



SERVICE  
MANUAL **2238**



**marantz**

model 2238

*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 2238 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 usually be obtained through local suppliers.

## 1. SERVICE NOTES

As can be seen from the circuit diagram, the chassis of Model 2238 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 . . . . . mounted on P.W. Board P100
2. Tuner . . . . . mounted on P.W. Board P200
3. Phono Equalizer Amp. . . . . mounted on P.W. Board P400
4. Main Amp. . . . . mounted on P.W. Board P700
5. Power Supply . . . . . mounted on P.W. Board P800
6. Pre & Tone Amp. . . . . mounted on P.W. Board PE01
7. Mono, Hi Filter, Tape 1 Monitor &  
FM 25 $\mu$ S Switches . . . . . mounted on P.W. Board PH01
8. Speaker Switch . . . . . mounted on P.W. Board PT01
9. Dial Lamp . . . . . mounted on P.W. Board PZ01

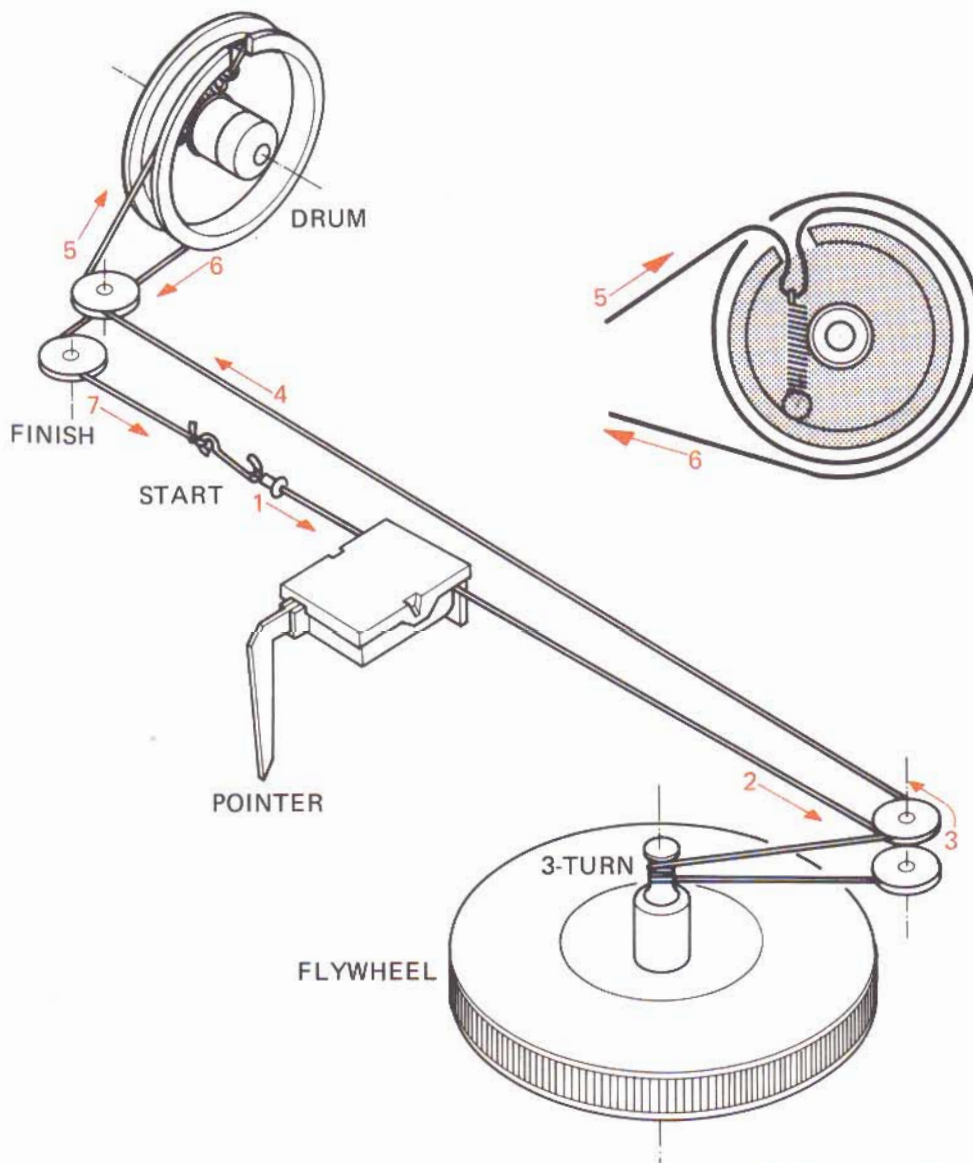


Figure 1. Dial Stringing

## 2. TEST EQUIPMENT REQUIRED FOR SERVICING

This table lists the test equipment required for servicing the Model 2238 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<br>MPX Signal Generator        | Sound Technology<br>Model 1000A                                    | Signal source for FM alignment<br>Stereo separation alignment and trouble shooting            |
| Distortion Analyzer<br>Audio Oscillator<br>AC VTVM | Sound Technology<br>Model 1700A                                    | Distortion measurements<br>Sinewave and squarewave signal source<br>Voltage measurements (AC) |
| Oscilloscope                                       | Tektronix Model T932<br>Philips Model 3232                         | Waveform analysis and trouble shooting and ASO alignment                                      |
| Frequency Counter                                  | Fluke Model 1900A  | MPX Oscillator adjustment (VCO)   |
| Circuit Tester                                     |  | Trouble shooting  |
| DC VTVM  | Fluke Model 8000 "Digital" Simpson<br>Model 313, Triplet Model 801 | Voltage measurements (DC)   |
| AC Wattmeter                                       | Simpson Model 1379   | Monitors primary power to amplifier   |
| AC Ammeter   | Commercial Grade (1-10A)   | Monitors amplifier output under short circuit condition                                       |
| Line Voltmeter                                     | Simpson Model 1359   | Monitors potential of primary power to amplifier  |
| Variable Autotransformer                           | Superior Electronic Co.,<br>Powerstat Model 116B-10A               | Adjusts level of primary power to amplifier   |
| Shorting Plug                                      | Use phono plug with 600-ohm<br>across center pin and shell         | Shorts amplifier input to eliminate noise pickup  |
| Output Load (8 ohms,<br>0.5%, 100W)                | Commercial Grade   | Provides 8-ohm load for amplifier output termination  |
| Output Load (4 ohms,<br>0.5%, 100W)                | Commercial Grade   | Provides 4-ohm load for amplifier output termination  |

## 3. AM ALIGNMENT PROCEDURE

### 3.1 AM IF ALIGNMENT

1. Connect a sweep generator to the L153 and an alignment scope to the resistor R162 (out side).
2. Rotate each core of IF transformers L155 and L156 for the maximum height and flat top symmetrical response.

### 3.2 AM FREQUENCY RANGE AND TRACKING ALIGNMENT

1. Set AM signal generator to 515 kHz. Turn the tuning capacitor fully closed (place the tuning pointer at the low end) and adjust the oscillator coil L154 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 on the oscillator tuning capacitor 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 AM ferrite-rod antenna L001 for maximum output.

5. Set the generator to 1400 kHz and tune the receiver to the same frequency and adjust the trimming capacitor on the antenna tuning capacitor 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

### 4.1 FM FREQUENCY RANGE AND TRACKING ALIGNMENT

1. Connect an FM signal generator to the FM antenna terminals and an oscilloscope and an audio distortion analyzer to the TAPE OUT jacks on the rear panel.
2. Set the generator to 87.4 MHz and provide about 3 to 5  $\mu$ V. Place the tuning pointer at the low frequency end by rotating the tuning knob and adjust the pitch of oscillator coil L107 to obtain maximum audio output.



3. Set the generator to 109 MHz and provide about 3 to 5  $\mu\text{V}$ . Rotate the tuning knob and place the tuning pointer at the high frequency end and adjust the trimming capacitor C121 for maximum output.
4. Repeat steps 2 and 3 until no further adjustment is necessary.
5. Set the generator 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 pitch of antenna coil L102 and RF coil L104 for maximum output.
6. Set the generator 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 maximum output.
7. Repeat steps 5 and 6 until no further adjustment is necessary.
8. Adjust the primary core (lower core) of discriminator transformer L202 so that the center tuning meter pointer indicates its center at no signal applied. Set the FM signal generator to 98 MHz and increase its output level 1  $\text{K}\mu\text{V}$  and tune the receiver to the same frequency so that the center tuning meter pointer indicates its center. Adjust the secondary core (upper core) of L202 for minimum distortion.

#### 4.2 STEREO SEPARATION ALIGNMENT

1. Set the FM signal generator to provide 1  $\text{K}\mu\text{V}$  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 generator, connect a frequency counter to test point J229 and adjust R301 so that the frequency counter may precisely read 76 kHz.
2. Modulate the generator with stereo composite signal consisting of only L or R channel (of course a pilot signal must be included).
3. Adjust the trimming resistor R317 for maximum and same separation in both channels.

#### 4.3 MUTING THRESHOLD ADJUSTMENT

1. Set the FM signal generator output to provide 12.5  $\mu\text{V}$  (IHF) at 98 MHz and tune receiver to the same frequency. Adjust the trimming resistor R212 for the threshold level of 12.5  $\mu\text{V}$ . (During this adjustment turn the FM MUTING pushswitch "on".)

