



SERVICE
MANUAL

2225L



marantz

model 2225L

Stereophonic Receiver

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INTRODUCTION

This service manual was prepared for use by Authorized Warranty Stations and contains service information for Marantz Model 2225L Stereophonic Receiver.

Servicing information and voltage data included in this manual are intended for use by the knowledgeable and experienced technician only. All instructions should be read carefully. No attempt should be made to proceed without a good understanding of the operations in the receiver.

The parts list furnishes information by which replacement parts may be ordered from the Marantz Company. A simple description is included for parts which can be usually be obtained through local suppliers.

1. SERVICE NOTES

As can be seen from the circuit diagram, the chassis of Model 2225L consists of the following units. Each unit mounted on a printed circuit board is described within the square enclosed by a bold dotted line on the circuit diagram.

- | | |
|--|-------------------------|
| 1. FM Front End & AM (LW, MW) Tuner | mounted on P.W.B. P1 00 |
| 2. FM IF Amplifier, Detector, Muting Control | mounted on P.W.B. P2 00 |
| 3. MPX Stereo Decoding Amplifier | mounted on P.W.B. P3 00 |
| 4. Phono Amplifier | mounted on P.W.B. P4 00 |
| 5. Tone Amplifier | mounted on P.W.B. PE 01 |
| 6. Tape Monitor, Mono, Low and High Filter Switch Unit | mounted on P.W.B. PH 01 |
| 7. Loudness, Muting, Main and Remote Switch Unit | mounted on P.W.B. PT 01 |
| 8. Power Amplifier | mounted on P.W.B. P7 00 |
| 9. Power Supply | mounted on P.W.B. P8 00 |
| 10. Dial Lamp Unit | mounted on P.W.B. PZ 01 |

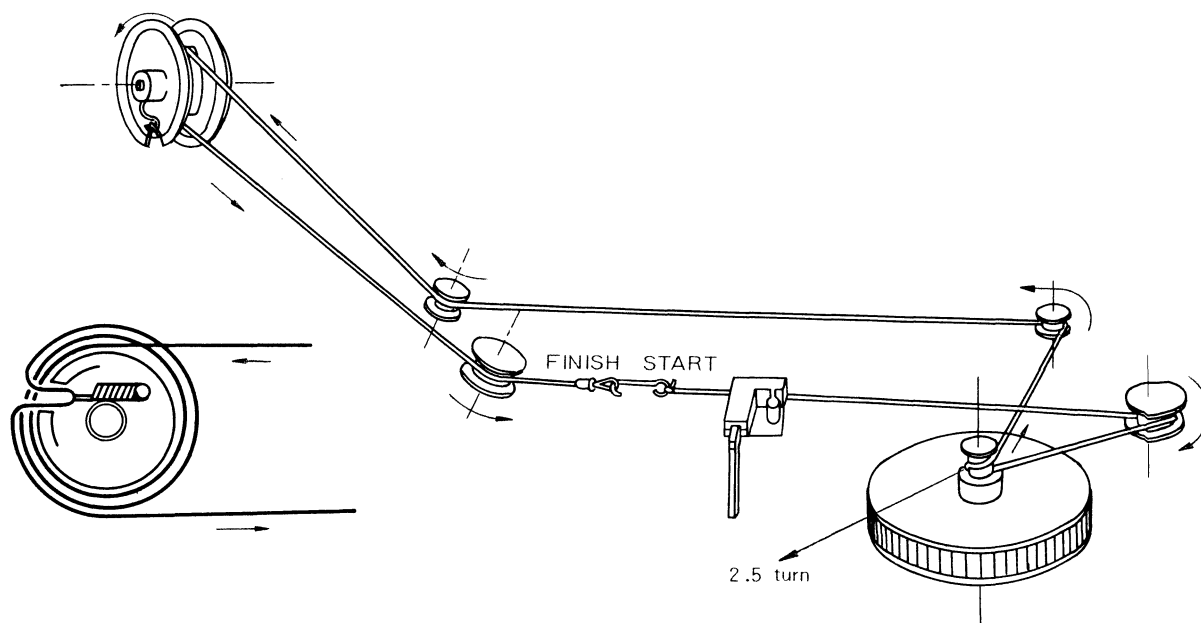


Figure 1. Dial Stringing

2. TEST EQUIPMENT REQUIRED FOR SERVICING

Table 1 lists the test equipment required for servicing the Model 2225L Receiver.

Item	Manufacturer and Model No.	Use
AM Signal Generator		Signal source for AM alignment
Test Loop		Use with AM Signal Generator
FM Signal Generator	Less than 0.3% distortion	Signal source for FM alignment
Stereo Modulator	Less than 0.3% distortion	Stereo separation alignment and trouble shooting
Audio Oscillator	Weston Model CVO-100P, less than 0.02% residual distortion is required.	Sinewave and squarewave signal source.
Frequency Counter		MPX Oscillator adjustment(VCO)
Oscilloscope	High sensitivity with DC horizontal and vertical amplifiers.	Waveform analysis and trouble shooting, and ASO alignment.
VTVM	With AC, DC, RF range	Voltage measurements.
Circuit Tester		Trouble shooting
AC Wattmeter	Simpson, Model 390	Monitors primary power to amplifier.
AC Ammeter	Commercial Grade(1-10A)	Monitors amplifier output under short circuit condition.
Line Voltmeter	Commercial Grade (0-150V AC)	Monitors potential of primary power to amplifier.
Variable Autotransformer (0-140V AC, 10 amps.)	Powerstat, Model 116B	Adjusts level of primary power to amplifier.
Shorting Plug	Use phono plug with 600 ohm across center pin and shell.	Shorts amplifier input to eliminate noise pickup.
Output Load (8 ohms, 0.5%, 100 W)	Commercial Grade	Provides 8-ohm load for amplifier output termination.
Output Load (4 ohms, 0.5%, 100 W)	Commercial Grade	Provides 4-ohm load for amplifier output termination.

3. AM ALIGNMENT PROCEDURE

3.1 AM (LW, MW) IF Alignment

1. Connect a sweep generator to the J106 and an alignment scope to the resistor R120 (outside).
2. Rotate each core of IF transformers L112 and L113 for the maximum height and flat top symmetrical response.

3.2 LW Frequency Range and Tracking Alignment

1. Set LW signal generator to 145 kHz. Turn the tuning capacitor fully close (place the tuning pointer at the low end) and adjust the oscillator coil L110 for maximum audio output.
2. Set the signal generator to 380 kHz. Place the tuning pointer in the high frequency end and adjust the oscillator trimmer C136 for maximum audio output.
3. Repeat steps 1 and 2 until no further adjustment is necessary.
4. Set the generator to 170 kHz, tune the receiver to the same frequency and adjust a slug core of LW ferrite rod antenna and RF coil L108 for maximum output.
5. Set the generator to 350 kHz and tune the receiver to the same frequency and adjust both trimming capacitor (C124 and C129) of antenna and RF tuned circuit for maximum output.
6. Repeat procedures 4 and 5 until no further adjustment is necessary.

3.3 MW Frequency Range and Tracking Alignment

1. Set MW signal generator to 515 kHz. Turn the tuning capacitor fully closed (place the tuning pointer at the low end) and adjust the oscillator coil L111 for maximum audio output.
2. Set the signal generator to 1650 kHz. Place the tuning pointer in the high frequency end and adjust the oscillator trimmer C139 for maximum audio output.
3. Repeat steps 1 and 2 until no further adjustment is necessary.
4. Set the generator to 600 kHz, tune the receiver to the same frequency and adjust a slug core of MW ferrite rod antenna and RF coil L109 for maximum output.
5. Set the generator to 1400 kHz and tune the receiver to the same frequency and adjust both trimming capacitor (C125 and C130) of antenna and RF tuned circuit for maximum output.
6. Repeat procedures 4 and 5 until no further adjustment is necessary.

Note: During tracking alignment reduce the signal generator output as necessary to avoid AGC action.

4. FM ALIGNMENT PROCEDURE

1. Connect an FM signal generator to the FM antenna terminals and an oscilloscope and an audio distortion analyzer to the tape output jack on the rear panel.
2. Set the FM SG to 87 MHz and provide about 3 to 5 μ V. Place the tuning pointer at the low frequency end by rotating the tuning knob and adjust the core of oscillator coil L104 to obtain maximum audio output.
3. Set the FM SG to 109 MHz and provide about 3 to 5 μ V. Rotate the tuning knob and place the tuning pointer at the high frequency end and adjust the trimming capacitor C118 for maximum output.
4. Repeat steps 2 and 3 until no further adjustment is necessary.
5. Set the FM SG to 90 MHz and tune the receiver to the same frequency. Decrease signal generator output until the audio output level decreases with the decreasing generator output. Adjust the antenna coil L101, RF coil L102 and L103 and IF transformer L105 for minimum audio distortion.

6. Set the FM SG to 106 MHz and tune the receiver to the same frequency. Decrease the signal generator output until the audio output level decreases with the decreasing generator output. Adjust the trimming capacitors of antenna and RF tuning circuits for minimum distortion.
7. Repeat steps 5 and 6 until no further adjustment is necessary.
8. Connect a DC VTVM with 1 V range selected to the resistor R237 (inside) and adjust the secondary core (black) of discriminator transformer L201 so that no voltage reading is obtained on the VTVM at no signal. Next set the FM SG to 98 MHz and increase the output level 1 k μ V, then tune the receiver to the same frequency so that no deflection is obtained on the VTVM. Adjust primary core (pink) of L201 for minimum distortion.

5. STEREO SEPARATION ALIGNMENT

1. Set the FM SG to provide 1 k μ V at 98 MHz. Tune the receiver to the same frequency so that the center tuning meter pointer indicates its center. Then turn off the modulation of the FM SG, connect a frequency counter to test point R312 (point C) and adjust R304 so that the frequency counter may precisely read 19 kHz.
2. Modulate the FM SG with stereo composite signal consisting of only L or R channel (of course a pilot signal must be included).
3. Adjust the trimming resistor R303 for maximum and same separation in both channels.

6. MUTING THRESHOLD ADJUSTMENT

Set the FM SG output to provide 12.5 μ V (IHF) at 98 MHz and tune receiver to the same frequency. Adjust the trimming resistor R253 for the threshold level of 12.5 μ V. (During this adjustment turn the MUTING pushswitch "on".)

7. POWER AMPLIFIER ADJUSTMENT

Connect a VTVM between J712(+) and J718(-) and adjust the trimming resistor R733 until the VTVM reads 20 mV DC, and next, connect a VTVM between J723 and J722 (GROUND) and adjust the trimming resistor R711 until the VTVM reads 0 mV DC. Do over again. For the other channel, connect the VTVM between J713(+) and J719(-) and adjust the R734 for the same reading, and connect the VTVM between J724 and J722 and adjust the R712 for the same reading. Do over again.

8. POWER SUPPLY ADJUSTMENT

Connect a VTVM between J812(+) and J811(-) and adjust R808 until the VTVM reads 35.0 V under no signal condition.

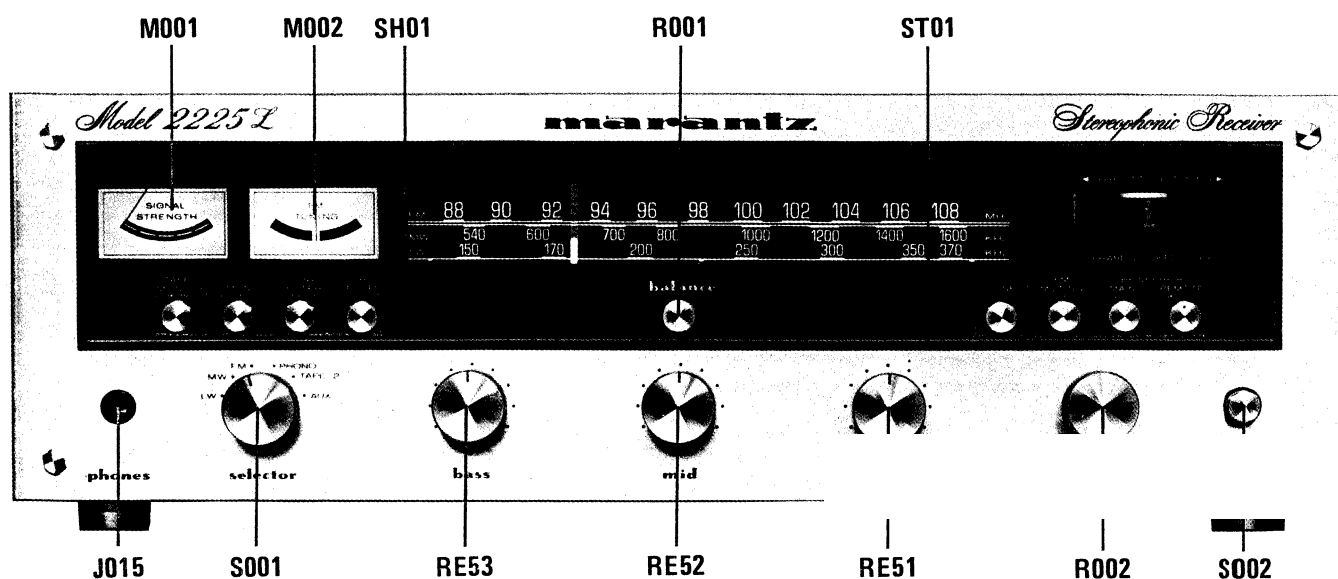


Figure 2. Front Panel Adjustments and Component Locations

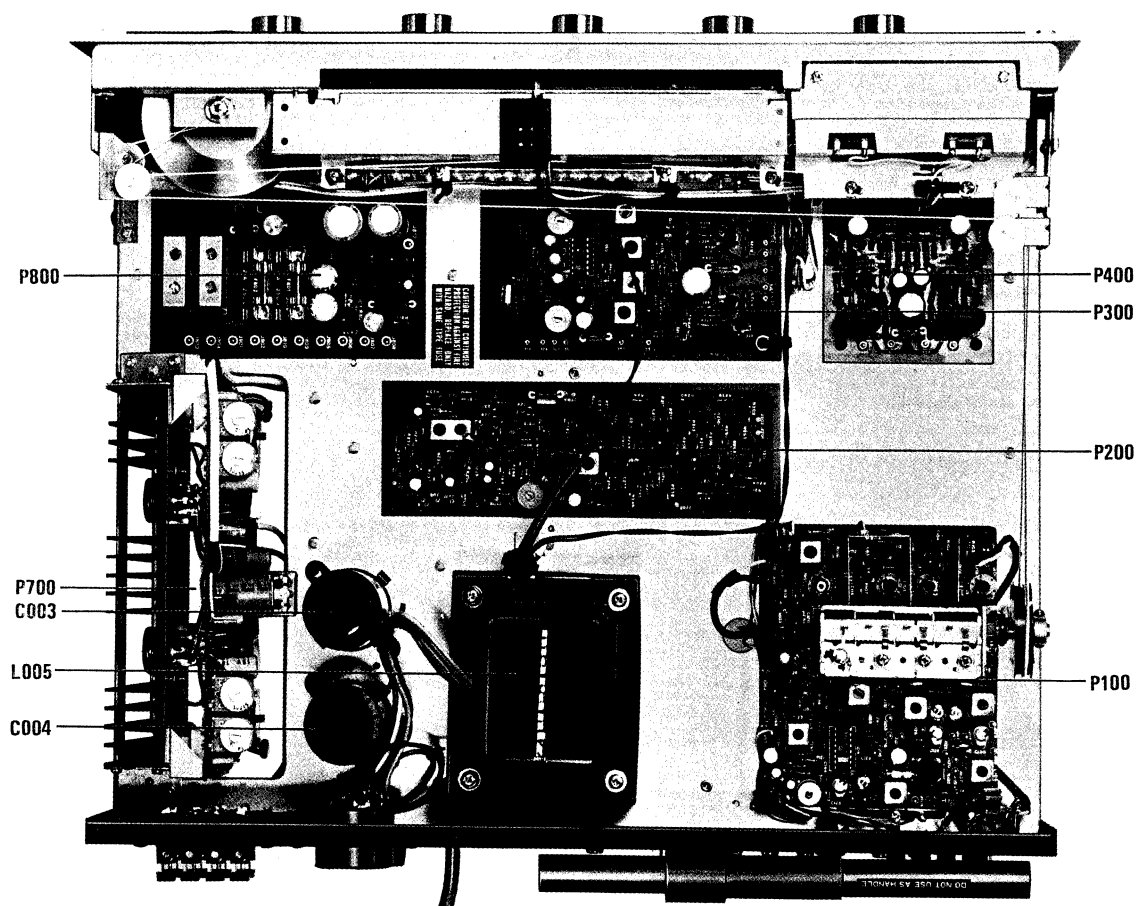


Figure 3. Main Chassis Component Locations (Top View)

