Disting Mk 4.10

Algorithm			Parameters	Z	X	Y	A	B
A - 1	**Precision Adder**	- Has knob recorder	0: Z Mode (integers or smooth) 1: Sum Mode	Offset	Input	Input	X + Y + Offset	X - Y - Offset
A - 2	**Four Quadrant Multiplier**	- Has knob recorder	0: Z Mode (integers or smooth)	Scale	Input	Input	X * Y * Scale	- X * Y * Scale
A - 3	**Full-wave Rectifer**			Mode *	Input	Input	abs (X + Y) * abs (X)	abs (X - Y) * abs (Y)
A - 4	**Minimum Maximum**			Gate	Input	Input	min (X, Y)	max (X, Y)
A - 5	**Linear/ Exponential Converter**			Tune	Exp In	Linear In	Linear Out	Exp Out
A - 6	**Quantizer**		0: Attenuation X 1: Transpose mode 2: Key 3: Offset 4: Midi Gate	Scale & Mode *	Input	Transpose - * Trigger In	Quantized	Trigger
A - 7	**Comparator**			Hysteresis	Input	Input	X > Y	X < Y
A - 8	**Dual Waveshaper**	- Has knob recorder		Gain	Input	Input	Folded X	Shaped Y
B - 1	**Sample and Hold**	- Press Z to trigger	0: Sample or Track 1: Offset 2: Noise Colour	Slew rate	Input	Trigger	Sampled	Noise
B - 2	**Slew Rate Limiter**		0: Up Slew 1: Down Slew	Slew rate	Input (Summed with Y)	Input (Summed with X)	Linear Slew	Log Slew
B - 3	**Pitch & Envelope Tracker**			Slew rate	Audio In	Offset	V / Octave	Envelope
B - 4	**Clockable Delay/Echo**	- Has tap tempo	0: Delay time multiplier 1: Output Mode	Feedback	Audio In	Clock	Dry + Delay	Delay Only
B - 5	**LFO**		0: Attenuation A 1: Attenuation B 2: Offset A 3: Offset B	Tune	Hz / V	Waveshape	Saw/Sin/Tri	Square
B - 6	**Clockable LFO**	- Has tap tempo	0: Attenuation A. 1: Attenuation B 2: Y Offset	Multiplier	Clock	Waveshape	Saw/Sin/Tri	Square
B - 7	**VCO with Linear FM**		0: Octave shift 1: Attenuation A 2: Attenuation B 3: Type A Wave 4: Type B Wave	Tune	V / Oct	Linear FM	Type A Out	Type B Out
B - 8	**VCO with waveshaping**		0: Octave shift 1: Attenuation A 2: Attenuation B 3: Y Offset 4: Out Waves	Tune	V/ Oct	Waveshape / PWM	Waveform A	Waveform B
C - 1	**Precision Adder**	- Has knob recorder	0: Z divisor	Offset	Input	Input	X + Y + Z	X - Y - Z
C - 2	**Voltage Controlled Delay**		0: Y offset	Feedback	Audio In	Delay Time	Delay only	Dry + delay
C - 3	**Clockable Ping Pong**	- Has tap tempo	0: Output Mode 1: Delay Time Multiplier 2: Input Pan	Feedback	Audio In	Clock	Left	Right
C - 4	**Clockable Ping Pong**	- Has tap tempo	0: Feedback 1: Delay Time Multiplier 2: Output Mode	Input Pan	Audio In	Clock	Left	Right
C - 5	**Resonator**	- Push Z for 'strike'	0: Y offset	Gain	Audio In	V / Oct	Audio Out	Envelope
C - 6	**Vocoder**		0: Filter bank	Decay	Modulator	Carrier	Audio Out	Envelope
C - 7	**Phaser**		0: Y offset 1: Number of stages	Feedback	Audio In	Sweep	Dry+phase	Phase Only
C - 8	**Bit Crusher**		0: Y offset 1: Reduction mode 2: Mangling mode	Bit depth	Input	Sample Rate	Output	Comparator
D - 1	**DJ Filter**		0: Filter Resonance	Filter Sweep	Left In	Right In	Left Out	Right Out
D - 2	**Tape Delay**		0: Tape length 1: Fine Length 2: Tape Speed 3: Output Mode	Feedback	Audio In	Tape Speed	Dry + delay	Delay Only
