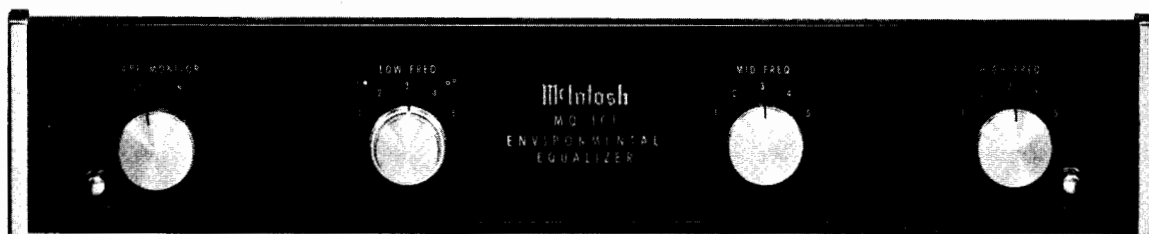


McIntosh

MQ 101

ENVIRONMENTAL EQUALIZER



SERVICE INFORMATION

STARTING WITH SERIAL NO. 1V001

McINTOSH LABORATORY INC. 2 CHAMBERS STREET BINGHAMTON, NEW YORK

MQ 101

ELECTRICAL SPECIFICATIONS

FREQUENCY RESPONSE

± 0.5 dB from 20Hz to 20,000Hz (with low frequency switch in position 1 and mid and high frequency switches in position 3.)

DISTORTION

Less than 0.1% at rated output level, 20Hz to 20,000Hz

HUM AND NOISE

85dB below rated output (140 μ V)

INPUT SENSITIVITY AND IMPEDANCE

Main and tape input 2.5 volts at 60k Ω for rated output at 1000Hz.

INPUT ATTENUATOR

Switched 0dB, -6dB, or -12dB

OUTPUT

Main: 2.5 volts into 47k Ω or greater load, 20Hz to 20,000Hz

Tape: 2.5 volts with rated input

EQUALIZATION

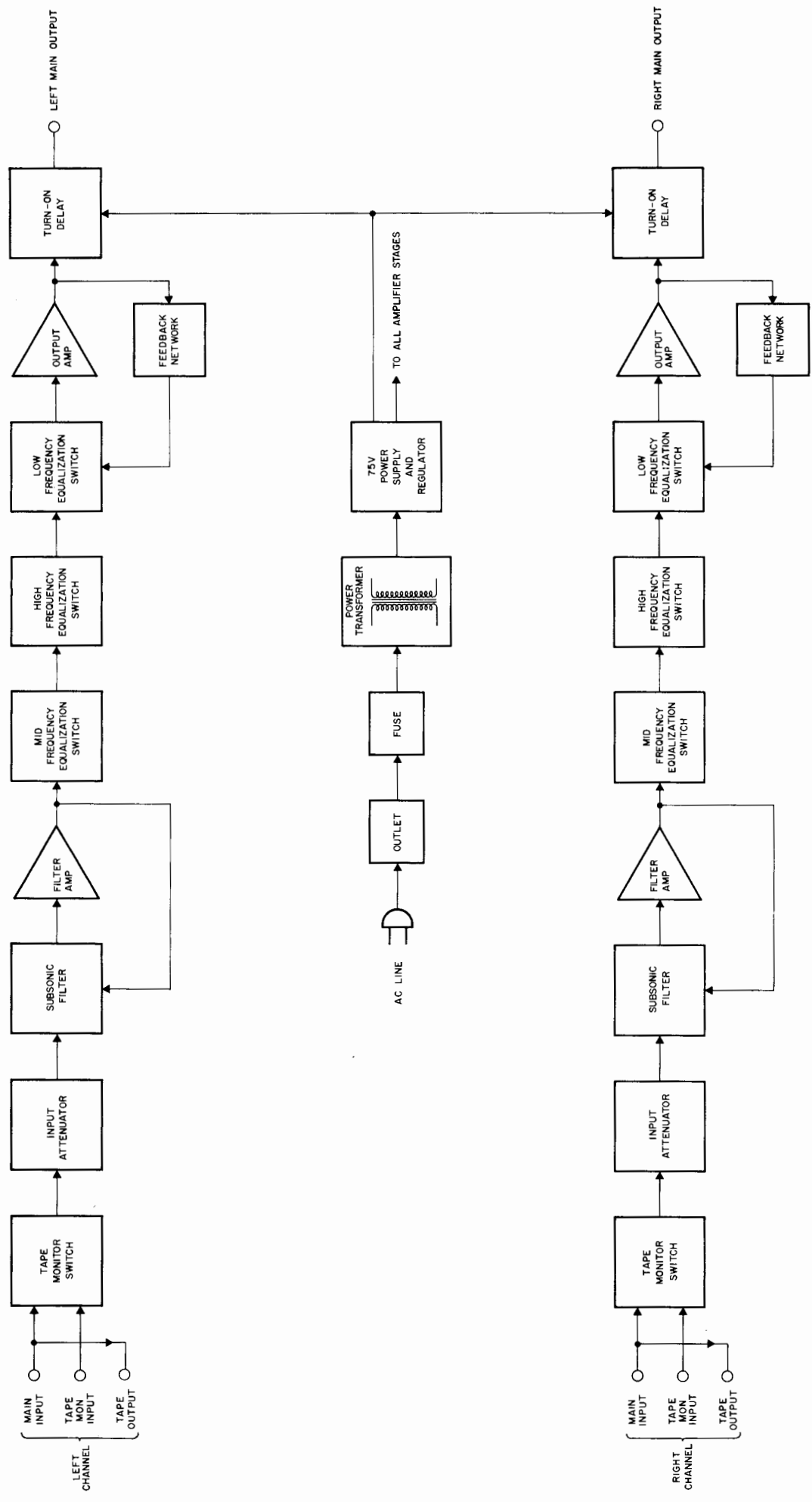
Low frequency: 0 to +17dB at 20Hz in 5 steps (0, +6, +9, +13, +17dB in positions 1, 2, 3, 4, 5 respectively)