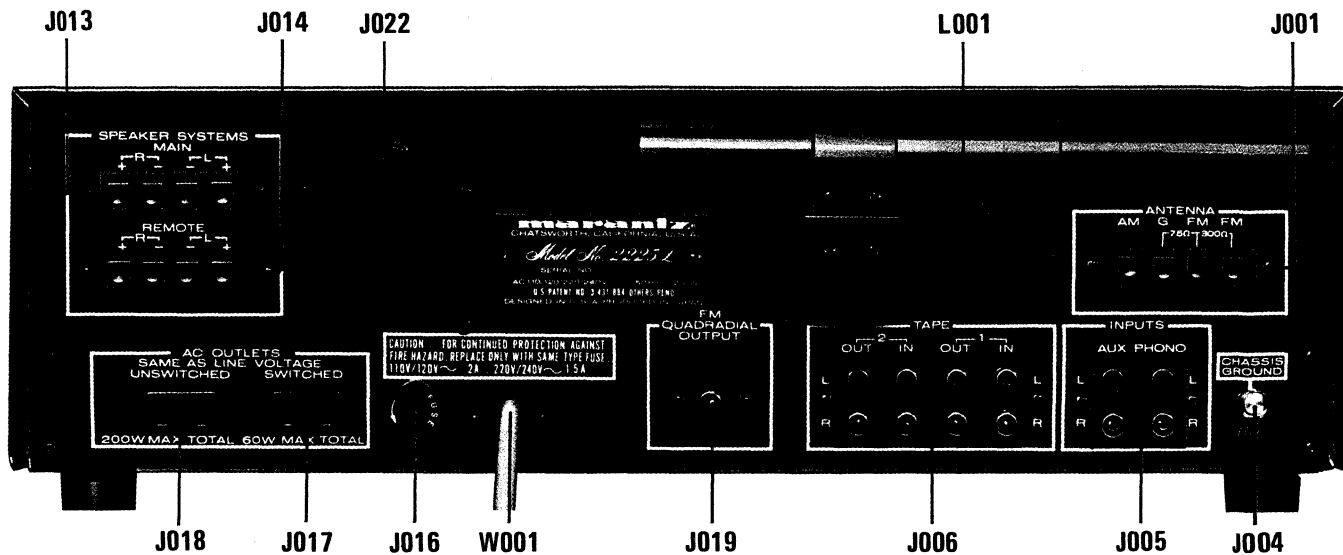


Figure 4. Rear Panel Adjustment and Component Locations

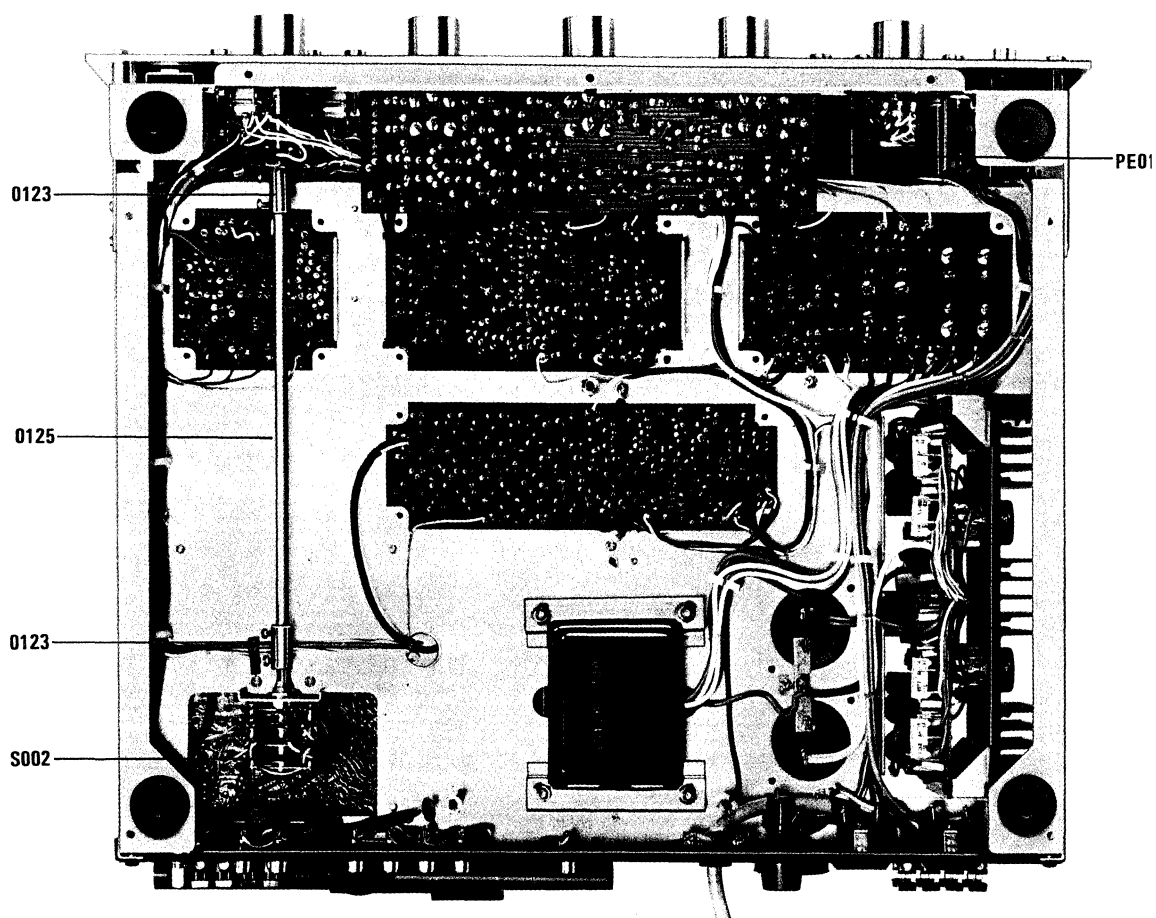


Figure 5. Main Chassis Component Locations (Bottom View)

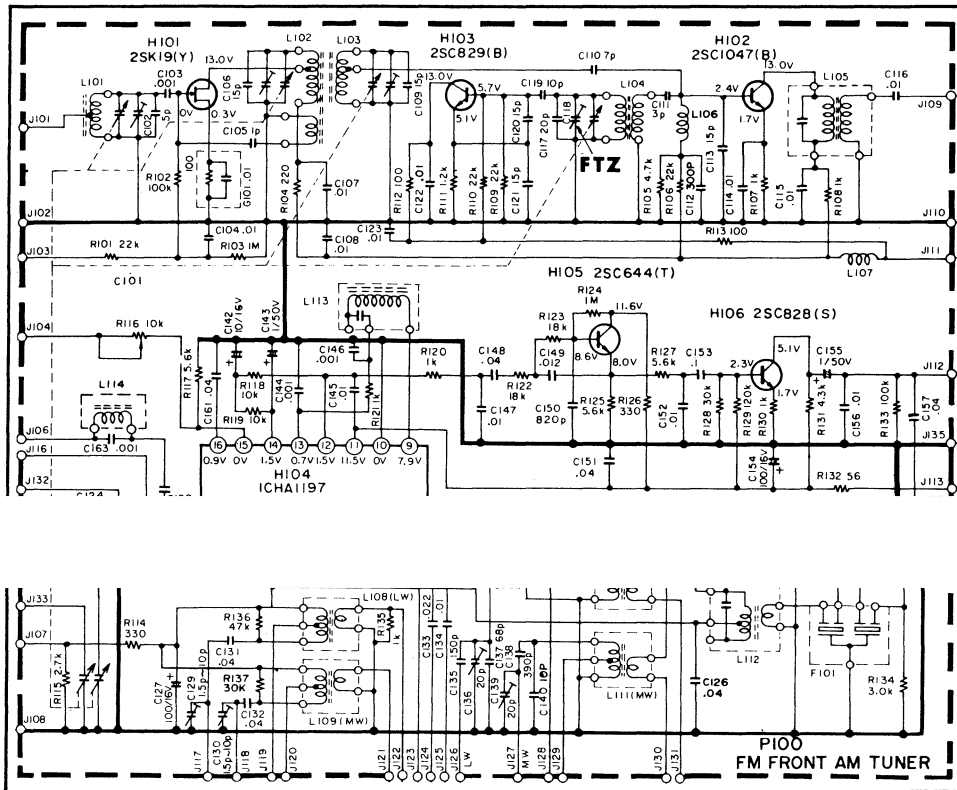


Figure 6. FM AM Front End Assembly (P100) Schematic Diagram

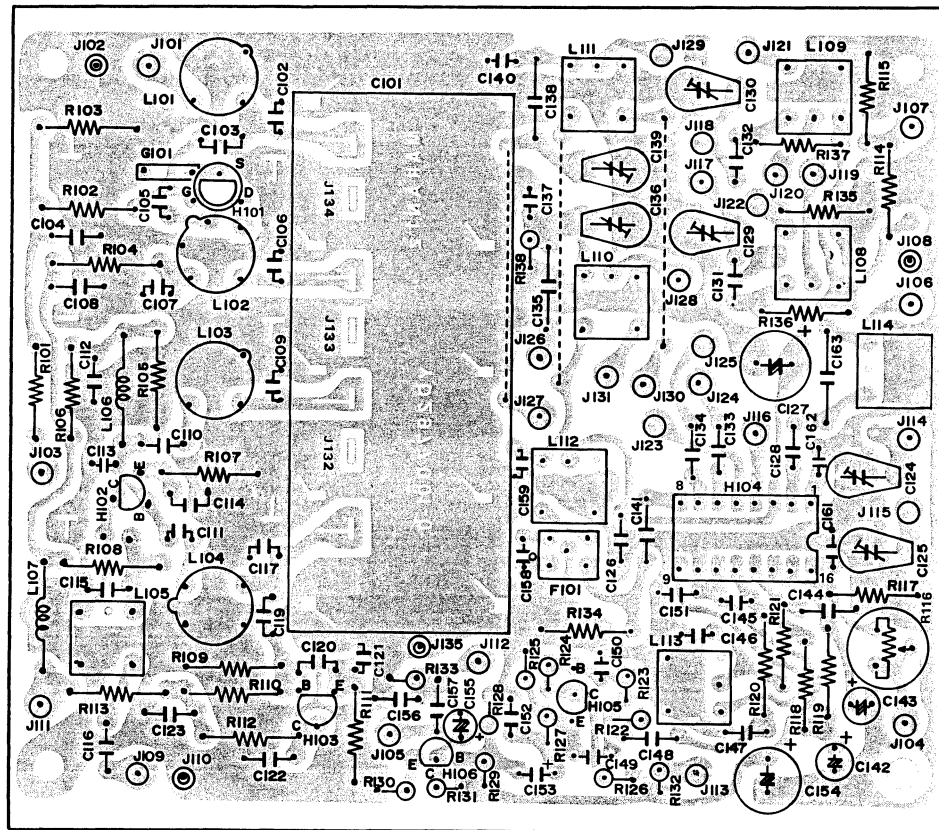


Figure 7. FM AM Front End Assembly (P100) Component Locations

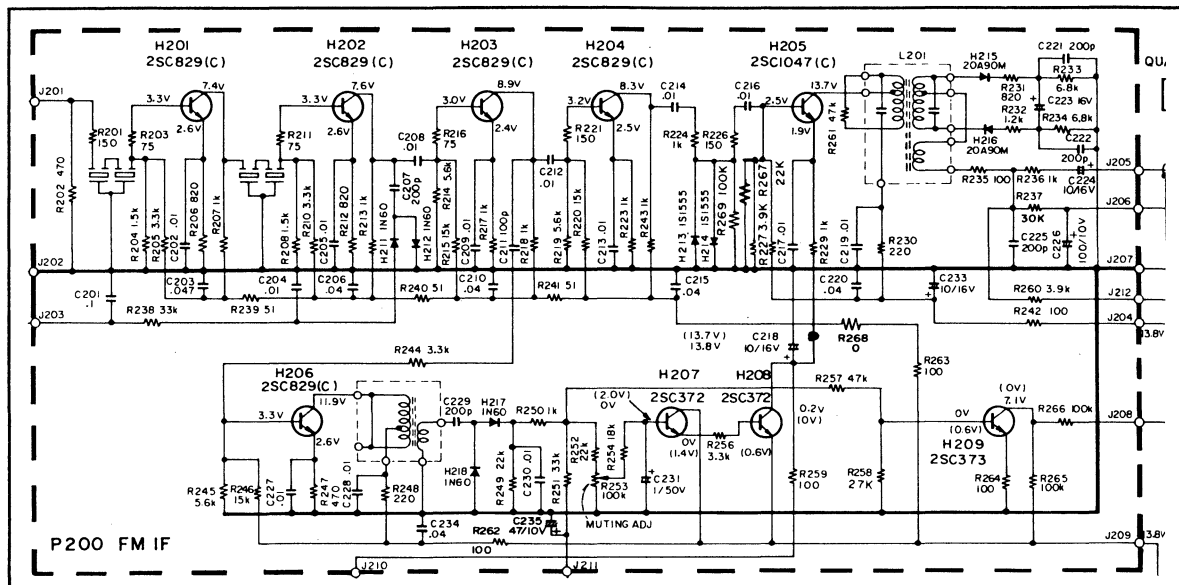


Figure 8. FM IF Amplifier, Detector, Muting Control and Meter Amplifier Unit Assembly (P200) Schematic Diagram

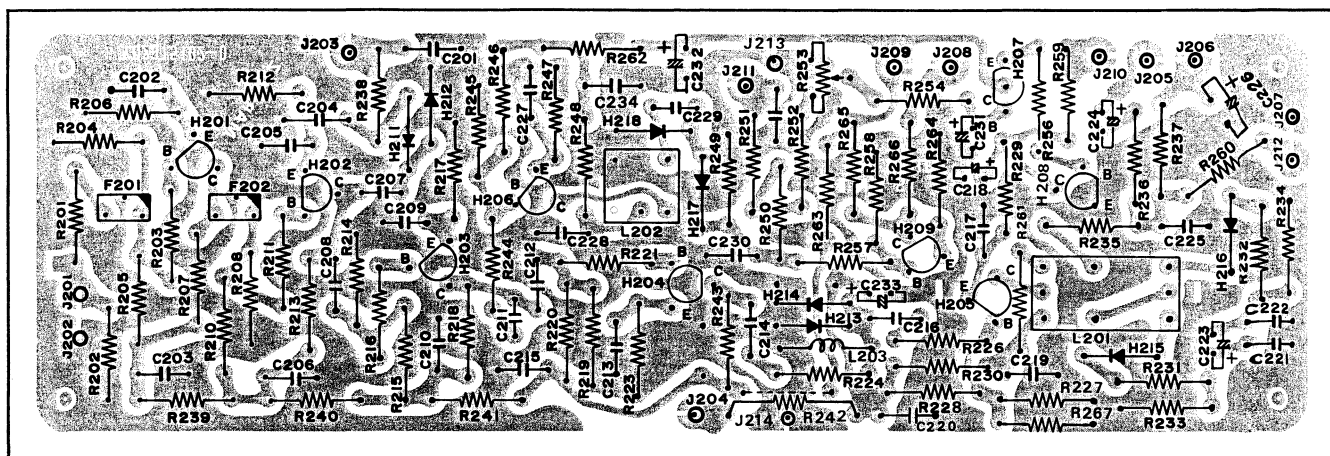


Figure 9. FM IF Amplifier, Detector, Muting Control and Meter Amplifier Unit Assembly (P200) Component Locations

