

# SUPERSCOPE®

SOLID STATE  
STEREO AMPLIFIER

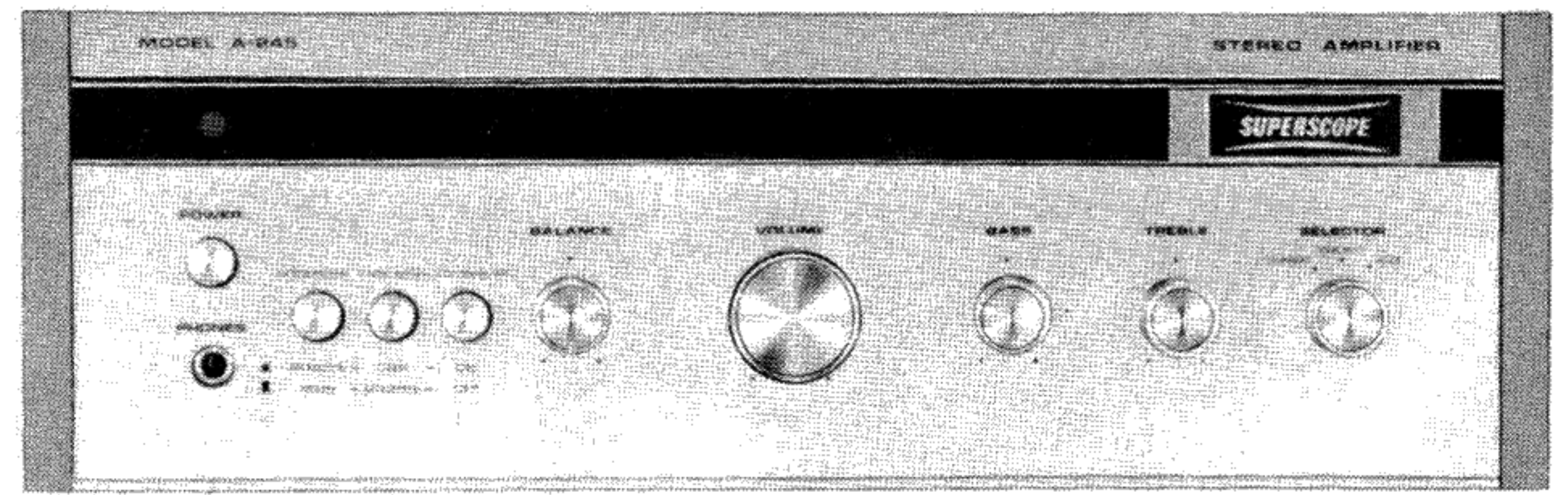
Model A-245

## SERVICE DATA

— Jan. 1973 —

**SUPERSCOPE INC.**

8150 VINELAND AVENUE,  
SUN VALLEY, CALIFORNIA, USA 91352



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### TECHNICAL SPECIFICATIONS

<b>&lt; AMPLIFIER SECTION &gt;</b>		<b>&lt; AUXILIARY CIRCUIT &gt;</b>	
Instantaneous Peak Music Power . . . . .	50W at 8 ohms	Tape Monitor Switch, Loudness Control Switch,	
E.I.A Music Power . . . . .	35W at 8 ohms	Boost-Cut Separate Bass and Treble Controls, Speaker	
Total Music Power (I.H.F) . . . . .	30W at 8 ohms	System Selector, Stereo Headphones Jack, Switched	
<b>Continuous Power (R.M.S) . . . . .</b>	<b>10W + 10W at 8 ohms</b>	Auxiliary AC Outlet.	
Harmonic Distortion at 1 KHz .	Less than 0.5% to 10 W		
Power Bandwidth . . . . .	30-30,000 Hz at 8 ohms	<b>&lt; Solid State Devices &gt;</b>	
	at 1% THD (-1 dB)	Transistors . . . . .	18
Frequency Response . . . . .	20-40,000 Hz (-3 dB)	Diodes . . . . .	10
Signal to Noise Ratio . . . . .	AUX. 70 dB, MAG. 60 dB		
Damping Factor . . . . .	30 at 8 ohms	<b>&lt; Power Requirements &gt;</b>	
Bass Control . . . . .	± 10 dB at 100 Hz	Power Voltage . . . . .	AC 120 V 50/60 Hz
Treble Control . . . . .	±10 dB 10,000 Hz	Power Consumption . . . . .	60 W maximum
Loudness Control . . . . .	+8 dB at 100 Hz, +4 dB		
	at 10,000 Hz	<b>&lt; Dimensions &gt;</b>	
Input Sensitivity .	MAG. 2.5mV to 10W OUTPUT, CER	Width . . . . .	14-11/32"
	150mV to 10W OUTPUT, TUNER 100mV	Depth . . . . .	7-1/8"
	to 10W OUTPUT, AUX. 100mV to 10W OUTPUT,	Height . . . . .	4-9/16"
	TAPE 200mV to 10W OUTPUT	Weight . . . . .	8 lbs

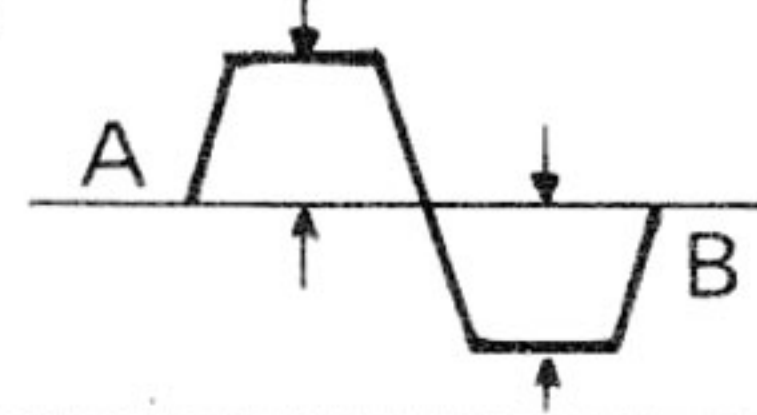
※These specifications and exterior designs may be changed for improvement without notice.

