

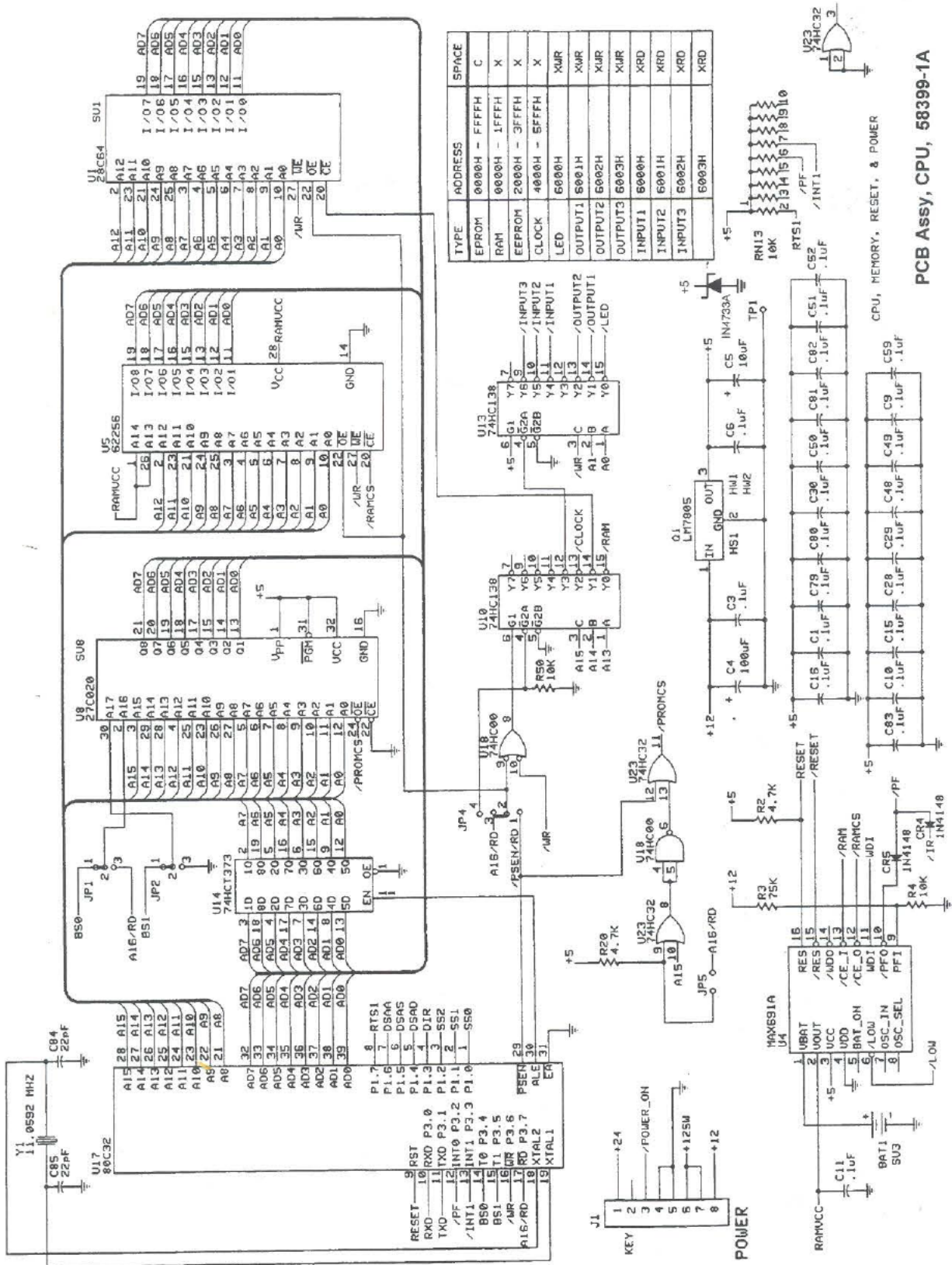


S E C T I O N

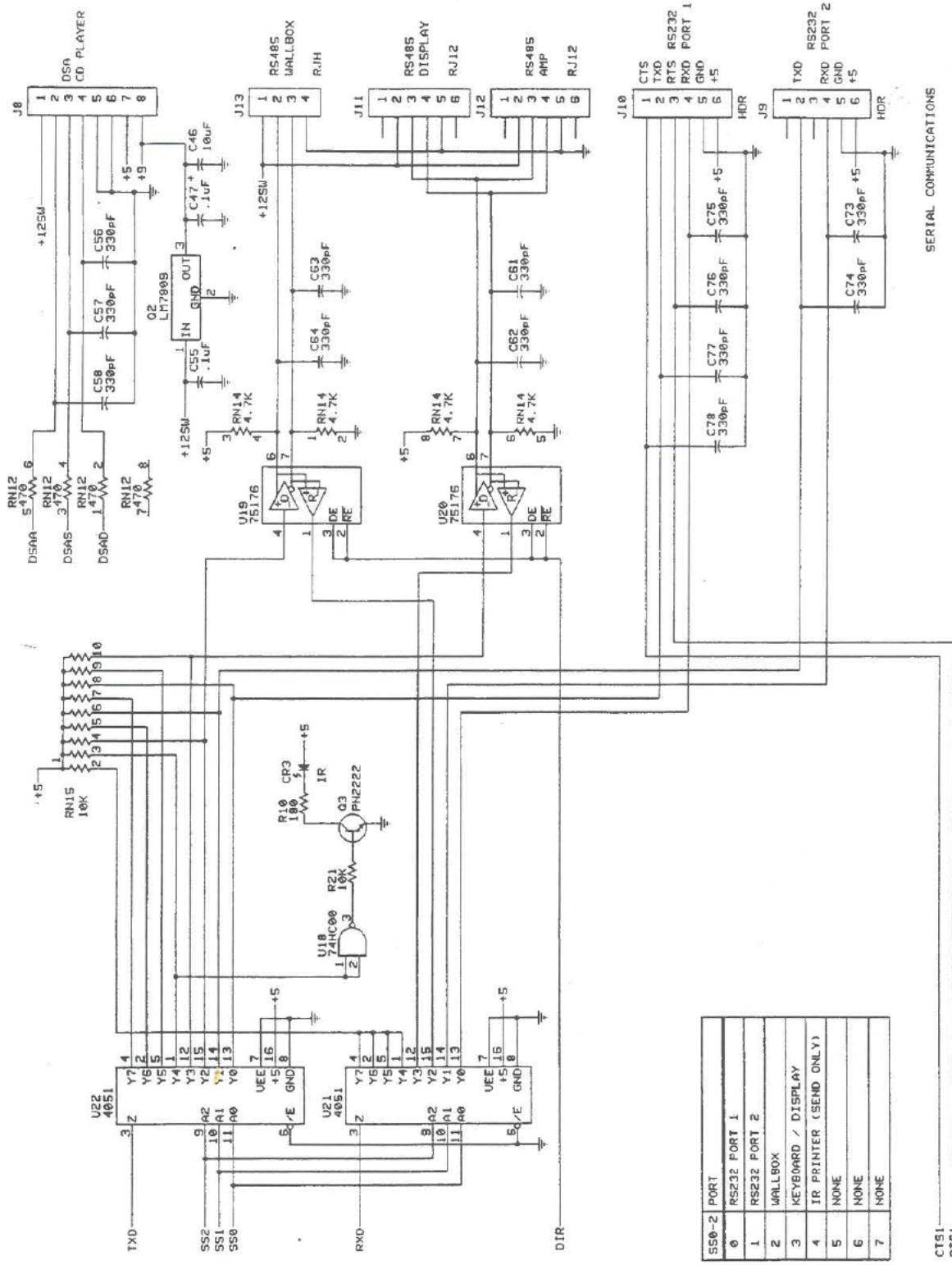
Major Component Schematics

- CPU
- Amplifier/Power Supply
- Audio Output Panel
- Keyboard/Display
- Volume Control
- Crossover
- Transformer
- Lighting Wiring Diagram (CD-8V)
- Primary Power Block Diagram

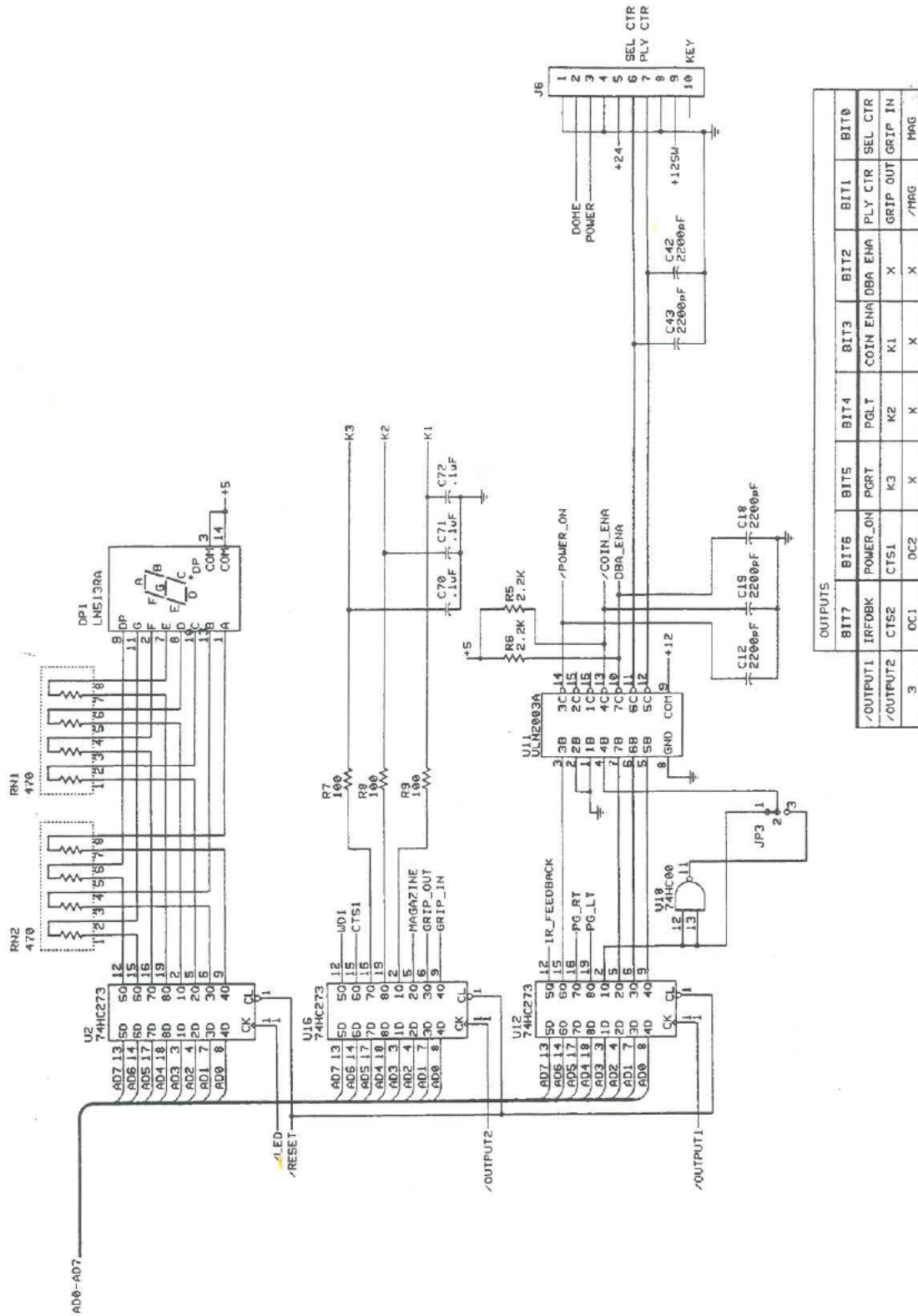
Computer (CPU)



