Vengeance Producer Suite: Metrum

User Guide

Version: 1.0 – February 2010

Dear customer,

thank you for choosing Vengeance Producer Suite: **Metrum**!

In modern Dance music, no other instrument has more impact than the bass drum…

Metrum offers the most flexible and user-friendly solution for creating bass drums ever. A special sine wave generator in combination with 3 sample layers, amplitude and pitch envelopes, a comprehensive FX section and a modulation matrix that fulfills all of today's requirements. Your customized bass drum is only a few mouse clicks away – be unique, be different, create the kick drums that really suit your music.

The days of having to search through thousands of samples until you finally find the "perfect" kick drum to suit the rest of your track are over… Vengeance Producer Suite: Metrum lets you build a bass drum specifically for your song, not the other way round. Within minutes instead of hours – the way it should be!

Metrum's extensive library and easy processing functions mean that beginners and experts alike can now create the perfect bass drums for their tracks. And if you run out of ideas – no problem: the Random Generator can instantly deliver impressive results. Metrum is a fun environment, it was made for experimentation.

Metrum: Stock samples are out – be unique!

The Metrum window, total view

Let's start at the beginning:

Installing Copy-Protection:

First of all, you will need a Steinberg Key (also known as Syncrosoft / eLicenser dongle) plugged into a spare USB port on your PC. The dongle serves as a license i.e. copy-protection for your software. If you don't already own such a dongle, you can order one online (they are not expensive) from one of several sources, e.g. here:

http://www.thomann.de/de/steinberg_key.htm

You will also need the configuration software “License Control Center” (LCC):

www.elicenser.net

Please ensure that you have downloaded and installed the latest version of LCC.

Immediately after ordering Metrum, you will receive an e-mail containing your license information. All you have to do then is to activate your license using LCC (for this, you should be connected to the Internet).

Installation (PC):

Start VPSMetrumSetup.exe and install the plugin into your standard VSTPlugIns folder. Follow further on-screen instructions. A “Metrum” entry will appear in the plugin list the next time you start your host application.

Installation (Mac):

Unpack the file VPSMetrum1.0.00.pkg.zip and start VPSMetrum1.0.00.pkg.
Follow further on-screen instructions.

The standard installation path for the VST version is: /Library/Audio/Plug-Ins/VST
The standard installation path for the AU version is: /Library/Audio/Plug-Ins/Components

After installing, please check that the VPS Metrum files actually appear in that location.

A “Metrum” entry will appear in the plugin list the next time you start your host application.

If you start “Metrum” for the very first time, and no factory library is present (empty library page), please go to the SYSTEM page and press “select”. Now, please show Metrum the file “MetrumFactory.fpk” on your hard disk. The factory library should appear now.

Vengeance Producer Suite: Metrum – an overview of functions

For additional information, we recommend that you watch our introductory video, which is available at:

www.vengeance-sound.com

The Librarian:

The Librarian has 4 sub-pages...

Kick Library: This is where your collection of kick drums is managed, loaded and stored. All factory content is divided into individual genres (central column) such as House or HandsUp, but of course you can create your own custom folders (right-click context menu). The right-hand column is used for selecting the kick preset.

OSC Presets: This is where you will find presets for Metrum's sine wave sub-oscillator. Again, all factory content is divided into individual folders (middle column) such as Complete Kicks (with attack) or Bodies (no attack), and you can create your own folders (right-click context menu). The right-hand column is used for selecting OSC Presets.

Attack Presets: This is where you will find the “attack” samples used for Metrum's three sample layers. All factory content is divided into individual folders (middle column), such as Gated Rooms or Hardstyle. The right-hand column is used for selecting samples.

User Samples: This is where you can import attack samples or your favourite kick drums from e.g. the Vengeance sample libraries so they can be used within Metrum. Right-click to open the context menu and select “Add User Directory”, then select the required source folder on your hard-disk Folders can be renamed or deleted from within Metrum using the “Edit” and “Delete” functions.

Note that Metrum lets you define up as many User .Wav folders as you want.

