Mixfood Unison Xs Sample-based Synth

Rack Extension for Propellerhead Reason

By Studio Corbach
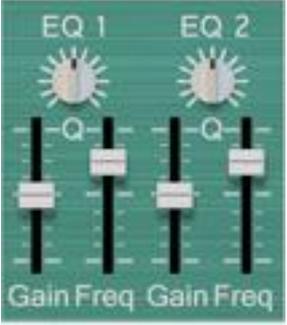

Mixfood Unison Xs is a sample-based synthesizer, the perfect tool for creating deep bass sounds and sharp synth sounds!

Equipped with 2 oscillators with a combined number of 1100! different waveforms, dedicated envelopes, LFO, pitch drop, effects, and a Unison effect with Stereo-spread. On the master output an extra filter is added. On top of it all a Sub oscillator is available to add extra depth to your sounds. For endless creative possibilities 6 audio outputs are available (main mix, 'dry' and 'wet' signal of each oscillator and sub-osc).

Parts

	Oscillators. Mixfood Unison Xs features 2 oscillators, that are always playing at the same time. Each oscillator contains 550 different samples. Use the arrow buttons to 'browse' through the samples or click and drag on the sample-display to select the sample you want. **Pan.** Panning control for oscillator 1 & 2 **Glide.** Glide function for oscillator 1 & 2 **Vel.** Velocity control for oscillator 1 & 2 **Each oscillator has its own controls** **Level.** Volume control for the oscillator **Shape.** Add minimal variation to the samplesound. **Semi.** Raise or lower the tuning, changing the frequency of the oscillator, in 24 semitone steps (2 octaves). **Cent.** Raise or lower the tuning, changing the frequency of the oscillator from -50 to +50 cents (100th of a semitone). That's down or up half a semitone.
	Unison. Mixfood Unison Xs features a 4 voice Unison module with stereo spread. **Voices.** Click on the display to choose the voices. **Detune.** Turn the knob to detune the voices. **Spread.** Turn the knob to create a stereo spread.
	Filter. With this control you can set filter 1 to operate as one of 4 different types of filter. **Display**. Click on the display to choose the filtertype (Low pass 12, Low pass 24, Band pass 6, High pass 12) **Cutoff**. The cutoff parameter determines which area of the frequency spectrum the filter will operate in. **Resonance**. The filter resonance parameter is used to set the filter characteristics, or quality.

Haas Swap Width	**Haas effect.** **Haas effect On/Off.** Turn on or off the Haas effect. **Haas effect swap.** Swap the Haas (delay) effect from left to right. Default the left channel is delayed. **Haas effect width.** Set the width (delay-time) of the Haas effect.
EQ 1 EQ 2 Q Q Gain Freq Gain Freq	**EQ 1 & 2.** There are 2 EQ's that affect the main mix of oscillator 1 & 2. **Gain.** Specifies how much the level of the mid frequency range should be boosted or cut. **Frequency.** This determines the center frequency of the mid EQ, i.e. at which frequency the level should be decreased or increased. **Q.** This governs the width of the affected area around the set center frequency. The lower the value, the narrower the affected frequency range.
Distortion Transistor High Low Drive Mix	**Distortion.** **Mode**. Transistor (stereo hard clipping) or Tube (mono soft clipping with DC bias). **High cut**. Low pass filter after distortion. **Low cut**. High pass filter before distortion. **Drive**. Set the amount of signal is affected by the distortion module **Mix**. Set the balance between the unprocessed (dry) signal and the effect (wet) signal.
Flanger Rate Depth Delay Phase Fbck Mix	**Flanger.** **Rate**. Set the modulation rate. **Depth**. Set the depth of the modulation, by how much the delay time should be modulated. **Delay**. Set the delay time of flanger effect, a flanger effect uses a short delay time. **Phase**. Set the phase offset between the left and right modulation. This produces a sort of panning-like effect. **Feedback**. Set the amount of effected signal to be fed back to the input. This affects the intensity and character of the effect. **Mix**. Set the balance between the unprocessed (dry) signal and the effect (wet) signal.
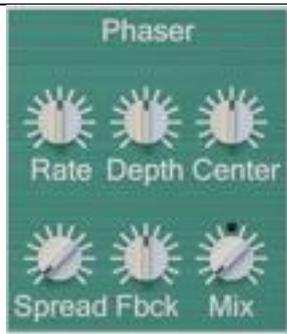
		Phaser. **Rate**. Set the speed of the effect modulating the frequency parameter. The higher the value, the faster the phaser sweeps. **Depth**. Set the depth of the frequency modulation, by how much the frequency parameter should be modulated. When turned to zero, the effect will be a static, formant-like sound (add a little feedback to hear the effect). **Center**. Set the center frequency the effect will modulate to create phase sweeps. **Spread**. Set the offset between left and right center frequencies. This is a panning like addition to the affected signal. **Feedback**. Set the amount of effected signal to be fed back to the input. This affects the intensity and character of the "tone" in the effect, similar to the resonance control on a filter. **Mix**. Set the balance between the unprocessed (dry) signal and the effect (wet) signal.
		Chorus. **Voices**. Set the number of chorus voices. **Rate**. Set the rate of the modulation delay time, the higher the value, the faster the sound will oscillate. **Depth**. Set the depth of the modulation delay time, how much the delay time should be modulated. In combination with the delay knob, the effect will be "frozen" (turn the mix knob up the hear the effect better). **Delay**. Set the delay time of the chorus effect. **Mix**. Set the balance between the unprocessed (dry) signal and the effect (wet) signal.
		Delay. **Mode**. Sets which channel(s) feedback is taken from. **Sync**. (to the beat) On/Off Turn on to synchronize the delay time (delay signal) with the beat, or turn off to set the delay time in milliseconds. **Time**. Set the delay time in sync mode (synced to the beat) or in milliseconds (by switching on or off the sync button). **Panning (L/R).** Pans the delay effect to the left or to the right. Create interesting effects by setting different delay modes.

