

SOLO

The Mini version of **ONE**

USER GUIDE



The Groove Activating
VSTi for Mac OSX & PC

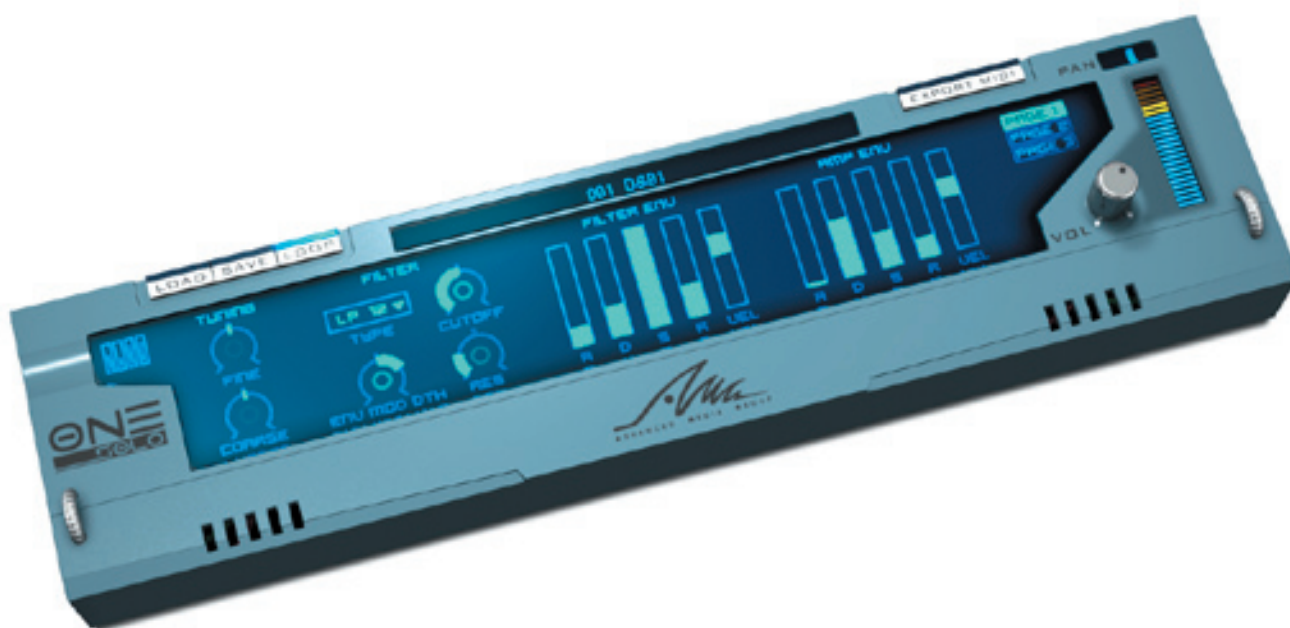
1. Foreword

Thank you for purchasing this AMG ONE/solo virtual instrument plugin. To get the best from your software purchase, we recommend that you read this manual carefully and keep a copy in a safe place for future reference.

Should you experience problems operating this product and can't find the answers in this manual, our technical support representative can be contacted via contact details on www.samples4.com.

Don't forget, when contacting technical support to describe the problem in as much detail as possible, and provide details of your system configuration (operating system, host program, CPU, RAM, etc.).

The AMG virtual instrument team



2. Compatibility

The AMG ONE/solo virtual instrument has been tested with a wide variety of VST2-compatible host programs. However, host programs vary in their specifications and some may not implement features in the VST2 specifications that AMG ONE/solo relies upon. You should carefully check a demo version with your own system if you are worried about compatibility issues.

3. System Requirements

- Windows, PIII400 processor, 128mb RAM, 16bit sound card
- MacOS OS-X 10.2.8 or better, 450 MHz G3 or G4, 256mb RAM
- VST2 plug-in compatible host software

You can find a list of VST2 plug-in compatible host software at www.kvr-vst.com, the internet's best resource for information about VST plug-ins and hosts.

4. Introduction – What does AMG ONE/solo do?

The AMG ONE/solo VST plug-in is a quick and simple way to play and manipulate sampled “loops” in your music. Sampled loops are one of the core ingredients in modern music and sound design, and AMG have dedicated themselves over the last 15 years to bring musicians the finest sound library on the planet.

