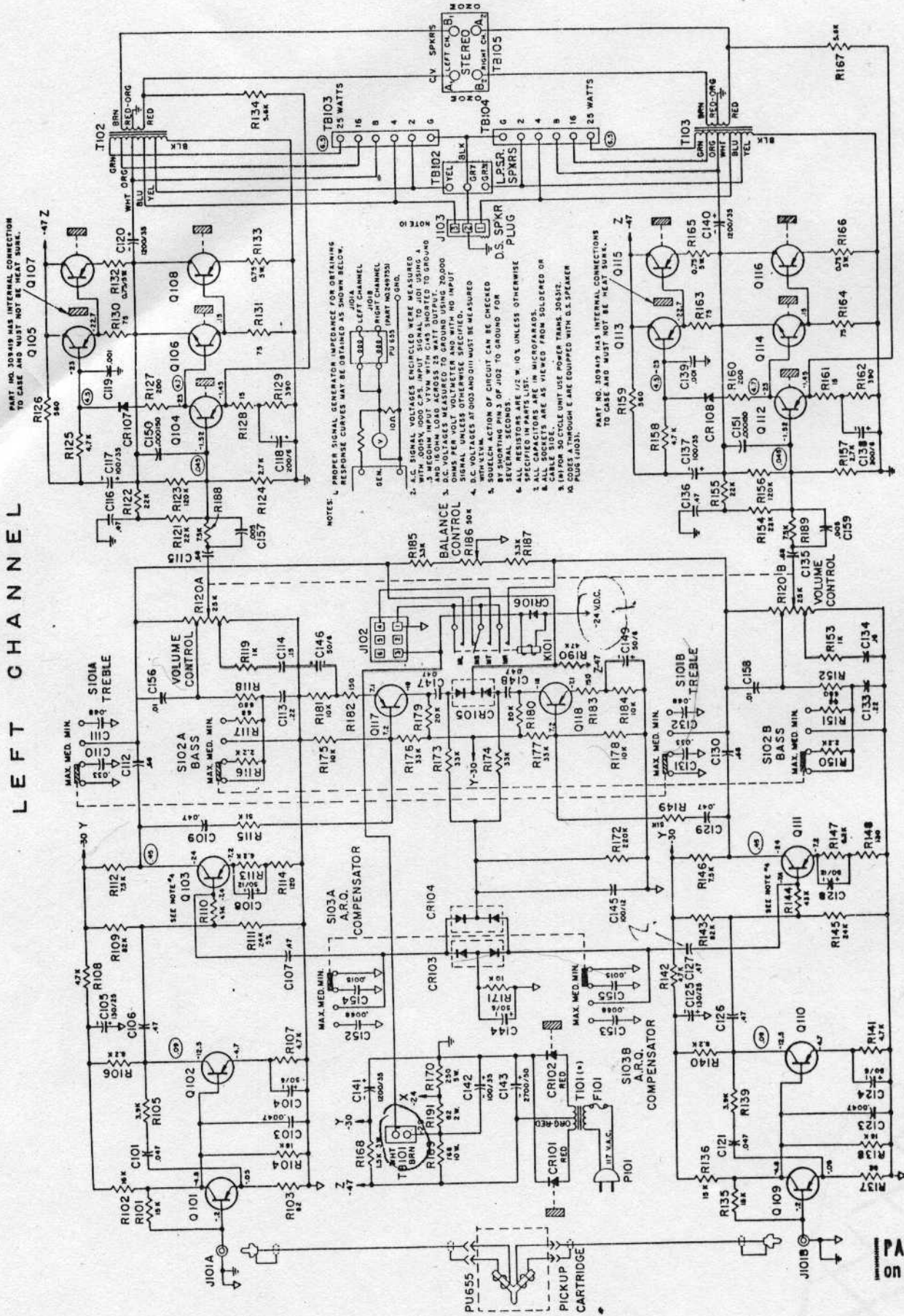


TRANSISTORIZED STEREO AMPLIFIER, Type TSA1

LEFT CHANNEL

RIGHT CHANNEL



PART NO. 30949 HAS INTERNAL CONNECTION TO CASE AND MUST NOT BE HEAT SUNK.

