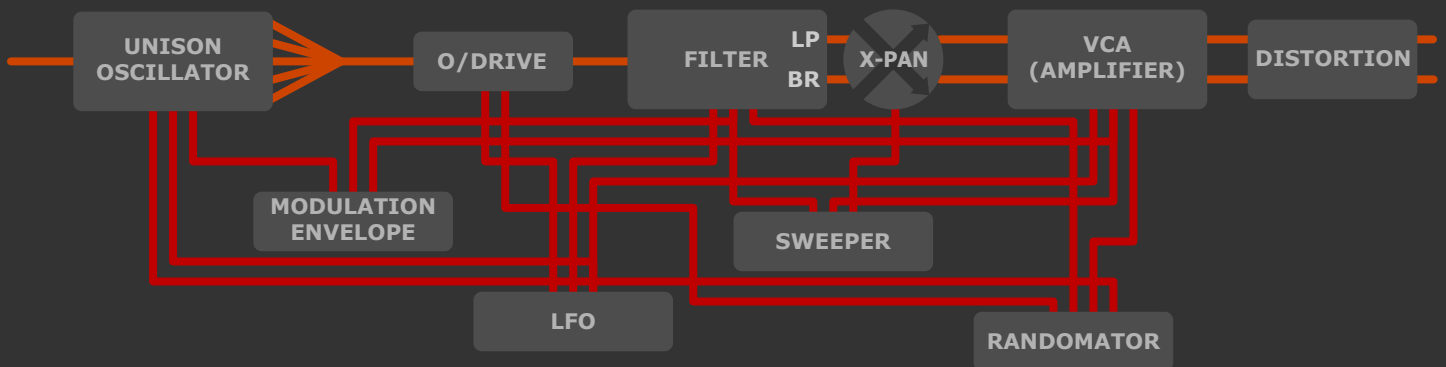# novakill ripsnorter

RIPSNORTER is a Virtual-Analogue [V/A] synth, featuring Chris Kerry's excellent Unison Oscillator, which has recently been updated to include PWM on all waveforms except Sine. The Oscillator feeds into a multi-mode filter that provides both Low-Pass and Band-Reject [Notch] outputs at the same time. X-Pan allows for a stereo signal path, with the Low-Pass output sent to one channel and Band-Reject to the other. There are plenty of modulation options which should allow you to create a broad range of useful timbres. The UI is slightly different from others in this range, in order to fit in a more comprehensive distortion set-up.
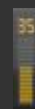

UI CONTROLS

SELECTOR - Click on the arrow to increment through choices or click on the display to select from a drop-down menu.

KNOBS - Change the value of any knob by clicking on it and dragging up/down. In the case of concentric knobs, click on the one you wish to change. i.e. The whole inner circle or the outer ring.

BUTTON [LED] - In the labelled state when lit.

SLIDER - Only used on Envelopes. Drag up/down to change values.

SELECTOR - Click to advance to next option

CONTROLS

OSCILLATOR

OCT	-2 [no lights] to +1 octaves [3rd light]		
WAVE	Click to select a waveform		
	SINE	Sine [no PWM]	
	SAW	Sawtooth	
	RMP1	Ramp	
	RMP2	Soft Ramp	
	RMP3	Peak Ramp	
	PULS	Pulse	
	TRI	Triangle	
	PEAK	Peak	
	OCTA	Octava [good for organs]	
	CLU1	Cluster 1	
	CLU2	Cluster 2	

PWIDTH — Controls Pulse Width
Inner knob sets width
Outer knob sets vartiation within Unison voices for a fatter sound

PWM — Envelope modulation of Pulse-Width

SYNC — Syncs waveform start to Note On

DRIVE — Overdrives the oscillator's output

UNISON
Inner knob sets the no. of Unison Voices.
Outer knob controls Unison Detune.
Small knob controls Unison Stretch.

CONTROLS continued...

ENVELOPE

A	Attack Time
D	Decay Time
B	Break Point Level
S	Slope Time
S	Sustain Level
R	Release Time

⌒   Select from 4 Interpolation modes:

No Lights	**LINEAR**
Light 1	**CONCAVE 1**
Light 2	**CONCAVE 2**
Light 3	**"S" CURVE**

↻   Select from 4 Loop Modes:

No Lights	**OFF**
Light 1	from **START**
Light 2	from **DECAY**
Light 3	from **BREAK POINT**

NOTES: Envelope times for this envelope are longer than for the **VCA** Envelope.

For smooth looping, either loop the whole envelope [Light 1] and set Sustain at zero or start the loop from the Decay Segment [Light 2] and set the Sustain value at maximum. Other settings are likely to cause audible clicks.

