

SEEBURG

HIGH FIDELITY AMPLIFIERS

TYPE C1FHA1 and C2FHA1

(Schematic and Parts List)

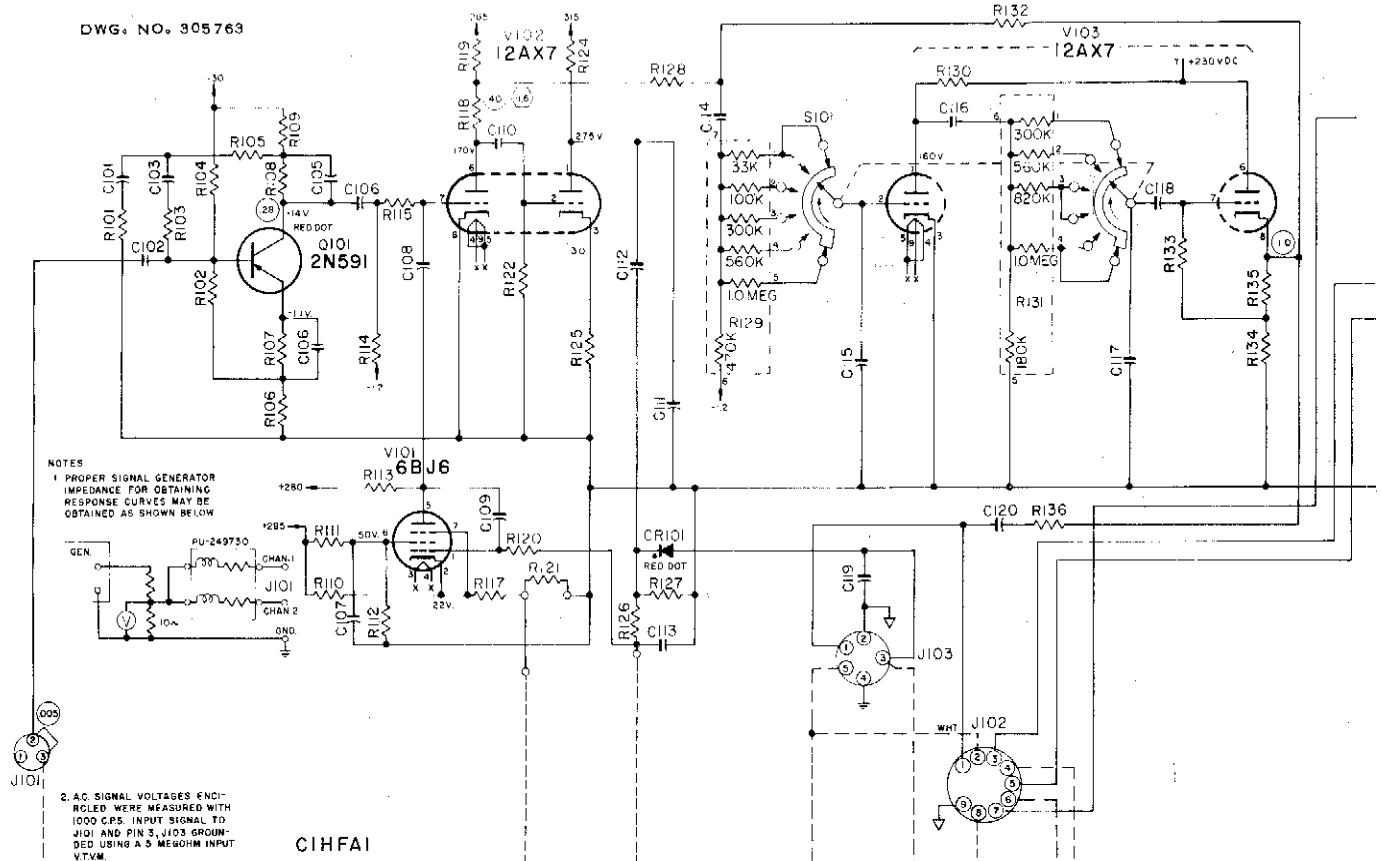
HIGH FIDELITY AMPLIFIERS, Type C1HFA1 and C2HFA1