D - 3	**Waveform Animator**		0: LFO Depth 1: Y Offset 2: LFO Rate 3: Scale	Seperation	Audio In	Threshold	Audio Out	Square Out
D - 4	**State Variable Filter**		0: Y Offset 1: Filter resonance	Filter Type	Audio In	V / Octave	LP / BP / HP	HP / BP / LP
D - 5	**LP/HP Filter**		0: Y Offset	Resonance	Audio In	V / Octave	Low Pass	High pass
D - 6	**LP/BP Filter**		0: Y Offset	Resonance	Audio In	V / Octave	Low Pass	Band pass
D - 7	**BP/HP Filter**		0: Y Offset	Resonance	Audio In	V / Octave	Band pass	High pass
D - 8	**BP/Notch Filter**		0: Y Offset	Resonance	Audio In	V / Octave	Band pass	Notch
E - 1	**AR Envelope**	- Press Z to trigger	0: Trig Mode 1: Z Mode 2: Out A Attenuv 3: Out B Attenuv 4: Out A Off 5: Out B Off	Times	Trigger	Trigger	Env Out	Env Out
E - 2	**AR Envelope & VCA**	- Press Z to trigger	0: Trig Mode 1: Z Mode 2: Out A Attenuv 3: Out B Attenuv 4: Out A Off 5: Out B Off	Times	Trigger	VCA In	Env Out	VCA Out
E - 3	**Dual AR Envelope**	- Press Z to trigger	0: Trig Mode 1: Z Mode 2: Out A Attenuv 3: Out B Attenuv 4: Out A Off 5: Out B Off	Times	Trigger	Trigger	Env A Out	Env B Out
E - 4	**Stereo Compressor**		0: Threshold 1: Attack 2: Release 3: Make-up gain 4: Lookahead	Ratio	Left In	Right In	Left Out	Right Out
E - 5	**Side-chain Compressor**		0: Threshold 1: Attack 2: Release 3: Make-up gain 4: Lookahead 5: Ratio	Side-chain In	Left In	Right In	Left Out	Right Out
E - 6	**Mono Compressor**		0: Threshold 1: Attack 2: Release 3: Make-up gain 4: Lookahead	Ratio	Audio In	Side-chain In	Audio Out	Gain Reduction Out CV
E - 7	**Euro to Buchla Converter**		0: Octave shift	Tune	1 V / Octave	Gate	1.2 V / Oct	Gate/trigger
E - 8	**Buchla to Euro Converter**		0: Octave shift	Tune	1.2 V / Octave	Gate / Trigger	1 V / Oct	Trigger
F - 1	**Clockable AD (mute)**	- Has tap tempo	0: Delay Time Mult 1: Out A Attenuv 2: Out B Attenuv 3: Attack Shape 4: Decay Shape	Shape	Clock	Mute	Env Out	Env Out
F - 2	**Clockable AD (gate)**	- Has tap tempo	0: Delay Time Mult 1: Out A Attenuv 2: Out B Attenuv 3: Attack Shape 4: Decay Shape	Shape	Clock	Gate	Env Out	Env Out
F - 3	**Clockable AD (trig)**	- Has tap tempo	0: Delay Time Mult 1: Out A Attenuv 2: Out B Attenuv 3: Attack Shape 4: Decay Shape	Shape	Clock	Trigger	Env Out	Env Out
F - 4	**Clockable AD & VCA**	- Has tap tempo	0: Delay Time Mult 1: Out A Attenuv 2: Out B Attenuv 3: Attack Shape 4: Decay Shape	Shape	Clock	VCA In	Env Out	VCA Out
F - 5	**ShiftReg Rand CVs**		0: Direction 1: Length 2: Slew rate 3: Output Attenuverter 4: Offset	Randomness	Clock	Modify	Unipolar	Bipolar
F - 6	**ShiftReg Rand Quantized**		0: Direction 1: Length 2: Scale 3: Output Attenuverter 4: Midi Gate 5: Transpose	Randomness	Clock	Modify	Quantized	Trigger
F - 7	**ShiftReg Rand Triggers**	- Press Z - modify seq	0: Length	Randomness	Clock	Modify	Trigger	Inverse
F - 8	**ShiftReg Rand Dual Trigs**		0: Length A 1: Length B	Randomness	Clock	Modify	Trigger	Trigger