PCB Assy, CPU, 58399-1A



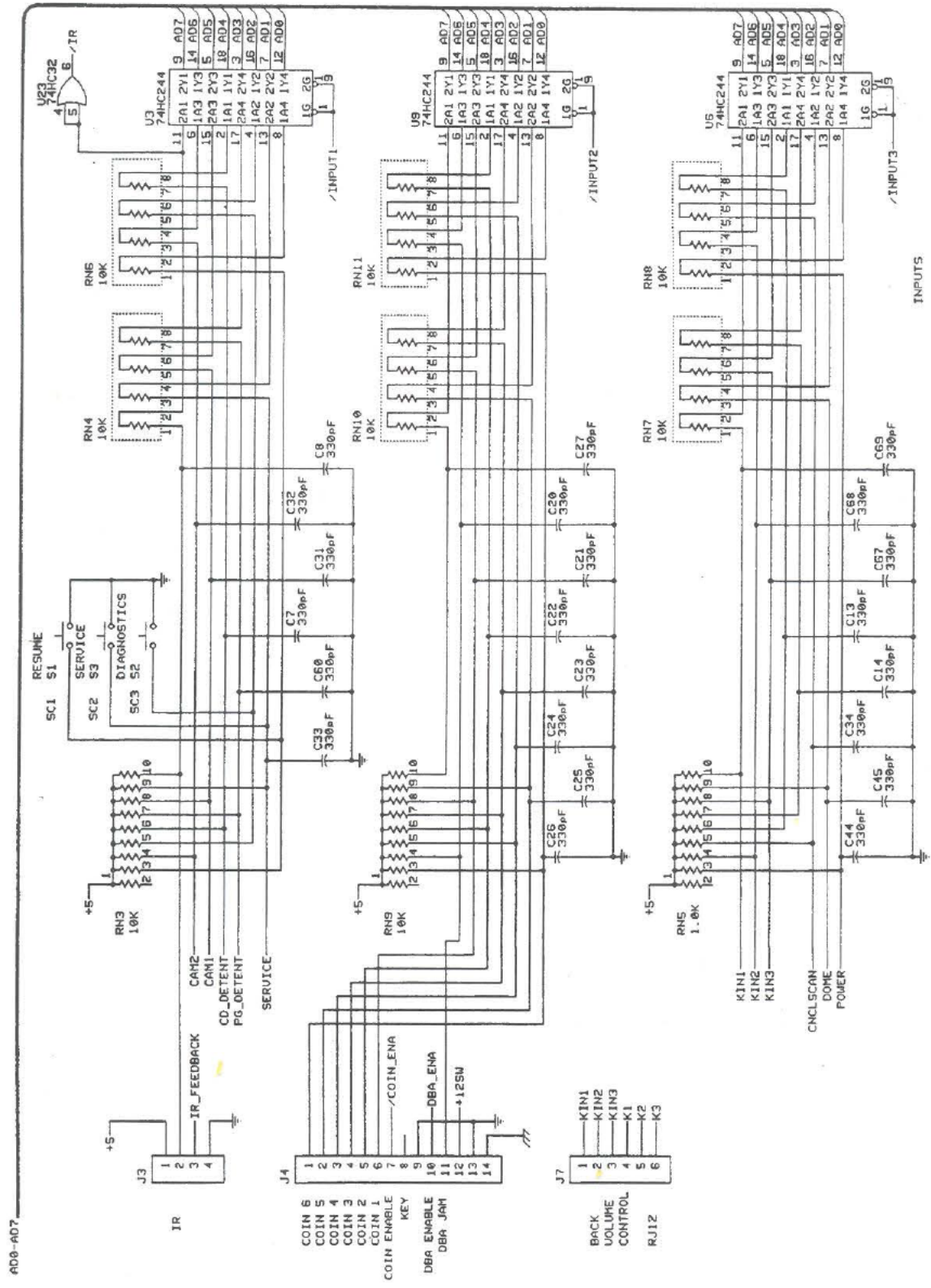
PCB Assy, CPU, 58399-1A



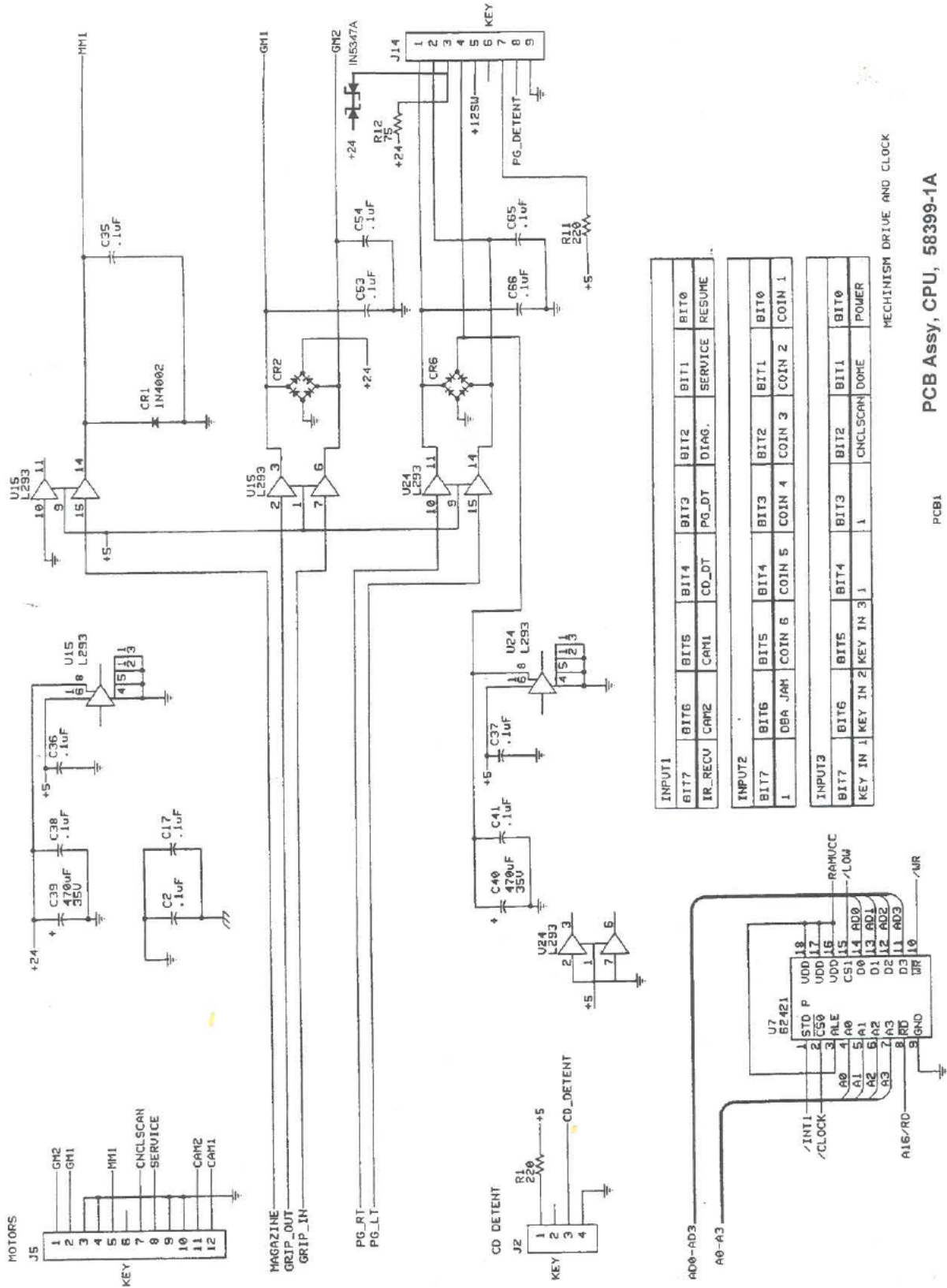
OUTPUTS											
OUTPUT1	OUTPUT2	3	BIT6	BIT5	BIT4	BIT3	BIT2	BIT1	BIT0	SEL CTR	GRIP IN
IRFDBK	CT52	OC1	POWER_ON	DC2	X	X	X	X	X	GRIP OUT	GRIP IN
			PRT	K3	K2	K1	X	X	X	DBA_ENA	PLY CTR
											MAG

