

# Camel Audio

# CamelSpace

Version 1.1



User manual

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## Welcome

Welcome to CamelSpace!



Prepare to be entranced! CamelSpace can take any sound you throw at it – be it a pad, a synth line or a drum loop – and generate a dizzying array of dynamically-evolving, gated rhythmic textures.

An enormously powerful 128-step 'trance gate' sequencer controls panning, filter cut-off and volume, while independent LFOs provide still more mind-boggling modulation options.

A tempo-synced stereo delay and powerful auto-panner ensure that your sounds are always on the move, while an enhancer (with 'Xcita' and soft saturation), a flanger and a high-quality reverb all add 'sparkle'.

A stunning graphical user interface puts all the controls at your fingertips, while the X/Y pad allows easy real-time manipulation of the most important parameters.

With the intelligent 'Randomize' button, new sounds and inspiration are just a click away. 128 attention-grabbing Presets, organised by category, are also included.

### Highlights

- Rhythmic multi-effect, to add dynamic interest to pads, synths, drums and more.
- Powerful 128 step 'trance gate' controlling filter cut-off, pan and volume.
- Auto-panner, enhancer, flanger, multi-mode filter, stereo delay, reverb.
- Easy-to-use, with X/Y pad and intelligent Randomize.
- 128 categorised Presets.

## System requirements

PC: Pentium III 1GHz, 128 MB RAM, Windows 98/ME/2000/XP, VST host.

Mac: G4 733 MHz, 128 MB RAM, Mac OS X, VST/Audio Units host.

(CamelPhat is one of many VST plugins adhering to the VST standard developed by Steinberg. The Audio Unit standard was developed by Apple.)

## Demo Version Restrictions

The following restrictions apply to the demo version of CamelSpace:

- Sound is interrupted by one second of silence every thirty seconds.
- Loading is disabled.
- Only a small selection from the Preset library is available.
- Stops outputting sound after fifteen minutes.
- Does not require a serial number.

## Why buy?

When you buy CamelSpace, in addition to getting a great plugin, you'll also get access to the latest updates, technical support, tutorials and extra Presets - as well as discounts on new Camel Audio products!

## Installation

Installing CamelSpace is a quick and easy process.

Simply double-click the installer program, and follow the on-screen instructions.

Once installation is complete, CamelSpace will be available from within your host application the same as any other effect plugin.

(The first time the plugin is opened you will be asked to supply your registration data, which should already have been emailed to you.)

### **Notes: Windows**

You will be asked to choose a destination directory. You should choose the VST plugins folder belonging to your preferred host application.

If you want to install the plugin for more than one host, you can run the installer again.

### **Notes: Mac OS X**

The installer will automatically put the plugins and support files in their proper places.

Both the VST and Audio Units versions of the plugin are contained in the installer. You can choose not to install one or the other by clicking the 'Customize' button at the relevant point during installation.

## Start here!

Software manuals are boring, and nobody likes reading them. We know this.

We've done our best to make this shorter and less boring than the average software manual... but frankly it's still pretty boring – and it's certainly a lot less fun than using CamelSpace.

Even so, please keep reading for at least a couple more pages! We have a few tips that'll really help you get the most out of CamelSpace.

## Try the Presets

CamelSpace comes with a large collection of Presets. These are a great way to find out what it's capable of. You can work your way through the Presets using your host's normal selector, or the up/down arrow buttons in the 'Value Readout' display, or by clicking the current Preset name and choosing a new Preset from the pop-up menu that appears.

## Think modular

CamelSpace is a **multi-effect**. That means it's several different effects processors in one. If you look at the front panel you'll see that it's divided into a number of different sections, each with a small blue 'On' button in its upper corner. You can get a wide variety of sounds out of CamelSpace simply by toggling different modules on and off, and trying out different combinations.

## Randomize!

You see that big button at the top and in the middle? The one marked 'Randomize'? That's the Randomize button, and it's one of CamelSpace's best features! Clicking Randomize instantly assigns a new value to every parameter in every active module (modules that are switched off aren't affected). In short, it's a great way to make interesting things happen quickly! Randomize is actually not completely random; it's designed to be 'intelligent' so that it won't produce settings that make no sound, or sounds that aren't any use.

## Save Presets

After a few clicks of the Randomize button, you'll probably have come up with a sound you want to keep and use again. Your host application will save all your plugin settings each time you save a song, but you can also save CamelPhat's settings in a separate file (e.g. to use in a different song, or host, or to share with other CamelPhat users).

