

SUPERSCOPE®

STEREO AMPLIFIER
Model R-330 (e)

SERVICE DATA

— Sep. 1973 —

SUPERSCOPE INC.

8150 VINELAND AVENUE
SUN VALLEY, CALIFORNIA · 91352 U.S.A.

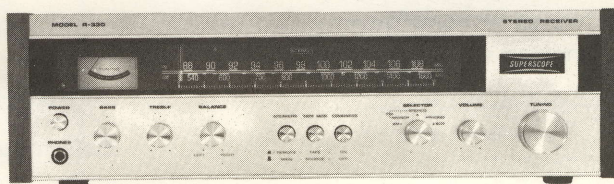


TABLE OF CONTENTS

Technical Specifications	1
Alignment Procedure	2 ~ 3
Circuit Board Diagram	4 ~ 5
Schematic Diagram	6
Exploded Diagram of The Mechanism	7
Parts List	8 ~ 13
Voltage Conversion	14

TECHNICAL SPECIFICATIONS

AUDIO CIRCUITS:

Instantaneous Peak Music Power . . .	36 Watts at 8 Ω
E.I.A. Total Music Power	26 Watts at 8 Ω
Total Music Power (IHF)	24 Watts at 8 Ω
Continuous Power (RMS)	7 + 7 Watts at 8Ω
High-level hum and noise (ref. 7 Watts at 8 Ω)	-70 dB
Phono hum and noise	1.5 μ V equivalent input
Dynamic range (phono input to tape recording output)	96 dB
I.M. Distortion (SMPTE), at rated power	1%
Distortion decreases as output is lowered	
Total Harmonic Distortion, at rated power	1% Maximum
Distortion decreases as output is lowered	
Power Bandwidth (IHF) for 1% THD	30 Hz to 40,000 Hz
Damping Factor (ref. 8 Ω)	Greater than 45
Frequency Response Through phono	1.0 dB
Input Sensitivity (for 7 Watts at 8 Ω) High-level	150 mV
Phono (1,000 Hz)	2.5 mV
Input Impedance High level	50 k Ω
Phono	47 k Ω
Channel Separation 20 Hz to 20,000 Hz	35 dB Minimum

FM SECTIONS:

IHF Usable Sensitivity	5.0 μ V
Selectivity	30 dB
Noise Quieting	-60 dB at 1,000 μ V
Total Harmonic Distortion, 400 Hz, 100% Mod	Mono: 0.5% Stereo: 1.0%
Frequency Response (ref. 75 μ sec. for U.S.A. 50 μ sec for EUR. de-emphasis)	\pm 1 dB 50 Hz to 15 kHz
Stereo Separation	1,000 Hz 35 dB
Sub Carrier (38 kHz) Suppression	55 dB

AM SECTIONS:

Selectivity	25 dB
Image rejection ratio (1400 kHz)	40 dB
Band width (-6 dB)	6 kHz

GENERAL:

Power Requirements	110, 120, 220, 240V AC 50/60 Hz
Power Consumption	55 Watts
Dimensions Width	16-15/16"
Height	4-13/16"
Depth	11-5/16"
Weight	15.4 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".
2. Connect 8 ohms dummy load resistor (30-50W, non-inductive preferably) to each R and L channel "MAIN" output terminals of the unit.

FM ALIGNMENT PROCEDURE

(Selector switch in the position "FM")

Step	Signal Source Connection	Signal Frequency	Indicator Connection	Dial Setting of the Unit	Adjustment
FM IF ALIGNMENT					
1	Sweep Generator to point ①	10.7 MHz Marker at 10.6, 10.7 and 10.8 MHz	Oscilloscope to point ② through a diode	Quiet point on band	L105, L106 for maximum and symmetry response
2			Oscilloscope to point ③ (J111)		L107 for straight and symmetrical S-sharp response
3	Repeat step 1 and 2				
FM RF ALIGNMENT					
1	RF generator to FM Antenna terminals through matching network (300 ohms balanced)	87 MHz	VTVM to R or L channel output terminals (J003)	87 MHz tuning closed	L104 for maximum
2		109 MHz		109 MHz tuning gang open	C114 for maximum
3		90 MHz		90 MHz	L101, L102 for maximum
4		106 MHz		106 MHz	CF-1, CF-2 for maximum
5	Repeat step 1 ~ 4				
6	Check overall response curve and repeat above steps as necessary to obtain maximum sensitivity.				
7	No connection	No signal	D.C. VTVM 1 Volt range to ④ (J111)	—	L107 secondary core (upper) for No Voltage reading
8	RF generator to FM antenna terminals through matching network (300 ohms balanced) output 1mV (IHF)	98 MHz	Distortion meter to ⑤ (J111)	98 MHz	L107 primary core (bottom) for minimum distortion

MULTIPLEX ALIGNMENT PROCEDURE

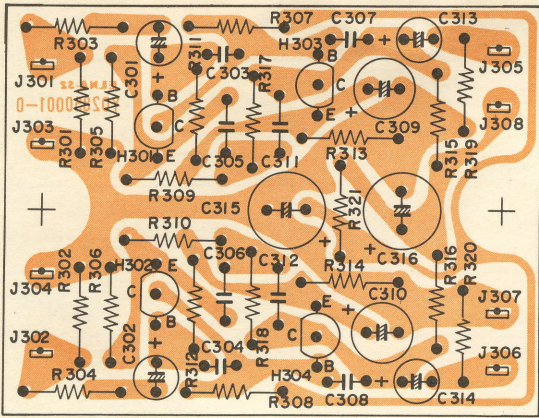
(Selector switch in the position "FM STEREO")

