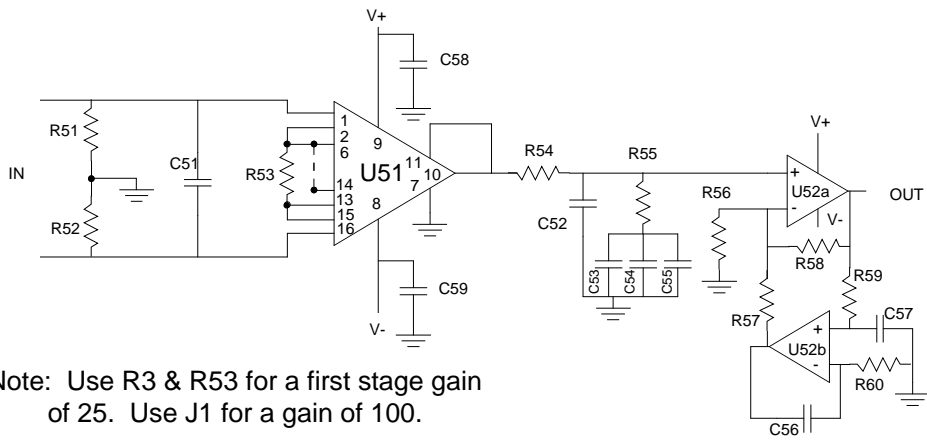
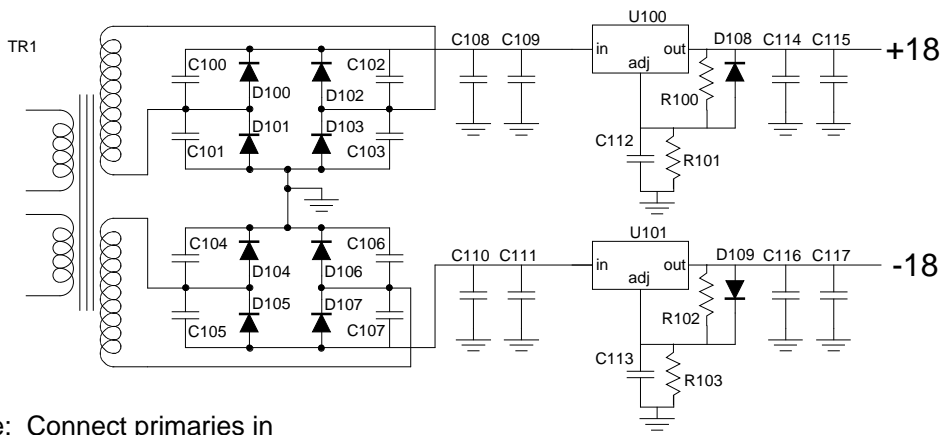
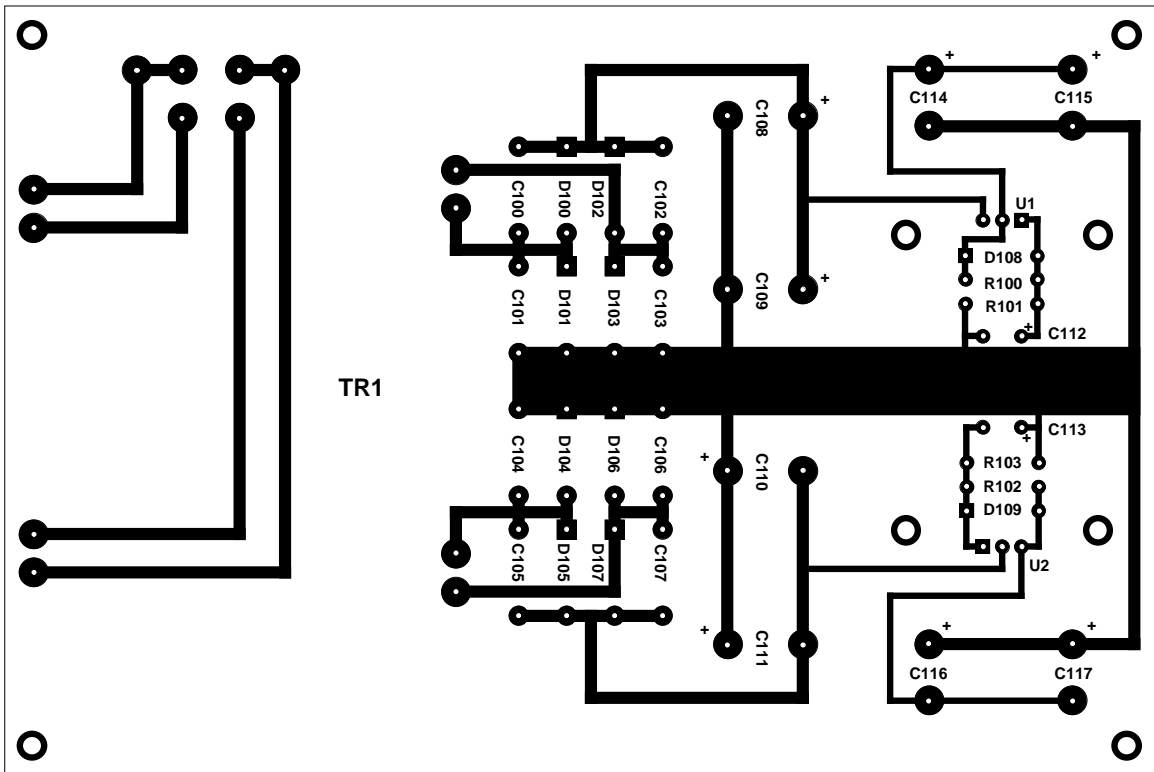