OUTPUTS, & STATUS LED

PCB Ass'y, CPU, 58399-1A



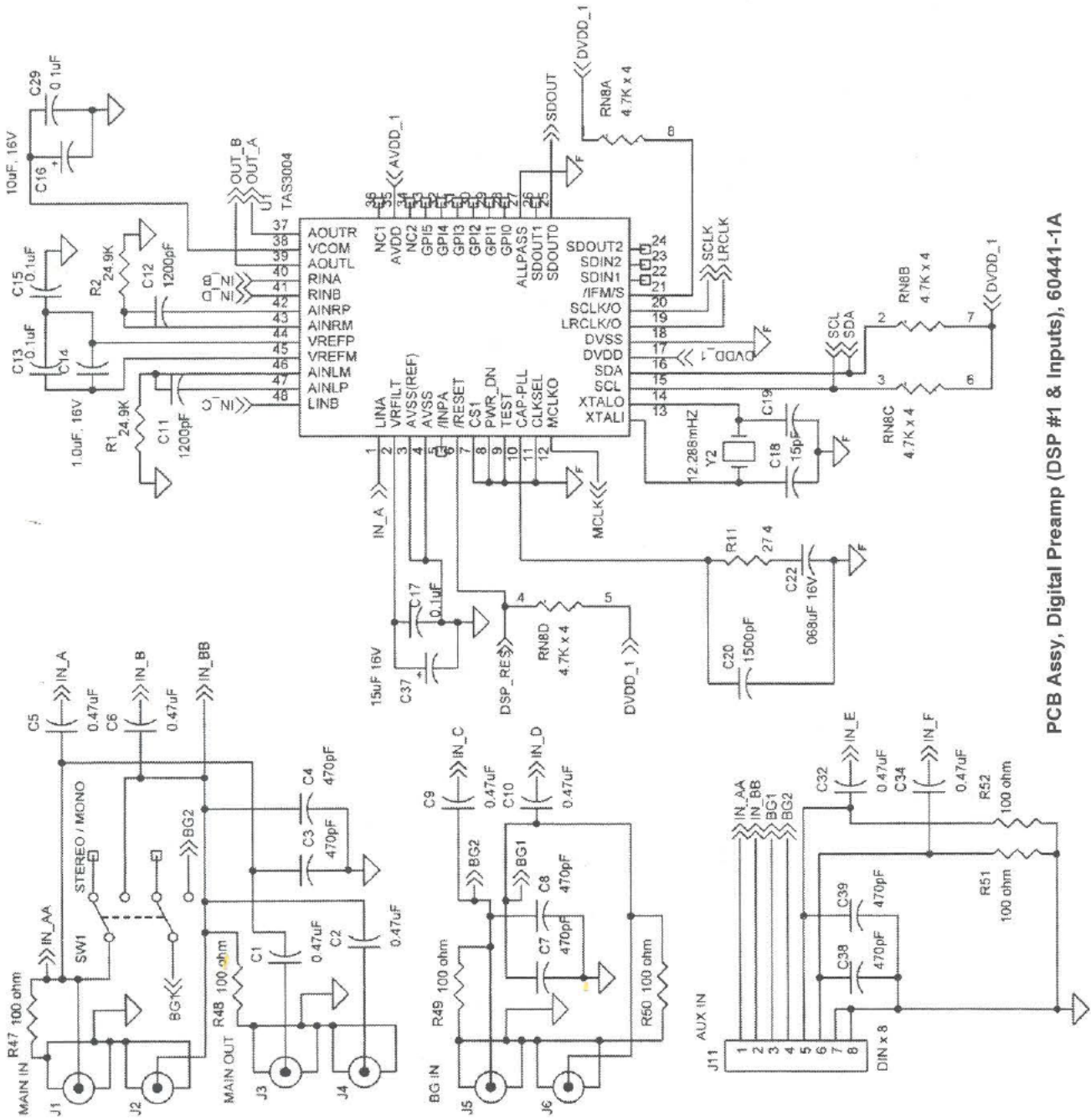
PCB Assy, CPU, 58399-1A



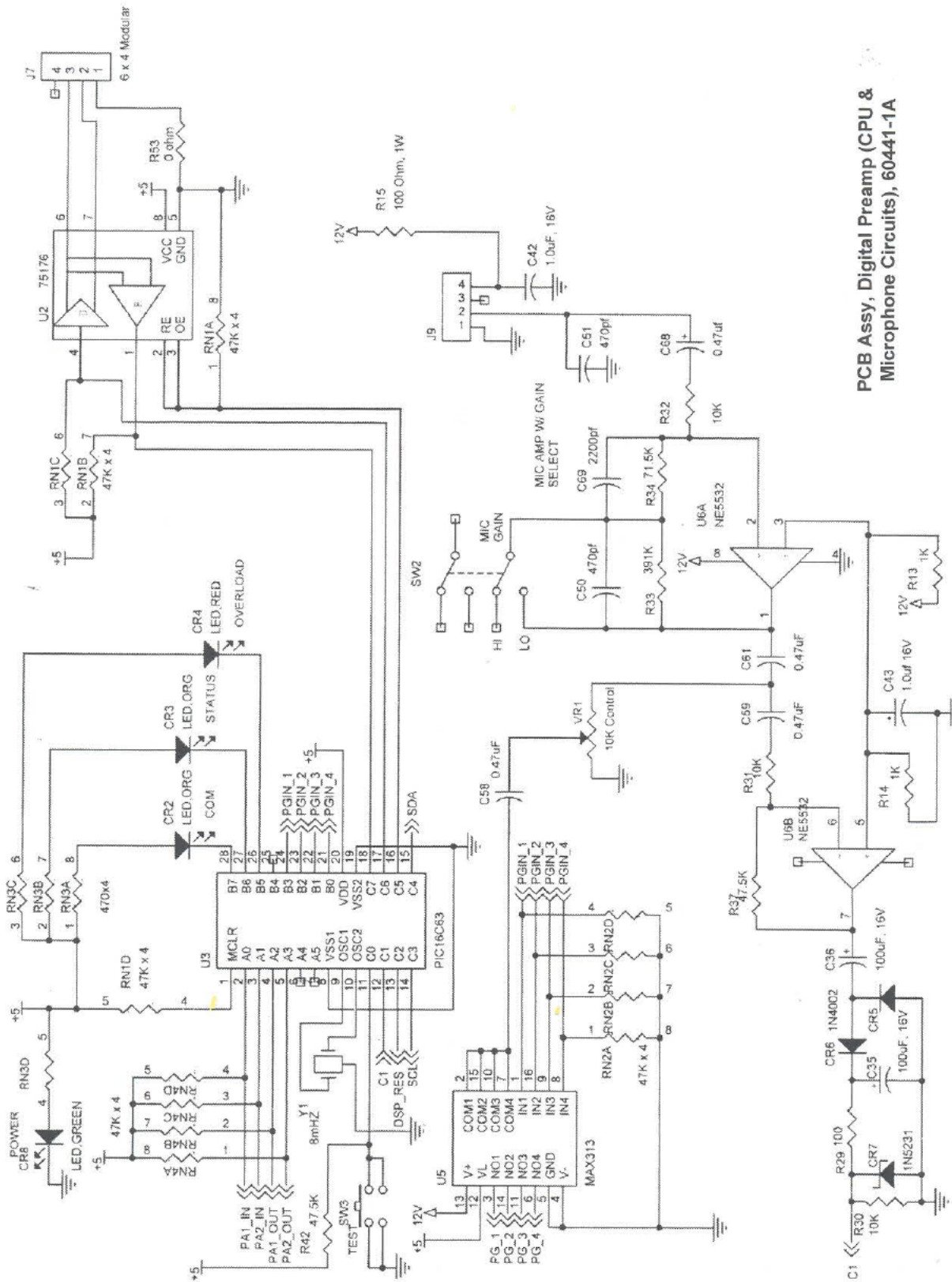
Bill of Materials - PCB Assy, CPU, 58399-1A

Reference	Part	Reference	Part
Back of board across 5V Supply	Diode, IN4733A	R10	Resistor: 180 ohm, 1/4W, 5%
Back of board across R12	Diode, IN5347A	R5, R6	Resistor: 2.2K ohm, 1/4W, 5%
BAT1	Battery, 3V Lithium	R2, R20	Resistor: 4.7K ohm, 1/4W, 5%
C1, C2, C3, C6, C9, C10, C11, C15, C16, C17, C28, C29, C30, C35-C38, C41, C47-C55, C59, C65, C66, C70, C71, C72, C79-C83	Capacitor: .1uF, 50V, Mono	R3	Resistor: 75K ohm, 1/4W, 5%
C12, C18, C19, C42, C43	Capacitor: 2200pF, 50V Mono	R12	Resistor: 75 ohm, 3W, 5%
C84, C85	Capacitor: 22pF, 100V, Mono	RN4, RN6, RN7, RN8, RN10, RN11	Resistor SIP Network, 10K ohm, 8 pin isolated
C7, C8, C13, C14, C20-C27, C31-C34, C44, C45, C56, C57, C58, C60, C61, C62, C63, C64, C67, C68, C69, C73 C78	Capacitor: 330pF, 100V, Mono	RN1, RN2, RN12	Resistor SIP Network, 470 ohm, 8 pin isolated
C4	Capacitor: 100uF, 25V	RN14	Resistor SIP Network, 4.7K ohm, 8 pin isolated
C5, C46	Capacitor: 10uF, 35V	RN5	Resistor SIP Network, 1.0K ohm, 10 pin common
C39, C40	Capacitor: 470uF, 35V	RN3, RN9, RN13, RN15	Resistor SIP Network 10k ohm 10 pin common
CR1	Diode, IN4002	S1, S2, S3	Switch, SPST Momentary
CR2, CR6	Diode Bridge 1A	SP1	Spacer, 3/8" for CR3
CR3	Light Emitting Diode, IR	SU1	28 pin Socket, low profile
CR4, CR5	Diode, IN4148	SU8	32 pin Socket, low profile
DP1	7 Segment Disp - com anode	SU3	Battery Holder 25mm dia.
HS1	Heatsink TO-220	TP1	Test Point
HW1	Screw, #6-32 x 3/8 Pan Hd	U15, U24	I.C. L293 - Quad Half-H Driver
HW2	Keps Nut #6-32	U4	I.C. MAX691A, Microprocessor Supervisor
J3	Connector: 4 pin .1	U11	I.C. ULN2003A, H-V, H-C
J9, J10	Connector: 6 pin .1	U7	I.C. 62421B - CMOS real time clock
J8	Connector: 8 pin .1	U17	I.C. 80C32 - 8 bit Microcomputer
J14	Connector: 9 pin .1	U5	62256-CMOS-32,768 Word by 8 Bit LSI
J6	Connector: 10 pin .1	U1	I.C. 28C64 - EEPROM 8KX8
J4	Connector: 14 pin .1	U8	I.C. 27C020
J2	Connector: 4 pin .156	U19, U20	I.C. 75176 - Differential Bus Transceiver
J1	Connector: 8 pin .156	U14	I.C. 74HCT373 H-CMOS Octal
J5	Connector: 12 pin .156	U18	I.C. 74HC00 H-CMOS Quad 2 input nand
J13	Connector: 4 pin RJH side. entry L.P.	U23	74HC32 H-CMOS Quad 2 input or gate
J7, J11, J12	Connector: 6 pin RJ12 side entry L.P.	U10, U13	I.C. 74HC138 H-CMOS 3/8 Decoder
JP5	Jumper Blk, 2 pin	U3, U6, U9	I.C. 74HC244 H-CMOS Octal Buffer
JP1, JP2, JP3	Jumper Blk, 3 pin	U2, U12, U16	I.C. 74HC273 H-CMOS Octal DFF w/ clear
JP4	Jumper Blk, 4 pin	U21, U22	4051 CMOS 8 Channel Analog
Q1	I.C. LM7805C	Y1	Crystal, 11.0592 Mhz
Q2	I.C. LM7809C		
Q3	NPN Transistor PN2222		
R7, R8, R9	Resistor: 100 ohm, 1/4W, 5%		
R4, R21, R50	Resistor: 10K ohm, 1/4W, 5%		
R1, R11	Resistor: 220 ohm, 1/4W, 5%		