The Librarian also includes a preview page

Preview: To the far left is the “Preview” column. This displays a visual representation of the selected samples, OSC Presets or complete bass drum preset. You will also find additional information such as bit depth, sample rate and length here.

Also, you can specify whether the “Autoplay” function is active. When switched on, Metrum will play the selected bass drum presets, samples or OSC presets. If Autoplay is deactivated, you can still preview the sound manually by pressing the “Play” button. Preview volume is adjustable using the central triangle.

<u>The 4 slots: OSC, L1, L2 and L3:</u>

Metrum sounds are built up using up to four so-called “slots”. Slot 1 is the internally generated sub-oscillator. L1, L2 and L3 can be filled with any attack samples you like.

The selected slot (which appears lighter) determines which of the envelopes (AMP/Pitch) can be edited using the row of buttons.

The Slots in detail:

OSC Slot: Metrum's internally generated sine wave oscillator. The main use of the OSC slot is to give your kick drum a deep, voluminous “body”. You can generate a random oscillator sound by selecting “Randomize OSC” from the context menu (right-click).

Vol: Oscillator volume.

Pnch: Punch. This parameter determines how much emphasis the oscillator places on frequencies in the “stomach region”!

FTne: Fine tune i.e. oscillator pitch control.

Spike: Determines how much emphasis is put on the initial attack of the oscillator.

Shp: Shape control. The waveform morphs from a pure sine towards (but not quite reaching) a pure triangle. Higher values give the sound more overtones.

Drv: Drive. This introduces distortion to the oscillator. Especially useful for harder genres e.g. Hardstyle or Hardcore/Gabba.

L1, L2, L3 Slot: Functionally identical, these 3 slots are containers for any attack samples you like. Attack samples are loaded from the library via Drag & Drop, via double-click or via the context menu (right-click). The context menu here also includes a “Randomize Layers” function, which fills all 3 slots with a random selection of sounds from the library. Note that sometimes only 1 or 2 slots will be filled: this is intentional – the actual number of slots used is also randomized.

Vol: Slot volume.

Pan: Panorama i.e. position of the layer in the stereo field.

Tune: Adjusts the pitch of the layer over a range of 2 octaves (+/- 1 octave).

Spike: Determines how much the initial attack is emphasized.

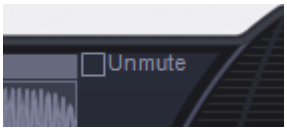
LPF: Low Pass Filter. Used for reducing or eliminating higher frequencies. Bass frequencies remain unaffected.

HPF: High Pass Filter. Used for reducing or eliminating lower frequencies. High frequencies remain unaffected. This filter model is perfect for cleaning up samples so that the low frequency content does not interfere with Metrum's own sine wave oscillator. Note that all attack sounds in the factory library have already been processed to remove potentially problematic frequencies.

M / S buttons: Mute and Solo buttons. As you might expect, Mute silences one slot, and Solo silences all other slots. These functions can be very useful when you are working on the details of individual layers.

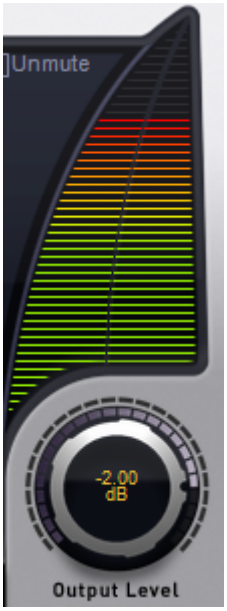
Hint:

Unmute: This button can be found to the right of the OSC slot. Whenever you want to listen to all slots at the same time (defeating any active solo and mute settings), you can do this with a simple click on the Unmute button.



The Output control:

Used to adjust Metrum's main output level. The standard attenuation is set to -2db because in most cases when all 4 slots are added together, this results in a total output of about 0db. However, depending on the samples used, you may wish to decrease or increase the volume here. An internal limiter (which can be defeated in the System page – see below) intercepts potential distortion / clipping that would otherwise occur if levels are set too high.