## ALIGNMENT PROCEDURE

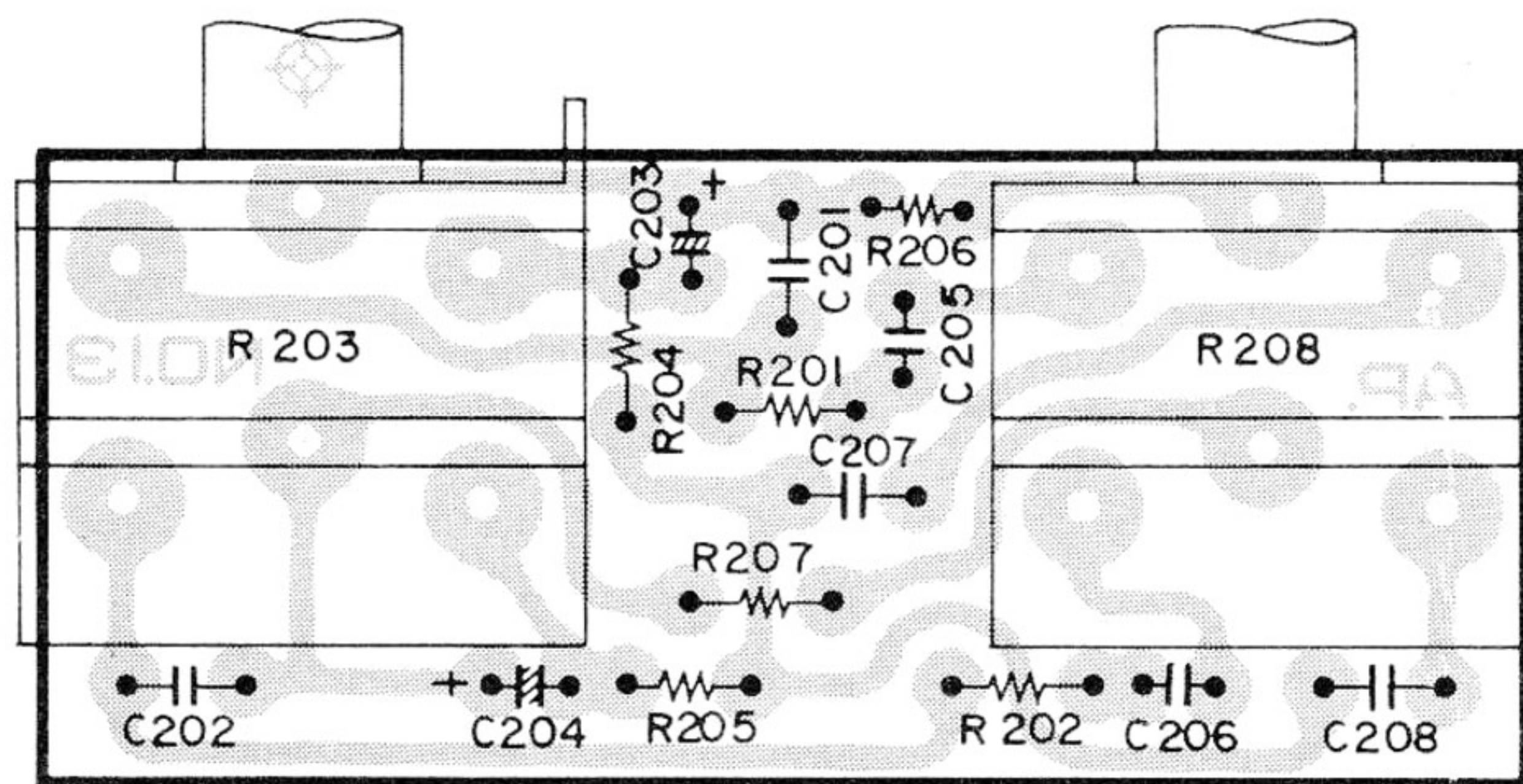
1. Set the volume control at maximum, bass, treble and balance controls at mechanical center position, speakers switch in the position "MAIN" while switching the tape monitor and loudness control switches off.
2. Connect 8 ohms dummy load resistors (10–20W, non-inductive preferably) to each R and L channel "MAIN" output terminals of the unit.

(Selector Switch in the position "AUX")