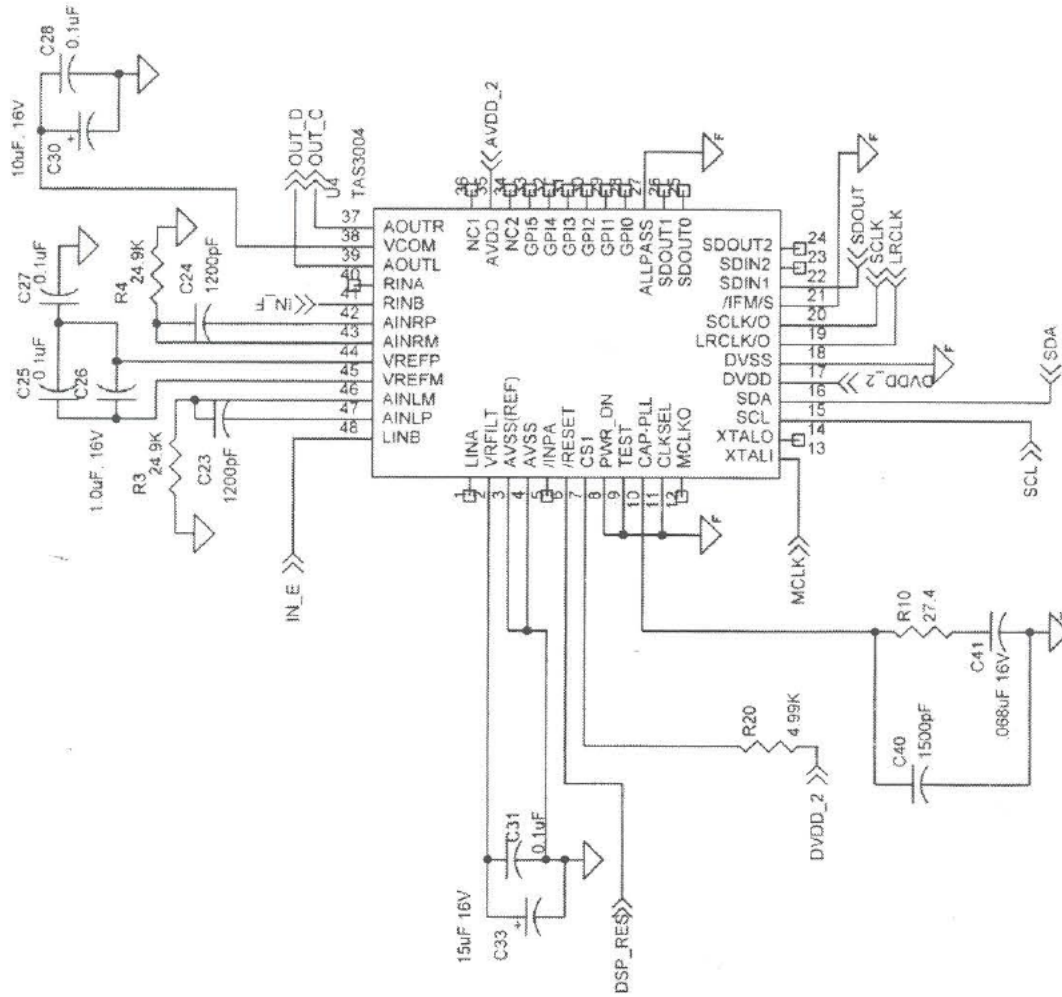
Digital Preamp



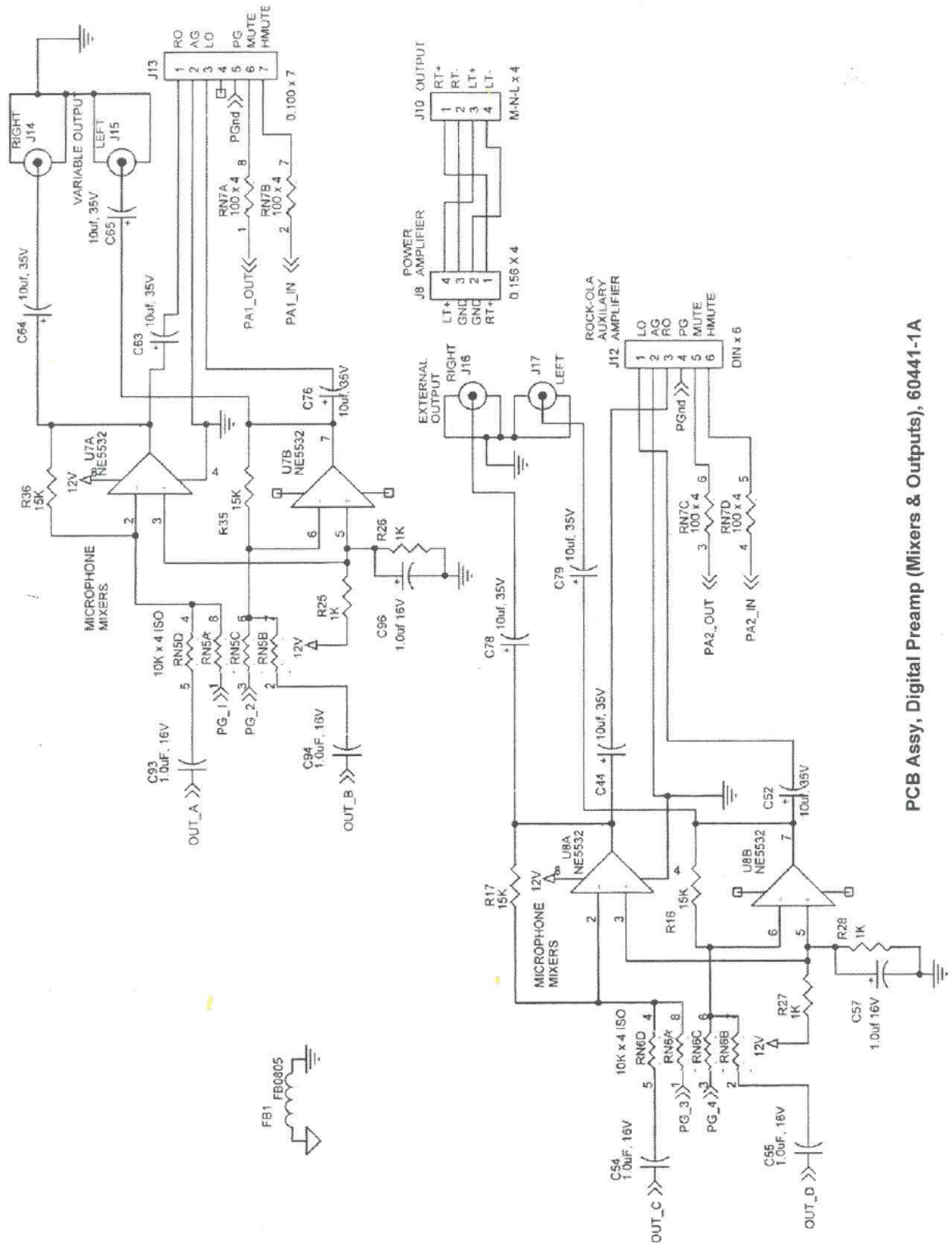
PCB Assy, Digital Preamp (DSP #1 & Inputs), 60441-1A



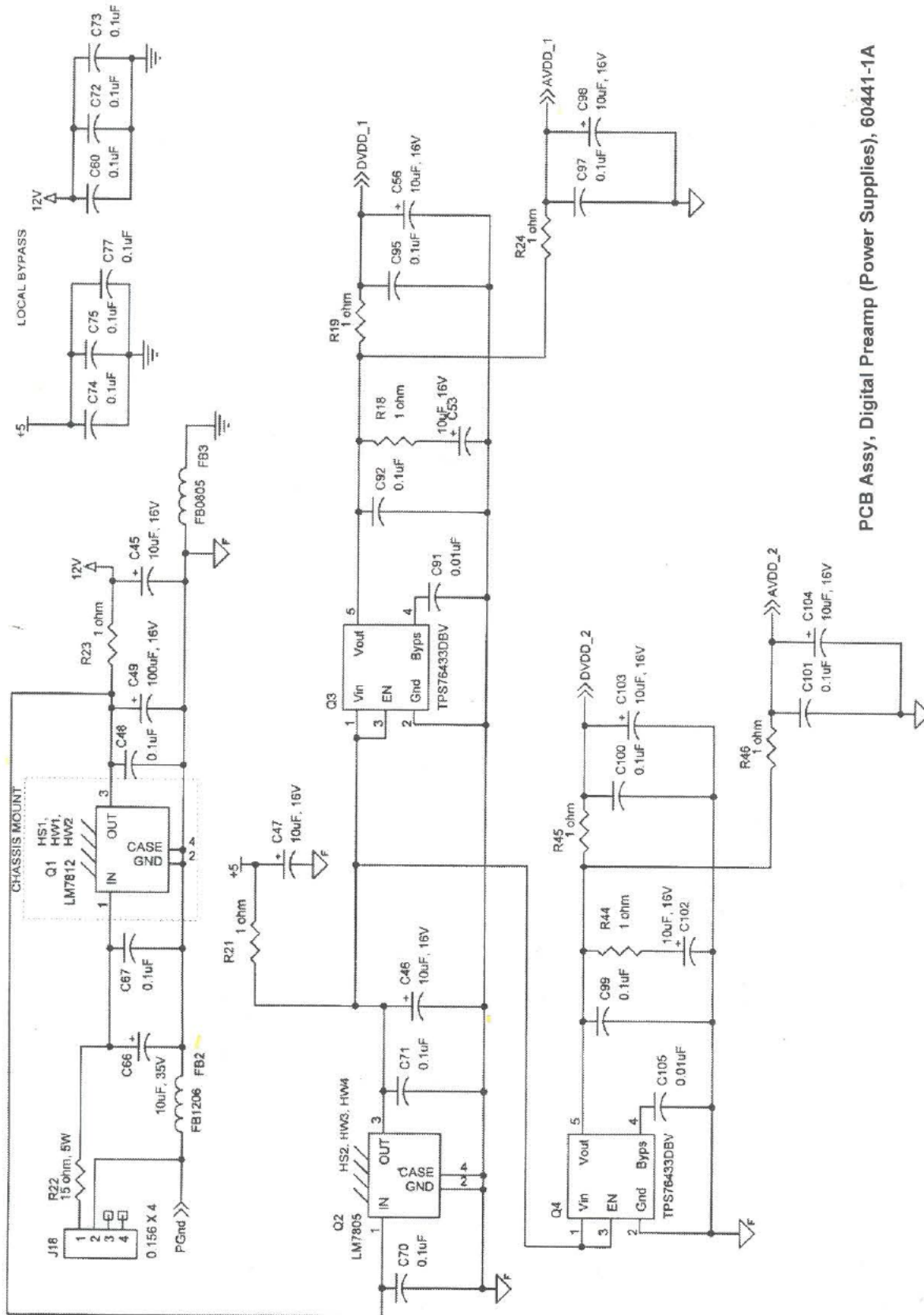
PCB Assy, Digital Preamp (CPU & Microphone Circuits), 60441-1A