Mid frequency: -5 to +5dB at 4000Hz in 5 equal steps

High frequency: -4 to +4dB at 20,000Hz in 5 equal steps

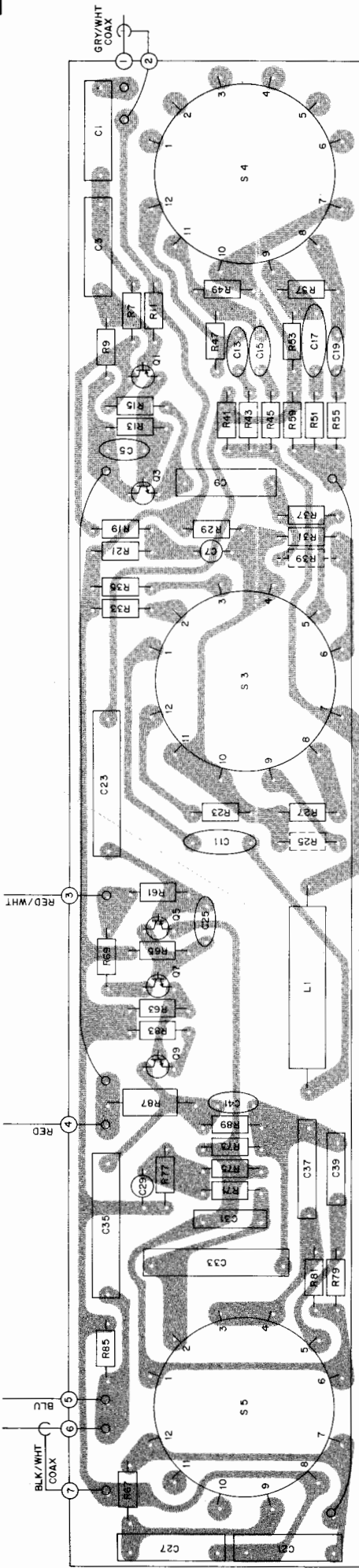
POWER REQUIREMENT

