

Table 1

	Out	In			
	Pt153 vco triangle		U1 amp 1		
		pt152 mod triangle			
	Pt1 sub vco triangle out				
		pt151 mod raw saw			
	pt2 sub tri out		U1 amp 2		
	pt154 sub pulse		U1 amp 3	SW1 154/156	
	pt156 sub out intermediate				
	pt158 sub out final				
		pt160 sub pulse in			
	pt 4 sub pulse out				
		Pt7 sq mod in			
	pt 157 sub pulse inverted 1				
	pt180 sub pulse 2 inverted				
		Pt5 sub pulse 2			
		pt3 sub pulse wave 1 i/o			
		pt6 sub pulse 1 i/o			
	P148 mod wheel		U1 amp 4		
	pt146 arp trigger a				
	Pt147 arp trigger b				
	Pt 138 arp tempo		U2 amp 1		
	pt136 arp led		U2 amp 2		
	Pt	pt145 arp tap in 10k on in			
	Pt139-144 arp matrix out switch				
	Pt 56-61 octave led's				
		Pt134-137,141 arp matrix a-d in			
		Pt132 switch oct up 10k			
		Pt133 switch oct down 10k			
	Pt131 lfo clock		U2 amp 3		
S&H	Pt59 random stepped voltage / s&h out		Pt 130 s&h out	U2 amp 4	
	Pt58 slow / smoothed random steps				
	Pt57 noise out	r355 470k noise tuning	U3 amp 1		
		Pt129 noise mod i/o	U3 amp 2		
		pt124 lfo slew i/o			
		Pt126 aftertouch in			
	Pt128 after touch vcf cutoff				
	Pt55 mod wheel				
LFO		Pt54 feeds lfo amount	U3 amp 3		
		Pt156 feeds vibrato amount	U3 amp 4		
	Pt35 lfo sine 10v				
	Pt34 lfo saw 10v pp freq2x				
	Pt79 lfo clock i/o				
	Pt33 lfo square 10v pp				
	Tp 1007 lfo led				
		Pt 147 LFO CV speed in			
	Pt43 LFO exp CV		U5 amp 1		
		Pt 46 LFO SYNC IN			
	Pt32 LFO tri 10v pp		U5 amp 2		
	Pt176 modulation wave from switch				
		Pt125 mod/pitch			
		Pt120 mod lfo for all			

	Out	In			
		Pt122 mod lfo filter in			
	Pt77 lfo / vco / pitch				
Vibrato	Pt31 vibrato sine				
		Pt118 vibrato tuning			
		C83 tuning cap			
	Pt115 vibrato after 100k				
	Pt74 vibrato VCO pitch				
Env2 Volume		Pt39 gate in iso via 1m / 2.2m			
	Pt106 env 2 trigger				
	Pt40 env 2 out				
		C76 1uF 25v to adjust timing			
	Tp1009 env 2 led r277 1k				
	Pt93 env1 thr - pre output amp so mod in				
Env1 Filter	Pt38 env 1 out	Pt97 velocity cv	U5 amp 3		
	Pt105 post amp env pre mixer for in				
	Tp1008 greb led 1k				
	Pt36 env1 * velocity				
	Pt37 env1*vel*amt				
		filter modu			
		Pt88 ext cv amp in			
		Pt89 lfo vca level			
		Pt27,28 misc amp in 100k may require r245 to be adjusted to mute 0v cv			
		Pt84 pre final amp modulation may work as in			
	Pt85 filer mod pre final amp i/o	Pt51 VCA feedback to mixer may be i/o			
	Pt150 vca master out 2v pp				
Filter					
	Pt66 mixer pre filter I/O				
	Pt71 LP filter in				
	Pt72 BP filt in				
	Pt73 HP filter in				
	Pt183 middle of filter i/o				
	Pt182 filter in ,/out				
		Pt81 part of filter resonance feedback, cap+pot ? or sig mix in			
		Pt80 resonance in at pot			
	Pt49 filter out				
		Pt82 filter tuning pre mods in			
		Pt23-25 mic cut off in 220k			
		Pt75 pre trans drive summed modifiers in			
		R209 tuning - digital pot ?			
Mixer					
	Tp1001 ext audio in thru 40.2k				
	Pt48 mixer out to filter after final amp				
Triangle / Metalizer					
	Pt68 env*velo*metalamt				
		Pt94 voltage level in to adjur mix			
	Pt96 midpoint in lfo pwm and env1				
	Pt90 pre output amps metalizer				

	Out	In			
		Pt92 after first mixer stage			
	Pt91 after 3rd mixer stage				
	Pt21 metalizer 10v pp post amp		U5 amp 4		
	Pt95 prior to amp 5				
	Pt22 metalizer out 10v pp				
VCO					
	Pt9 5v ref				
pulse gen	Pt45 env1 *vel*pw amt		U6 amp 1		
	Pt 172 pwm				
	Pt67 pwm*pwm metal*env1*vel*pw amt				
Square	pt13 SQ out		U6 amp 2		
Triangle	Pt174 middle of gen				
	Pt19 triangle out 10vpp			SW2 19/22	
	Pt22 metalizer out 10v pp				
Vco core					
	Pt44 .583 ref volt				
		Pt12-16 vco mod inputs 100k/220k extenal cv pitch in uses 100k			
		Pt181 initial tune			
		Pt170 cv for pitch pre amp			
	Pt167 post amp 1v/oct				
	Pt15 .21/octave				
	Pt166 partially summed i/o				
	Pt171 post final amp out				
		Pt8 soft sync goes thru 10pf			
		Pt10 hard sync			
	Pt11 saw 10v pp raw not metal				
Saw gen	Pt20 saw out 10vpp				
Ultrasaw					
	Pt62 i/o maybe wave here or put mod signal in				
	Pt161 i/o after second stage				
	Pt61 partially processed saw				
	Pt162 i/o pre super saw mixer, SWITCH to main SAW out				
	Pt63 saw animator out				
	Pt20 saw out 10vpp				
		Pt165 tuning mod			
		Pt65 after first amp i/o mod wave1 I/ O			
	Pt164 after 3rd amp i/o				
	Pt64 after saw + tuning + shaper				
	Pt163 final of 2nd shapper stage before final mixing amp				
Power					
	Pt 175,176,177,178,179 Gnd				
	Pt60, 720, 605 3.3v				
	Pt41, 742 12+				
	Pt42, 743 12-				
	Pt9 5v ref				
Sub osc					
		Pt153 vco triangle into input			
	Pt,152 after first amp				

	Out	In				
	Pt1 summed sub tri out					
	Raw saw+sub pluse mixer					
	Pt151 first mixer stage folded triangle					
	Pt2 2nd mixer stage out to sub tri2		U6 amp 3			
	Pt154 sub pulse 1+2					
	Pt155 sub pulse xored with modded sub pulse					
	Pt156 sub pulse selction					
	Pt3 sub pulse after amp stage					
	Pt158 sub Osc out		U6 amp 4			
	Pt160 sub pulse mod in or slection Out					
	Pt6 amped sub pulse					