Item	Part No.	Description	Item	Part No.	Description
C101	86326	.01 MFD 10% 50 V. Mylar	C159	86303	.15 MFD 10% 50 V. Mylar
C102	87682	9 MFD 6 V Lytic	C160	86212	.01 MFD 400 V. Paper
C103	86326	.01 MFD 10% 50 V. Mylar	C161	86241	33 MMFD 500 V. Ceramic
C104	87659	50 MFD 6 V. Lytic	C162	86140	.05 MFD 400 V. Paper
C105	86336	.033 MFD 10% 50 V. Mylar	C163	86146	.05 MFD 600 V. Paper
C106	86327	.047 MFD 10% 50 V. Mylar	C164	86146	.05 MFD 600 V. Paper
C107	86140	.05 MFD 400 V. Paper	C165	86243	150 MMFD 500 V. Ceramic
C108	86300	22 MFD 20% 400 V. Paper	C166	86313	.01 MFD 500 V. Ceramic
C109	86212	.01 MFD 10% 400 V. Paper	C167	87668	20 MFD 75 V. Lytic
C110	86213	.005 MFD 10% 400 V. Paper	C168	87680	50 MFD 60 V. Lytic
C111	86270	680 MMFD 10% 500 V. Ceramic	C169	87669	65 MFD 40 V. Lytic
C112	86212	.01 MFD 10% 400 V. Paper		*87680	50 MFD, 60 V. Lytic
C113	86329	.47 MFD 10% 50 V. Mylar	C170	87670	200 MFD 6 V. Lytic
C114	86309	1000 MMFD 10% 500 V. Ceramic	C171A	87681	20 MFD 500 V. Lytic
C115	86268	.470 MMFD 10% 500 V. Ceramic	C171B	87681	20 MFD 500 V. Lytic
C116	86213	.005 MFD 10% 400 V. Paper	C172A	87679	40 MFD 450 V. Lytic
C117	86337	180 MMFD 500 V. Ceramic	C172B		20 MFD 450 V. Lytic
C118	86207	.001 MFD 10% 200 V. Paper	C172C		20 MFD 450 V. Lytic
C119	86313	.01 MFD 500 V. Ceramic	C172D		20 MFD 450 V. Lytic
C120	86335	.47 MFD 10% 200 V. Mylar	C173	86303	.15 MFD 10% 50 V. Mylar
C121	86303	.15 MFD 10% 50 V. Mylar	CR101	309115	Selenium Diode
C122	86334	.1 MFD 10% 50 V. Mylar	CR102	309390	Selenium Diode
C123	86303	.15 MFD 10% 50 V. Mylar	CR103	309115	Selenium Diode
C124	86212	.01 MFD 400 V. Paper	CR104	309390	Selenium Diode
C125	86241	33 MMFD 500 V. Ceramic	F101	303087	Fuse 2 Amp. Slo-Blo
C126	86140	.05 MFD 400 V. Paper	J101	12034	Input
C127	86146	.05 MFD 600 V. Paper	J102	84305	Remote Volume Socket
C128	86146	.05 MFD 600 V. Paper	J103	84283	Mute Squelch 5 Pin
