

McIntosh

C 29 PREAMPLIFIER



SERVICE INFORMATION

STARTING WITH SERIAL NO. BZ1001

McINTOSH LABORATORY INC. BINGHAMTON, NEW YORK 13903

039 049

FREQUENCY RESPONSE

+ 0 -0.5 dB 20 Hz to 20,000 Hz

POWER REQUIREMENT

120 volts, 50/60 Hz, 45 watts

DISTORTION

.02% maximum at rated output level, 20 Hz
20,000 Hz

MECHANICAL INFORMATION

SIZE: Front Panel measures 16 inches wide (40.6 cm) by 5-7/16 inches high (13.8 cm). Chassis measures 14-3/4 inches wide (37.5 cm) by 4-13/16 inches high (12.2 cm) by 13 inches deep (33.0 cm), including PANLOC shelf and back panel connectors. Knob clearance required is 1-1/4 inches (3.2 cm) in front of the mounting panel.

INPUT SENSITIVITY AND IMPEDANCE

AUXILIARY, TUNER, TAPE 2, 0.25 volts at 250,000 ohms; PHono 1 and PHono 2, 2 millivolts (1,000 Hz) at 47,000 ohms and 65 pF; MICROPHONE, 2.5 millivolts at 500,000 ohms

WEIGHT: 19 pounds (8.6 kg) net, 31 pounds (14.1 kg) in shipping carton.

HUM AND NOISE

AUXILIARY, TUNER, TAPE 1, TAPE 2, IHFA 100 dB, unweighted 90 dB below rated output; PHONO 1, PHONO 2 IHFA 90 dB, unweighted 80 dB below 10 millivolts input, equivalent to less than 1.0 microvolt at the input terminals; MICROPHONE 1.5 microvolts at the input terminals.

OUTPUT LEVEL AND IMPEDANCE

MAIN: 2.5 volts with rated input, less than 100 ohms source impedance, to operate into 10,000 ohms or greater.

TAPE: 0.25 volts with rated input, less than 200 ohms source impedance, to operate into 10,000 ohms or greater.

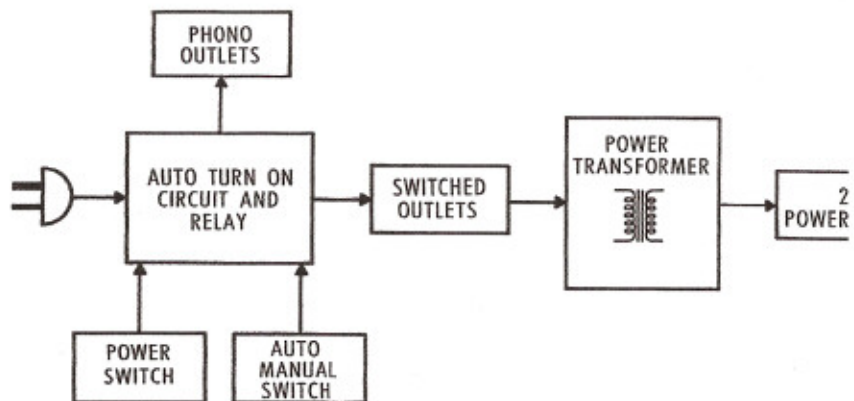
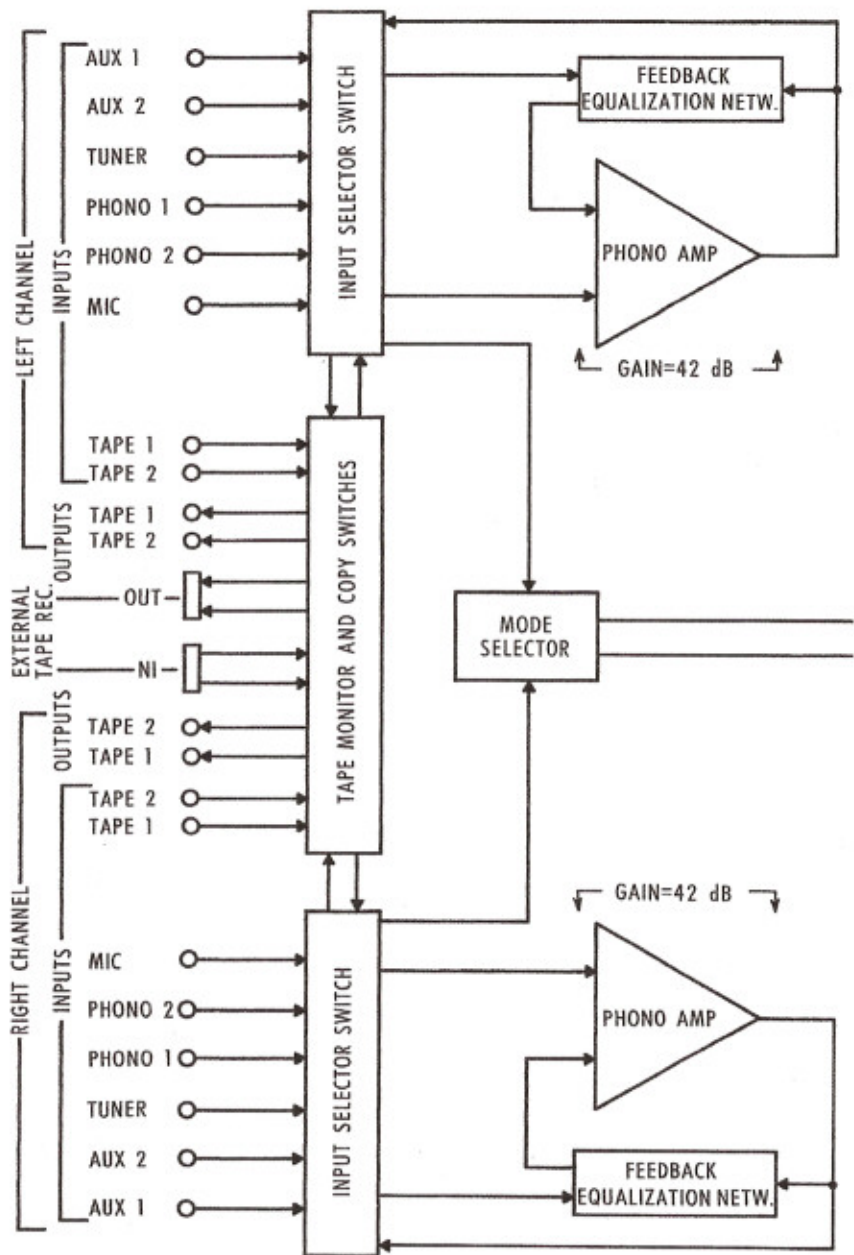
HEADPHONE LINE: 0.75 volts into 8 ohm load or 2.5 volts into 600 ohm line, 47 ohm source impedance, level controls provided.

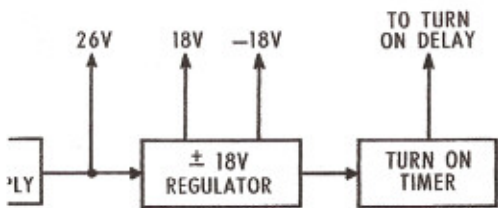
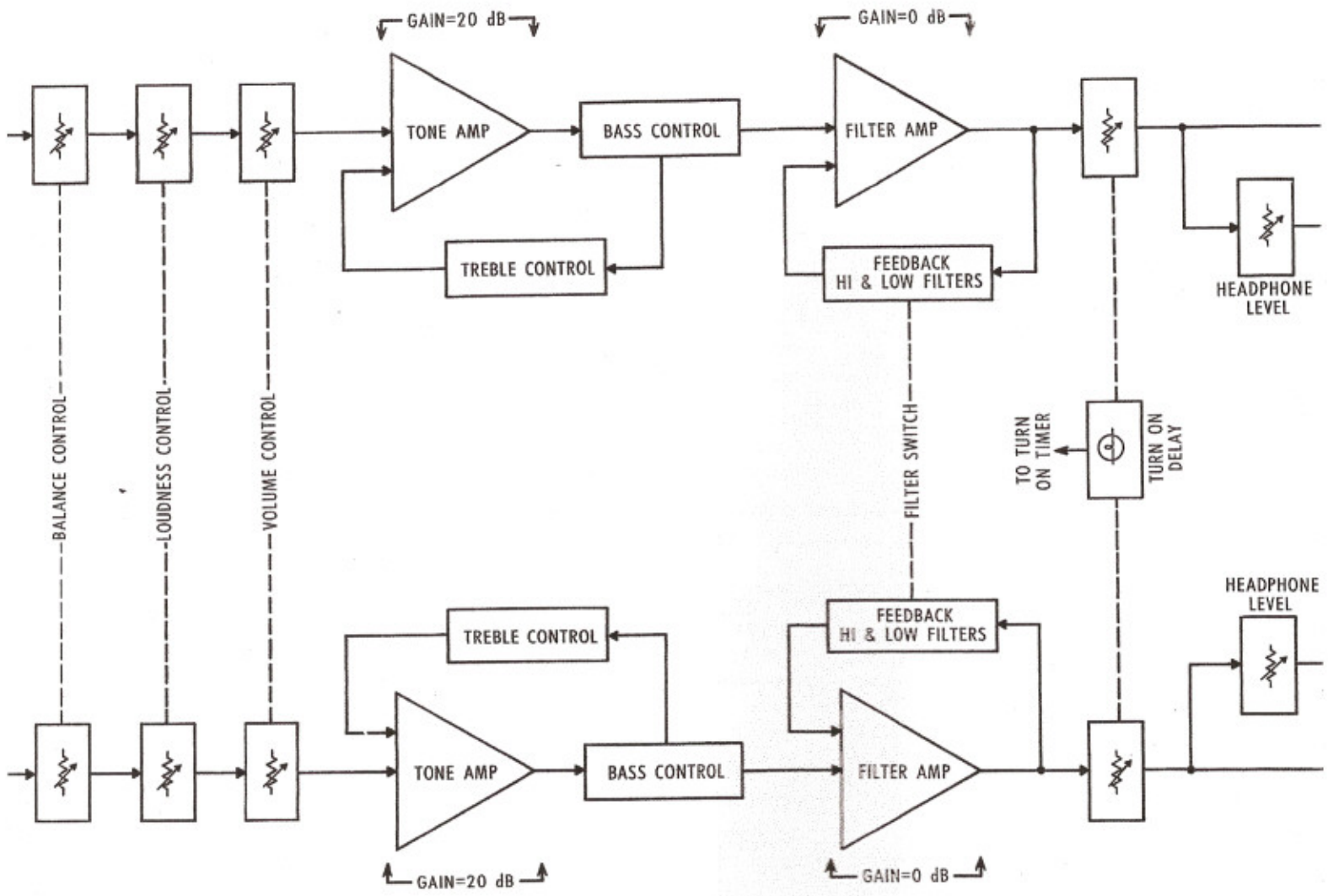
VOLTAGE AMPLIFICATION IN DECIBELS