The Button Bar:

Metrum's button bar (immediately beneath the main display) gives you access to one of 9 pages in which you can edit different aspects of your bass drum.

Library: The page for managing, loading and saving sounds. See above for a more detailed description of Metrum's library.

Main Env.: This is Metrum's global volume envelope, which determines the volume over time of the *entire* bass drum i.e. all slots together.

on/off: The envelope can be switched on or off using the upper right button. When switched off, the volume remains unaffected (but uses only the layer and oscillator envelopes).

Reset Env.: Instantly takes all envelope parameters back to their default values.

Log Scale: This switch toggles between a linear and logarithmic view of the waveform. As they are more important for the resulting sound, the first few milliseconds of the envelope have a higher resolution (1,2,5, 10ms etc.). The logarithmic view compensates for this non-linearity.

The envelope: Metrum's main envelope is an enhanced ADSR-type, consisting of the following parameters: Attack Curve, Attack Time, Decay Curve, Decay Time/Level, Sustain Curve, Hold Time/Sustain Level, Release Curve, Release Time.

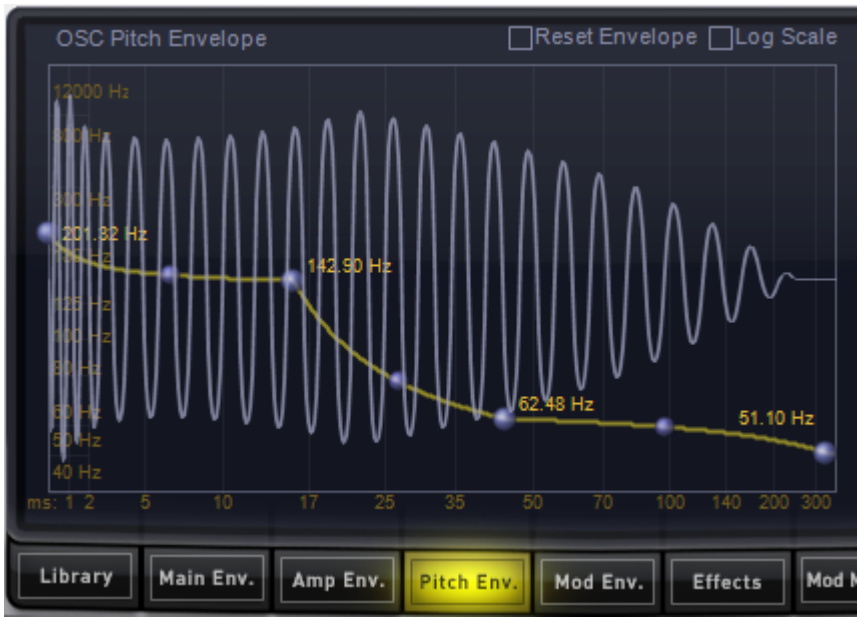
The controls: The main envelope can be directly adjusted from within the display area (the blue dots along the yellow line can be “grabbed” and moved to taste). Of course you can use the 4 large controls below the display instead – they have exactly the same functions.

Amp Env.: Amplitude Envelope. This is the volume envelope for the currently selected slot (OSC, L1,L2 or L3). This envelope has the same parameter set as the main envelope (see above).

Note: The amp envelope for the oscillator cannot be switched off because, unlike samples, this signal is continuous (it does not decay by itself).

Pitch Env.: The pitch envelope for the currently selected slot (OSC, L1,L2 or L3). It is structurally similar to the main envelope, but affects pitch instead of volume. The envelopes for slots L1, L2 and L3 consist of a Start Pitch, Pitch Curve and Pitch Length. The destination pitch is always the original pitch of the sample, and the range is +/- 1 octave.

Note: The pitch envelope of the sine oscillator cannot be switched off because, unlike samples, oscillators have no predetermined pitch.



Mod Env.: This button gives you access to Metrum's „Modulation Envelope“, which can be used as a source of modulation in the Mod Matrix (see next page). Again, the parameter set is similar to the main envelope (see above).

