

EXS24 mk II

This readme describes the new features of the Emagic Xtreme Sampler 24 Bit version Mark II in Logic 5.5.

Important: the EXS24 mk II is 100% file compatible with the original EXS24 (mk I) – you can continue to use your existing EXS library without conversion. Instrument files saved with the "mk II" can even be loaded into the "mk I" found in older Logic versions – but parameters that are exclusive to the mk II will be ignored. (More details: see section **EXS24 mk I backward compatibility** below).

Obviously, the GUI (graphical user interface) has been extensively redesigned and offers many new features. All parameters that were not originally found in the GUI of the mk I (only visible with the "001011"-button engaged) are now incorporated into the GUI. Given this redesign, some of the less frequently used pre-set modulation faders of the mk I have been removed. Their functionality has, of course, been retained – with expanded flexibility – inside the modulation matrix (more details: see section **EXS24 mk I modulation paths** below).

General

Help Tags

Clicking or moving any fader or knob shows a pop-up Help Tag that indicates the current numerical parameter value. (In Windows, Help Tags are known as "Tool Tips").

Used voices display



There is a new numerical display (to the left of the Instrument Load flip menu) which indicates the number of voices currently in use.

Unison mode



This new mode plays multiple EXS 24 mk II voices when each key is triggered:

- In Poly mode, 2 voices per note
- In Mono- or Legato mode, you can adjust the number of voices per note with the parameter "Voices" (internally this value is limited to 8 – which is more than enough for fat unisono sounds!)

The voices are equally distributed in the panorama field and are symmetrically detuned, dependent on the "Random" knob value.

Please keep in mind that the number of actually used voices per note increases with the number of layered sample zones.

Instrument +/- buttons



You will find "plus" and "minus" buttons to the left and right of the Instrument Load flip menu/display. These buttons allow you to browse to the next/previous Instrument (sound) of your sound library (if necessary, this will change folders in accordance with their order of appearance in the menu). Please note that the global "Next/Previous EXS Instrument" Key Commands also perform the same function.

Hold via



This determines the modulation source which triggers the sustain pedal function (hold all currently played notes, and ignore their note off messages until the modulation source's value falls below 64). The default is controller #64 (MIDI standard). You can change it if there are reasons to disable Sustain with CC#64, or for triggering Sustain with any other modulation source.

Crossfade (Xfade)



"Xfade" allows you to crossfade between layered sample Zones with adjacent "Select Range" settings (in earlier versions "Select Range" was labeled "Velocity Range"). Please read the "Sample Select" section which follows.

Crossfades are controlled by two parameters:

Amount

This is the range of velocity (or other modulation sources) values in which the crossfade takes place. The "Select Range" setting of all Zones will be expanded by this value, with the crossfade taking place in the expanded area. When the Amount parameter is set to "0", the EXS24 mk II will switch between sample Zones in exactly the same fashion as earlier versions (Velocity Switching).

Type

You can choose between 3 different fade types for the velocity crossfade:

- dB linear
- linear (gain linear)
- equal power

Sample Select

This is "just" another modulation Destination – but it is important to know a little bit more about it. By default, Sample Select is controlled by velocity (via the default "Velocity to Sample Select" modulation path). The velocity value determines which of the layered Zones with different Select Range settings (velocity layers) will sound. You can also use modulation sources, other than velocity – even multiple sources (in multiple modulation paths)!

If planning to do so, however, please keep in mind the fact that all sources (except "Velocity" and "Key") cause all velocity layers to run simultaneously – using up as many voices as there are layered Zones. This also happens in cases where the Zones are not audible at the current control level.

If a continuous controller (e.g. the mod wheel) is chosen, you can "step" through the velocity layers during playback. This is where the XFade parameter becomes important, as it allows smooth transitions between velocity split points.

Keep in mind that you can also combine velocity and mod wheel control by using the modulation matrix (more details are found in the **Modulation Matrix** section below).

Pitch

Random Detune

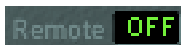


This knob controls the amount of random detuning which will apply to every played note.

"Random" ranges from 0 to +/- 50 cents.

You can use Random Detune to simulate the tuning drift of analog synthesizers. This parameter can also be effective in emulating a "natural feel" for some stringed instruments.

Remote



The "Remote" parameter allows you to easily pitch complete EXS24 Instruments in real-time. To do so, set the "Remote" parameter to the key of your MIDI Keyboard which you would like to use as the "original pitch". All keys in a range of ± 1 octave around this key will now pitch the entire Instrument. This two octave range is similar to the Pitch Bend function, but is quantized to semitones.

Please note that the 2 octaves of remote keys don't actually trigger the instrument – they are used exclusively for semitone tuning.

Filter



There is new, improved filter section in the EXS24 mk II. The most important message first: All the great sounding filter modes of the EXS24 mk I are included, and sound 100% identical to the original. The new modes simply expand on the possibilities of the older filter.

Lowpass (LP)

There is a further slope setting: 6 dB per octave (1 pole) which is very useful in cases where you want a slightly "warmer" sound without any drastic filter effects, e.g. in order to smooth "overly bright" samples.

Fat (Fatness)



The Fatness mode is now separate from the slope setting, and is not exclusively linked to the 24 db/oct slope, as in the previous version. This allows its use with the 18, 12 or 6 db/oct slopes.

