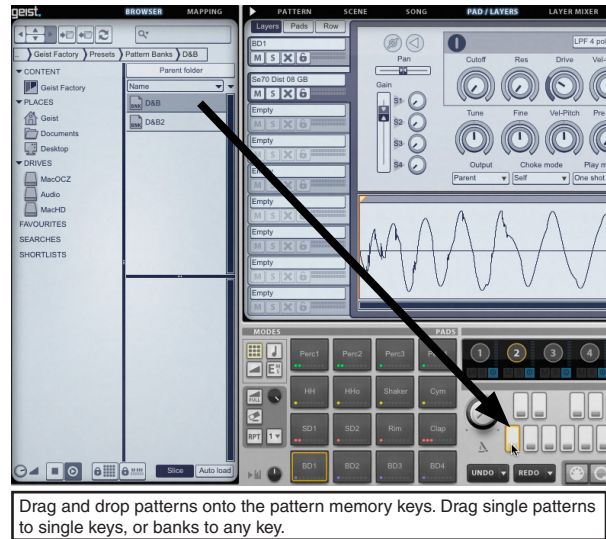
Drag and drop patterns onto the pattern memory keys. Drag single patterns to single keys, or banks to any key.

Useful Browser functions

The Browser features a number of features to make it as easy and quick as possible to locate the sounds you need. See chapter 2 for a full guide to their operation.

Favourites

It is possible to save favourite locations in order to access them quickly in future. Favourites are displayed in their own section in the Browser sidebar. See section 2:3 for more details.

Searching

The Browser features comprehensive searching functions – see section 2:6.

Shortlists

The shortlist allows you to create a list of sounds from disparate locations in order to audition them together. Shortlists can be saved as a new folder (copying the included samples to it) and added to your favourites – see section 2:7.

Diabling slicing for the contents of a folder

You may have noticed that clicking on samples within the Geist Factory/Hits folder does not result in invoking the Slicer, even though the **Slice** button is enabled. This is because Geist contains a feature for disabling slicing for the contents of any folder – if a folder only contains 'single-hit' samples, it can be useful to do this. See section 2:5 for more details.

Drag and drop engine files onto an engine selector.

Sampler

Geist also has the ability to sample audio from external sources, or to resample its own output.

When using the standalone version, you can sample audio from your audio interface input just like in a hardware sampler. When using Geist as a plugin in a host, an additional plugin called Spitter, included with Geist, is provided for sampling audio from any other track in the session directly into Geist's Sampler page. You can even set up multiple instances of the Spitter plugin on different tracks, and record into Geist from any of them.

See chapter 4 for a full guide to using the Sampler.

Saving your work

To save your work at any time, use the Save menu. You can save a number of different elements from Geist using this menu.

Saving a preset

To save the entire state of Geist, use the Save preset function. Enter a filename in the OS Save As dialog that appears and press ENTER.

The default save location is your Geist documents folder, accessible using the Places/Geist item in the Browser sidebar.

Saving other elements

You can save the kit, engine, pads, pattern, or the whole bank of 24 patterns in the current engine. See section 12:5 for details.

Exporting as MIDI or audio

See section 1:15 for an introduction to exporting MIDI and audio from Geist.

1:6 Editing sounds

The Pad/Layers page allows you to edit numerous parameters for altering the sound and playback characteristics of each pad layer.

See chapter 5 for a full reference guide to the Pad/Layers page.

Pad/Layer selector

The Pad/Layers page is laid out in a 'parent/child' view – the parent being the *pad* at the top, with the 8 *child* layers beneath it. Click on the parent pad to display the Pad editor controls, which mostly relate to how the layers are played back. Click any layer in the selector to display its editor parameters.

Layer editor controls

Pan and Gain controls, Send controls for the 4 Aux busses

Phase

Reverse

Filter power

Filter controls

Filter mode

Timestretch power

Timestretch controls

Parent pad – select this to edit pad parameters.

Currently selected layer

Mute, Solo, Clear and Lock buttons are available for the parent pad and all child layers. Each element also features a level meter.

Amp env ADSR

Amp env Destination and Depth controls

Free Env ADSR

Free env Destination and Depth controls

Zoom controls and scrollbar

Sample Start and End points

Waveform display

Output selector, Choke mode and Play mode drop-down menus

Tune and Fine tuning controls, Vel-Pitch controls how sample tuning is affected by velocity. Pre delay is useful for layered sounds.

Envelopes

Geist's Envs (envelopes) are adjusted in terms of absolute time. The first Env is hard-wired to the layer's amplitude, and can additionally be set to 2 further destinations. The second Env is a Free envelope, and can also be set to 2 destinations. The available destinations include Filter cutoff, Resonance, Drive and Pitch. All destinations feature a **Depth** setting.

Filter cutoff, Resonance, Drive

These classic sound design parameters allow you to shape the sounds in various ways. The filter is switchable between a number of different modes,

Note that the filter is disabled by default for CPU reasons – you must enable the **Filter power** button to activate the filter. The **Filter mode** drop-down menu selects between several filter responses. The **Cutoff** and **Res** parameters control the frequency cutoff and emphasis at the cutoff.

The **Drive** control increases the level of the signal entering the modelled filter circuit – higher levels cause the filter to react differently, changing the timbre quite drastically (in particular, the resonance is less apparent). **Vel-Cutoff** adjusts how incoming velocity affects filtering.

More filters are available as FX in the Layer mixer (see section 1:7).

Timestretch

Timestretch is useful for playing full loops on a single pad, stretched to the current tempo, and also for general-purpose creative sound design. See section 5:9 for a guide to the timestretch functions.

Output and Sends

Each layer's **Output selector** can be set to the parent pad, the Master channel, the 15 sub-outputs or the 4 Aux busses. The **Send 1** to **Send 4** controls allow you to route an adjustable amount of the layer's audio to the 4 global Aux busses (available on the Global mixer page).

Choke mode

Choking is a means of stopping a layer's sample playing back by the same or another layer. You can set a layer to be choked (stopped) by itself, any layer on the pad or any pad in the same pad row. Additionally there are also 2 assignable choke groups per engine, and another 2 global choke groups.

Play mode

Geist can play layers in One shot, Gated or Looping modes. These should be fairly self-explanatory, but see chapter 5 for a full description. The state of this setting also affect certain aspects of the pattern editor (events for Gated mode pads can be clicked and dragged to set their duration).

Pad editor controls

Pan and Gain controls, Send controls for the 4Aux busses. These affect all layers routed to the parent pad.

The Auto button arranges layers automatically when the Layer mode is set to 'Velocity split'

The Layer mode drop-down menu offers several ways of playing layers. The default setting is 'All layers'.

Parent pad selected for editing

Output selector

The Vel-Amp control dictates how the pad's amplitude is affected by incoming velocity

The Velocity split editor appears when the Layer mode is set to 'Velocity split'

There are far fewer controls for the parent pad. Overall **Gain**, **Pan** and **Send** controls are available, as well as an **Output selector**. This setting defines the output for layers with their output setting assigned to 'parent'.

The **Vel-Amp** control dictates how much the amplitude of the pad's layers is affected by velocity, both from MIDI input and from Velocity graph values in patterns (see 1:9 for more details on graphs).

The other function in the Pad screen is the **Layer mode**, which defines how the pad's layers are played when it is triggered. By default, all layers play simultaneously. You can set the pad to Velocity Split mode, which enables the **Split editor** (the **Auto** button arranges the layers in a linear split layout automatically). Layers can also be set to play in Round-robin and Random modes.

Pad and layer management

Right-click on the pad or any of its layers in the selector to display the pad/layer selector context menu. This contains a number of useful management features, as well as the **Tune loop to tempo** function, which pitches the selected layer(s) up or down so that it fits the current tempo. See section 5:1 for further details of this context menu.

Selecting and editing multiple layers and pads

Multiple selection of layers

In the Pad/Layers page, it is possible to select multiple layers in order to edit their parameters simultaneously:

• SHIFT-click to create a contiguous selection between 2 layers
• CMD-click (Mac) or CTRL-click (Windows) to add a layer to the selection

Multiple edit shortcuts

The Pad/Layers page allows you to edit multiple pads and layers using keyboard modifiers.
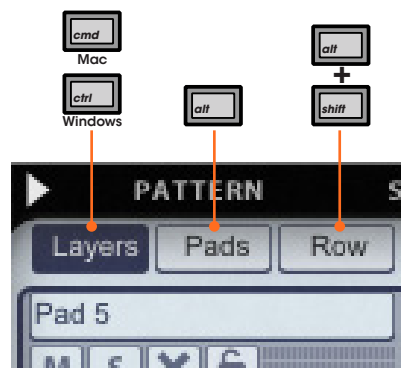
Editing multiple pads

Hold down the **Pads** button (the ALT key) to edit the same parameter across all pads in the engine.

Hold down the **Row** button (ALT+SHIFT) to edit the same parameter in all other pads in the same row.

You can use these modifiers in conjunction with a multiple layer selection.

Editing all layers

Hold down the **Layers** button (CMD key on Mac or CTRL key on Windows) to edit the same parameter across all layers of the current pad.

This function can be used in conjunction with the **Pads** button (ALT) or the **Row** button (ALT+SHIFT) to perform the operation on all layers of all pads in the engine or of all pads in the same row.

Note that only one of the **Pads** or **Row** edit modes can be active at any one time.

Note that the **Row** function uses the SHIFT key, and overrides the normal function of the SHIFT key (fine control over parameters). If you require fine control when adjusting a parameter on all pads of the same category, you must click the **Row** button on the interface to enable the mode, (rather than use the keyboard shortcut).

Interface Buttons	Key Modifiers	Function
Layers	CMD/CTRL	All layers on the current pad
Pads	ALT	Selected Layer(s) on all Pads in the engine
Pads+Layers	ALT+CMD/CTRL	All Layers on all Pads in the engine
Row	ALT+SHIFT	Selected Layer(s) on all Pads of the same row in the engine
Row+ Layers	ALT+SHIFT+ CMD/CTRL	All Layers on all Pads of the same row in the engine

1:7 Mixer pages and FX

All FX blocks in Geist are accessed via 'Mixer' pages for the currently selected Layer, Pad and Engine. There is additionally a Global mixer page for the Master channel and the Aux busses.

Each Mixer page shows 6 FX slots for the selected element, and a row of 'channels' representing each selectable element. The 'channels' feature basic mixing controls, as well as some additional functions.

Layer Mixer

Inserting a Vari-EQ FX device in the 2nd slot of layer 1 in the Layer mixer.

It is important to be aware that when using FX on layers, each of the FX processes audio in real time every time the pad is triggered. This can start to use a lot of CPU when adding multiple FX to multiple layers of the same pad.

If at all possible, apply FX to the entire pad, unless you specifically want to affect only certain layers with certain FX when performing detailed sound design.

Pad Mixer

One of the main advantages of adding FX to the entire pad is that the FX devices become available in Geist's graph step-based automation system (see section 1:9 for more details on graphs).

As mentioned, it can also be more CPU-friendly to use FX on the entire pad rather than multiple individual layers.

Engine Mixer

Engine FX are for overall processes for all pads in the engine, especially those you do not need to automate with graphs.

Note that you can still automate any FX device in Geist from your host by sending up to 32 host automation parameters, or any available MIDI CC (see section 1:14).

Global Mixer

The Master channel is the default output routing for all channels in Geist, unless you specifically specify a sub-output in any channels' **Output selector**.

Geist's Aux busses are useful for parallel processing and classic send effects such as reverbs and parallel compression for multiple channels.

If you're sub-mixing your parts entirely within Geist, the Master channel is a good place to put a Bus compressor over the whole mix.

Using the Mixer pages

To apply an FX device to a 'channel' in a Mixer page, select the channel by clicking on it. There may be other ways of selecting the channel, such as by clicking one of the 16 pads if you're using the Pad mixer.

4 of the available 6 FX slots are shown simultaneously. Click in the desired area of the **FX view/flow** control to jump to that area in the display. Change the order of the 6 FX slots by clicking and dragging FX devices left/right in the FX view/flow control.

Using the FX view/flow control to re-order FX slots.

FX controls

The controls for the FX themselves are fairly self-explanatory – see chapter 8 for a guide to individual FX devices' controls. There are several common controls for all FX:

The **Mix** control exists on all FX slots, and lets you create a wet/dry mix for any of the processors. There is also a **Mix** control for the whole FX chain, which lets you set the wet/dry mix of the entire FX chain vs. the original signal.

In addition to the Mix control, each FX slot features an output **Level** control, which is useful for attenuating or boosting a signal after certain FX settings.

Note that each FX device features a **Preset picker** which allows you to save and load FX device settings.

The **FX chain picker** provides the ability to save and load presets for the entire chain of 6 FX slots.
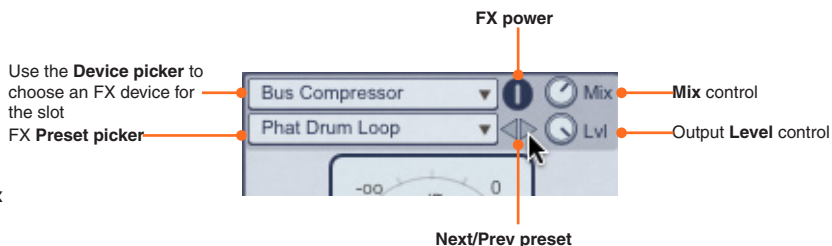
Other Mixer controls

Each mixer also displays important mix parameters for each of the contained elements which are arranged as 'channels' from left to right.

You can select multiple channels or use the Layers/Row/Pads modifiers in order to adjust mix parameters for multiple elements simultaneously.

Note that it is not possible to use this method to insert or adjust FX on multiple elements simultaneously.

Using the **Chain picker** to select a preset for the entire FX chain.
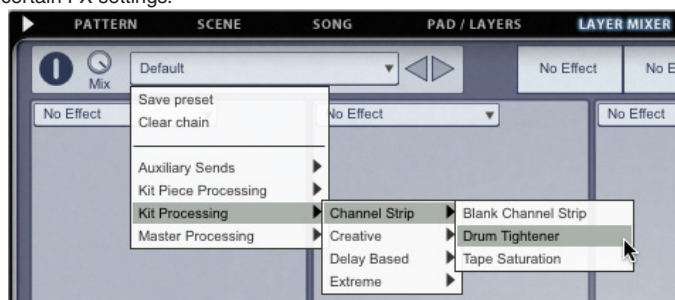
Sends view (Layer/Pad/Engine mixers)

Clicking the Sends button at the left of the Layer/Pad/Engine mixers displays the Send controls for each mixer channel instead of its usual Mix controls. The **S1** to **S4** controls allow you to route a variable amount of the channel's signal to any of the 4 Aux busses.

When Sends view is active, **Send 1-4** controls for the 4 Aux busses are shown with the **Mute**, **Solo** and **Output selector**.

The Aux busses are located in the Global mixer page – see section 7:4 for more details on Aux busses, including the way the **Pre/Post** controls work.

Note that it is also possible to route a the entire output of channels to an Aux bus, using the **Output selectors** (shown at the bottom of the Mix view – click the Mix button to the left of the mixer page to return to viewing the Mix controls).

Setup view (Engine mixer)

The Engine mixer's Setup view offers a number of controls which relate to the engine's pattern playback behaviour. Click the **Setup** button at the left of the Engine mixer in order to display the Setup view controls.

The Engine mixer Setup view shows Swing, **Pitch** and **Tempo modifier** controls for the engine, with **Mute** and **Solo** buttons.

The **Swing** controls allow an overview of the Swing settings for all 8 engines. These Swing controls are also available on the main interface for the currently selected engine.

The **Pitch** control adjusts the pitch of the entire engine's sounds, relative to their individual Pad/Layer Tune settings.

Meanwhile, the **Tempo modifier** multiplies the playback speed of the engine's patterns by a ratio, which can be a fraction (to slow down the tempo of the patterns) or a value greater than 1 (to increase the tempo).

Automating FX

Pad FX can be automated with Geist's graph step-based automation system, found in the Pattern page – see section 1:9.
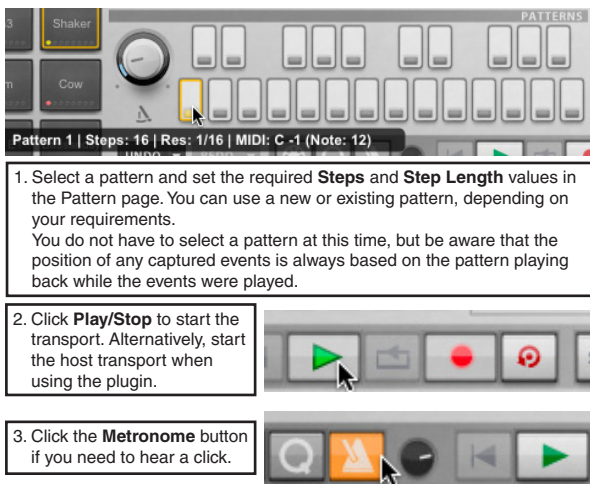
You can also automate any other FX device parameter using host automation or MIDI CC control, either live using hardware controls, or from tracks in your host when running Geist as a plugin – see section 1:14.

1:8 Patterns in more detail

Pattern recording is introduced in section 1:3. Geist also allows you to record pattern events retrospectively, while you can also program and edit events directly with the mouse.

Retro record

You may find that you perform better when you're not 'in record'. Geist's **Retro record** function allows you to retrospectively capture events triggered by MIDI input during playback, so that if you play something you like, you don't need to recreate it again with **Record** enabled on the transport.

1. Select a pattern and set the required **Steps** and **Step Length** values in the Pattern page. You can use a new or existing pattern, depending on your requirements.
   You do not have to select a pattern at this time, but be aware that the position of any captured events is always based on the pattern playing back while the events were played.

2. Click **Play/Stop** to start the transport. Alternatively, start the host transport when using the plugin.

3. Click the **Metronome** button if you need to hear a click.

4. Play the pads on the interface or via their corresponding MIDI notes.
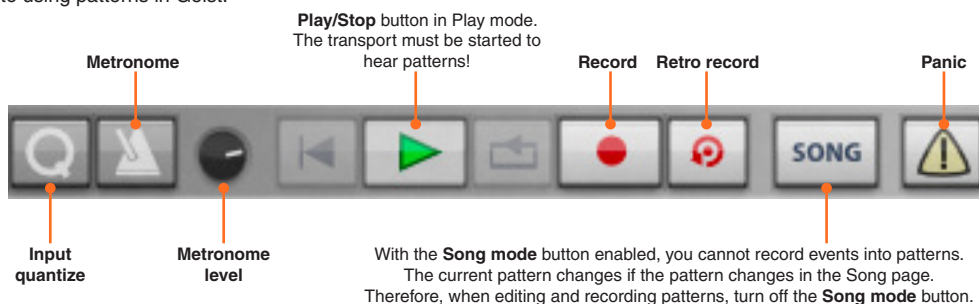
5. Click the **Retro record** button to capture the performance.
   Events from the last non-empty pattern cycle are used.

Transport controls

The transport is vital to using patterns in Geist.

Metronome

Play/Stop button in Play mode. The transport must be started to hear patterns!

Record   **Retro record**

Panic

Input quantize

Metronome level

With the **Song mode** button enabled, you cannot record events into patterns. The current pattern changes if the pattern changes in the Song page. Therefore, when editing and recording patterns, turn off the **Song mode** button.

Programming and editing patterns

Geist's editing functions are covered in full in chapter 9. The guide to the Multi tool on the next page shows what is possible when editing patterns in Geist.

Other useful pattern page functions

The **Quantize** button allows you to quantize the entire pattern to the grid (any Shift graph values are removed). If a selection of events exist, the process is applied only to the selection. This button is distinct from the **Input quantize** button on the transport, which automatically quantizes events during recording.

The **Duplicate** function 'doubles' the entire pattern or the current selection – an identical copy is inserted after its end.

Remix mode is a special editing mode which, when enabled, allows only 1 pad to play in any single step. It is intended as a quick way to rearrange or remix a sliced loop.

Swapping and copying patterns

Click and drag a pattern key onto another to swap the 2 patterns

Click and drag a pattern key onto another while holding down ALT to copy the pattern onto the destination pattern key.

Advanced pattern functions

Tempo modifier

Each engine features a **Tempo modifier** function, which applies to the entire pattern output from the engine. It applies a ratio that multiplies or divides the speed at which patterns play back. It can be an instant route to complex polyphonic experimentation. This function is located in the Engine mixer's Setup view – see section 7:2.

Convert timing

This function allows you to change the 'resolution' of a pattern without changing the position of events in the pattern. It can be useful if you want to change to working in triplet steps rather than 16ths, for example. This function is available on the pattern key context menu, displayed by right-clicking on a pattern memory key – see section 9:1 for more details.

Editing events with the Multi tool

Adding an event

Click to add an event.

Erasing an event

Right-click an existing event to erase it.

Adding a series of events

Click and drag right to add a series of events on adjacent steps.

Click and drag right to add a series of events, then drag down/up to adjust the velocity of all the events.

Using Insert patterns

1. Click and drag right to insert a series of events.

2. Cycle through available Insert patterns by repeatedly right-clicking, without releasing the left mouse button.

Selecting and deselecting events

SHIFT-click an event to select it. Any previously selected events are de-selected.

SHIFT-click and drag from an empty area to draw a selection box, which is added to any existing selection.

shift + cmd (Mac) / ctrl (Windows)

Click an event while holding SHIFT and CMD (Mac) or CTRL (Windows) to add it to the selection. Clicking the event again with these keyboard modifiers held down de-selects it.

SHIFT-click an empty area to de-select any selected events.

Moving / Copying a selection

Select some events.

Setting event velocity

Click and drag up/down on an event to adjust its velocity.

These actions can be swapped via a pref (see 12:8).

Displaying the track context menu

- ✏ Pen
- ◇ Delete
- ⬚ Select
- +₊ Multi Tool

alt

- Delete
- Cut
- Copy
- Paste
- Repeat pattern
- Extract groove from pattern

Right-click while holding down ALT on a selection, an event, or an empty area to show the track context menu.

Creating velocity fade-ins and fade-outs

alt

Click and drag right to insert a series of events, then drag up while holding down ALT to create a velocity fade-in.

alt

Click and drag right to insert a series of events, then drag down while holding down ALT to create a velocity fade-out.

Gated / Looping mode pads

Click and drag right to create a Gated / Looping mode event with a duration greater than 1 step.

Click and drag the end of an existing Gated / Looping mode event left/right to change its duration.

Moving a selection

Click and drag the selection to move it. Any Graph data that exists on selected steps is moved with the events.

Copying a selection

alt

Click and drag the selection while holding down ALT to copy it. Any Graph data that exists on selected steps is copied with the events.

1:9 Graphs

Clicking the small triangular arrow to the left of each pattern track displays its graph automation controls. Graphs are automation sequences which send a value to a parameter *at the onset of each step*. They are not 'continuous' automation curves, and should not be considered in this way. Graphs are discussed in more detail in section 9:5.

graphs offer a lot of potential for sound design and movement for your patterns. They are also crucial in several aspects of sequencing in Geist.

Shift graph

This graph represents timing deviations away from straight step timing by placing pad events on pattern tracks at variable distances before or after actual step onsets.

Positive values (above the centre line) result in the step's event being played late, and negative values (below the centre line) mean it is played early.

Shift graph values can be programmed or edited visually, and they are also generated during realtime MIDI input recording of pattern events.

Coarse and Fine Pitch graphs

These graphs represent changes in the overall pitch of pads over the course of the pattern.

Pitch graph values can be programmed or edited visually, and they are also generated during realtime MIDI input recording of pattern events, when using **Chromatic playback** mode for the pads (see section 1:3).

Force Layers graph

This graph is produced by the **Use layers** function in the Slicer panel when extracting the pattern alongside the slices from a loop.

It has 8 steps, with each value forcing the corresponding layer (1-8) to be played on that step.
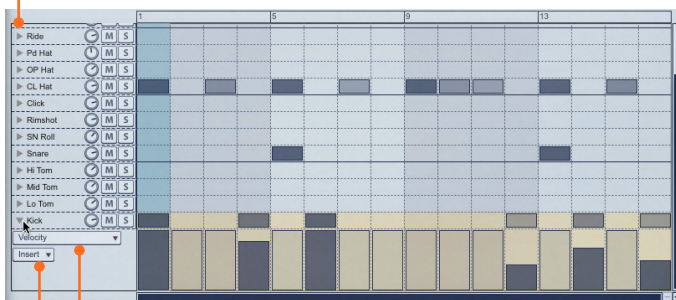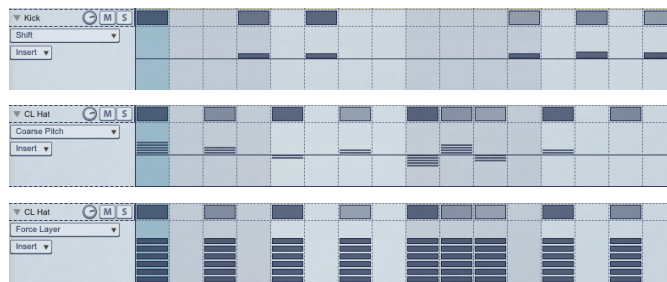
Graph type menu

Use this drop-down menu to select the graph type to view/edit. Any graph containing any events is highlighted in the menu listing.

Here is a summary of the available graphs:

Velocity, Pan	Pad velocity and pan
Repeats	Number of event repeats within a single step – useful for glitchy effects
Shift	Deviation from hard beat divisions
Reverse	Reverses all layers on the pad for the step
Coarse/Fine Pitch	Coarse and Fine pitch for all pad layers
Start Point	Changes the start point of samples on pad layers
Filter Cutoff, Res	Filter cutoff and resonance for the step
Filter Type	Filter type for the step
Force Layer	Forces Geist to play only a certain layer (1-8) for the step
Send 1-4	Send levels for Aux sends 1-4
Amp Env Depth 1/2	Depth for Amp Env destinations 1 and 2
Free Env Depth 1/2	Depth for Free Env destinations 1 and 2
Pad FX 1-6...	All parameters for all 6 Pad FX (*not* Layer FX or any other type of FX!) are available.
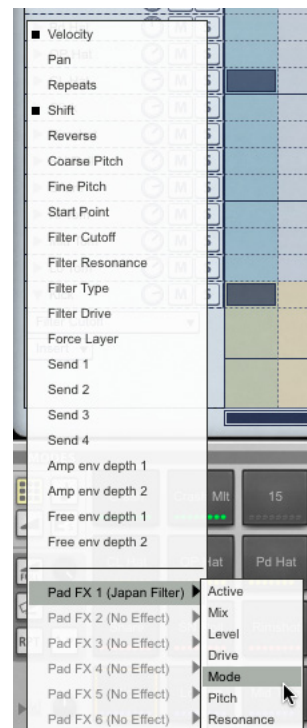
Graph insert menu

The Insert drop-down menu provides a number of useful graph automation shapes to insert onto the lane.

Note that using a shape from this menu results in overwriting all existing values in the graph lane.
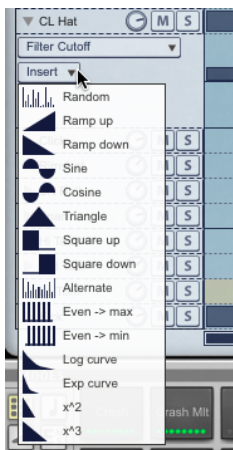
22

View mode

The following 2 buttons act as 'radio buttons' – only 1 of them can be active at a time.

Multi track view

When this button is enabled, all 16 pad tracks are visible simultaneously in the Pattern page.

Multi graph view

With this button enabled, the currently selected pad's track is shown along with 4 graph lanes, which can be set to show any of the pad's graphs.
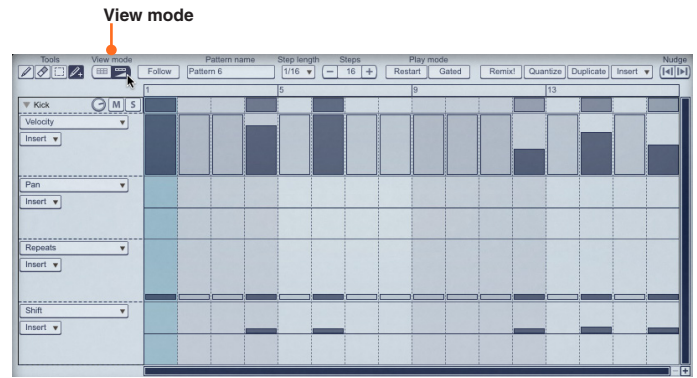
Changing to Multi graph view

Drawing graph values
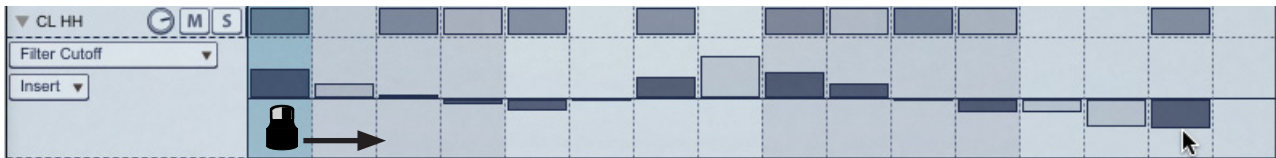
Click and drag across the graph lane to 'paint' values. You can also simply click values in single steps.
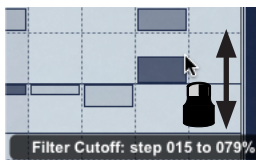
Click and drag up/down to adjust a value.

Hold down the SHIFT key for fine control.

Filter Cutoff: step 015 to 079%

Right-click on the graph lane to delete a step's value.
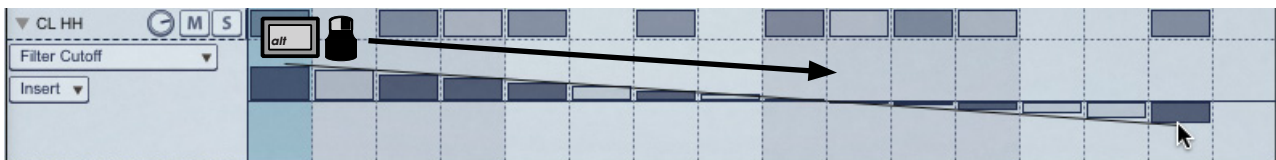
Click and drag while holding down the ALT key to draw 'lines' of graph values.

Recording graph values in real time

Graph values can be recorded as a performance in either of 2 ways:

• Using the Graph record control

The **Graph record** control provides an input source for recording graph values in real time. The variable output from this control is 'sampled and held' on the onset of each step, with the value being recorded in the currently selected pad's graph lane. The control can be assigned to a MIDI CC to facilitate hands-on performance.

1. Select the desired track by clicking the track name. Make sure the desired graph is displayed.

2. Click the **Record** button to record-arm the transport.

3. Click and drag up/down on the Graph record control.

The value of the Graph record control is recorded as the play position passes each step in the pattern. Click the Record button again to stop recording.

Note that if the **View mode** in the Pattern page is currently set to **Multi graph view**, the **Graph record** control operates on the first of the 4 graphs shown. Therefore, set the first graph lane to the desired graph type before proceeding.

• Using a MIDI CC

Each graph can be assigned to a MIDI continuous controller (CC), and graph events can be recorded by adjusting the CC while the Geist transport is in record mode – see below. Note that using this method, it is not necessary to select the track (step 1 above), or to ensure that the required graph is the first shown in **Multi graph view**.

Mapping graphs to MIDI CCs

Each individual graph (each graph type on each pad track on each engine) can be mapped to a MIDI continuous control (CC) or host automation parameter, using Geist's **Learn** function. The process of using the Learn button to map CCs/host parameters is described in sections 1:14.

When Learn mode is activated by clicking the Learn button, a clickable Learn button is shown on each graph, which is used to assign the graph to the CC or host automation parameter.

There are several situations when it is useful to map graphs to CCs or host automation parameters:

• Recording graph events in real time

This is achieved in a similar way to using the **Graph record** control (see above), except that specific MIDI CCs are used to record data for specific graphs. Mapped graphs do not need to be selected to be recorded into patterns.

• Exporting graph data with a pattern

As long as you assign any graphs used in a pattern to MIDI CCs, the graph data is written as MIDI CC values when the pattern is exported. Therefore, the exported pattern sounds the same when played back through Geist.

If you attempt to export a pattern which contains graph data not currently assigned to a MIDI CC, Geist automatically assigns MIDI CCs to any graphs that contain events, and values are exported as MIDI CC data with the pattern.

If you do not want this automatic behaviour to occur, you can disable it in the Geist preferences (see section 12:8).

• Transmitting graph data from Geist's MIDI output

Graphs which are assigned to MIDI CCs are sent as MIDI CC data aong with pattern events from Geist's MIDI output (see section 1:15).

1:10 Approaching sequencing and arrangement with Geist

Geist's architecture is deep enough to accomodate many different ways of working. No single way is better than another – it's purely down to the personal preference of the user.

Geist as a sample playback module or 'drum sampler'

If you prefer to use your host's MIDI sequencing features to trigger Geist's Pads from host MIDI tracks, you can disregard the Pattern sequencing functions entirely. Instead, trigger the Geist instrument with separate host sequencer tracks for each Engine, using the relevant notes for each Pad.

Using Geist in this way allows you to sequence Geist using a sequencer's piano roll rather than Geist's step-sequencer paradigm. You can still take advantage of Geist's sound design, FX and sample management/browsing functions.

Advantages of pattern sequencing in Geist:

- Geist features a slick step-sequencing environment which can be faster and more fun for creating drum patterns than the sometimes cumbersome and fiddly MIDI editors in some hosts
- Geist's sequencer offers advanced features like retro recording and unlimited undo, which may not exist in your host
- Geist features step-based parameter automation *graphs* – these allow you to efficiently add variation, movement and much more to your parts

A hybrid approach: exporting patterns from Geist

You may want to compose patterns in Geist, but then export them to MIDI tracks in your host to use its arrangement and detailed editing features.

Geist allows you to drag+drop any pattern to a MIDI track in your host, by clicking and dragging any pattern key on the interface (see section 1:15). This can be very useful even when not using Geist for pattern sequencing – for example, when extracting patterns from sliced loops.

Pattern power

To stop patterns playing within Geist at the same time as being triggered by exported MIDI, make sure you disable the **Pattern power** button for the relevant engine(s).

See section 1:14 for more details on exporting MIDI and audio from Geist.

Triggering patterns and scenes from your host

Another way of working is to program or record patterns in Geist, and trigger either individual engine patterns from MIDI tracks in your host.

All patterns are assigned to MIDI notes within their engine's MIDI channel. Scenes, on the other hand, can be used to trigger patterns in all 8 engine using only a single MIDI input channel (either channel 11 or 16). Using Geist in this way effectively uses your sequencing host as the 'song sequencer' while taking advantage of Geist's quick pattern recording/editing workflow.

