

pmillett.com Tube Microphone Preamp - Bill of Materials

Printed Circuit Board Parts

Qty	Value	Device	Parts	Description	Manufacturer	Manuf. PN	Vendor	Vendor PN	Cost Ea	Cost Ext	Notes
1	--	--	--	Bare PCB	--	--	pmillett.com		\$30.00	\$30.00	
4	UPW1J221MPD6	CPOL-EUE5-10.5	C1, C10, C13, C17	220uF 63V 5mmLS	Nichicon	UPW1J221MPD6	Mouser	647-UPW1J221MPD6	\$0.62	\$2.48	Low impedance/ESR electrolytic
3	UPW1C331MPD	CPOL-EUE3.5-8	C11, C14, C22	330uF 16V 3.5mmLS	Nichicon	UPW1C331MPD	Mouser	647-UPW1C331MPD	\$0.31	\$0.93	Low impedance/ESR electrolytic
1	.0039uF	C-EU050-025X075	C12	.0039uF 63V+ 0.2LS	Kemet	C322C392J1G5TA	Mouser	80-C322C392J1G	\$0.58	\$0.58	X7R ceramic or film OK
3	0.1uF	C-EU025-030X050	C15, C16, C20	0.1uF 100V 0.1LS	Kemet	C320C104K1R5TA7303	Mouser	80-C320C104K1R-TR	\$0.13	\$0.39	X7R ceramic or film OK
1	0.047uF	C-EU050-035X075	C19	0.047uF 100V 0.2LS	Kemet	C322C473K1R5TA7301	Mouser	80-C322C473K1R-TR	\$0.34	\$0.34	X7R ceramic or film OK
1	390pF	CAP_AXIAL_FILM_12X6	C2	390pF 50V film axial	Xicon	23PS139	Mouser	23PS139	\$0.23	\$0.23	
2	PLF1C471MDO1	CPOL-EUE5-10.5	C3, C5	470uF 16V organic 5mmLS	Nichicon	PLF1C471MDO1	Mouser	647-PLF1C471MDO1	\$1.53	\$3.06	Can also use Os-con
1	2.2uF 400V	C-EU275-173X316	C4	2.2uF 400V film 27.5mmLS	Wima	505-MKP42.2/400/10P	Mouser	MKP4-2.2/400/10P27.5	\$5.38	\$5.38	
5	UPS2V100MHD	CPOL-EUE5-13	C6, C8, C9, C18, C21	10uF 350V 5mmLS	Nichicon	UPS2V100MHD	Mouser	647-UPS2V100MHD	\$0.95	\$4.75	Low impedance/ESR electrolytic
1	0.22uF 400V	C-EU225-113X268	C7	0.22uF 400V film 22.5mmLS	Wima	MKP10-.22/400/10	Mouser	505-M10.22/400/10	\$1.70	\$1.70	
2	BZX55-3V9	BZX55	D1, D4	3.9V zener diode	Vishay	BZX55C3V9-TAP	Mouser	78-BZX55C3V9-TAP	\$0.03	\$0.06	
1	SB380	SB380	D2	3A 80V schottky diode	Fairchild	SB380	Mouser	512-SB380	\$0.44	\$0.44	
1	P6KE56	P6KEXX	D3	56V 600W TVS	Vishay	P6KE56A-E3/54	Mouser	625-P6KE56A-E3	\$0.22	\$0.22	
2	1N4148	1N4148	D5, D7	Diode	Fairchild	1N4148	Mouser	512-1N4148	\$0.03	\$0.06	
1	C3D02060A	MUR810	D6	SiV Schottky 600V 2A	CREE	C3D02060A	Digi-Key	C3D02060A-ND	\$1.87	\$1.87	
1	RXEF075	RXEF075	F1	PTC Fuse 750mA	Tyco/Raychem	RXEF075	Mouser	650-RXEF075	\$0.38	\$0.38	
4	BL02RN2R1M2B	FB_BL02RN2R1M2B	FB1, FB2, FB3, FB4	Ferrite bead	Murata	BL02RN2R1M2B	Mouser	81-BL02RN2R1M2B	\$0.23	\$0.92	