#### 4.4 FM DOLBY LEVEL ADJUSTMENT

1. Set the FM signal generator to provide a 400 Hz, 50% modulated 98 MHz mono signal, at 1  $\text{K}\mu\text{V}$  output. Precisely tune the receiver to 98 MHz.
2. Depress the FM 25  $\mu\text{S}$  pushswitch, and adjust R215 until the outputs of both channels are 580 mV.

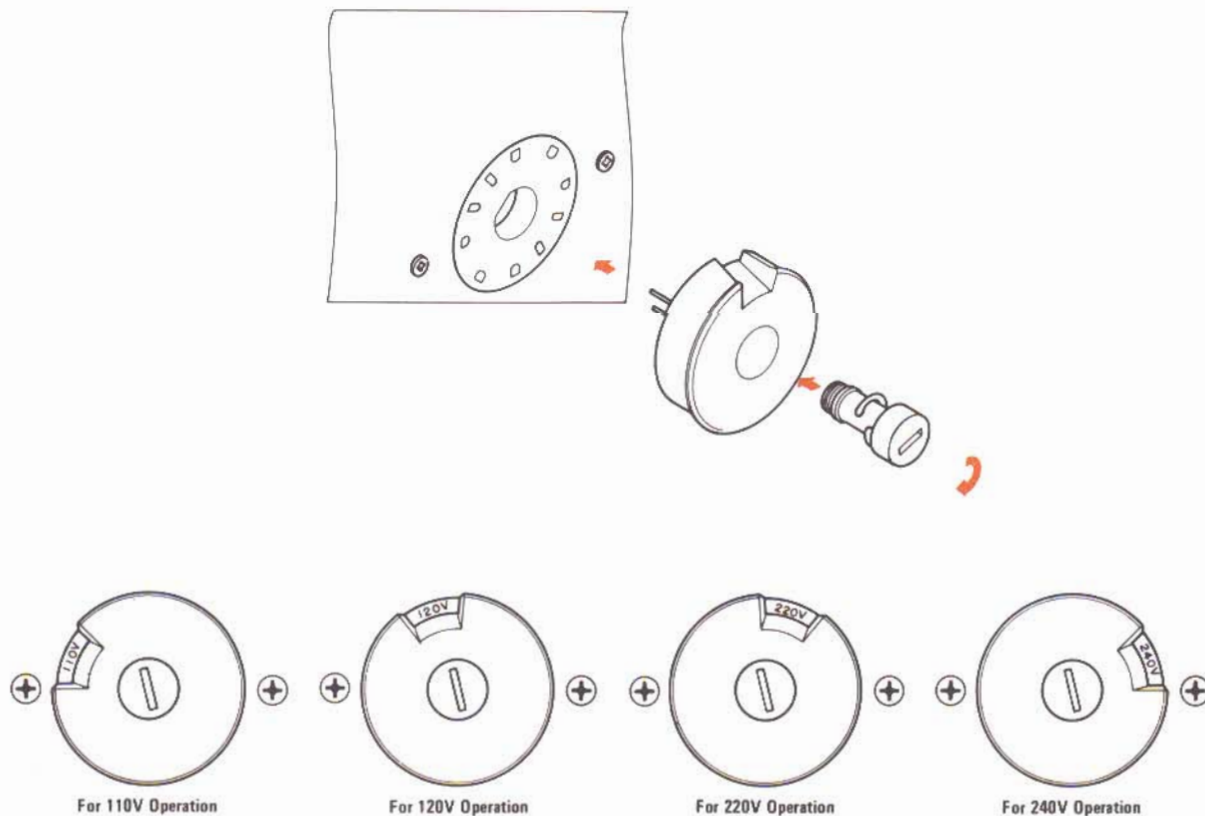


Figure 2. Voltage Conversion Chart

## 5. POWER AMPLIFIER ADJUSTMENT

Connect a VTVM between J714(+) and J716(-) and adjust the trimming resistor R733 until the VTVM reads 14 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 J715(+) and J717(-) 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.

## 6. POWER SUPPLY ADJUSTMENT

Connect a VTVM between J805(+) and J814(-) and adjust R808 until the VTVM reads 35.0 V under no signal condition.

## 7. VOLTAGE CONVERSION FOR EUROPEAN MODEL

The European version of the Model 2226 is equipped with a universal power transformer that may be adjusted to operate at 110V, 120V, 220V, or 240V AC at 50 to 60 Hz. To convert the unit to a different power source voltage, reposition conversion plug as shown in Figure 2.

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

## FTZ REGULATION

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

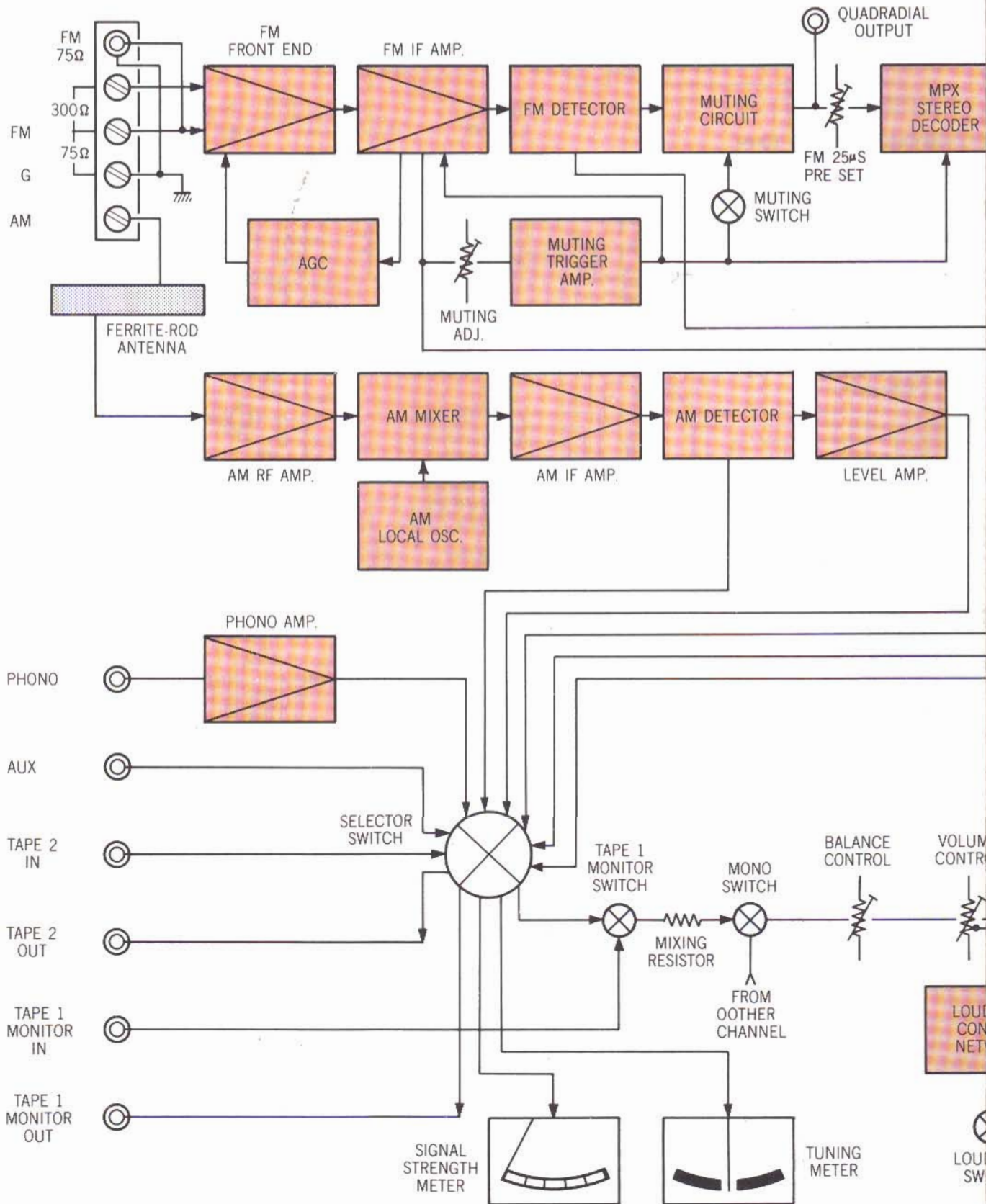
**Achtung für die Leute, die in dem Gebiet wohnen, wo die FTZ-Bestimmungen vorherrschend sind.**