Step	Signal Source Connection	Signal Frequency	Indicator Connection	Dial Setting of the Unit	Adjustment
1	RF generator to FM antenna terminals through matching network (300 ohms balanced) FM stereo simulator RF signal output 1mV (I.H.F.M.)	Pilot (19 KHz)	VTVM to point (E)	98 MHz	L113 for maximum
2					L114 for maximum
3		Stereo left (1,000 Hz)	VTVM to the right channel output terminal (J007)		R156, L114 for minimum
4		Stereo right (1,000 Hz)	VTVM to the left channel output terminal (J007)		
5	Repeat step 3 and 4				

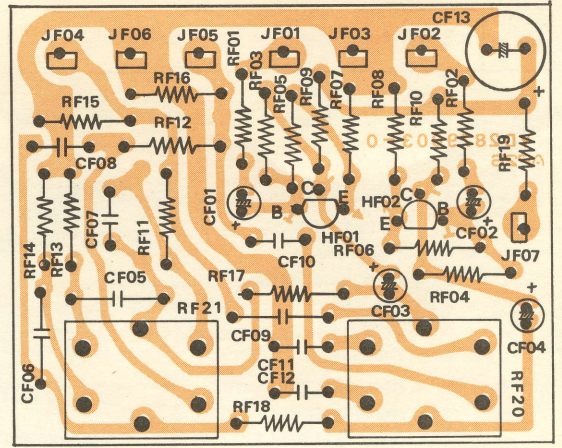
AM ALIGNMENT PROCEDURE

(Selector Switch in the position "AM")

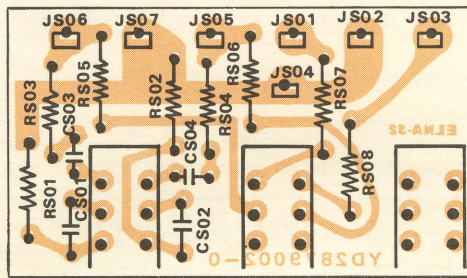
Step	Signal Source Connection	Signal Frequency	Indicator Connection	Dial Setting of the Unit	Adjustment
AM IF ALIGNMENT					
1	Sweep generator to point J107	Marker 455 KHz	Oscilloscope to point (B)	Quiet point on band	L109, L110, L111 maximum and Symmetrical response
2	Repeat 1				
AM RF ALIGNMENT					
1	RF generator to a test loop or a short wire placed near the ferrite-rod AM antenna	525 KHz	VTVM to R or L channel output terminals	525 KHz tuning closed	L108 for maximum
2		1,650 KHz		1,650 KHz tuning gang open	CA-2 for maximum
3		600 KHz		600 KHz	L001 for maximum
4		1,400 KHz		1,400 KHz	CA-1 for maximum
5	Repeat step 1 ~ 4 as necessary to obtain maximum sensitivity				



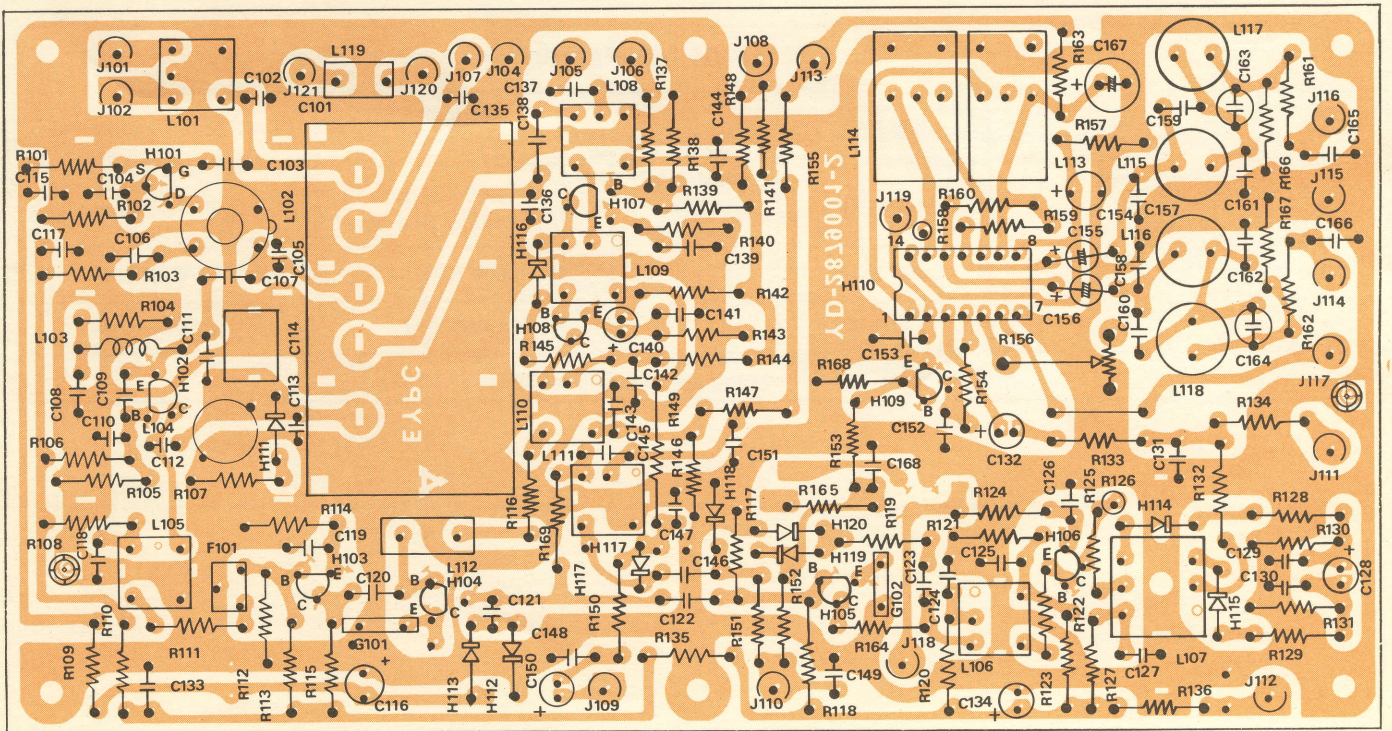
EQ Amp. Block P300



Tone Amp. Block PF00



Switch Block PS00
(Louddness, Speaker and Tape)