PCB Assy, Digital Preamp (DSP #2), 60441-1A



PCB Assy, Digital Preamp (Mixers & Outputs), 60441-1A

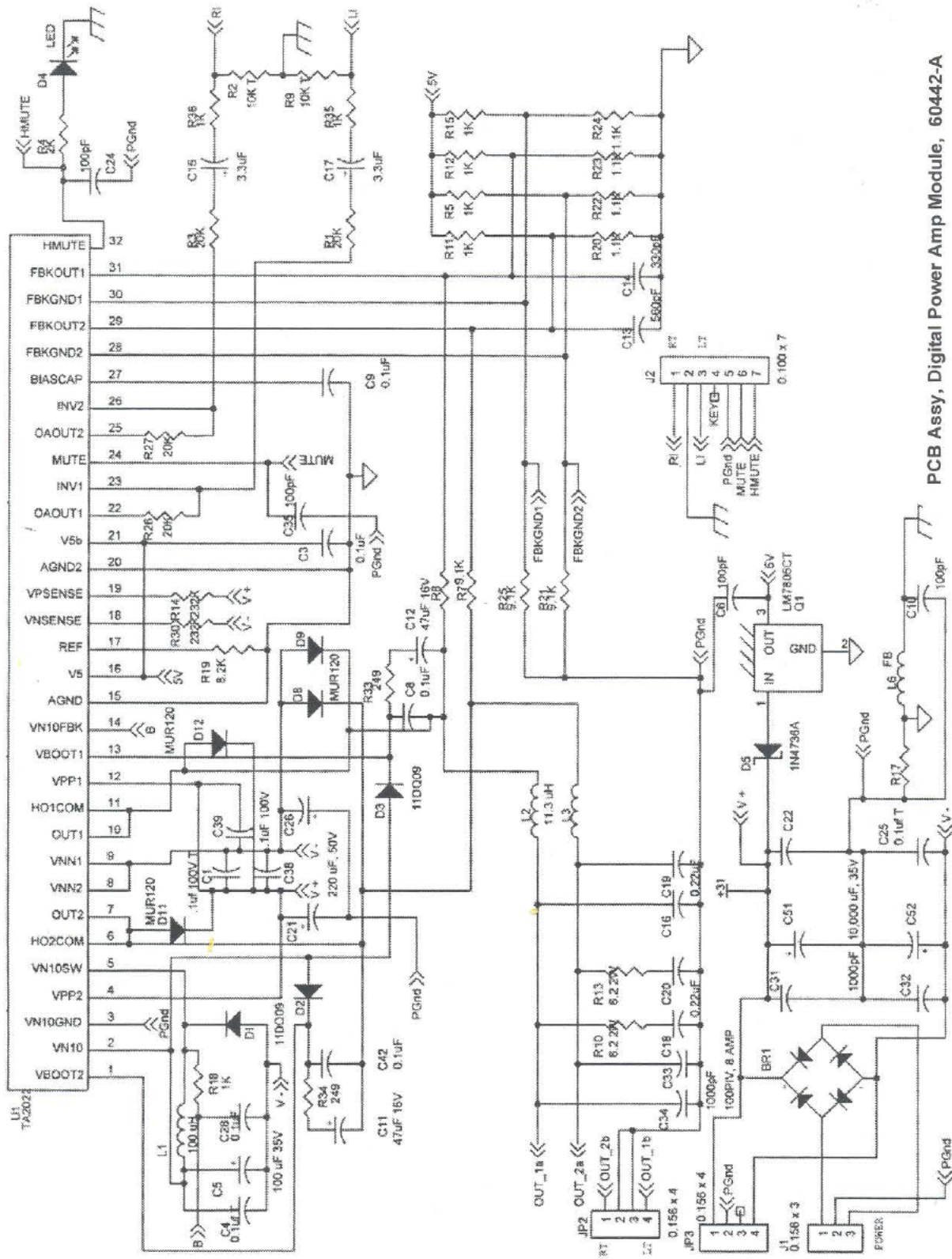


PCB Assy, Digital Preamp (Power Supplies), 60441-1A

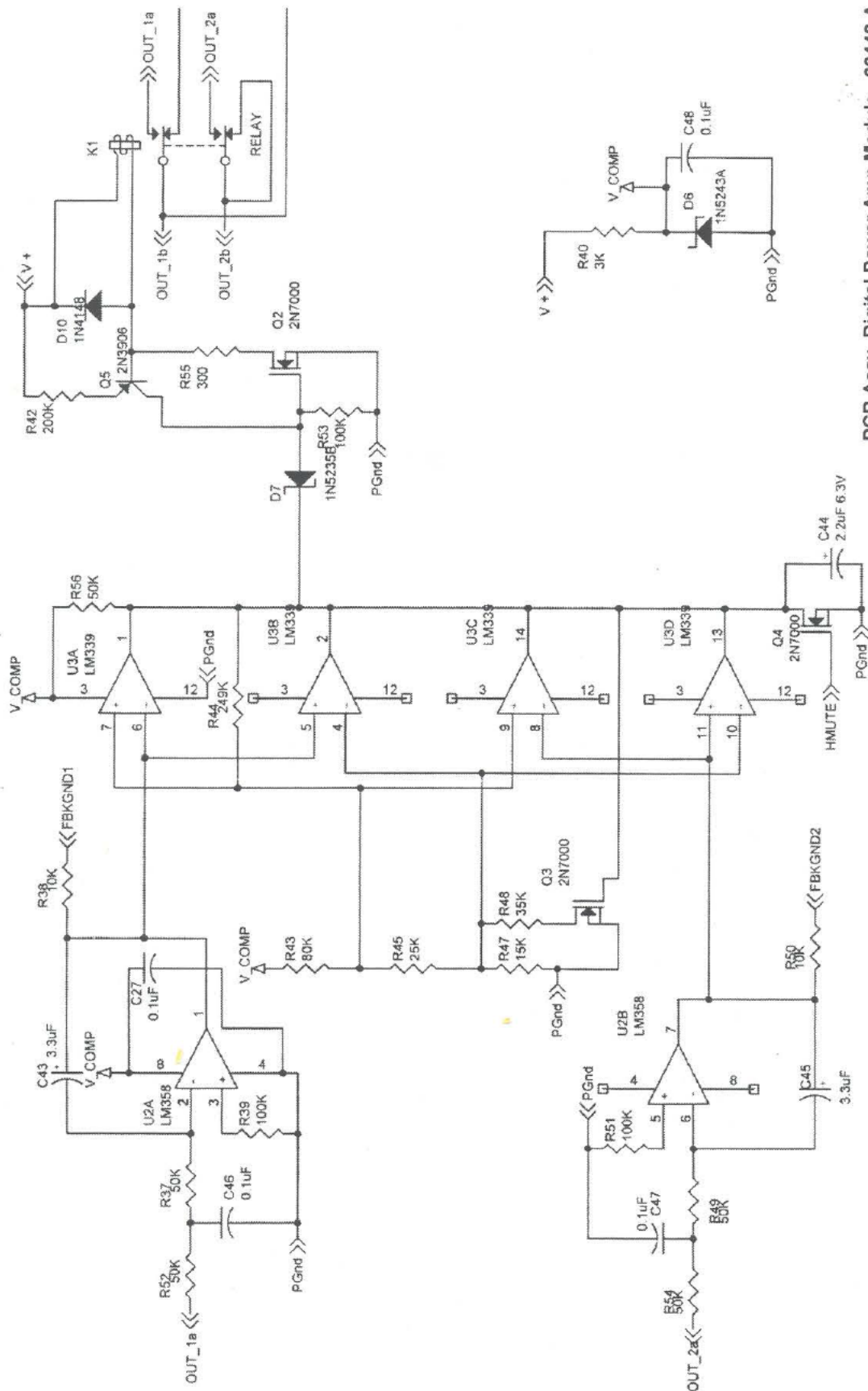
Bill of Materials, Digital Preamp, 60441-1A

Reference	Part
CR2,CR3	LED,ORG
CR4	LED,RED
CR6,CR5	Diode, DL41, 1N4002
CR7	Zener Diode, DL35 1N5231
CR8	LED,GREEN
C1,C2,C5,C6,C9,C10,C32,C34,C58,C59,C61,C68	Capacitor, 0.47uF, 16VDC
C3,C4,C7,C8,C38,C39,C50,C51	Capacitor, 470pF, 50V
C11,C12,C23,C24	Capacitor, 1200pF, 50V
C13,C15,C17,C25,C27,C28,C29,C31,C48,C60,C67,C70,C71,C72,C73,C74,C75,C77,C92,C95,C97,C99,C100,C101	Capacitor, 0.1uF, 50V
C14,C26,C42,C54,C55,C93,C94	Capacitor, 1.0uF, 16V, 0805
C16,C30,C45,C46,C47,C53,C56,C98,C102,C103,C104	Capacitor, 10uF 16V
C18,C19	Capacitor, 15pF
C20,C40	Capacitor, 1500pF, 50V
C22,C41	Capacitor, .068uF 16V
C37,C33	Capacitor, 15uF 16V
C35,C36,C49	Capacitor, 100uF, 16V
C43,C57,C96	Capacitor, 1.0uf 16V, Electrolytic
C44,C52,C63,C64,C65,C66C76,C78,C79	Capacitor, 10uF, 35V
C69	Capacitor, 2200pf, 50V
C91,C105	Capacitor, 0.01uF, 50V
FB1,FB3	Ferrite, 39 Ohm, 4A, 0805
FB2	Ferrite, 31 Ohm, 1.5A, 1206
J1,J2,J3,J4,J5,J6,J14,J15,J16,J17	RCA Jack
J7	RJ11 jack, 6 x 4 Modular
J8,J18	0.156 X 4 Receptacle, Bottom Entry
J9	0.156 x 4 Header, Straight
J10	M-N-L x 4
J11	DIN x 8
J12	DIN x 6
J13	0.100 x 7 Receptacle, Bottom Entry
Q1	12V Regulator, TO-220, LM7812 (mounted to chassis)
Q2	5V Regulator, TO-220, LM7805
Q3,Q4	3.3V Regulator, SM, TPS76433DBV
RN1,RN2,RN4	Resistor Network, 47K x 4
RN3	Resistor Network, 470x4
RN5,RN6	Resistor Network, 10K x 4 ISO
RN7	Resistor Network, 100 x 4
RN8	Resistor Network, 4.7K x 4
R1,R2,R3,R4	Resistor, 24.9K, 1/16W, 1%, 0603
R11,R10	Resistor, 27.4, 1/16W, 1%, 0603
R13,R14,R25,R26,R27,R28	Resistor, 1.00K, 1/10W, 1%, 0805
R15	Resistor, 100 Ohm, 1W, 5%, TH
R16,R17,R35,R36	Resistor, 15.0K, 1/16W, 1%, 0603
R18,R19,R21,R23,R24,R44,R45,R46	Resistor, 1.0, 1/8W, 5%, 1206
R20	Resistor, 4.99K, 1/16W, 1%, 0603
R22	Resistor, 15 Ohm, 5W
R29	Resistor, 1/8W, 5%, 1206
R30,R31,R32	Resistor, 10.0K, 1/16W, 1%, 0603
R33	Resistor, 391K, 1/16W, 1%, 0603
R34	Resistor, 71.5K, 1/16W, 1%, 0603
R37,R42	Resistor, 47.5K, 1/16W, 1%, 0603
R47,R48,R49,R50,R51,R52	Resistor, 100 Ohm, 1/8W, 1%, 0805
SW1,SW2	Switch, DPDT
SW3	Switch, Pushbutton
U1,U4	I. C. DSP, TI TAS3004PFB
U2	I.C., RS-485 Transceiver, 75176
U3	I.C., Programmed, PIC16C63A-20/SP
U5	I.C., Quad Switch, MAX313
U6,U7,U8	I.C. Low Noise OP Amp, NE5532
VR1	Potentiometer, 10K, Vertical
Y1	Crystal, with capacitors, 8mHZ
Y2	Crystal, Parallel Cut, 12.288mHZ