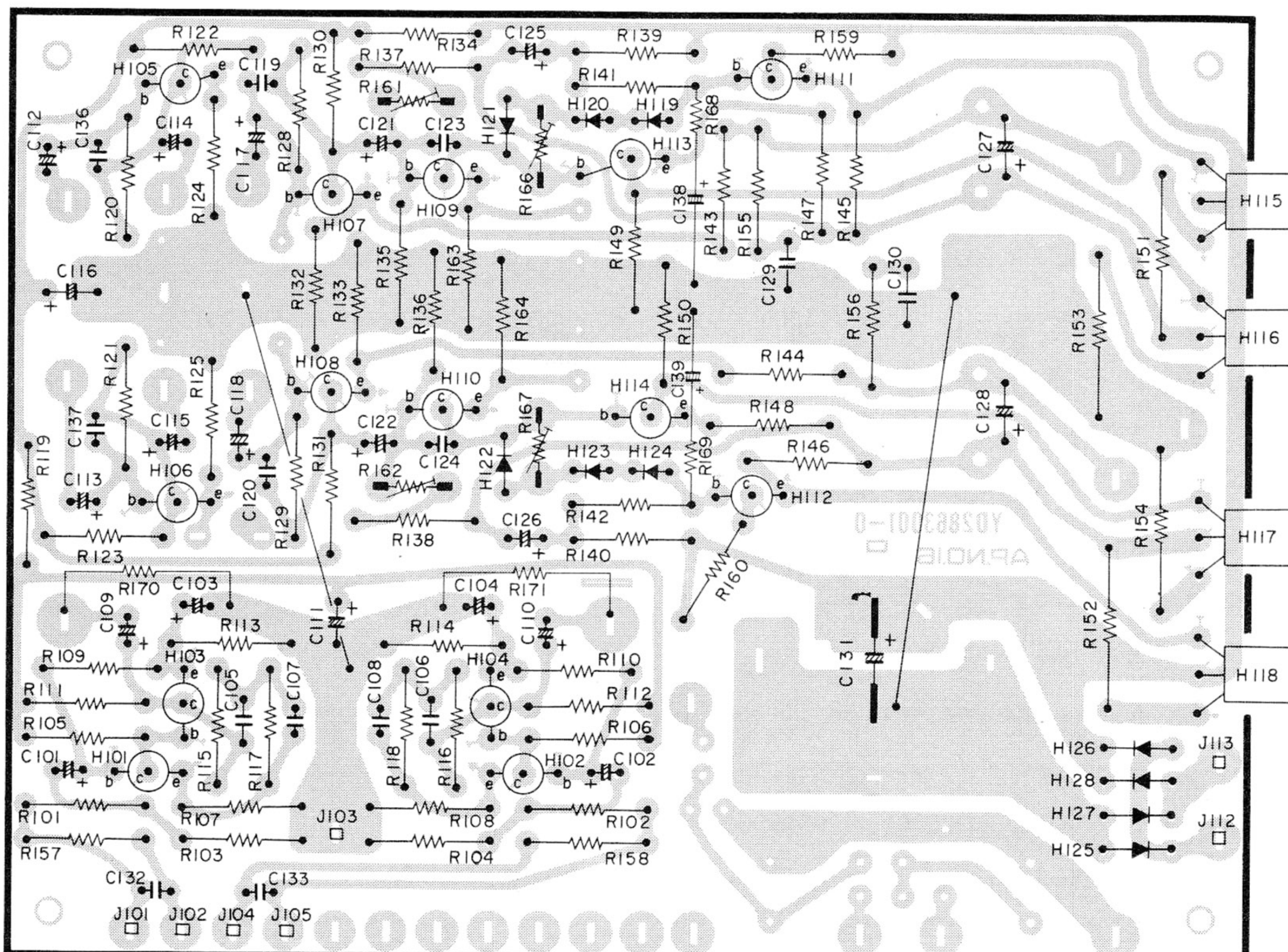
Step	Signal Source Connection	Signal Frequency	Indicator Connection	Adjustment
1	Audio Generator to AUX terminal	1,000 Hz	Oscilloscope to output terminals	Gradually increase output level of the audio generator and adjust R161 and R162 for symmetrical clipping level.
2				Adjust R166 and R167 for not having any evidence of crossover distortion at 500mW output. Caution: Avoid excessive bias current (10mA at no signal).