2	262-75AB-01	D01PA	HS1, HS2	Heatsink	Wakefield	262-75AB-01	Mouser	567-262-75AB-01	\$0.75	\$1.50	
2	NCJ6FI-H-0	JACK_NCJ6FI-H	J1, J2	Jack, XLR3/2/4" TRS	Neutrik	NCJ6FI-H-0	Mouser	568-NCJ6FI-H-0	\$2.73	\$5.46	
1	L712RA	DCJACK_L712RA	J3	Jack, DC power	Switchcraft	L722RA	Mouser	502-L722RA	\$3.86	\$3.86	
2	TSL1315RA-332	IND_TSL1315	L1, L4	Inductor, 3.3mH 440mA	Murata	19R335C	Mouser	580-19R335C	\$1.57	\$3.14	
2	TSL1315RA-151	IND_TSL1315	L2, L5	inductor, 150uH 2.1A	Murata	19R154C	Mouser	580-19R154C	\$1.57	\$3.14	
1	8109-RC	CML_PE-96173	L3	Common mode inductor	JW Miller	8109-RC	Digi-Key	M8904-ND	\$7.41	\$7.41	
1	FQP6N40CF	MOSFET_TO2202	Q1	MOSFET Nch 400V TO220	Fairchild	FWPF6N40CF	Mouser	512-FQP6N40CF	\$1.23	\$1.23	
2	0	R1/4W	R1, R2	Jumper wire (if needed)	NA	NA	NA	NA	\$0.00	\$0.00	Connects XLR GND to signal GND
1	68.1k MF	R1/4W	R10	68.1k 1% 1/4W metal film	Vishay	CCF5568K1FKR36	Mouser	71-CCF55-68.1K	\$0.06	\$0.06	Any 1/4W 1% metal film resistor
1	47.5k MF	R1/4W	R11	47.5k 1% 1/4W metal film	Vishay	CCF5547K5FKR36	Mouser	71-CCF55-47.5K	\$0.06	\$0.06	Any 1/4W 1% metal film resistor
3	124k	R1/4W	R19, R27, R28	124k 1% 1/4W metal film	Vishay	CCF55124KFKE36	Mouser	71-CCF55124KFKE36	\$0.04	\$0.12	Any 1/4W 1% metal film resistor
1	499	R1/4W	R22	499 1% 1/4W metal film	Vishay	CCF55499RFKE36	Mouser	71-CCF55499RFKE36	\$0.04	\$0.04	Any 1/4W 1% metal film resistor
2	5.11k	R1/4W	R20, R24	5.11k 1% 1/4W metal film	Vishay	CCF555K11FKR36	Mouser	71-CCF55-5.11K	\$0.06	\$0.12	Any 1/4W 1% metal film resistor
2	1.21k	R1/4W	R21, R25	1.21k 1% 1/4W metal film	Vishay	CCF551K21FKR36	Mouser	71-CCF55-1.21K	\$0.06	\$0.12	Any 1/4W 1% metal film resistor
1	100	R1/4W	R26	100 1% 1/4W metal film	Vishay	CCF55100RFKR36	Mouser	71-CCF55-100	\$0.06	\$0.06	Any 1/4W 1% metal film resistor
4	200 MF	R1/4W	R3, R8, R12, R13	200 1% 1/4W metal film	Vishay	CCF55200RFKR36	Mouser	71-CCF55-200	\$0.06	\$0.24	Any 1/4W 1% metal film resistor
1	30.1k MF	R1/4W	R4	30.1k 1% 1/4W metal film	Vishay	CCF5530K1FKR36	Mouser	71-CCF55-30.1K	\$0.06	\$0.06	Any 1/4W 1% metal film resistor
2	150k MF	R1/4W	R5, R29	150k 1% 1/4W metal film	Vishay	CCF55150KFKR36	Mouser	71-CCF55-150K	\$0.06	\$0.12	Any 1/4W 1% metal film resistor