CamelSpace allows you to save Presets (.FXP files) and Banks (.FXB files). A Preset is a record of all the settings required to make up a single sound. A Bank is a record of all the settings that make up a set of 64 different sounds. To save a Preset (or Bank), click on the Preset name in the Value Readout display, choose 'Save Preset' (or 'Save Bank') from the pop-up menu, then choose a name and location for the Preset file in the dialog box that appears.

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**Hint:** Presets and Banks saved from within CamelSpace are always saved in standard .FXP and .FXB formats. These are the same regardless of platform and host application, and files saved in this way can easily be shared with other CamelSpace users. If your host application uses a different format for saving effects settings the files will be a bit less 'portable'. Saving .FXB and .FXP files from within CamelSpace is therefore the preferred option.

---

### **Try MIDI Learn**

Most of CamelSpace's parameters can be controlled via MIDI. To do this, you'll first need to set up your host application to send MIDI data to the plugin (this varies from host to host). Then simply right-click (Ctrl-click if you're a Mac user) on any of CamelSpace's knobs, select 'MIDI Learn' from the menu that appears, then send a controller message from your preferred MIDI controller (e.g. move your keyboard's Mod Wheel). CamelSpace will recognise the controller and automatically assign it to your chosen parameter!

### **Come back soon**

That's enough to get you started. Once you've played around for a while, please come back and read the rest of this manual. It won't take long!

## User interface features

CamelSpace's user interface is quite straightforward, and to a large extent what you see is what you get.



Even so, there are one or two details that perhaps aren't apparent at first glance, and are worth knowing about.

## CamelSpace logo

In the top left corner of the CamelSpace window is CamelSpace's logo, along with the current version number (e.g. 'v1.00').

## Main display

CamelSpace's main display is divided into several sections:

- **Value Readout** is where the name of the currently-active Preset is displayed. Whenever you adjust a knob, its value (e.g. '75 %' or '1.3 Hz') will appear, replacing the Preset name. After about three seconds the Preset name reappears. Clicking in the Value Readout display opens a pop-up menu, from which you can choose to load or save Banks and Presets. 'Load Bank A' and 'Load Bank B' allow you to load the two default Banks included with CamelSpace. 'Clear Preset' sets all parameters to their default values.
- The **X/Y Controller** provides an easy way to dynamically control any two of CamelSpace's parameters simultaneously. Dragging the X/Y Cursor (the small 'dot') around in the X/Y Controller square changes the values of the chosen two parameters (you'll see the relevant knobs turning as you drag). The **X** and **Y** parameter fields

beneath the X/Y Controller square allow you to choose which parameter is assigned to the X axis (i.e. is affected by horizontal movements) and which to the Y axis (i.e. is affected by vertical movements). Right-clicking on the X/Y Cursor allows you to use CamelSpace's MIDI Learn function to assign MIDI continuous controllers to both the X and Y axis.

- **Output Level** is a simple 'VU' meter which graphically displays CamelSpace's output level. This is switched off by default; click on it to activate the display. If the output clips (i.e. if the topmost 'LED' lights up), try reducing CamelSpace's Master Volume slightly.

## Knobs

Right-clicking (Ctrl-clicking on a Mac) any of CamelSpace's knobs opens a pop-up menu containing four options:

- **Display Value** causes the knob's current value (e.g. '71.7 Hz' or '-40 dB') to appear in the 'Value Readout' section of CamelSpace's main display. After about three seconds, the current Preset name will reappear in its place.
- **MIDI Learn** allows a MIDI continuous controller to be assigned to the knob. (Note: your host application must first be set up to send MIDI data to the plugin. Different hosts do this in different ways. Please see your host's manual for more details!) Simply right-click (Ctrl-click on a Mac) a knob, choose 'MIDI Learn' from the menu, then send a message from your hardware controller (e.g. by moving your keyboard's Mod wheel, or some other assignable control). CamelSpace will 'learn' the controller, and automatically assign it to the relevant parameter.
- **Linear** and **Circular** tell CamelSpace's knobs how to respond to mouse movements. Linear mode is the default. In Linear mode, you can adjust a knob's value by clicking it and dragging vertically upwards (to increase the value) or downwards (to decrease it). In Circular mode, you instead use the mouse pointer as if you were turning a real knob on a hardware device. A clockwise turn increases the parameter value, while an anti-clockwise turn decreases it. Changing from Linear to Circular mode affects **all** of CamelSpace's knobs.