Scenes

It can be cumbersome to trigger and keep track of the patterns on 8 different engines, which is why Geist features Scenes.

Scenes are 'snapshots' that represent the pattern state of all 8 engines. These scene snapshots can be triggered with MIDI notes in the same way as individual patterns. Effectively, Scenes allow you to store 'what you're hearing' in terms of the patterns on all active engines.

Therefore, you can use MIDI notes to trigger scenes from MIDI tracks in your host. You can record the MIDI notes used to jam a scene performance to a host MIDI track, or simply program the notes in your host's MIDI editor.

Arranging pattern changes within Geist's Song page

Geist's Song page lets you arrange patterns as 'blocks' on a linear timeline. Patterns can be recorded into the Song timeline in real-time (you can use Scene triggers to trigger patterns on multiple engines), or you can use the Retro Record function to 'capture' a pattern/scene performance after the fact.

Working in this way can have the following advantages:

Advantages of arranging patterns in the Song page

- You can easily try different rhythm beds within the same host project by loading different Geist projects into the plugin
- You can compose beats and sample-based pieces in the Geist standalone version (without having to deal with a complex, resource-hungry host application) – perhaps on a laptop – then launch the project within a host/plugin environment for detailed work
- If you do not require the kinds of features found in fully-fledged sequencer hosts, it is perfectly possible to create entire sample-based musical pieces with the standalone version of Geist and nothing else – the built-in audio export functions allow you to mix down entire songs or individual patterns to finished stereo files.

1:11 Performing with patterns
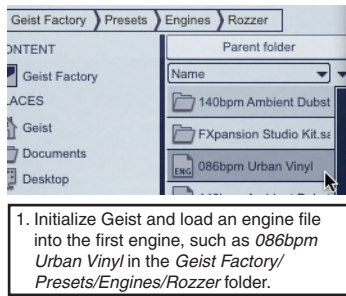
1. Initialize Geist and load an engine file into the first engine, such as *086bpm Urban Vinyl* in the *Geist Factory/ Presets/Engines/Rozzer* folder.
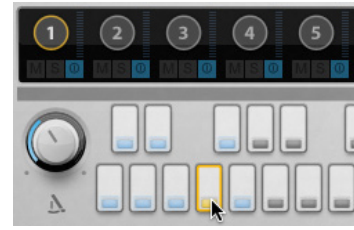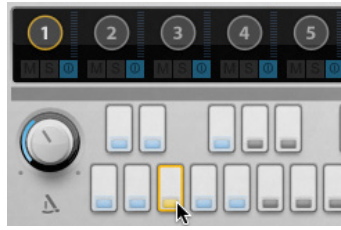
2. Click on the pattern keys to play the available patterns in the engine.
   Each pattern key can also be triggered by its corresponding MIDI note (see section 1:3).

Play mode

Each pattern features 2 play modes which dictate certain aspects of how it is played back: **Restart** mode and/or **Gated** mode (both modes can be active at the same time).

indicates start point of pattern (step 1)

Gated and Restart modes both disabled

The pattern is started by playing the key and releasing it. It starts in phase with the playing position, and loops indefinitely until another pattern is selected/played.
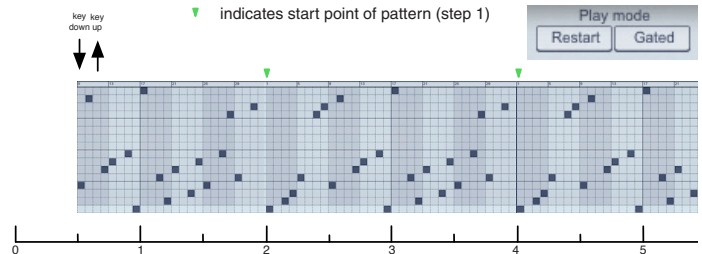
Gated Mode enabled, Restart Mode disabled

The pattern is started by holding the key down. It starts in phase with the playing position, and plays until the key is released.
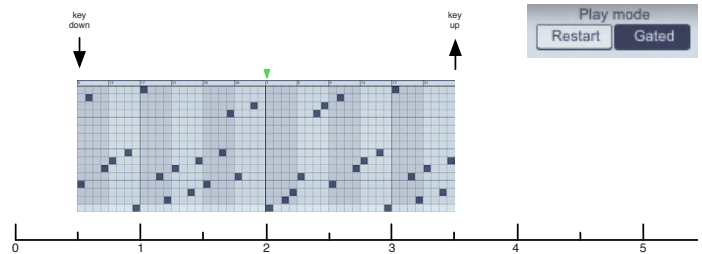
Gated Mode disabled, Restart Mode enabled

The pattern is started by playing the key and releasing it. The pattern always plays from its start, and can play of phase with the playing position. It loops indefinitely until another pattern is selected/played.
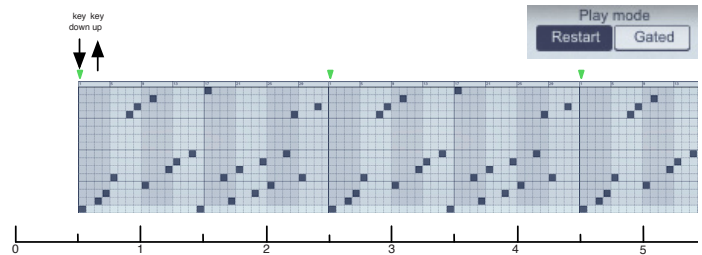
Gated and Restart modes both enabled

The pattern is started by holding the key down. The pattern always plays from its start, and can play out of phase with the playing position. It plays until the key is released.
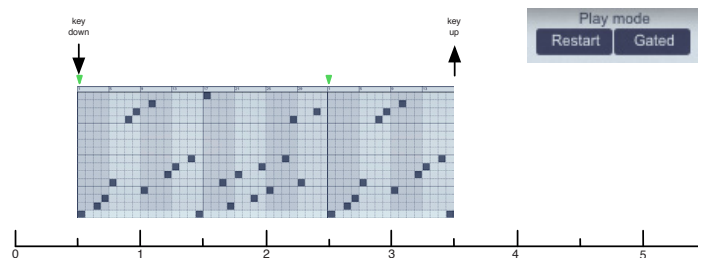
Turning off pattern sequencing on an engine

If you want an engine's patterns to be inactive, you can turn off the **Pattern power** button for the engine.

There are several situations when you may want to do this:

- If you're sequencing the engine's sounds, or entirely sequencing Geist, from MIDI tracks in your host
- If you've just exported one or more patterns from the engine to a host MIDI track
- **Pattern power** is very important in the context of scenes in Geist – if you have been switching between scenes, the **Pattern power** of one or more engines may be disabled. See the next section for more details.

When an engine's pattern power is disabled, its engine selector button is highlighted in red.

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1:12 Performing with scenes

It can be impractical to keep track of and change between the patterns on 8 different engines, and for this reason Geist features the Scenes page. Senes are 'snapshots' that represent the pattern state of all 8 engines. These scene snapshots can be triggered with MIDI notes in the same way as individual patterns. Effectively, scenes allow you to store 'what you're hearing' in terms of the patterns on all active engines, and recall this state with a single action. See chapter 10 for more details about the Scenes page.

Creating scenes

1. Initialize Geist and load an engine file into the first engine, such as *086bpm Urban Vinyl* in the *Geist Factory/ Presets/Engines/Rozzer* folder.

2. Select engine 2 as the current engine.

3. Load an engine file into engine 2, such as *808 Old School* in the *Geist Factory/ Presets/Engines/ Rozzer* folder.

4. Switch to engine 1 and select pattern 5.

5. Now switch to engine 2 and select pattern 10.

6. Switch to the Scenes page.

6. Click the **Snapshot scene** button on the first scene slot (note C-2).

8. Now switch to engine 1 and select pattern 6.

9. Switch to engine 2 and select pattern 1.

10. Start the transport if you have not already done so!

11. Click the Snapshot scene button on the second scene slot (note C#-2).

Playing scenes

Like patterns, scenes can either be clicked on-screen (in the Scenes page), or by corresponding MIDI notes on the appropriate MIDI channel (see section 1:3 for a summary of MIDI channels used in Geist).

Note that scenes simply *reference* the numbered patterns in each engine. If a scene references pattern 2 in engine 1, deleting or editing the referenced pattern will result in the scene sounding different when it is triggered.

What you actually hear when selecting a scene depends on the **Play mode** settings for the patterns within it. If any patterns are set to **Gated mode**, you need to hold down the scene trigger/MIDI note for as long as you want them to be heard. Patterns within scenes also follow the behaviour set by the **Restart mode**.

You can also specify how each scene – by default, scenes start as soon as they are triggered. They can also be set to start on the next beat or the start of the next bar using the **Start mode** buttons.

Scenes can be selected without being played by clicking the button at the bottom-left of the scene slot, which also displays the scene's MIDI note. This can be useful to inspect the **Scene info** summary for a scene without playing it.

Click or hold to play
Click to select

Click the main area of each scene in order to play it. You can also play their corresponding MIDI notes.

Scenes and Pattern Power

If you want an engine's patterns to be inactive in a scene, disable its **Pattern power** button before creating the scene.

If any engines are currently set to a blank pattern when a scene is created, the **Pattern power** is disabled for the engines within the scene data when it is created. This means that when the scene is recalled, the **Pattern power** for the relevant engines is disabled. This is to make sure that the scene sounds the same if you subsequently add events to an engine pattern that was blank at the time when the scene was created.

Therefore, when switching scenes, one or more engines' **Pattern power** button may be turned off – simply re-enable it if required.

If an engine's **Pattern power** button is turned off, its engine selector button is highlighted in red.

Pattern power buttons

When the above scenes are played, the Pattern power on engines 3-8 is disabled.
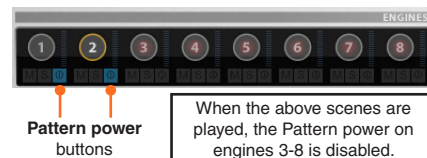
1:13 Arranging patterns within Geist's Song page

The Song page provides a sequencer that allows you to arrange patterns along a linear timeline to form a 'song' structure.

The Song page is only capable of sequencing patterns – there are no parameter automation features, for example. If you want to automate parameters over time within Geist, you must use host MIDI or automation tracks to send the required data to Geist.

This section introduces using the **Record** and **Retro record** to capture song events in real time. It is also possible to program and edit Song page events using the mouse – see chapter 11 for a guide to programming and editing, as well as a reference guide to all Song page functions.

Realtime recording and capture of song events

Recording in Song mode
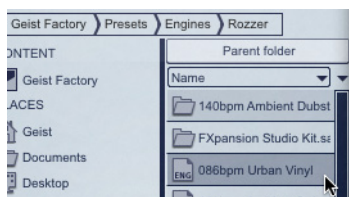
1. Initialize Geist and load an engine file into the first engine, such as *086bpm Urban Vinyl* in the *Geist Factory/ Presets/Engines/ Rozzer* folder.
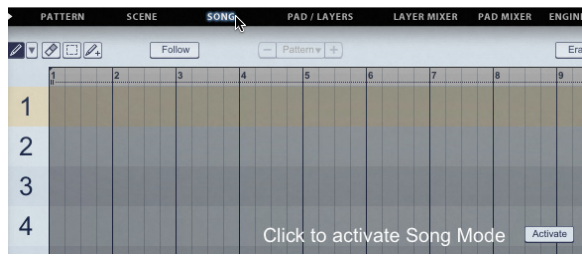
2. Click the Song page button to display the Song page.
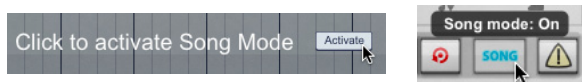
3. Either click the Activate button or the **Song mode** button on the transport.

4. For the purposes of this exercise, disable the **Pattern power** button for engines 2-8. This means their patterns won't be recorded.

5. Click the **Return to start** and **Metronome** buttons to enable them, and then click the **Record** button to 'arm' song recording.
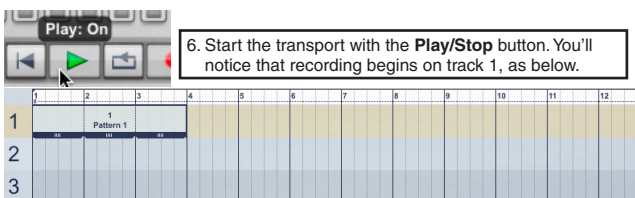
6. Start the transport with the **Play/Stop** button. You'll notice that recording begins on track 1, as below.
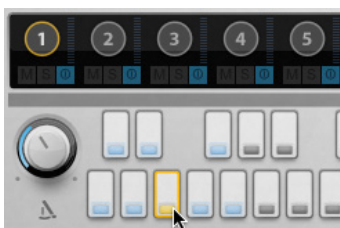
7. Play some pattern keys in engine 1.

   Each time you play a new pattern key, you'll notice that a new pattern 'block', called a *part*, is inserted onto track 1 in the Song page.
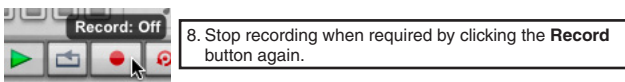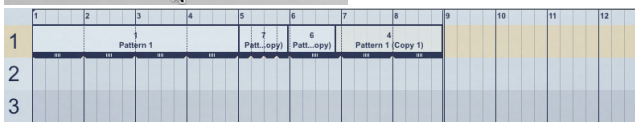
8. Stop recording when required by clicking the **Record** button again.

• You can also use scenes when recording into the song, which is useful when recording multiple engine tracks simultaneously.

Recording retrospectively into the song

1. After recording some parts into the song as above, click the Loop button on the transport and set the loop end indicator to the start of bar 9. This sets up an 8 bar loop.
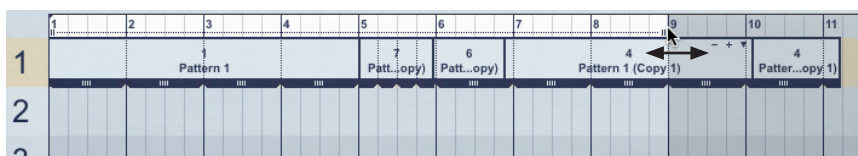
2. Start the transport. The first 8 bars are looped.

3. Play some pattern keys in engine 1 while the play position passes the first few bars.

4. Click the **Retro record** button on the transport.

5. You'll notice that the patterns you played overwrite the previous contents of the track while they were played.
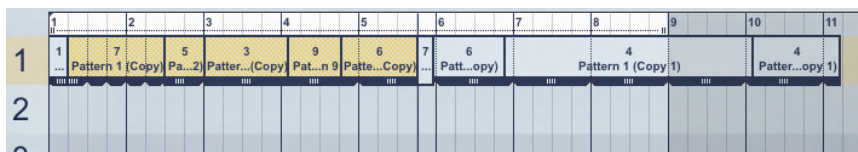
• You can also capture a pattern or scene performance which occurred while the **Song mode** button was disabled. After the performance, click the **Song mode** button and then click **Retro record**. The captured parts are inserted from the beginning of the song.

1:14 Using MIDI and host automation to remote control Geist parameters

Geist's Learn system allows you to map multiple Geist parameters to single MIDI CCs (continuous controllers) or host automation parameters. Each parameter's mapping features its own individual properties such as Min/Max values and settings for various aspects of control behaviour.

Mappings are stored with presets – to recall your mappings whenever you launch Geist, save them in a default preset (see section 12:7).

Mapping Geist controls to MIDI CCs

Hardware controllers which send MIDI CCs tend to be cheap and accessible. They offer a range of 127 values.

1. Click the **Learn** button to enter Learn mode.
   Parameters in Geist which can be mapped to MIDI CCs are highlighted in green.

2. Click the parameter you want to map on the Geist interface.

3. Move the physical knob, slider or other controller you want to use.

The parameter is now mapped, and the MIDI channel and CC number is overlaid on the control.

Mapping Geist controls to host automation parameters

Host automation parameters generally offer higher resolution than MIDI CCs. They can be drawn as curves in most sequencing hosts, or recorded with a dedicated controller. Such controllers are not simple, generic MIDI controllers, but usually dedicated devices that integrate specially with the host.

1. Click the Mapping page button to display the Mapping panel in place of the Browser. This panel contains 32 buttons which represent the availavble host automation parameters.

2. Click the Geist control that you want to map to a host automation parameter.

3. Click the button for the required host parameter number. The Geist control is mapped to the host parameter, with the number overlaid on the control.
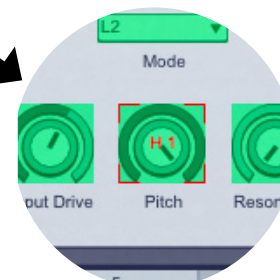
Mapping panel

As well as the 32 host parameter buttons, the Mapping panel displays a table showing all current MIDI CC and host automation mappings.

Each mapping's current properties are shown, such as its minimum and maximum values which are adjustable by clicking and dragging left/right.

There are further settings to adjust the behaviour of the mappings – see section 12:3 for a full guide to these settings.

1:15 MIDI / audio export and MIDI output

Although Geist is capable of creating finished song structures, you may prefer to arrange patterns as MIDI or audio clips within a fully-featured DAW/sequencer host.

Exporting patterns as MIDI

Geist allows you to export patterns as MIDI data by dragging pattern keys outside Geist. Patterns can be exported as MIDI files or directly to MIDI tracks in your host.

Exporting to a disk folder
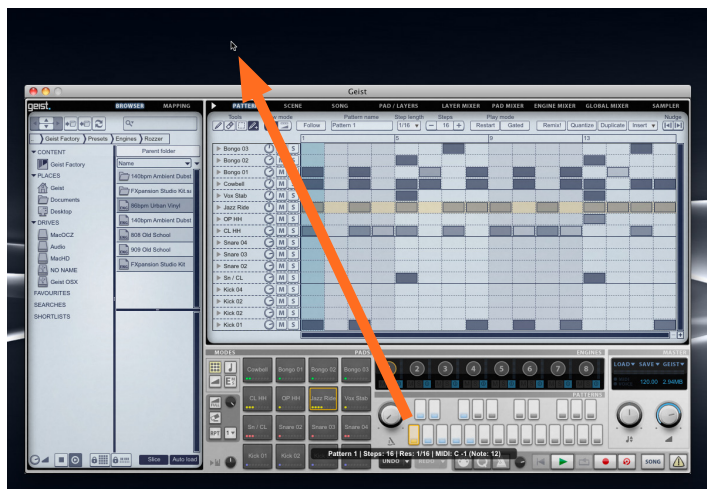
1. Click and drag the required pattern key to the desktop or any other file location in Finder (Mac) or Explorer (Windows).

The pattern is exported as a MIDI file to the file location.

Exporting to a MIDI track in a host
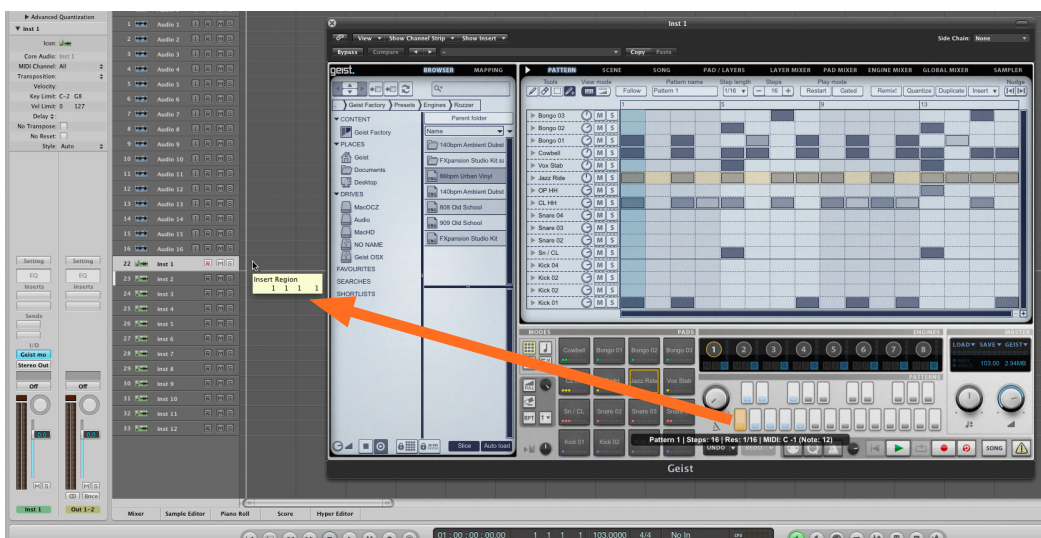
1. Make sure the required MIDI or audio instrument track on your host's 'arrange' page is visible, and click and drag the required pattern key to the required point on the track.

The pattern is exported as a MIDI 'clip' to the track at the point at which the mouse is released..

• Note that if you are using the MIDI track to drive Geist, it is advisable to turn off the **Pattern power** for the relevant engine, or to select an empty pattern.

Exporting graph data

As long as you assign any graphs used in a pattern to MIDI CCs, the graph data is written as MIDI CC values when the pattern is exported. Therefore, the exported pattern sounds the same when played back through Geist.

If you attempt to export a pattern which contains any graph data not currently assigned to a MIDI CC, Geist automatically assigns MIDI CCs to any graphs that contain events, and event values are exported as MIDI CC data with the pattern.

If you do not want graph data to be automatically converted to MIDI CC data upon export, this behaviour can be disabled in the Geist preferences (see section 12:8).

Audio export

The **Export as audio** function is located in the Geist Save menu. Invoking the function displays the Audio export panel, which offers a variety of ways to export audio from Geist. See section 12:6 for a full guide to the contents of the panel.

MIDI output (standalone and VST plugin in suitable hosts only)

If you use Geist as a standalone application, or as a plugin in a suitable host, it is possible to drive other MIDI instruments with events from Geist's sequencer. When using this function in a host, the must support MIDI output from VST instrument plugins. It is only possible to utilize the MIDI output when running Geist as VST plugin – *not* as an AU or RTAS plugin.

The content of Geist's MIDI output is the pattern output from engines 1-8, which is streamed over MIDI channels 1-8.

Any graphs currently assigned to MIDI CCs are exported as MIDI CC data along with note events in the pattern.

Please note that in the VST plugin specification, MIDI output from plugins is not sample-accurate. Therefore, please bear in mind that the timing of any triggered instrument will not be sample accurate!

1:16 Geist signal flow diagram

This signal flow diagram represents the possible signal paths for the audio from a single layer on a pad.

• Modulation of parameters is not represented.

• All sample-based processes such as tuning, timestretch, phase, reverse etc can be considered to take place within the 'Sample' block in the Layer section.

• Since there are 4 Aux busses in Geist, this block represents 4 parallel blocks of the same type – all processes from 'Summing' to output routing occur in 4 parallel channels.

• Aux pre-/post-fader routings are set on each of the 4 Aux busses. The setting dictates the routing setting for all layers/pads/engines routed to the Aux buss.

• This diagram does not represent the entire audio structure in Geist. There are 8 engines each containing 16 pads, each of which contain 8 layers. Therefore, there are 128 pads and 1024 layers in total.
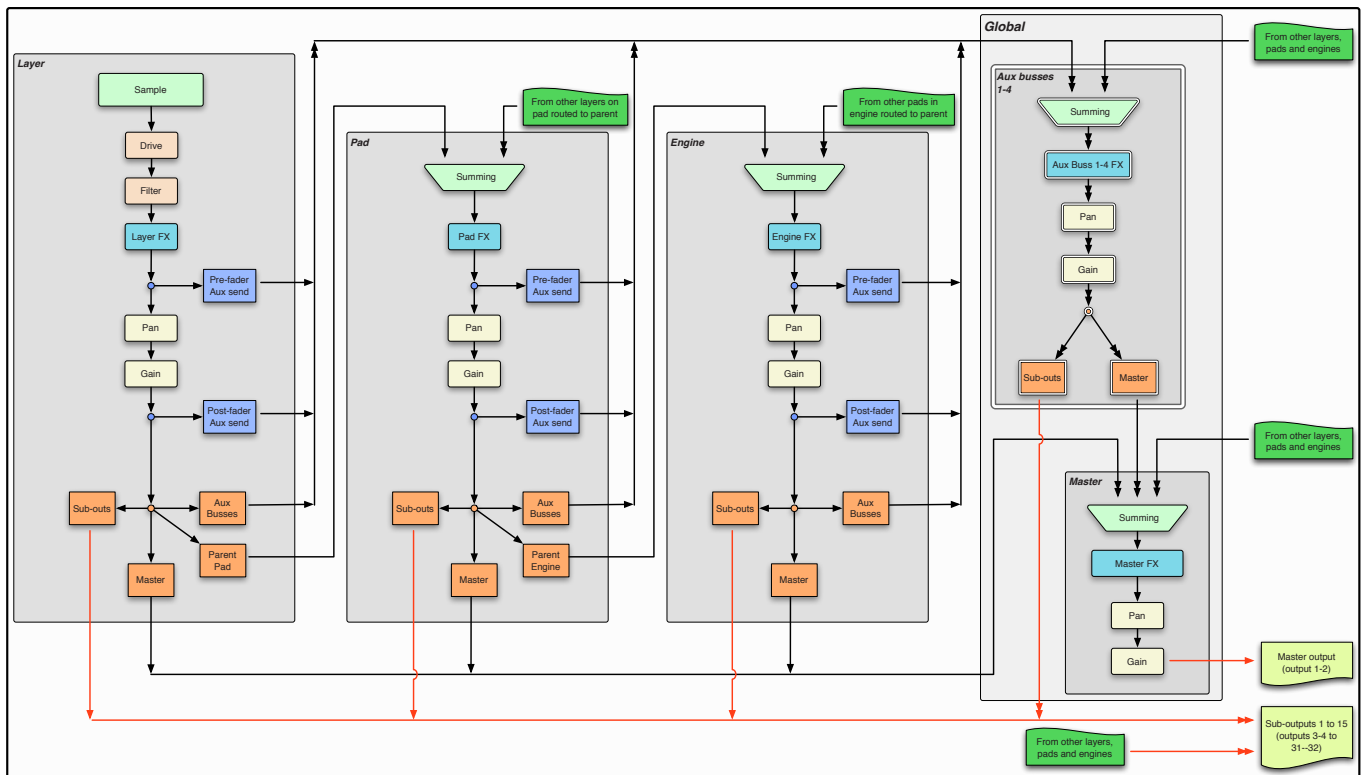
2 Browser

2:1 Browser overview

The Browser is the primary method of loading sounds into Geist, and is introduced in sections 1:2 and 1:5.

Note that you can also load Geist and GURU files using the Load menu, described in section 12:4.

Certain areas of the Browser feature a context menu, each of which is described in the relevant section below.

Browser visibility

You can toggle the presence of the Browser on the interface using the **Browser show/hide** button. You may want to hide the Browser when you are working on composition after having loaded the sounds you need.

2:2 Browser Modes

Auto play

When the **Auto play** button is enabled, selecting a sample in the Browser results in it being previewed automatically.

When this button is disabled, a **Preview play** button appears on the selected sample in the Browser which can be used to audition the sound manually.

Any preview can be stopped using the **Preview Stop** button at the bottom-right of the Browser.

Slice

If this button is enabled, selecting a sample results in it being opened in the Slicer. The Slicer lets you perform advanced non-destructive slicing for the sample and automatic pad assignment based on classification.

Note that it is possible to set the contents of any folder not to invoke the Slicer panel, even when the **Slice** button is enabled. Right-click on any file in the folder and use the **Allow/Disallow slicing of files in this folder** function on the files context menu.

Auto load

When this button is enabled, selecting a file in the Browser results in it being loaded to the currently selected pad or layer. Continuing to click on other files will result in them replacing the current contents.

Holding down ALT while clicking on a sample results in it being loaded to the next available layer on the current pad.

This continues to occur until you select another pad, **Lock** the pad or until you disable the **Auto load** button.

Disabling Auto load

If **Auto load** is disabled, samples must be loaded to pad layers via drag & drop.

Dragging a sample onto a pad loads it to the pad's first layer, replacing all other samples on the pad's layers.

Holding down ALT while dragging a sample onto a pad loads it to the pad's next available layer.

In this mode, you can also select up to 8 samples and subsequently drag and drop them to a pad in order to load the samples to the pad's 8 layers.

Navigation controls

Click to show the browser if the Mapping panel is currently visible.

Click to show the Mapping panel

Browser show/hide

Search controls

Path

Return

Browser sidebar

Preview play

Files area

Shortlist

Lock all pads

Lock all patterns

Auto play

Preview level!
(right-click to set an output)

Auto load

Preview stop

Slice
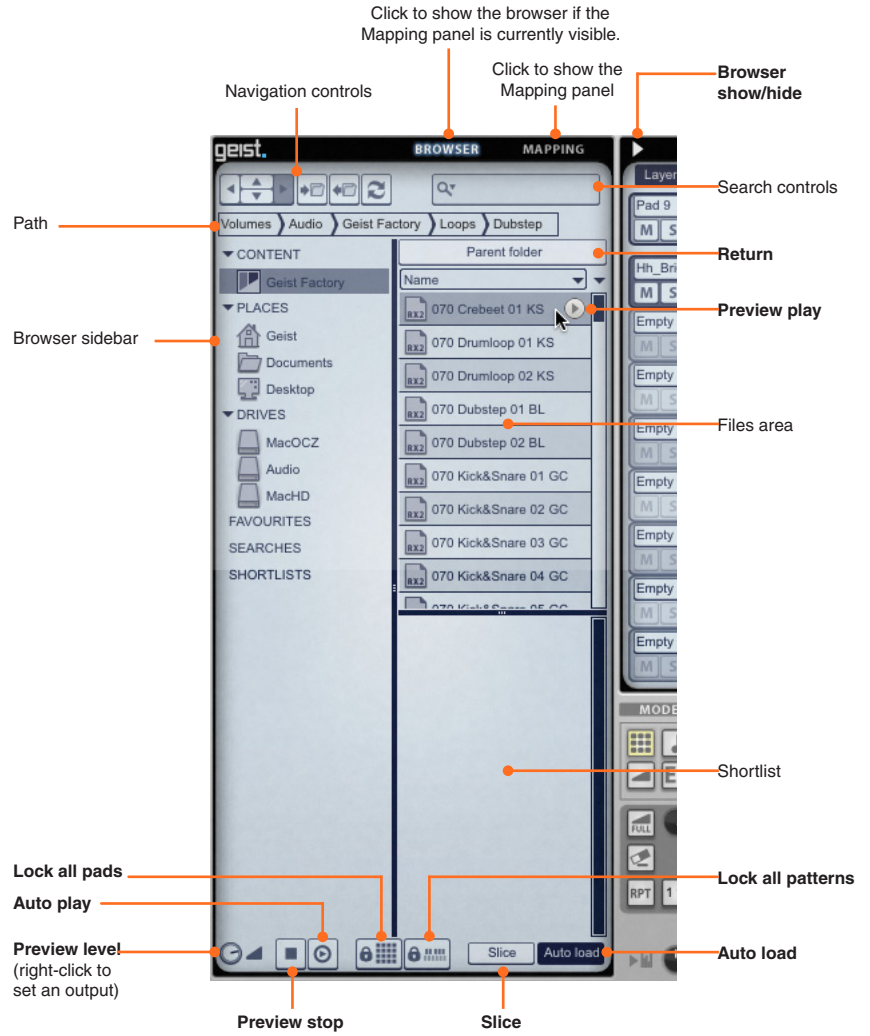
2:3 Browser sidebar

This area of the Browser displays links to content locations of various types.

Drives

This section displays all available drives – click on any drive to browse its contents.

The context menu allows you to reveal any drive in your OS file browser (Exporer/Finder).

Other items

The context menu for these items allows you to rename and remove the selected item, as well as to set a colour label. Some items feature additional functions on the context menu (see below).

Favourites

Click and drag any folder from the files area to this section to save it as a favourite (or right-click in the files section and use the **Add to favourites** function).

The context menu for favourites allows you to reveal the selected item's location in your OS file browser.

Searches

Saved searches are shown here. See section 2:6 for more details on saving searches.

The context menu for saved searches allows you to refresh the selected search.

Shortlists

Saved shortlists are shown here. See section 2:7 for more details on shortlists.

Adjusting the border between the sidebar and the files area/shortlist

The border between the Browser sidebar and the files area/shortlist can be adjusted to resize the areas. Simply click and drag the border left/right.

You can also double-click the border to hide the sidebar completely – double-click it again to restore it.
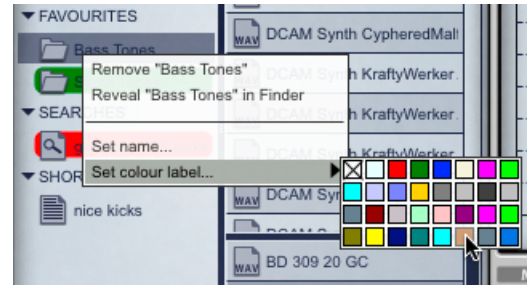
Setting the colour for a favourite using the context menu
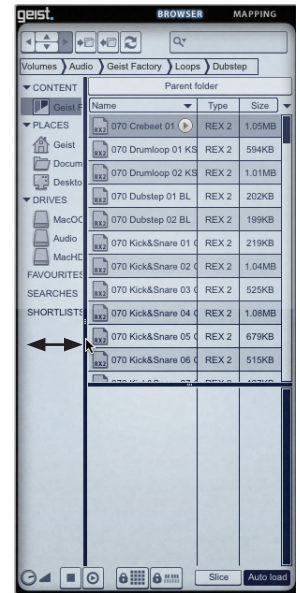
Adjusting the sidebar border

2:4 Navigation

Path

The current **Path** is shown at the top of the list of files. The name of each folder level is abbreviated for space reasons, but it is shown in full as a tooltip or in the context info display.

Click on any level of the **Path** to jump to the relevant location in the Browser.

Drag and drop from OS file window

Drag and drop a folder from Finder (Mac) or Explorer (Windows) to show the folder's contents in the Geist Browser.

Prev/Next file
Prev/Next folder
Enter folder/Return to parent
Refresh

The **Prev/Next file** buttons select the previous or next file in the files list. It can be useful to learn these buttons to MIDI CCs for a quick way of browsing through files in the current location with a hardware controller.

The **Prev/Next folder** buttons are Explorer/Finder-style navigation buttons.

When a sub-folder is selected, the **Enter folder** button opens the sub-folder.

The **Return to parent** button navigates to the parent folder above the current folder. You can also use the **Return** button (see section 2:5) if you are currently viewing the contents of a folder (if the Browser is not currently displaying the contents of a search).

The **Refresh** button reloads the current folder listing.