2	10k MF	R1/4W	R6, R23	10.0k 1% 1/4W metal film	Vishay	CCF5510K0FKR36	Mouser	71-CCF55-10K	\$0.06	\$0.12	Any 1/4W 1% metal film resistor
2	6.81k 0.1% MF	R1/4W	R7, R9	6.8k 0.1% 1/4W metal film	Vishay	RN55E6811BRE6	Mouser	71-RN55E-B-6.81K/R	\$0.55	\$1.10	Any 1/4W 0.1% metal film resistor
1	1k .5W	R2W_5083	R14	1k 1/2W metal film	Vishay	CMF601K0000FKEK	Mouser	71-CMF601K0000FKEK	\$0.28	\$0.28	Any 1/2W metal film resistor >300V
1	510k .5W	R2W_5083	R16	511k 1/2W metal film	Vishay	CMF60511K00FHEK	Mouser	71-CMF60511K00FHEK	\$0.28	\$0.28	Any 1/2W metal film resistor >300V
1	1M .5W	R2W_5083	R17	1M 1/2W metal film	Vishay	CMF601M0000FKEK	Mouser	71-CMF601M0000FKEK	\$0.28	\$0.28	Any 1/2W metal film resistor >300V
1	100 .5W	R2W_5083	R18	100 1/2W metal film	Vishay	CMF60100R00FHEK	Mouser	71-CMF60100R00FHEK	\$0.28	\$0.28	Any 1/2W metal film resistor >300V
1	10k 2W	R2W_5083	R15	10k 2W carbon film	KOA	SPR2C103J	Mouser	660-SPR2C103J	\$0.16	\$0.16	Can use MF or CF, 2W
1	RK271111001T	RK27	RV1	100k audio pot RK27	Alps	RK271111001T	Mouser	688-RK271111001T	\$6.92	\$6.92	
4	7201MD9AV2BE	SW_DPDT_7XXXA	SW1, SW2, SW3, SW4	Switch DPDT RA PCB	C&K	7201MD9AV2BE	Newark	46F1815	\$7.87	\$31.48	Gold contacts are important
1	LL7903	XFMR_LL7903	T1	Transformer mic input	Lundahl	LL7903	K&K Audio (in US)	LL7903	\$135.00	\$135.00	
1	LM2591HVT	LM2591HVT	U1	IC Buck reg LM2591HVT TO220	National Semi	LM2591HVT-ADJ	Digi-Key	LM2591HVT-ADJ-ND	\$5.71	\$5.71	
1	LT1373CN8	LT1373CN8	U2	IC Boost reg LT1373 DIP8	Linear Tech	LT1373CN8	Digi-Key	LT1373CN8#PBF-ND	\$7.00	\$7.00	
2	ECC88	TRIODE_9AJ_SH	VT1, VT2	Tube socket Noval PCB	Belton	VT9-PT-C	Antique Electronics	P-ST9-700	\$2.95	\$5.90	
2	ECC88	TRIODE_9AJ_SH	VT1, VT2	Tube 6922/6DJ8/ECC88	JJ Elektronik	6922/E88CC	Antique Electronics	T-6922-J	\$12.00	\$24.00	

Chassis / Final Assembly Parts

1	--	--	--	Case	LMB/Heeger	EAS-500	Mouser	537-EAS-500BK	\$35.51	\$35.51	Or direct from LMB/Heeger
1	--	--	--	Knob for volume control	Kilo	ML-75-3-6MM	Digi-Key	226-3004-ND	\$6.95	\$6.95	Use your favorite knob
1	--	--	--	Power supply 48V	Mean Well	GSM40A48-P1J	Mouser	709-GSM40A48-P1J	\$21.09	\$21.09	Others OK, 48V ~1A

Total cost

\$362.59