Using sampled loops on a computer hasn’t always been easy however. Once a sample is recorded, the duration and pitch are fixed. If you have ever tried to speed a sampled loop up or slow it down you’ll know already that it is impossible to do so easily without affecting the pitch or the sound quality. This is where the technique of loop “slicing” comes into its own. Loop slicing is the process of separating a sample into its constituent beats in software such as Propellerhead Software AB’s popular “Recycle” program, or Sony’s ACID. Once a sampled loop has been correctly sliced it can be used much more freely with regards to pitch and tempo, and musicians are free to mix and match sampled loops from various sources seamlessly within the same composition.

Until recently, musicians wanting to take advantage of sliced loop sample files such as REX or ACIDized music loops often had to rely on clumsy work-arounds to access their sample libraries from within their host sequencer. Thankfully, AMG ONE/solo gives you direct access to your loop library from within your host sequencer, with convenient VST plug-in integration. You can load a loop, jam with it live from your MIDI keyboard or mangle the beat with powerful synthesis features such as envelopes, LFOs and multi-mode resonant filters. Read on to find out how to enter the new era of sampled loop manipulation!



Visit AMG’s www.samples4.com website for information, reviews and demo files - discover over 400 sample libraries and the biggest and best selection of REX1 & REX2 files on Earth!



5. Front Panel Basics



When AMG ONE/solo is correctly installed in your host sequencer, it will be selectable from within your host program's VST instrument menus. When AMG ONE/solo is selected (in accordance to your host program's instructions), the user interface above will be displayed.

The user interface is designed to look a like a sort of cool rackmount sampler, with a glowing blue "display screen". Controls relating to AMG ONE/solo's internal synthesiser features are located in the display screen and are spread over three virtual "pages". In the screenshot above the controls on page 1 are displayed – to change which controls are visible use click on any of the three buttons labelled "page 1", "page 2" and "page 3". The currently selected page is always highlighted in bright blue.

Aside from the display screen, AMG ONE/solo has a number of controls that are always visible regardless of the page selected. These controls, around the edge of the display screen, access common functions such as loading or saving settings from disk.

There are four basic types of controls used throughout AMG ONE/solo's user interface:-

- **Rotary controls (knobs)**

Controls such as filter cutoff and resonance, as shown in the screenshot above, use rotary controls to display their settings. To change the value of a rotary control, click on it, hold the mouse button down and drag vertically. Dragging up will increase the value (the bar will grow) and dragging down will decrease the value (the bar will shrink). Whenever you click on a control, a small pop-up box will display the exact value you are changing. To set a control to its default value, hold down the CTRL key on your keyboard when clicking, and to increase the mouse range hold down SHIFT when clicking and dragging.

- **Sliders**

The amplitude and filter envelope controls are displayed using bar-graph slider controls. To increase the parameter click and drag vertically upwards. To decrease the parameter, click and drag your mouse downwards. Apart from their visual appearance, these controls are identical in function to the Rotary Controls described previously.

- **Buttons**

Buttons in AMG ONE/solo's display screen have two states – "on" and "off". To toggle a button's state simply click on it. The buttons around the edge of the user interface (for example the Load button) will activate special functions when clicked.

- **Drop-down menus**

Controls where there is a set menu of choices (for example, filter type or LFO waveform) have been implemented with drop-down menus. Click in the control to display the menu of choices and then click in the menu to select your desired option.



AMG ONE/solo can also be controlled entirely from an external MIDI controller, providing that controller is capable of sending MIDI Continuous Controller (CC) messages. Default CC mappings are listed in the appendix, but you can use a special MIDI “learn” mode to quickly build up your own mappings. Simply right-click on any control to display a menu of the current MIDI CC settings. Choose “link to next CC” from the menu to put a control into learn mode. Once a control is in learn mode, it will automatically link itself to the next CC message that it receives.

Note that MIDI controller functionality may differ from host program to host program. Some sequencers, for example, intercept and do not pass MIDI controller messages in their entirety to loaded plug-ins (FL Studio, Logic Audio for example). You should refer to your sequencer’s user manual for more information if you are not sure.

6. Global Controls

We will refer to the controls on the grey metallic part of AMG ONE/solo’s user interface as the “Global Controls”. This is because they are always visible regardless of the display screen page selected. These controls are as follows (from left to right):-

- **Load**

Loads a sampled loop into the plug-in. When this button is clicked a standard file browser will be displayed. Windows users will have to select (using the drop-down selector at the bottom of the dialog window) which sort of files they are browsing for. Mac OSX users will not have to do this – invalid file will appear greyed-out in the browser window.