### CIRCUIT BOARD DIAGRAM (TOP VIEW)



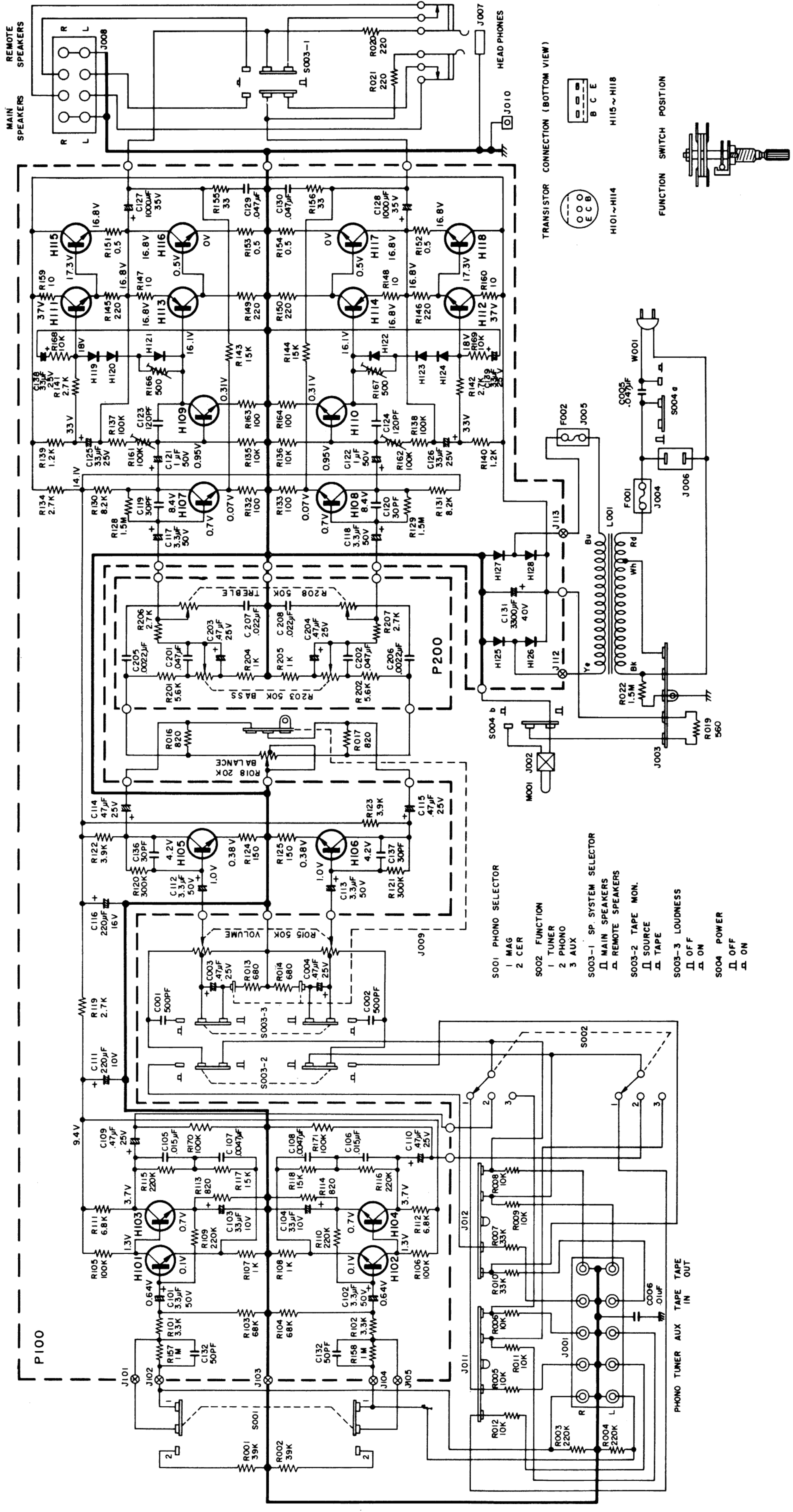
**Tone Control Block**



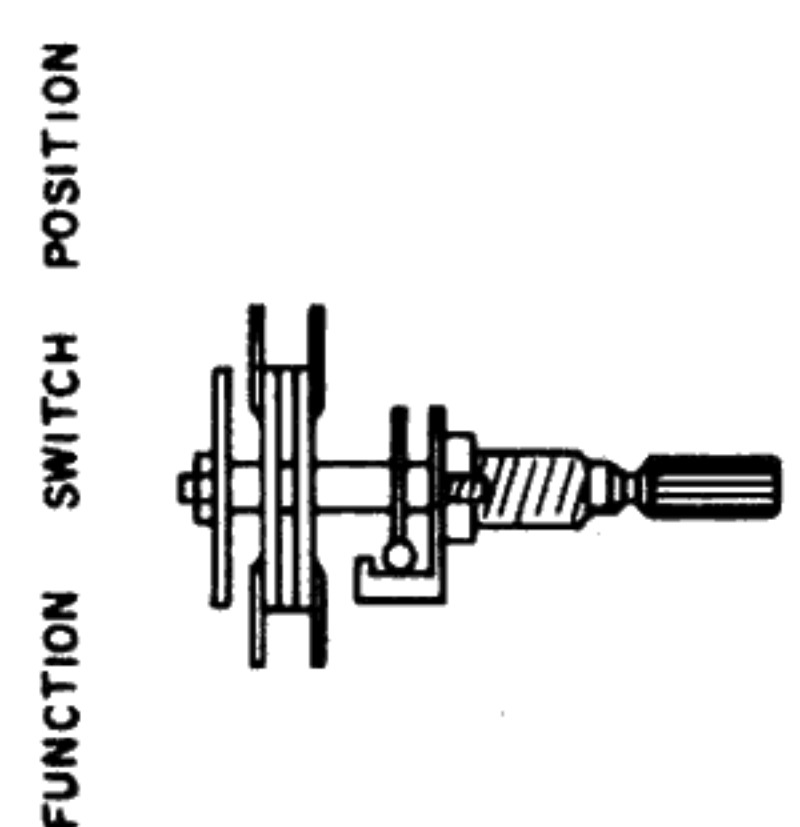
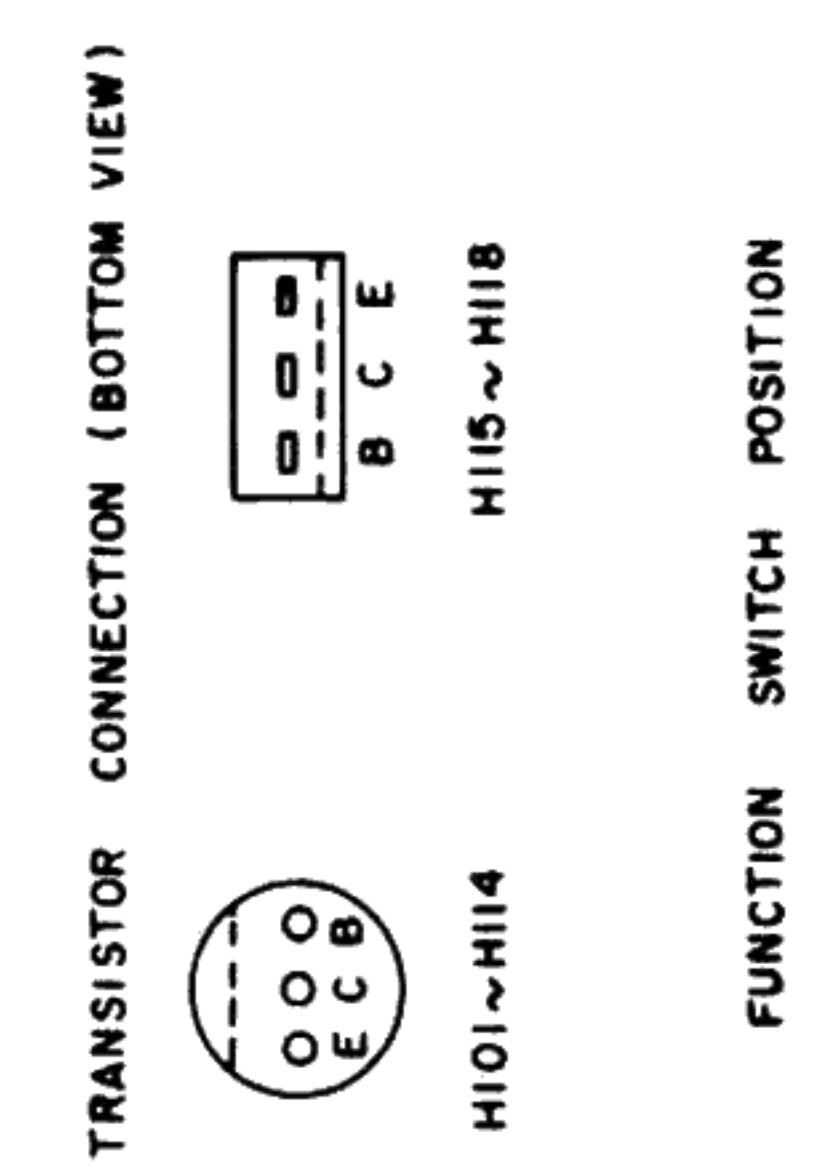
**Audio Amp. Block**