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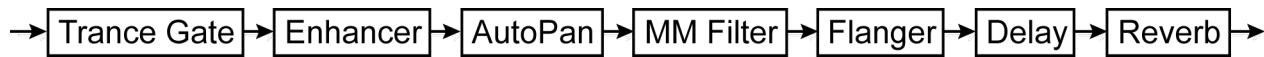
**Hint:** Holding down the Shift key while dragging will result in a slower, more precise knob movement.

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## Effect modules

CamelSpace features 8 different effect modules.

The incoming signal flows through them as shown below:



### On/off switches

One feature that all the effect modules have in common is a small, blue 'On' switch, which can be used to toggle the module on or off. When the 'On' button is illuminated, the module is active. When the 'On' button is dimmed, the module is switched off, and has no effect on the sound.

### A note about 'Sync'

Several of CamelSpace's effect modules provide a 'Sync' function that allows certain parameter changes to be synchronised with the tempo of your song. Please be aware that CamelSpace relies upon the host application to provide the necessary tempo information. Most hosts supply this information automatically, but a few may need to be told explicitly to configure CamelSpace as a 'tempo-based' effect (or something similar). If in doubt, please consult your host application's manual for more details!

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**Hint:** Sync allows 'triplet' (e.g. '2/1T') and 'dotted' (e.g. '1/4\*') rhythmic values to be set, to create more complicated and interesting effects. A triplet is where three notes are played in the same amount of time as two ordinary notes. A dotted note is a note that lasts one-and-a-half times as long as an ordinary note.

---

### Trance Gate

**Trance Gate** has only a single parameter: an 'On' button for toggling the effect on or off.

The Trance Gate affects the amplitude of the incoming sound, effectively switching the volume on and off.

Used in conjunction with the Step Sequencer module (see page 18), the Trance Gate can be used to create a range of 'stuttering' or similar rhythmic effects.

### Enhancer

The **Enhancer** module contains two effects, each with a single parameter:

- **Xcita** introduces a bright, harmonic distortion in the higher frequencies, enhancing the 'presence' of the sound.
- **Softsat** is an emulation of the 'soft saturation' effects characteristic of over-driven analogue hardware devices. Use it to add 'warmth' and 'punch' to the sound.

## AutoPan

The **AutoPan** module automatically moves (or 'pans') the sound from left to right in the stereo field.

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**Hint:** CamelSpace should be inserted into a stereo track or channel in your host application in order for AutoPan to work as expected!

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AutoPan has the following parameters:

- **Sync** recalibrates the 'Rate' knob (see below) in more musically-meaningful units of time, e.g. '1/4 bars', meaning that the 'LFO' (Low Frequency Oscillator) will complete one full cycle per quarter note, or four per bar.
- The **Shape** field allows you to choose the waveform shape used by AutoPan's LFO. Different waveform shapes produce characteristically different kinds of panning. 'Sine', for example, produces a smooth and even sweep from one side of the stereo field to the other, then back. 'Random Square', on the other hand, produces a series of unpredictable jumps from one position to another. There are seven different waveforms in total to choose from. You can either use the left and right arrow buttons to switch waveforms, or you can click the field for a pop-up menu.
- The **LFO** button activates AutoPan's LFO, which generates the constantly-changing control signal that drives the movement of the sound within the stereo field. The precise effect of the LFO will vary according to the chosen waveform Shape (see above).
- When the **SEQ** button is activated, AutoPan's LFO is disabled, and movement within the stereo field is instead driven by the Step Sequencer module (see page 18 for more details).
- **Depth** controls the severity of the AutoPan effect. With Depth set to its maximum, the sound will move from one extreme of the stereo field, all the way across to the other. Lower settings allow for narrower movements within the field.
- **Rate** controls the 'speed' of the effect, i.e. how slowly or rapidly the sound travels from one side of the stereo field to the other. The Rate control is calibrated in Hz (cycles per second) – unless the Sync button is activated (see above).

## MM Filter

The **MM Filter** module provides a powerful multi-mode filter capable of transforming the sound in a number of different ways.

You can choose from several different filter types, either by clicking on the left and right arrow buttons beside the 'Type' field, or by clicking the name of the currently-selected type and choosing from the pop-up menu that appears.