FM/AM Tuner Block P100

PARTS LIST

REF. DESIG.	PART NO.	DESCRIPTION	REF. DESIG.	PART NO.	DESCRIPTION
A	287906340	Front Panel Assembly	R106	RT0527314	27K Ω
0101	287906301	Escutcheon	R107	RT0510214	1.0K Ω
0104	287115801	Window	R108	RT0510114	100 Ω
0105	287325150	Badge K	R109	RT0518314	18K Ω
0116	281825905	Bush x 4	R110	RT0510114	100 Ω
0117	273125901	Bush	R111	RT0515114	150 Ω
B	287416040	Bracket Assembly	R112	RT0547214	4.7K Ω
0129	287430201	Dial	R113	RT0530314	30K Ω
0210	287116001	Bracket	R114	RT0547114	470 Ω
0211	287127401	Reflector	R115	RT0515214	1.5K Ω
0215	287112201	Sticker	R116	RT0515114	150 Ω
0216	287105302	Cover	R117	RT0556214	5.6K Ω
0525	51042606A	F.H.M. Screw x 2	R118	RT0524314	24K Ω
C	287406440	Case Assembly	R119	RT0522114	220 Ω
0121	287406450	Case K	R120	RT0510114	100 Ω
0430	287286102	Label	R121	RT0568214	6.8K Ω
D	287310340	Pointer Assembly	R122	RT0518314	18K Ω
0308	281810301	Pointer	R123	RT0547014	47 Ω
0309	287310301	Pointer	R124	RT0510214	1.0K Ω
0310	281805301	Cover	R125	RT0556114	560 Ω
M003	IN1008030	Lamp	R126	RC1056212	5.6K Ω \pm 10%, $\frac{1}{2}$ W
E	120200640	String Assembly	R127	RT0522114	220 Ω
0420	120225801	Hook	R128	RT0582114	820 Ω
0421	72080802A	String	R129	RT0582114	820 Ω
F	281915940	Drum Assembly	R130	RT0568214	6.8K Ω
0418	281915901	Drum	R131	RT0568214	6.8K Ω
0419	71101569M	Spring	R132	RT0510114	100 Ω
0817	51650304D	Set Screw H.P. x 2	R133	RT0510214	1.0K Ω
G	287916041	Rear Panel Assembly, For U.S.A.	R134	RT0522314	22K Ω
0318	287916001	Bracket	R135	RT0510114	100 Ω
0618	55060365S	T.R. Rivet x 2	R136	RT0510114	100 Ω
J011	YJ0400018	Jack	R137	RT0547014	47 Ω
G1	287916043	Rear Panel Assembly,	R138	RT0556214	5.6K Ω
0319	287916002	Bracket	R139	RT0527314	27K Ω
0618	55060365S	T.R. Rivet x 2	R140	RT0522214	2.2K Ω
J011	YJ0400018	Jack	R141	RT0515214	1.5K Ω
H	287125740	Lid Assembly	R142	RT0510414	100K Ω
0124	287125701	Lid	R143	RT0510214	1K Ω
0429	257886101	Label	R144	RT0510214	1K Ω
P100	YD2879001 ZZ2879801	P.W. Board, Tuner P.W. Board Assembly RESISTORS All resistors are \pm 5% and $\frac{1}{4}$ W, unless otherwise indicated.	R145	RT0582114	820 Ω
R101	RT0510514	1M Ω	R146	RT0556214	5.6K Ω
R102	RT0510114	100 Ω	R147	RT0524314	24K Ω
R103	RT0510114	100 Ω	R148	RT0522114	220 Ω
R104	RT0515214	1.5K Ω	R149	RT0513314	13K Ω
R105	RT0556214	5.6K Ω	R150	RT0547214	4.7K Ω
R111	RT0515114	150 Ω	R151	RT0527214	2.7K Ω
R112	RT0547214	4.7K Ω	R152	RT0539314	3.9K Ω
R113	RT0530314	30K Ω	R153	RT0547314	47K Ω
R114	RT0547114	470 Ω	R154	RT0568114	680 Ω
R115	RT0515214	1.5K Ω	R155	RT0522114	220 Ω
R116	RT0515114	150 Ω	R156	RA0102007	Trimming, 1K Ω
R117	RT0556214	5.6K Ω	R157	RT0547214	4.7K Ω
R118	RT0524314	24K Ω	R158	RC1033412	330K Ω \pm 10%, $\frac{1}{2}$ W
R119	RT0522114	220 Ω	R159	RT0556214	5.6K Ω
R120	RT0510114	100 Ω	R160	RT0556214	5.6K Ω
R121	RT0568214	6.8K Ω	R161	RT0533214	3.3K Ω
R122	RT0518314	18K Ω	R162	RT0533214	3.3K Ω
R123	RT0547014	47 Ω	R163	RT0522114	220 Ω
R124	RT0510214	1.0K Ω	R164	RT0510114	100 Ω
R125	RT0556114	560 Ω	R165	RT0533314	33K Ω
R126	RC1056212	5.6K Ω \pm 10%, $\frac{1}{2}$ W	R166	RT0547314	47K Ω
R127	RT0522114	220 Ω	R167	RT0547314	47K Ω
R128	RT0582114	820 Ω	R168	RT0539314	39K Ω
R129	RT0582114	820 Ω			
R130	RT0568214	6.8K Ω			
R131	RT0568214	6.8K Ω			
R132	RT0510114	100 Ω			
R133	RT0510214	1.0K Ω			
R134	RT0522314	22K Ω			
R135	RT0510114	100 Ω			
R136	RT0510114	100 Ω			
R137	RT0547014	47 Ω			
R138	RT0556214	5.6K Ω			
R139	RT0527314	27K Ω			
R140	RT0522214	2.2K Ω			
R141	RT0515214	1.5K Ω			
R142	RT0510414	100K Ω			
R143	RT0510214	1K Ω			
R144	RT0510214	1K Ω			
R145	RT0582114	820 Ω			
R146	RT0556214	5.6K Ω			
R147	RT0524314	24K Ω			
R148	RT0522114	220 Ω			
R149	RT0513314	13K Ω			
R150	RT0547214	4.7K Ω			
R151	RT0527214	2.7K Ω			
R152	RT0539314	3.9K Ω			
R153	RT0547314	47K Ω			
R154	RT0568114	680 Ω			
R155	RT0522114	220 Ω			
R156	RA0102007	Trimming, 1K Ω			
R157	RT0547214	4.7K Ω			
R158	RC1033412	330K Ω \pm 10%, $\frac{1}{2}$ W			
R159	RT0556214	5.6K Ω			
R160	RT0556214	5.6K Ω			
R161	RT0533214	3.3K Ω			
R162	RT0533214	3.3K Ω			
R163	RT0522114	220 Ω			
R164	RT0510114	100 Ω			
R165	RT0533314	33K Ω			
R166	RT0547314	47K Ω			
R167	RT0547314	47K Ω			
R168	RT0539314	39K Ω			