You can only load sampled loops that have been specially “sliced” and saved in an appropriate format. Sampled loops sliced in Propellerhead Software’s Recycle, for example, will have the file extensions REX, RX2 or RCY depending on the version of Recycle used.

Loops saved in Sony’s ACID software will have the file extension WAV. However, you should note that WAV files saved from other programs may not have the special ACID properties that Sony software embeds in the file – you may get an error message trying to load a WAV file that doesn’t have any embedded slice data.

AMG ONE/solo also implements its own file format with the extension OPF (ONE Program File). This file format is not only capable of storing the sample and slice points, but it also contains all the parameter settings and utilises a proprietary form of lossless compression that squeezes an OPF file down to around half the size of the original WAV!

- **Save**

Saves the current loop as an OPF file. When this button is clicked a standard file browser will be displayed. Use the dialog to navigate to the folder you would like to save your file in, provide a filename and click “OK”.

- **Loop**

Switches AMG ONE/solo’s internal slice sequencer on or off (when the blue bar in this button is glowing the slice sequencer is active). When the slice sequencer is active, AMG ONE/solo will only respond to the two octaves of notes centred around middle C (MIDI note 60). If you play middle C on the master keyboard you have linked to the plug-in, the sampled loop will play back at the speed set in your host program and at the same pitch it was recorded. The sample will loop for as long as you hold the key down and playback will stop as soon as you release the key.

If the slice sequencer is made inactive, AMG ONE/solo can no longer automatically synchronise to your host program's tempo setting. Instead, each "slice" of the loaded sampled loop will be assigned to MIDI notes 0 upwards. So a sampled loop with 16 slices will have successive slices mapped to notes 0 to 15 in ascending order. You can then play the slices manually from your keyboard or load some MIDI data into your sequencer to play the slices automatically (see the section on exporting MIDI data later in this manual).

- **Test button**

The small button labelled with a "T" in the title bar of the plug-in's user interface can be clicked on to test the currently loaded sound. When the test feature is active (or whenever a MIDI message is received by the plug-in) the button will glow bright blue. Note that the test button only functions when the Loop button is clicked and the slice sequencer is active.

- **Patch Name**

The name of the currently loaded sampled loop is displayed in this box. Double-click on the text to change the patch name.

- **Export MIDI**

Exports the current loop slices as MIDI information. When this button is clicked a standard file browser will be displayed. Use the dialog to navigate to the folder you would like to save your file in, provide a filename and click "OK". The slice data is saved as a Type 0 MIDI file – this can be imported into many host sequencer programs – import this data onto the same track as AMG ONE/solo, and then switch Loop mode OFF. Then you can edit the data in your MIDI sequencer to change the order and timing of the slices. By using this function you can create hundreds of variations on your sampled loops!

- **Pan**

Sets the balance between the left and right output channels. If a loop is stereo, panning 100% left will cause only the left channel of the loop to be played, and panning 100% right will cause only the right channel of the loop to be played. Mono samples (such as REX version 1 files) will be "panned" into the appropriate spot in the stereo soundstage. Note that this control is pre-mapped to MIDI controller 10 (Pan). If your host supports the sending of default pan values to tracks, this control will respond automatically!

- **Volume**

Sets the overall output volume of the plug-in. Note that this control is pre-mapped to MIDI controller 7 (volume). If your host supports the sending of default volume values to tracks, this control will respond automatically!

7. Controls on edit page 1



The first virtual page on the display screen contains just the controls most users will access most frequently.

Tuning Section

Controls in the Tuning section affect the playback pitch of the sampled loop, but do not affect the playback tempo.

- **Fine**

Sets the pitch (in cents) of the loop being played. An offset of +100 cents will cause the loop to play one semitone sharp.

- **Coarse**

Sets the pitch (in semitones) of the loop being played. An offset of +24 semitones will cause the loop to be played two octaves higher than recorded pitch.

Filter Section

AMG ONE/solo contains a powerful multi-mode resonant filter that you can use to creatively mangle your sampled loops.