Digital Power Amp Module



PCB Assy, Digital Power Amp Module, 60442-A

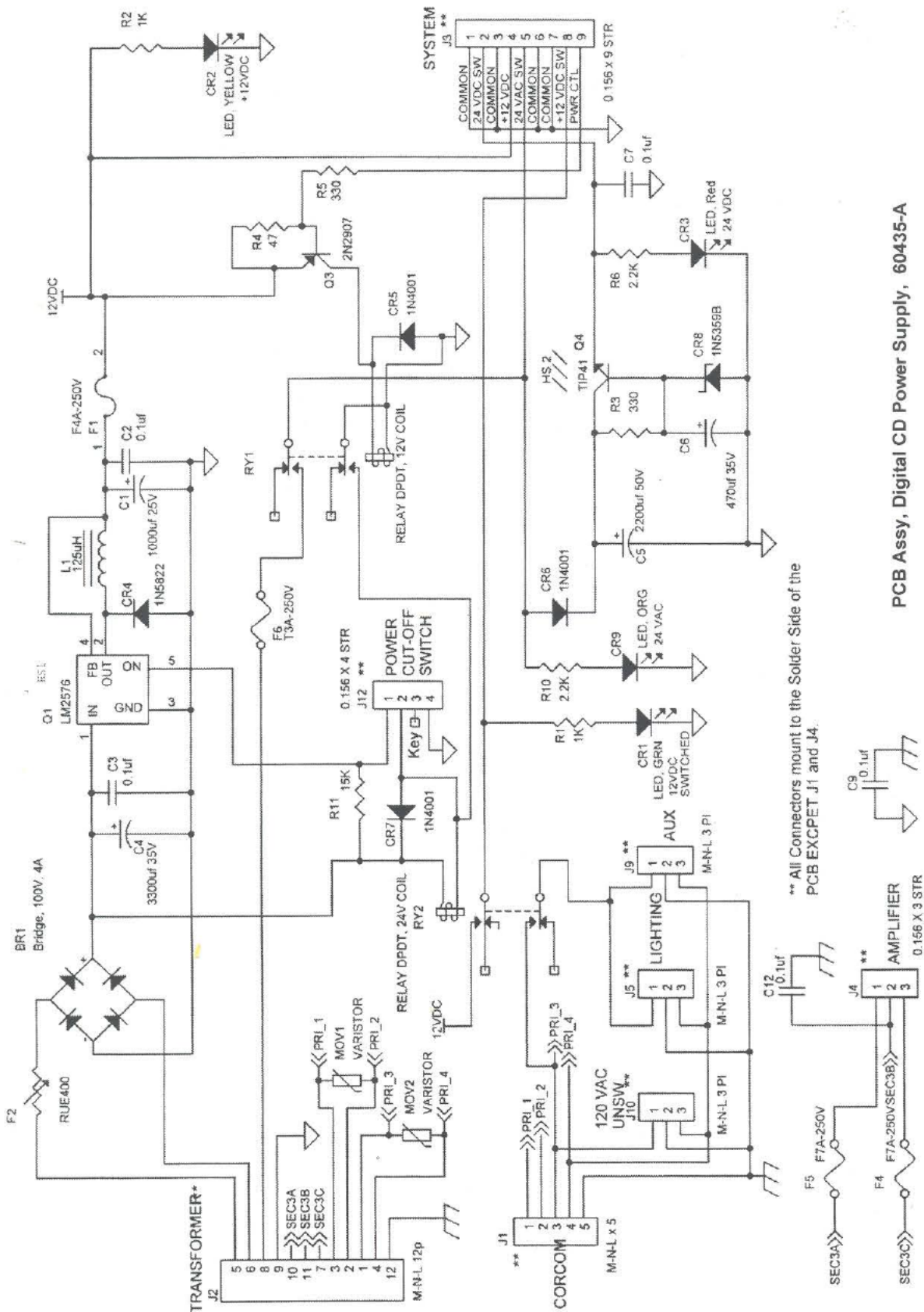


PCB Assy, Digital Power Amp Module, 60442-A

Bill of Materials, Digital Power Amp Module, 60442-A

Reference	Part
BR1	Bridge, 100PIV, 8A
C1	Capacitor, .1uf 100V
C3,C8,C9,C27,C28, C42,C46,C47, C48	Capacitor, 0.1uF
C4,C22,C25	Capacitor, 0.1uf
C5	Capacitor, 100 uF 35V
C6,C10,C24,C35	Capacitor, 100pF
C11,C12	Capacitor, 47uF 16V
C13	Capacitor, 560pF
C14	Capacitor, 330pF
C15,C17,C43,C45	Capacitor, 3.3uF
C16,C18,C19,C20	Capacitor, 0.22uF
C21, C26	Capacitor, 10,000uF, 35V
C31,C32,C33,C34	Capacitor, 1000pF
C38,C39	Capacitor,.1uF 100V
C44	Capacitor, 2.2uF 6.3V
D1,D2,D3	Diode, 11DQ09
D4	LED, Red
D5	Diode, 1N4736A
D6	Diode, 1N5243A
D7	Diode, 1N5235B
D8,D9, D11, D12	Diode, MUR120
D10	Diode, 1N4148
F1,F2	Fuse, 8A FB
JP2	0.156 x 4
JP3	0.156 x 3
J2	0.100 x 7
-K1	RELAY, 24VDC, DPDT
L1	Inductor, 100 uH
L2,L3	Inductor, RMC P/N 60290
L6	Ferrite Bead
Q1	Regulator, LM7805CT
Q2,Q3,Q4	Transistor, 2N7000
Q5	Transistor, 2N3906
R1,R3,R26,R27	Resistor, 20K
R2,R9	Resistor, 10K
R4	Resistor, 2K
R5,R11,R12,R15, R18,R35,R36	Resistor, 1K
R7,R8,R21,R25	Resistor, 9.1K
R13,R10	Resistor, 6.2 2W
R30,R14	Resistor, 232K
R17	Resistor, 0 ohm
R19	Resistor, 8.2K
R20,R22,R23,R24	Resistor, 1.1K
R34,R33	Resistor, 249
R37,R49,R52,R54, R56	Resistor, 50K
R38,R50	Resistor, 10K
R39,R51,R53	Resistor, 100K
R40	Resistor, 3K
R42	Resistor, 200K
R43	Resistor, 80K
R44	Resistor, 249K
R45	Resistor, 25K
R47	Resistor, 15K
R48	Resistor, 35K
R55	Resistor, 300 Ohm
U1	I.C., Digital Amp Tripath TA2022
U2	I.C., OP Amp, LM358
U3	I.C., Comp, LM339

Digital CD Power Supply



** All Connectors mount to the Solder Side of the PCB EXCEPT J1 and J4.

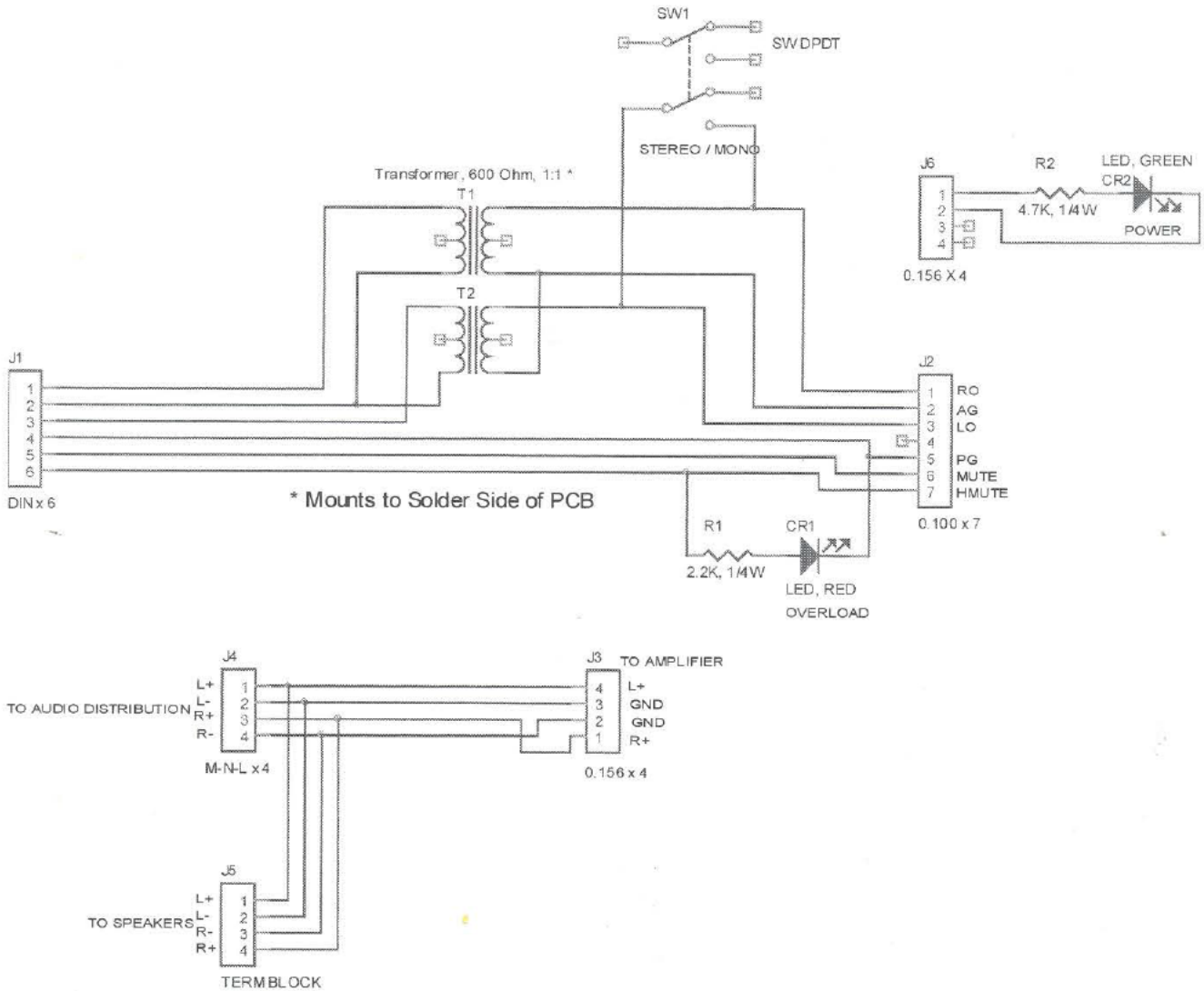
PCB Assy, Digital CD Power Supply, 60435-A

Bill of Materials, Digital CD Power Supply, 60435-A

Reference	Part
BR1	Bridge, 100V, 4A
CR1	LED, GRN
CR2	LED, YELLOW
CR3	LED, Red
CR4	Diode, Schotkey, 1N5822
CR5,CR6,CR7	Diode, 1N4001
CR8	Diode, 1N5359B
CR9	LED, ORG
C1	Capacitor, 1000uf 25V
C2,C3,C7,C9,C12	Capacitor, 0.1uf
C4	Capacitor, 3300uf 35V
C5	Capacitor, 2200uf 50V
C6	Capacitor, 470uf 35V
F1	Fuse, Fast Acting, 4A-250V
F2	Polyfuse, 4A, RUE400
F4,F5	Fuse, Fast Acting, 7A-250V
F6	Fuse, Time Delay, 3A-250V
J1	PC Header, M-N-L x 5
J2	PC Header, M-N-L 12p
J3	0.156 x 9 Header, Straight
J4	0.156 X 3 Header, Straight
J5,J9,J10	PC Header, M-N-L 3 Pi
J12	0.156 X 4 Header, Straight
L1	Inductor, 125uH
MOV1,MOV2	Metal Oxide Varistor, 140VAC, 1250SA
Q1	Regulator, 12V switching, LM2576
Q3	Transistor, 2N2907
Q4	Transistor, TIP41
RY1	Relay DPDT, 12V Coil
RY2	Relay DPDT, 24V Coil
R1,R2	Resistor, 1K
R5,R3	Resistor, 330
R4	Resistor, 47
R10,R6	Resistor, 2.2K
R11	Resistor, 15K