G - 1	**ES-1 Emulation**			Trim	Input	Input	Output	Output

G - 2	**ES-2 Emulation**		Trim	Input	Input	Output	Output
G - 3	**Pitch Reference**	0: Semitone 1: Octave	Amplitude			Sine Out	Square Out
G - 4	**Frequency Reference**		Amplitude			Sine Out	Square Out
G - 5	**Tuner**		Amplitude	Input		Output	Sine
G - 6	**MIDI Clock**	0: Divisor A 1: Divisor B 2: Divisor MIDI Out 3: Y Mode		Clock	Run / Stop	Output	Output
G - 7	**MIDI / CV**	0: Transpose 1: Bend Depth				Pitch CV	Gate
G - 8	**CV / MIDI**	0: Offset 1: Z Mode	Mod or Vel	Pitch CV	Gate		
H - 1	**Crossfade/ Pan** - Has knob recorder	0: Crossfade / pan law 1: Clip Mode 2: Out B option / LFO Speed 3: Out B Atten	Fade/pan	Input 1	Input 2	Mix of X & Y	Inverted Mix of X & Y
H - 2	**Dual Sample & Hold** - Press Z to trigger	0: Sample or Track 1: Offset	Gate	Input A	Input B	Output X	Output Y
H - 3	**Dual Quantizer (Z Scale)**	0: X Attenuation 1: Y Attenuation 2: X Trans 3: Y Trans	Scale	Input A	Input B	Quantized X	Quantized Y
H - 4	**Dual Quantizer**	0: X Attenuation 1: Y Attenuation 2: X Scale 3: Y Scale 4: Midi Gate	Trigger	Input A	Input B	Quantized X	Quantized Y
H - 5	**Dual Euclidean Patterns**	0: Steps 1: Pules 1 2: Rotation 3: Pulse Length	Pulses 2	Clock	Reset	Output 1	Output 2
H - 6	**Dual Delayed Pulse Gen**	0: Z Mode 1: Range 2: Delay 3: Length	Control	Trigger A	Trigger B	Output X	Output Y
H - 7	**Noise**	0: Type A 1: Type B 2: Attenuation A 3: Attenuation B	Blend	VCA 1	VCA 2	Output 1	Output 2
H - 8	**Quantizer 2**	0: Pattern 1: Scale 2: Key 3: In X Atten 4: Trig Mode/Offset/In Y Atten 5: Slew Rate	Interval	Pitch CV	Trig / Pitch CV	Quantized	Quantized (interval)
I - 1	**Audio Playback**	0: Folder 1: Env Time	Sample Select	Retrigger	Start Pos	Left Out	Right Out
I - 2	**Clocked Audio Playback**	0: Folder 1: Env Time	Sample Select	Retrigger	Clock	Left Out	Right Out
I - 3	**Audio Playback V/Oct**	0: Folder 1: Octave shift 2: Env Time 3: Midi Mode	Sample Select	Retrigger	V / Oct	Left Out	Right Out
I - 4	**Audio Playback Z Speed**	0: Folder 1: Sample selection 2: Env Time	Speed	Retrigger	Start Pos	Left Out	Right Out
I - 5	**Audio Playback with Reverse**	0: Folder 1: Y Offset 2: Env Time	Speed	Retrigger	Sample Select	Left Out	Right Out
I - 6	**Audio Playback with Scrub**	0: Folder 1: Speed Limit 2: Slew Limit 3: Y Offset	Sample Select		Playback Position	Left Out	Right Out
I - 7	**Dual Audio Playback**	0: Folder 1: Panning Option 2: Env Time	Sample Select	Trigger A	Trigger B	Left Out	Right Out
I - 8	**Dual Audio Playback with Z Speed**	0: Folder 1: Sample A 2: Sample B 3: Pan Opt A 4: Z Effect 5: Env Time	Playback Speed	Trigger A	Trigger B	Left Out	Right Out
J - 1	**MIDI Playback (Clocked)**		Select	Clock	Retrigger	CV Out	Gate Out
J - 3	**MIDI Playback (Free)**	0: MIDI File selection	Speed	V / Oct	Retrigger	CV Out	Gate Out