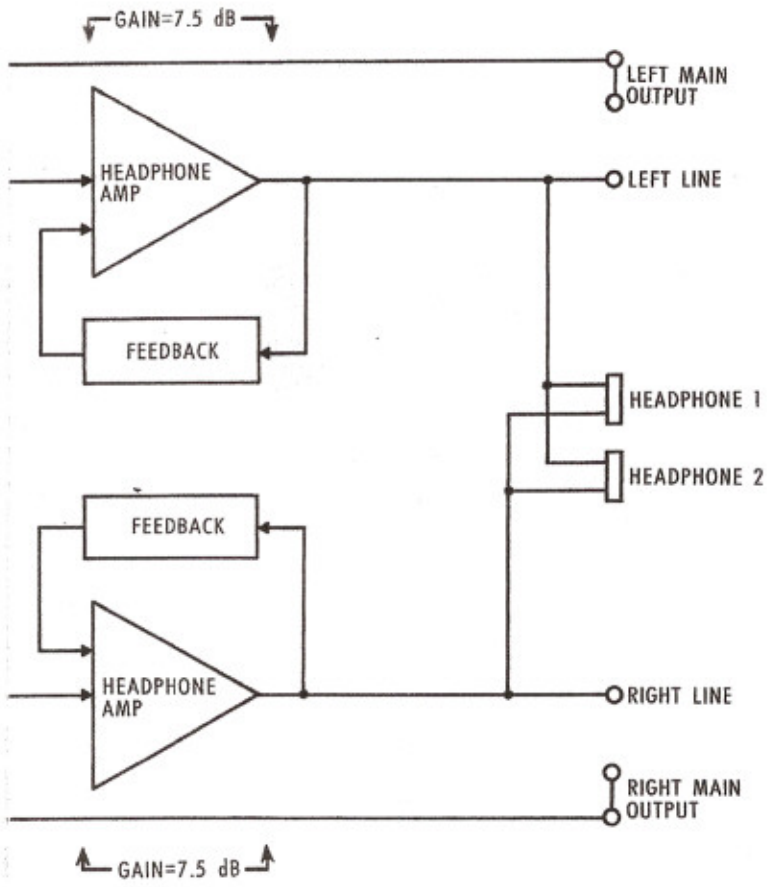
AUXILIARY, TUNER, TAPE 1 and TAPE 2	
to MAIN output	20 dB
to TAPE output	0 dB
to HEADPHONE/LINE Output	30 dB

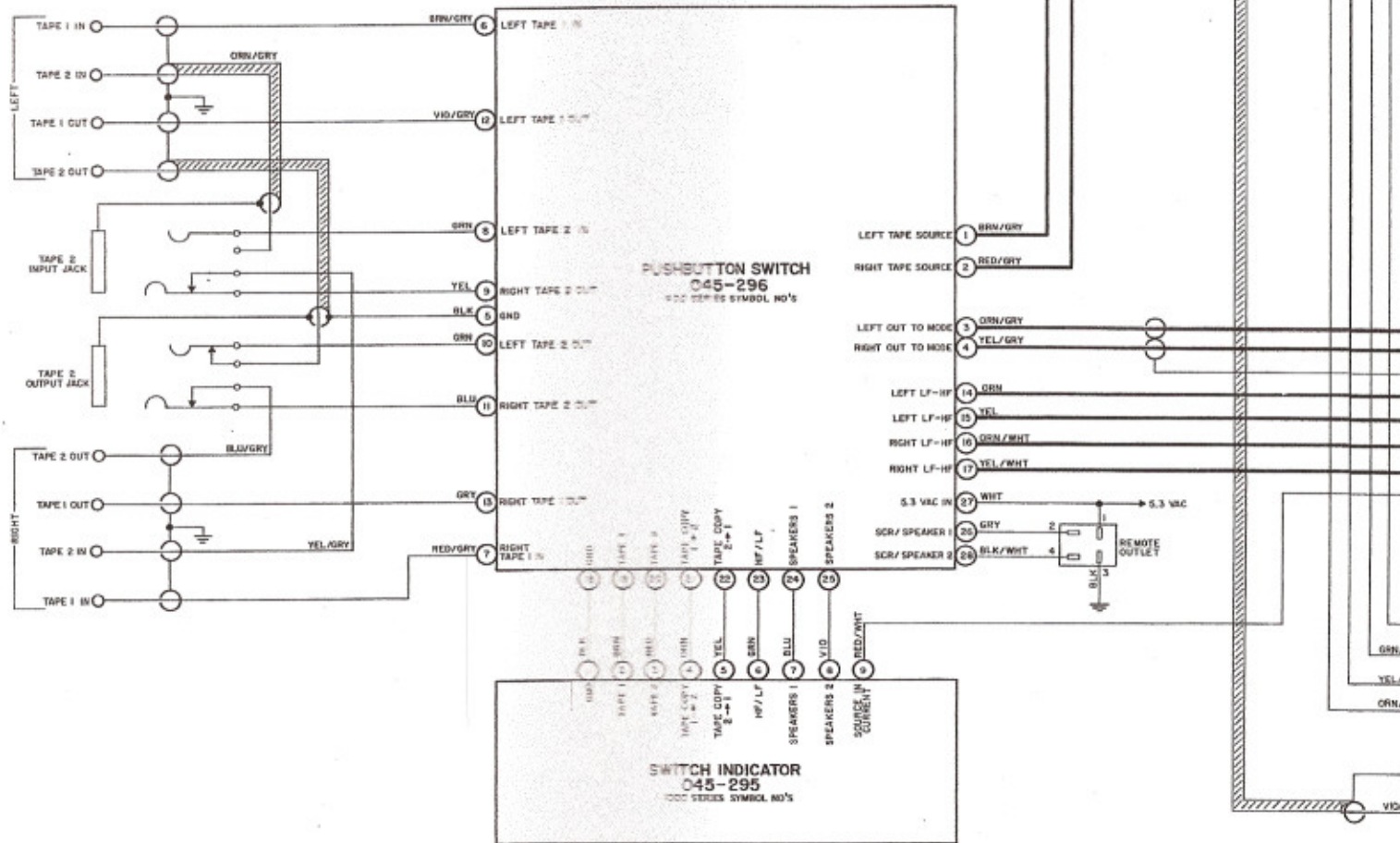
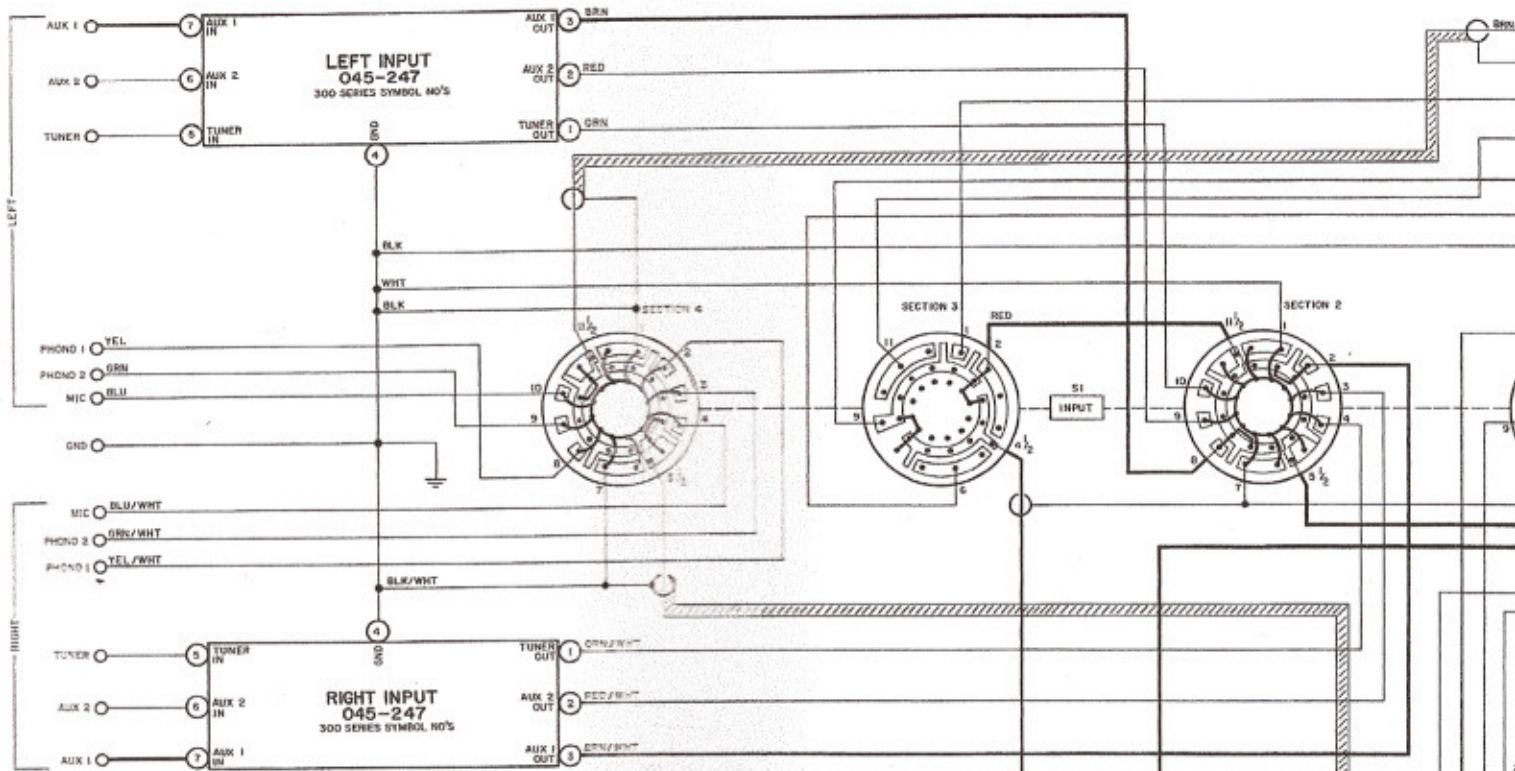
PHONO 1 and PHONO 2 at 1 kHz	
to MAIN output	62 dB
to TAPE output	42 dB
to HEADPHONE/LINE Output	72 dB