The available filter types are:

- **LowPass**: a low-pass filter; it allows frequencies below the 'Cutoff' point (see below) to pass, while rejecting other frequencies.

- **BandPass**: a band-pass filter. Like a simplified version of the BP Filter module, it allows a band of frequencies around the Cutoff point to pass, while rejecting other frequencies.
- **HighPass**: a high-pass filter. It allows frequencies above the Cutoff point to pass, while rejecting other frequencies.
- **LowPass Fat**: similar to 'LowPass' (see above), but produces an 'edgier', more 'biting' sound, especially with the Resonance (see below) turned up.
- **BandPass Fat**: similar to 'BandPass' (see above), but produces an 'edgier', more 'biting' sound, especially with the Resonance turned up.
- **HighPass Fat**: similar to 'HighPass' (see above), but produces an 'edgier', more 'biting' sound, especially with the Resonance turned up.
- **Peaking**: a bit like an inverted notch filter (see below) or a variation on a band-pass filter (see above). The Peaking filter type emphasises a narrow band of frequencies around the Cutoff point. The effect is particularly pronounced with the Resonance turned up.
- **Notch**: a notch filter. Sometimes called a 'band-stop' or 'band-reject' filter, a notch filter essentially works like a band-pass filter in reverse. It 'rejects' a narrow band of frequencies around the Cutoff point, while allowing other frequencies to pass.
- **Comb**: a comb filter. A comb filter produces an effect called 'phase cancellation', resulting in a 'spiky' frequency spectrum (which might be said to resemble a comb). In practise, comb filtering produces a characteristically bright, lively, metallic sound, especially with the Resonance turned up.
- **Ring Mod**: a ring modulator. Ring modulation (sometimes called amplitude modulation) involves multiplying the incoming signal together with a sine wave modulator, producing a sound with unpredictable, often metallic-sounding overtones.

MM Filter's other parameters are:

- **Cutoff** sets the filter Cutoff point (in Hz). Exactly what effect this has varies depending on the selected filter type (see above).
- **Resonance** is an effect where the frequencies immediately surrounding the filter Cutoff point (see above) are emphasised or boosted. This is particularly effective when the Cutoff point is modulated or 'swept' (e.g. by the envelope follower, an LFO or a MIDI continuous controller), as it emphasises the 'movement' in the sound.
- **Mix** controls the wet/dry balance of the filter effect. With the knob turned all the way to the right, you'll hear only the filtered sound. Turned the other way, you'll hear the 'dry' unfiltered sound.

## Filter Mod

**FilterMod** is not actually an effect module in its own right. Rather, it's a companion to the MM Filter module which allows you to modulate the filter 'Cutoff' parameter in a few different ways.

Filter Mod's parameters are:

- **Sync** recalibrates the 'Rate' knob (see below) in more musically-meaningful units of time, e.g. '1/4 bars'.
- The **Shape** field allows you to choose the waveform shape used by FilterMod's LFO. Different waveform shapes produce characteristically different kinds of modulation. 'Sine', for example, produces a smooth and even sweep from extreme of the parameter range to the other, then back. 'Random Square', on the other hand, produces a series of unpredictable jumps from one value to another. There are seven different waveforms in total to choose from. You can either use the left and right arrow buttons to switch waveforms, or you can click the field for a pop-up menu.
- The **LFO** button activates FilterMod's LFO, which generates the constantly-changing control signal that modulates filter Cutoff. The precise effect of the LFO will vary according the chosen waveform Shape (see above).
- When the **SEQ** button is activated, FilterMod's LFO is disabled, and movement within the stereo field is instead driven by the Step Sequencer module (see page 18).
- **Depth** controls the severity of the FilterMod effect, i.e. the range over which filter Cutoff is 'swept'.
- **Rate** controls the 'speed' of the effect, i.e. how slowly or rapidly filter Cutoff is 'swept'. The Rate control is calibrated in Hz (cycles per second) – unless the Sync button is activated (see above).

## Flanger

Flanging is an effect produced when a slightly delayed copy of a signal is mixed together with the original. The length of the delay is varied over time, but is usually never longer than a couple of dozen milliseconds. Flanging creates a characteristic 'sweeping' or 'whooshing' effect.