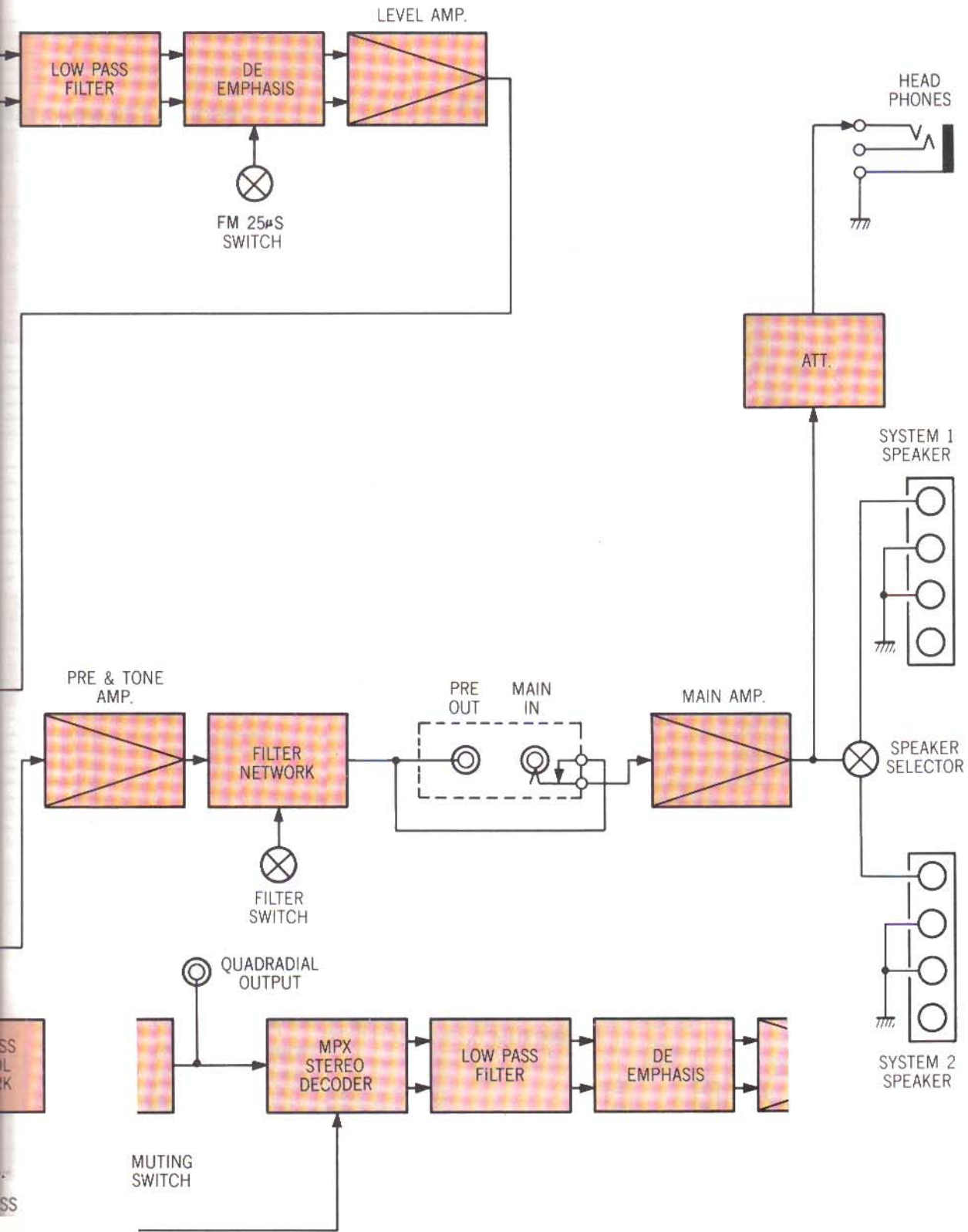
Sollte das Gerät auch für Frequenzen ausserhalb des in den FTZ-Bestimmungen angegebenen Bereiches empfangebereit sein, bitten wir, den Bereich durch Nachstellen des Kernes in der Oszillatorspule (in der Abbildung mit "FTZ" gekennzeichnet) so zu korrigieren, dass er den Bestimmungen entspricht.