REF. DESIG.	PART NO.	DESCRIPTION
R169	RT0556114	560Ω
		CAPACITORS
C101	CA3240007	Variable, FM-3, AM-2 Gang
C102	DD1615001	Ceramic, 15PF ± 10%
C103	DK1710201	Ceramic, 0.001μF ± 20%
C104	DK1820302	Ceramic, 0.02μF +100%, -0%
C105	DD1210001	Ceramic, 10PF ± 1PF
C106	DK1820302	Ceramic, 0.02μF +100%, -0%
C107	DD1105001	Ceramic, 5PF ± 1PF
C108	DD1530101	Ceramic, 300PF ± 5%
C109	DD1540001	Ceramic, 40PF ± 5%
C110	DK1710201	Ceramic, 0.001μF ± 20%
C111	DD1105001	Ceramic, 5PF ± 0.5PF
C112	DD1550001	Ceramic, 50PF ± 5%
C113	DD1615001	Ceramic, 15PF ± 10%
C114	CT1100005	Trimming
C115	DK1820302	Ceramic, 0.02μF +100%, -0%
C116	EM2240251	Electroly, 0.22μF, 25V
C117	DK1820302	Ceramic, 0.02μF +100%, -0%
C118	DK1820302	Ceramic, 0.02μF +100%, -0%
C119	DK1820302	Ceramic, 0.02μF +100%, -0%
C120	DK1710301	Ceramic, 0.01μF ± 20%
C121	DD1620001	Ceramic, 20PF ± 10%
C122	DD1620101	Ceramic, 200PF ± 10%
C123	DD1550001	Ceramic, 50PF ± 5%
C124	DK1820302	Ceramic, 0.02μF +100%, -0%
C125	DK1820302	Ceramic, 0.02μF +100%, -0%
C126	DK1820302	Ceramic, 0.02μF +100%, -0%
C127	DK1840302	Ceramic, 0.04μF +80%, -20%
C128	EA4750359	Electroly, 4.7μF, 35V
C129	DD1620101	Ceramic, 200PF ± 10%
C130	DD1620101	Ceramic, 200PF ± 10%
C131	DD1650101	Ceramic, 500PF ± 10%
C132	EA3350509	Electroly, 3.3μF, 50V
C133	DK1840302	Ceramic, 0.04μF +80%, -20%
C134	EA1060169	Electroly, 10μF, 16V
C135	DD1615001	Ceramic, 15PF ± 10%
C136	DD1625001	Ceramic, 25PF ± 10%
C137	DF1747201	Film, 0.0047μF ± 20%
C138	DF6536150	Film, 360PF ± 5%
C139	DF1622305	Film, 0.022μF ± 10%
C140	EA2260109	Electroly, 22μF, 10V
C141	DK1840302	Ceramic, 0.04μF +80%, -20%
C142	DK1820302	Ceramic, 0.02μF +100%, -0%
C143	DK1820302	Ceramic, 0.02μF +100%, -0%
C144	DK1840302	Ceramic, 0.04μF +80%, -20%
C145	DD1530101	Ceramic, 300PF ± 5%
C146	DD1650101	Ceramic, 500PF ± 10%
C147	DF1622301	Film, 0.022μF ± 10%
C148	DF1610305	Film, 0.01μF ± 10%
C149	DK1840302	Ceramic, 0.04μF +80%, -20%
C150	EA4740501	Electroly, 0.47μF, 50V
C151	DK1840302	Ceramic, 0.04μF +80%, -20%
C152	DK1840302	Ceramic, 0.04μF +80%, -20%
C153	DF1510305	Film, 0.01μF ± 5%
C154	EA2260109	Electroly, 22μF, 10V
C155	EA4750359	Electroly, 4.7μF, 35V
C156	EA4750359	Electroly, 4.7μF, 35V
C157	DF1627205	Film, 0.0027μF ± 10%
C158	DF1627205	Film, 0.0027μF ± 10%
C159	DF1533205	Film, 0.0033μF ± 5%
C160	DF1533205	Film, 0.0033μF ± 5%