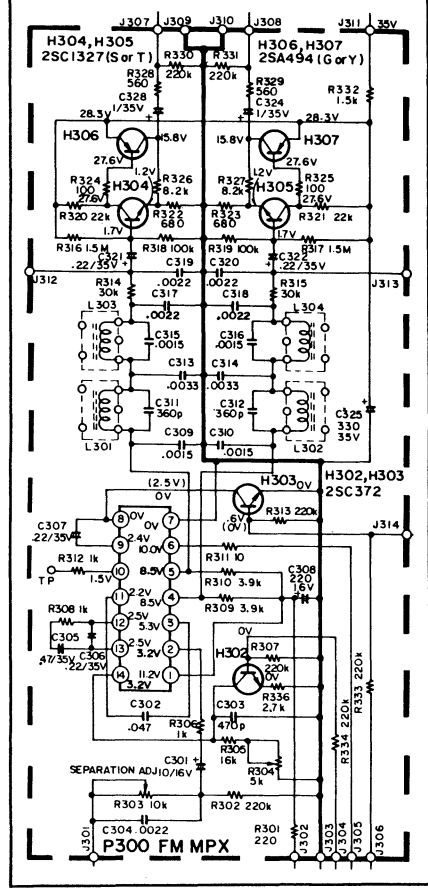


Figure 10. FM MPX Stereo Decoding Amplifier Assembly (P300) Schematic Diagram

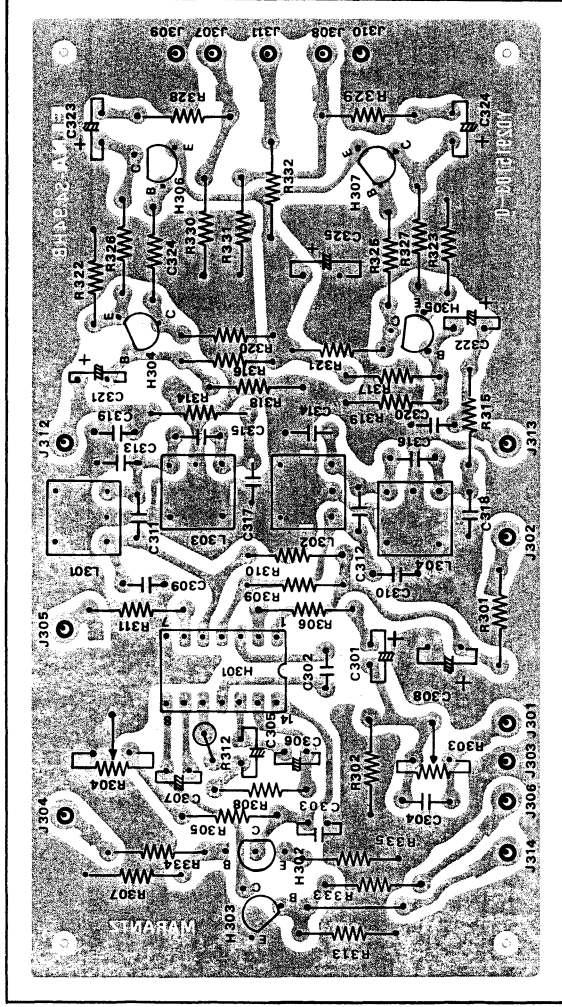


Figure 11. FM MPX Stereo Decoding Amplifier Assembly (P300) Component Locations

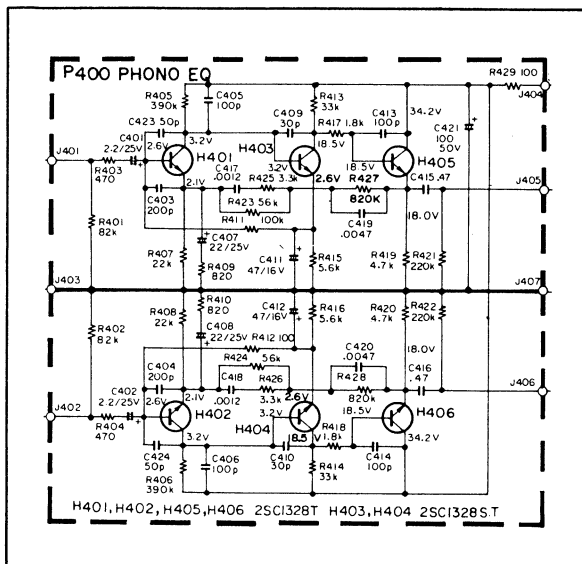


Figure 12. EQL Amplifier Assembly (P400)
Schematic Diagram

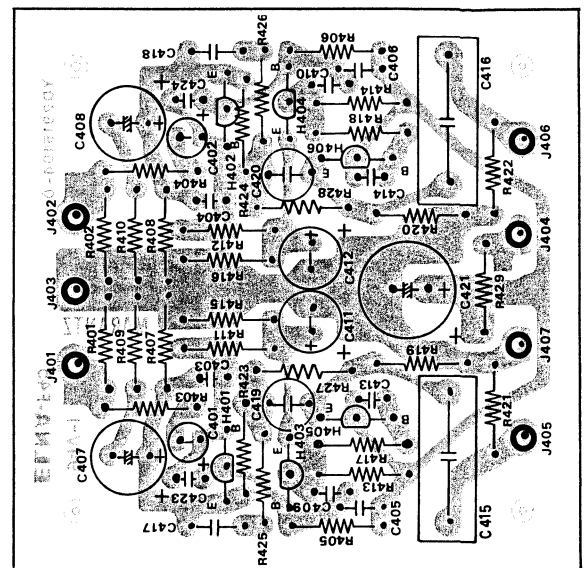


Figure 13. EQL Amplifier Assembly (P400)
Component Locations

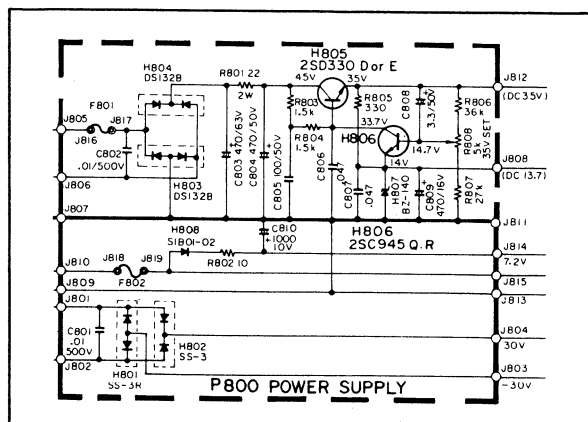


Figure 14. Power Supply Assembly (P800)
Schematic Diagram

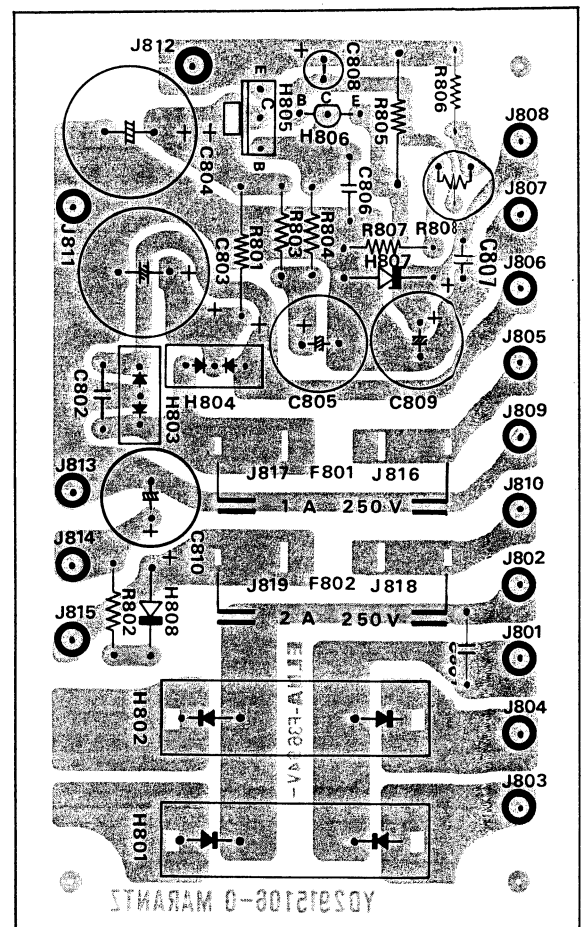


Figure 15. Power Supply Assembly (P800)
Component Locations

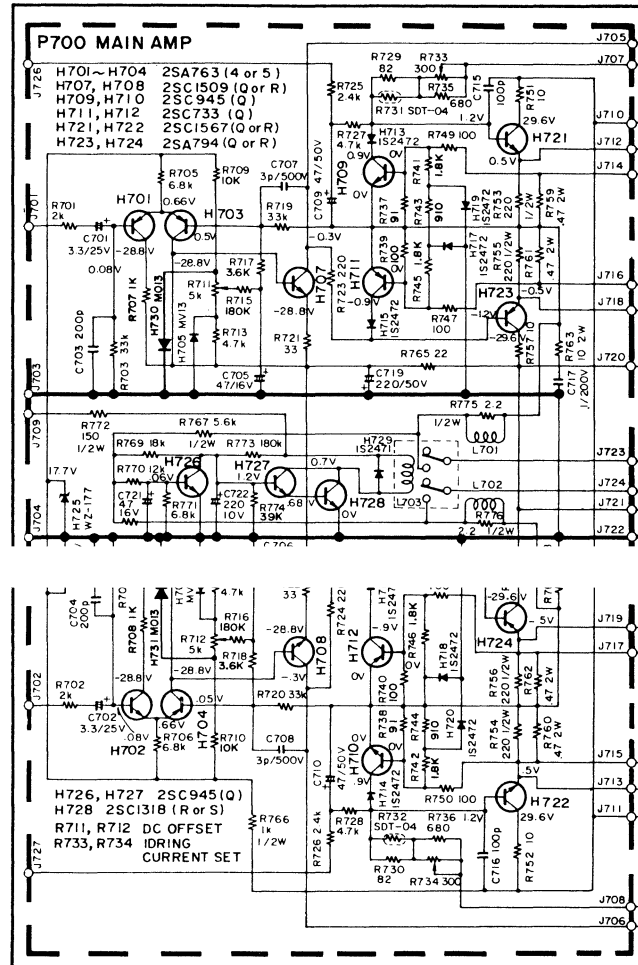


Figure 16. Main Amplifier Assembly (P700) Schematic Diagram

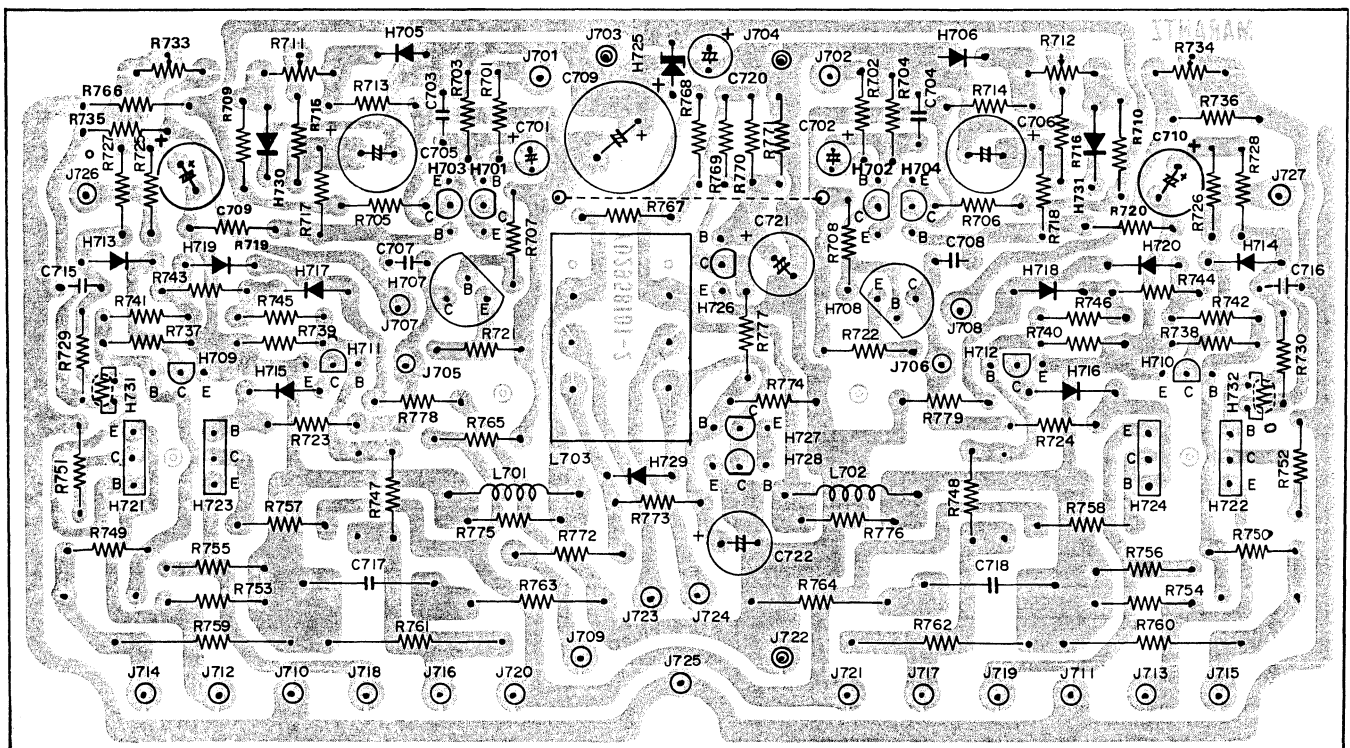


Figure 17. Main Amplifier Assembly (P700) Component Locations

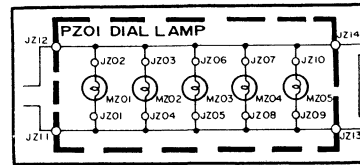


Figure 18. Dial Lamp Assembly (PZ01) Schematic Diagram



Figure 19. Dial Lamp Assembly (PZ01) Component Locations

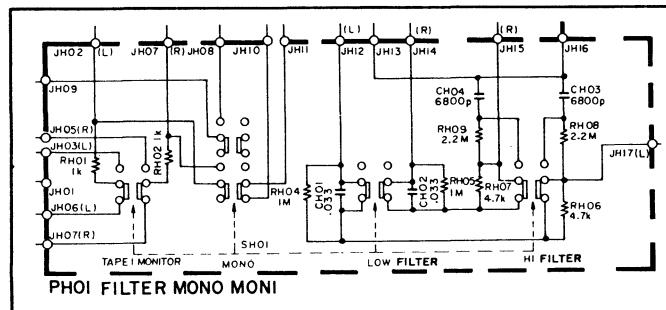


Figure 20. Filter Assembly (PH01) Schematic Diagram

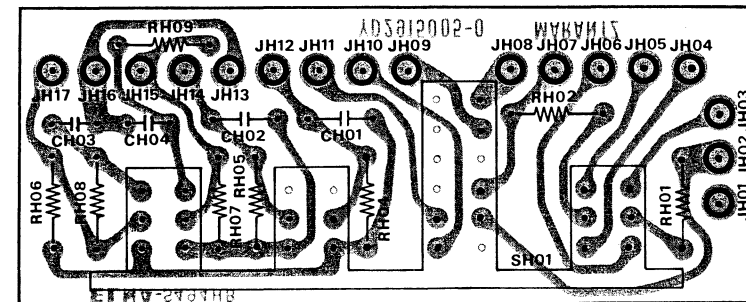


Figure 21. Filter Assembly (PH01) Component Locations

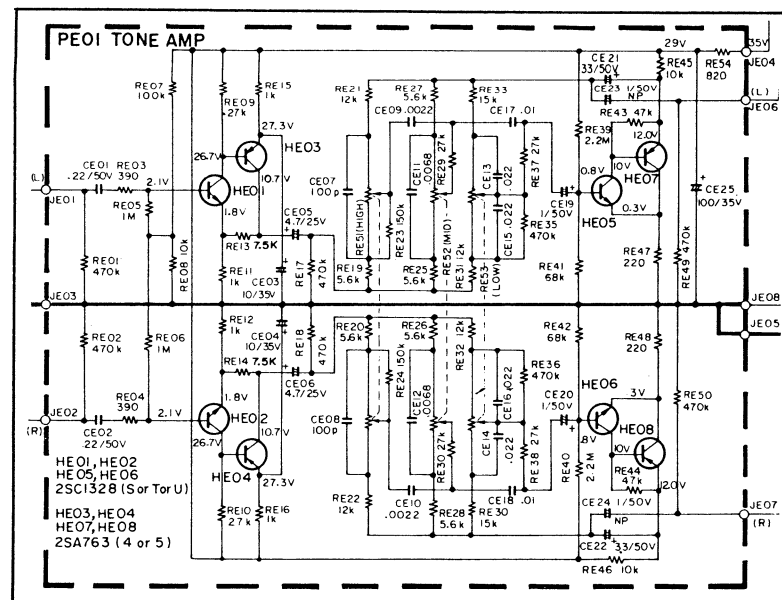


Figure 22. Pre-Tone Amplifier Assembly (PE01) Schematic Diagram

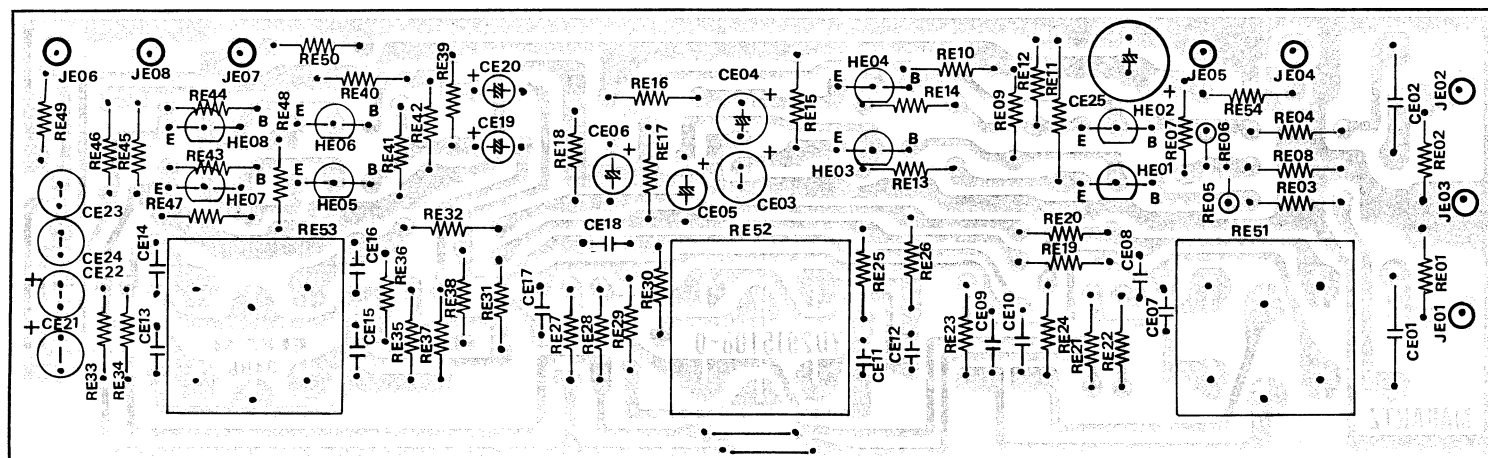


Figure 23. Pre-Tone Amplifier Assembly (PE01) Component Locations

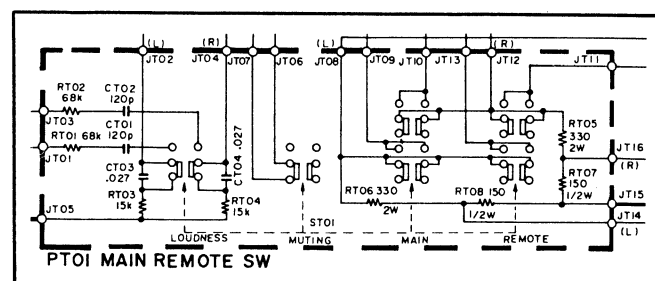


Figure 24. Main and Remote Switch Assembly (PT01) Schematic Diagram

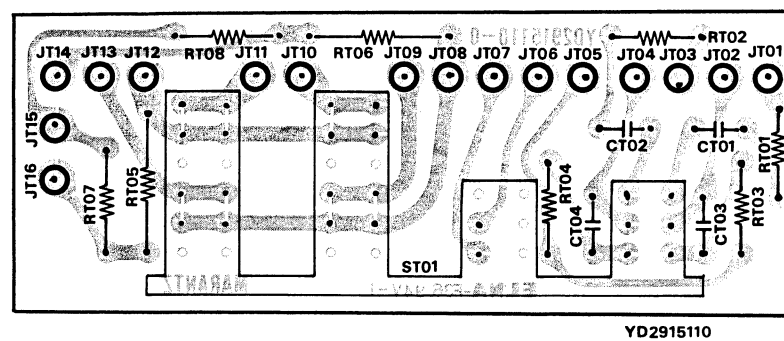


Figure 25. Main and Remote Switch Assembly (PT01) Component Locations



Figure 26. Exploded Mechanical Diagram

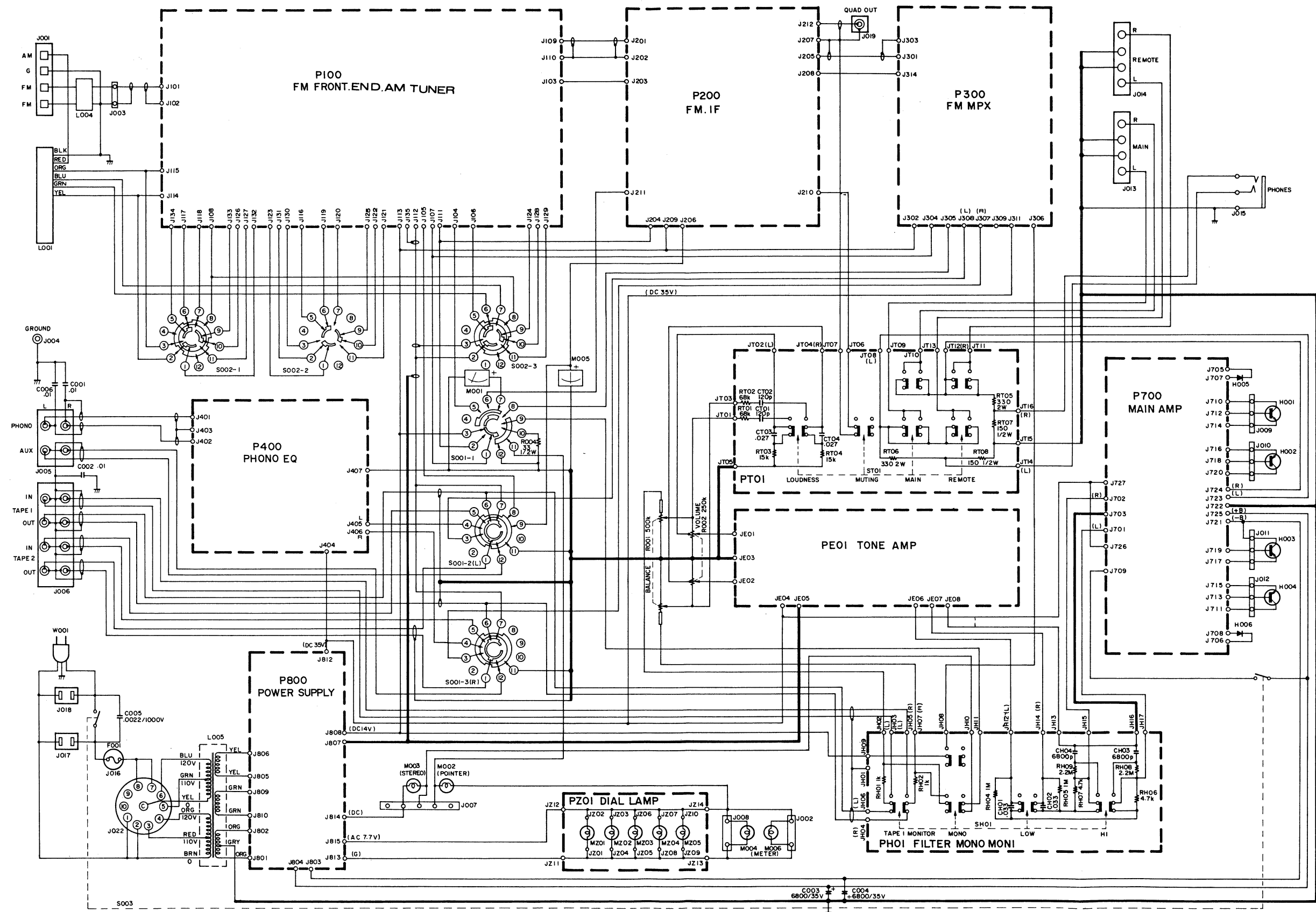


Figure 27. Wiring Diagram

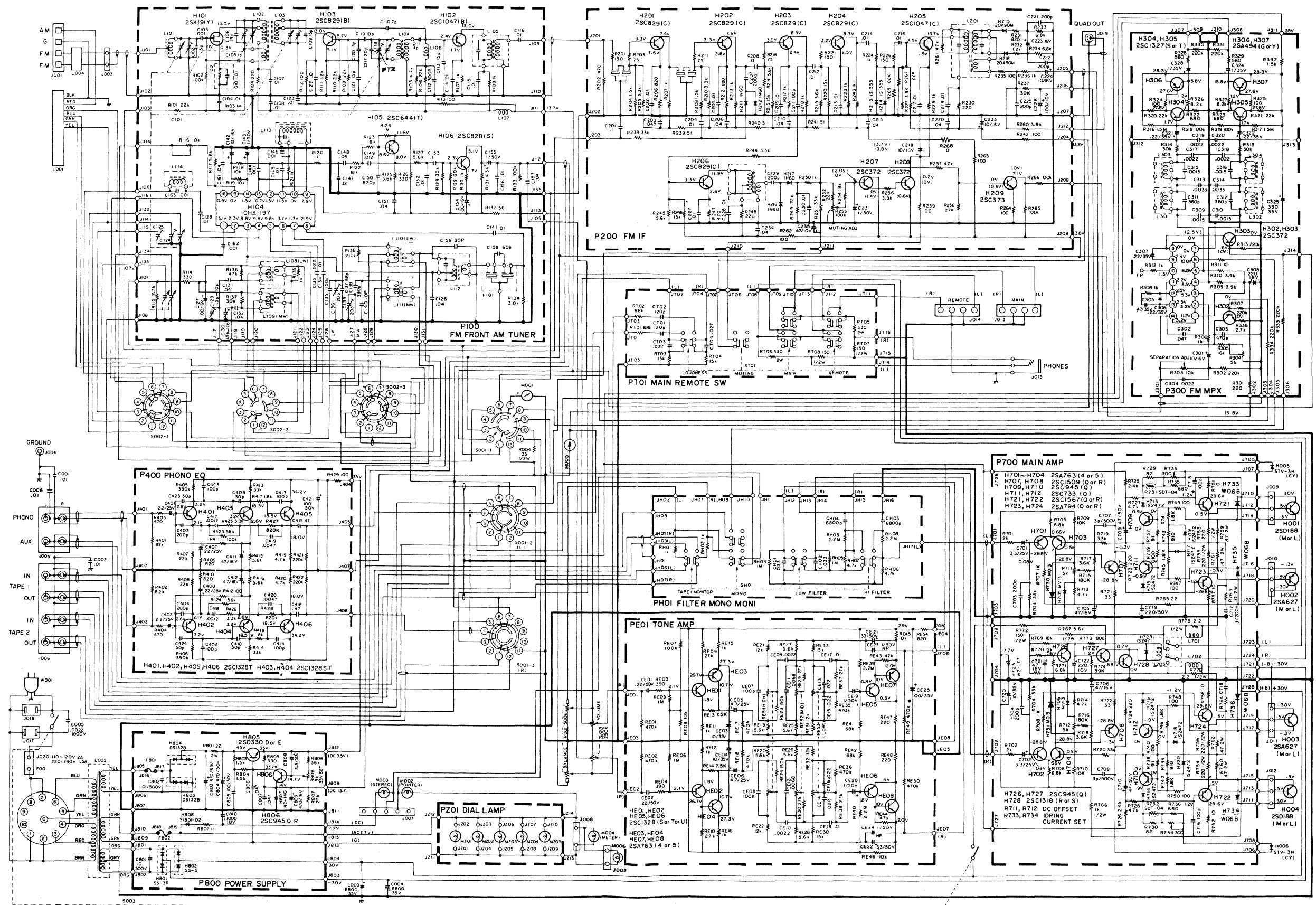


Figure 28. Schematic Diagram

Parts List

REF DESIG.	Q'TY	PART NO.	DESCRIPTION	REF DESIG.	Q'TY	PART NO.	DESCRIPTION
A	1	297706340	Front Panel Assembly	0308	4	51380305P	R.H. Tapped Screw, R3 x 5
0404	1	297706301	Escutcheon	0311	8	51100314E	B.H.M. Screw, B3 x 14
0405	1	285340101	Frame	0313	8	54040302N	Spring Washer
0406	1	293415801	Window	0316	2	282016007	Bracket
0407	8	288625901	Bushing	0317	8	51380306P	R.H. Tapped Screw, R3 x 6
0408	1	285425901	Bushing	0321	1	62030039W	Lug
0410	1	281825905	Bushing	0322	1	62030039W	Lug
0411	1	291510701	Sheet	0324	1	291526702	Heatsink
0415	1	291505301	Cover	0325	1	51100306E	B.H.M. Screw, B3 x 6
B	1	285327340	Flywheel Assembly	0503	1	293416022	Bracket
1304	2	257706302	Escutcheon	0509	1	145525907	Bushing
1305	1	257727301	Flywheel	0511	4	51100308S	B.H.M. Screw, B3 x 8
1306	1	285311201	Shaft	0512	4	53110303E	Hexagon Nut
1310	1	53110603E	Hexagon Nut	0514	2	51100308S	B.H.M. Screw, B3 x 8
1312	1	54020601E	Flat Washer, P	0515	2	53110303E	Hexagon Nut
C	1	291510341	Pointer Assembly	0516	6	51100308S	B.H.M. Screw, B3 x 8
1404	1	291510301	Pointer	0517	6	53110303E	Hexagon Nut
1405	1	282610301	Pointer	0519	1	54050400R	T.L. Washer, OR
1406	1	291510302	Pointer	0524	1	62030039W	Lug
1408	1	291526703	Heatsink	0530	3	51100306S	B.H.M. Screw, B3 x 6
M002	1	IN1008030	Lamp	0531	1	282125901	Bushing
D	1	120200640	Hook Assembly	0532	2	53110303A	Hexagon Nut
1504	1	120225801	Hook	0533	2	54050300R	T.L. Washer
1506	1	72080802A	String	0534	2	51060316A	P.H.M. Screw, P3 x 16
E	1	281915943	Drum Assembly	0535	2	55060305S	T.R. Rivet
0108	1	281915901	Drum	0605	1	281927103	Holder
0110	1	71101689L	Spring	0606	1	257816052	Bracket, K
0113	2	51064019A	Set Screw	0611	2	51100310S	B.H.M. Screw, B3 x 10
0121	1	293416001	Bracket	0612	2	54050300R	T.L. Washer, OR
0122	2	51570306B	P.H. Tapped Screw, P3 x 6	0613	2	53110303E	Hexagon Nut
0123	2	289612501	Joint	0616	2	51100310S	B.H.M. Screw, B3 x 10
0124	4	51064019A	Screw	0618	2	53110303E	Hexagon Nut
0125	1	293411201	Shaft	0622	1	62041760W	Lug
0202	2	51440314A	P.H.M. Screw S, P3 x 14	0627	1	62030039W	Lug
0203	2	54020301A	Flat Washer	0703	1	291516050	Bracket, K
0204	2	53110303A	Hexagon Nut	0710	2	51100306A	B.H.M. Screw, B3 x 6
0209	4	51100306S	B.H.M. Screw, B3 x 6	0713	2	51100306A	P.H.M. Screw, P3 x 6
0212	1	121000501	Clamper	0716	1	281816003	Bracket
0214	2	281810104	Support	0717	1	281816004	Bracket
0215	2	51100306S	B.H.M. Screw, B3 x 6	0718	4	51100405A	B.H.M. Screw, B4 x 5
0220	2	116900502	Clamper	0721	4	51100306A	B.H.M. Screw, B3 x 6
0221	2	51102606B	B.H.M. Screw, B2.6 x 6	0722	2	51100306A	B.H.M. Screw, B3 x 6
