

## Envelope Mode

### Modulation channel modulator assignment

Model Name	MOD Channel 1 (Shape)	MOD Channel 2 (ShiftShape)	MOD Channel 3 (Param1)	A.S.
Virtual Analog	Tri>Saw>PW M	Detune -Pitch/+Pitch H	Pulse Width T	Log
VA Sync	Tri>Saw>PW M	Detune -Pitch/+Pitch H	Pulse Width T	Log
Tides	Wavefold T	Asymmetry M	Waveform H	Log
Warps	Wavefold T	Asymmetry M	Waveform H	Log
FM	Modulation Index T	Frequency Ratio H	Feedback 1OP/2OP M	Log
Grain	Formant Frequency T	Width and Shape M	Frequency Ratio H	Log
ZBraids	CF Freq T	Saw>Sqr>Tri M	PK>LP>BP>HP H	Log
Additive	Harmonic Index T	Bump Shape M	Number of Bumps H	Log
SWARM	Pitch Randomization H	Grain Duration/Overlap M	Grain Density T	Lin
Particle	Pitch Randomization H	Filter Type All/BandPass M	Particle Density T	Lin
Noise	Filter Resonance M	LP>BP>HP H	Clock Frequency T	Lin
NoiseDBP	Filter Resonance M	2nd BP Center frequency	Clock Frequency T	Lin
String	Inharmonicity H	Brightness/density T	Decay M	Lin
Modal	Inharmonicity H	Brightness/density T	Decay M	Lin
Bass Drum	Brightness T	Sharpness/Overdrive H	Decay M	Lin
Snare	Mode Balance T	Harmonic/Noisy H	Decay M	Lin
HiHat	HP Filter Cutoff T	Metallic/Noisy H	Decay M	Lin

## Modulation Key

Env*EV
Env*EV+LFO
Envelope
Env+LFO
Key Track
KT+LFO
KT+EV
LFO2*EV
LFO*EV
KT+EV*LFO
LFO2
LFO2[x]LFO

### Envelope Mode control ranges

Param5	Param6	
Attack	Decay	
[+] Rate	[+] Rate	AD Envelope
[+] Rate	[-] Rate	AR Envelope
[-] Rate	[+] Rate	ADSR 40% Sustain
[-] Rate	[-] Rate	ADSR 70% Sustain

## LFO mode

### Modulation channel modulator assignment

Model Name	MOD Channel 1 (Shape)	MOD Channel 2 (ShiftShape)	MOD Channel 3 (Param1)	A.M.
Virtual Analog	Tri>Saw>PW M	Detune -Pitch/+Pitch H	Pulse Width T	LFO2
VA Sync	Tri>Saw>PW M	Detune -Pitch/+Pitch H	Pulse Width T	LFO2
Tides	Wavefold T	Asymmetry M	Waveform H	LFO2
Warps	Wavefold T	Asymmetry M	Waveform H	LFO2
FM	Modulation Index T	Frequency Ratio H	Feedback 1OP/2OP M	LFO2
Grain	Formant Frequency T	Width and Shape M	Frequency Ratio H	LFO2
ZBraids	CF Freq T	Saw>Sqr>Tri M	PK>LP>BP>HP H	LFO2
Additive	Harmonic Index T	Bump Shape M	Number of Bumps H	LFO2
SWARM	Pitch Randomization H	Grain Duration/Overlap M	Grain Density T	LFO2
Particle	Pitch Randomization H	Filter Type All/BandPass M	Particle Density T	LFO2
Noise	Filter Resonance M	LP>BP>HP H	Clock Frequency T	LFO2
NoiseDBP	Filter Resonance M	2nd BP Center frequency	Clock Frequency T	LFO2
String	Inharmonicity H	Brightness/density T	Decay M	KeyT
Modal	Inharmonicity H	Brightness/density T	Decay M	KeyT
Bass Drum	Brightness T	Sharpness/Overdrive H	Decay M	LFO2
Snare	Mode Balance T	Harmonic/Noisy H	Decay M	LFO2
HiHat	HP Filter Cutoff T	Metallic/Noisy H	Decay M	LFO2

### LFO Mode control ranges

Param5	Param6	
Attack	Decay	
0	[+] Rate	LFO2+LFO
0	[-] Rate	LFO2*LFO
[+] Rate	0	LFO2trem+LFO
[-] Rate	0	LFO2trem*LFO

### KT Mode control ranges

Param5	Param6	
Attack	Decay	
0	[+] Rate	EG Velocity Decay
0	[-] Rate	or
[+] Rate	0	EG Velocity Brightness
[-] Rate	0	

### 3 x LFO Mode

Param5	Param6	
Attack	Decay	
0	0	LFO*EV

All models	LFO * EV	LFO * EV	LFO * EV
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