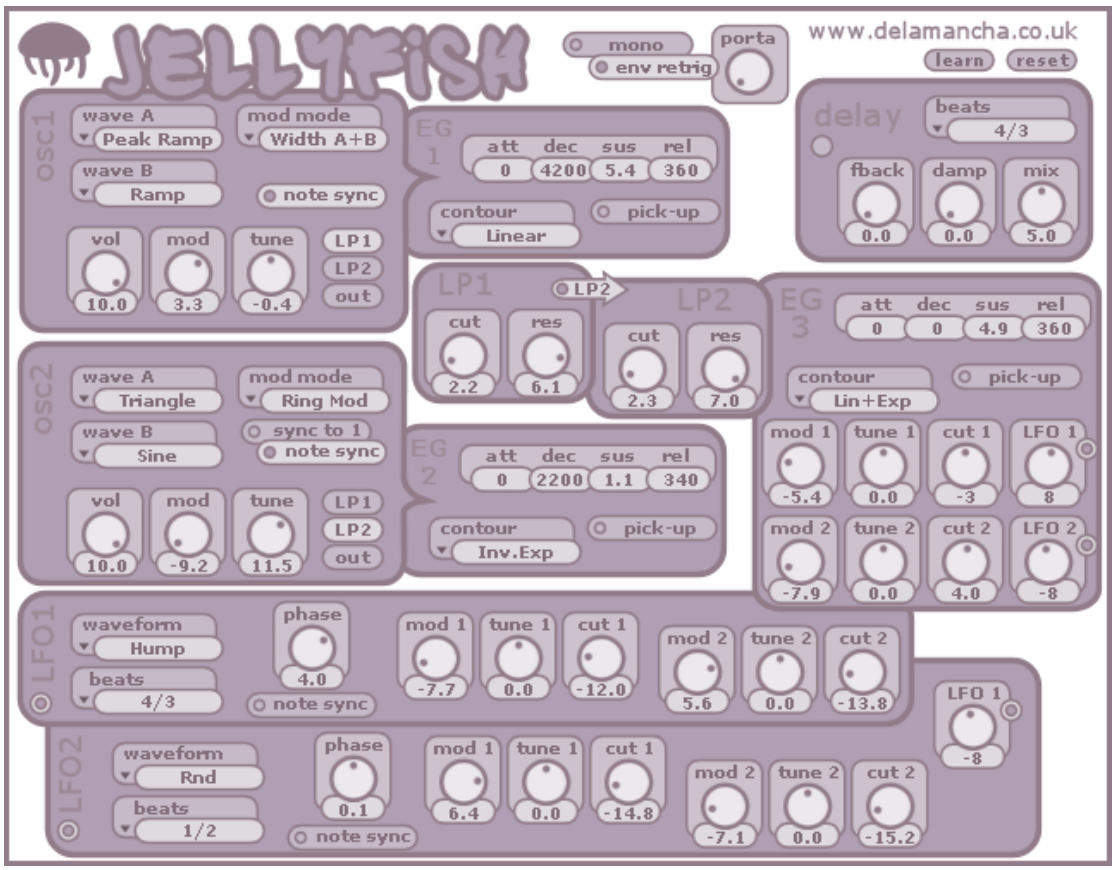

jellyfish was developed by **de la Mancha** with presets by **Runagate**
It is a VST synth for Microsoft Windows.

Introduction

jellyfish is a 4 oscillator synth with multiple modulation methods between the oscillators and of their various parameters which guarantees plenty of movement in the sound. This is great for evolving pads, wobbly bass, vibrant leads or just plain strangeness. Using addition, subtraction, phase difference, ring modulation or phase distortion, the oscillators can modulate each other to get a wide variety of sounds. 2 tempo-sync LFOs and an ADSR envelope can all modulate this inter-osc modulation, as well as pitch, filter cut-off and each other. A pair of resonant filters and a tempo-sync delay complete the deal

Features

- 4 oscillators arranged in pairs, with each pair able to modulate each other
- 9 inter-osc modulation methods, including phase distortion, phase difference and ring modulation
- ADSR envelope per oscillator pair, with unlimited values and definable contours
- 2 resonant low pass filters with flexible routing
- 2 tempo-sync LFOs with 16 waveforms and adjustable phase
- LFOs can modulate the inter-osc modulation, pitch and filter cutoff for each pair
- LFO2 can modulate LFO1
- 1 ADSR envelope can modulate as per the LFOs and modulate both LFOs
- Tempo-sync delay, with damping and mix level
- Oscillator and LFO note-on sync
- 11 waveforms per oscillator
- Midi learn / Midi CC parameters defined
- 50+ presets by Runagate

Installation

To install, you should copy the jellyfish.dll file from the zip file into your VST directory and install in your host as you would any other VST instrument.