- **Filter Type**

There are 10 different kinds of filter available, accessible via the drop down menu

Filter	Description
LP12	12db/Octave Lowpass filter – reduces the treble
HP12	12db/Octave Highpass filter – reduces the bass
BP12	12db/Octave Bandpass filter – reduces the bass and treble together
BR12	12db/Octave Band reject filter – creates a notch in the spectrum like a phaser
LP24	As LP12 but with a stronger effect
HP24	As HP12 but with a stronger effect
BP24	As BP12 but with a stronger effect
BR24	As BR24 but with a stronger effect
LP/BR	A hybrid of Band Reject and Lowpass. Great for Phasey-synth sweeps
PEAK	A narrow peaking filter that emphasises only a small range of the spectrum

- **Cutoff**

The action of the Cutoff control is to set the point in the audio spectrum at which the effect of the filter begins. For a lowpass filter this means the frequency after which the treble is reduced. In a highpass filter this would be the frequency at which the bass is back to normal (the opposite of a lowpass filter!). For bandpass and bandreject the cutoff is the centre of their area of effect.

- **Resonance**

The Resonance control, in the LP12/24, HP12/24 and LP/BR filters, causes the output of the filter to feedback into the input. This creates a peak in the spectrum at the cutoff point. Many classic “squelchy” analogue synth sounds use a resonant lowpass filter. With the BP12/24 and BR12/24 the resonance control widens or focuses the filter’s effect around the centre frequency.

- **Filter Env Mod Depth**

The Env Mod Depth knob determines how much of the signal from the filter envelope (see next section) is added to the Cutoff frequency of the filter set by the Cutoff control. You can use this to vary how the filter opens, and closes over time for exciting dynamic effects.

Filter Envelope Section

AMG ONE/solo has two envelope generators, one connected to the filter and the other connected to the amplifier. Each envelope generator has four stages:

Stage	Description
Attack	Time taken for the envelope output to reach maximum output
Decay	Time take to fall from maximum to the sustain level
Sustain	% of maximum output to hold at until slice end marker
Release	Time taken to die away to zero output while slice is finishing

The filter envelope parameters, in conjunction with the Filter Env Mod Depth parameter, are used to control how the filter opens and closes over time. Since the filter envelope is triggered at the beginning of each slice in a loaded sample loop, the envelope cannot be used to slowly open or close the filter as the loop plays. Instead, the filter envelope is used to create exciting and radical rhythmic “wah” type effects where the filter opens and closes rapidly on each beat of the loop. This is a huge amount of fun to experiment with so get stuck in!

One tip for creating pulsating filter effects is to reduce the Filter Envelope Sustain control to zero, and increase the Filter Envelope Decay control a fraction. By reducing the Filter Cutoff control and increasing the Filter Env Mod Depth you should hear the filter “pulsing” – opening and closing very quickly in time with the beat. Use the Filter Resonance control to emphasis this effect and add “squelch”!

If you have a velocity-sensitive master keyboard (or your host sequencer allows you to set velocity values for MIDI notes in your track) then experiment with the Filter Velocity control. When this control is set to a positive amount (e.g. +50%) you will be able to control the filter envelope output by playing harder and softer on your keyboard. When you play a trigger note harder, AMG ONE/Solo will open the filter envelope more – when you play more softly it will open it less. The exact amount of variation you can create with velocity depends on the value of the parameter – higher values give a greater range of velocity response.

When the Filter Envelope Velocity control is set to a negative amount (e.g. –50%) the relationship between the played velocity and its effect on the filter envelope becomes inverted. Playing harder (higher velocity) will yield a lower output from the filter envelope.

Amplifier Envelope Section

The parameters in this section are the same as for the Filter Envelope section. However, the second of AMG ONE/solo's two envelope generators is dedicated to the amplifier which in turn determines what you hear from the plug-in's output.

These controls can be used to radically alter the dynamics of a sampled loop. For example, the settings given in the preceding section for a pulsating filter effect can be used in the amplifier envelope to create a super-tight staccato effect.

Also of particular note is how the Amplifier Envelope Release parameter can be used. When a sampled loop is sliced into individual beats in a program such as Recycle or ACID, the length of each slice determines the relative timing of each beat. To play the loop faster, software like AMG ONE/solo simply stops each slice short of its full length and immediately plays the next slice. This has the effect of later slices seemingly "cutting off" earlier slices which can make a speeded-up sampled loop sound slightly unnatural. Since there is still some sound left to play in each slice, you can make a speeded-up loop sound more natural by increasing the Amplifier Envelope Release parameter a few milliseconds or so. This will allow each slice to play on and fade out even after a new slice has started playing.