CamelSpace's Flanger has the following parameters:

- **Delay** sets the initial length of the delay between the delayed and dry signals.
- **Rate** controls the rate at which the length of the Flanger's delay changes. In other words, it changes the speed of the 'sweeping' effect.
- **Depth** controls the amount of variation in the delay time.
- **Feedback** determines the extent to which the Flanger's delay line feeds back on itself. Higher Feedback settings result in more pronounced, even metallic-sounding effects.
- **Mix** controls the wet/dry mix of the effect. Turn the knob to the right to increase the level of the processed sound.

## Stereo Delay

The Stereo Delay module creates 'echo' effects by creating a delayed copy of the incoming signal. (Internally, this is quite similar to how the Flanger works, but it sounds quite different since the delay times are much longer.)

Stereo Delay has the following parameters:

- **Feedback** controls the extent to which the delay line feeds back into itself. Higher Feedback settings result in more 'repeats' of the delayed sound.
- **Cutoff** controls the cut-off point of a low-pass filter in the delay line. Lower Cutoff settings result in attenuated high frequencies in the delayed signal. In other words, they make the 'echoes' sound more 'muted'; a little less 'bright'. This can produce effects reminiscent of some analogue delay or echo devices.
- **Rate** (L/R): both the **Left** and **Right** stereo channels can have their own delay times set independently. Delay times are calibrated in milliseconds ('ms'), unless 'Sync' is activated (see below).

---

**Hint:** remember that these are **Rate** controls. Turning them to the **right** increases the rate of repeats, and so results in **shorter** delay times. Turning them to **left** reduces the rate of repeats, and so results in **longer** delay times.

---

- **Mix** controls the wet/dry balance of the effect. Turn the knob to the right to increase the level of the delayed sound.
- **Sync** recalibrates the 'Rate' knobs (see above) in more musically-meaningful units of time, e.g. '1/4 bars'. This allows you to easily create rhythmic effects where the delayed 'echoes' are exactly in time with the music.

## Reverb

The Reverb module creates artificial reverberation effects to simulate the sounds of rooms, concert halls and other reverberant spaces. It's designed to be as straightforward as possible to use, and features just two parameters:

- **Size** controls the size of the reverberant space to be simulated. Lower settings, for example, produce 'small room' sounds. Higher settings can mimic concert halls, or even larger spaces.
- **Mix** determines the amount of reverberation to be mixed in with the 'dry' sound. How you set the Mix control will depend on the kind of effect you want to achieve.

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**Hint:** Lower Mix settings can help the reverb to 'sit behind' the dry sound, to avoid 'swamping' the details of more complex, rhythmic material.

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## Other modules

In addition to the eight effect modules described above, CamelSpace features two other modules.

### Master

The **Master** module has three parameters:

- **On** is a toggle switch much like the on/off switches in the effects modules. However, switching the Master module off has the effect of completely bypassing CamelSpace, so that only the 'dry', unprocessed signal is heard.
- **Volume** allows you to adjust to overall level of CamelSpace's output. If the Output Level meter in the main display shows the signal 'clipping', you can reduce the Volume slightly until it stops.
- **Mix** allows you to adjust the wet/dry balance of CamelSpace's output. You'll probably most often want to hear just the 'wet', processed output, and so should set the Mix knob all the way to the right. Sometimes, however, it can be useful to mix in a little of the dry, untreated signal. Turn the Mix knob to the left to adjust the balance in favour of the dry signal.

### Step Sequencer

The **Step Sequencer** module is the key to some of CamelSpace's most remarkable effects!

Using tempo information provided by your host application, the Step Sequencer runs in perfect synchronisation with the track you're working on, and allows you to create complex control sequences that can really bring the sound to life!

---

**Hint:** CamelSpace relies upon the host application to provide the necessary tempo information. Most hosts supply this information automatically, but a few may need to be specially configured. See your host's documentation for details.

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The Step Sequencer can store up to 8 different patterns, and each pattern contains 16 steps. Patterns are played as repeating loops, and the length of time taken to repeat each loop is variable.

Use the **Length** knob to adjust pattern length. The pattern length is shown in the Value Readout section of the main CamelSpace display, calibrated in fractions of one bar. So, setting Length to '1/1 bars' produces patterns that are exactly one bar long. '1/2 bars' makes patterns half a bar long, '4/1 bars' makes pattern four bars long, and so on.

---

**Hint:** more complex and unusual rhythmic effects can be created by setting 'triplet' and 'dotted' Length values, e.g. '8/1T bars' or '1/2\* bars'.