REF. DESIG.	PART NO.	DESCRIPTION
C161	DF1647205	Film, 0.0047μF ± 10%
C162	DF1647205	Film, 0.0047μF ± 10%
C163	DF5582101	Film, 820PF ± 5%
C164	DF5582101	Film, 820PF ± 5%
C165	DF1539205	Film, 0.0039μF ± 5%
C166	DF1539205	Film, 0.0039μF ± 5%
C167	EA1070109	Electroly, 100μF, 10V
C168	DK1840302	Ceramic, 0.04μF +80%, -20%
		SEMICONDUCTORS
H101	HF200411B	F.E.T., 2SK41 (E)
H102	HT309301C	Transistor, 2SC930 (C)
H103	HT309301C	Transistor, 2SC930 (C)
H104	HT309301C	Transistor, 2SC930 (C)
H105	HT309301C	Transistor, 2SC930 (C)
H106	HT309301D	Transistor, 2SC930 (D)
H107	HT309291C	Transistor, 2SC929 (C)
H108	HT309301C	Transistor, 2SC930 (C)
H109	HT305361E	Transistor, 2SC536 (E)
H110	HC1000403	IC, LA3300
H111	HD1000303	Diode, 1S188FM2
H112	HD1000303	Diode, 1S188FM2
H113	HD1000303	Diode, 1S188FM2
H114	HD1000303	Diode, 1S188FM2
H115	HD1000303	Diode, 1S188FM2
H116	HD1000303	Diode, 1S188FM2
H117	HD1000303	Diode, 1S188FM2
H118	HD1000303	Diode, 1S188FM2
H119	HD1000303	Diode, 1S188FM2
H120	HD1000303	Diode, 1S188FM2
G101	BF2230007	Printed Compo., 0.02μF + 680Ω
G102	BF2230007	Printed Compo., 0.02μF + 680Ω
F101	FF1107004	Ceramic Filter
L101	LA1004606	ANT Coil, FM
L102	LA1202610	RF Coil, FM
L103	LC1751001	Choke Coil, 0.75μH
L104	LO1203601	OSC Coil, FM
L105	LI1015605	IFT, FM
L106	LI1001616	IFT, FM
L107	LI1401623	IFT, FM
L108	LO1001042	OSC Coil, AM
L109	LI1001061	IFT, AM
L110	LI1001012	IFT, AM
L111	LI1001048	IFT, AM
L112	LC1223004	Choke Coil, 22μH
L113	LS1031001	MPX Coil, 19KHz
L114	LS1031004	MPX Coil, 38KHz
L115	LC2226004	Choke Coil, 22mH
L116	LC2226004	Choke Coil, 22mH
L117	LC2226004	Choke Coil, 22mH
L118	LC2226004	Choke Coil, 22mH
J101	YP1000099	Plug
J102	YP1000099	Plug
J104		
J119	YP1000099	Plug
0414	282110901	Shield x 2
0415	286710901	Shield

REF. DESIG.	PART NO.	DESCRIPTION	REF. DESIG.	PART NO.	DESCRIPTION
P300	YD2850001 ZZ2879101	P.W. Board, Phono P.W. Board Assembly RESISTORS All resistors are $\pm 5\%$ and $\frac{1}{4}W$.	R606	RT0568314	68K Ω
R301	RT0556314	56K Ω	R607	RT0522214	2.2K Ω
R302	RT0556314	56K Ω	R608	RT0522214	2.2K Ω
R303	RT0539114	390 Ω	R609	RT0533214	3.3K Ω
R304	RT0539114	390 Ω	R610	RT0533214	3.3K Ω
R305	RT0556114	560 Ω	R611	RT0539014	39 Ω
R306	RT0556114	560 Ω	R612	RT0539014	39 Ω
R307	RT0568314	68K Ω	R613	RT0539214	3.9K Ω
R308	RT0568314	68K Ω	R614	RT0539214	3.9K Ω
R309	RT0522314	22K Ω	R615	RT0527214	2.7K Ω
R310	RT0522314	22K Ω	R616	RT0527214	2.7K Ω
R311	RT0539414	390K Ω	R617	RT0527214	2.7K Ω
R312	RT0539414	390K Ω	R618	RT0527214	2.7K Ω
R313	RT0551114	510 Ω	R619	RT0582214	8.2K Ω
R314	RT0551114	510 Ω	R620	RT0582214	8.2K Ω
R315	RT0582214	8.2K Ω	R621	RT0533214	3.3K Ω
R316	RT0582214	8.2K Ω	R622	RT0533214	3.3K Ω
R317	RT0533414	330K Ω	R623	GF0515112	150 Ω \pm 5%, $\frac{1}{2}W$
R318	RT0533414	330K Ω	R624	GF0515112	150 Ω \pm 5%, $\frac{1}{2}W$
R319	RT0522414	220K Ω	R625	GF0515112	150 Ω \pm 5%, $\frac{1}{2}W$
R320	RT0522414	220K Ω	R626	GF0515112	150 Ω \pm 5%, $\frac{1}{2}W$
R321	RT0518314	18K Ω	R627	GF0510014	10 Ω
C301	EA4750359	Electroly, 4.7 μF , 35V	R628	GF0510014	10 Ω
C302	EA4750359	Electroly, 4.7 μF , 35V	R631	RW1000503	0.5 Ω \pm 10%, 3W
C303	DD1650001	Ceramic, 50PF \pm 10%	R632	RW1000503	0.5 Ω \pm 10%, 3W
C304	DD1650001	Ceramic, 50PF \pm 10%	R633	RW1000503	0.5 Ω \pm 10%, 3W
C305	DF1633205	Film, 0.0033 μF \pm 10%	R634	RW1000503	0.5 Ω \pm 10%, 3W
C306	DF1633205	Film, 0.0033 μF \pm 10%	R635	RC1010012	10 Ω \pm 10%, $\frac{1}{2}W$
C307	DD1650001	Ceramic, 50PF \pm 10%	R636	RC1010012	10 Ω \pm 10%, $\frac{1}{2}W$
C308	DD1650001	Ceramic, 50PF \pm 10%	R637	RT0524314	24K Ω
C309	EA1070109	Electroly, 100 μF , 10V	C601	EE1060162	Electroly, 10 μF , 16V
C310	EA1070109	Electroly, 100 μF , 10V	C602	EE1060162	Electroly, 10 μF , 16V
C311	DF1610305	Film, 0.01 μF \pm 10%	C603	DD1530101	Ceramic, 300PF \pm 5%
C312	DF1610305	Film, 0.01 μF \pm 10%	C604	DD1530101	Ceramic, 300PF \pm 5%
C313	EA1050509	Electroly, 1 μF , 50V	C605	EA2270259	Electroly, 220 μF , 25V
C314	EA1050509	Electroly, 1 μF , 50V	C606	EA2270259	Electroly, 220 μF , 25V
C315	EA1070359	Electroly, 100 μF , 35V	C607	EA1070259	Electroly, 100 μF , 25V
H301	HT313271T	2SC1327 (T)	C608	EA1070259	Electroly, 100 μF , 25V
H302	HT313271T	2SC1327 (T)	C609	DD1650001	Ceramic, 50PF \pm 10%
H303	HT313271S	2SC1327 (S)	C610	DD1650001	Ceramic, 50PF \pm 10%
H304	HT313271S	2SC1327 (S)	C611	DF1747305	Film, 0.047 μF \pm 20%
J301	YP1000094	Plug	C612	DF1747305	Film, 0.047 μF \pm 20%
J308			C613	EA1080259	Electroly, 1000 μF , 25V
P600	YD2874003 ZZ2879803	P.W. Board, Main Amp. SE P.W. Board Assembly RESISTORS All resistors are $\pm 5\%$ and $\frac{1}{4}W$, unless otherwise indicated.	C614	EA1080259	Electroly, 1000 μF , 25V
R601	RT0510214	1K Ω	C615	DK1710301	Ceramic, 0.01 μF \pm 20%
R602	RT0510214	1K Ω	C616	DK1710301	Ceramic, 0.01 μF \pm 20%
R603	RT0510414	100K Ω	C617	EA1070359	Electroly, 100 μF , 35V
R604	RT0510414	100K Ω	H601	HT104941C	2SA494 (Y)
R605	RT0568314	68K Ω	H602	HT104941C	2SA494 (Y)
			H603	HT307341C	2SC734 (Y)
			H604	HT307341C	2SC734 (Y)
			H605	HT307341B	2SC734 (O)
			H606	HT307341B	2SC734 (O)
			H607	HT105611C	2SA561 (Y)
			H608	HT105611C	2SA561 (Y)
			H609	HT307901R	2SA790 (R)
			H610	HT307901R	2SC790 (R)
			H611	HT104901R	2SA490 (R)
			H612	HT104901R	2SA490 (R)
			H613	HT308281B	2SC828 (B)

