

Pulse SYNTHESIZER

waldorf

ARPEGGIATOR

Active: on / off / hold — 102

Range: 10 … 1 — 103

Tempo: 300 … 48/midi — 105

Clock: 1/1...1/32 — 104

Mode: up / down / alternating / random / Assign up / Assign down / Assign alternating — 106

PORTAMENTO

Portamento: 127 … 0 — X

Mode: normal / legato — 62

PITCHBEND

Pitchbend scale: 24 … 0 — 63

intensity of the pitchbend

MIDI

GLOBAL

Mastertune
430...450
Reference pitch is A' (MIDI note A3)
The preset value is 440 Hz.

Control X
0 - 127
Parameters suitable for:
Cutoff Mod Source
Pitch Mod Source
Mod Unit 1...4 Source

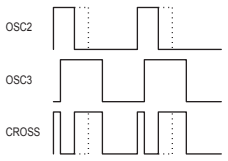
VCO

OSC1

Semitone: 48 … -48 — D01 — 32
Tune: 31 … -32 — 33
Shape: PLS pulse (square with variable pulsewidth) / SAT sawtooth / TRI triangle — 34
Pulsewidth: 127 =50% … 0 =1% — D04 — 35

OSC2

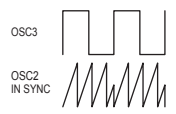
Semitone: 48 … -48 — D02 — 36
Tune: 31 … -32 — 37
Shape: PLS pulse (square with variable pulsewidth) / SAT sawtooth / TRI triangle / CRS cross mod — 38
XOR combination of the square waveshapes of Oscillators 2 and 3



Pulsewidth: 127 =50% … 0 =1% — D05 — 39
Keytrack: on / off — 40
Sync: on / off — 41

OSC2 slave

sync cross modulation



OSC3

Semitone: 48 … -48 — D03 — 42
Tune: 31 … -32 — 43
Shape: PLS pulse (square) / SAT sawtooth / TRI triangle — 44

OSC3 master

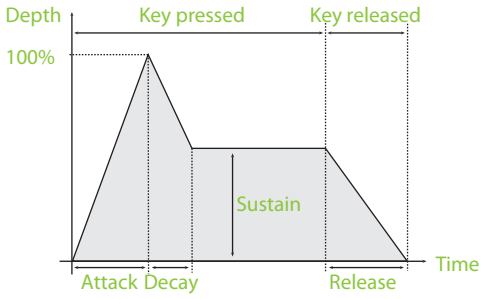
MIXER

MIX

Osc1: 127 … 0 — D06 — 45
Osc2: 127 … 0 — D07 — 46
Osc3: 127 … 0 — D08 — 47
Noise (pink): 127 … 0 — D09 — 48

one oscillator, the signal is overdriven somewhere in the volume value range of 40.

more than one oscillator, a volume value of approx. 30 is the overdrive threshold for each oscillator



EG

ENV1 S06

Attack: 127 … 0 — 14
Decay: 127 … 0 — 15
Sustain: 127 … 0 — 16
Release: 127 … 0 — 17
Keytrack: 63 … -63 — 28
Trigger: Single-Trigger 1 / Single-Trigger 2 / Retrigger 1 / Retrigger 2 — 29

ENV2 S07

Attack: 127 … 0 — 18
Decay: 127 … 0 — 19
Sustain: 127 … 0 — 20
Release: 127 … 0 — 21
Keytrack: 63 … -63 — 30
Trigger: Single-Trigger 1 / Single-Trigger 2 / Retrigger 1 / Retrigger 2 — 31

VCF

Cutoff: 127 … 0 — D10 — 50
Keytrack: 63 … -63 — 51
Env1 Sens: 63 … -63 — 52
Velo Sens: 63 … -63 — 53
Cutoff Mod: 63 … -63 — 55
Resonnance: 127 … 0 — D11 — 56

Source: 54
0 Off
1 LFO1
2 LFO1*Modw.
3 LFO1*Aftert.
4 LFO2
5 LFO2*Env1
6 Envelope 1
7 Envelope 2
8 Velocity
9 Keytrack
10 Pitch follow
11 Pitchbend
12 Modwheel
13 Aftertouch
14 Breath Ctr.
15 Control X

LFO

LFO1 S01

Speed: 127 … 0 — D14 — 24
Shape: sine / triangle / sawtooth / pulse / sample & hold / triangle sync / sawtooth sync / pulse sync — 25

LFO2 S04

Speed: 127 … 0 — 26
Delay: 127 … 0 — 27

MODULATIONS

MOD

Select	Source (Sxx)	Amount	Destination (Dxx)
1	0 Modulation off	63 … -63	0 Pitch
2	1 LFO 1 signal		1 Osc 1 Pitch
3	2 LFO 1 signal multiplied by the Modulation Wheel value (MIDI Controller 1)		2 Osc 2 Pitch
4	3 LFO 1 signal multiplied by the MID Aftertouch valuel		3 Osc 3 Pitch
	4 LFO 2 signal		4 Pulsewidth 1
	5LFO 2 signal multiplied by Envelope 1		5 Pulsewidth 2
	6 Envelope 1 signal		6 Osc 1 Level
	7 Envelope 2 signal		7 Osc 2 Level
	8 Velocity = MIDI Note Velocity		8 Osc 3 Level
	9 Keytrack = MIDI Note Number		9 Noise Level
	10 Pitch Follow, same as Keytrack, but with portamento and pitchbend		10 Cutoff
	11 MIDI Pitchbend signal		11 Resonance
	12 MIDI Modulation Wheel (Controller 1)		12 Volume
	13 MIDI Aftertouch		13 Panning
	14 MIDI Breath Control (Controller 2)		14 LFO 1 Speed
	15 Control X, freely assignable MIDI Controller		15 Mod 1 Amount
1	108	D15	110
2	111		113
3	114		116
4	117		119

PITCH

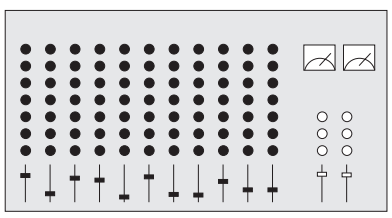
Pitch mod: 63 … -63 — 61

Source: D00
0 Off
1 LFO1
2 LFO1*Modw.
3 LFO1*Aftert.
4 LFO2
5 LFO2*Env1
6 Envelope 1
7 Envelope 2
8 Velocity
9 Keytrack
10 Pitch follow
11 Pitchbend
12 Modwheel
13 Aftertouch
14 Breath Ctr.
15 Control X
60

VCA

Volume (program): 127 … 0 — D12 — 57
Velo Sens: 63 … -63 — 58
Pan: 63 … -63 — D13 — 10

Volume (main): 127 … 0 — 07



MIDI CC

S12	01	0-127 Mod Wheel
S14	02	0-127 Breath Control
	05	0-127 Portamento Time
	64	0-127 Sustain Switch
	121	0 Reset All Control
	123	0 All Notes Off

midi signal
internal signal
audio signal
61 midi # CC
Sxx /Dxx source / destination