Effects: This button gives you access to Metrum's FX pages, including a 2-band equalizer. Applied carefully, effects can give your bass drums just the right “flavor”, and the EQ can be used to make precise adjustments to the overall frequency spectrum. Many of the effects can be routed in various ways using the switch to the right of the control. For instance, if OSC and L3 are switched on while L1 and L2 are switched off, the effect will only be applied to the oscillator and L3. The context menu here (via right-click) offers additional functions such as a complete reset to default values. “Randomize FX Settings” generates random effect combinations and values. The individual effect algorithms in Metrum are:

Distortion: Especially interesting for harder styles. “Drive” determines the distortion intensity, “Soften” smoothes this out a little by filtering out harsh frequencies (which can become unpleasant) from the distorted signal.

Bit Crusher: “Bit” varies the bit depth of the signal, “Rate” is sample rate reduction (in Hertz). The Bit Crusher is the to-go effect for “destroyed” or “8-bit computer game” type sounds.

Stereo Matrix: This effect lets you increase the stereo width of a sample (via the “Boost” control) and/or adjust the level of mono content in the signal (via the “Center” control). Conversely, stereo signals can be mixed to mono (via the “Mono” switch).

Stereo Delay: If you find that a signal doesn't have enough stereo information for your purposes, you can use this effect to add more – by delaying the left and/or right parts of the signal by several milliseconds. Note that this effect should not be applied to the OSC slot: as a rule, low frequencies should stay in the center (mono).

Room Reverb: Metrum has an in-built reverb unit optimized for bass drums (the “rooms” are relatively small). “Mix” controls the volume, “Size” controls the length of the reverb tail.

Gated Reverb: This has been a very popular bass drum effect for several years, so we included Gated reverb in Metrum. However, we have pre-configured it to sit exactly between two consecutive bass drum hits (Gated Reverb even follows song tempo changes). “Mix” controls reverb volume, and “Damp” reduces the high frequency content.

Equalizer: The lower area of the effects page is taken up by Metrum's 2-band equalizer controls. The equalizer gives you control over the spectral content of your sound by lowering or boosting the high, mid or low frequencies. You can either move the colored dots to different positions with your mouse, or use the individual knobs. The Q factor (width of each band) is controlled via the outer ring of the corresponding knob.

Mod Matrix: This button takes you to Metrum's modulation matrix, a general purpose tool for all kinds of modulation e.g. when you want a drum to become more distorted the harder you play the keys (Midi Velocity to Distortion Drive Level). The matrix has a total of 10 slots, each with a Source, Amount, and Target parameter. The Source and Target can be selected via a pull-down menu. The context menu here (via right-click) lets you clear either a single slot or all the slots at once. Again, there is a “Randomize” function available in the context menu for generating random modulation settings. Feel free to experiment with this feature!

MIDI: The MIDI page contains parameters that determine how Metrum reacts to MIDI data received from your sequencer and/or keyboard.

Velocity: This controls how loud a bass drum is played back according to how hard you play. “Main” applies to the entire sound, whereas OSC, L1, L2 and L3 only apply to the corresponding slot (for individual velocity control).

Velocity Curve: MIDI velocity is mapped to a curve (positive or negative logarithmic) ranging from 0 (soft) to 128 (hard). The center position (64) is flat i.e. linear.

MIDI Note Lgth: These switches determine whether slots will react to the length of played notes. Standard envelopes effectively “loop” during the Sustain phase, only moving on to the Release phase when notes are actually released. This lets you play short or long kicks depending on how long you play notes. If all these switches are off, the length of the bass drum is defined by the Amp or Main Envelope (see above).

MIDI Note Pch: These switches determine whether slots will react to different MIDI notes. If switched on for all slots, your bass drum can be played tonally, like a synthesizer. If e.g. L3 is the only slot where MIDI Note Pitch is switched off, all slots except L3 will change pitch according to the played note.

Pitchbend Rng: Pitchbend Range specifies how much pitch offset (in semitones) will be applied to the sound when Metrum receives MIDI pitch-bend data (e.g. from the center-sprung wheel on your keyboard). You can set separate values for positive (up) and negative (down) bending.