0222	2	53112603E	Hexagon Nut	0723	2	51100305A	B.H.M. Screw, B3 x 5
0226	1	282110901	Shield	0724	1	257710602	Bearing
0227	1	295810901	Shield	0725	1	141511801	Spacer
0306	1	291526701	Heatsink	0726	2	51040306A	F.H.M. Screw, F3 x 6
0307	2	291516007	Bracket	0727	2	51490306A	B.H.M. Screw FS, B3 x 6
				0728	2	287105302	Cover
				0729	1	291512004	Insulator
				0731	1	281912005	Insulator
				0732	1	285326901	Protector
				0733	2	51570305B	P.H. Tapped Screw, P3 x 5
				0802	2	51570306B	P.H. Tapped Screw, P3 x 6
				0803	2	54050300R	T.L. Washer, OR
				0806	2	51042608A	F.H.M. Screw, F2.6x 8
				0829	1	287105102	Guide
				0833	4	288612002	Insulator

REF DESIG.	Q'TY	PART NO.	DESCRIPTION	REF DESIG.	Q'TY	PART NO.	DESCRIPTION
0901	1	291516006	Bracket	2020	1	291516009	Bracket
0911	1	291516005	Bracket	2021	1	51570306B	R.H. Tapped Screw, R3 x 6
0912	2	51060306A	P.H.M. Screw, P3 x 6	2022	1	54050300R	T.L. Washer, OR
0920	3	292705502	Collar	2023	2	51570306B	P.H. Tapped Screw, P3 x 6
1002	1	288627401	Reflector	2028	2	294212001	Insulator
1003	1	288627102	Holder	2029	1	51570306B	P.H. Tapped Screw, P3 x 6
1005	2	51480306A	B.H.M. Screw F, B3 x 6	2030	1	54050300R	T.L. Washer, OR
1006	2	51570305B	P.H. Tapped Screw, P3 x 5	2033	1	51570306B	P.H. Tapped Screw, P3 x 6
1007	1	138200503	Clamper	2102	4	51570306B	P.H. Tapped Screw, P3 x 6
1016	2	288610701	Sheet	2106	1	51570306B	P.H. Tapped Screw, P3 x 6
1026	1	291510903	Shield	2109	1	51570306B	P.H. Tapped Screw, P3 x 6
1027	1	291512003	Insulator	2111	1	51570306B	P.H. Tapped Screw, P3 x 6
1102	1	287127101	Holder	2123	1	291526250	Pulley, K
1103	2	51570305P	P.H. Tapped Screw, P3 x 5	2128	2	51570306B	P.H. Tapped Screw, P3 x 6
1106	2	287100501	Sheet	2130	2	51570306B	P.H. Tapped Screw, P3 x 6
1107	2	51100306A	B.H.M. Screw, B3 x 6	2133	2	51570306B	P.H. Tapped Screw, P3 x 6
1112	1	287127401	Reflector	2202	4	257711807	Spacer
1113	2	51480306A	B.H.M. Screw F, B3 x 6	2203	1	281825701	Lid
1116	1	287425901	Bushing	2204	1	281825702	Lid
1203	1	285310650	Bearing, K	2205	1	291512001	Insulator
1208	1	51640410D	Set Screw C.P.	2206	4	51480406S	B.H.M. Screw F, B4 x 6
1209	1	54040402N	Spring Washer	2207	10	51100406S	B.H.M. Screw, B4 x 6
1210	1	53110403E	Hexagon Nut	2208	1	295805601	Buffer
1616	1	297730201	Dial	2225	1	257886101	Label, UL Caution
1620	1	285610701	Sheet	2226	1	293286101	Label, Do not remove. See marking....
1705	1	290825901	Bushing	2228	1	250626506	Indicator, Do not use as Handle.
1706	1	292716005	Bracket	2233	1	951091101	Label, L.L. No.
1802	1	121000501	Clamper	2234	1	282186102	Label, Fuse Caution
1804	1	121000501	Clamper	2235	1	951091102	Label, UL Factory Code
1902	4	293205701	Leg	2302	4	52017039J	H. Head Bolt
1903	4	51440410S	P.H.M. Screw S, P4 x 10	2306	1	289610701	Sheet
1905	1	51570306B	P.H. Tapped Screw, P3 x 6	2310	1	289205502	Collar
1908	1	288686101	Label, on Power Transformer	2314	8	288615403	Knob
1911	1	951022101	Label, Fuse Caution	2316	1	290415404	Knob
1917	6	51100306S	B.H.M. Screw, B3 x 6	2317	1	285015401	Knob
1919	2	51100306S	B.H.M. Screw, B3 x 6	2318	5	281815403	Knob
1922	1	297710550	Chassis, K	2322	1	297726501	Indicator
1925	4	285110101	Support	2331	2	51100306S	B.H.M. Screw, B3 x 6
1927	2	295800502	Clamper	2409	1	285011202	Shaft
1928	4	54020401A	Flat Washer, P	2410	1	54040402N	Spring Washer
1929	4	54040402A	Spring Washer	2414	1	56332040G	Eyelet
1930	4	53110403A	Hexagon Nut	2417	1	291526901	Protector
1931	2	282100501	Clamper	2418	2	51570305B	P.H. Tapped Screw, P3 x 5
1932	1	62030039W	Lug	2424	4	952301511	Serial No. Card
1933	1	51570306B	P.H. Tapped Screw, P3 x 6	2502	1	297785131	Instruction, Set
1934	4	51570306S	P.H. Tapped Screw, P3 x 6	2511	1	297785601	Schematic
2002	4	51100306S	B.H.M. Screw, B3 x 6	2536	1	281885112	Instructions, "Important"
2003	16	51570306S	P.H. Tapped Screw, P3 x 6	2537	1	963000018	Guarantee Card
2006	1	51570306B	P.H. Tapped Screw, P3 x 6	2538	1	281885114	Instructions, Packing
2007	1	121000501	Clamper	2602	1	ZA0200007	Ext. Antenna
2008	1	54050300R	T.L. Washer, OR	2703	1	281881301	Envelope
2009	10	51570305B	P.H. Tapped Screw, P3 x 5	2713	1	297780101	Packing Case, Inner
2012	2	288600503	Clamper	2714	1	297780111	Packing Case, Outer
2013	4	288600502	Clamper	2719	1	281880304	Cushion
2014	2	288600505	Clamper	2720	1	281880305	Cushion
2015	2	288600506	Clamper	2723	1	901483838	Polyethylene Bag, Set
				2725	1	901302501	Polyethylene Bag, Printed Matter