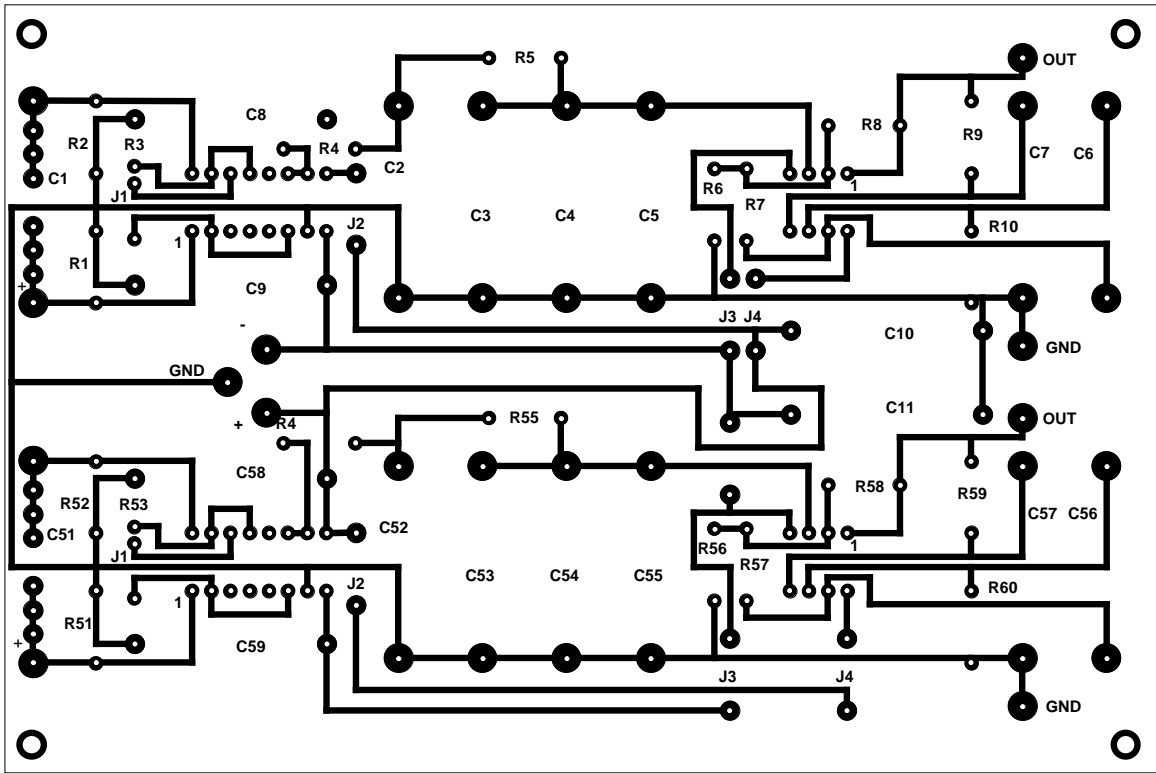


Note: Use R3 & R53 for a first stage gain of 25. Use J1 for a gain of 100.