C129	86243	150 MMFD 500 V. Ceramic	J104	305632 941750	Output 941750 Contacts
C130	87668	20 MFD 75 V. Lytic	L101		
C131	87680	50 MFD 60 V. Lytic	L102	305767	Filter Choke
C132	87669	65 MFD 40 V. Lytic	P101	300007	Power Input
	*87680	50 MFD, 60 V. Lytic	P102	305634	Plug 9 Pin Cap 305633
C133	87670	200 MFD 6 V. Lytic	P103	305634	Plug 9 Pin Cap 305633
C134A	87681	20 MFD 500 V. Lytic	Q101	309404	2N591 Transistor
C134B	87681	20 MFD 500 V. Lytic	Q102	309404	2N591 Transistor
C135A	87679	40 MFD 450 V. Lytic	R101	82440	22,000 OHM
C135B		20 MFD 450 V. Lytic	R102	82634	10,000 OHM 5%
C135C		20 MFD 450 V. Lytic	R103	82775	39,000 OHM 5%
C135D		20 MFD 450 V. Lytic	R104	82696	270,000 OHM 5%
C136	86313	.01 MFD 500 V. Ceramic	R105	82775	39,000 OHM 5%
C137	86336	.033 MFD 10% 50 V. Mylar	R106	82617	47 OHM 5%
C138	87682	9 MFD 6 V. Lytic	R107	82626	3,900 OHM 5%
C139	86326	.01 MFD 10% 50 V. Mylar	R108	82796	51,000 OHM 5%
C140	87659	50 MFD 6 V. Lytic	R109	82634	10,000 OHM 5%
C141	86336	.033 MFD 10% 50 V. Mylar	R110	82847	68,000 OHM 2 W. 5%
C142	86140	.05 MFD 400 V. Paper	R111	82454	330,000 OHM
C143	86327	.047 MFD 10% 50 V. Mylar	R112	82796	51,000 OHM 5%
C144	86300	.22 MFD 20% 400 V. Paper	R113	82698	150,000 OHM 5%
C145	86213	.005 MFD 10% 400 V. Paper	R114	82456	470,000 OHM
C146	86212	.01 MFD 10% 400 V. Paper	R115	82698	150,000 OHM 5%
C147	86270	680 MMFD 10% 500 V. Ceramic	R117	82628	5,100 OHM 5%
C148	86212	.01 MFD 10% 400 V. Paper	R118	82695	56,000 OHM 5%
C149	86329	.47 MFD 10% 50 V. Mylar	R119	82637	15,000 OHM 5%
C150	86309	1000 MMFD 10% 500 V. Ceramic	R120	82470	6.8 Meg.
C151	86268	470 MMFD 10% 500 V. Ceramic			
C152	86213	.005 MFD 10% 400 V. Paper			
C153	86337	180 MMFD 500 V. Ceramic			
C154	86207	.001 MFD 10% 200 V. Paper			
C155	86335	.47 MFD 10% 200 V. Mylar			
C156	86303	.15 MFD 10% 50 V. Mylar			
C157	86303	.15 MFD 10% 50 V. Mylar			
C158	86334	.1 MFD 10% 50 V. Mylar			