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## The Steps display

The Steps display is the heart of the Step Sequencer:



Each column in the display represents a step (numbered from 1 to 16).

The small, blue **Volume** button at the top of the display determines what values steps can have:

- When the **Vol** button is illuminated, you can adjust each step's value by clicking once in its column, or by dragging up or down.
- When the **Vol** button is extinguished, a step has only two possible values: On and Off (100% and 0%, if you prefer).

In either case, right-clicking (Ctrl-clicking on a Mac) a step resets its value to zero.

---

**Hint:** beneath each step is a small box. Clicking this box causes a 'chain-link' icon to appear in the box, indicating that the step is **typed** to the step following it. When two or more steps are tied together they behave like one, longer step; only the first step has an audible 'attack' phase, while any subsequent steps provide sustain. Right-click (Ctrl-click on a Mac) the box to 'untie' a step.

---

## Step envelope

At the top of the Step Sequencer module are three knobs, which can be used shape the 'envelope' of each step in the pattern:

- **Attack** controls the attack time of each step, as a percentage of the current step length. Shorter times produce more 'abrupt', 'percussive' effects. Longer times 'fade in' more smoothly.
- **Sustain** controls the period of time (again, as a percentage of the step length) each step is 'held' for before it begins to 'decay'.
- **Decay** controls the rate at which each step 'decays' at the end of the sustain period.

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**Hint:** exactly what effect step envelope settings have on the sound depends upon which parameter or parameters the Step Sequencer is set to control.

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## Other parameters

- The **1 – 8** number buttons each represent a stored pattern. To switch to the second of the eight patterns, for example, simply click button **2**. Each time you switch patterns, the 'Steps' display (above) updates itself accordingly.
- **Copy** and **Paste**, as their names suggest, allow you to copy and paste patterns. For example, to copy a pattern 1 to pattern 8, first ensure that the **1** button is illuminated, then click 'Copy', then click the **8** button, then click 'Paste'. The 'Steps' display will update to show the newly-pasted pattern.
- The **Swing** knob introduces a 'shuffle groove' into the Step Sequencer's phrasing, by pulling every second step slightly forward in time. With Swing set to 100%, 'swung' steps are brought forward by nine-tenths of a step.

## Using the Step Sequencer

The Step Sequencer can control three different parameters: **Filter** (filter cut-off, via the FilterMod module), **Pan** (the AutoPan module) and **Tgate** (the Trance Gate).

These can be selected using the buttons found below the numbered pattern selection buttons:



Each of the eight patterns can be routed to none, one, two or all three of these destinations. For example, to indicate that the currently selected pattern should be routed to the FilterMod, the 'Filter' button should be activated.

If more than one pattern has a given destination activated, the Step Sequencer will play through each of those patterns in numerical order. This happens for each of the three destinations independently. For example, the Trance Gate could be being controlled by pattern 3, while the MM Filter Cutoff is modulated by pattern 5.

To use the Step Sequencer to control the Trance Gate, first make sure the Trance Gate module is switched on, since the Trance Gate 'On' button overrides the 'TGate' control. If you switch on the Trance Gate when no patterns are routed to it, the current pattern will automatically be routed to it.

FilterMod and AutoPan modulation work in a similar way. For example, you can have several patterns routed to FilterMod, but these will only affect the sound if the 'SEQ' button is activated in the FilterMod module.

When the FilterMod module is in 'SEQ' mode, the 'Depth' and 'Cutoff' parameters affect the sound in the same way as in 'LFO' mode. In order for a zero volume step to produce minimum filter cut-off and a full volume step to produce maximum filter cut-off, you should set the MM Filter Cutoff parameter to its middle value, and FilterMod 'Depth' to 100%. The AutoPan module is similarly affected by its own 'Depth' control.

The 'Rate' controls in the AutoPan and FilterMod modules have no effect when those modules are in 'SEQ' mode.

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**Hint:** when the Step Sequencer is used to control AutoPan, step 'volume' corresponds with pan position. A full volume step positions the sound to the left, while a zero volume step positions the sound to the right. (To produce constant left-side panning, tie the relevant steps together.)

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### Step Sequencer example

To give you an idea how the Step Sequencer can be used, let's look at a short step-by-step (no pun intended) example.

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**Hint:** before we begin, you should initialise the current Preset. Click the current Preset name and select 'Clear Preset' from the menu that appears.