	Feedback. Set the number of delay-repeats (how long the delay continues to sound). **Mix**. Set the balance between the unprocessed (dry) signal and the effect (wet) signal.
	Reverb. **Low cutoff**. Low pass filter cutoff frequency, lower it to get more low frequencies in the reverb signal. **Time**. Set the length of the "reverb tail". **High cutoff**. High pass filter cutoff frequency, raise it to get more high frequencies in the reverb signal. **Pre-delay**. Set the pre-delay time, the initial delay before reverb. **Damping**. Damping of the reverb signal (progressive loss of high frequencies in reverb tail). **Mix**. Set the balance between the unprocessed (dry) signal and the effect (wet) signal.
	EQ FX. Special parametric eq that operates as an effect on the signal. Is is a parallel eq so the frequencies are added to the original signal. **Frequency**. This determines the center frequency of the mid EQ, i.e. at which frequency the level should be decreased or increased. **Q**. This governs the width of the affected area around the set center frequency. The lower the value, the narrower the affected frequency range. **Gain**. Specifies how much the level of the mid frequency range should be boosted or cut.
	Pitch Drop. **Sub.** Also affect the Sub-oscillator. **Depth.** + -> drop the signal from +1 octave to 0 - -> raise the signal from -1 octave to 0 **Smooth.** Slow down the effect.

LFO.

Sync (to the beat) On/Off. Set the (modulation) rate units to beats, quarter notes per cycle when sync is ON. Set the (modulation) rate units to Hz, cycles per second when sync is OFF.

Retrigger On/Off. When Off, all voices will be modulated together in sync. When On, the LFO for each voice starts from the beginning when the note is triggered

Sub. LFO is also affecting the signal from the Sub-oscillator.

Waveform. Set the waveform the LFO uses to modulate the chosen parameter(s).

Rate. Set the LFO's frequency. The modulation frequency can be synced to the beat or in milliseconds (by switching on or off the sync button).

(Start) Phase. This shifts the starting point in the LFO waveform. It is most useful when retrigger is off and sync is set to ON. Then it adjusts the alignment of the LFO waveform relative to beats on the song timeline.

Tune depth. Make the LFO modulate the tuning(pitch) of. Set the depth to positive to control the amount of modulation on the signal (increase the tuning parameter). When set to a negative value, control the modulation amount but the modulation will be inverted (reduce the tuning parameter). 100% pitch modulation = 1 octave.

Tune smooth. Makes the modulation effect smoother, smooth the parameter changes.

Volume depth. Make the LFO modulate the volume of. Set the depth to positive to control the amount of modulation on the signal (increase the volume parameter). When set to a negative value, control the modulation amount but the modulation will be inverted (reduce the volume parameter). 100% volume modulation = no volume.