120 volts, 50/60Hz, 20 watts

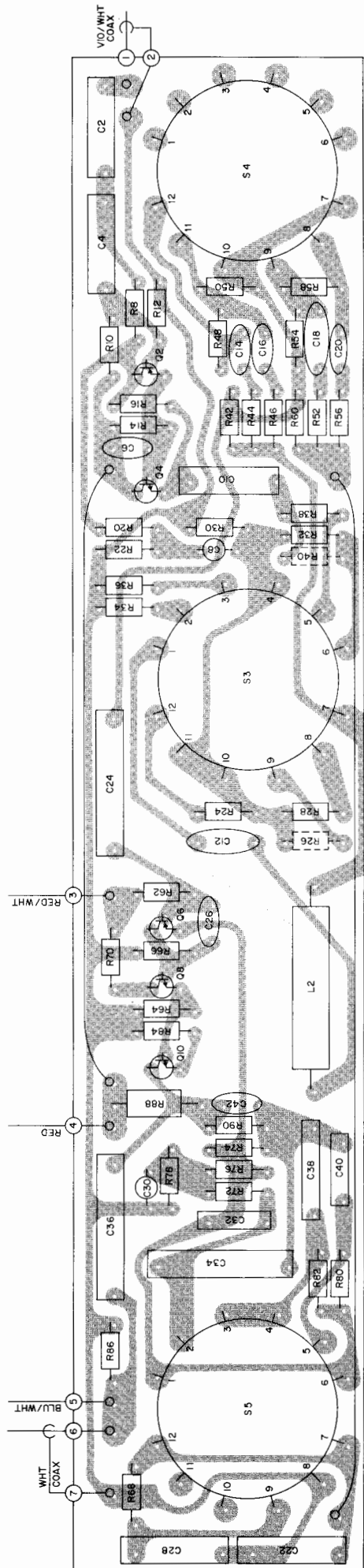


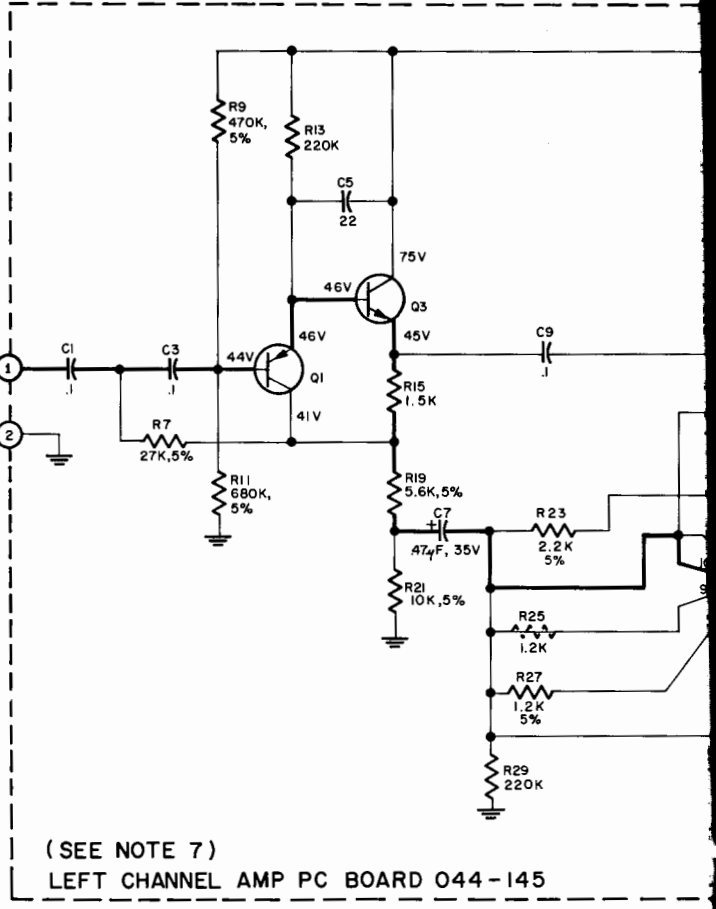
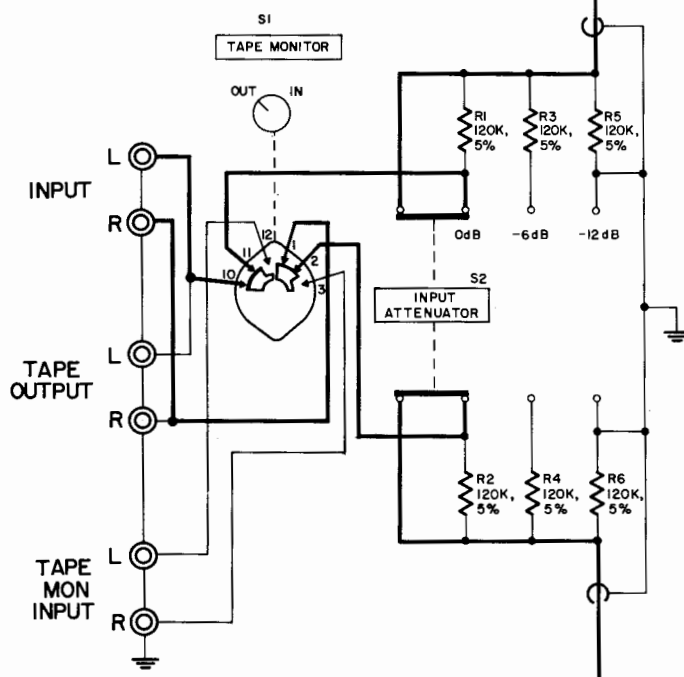
BLOCK DIAGRAM