Note: Connect primaries in parallel for 117 V Series for 240 V





IC Phono Parts List

Part no.	Description	Manufacturer	Digikey part number	Cost	No. in package
C1	optional (determined by cartridge recommendation, usually		about 150 pF)		
C2	Polyprop film cap (0.1 μ F, 50v, 2%)	panasonic	P3104-ND	\$ 0.98	1
C3	Polyprop film cap (0.1 μ F, 50v, 2%)	panasonic	P3104-ND	\$ 0.98	1
C4	Polyprop film cap (0.1 μ F, 50v, 2%)	panasonic	P3104-ND	\$ 0.98	1
C5	Polyprop film cap (0.1 μ F, 50v, 2%)	panasonic	P3104-ND	\$ 0.98	1
C6	Polyprop film cap (0.1 μ F, 50v, 2%)	panasonic	P3104-ND	\$ 0.98	1
C7	Polyprop film cap (0.1 μ F, 50v, 2%)	panasonic	P3104-ND	\$ 0.98	1
C8	Polyprop film cap (0.1 μ F, 50v, 2%)	panasonic	P3104-ND	\$ 0.98	1
C9	Polyprop film cap (0.1 μ F, 50v, 2%)	panasonic	P3104-ND	\$ 0.98	1
C10	Polyprop film cap (0.1 μ F, 50v, 2%)	panasonic	P3104-ND	\$ 0.98	1
C11	Polyprop film cap (0.1 μ F, 50v, 2%)	panasonic	P3104-ND	\$ 0.98	1
C51	optional (determined by cartridge recommendation, usually		about 150 pF)		
C52	Polyprop film cap (0.1 μ F, 50v, 2%)	panasonic	P3104-ND	\$ 0.98	1
C53	Polyprop film cap (0.1 μ F, 50v, 2%)	panasonic	P3104-ND	\$ 0.98	1
C54	Polyprop film cap (0.1 μ F, 50v, 2%)	panasonic	P3104-ND	\$ 0.98	1
C55	Polyprop film cap (0.1 μ F, 50v, 2%)	panasonic	P3104-ND	\$ 0.98	1
C56	Polyprop film cap (0.1 μ F, 50v, 2%)	panasonic	P3104-ND	\$ 0.98	1
C57	Polyprop film cap (0.1 μ F, 50v, 2%)	panasonic	P3104-ND	\$ 0.98	1
C58	Polyprop film cap (0.1 μ F, 50v, 2%)	panasonic	P3104-ND	\$ 0.98	1
C59	Polyprop film cap (0.1 μ F, 50v, 2%)	panasonic	P3104-ND	\$ 0.98	1
C100	ceramic cap (560 pF, 500 V)	panasonic	P4033-ND	\$ 0.12	10
C101	ceramic cap (560 pF, 500 V)	panasonic	P4033-ND	\$ 0.12	10
C102	ceramic cap (560 pF, 500 V)	panasonic	P4033-ND	\$ 0.12	10
C103	ceramic cap (560 pF, 500 V)	panasonic	P4033-ND	\$ 0.12	10
C104	ceramic cap (560 pF, 500 V)	panasonic	P4033-ND	\$ 0.12	10
C105	ceramic cap (560 pF, 500 V)	panasonic	P4033-ND	\$ 0.12	10
C106	ceramic cap (560 pF, 500 V)	panasonic	P4033-ND	\$ 0.12	10
C107	ceramic cap (560 pF, 500 V)	panasonic	P4033-ND	\$ 0.12	10
C108	Electrolytic cap (3300 μ F, 35 V)	panasonic	P5755-ND	\$ 3.40	1
C109	Electrolytic cap (3300 μ F, 35 V)	panasonic	P5755-ND	\$ 3.40	1
C110	Electrolytic cap (3300 μ F, 35 V)	panasonic	P5755-ND	\$ 3.40	1
C111	Electrolytic cap (3300 μ F, 35 V)	panasonic	P5755-ND	\$ 3.40	1
C112	Electrolytic cap (120 μ F, 35 V)	panasonic	P5730-ND	\$ 0.40	1
C113	Electrolytic cap (120 μ F, 35 V)	panasonic	P5730-ND	\$ 0.40	1
C114	Electrolytic cap (4700 μ F, 25 V)	panasonic	P5724-ND	\$ 3.19	1