Digital Auxiliary Amp

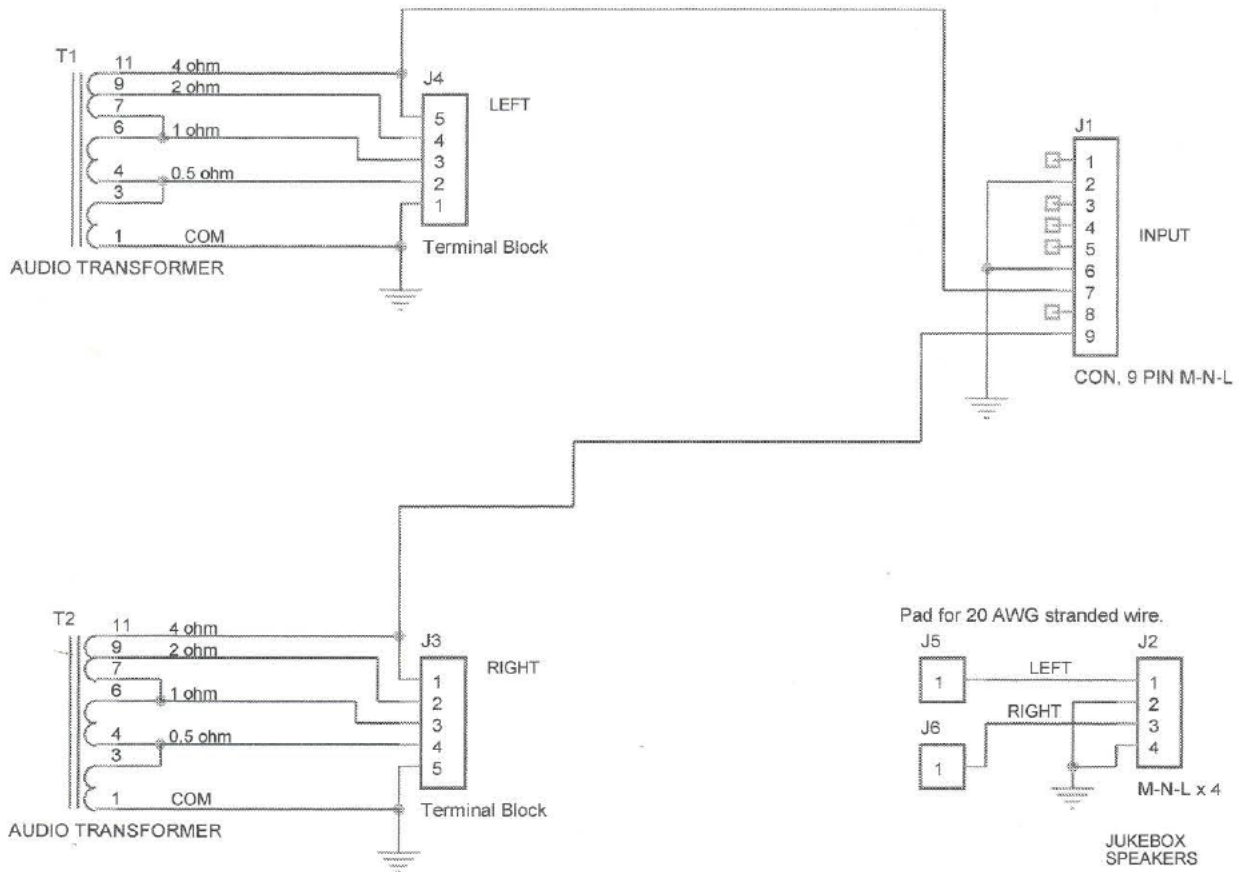
PCB Assy, Digital Auxiliary Amp, 60429-1A



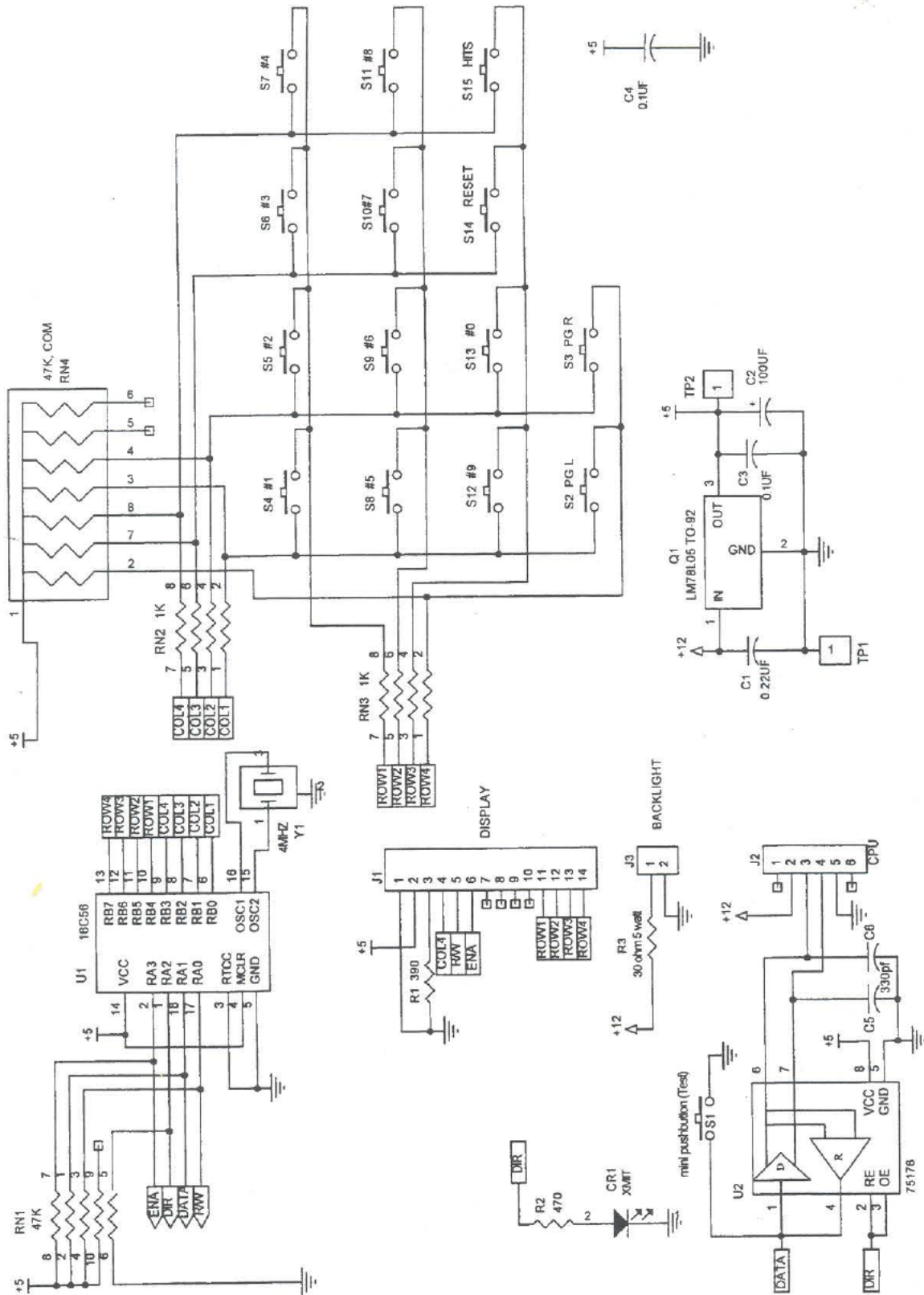
Bill of Materials

Reference	Part
CR1	LED, RED
CR2	LED, GREEN
J1	Connector, DIN x 6
J2	0.100 x 7, Receptacle, Bottom Entry
J3,J6	0.156 X 4, Receptacle, Bottom Entry
J4	M-N-L x 4, PCB Mount Header
J5	Terminal Block, 4 place
R1	Resistor, 2.2K, 1/4W
R2	Resistor, 4.7K, 1/4W

Audio Output Panel 70107-A



Keyboard/Display



Keyboard/Display 58926-A

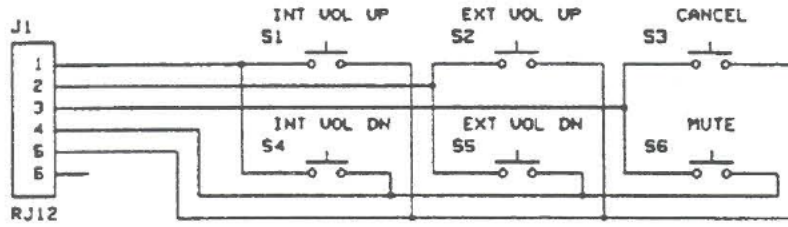
Bill of Materials, PCB Assy, Keyboard/Display, 58926-A

Reference	Part
C1	Capacitor 0.22uF
C2	Capacitor 100uF
C3, C4	Capacitor 0.1uF
C5, C6	Capacitor 330pF
CR1	Diode
J1	Connector (Display)
J2	Connector (CPU)
J3	Connector (Backlight)
Q1	I.C. LM78L05
RN1	Resistor 47K
RN2, RN3	Resistor 1K
RN4	Resistor 47K, (COM)
R1	Resistor 390 ohm
R2	Resistor 470 ohm
R3	Resistor 30 ohm, 5W
S1	Mini pushbutton (Test)
S2	Mini pushbutton (PG L)
S3	Mini pushbutton (PG R)
S4 - S13	Mini pushbutton

Removable Volume Control

(Back of Machine)

PCB Assy, Volume Control, 58515-A

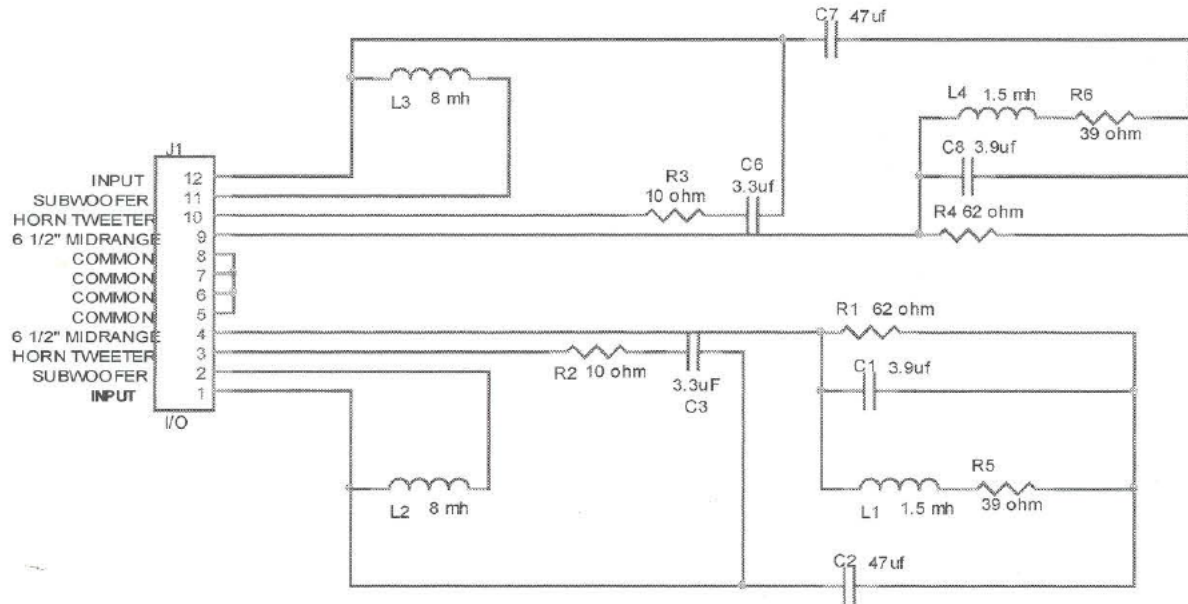


Bill of Materials - Volume Control PC Board Assembly, 58515-A

Reference	Part
J1	Conn Jack RJ12 PCB Low Prof w/ Stops
S1 - S6	Switch SPST, Mom, PB NO