PART NO. 30943 HAS INTERNAL CONNECTIONS TO CASE AND MUST NOT BE HEAT SUNK.

- NOTES:
1. PROPER SIGNAL GENERATOR IMPEDANCE FOR OBTAINING RESPONSE CURVES MAY BE OBTAINED AS SHOWN BELOW.
 2. A.C. SIGNAL VOLTAGES ENCLOSED WERE MEASURED BY SHORTING THE J102 TO GROUND FOR THE LEFT CHANNEL AND THE RIGHT CHANNEL.
 3. D.C. VOLTAGES MEASURED TO GROUND USING 20,000 OHMS PER VOLT VOLTMETER SPECIFIED.
 4. D.C. VOLTAGES AT Q103 AND Q111 MUST BE MEASURED WITH A.V.M.
 5. SQUELCH ACTION OF CIRCUIT CAN BE CHECKED BY SHORTING THE J102 TO GROUND FOR THE LEFT CHANNEL.
 6. ALL RESISTORS ARE 1/2 W. 10% UNLESS OTHERWISE SPECIFIED IN PARTS LIST.
 7. ALL CAPACITORS ARE IN MICROFARADS.
 8. CABLE SIDE, ARE AS VIEWED FROM SOLDEDED OR SOLDER SIDE.
 9. 1M FOR 50 CYCLE UNIT USE POWER TRANS. 30432.
 10. CODES THROUGH E ARE EQUIPPED WITH U.S. SPEAKER PART 14031.

PARTS LIST on Reverse Side

Schematic Diagram for Transistorized Stereo Amplifier, Type TSA1.

TRANSISTORIZED STEREO AMPLIFIER, Type TSA1 (Code F)