# SCHEMATIC DIAGRAM

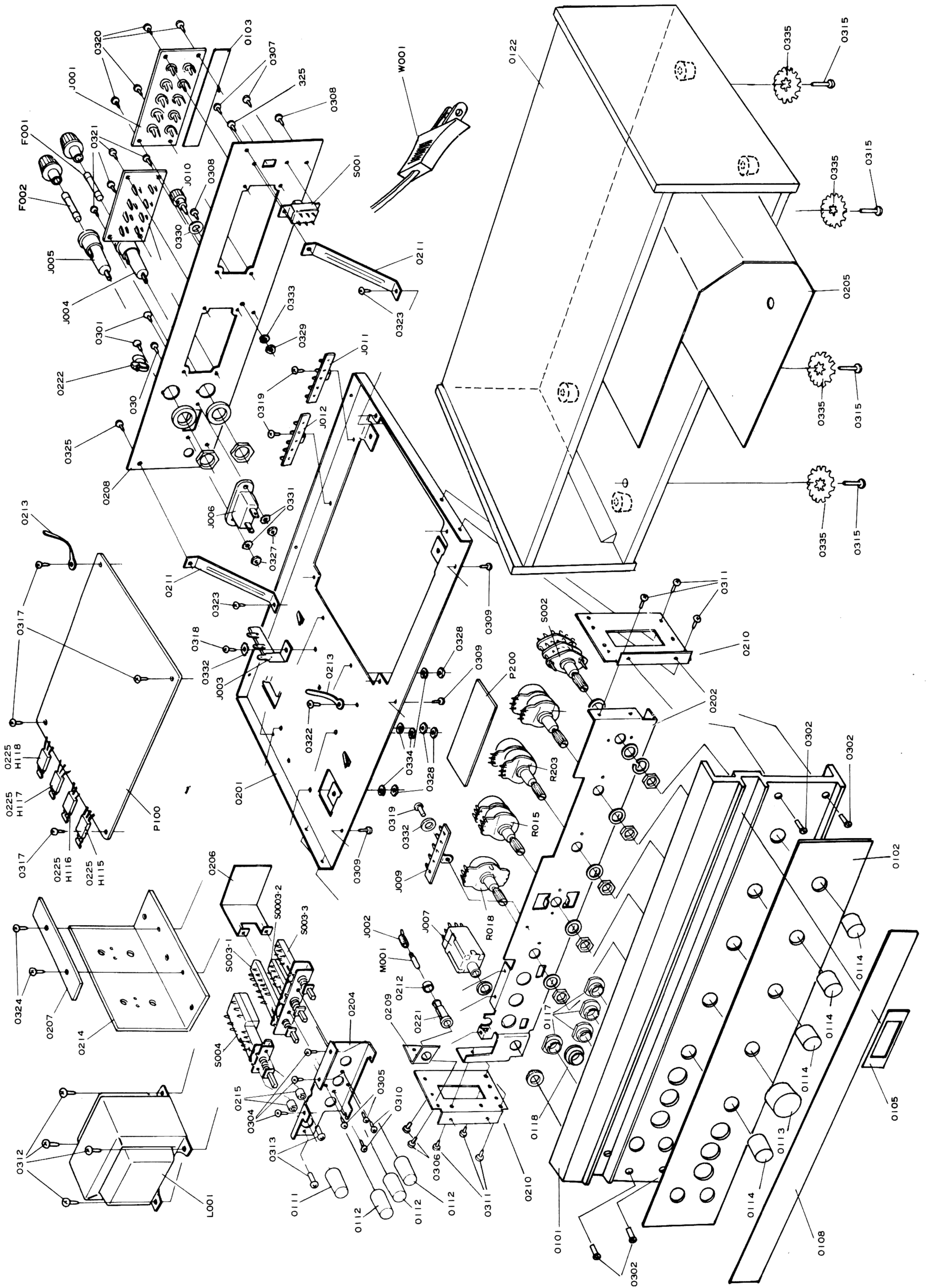
- H101, H102 HT307321A (2SC732GR)
- H103, H104 HT307331D (2SC733BL)
- H105, H106 HT307331C (2SC733GR)
- H107, H108 HT303720A (2SC732Y)
- H109, H110 HT307341C (2SC734Y)
- H111, H112 HT307341B (2SC734O)
- H113, H114 HT105611B (2SA561O)
- H115~H118 HT402351B (2SD235O)
- H119~H124 HV0000705 (S-3016R)
- HD2000110 (1S-1665)



- S001 PHONO SELECTOR
  - 1 MAG
  - 2 CER
- S002 FUNCTION
  - 1 TUNER
  - 2 PHONO
  - 3 AUX
- S003-1 SP. SYSTEM SELECTOR
  - MAIN SPEAKERS
  - REMOTE SPEAKERS
- S003-2 TAPE MON.
  - SOURCE
  - TAPE
- S003-3 LOUDNESS
  - OFF
  - ON
- S004 POWER
  - OFF
  - ON