# 8. DIAGRAMS

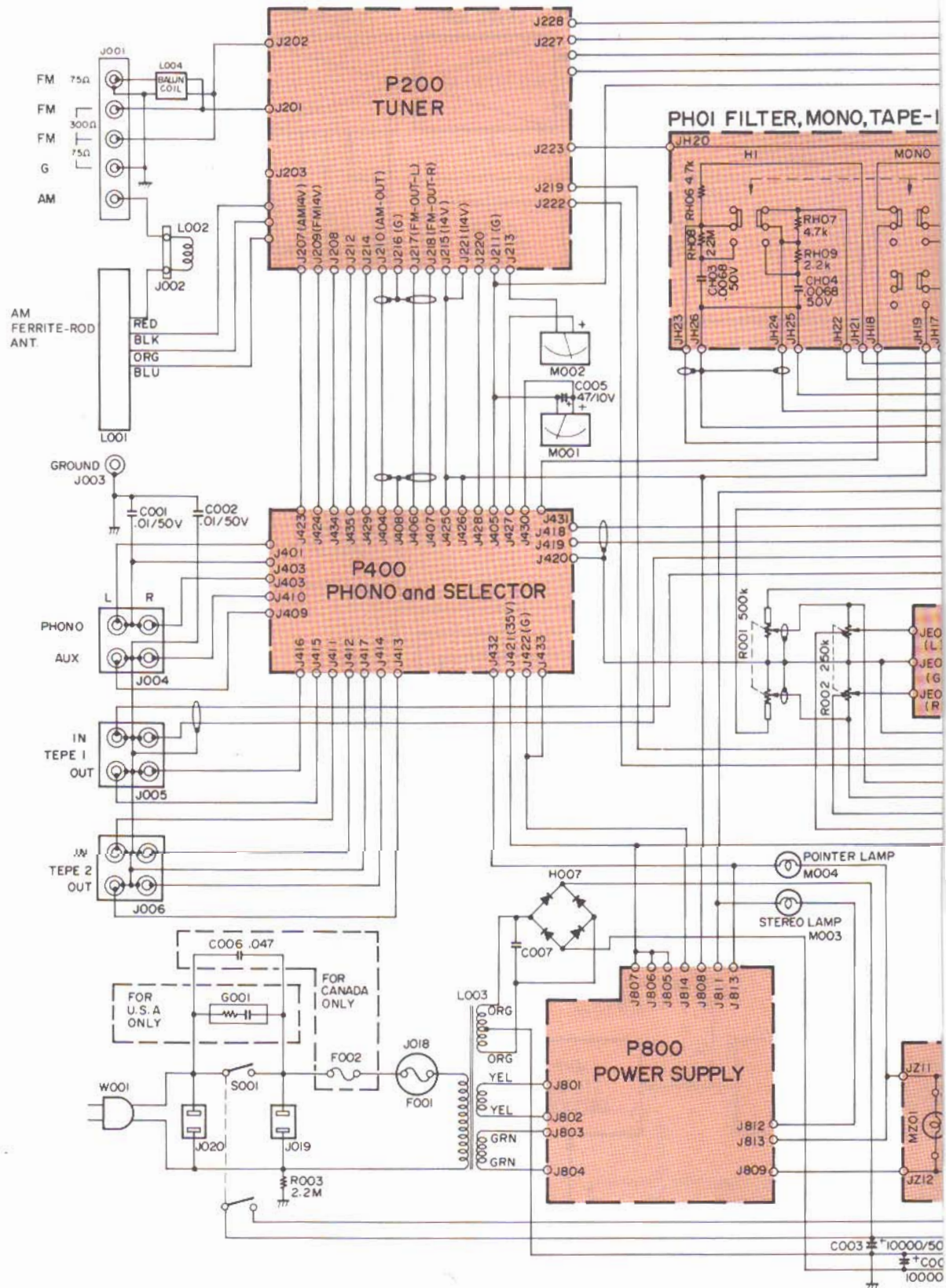
## 8.1 BLOCK DIAGRAM

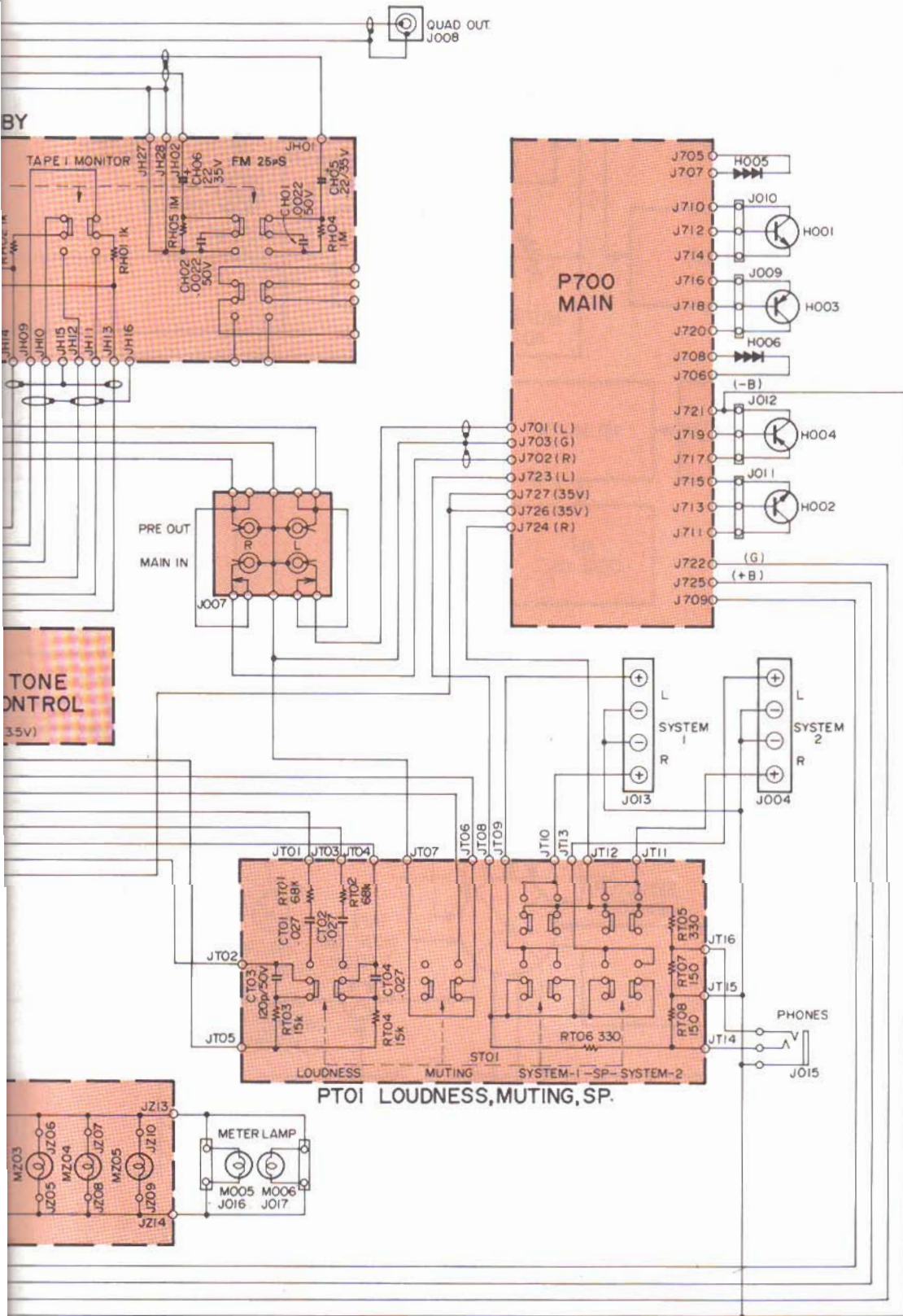






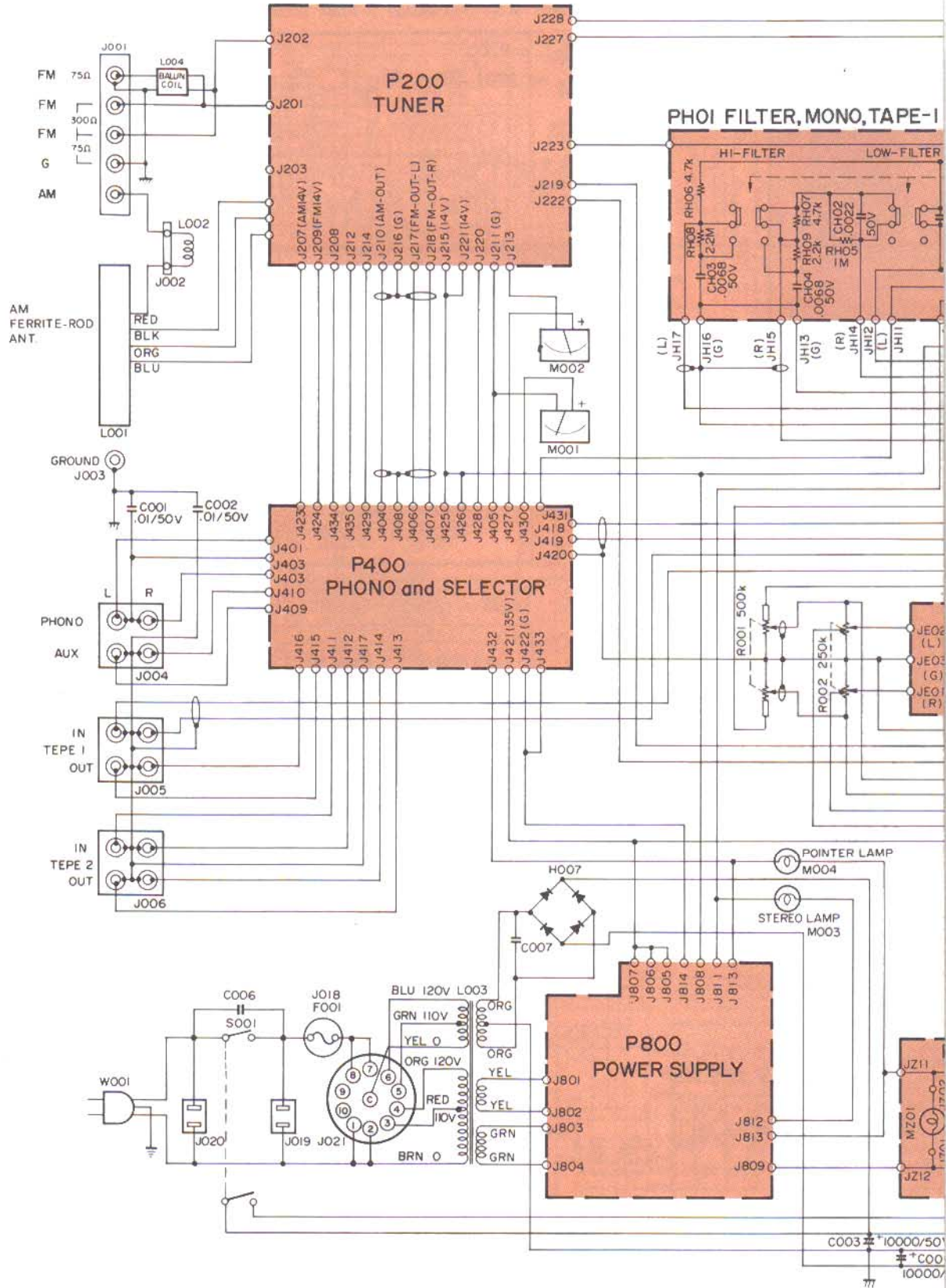
8.2 INTER CONNECTION DIAGRAM - U.S.A. & CANADA