REF. DESIG.	PART NO.	DESCRIPTION
H614	HT308281B	2SC828 (B)
		MISCELLANEOUS
M601	IN1008033	Lamp, 8V
M602	IN1008033	Lamp, 8V
J601 ? J610	YP1000099	Plug
0401	287426701	Heat-Sink
0402	287416002	Bracket x 2
0403	287400501	Clamper
0404	287411801	Spacer x 2
0406	287116008	Bracket
0727	51570306B	P Tapt Screw x 2
0728	51100306A	B.H.M. Screw x 2
0729	51100306A	B.H.M. Screw x 2
0730	51100312A	B.H.M. Screw x 2
0719	51570306B	P Tapt Screw x2
0424	285416003	Bracket
P800	YD2879004	P.W. Board, Power Supply
	ZZ2879004	P.W. Board Assembly
		RESISTORS
R801	GJ1025102	250Ω ± 10%, 2W
R802	GJ1025102	250Ω ± 10%, 2W
R803	RC1022012	22Ω ± 10%, ½W
		CAPACITORS
C801	DK1810351	Ceramic, 0.01μF +100%, -0%
C802	DK1810351	Ceramic, 0.01μF +100%, -0%
C803	EA4770359	Electroly, 470μF, 35V
C804	EA4770259	Electroly, 470μF, 25V
C805	EA3370169	Electroly, 330μF, 16V
C806	EA4770109	Electroly, 470μF, 10V
		DIODE
H801	HD2002107	SI5-01
H802	HD2002107	SI5-01
H803	HD2002107	SI5-01
H804	HD2002107	SI5-01
H805	HD2000501	W06B
H806	HD2000501	W06B
H807	HD3002409	WZ-120
		MISCELLANEOUS
J801 ? J810	YP1000099	Plug
0222	287126250	Pulley K
0301	287327350	Fly Wheel K
0306	116812002	Insulator
0314	287316004	Bracket
0315	287316005	Bracket
0509	51100305A	B.H.M. Screw x 2
0510	51100305A	B.H.M. Screw x 2
0512	51100305A	B.H.M. Screw
0513	51100305A	B.H.M. Screw x 2
0514	51100305A	B.H.M. Screw x 4
0518	51040306A	F.H.M. Screw