REF DESIG.	Q'TY	PART NO.	DESCRIPTION			
2726	1	901302501	Polyethylene Bag, Accessories			
2728	1	102980401	Sleeve			
2729	1	956000004	Hang Tag			
2730	1	273182101	Silicagel			
2731	1	281905601	Buffer			
2732	1	291810713	Sheet			
P100 FM AM FRONT END BOARD						
P100	1	YD2977001	P.W. Board			
	1	ZZ2977001	P.W. Board Assembly			
G101	1	BF1030003	Printed Comp.,	0.01μF	100Ω	
R101	1	RT0522314	Resistor,	22kΩ	±5%	¼W
R102	1	RT0510414	Resistor,	100kΩ	±5%	¼W
R103	1	RT0510514	Resistor,	1MΩ	±5%	¼W
R104	1	RT0522114	Resistor,	220Ω	±5%	¼W
R105	1	RT0547214	Resistor,	4.7kΩ	±5%	¼W
R106	1	RT0522314	Resistor,	22kΩ	±5%	¼W
R107	1	RT0510214	Resistor,	1kΩ	±5%	¼W
R108	1	RT0510214	Resistor,	1kΩ	±5%	¼W
R109	1	RT0522314	Resistor,	22kΩ	±5%	¼W
R110	1	RT0522314	Resistor,	22kΩ	±5%	¼W
R111	1	RT0512214	Resistor,	1.2kΩ	±5%	¼W
R112	1	RT0510114	Resistor,	100Ω	±5%	¼W
R113	1	RT0510114	Resistor,	100Ω	±5%	¼W
R114	1	RT0533114	Resistor,	330Ω	±5%	¼W
R115	1	RC1027212	Resistor,	2.7kΩ	±10%	½W
R116	1	RA0103020	Trimming Resistor, 10kΩ			
R117	1	RT0556214	Resistor,	5.6kΩ	±5%	¼W
R118	1	RT0510314	Resistor,	10kΩ	±5%	¼W
R119	1	RT0510314	Resistor,	10kΩ	±5%	¼W
R120	1	RT0510214	Resistor,	1kΩ	±5%	¼W
R121	1	RT0510214	Resistor,	1kΩ	±5%	¼W
R122	1	RT0518314	Resistor,	18kΩ	±5%	¼W
R123	1	RT0518314	Resistor,	18kΩ	±5%	¼W
R124	1	RT0510514	Resistor,	1MΩ	±5%	¼W
R125	1	RT0556214	Resistor,	5.6kΩ	±5%	¼W
R126	1	RT0533114	Resistor,	330Ω	±5%	¼W
R127	1	RT0556214	Resistor,	5.6kΩ	±5%	¼W
R128	1	RT0530314	Resistor,	30kΩ	±5%	¼W
R129	1	RT0512414	Resistor,	120kΩ	±5%	¼W
R130	1	RT0510214	Resistor,	1kΩ	±5%	¼W
R131	1	RT0543214	Resistor,	4.3kΩ	±5%	¼W
R132	1	RT0556014	Resistor,	56Ω	±5%	¼W
R133	1	RT0510414	Resistor,	100kΩ	±5%	¼W
R134	1	RT0530214	Resistor,	3.0kΩ	±5%	¼W
R135	1	RT0510214	Resistor,	1kΩ	±5%	¼W
R136	1	RT0547314	Resistor,	47kΩ	±5%	¼W
R137	1	RT0530314	Resistor,	30kΩ	±5%	¼W
R138	1	RT0539414	Resistor,	390kΩ	±5%	¼W
H101	1	HF200191A	FET, 2SK19(Y)			
H102	1	HT310471B	Transistor, 2SC1047 (B)			
H103	1	HT308291B	Transistor, 2SC 829 (B)			
H104	1	HC1001901	IC, HA 1197			
H105	1	HT306441C	Transistor, 2SC 644 T			
H106	1	HT308281D	Transistor, 2SC 828 S			
F101	1	FF1004516	Ceramic Filter, SFD-455D			
L101	1	LA1202801	Ant. Coil			

REF DESIG.	Q'TY	PART NO.	DESCRIPTION			
L102	1	LA1202802	RF Coil			
L103	1	LA1202803	RF Coil			
L104	1	LO1202801	Osc. Coil			
L105	1	LI1015801	FM IFT			
L106	1	LC1751001	Choke Coil			
L107	1	LC1332002	Choke Coil			
L108	1	LA1029001	LW RF Coil			
L109	1	LA1001020	MW RF Coil			
L110	1	LO1001052	LW Osc. Coil			
L111	1	LO1001048	MW Osc. Coil			
L112	1	LI1001501	AM IFT			
L113	1	LI1001064	AM IFT			
L114	1	LO1001042	Trap Coil			
C101	1	CA4330003	Variable Cap.,		Tuning	
C102	1	DD1205001	Ceramic Cap.,		5pF	±10%
C103	1	DK1710201	Ceramic Cap.,		0.001μF	±20%
C104	1	DK1710301	Ceramic Cap.,		0.01μF	±20%
C105	1	DD1001001	Ceramic Cap.,		1pF	±0.25pF
C106	1	DD1615001	Ceramic Cap.,		15pF	±10%
C107	1	DK1710201	Ceramic Cap.,		0.001μF	±20%
C108	1	DK1710301	Ceramic Cap.,		0.01μF	±20%
C109	1	DD1615001	Ceramic Cap.,		15pF	±10%
C110	1	DD1207001	Ceramic Cap.,		7pF	±1pF
C111	1	DD1103001	Ceramic Cap.,		3pF	±0.5pF
C112	1	DD1530101	Ceramic Cap.,		300pF	±5%
C113	1	DD1615001	Ceramic Cap.,		15pF	±10%
C114	1	DK1710201	Ceramic Cap.,		0.001μF	±20%
C115	1	DK1710301	Ceramic Cap.,		0.01μF	±20%
C116	1	DK1710301	Ceramic Cap.,		0.01μF	±20%
C117	1	DD1520002	Ceramic Cap.,		20pF	±5%
C118	1	CT1100008	Trimming Cap.,		1.5pF ~ 10pF	
C119	1	DD1210006	Ceramic Cap.,		10pF	±1pF
C120	1	DD1615003	Ceramic Cap.,		15pF	±10%
C121	1	DD1615003	Ceramic Cap.,		15pF	±10%
C122	1	DK1710301	Ceramic Cap.,		0.01μF	±20%
C123	1	DK1710301	Ceramic Cap.,		0.01μF	±20%
C124	1	CT1200001	Trimming Cap.,		20pF	
C125	1	CT1100001	Trimming Cap.,		1.5pF ~ 10pF	
C126	1	DK1840302	Ceramic Cap.,		0.04μF	±8%
C127	1	EA1070169	Electrolytic Cap.,		100μF	16V
C128	1	DK1710301	Ceramic Cap.,		0.01μF	±20%
C129	1	CT1100001	Trimming Cap.,		1.5pF ~ 10pF	
C130	1	CT1100001	Trimming Cap.,		1.5pF ~ 10pF	
C131	1	DF1740301	Film Cap.,		0.04μF	±20%
C132	1	DF1740301	Film Cap.,		0.04μF	±20%
C133	1	DF1722301	Film Cap.,		0.022μF	±20%
C134	1	DK1710301	Ceramic Cap.,		0.01μF	±20%
C135	1	DF6515150	Film Cap.,		150pF	±5%
C136	1	CT1200001	Trimming Cap.,		20pF	
C137	1	DD1668001	Ceramic Cap.,		68pF	±10%
C138	1	DF6539101	Film Cap.,		390pF	±5%
C139	1	CT1200001	Trimming Cap.,		20pF	
C140	1	DD1210001	Ceramic Cap.,		10pF	±1pF
C141	1	DK1710301	Ceramic Cap.,		0.01μF	±20%
C142	1	EA1060169	Electrolytic Cap.,		10μF	16V
C143	1	EA1050509	Electrolytic Cap.,		1μF	50V
C144	1	DK1710201	Ceramic Cap.,		0.001μF	±20%

REF DESIG.	Q'TY	PART NO.	DESCRIPTION			
C145	1	DF1710301	Film Cap.,	0.01 μ F	$\pm 20\%$	
C146	1	DF1610201	Film Cap.,	0.001 μ F	$\pm 10\%$	
C147	1	DK1710301	Ceramic Cap.,	0.01 μ F	$\pm 20\%$	
C148	1	DK1840302	Ceramic Cap.,	0.04 μ F	$\pm 10\%$	
C149	1	DF1512301	Film Cap.,	0.012 μ F	$\pm 5\%$	
C150	1	DF6582150	Film Cap.,	820pF	$\pm 5\%$	
C151	1	DK1840302	Ceramic Cap.,	0.04 μ F	$\pm 10\%$	
C152	1	DF1610301	Film Cap.,	0.01 μ F	$\pm 10\%$	
C153	1	EV1040356	Film Cap.,	0.1 μ F	35V	
C154	1	EA1070169	Electrolytic Cap.,	100 μ F	16V	
C155	1	EE1050501	Electrolytic Cap.,	1 μ F	50V	
C156	1	DK1710301	Ceramic Cap.,	0.01 μ F	$\pm 20\%$	
C157	1	DK1840302	Ceramic Cap.,	0.04 μ F	$\pm 10\%$	
C158	1	DD1660001	Ceramic Cap.,	60pF	$\pm 10\%$	
C159	1	DD1630001	Ceramic Cap.,	20pF	$\pm 10\%$	
C161	1	DK1840302	Ceramic Cap.,	0.04 μ F	$\pm 10\%$	
C162	1	DK1710201	Ceramic Cap.,	0.001 μ F	$\pm 20\%$	
C163	1	DF6510201	Film Cap.,	0.001 μ F	$\pm 5\%$	
J101	31	YP1000113	Plug			
J131						
J135		YP1000113	Plug			
J136		YP1000113	Plug			
P200	1	YD2915102	P.W. Board			
	1	ZZ2977802	P.W. Board Assembly			
P208	2	293311802	Spacer			
R201	1	RT0515114	Resistor,	150 Ω	$\pm 5\%$	$\frac{1}{4}W$
R202	1	RT0547114	Resistor,	470 Ω	$\pm 5\%$	$\frac{1}{4}W$
R203	1	RT0575014	Resistor,	75 Ω	$\pm 5\%$	$\frac{1}{4}W$
R204	1	RT0515214	Resistor,	1.5k Ω	$\pm 5\%$	$\frac{1}{4}W$
R205	1	RT0533214	Resistor,	3.3k Ω	$\pm 5\%$	$\frac{1}{4}W$
R206	1	RT0582114	Resistor,	820 Ω	$\pm 5\%$	$\frac{1}{4}W$
R207	1	RT0510214	Resistor,	1k Ω	$\pm 5\%$	$\frac{1}{4}W$
R208	1	RT0515214	Resistor,	1.5k Ω	$\pm 5\%$	$\frac{1}{4}W$
R210	1	RT0533214	Resistor,	3.3k Ω	$\pm 5\%$	$\frac{1}{4}W$
R211	1	RT0575014	Resistor,	75 Ω	$\pm 5\%$	$\frac{1}{4}W$
R212	1	RT0582114	Resistor,	820 Ω	$\pm 5\%$	$\frac{1}{4}W$
R213	1	RT0510214	Resistor,	1k Ω	$\pm 5\%$	$\frac{1}{4}W$
R214	1	RT0556214	Resistor,	5.6k Ω	$\pm 5\%$	$\frac{1}{4}W$
R215	1	RT0515314	Resistor,	15k Ω	$\pm 5\%$	$\frac{1}{4}W$
R216	1	RT0575014	Resistor,	75 Ω	$\pm 5\%$	$\frac{1}{4}W$
R217	1	RT0510214	Resistor,	1k Ω	$\pm 5\%$	$\frac{1}{4}W$
R218	1	RT0510214	Resistor,	1k Ω	$\pm 5\%$	$\frac{1}{4}W$
R219	1	RT0556214	Resistor,	5.6k Ω	$\pm 5\%$	$\frac{1}{4}W$
R220	1	RT0515314	Resistor,	15k Ω	$\pm 5\%$	$\frac{1}{4}W$
R221	1	RT0515114	Resistor,	150 Ω	$\pm 5\%$	$\frac{1}{4}W$
R223	1	RT0510214	Resistor,	1k Ω	$\pm 5\%$	$\frac{1}{4}W$
R224	1	RT0515114	Resistor,	150 Ω	$\pm 5\%$	$\frac{1}{4}W$
R226	1	RT0515114	Resistor,	150 Ω	$\pm 5\%$	$\frac{1}{4}W$
R227	1	RT0539214	Resistor,	3.9k Ω	$\pm 5\%$	$\frac{1}{4}W$
R228	1	RT0515314	Resistor,	15k Ω	$\pm 5\%$	$\frac{1}{4}W$
R229	1	RT0510214	Resistor,	1k Ω	$\pm 5\%$	$\frac{1}{4}W$
R230	1	RT0522114	Resistor,	220 Ω	$\pm 5\%$	$\frac{1}{4}W$
R231	1	RT0582114	Resistor,	820 Ω	$\pm 5\%$	$\frac{1}{4}W$
R232	1	RT0512214	Resistor,	1.2k Ω	$\pm 5\%$	$\frac{1}{4}W$
R233	1	RT0568214	Resistor,	6.8k Ω	$\pm 5\%$	$\frac{1}{4}W$
R234	1	RT0568214	Resistor,	6.8k Ω	$\pm 5\%$	$\frac{1}{4}W$
R235	1	RT0510114	Resistor,	100 Ω	$\pm 5\%$	$\frac{1}{4}W$
R236	1	RT0510214	Resistor,	1k Ω	$\pm 5\%$	$\frac{1}{4}W$
R237	1	RT0530314	Resistor,	30k Ω	$\pm 5\%$	$\frac{1}{4}W$
R238	1	RT0533314	Resistor,	33k Ω	$\pm 5\%$	$\frac{1}{4}W$
R239	1	RT0551014	Resistor,	51 Ω	$\pm 5\%$	$\frac{1}{4}W$
R240	1	RT0551014	Resistor,	51 Ω	$\pm 5\%$	$\frac{1}{4}W$
R241	1	RT0551014	Resistor,	51 Ω	$\pm 5\%$	$\frac{1}{4}W$
R242	1	RT0551014	Resistor,	51 Ω	$\pm 5\%$	$\frac{1}{4}W$
R243	1	RT0510214	Resistor,	1k Ω	$\pm 5\%$	$\frac{1}{4}W$
R244	1	RT0533214	Resistor,	3.3k Ω	$\pm 5\%$	$\frac{1}{4}W$
R245	1	RT0556214	Resistor,	5.6k Ω	$\pm 5\%$	$\frac{1}{4}W$
R246	1	RT0515314	Resistor,	15k Ω	$\pm 5\%$	$\frac{1}{4}W$
R247	1	RT0515314	Resistor,	15k Ω	$\pm 5\%$	$\frac{1}{4}W$
R249	1	RT0522314	Resistor,	22k Ω	$\pm 5\%$	$\frac{1}{4}W$
R250	1	RT0510214	Resistor,	1k Ω	$\pm 5\%$	$\frac{1}{4}W$
R251	1	RT0533314	Resistor,	33k Ω	$\pm 5\%$	$\frac{1}{4}W$
R252	1	RT0522314	Resistor,	22k Ω	$\pm 5\%$	$\frac{1}{4}W$
R263	1	RA0104018	Trimming Resistor,	100k Ω		
R254	1	RT0518314	Resistor,	18k Ω	$\pm 5\%$	$\frac{1}{4}W$
R256	1	RT0533214	Resistor,	3.3k Ω	$\pm 5\%$	$\frac{1}{4}W$
R257	1	RT0547314	Resistor,	47k Ω	$\pm 5\%$	$\frac{1}{4}W$
R258	1	RT0527314	Resistor,	27k Ω	$\pm 5\%$	$\frac{1}{4}W$
R259	1	RT0510114	Resistor,	100 Ω	$\pm 5\%$	$\frac{1}{4}W$
R260	1	RT0539214	Resistor,	3.9k Ω	$\pm 5\%$	$\frac{1}{4}W$
R261	1	RT0547314	Resistor,	47k Ω	$\pm 5\%$	$\frac{1}{4}W$
R262	1	RT0510114	Resistor,	100 Ω	$\pm 5\%$	$\frac{1}{4}W$
R263	1	RT0510114	Resistor,	100 Ω	$\pm 5\%$	$\frac{1}{4}W$
R264	1	RT0510114	Resistor,	100 Ω	$\pm 5\%$	$\frac{1}{4}W$
R265	1	RT0510414	Resistor,	100k Ω	$\pm 5\%$	$\frac{1}{4}W$
R266	1	RT0510414	Resistor,	100k Ω	$\pm 5\%$	$\frac{1}{4}W$
R267	1	RT0522314	Resistor,	22k Ω	$\pm 5\%$	$\frac{1}{4}W$
R268	1	RC0000012	Resistor,	0 Ω		
R269	1	RT0510414	Resistor,	100k Ω	$\pm 5\%$	$\frac{1}{4}W$
C201	1	DK1810402	Ceramic Cap.,	0.1 μ F	$\pm 10\%$	
C202	1	DK1710301	Ceramic Cap.,	0.01 μ F	$\pm 20\%$	
C203	1	DK1840301	Ceramic Cap.,	0.04 μ F	$\pm 10\%$	
C204	1	DK1710301	Ceramic Cap.,	0.01 μ F	$\pm 20\%$	
C205	1	DK1710301	Ceramic Cap.,	0.01 μ F	$\pm 20\%$	
C206	1	DK1840301	Ceramic Cap.,	0.04 μ F	$\pm 10\%$	
C207	1	DD1620101	Ceramic Cap.,	200pF	$\pm 10\%$	
C208	1	DK1710301	Ceramic Cap.,	0.01 μ F	$\pm 10\%$	
C209	1	DK1710301	Ceramic Cap.,	0.01 μ F	$\pm 10\%$	
C210	1	DK1840301	Ceramic Cap.,	0.04 μ F	$\pm 10\%$	
C211	1	DD1610101	Ceramic Cap.,	100pF	$\pm 10\%$	
C212	1	DK1710301	Ceramic Cap.,	0.01 μ F	$\pm 20\%$	
C213	1	DK1710301	Ceramic Cap.,	0.01 μ F	$\pm 20\%$	
C214	1	DK1710301	Ceramic Cap.,	0.01 μ F	$\pm 20\%$	
C215	1	DK1840301	Ceramic Cap.,	0.04 μ F	$\pm 10\%$	
C216	1	DK1710301	Ceramic Cap.,	0.01 μ F	$\pm 20\%$	
C217	1	DK1710301	Ceramic Cap.,	0.01 μ F	$\pm 20\%$	
C218	1	EA1060169	Electrolytic Cap.,	10 μ F	16V	
C219	1	DK1710301	Ceramic Cap.,	0.01 μ F	$\pm 20\%$	
C220	1	DK1840301	Ceramic Cap.,	0.04 μ F	$\pm 10\%$	
C221	1	DD1620101	Ceramic Cap.,	200pF	$\pm 10\%$	

