

TABLE 2: PREAMP PARTS LIST

Part	Value/Description	Manufacturer	Source	Order #
U1	PGA2310 volume control	Ti/Burr-Brown	Mouser	595-PGA2310PA
U2	PIC16F877A uProc	Microchip	DK	PIC16F877A-1PT-ND
U3, U4	A68215LW parallel driver	Alegra	DK	620-1096-ND
U7	LM317T	National	DK	LM317TFS-ND
U9	7812CT	National	DK	LM340T-12-ND
U10	7805CT	National	DK	LM340T-5.0-ND
U11	LM337T	National	DK	LM337TNS-ND
U300, U301	A6726ELW LED driver	Alegra	DK	620-1151-1-ND
U1A1L, U1A1R, U1A2, U1A3, U1A4, U1A5R, U1A5L	OPA2134	Ti/Burr-Brown	DK	OPA2134UA-ND
F100	1A fuse	Littlefuse	DK	F2452-ND
Fuse holder (2)		Littlefuse	DK	F044-ND
K100-K114	AGQ20012	Panasonic relay	DK	255-1358-5-ND
D100, D101	1N4002, rectifier diode	Fairchild	DK	1N4002F5CT-ND
D102-D117	1N4148, protect diode	Micro Commercial	DK	1N4148-TPM5CT-ND
D300-D323	LTL-4261N, volume LED, red	Lite-On	DK	160-1035-ND
D324-D327	LTL-4261N, balance LED, red	Lite-On	DK	160-1035-ND
D328-D331	LTL-4231N, balance LED, green	Lite-On	DK	160-1142-ND
D332	1N4148, protect diode	Micro Commercial	DK	1N4148-TPM5CT-ND
S1-A-S8-A, S200-A-S208-A	KS18BU43T, select push button	C&K	DK	401-1854-ND
S1-B	Button LED, blue, P/O S1			
S2-B	button LED, blue, P/O S2			
S3-B	button LED, blue, P/O S3			
S4-B	button LED, blue, P/O S4			
S5-B	button LED, green, P/O S5			
S6-B	button LED, blue, P/O S6			
S7-B	button LED, red, P/O S7			
S8-B	button LED, green, P/O S8			
S200-B	button LED, blue, P/O S200			
S201-B	button LED, blue, P/O S201			
S202-B	button LED, blue, P/O S202			
S203-B	button LED, blue, P/O S203			
S204-B	button LED, blue, P/O S204			
S205-B	button LED, blue, P/O S205			
S206-B	button LED, blue, P/O S206			
S207-B	button LED, blue, P/O S207			
S208-B	button LED, white or blue, P/O S213			
X1	EC5-41-20-4, 4.096MHz xtal	EC5	DK	X156-ND
J1	6 pin on CPU to main board	Tyco	DK	A34976-40-N
J2	6 pin on CPU to LED board	Tyco	DK	A34976-40-N
J3	RJ-45 programming on CUP board	Hirose	DK	H11250-ND
J4	20 pin on CUP to main board	Tyco	DK	A34976-40-N
J5	4-pin locking optical encoder connection			
J100-J106, J107-J110, J112, J113	1020-09-0600A, dual RCA	Kobiconn	Mouser	161-4221-E
J106A, J111A, J114	SJ1-3513, 1/8" audio jack	CUI	DK	CP1-3513N-ND
J115	6-pin on main board from CPU	Tyco	DK	A34976-40-N
J116	20 pin on main board from CPU	Tyco	DK	A34976-40-N
J117	2-pin +5V remote enable power out	Tyco	DK	A34976-40-N
J118-120	Faston ¼" terminals	Keystone	DK	1287K-ND
J121	6-pin power selector	Molex	DK	WM6436-ND