Item	Part No.	Description	Item	Part No.	Description	Item	Part No.	Description	Item	Part No.	Description
C101	86327	0.047 Mfd. 50 V. Mylar	C152	86332	0.0068 Mfd. 50 V. Mylar	R109	82447	82000 Ohm 1/2 W. 10%	R157	82670	2700 Ohm 1/2 W. 5%
C103	86330	0.0047 Mfd. 50 V. Mylar	C153	86240	0.0015 Mfd. Ceramic	R110	82678	43000 Ohm 1/2 W. 5%	R158	82630	6800 Ohm 1/2 W. 5%
C104	87696	50 Mfd. 6 V. Lytic	C154	86313	0.01 Mfd. Ceramic	R111	82605	24000 Ohm 1/2 W. 5%	R159	82421	560 Ohm 1/2 W. 10%
C105	87717	130 Mfd. 25 V. Lytic	C155	86314	0.01 Mfd. Ceramic	R112	308962	12,000 Ohm 1/2 W. 5%	R160	82686	240 Ohm 1/2 W. 5%
C106	86329	0.47 Mfd. 50 V. Mylar	C156	86254	0.005 Mfd. Ceramic	R113	82610	6200 Ohm 1/2 W. 5%	R161	82402	15 Ohm 1/2 W. 10%
C107	87703	50 Mfd. 12 V. Lytic	C157	309387	Silicon Rectifier U-212	R114	82413	120 Ohm 1/2 W. 10%	R162	82688	390 Ohm 1/2 W. 5%
C108	86327	0.047 Mfd. 50 V. Mylar	CR101	309387	Silicon Rectifier U-212	R115	82796	51000 Ohm 1/2 W. 5%	R163	82649	75 Ohm 1/2 W. 5%
C109	86336	0.033 Mfd. 50 V. Mylar	CR102	309398	Dual Selenium Diode	R116	82428	2200 Ohm 1/2 W. 10%	R164		
C111	86351	0.068 Mfd. 50 V. Mylar	CR103	309397	Dual Selenium Diode	R117	82410	68 Ohm 1/2 W. 10%	R165	81231	0.75 Ohm 5 W. 10%
C112	86354	0.68 Mfd. 50 V. Mylar	CR104	309397	Dual Selenium Diode	R118	82422	680 Ohm 1/2 W. 10%	R166	82433	5600 Ohm 1/2 W. 10%
C113	86331	0.22 Mfd. 50 V. Mylar	CR105	309399	Dual Selenium Diode	R119	82424	1000 Ohm 1/2 W. 10%	R167	81242	1500 Ohm 3 W. 10%
C114	86303	0.15 Mfd. 50 V. Mylar	CR106	309384	Semi Conductor Rectifier (Silicon)	R120A	306318	Volume Control 25,000 Ohm.	R168	81243	168 Ohm 10 W. 10%
C115	86354	0.68 Mfd. 50 V. Mylar	CR107	306316	8/10 Amp. Six-Blo	R120B			R169	81201	250 Ohm 5 W. 10%
C116	86329	0.47 Mfd. 50 V. Mylar	F 101	306316	8/10 Amp. Six-Blo	R121	82639	22000 Ohm 1/2 W. 5%	R170	82436	10,000 Ohm 1/2 W. 10%
C117	87700	100 Mfd. 35 V. Lytic	J 101A	306306	Input Socket	R122	82899	120,000 Ohm 1/2 W. 5%	R171	82452	220,000 Ohm 1/2 W. 10%
C118	87702	200 Mfd. 6 V. Lytic	J 101B	306306	Input Socket	R123	82670	2700 Ohm 1/2 W. 5%	R172	82442	33,000 Ohm 1/2 W. 10%
C119	86309	0.001 Mfd. Ceramic	J 102	306302	Mute Jack	R124	82630	6800 Ohm 1/2 W. 5%	R173	82436	10,000 Ohm 1/2 W. 10%
C120	87718	1200 Mfd. 35 V. Lytic	J 103	803725	D.S. Output Jack	R125	82630	6800 Ohm 1/2 W. 5%	R174	82442	33,000 Ohm 1/2 W. 10%
C121	86327	0.047 Mfd. 50 V. Mylar	K101	306352	Mute Trip Relay	R126	82421	560 Ohm 1/2 W. 10%	R175	82436	10,000 Ohm 1/2 W. 10%
C123	86330	0.0047 Mfd. 50 V. Mylar	Q101	309413	GC-112A PNP Low Noise Germ. Transistor	R127	82686	240 Ohm 1/2 W. 5%	R176	82442	33,000 Ohm 1/2 W. 10%
C124	87696	50 Mfd. 6 V. Lytic	Q102	309414	GC-112 PNP Germ. Transistor	R128	82402	15 Ohm 1/2 W. 10%	R177	82436	10,000 Ohm 1/2 W. 10%
C125		130 Mfd. 25 V. Lytic	Q103	309421	GC-380 PNP High Gain Germ. Transistor	R129	82668	390 Ohm 1/2 W. 5%	R178	82601	20,000 Ohm 1/2 W. 5%
C126	86329	0.47 Mfd. 50 V. Mylar	Q104	309419	RCA 34573 PNP Germ. Transistor	R130	82649	75 Ohm 1/2 W. 5%	R179	82436	10,000 Ohm 1/2 W. 10%