33
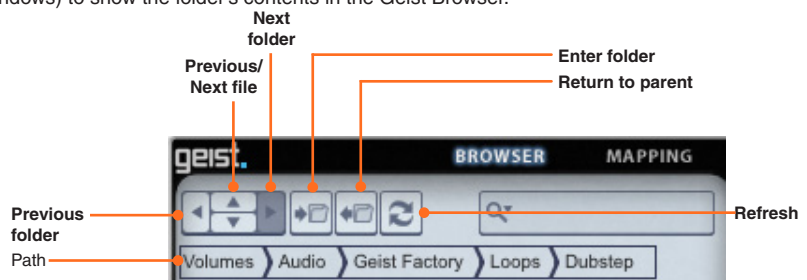
2:5 Files

This section shows the files contained within the currently selected content. Nested sub-folders are also shown for navigating further down in the folder structure.

Return

The **Return** button varies its function depending on the current state of the Browser. When browsing a folder, it acts as a 'Return to Parent' button. When a search term is active, it cancels the search and returns to displaying files normally.

Files area

The files area shows the contents of the current folder location, or the current search results.

Selection

Click a file to select it. The behaviour that follows selection depends upon the state of the **Auto load**, **Auto play** and **Slice** buttons (see section 2:2).

Right-clicking on a selection displays the files context menu.

Multiple selection

Multiple files can be selected using the following methods:

• SHIFT-click to create a contiguous selection between 2 files
• CMD-click (Mac) or CTRL-click (Windows) to add a file to the selection

This is useful for several functions, such as:

• adding files to shortlists
• loading up to 8 samples to a single pad when not in Auto load mode
• various operations on the files context menu

View options

By default, the Browser is set to show all possible types of files relevant to Geist. The Browser view options menu button allows you to enable or disable each file type in the files listing.

View

You can set the Browser to show or hide the following elements, or to view them all.

Audio	Samples in WAV, AIFF, REX and RX2 formats
Presets	Geist presets store the entire state of Geist, and must be double-clicked to load them from the Browser (whether Auto load mode is enabled or disabled), discarding the contents of the current session
	Note that a Load preset operation *cannot* be reversed using the **Undo** function
Engines	Engine files store the entire state of an engine: the sounds on the pad (plus Pad/Layers page settings), 24 patterns, and any layer/pad/engine FX.
	When Auto load mode is disabled, you can drag and drop an engine file to an engine selector button.
Kits	A kit file contains the contents of the pads on an engine, including layer and pad FX.
Pads	A pad contains the contents of a pad, including all its layers and their settings, as well as pad and layer FX
Patterns	Geist pattern files.
Pattern Bank	An entire set of up to 24 patterns (all patterns in an engine)
MIDI	Geist can import MIDI files as patterns. Any MIDI notes that are not on pad notes are ignored.
Guru Kit	Imports a GURU kit to the currently selected engine. The kit file must be saved with GURU 1.5 or later.
Guru Pattern	Imports a GURU pattern to the currently selected pattern.
Guru Pattern Bank	Imports a GURU pattern bank (a bank of 24 patterns) to the currently selected engine.
Folders	If this is disabled, folders are not visible in the files list in the Browser. This is intended for situations when a folder containing samples also contains a lot of sub-folders, and their presence makes excessive scrolling necessary.
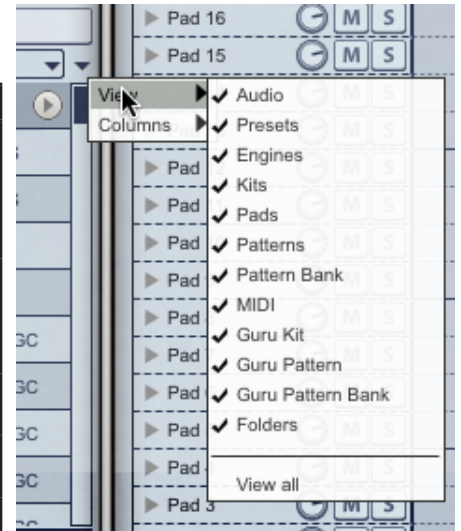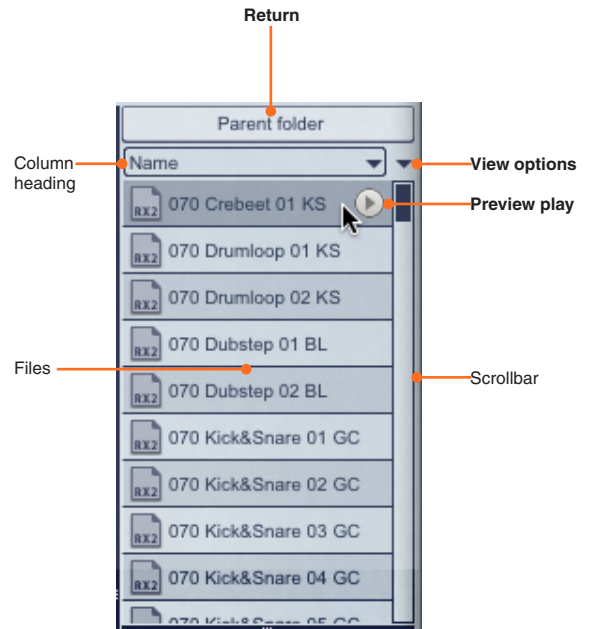
Importing GURU files saved in GURU 1.5 or later

Geist can import GURU v1.5 format kits, patterns and pattern banks from the Browser. GURU v1.5 format presets can also be imported via the Load menu (see section 12:4). Files saved with GURU versions prior to v1.0 *cannot* be imported – they *must* be loaded into v1.5 or later and re-saved.

Note that while the important aspects of the files are imported, there are some parameters which cannot be translated due to fundamental differences between the architecture of Geist and GURU.

• FX are not imported

• The filter settings may differ considerably, due to the improved filter in Geist, and the fact that it features discrete filter types rather than GURU's blendable LP/BP/HP filter.

• Geist's envelopes are based on absolute time, whereas GURU's envelopes were scaled to the length of each sample. Therefore, envelopes sound significantly different when importing GURU files.

• Velocity split ranges are approximated from GURU's velocity split settings.

• Cut groups are also an approximation of GURU's settings.

• Gain/volume levels may differ slightly, due to the different gain structure within Geist.

• Not all graphs are translated properly – in particular, the Force Layers and Filter Type graphs differ considerably.

Columns

By default, the 'Name' (filename), 'Type' and 'Size' columns are shown for each item displayed in the files area. Using the Columns sub-menu in the view options menu, you can optionally choose to hide the 'Type' and 'Size' columns.

Clicking on the column headings allows you to sort by the column's contents. Repeatedly clicking the column headings toggles between ascending and descending arrangement.
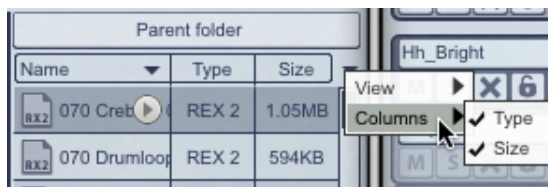
Files context menu

Right-click in the files area to display the files context menu, which offers the following functions:

Select All

Selects all files visible within the current Browser location.

Delete slice information
Delete all slice information in this folder

See section 3:5 for details of these functions.

Allow/Disallow slicing of files in this folder

If a folder contains only samples that you wish to use as 'single hits' rather than as loops, you can disallow the Slice function for the folder's contents with the **Disallow slicing of files in this folder** function – clicking on any sample in the file does not invoke the Slicer, whether the **Slice** button is enabled or disabled.

If this function has been applied to a folder, a 'star' indicator appears on the folder name and on the icon for each sample within the folder. The **Allow slicing of files in this folder** function reverts to normal behaviour for the folder.

All sub-folders in the Geist Factory/Hits folder have been set to disallow slicing.

Reveal file/folder in Explorer/Finder

Launches an OS file browser window (Explorer on Windows or Finder on Mac) at the selected file or folder location.

Shortlist

Adds any currently selected files to the shortlist (see section 2:7).

Add file/folder to favourites

Adds the selected file or folder to the Browser sidebar as a favourite.
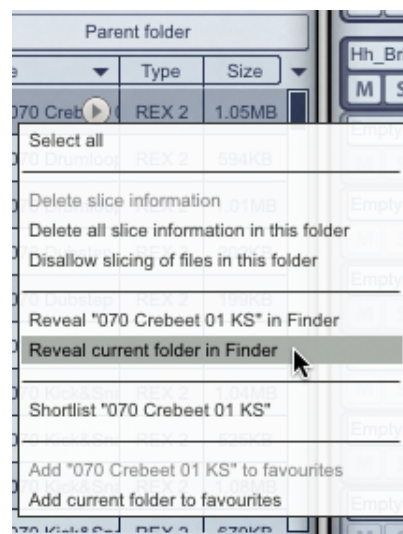
2:6 Search functions

Search

The Search function provides a simple filename-based search. Simply click the **Search** text box, type a search term and press ENTER.

Search results appear in place of the current Browser location in the files area. To return to the previous Browser location, click the **Previous folder** navigation button, or the **Return** button above the files list.
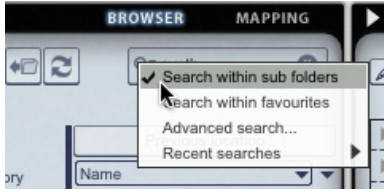
Search menu

Click the **Search menu** button at the left of the **Search** box to display the search menu.

Search sub-folders

With this setting disabled, the Seach function effectively applies a filter to the files within the current folder.

With this setting enabled, all sub-folders within the current Browser location are included in the search.

Search favourites

With this setting enabled, all current Favourites locations are also included in the search.

Advanced search...

This function opens the Advanced search controls within the Browser (see below).

Recent searches

Any recently used search terms are listed in this sub-menu for convenience.

Advanced Search

The **Advanced search...** function on the search context menu opens the Advanced search controls, which offer additional options for searching.

Note that the **Search sub-folders** and **Search favourites** settings in the search context menu also apply to the Advanced search.

Like the Search function, the results returned by the Advanced Search are displayed in place of the current Browser location in the files area. To return to the previous Browser location, click the **Previous folder** navigation button, or the **Return** button above the files list.

To remove the Advanced search controls, deactivate the **Advanced search...** function on the search menu.

Search conditions

It is possible to define up to 3 search conditions in the Advanced search. Each of the 3 search conditions are structured in the following way:

File attribute   Condition   Search term
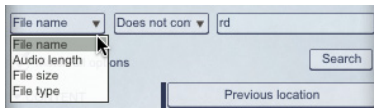
File attribute

This drop-down menu specifies which file attribute is searched. This can be any of the following: **File name**, **Audio length**, **File size** and **File type**.
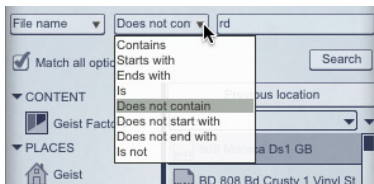
Condition

This drop-down menu defines the condition for the search term to return a result. The possible settings are:

Positive searches: **Contains**; **Starts with**; **Ends with**; **Is**

Negative searches: **Does not contain**; **Does not start with**; **Does not end with**; **Is not**

Search term

Enter the desired search term in this text box. Search results appear in place of the current Browser location in the files area. To return to the previous Browser location, click the **Back** navigation button.

Match all options

With this button enabled, all 3 search conditions must be present for a result to be returned.

With the button disabled, any of the 3 search conditions must be present for a result to be returned.

Saving searches

Right-click within the search results to display the files context menu. Use the **Save search results** function to save the search in the Searches section of the Browser sidebar.
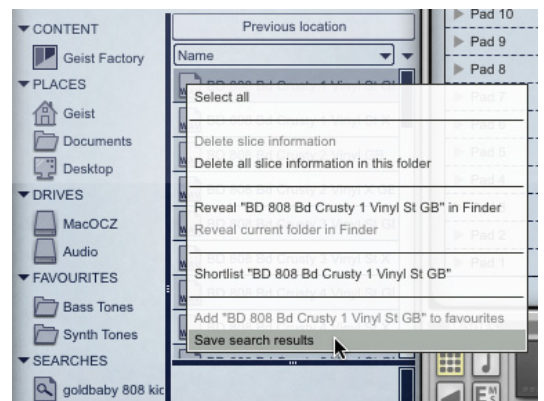
2:7 Shortlist

Geist allows you to browse for samples in a multitude of locations and drag them to the shortlist, where you can then audition them together without navigating to their original folders.

The shortlist is the area underneath the Files area of the Browser (click and drag the border pane if it has been hidden). It allows you to compile a list of samples from disparate locations so that they can be auditioned together without navigating to multiple locations.

Add a file to the shortlist using the files context menu (see section 2:5).
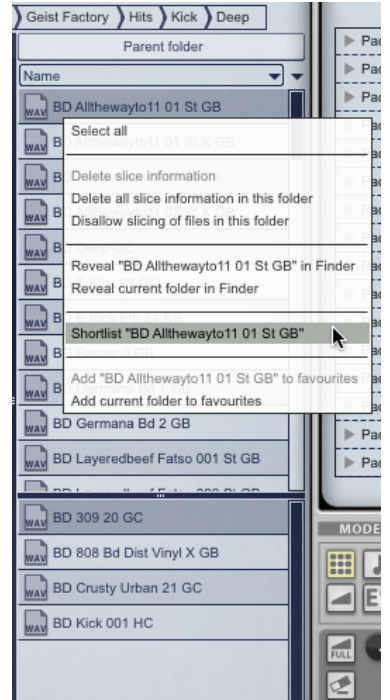
Saving a Shortlist

Shortlists can be saved for future use by right-clicking in the Shortlist area and using the **Save as shortlist file** function in the shortlist context menu. This action automatically puts the saved shortlist in the Saved Shortlists section of the Browser sidebar.

Exporting a Shortlist as a Favourite

The **Collect files and export as favourite** function, also available on the shortlist context menu, creates a new folder and copies the files in the shortlist to that folder, which is also added to your Favourites.
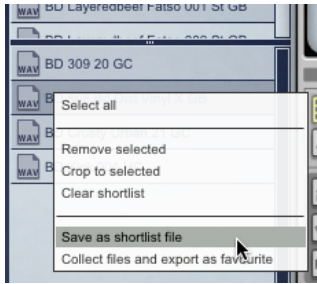
Other functions in the shortlist context menu

Several of the functions in the shortlist context menu act upon a selection. Select a single file in the shortlist by clicking it, or select multiple files in either of the following ways:

• SHIFT-click to create a contiguous selection between 2 files
• CMD-click (Mac) or CTRL-click (Windows) to add a file to the selection

Select all

Selects all files currently in the shortlist.

Remove selected

Removes any selected files from the shortlist.

Crop to selected

Removes any files that are not currently selected in the shortlist.

Clear shortlist

Clears the entire contents of the shortlist.

Adjusting the border between the shortlist and the files area

The border between the shortlist and the files area can be adjusted to resize the areas. Simply click and drag the border up/down. You can also double-click the border to hide the sidebar completely – double-click it again to restore it.

2:8 Additional Browser controls

Preview volume

This control allows you to adjust the level of Browser previews.

Preview output

Right-click on the **Preview volume** control to show the preview output menu, which allows you to route all audio from Browser previews to a discrete output.

Setting a discrete output allows you to set up a 'cueing' system, whereby you can audition sounds without them being heard in the main mix (good for live performance).
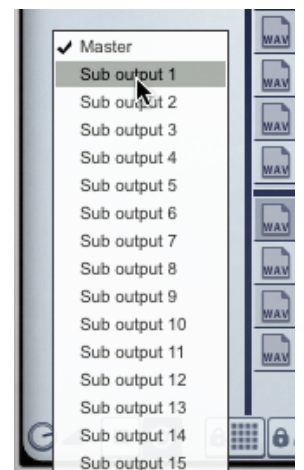
Lock/Unlock all pads
Lock/Unlock all patterns

These buttons allow you to lock or unlock all pads and patterns in the current engine with a single action.

They are especially useful for Slicer operations while Auto load mode is enabled – for example, if you only want to extract the sounds or the pattern from a loop.

You can also lock individual pads, layers, patterns and pattern tracks – see sections 5:10 and 9:7 for a summary of these functions.

Using the **Lock all pads** button to lock all 16 pads in the engine

3 Slicer

When browsing audio files in Slice mode (with the **Slice** button enabled in the Browser), clicking on a sample displays the Slicer panel, which allows you to extract the audio and pattern from audio loops. It contains auto-analysis and pad classify features which can speed up your workflow.

Note that this panel does not have a dedicated 'page' tab button. It can only be accessed by clicking on a sample in the Geist Browser with the **Slice** button enabled.

All other pages are disabled when the Slicer is open – although many functions on the 'hardware' section of Geist are still available, such as the pads and transport.

3:1 Slicer overview

Important Browser controls for the Slicer

Slice

The **Slice** button must be enabled for Geist to open the Slicer when you click on a sample.

Note that the contents of a folder can be set to not invoke the Slicer even when the Slice button is enabled, using the files context menu – see section 2:5 for more details.

Auto load

If the **Auto load** button is enabled when the Slicer is invoked, the audio slices and analysed pattern are always automatically extracted from the loop and loaded to the pads and current pattern in the current engine. The previous contents of the pads and pattern are always removed first. In the case of pads, the audio contents are removed but the other settings remain.

This does not apply to locked pads or patterns – see sections 5:10 and 9:7 for a summary of pad and pattern lock functions.

Note that this automatic loading can be cancelled by clicking the **Cancel** button to exit the Slicer and discard the current slicing session. Clicking the **Done** button confirms the changes.

When Auto load mode is active, the extracted pad and pattern contents are refreshed in real time when moving/adding/removing slice points and using the **Sensitivity** slider in Transient slice mode.

Pattern viewer shows pattern extracted from loop

Waveform ruler inc. slice points

Slicer waveform display

Classify indicators

Zoom in/out and scrollbar

Slicing controls

Lock all pads and **Lock all patterns**

Slice and **Auto load** enabled

Slices extracted automatically to pads

Disabling Auto load mode

If the **Auto load** button is disabled, pads and audio slices must be loaded to pads using the **Extract** buttons (see section 3:3). Individual slices can also be loaded to pads using drag and drop. In this mode, simply clicking the **Done** button before performing any **Extract** or drag & drop actions does not result in anything being loaded. The **Cancel** button, however, still discards any actions performed in the Slicer session.

Undo

You can also use Geist's **Undo** function to revert to previous states before the Slicer was initiated, whether using Auto load mode or not.

Lock all pads / Lock all patterns

These buttons are for quickly locking all pads and patterns in the current engine, and is especially useful for Slicer operations while Auto load mode is enabled. Individual pads and patterns can be locked using the pad and pattern context menus (see sections 5:10 and 9:7).

Basic Slicer controls and displays

BPM/Bars/Beats

This information is calculated from the sample. REX2 files feature embedded information for these fields, while WAV/AIFF samples are analysed and calculated according to their length.

You can correct/override this information manually if required, by clicking the relevant field and typing new numerical values.

Waveform display

The selected sample in the Browser is shown in the waveform display.

The upper part of the waveform can be clicked to audition the slice.

Click and drag down/up in the cenrtal part of the waveform display to zoom in/out, and scroll by dragging left/right (the orientation of these actions can be changed in the preferences – see section 12:8).

The lower part of the waveform can be used to drag and drop slices to pads manually.
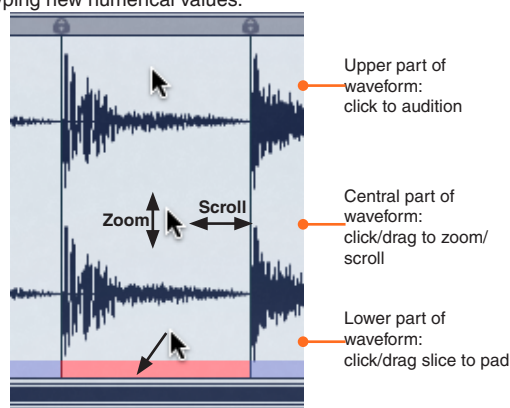
Pattern viewer

This part of the Slicer page displays the current pattern (this display cannot be edited).

If you're currently in Auto load mode, the analysed pattern is automatically extracted and replaces the previous contents of the pattern.

When Auto load mode is not enabled, this display shows the contents of the pattern before you entered the Slicer. If you extract the pattern from the loop by clicking the **Extract pattern** button, the extracted pattern is shown in place of the previous pattern.

Upper part of waveform: click to audition

Central part of waveform: click/drag to zoom/ scroll

Lower part of waveform: click/drag slice to pad

Slice Mode: Transient/Divide

The **Slice Mode** switch sets the Slicer to either Transient (transient-based algorithm) or Divide (equal division-based algorithm) mode.

In Transient mode, a **Sensitivity** control is shown on the interface. See section 3:2 for details on using Transient mode.

In Divide mode, this is replaced by a numerical text box allowing you to specify the number of equal-length slices into which to divide the audio file. This mode is discussed in section 3:4.

3:2 Transient slice mode

Sensitivity

In Transient slice mode, Geist features a variable **Sensitivity** control for detecting transients in the audio file.

In this mode, a **Sensitivity** slider is displayed. As the slider is increased, the slicing algorithm becomes more sensitive to transients (i.e. it finds more of them). Each division is indicated by a slice point, which represents the end of the previous slice and the start of the next.

Locking slice points

To lock a slice, right-click on the waveform slice or on the slice point, and use the **Lock slice** function on the slice context menu.

Unlock a locked slice by using the **Unlock slice** function on the slice context menu.

Locking slice points is very useful, as they are unaffected by further adjustments to the **Sensitivity** slider. For example, you can use a high **Sensitivity** setting in order to display more detailed slice points, lock the ones you want to keep, and then turn down the Sensitivity again.

Moving slice points

To move the position of a slice point, simply click it and drag left or right with the mouse.

Adding slice points manually

To add a slice point manually without using the **Sensitivity** control, click on the desired position in the 'ruler' above the waveform.

When a slice is added in this way, it is automatically locked – this means that the slice point is not affected by any further adjustment of the **Sensitivity** control, until it is unlocked using the slice context menu.

Deleting slice points

Slice points can be removed using the **Delete slice** function in the slice context menu, on the slice point or on the waveform slice itself.

You can also ALT-click the relevant slice point.

To restore a deleted slice point, simply use the **Restore slice** function on the slice context menu.

Slice context menu

To display the slice context menu, right-click either on the slice point, or within a slice area on the waveform itself (the operation is applied to the slice point with which the slice begins).

Lock/Unlock Slice

You can **Lock** any slice point so that it is not affected by any subsequent adjustment of the **Sensitivity** control. **Unlock** the slice point to remove this behaviour.

Delete/Restore Slice

When a slice point is deleted, it is effectively 'disabled' – it can never be added back by further adjustment of the **Sensitivity** control. **Restore** the slice point to remove this behaviour.

Kick/Snare/Hihat/Percussion

These functions allow you to override Geist's automatic Classify function. If Geist has mis-classified any slice, you can set it manually to the correct pad type using these functions.

Manual classification of slices is saved along with any automatic classification in Geist's slice information files (see section 3:5).

Right-click to use the **Lock/Unlock slice** functions

Move a slice point by click/dragging it left/ right

Click in the waveform ruler to add a slice point

ALT-click to delete a slice point, or use the slice context menu
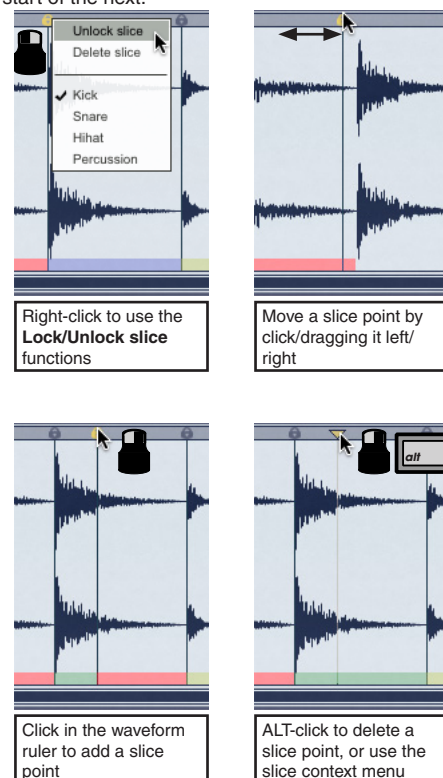
3:3 Classification and extraction controls

Classify on/off

Enabling this button results in each slice being analysed to determine if it mostly resembles a kick, snare, hihat or other. When slices are assigned to pads, they follow the pad categorizations.

If the **Classify** button is turned off, slices are simply added sequentially from pads 1-16.

The classify function is only available in Transient mode (when the **Slice mode** is set to 'Transient')

This function is fully explained in section 1:4.

Use layers

This function is only relevant when working with samples resulting in over 16 slices. If the **Use layers** button is enabled, slices are assigned to additional layers in the current engine's pads. If it is not enabled, the most accurate matches (Transient mode) or the first 16 slices (Divide mode) are used.

Classify/extraction display

The waveform display provides useful information during the slicing session that summarizes the classification for each slice, and whether or not each slice has been extracted to a pad layer.

Extracted slices are highlighted more brightly than unused slices. The coloured strips below the waveform indicate the slice's classify status.

Hover the mouse over a used slice to show information about the pad/layer to which the slice has been extracted.

Extraction indicators

If any slice has been extracted to a pad layer, it is shaded more brightly than unused slices. Hovering the mouse over a slice for a few moments displays specific information about the pad assignment – the number of the slice in the current set of slices, the engine number, pad number, layer number and classification type (Kick/Snare/Hihat/Percussion).

Classify indicators

The small colour strips at the bottom of the waveform display provide information about the classification status of each slice. The colours used are related to the colour of each pad row – blue for kicks, red for snares, yellow for hihats and green for percussion.

Extract Audio
Extract Pattern
Extract Audio+Pattern

These 3 buttons are only visible when the **Auto load** button is disabled in the Browser.

If the Auto load button is enabled, the audio and pattern are always extracted from the loop and loaded to the pads and current pattern (unless they are locked).

If the **Auto load** button is disabled, nothing is extracted/loaded automatically and these buttons allow you to load the desired elements from the sliced loop by clicking them to perform the relevant action.

Extract Audio

Sends the audio slices to current engine's pads.

Extract Pattern

Sends the extracted pattern to the current pattern slot.

Extract Audio+Pattern

Performs both of the above actions.

Extracting slices manually to pads or layers

Single slices can be extracted manually to a pad or the next layer on the pad, whether Auto load mode is enabled or disabled.

Click and drag from the lower part of the waveform display to a pad – all previous sample contents are removed and the slice is added as the first layer.

If you perform this operation while holding down the ALT key, the slice is added as the next free layer on the pad.
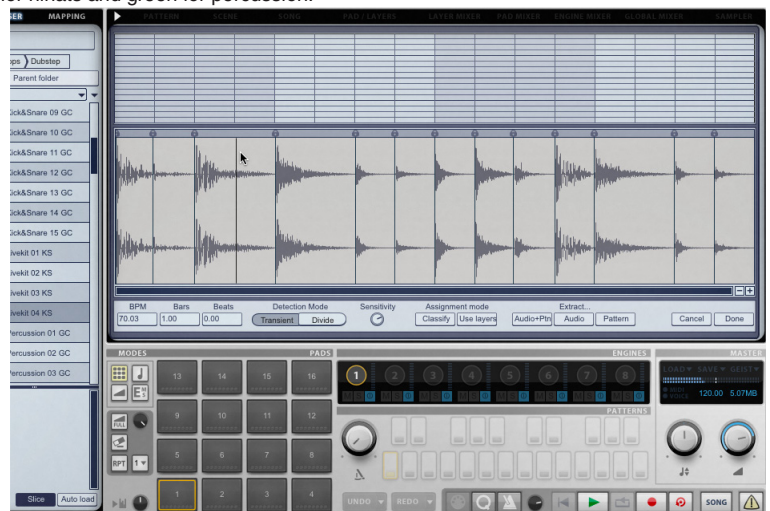
In this screenshot, **Auto load** and **Classify** are disabled, meaning that no auto-extraction or classification takes place. Slices can be auditioned by clicking.

The **Extract** buttons extract the pattern or multiple pads. You can also click/drag individual slices to pads.

3:4 Divide slice mode
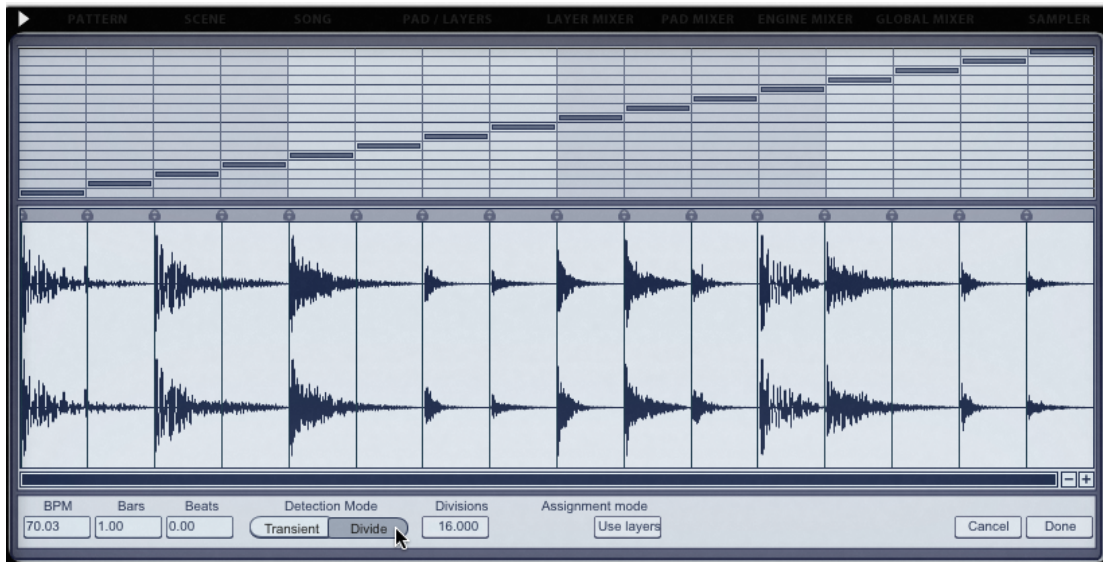
This screenshot shows Divide slice mode with Auto load enabled. The loop has been chopped into 16 equal slices, with the slices and pattern automatically extracted.

In Divide mode, the Sensitivity slider is replaced by a **Divisions** control – a numerical text box allowing you to input the number of equal-length divisions produced by the chopping process.

In this mode, it is not possible to add/remove slice points manually, and the slice context menu is not available. It is also not possible to use the **Classify** function.

3:5 Confirming or discarding a slicing session

Done

When you have finished extracting audio/pattern data from the sliced sample, click the **Done** button to exit the Slicer panel. This confirms any operations performed since the Slicer panel was initiated. If Auto load is disabled and no Extract or drag & drop operations are performed, clicking the Done button results in no changes to the pads or current pattern.

Cancel

If you want to entirely discard all operations performed during the slicing session, regardless of the state of the Auto load button, click the **Cancel** button. The engine's pads and current pattern return to the previous state before the Slicer was initiated.

Alternatively, if you want to carry on slicing (for example if you have extracted the audio slices from one sample, and want to extract the pattern from another), then simply click on another sample in the Browser.

Slice information files

When clicking the **Done** button to confirm a slicing session, Geist saves a 'slice information file', using the original filename with a **.gsa** file extension, alongside any sample that is processed in the Slicer. Therefore, if you click **Cancel** and abort a slicing operation, no changes are made to the .gsa file alongside the sample (if a .gsa file does not yet exist, none is created).

The .gsa file contains information about the slicing settings, slice points and any classification which may have been performed automatically by Geist, or manually using the slice context menu.

Saving a .gsa file means you will only need to slice and classify any particular audio file once. Whenever you try to load the sample into the slicer in future, the saved slicing information is recalled.

To remove the .gsa file for any sample, simply right-click on the sample in the Geist Browser and use the **Remove slice information** function. This allows you to start from 'a clean slate' and re-slice and re-classify the sample.

3:6 Useful tips for slicing

Using pad locks during the slicing process

During the slicing process in **Auto load** mode, lock any pads that you want to keep as you go along – right-click on a pad and use the **Lock pad** function. This way, you can adjust slice points without locked pads being affected when slices are automatically reassigned to pads.

Auditioning and extracting specific slices

Remember that you can audition all slices, even those which are not already assigned to pads, by clicking in the top part of the waveform display.

Also remember that you can drag any slice to a pad using drag and drop, even when in **Auto load** mode.

Creative choices

When 'crate-digging' and recycling found sounds, we encourage the creative philosophy of putting your own 'slant' on the samples you use, making something new, original and interesting out of existing samples.

Sometimes it can be good to be presented with surprising results by the Slicer – it's more creative to avoid recreating loops exactly in their original form, although Geist can be set to do this if you wish. It can be more rewarding to experiment and try out settings that you wouldn't normally use, as the loop's sounds and pattern can be extracted and exposed in slightly different ways that have their own feel and vibe.

The slicing system is designed to work with the minimal amount of clicking, so you can experiment with new sounds instantly by clicking on loops in the browser. The automated nature and lack of 'control' can be refreshing, and it's easy to dive in and tweak slice points as much as you want afterwards.

4 Sampler

4:1 Introduction to using Geist's Sampler

Geist's Sampler page offers a real-time sample recording environment, with which you can sample audio live during a session. Sampling directly into the instrument can replicate some of the immediacy of classic hardware sampling instruments.

Source

Geist can record samples from a number of sources – from its own outputs or from an external input. The source for the sampling session is specified using the **Source** selector, located near the **Arm** and **Rec/Stop** buttons in the Sampler page.

External

The external input can be used in the Geist standalone version and in hosts that support the routing of audio to instrument plugin inputs.

Resample Master

With this setting, the content of the Master output is used for the sampler input source. No audio streams routed to Sub-outputs are recorded.

Resampling is used for quickly creating new samples using Geist's sound design functions, and is a real-time alternative to using the audio export functions.

Resample sub-output 1-15

With these settings, the content of the relevant sub-output is used as the sampler input source.

Spitter instances within the current host session

Spitter is Geist's companion audio-routing plugin, which routes audio directly to Geist's sampler input from other channels in your host.

This is useful for hosts which do not support the routing of audio to instrument plugin inputs. Multiple instances of Spitter can be used in your session, and can be selected as discrete sources within the Geist sampler page. See section 4:4 for more details on using the Spitter plugin.
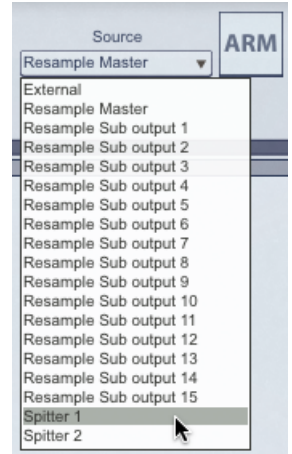
4:2 Main sampling controls

Once the **Source** has been set as required, the main process of sampling is dependent mainly on the **Trigger mode** and **Record mode** settings.