*All components (capacitors and resistors) identified are used collectively and with those identified on page 4082.

HIGH FIDELITY AMPLIFIERS. Type C1HFA1 and C2HFA1

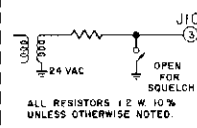
DWG. NO. 305763



NOTES
 1. PROPER SIGNAL GENERATOR IMPEDANCE FOR OBTAINING RESPONSE CURVES MAY BE OBTAINED AS SHOWN BELOW

2. A.C. SIGNAL VOLTAGES ENCLOSED WERE MEASURED WITH 1000 CPS. INPUT SIGNAL TO J101 AND PIN 3, J103 GROUNDED USING A 5 MEGOHM INPUT VTVM.

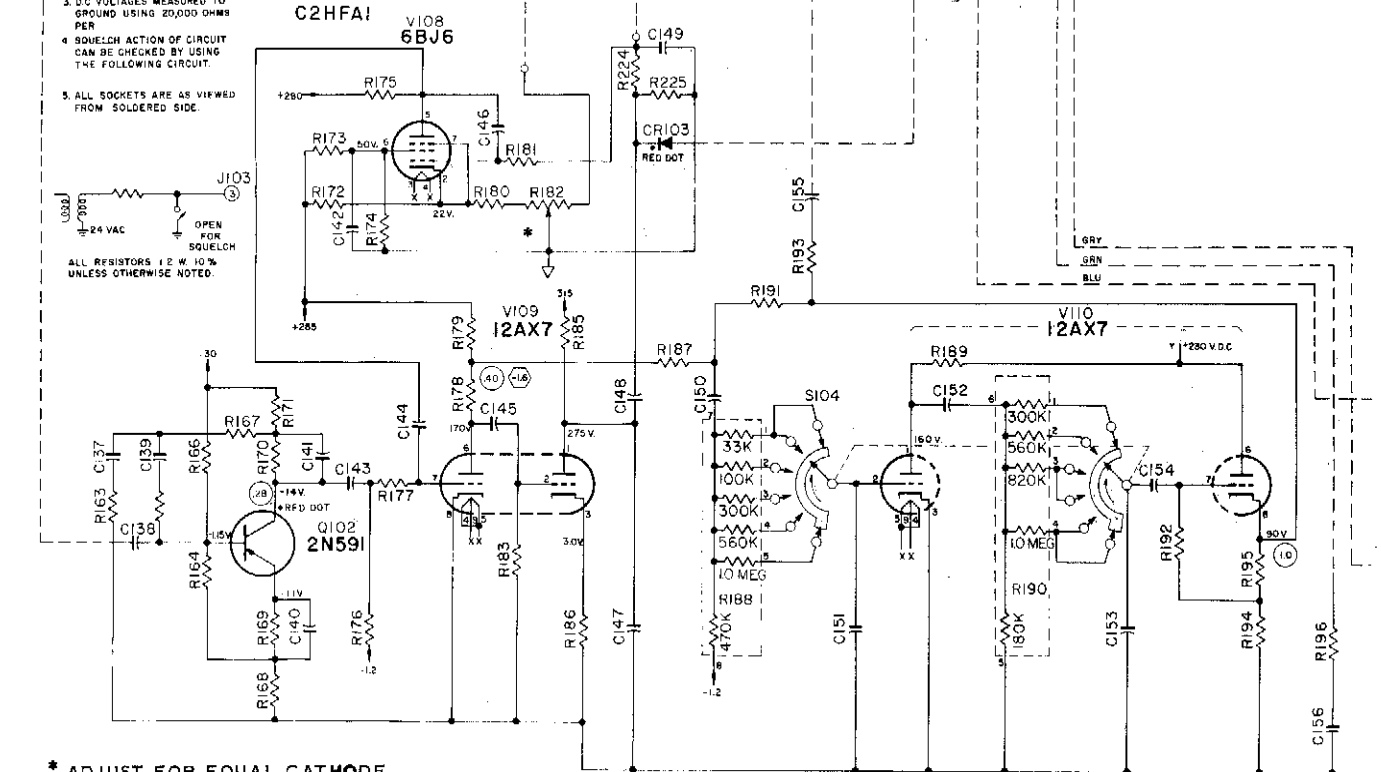
3. D.C. VOLTAGES MEASURED TO GROUND USING 20,000 OHMS PER
 4. SQUELCH ACTION OF CIRCUIT CAN BE CHECKED BY USING THE FOLLOWING CIRCUIT.
 5. ALL SOCKETS ARE AS VIEWED FROM SOLDERED SIDE.



ALL RESISTORS 1/2 W. 10% UNLESS OTHERWISE NOTED.

