

DCO - Digitally Controlled Oscillator

PULSE WAVEFORM [DIN PIN10] BTN OFF [LED DOUT 0]		SAW WAVEFORM [DIN PIN11] BTN OFF [LED DOUT 4]		PULSE WITH WAVE 3 [DIN 28+29] ENC PWM RATE WAVE 3 [DIN 30+31] ENC		DCO SUB OSCILLATOR [DIN PIN12] BTN WAVE FORM [LED DOUT 10] SUB WAVE 0 [DIN PIN13] BTN LEVEL [LED DOUT 16] SUB OSC. OFF LEVEL 0 SUB WAVE 1 [LED DOUT 11] SUB OSC. LEVEL 1 [LED DOUT 17] SUB WAVE 2 [LED DOUT 12] SUB OSC. LEVEL 2 [LED DOUT 18] SUB WAVE 3 [LED DOUT 13] SUB OSC. LEVEL 3 [LED DOUT 19] SUB WAVE 4 [LED DOUT 14] SUB WAVE 5 [LED DOUT 15]		DCO NOISE [DIN PIN14] BTN LEVEL [LED DOUT 20] NOISE OFF [DIN PIN15] BTN RANGE [LED DOUT 24] NOISE LEVEL 1 [LED DOUT 21] NOISE LEVEL 2 [LED DOUT 22] NOISE LEVEL 3 [LED DOUT 23]		DCO PITCH [DIN PIN15] BTN RANGE [LED DOUT 24] 4' [LED DOUT 25] 8' [LED DOUT 26] 16' [LED DOUT 27]		PITCH ENVELOPE MODULATION (MODE) [DIN PIN16] BTN [LED DOUT 28] DCO PITCH ENV NORMAL ENV INVERT [LED DOUT 29] NORM. WITH DYN. [LED DOUT 30] INV. WITH DYN. [LED DOUT 31]		PITCH LFO DEPTH [DIN34+35] ENC MODULATION		CC (MIDI) PORTAMENTO [DIN PIN 17] BTN PORTA ON [LED DOUT 32] PORTAMENTO TIME (CC) [DIN 40+41] ENC VOLUME (CC) [DIN 42+43] ENC	
PITCH ENVELOPE MODULATION (DEPTH) [DIN 32+33] ENC Key ON, Key OFF		AFTERTOUCH SENSITIVITY [DIN 38+39] ENC															

VCF - Voltage Controlled Filter

VCF CUTOFF [DIN 44+45] ENC CUTOFF FREQ. 8Hz to 33kHz -24dB/oct.	VCF - ENV MODULATION (MODE) [DIN PIN18] BTN NORMAL [LED DOUT 37] INVERT [LED DOUT 38] NORM. + DYN. [LED DOUT 39] DYNAMICS [LED DOUT 40]	VCF - LFO DEPTH [DIN 50+51] ENC MODULATION
VCF RESONANCE [DIN 46+47] ENC	VCF ENVELOPE MODULATION (DEPTH) [DIN 48+49] ENC	VCF KEYB. FOLLOWER [DIN 52+53] ENC
	VCF AFTERTCH. DPTH [DIN 54+55] ENC	

HPF - High Pass Filter

HIGH PASS FILTER [DIN PIN19] BTN
LOW FRQ. EMPHASIZED [LED DOUT 33]
HPF FILTER OFF [LED DOUT 34]
HPF CUTOFF LOW. FREQ. [LED DOUT 35]
HPF CUTOFF HIGH. FREQ. [LED DOUT 36]

LFO - Low Frequency Oscillator

LFO RATE [DIN 56+57] ENC RATE 0.03 - 60Hz
LFO DELAY [DIN 58+59] ENC DELAY TIME 0 - 30s

CHORUS

[DIN PIN 21] BTN ON [LED DOUT 41]
CHORUS RATE [DIN 60+61] ENC

ENV - Envelope

ENV L1 ATTACK LEVEL [DIN 62+63] ENC	ENV L2 BREAK LEVEL [DIN 64+65] ENC	ENV L3 SUSTAIN LEVEL [DIN 66+67] ENC	KEYBOARD FOLLOWER [DIN 68+69] ENC
ENV T1 ATTACK TIME [DIN 70+71] ENC	ENV T2 BREAK TIME [DIN 72+73] ENC	ENV T3 DECAY TIME [DIN 74+75] ENC	ENV T4 RELEASE TIME [DIN 76+77] ENC

VCA - Voltage Controlled Amplifier

VCA MODE [DIN PIN 20] BTN	VCA LEVEL [DIN 78+79] ENC
VCA ENV MODE [LED DOUT 42]	VCA AFTERTOUCH [DIN 80+81] ENC
VCA GATE MODE [LED DOUT 43]	
VCA MODE ENV + DYNAMICS [LED DOUT 44]	
VCA MODE GATE + DYNAMICS [LED DOUT 45]	

TONE

TONE BANK JUNO PRESET TONE BANK ProgCh & BS TONE (65-128) [LED DOUT 46] JUNO MEMORY TONE BANK ProgCh & BS TONE (1-64) [LED DOUT 47]	SELECT JUNO TONE (MIDI Prog Change) [DIN PIN 4+5] ENC
SEND CS TONE TO JUNO [DIN PIN 9] BTN	

JuCtrl Alpha Juno Controller

Block Diagram: DCO Block, HPF Block, VCF Block, VCA Block, Chorus Block, LFO Block, ENV Block, Modulation, Pitch Bender, Keyboard, Output.

2x 20 LCD

BANKSTICK

SAVE TONE	SEND TONE TO CS	SELECT BANKSTICK TONE
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[DIN PIN 7] BTN [DIN PIN 8] BTN [DIN PIN 9+1] ENC

FUNCTIONS

BANKSTICK SELECT [DIN PIN 6] BTN	VALUE [DIN PIN 2+3] ENC			
F1 ENVELOPE LEVEL MAX [DIN PIN 22] BTN	F2 ENVELOPE LEVEL MIN [DIN PIN 23] BTN	F3 ENVELOPE TIME MAX [DIN PIN 24] BTN	F4 ENVELOPE TIME MIN [DIN PIN 25] BTN	F5: SEND SYSEX DUMP BANKSTICK [DIN PIN 26] BTN