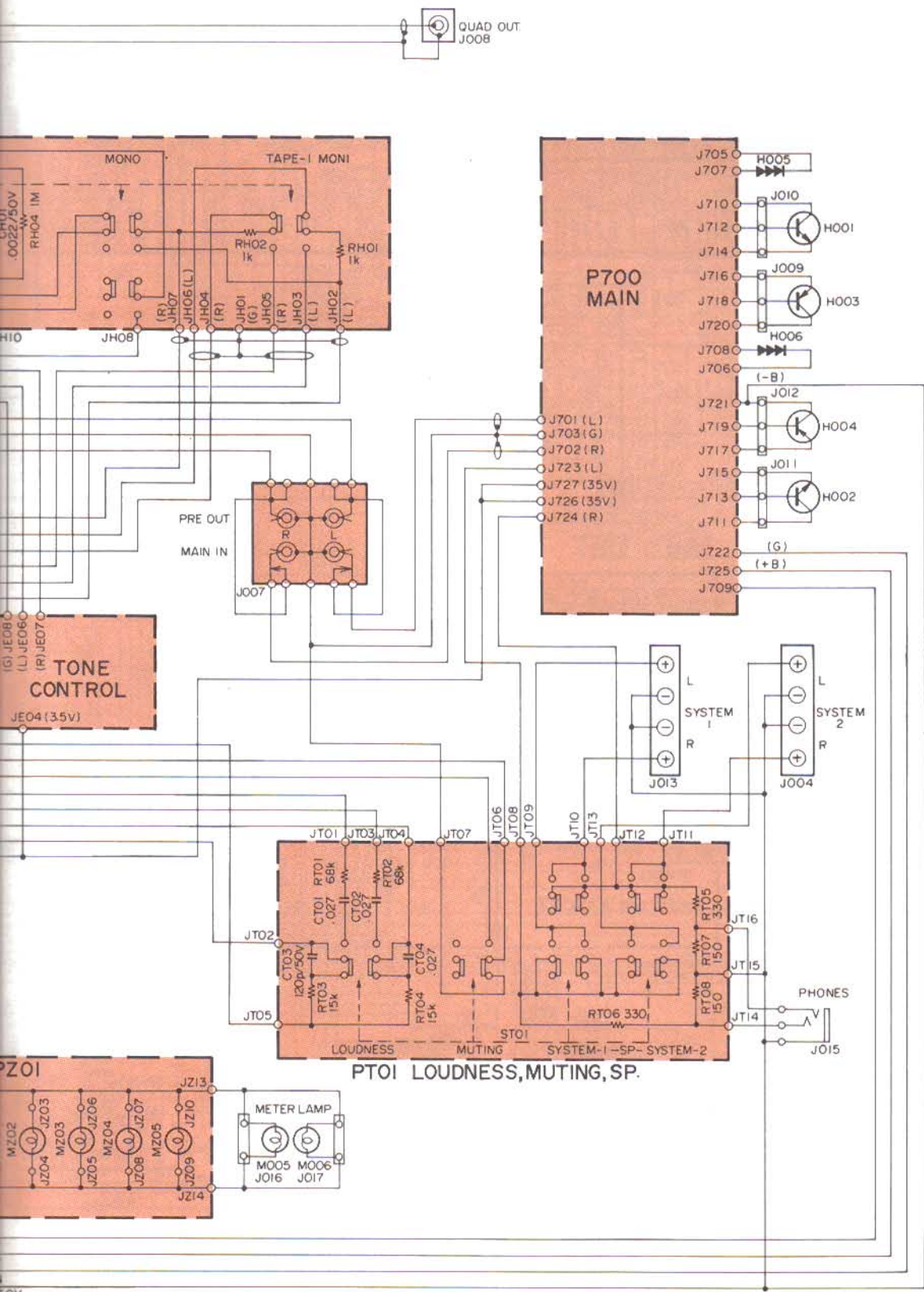






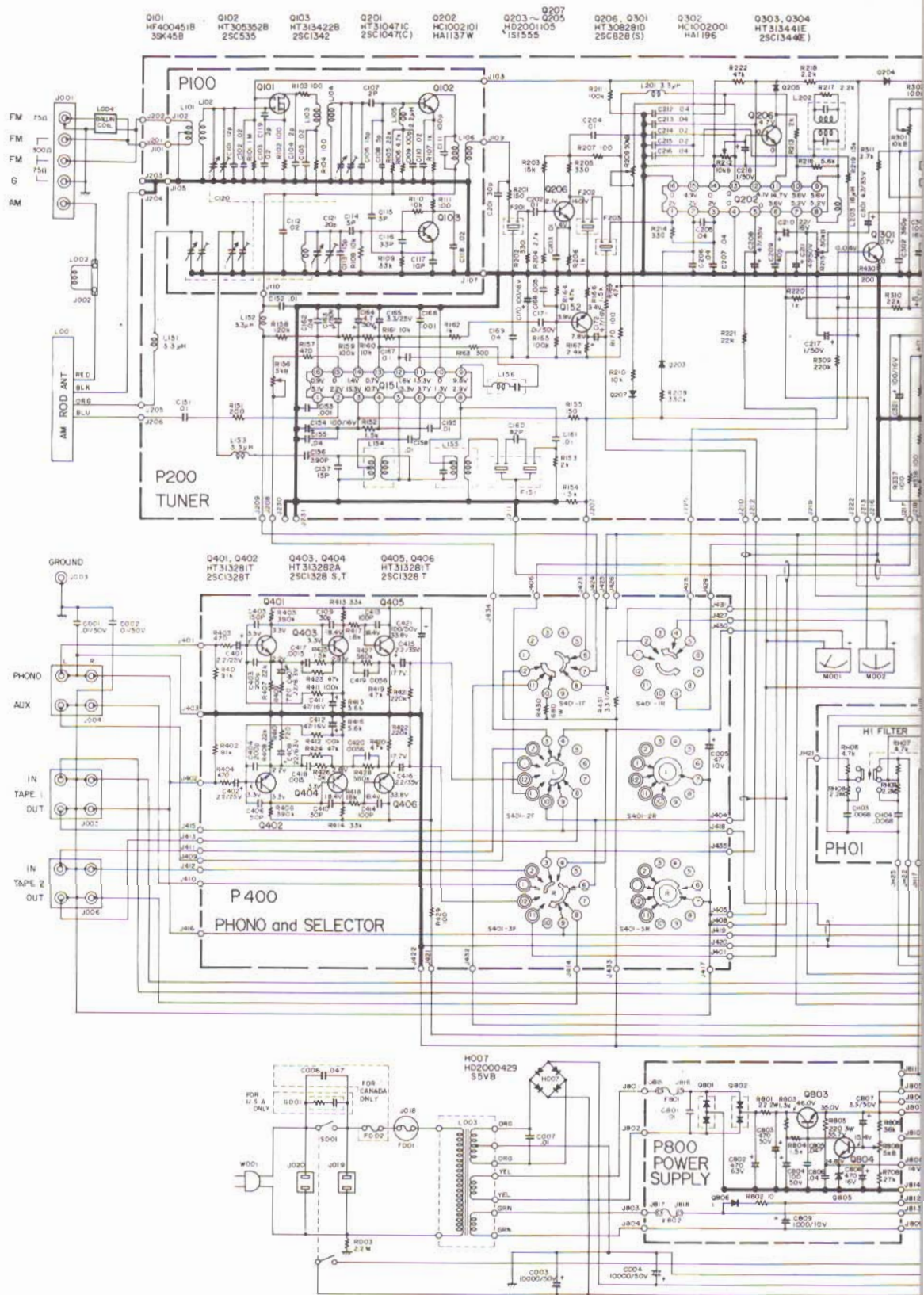
### 8.3 INTER CONNECTION DIAGRAM - EUROPE



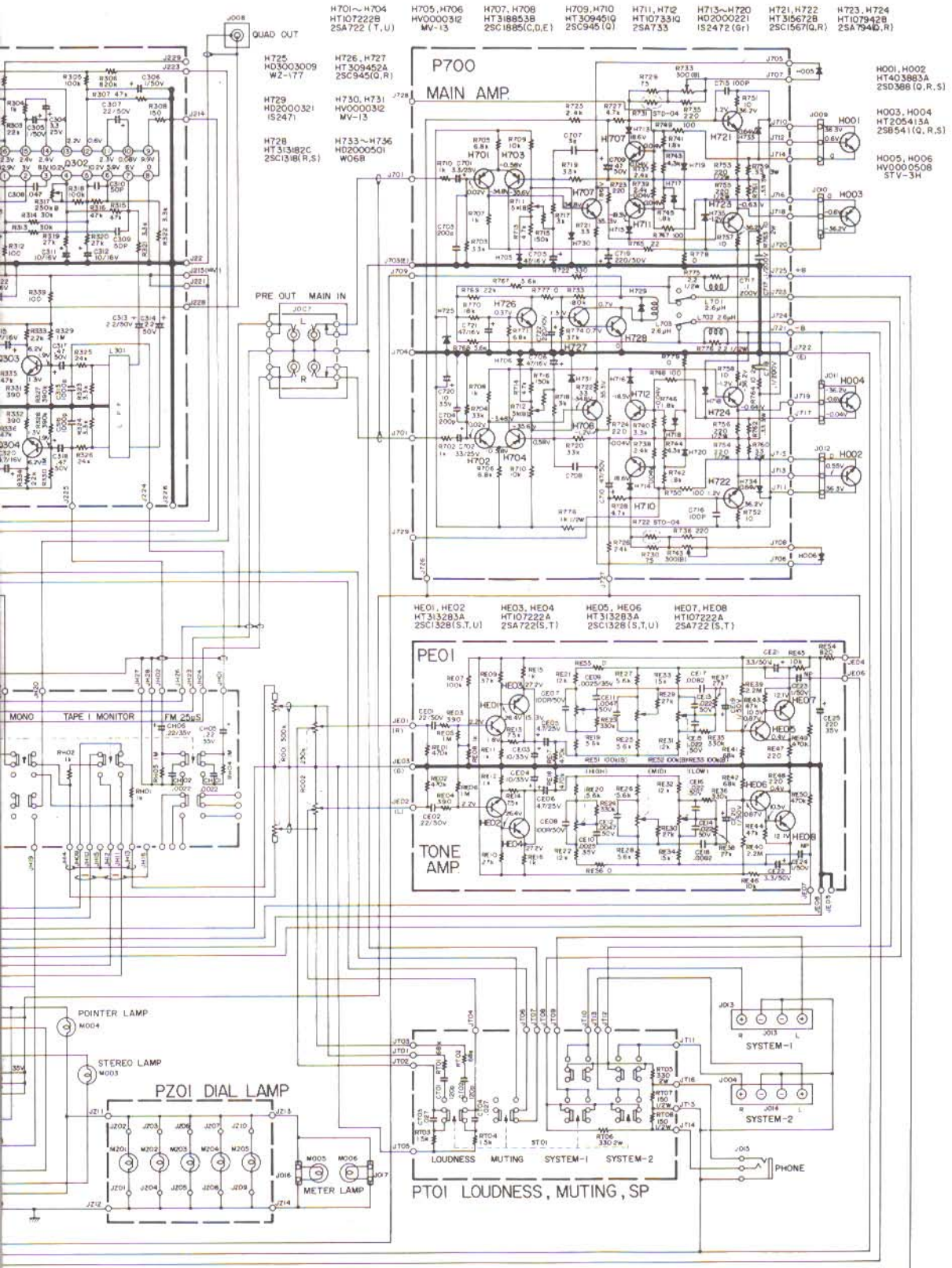




8.4 SCHEMATIC DIAGRAM - U.S.A. & CANADA







- H701~H704 HT107222B 25A722 (T,U)
- H705, H706 HV0000312 MV-13
- H707, H708 HT318B53B 25C18B5(C,D,E)
- H709, H710 HT3094510 25C945 (G)
- H711, H712 HT107331Q 25A733
- H713~H720 HD2000221 152472 (G,R)
- HT21, HT22 HT315672B 25C1567(G,R)
- H723, H724 HT107942B 25A794B (R)