C127			Q105	309418	SC-365 PNP Silicon Transistor	R131			R180	82436	10,000 Ohm 1/2 W. 10%
C128	87703	50 Mfd. 12 V. Lytic	Q106	309418	SC-350 NPN Silicon Transistor	R132	81231	0.75 Ohm 5 W. 10%	R181	82414	150 Ohm 1/2 W. 10%
C129	86327	0.047 Mfd. 50 V. Mylar	Q107	309412	GC-114 PNP Germ. Power Transistor	R133	82433	5600 Ohm 1/2 W. 10%	R182	82436	10,000 Ohm 1/2 W. 10%
C130	86354	0.68 Mfd. 50 V. Mylar	Q108	309413	GC-112A PNP Low Noise Germ. Transistor	R134	308967	15000 Ohm 1/2 W. 10%	R183	82430	3300 Ohm 1/2 W. 10%
C131	86336	0.033 Mfd. 50 V. Mylar	Q109	309414	GC-112 PNP Germ. Transistor	R135	82411	82 Ohm 1/2 W. 10%	R184	306319	50,000 Ohm Balance Control
C132	86351	0.068 Mfd. 50 V. Mylar	Q110	309414	GC-112 PNP Germ. Transistor	R136	82439	18000 Ohm 1/2 W. 10%	R185	82430	3300 Ohm 1/2 W. 10%
C133	86303	0.15 Mfd. 50 V. Mylar	Q111	309420	GC-380 PNP High Gain Germ. Transistor	R137	82626	3900 Ohm 1/2 W. 5%	R186	82430	3300 Ohm 1/2 W. 10%
C134	86354	0.68 Mfd. 50 V. Mylar	Q112	309421	RCA 34573 PNP Germ. Transistor	R138	308968	8200 Ohm 1/2 W. 10%	R187	82631	7500 Ohm 1/2 W. 5%
C135	86329	0.47 Mfd. 50 V. Mylar	Q113	309415	SC-365 PNP Silicon Transistor	R139	82432	4700 Ohm 1/2 W. 10%	R188	82444	47000 Ohm 1/2 W. 10%
C136	87700	100 Mfd. 35 V. Lytic	Q114	309418	SC-350 NPN Silicon Transistor	R140	82432	4700 Ohm 1/2 W. 10%	R189	81237	82 Ohm 2 W. 10%
C137	87702	200 Mfd. 6 V. Lytic	Q115	309412	GC-114 PNP Germ. Power Transistor	R141	82447	82000 Ohm 1/2 W. 10%	R190		
C138	87700	100 Mfd. 35 V. Lytic	Q116	309414	GC-112 PNP Germ. Transistor	R142	82678	43000 Ohm 1/2 W. 5%	R191	306329	Treble Switch
C139	86309	0.001 Mfd. Ceramic	Q117	309414	GC-112 PNP Germ. Transistor	R143	82605	24000 Ohm 1/2 W. 5%	S101	306329	Bass Switch
C140	87718	1200 Mfd. 35 V. Lytic	Q118	308967	15000 Ohm. 1/2 W. 10%	R144	308962	12,000 Ohm 1/2 W. 5%	S102	306329	Auto. Record Quality Compensator
C142	87700	100 Mfd. 35 V. Lytic	R101	82411	82 Ohm 1/2 W. 10%	R145	82610	6200 Ohm 1/2 W. 5%	S103	306329	Auto. Record Quality Compensator
C143	87721	2700 Mfd. 50 V. Lytic	R102	82439	18000 Ohm 1/2 W. 10%	R146	82413	120 Ohm 1/2 W. 10%	T101	306312	Power Transformer for 50 cycles
C144	87696	50 Mfd. 6 V. Lytic	R103	82626	3900 Ohm 1/2 W. 5%	R147	82796	51000 Ohm 1/2 W. 5%	T102	306311	Power Transformer for 60 cycles
C145	87724	100 Mfd. 12 V. Lytic	R104	82626	3900 Ohm 1/2 W. 5%	R148	82428	2200 Ohm 1/2 W. 10%	T103	306314	Output Transformer
C146	87696	50 Mfd. 6 V. Lytic	R105	308968	8200 Ohm 1/2 W. 10%	R149	82410	68 Ohm 1/2 W. 10%	TB101	306313	Output Transformer
C147	86327	0.047 Mfd. 50 V. Mylar	R106	82432	4700 Ohm 1/2 W. 10%	R150	82410	68 Ohm 1/2 W. 10%	TB102	306343	2 Lug Terminal Board
C148			R107	82432	4700 Ohm 1/2 W. 10%	R151	82422	680 Ohm 1/2 W. 10%	TB103	305831	3 Lug Terminal Board
C149	87696	50 Mfd. 6 V. Lytic	R108	82626	3900 Ohm 1/2 W. 10%	R152	82424	1000 Ohm 1/2 W. 10%	TB104	306304	6 Lug Terminal Board
C150						R153	82639	22000 Ohm 1/2 W. 5%	TB105	306338	4 Lug Terminal Board
C151						R154	82899	120,000 Ohm 1/2 W. 5%			