The **Trigger mode** dictates how the sampler starts recording, while the **Record mode** sets the action of the sampler after recording has started.
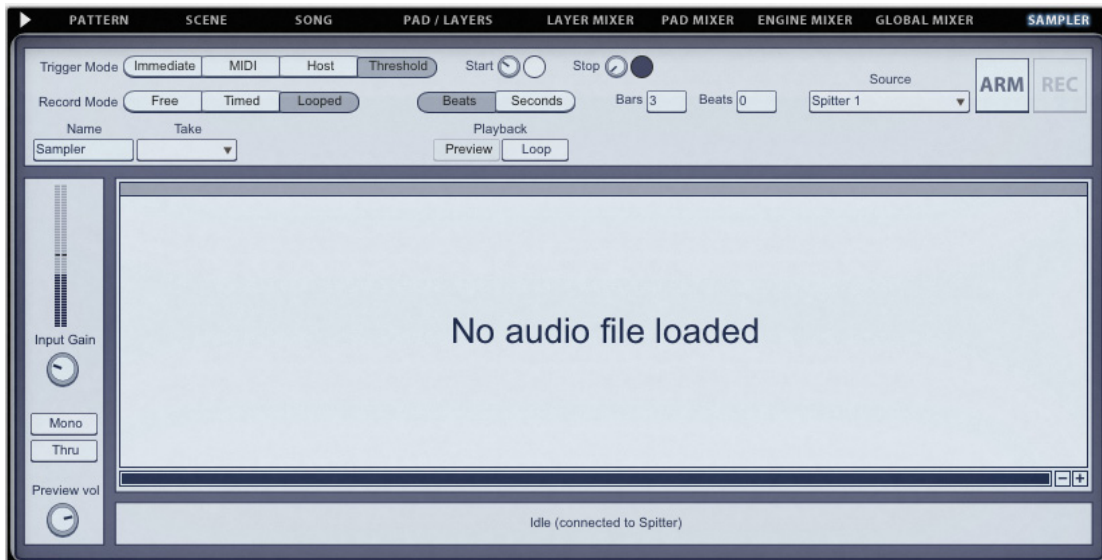
In this example, the **Input meter**, above the **Input gain** control, represents the level of incoming audio at the sampler input. The **Source** has been set as the first of the 2 Spitter instances in the current session. No sampling has yet taken place.

Input Gain/Meter

The **Input gain** control sets the input level for the sampler recording. The **Input meter** represents the level of the input signal.

Mono

Enabling this button forces monophonic recording using only the left channel of the input stream.

Thru

With this button enabled, the sampler input signal is routed through to the main output even when the **Arm** button is not active. Note that when the **Source** is set to 'Resample Master', the sampler input is never routed to the main output, to prevent feedback.

Preview vol

This control sets the level of preview auditions in the Sampler page.
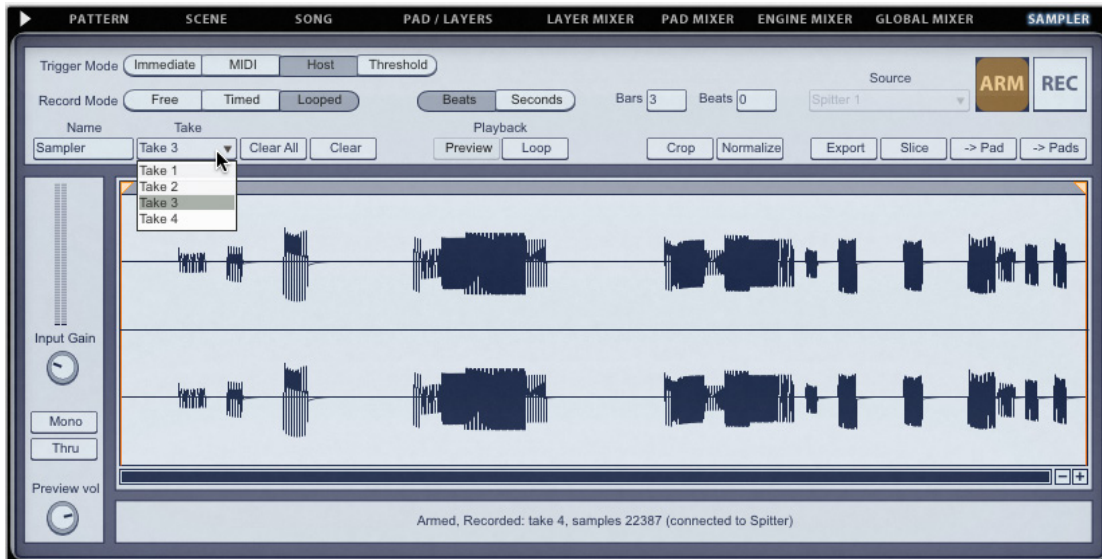
With the **Trigger mode** set to 'Host', and the **Record mode** set to 'Looped', the Sampler has recorded 4 takes during the host transport being active. Note that because the **Arm** button is still enabled, the **Source** selector cannot be used until it is deactivated.

Trigger Mode

This setting dictates how the sampler starts recording. The following settings are available:

• **Immediate**

With this setting, the sampler beings recording starts as soon as the **Arm** button is enabled.

• **MIDI**

With this setting, recording begins on the first MIDI note received (when the **Arm** button is active).

• **Host**

With this setting, recording starts when the transport is started, either internally or from the host (when the **Arm** button is active).

• **Threshold**

When this setting is enabled, two extra controls appear, labelled **Start** and **Stop**.

With the **Arm** button active, recording starts when the input level rises above the threshold defined by the **Start** parameter.

Recording stops when the input level falls below the threshold defined by the **Stop** parameter for a short period.

Record mode

This setting dictates what occurs after the sampler has started recording. The following settings are possible:

• **Free**

Recording continues until it is stopped by clicking the **Rec/Stop** button.

• **Timed**

The sampler records a single take of the defined length. The length can be defined in bars/beats or seconds (specified by the **Beats/Seconds** switch).

• **Looped**

The sampler records multiple takes of the defined length. The length of each loop can be defined in bars/beats or seconds (specified by the **Beats/Seconds** switch).

Start & Stop

These parameters control the threshold which the input signal level must exceed (**Start**) and fall below (**Stop**) when the **Trigger mode** is set to 'Threshold'.

Beats/Seconds

This switch appears when the **Record mode** is set to 'Timed' or 'Looped' modes. It specifies whether the recording time is set in bars and beats (the actual recording time depends on the current tempo) or in seconds.

Setting the sampling time in seconds instead of BPM-based values.

Bars/Beats or Seconds

This setting, which defines the length of Timed/Looped recordings, changes depending on the **Beats/Seconds** switch.

With this set to 'Beats', the length is set using 2 fields for **Bars** and **Beats**.

If the switch is set to 'Seconds', the length is set in **Seconds** using a single field.

Arm

This button arms the sampler for recording.

If the **Trigger mode** is set to 'Immediate', clicking the **Arm** button starts recording immediately.

In other modes, further actions or conditions are required before recording starts.

Rec/Stop

While the **Arm** button is enabled, the Rec/Stop button activates recording with certain **Record mode** settings. When using 'Free' mode, click the **Rec/Stop** button to start recording.

When using the other modes, the **Rec/Stop** button is activated by various conditions.

Whenever recording is active, click the **Rec/Stop** button to stop recording.

Take

This drop-down menu shows the list of takes that have been recorded, allowing you to select the active take for editing.

Name

This field specifies the name which is used when takes are saved to disk.

Clear

This function clears the current take from the take list.

Clear All

This function clears all the takes currently in the take list.

Preview

Clicking the **Preview** button auditions the current take.

Loop

If this button is enabled, the audition preview repeats continuously until the **Preview** button is deactivated.

If the **Loop** button is deactivated, clicking the **Preview** button results in a single audition.

4:3 Additional controls visible with a take displayed
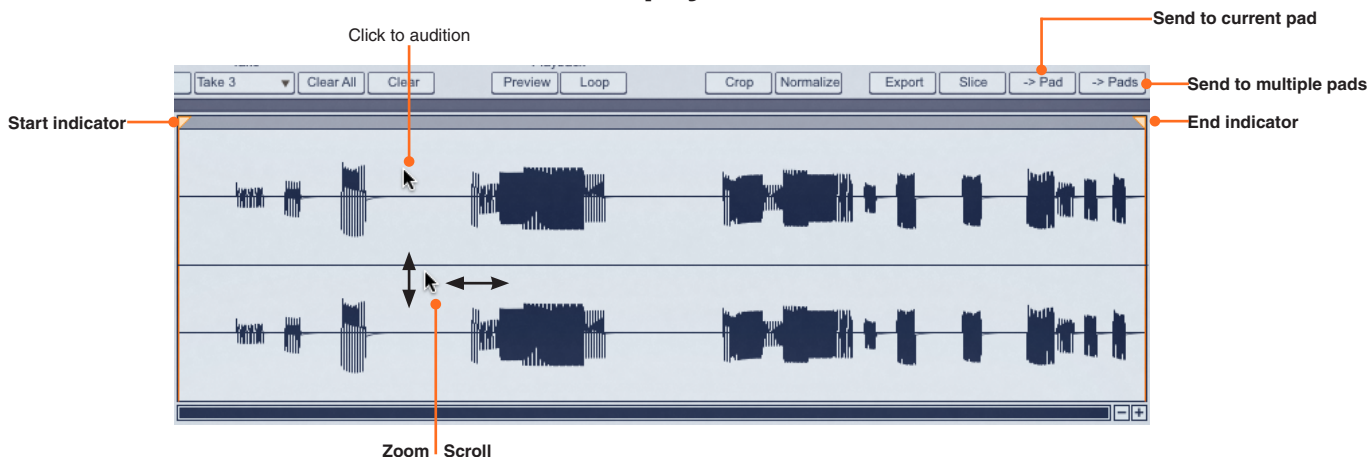
Waveform Display

The waveform display features zoom in/out buttons and a scrollbar.

Click in the top part of the waveform display to preview the audio within the **Start/End** points.

Click and drag down/up in the lower part of the waveform display to zoom in/out, and scroll by dragging left/right (the orientation of these actions can be changed in the preferences – see section 12:8).

Start/End points

These indicators shown above the sample allow you to set start/end points in order to **Crop** the sample. They also define the looped region when using looped previews (see section 4:2).

Click and drag the indicators left/right to adjust them.

Crop

This function crops the sample to the defined **Start/End points**.

Normalize

This function makes the area enclosed by the **Start/End points** louder so that the loudest peak(s) are 0 dB.

Export

This function opens an OS File Save As dialog in order to save the current take as a WAV file.

Slice

This function opens an OS File Save As dialog in order to save the current take as a WAV file, and then automatically opens the saved file in the Slicer.

Send to current pad

This function sends the current take to the first layer of the currently selected pad, clearing all previous contents of the pad.

An OS File Save As dialog box is shown, prompting you for a filename so that the take can be saved as a WAV file.

Send to multiple pads

If no more than 16 takes exist in the take list, this button sends takes to the first layer of any free pads in the current engine. If there are more takes than empty pads, this button returns an error message asking you to either free up more pads, or to clear takes as necessary.

An OS File Save As dialog box is shown prompting you for a folder. Each take is saved into this folder in the following format: <Name> <Take number>.wav

4:3 The Spitter plugin

Spitter is a stereo audio insert 'effect' plugin, supplied with Geist in VST, AU and RTAS formats. Rather than applying an effect to the channel on which it is inserted, it routes audio directly to Geist for use with the Sampler page.

To use Spitter, first insert it on a channel in your host, such as an audio track, audio input or another instrument channel. This is done in the same way as inserting any other effect plugin to a channel.

Name

By default, the Spitter instance is named 'Spitter 1', which is the name that will appear in Geist's Source drop-down menu in the Sampler page. You can change the name to something more meaningful by clicking in **Name** text-box in the Spitter plugin interface and typing an alternative.

Status

When the Spitter plugin is inserted, its **Status** display shows 'No connections'. Once the instance is selected in Geist's Sampler page, the display changes to '1 connections'. You may need to start your host's audio engine (by starting its transport) for this to be updated.
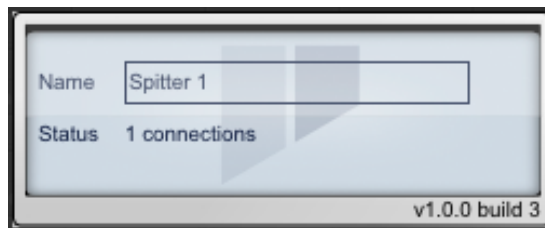
Setting Spitter as the sampling Source

After a Spitter plugin has been inserted in the same host session as Geist, it must be selected in the **Source** drop-down menu on Geist's Sampler page.

The host session can contain multiple Spitter instances, each of which appear as discrete entries in the **Source** drop-down menu. Note that you can sample from only one Spitter instance at a time.
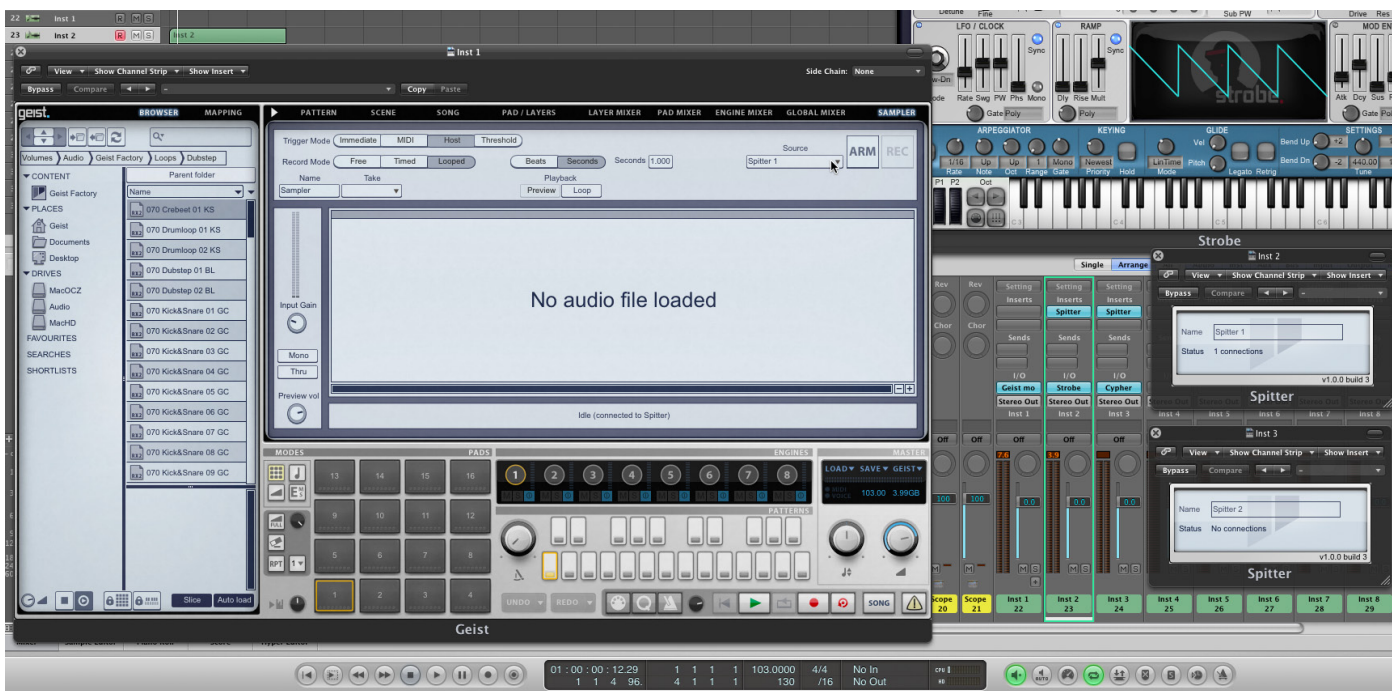
In this *Logic* session example, the first of the 2 Spitter instances in the session is currently selected as the Source in Geist. Note that the first Spitter instance (on Inst channel 2) shows '1 connections' in the **Status** display, confirming that this Spitter instance is currently connected to the Geist sampler input.

5 Pads and layers

5:1 Pad/Layers selector

Selecting a pad

The concept of the 'selected pad' is used for editing in the Pad/Layers page.

• Clicking a pad selects the pad and plays its layers
• ALT-clicking a pad selects the pad without playing any audio

If any of the real-time pad modes are active (see section 1:3), you must ALT-click a pad to select it.

Selecting the pad or its layers for editing

This Pad/Layers selector features the 'parent' pad item at the top, with its 8 'child' layers shown underneath.

Click the parent pad item to edit its settings. The pad editor controls are described in section 5:2.

Click individual layer(s) to edit their settings. The layer editor controls are described in sections 5:4 to 5:9.

The dark border around the editor controls is connected to the selected item, allowing you to see what you are currently editing.

It is possible to edit multiple layers simultaneously – see section 1:6.

The FX on each layer and each pad are accessed via the Layer mixer and Pad mixer pages respectively. See chapter 6 for details of these pages.

The selected item in all pages is always synchronized – in other words, if you have selected pad 1, layer 2 in the Pad/Layers page, the Layer mixer displays the FX slots for pad 1, layer 2; the Pad mixer displays the FX slots for pad 1.
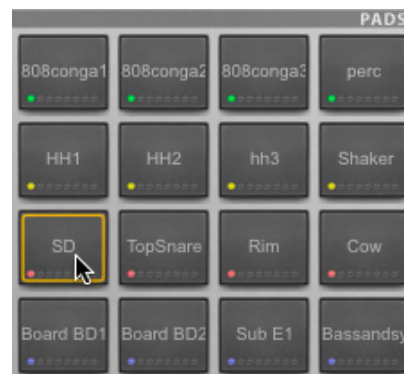
Selecting pad 5

Additional functions of the Pad/Layers selector

Pad/Layer name

The default names for pads and layers are Pad 1, Pad 2, Pad 3, and so on. To rename a pad, first click the parent pad item to select it. Click on the current name, type a new name, then press ENTER.

The default name for each layer is the filename of the sample loaded into it. To rename the layer, first select it and then click on the current name. Type the new name and press ENTER.

Click name to rename

Click the pad to display the Pad edit parameters

Click any layer to select it and show its Layer edit parameters

Right-click on a layer to display the pad/layers context menu

Mute/Solo

These buttons allow you to mute/solo the pad or any of its individual layer(s) without first selecting them for editing.

Note that these Mute/Solo buttons are distinct from the Track Mute/Solo buttons on each track of every pattern.

The Engine selector allows you to un-mute or un-solo all pads/layers within an engine – see section 7:1.

Lock

The **Lock** buttons allow you to lock all settings of the pad or any individual layer – the pad/layer's parameters cannot be edited, and the associated samples cannot be removed or replaced until the pad/layer is unlocked.

Clear

Clears the sample(s) and all settings from the pad/layer.

Pad/Layers context menu

Right-clicking on the Pad/Layers selector displays the Pad/Layers context menu, which allows a number of management functions for pads and layers.

Cut, Copy, Paste

These functions allow you to cut, copy and paste content between pads and layers. These functions are the same as those available on the pad context menu (see section 5:3).

Note that even if a multiple selection exists, **Cut**, **Copy** and **Paste** operations only apply on the single pad or layer on which you right-click to display the context menu.

Select all layers

Selects all layers in the current pad so they can be edited simultaneously (see section 1:6).

Reset Layer (layers only)

Resets the layer to its initialized state.

Reset Envelopes (layers only)

Resets the layer's envelopes to their initialized state.

Reset all layers (pads only)

Resets all layers on the selected pad to an initialized state.

Reset all layers' envelopes (pads only)

Resets the envelopes on all the selected pad's layers to an intialized state.

Tune loop to tempo

This function increases or decreases the pitch of the sample on the layer so that it fits the current tempo.
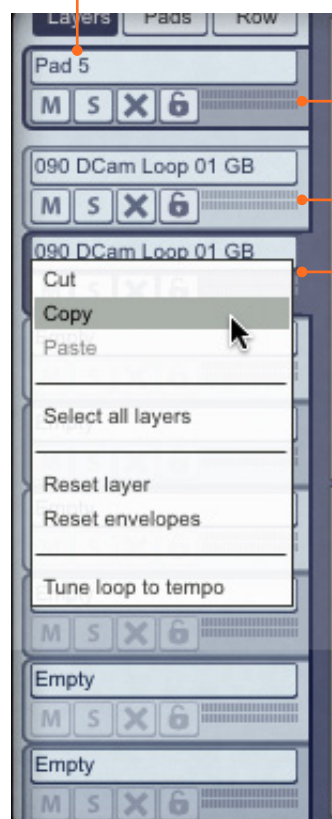
5:2 Pad Edit screen

The parameters on this page offer control for the parent Pad.

Pan and Gain controls, Send controls for the 4Aux busses. These affect all layers routed to the parent pad.

The Auto button arranges layers automatically when the Layer mode is set to 'Velocity split'.

The Layer mode drop-down menu offers several ways of playing layers. The default setting is 'All layers'

Parent pad selected for editing

Output selector

The Vel-Amp control dictates how the pad's amplitude is affected by incoming velocity.

The Velocity split editor appears when the Layer mode is set to 'Velocity split'.

Gain, Pan

These parameters adjust the gain and pan for the pad.

Vel-Amp

This parameter sets the amount that the pad's amplitude is affected by MIDI input velocity.

Send 1-4

Sets the send level from the pad to the Aux busses.

These controls adjust the amount of the pad's signal that is sent to the 4 Aux buss channels. The routing point for all sends to an Aux buss can be set to either pre- or post-fader, using the **Pre/Post** button in the Aux buss itself, located in the Global mixer page (see section 7:4).

Pad Output

This drop-down menu specifies the Geist output through which to route the audio from the pad. If it is set to 'Parent', the pad's audio is mixed with other pads in the parent engine – you must then use the engine's settings to route the audio.

Layer Mode

This setting dictates how the pad's 8 layers are played back when the pad is triggered.

• All layers

All layers are played back simultaneously (this is the default setting).

• Velocity split

The layers can be split along the velocity range, with different layers triggered at different velocities. When this setting is active, the **Velocity split editor** becomes visible, allowing you to edit the velocity range and fade for each layer (see below).

• Round robin

A single layer is played each time the pad is triggered. The playback engine 'cycles through' the layers each time the pad is triggered.

• Round robin reset

As 'Round robin', except that each time the pattern is looped, the pad is played from the first layer. This means that the round-robin behaviour sounds the same on every pass when the pattern is looping.

• Random

A single layer is played at random each time the pad is triggered.

Velocity split editor

The **Velocity split editor** is only visible when the Layer mode is set to 'Velocity split'.

The high/low velocity and high/low velocity fade settings for each layer can be adjusted by clicking and dragging left/right.

Adjusting the High fade velocity for the layer.

Adjusting the High velocity for the layer.

Adjusting the Low fade velocity for the layer.

Adjusting the Low velocity for the layer.
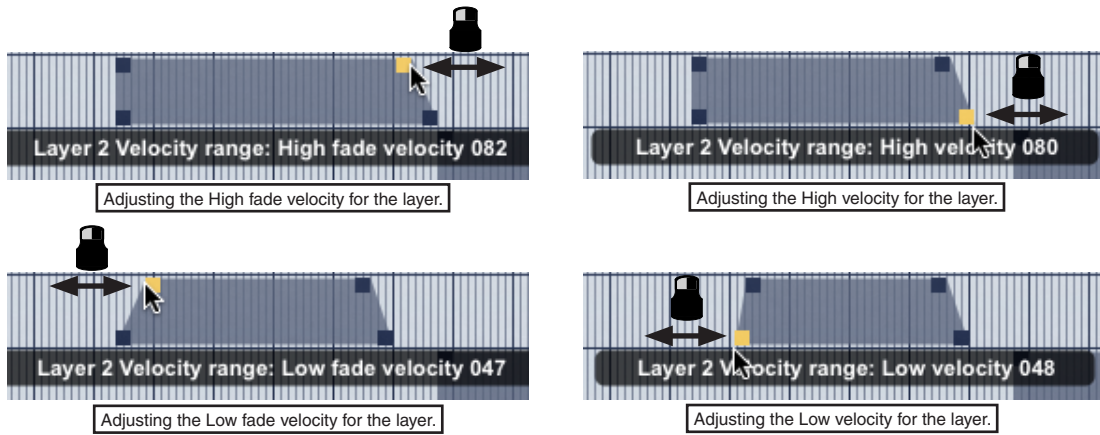
Auto

This button can be used to arrange all layers proportionally across the velocity range when the **Layer mode** is set to 'Velocity split'.
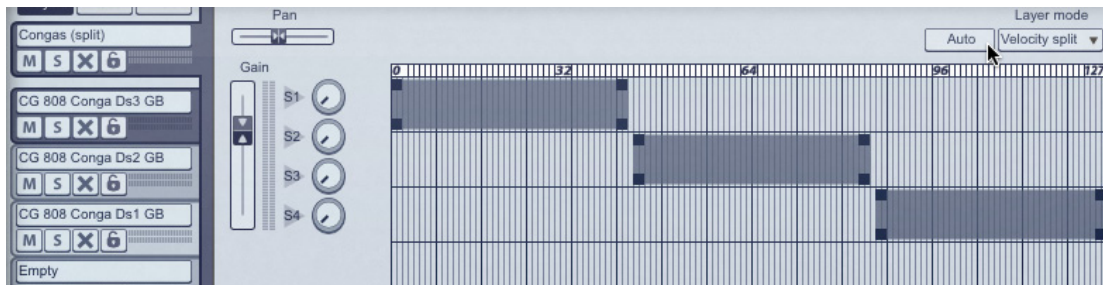
5:3 Pad context menu

Right-clicking on any pad displays the Pad context menu, which allows numerous pad management operations.

Cut, Cut with pattern
Copy
Paste, Paste with Pattern

These functions allow you to manage pads and their corresponding pattern tracks.

Pattern tracks are always copied along with the pad.

You can cut a pad with or without its pattern track, and paste the contents of the clipboard with or without the corresponding pattern track.

Clear pad

This function clears the contents of the selected pad.

Clear all pads

This function clears the contents of all pads in the current engine.

Clear pad layer...

This sub-menu allows you to clear any layer on the pad.

Lock/Unlock pad

This function locks the pad – none of its pad/layer settings can be adjusted, and its samples cannot be changed.

This function is identical to the **Lock pad** button on the Pad/Layers page.

Unlock all pads

This function unlocks any pads in the engine which are currently locked.

Lock/Unlock track and pad

This function locks both the pad and the corresponding track in the current pattern.

Clone using pitching

This function clones all layers of the current pad to all pads in the engine at varying pitch, overwriting the previous contents of the pads.

This is distinct from the Chromatic pad mode, which temporarily allows you to play the currently selected pad at different pitches over all pads in the engine.

If any layers' Stretch function is enabled, the pitching process does not affect the length of its sample. If the Stretch function is not enabled, the duration of its sample varies with pitch.

You can choose to pitch the pad in the following ways:

Upwards: Going up in semitones from pad 1 at original pitch.

Downwards: Going down in semitones from pad 16 at original pitch.

Centred: Going up and down in semitones from pad 9 at original pitch.

Swap, Copy, Move pad to...

These functions allow you to swap/copy/move pads within the available pads in the engine. Select the destination pad from the sub-menus.

Copy sample path...

This function allows you to copy, as text to the clipboard, the path to the sample file on any of the pad's layers. Select the layer from the sub-menu.

Open parent folder in browser...

This function reveals the sample on any of the pad's layers in the Geist Browser. Select the layer from the sub-menu.

Reveal in Explorer/Finder...

This function reveals the sample on any of the pad's layers in your OS file browser (Explorer on Windows, Finder on Mac). Select the layer from the sub-menu.

Save layer sample...

This function opens a file save dialog for saving any pad layer's sample to disk. Select the layer from the sub-menu.

5:4 Layer Edit overview

Pan and Gain controls, Send controls for the 4 Aux busses

Phase

Reverse

Filter power

Filter controls

Filter mode

Timestretch power

Timestretch controls

Parent pad – select this to edit pad parameters.

Currently selected layer

Mute, Solo, Clear and Lock buttons are available for the parent pad and all child layers. Each element also features a level meter.

Amp env ADSR

Amp env Destination and Depth controls.

Free Env ADSR

Free env Destination and Depth controls

Sample Start and End points

Waveform display

Output selector, Choke mode and Play mode drop-down menus

Tune and Fine tuning controls, Vel-Pitch controls how sample tuning is affected by velocity. Pre delay is useful for layered sounds.

Zoom controls and scrollbar

5:5 Layer edit: Non-destructive sample editing

When a loop is sliced, the individual slices are the same sample with different start and end points. These controls allow you to adjust these slice points whenever you like.

Waveform Display

Sample Start point

Loop start and Loop end

Sample End point

Click to audition

Zoom   Scroll

Scrollbar

No auto-zooming

Auto-zoom to start and end

Auto-zoom to start

Auto-zoom to end

Zoom in/out controls
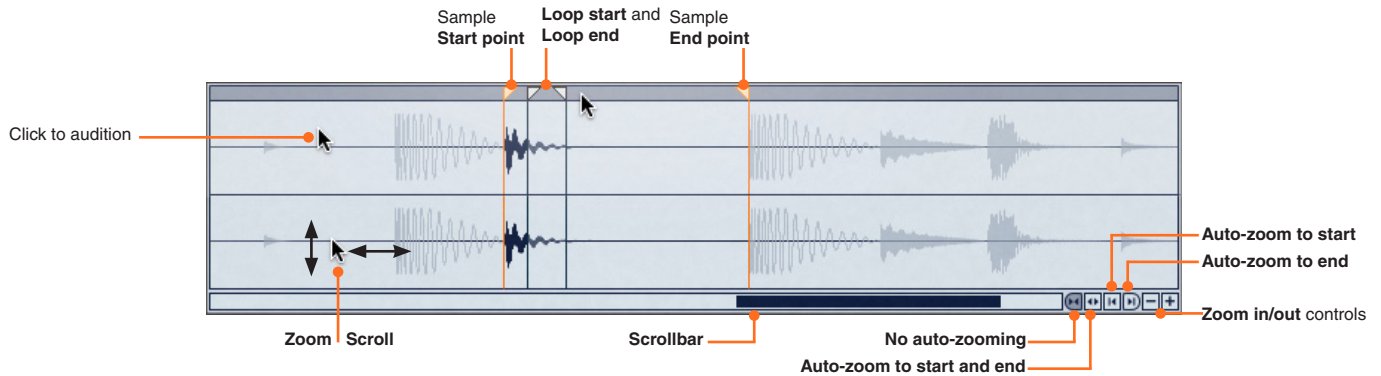
As well as displaying the layer sample's waveform, the waveform display features some additional functions:

Audition

Click in the top half of the waveform display to audition the layer's sample. The portion enclosed within the start/end markers is played, and no layer processes or FX in the signal path are applied. The audition function is intended purely to hear the raw sample on the layer.

Zoom/Scroll

You can click and drag down/up on the bottom half of the waveform display to zoom in/out, and scroll by dragging left/right.

The orientation of both these actions can be inverted in the Geist preferences.

Start/End points

These markers shown above the layer's sample in the waveform display allow you to non-destructively set the start/end points of the layer's sample.

Loop start/end

When a layer's Play mode is set to 'Looping', the waveform display also shows the Loop start and Loop end points.

To adjust them, click and drag these points left/right.

Zoom in/out & scrollbar

The Zoom in/out buttons and scrollbar are an alternative to clicking and dragging on the lower part of the waveform display.

The scrollbar allows you to adjust the visible area when zoomed in.

Auto-zoom modes

The auto-zoom modes cut down on a lot of cumbersome manual zooming to see the desired portion of the waveform. There are 4 zoom modes – only a single mode can be active at any one time.

No Auto-zooming

With this button active, no auto-zooming takes place – all zooming must be performed manually with the usual zoom in/out controls.

Auto-zoom to start and end

With this button enabled, the waveform view auto-zooms so that the start and end points are at the extreme left and right border of the display. Effectively, the 'active' part of the sample is 'maximized' within the waveform display.

Auto-zoom to start
Auto-zoom to end

The **Auto-zoom to start** mode forces the waveform display to 'jump' to the start point of the layer when it is selected. The start point is centred in the display.

The **Auto-zoom to end** mode forces the waveform display to 'jump' to the end point of the layer when it is selected. The end point is centred in the display.

These modes are extremely useful for fine adjustments to prevent clicks. They are also great for going through the slices of a loop, cleaning up the slice points.

5:6 Layer edit: Main parameters

Gain, Pan

These controls adjust the layer's gain and pan.

Send 1-4

These controls adjust the amounts of the layer's signal that are sent to the 4 Aux buss channels. The routing point for all sends to an Aux buss can be set to either pre- or post-fader, using the **Pre/Post** button in the Aux buss itself, located in the Global mixer page (see section 7:4).

Reverse

This button reverses the sample on the layer.

Phase

This button inverts the phase of the layer's sample.

Output selector

This drop-down menu specifies the Geist output through which to route the audio from the layer. If it is set to 'Parent', the layer's audio is merged with the parent pad – you must then use the pad's settings to route the audio.

Tune, Fine

These parameters allow you to adjust the pitch of the layer's sample.

Vel-Pitch

This setting allows the pitch of the layer to be varied with event velocity, whether from the Geist sequencer or from incoming MIDI. This control is bi-polar: positive settings increase the pitch with higher velocity values, while negative settings decrease the pitch with higher velocity values.

Predelay

This parameter applies a delay of up to 1 second before the layer is played. This can be very useful for creative stacking of sounds on multiple layers.

Filter power

Enabling this button activates the layer's filter. Geist's per-layer filter is an extremely high quality circuit-modelled algorithm – by default, the filter is disabled in order to save CPU power.

Filter mode

The filter features 10 filter responses, selectable using this drop-down menu: low-pass, high-pass, band-pass, notch and peak filters are provided in 2-pole and 4-pole versions.

Cutoff

This parameter controls the frequency cutoff of the filter.

Resonance

This parameter controls the amount of resonance at the filter cutoff frequency.

Drive

The **Drive** control inceases the level of the signal entering the filter, effectively overloading and overdriving the filter circuit. Higher amounts of drive lead to a gritty, aggressive sound with less resonance.