# EXPLODED DIAGRAM OF THE MECHANISM



## PARTS LIST

REF. DESIG.	MARANTZ PART NO.	DESCRIPTION
<b>MECHANICAL PARTS</b>		
A	287706340	Escutcheon Ass'y
0101	287706301	Escutcheon
0102	287706302	Escutcheon
0105	287625150	Badge K
0108	287715801	Window
0117	286025901	Bush x 4
0118	273125901	Bush
0210	287616002	Bracket x 2
0302	51040306A	F.H.M. Screw x 4
0103	287726501	Indicator
0111	287615407	Knob (Power Switch)
0112	287615409	Knob x 3
0113	287615402	Knob (Volume)
0114	287615406	Knob x 4
0122	287606450	Case K
0201	279210501	Chassis
0202	280416001	Bracket (Front)
0203	286116001	Bracket (Rear)
0204	280416003	Bracket
0205	287610901	Shield
0206	280410901	Shield
0207	279200501	Clamper
B	287716040	Bracket Ass'y
0209	287716001	Bracket
0221	276325901	Bush
0212	71400219Q	Spring
0211	254910401	Retainer x 2
0213	138200503	Clamper x 2
0214	267326701	Heat Sink
0215	273105502	Collar x 2
0220	145525901	Bush
0225	268611801	Spacer x 4
0230	951130101	UL Label
0232	257886101	CAUTION Label
0301	51042608A	F.H.M. Screw x 2
0303	62031650W	Lug
0304	51062605A	P.H.M. Screw x 3
0305	51062605A	P.H.M. Screw x 2
0306	51060305A	P.H.M. Screw x 2
0307	51060305A	P.H.M. Screw x 2
0308	51060305A	P.H.M. Screw x 3
0309	51060305A	P.H.M. Screw x 3
0310	51060305A	P.H.M. Screw x 2
0311	51060305A	P.H.M. Screw x 6
0312	51060308A	P.H.M. Screw x 4
0313	51060310A	P.H.M. Screw x 2
0314	54050300R	T.L. Washer OR
0315	51100410A	B.H.M. Screw x 4
0316	51570310B	P. Tapt Screw
0317	51570306B	P. Tapt Screw x 4
0318	51570306B	P. Tapt Screw
0319	51570306B	P. Tapt Screw x 3
0320	51570306B	P. Tapt Screw x 3

REF. DESIG.	MARANTZ PART NO.	DESCRIPTION
0321	51570306B	P. Tapt Screw x 4
0322	51570306B	P. Tapt Screw
0323	51570306B	P. Tapt Screw x 2
0324	51570315B	P. Tapt Screw x 2
0325	51380305P	P.H.Tapt Screw x 2
0326	53110303E	Hexagon Nut
0327	53112603E	Hexagon Nut x 2
0328	53110303E	Hexagon Nut x 4
0329	53110303E	Hexagon Nut
0330	54020301E	Flat Washer P
0331	54052600R	T.L. Washer OR x 2
0332	54050300R	T.L. Washer OR x 2
0333	54050300R	T.L. Washer OR
0334	54040302A	Spring Wahser x 4
0335	54080400R	T.L. Washer RR x 4
<b>ELECTRICAL PARTS</b>		
P100	YD2863001	P.C. Board
	ZZ2861101	P.C. Board Ass'y
<b>RESISTORS (All resistors are <math>\pm 10\%</math>, <math>\frac{1}{4}W</math> and carbon type, unless otherwise indicated.)</b>		
R101	RT1033214	3.3K $\Omega$
R102	RT1033214	3.3K $\Omega$
R103	RT1068314	68K $\Omega$
R104	RT1068314	68K $\Omega$
R105	RT1010414	100K $\Omega$
R106	RT1010414	100K $\Omega$
R107	RT1010214	1K $\Omega$
R108	RT1010214	1K $\Omega$
R109	RT1022414	220K $\Omega$
R110	RT1022414	220K $\Omega$
R111	RT1068214	6.8K $\Omega$
R112	RT1068214	6.8K $\Omega$
R113	RT1082114	820 $\Omega$
R114	RT1082114	820 $\Omega$
R115	RT1022414	220K $\Omega$
R116	RT1022414	220K $\Omega$
R117	RT1015314	15K $\Omega$
R118	RT1015314	15K $\Omega$
R119	RT1027214	2.7K $\Omega$
R120	RT1030414	300K $\Omega$
R121	RT1030414	300K $\Omega$
R122	RT1039214	3.9K $\Omega$
R123	RT1039214	3.9K $\Omega$
R124	RT1015114	150 $\Omega$
R125	RT1015114	150 $\Omega$
R128	RT1015514	1.5M $\Omega$
R129	RT1015514	1.5M $\Omega$
R130	RT1082214	8.2K $\Omega$
R131	RT1082214	8.2K $\Omega$
R132	RT1010114	100 $\Omega$
R133	RT1010114	100 $\Omega$
R134	RT1027214	2.7K $\Omega$
R135	RT1010314	10K $\Omega$
R136	RT1010314	10K $\Omega$
R137	RT1010414	100K $\Omega$
R138	RT1010414	100K $\Omega$
R139	RT1012214	1.2K $\Omega$
R140	RT1012214	1.2K $\Omega$
R141	RT1027214	2.7K $\Omega$
R142	RT1027214	2.7K $\Omega$