REF DESIG.	Q'TY	PART NO.	DESCRIPTION						
C222	1	DD1620101	Ceramic Cap.,	200pF	±10%				
C223	1	EA1060169	Electrolytic Cap.,	10μF	16V				
C224	1	EA1060169	Electrolytic Cap.,	10μF	16V				
C225	1	DD1620101	Ceramic Cap.,	200pF	±10%				
C226	1	EA1070109	Electrolytic Cap.,	100μF	10V				
C227	1	DK1710301	Ceramic Cap.,	0.01μF	±20%				
C228	1	DK1710301	Ceramic Cap.,	0.01μF	±20%				
C229	1	DD1620101	Ceramic Cap.,	200pF	±10%				
C230	1	DK1710301	Ceramic Cap.,	0.01μF	±20%				
C231	1	EA1050509	Electrolytic Cap.,	1μF	50V				
C232	1	EA3360259	Electrolytic Cap.,	33μF	25V				
C233	1	EA1060169	Electrolytic Cap.,	10μF	16V				
C234	1	DK1840301	Ceramic Cap.,	0.04μF	±10%				
C235	1	EA4760109	Electrolytic Cap.,	47μF	10V				
H201	1	HT308291C	Transistor,		2SC829C				
H202	1	HT308291C	Transistor,		2SC829C				
H203	1	HT308291C	Transistor,		2SC829C				
H204	1	HT308291C	Transistor,		2SC829C				
H205	1	HT310471C	Transistor,		2SC1047C				
H206	1	HT308291C	Transistor,		2SC829C				
H207	1	HT3037210	Transistor,		2SC372				
H208	1	HT3037210	Transistor,		2SC372				
H209	1	HT3037310	Transistor,		2SC373				
H211	1	HD1000105	Diode,		1N60				
H212	1	HD1000105	Diode,		1N60				
H213	1	HD2001105	Diode,		1S1555				
H214	1	HD2001105	Diode,		1S1555				
H215	1	HD1000302	Diode,		20A90M				
H216	1	HD1000302	Diode,		20A90M				
H217	1	HD1000105	Diode,		1N60				
H218	1	HD1000105	Diode,		1N60				
F201	1	FF1107005	Ceramic Cap.,		SFE 10.7MHz				
F202	1	FF1107005	Ceramic Cap.,		SFE 10.7MHz				
L201	1	LI1018802	IFT,		FM DET				
L202	1	LI1015602	IFT,		FM				
J201	14	YP1000113	Plug						
J214									
P300	1	YD2915103	P300 MPX. BOARD						
	1	ZZ2974103	P.W. Board Assembly						
P308	4	293311802	Spacer						
R301	1	RT0522114	Resistor,	220Ω	±5%	¼W			
R302	1	RT0556314	Resistor,	56kΩ	±5%	¼W			
R303	1	RA0103025	Trimming Resistor,	10kΩ					
R304	1	RA0472005	Trimming Resistor,	4.7kΩ	B				
R305	1	RT0516314	Resistor,	16kΩ	±5%	¼W			
R306	1	RT0510214	Resistor,	1kΩ	±5%	¼W			
R307	1	RT0522414	Resistor,	220kΩ	±5%	¼W			
R308	1	RT0510214	Resistor,	1kΩ	±5%	¼W			
R309	1	RT0539214	Resistor,	3.9kΩ	±5%	¼W			
R310	1	RT0539214	Resistor,	3.9kΩ	±5%	¼W			
R311	1	RT0510014	Resistor,	10Ω	±5%	¼W			
R312	1	RT0510214	Resistor,	1kΩ	±5%	¼W			
R313	1	RT0522414	Resistor,	220kΩ	±5%	¼W			
R314	1	RT0530314	Resistor,	30kΩ	±5%	¼W			

REF DESIG.	Q'TY	PART NO.	DESCRIPTION			
R315	1	RT0530314	Resistor,	30kΩ	±5%	¼W
R316	1	RT0515514	Resistor,	1.5MΩ	±5%	¼W
R317	1	RT0515514	Resistor,	1.5MΩ	±5%	¼W
R318	1	RT0510414	Resistor,	100kΩ	±5%	¼W
R319	1	RT0510414	Resistor,	100kΩ	±5%	¼W
R320	1	RT0522314	Resistor,	22kΩ	±5%	¼W
R321	1	RT0522314	Resistor,	22kΩ	±5%	¼W
R322	1	RT0568114	Resistor,	680Ω	±5%	¼W
R323	1	RT0568114	Resistor,	680Ω	±5%	¼W
R324	1	RT0510114	Resistor,	100Ω	±5%	¼W
R325	1	RT0510114	Resistor,	100Ω	±5%	¼W
R326	1	RT0582214	Resistor,	8.2kΩ	±5%	¼W
R327	1	RT0582214	Resistor,	8.2kΩ	±5%	¼W
R328	1	RT0556114	Resistor,	560Ω	±5%	¼W
R329	1	RT0556114	Resistor,	560Ω	±5%	¼W
R330	1	RT0522414	Resistor,	220kΩ	±5%	¼W
R331	1	RT0522414	Resistor,	220kΩ	±5%	¼W
R332	1	RT0515214	Resistor,	1.5kΩ	±5%	¼W
R333	1	RT0522414	Resistor,	220kΩ	±5%	¼W
R334	1	RT0522414	Resistor,	220kΩ	±5%	¼W
R335	1	RT0527214	Resistor,	2.7kΩ	±5%	¼W
R336	1	RC0000012	Resistor,	0Ω		¼W
C301	1	EA1060169	Electrolytic Cap.,	10μF		16V
C302	1	DF1747301	Film Cap.,	0.047μF	±20%	
C303	1	DF5547101	Film Cap.,	470pF	±5%	
C304	1	DF1622205	Film Cap.,	2200pF	±10%	
C305	1	EQ4740501	Electrolytic Cap.,	0.47μF	±20%	35V
C306	1	EQ2240501	Electrolytic Cap.,	0.22μF	±20%	35V
C307	1	EQ2240501	Electrolytic Cap.,	0.22μF	±20%	35V
C308	1	EA2270169	Electrolytic Cap.,	220μF		16V
C309	1	DF1615205	Film Cap.,	1500pF	±10%	
C310	1	DF1615205	Film Cap.,	1500pF	±10%	
C311	1	DD1536101	Ceramic Cap.,	360pF	±5%	
C312	1	DD1536101	Ceramic Cap.,	360pF	±5%	
C313	1	DF1633205	Film Cap.,	3300pF	±10%	
C314	1	DF1633205	Film Cap.,	3300pF	±10%	
C315	1	DF1515205	Film Cap.,	1500pF	±5%	
C316	1	DF1515205	Film Cap.,	1500pF	±5%	
C317	1	DF1622205	Film Cap.,	2200pF	±10%	
C318	1	DF1622205	Film Cap.,	2200pF	±10%	
C319	1	DF1522205	Film Cap.,	2200pF	±5%	
C320	1	DF1522205	Film Cap.,	2200pF	±5%	
C321	1	EV2240351	Electrolytic Cap.,	0.22μF	±20%	35V
C322	1	EV2240351	Electrolytic Cap.,	0.22μF	±20%	35V
C323	1	EV1050352	Electrolytic Cap.,	1μF	±20%	35V
C324	1	EV1050352	Electrolytic Cap.,	1μF	±20%	35V
C325	1	EA2270359	Electrolytic Cap.,	220μF		35V
H301	1	HC1000401	IC,			
H302	1	HT3037210	Transistor,	2SC37?		
H303	1	HT3037210	Transistor,	2SC37?		
H304	1	HT313272A	Transistor,	2SC13? S or T		
H305	1	HT313272A	Transistor,	2SC13? S or T		
H306	1	HT108422A	Transistor,	2SA84? GR or BL		
H307	1	HT108422A	Transistor,	2SA84? GR or BL		
L301	1	LS1001304	MPX Coil,	56mH		
L302	1	LS1001304	MPX Coil,	56mH		
L303	1	LS1001305	MPX Coil,	43mH		

REF DESIG.	Q'TY	PART NO.	DESCRIPTION				
L304	1	LS1001305	MPX Coil,	43mH			
J301 }	14	YP1000113	Plug				
J314							
P400	1	YD2915104	P. W. Board				
	1	ZZ2915304	P. W. Board Assembly				
P408	2	293311802	Spacer				
R401	1	RT0582314	Resistor,	82k Ω	$\pm 5\%$	$\frac{1}{4}W$	
R402	1	RT0582314	Resistor,	82k Ω	$\pm 5\%$	$\frac{1}{4}W$	
R403	1	RT0547114	Resistor,	470 Ω	$\pm 5\%$	$\frac{1}{4}W$	
R404	1	RT0547114	Resistor,	470 Ω	$\pm 5\%$	$\frac{1}{4}W$	
R405	1	RN05394					
R406	1	RN05394					
R407	1	RT0522314	Resistor,	22k Ω	$\pm 5\%$	$\frac{1}{4}W$	
R408	1	RT0522314	Resistor,	22k Ω	$\pm 5\%$	$\frac{1}{4}W$	
R409	1	RT0582114	Resistor,	820 Ω	$\pm 5\%$	$\frac{1}{4}W$	
R410	1	RT0582114	Resistor,	820 Ω	$\pm 5\%$	$\frac{1}{4}W$	
R411	1	RN0510414	Resistor,	100k Ω	$\pm 5\%$	$\frac{1}{4}W$	
R412	1	RN0510414	Resistor,	100k Ω	$\pm 5\%$	$\frac{1}{4}W$	
R413	1	RT0533314	Resistor,	33k Ω	$\pm 5\%$	$\frac{1}{4}W$	
R414	1	RT0533314	Resistor,	33k Ω	$\pm 5\%$	$\frac{1}{4}W$	
R415	1	RT0556214	Resistor,	5.6k Ω	$\pm 5\%$	$\frac{1}{4}W$	
R416	1	RT0556214	Resistor,	5.6k Ω	$\pm 5\%$	$\frac{1}{4}W$	
R417	1	RT0518214	Resistor,	1.8k Ω	$\pm 5\%$	$\frac{1}{4}W$	
R418	1	RT0518214	Resistor,	1.8k Ω	$\pm 5\%$	$\frac{1}{4}W$	
R419	1	RT0547214	Resistor,	4.7k Ω	$\pm 5\%$	$\frac{1}{4}W$	
R420	1	RT0547214	Resistor,	4.7k Ω	$\pm 5\%$	$\frac{1}{4}W$	
R421	1	RT0522414	Resistor,	220k Ω	$\pm 5\%$	$\frac{1}{4}W$	
R422	1	RT0522414	Resistor,	220k Ω	$\pm 5\%$	$\frac{1}{4}W$	
R423	1	RT0556314	Resistor,	56k Ω	$\pm 5\%$	$\frac{1}{4}W$	
R424	1	RT0556314	Resistor,	56k Ω	$\pm 5\%$	$\frac{1}{4}W$	
R425	1	RT0533214	Resistor,	3.3k Ω	$\pm 5\%$	$\frac{1}{4}W$	
R426	1	RT0533214	Resistor,	3.3k Ω	$\pm 5\%$	$\frac{1}{4}W$	
R427	1	RN0582414	Resistor,	820k Ω	$\pm 5\%$	$\frac{1}{4}W$	
R428	1	RN0582414	Resistor,	820k Ω	$\pm 5\%$	$\frac{1}{4}W$	
R429	1	RT0510114	Resistor,	100 Ω	$\pm 5\%$	$\frac{1}{4}W$	
C401	1	EV2250256	Electrolytic Cap.,	22 μF	25V $\pm 20\%$		
C402	1	EV2250256	Electrolytic Cap.,	22 μF	25V $\pm 20\%$		
C403	1	DD1520101	Ceramic Cap.,	200pF	50V $\pm 10\%$		
C404	1	DD1520101	Ceramic Cap.,	200pF	50V $\pm 10\%$		
C405	1	DD1610101	Ceramic Cap.,	100pF	50V $\pm 10\%$		
C406	1	DD1610101	Ceramic Cap.,	100pF	50V $\pm 10\%$		
C407	1	EE2260251	Electrolytic Cap.,	22 μF	25V $\pm 20\%$		
C408	1	EE2260251	Electrolytic Cap.,	22 μF	25V $\pm 20\%$		
C409	1	DD1630001	Ceramic Cap.,	30pF	50V $\pm 10\%$		
C410	1	DD1630001	Ceramic Cap.,	30pF	50V $\pm 10\%$		
C411	1	EA4760169	Electrolytic Cap.,	47 μF	16V $\pm 10\%$		
C412	1	EA4760169	Electrolytic Cap.,	47 μF	16V $\pm 10\%$		
C413	1	DD1610101	Ceramic Cap.,	100pF	50V $\pm 10\%$		
C414	1	DD1610101	Ceramic Cap.,	100pF	50V $\pm 10\%$		
C415	1	DF1747401	Film Cap.,	0.47 μF	50V $\pm 20\%$		
C416	1	DF1747401	Film Cap.,	0.47 μF	50V $\pm 20\%$		
C417	1	DF5412201	Film Cap.,	1200pF	50V $\pm 2\%$		
C418	1	DF5412201	Film Cap.,	1200pF	50V $\pm 2\%$		
C419	1	DF5547201	Film Cap.,	4700pF	50V $\pm 5\%$		
C420	1	DF5547201	Film Cap.,	4700pF	50V $\pm 5\%$		