Vel-Cutoff

This setting allows the cutoff frequency of the layer's filter to be varied with event velocity, whether from the Geist sequencer or from incoming MIDI. This control is bi-polar: positive settings increase the cutoff frequency with higher velocity values, while negative settings decrease the cutoff frequency with higher velocity values.
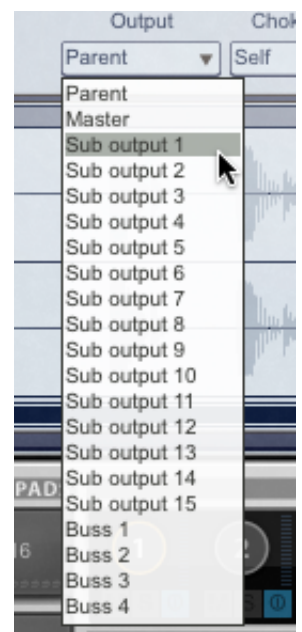
Layer **Output selector**
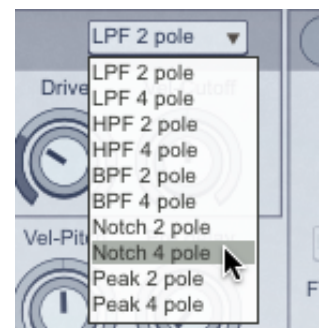
Filter mode

5:7 Layer edit: Play mode and Choke mode

Play mode

The **Play mode** drop-down menu dictates how the layer's sample reacts to being played via MIDI.

• **One shot**

In this mode, the layer responds to note-ons only, plays in entirety unless specifically choked.

• **Gated**

In this mode, the layer responds to note-on for start, and note-off for end.

• **Looping**

This mode is similar to gated mode, but continuously repeats the region enclosed by the **Loop Start/End** points, and then plays out the remainder of the sample during the release phase.
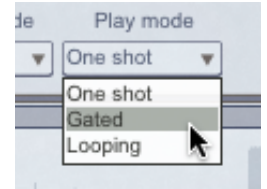
Play mode

Choke mode

Choking is the process of stopping the playback of one layer by another. Geist offers a number of different sources for choking a layer, specified by the **Choke mode** drop-down menu.

• **Not cut**

The layer cannot be choked by any other sounds

• **Self**

The layer is choked by itself

• **Pad**

The layer is choked by any layer on the same pad

• **By other pads**

The layer is choked by any other pad in the engine.

• **Self + Other**

The layer is choked by any layer on the pad (including itself), or any other pad in the engine.

• **Pad type**

The layer is choked by any layer on any pad in the same row within the engine

• **Engine group 1, 2**

The layer is choked by any layer assigned to the same engine group – each engine features 2 assignable cut groups

• **Global group 1, 2**

The layer is choked by any layer assigned to the same global cut group, of which 2 are available in total
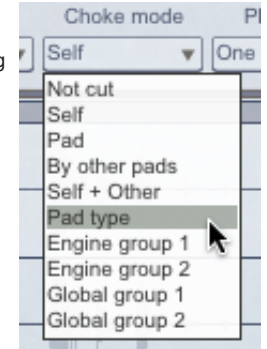
Choke mode

5:8 Layer edit: Envelopes

Geist's envelopes are adjusted in terms of absolute time.

The first envelope is an Amp envelope – it is hard-wired to the layer's amplitude – and can additionally be routed to 2 further destinations. The second envelope is a Free envelope, and can be routed to 2 destinations. The available destinations are Cutoff, Resonance, Drive and Pitch. All destinations feature a **Depth** setting.

Graphical ADSR envelope controls (for Amp and Free Envs)

The graphical envelope display allows you to set the Attack, Decay, Sustain and Release stages for the envelopes, as well as the curve between each stage. Simply click/drag the relevant handles on the graphical display as shown in the diagrams below.

Note that when the layer's Play mode is set to One shot, the Sustain time is the length of the sample minus the Attack, Decay and Release times. When the Play mode is set to Gated or Looping, the Sustain time is the duration of the event which plays the layer.

Env Destination selectors (for Amp and Free Envs)

While the Amp envelope always dictates the amplitude of the Layer's sample, it can also be assigned to 2 additional destinations (Pitch, Filter Cutoff, Filter Resonance or Filter Blend).

The Free envelope can also be assigned to 2 destinations although, unlike the Amp env, it does not possess any hard-wired routings.

Setting a **Destination** for the Amp env

Env Depth control for each Destination (for Amp and Free Envs)

These controls set the amount by which each assigned destination is modulated by each envelope.
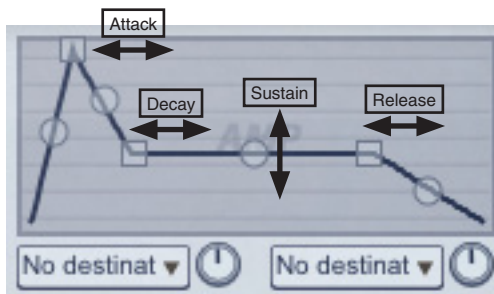
Adjust the square handles for setting the Attack, Decay and Release times. Click and drag *left* to increase the Release. Adjust the circular handle between Decay and Release to set the Sustain level.
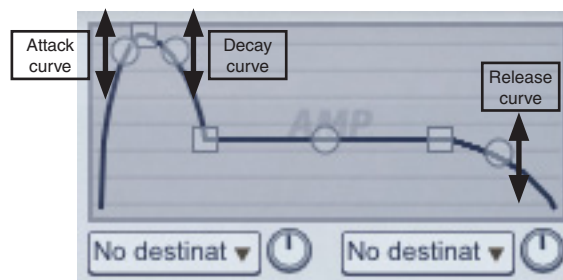
Adjust the circular handles in the Attack, Decay and Release phases to adjust the curve for these phases.

5:9 Layer edit: Timestretch controls

The process of time-stretching allows you to change the pitch of a sample without affecting its length and vice-versa: it can change the length of the sample without affecting its pitch.

This is useful for working with full loops on a single pad, and also for general-purpose creative sound design.

It is important to remember that timestretching almost always results in some artifacts, as it is a very complex digital process which 'bends physics' to some extent. Changing the **Stretch mode** setting can minimize the artifacts, although these types of artifacts can often be desirable when used in a creative context.

Note that Geist also features a method of changing the pitch of a sample so that it fits the tempo exactly without timestretching, using the **Tune loop to tempo** function (described in section 5:1).
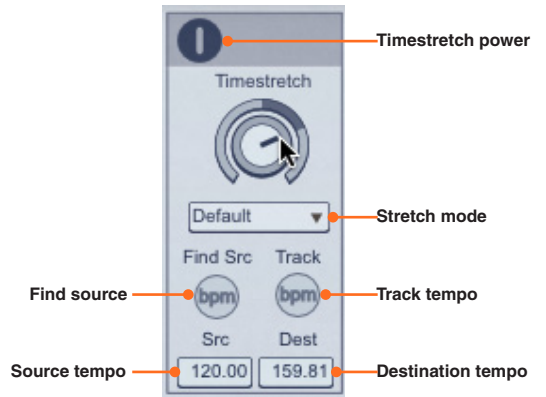
Timestretch power

This button activates or deactivates the timestretch function.

When the timestretch function is active, any changes to the pitch of the sample – using the **Tune** and **Fine** controls, pitch graphs and engine/Master pitch controls elsewhere in Geist – result in the length of the sample staying the same.

Source tempo

This field specifies the tempo of the original sample. Use the **Find source** button to calculate the tempo of the current sample automatically.

You can input the tempo manually if required, by clicking in the numerical box and typing a new value.

Find source

Click this button to analyse the sample and calculate its tempo according to its length or filename. The result is used as the **Source tempo**.

Destination tempo

By default, this is set to the current Geist tempo, so that the sample is sped up or slowed down to play in time at the current tempo.

You can specify any tempo manually by clicking in the numerical box and typing a new value.

You can also enable the **Track tempo** button to automatically track the host tempo of Geist and apply an according amount of timestretch.

Timestretch

This control adjusts the timestretch amount between a range of 10% to 400% of the original length. At the centre position (0%), the sample is played back at its original speed.

If the timestretch amount is set by means of the **Source tempo** and **Destination tempo** settings, the **Timestretch** control displays the resulting amount.

Track tempo

When this button is enabled, the **Destination tempo** always tracks the current global tempo setting in Geist (which is synchronized to the host when running as a plugin).

Stretch mode

This drop-down menu provides 2 timestretch modes. The 'Default' mode is optimized for drum sounds and other sounds with hard, fast transients. The 'Fast' mode is less CPU-heavy, and is designed for melodic material like synths or vocals. It's always worth experimenting with both modes, as one may work better than the other for any particular material.

Adjusting the **Stretch mode**

5:10 Summary of Pad lock functions

Pad locks

• **Lock** button for pads in Pad/Layers page (Pad/Layer selector on left of screen) – section 5:1
• **Lock/Unlock pad** function in pad context menu (right-click on a pad) – section 5:3
• **Lock all pads** in Browser – section 2:8
• **Lock/Unlock track and pad** on track context menu – section 9:6

Layer locks

• **Lock** button for layers in Pad/Layers page (Pad/Layer selector on left of screen) – section 5:1

6 Layer mixer and Pad mixer

6:1 Mixer overview

Each element in the Geist sound architecture hierarchy – layers, pads and engines – features a mixer that shows all the relevant items, as well as further controls for the currently selected item. The Global mixer is slightly different to the other mixers, but is operated in a similar way.

This chapter covers the Layer mixer and Pad mixer. See chapter 7 for a guide to the Engine mixer and Global mixer.

Please also familiarize yourself with the Geist signal flow, depicted in section 1:16.

6:2 Layer mixer

The Layer mixer lets you mix and add FX to the 8 layers in the currently selected pad. Only the FX slots for the currently selected layer are shown at any one time.

Inserting a Vari-EQ FX device in the 2nd slot of layer 1 in the Layer mixer.
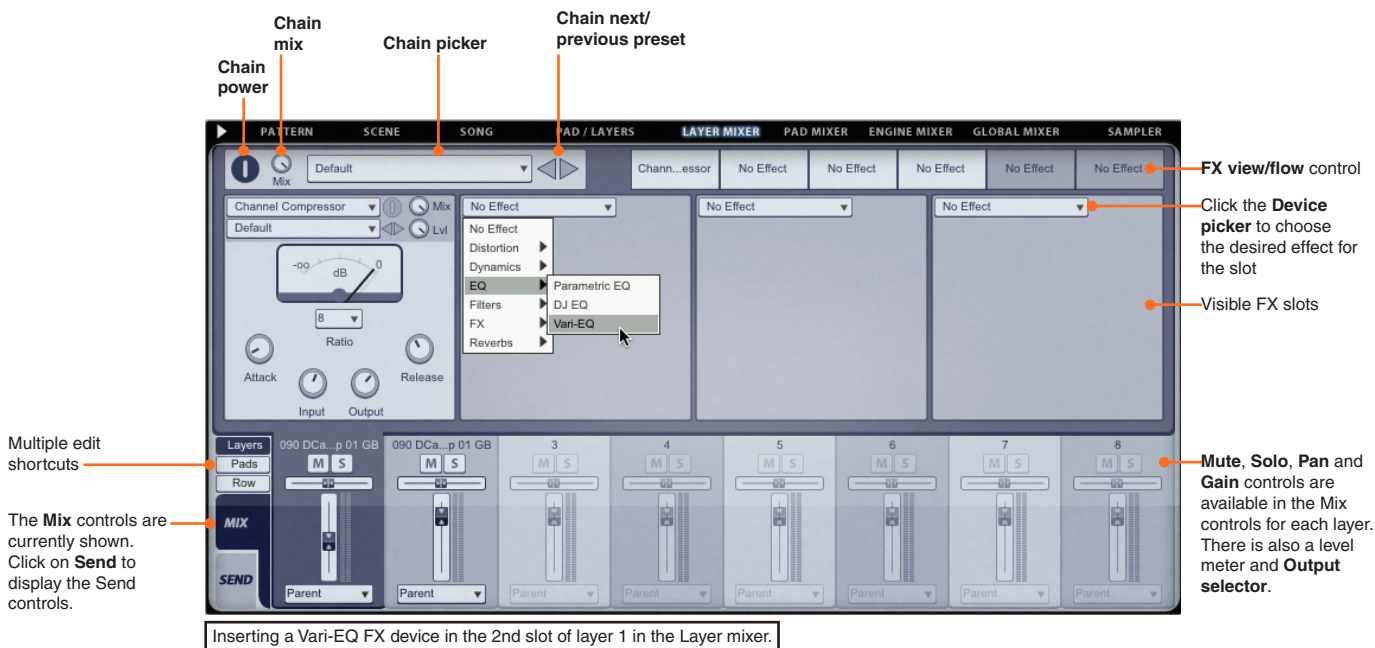
Layer 'channels'

The 'channels' in the mixer, arranged from left to right, represent the 8 available layers on the selected pad.

Selecting a layer

First, the relevant pad must be selected – see section 6:3. Then, select a layer on the pad in either of the following ways:

• Select a layer by clicking one of the 8 displayed 'channels' in the Layer mixer, each of which represents a layer on the current pad
• On the Pad/Layers page, click a layer in the layer selector on the left of the screen, underneath the parent Pad selector – selections are always preserved between the Pad/Layers page and the Layer Mixer

Multiple selection of layers

Multiple layers can be selected in the Layer mixer, using the following methods:

• SHIFT-click to create a contiguous selection between 2 layers
• CMD-click (Mac) or CTRL-click (Windows) to add a layer to the selection

Multiple selections can also be made in the Pad/Layers page – the selection is always preserved between the pages.

Multiple edit shortcuts

The **Layer**, **Pad** and **Row** edit shortcuts apply in the Layer mixer in the same way as in the Pad/Layers page. These functions are described in section 1:6.

Note that you cannot add FX devices or alter their parameters using these edit shortcuts.

Layer output routing

If a layer's **Output selector** is set to 'Parent', it is mixed with any other layers on the parent pad that are also set to 'Parent' and sent to the pad mixer, allowing you to apply pad FX to the mixed signal.

If the layer is routed to a sub-output, it bypasses any other stages and FX further down the signal path (the pad, engine and Master channel blocks).

Mix controls

Click the **Mix** button to reveal the Mix controls if the Send controls are currently displayed.

The Mix controls feature **Mute/Solo**, **Pan** and **Gain** controls for each layer, along with a **level meter** and **Output selector**.

Set the **Gain** levels to achieve the desired balance between the levels of each layer on the pad. If there are multiple layers with a high amplitude which play simultaneously (this depends on the state of the Pad editor's **Layer mode** setting), it may be necessary to reduce their levels so that clipping does not occur.

Sends

Click the **Sends** button to display the Send controls and hide the Mix controls.
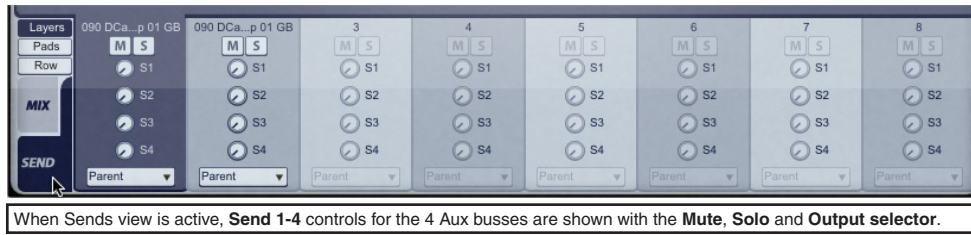
Sends are 'parallel' routings from the layer to the Aux busses. This view shows each layer's Send controls for the 4 Aux busses, labelled **Send 1** to **Send 4**.

The routing point for all sends to an Aux buss can be set to either pre- or post-fader, using the **Pre/Post** button on the Aux buss itself, located in the Global mixer page (see section 7:4).

FX Slots

Each layer features 6 assignable FX slots. Layer FX are always applied, regardless of the layer's output setting.

FX chain picker

The FX chain picker, located above the FX slots, provides a preset system for the entire chain of 6 FX slots. You can load and save presets, and use the **Clear chain** function to reset the entire FX chain.

Using the **Chain picker** to select a preset for the entire FX chain.

FX view/flow control

Visible FX slots   Invisible FX slots – click to view

It is only possible to view 4 FX slots simultaneously. The currently viewed slots are highlighted in the FX view/flow control. Click on any other slot in order to make it visible in the Layer mixer page.

The FX view/flow control also lets you re-order the FX chain (in other words, change the signal flow of the FX slots). Each slot is represented by a 'block' in the control. In order to re-order them, simply click and drag the relevant FX slot left/right.
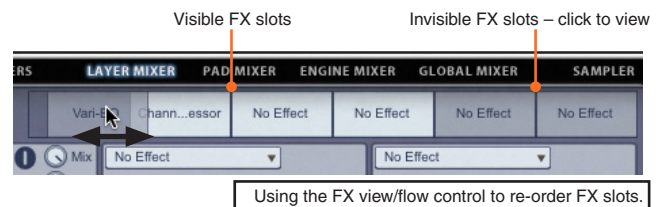
Using the FX view/flow control to re-order FX slots.

Common FX slot controls

FX device picker

Use this drop-down menu to select the device for the FX slot. See chapter 8 for a detailed guide to the available FX devices.

FX power

Use the **Device picker** to choose an FX device for the slot

FX **Preset picker**

Mix control

Output **Level** control

Next/Prev preset

Preset picker

Each FX device features the ability to store and recall presets. The preset picker drop-down menu displays all available presets for the current FX device.

It also includes the **Save preset...** function, which saves the current state of the FX device as a preset, and the **Save as default** function for saving the current settings as the initialized settings for the FX device whenever it is subsequently loaded. Use the **Revert to default** function to return to the default settings at any time.

FX power

With this button enabled, the FX device processes audio. With it disabled, the device is bypassed and audio passes through it unaffected. Disabling FX results in lower CPU usage.

Mix

This control acts as a 'wet/dry' control, blending between the input signal and the output of the FX device. It is very useful for parallel processing through inserted FX such as compressors, reverbs and so on.

Level

This control sets the output level from the FX device.

FX context menu

Right-clicking within an FX device displays the FX context menu.

Cut

Stores the current FX slot state in the clipboard and removes the slot's FX device, resetting the slot to an empty state.

Copy

Stores the current FX slot state in the clipboard, leaving the slot unchanged.

Paste

If the clipboard contains suitable data, this function pastes the clipboard contents into the slot, replacing its previous state.
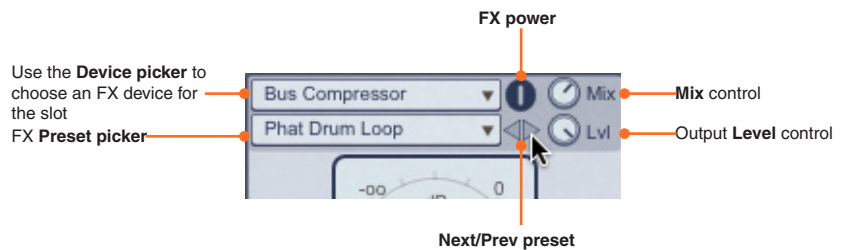
6:3 Pad Mixer

The Pad mixer lets you mix and add FX to the 16 pads in the current engine. Only the FX slots for the currently selected pad are shown at any one time.
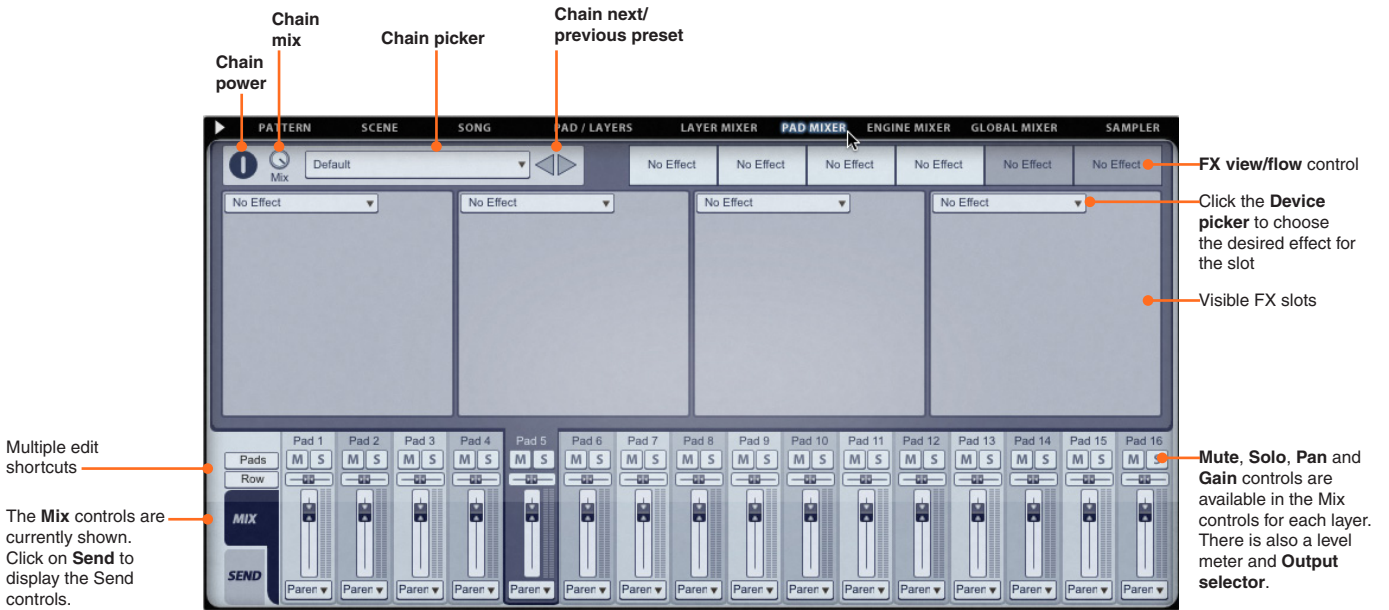
Selecting a pad

- Click a pad to select it and play its layers
- ALT-click a pad to select it without playing any audio
- When using the Pad mixer, click on one of the 16 displayed 'channels', each of which corresponds to a pad in the current engine

You can also select a pad in the Pattern page, using the track context menu (see section 9:6).

Multiple selection of pads

Multiple pads can be selected in the Pad mixer, using the following methods:

- SHIFT-click to create a contiguous selection between 2 pads
- CMD-click (Mac) or CTRL-click (Windows) to add a pad to the selection

Multiple edit shortcuts

The **Pad** and **Row** edit shortcuts apply in the Pad mixer in the same way as in the Pad/Layers page. These functions are described in section 1:6.

Note that you cannot add FX devices or alter their parameters using these edit shortcuts.

Mix controls

Click the **Mix** button to reveal the Mix controls if the Sends are currently displayed.

The Mix controls feature **Mute/Solo**, **Pan** and **Gain** controls for each pad, along with a **level meter** and **Output selector**.

Set the **Gain** levels to achieve the desired balance between the levels of each pad in the engine.

Sends

Click the **Sends** button to display the Send controls and hide the Mix controls.

When Sends view is active, **Send 1-4** controls for the 4 Aux busses are shown with the **Mute**, **Solo** and **Output selector**.

Sends are 'parallel' routings from the pad to the Aux busses. This view shows each pad's Send controls for the 4 Aux busses, labelled **Send 1** to **Send 4**.

The routing point for all sends to an Aux buss can be set to either pre- or post-fader, using the **Pre/Post** button on the Aux buss itself, located in the Global mixer page (see section 7:4).

FX Slots

Each pad features 6 assignable FX slots. Pad FX slots process all layers on the pad whose outputs are assigned to the parent pad (the layers' output selectors must be set to 'Parent').

The FX slots themselves behave in the same way as those in the other mixer pages within Geist. See section 6:2 for a summary of the FX slot controls.

7 Engines, Aux busses and the Master channel

7:1 Engines

Engine selector

Each engine features a numbered button for selecting it as the current engine.

The currently selected engine is highlighted in yellow.

Any engines with their **Pattern power** button disabled are highlighted in red.

Engine selector with **Pattern power** disabled on engines 6-8.

Mute & Solo

Each engine features a **Mute** and **Solo** button. These functions affect the entire audio output from the engine.

Engine mute/solo indicators

Each engine selector button features 2 LED indicators, which are highlighted if any element of the engine is muted or soloed (layers, pads or the engine itself). If the engine is soloed, the mute indicators for unsoloed engines is highlighted.

The red LED indicates that mutes are present within the engine, while the green LED indicates solos.

Engine 2 soloed, showing solo indicator and mute indicators on all other engines.

Pattern Power

The **Pattern power** button for each engine is very important in the context of Geist's sequencing functions.

Deactivating an engine's **Pattern power** button disables pattern playback on the engine. This is useful in the following situations:

• Arranging patterns in your DAW/host after exporting them from Geist

• When creating a scene, Geist stores an engine's state with **Pattern power** disabled if an empty pattern is selected at the time. This is to preserve the scene's pattern content even if the empty patterns are subsequently changed.

If you want to hear the engine again, simply re-enable the **Pattern power** button on the affected engines.

The **Pattern power** buttons for all engines are visible simultaneously underneath the engine selector controls, giving you a convenient overview of the pattern playback status of all 8 engines. The engine selector buttons for any engines with their **Pattern power** button disabled are highlighted in red.
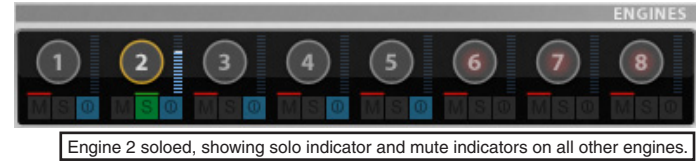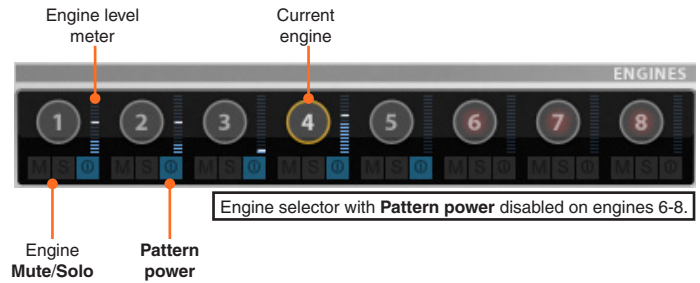
Engine context menu

Cut, Copy, Paste

These functions allow you to cut or copy the entirety of the currently selected engine to the clipboard, or to paste any engine previously stored in the clipboard to the current engine, overwriting the previous contents.

Un-mute all pads/layers on this engine

This function turns off any mutes that exist within the engine, on any of its pads and layers.

Un-solo all pads/layers on this engine

This function turns off any solos that exist within the engine, on any of its pads and layers.

Reset engine

Resets the current engine to its default empty state.

Reset all engines

Resets all 8 engines to their default empty state.
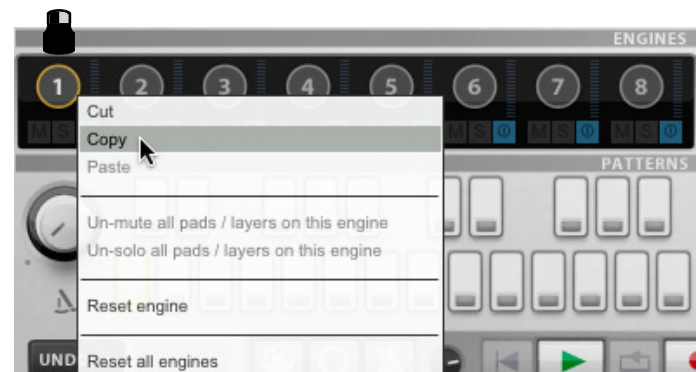
Swing

Geist's features individual Swing controls for each engine, allowing you to inject varying swing/shuffle types and amounts into each engine's patterns.

The Swing controls are also available in the Engine mixer page's Setup view, which displays a convenient overview of the Swing settings for all 8 engines simultaneously.

Swing

Sets the amount of swing applied to the engine.

Swing context menu

Right-click on the **Swing** control in order to display the swing context menu.

Swing templates

All the currently available swing templates are shown in the swing context menu. Each provides a different type of swing feel.

Extract timing from current pattern

This function creates a swing template using the Shift graph information from the current pattern. The resulting template is added to the list of available swing templates.

This feature is also available on the pattern key context menu – right-click on the relevant pattern and use the **Extract groove from pattern** function.

Import MIDI template

This function creates a swing template from a MIDI file. The resulting template is added to the list of available swing templates.

Import GURU swing/shuffle

This function imports a GURU-format swing file and creates a swing template from it, which is added to the list of available swing templates.
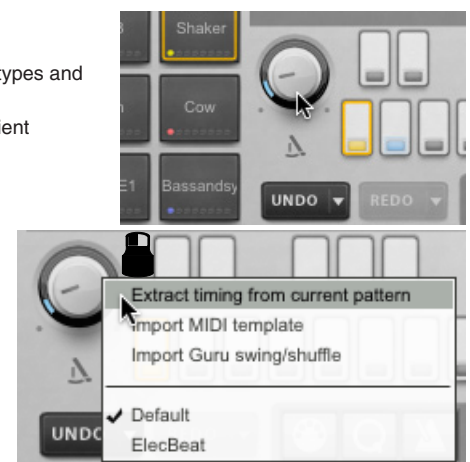
7:2 Engine Mixer

The Engine mixer lets you mix and add FX to the 8 engines in Geist. Only the FX slots for the currently selected engine are shown at any one time.
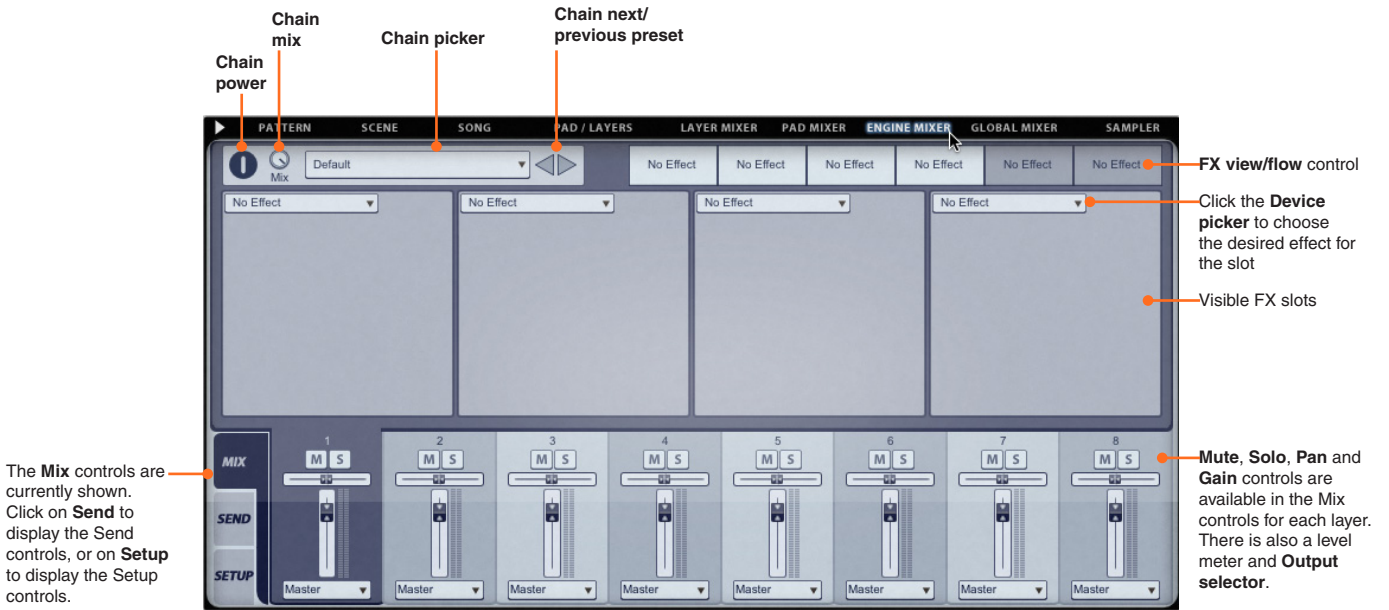
As well as the Mix and Sends views which are available in the Layer mixer and Pad mixer, several engine-specific controls are available within an additional Setup view.

Selecting an Engine

The engine can be selected by either of the following methods:

• click the Engine selector buttons which are always visible on the Geist interface

• click the engine 'channels' in the Engine mixer page, which are arranged from left to right

Selecting an engine makes it the currently active engine for editing – its pads and patterns are accessible via the on-screen pad and pattern buttons.

Multiple selection of engines

Multiple engines can be selected in the Engine mixer, using the following methods:

• SHIFT-click to create a contiguous selection between 2 engines
• CMD-click (Mac) or CTRL-click (Windows) to add an engine to the selection

Mix controls

Click the **Mix** button to display the Mix controls and hide the Sends or Setup controls.

The Mix controls feature **Mute/Solo**, **Pan** and **Gain** controls for each engine, along with a **level meter** and **Output selector**.

Set the **Gain** levels to achieve the desired balance between the levels of each engine within Geist.

Engine output routing

If an engine's **Output routing** is set to 'Master', it is mixed with all other signals routed to the Master channel and any Master FX are applied.

If the engine is routed to a sub-output, it bypasses the Master channel and its FX slots.

Sends

Click the **Sends** button to display the Sends controls and hide the Mix or Setup controls.

When Sends view is active, **Send 1-4** controls for the 4 Aux busses are shown with the **Mute**, **Solo** and **Output selector**.

Sends are 'parallel' routings from the engine to the Aux busses. This view shows each engine's Send controls for the 4 Aux busses, labelled **Send 1** to **Send 4**.

The routing point for all sends to an Aux buss can be set to either pre- or post-fader, using the **Pre/Post** button on the Aux buss itself, located in the Global mixer page (see section 7:4).

Setup

Click the **Setup** button to display the Setup controls and hide the Mix or Send controls.

The Engine mixer Setup view shows Swing, **Pitch** and **Tempo modifier** controls for the engine, with **Mute** and **Solo** buttons.
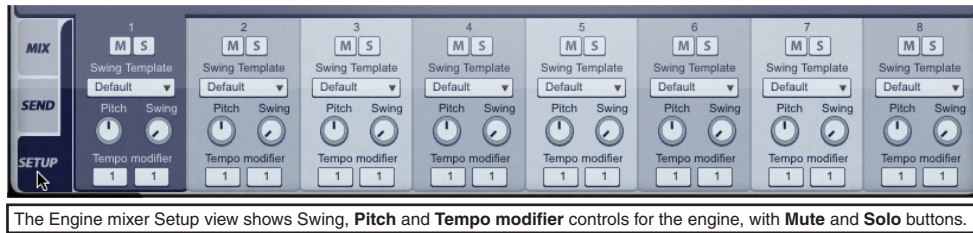
Apart from the **Pitch** controls, the controls available in the Setup view are not related to the sound architecture of Geist – in fact, they relate to the timing of the engine's pattern-sequencing functions.

Pitch

This control adjusts the pitch of the entire engine. Relative pitch differences between layers in the engine are preserved.

Tempo Modifier

The **Tempo modifier** scales the master tempo, so that each engine can operate at a distinct multiple or fraction of the master tempo.

This control effectively represents a ratio which it multiplies the master tempo.

Click and drag up/down to change the values, or double-click a value to type a new value.