When slowing down a loop, slices are played to their end, but the software waits before playing the next slice. This again sounds slightly unnatural, but the Amplifier Release can help here if the loop has been cleverly pre-formatted in Recycle. Sound Designers who use Recycle have an option called "stretch", which adds a small looped section of sound to the end of each slice that fades out quite quickly. When a loop is played at normal speed or faster, when the Amplifier Envelope Release parameter is at minimum, these stretched slices are no different from ordinary slices. However, if the sampled loop is slowed down, increasing the release parameter enables the stretched portion to be heard – this can help a loop sound more natural.

If you need dynamic control over the output level of a sampled loop, use Amplifier Envelope Velocity control. When this control is set to a positive amount (e.g. +50%), the loop will get quieter when you play more softly and louder when you play harder. The exact range of sensitivity is determined by the control setting. When the control is set to a negative amount (e.g. -50%) the effect of velocity on the output level is inverted – playing softly will make the loop play back louder.

8. Controls on Edit Page 2



The second virtual page on the display screen contains controls that can be used to more deeply edit how their sampled loops are played.

Filter LFO section

LFO is short for Low Frequency Oscillator. You may be familiar with synthesiser oscillators that produce an audible tone – LFO's are identical but operate at a much lower frequency, often below the hearing threshold. The output of the LFO is not connected to the audio circuitry however. Instead, the rising and falling output is used to make the value of another parameter (for example filter cutoff) rise and fall automatically.

AMG ONE/solo contains two very well specified LFOs. The group of controls on the left relate to the Filter LFO, and those on the right related to the Pitch LFO.

• LFO Waveform

The first control is the Waveform selector that allows you to choose the waveform that the filter LFO will output. The shape of each waveform is shown on the buttons themselves and are as follows:

Waveform

Sawtooth (a.k.a. Ramp)

Square (a.k.a. Pulse)

Triangle

Sine

Description

A slow rise followed by a rapid drop. Interesting to use on synth sounds modulating pitch or filter for pulsating, rhythmic effects

Rapid rise, followed by a rapid drop, not so good on filters but fun on pitch for siren effects.

Slow rise, slow fall with sharp transitions at the maxima. Excellent on pitch and filter cutoff.

As above, but with smoother transitions at the maxima. Good for natural sounding vibrato.

• Key Retrigger

The LFO can be forced to always return to the beginning of its cycle every time a slice begins (or a key is pressed, depending on whether or not Loop Mode is active) with this parameter. When this parameter is ON and Loop mode is ON, the LFO will return to the beginning of its cycle every time a trigger is held down to play the loop. If this parameter is OFF, the LFO will run continuously and you will not be able to guarantee when playback begins the LFO will be at a particular stage in its cycle. If you want an exact LFO effect at a particular point in your song you should use the Key Retrigger feature.

If Loop mode is OFF however, since AMG ONE/solo will be playing individual slices rather than the whole sampled loop, this parameter (when switched ON also) will cause the LFO to restart when a new slice is triggered.

- **LFO Rate and Tempo Sync**

These two parameters in turn determine exactly how fast the LFO will cycle. When Tempo Sync is OFF, the LFO Rate parameter is set as a value in Hz (cycles per second). However, when Tempo Sync is ON, the LFO Rate parameter is set as a fraction of a beat and is directly linked to the host program's tempo just like the slice sequencer. So if you want the LFO filter to open and close over an exact section of your song, or in sync with the beat (at higher settings), use the Tempo Sync button.

- **Filter LFO Mod Depth - Cutoff**

This control determines how much of the LFO signal is used to change (modulate) the Filter Cutoff setting on edit page 1. When set to a small positive value, the LFO will gently sweep the filter cutoff up and down over a small range. When set to a large positive value, the LFO will sweep the filter cutoff fully open and fully closed quite aggressively. Negative values for Filter LFO Mod Depth (e.g. -50%) will cause the LFO signal to be inverted before it is used to modulate the filter.

- **Filter LFO Mod Depth – Resonance**

This control determines how much of the LFO signal is used to change (modulate) the Filter Resonance setting on edit page 1. This control is used in much the same way as the Filter LFO Mod Depth – Cutoff control described in the preceding section.

- **Pitch Mod Depth and Pitch Mod Ratio**

On the far right there are two controls that determine how the Pitch LFO is used to change (modulate) the tuning of the loop being played. The first of these controls sets the amount pitch-shifting that will occur as the LFO signal sweeps up and down, the second determines the exact range over which that modulation will occur. For example, if the Pitch LFO waveform is set to Triangle, and the Pitch Mod Depth is set to +100% and the Pitch Mod Ratio left at 1:1, the playback pitch will be swept first up one octave, then down an octave and so on. If the Pitch Mod Ratio control is increased to 2:1, the playback pitch will sweep up and down two octaves instead.