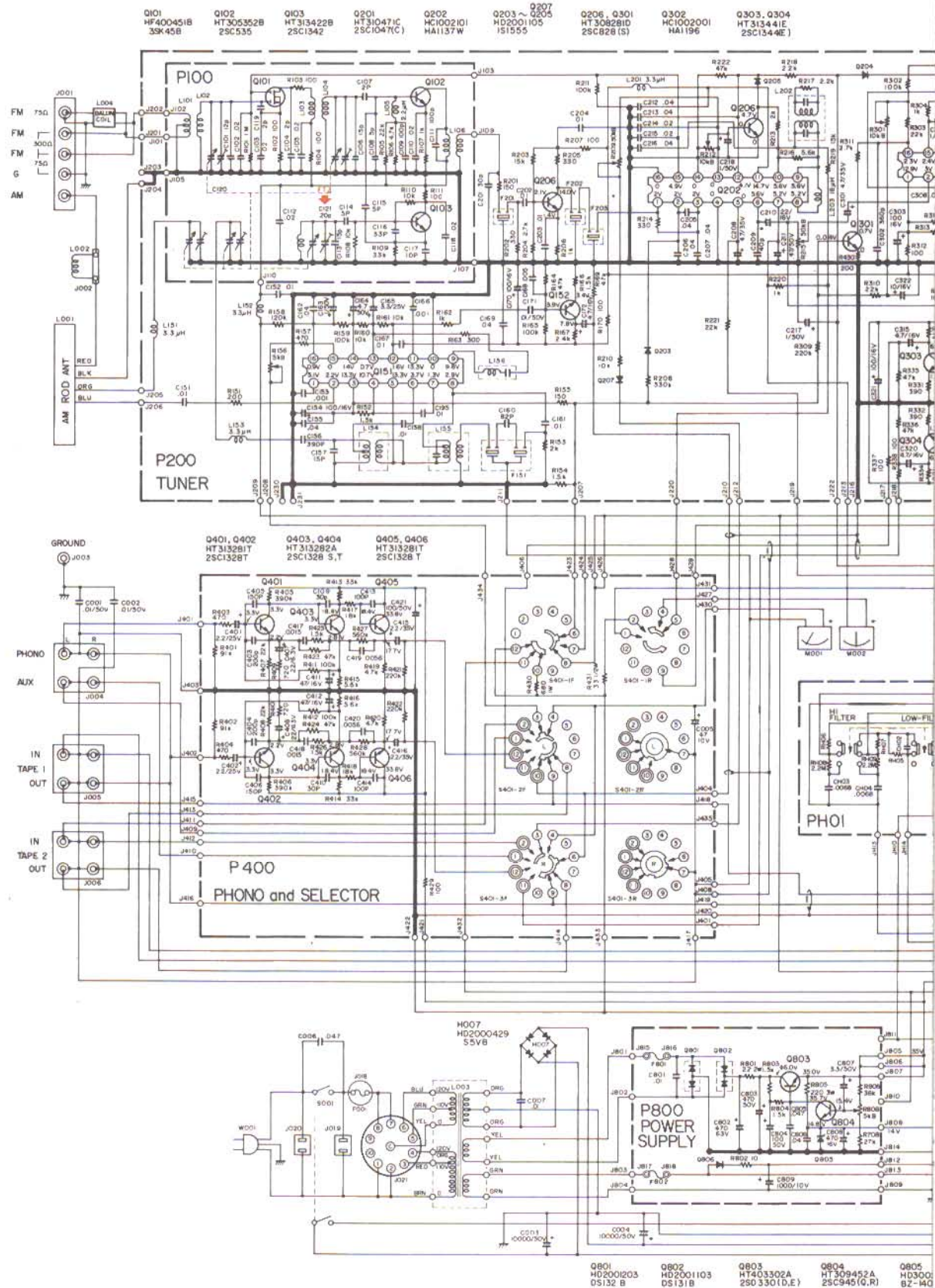
- H725 HD3003009 WZ-177
- HT29 HD2000321 152471
- HT28 HT313B2C 25C13B(R,S)
- H726, H727 HT3094524 25C945(G,R)
- H730, H731 HV0000312 MV-13
- H733~H736 HD2000501 W06B
- H001, H002 HT4038B3A 25D38B (Q,R,S)
- H003, H004 HT205413A 25B541 (Q,R,S)
- H005, H006 HV0000508 STV-3H

- HE01, HE02 HT3132B3A 25C132B(S,T,U)
- HE03, HE04 HT107222A 25A722(S,T)
- HE05, HE06 HT3132B3A 25C132B(S,T,U)
- HE07, HE08 HT107222A 25A722(S,T)

Q805 HD3002109 BZ-40  
 Q806 HD2000413 S1801-02

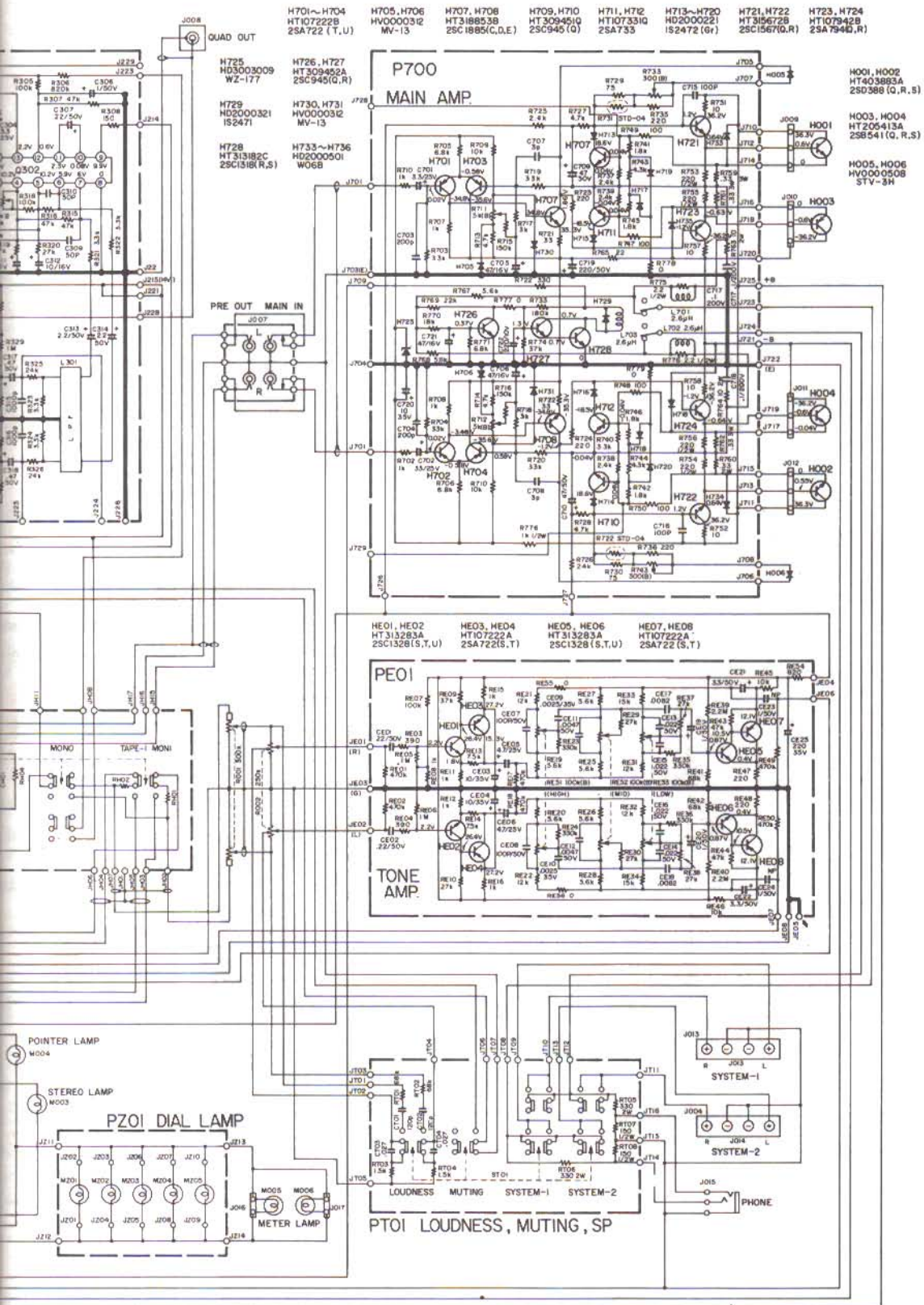


# 8.5 SCHEMATIC DIAGRAM - EUROPE



- Q801  
HD2001203  
DS132 B
- Q802  
HD2001103  
DS131 B
- Q803  
HT403302A  
250 330(D.E.)
- Q804  
HT309452A  
250 945(G.R.)
- Q805  
HD3000  
BZ-140