Pitchtrack: For slots where MIDI Note Pitch is switched on (see immediately above), this knob specifies the degree to which pitch will follow MIDI notes. The standard setting is 100% (e.g. C to C# will be exactly one semitone, C0 to C1 will be one octave). Values below 100% mean that the interval between notes will be narrower, even down to a few cents (hundredths of a semitone). Lower values are useful for ensuring that your bass drum is not pitched too strongly according to MIDI note, especially when sounds are mostly atonal.

Root Key: Determines the basic (“root”) pitch of your bass drum.

System: The System page is reserved for global settings (applied to all sounds).

Limiter: As already mentioned, Metrum has an in-built limiter which removes the risk of unwanted digital clipping caused by setting volumes to high. Metrum's limiter can also be used as a sound-shaping processor, delivering a hard-compression effect when fed with very “hot” signals. Although recommended at all times, you can switch the limiter off here.

Gat. Rv. Reset: The Gated Reverb Reset lets you specify whether rapid consecutive notes will suppress the Gated Reverb effect (see Effects page). Practically: If you play a fast bass drum roll, you probably won't want a gated reverb during these notes! When you switch “Gated Reverb Reset” on, the effect will only appear where there is sufficient room between notes to accommodate those created by the effect.

Randomizer: Metrum includes a highly effective and powerful randomize function activated by clicking on the large “Randomize” button immediately above the main display. The scope of this function i.e. which parameters are affected via the Randomizer button, is specified by this switch.
OSC: Loads a random oscillator preset, with a relatively low probability of creating a complete randomized oscillator sound from scratch.
Layer: All sample layers are filled with random content, and the layer's settings and envelopes are randomly generated.
FX: All parameters in the Effects page (including the Equalizer) are randomized.
MOD: All parameters in the Mod Matrix are randomized.

Content Loc.: Content Location. Specifies the path where Metrum can expect to find its files (“Factory Content”).

Other Elements:

Preset Display: The info-box at the top of the plugin window shows the name of the currently loaded preset as well as its origin (category or expansion).

Memory Button: Immediately to the right of the preset display is a “Memory” button giving you direct access to the basic Load, Save and Import functions.

Pitch and Mod wheels: If you do not own a MIDI keyboard with wheels, you can use these virtual wheels instead. Note: All factory presets make use of Modwheel data (usually for low cut filtering). Of course there is nothing preventing you from redefining the wheel functions in the factory presets as well as in your own creations!

GUI Modifiers 1-3: The three large knobs below the main display are general-purpose controls you can use as modulation sources in the Mod Matrix. All sounds in Metrum's factory library make use of all these knobs. For instance, GUI Modifier 1 could close the Bit Crusher while (at the same time) add more distortion and reverb. The GUI Modifiers can be given more descriptive names (simply double-click on the text field below the knob).

The GUI Modifiers can be automated (by hardware MIDI controllers for example) by using MIDI CC70 (knob1) CC71 (knob2) and CC72 (knob3).

Readout Display: At the bottom of Metrum's window is a status line displaying the value of the parameter currently underneath the mouse pointer.

Automation:

All Metrum's controls can be automated from the host application / sequencer. For details of how to automate plugin parameters in your host software, please refer to the host's documentation.

Tips and new features:

We intend to continually update and extend Metrum. Whenever new functions are added, they will be explained here.

How to: Save your own kicks

Please go to your “Metrum” working directory. This is where the file “MetrumFactory.fpk” is. (You can find it by going to the SYSTEM page, the path is shown there). You will find a folder “userdata” inside the working directory. Inside this folder, another two folders are located: “kck” (kick presets) and “osc” (Oscillator presets). Please create at least one additional folder in each of those two folders – This is where you can store your presets. An example could be: “\userdata\kck\my house kicks\”. Inside this folder your kick presets may be stored. A folder “my house kicks” will appear then inside the “Metrum” librarian. You can create as many folders as you wish.

User content (your own creations) will be displayed in another color (blue), to separate it from the factory content (yellow).

Technical Support: www.vengeance-forum.com

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