Controls

Oscillator pairs
There are 4 oscillators, arranged in pairs. Eg Osc 1 = pair 1 (A and B)
Within the pair, the oscillators can modulate each other in various ways

Oscillator waveform
Choose each oscillators waveform from the drop down box. There are 11 different waveforms to choose from.

Mod Mode
Use the dropdown to choose the method you want to use for the inter-osc modulation
The 'mod' knob will change function depending on which mode is selected

Mod Mode	Modulation method	'mod' knob function
A only	Switches off osc B	None
A+B	Addition of A and B	Changes both phases
A-B	Subtracts B from A	Changes both phases
AB mix	Addition of A and B	Changes mix level
Width A+B	Addition of A and B	Changes phase difference
Width A-B	Subtracts B from A	Changes phase difference
Ring Mod	Multiplies A and B	Changes phase difference
Ring +A	Multiplies A and B, then adds A	Changes phase difference
Phase Distort	B distorts the phase of A	Changes depth of PD

Note sync
This will restart the phase of the oscillator each time a note is pressed

Vol
Changes the volume of the oscillator pair

Mod
Changes the mod value, according to the mod mode in use, see table above

Tune
Changes the pitch tuning of the oscillator pair, in semitones +/- 36

Filter routing
Choose from 'LP1', 'LP2' or 'out' to choose which filter the osc pair will feed into
You can also feed LP1 into LP2 for more complex filtering
'out' will bypass both filters and go directly to the synth output

EG 1 & 2
There are a pair of envelope generators, each dedicated to one of the osc pairs. They modulate the volume of the osc pair.

ADSR are attack, decay, sustain and release. Sustain is a scale of 0-10, for the vol level of the sustained part of the envelope, the others are in milliseconds.
You can enter any value you wish into the A, D & R sections, to give you unlimited envelope sizes

Contour
Choose from a selection of contours to shape the envelope and change the sound profile

Pickup
Using this mode, when the envelope is retriggered, it will begin the attack from whatever value was at the retrigger point. If this mode is not on, the attack will begin from zero. Pickup can help reduce clicking on some waveforms, but can also reduce the impact of attack

Filters
There are 2 Low Pass filters (LP) with a flexible routing system.
You can route either osc pair into any of the LP filters, and additionally can route LP1 into LP2
Some examples;

- Osc1 -> LP1 : Osc2 -> LP1 : LP1 -> LP2 (both into LP1, then into LP2)
- Osc1 -> LP1 : Osc2 -> LP2 : LP1 -> LP2 (Osc1 into LP1, then both into LP2)
- Osc1 -> LP1 : Osc2 -> out : LP1 -> LP2 (Osc1 into LP1 then LP2, Osc2 to output)

Cut
This adjusts the cut-off value of the filter, in kHz

Res
This adjusts the resonance of the filter at the selected cut-off

Monophonic mode
You can use the toggles at the top of the GUI to put jellyfish into monophonic mode. This also allows you to choose if overlapping notes will retrigger the envelopes or not, and how much portamento (pitch slide) between overlapping notes

MIDI learn
Press 'learn'
LED will light
tweak control on metamorph
tweak control on your MIDI controller
LED will go out

Press 'reset' to go back to default values

OK, that was the straightforward bit, now for some modulation fun…

Modulation possibilities
There are many ways to modulate the inter-osc modulation, pitch and filter cut-off in jellyfish. Each of these parameters can be modulated independently by 2 LFOs and 1 envelope, as well as the envelope modulating the LFOs and one LFO modulating the other.