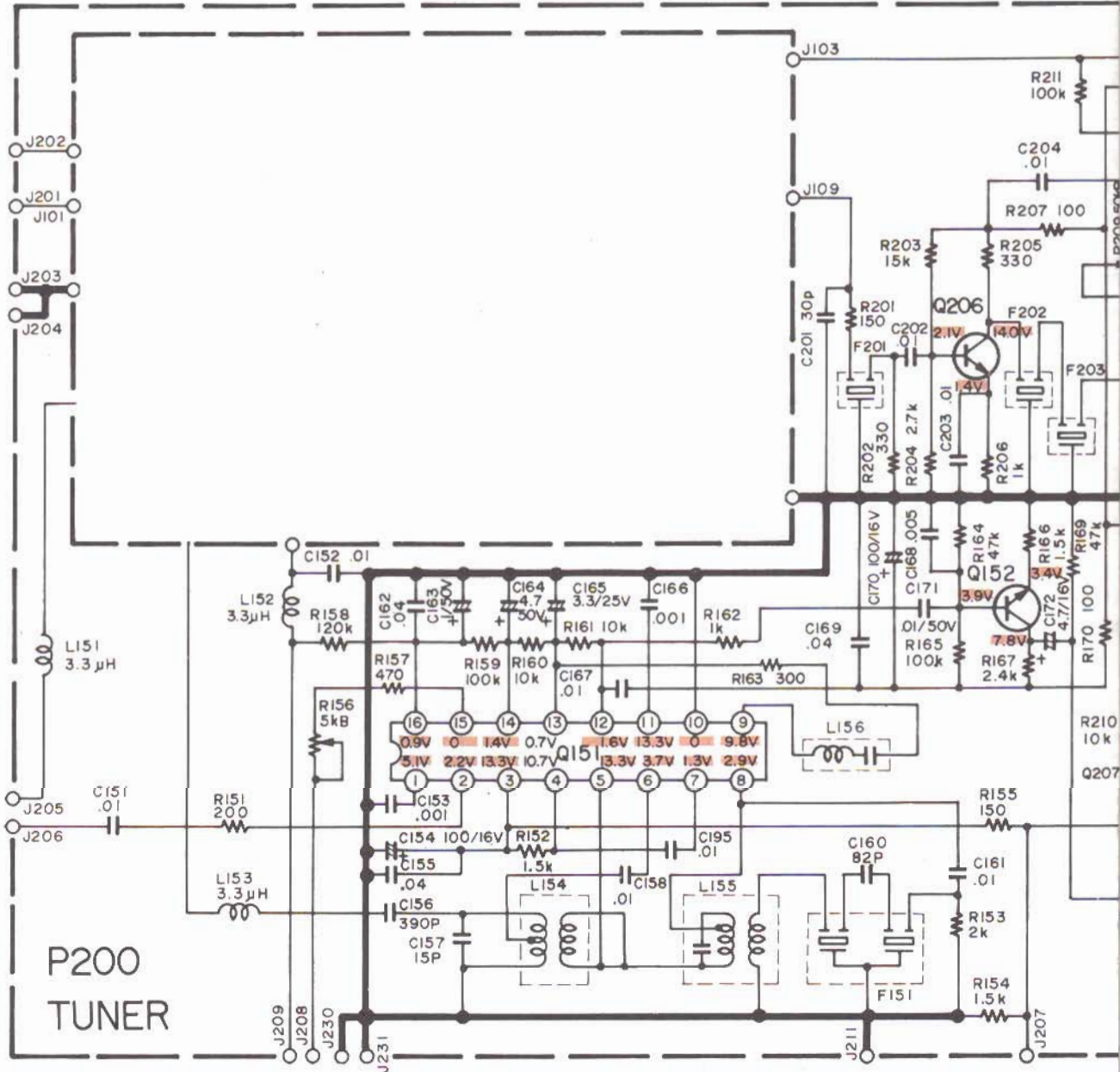


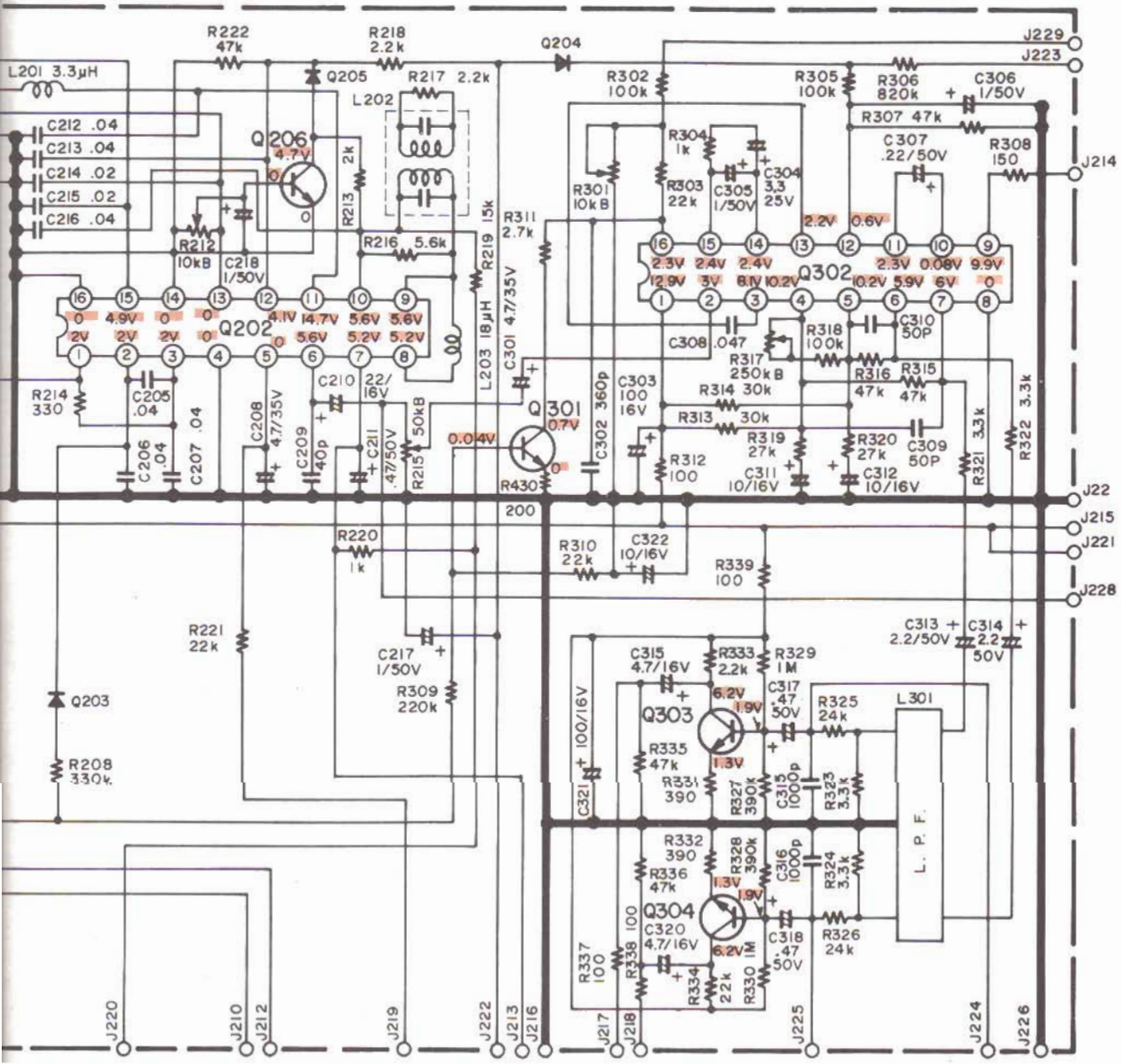


Q806  
HD2000413  
S1801-02

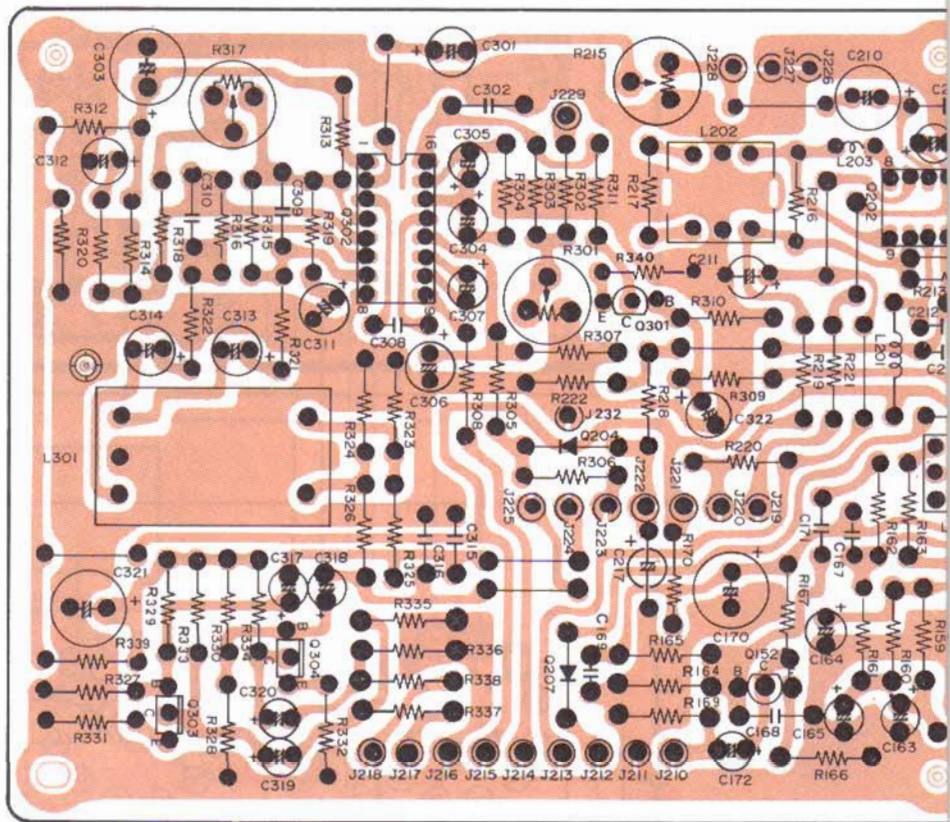


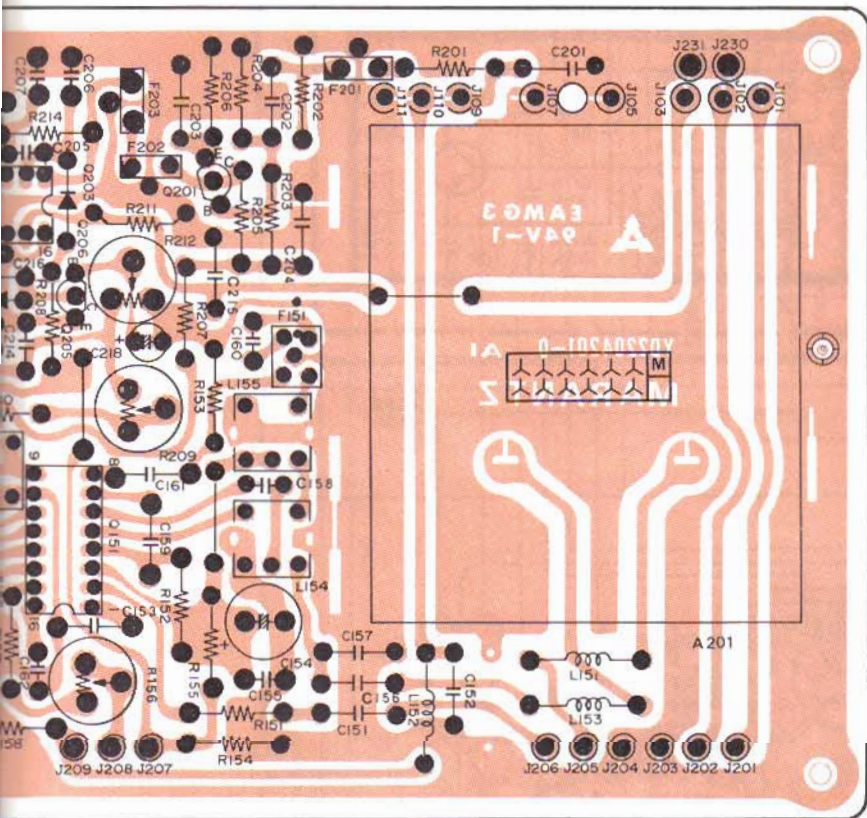
