MANUAL

messiah

FILTER

Cutoff: Frequencies lower than this setting will pass the filter. (Lowpassfilter). Res= Resonance. Gives more emphasis to the frequency set as cutoff frequency. Filter envelope: The level of the filter envelope.

KB track: Makes the highest notes brighter. It is a cutoff frequency compensation.

Mode: Filter can be in lowpass, bandpass, highpass or notch mode.

Lowpass: Only sound lower that cutoff will pass.

Highpass: Only sound higher than cutoff will pass.

Bandpass: Only sound in a band around cutoff will pass. Res sets bandwidth.

Notch: Only sound over and under the band will pass. Res is bandwidth

Filter envelope. Affects how the sound develop over time:

Attack: Start time. Time from zero level to full level.

Decay: Time from full level to sustain level.

Sustain: The level when the envelope is finished and you still hold you hand on the keys.

Release: Fade out time after you lift your hands from the keybaord.

You can make the graphic envelopes visible with this button:

And it looks like this:

You can select the curve for each stage. The upper is filter envelope, the lower is amp envelope. You have to play to see the changes for amp envelope.

The envelopes has 2 options:

Keyb. follow: Shorter sounds in the highest ranges. (Like a piano).

Release: Release stage off/on

MODULATION

LFO

Rate: Speed from 0.04 to 20 Hz.

Sync: Sync to host clock. Overrides rate knob when on.

Level is also available in control section: "Wheel LFO"

The lower row:

Source mix: Balance of LFO or noise.

Destinations:

FRQ A: OscillatorA pitch

PW A: Oscillator A pulse wave modulation. (Pulse length).

FILTER: Filter cutoff frequency.

If you go to page 2 there are 3 more LFOs.

LFO2 is hardwired to oscillator 1 pulse-width.

LFO3 is hardwired to oscillator2 pulse width.

LFO4 is hardwired to pitch modulation from modulation wheel.

RATE = speed SYNC = If LFO is set to sync, this will also affect LFO 2, 3 and 4.

The purpose of LFO 2, 3 and 4 is to do the basic modulation, so LFO1 can be used for more creative things.

Note that pulse witdth modulation is sent to flexi-oscillator only. And it can perform a lot more than pulse-width modulation depending on the oscillator mode.

POLY-MOD: Osc B and filter envelope used as modulation signal.

The levels of filter envelope and osc B is mixed and used as modulation signal.

Filt env = filter envelope level

Osc B = oscillator B level

Destinations:

FREQ A: Oscillator A pitch

PW A: Oscillator A pulse width length.

Note that the foot-pedal can also be used as modulation signal in polymod. It is selected in the control section "foot polymod".

CONTROL

Page 1 Edit (All controls in one view).

Page 2 Keyboard

Page 3 LFO/monitor.

Page4 Osc= Oscillator settings

Hold: The synth will continue to play when you lift your hands from the keyboard.

Wheel LFO rate: Modwheel increases LFO rate.

Wheel morph: You can morph from wave 1 to wave 4 with the mod wheel when morph oscillator is set to manual morph mode.

Octave shift: At strong velocity the osc pitch is one octave higher.

Wheel oscB: This is a weird control intended for distortion. OscB is 5 semitones lower when mod wheel is at zero position (for power chords). 'When modwheel is at max oscB pitch is normal.

Panic: Send "all notes off" midi messages to all parts of the synth.

Wheel LFO: LFO level controlled from modwheel.

Foot polymod: Polymod voltage is controlled from foot pedal. With this control you can use polymod even when oscB and envelope is turned down in the polymod section. The foot pedal will provide the control voltage.

After filter: Aftertouch increases filter cutoff frequency.

AMP velocity: Velocity controls output level and envelope speed.

FILTER velocity: Velocity controls filter cotoff frequency.

OSCILLATOR SETTINGS

Freq= Pitch in half-steps. Range: 5 octaves.

Shape=Oscillators off/on switches. Select the waveform and oscillator mode in the oscillator page. Most patches in the factory bank is set up like the Prophet5. A: saw - square. B: saw - triangle - square.

Pulse=Pulsewidth. This is sent to flexi oscillator and can do more than pulse wave modulation depending on the oscillator mode.

Sync A to B. The pitch of osc A is hardsynced to osc B. (Flexi B must be on, because it controls the pitch.)

Osc sync in oscB= sync to host clock.