Crossover

PCB Assy, Crossover, 60717-A

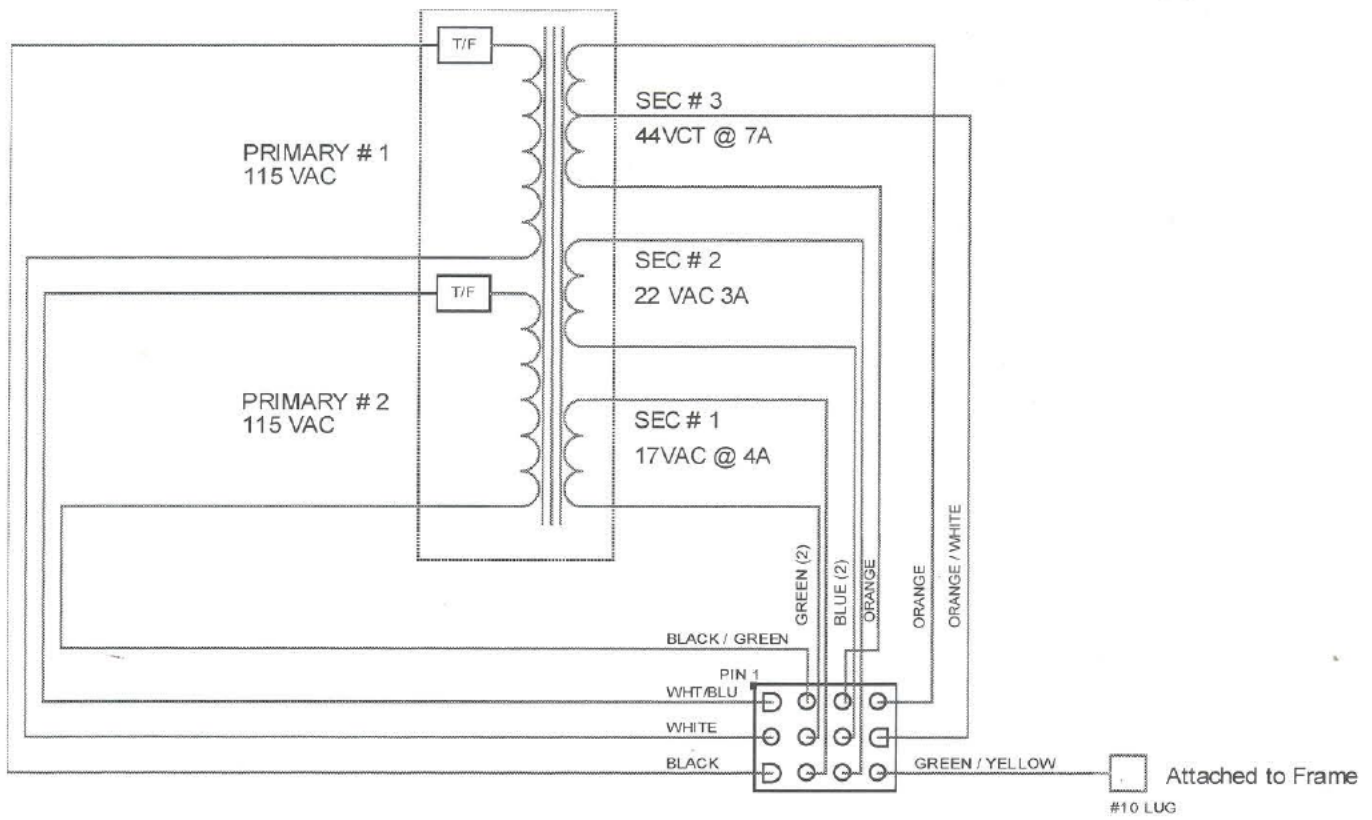


All resistors 5 watt 10%
All capacitors 100 VDC

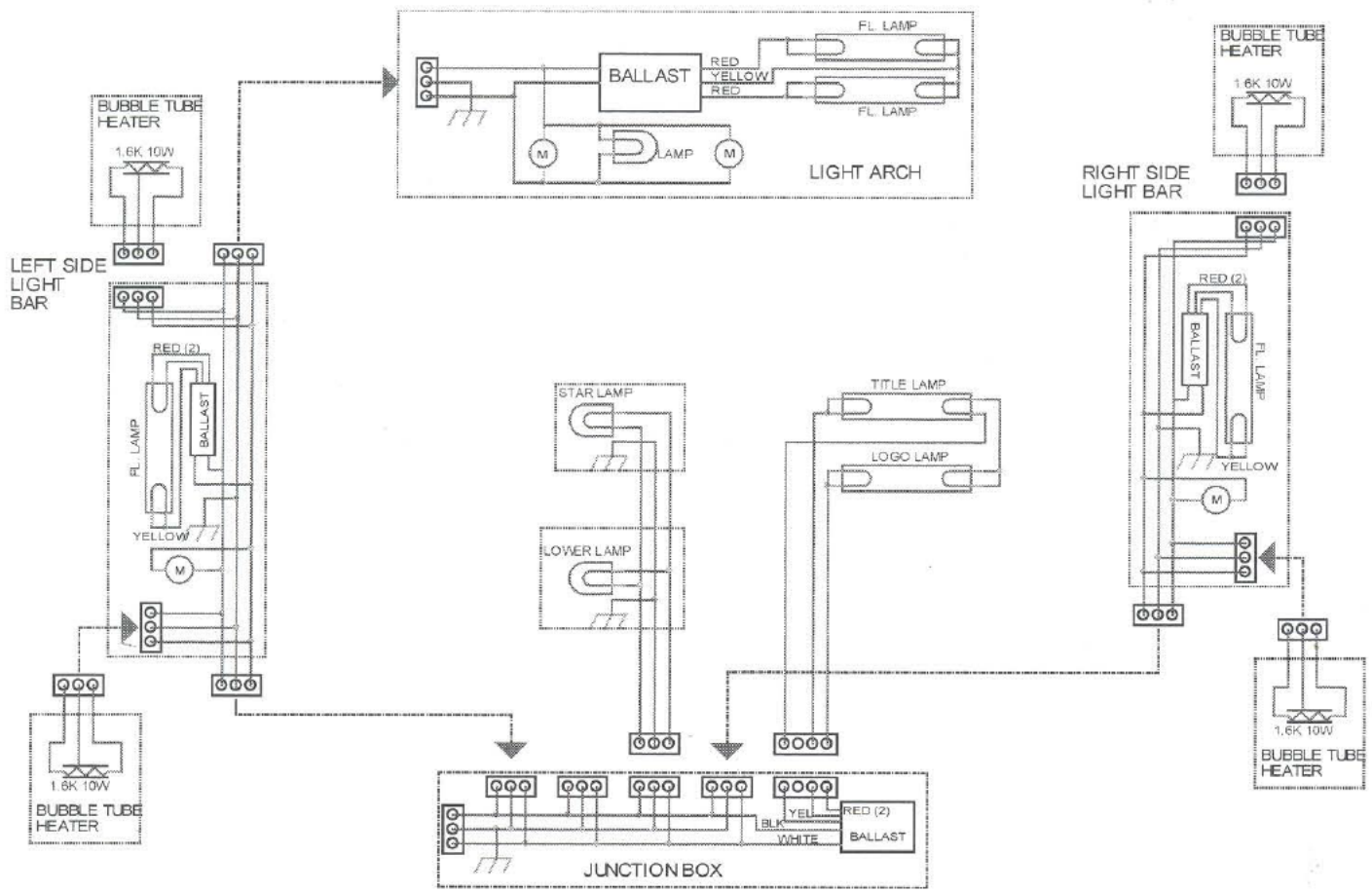
Bill of Materials, PCB Assy, Crossover, 60717-A

Reference	Part
C1, C8	Capacitor 3.9 uf
C2, C7	Capacitor 47 uf
C6, C3	Capacitor 3.3 uf
J1	Header 12 pin
L1, L4	Coil 1.5 mh
L2, L3	Coil 8 mh
R1, R4	Resistor 62 ohm
R2, R3	Resistor 10 ohm
R5, R6	Resistor 39 ohm

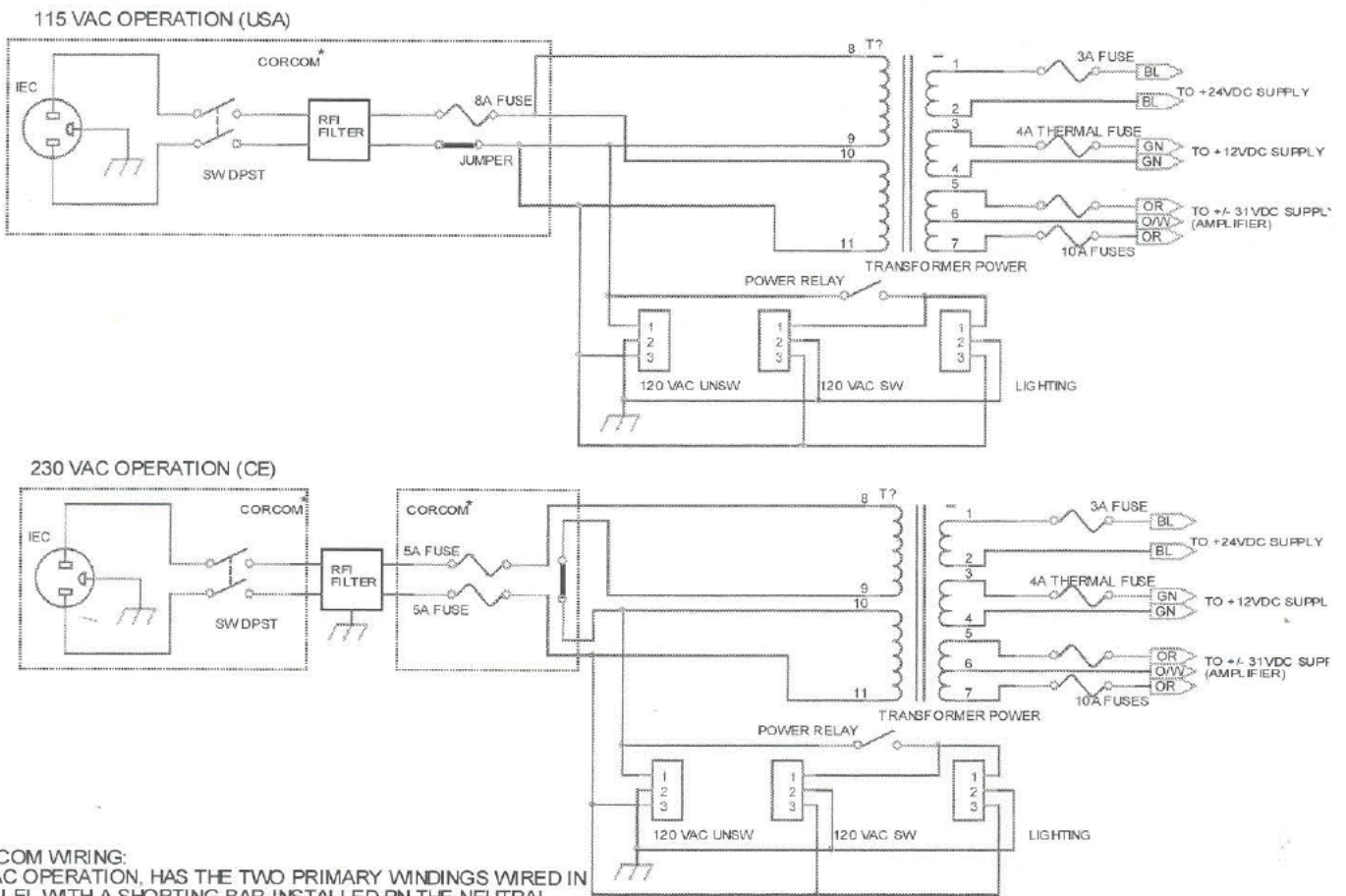
Transformer 60681-A



Lighting Wiring Diagram, CD-8



Primary Power Block Diagram, CD-4/6/8



* CORCOM WIRING:
 115 VAC OPERATION, HAS THE TWO PRIMARY WINDINGS WIRED IN PARALLEL WITH A SHORTING BAR INSTALLED ON THE NEUTRAL SIDE AND AN 8 AMP FUSE ON THE HOT SIDE.
 230 VAC OPERATION HAS THE TWO PRIMARY WINDINGS WIRED IN SERIES WITH THE LIGHTING CONNECTED TO PRIMARY #2 SUCH THAT 115 VAC IS SUPPLIED. (2) 5 AMP FUSES ARE INSTALLED.