REF DESIG.	Q'TY	PART NO.	DESCRIPTION				
C421	1	EA1070509	Electrolytic Cap.,	100 μF	50V $\pm 10\%$		
C423	1	DD1650001	Ceramic Cap.,	50pF	50V $\pm 10\%$		
C424	1	DD1650001	Ceramic Cap.,	50pF	50V $\pm 10\%$		
H401	1	HT313281T	Transistor,	2SC1328 T			
H402	1	HT313281T	Transistor,	2SC1328 T			
H403	1	HT313282A	Transistor,	2SC1328 S or T			
H404	1	HT313282A	Transistor,	2SC1328 S or T			
H405	1	HT313281T	Transistor,	2SC1328 T			
H406	1	HT313281T	Transistor,	2SC1328 T			
J401 }	7	YP1000113	Plug				
J407							
H005	1	HV0000508	Diode,	STU-3H (CY)			
P700	1	YD2958101	P. W. Board				
	1	ZZ2958301	P. W. Board Assembly				
P708	40	293311802	Spacer				
R701	1	RT0520214	Resistor,	2.0k Ω	$\pm 5\%$	$\frac{1}{4}W$	
R702	1	RT0520214	Resistor,	2.0k Ω	$\pm 5\%$	$\frac{1}{4}W$	
R703	1	RT0533314	Resistor,	33k Ω	$\pm 5\%$	$\frac{1}{4}W$	
R704	1	RT0533314	Resistor,	33k Ω	$\pm 5\%$	$\frac{1}{4}W$	
R705	1	RT0568214	Resistor,	6.8k Ω	$\pm 5\%$	$\frac{1}{4}W$	
R706	1	RT0568214	Resistor,	6.8k Ω	$\pm 5\%$	$\frac{1}{4}W$	
R707	1	RT0510214	Resistor,	1k Ω	$\pm 5\%$	$\frac{1}{4}W$	
R708	1	RT0510214	Resistor,	1k Ω	$\pm 5\%$	$\frac{1}{4}W$	
R709	1	RT0510314	Resistor,	10k Ω	$\pm 5\%$	$\frac{1}{4}W$	
R710	1	RT0510314	Resistor,	10k Ω	$\pm 5\%$	$\frac{1}{4}W$	
R711	1	RA0502017	Trimming Resistor,	5k Ω	(B)		
R712	1	RA0502017	Trimming Resistor,	5k Ω	(B)		
R713	1	RT0547214	Resistor,	4.7k Ω	$\pm 5\%$	$\frac{1}{4}W$	
R714	1	RT0547214	Resistor,	4.7k Ω	$\pm 5\%$	$\frac{1}{4}W$	
R715	1	RT0518414	Resistor,	180k Ω	$\pm 5\%$	$\frac{1}{4}W$	
R716	1	RT0518414	Resistor,	180k Ω	$\pm 5\%$	$\frac{1}{4}W$	
R717	1	RT0536214	Resistor,	3.6k Ω	$\pm 5\%$	$\frac{1}{4}W$	
R718	1	RT0536214	Resistor,	3.6k Ω	$\pm 5\%$	$\frac{1}{4}W$	
R719	1	RT0533314	Resistor,	33k Ω	$\pm 5\%$	$\frac{1}{4}W$	
R720	1	RT0533314	Resistor,	33k Ω	$\pm 5\%$	$\frac{1}{4}W$	
R721	1	GF0533014	Resistor,	33 Ω	$\pm 5\%$	$\frac{1}{4}W$	
R722	1	GF0533014	Resistor,	33 Ω	$\pm 5\%$	$\frac{1}{4}W$	
R723	1	GF0522114	Resistor,	220 Ω	$\pm 5\%$	$\frac{1}{4}W$	
R724	1	GF0522114	Resistor,	220 Ω	$\pm 5\%$	$\frac{1}{4}W$	
R725	1	RT0524214	Resistor,	2.4k Ω	$\pm 5\%$	$\frac{1}{4}W$	
R726	1	RT0524214	Resistor,	2.4k Ω	$\pm 5\%$	$\frac{1}{4}W$	
R727	1	RT0547214	Resistor,	4.7k Ω	$\pm 5\%$	$\frac{1}{4}W$	
R728	1	RT0547214	Resistor,	4.7k Ω	$\pm 5\%$	$\frac{1}{4}W$	
R729	1	RT0582014	Resistor,	82 Ω	$\pm 5\%$	$\frac{1}{4}W$	
R730	1	RT0582014	Resistor,	82 Ω	$\pm 5\%$	$\frac{1}{4}W$	
R731	1	HH0000303	Thermister,	SDT-04			
R732	1	HH0000303	Thermister,	SDT-04			
R733	1	RA0301002	Trimming Resistor,	300 Ω	(B)		
R734	1	RA0301002	Trimming Resistor,	300 Ω	(B)		
R735	1	RT0568114	Resistor,	680 Ω	$\pm 5\%$	$\frac{1}{4}W$	
R736	1	RT0568114	Resistor,	680 Ω	$\pm 5\%$	$\frac{1}{4}W$	
R737	1	GF0591014	Resistor,	91 Ω	$\pm 5\%$	$\frac{1}{4}W$	
R738	1	GF0591014	Resistor,	91 Ω	$\pm 5\%$	$\frac{1}{4}W$	

REF DESIG.	Q'TY	PART NO.	DESCRIPTION				REF DESIG.	Q'TY	PART NO.	DESCRIPTION			
R739	1	GF0510114	Resistor,	100Ω	±5%	¼W	C721	1	EA4760169	Electrolytic Cap.,	47μF	16V ^{+10%} _{-10%}	
R740	1	GF0510114	Resistor,	100Ω	±5%	¼W	C722	1	EA3370109	Electrolytic Cap.,	330μF	10V ^{+10%} _{-10%}	
R741	1	GF0518214	Resistor,	1.8kΩ	±5%	¼W	J701						
R742	1	GF0518214	Resistor,	1.8kΩ	±5%	¼W	J727	27	YP1000113	Plug			
R743	1	GF0591114	Resistor,	910Ω	±5%	¼W							
R744	1	GF0591114	Resistor,	910Ω	±5%	¼W	H701	1	HT107221T	Transistor,	2SA722 (T, U)		
R745	1	GF0518214	Resistor,	1.8kΩ	±5%	¼W	H702	1	HT107221T	Transistor,	2SA722 (T, U)		
R746	1	GF0518214	Resistor,	1.8kΩ	±5%	¼W	H703	1	HT107221T	Transistor,	2SA722 (T, U)		
R747	1	GF0510114	Resistor,	100Ω	±5%	¼W	H704	1	HT107221T	Transistor,	2SA722 (T, U)		
R748	1	GF0510114	Resistor,	100Ω	±5%	¼W	H705	1	HV0000312	Diode,	MV-13		
R749	1	GF0510114	Resistor,	100Ω	±5%	¼W	H706	1	HV0000312	Diode,	MV-13		
R750	1	GF0510114	Resistor,	100Ω	±5%	¼W	H707	1	HT315092B	Transistor,	2SC1509 (Q, R)		
R751	1	GF0510014	Resistor,	10Ω	±5%	¼W	H708	1	HT315092B	Transistor,	2SC1509 (Q, R)		
R752	1	GF0510014	Resistor,	10Ω	±5%	¼W	H709	1	HT309451Q	Transistor,	2SC945 Q		
R753	1	GF0522112	Resistor,	220Ω	±5%	¼W	H710	1	HT309451Q	Transistor,	2SC945 Q		
R754	1	GF0522112	Resistor,	220Ω	±5%	¼W	H711	1	HT107331Q	Transistor,	2SA733 Q		
R755	1	GF0522112	Resistor,	220Ω	±5%	¼W	H712	1	HT107331Q	Transistor,	2SA733 Q		
R756	1	GF0522112	Resistor,	220Ω	±5%	¼W	H713	1	HD2000221	Diode,	1S2472 (G, R)		
R757	1	GF0510014	Resistor,	10Ω	±5%	¼W	H714	1	HD2000221	Diode,	1S2472 (G, R)		
R758	1	GF0510014	Resistor,	10Ω	±5%	¼W	H715	1	HD2000221	Diode,	1S2472 (G, R)		
R759	1	GW1047202	Resistor,	0.47Ω	±10%	2W	H716	1	HD2000221	Diode,	1S2472 (G, R)		
R760	1	GW1047202	Resistor,	0.47Ω	±10%	2W	H717	1	HD2000221	Diode,	1S2472 (G, R)		
R761	1	GW1047202	Resistor,	0.47Ω	±10%	2W	H718	1	HD2000221	Diode,	1S2472 (G, R)		
R762	1	GW1047202	Resistor,	0.47Ω	±10%	2W	H719	1	HD2000221	Diode,	1S2472 (G, R)		
R763	1	GJ0510002	Resistor,	10Ω	±5%	2W	H720	1	HD2000221	Diode,	1S2472 (G, R)		
R764	1	GJ0510002	Resistor,	10Ω	±5%	2W	H721	1	HT315671Q	Transistor,	2SC1567 (Q, R)		
R765	1	GF0522014	Resistor,	22Ω	±5%	¼W	H722	1	HT315671Q	Transistor,	2SC1567 (Q, R)		
R766	1	GF0510212	Resistor,	1kΩ	±5%	¼W	H723	1	HT107941Q	Transistor,	2SA794 (Q, R)		
R767	1	RC1056212	Resistor,	5.6kΩ	±10%	¼W	H724	1	HT107941Q	Transistor,	2SA794 (Q, R)		
R768	1	RC1056212	Resistor,	5.6kΩ	±10%	¼W	H725	1	HD3003009	Diode,	WZ-177		
R769	1	RT0518314	Resistor,	18kΩ	±5%	¼W	H726	1	HT309452A	Transistor,	2SC945 (Q, R)		
R770	1	RT0512314	Resistor,	12kΩ	±5%	¼W	H727	1	HT309452A	Transistor,	2SC945 (Q, R)		
R771	1	RT0568214	Resistor,	6.8kΩ	±5%	¼W	H728	1	HT313182C	Transistor,	2SC1318 (R, S)		
R772	1	GF0515112	Resistor,	150Ω	±5%	½W	H729	1	HD2000321	Diode,	1S2471 (B L)		
R773	1	RT0518414	Resistor,	180kΩ	±5%	¼W	H730	1	HV0000312	Diode,	MV-13		
R774	1	RT0539314	Resistor,	39kΩ	±5%	¼W	H731	1	HV0000312	Diode,	MV-13		
R775	1	RC1002212	Resistor,	2.2Ω	±10%	¼W	H733	1	HD2000501	Diode,	W06B		
R776	1	RC1002212	Resistor,	2.2Ω	±10%	¼W	H734	1	HD2000501	Diode,	W06B		
R777	1	RC0000012	Resistor,	0Ω			H735	1	HD2000501	Diode,	W06B		
R778	1	RC0000012	Resistor,	0Ω			H736	1	HD2000501	Diode,	W06B		
R779	1	RC0000012	Resistor,	0Ω			L701	1	LC2272001	Coil,	2.7μF		
C701	1	EE3350251	Electrolytic Cap.,	3.3μF	25V ±20%		L702	1	LC2272001	Coil,	2.7μF		
C702	1	EE3350251	Electrolytic Cap.,	3.3μF	25V ±20%		L703	1	LY2024009	Relay,	MY-2Z-02	24V	
C703	1	DD1620101	Ceramic Cap.,	200pF	50V								
C704	1	DD1620101	Ceramic Cap.,	200pF	50V								
C705	1	EE4760162	Electrolytic Cap.,	47μF	16V ±20%		P800	1	YD2915106	P. W. Board			
C706	1	EE4760162	Electrolytic Cap.,	47μF	16V ±20%			1	ZZ2915306	P. W. Board Assembly			
C707	1	DD1003050	Ceramic Cap.,	3pF	500V		P808	8	293311802	Spacer			
C708	1	DD1003050	Ceramic Cap.,	3pF	500V		R801	1	GJ0522002	Resistor,	22Ω	±5%	2W
C709	1	EA4760509	Electrolytic Cap.,	47μF	50V ^{+10%} _{-10%}		R802	1	GF0510014	Resistor,	10Ω	±5%	¼W
C710	1	EA4760509	Electrolytic Cap.,	47μF	50V ^{+10%} _{-10%}		R803	1	RT0515214	Resistor,	1.5kΩ	±5%	¼W
C715	1	DK1610150	Ceramic Cap.,	100pF	±10%		R804	1	RT0515214	Resistor,	1.5kΩ	±5%	¼W
C716	1	DK1610150	Ceramic Cap.,	100pF	±10%		R805	1	GJ0533102	Resistor,	330Ω	±5%	2W
C717	1	DF1710452	Film Cap.,	0.1μF	200V		R806	1	RT0536314	Resistor,	36kΩ	±5%	¼W
C718	1	DF1710452	Film Cap.,	0.1μF	200V		R807	1	RT0527314	Resistor,	27kΩ	±5%	¼W
C719	1	EA2270509	Electrolytic Cap.,	220μF	50V ^{+10%} _{-10%}		R808	1	RA0502013	Trimming Resistor,	5kΩ	(B)	
C720	1	EA1060359	Electrolytic Cap.,	10μF	35V ^{+10%} _{-10%}		C801	1	DK1810351	Ceramic Cap.,	0.01μF	±10%	500V
							C802	1	DK1810351	Ceramic Cap.,	0.01μF	±10%	500V
							C803	1	EA4770631	Electrolytic Cap.,	470μF	63V	
							C804	1	EA4770509	Electrolytic Cap.,	470μF	50V	
							C805	1	EA1070509	Electrolytic Cap.,	100μF	50V	

REF DESIG.	Q'TY	PART NO.	DESCRIPTION
C806	1	DF1747305	Film Cap., 0.047μF ±20% 50V
C807	1	DK1840302	Ceramic Cap., 0.04μF ±10% 50V
C808	1	EA3350509	Electrolytic Cap., 3.3μF 50V
C809	1	EA4770169	Electrolytic Cap., 470μF 16V
C810	1	EA1080109	Electrolytic Cap., 1000μF 10V
H801	1	HD2001508	Diode, SS-3R
H802	1	HD2001408	Diode, SS-3
H803	1	HD2001203	Diode, DS1323
H804	1	HD2001103	Diode, DS131 B
H805	1	HT403302A	Transistor, 2SD330 D or E
H806	1	HT309452A	Transistor, 2SC945 Q or R
H807	1	HD3002109	Diode, BZ-140 14V
H808	1	HD2000413	Diode, S1B01-02
J801	19	YP1000113	Plug
J819			
H002	1	HT106271M	Transistor, 2SA627 ML
H001	1	HT401881M	Transistor, 2SD188 ML
H004	1	HT401881M	Transistor, 2SD188 ML
H003	1	HT106271M	Transistor, 2SA627 ML
J009	1	YJ0500019	Socket, Transistor
J010	1	YJ0500019	Socket, Transistor
J011	1	YJ0500019	Socket, Transistor
J012	1	YJ0500019	Socket, Transistor
J022	1	BY0311001	Terminal
J001	1	YT0304009	Terminal, Antenna
J004	1	YT0101005	Terminal, Ground
J013	1	YT0304006	Terminal, Speaker
J014	1	YT0304006	Terminal, Speaker
J016	1	YJ0800022	Socket, Fuse Holder
J017	1	YJ0400056	Jack, AC Outlet
J018	1	YJ0400056	Jack, AC Outlet
J019	1	YT0201009	Terminal, Quad. Out
L001	1	LF1140082	Antenna Coil, LW, MW
C001	1	DK1710301	Ceramic Cap., 0.01μF ±20% 50V
C006	1	DK1710301	Ceramic Cap., 0.01μF ±20% 50V
J005	1	YT0204008	Terminal, 4P Pin-Jack
C002	1	DK1710301	Ceramic Cap., 0.01μF ±20% 50V
J006	1	YT0208006	Terminal, 8P Pin-Jack
J015	1	YJ0100098	Jack, Headphone
C005	1	DF1722380	Film Cap., 0.022μF 1000V
S002	1	SP0201015	Power Switch
M001	1	IM1104203	Meter, AM/FM Strength
M005	1	IM1104202	Meter, Center
M003	1	IN1008034	Lamp, Stereo Indicator
M004	1	IN1008007	Lamp, Meter
M006	1	IN1008007	Lamp, Meter
J002	1	YJ0800019	Socket, Lamp
J008	1	YJ0800019	Socket, Lamp
PZ01	1	YD2886016	P. W. Board
	1	ZZ2889116	P. W. Board Assembly
MZ01	1	IN1008007	Lamp
MZ02	1	IN1008007	Lamp
MZ03	1	IN1008007	Lamp
MZ04	1	IN1008007	Lamp

REF DESIG.	Q'TY	PART NO.	DESCRIPTION			
MZ05 JZ01 } JZ10 JZ11 } JZ14	1 10 4	IN1008007 YJ0800017 YP1000120	Lamp Socket Plug			
PE01	1 1	YD2915108 ZZ2958308	PE01 PRE-TONE AMP. BOARD P. W. Board P. W. Board Assembly			
PE08	2	293311802	Spacer			
RE01	1	RT0547414	Resistor,	470kΩ	±5%	¼W
RE03	1	RT0539114	Resistor,	390Ω	±5%	¼W
RE04	1	RT0539114	Resistor,	390Ω	±5%	¼W
RE05	1	RN0510514	Resistor,	1MΩ	±5%	¼W
RE06	1	RN0510514	Resistor,	1MΩ	±5%	¼W
RE07	1	RN0510414	Resistor,	100kΩ	±5%	¼W
RE08	1	RT0510314	Resistor,	10kΩ	±5%	¼W
RE09	1	RT0527314	Resistor,	27kΩ	±5%	¼W
RE10	1	RT0527314	Resistor,	27kΩ	±5%	¼W
RE11	1	RT0510214	Resistor,	1kΩ	±5%	¼W
RE12	1	RT0510214	Resistor,	1kΩ	±5%	¼W
RE13	1	RT0575214	Resistor,	7.5kΩ	±5%	¼W
RE14	1	RT0575214	Resistor,	7.5kΩ	±5%	¼W
RE15	1	RT0510214	Resistor,	1kΩ	±5%	¼W
RE16	1	RT0510214	Resistor,	1kΩ	±5%	¼W
RE17	1	RT0547414	Resistor,	470kΩ	±5%	¼W
RE18	1	RT0547414	Resistor,	470kΩ	±5%	¼W
RE19	1	RT0556214	Resistor,	5.6kΩ	±5%	¼W
RE20	1	RT0556214	Resistor,	5.6kΩ	±5%	¼W
RE21	1	RT0512314	Resistor,	12kΩ	±5%	¼W
RE22	1	RT0512314	Resistor,	12kΩ	±5%	¼W
RE23	1	RT0515414	Resistor,	150kΩ	±5%	¼W
RE24	1	RT0515414	Resistor,	150kΩ	±5%	¼W
RE25	1	RT0556214	Resistor,	5.6kΩ	±5%	¼W
RE26	1	RT0556214	Resistor,	5.6kΩ	±5%	¼W
RE27	1	RT0556214	Resistor,	5.6kΩ	±5%	¼W
RE28	1	RT0556214	Resistor,	5.6kΩ	±5%	¼W
RE29	1	RT0527314	Resistor,	27kΩ	±5%	¼W
RE30	1	RT0527314	Resistor,	27kΩ	±5%	¼W
RE31	1	RT0512314	Resistor,	12kΩ	±5%	¼W
RE32	1	RT0512314	Resistor,	12kΩ	±5%	¼W
RE33	1	RT0515314	Resistor,	15kΩ	±5%	¼W
RE34	1	RT0515314	Resistor,	15kΩ	±5%	¼W
RE35	1	RT0547414	Resistor,	470kΩ	±5%	¼W
RE36	1	RT0547414	Resistor,	470kΩ	±5%	¼W
RE37	1	RT0527314	Resistor,	27kΩ	±5%	¼W
RE38	1	RT0527314	Resistor,	27kΩ	±5%	¼W
RE39	1	RT0522514	Resistor,	2.2MΩ	±5%	¼W
RE40	1	RT0522514	Resistor,	2.2MΩ	±5%	¼W
RE41	1	RT0568314	Resistor,	68kΩ	±5%	¼W
RE42	1	RT0568314	Resistor,	68kΩ	±5%	¼W
RE43	1	RT0547314	Resistor,	47kΩ	±5%	¼W
RE44	1	RT0547314	Resistor,	47kΩ	±5%	¼W
RE45	1	RT0510314	Resistor,	10kΩ	±5%	¼W