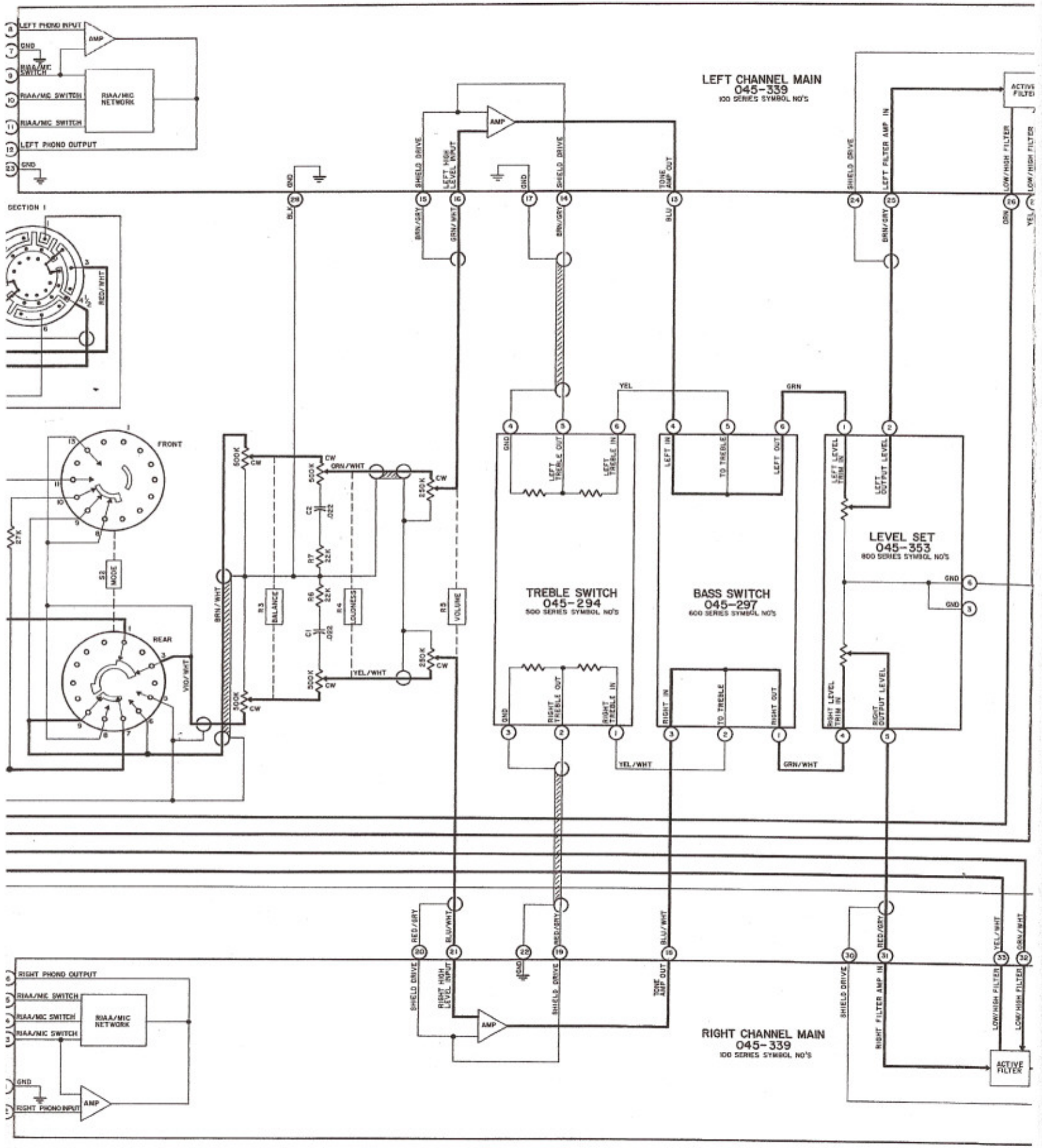
MICROPHONE	
to MAIN output	60 dB
to TAPE output	40 dB
to HEADPHONE/LINE output	70 dB