This design is flexible, to allow you to modulate in many different ways. However, if you choose to modulate in every which way possible all at the same time, expect your CPU to warm up a little

LFO's (Low Frequency Oscillators)
There are 2 tempo-sync LFO's, both of which can modulate the same parameters. This allows some complex modulation if the LFO's have different waveforms and frequencies. In addition, LFO2 can modulate LFO1 for further complexity

Toggle
You can switch each LFO on/off with the toggle, to save CPU when not in use, or to assist with sound design

Waveform
Choose the LFO waveform from the dropdown box, 16 types to choose from

Beats
Choose the frequency of the LFO, expressed in beats for tempo-sync with your host. Ranges from 1/16th to 16 beats, in multiples/divisions of 2 and 3

Phase
Adjust the phase of the LFO, allows both phase difference with the played note and the other LFO

Note sync
This will restart the phase of the LFO each time a note is pressed

Modulation depth
The LFO depth (how much it modulates the target) can be adjusted independently for 6 parameters, 2 from each osc pair, 1 from each filter

- Mod1 – the mod parameter from osc pair 1
- Tune1 – the pitch parameter from osc pair 1
- Cut1 – the cut-off parameter from LP1
- Mod2 – the mod parameter from osc pair 2
- Tune2 – the pitch parameter from osc pair 2
- Cut2 – the cut-off parameter from LP2

Mod depth is –10 to +10
Tune depth is –60 to +60 semitones (+/- 5 octaves!)
Cut depth is –20 to +20 kHz
A negative depth value will invert the phase of the modulation

In addition, LFO1 can modulate LFO2 globally, which means all 6 parameter of LFO1 will be modulated by LFO2. This knob is –100% to 100% with a toggle to turn off if not required

EG3
Where EG1 and EG2 modulate the osc pair volumes, EG3 modulates all the same parameters as the LFO's as well as the LFOs themselves

ADSR are attack, decay, sustain and release. Sustain is a scale of 0-10, for the vol level of the sustained part of the envelope, the others are in milliseconds.
You can enter any value you wish into the A, D & R sections, to give you unlimited envelope sizes

Contour
Choose from a selection of contours to shape the envelope and change the sound profile

Pickup
Using this mode, when the envelope is retriggered, it will begin the attack from whatever value was at the retrigger point. If this mode is not on, the attack will begin from zero. Pickup can help reduce clicking on some waveforms, but can also reduce the impact of attack

Envelope depth
The EG depth (how much it modulates the target) can be adjusted independently for 8 parameters, 2 from each osc pair, 1 from each filter and both LFO's

- Mod1 – the mod parameter from osc pair 1
- Tune1 – the pitch parameter from osc pair 1
- Cut1 – the cut-off parameter from LP1
- LFO1 – the depth of LFO1
- Mod2 – the mod parameter from osc pair 2
- Tune2 – the pitch parameter from osc pair 2
- Cut2 – the cut-off parameter from LP2
- LFO2 – the depth of LFO2

Mod depth is –10 to +10
Tune depth is –36 to +36semitones (+/- 3 octaves)
Cut depth is –100% to 100% of the cutoff value
LFO depth is –100% to 100% of the LFO depth

A negative depth value will invert the direction of modulation (eg rising or falling pitch)

The LFO depths have a toggle to turn off if not required

User License Agreement

Credits

Thanks go to Runagate for the weird and wonderful presets

Thanks also to Jeff McClintock for creating SynthEdit and to the 3rd party SE module developers, without which this plug-in wouldn't exist.

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Links

SynthEdit	http://www.synthedit.com/
Dave Haupt Modules	http://www.dehaupt.com/SynthEdit/semodules.htm
Chris Kelly Modules	http://www.chriskerry.f9.co.uk/
KD Lynch Modules	http://www.rubyhex.com/synthedit/
Scoofster Audio Modules	http://scp.web.elte.hu/synthedit/modules.html
Runagate	http://briarmonsmetrach.googlepages.com/home

About the Developer

de la Mancha lives, eats, dreams and breathes VST plugins, seeking to bring randomization and modulation to the masses. He is also a producer of odd-skool breakbeat, downtempo glitchy beats and other assorted bleeps and noises. You can find his music at www.papadodo.co.uk www.3x0.co.uk and www.mono-log.co.uk

Sign up for the newsletter if you want to be kept in touch about plug-in releases and updates: www.delamancha.co.uk/contact.htm