Volume smooth. Makes the modulation effect smoother, smooth the parameter changes

Panning depth. Make the LFO modulate the panning of. Set the depth to positive to control the amount of modulation on the signal (right to left) When set to a negative value, control the modulation amount but the modulation will be inverted (left to right). 100% panning modulation = completely right or left.

Panning smooth. Makes the modulation effect smoother, smooth the parameter changes.

Filter cutoff depth. Make the LFO modulate the cutoff of the the filter. Set the depth to positive to control the amount of modulation on the signal (increase the filter cutoff frequency) When set to a negative value, control the modulation amount but the modulation will be inverted (decrease the filter cutoff frequency). 100% filter cutoff modulation = 25kHz.

Filter cutoff smooth. Makes the modulation effect smoother, smooth the parameter changes.

Filter resonance depth. Make the LFO modulate the resonance of the filter. Set the depth to positive to control the amount of modulation on the signal (increase the filter resonance percentage) When set to a negative value, control the modulation amount but the modulation will be inverted (decrease the filter resonance percentage). 100% filter resonance modulation = 100% resonance.

Filter resonance smooth. Makes the modulation effect smoother, smooth the parameter changes.

QE fx depth. Make the LFO modulate the EQ fx.

QE fx smooth. Makes the modulation effect smoother, smooth the parameter changes.
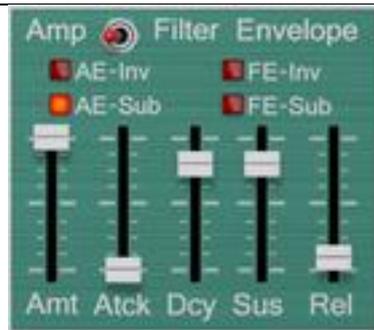
Envelopes.

Envelope switch. Switch between Amp envelope and Filter envelope

Amp envelope.

Amount. Set the degree (amount) the volume will be affected by the amp envelope.

Invert. If active, the amp envelope will be inverted.

Sub. Also affect the Sub-oscillator

Attack. Set the attack time for initial run-up of volume from nil to peak, beginning when the key is first pressed.

Decay. Set the time taken for the subsequent run down from the attack level to the designated sustain level. After the maximum value has been reached, the value starts to drop. How long this should take is determined by the decay parameter.

Sustain. Set the level the envelope should "rest at" after the decay until the key is released.

Release. Set the time it takes for the value/volume to fall back to zero after releasing the key.

Filter Envelope.

Amount. Set the degree (amount) the volume will be affected by the filter envelope.

Invert. If active, the filter envelope will be inverted.

Sub. Also affect the Sub-oscillator.

Attack. Set the attack time for initial run-up of the filter(envelope) from nil to peak, beginning when the key is first pressed.

Decay. Set the time taken for the subsequent run down from the attack level to the designated sustain level. After the maximum value has been reached, the value starts to drop. How long this should take is determined by the decay parameter.

Sustain. Set the level the envelope should "rest at" after the decay until the key is released.

Release. Set the time it takes for the value to fall back to zero after releasing the key.
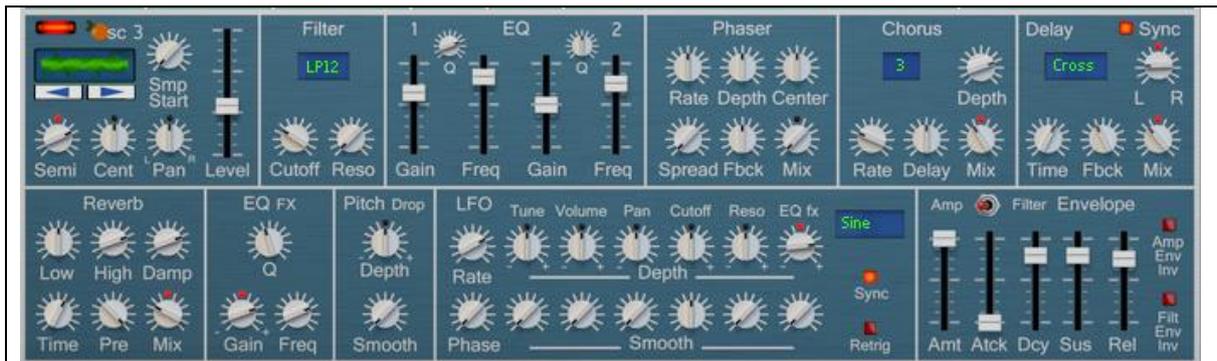
Added in version 2.0, a third oscillator with new waveforms. The controls are the same as described above.