REF. DESIG.	PART NO.	DESCRIPTION
J006	YJ0100069	Jack, Head Phone
R003	RC1027112	Resistor, 270Ω ± 10%, ½W
R004	RC1027112	Resistor, 270Ω ± 10%, ½W
0302	285027101	Holder
M002	IN1008034	Lamp, Stereo
R006	RM0254023	Variable Resistor, 250KΩ
R007	RK0504008	Variable Resistor, 500KΩ (B)
R016	RT0510314	Resistor, 10KΩ ± 5%, ¼W
R017	RT0510314	Resistor, 10KΩ ± 5%, ¼W
PZ00	YD2871005	P.W. Board, Lamp Board
	ZZ2871005	P.W. Board Assembly
MZ01 ? MZ05	IN1008007	Lamp
JZ01 ? JZ10	YJ0800017	Socket
JZ11	YP1000094	Plug
JZ12	YP1000094	Plug
0212	287127101	Holder
0213	287425901	Bush
0526	51570306B	P Tapt Screw x 2
0527	51100306A	B.H.M. Screw x 2
0528	54050300R	T.L. Washer OR x 2
0529	138200503	Clamper
M001	IM1104207	DC Meter
C004	EA4760109	Electroly Cap., 47μF, 10V
S002	SP0201011	Push Switch, Power
C006	DF1747380	Film Cap., 0.047μF ± 20%, 1000V
0305	287416001	Bracket
0511	51100305A	B.H.M. Screw x 2
PF00	YD2879003	P.W. Board Tone Amp.
	ZZ2879003	P.W. Board Assembly
		RESISTORS
		All resistors are ±5% and ¼W, unless otherwise indicated.
RF01	RT0510214	1KΩ
RF02	RT0510214	1KΩ
RF03	RT0515514	1.5MΩ
RF04	RT0515514	1.5MΩ
RF05	RT0518414	180KΩ
RF06	RT0518414	180KΩ
RF07	RT0547114	470Ω
RF08	RT0547114	470Ω
RF09	RT0515314	15KΩ
RF10	RT0515314	15KΩ
RF11	RT0510314	10KΩ

REF. DESIG.	PART NO.	DESCRIPTION
RF12	RT0510314	10K Ω
RF13	RT0527214	2.7K Ω
RF14	RT0527214	2.7K Ω
RF15	RT0547314	47K Ω
RF16	RT0547314	47K Ω
RF17	RT0513314	13K Ω
RF18	RT0513314	13K Ω
RF20	RM0104012	Variable, 100K Ω (A)
RF21	RM0104012	Variable, 100K Ω (A)
CAPACITORS		
CF01	EA1050509	Electroly, 1 μ F, 50V
CF02	EA1050509	Electroly, 1 μ F, 50V
CF03	EA4750359	Electroly, 4.7 μ F, 35V
CF04	EA4750359	Electroly, 4.7 μ F, 35V
CF05	DF1510405	Film, 0.1 μ F \pm 5%
CF06	DF1510405	Film, 0.1 μ F \pm 5%
CF07	DF1582205	Film, 0.0082 μ F \pm 5%
CF08	DF1582205	Film, 0.0082 μ F \pm 5%
CF09	DF1510205	Film, 0.001 μ F \pm 5%
CF10	DF1510205	Film, 0.001 μ F \pm 5%
CF11	DF1512305	Film, 0.012 μ F \pm 5%
CF12	DF1512305	Film, 0.012 μ F \pm 5%
CF13	EA1070359	Electroly, 100 μ F, 35V
TRANSISTORS		
HF01	HT308281D	2SC828 (S)
HF02	HT308281D	2SC828 (S)
MISCELLANEOUS		
JF01 { JF07	YP1000094	Plug
0802	62031650W	Lug
PS00	YD2879002 ZZ2879002	P.W. Board, Push SW P.W. Board Assembly
RESISTORS		
All resistors are \pm 5% and $\frac{1}{4}$ W.		
RS01	RT0513314	13K Ω
RS02	RT0513314	13K Ω
RS03	RT0522414	220K Ω
RS04	RT0522414	220K Ω
RS05	RT0510214	1K Ω
RS06	RT0510214	1K Ω
RS07	RT0522214	2.2K Ω
RS08	RT0522214	2.2K Ω
CAPACITORS		
CS01	DF1633305	Film, 0.033 μ F \pm 10%
CS02	DF1633305	Film, 0.033 μ F \pm 10%
CS03	DD1620101	Ceramic, 200PF \pm 10%
CS04	DD1620101	Ceramic, 200PF \pm 10%
MISCELLANEOUS		
SS01	SP0203002	Push Switch
JS01 { JS07	YP1000099	Plug
0214	287105101	Guide

REF. DESIG.	PART NO.	DESCRIPTION
0227	287126251	Pulley K
0232	287126252	Pulley K
0529	51100305A	B.H.M. Screw x 2
0530	51100305A	B.H.M. Screw x 2
0218	285427401	Reflector
0219	285427101	Holder
M004	IN1008007	Lamp
J009	YJ0800013	Socket
0519	51100306A	B.H.M. Screw
0520	54050300R	T.L. Washer OR
0521	51570306B	P Tapt Screw
S001	SR0705003	Rotary Switch, Selector
R001	RT0568114	Resistor, 68 Ω \pm 5%, $\frac{1}{4}$ W
C001	DK1710301	Ceramic Cap., 0.01 μ F \pm 20%
C002	DK1710301	Ceramic Cap., 0.01 μ F \pm 20%
2936	62031650W	Lug x2
W001	YC0190003	AC Cord
J001	YT0104004	Terminal, FM/AM Ant
J002	YT0201006	Terminal, Quadra. Qnt
J003	YT0204003	Terminal, Tape in out
J004	YL0301021	Terminal, Ground
J005	YT0204003	Terminal, Phono Aux
J007	YT0104014	Terminal, Speaker Main
J008	YT0104014	Terminal, Speaker Remote
0603	51100308S	B.H.M. Screw
0604	51100306S	B.H.M. Screw
0602	53110303A	Hexagon Nut
0606	51100306S	B.H.M. Screw x6
0609	51100308S	B.H.M. Screw x6
0610	53110303A	Hexagon Nut x6
0613	54020401E	Falt Washer P, Ground
0614	54050400R	T.L. Washer OR, Ground
0615	5311403A	Hexagon Nut, Ground
J014	YL0105011	Terminal
J015	YJ1100001	Rec Play Din Jack
L003	LC2272001	Choke Coil
L004	LC2272001	Choke Coil
R008	RC1002012	Resistor, 2 Ω \pm 10%, $\frac{1}{4}$ W
R009	RC1002012	Resistor, 2 Ω \pm 10%, $\frac{1}{4}$ W
R010	RT0530414	300K Ω \pm 5%, $\frac{1}{4}$ W
R011	RT0530414	300K Ω \pm 5%, $\frac{1}{4}$ W
R012	RT0510414	100K Ω \pm 5%, $\frac{1}{4}$ W
R013	RT0510414	100K Ω \pm 5%, $\frac{1}{4}$ W
R014	RT0533314	33K Ω \pm 5%, $\frac{1}{4}$ W
R015	RT0533314	33K Ω \pm 5%, $\frac{1}{4}$ W
0326	282125901	Bush
0327	284906702	Cap
0607	51570306B	P. Tapt Screw x2
0616	62041760W	Lug
0622	55060305S	T.R. Rivet x2
0623	51060316A	P.H.M. Screw x2
0624	54050300R	T.L. Washer OR x2