C115	Electrolytic cap (4700 μ F, 25 V)	panasonic	P5724-ND	\$ 3.19	1
C116	Electrolytic cap (4700 μ F, 25 V)	panasonic	P5724-ND	\$ 3.19	1
C117	Electrolytic cap (4700 μ F, 25 V)	panasonic	P5724-ND	\$ 3.19	1
D100	Silicon Diode	Gen. Inst.	1N4007GICT-ND	\$ 0.07	10
D101	Silicon Diode	Gen. Inst.	1N4007GICT-ND	\$ 0.07	10
D102	Silicon Diode	Gen. Inst.	1N4007GICT-ND	\$ 0.07	10
D103	Silicon Diode	Gen. Inst.	1N4007GICT-ND	\$ 0.07	10
D104	Silicon Diode	Gen. Inst.	1N4007GICT-ND	\$ 0.07	10
D105	Silicon Diode	Gen. Inst.	1N4007GICT-ND	\$ 0.07	10
D106	Silicon Diode	Gen. Inst.	1N4007GICT-ND	\$ 0.07	10
D107	Silicon Diode	Gen. Inst.	1N4007GICT-ND	\$ 0.07	10
D108	Silicon Diode	Gen. Inst.	1N4007GICT-ND	\$ 0.07	10
D109	Silicon Diode	Gen. Inst.	1N4007GICT-ND	\$ 0.07	10
R1	Resistor (23.7 k Ω , 1%)	Yageo	23.7KBK-ND	\$ 0.11	5
R2	Resistor (23.7 k Ω , 1%)	Yageo	23.7KBK-ND	\$ 0.11	5
R3	Resistor (249 Ω , 1%)	Yageo	249XBK-ND	\$ 0.11	5
R4	Resistor (7.32 K Ω , 1%)	Yageo	7.32KBK-ND	\$ 0.11	5
R5	Resistor (1.07 K Ω , 1%)	Yageo	1.07KBK-ND	\$ 0.11	5
R6	Resistor (100 K Ω , 1%)	Yageo	100KBK-ND	\$ 0.11	5
R7	Resistor (8.06 K Ω , 1%)	Yageo	8.06KBK-ND	\$ 0.11	5
R8	Resistor (3.92 K Ω , 1%)	Yageo	3.92KBK-ND	\$ 0.11	5
R9	Resistor (1 M Ω , 1%)	Yageo	1.00MBK-ND	\$ 0.11	5
R10	Resistor (1 M Ω , 1%)	Yageo	1.00MBK-ND	\$ 0.11	5
R51	Resistor (23.7 k Ω , 1%)	Yageo	23.7KBK-ND	\$ 0.11	5
R52	Resistor (23.7 k Ω , 1%)	Yageo	23.7KBK-ND	\$ 0.11	5
R53	Resistor (249 Ω , 1%)	Yageo	249XBK-ND	\$ 0.11	5
R54	Resistor (7.32 K Ω , 1%)	Yageo	7.32KBK-ND	\$ 0.11	5
R55	Resistor (1.07 K Ω , 1%)	Yageo	1.07KBK-ND	\$ 0.11	5
R56	Resistor (100 K Ω , 1%)	Yageo	100KBK-ND	\$ 0.11	5
R57	Resistor (8.06 K Ω , 1%)	Yageo	8.06KBK-ND	\$ 0.11	5
R58	Resistor (3.92 K Ω , 1%)	Yageo	3.92KBK-ND	\$ 0.11	5
R59	Resistor (1 M Ω , 1%)	Yageo	1.00MBK-ND	\$ 0.11	5
R60	Resistor (1 M Ω , 1%)	Yageo	1.00MBK-ND	\$ 0.11	5
R100	Resistor (243 Ω , 1%)	Yageo	243XBK-ND	\$ 0.11	5
R101	Resistor (3.24 K Ω , 1%)	Yageo	3.24KBK-ND	\$ 0.11	5
R102	Resistor (243 Ω , 1%)	Yageo	243XBK-ND	\$ 0.11	5
R103	Resistor (3.24 K Ω , 1%)	Yageo	3.24KBK-ND	\$ 0.11	5
TR1	Toroid Transformer (25 VA, 15V x2)	Telema	TE70063-ND	\$ 18.23	1
U1	Instrumentation Amp (INA103)	Burr Brown	INA103KP-ND	\$ 6.62	1
U2	Op-Amp (OPA2132)	Burr Brown	OPA2132P-ND	\$ 6.91	1
U51	Instrumentation Amp (INA103)	Burr Brown	INA103KP-ND	\$ 6.62	1
U52	Op-Amp (OPA2132)	Burr Brown	OPA2132P-ND	\$ 6.91	1
U100	Positive Adjustable Regulator	Nat. Semi.	LM317T-ND	\$ 1.30	1
U101	Negative Adjustable Regulator	Nat. Semi.	LM337T-ND	\$ 2.17	1
			Total:	\$ 97.86	