

A1 Precision Adder

Z	offset (+/- 10V in 1V steps)
A	$X + Y + \text{offset}$, or $X + \text{offset}$
B	$X - Y - \text{offset}$, or $Y \pm \text{offset}$
0	Z Mode
1	Sum Mode
2	Divisor
3	Modulo
4	Slew

A4 Minimum/maximum

Z	gate (>2.5V, "HI"; <-1.5V, "LO")
A	$\min(X, Y)$
B	$\max(X, Y)$

A6 Quantizer

Z	scale, function of Y
X	input CV, 1V/Oct
Y	$Z > 0$, transpose; $Z < 0$, trigger
A	quantize(X)
B	trigger on note change
0	-1/31 - input X attenuation
1	0/1 - transpose mode
2	-31/31 - key
3	0/31 - offset
4	MIDI Gate
5	Transpose
6	MIDI Mode

B1 Sample and Hold

Z	slew rate
A	X when Y exceeds 1V
B	noise $\pm 8V$
0	Mode
1	Offset
2	Noise colour
2.0	Violet
2.1	White
2.2	Pink
2.3	Red

B1 Sample and Hold (cont)

3	Noise X
4	Atten B
5	Up slew
6	Down slew

B2 Slew Rate Limiter

Z	slew rate
A	linear slew rate limited ($X + Y$) or X
B	log slew rate limited ($X + Y$) or Y
0	Up slew
1	Down slew
2	Type A
0	Linear
1	Logarithmic
3	Type B
0	Linear
1	Logarithmic
4	Mode
0	Outputs A & B are both based on the sum of $X + Y$
1	A is based on X, and B is based on Y

MODELO

Z
X
Y
A
B
0
1
2
3
4

MODELO (copy)

Z
X
Y
A
B
0
1
2
3
4

MODELO (copy)

Z
X
Y
A
B
0
1
2
3
4

MODELO (copy)

Z
X
Y
A
B
0
1
2
3
4

B7 VCO with linear FM

Z tune ± 0.5 octaves
X V/Oct pitch input
Y linear FM input
A y B selectable output waveforms
0 Octave shift
1 Sets an attenuation for output A
2 Sets an attenuation for output B
3 Type A
0 Triangle
1 Sine
2 Square
3 Saw
4 Sub-octave square
5 MIDI gate
4 Type B
5 Fine tune/enable sync

B6 Clockable LFO

Z integer multiplier/divider
X clock input
Y waveshape
A saw -> sine -> triangle
B pulse -> square -> pulse
0 Output A attenuverter
1 Output B attenuverter
2 Y Offset

B5 LFO

Z tune
X Hz/V frequency
Y waveshape
A saw -> sine -> triangle
B pulse -> square -> pulse
0 Sets an attenuation for output A
1 Sets an attenuation for output
2 Sets an offset for output A
3 Sets an offset for output B

B5 LFO (cont)

4 Y offset

A2 Four Quadrant Multiplier

Z scale (1/10 to 10x)

A $X \cdot Y$. scale

B $-X \cdot Y$. scale

0 Z Mode (0, 1)

1 Y Offset (± 20)

A3 Full-wave Rectifier

Z mode (-0: independent, 0: combined)

A $\text{abs}(X + Y)$ or $\text{abs}(X)$

B $\text{abs}(X - Y)$ or $\text{abs}(Y)$

A5 Linear/Exponential Converter

Z scale (Hz/V, centered on 1kHz)

A $(2^X) \cdot \text{scale}$

B $\log_2(Y/\text{scale})$

A7 Comparator

Z hysteresis

A gate from $X > Y$

B inverted gate

0 X Offset

1 Y Offset

A8 Dual Waveshaper

Z gain

A shaped X

B shaped Y

0 Type A

1 Type B

2 X offset

3 Y offset

4 Mix A

5 Mix B

B3 Pitch and Envelope Tracker

Z slew rate for envelope

A V/octave pitch derived from X, plus Y

B envelope derived from X

B4 Clockable Delay/Echo

Z feedback

X signal

Y clock input

A output according to mode

B output according to mode

0 Delay time multiplier

-15 1/64

-14 1/48

-13 1/32

-12 1/24

-11 1/16

-10 1/12

-9 1/8

-8 1/6

-7 3/16

-6 1/4

-5 5/16

-4 1/3

-3 3/8

-2 1/2

-1 3/4

0 x1

1 x1.5

2 x2

3 x3

4 x4

5 x5

6 x6

7 x8

8 x16

1 Output mode

0 A is mix; B is delay only

B4 Clockable Delay/Echo (cont)

1	A & B are mix
2	A & B are delay only
2	Mix
3	Feedback
4	MIDI clock divider
0	MIDI clock off
1	1/32
2	1/16 triplet
3	1/16
4	1/8 triplet
5	3/32
6	1/8
7	1/4 triplet
8	3/16
9	1/4
10	1/2 triplet
11	3/8
12	1/2
13	1/1 triplet
14	3/4
15	1/1



By **Patricio Pretti** (P470pa)
cheatography.com/p470pa/

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