LEFT CHANNEL AMPLIFIER PC BOARD 044-145

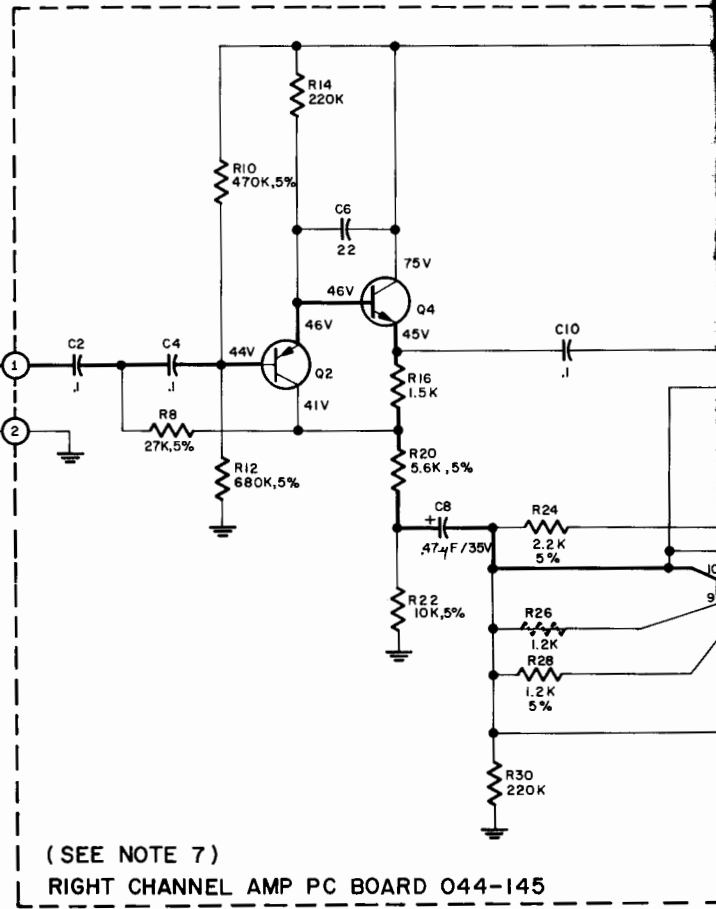


RIGHT CHANNEL AMPLIFIER PC BOARD 044-145

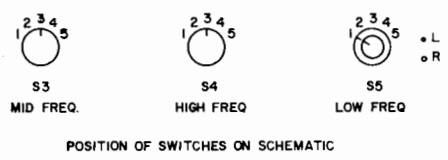




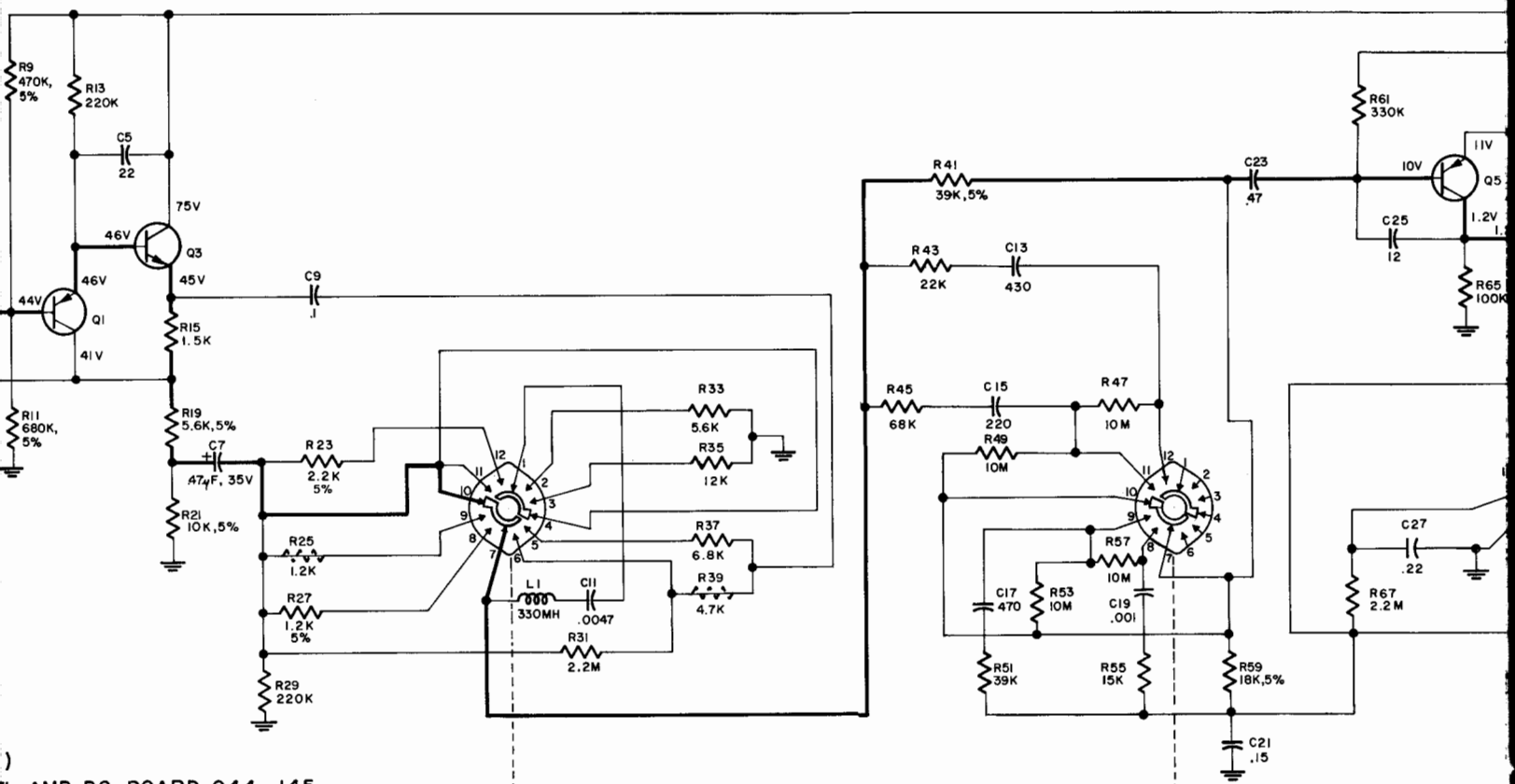
(SEE NOTE 7)
LEFT CHANNEL AMP PC BOARD O44-145