FILTER

LP24   Switch the Low-Pass Filter from 12 to 24dB/octave mode

                CUTOFF [Inner] and **RESONANCE** [Outer] Knobs are unlabelled.

MOD   Inner knob controls Envelope Modulation
            Outer knob controls Velocity Modulation

LP   Controls Low-Pass Filter Level [volume].

BR   Controls Band-Reject [notch] Filter Level.

X   Controls the X-Pan function.
        X-Pan uses the **SWEEPER** [see below] to modulate the stereo position of each Filter output [Low-Pass and Band Reject] in opposite directions. i.e. One pans from left to right, the other right to left.
        X-Pan has an ON switch and a Depth knob.

NOTE: Using X-Pan will automatically switch the **SWEEPER** LFO on and will set-up a stereo signal path inside the instrument. This can lead to higher CPU use than normal, so switch the X-Pan off if you do not intend to use it.

VCA

VOL   Master Volume control
            Outer knob controls Velocity Modulation.

WIDE   Inverts one channel to create space in the centre of the mix

PORTAMENTO   Portamento time [Legato only]

A D S R   ADSR envelope with linear interpolation.

LFO

WAVE   Select the LFO waveform:
            SINE
            TRIANGLE
            SAW

            RAMP
            SQUARE
            RANDOM

TIME   [Unlabelled] Inner knob selects Time from 1/16 note to 2 bars.
            Outer knob sets the delay time.

DESTINATION x 2 - Knob controls modulation depth
            Modulation range +/- 50%
            Negative values invert LFO phase.

RANDOMATOR

Adds a random factor to the selected parameter for each new note played. Use the Selector to set a destination and the knob to control the depth of the randomness.

SWEEPER

The SWEEPER is a specialised LFO, designed for longer, sweep-style modulation. As well as having its own controls, it is used by the **X-Pan** function in the Filter.

TIME   [Unlabelled] Set the LFO period from 1 bar to 16 bars.

DESTINATION [Unlabelled]

No Light	SWEEPER is off [no CPU use]
Light 1	to Oscillator FM
Light 2	to Filter Cutoff
Light 3	to both FM and Cutoff

DEPTH   Controls modulation depth [+/-]

DISTORTION

DRIVE/MIX Inner controls Drive
             Outer controls Wet/Dry Mix

HIGH/LOW Inner controls Low Cut
             Outer controls High Excite

MOD WHEEL

Select multiple destinations and use the **SENS**itivity knob to control the modulation depth. **PWM**, **DRIVE**, **CUT**, **BR** and **DIST** add extra modulation. When the **LFO** light is lit, LFO modulation is fully controlled by the Mod Wheel and the Destination knobs in the LFO itself set the maximum depth.

GLOBAL

MONO   Monophonic operation [no Unison]

RETRIGGER Retriggers all envelopes for each new note - Mono mode only

MIDI CC TABLE

PD OSCILLATOR

PARAMETER	CC	PARAMETER	CC
Waveform	21	OCTave	22
Pulse Width	23	PW Variation	24
PWM [env]	25	Drive	26
Sync	28		

UNISON

PARAMETER	CC	PARAMETER	CC
Voices	31	Detune	32
Stretch	33		

FILTER

PARAMETER	CC	PARAMETER	CC
Cutoff	13	Resonance	14
LP Gain	15	BR Gain	16
Envelope Mod	17	Velocity Mod	18
LP24 On/Off	19	Env -> BR Gain	20
X-Pan ON	10	X-Pan Depth	11

VCA

PARAMETER	CC	PARAMETER	CC
VOLUME	07	PORTAmento	05
Velocity to VOL	45	WIDE On/Off	46
Attack	41		
Decay	42		
Sustain Level	43		
Release	44		

RANDOMATOR

PARAMETER	CC		
Destination	105	Depth	106

MODULATION ENVELOPE

PARAMETER	CC	PARAMETER	CC
Attack	61	Interpolation	67
Decay	62	Looping	68
Break-Point	63		
Slope	64		
Sustain Level	65		
Release	66		

LFO

PARAMETER	CC	PARAMETER	CC
WAVEform	51		
Time	52	Delay	53
Destination 1	54	Depth 1	55
Destination 2	56	Depth 2	57

SWEEPER

PARAMETER	CC	PARAMETER	CC
Time	71	Mode	72
Depth	73		

DISTORTION

PARAMETER	CC	PARAMETER	CC
On/Off	111	Drive	112
Wet/Dry Mix	113	High Excite	114
Low Cut	115		

MOD WHEEL

PARAMETER	CC	PARAMETER	CC
PWM On/Off	81	Drive	82
CUToff On/Off	83	BR On/Off	84
LFO On/Off	85	Distortion On/Off	86
Sensitivity	87		
MONO On/Off	08	RETRIGGER On/Off	09

Intentionally blank