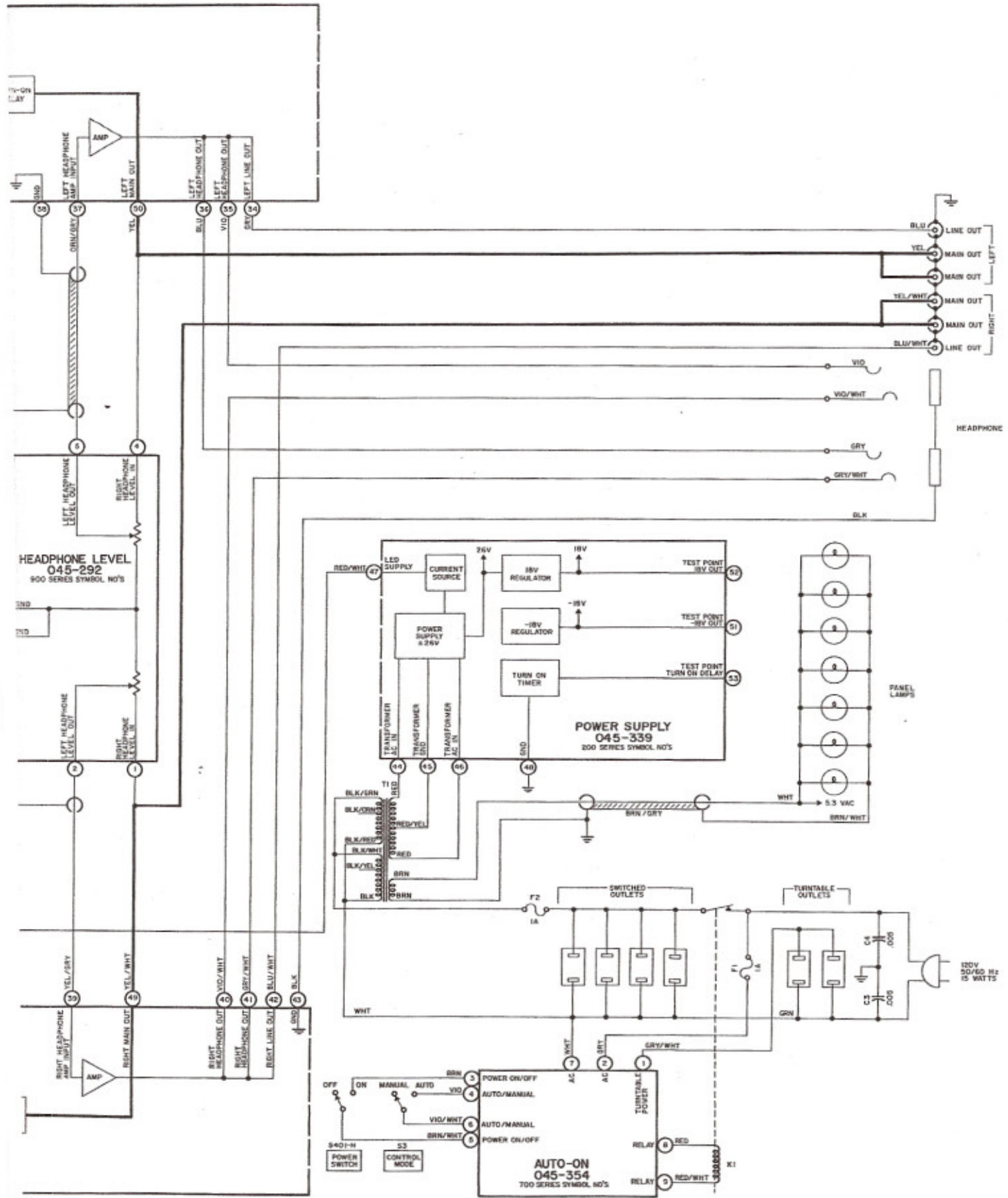










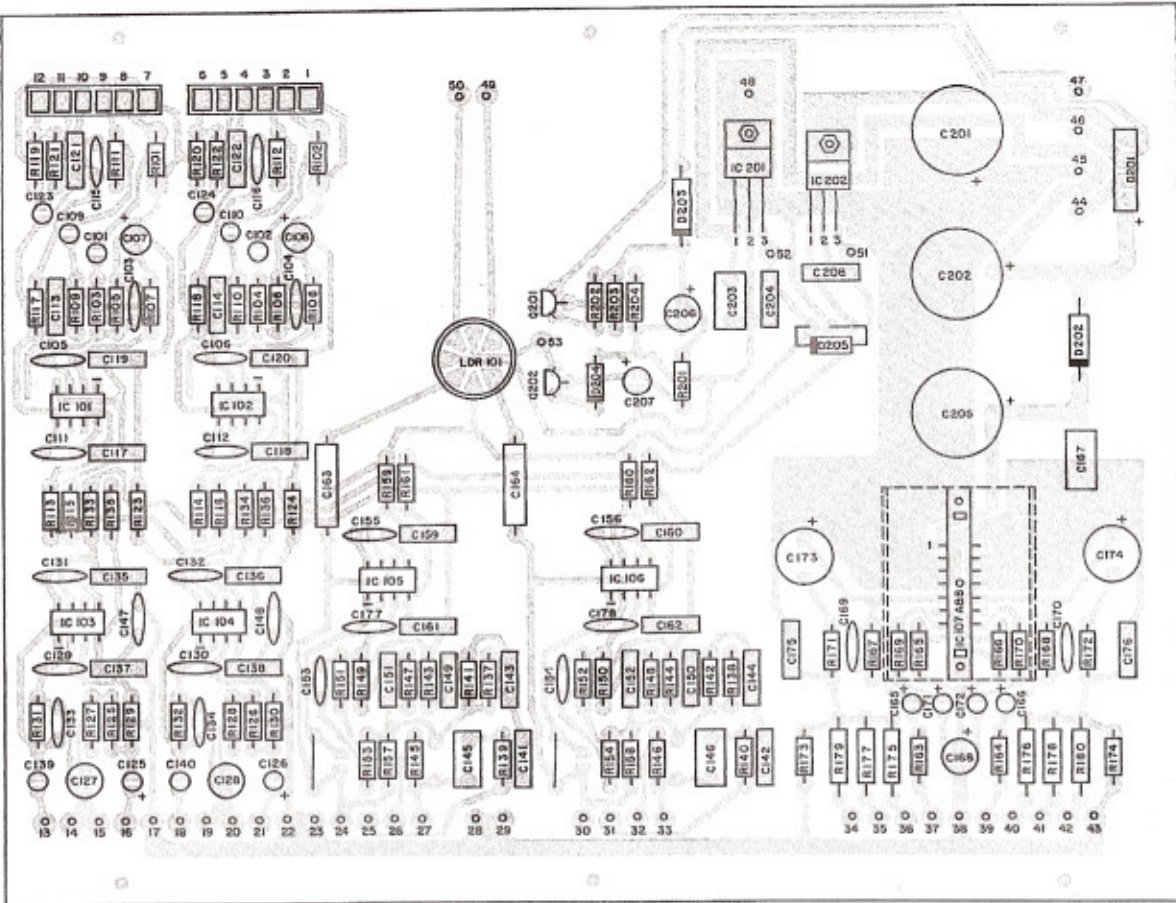


CONNECT

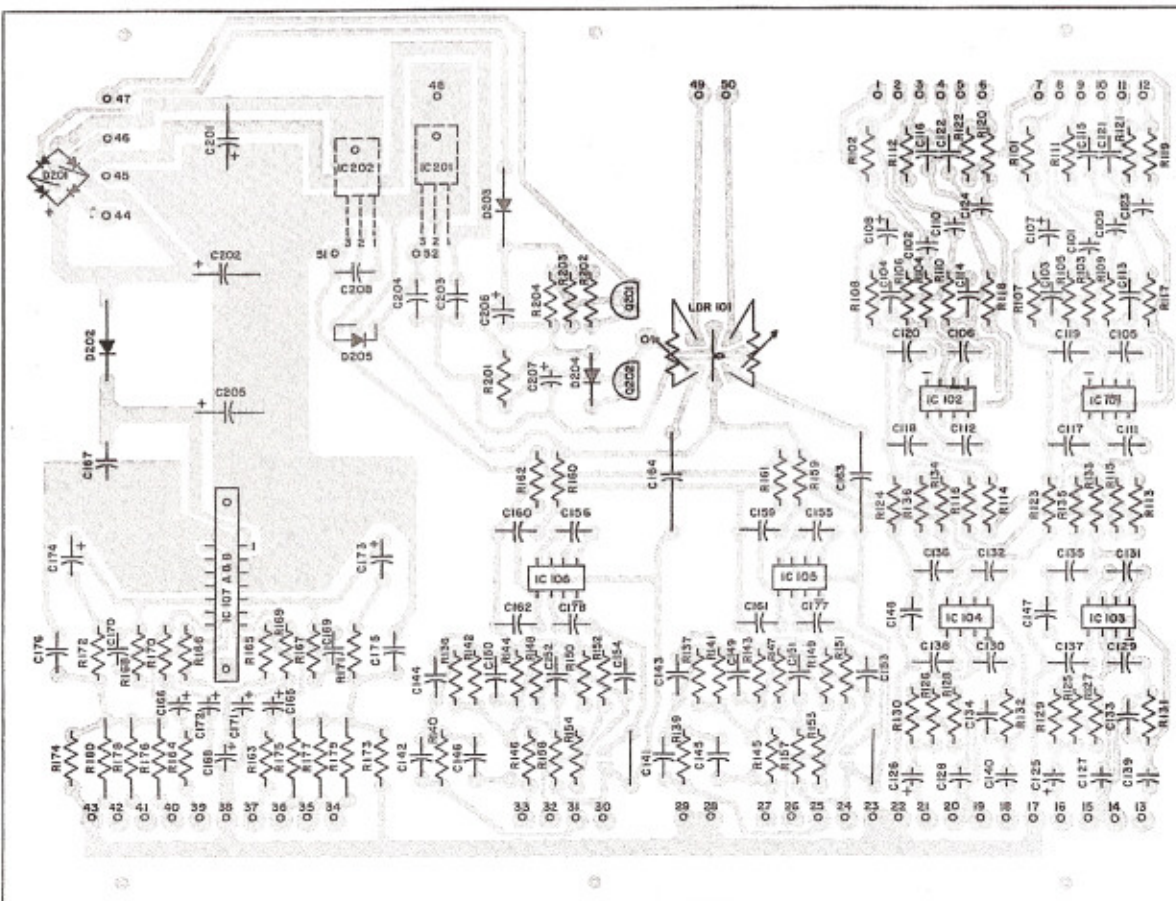
1. Unless otherwise specified: Resistance values are in ohms, 1/4 watt, and 5% tolerance; capacitance values smaller than 1 are in microfarads (μF); capacitance values greater than 1 are in picofarads (pF); inductors are in microhenries (μH).
2. Printed circuit board components are outlined on the schematics 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 120 volts, 50/60 Hz.
 - e. Front panel controls at:

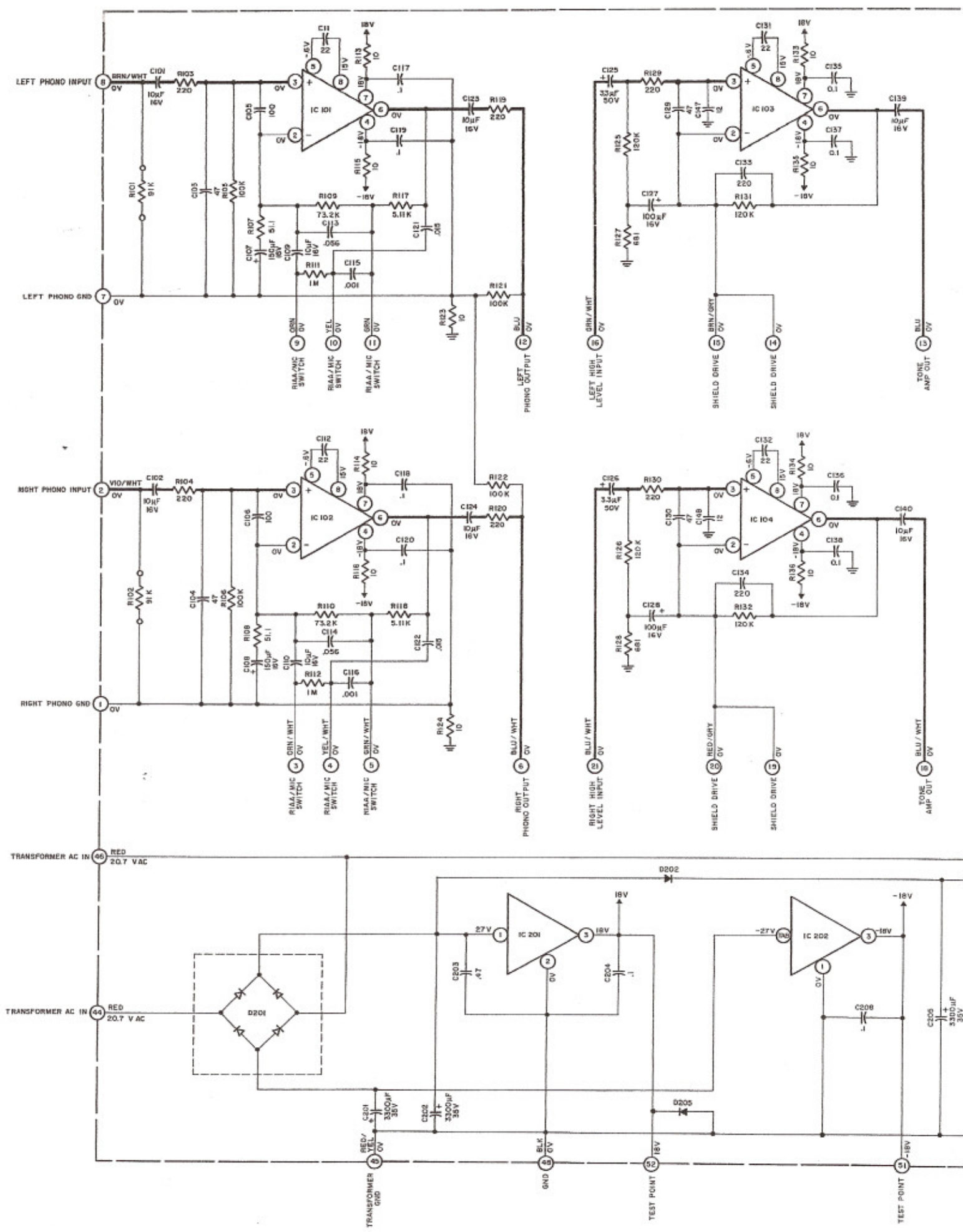
Input Selector	Aux
Mode Selector	Stereo
Treble	Flat
Bass	Flat
Volume	ccw
Balance	Center Detent
Loudness	Flat
Push Switches	Out
Power Switch	On