(SEE NOTE 7)
RIGHT CHANNEL AMP PC BOARD O44-145

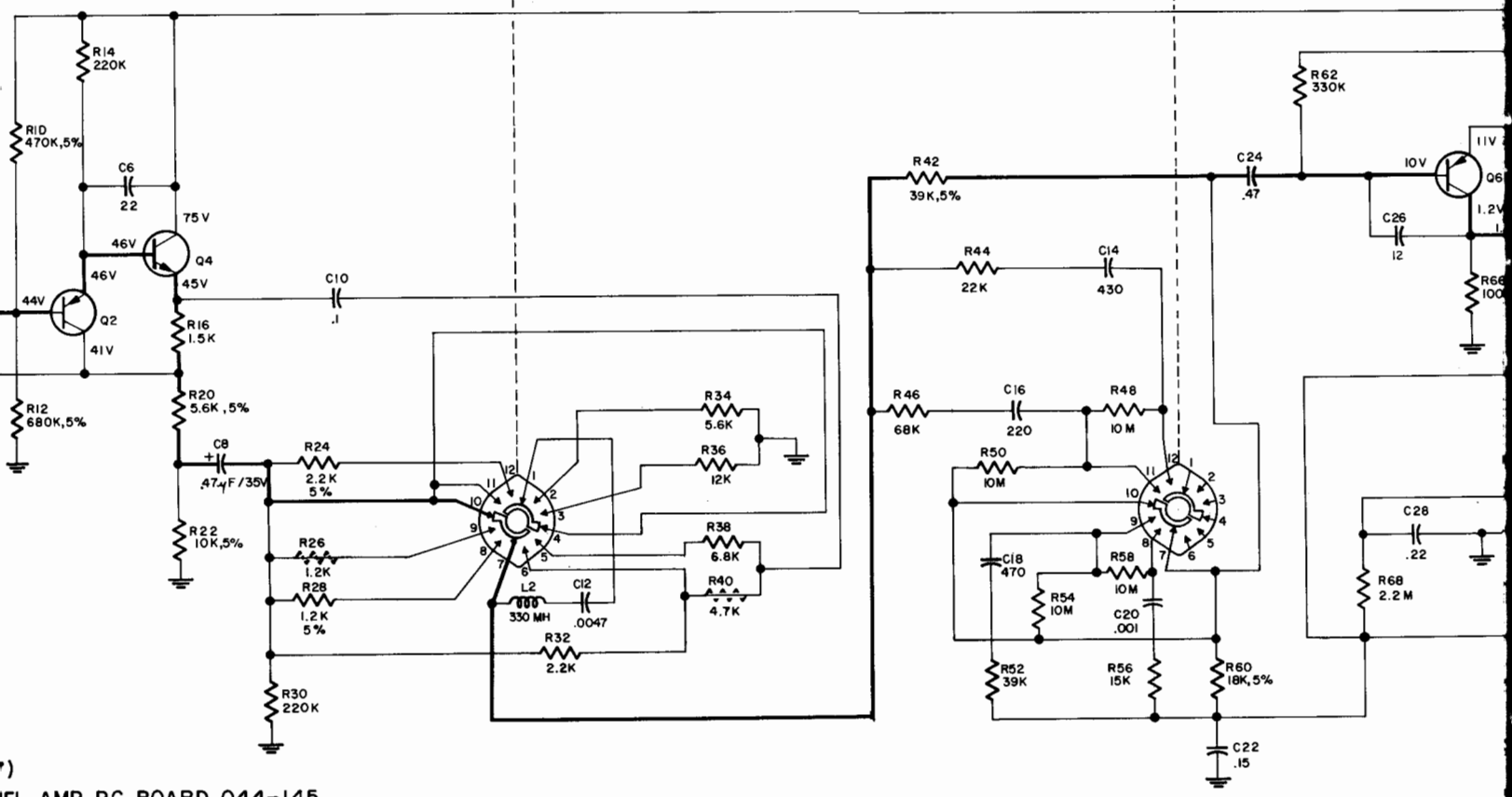


POSITION OF SWITCHES ON SCHEMATIC

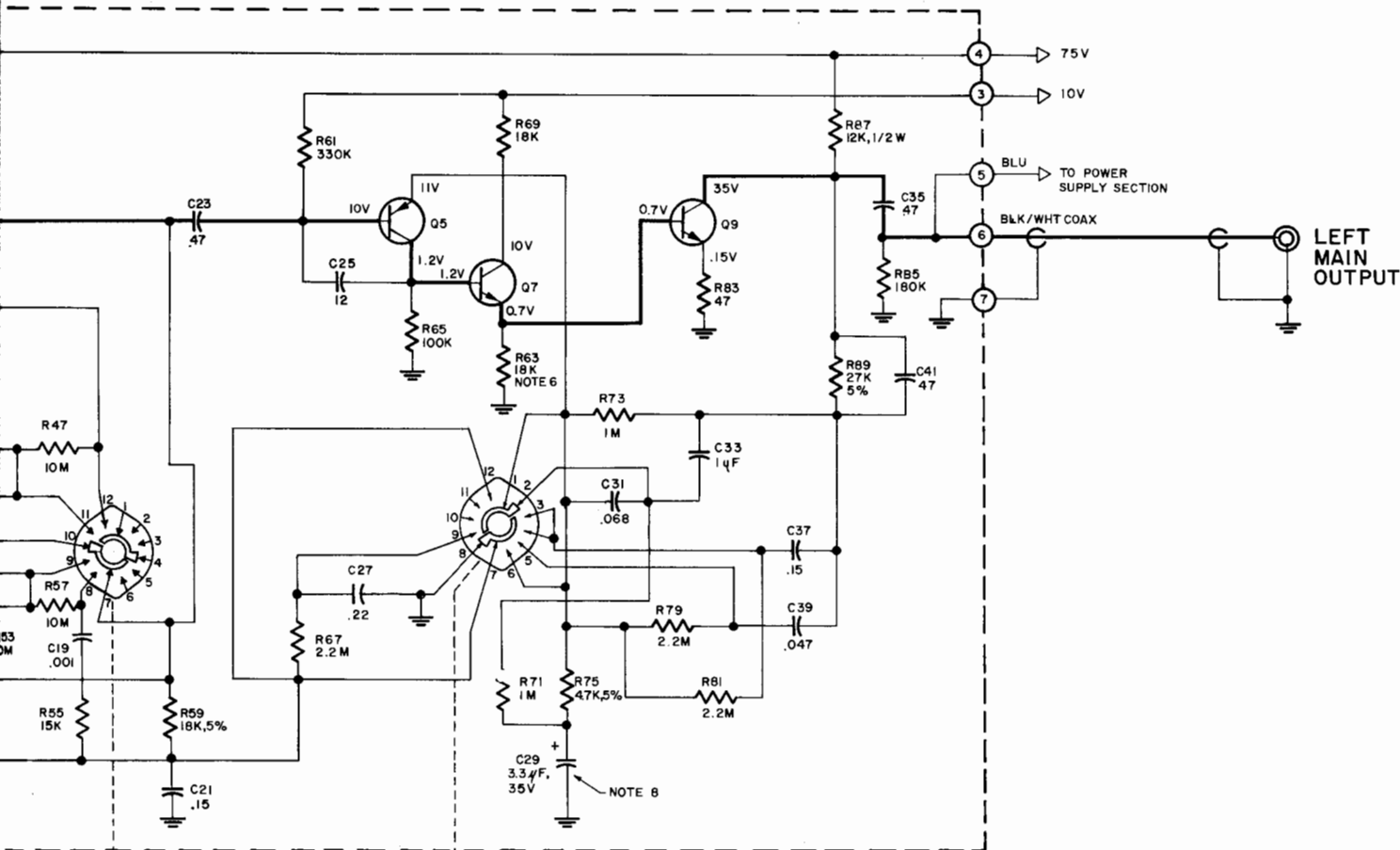


MID. FREQ. S3 2 3 4 5

HIGH FREQ. S4 1 2 3 4 5



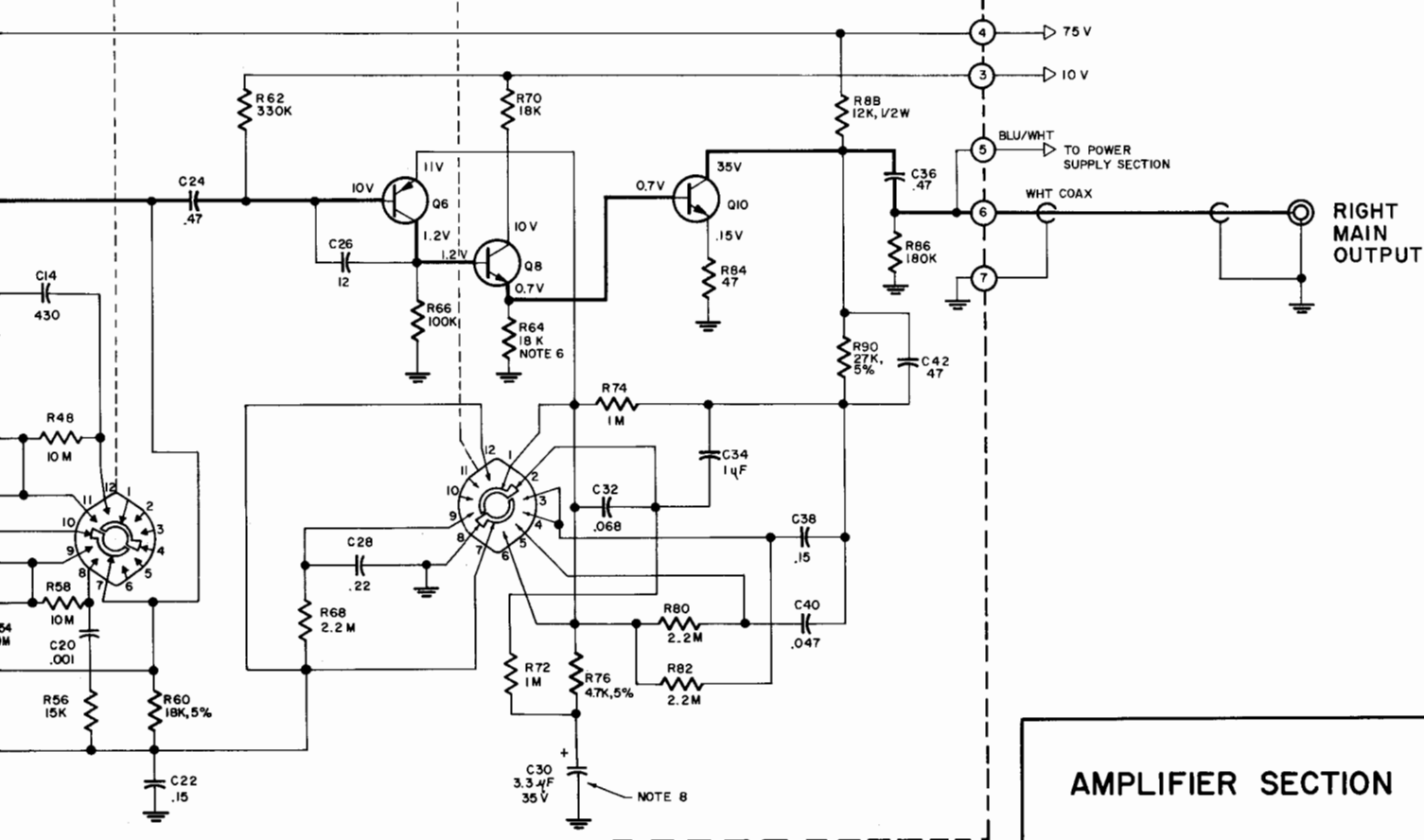
EL AMP PC BOARD 044-145



HIGH FREQ. S4

LOW FREQ. S5

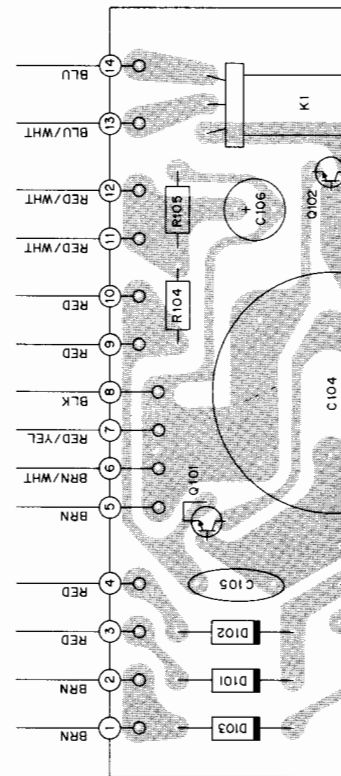
• L
○ R



AMPLIFIER SECTION

SCHEMATIC NOTES

1. Unless otherwise specified: Resistance values are in ohms, 1/4 watt, and 10% tolerance; capacitance values smaller than 1 are in microfarads (μF); capacitance values greater than 1 are in picofarads (pF).
2. Printed circuit board components are outlined on the schematics by dotted lines. The circled numbers around the dotted lines correspond to the numbers on the PC Board layouts.