REF. DESIG.	MARANTZ PART NO.	DESCRIPTION
R143	RT1015314	15K $\Omega$
R144	RT1015314	15K $\Omega$
R145	RT1022112	Solid 220 $\Omega$ , $\pm$ 10%, $\frac{1}{2}$ W
R146	RC1022112	Solid 220 $\Omega$ , $\pm$ 10%, $\frac{1}{2}$ W
R147	RC1010012	Solid 10 $\Omega$ , $\pm$ 10%, $\frac{1}{2}$ W
R148	RC1010012	Solid 10 $\Omega$ , $\pm$ 10%, $\frac{1}{2}$ W
R149	RC1022112	Solid 220 $\Omega$ , $\pm$ 10%, $\frac{1}{2}$ W
R150	RC1022112	Solid 220 $\Omega$ , $\pm$ 10%, $\frac{1}{2}$ W
R151	GW1050202	0.5 $\Omega$ , $\pm$ 10%, 2W
R152	GW1050202	0.5 $\Omega$ , $\pm$ 10%, 2W
R153	GW1050202	0.5 $\Omega$ , $\pm$ 10%, 2W
R154	GW1050202	0.5 $\Omega$ , $\pm$ 10%, 2W
R155	RC1033012	Solid 33 $\Omega$ , $\pm$ 10%, $\frac{1}{2}$ W
R156	RC1033012	Solid 33 $\Omega$ , $\pm$ 10%, $\frac{1}{2}$ W
R157	RT1010514	1M $\Omega$
R158	RT1010514	1M $\Omega$
R159	RC1010012	Solid 10 $\Omega$ , $\pm$ 10%, $\frac{1}{2}$ W
R160	RC1010012	Solid 10 $\Omega$ , $\pm$ 10%, $\frac{1}{2}$ W
R161	RA0104006	Trimmer 100K $\Omega$
R162	RA0104006	Trimmer 100K $\Omega$
R163	RT1010114	100 $\Omega$
R164	RT1010114	100 $\Omega$
R166	RA0501001	Trimmer 500 $\Omega$
R167	RA0501001	Trimmer 500 $\Omega$
R168	RT1010314	10K $\Omega$
R169	RT1010314	10K $\Omega$
R170	RT1010414	100K $\Omega$
R171	RT1010414	100K $\Omega$
<b>CAPACITORS</b>		
C101	EA3350509	Elect. 3.3 $\mu$ F, 50V
C102	EA3350509	Elect. 3.3 $\mu$ F, 50V
C103	EA3360109	Elect. 33 $\mu$ F, 10V
C104	EA3360109	Elect. 33 $\mu$ F, 10V
C105	DF1715301	Mylar 0.015 $\mu$ F, $\pm$ 20%
C106	DF1715301	Mylar 0.015 $\mu$ F, $\pm$ 20%
C107	DF1747201	Mylar 0.0047 $\mu$ F, $\pm$ 20%
C108	DF1747201	Mylar 0.0047 $\mu$ F, $\pm$ 20%
C109	EM4740251	Elect. 0.47 $\mu$ F, 25V
C110	EM4740251	Elect. 0.47 $\mu$ F, 25V
C111	EA2270109	Elect. 220 $\mu$ F, 10V
C112	EA3350509	Elect. 3.3 $\mu$ F, 50V
C113	EA3350509	Elect. 3.3 $\mu$ F, 50V
C114	EM4740251	Elect. 0.47 $\mu$ F, 25V
C115	EM4740251	Elect. 0.47 $\mu$ F, 25V
C116	EA4760169	Elect. 47 $\mu$ F, 16V
C117	EA3350509	Elect. 3.3 $\mu$ F, 50V
C118	EA3350509	Elect. 3.3 $\mu$ F, 50V
C119	DD1630001	Ceramic 30pF, $\pm$ 10%
C120	DD1630001	Ceramic 30pF, $\pm$ 10%
C121	EA1050509	Elect. 1 $\mu$ F, 50V
C122	EA1050509	Elect. 1 $\mu$ F, 50V
C123	DD1612101	Ceramic 120pF, $\pm$ 10%
C124	DD1612101	Ceramic 120pF, $\pm$ 10%
C125	EA3360259	Elect. 33 $\mu$ F, 25V
C126	EA3360259	Elect. 33 $\mu$ F, 25V
C127	EC1080353	Elect. 1000 $\mu$ F, 35V
C128	EC1080353	Elect. 1000 $\mu$ F, 35V
C129	DF1747301	Mylar 0.047 $\mu$ F, $\pm$ 20%
C130	DF1747301	Mylar 0.047 $\mu$ F, $\pm$ 20%
C131	EC3380401	Elect. 3300 $\mu$ F, 40V
C132	DD1650001	Ceramic 50pF, $\pm$ 10%

