

# MICROFREAK OSCILLATORS CHEATSHEET

TYPE	WAVE	TIMBRE	SHAPE
<b>BasicWaves</b>	Morph	Sym	Sub
	<i>Morphing square -&gt; saw -&gt; 2 saws</i>	<i>Pulse width or phasing between saws</i>	<i>Sine sub</i>
<b>SuperWave</b>	Wave	Detune	Volume
	<i>Saw, square, triangle or sinus</i>	<i>Detuning amount</i>	<i>Detuned waves amplitude</i>
<b>Wavetable</b>	Table	Position	Chorus
	<i>Wave selection</i>	<i>Cycle position</i>	<i>Chorus effect amount</i>
<b>Harmo</b>	Content	Sculpting	Chorus
	<i>Morphing through harmonic amplitude tables</i>	<i>Morphing between sine and triangle</i>	<i>Chorus effect amount</i>
<b>KarplusStr</b>	Bow	Position	Decay
	<i>Amount of bow applied besides the strike</i>	<i>Position of the strike on the resonator</i>	<i>Amount of resonance</i>
<b>V. Analog</b>	Detune	Shape	Wave
	<i>Detuning between the two waves</i>	<i>Morphing from narrow pulse to square to hard sync formants</i>	<i>Morphing between triangle and saw</i>
<b>Waveshaper</b>	Wave	Amount	Asym
	<i>Waveshaper waveform</i>	<i>Wavefolder amount</i>	<i>Waveform asymmetry</i>
<b>Two Op. FM</b>	Ratio	Amount	Shape
	<i>Frequency ratio between oscillators</i>	<i>Modulation index</i>	<i>Feedback amount of op. 2</i>
<b>Formant</b>	Interval	Formant	Shape
	<i>Frequency ratio between formants 1 and 2</i>	<i>Formant frequency</i>	<i>Formant width and shape</i>
<b>Chords</b>	Type	Inv/Transp	Waveform
	<i>Octave, 5th, sus4, m, m7, m9, m11, 6th+9th, M9, M7, M</i>	<i>Changes inversion and frequency range of the chords</i>	<i>Waveform type: [0-50] = string-machine like waveform, [50-100] = 16 wavetables</i>
<b>Speech</b>	Type	Timbre	Word
	<i>Formants, colors, numbers, letters, words</i>	<i>Shift the formants up or down</i>	<i>Scan through words, depending on Type</i>
<b>Modal</b>	Inharm	Timbre	Decay
	<i>Amount of inharmonicity</i>	<i>Excitation brightness and dust density</i>	<i>Damping, decay time</i>
<b>Noise</b>	Wave	Timbre	Shape
	<i>Particle noise to white noise to metallic noise</i>	<i>Sample rate reduction (+ pitch control for square waves in metallic noise)</i>	<i>Morph between noise only (0%), noise+sine (33%), noise+triangle (66%), noise+square (100%)</i>
<b>BASS</b>	Saturate	Fold	Noise
	<i>Saturation of cosine osc.</i>	<i>Folding amount</i>	<i>Level of noise</i>
<b>SAWX</b>	Saw Mod	Shape	Noise
	<i>Gain of modulus</i>	<i>Chorus amount</i>	<i>Phase modulation amount</i>
<b>HARM</b>	Spread	Rectification	Noise
	<i>Partial relation: unison to octave</i>	<i>Partial rectification</i>	<i>Amount of phase-modulated noise</i>
<b>Vocoder</b>	Wave	Shift	Bandwidth
	<i>[0-11] saw, [11-90] pulse width 50% to 99%, [91-100] noise</i>	<i>Vocoder frequency range</i>	<i>Vocoder's filter bandwidths</i>