---

First let's see how the Step Sequencer can be used to control the Trance Gate.

- Select pattern 1, and depress the 'TGate' button. (Notice that the Trance Gate 'On' button is automatically activated). Turn the 'Length' knob until '1/1 bars' is shown in the main display.
- Click 'STEP ON / VOL', and choose 'Vol Every 4' from the menu that appears. The Steps display will update, showing every fourth step set to full volume. Start your host application playing and you should be able to hear a short, steady burst of your chosen sound source on each beat of the bar.

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**Hint:** try adjusting the step envelope parameters ('Attack', 'Sustain' and 'Decay'), and listen to how they affect the sound. Reduce Attack and Decay to '0 %', and Sustain to '25 %', and the steps will sound short, 'dry' and percussive. Set Attack to '100 %', and Decay and Sustain to '0 %', and each step will smoothly 'swell' or fade in.

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- Now try activating some other steps in the pattern. Drag up and down on a step's column to raise or lower its volume. Try 'tying' two or three adjacent steps together and listen to how this affects the sound of the pattern.

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**Hint:** CamelSpace's Randomize button (see page 8) can create random Step Sequencer patterns with a single click!

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If you like to keep things simple, you can use the Step Sequencer perfectly well without ever selecting any pattern other than the first one. However, there's plenty more you can do with only a little more effort – so if you're interested, read on!

What happens if we use two patterns to modulate the Trance Gate, rather than just one?

- Select pattern 2 by clicking the appropriate button. Click 'STEP ON / VOL' again, and choose 'Vol All' from the menu.
- Depress the 'TGate' button, and you'll notice that the pattern now changes every other bar. (Try turning the 'TGate' button off again and listen for a few bars to compare.)

Now let's try adding some filter modulation:

- Select pattern 3, and depress the 'Filter' button. (Notice that the Filter and FilterMod sections are automatically turned on, and that the FilterMod module is automatically swapped to 'SEQ' mode). We want to control the whole range of the filter, so set FilterMod depth to '100 %' and Cutoff (in the MM Filter module) to its halfway point.
- Click on 'STEP ON / VOL', select 'Tie All' from the menu, then draw a gradually increasing 'ramp', starting at zero for step 1 and going up to full volume at step 16. Listen to how the filter sweeps up over the course of each bar. (If you find it difficult to tell what's going on, try turning the Trance Gate off, and the effect will be more obvious.)

And that's really all you need to know about using the Step Sequencer! As you can tell, it's extremely powerful, and allows for long and complex modulations of the Trance Gate, filter cut-off and panning.

### Further Step Sequencer examples

- The FilterMod module has patterns 1, 2 and 3 routed to it, while the Trance Gate has patterns 1 and 2 to routed to it. Below you can see which patterns will be played for each of the first 9 bars of a song (assuming we've set the length to 1 bar).

Bar	1	2	3	4	5	6	7	8	9
<b>FilterMod</b>	1	2	3	1	2	3	1	2	3
<b>Trance Gate</b>	1	2	1	2	1	2	1	2	1

- You want a downward filter sweep for one bar, then an upward sweep for one bar, then unchanging filter cut-off while the sound is panned left and right for a bar. Here's how you could achieve that (note that all steps should be tied together for all these patterns).

<b>Pattern 1</b>	Downward ramp	Routed to FilterMod
<b>Pattern 2</b>	Upward ramp	Routed to FilterMod
<b>Pattern 3</b>	All values fully up	Routed to FilterMod
<b>Pattern 4</b>	All values half way up	Routed to AutoPan
<b>Pattern 5</b>	All values half way up	Routed to AutoPan
<b>Pattern 6</b>	Sine wave	Routed to AutoPan

## Step Sequencer shortcuts

As we've already seen, clicking the 'STEP ON / VOL' field at the left-hand end of Steps display opens a pop-up menu, containing a number of convenient features to help you work with the Step Sequencer:

- **Load Preset** allows you load a Step Sequencer pattern from a .CSP file.
- **Save Preset** allows you to save a Step Sequencer pattern to a .CSP file.
- **Clear** resets all steps in the pattern to zero.
- **Vol All** sets all steps in the pattern to 'full volume'.
- **Vol Every 2** sets every other step in the pattern to 'full volume', and the rest to zero.
- **Vol Every 4** sets every fourth step in the pattern to 'full volume', and the rest to zero.
- **Tie All** ties all the steps in the pattern (see page 19).
- **Move Left** re-frames the pattern by shifting all steps one place to the left. (The first step becomes the last step.)
- **Move Right** re-frames the pattern by shifting all steps one place to the right. (The last step becomes the first step.)
- **MIDI Trigger On** activates MIDI control of the Step Sequencer (see below).
- **MIDI Trigger Off** deactivates MIDI control of the Step Sequencer.