3. The heavy lines on the schematics denote the primary signal path.
4. The terminal numbering of rotary switches is for reference only.
5. All voltages indicated on the schematics are measured under the following conditions:
 - a. Use of an 11 megohm input impedance VTVM.
 - b. All voltages $\pm 10\%$ with respect to chassis ground.
 - c. No signal at input terminals.
 - d. AC input at 117 volts, 50/60 Hz.
6. In units with Serial No.'s below 1V445, R63 and R64 are 47k.
7. In units with Serial No's below 3V164: R75 & R76 are 1.5K; R55 & R56 are 18K; R89 & R90 are 30K; R41, R42, R43 & R44 are 100K; R45 & R46 are 220K; C15 & C16 are 68pF; C13 & C14 are 120pF; C21 & C22 are .22 μF ; C17 & C18 are 430pF; C19 & C20 are 680pF; R15 & R16 are 1K; R19 & R20 are 4.7K; R21 & R22 are 2.7K; R23 & R24 are 750 Ω R25 & R26 are used; R27 & R28 are 3K; R29 & R30 are 47K; R35 & R36 are 8.2K; R37 & R38 are 10K; R39 & R40 are used and C33 & C34 are .47 μF .
8. In units with Serial No's below 3V679 C29 & C30 are 10 μF .



NOTES

Resistance values are in ohms; capacitance values are in microfarads (μF); capacitance values in picofarads (pF).

Points are outlined on the schematic. The circled numbers correspond to the numbers on the test points on the board.

Test points denote the primary test points.

Primary switches is for reference only.

Measurements on the schematics are measured with an impedance VTVM.

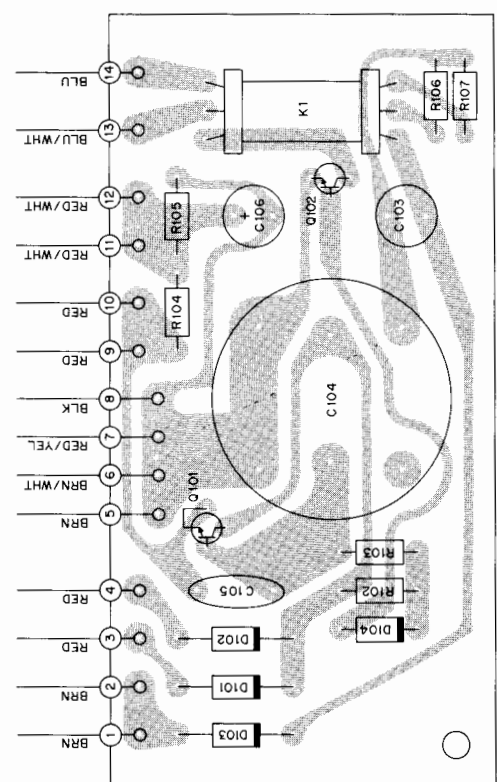
Measurements are taken with respect to chassis ground.

Measurements are taken at 60 Hz.

Diodes are 1V445, R63 and R64 are 1N4001.