With the **Tempo modifier** ratio set to 1/1 (or, indeed, 2/2 or 3/3 for example), the engine's patterns play back at the master tempo.

If it is set to 1/2, that engine's patterns play back at half the master tempo.

If the ratio is set to 2/1, patterns play back at double the speed of the master tempo.

When a pattern is played back, it is looped according to the **Tempo modifier** ratio. Therefore, if the patterns in engine 1 and 2 are set to the same number of steps, and engine 2's **Tempo modifier** is 1/2, engine 1's patterns will have played through twice in the time engine 2's patterns take to play once.

It is possible to set the ratio to anything from 1/16 (a 16th of the master tempo) to 16/1 (16 times faster than the master tempo).

Of course, any ratio between these values can be set, such as 2/3, 3/5 etc. These values are useful for polyrhythmic and unconventional rhythms.

Swing

The **Swing template** selector and **Swing amount** control are displayed in the Setup screen, which allow a convenient overview of the Swing settings of all engines. The Swing parameters are described in section 7:1.

FX Slots

Each engine features 6 assignable FX slots. Engine FX slots process all pads within the engine whose outputs are assigned to the parent engine (the pads' output selectors must be set to 'Parent').

The FX slots themselves behave in the same way as those in the other mixer pages within Geist. See section 6:2 for a summary of the FX slot controls.

7:3 Global elements

Master pitch

This control adjusts the pitch of the entire output of Geist, relative to individual layer, pad and engine tuning settings.

Master gain

Adjusts the gain of the Master channel. This control is the same as the **Gain** control in the Global mixer for the Master channel.

Master pitch   Master gain
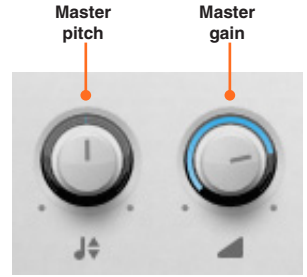
7:4 Global mixer

The Global mixer lets you mix and add FX to the 4 Aux buss channels and the Master channel. Only the FX slots for the currently selected channel are shown at any one time.

Chain power

Chain mix

Chain picker

Chain next/ previous preset

FX view/flow control

Click the **Device picker** to choose the desired effect for the slot

Visible FX slots

The Master channel contains only a **Gain** control and a level meter. The **Gain** control is identical to the Master Gain shown on the main Geist interface.

The 4 Aux busses feature Mute, Solo, Pre/Post control, Gain, level meter and Output selector.

This Mixer page is slightly different from the Layer, Pad and Engine mixers: there is only a single view, and the Master channel controls differ from those available for the Aux buss channels.

Selecting channels in the Global Mixer

Click any of the Aux buss channels or the Master channel to select it for editing.

Unlike the Pad, Layer and Engine Mixers, the channel elements in the Global mixer cannot be selected elsewhere in Geist.

Aux Buss controls

Each Aux buss features controls for **Mute/Solo**, **Gain**, a **level meter**, **Output selector** and a **Pre/Post** fader switch.

Pre/Post

In Geist, the pre- or post-fader status of the sends to an Aux buss is set for all sends at once. By setting the **Pre/Post** setting on an Aux buss, all sends to it are routed accordingly either before or after the channel's Gain stage (set by its level fader in the Layer/Pad/Engine mixers).

Aux buss output routing

If an Aux buss's **Output routing** is set to 'Master', it is mixed with all other signals routed to the Master channel and any Master FX are applied.

If the Aux buss is routed to a sub-output, it bypasses the Master channel and its FX slots.

Master channel controls

The Master channel simply contains a **Master Gain** control and **level meter**.

The Master channel output is hard-wired to the primary stereo output from Geist (output 1-2).

By default, all layers, pads and engines are routed to the Master channel. Any routings to sub-outputs must be explicitly defined.

FX Slots

Each Aux buss and the Master channel feature 6 assignable FX slots.

FX slots on Aux busses only process audio routed to the relevant Aux busses via Send controls or via layer, pad and engine **Output selectors**.

Similarly, the Master channel only processes audio which is routed to it from layer, pad, engine and Aux buss **Output selectors**.

The FX slots themselves behave in the same way as those in the other mixer pages within Geist. See section 6:2 for a summary of the FX slot controls.

8 FX devices

8:1 Distortion

Distortion

This is a versatile, DCAM-modelled overdrive/distortion effect. The **Type** control switches between 4 different distortion models – 'Diode', 'OTA', 'OpAmp' and 'HalfRect' – each of which provides a different flavour of distortion. The **Low Cut** and **High Cut** controls allow you to filter the signal before the distortion stage.

The **Drive** control sets the amount of drive or distortion applied to the signal. The **Tone** control adjusts a 1-pole low-pass filter for removing unwanted high-frequencies from the driven signal. The **Clean** control reintroduces the signal previously filtered out by the Low Cut and High Cut controls.

BitCrusher

This effect emulates the digital distortion that occurs when lowering the bit-depth or samplerate of an audio signal. The **Low Cut** and **High Cut** controls allow you to filter the signal before the distortion/bit-reduction/samplerate-reduction stages.

Adjust the bit-depth with **Bits** control and the samplerate with the **Freq** control.

The **Drive** control sets the amount of drive or distortion applied to the signal. The **Tone** control adjusts a 1-pole low-pass filter for removing unwanted high-frequencies from the processed signal.

RingMod

This effect is used for radical shifts in timbre and experimental effects. It multiplies the input signal with its internal oscillator, the shape and pitch of which are set with the **Mode** and **Pitch** controls. The **Drive** control sets the amount of distortion on the input signal.

8:2 Dynamics

Gain

This effect is a simple tool for increasing or decreasing a channel's gain. The **Gain** control sets the channel's gain between -inf dB and +36 dB.

Stereo Width

This device provides a **Width** control that adjusts the stereo width of the signal between full stereo (maximum position) and mono (minimum position). It also features a **Gain** control that sets the signal's gain between -inf dB and +18 dB.

Channel Compressor

This is a DCAM circuit-modelled channel compressor, based on a classic 'limiting amplifier' design. Increase the **Input** control to make the sound more compressed (higher signals engage the compression circuit more), and adjust the **Output** level to reduce the final level as required.

The **Ratio**, **Attack** and **Release** controls affect the compression characteristics.

The amount of gain reduction is indicated on the VU meter in real time.

Bus Compressor

This is a DCAM circuit model of a classic British console bus compressor design. The **Threshold** control dictates the level over which signals are compressed. The **Ratio**, **Attack** and **Release** parameters control the compression characteristics, while the **Make up** control allows you to increase the audio level after the compression circuit.

The amount of gain reduction is indicated on the VU meter in real time.

Noise Gate

The Noise Gate attenuates the signal until its amplitude reaches the **Threshold** level. The **Attack** and **Release** controls set the speed at which the gate opens and closes after the signal goes above or below the threshold, while the **Hold** control forces the gate to remain open for an adjustable length of time after it is opened, even if the input signal drops below the threshold level.

The **LPF** control allows you to low-pass filter the signal used for the amplitude-detection circuit. Increasing the **Hysteresis** control smooths the gate's response, although this can result in a side effect of lower sensitivity to small changes in amplitude around the threshold level.

Env Shaper

The Envelope Shaper allows you to adjust transients and change the dynamic shape of a signal in a different way to using a compressor. The **Sensitivity** control adjusts the sensitivity of the Env Shaper's peak detection circuit.

The **Attack** control adjusts the intensity of the attack phase of detected peaks in the audio signal. Increase the control to intensify attack transients, and decrease it to soften transients.

The **Sustain** control adjusts the intensity of release portions of detected peaks in the audio signal, which increases or decreases the apparent sustain of sounds in the signal. Increase the control for more sustain, and decrease it for less sustain. This control is useful for adjusting the perceived level of ambience in a channel. Very low settings can produce damping effects for drum sounds.

The processed signal level can be adjusted using the **Gain** control.

8:3 EQ

Parametric EQ

This is a 2-band parametric EQ. The current frequency response curve is indicated on the graphical display.

The **High Freq**, **High Q** and **High Gain** controls set the centre frequency, gain and Q of the high band.

The **Low Freq**, **Low Q** and **Low Gain** controls set the centre frequency, gain and Q of the low band.

Vari EQ

The Vari EQ is a single-band EQ processor which provides a wide variety of filter response types, selected using the drop-down menu. The current frequency response curve is indicated on the graphical display.

Bell, **Low shelf**, **High shelf** types: these parametric EQ-style curves provide **Frequency**, **Gain** and **Q** controls.

LPF, **BPF**, **BPF (0 dB)**, **HPF**, **Notch**, **Allpass** types: these filter-style curves provide **Frequency** and **Q** controls.

DJ EQ

The DJ EQ offers a simple 3-band parametric EQ, with fixed Q. The **L Gain** and **H Gain** set the amount of gain for the low and high bands. The **M Gain** and **M Freq** settings adjust the gain and centre frequency for the mid band.

The frequency response curve is indicated on the graphical display.

8:4 Filters

Filter

The Filter device provides simple 1-pole high-pass and low-pass filters. Each filter features power buttons (**HP On** and **LP On**) and frequency (**HP Freq** and **LP Freq**) controls. The frequency response of the filters is indicated on the graphical display.

Modulated Filter

This is a DCAM circuit-modelled multimode resonant filter with modulation.

The **Cutoff** and **Resonance** controls adjust the cutoff frequency and amount of emphasis around the cutoff frequency. The **Mode** control switches between low-pass, band-pass, high-pass, peak and notch modes.

The effect contains a built-in envelope follower for modulating the cutoff frequency with the amplitude of the input signal. It features controls for envelope **Attack** and **Decay** in response to detected peaks in the signal, and a **Depth** control which sets the amount of modulation of the cutoff frequency by the generated envelope shape.

Comb Filter

The Comb Filter operates by feeding a delayed version of the input signal back on itself, generating phase effects that cause an array of peaks in the frequency response.

The **Input Drive** control adjusts the level of the signal entering the comb filter. The **Pitch** control adjusts the length of the delay in the comb filter circuit, while the **Resonance** control sets amount of feedback. The **Mode** button switches the comb filter polarity between positive or negative.

Three Oh! Three Filter
Hoover Filter
Grandad Filter
Little Fatty Filter
Child Genius Filter
Japan Filter

All these filter devices, each modelled on classic vintage filter circuits, feature a common set of controls. They do not feature any built-in modulation – they must be used as Pad FX to be modulated with graphs, or controlled via MIDI CCs/host automation.

The **Mode** control sets the response of the filter – a variety of responses are available, and each filter device features a different set of filter responses. Each Mode offers a huge variety of timbral variation and character, so please experiment with each device!

The **Pitch** and **Resonance** controls adjust the cutoff frequency and resonance of the filter circuit. The **Input Drive** sets the level of the signal entering the filter. The filter circuit responds with varying characteristics depending on the input level. Higher levels can decrease the apparent resonance of the filter.

8:5 FX

Delay

This is a classic stereo delay line. The **Delay Time** and **Feedback** controls set the amount of delay and feedback intensity in the effect.

The **Swing** control adjusts between a wide variety of delay feels, and the **High Cut** and **Low Cut** controls adjust the filters in the feedback chain.

The **Sync** button enables a tempo-synced **Delay Time** control with note-based values instead of absolute time values.

Flanger

The Flanger effect is a short modulated delay line with feedback to the input. It is used for a sense of movement and for psychedelic effects.

The **Frequency** control sets the frequency of the sine LFO used to modulate the flanger's delay time, while the **Depth** control adjusts the amount of modulation.

The **Feedback** control adjusts the amount of the processed signal that is fed back into the input. Higher settings result in a more pronounced flanging effect, with settings over 50% leading to extreme comb filter type effects.

The **Pos** (Position) control adds up to 10ms to the flanger's delay time. The **Spread** control adjusts the panning of the left and right channel processed signals, while **Phase** offsets the phase of the internal LFOs for the left and right channels.

Chorus

The Chorus device is a modulation effect that is pitch-based, useful for thickening up sounds. The **Frequency** control affects the speed of pitch modulation. The **Depth** control adjusts the amount of modulation away from the input signal's original pitch. The **Spread** control varies the panning of the left and right pitch-modulated signals.

Phaser

The Phaser effect applies a set of allpass filters on the input signal, with the option to sweep the filters with an LFO for psychedelic movement and timbral effects. The **Mode** control features selectable phaser 8 algorithms. 2, 4, 6 and 8 stage phasers are available (the number of stages, or 'poles', is the number of allpass filters), each with positive or negative feedback.

The **Input Drive** control sets the level of the signal entering the phaser circuit. The **Pitch** control sets the centre frequency of the allpass filter array, while the **Resonance** control sets the resonance of the filters.

The **Frequency** parameter controls the rate of the LFO, with the **Depth** control setting the amount of modulation of the centre frequency of the filters.

Frequency shifter

This effect changes the pitch of the input signal without preserving the harmonic information, resulting in very alien and abstract timbres.

The **Pitch** control sets the amount of frequency shifting above or below the original signal, while the **Amp** control adjusts the level of the output signal.

Audio Freezer

This is a granular buffer-looping/freezing effect that is useful for glitchy and stuttery sounds.

Once the **Gate** button is enabled, the Freezer effect starts recording audio from the input into a buffer, the length of which is dictated by the **Loop Length** control (1-16 beats). After the loop buffer is flled, subsequent incoming audio is ignored, until the buffer is re-gated (**Gate** button turned off and on again).

The audio in the loop buffer is divided up into slices, the size of which is set by the **Grain Length** parameter in seconds.

Once the buffer has been filled, the first grain is looped – or 'frozen' – while the **Speed** parameters is set to 0. Increasing the **Speed** control plays through the available grains sequentially. The **Smoothing** control adjusts the amount of smoothing between grains.

The **Scratch** parameter scales the pitch of the loop in a similar way to scratching a record on a turntable, so you can play the loop forwards and backwards and everywhere in between.

8:6 Reverb

TinCanVerb

This effect is a recreation of a low-end room reverb unit, perfect for emulating 'cheap and nasty' onboard synth FX. Use the included Overloud Breverb devices for high-quality reverb FX.

The **Size** control adjusts the size of the virtual reverberation room. Smaller rooms offer subtle ambience, while large rooms result in a more 'cavernous' and reflective effect. The **Decay** control adjusts the decay time of the reverb effect. Use smaller decay times for subtle small room effects, with larger times useful for special effects.

Increasing the **Damp** control results in less high frequencies in the effected signal, leading to a darker reverb sound. At least some damping is essential to avoid overly tinny and fatiguing results.

The **Pinch** and **Squeeze** controls manipulate the shape of the virtual reverb room, leading to a variety of resulting effects. They make the reverb sound a lot more artificial and are useful for special effects.

Breverb Hall

The **Time** control sets the duration of the reverberation tail. It is also influenced by the **Size** parameter, which sets the rate of build-up diffusion after the initial period, the amount of which is controlled by the **Diffusion** parameter. The **Size** control also acts as a master control for **Time** and **Spread**. The apparent size of the space created is actually a combination of the settings of the **Size**, **Shape** and **Spread** controls.

The **Shape** parameter works together with the **Spread** parameter to control the overall ambience of the reverberation created by the Breverb Room algorithm. It specifically determines the contour of the reverberation envelope. With the **Shape** control all the way down, reverberation builds explosively and decays very quickly. As the control is is increased, reverberation builds up more slowly and sustains for the time set by the **Spread** parameter. The **Spread** parameter controls the duration of the initial contour of the reverberation envelope. Low **Spread** settings result in a rapid onset of reverberation at the beginning of the envelope, with little or no sustain, while higher settings spread out both the build-up and sustain.

The **Predelay** control sets the amount of time that elapses between the input signal and the onset of reverberation. It can be used to create a sense of distance and volume within an acoustic space.

Breverb Inverse

The **Time** control sets the duration of the reverberation. This time, added to the **Predelay** time, is the time that elapses from the direct sound to the end of the reverberation process. The **Predelay** control sets the amount of time that elapses between the input signal and the onset of reverberation. It can be used to create a sense of distance and volume within an acoustic space.

The **Diffusion** control sets the degree to which the initial echo density increases over time.

Breverb Room

The **Time** control sets the duration of the reverberation tail. It is also influenced by the **Size** parameter, which sets the apparent size of the acoustic space being emulated by the algorithm. Values from minimum to half way up are typical of the ambience of a recording studio.

The **Diffusion** parameter controls the degree to which the initial echo density increases over time.

The **Decay** control balances between the late reverberation and the early reflections. When the control is turned down fully, only the early reflections are present. As it is increased, late reverberations are gradually added.

The **Predelay** control sets the amount of time that elapses between the input signal and the onset of reverberation. It can be used to create a sense of distance and volume within an acoustic space.

Breverb Plate

The **Time** control sets the duration of the reverberation tail. It is also influenced by the **Size** parameter, which sets the apparent size of the plate emulated by the algorithm. The **Diffusion** parameter controls the degree to which the initial echo density increases over time.

The **Predelay** control sets the amount of time that elapses between the input signal and the onset of reverberation. It can be used to create a sense of distance and volume within an acoustic space.

The **Shape** control determines the contour of the reverberation envelope. With the control turned all the way down, reverberation builds explosively and decays very quickly. As the control is raised, reverberation builds up more gradually and sustains longer.

9 Patterns and graphs

9:1 Introduction to Patterns

Patterns are introduced in sections 1:3 and 1:8 to 1:11.

Pattern memory keys

This section of the interface displays the 24 available patterns in the currently selected engine, with each pattern represented by a pattern memory key, or pattern key.

The currently selected pattern is highlighted in yellow (a pattern must always be selected), and plays according to its **Play mode** settings (see section 1:11). If you do not want any patterns to play in the engine, you must turn off the engine's **Pattern power** button.

Any patterns that contain events feature a blue LED highlight.

Selecting pattern 1

Selecting a pattern

Clicking a pattern memory key on the Geist interface selects it as the current pattern.

You can also play the pattern key's corresponding MIDI note in order to select it as the current pattern.

Playing a pattern

Selecting a pattern is not always the same thing as 'playing' the pattern. The way in which the pattern is played and heard depends on its **Play mode** settings. For example, a pattern with **Gated** mode enabled is only heard while the pattern key, or its corresponding MIDI key, is held down. A pattern with **Restart** mode enabled (and the Gated mode disabled) starts playing as soon as it is selected, from the start of the pattern.

See section 1:11 for a graphical illustration of the possible **Play mode** settings.
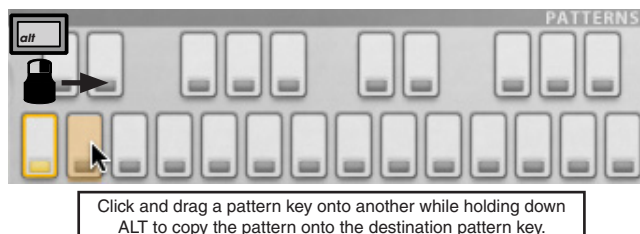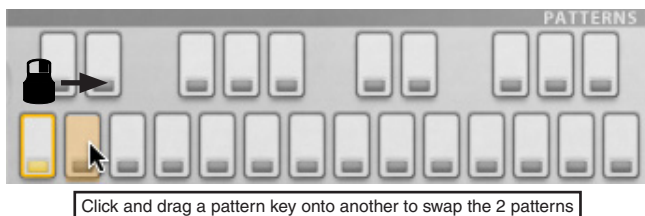
Exporting patterns as MIDI

Pattern memory keys can be exported as MIDI by dragging and dropping them outside Geist – see section 1:15.

Swapping and copying patterns

You can manage patterns using the pattern key context menu (see below), but you can also swap and copy patterns using drag and drop.

Drag one pattern key onto another to swap them.

To copy a pattern from one slot to another, drag the pattern key onto another while holding down the ALT key.

Click and drag a pattern key onto another to swap the 2 patterns

Click and drag a pattern key onto another while holding down ALT to copy the pattern onto the destination pattern key.

Pattern key context menu

Right-clicking on a pattern key displays the pattern context menu, containing a range of pattern management features.

Cut/Copy/Paste

You can cut/copy/paste patterns between the available pattern keys within the engine.

Clear pattern
Clear all patterns

Functions for clearing the current pattern or all patterns in the engine.

Lock/Unlock pattern

Locks the entire pattern (all tracks within the pattern) so that it cannot be altered. If the pattern is currently locked, unlock it with the Unlock pattern function.

Reset pattern velocity

Resets the Velocity graph events for all step events within the pattern.

Quantize pattern timing

Resets the Shift graph events for all step events within the pattern.

Convert timing

Because Geist is a step-sequencer, it has a fixed 'grid' – each pattern has a finite number of steps, with the steps lasting a certain amount of time in relation to the current tempo (although an event can occur at any point within the step using Shift graph values).

The **Convert timing** function allows you to change the grid without changing the position of existing events. Accessing this function displays a dialog box prompting you for the new **Steps** and **Step Length** values. You can also optionally apply the grid changes to all patterns in the engine.

The function calculates where existing events should be in the new Geist – which steps they occupy and any new Shift graph values that may be required.

Note that this function is really intended for *increasing* the grid resolution while keeping a pattern sounding the same (in other words, increasing the **Steps** value and decreasing the **Step Length** value). It is not recommended to decrease the resolution unless absolutely necessary, as events may be lost.

Some common conversions you may need to make:

• Convert to 1/16T (triplet) timing – set **Steps** to 24 and **Step Length** to 1/16T.
• Double the resolution of a 16-step pattern: set **Steps** to 32 and **Step Length** to 1/32.
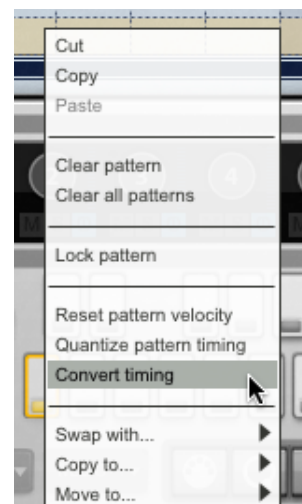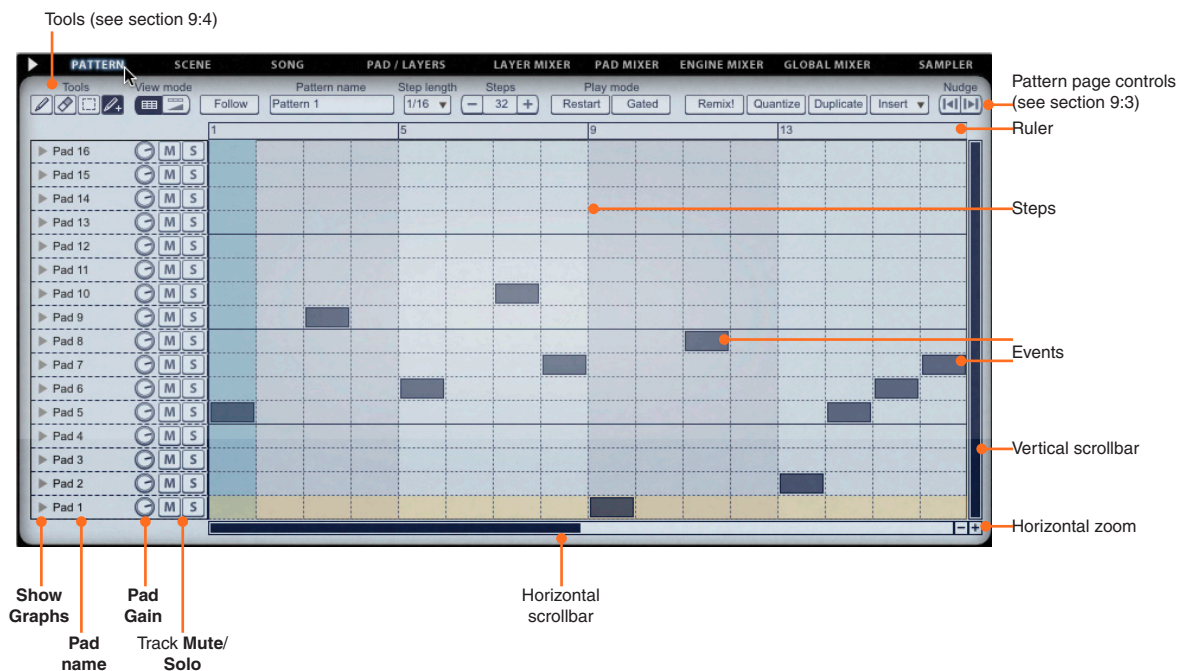
Swap to...
Move to...
Copy to...

These functions allow you to swap/copy/move patterns between the available pattern keys in the engine.

9:2 Pattern page

The Pattern page displays the currently selected pattern, and allows you to program and edit patterns.

Tools (see section 9:4)

Pattern page controls (see section 9:3)
Ruler
Steps
Events
Vertical scrollbar
Horizontal zoom

Show Graphs
Pad Gain
Pad name
Track **Mute**/**Solo**
Horizontal scrollbar

Ruler

The numerical markers in the ruler indicate step numbers. The current horizontal zoom level dictates the actual step numbers that are displayed.

Tracks

Each of the 16 pads in the engine is represented as a track in each pattern.

Pad name

The **Pad name** is effectively the name of the track. Pads cannot be renamed in the pattern page – this must be performed in the Pad/Layers page (see section 5:1).

Pad Gain

Each track's level control is the same parameter as the pad's **Gain** control on the Pad/Layers page.

Mute/Solo

Track **Mute** and **Solo** buttons operate on the pattern tracks in the current pattern only – muting or soloing a track in a pattern does not affect any other patterns. These buttons are not related to the pad's mute/solo functions located on the Pad/Layers page (see section 5:1) and in the pad context menu (see section 5:2).

Step cells

The actual step 'cells' represent possible positions for events in the current pattern. Events are shown as dark blocks.

This area is fully editable using the editing tools – see section 9:4 for a comprehensive guide to the tools and their editing features.

Show graphs

The triangular arrow at the left of the track can be clicked to display the track's graph lane. The actual graph type that is shown here is selectable using the drop-down menu selector that appears. See 9:5 for a full guide to these controls, and to using graphs in general.

Horizontal zoom

These buttons increase and decrease the horizontal zoom level of the step-sequencer display in the pattern page. These settings are per-pattern.

Scrollbars

The horizontal scrollbar can be clicked and dragged left/right in order to access the whole pattern when zoomed in sufficiently.
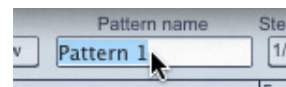
The vertical scrollbar is not needed unless 1 or more tracks' graph lanes are open.

9:3 Pattern page control reference


Pattern name

The name of the currently selected pattern. Click the text-box to edit it or enter a new name.
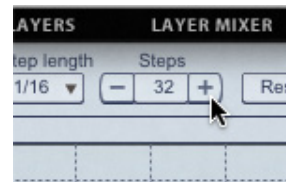
Steps

This control adjusts the number of steps in the pattern. There are several ways of using this control:
- Click the numerical display to type a value manually.
- Click the **+** and **-** buttons to increase and decrease the value by 1.
- Click these buttons while holding down the SHIFT key to adjust the value by +/- 8.
- Click these buttons while holding down the ALT key to double or halve the value.
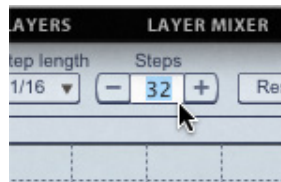
Click the value, type a new value and press ENTER...

... or use the + and - buttons.

Step Length

This control sets the length of each step in the step sequencer grid – 1, 1/2, 1/4, 1/8, 1/16, 1/32, 1/64 straight and triplet settings are available.

Play Mode: Gated and Restart

When a pattern is set to **Gated** mode, it only plays while the pattern's MIDI key is held down. With the **Gated** button disabled, patterns are started by playing the key and releasing it, and it loops indefinitely.

When a pattern is set to **Restart** mode, it always plays from the beginning of the pattern when triggered. With the **Restart** button disabled, the pattern starts in phase with the playing position.

Note that both of these modes can be active at the same time.

See section 1:11 for a graphical illustration of these settings.

Follow

If you are currently zoomed in so that the full pattern is not visible, enabling the **Follow** button causes the play position to scroll along the pattern duration.

Quantize

Clicking this button quantizes either the selected events in the pattern, or the whole pattern if no selection exists. Events are quantized to the start of the nearest step.

Note that this function is distinct from the **Input Quantize** button on the Geist transport, which enables or disables automatic quantizing of real-time MIDI input during recording.
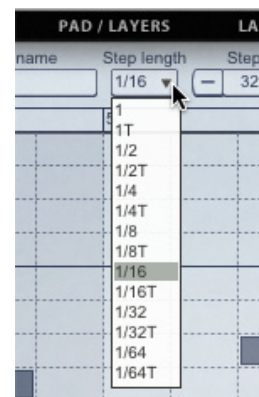
Insert

The **Insert** menu offers a number of useful rhythmic patterns to automatically insert onto the currently selected pad's pattern lane.

There are a few different instances of this function within Geist.
- The main Insert menu creates events from the start of the pattern
- The Insert menu on the track context menu creates events from the selected step (see section 9:6)
- The Pen and Multi tools also feature an Insert function which operates on the steps painted in a single action (see section 9:4)
- Geist can also insert graph patterns, using the Insert menu for graphs (see section 9:5)

Remix

Remix mode is a special editing mode which, when enabled, allows only 1 pad to play in any single step. It is intended as a quick way to rearrange or remix a sliced loop.

Duplicate

Click the **Duplicate** button to double the entire pattern, or the current selection of events – another copy of it is inserted at its end.
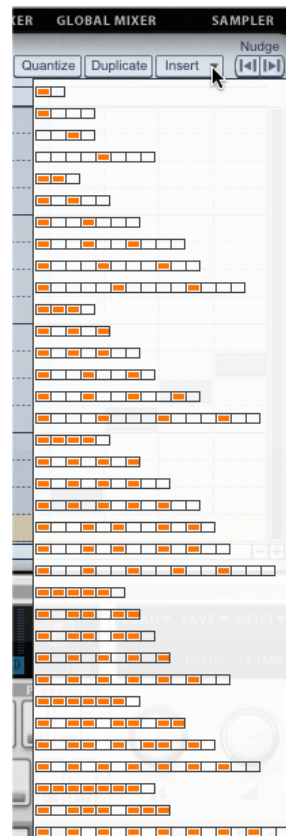
Nudge left/right

These buttons move the events in the pattern left or right by 1 step. Events 'wrap around' the beginning and end of the pattern.

All the steps' accompanying graph information is also moved.

With one or more events selected, using the **Nudge** buttons results in moving only the selected events.

View mode

See section 9:5 for details of these buttons.

9:4 Editing tools

Pen tool

Adding an event

Click to add an event.

Adding a series of events

Click and drag right to add a series of events on adjacent steps.

Click and drag right to add a series of events, then drag down/up to adjust the velocity of all the events.

Using Insert patterns

1. Click and drag right to insert a series of events.

2. Cycle through available Insert patterns by repeatedly right-clicking, without releasing the left mouse button.

Selecting and deselecting events

SHIFT-click an event to select it. Any previously selected events are de-selected.

Click an event while holding SHIFT and CMD (Mac) or CTRL (Windows) to add it to the selection. Clicking the event again with these keyboard modifiers held down de-selects it.

SHIFT-click and drag from an empty area to draw a selection box. Also hold down CMD (Mac) or CTRL (Windows) to add to an existing selection.

SHIFT-click an empty area to de-select any selected events.

Setting event velocity

Click and drag up/down on an event to adjust its velocity. This can also be performed on selections.

Displaying the track context menu

Pen
Delete
Select
Multi Tool

Delete

Cut
Copy
Paste
Repeat pattern

Extract groove from pattern

Right-click on a selection, an event, or an empty area to show the track context menu, which includes a **Delete** function.

Creating velocity fade-ins and fade-outs

alt

alt

Click and drag right to insert a series of events, then drag up while holding down ALT to create a velocity fade-in.

Click and drag right to insert a series of events, then drag down while holding down ALT to create a velocity fade-out.

Gated / Looping mode pads

Click and drag right to create a Gated / Looping mode event with a duration greater than 1 step.

Click and drag the end of an existing Gated / Looping mode event left/right to change its duration.

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Delete tool

Deleting an event

Click an event to delete it.

Displaying the track context menu

Pen
Delete
Select
Multi Tool

Delete

Cut
Copy
Paste
Repeat pattern

Extract groove from pattern

Right-click on a selection, an event, or an empty area to show the track context menu, which includes a **Delete** function.

Selecting and deselecting events

SHIFT-click an event to select it. Any previously selected events are de-selected.

SHIFT-click and drag to draw a selection box, from an empty area or from an event (the event is included in the selection). Also hold down CMD (Mac) or CTRL (Windows) to add to an existing selection.

shift
+
cmd — Mac
ctrl — Windows

Click an event while holding SHIFT and CMD (Mac) or CTRL (Windows) to add it to the selection. Clicking the event again with these keyboard modifiers held down de-selects it.

shift

SHIFT-click an empty area to de-select any selected events.

Select tool

Selecting and deselecting events

Click an event to select it. Any previously selected events are de-selected.

SHIFT-click and drag from an empty area to draw a selection box. You can also SHIFT-click and drag from an event (the event is included in the selection). Also hold down CMD (Mac) or CTRL (Windows) to add to an existing selection.

cmd — Mac
ctrl — Windows

Click an event while holding SHIFT and CMD (Mac) or CTRL (Windows) to add it to the selection. Clicking the event again with these keyboard modifiers held down de-selects it.

Click an empty area to de-select any selected events.

Displaying the track context menu

Pen
Delete
Select
Multi Tool

Delete

Cut
Copy
Paste
Repeat pattern

Extract groove from pattern

Right-click on a selection, an event, or an empty area to show the track context menu, which includes a **Delete** function.

Moving / Copying a selection

Select some events.

Moving a selection

Click and drag the selection to move it. Any Graph data that exists on selected steps is moved with the events.

Copying a selection

alt

Click and drag the selection while holding down ALT to copy it. Any Graph data that exists on selected steps is copied with the events.

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Multi tool

Adding an event

Click to add an event.

Erasing an event

Right-click an existing event to erase it.

These can be swapped via a preference (see 12:8).

Setting event velocity

Click and drag up/down on an event to adjust its velocity.

Displaying the track context menu

- Pen
- Delete
- Select
- Multi Tool

alt

- Delete

- Cut
- Copy
- Paste
- Repeat pattern

Extract groove from pattern

Right-click while holding down ALT on a selection, an event, or an empty area to show the track context menu.

Adding a series of events

Click and drag right to add a series of events on adjacent steps.

Click and drag right to add a series of events, then drag down/up to adjust the velocity of all the events.

Creating velocity fade-ins and fade-outs

alt

Click and drag right to insert a series of events, then drag up while holding down ALT to create a velocity fade-in.

alt

Click and drag right to insert a series of events, then drag down while holding down ALT to create a velocity fade-out.