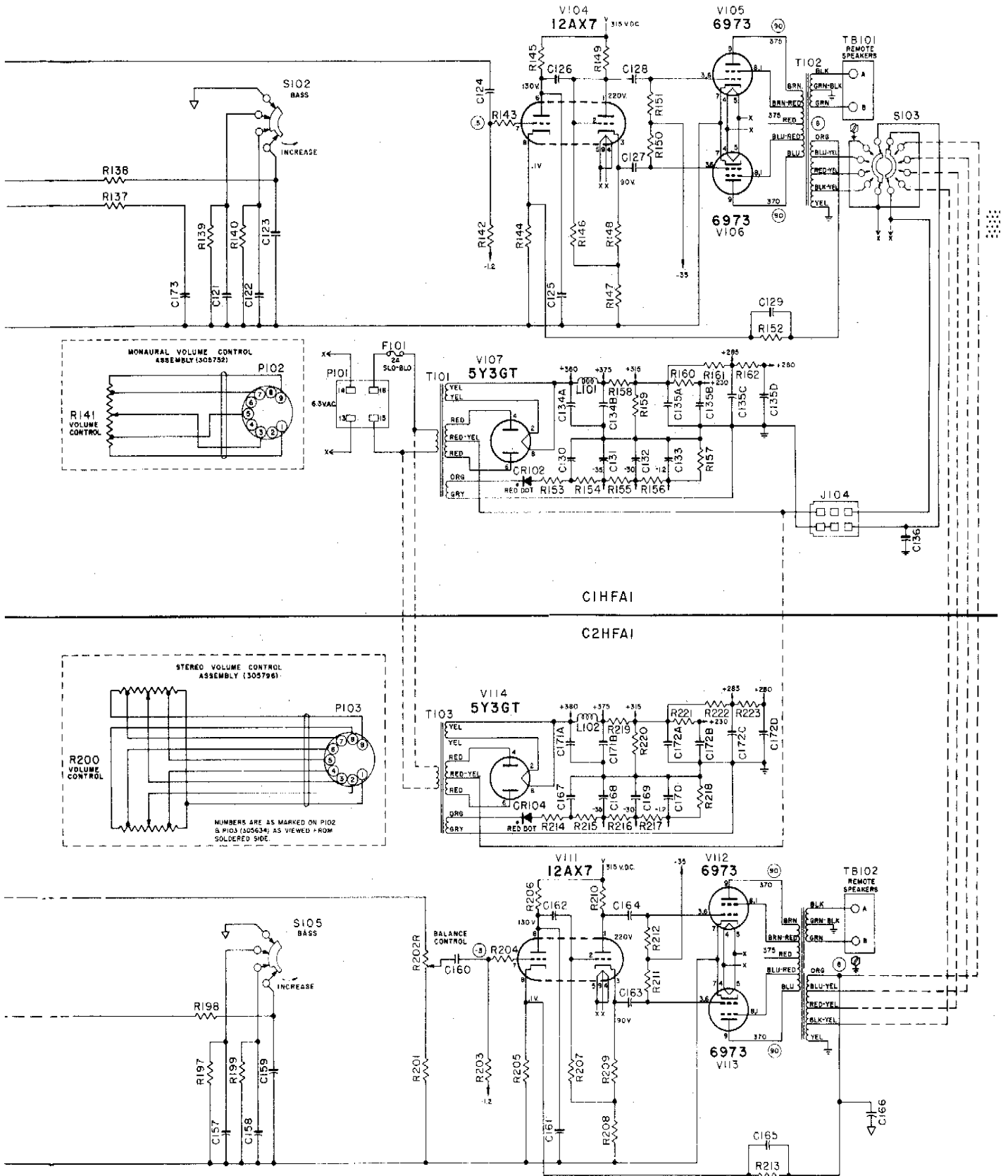
C1HFA1

C2HFA1



* ADJUST FOR EQUAL CATHODE VOLTAGE (PIN 2) V102 AND V107 WITH ZERO SIGNAL INPUT.