Resistors: R75 & R76 are 30K; R90 are 30K; R41, R42, R43, R44, R45, R46, R47, R48, R49 are 220K; C15 & C16 are 680pF; R15 & R16 are 2.7K; R17 & R22 are 2.7K; R23 & R24 are 10K; R25 & R26 are 10K; R27 & R28 are 10K; R29 & R30 are 10K; R31 & R32 are 10K; R33 & R34 are 10K; R35 & R36 are 8.2K; R37 & R38 are 10K; R39 & R40 are 10K; R41 & R42 are 220K; R43 & R44 are 220K; R45 & R46 are 220K; R47 & R48 are 220K; R49 & R50 are 220K; R51 & R52 are 220K; R53 & R54 are 220K; R55 & R56 are 220K; R57 & R58 are 220K; R59 & R60 are 220K; R61 & R62 are 220K; R63 & R64 are 1N4001; R65 & R66 are 220K; R67 & R68 are 220K; R69 & R70 are 220K; R71 & R72 are 220K; R73 & R74 are 220K; R75 & R76 are 30K; R77 & R78 are 220K; R79 & R80 are 220K; R81 & R82 are 220K; R83 & R84 are 220K; R85 & R86 are 220K; R87 & R88 are 220K; R89 & R90 are 30K.

Capacitors: C29 & C30 are 3V679; C21 & C22 are .22 μF ; C23 & C24 are 680pF; C25 & C26 are 2.7K; C27 & C28 are 2.7K; C29 & C30 are 3V679; C31 & C32 are 10K; C33 & C34 are 10K; C35 & C36 are 10K; C37 & C38 are 10K; C39 & C40 are 10K; C41 & C42 are 10K; C43 & C44 are 10K; C45 & C46 are 10K; C47 & C48 are 10K; C49 & C50 are 10K; C51 & C52 are 10K; C53 & C54 are 10K; C55 & C56 are 10K; C57 & C58 are 10K; C59 & C60 are 10K; C61 & C62 are 10K; C63 & C64 are 10K; C65 & C66 are 10K; C67 & C68 are 10K; C69 & C70 are 10K; C71 & C72 are 10K; C73 & C74 are 10K; C75 & C76 are 10K; C77 & C78 are 10K; C79 & C80 are 10K; C81 & C82 are 10K; C83 & C84 are 10K; C85 & C86 are 10K; C87 & C88 are 10K; C89 & C90 are 10K; C91 & C92 are 10K; C93 & C94 are 10K; C95 & C96 are 10K; C97 & C98 are 10K; C99 & C100 are 10K.



POWER SUPPLY PC BOARD 044-144

REPLACEMENT PARTS

All parts not listed are common items obtainable from radio parts jobbers.

Replacement parts may be obtained when ordered by PART NUMBER from:

McIntosh Laboratory, Inc.
Customer Service Department
2 Chambers Street
Binghamton, New York 13903
(telephone 607-723-3512)

CAPACITORS

Symbol Number	Description	Part Number
C1,2	Mylar .1 μ F 250V	064-067
C3,4	Mylar .1 μ F 250V	064-067
C7,8	Tant. Elect. .47 μ F 35V	066-244
C9,10	Mylar .1 μ F 250V	064-067
C21,22	Mylar .22 μ F 250V	064-096
C23,24	Mylar .47 μ F 250V	064-069
C27,28	Mylar .22 μ F 250V	064-096
C29,30	Tant. Elect. 3.3 μ F 35V	066-238
C31,32	Mylar .068 μ F 250V	064-095
C33,34	Mylar .47 μ F 250V	064-069
C35,36	Mylar .47 μ F 250V	064-069
C37,38	Mylar .15 μ F 250V	064-100
C39,40	Mylar .047 μ F 250V	064-085
C103	Elect. 220 μ F 16V	066-160
C104	Elect. 200/200 μ F 150/100V	066-159
C106	Elect. 220 μ F 16V	066-160

DIODES

D101,102	Si. Rectifier	070-031
D103	Si. Rectifier	070-031
D104	Zener Diode 75V	070-025

FUSES

F101	Fuse .5 ampere	089-009
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CHOKES

L1,2	Choke 300MH	122-100
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TRANSISTORS

Q1,2	Si. PNP transistor	132-074
Q3,4	Si. NPN transistor	132-075
Q5,6	Si. PNP transistor	132-074
Q7,8	Si. NPN transistor	132-075
Q9,10	Si. NPN transistor	132-075

Q101	Power transistor	132-078
Q102	Si. NPN transistor	132-075

SWITCHES

S1	Tape Monitor	146-142
S2	Input Attenuator	148-026
S3	Mid. Frequency	146-144
S4	High Frequency	146-144
S5	Low Frequency	146-144

TRANSFORMERS

T101	Power Transformer	159-092
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LAMPS

#1866 (Front panel)	058-014
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RELAYS

K1	Relay	087-007
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FRONT PANEL & TRIM

Front Panel	044-179
Front Panel End Caps	018-137
Tape Monitor Knob	043-253
Mid. Frequency Knob	043-253
High Frequency Knob	043-253
Low Frequency Knob (front)	044-375
Low Frequency Knob (rear)	090-100

MOUNTING SYSTEM

Shelf Bracket (right)	044-210
Shelf Bracket (left)	044-209
Mounting Template #400	038-429
Hardware Package	044-143

MISCELLANEOUS ITEMS

Fuseholder	178-001
AC Power Cord	170-021
Shipping Carton	044-211
Owners Manual	038-669
Audio Cable	170-015