Low: Osc B in low mode. Used when oscB is modulation signal in the Poly-mod section. The pitch is 5 octaves lower in low mode.

Keyboard control: When on, incoming midi messages will control the pitch of oscB, and it will track the keyboard. When off oscB is free running. When on in low mode each voicecard will have different pitch in Poly-mod.

Detune: Each voicecard has different pitch.

Pulse: Each voicecard has different pulse.

VCA: Each voicecard has different level.

Filter: Each voicecard has different cutoff frequency.

FLEXI DETUNE: Detuning of the flexi-oscillator.

MIXER:

OscA = OscA level 0-10.

OscB = OscB level 0-10.

Noise = noise level 0-10.

SYNC

This button forces the pich of oscillator A to follow the pitch of oscillator B. So you set the pitch for OSC A in the OSC B section. The trick is to sweep the pitch of OSC A with the LFO, so that the sync gets some pitch-variations to work with. NB: Only works if oscillator FlexiB is on. (Because it is sync source). Tip: You can control the pitch of oscA with foot pedal to make wah-wah effects.

GATE / ARP SECTION

Tempo control is also sent to LFO sync, OscB sync and Delay sync.

Speed: How the tempo is divided for use with the gate and arp. The LFO, OscB and delay has its own divide controls.

Sync: Sync to host clock. Use this setting when you compose songs. Off mode is intended for live use.

The other controls is for live use:

Foot tap: Tap tempo with sustain pedal intead of the tap button when on.

Tap 4 times: The tap tempo button.

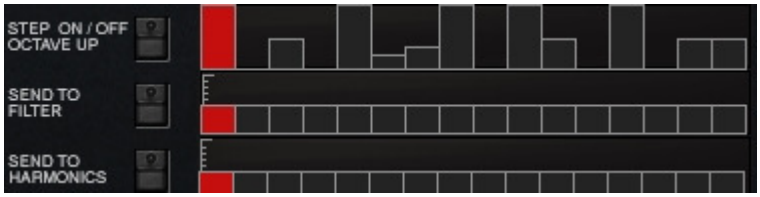
BPM: Actual speed display.

Tempo slider: You can use this instead of the tap button when sync is off. You can use both the tap button and tempo slider, the last changed control will be displayed.

Lenght: Note length. Full is 100%

Octaves: The arpeggiator will work with 1 - 4 octaves.

Hold: Use this in addition to the hold button in the control section. The synth will continue to play when you lift the hands from the keyboard.



The gate has off/on switches for each row.

First row: Sent to oscillator pitch. -12= off.-12 to 0 is normal pitch. 0-12 is half-steps from normal pitch to one octave. So full is one octave up.

Second row: Sent to filter cutoff.

Third row: Sent to oscillator harmonics. This is a kind of built in filter in the oscillator.

PAGE

Page1: Edit page. All controls in one view. Controls, arp/gate and effects.

Page2: GUI keyboard.

Page3: Monitor and LFO 2, 3 and 4.

Page4: Oscillator settings.

OSCILLATOR PAGE

Common for all oscillators:

Drift depth: The level of the oscillator`s pitch LFO

Drift speed: The speed of the oscillator`s pitch LFO.

Osc mode:

Wavetrain: All waves played in fast sequence after each other. Will create noisy sounds.

Morph2: Use man morph knob or "wheel morph" in control section to morph between the 4 waves.

AutoMorph2: A built-in LFO in the oscillator will morph between the 4 waves with the speed set in the "auto morph time" knob.

Step: Manual morph - same as Morph2, but with no blending between the waves.

Wave1: Wave1 only is played. This mode saves CPU.

Unison voices: 1-7 voices. In addition the whole synth can be in unison mode (5 voices) - so this oscillator can play 7 X5 voices = 35 voices if the whole synth is in unison mode.

Detune: Makes each voice out of tune.

Detune stretch: Makes the detuning less linear between the voices.

Osc mode:

Single: Only wave A. This saves CPU. PWM= Phasemodulation.

Shaped EnvA: Wave A is shaped by the envelope. PWM= Balancebetween the shaped and unshaped waveform.

Shaped EnvB: Wave A is shaped by the envelope. PWM= Phasemodulation of wave A.

Biwave: WaveA is played first, then waveB. PWM= Phasemodulation. OBS: B/Env offset has no function in this mode.