9. Controls on edit page 3



The third and final edit page contains controls that few users are likely to need to access on a daily basis. The controls on this page are used to determine how the two LFO signal generators will respond to MIDI messages from common controllers such as the Modulation Wheel, Velocity or Aftertouch. In the same manner as Edit Page 2, this page is divided into two sections with controls related to the Filter LFO on the left and the Pitch LFO on the right.

- **LFO Rate Modulation Source**

Determines which MIDI controller source signal will be used to change (modulate) the speed of the appropriate LFO. Choose from Velocity, Modulation Wheel or Aftertouch.

- **LFO Rate Modulation Depth**

Sets the sensitivity of the LFO to rate modulation. If set to a positive value (e.g. +50%), increasing the rate modulation source MIDI controller will cause the LFO rate to speed up. If set to a negative value (e.g. -50%) the relationship will be inverted, i.e. decreasing the MIDI controller will cause the LFO rate to speed up.

- **LFO Depth Modulation Source**

Determines which MIDI controller source signal will be used to change (modulate) the depth (output level) of the appropriate LFO. Choose from Velocity, Modulation Wheel or Aftertouch.

- **LFO Depth Modulation Depth**

Sets the sensitivity of the LFO to depth modulation. If set to a positive value (e.g. +50%), increasing the depth modulation source MIDI controller will cause the LFO output to become stronger. If set to a negative value (e.g. -50%) the relationship will be inverted, i.e. decreasing the MIDI controller will cause the LFO rate to become stronger.

- **Polyphony**

Sets how many voices the engine will use. To change the value of this control, click on it and drag vertically with the mouse (upwards to increase, downwards to decrease). With a typical loop you are unlikely to hear much difference if you decrease the polyphony (and have the amplifier envelope release set to minimum) as loop slices don't normally overlap when played at original or slower speed. If you are speeding a loop up, have a loop that has been specially sliced in Recycle using the "stretch" parameter and have the amplifier envelope release set above minimum, you may wish to adjust the polyphony to ensure a particular level of CPU consumption. You may also find the polyphony control useful if you have loop mode switched off and are playing slices manually.

10. MIDI controller settings

AMG ONE/solo can also be controlled entirely from an external MIDI controller, providing that controller is capable of sending MIDI Continuous Controller (CC) messages. Default CC mappings are listed below, but you can use a special MIDI “learn” mode to quickly build up your own mappings. Simply right-click on any control to display a menu of the current MIDI CC settings. Choose “link to next CC” from the menu to put a control into learn mode. Once a control is in learn mode, it will automatically link itself to the next CC message that it receives.

Note that MIDI controller functionality may differ from host program to host program. Some sequencers, for example, intercept and do not pass MIDI controller messages in their entirety to loaded plugins (FL Studio, Logic Audio for example). You should refer to your sequencer’s user manual for more information if you are not sure.

Parameter	MIDI controller
Volume	7
Pan	10
Loop Mode	75
Coarse Tune	76
Fine Tune	77
Pitch Modulation Ratio	78
Pitch LFO Modulation Depth	79
Filter Type	80
Filter Cutoff	81
Filter Resonance	82
Filter Envelope Modulation Depth	83
Filter LFO Cutoff Modulation Depth	84
Filter LFO Resonance Modulation Depth	85
Amplifier Envelope Attack	86
Amplifier Envelope Decay	87
Amplifier Envelope Sustain	88
Amplifier Envelope Release	89
Amplifier Envelope Velocity	90
Filter Envelope Attack	91
Filter Envelope Decay	92
Filter Envelope Sustain	93
Filter Envelope Release	94
Filter Envelope Velocity	95
Filter LFO Waveform	96
Filter LFO Tempo Sync	97
Filter LFO Rate	102
Filter LFO Key Trigger	103
Pitch LFO Waveform	104
Pitch LFO Tempo Sync	105
Pitch LFO Rate	106
Pitch LFO Key Trigger	107

11. Copyright and Credits

Tachyon Engine customisation:	David Waugh for Muon Software Ltd
Tachyon Engine coding:	David Waugh, Cesare Ferrari
Graphics:	Shaun Ellwood for Decoder Design
Project Management:	Matt Wilkinson for AMG

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Love & Peace - AMG.



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