## MIDI control of the Step Sequencer

If you've set your host application to transmit MIDI messages to CamelSpace (see your host's documentation for more details), then you have even more options when working with the Step Sequencer!

MIDI notes can be used to switch on different patterns for different effect parameters. When a note is received for a given parameter, all other patterns routed to that destination are switch off; only the specified pattern is used.

The keys one octave below middle C, starting from the C (MIDI notes 48-56), can be used to trigger each of the different trance gate settings. For example, hitting the 'C', will route pattern **1** to the Trance Gate, and hitting 'C#' will route pattern **2** to the trance gate, and so on.

The next octave up (60-68) will behave similarly, but controls the FilterMod; the next octave up controls the AutoPan.

MIDI control be very useful in a live setting, and can also be used to specify particular patterns to be played at particular points in a track, since the MIDI notes may be recorded and played back using your host's standard MIDI sequencing functions.

## Frequently Asked Questions

### **Why doesn't the plugin sync to host tempo properly?**

Sonar/Project5 users: The Cakewalk Adapter doesn't automatically identify effect plugins which are tempo-synced. When you run the adapter, make sure you check the 'Tempo Based Effect' tick box. The plugin will now sync correctly. (Cakewalk are aware of the issue and are planning to automatically check the box in future).

### **Why aren't Preset names showing up correctly when I load a Bank?**

If you load a Bank using CamelSpace's internal Preset system the host won't know about the change, and it won't display the right Preset names. Use your host's own Bank loading feature (see the host's manual for details) and the names will be right.

### **Why doesn't MIDI learn work?**

MIDI learn relies on you setting up your host to transmit MIDI to the plugin. How exactly this is achieved varies from host to host – please read your host's manual for details. (Some hosts do not support this feature. We recommend you email the developers and ask them to include it in a future update.)

### **Why doesn't the X/Y controller dot move when I play back automation?**

When you record automation while moving the dot in the X/Y controller, the values of the underlying parameters are recorded, but the position of the dot is not. This is by design, rather than a bug.

### **Why doesn't modifying 'MorphXParam' and 'MorphYParam' from outside the plugin result in the expected behaviour?**

These two parameters control the selected modulation destinations for the X/Y controller. If you want to automate particular parameters, select them directly, rather than via the X/Y controller.

### **Displaying the interface really slows down my computer. How can I fix it?**

Please ensure your graphics card drivers and operating system are up to date (i.e. the most recent updates have been installed). If this does not solve the problem, see if there is an option to turn on 'bus mastering' for your graphics card, and if so, enable it. In nearly all cases this solves the problem.

Windows 98 users: we are not officially supporting Windows 98, due to some problems it has with 'alpha-blending' – a process used by our graphics library. If you have tried updating your system and the plugin still performs unsatisfactorily, then we regret that we can't help you any further. If you have a more recent operating system, and updating your graphics drivers and OS hasn't solved the problem, please submit a technical support enquiry giving full details of your setup and the problems you are experiencing.

### **Where are the extra 64 Presets?**

The 128 Presets included in the full version of CamelSpace are contained in two Banks of 64 Presets. Click in the Value Readout display, and from the pop-up menu choose 'Load Bank A' to load the first 64 Presets, or 'Load Bank B' to load the second 64 Presets.

**There's a problem I have which isn't covered here – what should I do?**

Please visit the support page on our website at [www.camelaudio.com](http://www.camelaudio.com). Refer to the relevant FAQs for the latest information.

## **Credits**

### **Concept, design and programming**

Ben Gillett

### **Additional programming**

Rob Martino

### **Graphic design**

Bitplant

### **Additional design input**

Tim Conrardy

Jim Hunter

Mark Jones

### **Sound Design**

Manuel Schleis (Vengeance Sound)

Tim Conrardy

Biomechanoid

Rory Dow

Stephan Muesch

Jim Hunter

David Goodwin

Meffy Ellis

### **User manual**

Paul Sellars