

Matty V1 Partslist - Pseudo Jan Ray values

Part	Value	Description	Alt. Values and Notes	Package	Device	Lead Spacing
	<i>note: on the Jan Ray, there is a 22pF cap to ground after C3 but before R2. This just filters high frequencies and isn't exactly necessary.</i>					
	<i>There is also a trimpot in the gain stage which adjusts the bass control. Obviously I haven't included space for one on the PCB.</i>					
	CAPACITORS		All caps should be rated 16vdc or higher			
C1	100u	Electrolytic Capacitor	47u, main power filter cap	6.3mm dia, 2.5mm	631	2.5mm
C2	47p	Film or Ceramic Capacitor		072X025	072X0252	5mm
C3	47n	Film Capacitor		072X045	072X0452	5mm
C4	47n	Film Capacitor		072X025	072X0252	5mm
C5	1u	Film Capacitor		072X045	072X0452	5mm
C6	39n	Film Capacitor		072X025	072X0252	5mm
C7	47u	Electrolytic Capacitor		5mm dia, 2mm LS	501	2mm
C8	100n MLCC	MLCC Capacitor	<i>NP0/C0G or X7R MLCC, ideally</i>	5mm LS	072X0252	5mm
C9	22u	Electrolytic Capacitor	33u, 47u, 100u	5mm dia, 2mm LS	501	2mm
C10	1u	Film Capacitor		072X045	072X0452	5mm
	DIODES					
D1	1N4148*	Diode	D1 through D4 are clipping diodes	DO07	DO07	
D2	1N4148*	Diode	You can use other options for D1 - D4 such as	DO07	DO07	
D3	1N4148*	Diode	LEDs, Germanium diodes, etc.	DO07	DO07	
D4	1N4148*	Diode		DO07	DO07	
D5	1N5817*	Diode	Polarity protection (1N4001, 1N5818, etc)	DO41-1	1N58171	
LED1	Indicator LED	Indicator LED	<i>Use whatever size you prefer for your build</i>	LED3MM	LED3MM	
	POTS					
GAIN	B500K	Potentiometers		16mm PC Mount	POT16MM	
HI	B10K	Potentiometers		16mm PC Mount	POT16MM	
LO	B50K	Potentiometers		16mm PC Mount	POT16MM	
VOL	B10K	Potentiometers		16mm PC Mount	POT16MM	
	ICs					
	Install a DIP8 socket					
IC1	LM1458 (socket)	OP AMP	Try JRC4558, MC1458, TL072, etc	DIL08	LM1458	
	RESISTORS					
	1/4w Film Resistors (preferably 1% Metal Film)					
CLR	4K7*	6mm Resistors	LED brightness resistor	R0207/3	6MM.3	6.3mm
R1	10K	6mm Resistors	<i>Socket and try other values for more or less gain</i>	R0207/3	6MM.3	6.3mm
R2	1M	6mm Resistors		R0207/3	6MM.3	6.3mm
R3	1M	6mm Resistors	2M2	R0207/3	6MM.3	6.3mm
R4	7K5	6mm Resistors		R0207/3	6MM.3	6.3mm
R5	1K2	6mm Resistors		R0207/3	6MM.3	6.3mm
R6	3K3	6mm Resistors		R0207/3	6MM.3	6.3mm
R7	3K3	6mm Resistors		R0207/3	6MM.3	6.3mm
R8	100R	6mm Resistors		R0207/3	6MM.3	6.3mm
R9	390R*	6mm Resistors	470R	R0207/3	6MM.3	6.3mm
R10	9K1	6mm Resistors		R0207/3	6MM.3	6.3mm
R11	3K3 + 150p***	6mm Resistors	3K3 + 150pF cap in parallel!!!	R0207/3	6MM.3	6.3mm