REF. DESIG.	PART NO.	DESCRIPTION
0625 0410 0409	53110303A 138200503 287100501	Hexagon Nut x2 Clamper x12 Clamper
J012	YL0103018	Terminal, 3P
C003	EA4770359	Electroly Cap., 470 μ F, 35V
R002	RT0518214	Resistor, 1.8K Ω \pm 5%, $\frac{1}{4}$ W
L001	LF1140057	ANT Coil (AM)
0332 0331	150227101 287927101	Holder x2 Holder
0704 0705	51100310A 54020301A	B.H.M. Screw x2 Flat Washer P x2
PR00	YD2871003 ZZ2871803	PW Board PW Board
JR01 } JR08	YJ0800020	Socket
JR09 } JR16	YJ1000099	Plug
J017	YL0103013	Terminal, 3P
R018	RT0533214	Resistor, 3.3K Ω \pm 5%, $\frac{1}{4}$ W
J013	YL0106004	AC Line Select
W002 W003 W004 W005 W006	YW2879002 YX2879001 YB0007001 YB0007001 YB0027001	Wire Material Wire Material Wire Material Wire Material Wire Mateiral
0126 0630 0631 C005 C005	287205701 51060418A 54040402A EC3080552 EC3080552	Leg x4 P.H.M. Screw x4 Spring Washer x4 Electroly Cap., 3000 μ F, 55V Electroly Cap., 3000 μ F, 55V
L002	TS1660810	Power Transformer
0413 0407	287910901 287416003	Shield Bracket
3936	138200503	Clamper
0411 0406 0425	121000501 287410901 286412001	Clamper Shield Insulator
J018	YL0103018	Terminal
0201	287110550	Chassisk
3938 3937	53110303A 54050300R	Hexagon Nut T.L. Washer
0801 0803 0806 0807 0809 0811 0814	51570306B 54050300R 51570306B 54050300R 51570306B 51100305A 51570312B	P Tapt Screw x15 T.L. Washer OR x6 P Tapt Screw T.L. Washer OR P Tapt Screw B.H.M. Screw x2 P Tapt Screw x2

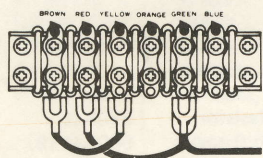
REF. DESIG.	PART NO.	DESCRIPTION
0733	51570306B	P Tapt Screw x3
0601	51100306S	B.H.M. Screw x6
0701 0702 0703 0709 0711 0712 0714 0715 0716 0720 0725	51570306B 51570306B 51570306B 51100305A 51570306B 51570306B 51100410A 54040402A 53110403A 51100305A 51570306B	P Tapt Screw x6 P Tapt Screw x6 P Tapt Screw x2 B.H.M. Screw x3 P Tapt Screw x2 P Tapt Screw x2 B.H.M. Screw x4 Spring Washer x4 Hexagon Nut x4 B.H.M. Screw x2 P Tapt Screw
0726	11570308B	P Tapt Screw x2
0109 0110 0111 0112	287615401 287615406 287615407 287615409	Knob, Tuning Knob x5 Knob, Power Knob x3
0125	287225902	Bush x4
0501 0502 0503 0504 0505 0506	51040305A 51100305A 51100305S 51120418S 54050400R 54020601A	F.H.M. Screw x2 B.J.M. Screw x3 B.H.M. Screw x6 T.H.M. Screw x4 T.L. Washer OR x4 Frat Washer P x4
0132	287926502	Indicator
0605	51100306S	B.H.M. Screw x2
4136	282112001	Insulater
FR01 FR02	FS1040003 FS1010003	Fuse Fuse
0303 0304	287112001 287311801	Insulator Spacer x2
0818	56382540G	Eyelet
0902 0903 0906 0911 0913 0914 0916 0919 0921	287985121 281885108 287985603 952301511 901453535 901183001 956000004 286480401 273182101	Instructions Instructions Schematic Diagram Serial NO Card x4 Polyethy Bag, For Set Polyethy Bag x2 Hang Tag Sleeve For AC Card Silicagel
0923 0924 0925 0926 0929	287980101 287980102 287280301 287180701 2A0200008	Packing Case Packing Case Partitioner x2 Reinforcement x2 EXT Antenna, For FM Reception

VOLTAGE CONVERSION

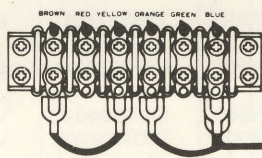
This model is equipped with a universal power transformer to permit operation at 110, 120, 220, 240 Volts AC 50/60 Hz.

To convert the unit to the required voltage, change the jumper wires as illustrated.

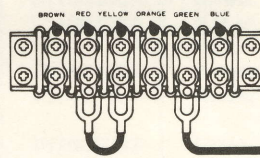
CAUTION: DISCONNECT POWER SUPPLY CORD FROM AC OUTLET BEFORE CONVERTING VOLTAGE.



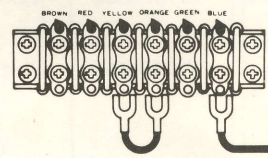
For 110V Operation



For 120V Operation



For 220V Operation



For 240V Operation

Voltage conversion Chart