REF DESIG.	Q'TY	PART NO.	DESCRIPTION				REF DESIG.	Q'TY	PART NO.	DESCRIPTION			
RE46	1	RT0510314	Resistor,	10kΩ	±5%	¼W	RH08	1	RT0522514	Resistor,	2.2MΩ	±5%	¼W
RE47	1	RT0522114	Resistor,	220Ω	±5%	¼W	RH09	1	RT0522514	Resistor,	2.2MΩ	±5%	¼W
RE48	1	RT0522114	Resistor,	220Ω	±5%	¼W	CH01	1	DF1633305	Film Cap.,	0.033μF	50V	±10%
RE49	1	RT0547414	Resistor,	470kΩ	±5%	¼W	CH02	1	DF1633305	Film Cap.,	0.033μF	50V	±10%
RE50	1	RT0547414	Resistor,	470kΩ	±5%	¼W	CH03	1	DF1668205	Film Cap.,	0.0068μF	50V	±10%
RE51	1	RM0104005	Variable Resistor,	100kΩ	(B) HIGH		CH04	1	DF1668205	Film Cap.,	0.0068μF	50V	±10%
RE52	1	RM0104005	Variable Resistor,	100kΩ	(B) MID		SH01	1	SP0404013	Push Switch			
RE53	1	RM0104005	Variable Resistor,	100kΩ	(B) LOW		JH01						
RE54	1	RT0582114	Resistor,	820Ω	±5%	¼W	}	17	YP1000113	Plug			
RE55	1	RC0000012	Resistor,	0Ω			JH17						
RE56	1	RC0000012	Resistor,	0Ω						PT01 MAIN-REMOTE SELECTOR BOARD			
CE01	1	DF1722405	Film Cap.,	0.22μF	50V	±20%	PT01	1	YD2915110	P. W. Board			
CE02	1	DF1722405	Film Cap.,	0.22μF	50V	±20%		1	ZZ2915310	P. W. Board Assembly			
CE03	1	EA1060359	Electrolytic Cap.,	10μF	35V ±10%		PT07	4	344411805	Spacer			
CE04	1	EA1060359	Electrolytic Cap.,	10μF	35V ±10%		RT01	1	RT0568314	Resistor,	68kΩ	±5%	¼W
CE05	1	EE4750251	Electrolytic Cap.,	4.7μF	25V	±20%	RT02	1	RT0568314	Resistor,	68kΩ	±5%	¼W
CE06	1	EE4750251	Electrolytic Cap.,	4.7μF	25V	±20%	RT03	1	RT0515314	Resistor,	15kΩ	±5%	¼W
CE07	1	DD1610101	Ceramic Cap.,	100pF	50V	±10%	RT04	1	RT0515314	Resistor,	15kΩ	±5%	¼W
CE08	1	DD1610101	Ceramic Cap.,	100pF	50V	±10%	RT05	1	GJ0533102	Resistor,	330Ω	±5%	2W
CE09	1	DF1622205	Film Cap.,	2200pF	50V	±10%	RT06	1	GJ0533102	Resistor,	330Ω	±5%	2W
CE10	1	DF1622205	Film Cap.,	2200pF	50V	±10%	RT07	1	GU0515112	Resistor,	150Ω	±5%	½W
CE11	1	DF1668205	Film Cap.,	6800pF	50V	±10%	RT08	1	GU0515112	Resistor,	150Ω	±5%	½W
CE12	1	DF1668205	Film Cap.,	6800pF	50V	±10%	CT01	1	DD1612101	Ceramic Cap.,	120pF	50V	±10%
CE13	1	DF1622305	Film Cap.,	0.022μF	50V	±10%	CT02	1	DD1612101	Ceramic Cap.,	120pF	50V	±10%
CE14	1	DF1622305	Film Cap.,	0.022μF	50V	±10%	CT03	1	DF1627305	Film Cap.,	0.027μF	50V	±10%
CE15	1	DF1622305	Film Cap.,	0.022μF	50V	±10%	CT04	1	DF1627305	Film Cap.,	0.027μF	50V	±10%
CE16	1	DF1622305	Film Cap.,	0.022μF	50V	±10%	ST01	1	SP0404011	Push Switch			
CE17	1	DF1610305	Film Cap.,	0.01μF	50V	±10%	JT01						
CE18	1	DF1610305	Film Cap.,	0.01μF	50V	±10%	}	16	YP1000120	Plug			
CE19	1	EE1050501	Electrolytic Cap.,	1μF	50V	±20%	JT16						
CE20	1	EE1050501	Electrolytic Cap.,	1μF	50V	±20%	R002	1	RM0254022	Variable Resistor,	Volume		
CE21	1	EE3350501	Electrolytic Cap.,	33μF	50V	±20%	S001	1	SR0806019	Rotary Switch,	Selector		
CE22	1	EE3350501	Electrolytic Cap.,	33μF	50V	±20%	R004	1	GF0533012	Resistor,	33Ω	±5%	½W
CE23	1	EQ1050501	Electrolytic Cap.,	1μF	50V	±30%	S002	1	SR1106001	Rotary Switch,	Selector (Tuner)		
CE24	1	EQ1050501	Electrolytic Cap.,	1μF	50V	±30%	R001	1	RS0504004	Variable Resistor,	Balance		
CE25	1	EA2270359	Electrolytic Cap.,	220μF	35V ±10%		M002	1	IN1008030	Lamp,	Pointer		
HE01	1	HT313283A	Transistor,	2SC1328 S, T, U			J003	1	YL0102003	Terminal			
HE02	1	HT313283A	Transistor,	2SC1328 S, T, U			L004	1	LB3007526	Balun Coil			
HE03	1	HT107222A	Transistor,	2SA722 S, T			J007	1	YL0105002	Terminal			
HE04	1	HT107222A	Transistor,	2SA722 S, T			W001	1	YC0190003	AC Cord			
HE05	1	HT313283A	Transistor,	2SC1328 S, T, U			C003	1	EC6880352	Electrolytic Cap.,	6800μF	35V	
HE06	1	HT313283A	Transistor,	2SC1328 S, T, U			C004	1	EC6880352	Electrolytic Cap.,	6800μF	35V	
HE07	1	HT107222A	Transistor,	2SA722 S, T			L005	1	TS1960219	Power Transformer			
HE08	1	HT107222A	Transistor,	2SA722 S, T									
JE01							F801	1	FS1010090	Fuse,	SGA, 1A, 20 m/m		
}							F802	1	FS1020090	Fuse,	SGA, 2A, 20 m/m		
JE08	8	YP1000113	Plug				F001	1	FS1015090	Fuse,	SGA, 1.5A, 20 m/m		
			PH01 FILTER BOARD										
PH01	1	YD2915005	P. W. Board										
	1	ZZ2974105	P. W. Board Assembly										
RH01	1	RT0510214	Resistor,	1kΩ	±5%	¼W							
RH02	1	RT0510214	Resistor,	1kΩ	±5%	¼W							
RH04	1	RT0510514	Resistor,	1MΩ	±5%	¼W							
RH05	1	RT0510514	Resistor,	1MΩ	±5%	¼W							
RH06	1	RT0547214	Resistor,	4.7kΩ	±5%	¼W							
RH07	1	RT0547214	Resistor,	4.7kΩ	±5%	¼W							

TECHNICAL SPECIFICATIONS

AUDIO CIRCUITS:

Rated Power Output (Continuous Average per Channel, All Channels Driven)

Power Output	25 Watts 4 Ohms
	25 Watts 8 Ohms
	12.5 Watts 16 Ohms
Power Band	20 Hz to 20 kHz
THD	0.5%
High-level hum and noise (ref. 20 Watts at 8 ohms)	-77 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	0.9%
Distortion decreases as output is lowered	
Total Har	
Distc	
Power Bandwidth (IHF) for 0.5% THD	10 Hz to 50,000 Hz
Damping Factor (ref. 8 ohms)	Greater than 45
Frequency Response	
Through phono	2.0 dB
Input Sensitivity (for 15 Watts at 8 ohms)	
High-level	180 mV
Phono (1,000 Hz)	1.8 mV
Input Impedance	
High-level	80,000 Ohms
Phono	47,000 Ohms
Channel Separation 20 Hz to 10,000 Hz	30 dB Minimum

FM SECTIONS:

IHF Usable Sensitivity	2.5 μ V
(DIN) Sensitivity	2.2 μ V
Selectivity	50 dB
Noise Quieting	-70 dB at 1,000 μ V
Total Harmonic Distortion, 400 Hz, 100% Mod	0.3% Maximum
Frequency Response (ref. 75 μ sec. de-emphasis)	± 1 dB 50 Hz to 15 kHz
Stereo Separation	1,000 Hz 40 dB
Sub Carrier (38 kHz) Suppression	60 dB

AM (LW, MW) SECTION:

LW Sensitivity	100 μ V
MW Sensitivity	20 μ V
LW Image Rejection	Greater than 50 dB
MW Image Rejection	Greater than 60 dB

GENERAL:

Power Requirements	220V ~ 50 Hz
At rated output, both channels operating	130 Watts
Idling Power (Volume Control at zero)	30 Watts
Dimensions	
Panel Width	43.4 cm (17-3/8 Inches)
Panel Height	13.4 cm (5-3/8 Inches)
Depth	35 cm (14 Inches)
Weight	
Unit alone	26.5 lbs
Packed for shipment	34.2 lbs

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

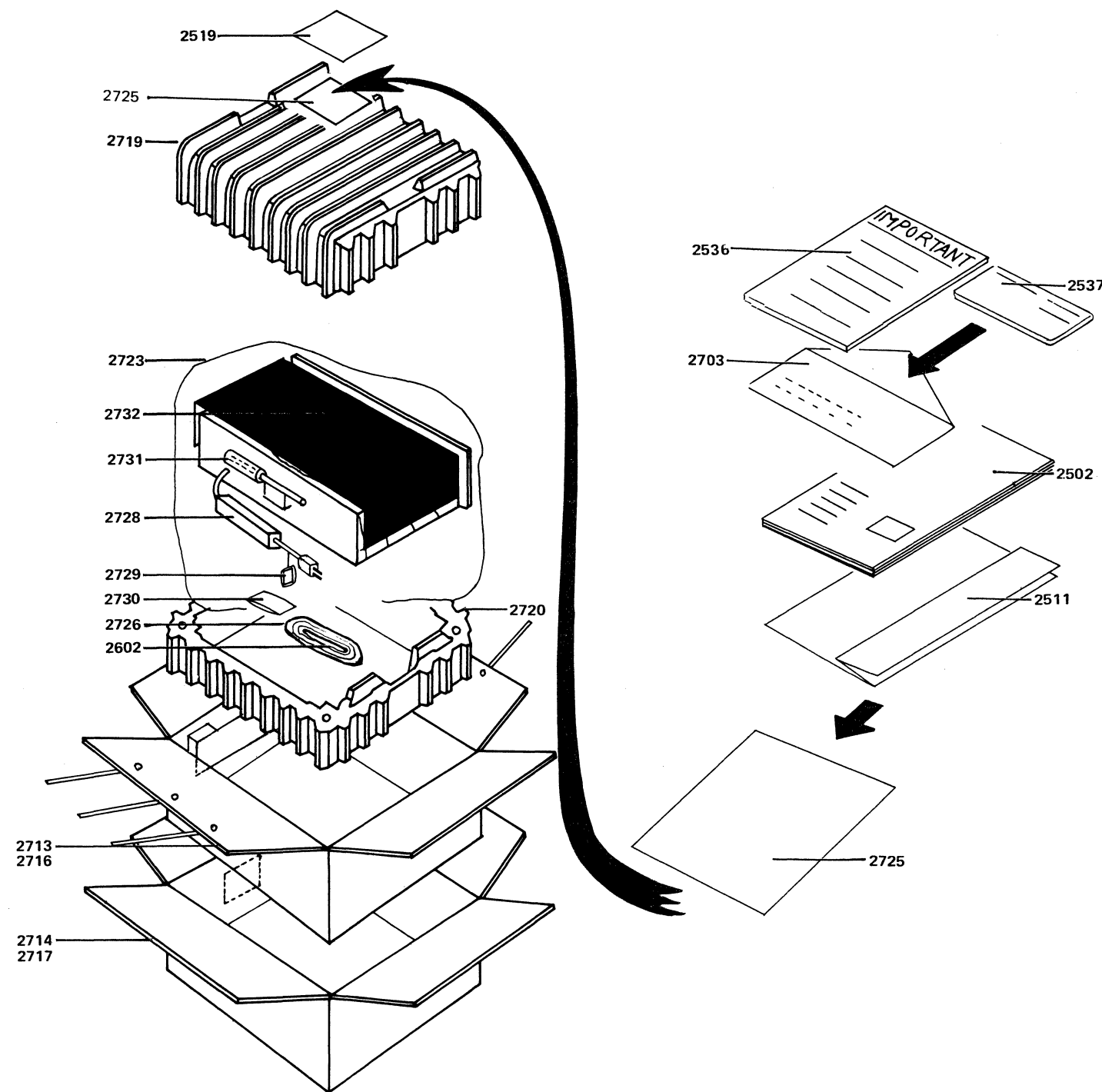


Figure 29. Packing

VOLTAGE CONVERSION

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

To convert the unit to the required voltage, set the plug as illustrated so that you can adjust the voltage as required.

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

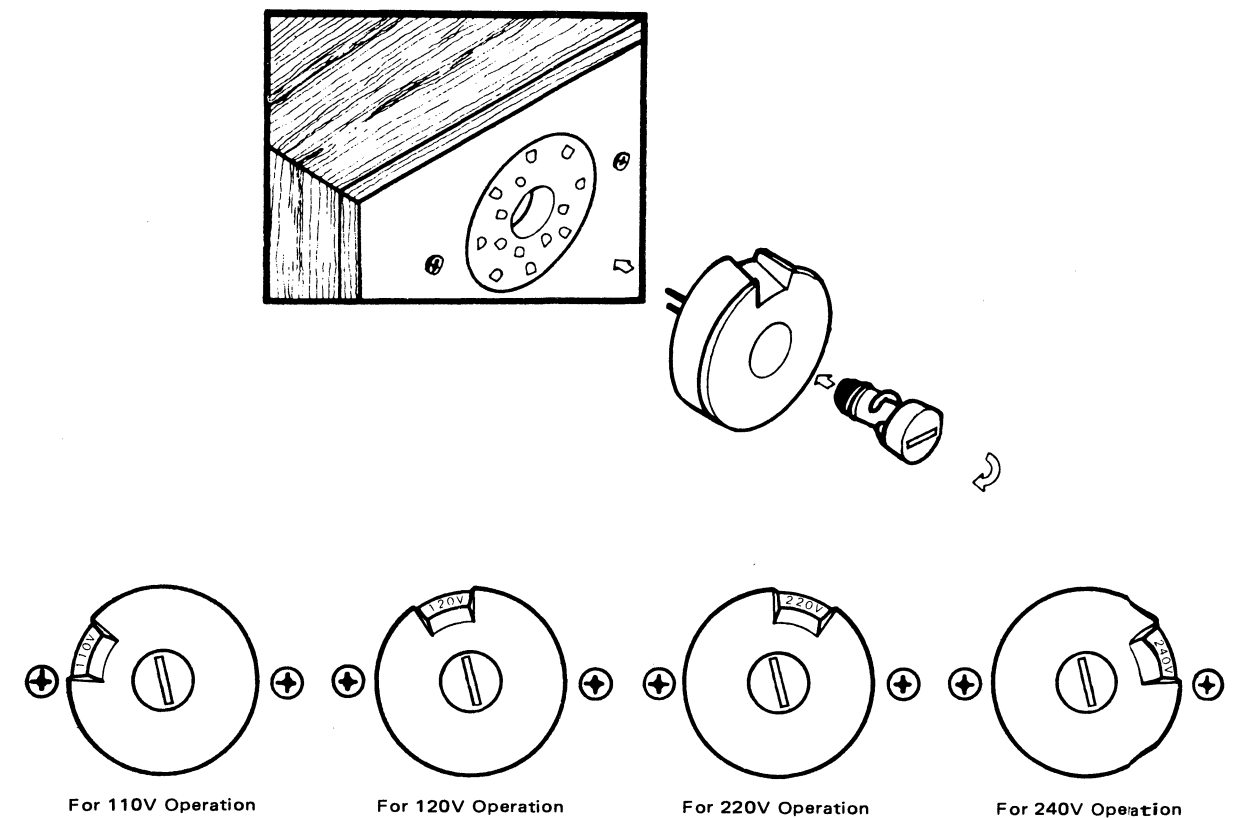


Figure 30. Voltage Conversion Chart

Instruction for the use in the range other than specified in FTZ codes

Achtung für die Leute, die in dem Gebiet wohnen,
wo die FTZ-Bestimmungen vorherrschend sind.

Sollte das Gerät auch für Frequenzen ausserhalb des in den FTZ-Bestimmungen angegebenen Bereiches empfangsbereit sein, bitten wir, den Bereich durch Nachstellen des Kernes in der Oszillatorschule (in der Abbildung mit "FTZ" gekennzeichnet) so zu korrigieren, dass er den Bestimmungen entspricht.



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MARANTZ CO., INC. · P. O. BOX 577 · CHATSWORTH, CALIFORNIA · 91311



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