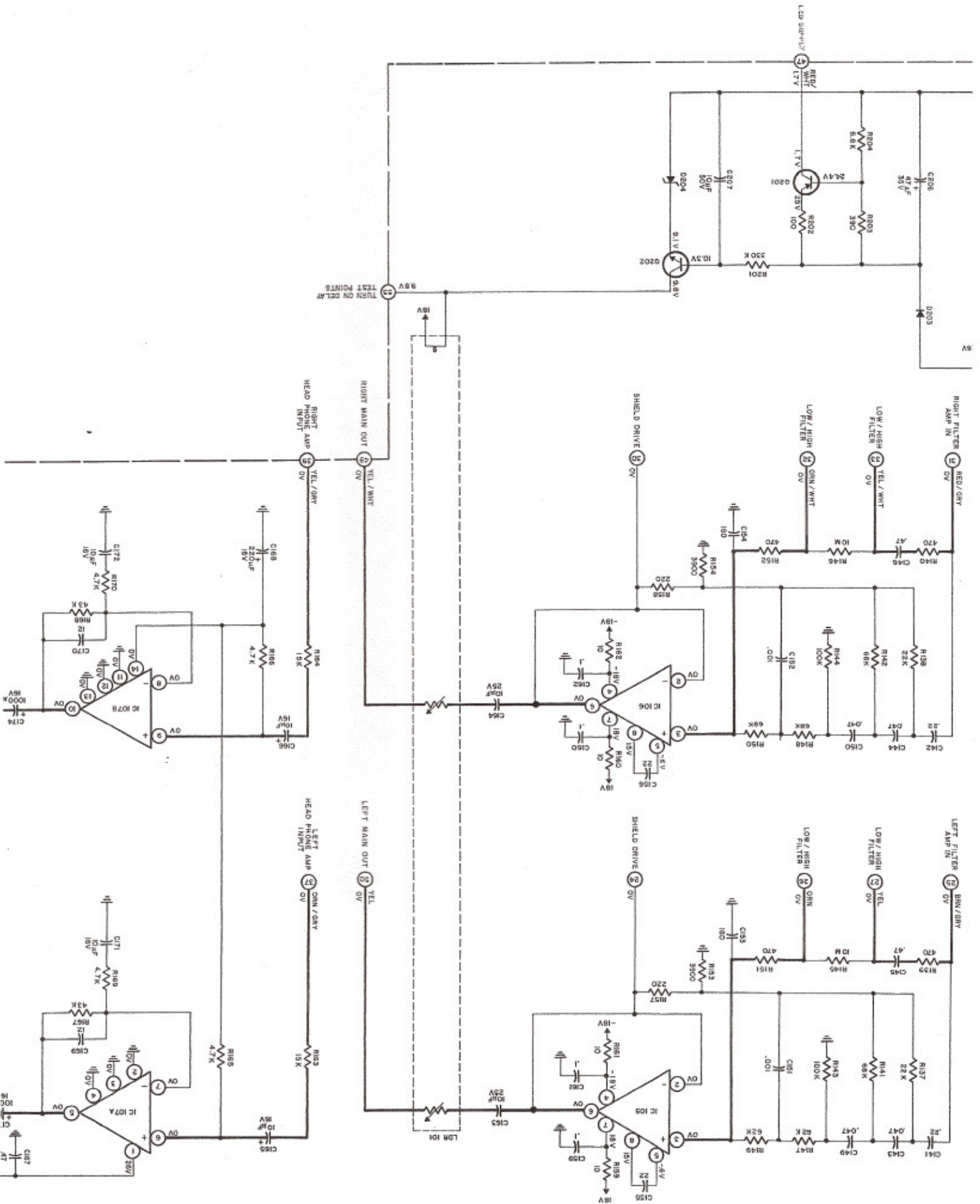
All other controls at normal positions

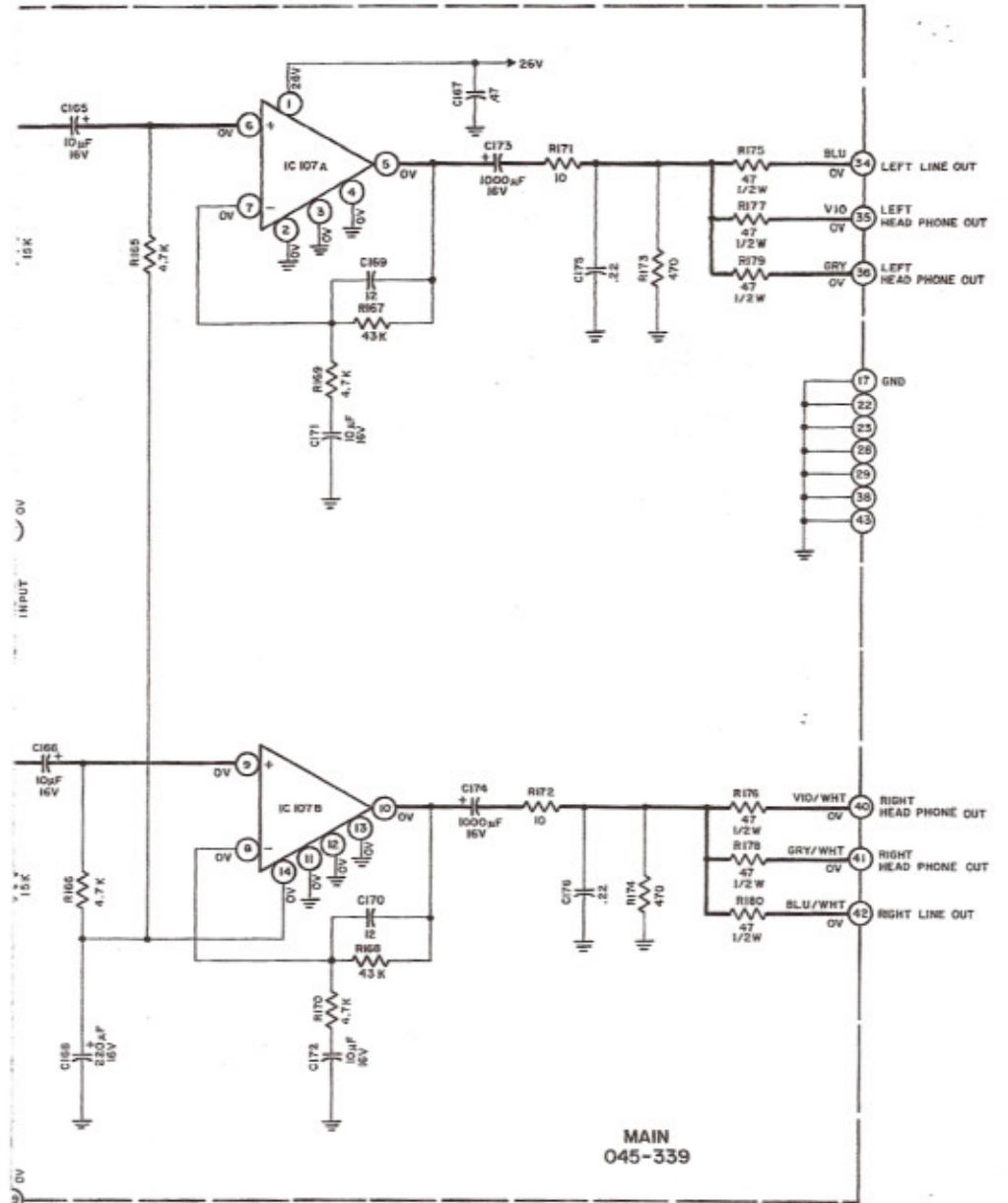


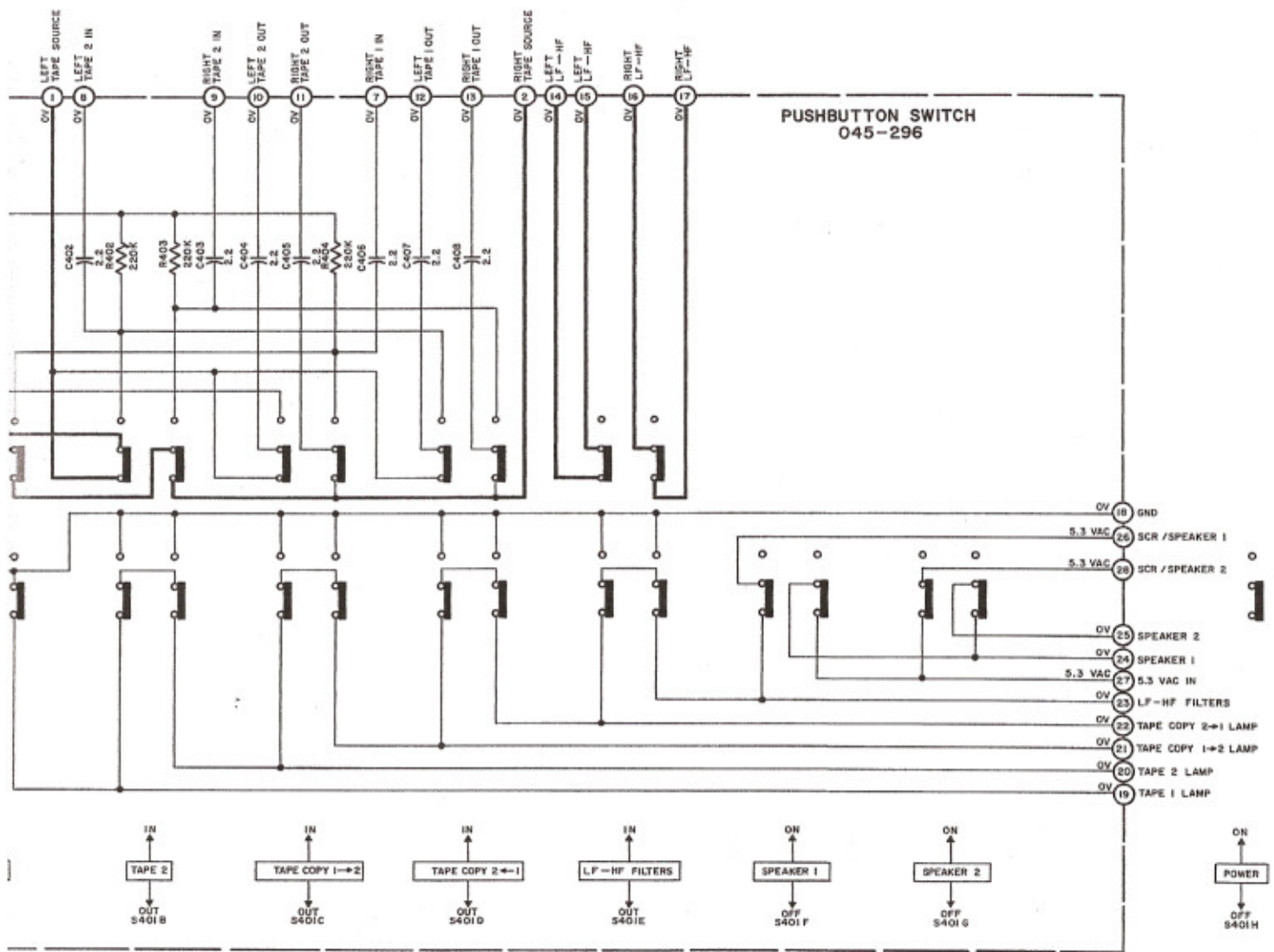
MAIN PC BOARD
045-339

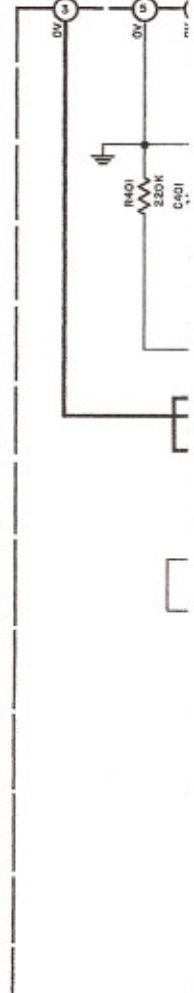


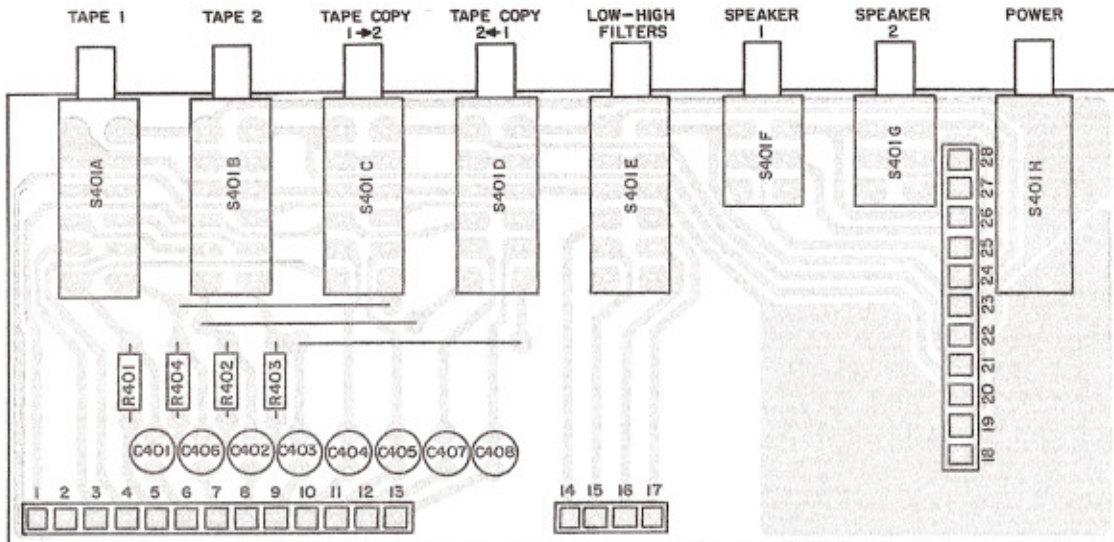




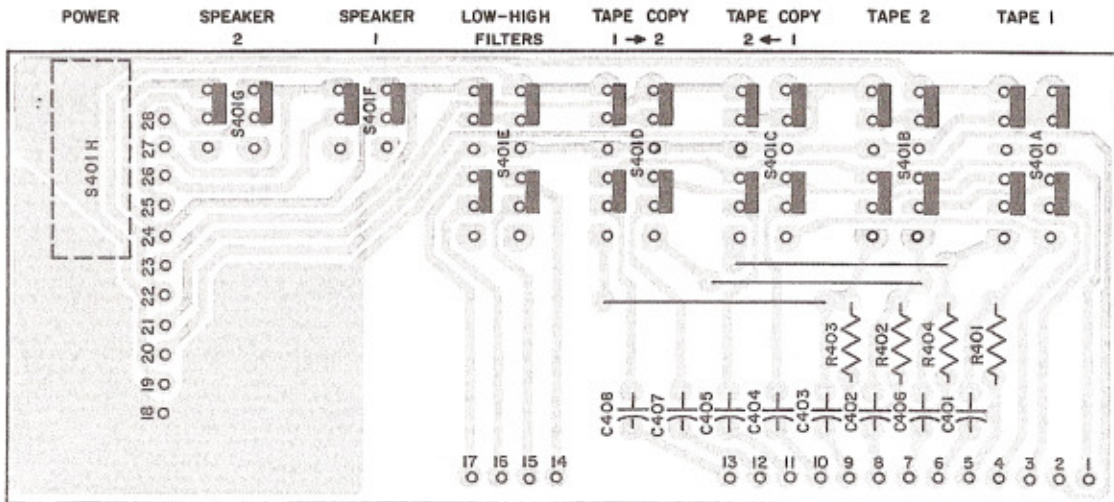


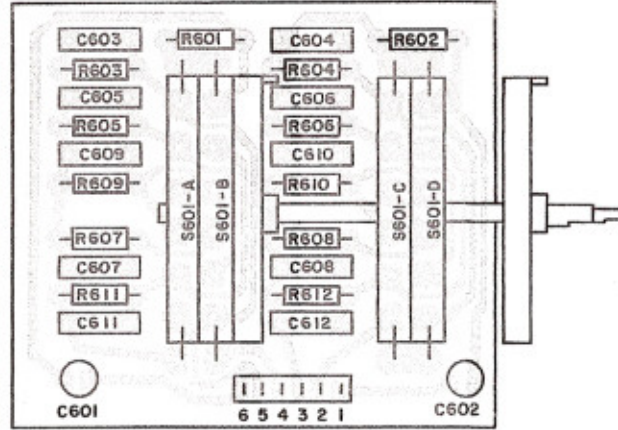




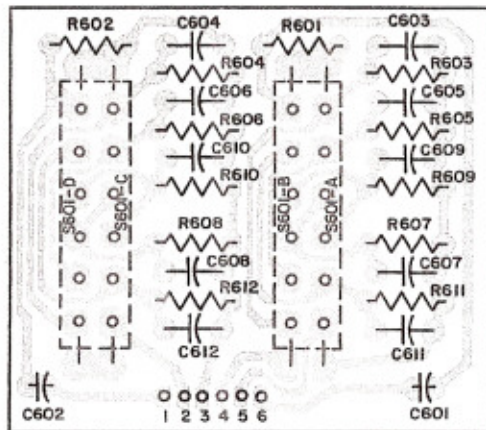


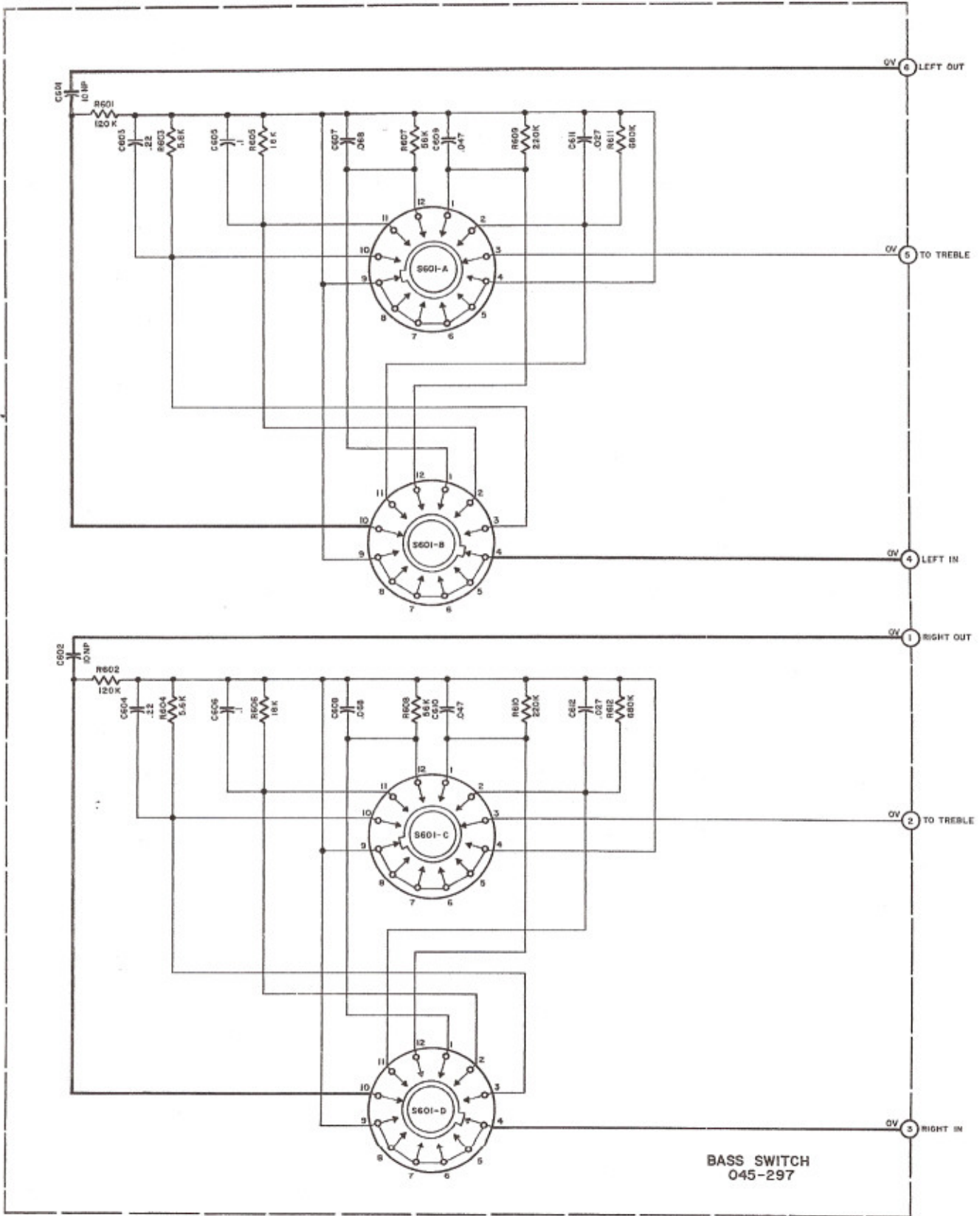
PUSHBUTTON SWITCH PC BOARD
045-296



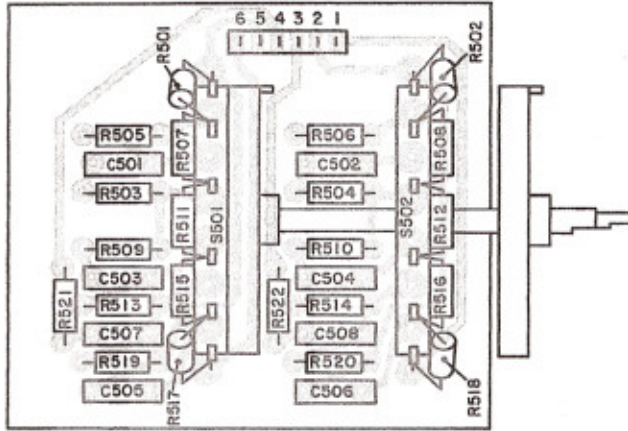


BASS SWITCH PC BOARD
045-297

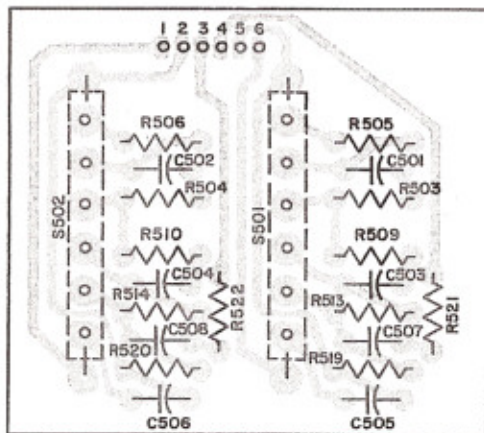


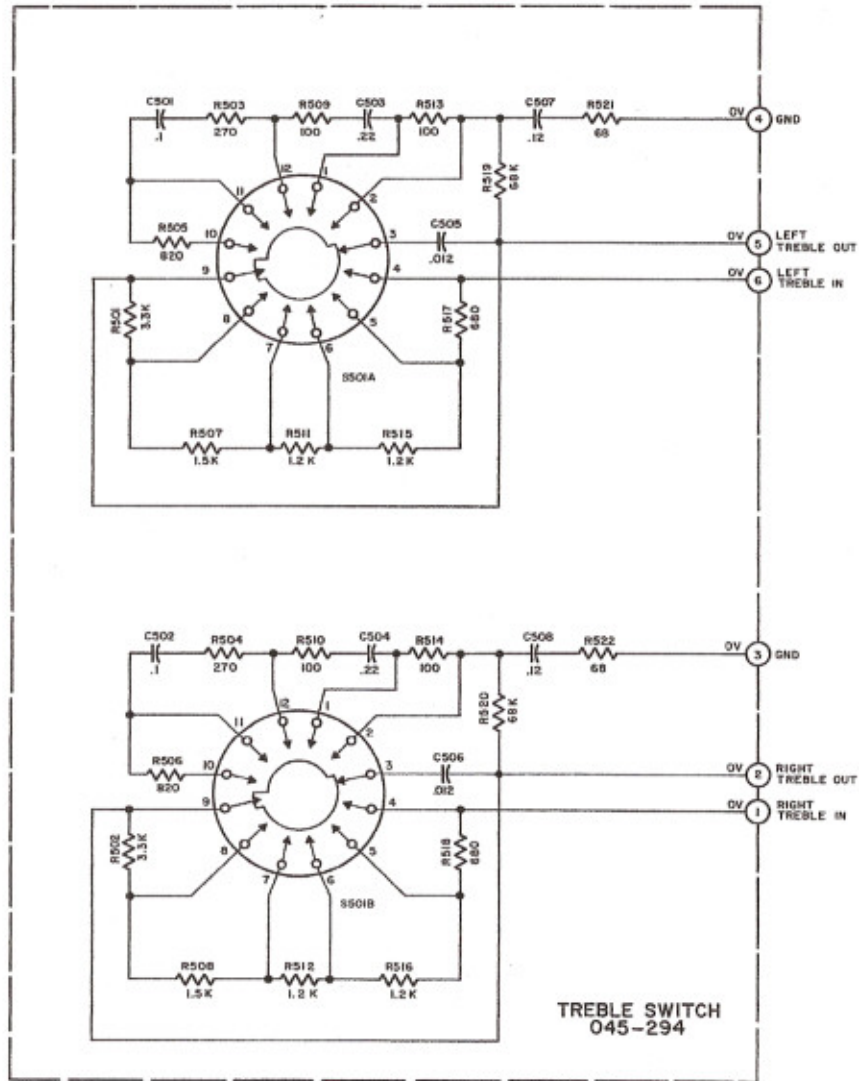


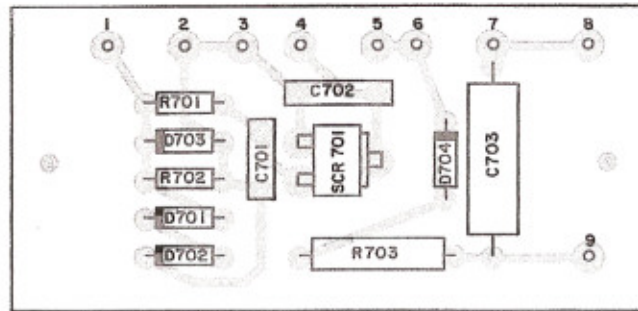
BASS SWITCH
O45-297



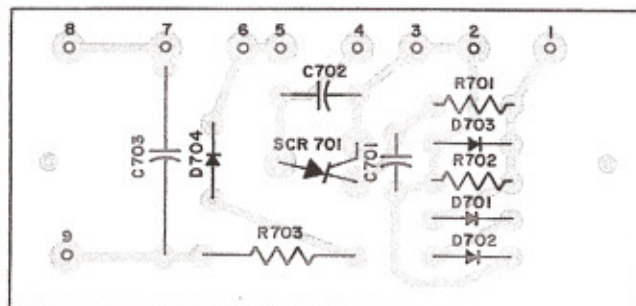
TREBLE SWITCH PC BOARD
045-294

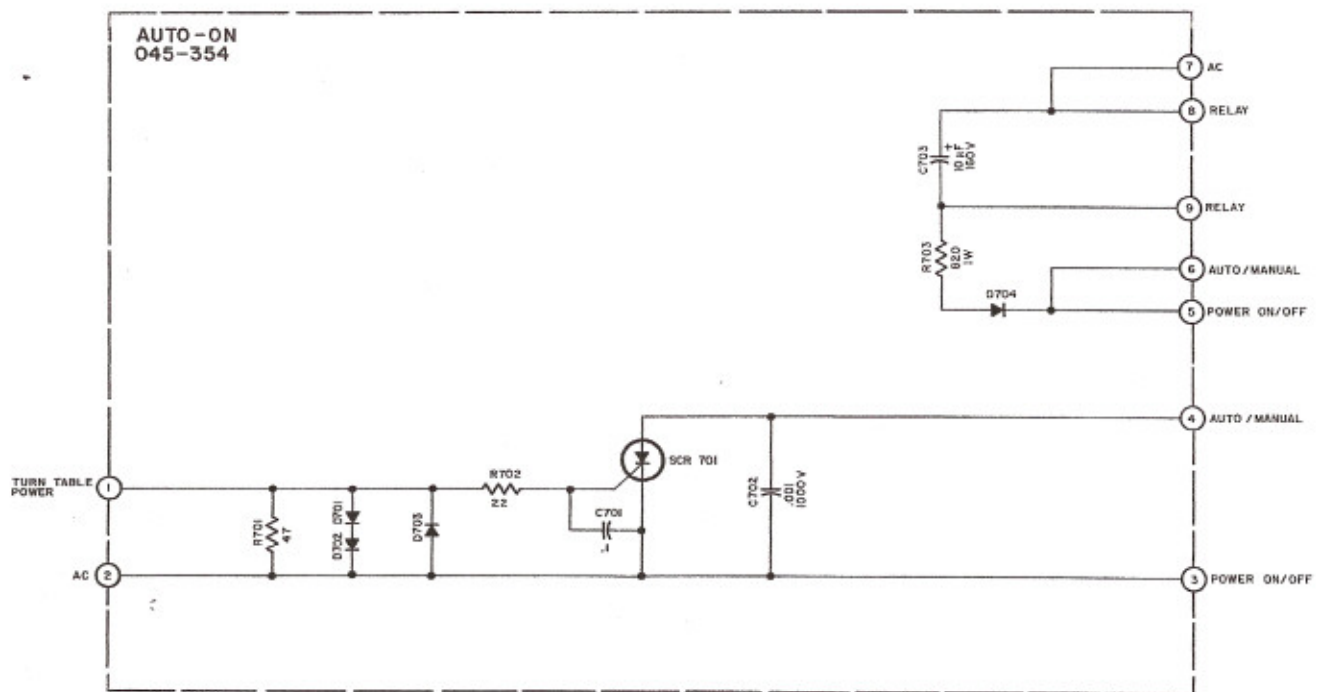