Fatness preserves the bass frequency response, even with high Resonance settings. Please note that this only applies to Lowpass filters. Together with High or Bandpass filters *Fatness* does not have a function.

Highpass (HP)

The new Highpass filter is a 2 pole (12 dB/oct) design. A Highpass filter reduces the level of frequencies that fall below the Cutoff frequency. It is useful for situations where you would like to suppress the bass and bass drum in a sample, for example, or for creating "classic" Highpass filter sweeps.

Bandpass (BP)

The new Bandpass filter is also a 12 db/oct design. A Bandpass filter reduces the level of

frequencies above *and* below the Cutoff frequency. Use it whenever you wish to isolate the mid frequencies of a sample, for use in your mix.

LFO 3



There is a new LFO available which always uses a triangular waveform. LFO 3 can oscillate freely between 0 and 35 Hz, or can be tempo synchronized in values between 32 bars and 1/128 triplets.

Modulation Matrix

The modulation matrix is the dark horizontal band that spans the center of the plug-in window. It consists of 10 modulation paths, each linking a modulation **Source** with a modulation **Destination** (the sound parameter which you would like to modulate). This is similar to the use of patch cords on modular synthesizers, but with the additional option of control over the modulation amount **via** another modulation source.



Creating a new modulation path is easy:

- first choose the **Destination** ("Dest"),
- then choose the **Source** ("Src").

The green triangular fader on the right side of each modulation path allows you to set the modulation *depth* with a bipolar range (positive or negative value).



In this example, the LFO1 speed is modulated by channel pressure (aftertouch) messages of a

MIDI keyboard.

You have the option of inserting another modulation source in the middle slot labeled **via**. In this scenario, the green triangular fader will divide, allowing you to set a *range* for modulation depth. The exact position (modulation depth) inside this range is determined by the value of the **via** modulation source.



In our example, the key number of the MIDI keyboard ("Key") determines how strongly channel pressure controls the speed of LFO1. For more experienced users, you'd read the picture like: "pressure to LFO1 speed via key number".

Inverting Sources

You can also invert the direction of a source's effect by clicking the **inv** button (right of the word **Src** or **via**), depending on which of the sources you would like to invert.



In this example, we inverted the "via" modulation source. You can see how the green and orange triangles have swapped positions. The orange triangle always marks the modulation depth for the maximum value of the "via" source, while the green triangle always marks the modulation depth if the "via" source is at its minimum value. They are reversed by inverting the modulation.

Bypassing Modulation Paths

You can temporarily disable the entire modulation path with the "b/p" button, found alongside the word "Dest".



In our example, both modulation sources - "Pressure" and "Key" - are disconnected from the modulation destination "LFO1 Spd". Clicking the "b/p" button a second time reconnects the modulation path, restoring the old modulation depth settings.

Common hints

Please note that the EXS24 mk II also allows the use of so-called "2nd order" modulation destinations (such as envelope times, LFO speeds etc.) – functionally outperforming many analog synthesizers.

The same source can be used as often as you want to control different destinations.

The same destination can be controlled by different sources. The input values are accumulated.

EXS24 mk I modulation paths

Many of the modulation paths that were available as sliders on the original EXS24 mk I are now part of the modulation matrix. In order to reconstitute the modulation sliders of the mk I version, click on the button in the upper-right corner and choose "(Recall default EXS24 mk I settings)" from the pop-up menu. This will load the mk I modulation paths into the matrix:

- Velocity to Sample Select
- LFO 1 to Pitch via ModWheel (= Ctrl#1)
- Velocity to Sample Start (inv)
- LFO 2 to Filter Cutoff via ModWheel
- Velocity to Filter Cutoff
- Envelope 1 to Filter Cutoff via Velocity
- LFO 2 to Pan via ModWheel

You can, of course, freely alter the settings of these modulation paths, e.g. exchange modulation sources with sources which were not available in EXS24 mk I (see a complete list of sources and destinations below).

EXS24 mk I backward compatibility

For technical reasons, the settings of the modulation matrix can not translate backwards to the EXS24 mk I. If you are a sound designer and want your products to be compatible for Logic 4.x users, we recommend the use of Logic version 5.3 (Mac OS X: 5.4) with the EXS24 mk I. Please bear in mind the fact that the EXS24 mk II is free to all registered Logic 5 users, and that the majority of our users have already updated to version 5.

List of modulation destinations

Sample Select
Sample Start
Glide Time
Pitch
Filter Drive
Filter Cutoff
Filter Resonance
Volume
Pan
Relative Volume

Relative Volume (auto adjust)
LFO1 Dcy./Dly
LFO1 Speed
LFO2 Speed
LFO3 Speed
Env1 Attack
Env1 Decay
Env1 Release
Time
Env2 Attack (Amp)
Env2 Decay (Amp)
Env2 Release (Amp)
Hold

List of modulation sources

Side Chain (level)
Maximum
Env1
Env2 (Amp)
LFO 1
LFO 2
LFO 3
Release Velocity
Pressure
Pitch Bend
Key
Velocity
Control#1
...
Control#120

Controller 7 and 10 are marked as "(not available)", Logic uses these controllers for volume and pan automation of the audio object. Controller 11 is marked as "(Expression)". It has a fixed connection to this functionality, but it can also be used to control other modulation sources additionally.

We wish you as much fun with the EXS24 mk II as we had developing it.

Your Emagic Team