J300	6-pin on LED board from CPU	Tyco	DK	A34976-40-N
J1-1, 2a, J1-1, 2b	SJ1-3513, 1/8" audio jack +5 remote	CUI	DK	CP1-3513N-ND
	IEC power receptacle/filter	Tyco	Mouser	592-6EAP
	20 lead cable CPU to main board	Tyco	DK	A34976-40-N
	6 lead cable CPU to LED board	Tyco	DK	A34976-40-N
	6 lead cable CPU to main board	Tyco	DK	A34976-40-N
	4 lead cable CPU to optical encoder	Molex	DK	WM6436-ND
P1	600en-128-cbl, Vol/Bal opt. encoder	Honeywell	DK	600C5-ND
	knob, volume/balance	Tyco	DK	450-1696-ND
	knob, tone (2)	Tyco	DK	450-1701-ND
T100	power transformer	Avel-Lindberg	A/L	ZY26003
BR100, BR101	KBP201G, bridge rectifier	Diodes Inc.	DK	KBP201GDI-ND
R1(a-h), R2(a-h)	10K, resistor SIP	Bourns	DK	4610X-1-103LF-ND
R3(a-h)	330 resistor SIP	Bourns	DK	4610X-1-330-ND
R5	46.4k, 1/8W film resistor	Rohm	DK	RHM46.4KCT-ND
R100, R102	249, 1/8W film resistor	Rohm	DK	RHM249CCT-ND
R101, R103	2.74k, 1/8W film resistor	Rohm	DK	RHM2.74KCT-ND
R104, R105	47.5, 1/8W film resistor	Rohm	DK	RHM47.5CCT-ND
R106, R1A5L, R1A5R, R2A5L, R2A5R, R3A31, R3A3L, R3A3R	10k, 1/8W film resistor	Rohm	DK	RHM10.0KCT-ND
R3A5R, R5A5L, R5A5R, R6A5L, R6A5R	1.0, 2W, ERX-25J1R0	Panasonic	DK	P1.0W-2BK-ND
R107	330, resistor SIP	Bourns	DK	4610X-1-330-ND
R108	2k, 1/8W film resistor	Rohm	DK	RHM2.0KCT-ND
R300, R301	75k, 1/8W film resistor	Rohm	DK	RHM75.0KCT-ND
R302	100k, 1/8W film resistor	Rohm	DK	RHM100KCT-ND
R1A1L, R1A1R, R2A1L, R2A1R, R1A2L, R1A2R, R1A3L, R1A3R	681, 1/8W film resistor	Rohm	DK	RHM681CCT-ND
R3A1L, R3A1R	75, 1/8W film resistor	Rohm	DK	RHM75.0CCT-ND
R4A1L, R4A1R	750, 1/8W film resistor	Rohm	DK	RHM750CCT-ND
R5A1L, R5A1R	1M 1.8W film resistor	Rohm	DK	RHM1.00MCT-ND
R6A1KL, R6A1R	3.32k, 1/8W film resistor	Rohm	DK	RHM3.32KCT-ND
R7A1L, R7A1R, R3A2L, R3A2R, R4A2L, R4A2R, R3A31, R3A3L, R3A3R	31.6k, 1/8W film resistor	Rohm	DK	RHM31.6KCT-ND
R4A3L, R4A3R, R4A4L, R4A4R, R7A4L, R7A4RR7A5L, R7A5R	221, 1/8W film resistor	Rohm	DK	RHM221CCT-ND
R8A1L, R8A1R	47.5k, 1/8W film resistor	Rohm	DK	RHM47.5CCT-ND
R9A1L, R9A1R	46.4k, 1/8W film resistor Rohm DK	RHM46.4KCT-ND	DK	RHM3.2KCT-ND
R10A1L, R10A1R, R5A2L, R5A2R, R5A3L, R5A3R, R9A5L, R9A5R, R9A5R, R10A5L, R10A5R	33.2k, 1/8W film resistor	Rohm	DK	RHM3.2KCT-ND
R11A1L, R11A1R, R1A4L, R1A4R	4.64k, 1/8W film resistor	Rohm	DK	RHM4.64KCT-ND
R2A2L, R2A2R, R2A3L, R2A3R	1k, 1/8W film resistor	Rohm	DK	RHM1.00KCT-ND
R6A2L, R6A2R, R6A3L, R6A3R	2.2k, 1/8W film resistor	Rohm	DK	RHM2.2KCT-ND