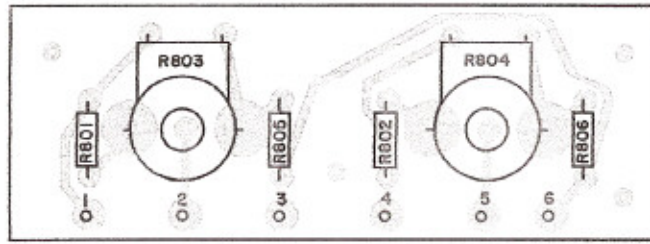




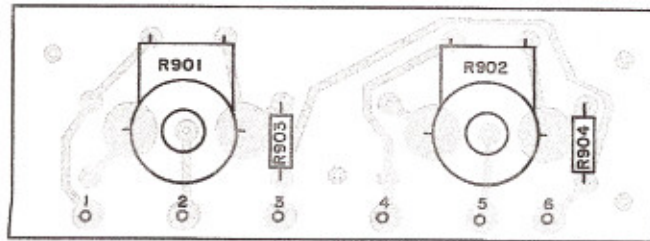
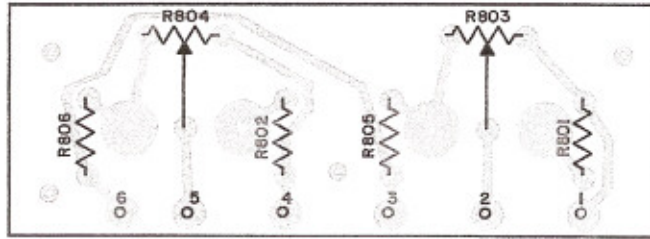
AUTO-ON PC BOARD
045-354



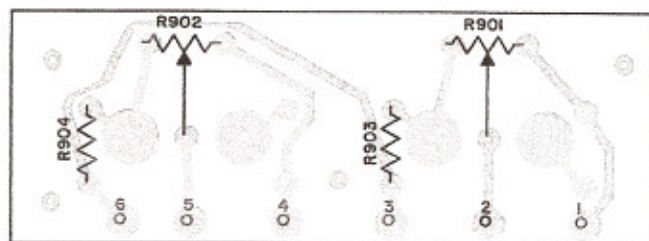


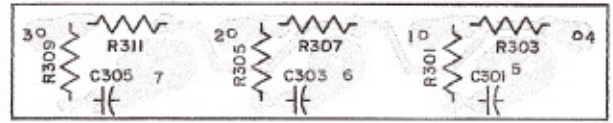
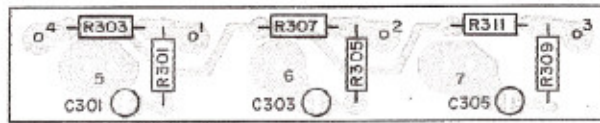


**LEVEL SET PC BOARD
045-353**

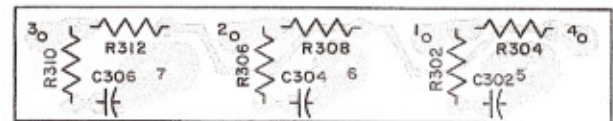
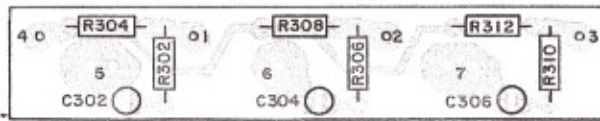


**HEADPHONE LEVEL PC BOARD
045-292**





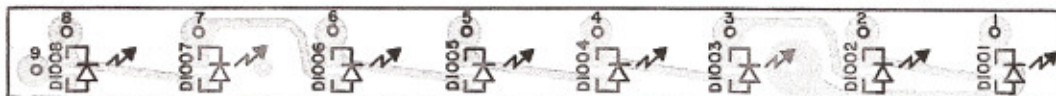
LEFT INPUT TERMINAL PC BOARD
045-247

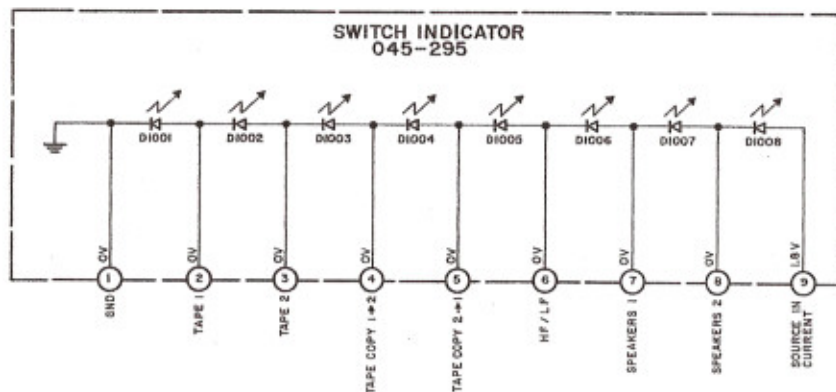
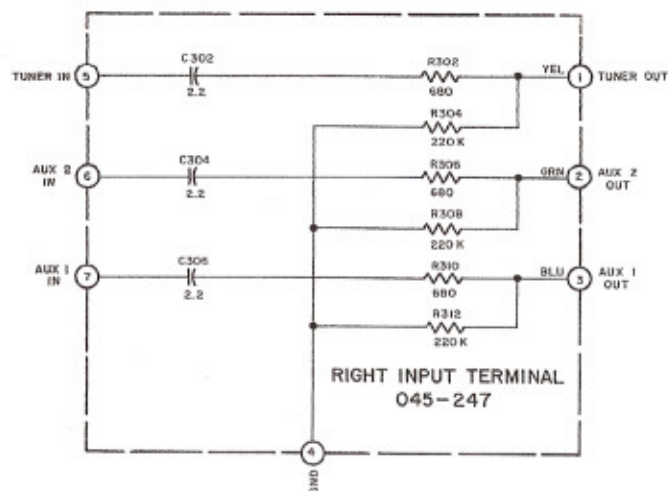
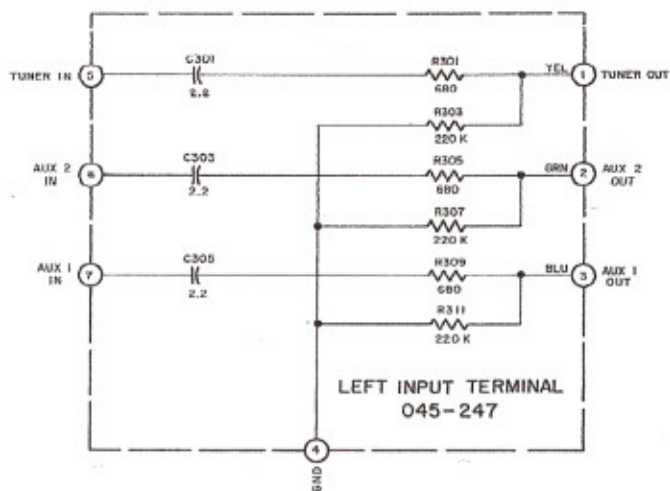


RIGHT INPUT TERMINAL PC BOARD
045-247



SWITCH INDICATOR PC BOARD
045-295





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)

DIODES		
Symbol Number	Description	Part Number