Pulse: WaveA saw and WaveB saw is used to produce pulse wave with pulse width modulation. PWM is pulse width modulation. (This is the original Prophet5 mode.) Both waves must be saw to produce traditional PWM.

Dual A+B: The 2 waves are added. PWM= Phasemodulation.

Dual A-B: The 2 waves are subtracted. PWM= Phasemodulation.

Dual Mix: Both waves are played. PWM= Balancebetween the 2 waves.

Ring depth: The waves performs ring modulation. PWM= Ring-modulationdepth.< /FONT>

Ring-width+A: The waves performs ring modulation. PWM= Phasewidth/gap between the waves.

Phz dist wave: The 2 waves performs phase distortion. PWM= The depth of phase modulation.

Phz dist envA: Envelope distorts the phase of wave A. PWM= The depth of phase modulation.

Phz dist envB: Envelope directly drives the phase of waveA. PWM= Phasemodulation of wave A.

Envelope: Only the envelope is output. This will not make any sound, but can be used as modulator signal.

Ext. indexing: PWM directly drives the phase of waveA

WaveB/env offset: Pitch of waveB or depth of envelope.

Phase dist mode: You can select the mode that sounds best for the phase Phz dist modes.

Level 1-9: Level for 9 stages in the built-in envelope. The times are fixed.

HarmonicsA: Set the overtones from 0-256. It is like a built in filter. Harmonics A for the FlexiA oscillator controls the harmonics of all the other oscillators in the synth, except the flexi oscillators.

HarmonicsB: Set the overtones from 0-256. Like a built in filter.

The Flexi-envelope is displayed above the unison oscillator. You must play to see the changes.

OVERDRIVE

This is distortion. When set to off, the signal is bypassed, and that will reduce CPU-load.

High cut: Will remove frequencies above 5 Khz. Like a guitar cabinet.

When you increase the gain knob, the sound will become more and more like a square wave.

Overs: This is 2 times oversampling.

EQ: You can set the level and frequency for each band. I tried to emulate the Marshall JCM 800 eq when I designed it. (But of course the JCM 800 has fixed bands.)

You can use the EQ without distortion. Just set the gain to 0V.

DELAY

Speed: Delay time when sync is not selected.

Sync=Syncronization with host clock. Set sync speed with note values.

Feedback= number of repetitions.

Right speed 2X: Double delay time for right output. If you increase feedback the result will be ping-pong delay.

MODULATION EFFECTS

Mod=modulation off/on and chorus/ensemple/phaser selector.

Chorus:

Level: 0% = dry 100% = wet only. Best effect is at 50%. When under 50%, right phase is 180 degrees. When level is over 50% phase is normal.

Speed=rate for left and right. Speed2=Right speed offset

Depth=Depth of the modulation signal. At lowest settings the result is flanging. At the highest settings the result is chorus.

Feedback=Level ofthe feedback signal. Should be set to zero when used as a chorus.The phase of the right feedback signal is 180 degrees.

Ensemble

A-env=amplitude envelope level sent to detune.

LFO=LFOlevel sent to detune.

Detune=pitch-shifter that is mixed with the original signal. Detune is the amount of pitch shift.

Delay=delay time of the pitch-shifted signal.

Phaser

Speed=Speed of the phaser modulation.

Spread=Distance between the bands

Res=Resonance

Stages= Number of phaser stages.

MONO/POLY CONTROL

Glide= glide time.

Mono: Only one voice. Will not be retriggered unless you lift all hands from the keyboard.

Unison: 5 voicecards assigned to a single key. Used for fat sounds. Set detuning in "card-drift" section. Obs: The unison oscillator can also be in unison mode. Then it can play 35 voices!

Poly mode: Switch off mono and unison buttons. Polyphony: 8 voices.

CPU ADVICE:

There are off/on switches connected to the level knobs. Because of that you should always make sure that unused parts of the synths have zero level.

AUDIO QUALITY

The synth works internally at 32 bit. It automatically syncs to your soundcard sampling rate. So you can oversample the whole synth by setting the soundcard at 96kHz.

Please send me patches if you have created some. I am always interested.

Have fun!

Best regards

Gunnar .

Credits: Programming: Gunnar Ekornås . Custom modules by Chris Kerry , David Haupt , , Peter Schoffhauser , EVM,

Kelly Lynch , , Andy Medforth , Christian-W Budde. Programming advice: Chris Kerry and Peter Werner. Skin: Scott Kane. Made with Synth-Edit.