Bank 1-a

1-a Precision Adder 	1-b Four Quadrant Multiplier 	1-c Full-wave Rectifier 	1-d Minimum Maximum 
Has knob recorder Parameters 0: Z smooth or integers	Has knob recorder Parameters 0: Z smooth or integers		
Z Offset	Z Scale	Z Mode	Z Gate
X Input	X Input	X Input	X Input
Y Input	Y Input	Y Input	Y Input
A X + Y + Z	A X * Y * Z	A abs(X + Y) abs(X)	A min(X, Y)
B X - Y - Z	B -X * Y * Z	B abs(X - Y) abs(Y)	B max(X, Y)
2-a Linear/ Exponential Converter 	2-b Quantizer 	2-c Comparator 	2-d Dual Waveshaper 
	Parameters 0: Attenuation X 1: Transpose mode 2: Key		Has knob recorder
Z Tune	Z Scale & Mode	Z Hysteresis	Z Gain
X Exp In	X Input	X Input	X Input
Y Linear In	Y Transpose Trigger In	Y Input	Y Input
A Linear Out	A Quantized	A X > Y	A Folded X
B Exp Out	B Trigger	B X < Y	B Shaped Y

Bank 1-a

3-a Sample and Hold 	3-b Slew Rate Limiter 	3-c Pitch & Envelope Tracker 	3-d Clockable Delay/Echo 
Press Z to trigger			Has tap tempo
Z Slew rate	Z Slew rate	Z Slew rate	Z Feedback
X Input	X Input	X Audio In	X Audio In
Y Trigger	} summed Y Input	Y Offset A	Y Clock
A Sampled X	A Linear slew	A V/Octave	A Dry+delay
B Noise	B Log slew	B Envelope	B Delay only
4-a LFO 	4-b Clockable LFO 	4-c VCO with Linear FM 	4-d VCO with waveshaping 
0: Attenuation A 1: Attenuation B 2: Offset A 3: Offset B	Has tap tempo Parameters 0: Attenuation A & B	Parameters 0: Octave shift 1: Attenuation A 2: Attenuation B	0: Octave shift 1: Attenuation A 2: Attenuation B 3: Y offset
Z Tune	Z Multiplier	Z Tune	Z Tune
X Hz/V In	X Clock	X V/Octave	X V/Octave
Y Waveshape	Y Waveshape	Y Linear FM	Y Waveshape
A Saw/Sin/Tri	A Saw/Sin/Tri	A Sine	A Saw/Tri/Saw
B Square	B Square	B Saw	B Square

Bank 1-b

1-a Precision Adder 	1-b Voltage Controlled Delay Line 	1-c Clockable Ping Pong 	1-d Clockable Ping Pong 
Has knob recorder Parameters 0: Z divisor	Parameters 0: Y offset	Has tap tempo Parameters 0: Output Mode	Has tap tempo Parameters 0: Feedback
Z Offset	Z Feedback	Z Feedback	Z Input Pan
X Input	X Audio In	X Audio In	X Audio In
Y Input	Y Delay Time	Y Clock	Y Clock
A X + Y + Z	A Delay only	A Left	A Left
B X - Y - Z	B Dry+delay	B Right	B Right

2-a Resonator 	2-b Vocoder 	2-c Phaser 	2-d Bit Crusher 
Push Z for 'strike' Parameters 0: Y offset	Parameters 0: Filter bank	Parameters 0: Y offset 1: Number of stages	Parameters 0: Y offset 1: Reduction mode 2: Mangling mode
Z Gain	Z Decay	Z Feedback	Z Bit depth
X Audio In	X Modulator	X Audio In	X Input
Y V/Octave	Y Carrier	Y Sweep	Y Sample rate
A Audio Out	A Audio Out	A Dry+phase	A Output
B Envelope	B Envelope	B Phase only	B Comparator

Bank 1-b

3-a	3-b Tape Delay	3-c	3-d State Variable Filter
	Parameters 0: Tape length		Parameters 0: Filter resonance
	Z Feedback		Z Filter Type
	X Audio In		X Audio In
	Y Tape speed		Y V/Octave
	A Dry+delay		A LP/BP/HP
	B Delay only		B HP/BP/LP

4-a LP/HP Filter	4-b LP/BP Filter	4-c BP/HP Filter	4-d BP/Notch Filter
Z Resonance	Z Resonance	Z Resonance	Z Resonance
X Audio In	X Audio In	X Audio In	X Audio In
Y V/Octave	Y V/Octave	Y V/Octave	Y V/Octave
A Low pass	A Low pass	A Band pass	A Band pass
B High pass	B Band pass	B High pass	B Notch

Bank 1-c

1-a AR Envelope 	1-b AR Envelope (w/ push) 	1-c AR Envelope & VCA 	1-d AR Envelope & VCA 
0: Trigger Mode 1: Z Mode 2: Out A Attenuverter 3: Out B Attenuverter	Press Z to trigger Parameters 0: Trigger Mode	0: Trigger Mode 1: Z Mode 2: Out A Attenuverter 3: Out B Attenuverter	Press Z to trigger Parameters 0: Trigger Mode
Z Times	Z Times	Z Times	Z Times
X Trigger	X Trigger	X Trigger	X Trigger
Y Trigger	Y Trigger	Y VCA In	Y VCA In
A Env Out	A Env Out	A Env Out	A Env Out
B Env Out	B Env Out	B VCA Out	B VCA Out