D201	Rectifier 2A	070-044
D202,203	Si. signal diode	070-031
D204	Zener diode 9V	070-066
D205	Si. signal diode	070-031
D701,702	Si. signal diode	070-031
D703	Si. signal diode	070-031
D704	Rectifier	070-059
SCR701	Rectifier	131-010
D1001,1002	LED Lamp	070-093
D1003,1004	LED Lamp	070-093
D1005,1006	LED Lamp	070-093
D1007,1008	LED Lamp	070-093
TRANSISTORS		
Q201	Si. PNP Transistor	132-150
Q202	Si. NPN Transistor	132-090
INTEGRATED CIRCUITS		
IC101,102	Integrated Circuit	133-067
IC103,104	Integrated Circuit	133-066
IC105,106	Integrated Circuit	133-066
IC107	Integrated Circuit	133-070
IC201	Integrated Cir. +18V Reg.	133-045
IC202	Integrated Cir. -18V Reg.	133-044
RESISTORS		
LDR101	Lamp Photo Resistor	144-137
SWITCHES		
S1	Input selector	146-200
S2	Mode selector	146-197
S401	Pushbutton switch	150-027
S501	Treble switch	146-199
S601	Bass switch	146-198
POTENTIOMETERS		
R3	Balance control	134-320
R4	Loudness control	134-320
R5	Volume control	134-319

TRANSFORMERS		
T1	Power transformer	045-287
FUSES		
F1	Fuse 1A Norm-Blo	089-002
RELAYS		
K1	Relay DPDT	087-030
LAMPS		
	Indicator lamp	058-041
	Front panel lamp	058-069
FRONT PANEL & TRIM		
	Front panel	045-278
	Front panel glass	016-166
	End cap	018-160
	Pushbutton black	017-230
	Pushbutton red	017-244
	Balance knob	090-187
	Loudness knob	090-186
	Volume knob	090-170
	Input selector knob	090-156
	Mode selector knob	090-156
	Bass knob front	090-200
	Bass knob rear	090-201
	Treble knob front	090-200
	Treble knob rear	090-201
MISCELLANEOUS		
	Fuseholder	178-106
	AC power cord	170-019
	Shipping carton	045-437
	Hardware package	045-142
	Audio cable	170-015
	Shorting phono plug	127-021