Using Insert patterns

1. Click and drag right to insert a series of events.

2. Cycle through available Insert patterns by repeatedly right-clicking, without releasing the left mouse button.

Selecting and deselecting events

shift

SHIFT-click an event to select it. Any previously selected events are de-selected.

shift

SHIFT-click and drag to draw a selection box, from an empty area or from an event (the event is included in the selection). Also hold down CMD (Mac) or CTRL (Windows) to add to an existing selection.

shift
+
cmd   ctrl
Mac   Windows

Click an event while holding SHIFT and CMD (Mac) or CTRL (Windows) to add it to the selection. Clicking the event again with these keyboard modifiers held down de-selects it.

shift

SHIFT-click an empty area to de-select any selected events.

Gated / Looping mode pads

Click and drag right to create a Gated / Looping mode event with a duration greater than 1 step.

Click and drag the end of an existing Gated / Looping mode event left/right to change its duration.

Moving a selection

Click and drag the selection to move it. Any Graph data that exists on selected steps is moved with the events.

Copying a selection

alt

Click and drag the selection while holding down ALT to copy it. Any Graph data that exists on selected steps is copied with the events.

Moving / Copying a selection

Select some events.

9:5 Graphs

Graphs are automation sequences which send a value to a parameter *at the onset of each step*. They are not 'continuous' automation curves.

Graphs are introduced in section 1:9.

Show graphs

Clicking the small triangular arrow to the left of each pattern track to display its graph automation controls. When one or more tracks' graph controls are visible, a vertical scrollbar appears in the Pattern page.

Graph type menu

Use this drop-down menu to select the graph type to view/edit.

See below for a guide to all available graph types.

Graph insert menu

The graph Insert drop-down menu provides a number of useful graph automation shapes to insert onto the lane.

View mode

The following 2 buttons act as 'radio buttons' – only 1 of them can be active at a time.

Multi track view

When this button is enabled, all 16 pad tracks are visible simultaneously in the Pattern page.

Multi graph view

With this button enabled, the currently selected pad's track is shown along with 4 graph lanes, which can be set to show any of the pad's graphs.

Graph types

All graph values sent to a parameter are applied relative to any underlying parameter value settings.

Velocity

This graph represents the velocity of the event on the step. Values range from 0 to 127.

Show graphs buttons

Graph insert menu

Graph type menu

View mode

Changing to Multi graph view

Pan

The Pan graph represents the Pan position of the event on the step. Values below the centre point represent panning towards the left, while values above the centre represent panning towards the right.

Repeats

This graph lets you repeat an event up to 8 times on a single step. It is intended for glitchy effects.
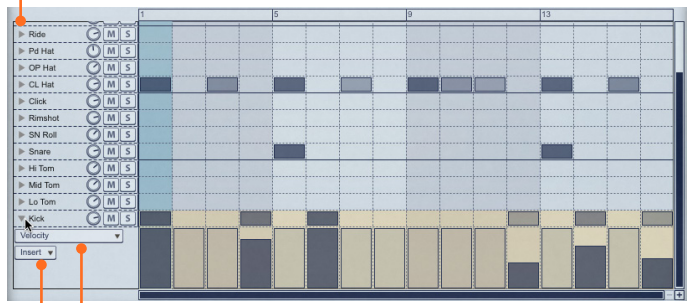
Shift

This graph represents timing deviations away from straight timing. It can alter the timing of a step's event by placing the onset of the event at variable distances before or after the step.

Positive values (above the centre line) result in the step's event being played late, and negative values (below the centre line) cause it to be played early.

Shift graph values can be programmed or edited visually, and they are also generated during realtime MIDI input recording of pattern events.
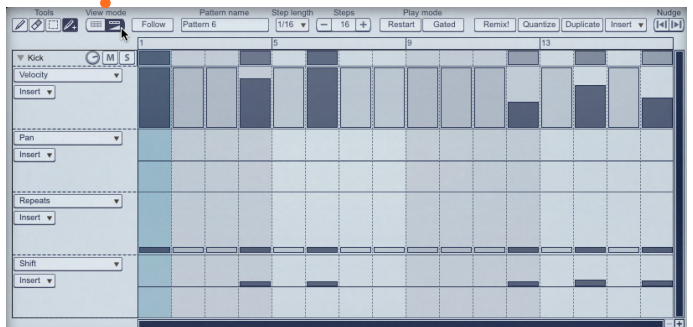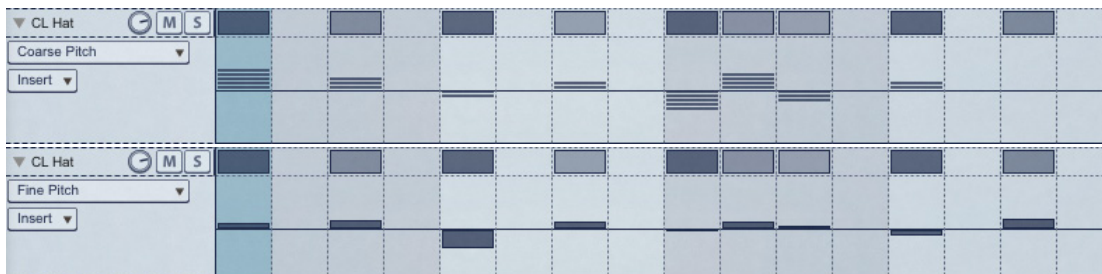
Reverse

This graph inverts the **Reverse** setting for each layer triggered by the step's event. There are only 2 possible values – 'Forward' (minimum value) and 'Reverse' (maximum value).

Coarse Pitch, Fine Pitch

These graphs represent changes in the overall pitch of pads over the course of the pattern.

The Coarse Pitch graph allows you to adjust the pitch of a step's event between +12 (values above the centre line) and -12 (values below the centre line) semitones. The Fine Pitch graph adjusts the pitch of a step's event from +100 (values above the centre line) and -100 cents (values below the centre line).

Coarse and Fine Pitch graph values can be programmed or edited visually, and they are also generated during realtime MIDI input recording of pattern events, when using the Chromatic Playback mode for pads (see section 1:3).

Start point

This graph changes the start point of any triggered layers' contained samples. It is intended for glitchy, disturbed audio effects.

This graph is bi-directional: the start point defined in the Pad/Layers page is represented by the centre line. Values above the centre move the start point later in the sample, while values below the centre move the end point earlier in the sample.

Filter cutoff

This graph sets the Filter cutoff for the step's layers.
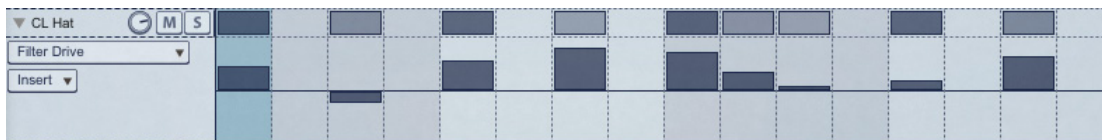
Filter resonance

The graph sets the Filter resonance for the step's layers.

Filter type

This graph sets the Filter type for the step. When set to the minimum value, the **Filter type** specified for the layer on the Pad/Layers page is used (see section 5:6). All other values for the graph correspond to one of the available filter types.

Filter drive

This graph sets the Filter type for the step. When set to the minimum value, the **Filter type** specified for the layer on the Pad/Layers page is used (see section 5:6). All other values for the graph correspond to one of the available filter types.

Force Layers
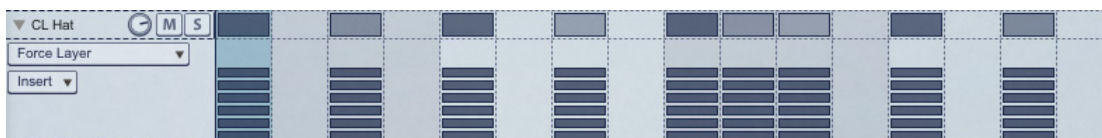
The function of the Force Layers graph is to override the Layer Mode setting and play a specific pad layer on a step.

This graph is produced by the Use Layers function in the Slicer panel when extracting the pattern as well as the slices from a loop.

Possible values range from Off to 8, with each value from 1 to 8 forcing the corresponding layer (1-8) to be played on that step. If the value on a step is 'off', the layer playback is determined by the Pad's Layer Mode setting.

Send 1-4

These 4 graphs adjust the Send levels for the Pad's Aux sends 1-4.

Amp Env Depth 1, 2

These 2 graphs adjust the Amp Env Depth amount for the layers' 2 definable Amp Env destinations. The hard-wired layer amplitude destination is not affected by the graphs.

Free Env Depth 1, 2

These 2 graphs adjust the Free Env Depth amount for the layers' 2 definable Free Env destinations.

Pad FX 1-6...

These graphs allow you to vary Pad FX parameters on each step. The FX device must be loaded first. If the FX device is removed, any graph data associated with it is also cleared.

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9:6 Track context menu

The action to display the track context menu depends on the currently active editing tool.

Pen, Erase, Select tools

Right-click any step or event selection in a pattern lane to display the track context menu.

Multi tool

There are 2 possible actions for displaying the track context menu while the Multi tool is active, which depend upon the state of the **Multi tool right-click opens menu** setting in the Geist preferences.

• Right-click (preference enabled)

• ALT-right-click (preference disabled) – this is the default setting

Tool selectors

You can select between the Pen, Erase, Select and Multi tools using the track context menu.

Delete

Deletes the note on the track – this function is also available through various methods using the editing tools.

Cut, Copy, Paste

These functions allow you to cut or copy current selection to the clipboard, or to paste the contents of the clipboard from the selected step (the step on which you right-click or ALT-right-click).

Duplicate selected steps, Duplicate pattern

When a selection of step events exists, this function is called **Duplicate selected steps**. It repeats the selection on the same track. The pattern length is increased if the duplicated events over-run the current pattern length.

If no selection exists, this function is called **Duplicate pattern** and performs the same action as the **Duplicate** button at the top of the Pattern page.

Extract groove from pattern

This function analyses the pattern's Shift graph values and creates a swing template that can be used with Geist's **Swing** control on any engine.

Quantize pattern timing

Resets the Shift graph for the entire pattern.

Reset pattern velocity

Resets the Velocity graph for the entire pattern.

Quantize track timing

Resets the Shift graph for the pattern track.

Reset track velocity

Resets the Velocity graph for the pattern track.

Clear track

Clears all pattern events on the track.

Clear all tracks

Clears all events in the entire pattern.

Lock/Unlock track

Track locks are distinct from pad locks (and layer locks). It means you can lock the track for certain pads, so that you can load new patterns without altering the events on certain tracks.

Unlock all tracks

This function unlocks any tracks in the pattern which may be locked.

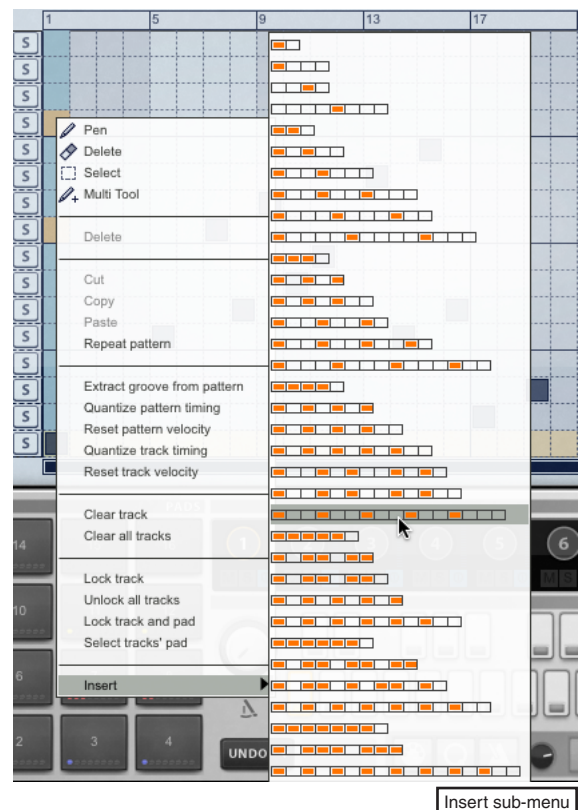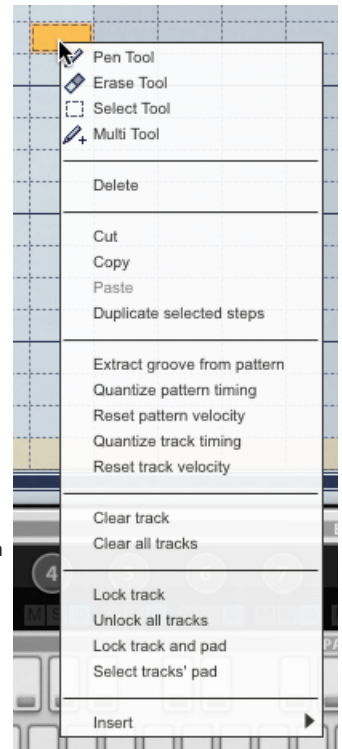### Lock/Unlock track and pad

This function locks the selected track and its corresponding pad.

Select track's pad

Sets the track's pad as the currently selected pad.

Insert...

A sub-menu of useful event patterns, which are inserted from the selected step (the step on which you right-click or ALT-right-click to display the context menu). There are other Insert functions in Geist – see section 9:3 for a summary.

9:7 Summary of pattern lock functions

Pattern locks

• Pattern key context menu (right-click on a pattern memory key) – section 9:1

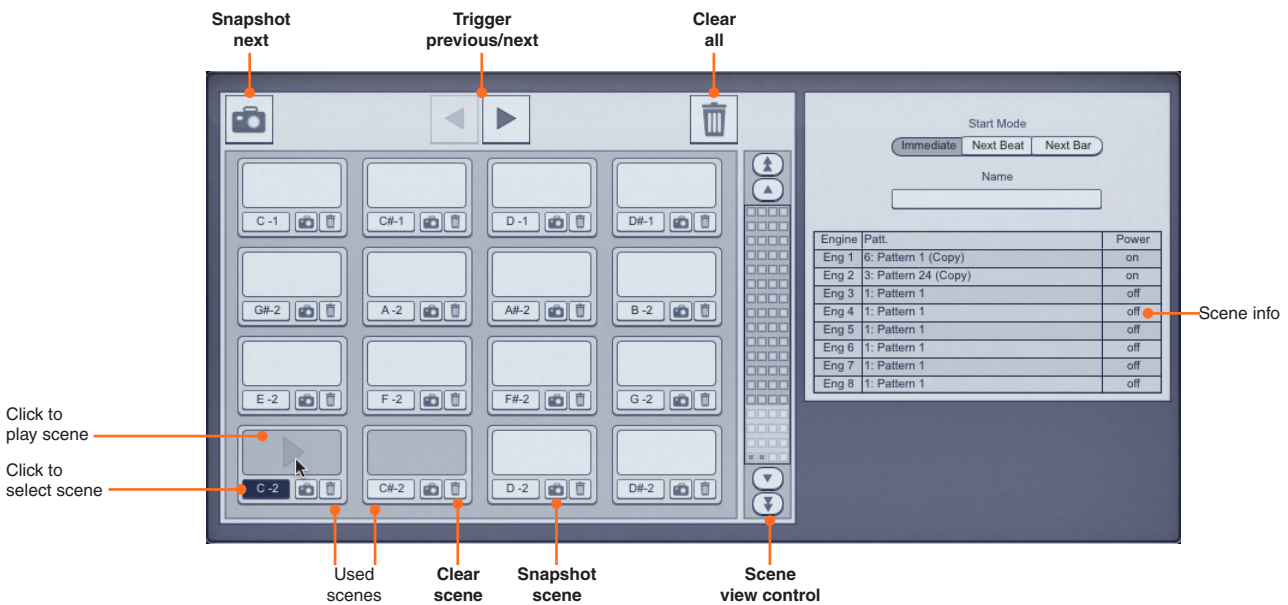• **Lock all patterns** in Browser – section 2:8

Track locks

• **Lock/Unlock track** on track context menu – section 9:6

• **Lock/Unlock track and pad** on pattern context menu

• **Unlock all tracks** on pattern context menu

Insert sub-menu

10 Scenes page

10:1 Scenes page control reference

A scenes is a snapshot of the patterns playing in all 8 engines. Because each engine's patterns are invidually accessed on MIDI channels 1-8, scenes allow a more convenient way of triggering a pattern in all 8 engines simultaneously with a single action.

Scenes are introduced in section 1:12.

Snapshot next — **Trigger previous/next** — **Clear all**

Click to play scene
Click to select scene

Used scenes — **Clear scene** — **Snapshot scene** — **Scene view control**
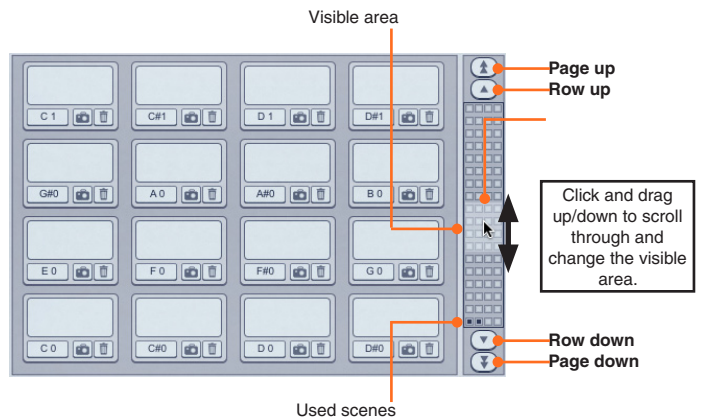
Scene info

Scene view control

There are 60 scene slots, each of which can contain a scene. Each slot can be selected/triggered either on the interface, or via MIDI, using *MIDI channel 11* or *16*.

Six octaves of scene slots are available, making 64 scene slots in total.

C0 -> B0   C3 -> B3
C1 -> B1   C4 -> B4
C2 -> B2   C5 -> B5

The available scenes slots are displayed in the Scene page so that 16 slots are visible simultaneously. The scene view control allows you to scroll up and down the full range of scenes in the following ways:

- click/drag the active area of the **Scene view control** to scroll freely through the available scenes
- click the **Row up/down** buttons to shift the viewable area by 1 row
- click the **Page up/down** buttons to shift the viewable area by 4 rows.

Visible area

Page up
Row up

Click and drag up/down to scroll through and change the visible area.

Row down
Page down

Used scenes

Snapshot scene

The combination of currently playing patterns is added to the currently selected scene slot.

Clear scene

The contents of the currently selected scene slot are removed.

Snapshot next

Adds the currently playing patterns as a Scene in the next available Scene slot.

Trigger previous

Triggers the previous scene to that which is currently selected. This button is unavailable if the first scene (on C-2) is currently selected.

Trigger next

Triggers the next scene to that which is currently selected. This button is unavailable if the last scene (on B3) is currently selected.

Clear All

Clears the contents of all scene slots.

Start mode

This setting dictates how the scene begins when triggered. Note that this setting is completely separate to the Play mode settings of a scene's patterns. The Start mode dictates when the scene itself is triggered in relation to the scene trigger (via the on-screen buttons or corresponding MIDI notes).

Note that if a scene's patterns are set to Gated mode, you will need to keep the scene trigger input held down (the interface button or MIDI note), during any pause caused by the Start mode setting, and for as long as required after it starts.

• Immediate

When the scene is triggered, it begins automatically, in phase with the current tempo/bar position.

• Next beat

When triggered, the scene begins on the next beat.

• Next bar

When triggered, the scene begins at the start of the next bar.

Name

This text field allows you to name the scene. Click the Name field, type a new name and press ENTER.

The name is displayed on the scene slot.

Scene info

This section features a summary of the contents of the selected scene. The pattern number and **Pattern power** status is shown for each of the 8 engines.

Click the Name field to name the selected scene. The name is displayed on the scene slot.

Scene context menu

Cut, Copy, Paste

These functions allow you to Cut/Copy the currently selected scene to the clipboard, or to Paste any scene data stored in the clipboard into the currently selected scene. If Pasting into a scene which is not empty, the existing contents are overwritten the the Pasted data.
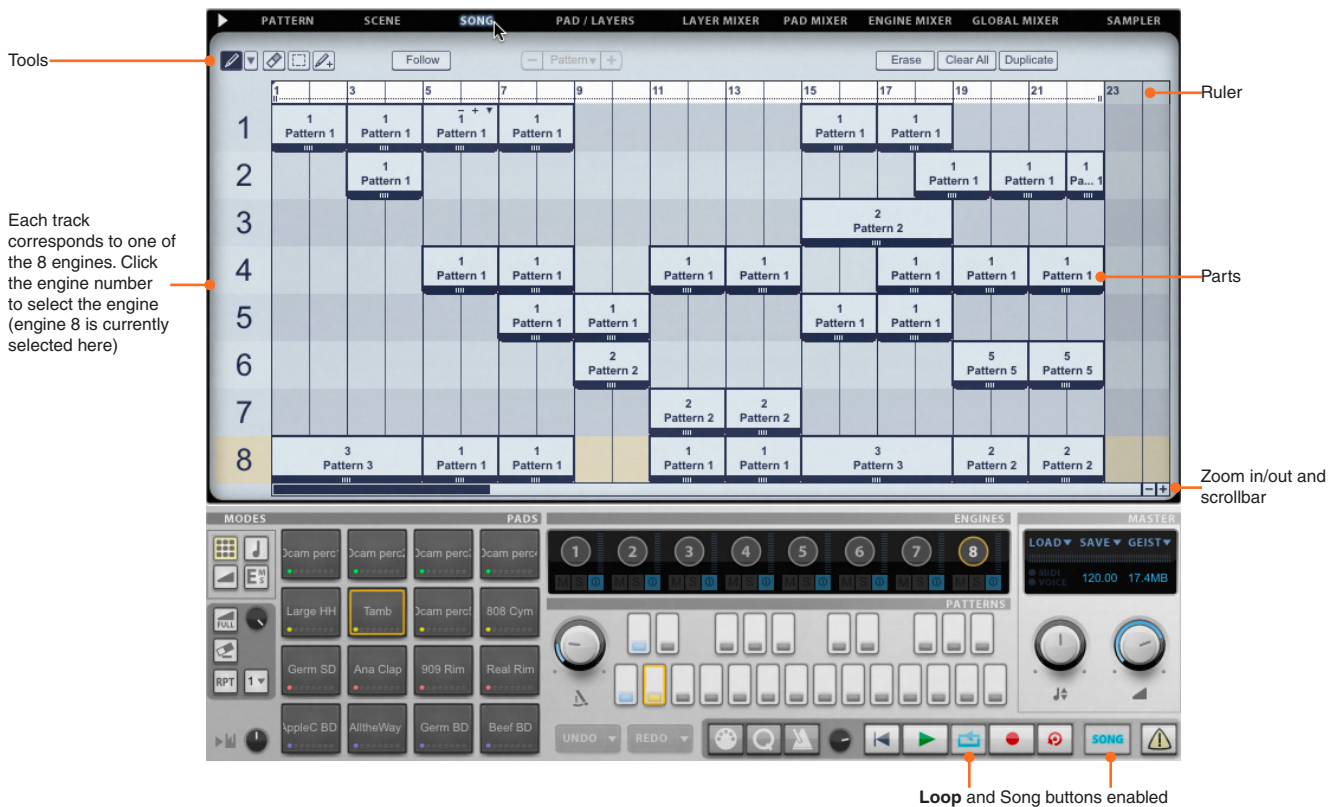
11 Song page

11:1 Working with the Song page

The Song page provides a sequencer for patterns so that you can arrange them on a linear timeline.

You can either draw in patterns directly onto the tracks, or record pattern or scene performances in realtime.

The Song page is introduced in section 1:13.

Tools

Each track corresponds to one of the 8 engines. Click the engine number to select the engine (engine 8 is currently selected here)

Ruler

Parts

Zoom in/out and scrollbar

Loop and Song buttons enabled

11:2 Relevant transport controls

Song mode

Enabling this button activates Song mode for arranging patterns over time. When the **Song mode** button is disabled, the Song is not active, and any controls specific to Song mode are also inactive.

In Song mode, the Record function is used for the Song sequencer – the currently playing patterns in each engine are added to the Song sequencer tracks.

Return to start · Play/Stop · Loop · Record · Retro record · Song mode

Return to start

Clicking this button causes the playback position to return to the start of the Song. This button is only available in Song mode (when the **Song mode** button is enabled).

If the **Loop** button is enabled, clicking the **Return to start** button once returns to the loop start indicator. Clicking the **Return to start** button again returns to the start of the song.

Play/Stop

The Play/Stop button starts and stops the Geist transport.

Note that when running Geist as a plugin, its transport is synchronized to the host transport.

Loop

Enabling the **Loop** button activates Loop mode. An adjustable loop indicator appears in the Song page ruler, with playback repeating within this period. This control is only available in Song mode (when the **Song mode** button is enabled).

Record

When the **Song mode** button is enabled, the **Record** button operates for the Song page – you cannot record to the current pattern.
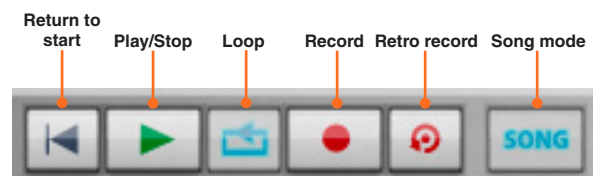
Starting the transport commences Record mode. Patterns can be played via pattern keys (and their corresponding MIDI notes).
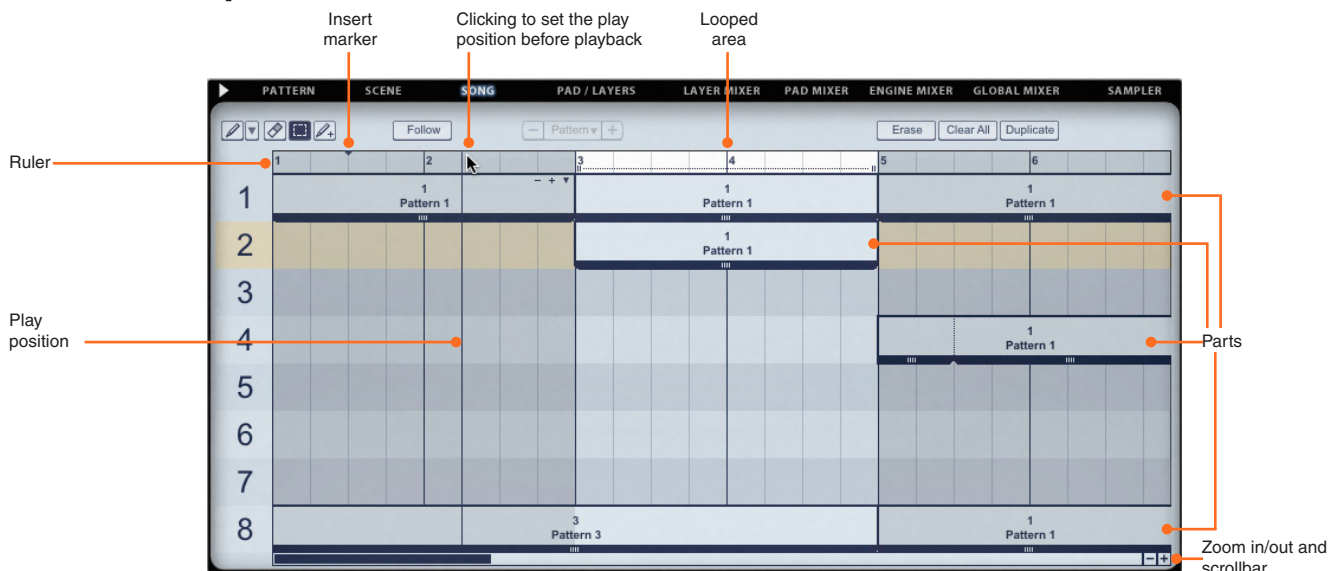
Retro record

The MIDI input is always being recorded for patterns, to an internal buffer. Clicking the **Retro record** button captures the contents of the buffer. Therefore, if you come up with the perfect take while practising, you can retrospectively capture it instead of having to recreate it.

If the **Song mode** button is enabled, events captured by the **Retro record** button are written over the previous contents of the song at the positions where they were played.

If the **Song mode** button is currently disabled, first activate Song mode and then click the **Retro record** button – the performance overwrites the previous contents of the song from the beginning.

11:3 Tracks and parts

Labels: Insert marker · Clicking to set the play position before playback · Looped area · Ruler · Play position · Parts · Zoom in/out and scrollbar

Ruler

The ruler's time 'scale' is based on the current time signature supplied by the host when running Geist as a plugin. When running the standalone version, the time signature is 4/4.

The Song does not support time signature changes. It is not recommended to change time signatures in your host, as the entire Geist Song timeline also changes with it, meaning that the song is not played back accurately.

If your projects require time signature changes, you must arrange sequences using your host's MIDI features, and use Geist as a sample playback device.

Play position

The current playback position is indicated by a vertical line which scrolls along the timeline at the current tempo.

In the standalone version of Geist, the play position can be set before playback by clicking in the upper part of the ruler.

In the plugin version of Geist, the playback position is always synchronized to the host.

Engine tracks

The Songs page displays a timeline for 8 tracks – one for each of the 8 engines.

Parts

Each pattern event on an engine track is called a *part*. A part is a reference to one of the engine's 24 patterns.

Only 1 part can play on an engine track at any one time.

Pattern number references

The number of the pattern referenced by a part is shown on the part itself.

The pattern number of any selected song part(s) can be specified using the following methods:

• Using the **+**, **-** and **Pattern selector** buttons at the top of the Song page

These buttons allow you to change the pattern number of the currently selected part(s). The **+** and **-** buttons increase and decrease the pattern numbers for the selected parts by 1. The **Patt...** button displays a pop-up menu of patterns 1-24 – click a pattern to use it as the referenced pattern for all selected parts.

• While the **Select tool** is active using the **+**, **-** and **Pattern selector** buttons on the parts themselves.

These buttons work identically to the above buttons – again, the change is applied to all selected parts.

• When drawing new events, the **Pen tool** is set to draw events referencing a particular pattern. This pattern number can be set before drawing by using the **Pattern selector** button next to the Draw tool.
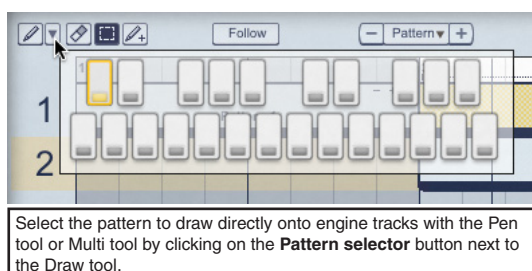

Select the pattern to draw directly onto engine tracks with the Pen tool or Multi tool by clicking on the **Pattern selector** button next to the Draw tool.
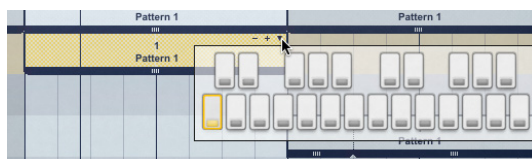
Adjust a referenced pattern by clicking the triangular arrow at the top-right corner of the part while in Select mode. Then, click on one of the 24 engine patterns on the pop-up selector that appears. The change is applied to all selected parts.
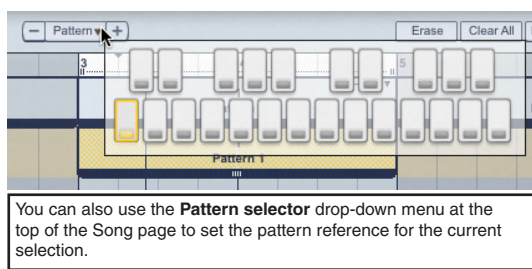
You can also use the **Pattern selector** drop-down menu at the top of the Song page to set the pattern reference for the current selection.
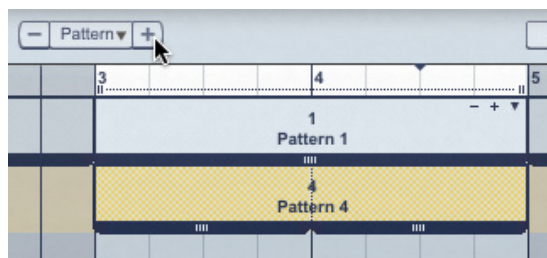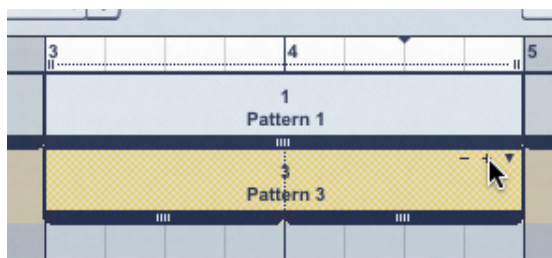
Pattern numbers for parts can be increased or decreased by 1 by using the + and - buttons on a part itself, or using the + and - buttons at the top of the Song page. The change applies to all selected parts.

Pattern phase

The phase of patterns is preserved when recording into the Song. A pattern's phase refers to the point within it when it starts playing after it is played/triggered by its pattern key or a scene which contains it.

When performing live with patterns/scenes, or when creating a live recording, the pattern's phase depends on the point in time when the pattern was played/triggered. After a song recording has been made, patterns can be moved/copied freely while preserving their original phase, and their phase can be adjusted using the **Phase anchor**. The start and end points of a part can be adjusted without changing the phase (see section 11:5).

Phase anchor

While in Select mode, you can adjust the **Phase anchor** of the part, to change the pattern phase. The beginning and end of a pattern within an event are represented as shown in the screenshot. The **Phase anchor** is located in the lower part of each part, and is adjusted by clicking and dragging it left/right.

Erase

Holding down this momentary button results in erasing pattern parts in real time on the selected engine track while the button is held down.

Clear All

Clicking button clears all parts on all engine tracks.

Duplicate

This button creates a copy of the selected part(s), which starts at the position at which the last selected part ends. When multiple selections are duplicated, their relative positions are preserved. If no selection exists, the entire arrangement is duplicated.

Follow

Enabling this button results in the song timeline view scrolling with the current playback position.

Insert marker

The insert marker is shown in the ruler at the point at which the song page context menu is invoked (see below). It indicates the insert point for Paste operations on the relevant track.

11:4 Song page context menu

The song page context menu can be invoked on a selection or an empty area of the song page. The action required to display the menu depends on the current editing tool – see section 11:5 for more details. Apart from the tool selectors and the Paste parts function, all functions on the menu require a selection.

Tool selectors

You can select between the **Pen tool**, **Erase tool**, **Select tool** or **Multi tool** using the song page context menu.

Cut Parts, Copy parts, Paste parts

These functions allow you to cut and copy the selection to the keyboard, or paste the current contents of the clipboard at the insert marker position (which is set at the point at which the context menu is invoked).

Delete parts

Deletes the currently selected parts.