J - 4	**Audio Playback End CV**	0: Folder 1: Sample selection 2: Env Time	Trigger	End Pos /Trigger	Start Pos	Left Out	Right Out
J - 5	**Audio Recorder**		Record	Input L	Input R	Output L	Output R
J - 6	**Multisample**	0: Folder 1: Octave shift 2: Env Time 3: Midi Mode	Tune	Retrigger	V / Oct	Output L	Output R
J - 7	**Mono Audio Recorder**	Only X / L is recorded	Record	Input L	Input R	Output L	Output R
J - 8	**Audio Playback with Crossfade**	0: Folder 1: Octave Shift 2: Crossfade time 3: Gate Mode	Sample Select	Gate / Clock	V / Oct	Left Out	Right Out
K - 1	**Wavetable VCO**	0: Wavetable 1: Octave Shift 2: Y Offset 3: Output B option / detune	Tune	V / Oct	Wave	Wave Out	Sub or detuned Out
K - 2	**Clockable Wavetable LFO**	0: Wavetable 1: Y Offset 2: Out A Attenuverter 3: Out B Attenuverter	multiplier / divider	Clock Input	Wavetable Input	Wave A Out	Wave B Out
K - 3	**Wavetable Waveshaper**	0: Wavetable 1: Y Offset	Gain	Signal Input	Wavetable Input	Wave Out	Comp Wave Out
K - 5	**Programmable Quantizer**	0: Scale 1: In X Atten 2: In Y Atten 3: Transpose 4: Offset	Slew rate	Pitch In	Pitch In / Trig (if 2: = -2)	Quantized (X+Y)	Trigger
K - 6	**Clockable SD Delay.** - Has tap tempo	0: Delay Time Multiplier 1: Maximum Feedback 2: Output Mode	Feedback	Audio In	Clock	Out - as per mode	Out - as per mode
K - 7	**Stereo Clock SD Delay** - Has tap tempo	0: Delay Time Multiplier 1: Maximum Feedback	Feedback	Input L	Input R	Output L	Output Y
K - 8	**Stereo Clock SD Delay (Z clock)** - Has tap tempo	0: Delay Time Multiplier 1: Feedback	Clock	Input L	Input R	Output L	Output Y
L - 1	**Stereo Reverb**	0: Size 1: Feedback 2: Character 3: Lowpass Filter	Wet / Dry	Left In	Right In	Left Out	Right Out
L - 2	**Mono to Stereo Reverb**	0: Size 1: Feedback 2: Character 3: Lowpass Filter	Wet / Dry	Input	Feedback	Left Out	Right Out
L - 3	**Dual Reverb**	0: Size 1: Feedback 2: Character 3: Lowpass Filter	Wet / Dry	Input A	Input B	Output A	Output B
L - 4	**Dual Vowel Filter**	0: Vowel A 1: Vowel B 2: BPF gain 2 3: BPF gain 3	Vowel Selection	Input X	Input Y	Output A	Output B
L - 5	**Stereo Chorus**	0: LFO Depth 1: Y Offset 2: Feedback 3: Lowpass Filter	Wet / Dry	Input	LFO Rate	Left Out	Right Out
L - 6	**Mono Chorus**	0: LFO Depth 1: Y Offset 2: Feedback 3: Lowpass Filter	Wet / Dry	Input	LFO Rate	Blend	Chorus
L - 7	**Mixer**	0: Input X gain 1: Inout Y gain 2: Y Pan	Pan for Input X	X Input	Y Input	Left Out	Right Out
L - 8	**Gate**	0: Attack 1: Hold 2: Release 3: Lookahead	Threshold	Left In	Right In	Left Out	Right Out
M - 1	**Delayed LFO**	0: OutTypeA 1: OutTypeB 2: LFORange 3: RampTime 4: Att A 5: Att B	LFO Speed	Trigger	Ramp Time	Output A	Output B
M - 2	**Scaled LFO**	0: OutTypeA 1: OutTypeB 2: LFORange 3: Mode 4: X Offset 5: Y Offset	LFO Speed	Min / LFO Centre	Max / Amp	Output A	Output B
M - 3	**Logic**	0: Out B Logic Op 1: In X Threshold 2: In Y Threshold 3: In X Hyster 4: In Y Hyster	Logic Op for Out A	Input X	Input Y	Logic Out	Logic Out