R2A4L, R2A4R, R5A4L, R5A4R, R6A4L, R6A4R	200, 1/8W film resistor	Rohm	DK	RHM200CCT-ND
R3A4L, R3A4R	2.2 2W, ERX-25J2R2	Panasonic	DK	P2.2W-2BK-ND
R8A4L, R8A4R	10K, PVG3A103C01R00	Murata	DK	490-2644-1-ND
R9A4L, R9A4R, R10A4L, R10A4R	100k pot, RV122F-20-15F-B100k	Alpha	Mouser	313-1250F-100k
R11A4L, R11A4R	100k pot, P/O R8FL	Alpha	Mouser	313-1250F-100k
R4A5L, R8A5L	15pF, C0805C150J5GACTU	Kemet	DK	399-1111-1-ND
R4A5R, R8A5R				
C1, C2	0.1uF, ECJ-1VB1H104K	Panasonic	DK	PCC2452CT-ND
C3, C4, C108, C109, C111, C113, C115, C300, C301, C9A1L, C9A1R	4700/35V, ECO-51VA472CA	Panasonic	DK	P6600-ND
C11A1L, C11A1R, C5A2L, C5A2R, C6A2L, C6A2R, C6A3L, C6A3R	2200/35V, ECO-51VA222BA	Panasonic	DK	P7466-ND
C100, C101	10/35V, T491C106K035AT	Kemet tantalum	DK	399-3766-1-ND
C102				
C103-C107				
C10, C112, C114, C302, C8A1L, C8A1R, C10A1L, C10A1R, C4A2L, C4A2R, C7A2L, C7A2R, C4A3L, C4A3R, C7A3L, C7A3R, C5A5L, C5A5R, C6A5L, C6A5R	10uF, 25V, T491C106K025	Kemet tantalum	DK	399-3734-1-ND
C116, C117, C7A1L, C7A1R	2.2uF, BQ054D0225K	AVX	DK	495-1127-ND
C1A1L, C1A1R, C2A2L, C2A2RC2A3L, C2A3R, C7A5L, C7A5R, C8A5L, C8A5R	100pF, C0805C101J5GACTU	Kemet	DK	399-1119-ND
C2A1L, C2A1R, C1A2L, C1A2R, C1A3L, C1A3R	1uF, BQ074D0105J	AVX	DK	495-1119-ND
C3A1L, C3A1R, C5A1L, C5A1R, C1A4L, C1A4R	33pF, C0805C330J5GACTU	Kemet	DK	399-1115-1-ND
C4A1L, C4A1R, C6A1L, C6A1R	0.1uF poly, B32529C104J	EPCCOS	DK	495-1103-ND
C3A2L, C3A2R, C3A3L, C3A3R	560pF, C0805C561J5GACTU	Kemet	DK	399-1134-1-ND
C2A4L, C2A4R, C3A4L, C3A4R	22uF, 25V, T491D2266K025AT	Kemet tantalum	DK	399-3776-1-ND
C1A5L, C1A5R, C2A5L, C2A5R	0.033 uF, B32529C333J	EPCCOS	DK	495-1100-ND
C3A5L, C3A5R, C4A5L, C4A5R	3300pF poly, B32529C332J	EPCCOS	DK	495-1094-ND
Q1A4L, Q1A4R	ZXMN6A09KTC, N-channel power FET	Zetex	DK	ZXMN6A09KTCCT-ND
Q2A4L, Q2A4R	ZXMP6A18KTC, P-channel power FET	Zetex	DK	ZXMP6A18KTCCT-ND
Q100	IRF7416 or IRF7205	International Rectifier	DK	IRF7416IRPBFCT-ND

Sources
Mouser—www.mouser.com
Digi-Key—www.DigiKey.com
Avellindberg—www.avellindberg.com
Sealsawwww.audioexpress.com/magsdirx/ax/addenda/index.htmforPCboardlayoutandmore.

The following are available from A and T Labs at www.a-and-t-labs.com/K12_Preamp/index.htm.
 K12PCB1 main board, four layer multilayer with ground and power planes \$69 each
 K12PCB2 LED display board \$11 each
 K12PCB3 microprocessor/controller board \$15 each
 Programmed PIC16F877A microprocessor \$15 each