Duplicate parts

This function is identical to the **Duplicate** button at the top of the Song page.

Quantize parts (start)

Quantizes the start of events to the current grid resolution (which is dependent on the zoom setting).

Quantize parts (start/end)

Quantizes the start and end of events to the current grid resolution (dependent on the zoom setting).

Quantize mode

• Maintain start phase

Even if the start of the part moves during a quantize operation, the same part of the pattern is preserved – this means that the timing of the part's events in relation to the song is changed).

• Maintain sync

The events within the part will continue to be triggered at exactly the same time within the song after a quantize operation, but some beats at the start and end of the pattern may no longer be heard.

• Auto

Each part is quantized depending on the referenced pattern's **Restart mode** setting. The Auto setting usually provides the most musically useful results.

Select all parts

This function selects all events within the song.

Select empty parts

This function selects all empty events within the song – in other words, any events that are linked to a pattern containing no events.

Clear all parts
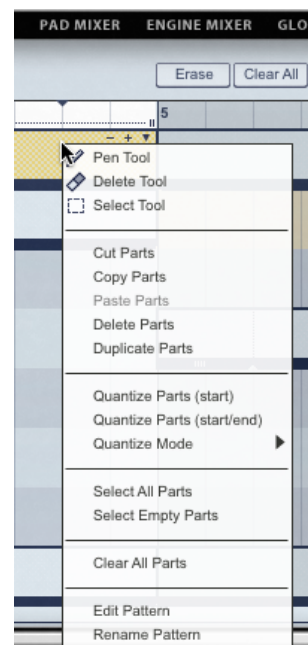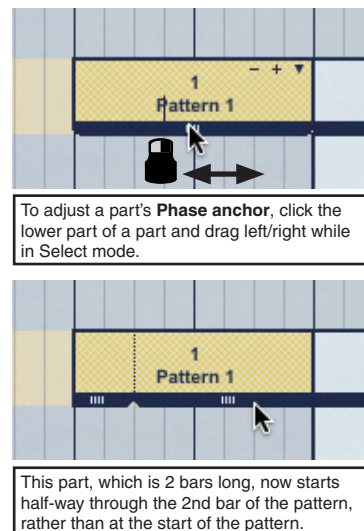
This function clears the entire song.

Edit pattern

This function jumps to the selected pattern in the Pattern page for editing. The current engine is also changed to the relevant engine. This function disregards multiple selections – it only operates on the event on which you right-click/ALT-click to display the menu.

Rename pattern

This function allows you to rename an event's linked pattern – any additional instances of the pattern within other events in the song are also renamed. It is designed to allow you to rename referenced patterns without leaving the Song page.

This function disregards multiple selections – it only operates on the part on which you right-click/ALT-click to display the menu.

To adjust a part's **Phase anchor**, click the lower part of a part and drag left/right while in Select mode.

This part, which is 2 bars long, now starts half-way through the 2nd bar of the pattern, rather than at the start of the pattern.

11:5 Editing tools

Draw tool

Adding parts

Click in an empty area to add a part.
The point at which it is inserted is indicated by an 'L' marker.

Click and drag right to extend the part so that it plays repeatedly.

If you click on an area that is not empty, the existing part is overwritten by the new part.

Selecting parts

Click a part while holding down CMD (Mac) or CTRL (Windows) to select it, de-selecting any previous selection.

Click another part while holding down the SHIFT key to add it to the selection.

Click and drag while holding down the SHIFT key to draw a selection box. If you click and drag from a part, it is included in the selection. You can also click and drag from an empty area without holding down SHIFT – any previous selection is de-selected.

Displaying the song context menu

- Pen Tool
- Delete Tool
- Select Tool
- Cut Parts
- Copy Parts
- Paste Parts
- Delete Parts
- Duplicate Parts
- Quantize Parts (start)
- Quantize Parts (start/end)
- Quantize Mode
- Select All Parts
- Select Empty Parts
- Clear All Parts
- Edit Pattern
- Rename Pattern

Right-click on an empty area, on a part, or on one of multiple selected parts to display the song context menu.

Moving and copying selections

Select a part.

Click and drag the part while holding down CMD (Mac) or CTRL (Windows) to move it.

Click and drag the part while holding down the ALT and CMD (Mac) or CTRL (Windows) keys to copy it.

Adjusting a part's start/end points

Hover the mouse over the end of a part. Click and drag left/right while holding down CMD (Mac) or CTRL (Windows) to adjust the end point.

Hover the mouse over the beginning of a part. Click and drag left/right while holding down CMD (Mac) or CTRL (Windows) to adjust the start point.

Changing a part's referenced pattern

When the Draw tool is active, you can use the +, - and **Pattern selector** buttons on a part to change the referenced pattern.
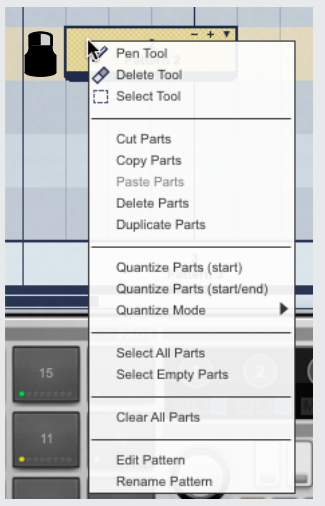

Adjusting a part's pattern phase

To adjust a part's **Phase anchor**, click the lower part of the part and drag left/right while holding down CMD (Mac) or CTRL (Windows).

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Select tool

Selecting parts

Click a part to select it, de-selecting any previous selection.

Click another part while holding down the SHIFT key to add it to the selection.

Click and drag while holding down the SHIFT key to draw a selection box. If you click and drag from a part, it is included in the selection.

Moving and copying selections

Select a part.

Click and drag the part to move it.

Click and drag the part while holding down the ALT key to copy it.

Adding parts

Click in an empty area while holding down CMD (Mac) or CTRL (Windows) to add a part. The point at which it is inserted is indicated by an 'L' marker.

CMD-Click or CTRL-click and drag right to extend the part so that it plays repeatedly.

If you click on an area that is not empty while holding down CMD (Mac) or CTRL (Windows), the existing part is overwritten by the new part.
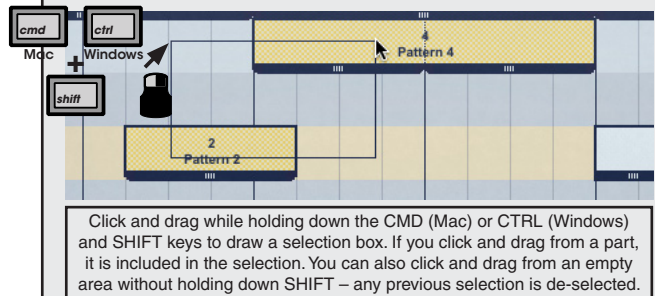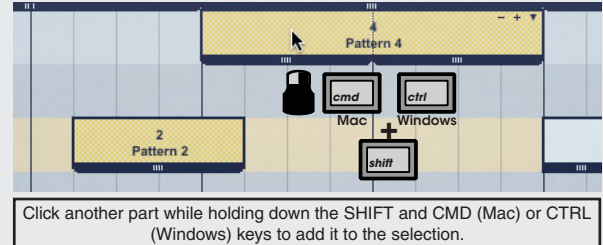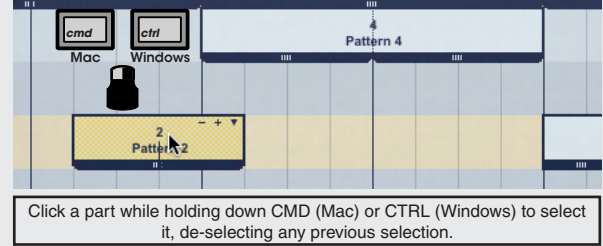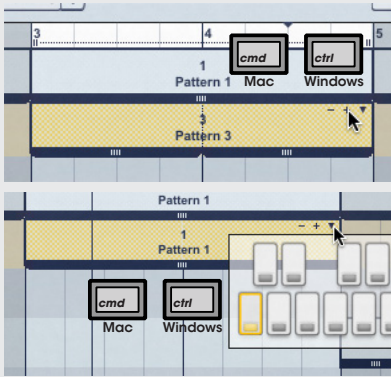
Displaying the song context menu

Right-click on an empty area, on a part, or on one of multiple selected parts to display the song context menu.

Pen Tool
Delete Tool
Select Tool

Cut Parts
Copy Parts
Paste Parts
Delete Parts
Duplicate Parts

Quantize Parts (start)
Quantize Parts (start/end)
Quantize Mode

Select All Parts
Select Empty Parts

Clear All Parts

Edit Pattern
Rename Pattern

Adjusting a part's start/end points

Hover the mouse over the end of a part. Click and drag left/right to adjust the end point.

Hover the mouse over the beginning of a part. Click and drag left/right to adjust the start point.

Changing a part's referenced pattern

When the Select tool is active, you can use the **+**, **-** and **Pattern selector** buttons on a part to change the referenced pattern.

Erase tool

Deleting parts

Click on a part, or on a selection, to delete it.

Displaying the song context menu

Right-click on an empty area, on a part, or on one of multiple selected parts to display the song context menu.

Pen Tool
Delete Tool
Select Tool

Cut Parts
Copy Parts
Paste Parts
Delete Parts
Duplicate Parts

Quantize Parts (start)
Quantize Parts (start/end)
Quantize Mode

Select All Parts
Select Empty Parts

Clear All Parts

Edit Pattern
Rename Pattern

Selecting parts

Click a part while holding down CMD (Mac) or CTRL (Windows) to select it, de-selecting any previous selection.

Click another part while holding down the SHIFT and CMD (Mac) or CTRL (Windows) keys to add it to the selection.

Click and drag while holding down the CMD (Mac) or CTRL (Windows) and SHIFT keys to draw a selection box. If you click and drag from a part, it is included in the selection. You can also click and drag from an empty area without holding down SHIFT – any previous selection is de-selected.
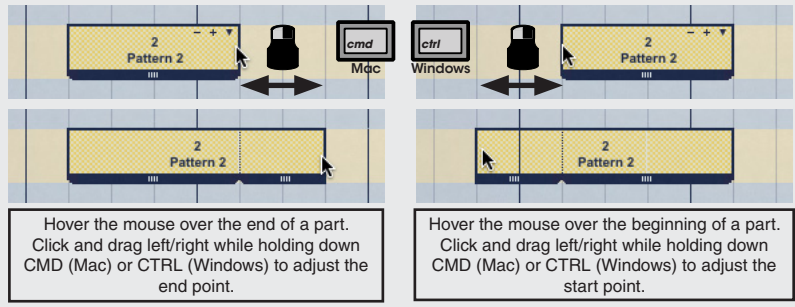
Changing a part's referenced pattern

While holding down the CMD (Mac) or CTRL (Windows) key, you can use the **+**, **-** and **Pattern selector** buttons on a part to change the referenced pattern.

Moving and copying selections
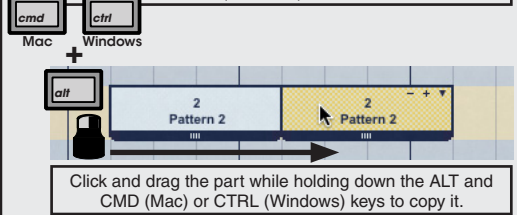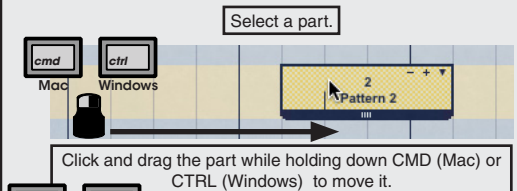
Select a part.

Click and drag the part while holding down CMD (Mac) or CTRL (Windows) to move it.

Click and drag the part while holding down the ALT and CMD (Mac) or CTRL (Windows) keys to copy it.

Adjusting a part's start/end points

Hover the mouse over the end of a part. Click and drag left/right while holding down CMD (Mac) or CTRL (Windows) to adjust the end point.

Hover the mouse over the beginning of a part. Click and drag left/right while holding down CMD (Mac) or CTRL (Windows) to adjust the start point.

Multi tool

Adding and deleting parts

Click in an empty area to add a part.
The point at which it is inserted is indicated by an 'L' marker.

Right-click on a part, or on a selection, to delete it.

Click and drag right to extend the part so that it plays repeatedly.

cmd Mac | ctrl Windows

If you click on an area that is not empty while holding down CMD (Mac) or CTRL (Windows), the existing part is overwritten by the new part.

Selecting parts

Click a part to select it, de-selecting any previous selection.

shift

Click another part while holding down the SHIFT key to add it to the selection.

shift

Click and drag while holding down the SHIFT key to draw a selection box.
If you click and drag from a part, it is included in the selection.

Displaying the song context menu

alt

- ✏ Pen Tool
- ✐ Delete Tool
- ⬚ Select Tool

Cut Parts
Copy Parts
Paste Parts
Delete Parts
Duplicate Parts

Quantize Parts (start)
Quantize Parts (start/end)

While holding down the ALT key, right-click on an empty area, on a part, or on one of multiple selected parts to display the song context menu.

Moving and copying selections

Select a part.

Click and drag the part to move it.

alt

Click and drag the part while holding down the ALT key to copy it.

Adjusting a part's start/end points

Hover the mouse over the end of a part. Click and drag left/right to adjust the end point.

Hover the mouse over the beginning of a part. Click and drag left/right to adjust the start point.
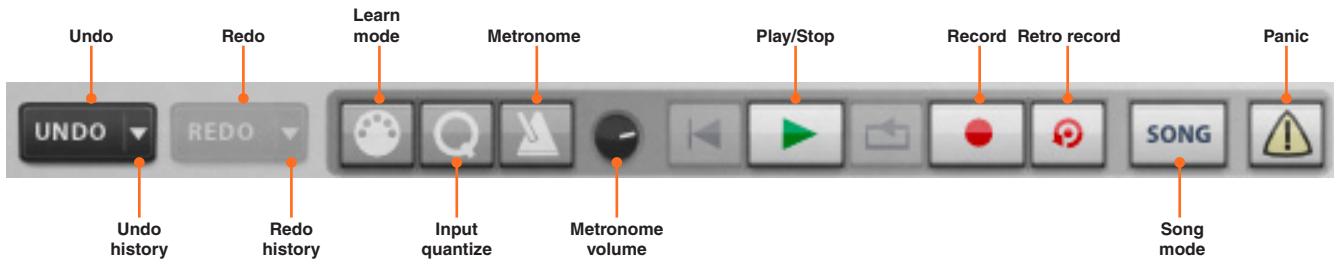
Changing a part's referenced pattern

When the Multi tool is active, you can use the **+**, **-** and **Pattern selector** buttons on a part to change the referenced pattern.

Adjusting a part's pattern phase

To adjust a part's **Phase anchor**, click the lower part of the part and drag left/right.

12 Other panels, menus, controls and indicators

12:1 Transport area

Input Quantize

With this button enabled, events are automatically quantized to the start of the nearest step when recording.

Metronome

With this button enabled, the metronome 'click' is active while the transport is started (during recording and playback).

Note that you can choose from a range of metronome sounds in the Geist preferences (see section 12:8).

Metronome output

Right-click on the **Metronome** button to display the metronome output menu. This menu allows you to specify an output for the metronome signal – this can be especially useful for live performances.

Metronome volume

This control allows you to set the volume of the metronome signal to the desired level.

Play

Starts the Geist transport. Note that when running Geist as a plugin, its transport is synchronized to the host transport.

Record
Retro record

The Record and Retro record buttons behave differently depending on the state of the **Song mode** button.

See sections 1:8 and 11:2 for more details.

Song mode

Enabling this button activates the Geist Song mode for arranging patterns over time. When the **Song** button is disabled, the Song is not active, and any controls specific to Song mode are also inactive.

When the **Song** button is enabled, it is not possible to record pad events to the current pattern. Instead, pattern events are recorded to the Song page.

Return to song start
Loop

See section 11:2 for details of these functions.

Panic

Clicking this button stops any sounds and patterns that are currently playing.

Undo & Redo

The multiple-level **Undo** & **Redo** applies for all functions in Geist. The number of undo steps can be defined in the Geist preferences.
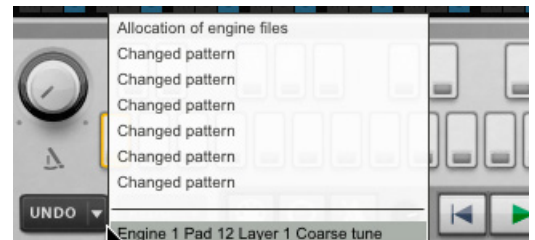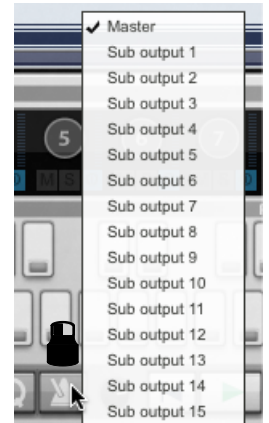
Undo & Redo History

The **Undo** and **Redo** functions also provide a sequential list of previously performed actions, which forms an undo 'history'. Click the buttons to the right of the Undo button to display it as a pop-up menu. The **Undo history** is arranged chronologically with the most recent at the bottom (closest to the button) – the most recent action is separated from previous actions. Click on any stage of the displayed history to revert back to its state.
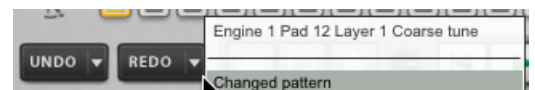
The **Redo history** is a sequential list of undo actions. The most recently performed undo action is at the bottom of the list (closest to the button).

Learn

This button activates Learn mode – see sections 1:14 and 12:3.

The **Undo history** shows previous actions which can be undone. You can click on any action in the history to avoid having to click **Undo** multiple times.

After undoing a couple of actions, clicking on the **Redo history** displays the actions that can be redone.

12:2 Master section display

Tempo

Sets the master tempo when using the Geist standalone application. When using Geist as a plugin, the tempo is always locked to the host tempo.

Memory usage

Displays the amount of RAM currently used by Geist and the currently loaded samples.

MIDI/Audio stream indicator

Flashes when any MIDI note event is received.

If the indicator is highlighted in red, Geist cannot establish an audio stream connection with the audio interface (standalone version) or the host audio engine (plugin version), meaning that it will not function until this is resolved.

Voice steal indicator

This indicator lights up if the voice limit is reached and voice stealing (based on the oldest playing voices) has to occur.

Load

This button displays the Load menu – see section 12:4.

Save

This button displays the Save menu – see section 12:5.

Geist

This button displays the Geist menu – see section 12:7.
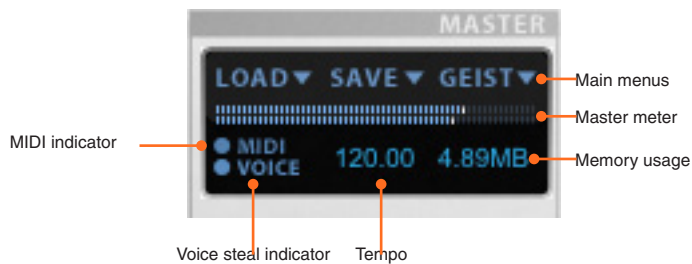
12:3 Learn mode & Mapping panel

Geist's Mapping panel allows you to assign interface controls to MIDI continuous controllers (MIDI CCs) and host automation parameters, so that you can use physical knobs and faders on hardware controllers to adjust Geist's interface controls.

The process of creating mappings is described in section 1:14.

This screenshot shows the Mapping panel after some MIDI CC assignments have been made.

Mapping panel

All current MIDI CC and host automation mappings are listed in the Mapping panel, which is displayed by clicking the Mapping tab above the Browser – the Mapping panel replaces the Browser, and Learn mode is activated automatically.

Mappings are shown in a table with the following column headings:

Clear

Click this button to remove the assignment.

Locale

This column shows the MIDI channel and MIDI CC number that is assigned to the parameter.

Path

This column displays the part of Geist containing the mapped control – whether it is a global control (such as the **Master gain** control) or within a specific engine, pad or layer.

This display shows the Mapping panel listing with all columns expanded.

85

Name

The name of the assigned parameter.

Min, Max

These values allow you to define the minimum and maximum value of the parameter across the range of the MIDI CC range of 0-127.

Type

By default, all assignments are Continuous – the parameter's value follows the incoming MIDI CC values continuously. There are 3 other possible settings for this column, and are only available for mapping button controls in Geist to MIDI CCs.

Adjusting the **Max** setting for a **Swing** control mapping by click/dragging left/right.

Momentary

The parameter is set to its maximum value while the incoming MIDI CC is at a value of 127.

Latching

Every time the MIDI CC reaches a value of 127, the assigned control toggles between maximum and minimum values.

Trigger

When the incoming MIDI CC reaches the maximum value (127), the assigned parameter is set to its maximum value. The assigned parameter does not respond to any MIDI CC value other than 127.

Foc. (Focus)

This setting is only available for engine/pad/layer-specific controls. It implements the mapping on the currently 'focused' element's control. For example, enabling the Focus setting for a layer's **Tune** control results in the mapping being active on the currently focused layer. If it is disabled (this is the default state), the mapping is absolute, to the specific engine/pad/layer of the mapped parameter.

The Focus setting is unavailable for 'global' controls such as the **Master gain** and **Master pitch** controls.
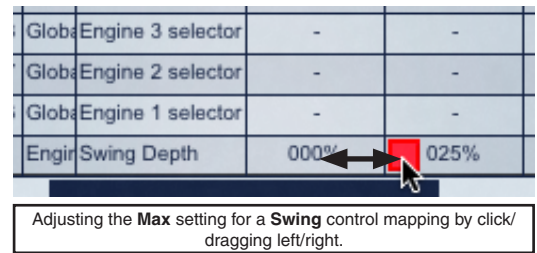
Mapping panel context menu

Right-click in any column of a mapping to display the mapping panel context menu. This menu provides a number of functions with which to manage mappings.

Remove mapping

This function clears the selected mapping.

Collapse/Expand column

This function collapses or expands the column underneath the mouse when the context menu is invoked, depending on its current status. The 'Foc.' (Focus) and Clear columns cannot be collapsed or expanded.

Collapsing columns can be useful if you want to minimize the amount of scrolling required within the panel.

Collapse all columns
Expand all columns

These functions simply collapse or expand all columns (except the Clear and Focus columns).
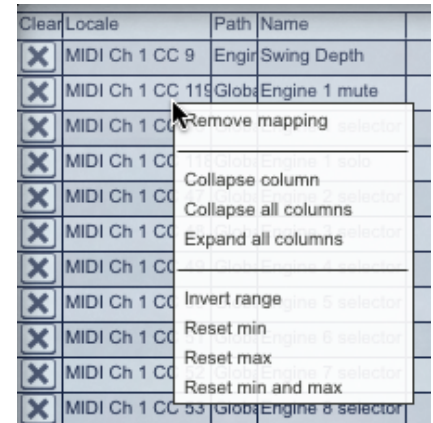
Invert range

This function swaps the Min and Max values for the selected mapping, effectively inverting the range.

Reset min
Reset max
Reset min and max

These functions reset the min/max values to the default values associated with the mapped control.

12:4 Load menu

This menu allows you to load various elements into Geist using an OS file Open dialog instead of the Browser.

Load preset
Load engine
Load kit
Load pad
Load pattern bank
Load pattern
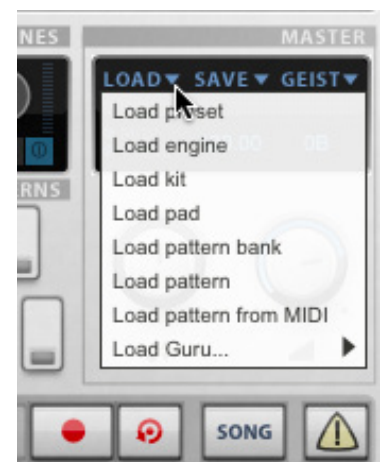**Load pattern from MIDI**
Load GURU kit
Load GURU pattern
Load GURU pattern bank

These elements can also be loaded from the Browser. See section 2:5 for a guide to each type.

Load GURU preset

Loads a GURU 1.5 format preset, clearing the current Geist session. Some elements of GURU files cannot be translated into Geist – see section 2:5 for more details.

12:5 Save menu

The Save menu allows you to save various elements from the current Geist session to disk.

It also includes the **Export as audio** function, which is discussed in the section 12:6.

Save preset

Saves the entire current state of Geist as a preset.

Save current engine

Saves the currently selected engine as an engine file.

Save kit

Saves the current engine's kit (pads and layers, their settings and FX) as a kit file.

Save current pad

Saves the currently selected pad as a pad file – its layers, Pad/Layers page settings, and pad and layer FX.

Save pattern bank

Saves all patterns in the current engine as a pattern bank.

Save current pattern

Saves the currently selected pattern.

Save current pattern as MIDI

Exports the current pattern as a MIDI file. This function can also be achieved by dragging and dropping a pattern memory key to a disk location – see section 1:15 for more details of this feature.

Export as audio...

This function is discussed in section 12:8.

Save samples with presets

This setting toggles whether samples are saved in a sub-folder alongside presets, engines, kits and pads.
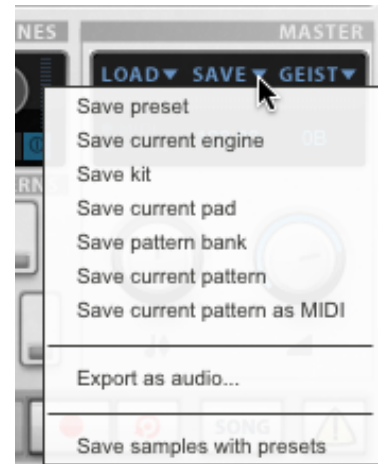
12.6 Export as audio... (Save menu)

Using the **Export as audio** function on the Save menu displays the Export Audio panel, which provides a number of different ways of exporting audio from Geist.

Output source

This control dictates what pattern material is exported. The following settings are available:

• **All engine patterns**

The current pattern number from all 8 engines.
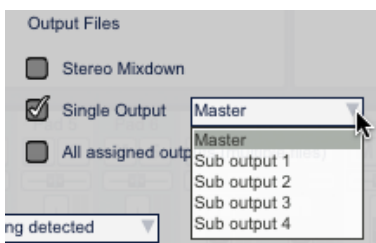
• **Current engine pattern**

The currently selected pattern in the current engine is exported.

• **Song**

The entire Song is exported.

Output Files

This setting determines which Geist output channels are used for the export. Each output that is used results in a stereo file. The following settings are available:

• **Stereo mixdown**

The master output of Geist, mixed down to a stereo file.

• **Single output**

A specific Geist output, exported as a stereo file. Note that sub-outputs are only available on this menu if they are actually in use.

• **All assigned outputs (multiple files)**

All used Geist outputs are exported as separate stereo files.

Normalization

This setting features several options for normalizing the exported file(s) so that the highest peaks reach 0 dB.

• **Prompt if clipping detected**

Geist asks if you want to normalize the audio export if it detects clipping.

• **Normalize if clipping detected**

Geist automatically normalizes an exported audio file if it detects any clipping within it.

• **Always normalize**

Geist always normalizes all exported audio files.

Tail Length

A tail of any length can be retained at the end of the audio export, in order to include any long decays from reverb or delay FX, for example.

Loop

With this button enabled, each pattern-based export (when the Output Souce is *not* set to 'Song') is exported as Pattern + Pattern&FX tail + FX tail.

This feature is designed to provide enough material to make a sustaining loop with FX tail when using loop-based arrangement software such as Ableton Live, for example.

AutoCrop

With this button enabled, any excess silence in the Tail Length is removed (if the Tail Length is enabled). This occurs when the tail level drops under -96dB.

12:7 Geist menu

About

Shows the 'about' box containing the Geist version number and credits listing.

Preferences

Using this function displays the preferences panel, which contains a number of options for customizing Geist's workflow. See section 12:8 for more details.

Show manual

Opens the Geist manual in your OS's default PDF reader (usually Preview on Mac, and Acrobat Reader on Windows).

Reset Geist

Resets Geist to the default preset state (see below), or to an entirely blank state if a default preset is not currently specified.

Save as default preset

Saves the current state of Geist as the default preset, which is loaded every time you launch the Geist standalone application or plugin.

If you find you perform certain operations every time you start Geist, it's worth considering saving up a default preset, perhaps with a favourite set of sounds loaded. It can be beneficial to have some ready-loaded sounds with your favourite FX setups ready to use when you start Geist – it lets you lay down a beat quicker when inspiration strikes, and it's very quick to start replacing sounds as needed, leaving layer and FX settings the same.

Clear default preset

This function removes the default preset if one exists.
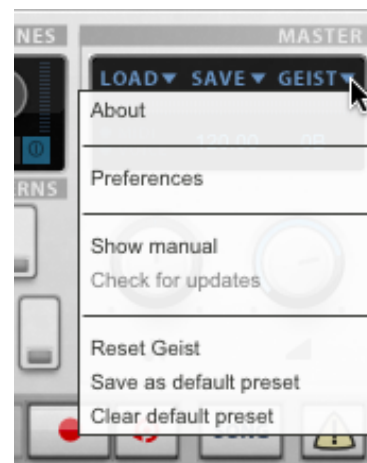
12:8 Preferences (Geist menu)
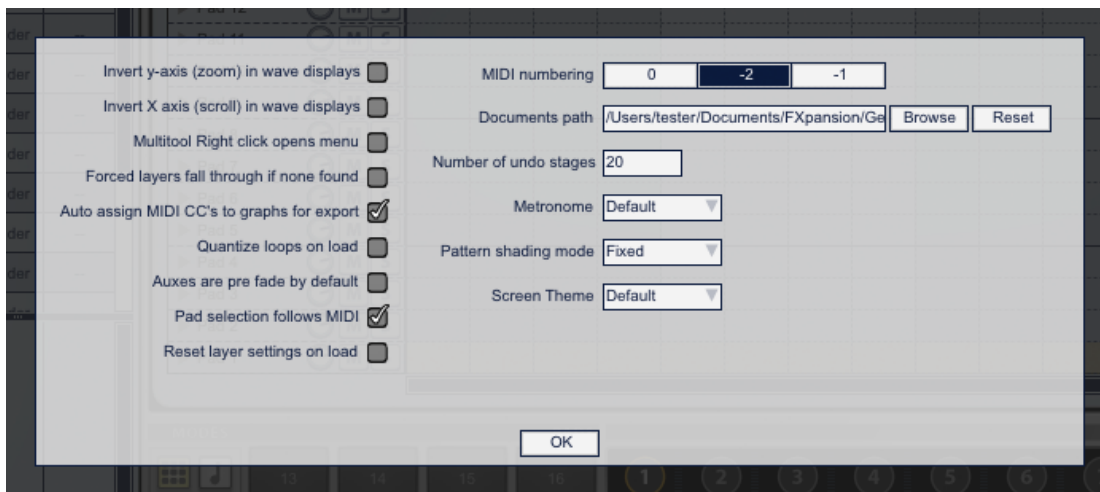
Invert Y axis (zoom) in wave displays

Toggles the Y-axis zoom orientation in waveform displays.

With the preference disabled, click-dragging upwards on the waveform display zooms in.

With the preference enabled, click-dragging upwards on the waveform display zooms out.

Invert X axis (scroll) in wave displays

Toggles the X-axis scroll orientation in waveform displays.

With the preference disabled, click-dragging to the left on the waveform display scrolls earlier in the waveform.

With the preference enabled, click-dragging to the left on the waveform display scrolls later in the waveform.

Multi tool right-click opens menu

When using the Multi tool in the Pattern page, the right mouse button is used to erase step events by default. Right-clicking while holding down the ALT key results in opening the track context menu.

Enabling this preference inverts these functions – right-clicking opens the track context menu; right-clicking while holding down ALT results in erasing step events.

Forced layers fall through if none found

If this setting is enabled, if a layer that does not currently contain a sample is triggered by the Force Layer graph, playback falls through to the next available layer according to the currently specified **Layer mode**.

If the setting is disabled, the specified layer is always triggered, even if it does not contain a sample, in which case the event will result in nothing being heard.

Auto-assign MIDI CCs to graphs on export

When this setting is enabled, a MIDI CC is assigned to all used graphs, with their values written to patterns when they are exported. This means that patterns sound the same when exported as they do within Geist.

Quantize loops on load

With this setting enabled, all Shift graph events are discarded when loading a loop (when extracting the pattern from REX or sliced WAV/AIFF files).

Aux busses are pre-fade by default

Enabling this setting changes the default status of all auxes from post-fade to pre-fade.

Pad selection follows MIDI

With this setting enabled, received MIDI input (on the relevant notes) results in changing the currently selected pad.

Reset layer settings on load

With this setting enabled, loading a new sample to a layer results in all parameters for the layer being reset to default values. This setting is disabled by default.

MIDI numbering

Different MIDI devices and software often have different MIDI octave numbering conventions. The lowest octave in the MIDI note range can be referred to as octave 0, -1 or -2. This preference is provided so that you can set the MIDI octave numbering for your own requirements.

Documents path

This is a disk location used by Geist for things like sampled audio, as well as user presets for FX and so on. It defaults to your user documents path:

Windows: **C:\Documents and Settings\<user>\My Documents\FXpansion\Geist**

Mac: **<user>/Documents/FXpansion/Geist**

However, you can **Browse** to and specify any location using this preference. Click the **Reset** button to change this setting back to the factory default (Documents/FXpansion/Geist).

Number of undo stages

This setting defines the number of available Undo stages. Note that more Undo stages use more RAM!

Metronome

This setting allows you to choose from a range of metronome sounds to use as a 'click' while recording sequences.

Note that you can add your own metronome sounds manually:

1. Create a sub-folder with the desired metronome name within the following folder:

Mac: **Library/Application Support/FXpansion/Geist/System/Metronomes**

Windows: **Program Files\FXpansion\Geist\System\Metronomes**

2. Copy 2 audio files into the folder – the first should be called **bar.wav** and the second should be called **beat.wav**.

3. On the next relaunch of Geist, the metronome you added is available in the Preferences panel's Metronome setting.

Pattern shading mode

This setting specifies the type of shading used for grid steps in the pattern page. Some of the shading modes dynamically react to the setting of the **Step Length** parameter.

Fixed

The shading of steps changes every 16 steps, regardless of the **Step Length** setting.

Adaptive

The shading of steps changes on every beat. With a 1/16 **Step Length**, the shading changes every 4 steps; with a 1/16T setting, the shading changes every 6 steps, and so on.

Cyclic

The shading of steps alternates every measure: for a **Step Length** of 1/4 or 1/4T, the shading changes every 4 steps; for 1/8 or 1/8T settings, the shading changes every 8 steps, and so on.

Off

All steps are the same colour – there are no differences in shading.

Screen theme

This setting allows you to select from a number of possible colour tints for the Geist LCD display.