HIGH FIDELITY AMPLIFIERS, Type C1HFA1 and C2HFA1



HIGH FIDELITY AMPLIFIERS, Type CIHFA1 and C2HFA1

Item	Part No.	Description	Item	Part No.	Description
R121	82423	820 OHM	R188	82891	PAC
R122	82460	1 Meg.	R189	82695	56,000 OHM 5%
R124	82793	68,000 OHM 5%	R190	82890	PAC
R125	82610	6,200 OHM ½ W. 5%	R191	82791	180,000 OHM 5%
R126	82470	6.8 Meg.	R192	82464	2.2 Meg.
R127	82506	22 Meg.	R193	82418	330 OHM 10%
R128	82666	100,000 OHM 5%	R194	82446	68,000 OHM
R129	82891	PAC	R195	82421	560 OHM
R130	82695	56,000 OHM 5%	R196	82425	1,200 OHM
R131	82890	PAC	R197	82424	1,000 OHM
R132	82791	180,000 OHM 5%	R198	82425	1,200 OHM
R133	82464	2.2 Meg.	R199	82432	4,700 OHM
R134	82446	68,000 OHM	R200	305624	Volume Control (25 ea. Sec.)
R135	82421	560 OHM	R201	82438	15,000 OHM
R136	82418	330 OHM 10%	R202	305784	Gainset
R137	82425	1,200 OHM	R203	82667	470,000 OHM 5%
R138	82425	1,200 OHM	R204	82440	22,000 OHM
R139	82424	1,000 OHM	R205	82659	330 OHM 5%
R140	82432	4,700 OHM	R206	82667	470,000 OHM 5%
R141	309195	Volume Control (25K)	R207	82457	560,000 OHM
R142	82667	470,000 OHM 5%	R208	82789	390,000 OHM 5%
R143	82440	22,000 OHM	R209	82433	5,600 OHM
R144	82659	330 OHM 5%	R210	82789	390,000 OHM 5%
R145	82667	470,000 OHM 5%	R211	82667	470,000 OHM 5%
R146	82457	560,000 OHM	R212	82667	470,000 OHM 5%
R147	82789	390,000 OHM 5%	R213	82629	5,600 OHM 5%
R148	82433	5,600 OHM	R214	82418	330 OHM 10%
R149	82789	390,000 OHM 5%	R215	86210	6,200 OHM 5%
R150	82667	470,000 OHM 5%	R216	82426	1,500 OHM
R151	82667	470,000 OHM 5%		*82663	1,500 ohm 5%
R152	82629	5,600 OHM 5%	R217	82634	10,000 OHM 5%
R153	82418	330 OHM 10%	R218	82798	360 OHM 5%
R154	82610	6,200 OHM 5%		*82619	430 ohm 5%
R155	82426	1,500 OHM	R219	81194	3,300 OHM 5 W. 10%
	*82663	1,500 ohm 5%	R220	81199	25,000 OHM 10 W. 10%
R156	82634	10,000 OHM 5%	R221	82443	39,000 OHM
R157	82798	360 OHM 5%	R222	82431	3,900 OHM
	*82619	430 ohm 5%	R223	82438	15,000 OHM
R158	81194	3,300 OHM 5W. 10%	S101	305759	Treble Control Switch
R159	81199	25,000 OHM 10 W. 10%	—	305333	Knob
R160	82443	39,000 OHM	S102	305757	Bass Control Switch
R161	82431	3,900 OHM	—	305333	Knob
R162	82438	15,000 OHM	S103	305625	Speaker Switch 2P5T
R163	82426	1,500 OHM	—	305333	Knob
R164	82634	10,000 OHM 5%	S104	305759	Treble Control Switch
R165	82775	39,000 OHM 5%	—	305333	Knob
R166	82696	270,000 OHM 5%	S105	305757	Bass Control Switch
R167	82775	39,000 OHM 5%	—	305333	Knob
R168	82617	47 OHM 5%	T101	305748	Power Transformer
R169	82626	3,900 OHM 5%	T102	305750	Audio Output
R170	82796	51,000 OHM 5%	T103	305748	Power Transformer
R171	82634	10,000 OHM 5%	T104	305750	Audio Output
R172	82847	68,000 OHM 2 W. 5%	TB101	602815	Terminal Board
R173	82454	330,000 OHM	TB102	602815	Terminal Board
R174	82796	51,000 OHM 5%	V101-108	308603	6B16
R175	82698	150,000 OHM 5%	V102-103	308120	12AX7
R176	82456	470,000 OHM	V104	308120	12AX7
R177	82698	150,000 OHM 5%	V105-106	308026	6973
R178	82775	39,000 OHM 5%	V107-114	308504	5Y3GT
R179	82640	27,000 OHM 5%	V109-110	308120	12AX7
R180	82628	5,100 OHM 5%	V111	308120	12AX7
R181	82470	6.8 Meg.	V112-113	308026	6973
R182	305674	Balance Control			
R183	82460	1 Meg.			
R185	82793	68,000 OHM 5%			
R186	82610	6,200 OHM ½ W. 5%			
R187	82675	82,000 OHM 5%			

*All components (capacitors and resistors) identified are used collectively and with those identified on page 4079.