REF. DESIG.	PART NO.	DESCRIPTION
C133	DD1650001	Ceramic 50pF, $\pm$ 10%
C136	DD1630001	Ceramic 30pF, $\pm$ 10%
C137	DD1630001	Ceramic 30pF, $\pm$ 10%
C138	EA3360259	Elect. 33 $\mu$ F, 25V
C139	EA3360259	Elect. 33 $\mu$ F, 25V
<b>SEMICONDUCTORS</b>		
H101	HT307321A	Transistor 2SC732 (GR)
H102	HT307321A	Transistor 2SC732 (GR)
H103	HT307331D	Transistor 2SC733 (BL)
H104	HT307331D	Transistor 2SC733 (BL)
H105	HT307331C	Transistor 2SC733 (GR)
H106	HT307331C	Transistor 2SC733 (GR)
H107	HT303720A	Transistor 2SC372 (Y)
H108	HT303720A	Transistor 2SC372 (Y)
H109	HT307341C	Transistor 2SC734 (Y)
H110	HT307341C	Transistor 2SC734 (Y)
H111	HT307341B	Transistor 2SC734 (O)
H112	HT307341B	Transistor 2SC734 (O)
H113	HT105611B	Transistor 2SA561 (O)
H114	HT105611B	Transistor 2SA561 (O)
H115	HT402351B	Transistor 2SD235 (O)
H116	HT402351B	Transistor 2SD235 (O)
H117	HT402351B	Transistor 2SD235 (O)
H118	HT402351B	Transistor 2SD235 (O)
H119	HV0000705	Varistor S-3016R
H120	HV0000705	Varistor S-3016R
H121	HV0000705	Varistor S-3016R
H122	HV0000705	Varistor S-3016R
H123	HV0000705	Varistor S-3016R
H124	HV0000705	Varistor S-3016R
H125	HD2000110	Diode 1S-1665
H126	HD2000110	Diode 1S-1665
H127	HD2000110	Diode 1S-1665
H128	HD2000110	Diode 1S-1665
<b>MISCELLANEOUS</b>		
J101	YP1000094	Plug
J102	YP1000094	Plug
J103	YP1000094	Plug
J104	YP1000094	Plug
J105	YP1000094	Plug
J112	YP1000094	Plug
J113	YP1000094	Plug
P200	YD2792002 ZZ2861102	P.C. Board P.C. Board Ass'y
<b>RESISTORS</b>		
R201	RT1056214	Carbon 5.6K $\Omega$ , $\pm$ 10%, $\frac{1}{4}$ W
R202	RT1056214	Carbon 5.6K $\Omega$ , $\pm$ 10%, $\frac{1}{4}$ W
R203	RM0503038	Variable 50K $\Omega$ (A) x 2, Bass
R204	RT1010214	Carbon 1K $\Omega$ , $\pm$ 10%, $\frac{1}{4}$ W
R205	RT1010214	Carbon 1K $\Omega$ , $\pm$ 10%, $\frac{1}{4}$ W
R206	RT1027214	Carbon 2.7K $\Omega$ , $\pm$ 10%, $\frac{1}{4}$ W
R207	RT1027214	Carbon 2.7K $\Omega$ , $\pm$ 10%, $\frac{1}{4}$ W
R208	RM0503038	Variable 50K $\Omega$ (A) x 2, Treble
<b>CAPACITORS</b>		
C201	DF1747301	Mylar 0.047 $\mu$ F, $\pm$ 20%
C202	DF1747301	Mylar 0.047 $\mu$ F, $\pm$ 20%
C203	EM4740251	Elect. 0.047 $\mu$ F, 25V
C204	EM4740251	Elect. 0.047 $\mu$ F, 25V
C205	DF1722201	Mylar 0.0022 $\mu$ F, $\pm$ 20%
C206	DF1722201	Mylar 0.0022 $\mu$ F, $\pm$ 20%

REF. DESIG.	PART NO.	DESCRIPTION
C207	DF1722301	Mylar 0.022 $\mu$ F, $\pm$ 20%
C208	DF1722301	Mylar 0.022 $\mu$ F, $\pm$ 20%
		<b>RESISTORS (All resistors are <math>\pm</math>10%, <math>\frac{1}{4}</math>W and carbon type, unless otherwise indicated. )</b>
R001	RT1039314	39K $\Omega$
R002	RT1039314	39K $\Omega$
R003	RT1022414	220K $\Omega$
R004	RT1022414	220K $\Omega$
R005	RT1010314	10K $\Omega$
R006	RT1010314	10K $\Omega$
R007	RT1033314	33K $\Omega$
R008	RT1010314	10K $\Omega$
R009	RT1010314	10K $\Omega$
R010	RT1033314	33K $\Omega$
R011	RT1010314	10K $\Omega$
R012	RT1010314	10K $\Omega$
R013	RT1068114	680 $\Omega$
R014	RT1068114	680 $\Omega$
R015	RM0503044	Variable 50K $\Omega$ (A) x2 Volume
R016	RT1082114	820 $\Omega$
R017	RT1082114	820 $\Omega$
R018	RK0203021	Variable 20K $\Omega$ Balance
R019	RJ1056103	560 $\Omega$ $\pm$ 5%, 3W
R020	RT1022114	220 $\Omega$
R021	RT1022114	220 $\Omega$
R022	RC1015512	Solid 1.5M $\Omega$ , $\pm$ 10%, $\frac{1}{2}$ W
		<b>CAPACITORS</b>
C001	DD1650101	Ceramic 500pF, $\pm$ 20%
C002	DD1650101	Ceramic 500pF, $\pm$ 20%
C003	EM4740251	Elect. 0.47 $\mu$ F, 25V

REF. DESIG.	PART NO.	DESCRIPTION
C004	EM4740251	Elect. 0.47 $\mu$ F, 25V
C005	DF1747351	Mylar 0.047 $\mu$ F, 600V
C006	DK1710301	Ceramic 0.01 $\mu$ F, $\pm$ 20%
		<b>MISCELLANEOUS</b>
S001	SS0202017	Phono Selector Switch
S002	SR0403008	Function Switch
S003	SP0403004	Speaker, Tape Mon., Loudness Switch
S004	SP0201011	Power Switch
J001	YT0210001	Terminal
J002	JY0200007	Lamp Socket
J003	YL0105011	Sp Lug Terminal
J004	YJ0800012	Fuse Holder Socket
J005	YJ0800012	Fuse Holder Socket
J006	YJ0400032	AC Outlet Jack
J007	YJ0100069	Headphone Jack
J008	YT0108001	Output Terminal
J009	YL0105003	5P Lug Terminal
J010	YL0301020	Ground Terminal
J011	YL0105003	5P Lug Terminal
J012	YL0105003	5P Lug Terminal
M001	IN1006006	Lamp, 6V, 60mA
L001	TS1660102	Power Transf.
F001	FS1020004	Fuse, 2A, 250V
F002	FS1020004	Fuse, 2A, 250V
W001	YC0240001	AC Cord
W002	YW2861001	Wiring Materials

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