2-a Dual AR Envelope 	2-b Dual AR Envelope 	2-c Euro to Buchla Converter 	2-d Buchla to Euro Converter 
0: Trigger Mode 1: Z Mode 2: Out A Attenuverter 3: Out B Attenuverter	Press Z to trigger Parameters 0: Trigger Mode	Parameters 0: Octave shift	Parameters 0: Octave shift
Z Times	Z Times	Z Tune	Z Tune
X Trigger A	X Trigger A	X 1V/Oct	X 1.2V/Oct
Y Trigger B	Y Trigger B	Y Gate	Y Gate/trigger
A Env Out A	A Env Out A	A 1.2V/Oct	A 1V/Oct
B Env Out B	B Env Out B	B Gate/trigger	B Trigger

Bank 1-c

3-a Clockable AD (mute) 	3-b Clockable AD (gate) 	3-c Clockable AD (trig) 	3-d Clockable AD & VCA 
Has tap tempo Parameters 0: Output Attenuverter	Has tap tempo Parameters 0: Output Attenuverter	Has tap tempo Parameters 0: Output Attenuverter	Has tap tempo Parameters 0: Output Attenuverter
Z Shape	Z Shape	Z Shape	Z Shape
X Clock	X Clock	X Clock	X Clock
Y Mute	Y Gate	Y Trigger	Y VCA In
A Env Out	A Env Out	A Env Out	A Env Out
B Env Out	B Env Out	B Env Out	B VCA Out
4-a Shift Register CVs 	4-b Shift Register Quantized 	4-c Shift Register Triggers 	4-d Shift Register Dual Trigs 
0: Direction 1: Length 2: Slew rate 3: Output attenuator	0: Direction 1: Length 2: Scale 3: Output attenuator	Press Z to modify seq Parameters 0: Length	Parameters 0: Length A 1: Length B
Z Randomness	Z Randomness	Z Randomness	Z Randomness
X Clock	X Clock	X Clock	X Clock
Y Modify	Y Modify	Y Modify	Y Modify
A Unipolar	A Quantized	A Trigger	A Trigger A
B Bipolar	B Trigger	B Inverse	B Trigger B

Bank 1-d

1-a ES-1 Emulation 	1-b ES-2 Emulation 	1-c 	1-d 
Z Trim	Z Trim		
X Input 1	X Input 1		
Y Input 2	Y Input 2		
A Output 1	A Output 1		
B Output 2	B Output 2		
2-a Dual Quantizer (Z scale) 	2-b Dual Quantizer 	2-c Dual Delayed Pulse Gen 	2-d 
0: X Attenuation 1: Y Attenuation 2: X Transpose 3: Y Transpose	0: X Attenuation 1: Y Attenuation 2: X Scale 3: Y Scale	0: Z Mode 1: Range 2: Delay 3: Length	
Z Scale	Z Trigger	Z Control	
X Input A	X Input A	X Trigger A	
Y Input B	Y Input B	Y Trigger B	
A Quantized X	A Quantized X	A Output X	
B Quantized Y	B Quantized Y	B Output Y	

Bank 1-d

3-a Crossfade/ Pan 	3-b Dual Sample and Hold 	3-c 	3-d 
Has knob recorder Parameters 0: Crossfade/pan law	Parameters 0: Sample or Track		
Z Fade/pan	Z Gate		
X Input 1	X Input A		
Y Input 2	Y Input B		
A Left Out	A Output X		
B Right Out	B Output Y		
4-a Dual Euclidean Patterns 	4-b 	4-c 	4-d 
0: Steps 1: Pulses 1 2: Rotation 3: Pulse length			
Z Pulses 2			
X Clock			
Y Reset			
A Output 1			
B Output 2			

Bank 2-a

1-a Audio Playback 	1-b 	1-c Audio Playback V/Oct 	1-d Audio Playback Z Speed 
		Parameters 0: Octave shift	Parameters 0: Sample selection
Z Select		Z Select	Z Speed
X Retrigger		X Retrigger	X Retrigger
Y Start Pos		Y V/Oct	Y Start Pos
A Left Out		A Left Out	A Left Out
B Right Out		B Right Out	B Right Out

3-a MIDI Playback (Clocked) 	3-b 	3-c MIDI Playback (Free) 	3-d Audio Playback End CV 
		Parameters 0: MIDI File selection	Parameters 0: Sample selection
Z Select		Z Speed	Z Trigger /End Pos
X Clock		X V/Oct	X End Pos /Trigger
Y Retrigger		Y Retrigger	Y Start Pos
A CV Out		A CV Out	A Left Out
B Gate Out		B Gate Out	B Right Out

Bank 2-b

1-a Clocked Audio Playback 	1-b 	1-c 	1-d 
Z Select			
X Retrigger			
Y Clock			
A Left Out			
B Right Out			
3-a Audio Recorder 	3-b 	3-c 	3-d 
Z Record			
X Input L			
Y Input R			
A Output L			
B Output R			

Expert Sleepers disting mk3 Quick Reference Guide

For firmware v3.9

X, **Y** and **Z** are **Inputs**.
A and **B** are **Outputs**.

Changing Algorithm

Either:

- Push 'S' and hold in while turning, or
- Use the menu:
  - Press 'S' twice
  - Turn to select algorithm
  - Press to accept

Changing Bank

- Press 'S' (to enter the menu)
- Turn to select '2' (change bank)
- Press to accept
- Turn to select bank
- Press to accept

Parameters

Turn 'S' to modify the currently selected parameter.
Press 'Z' to cycle between parameters (if the current algorithm has more than one parameter).

Tap Tempo

If available – press 'Z'. The time between two presses defines the delay/LFO/etc. time.

Knob Recorder

If available – push 'Z' and hold in while turning. Release to begin playback. Turn 'Z' to stop playback and regain manual control.

Menus

Press 'Z' to cancel menu mode.