8.6 TUNER BOARD SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS





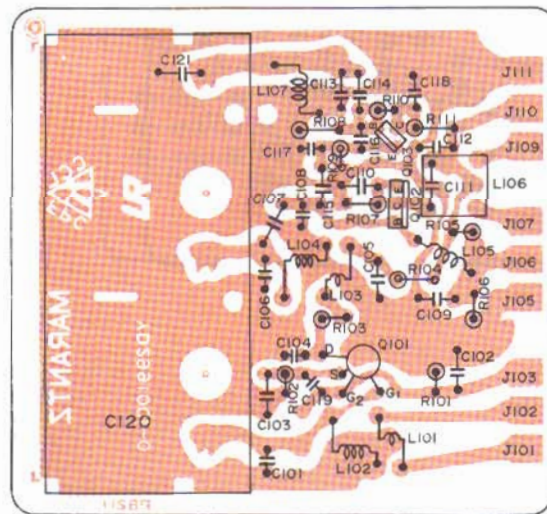
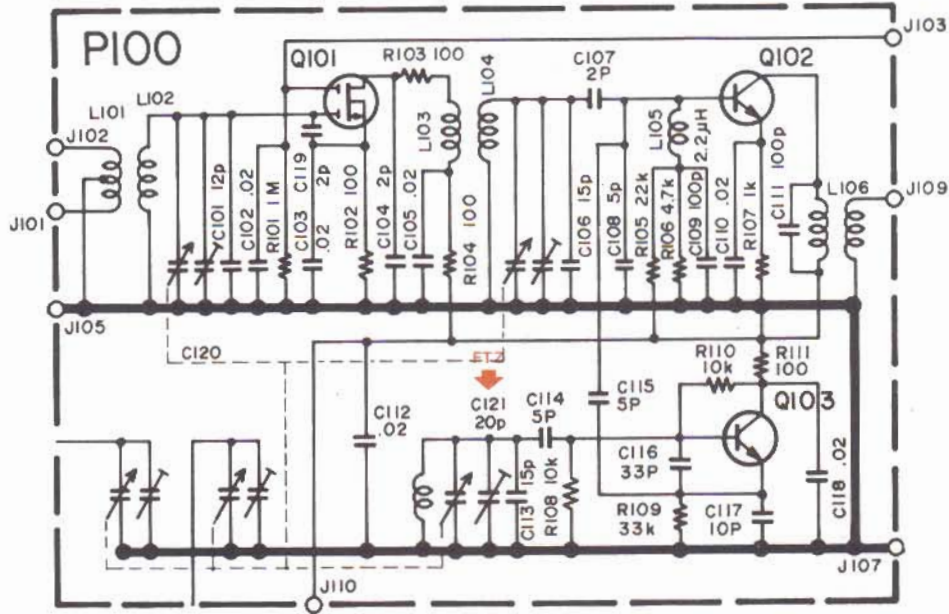




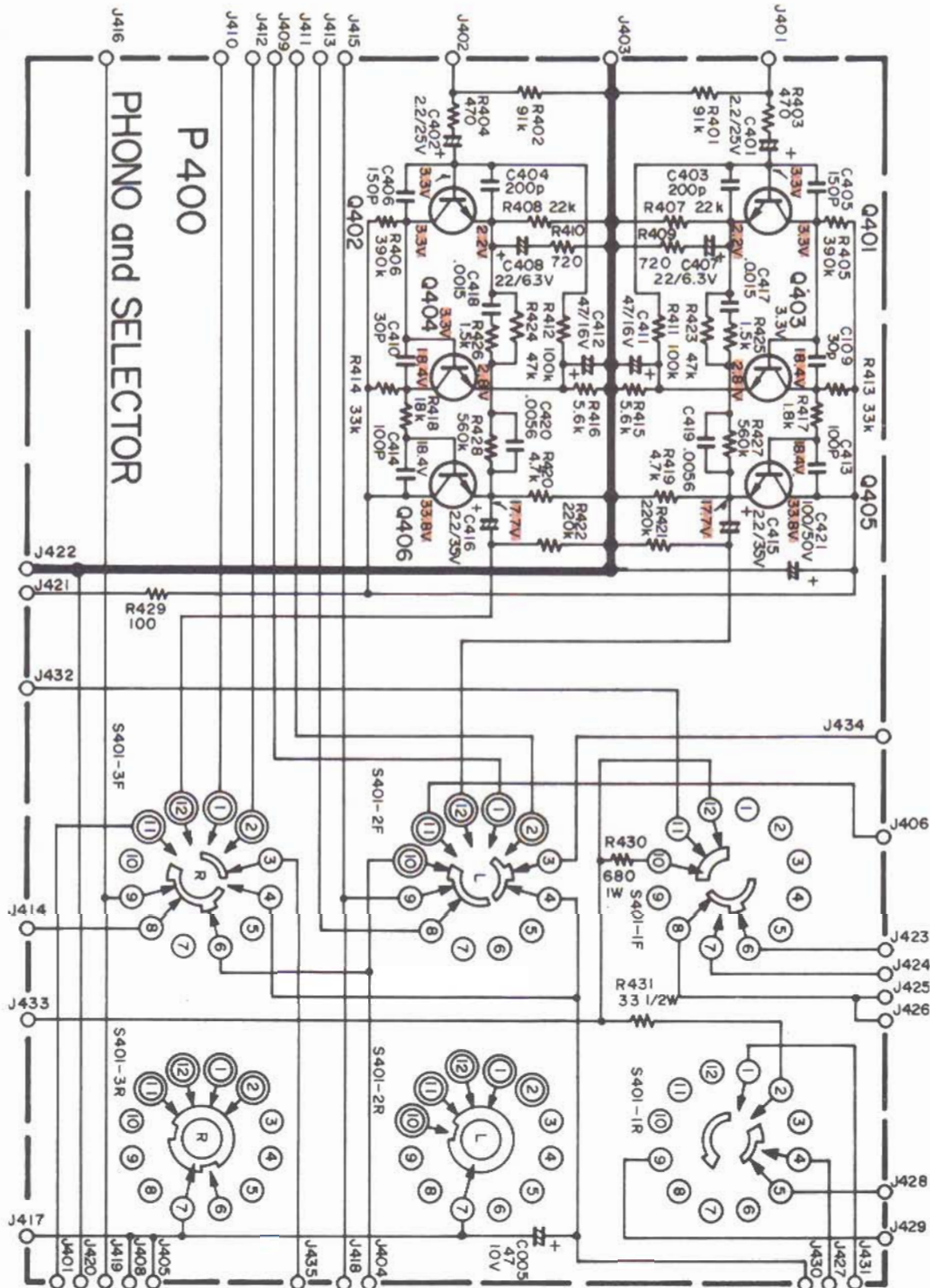




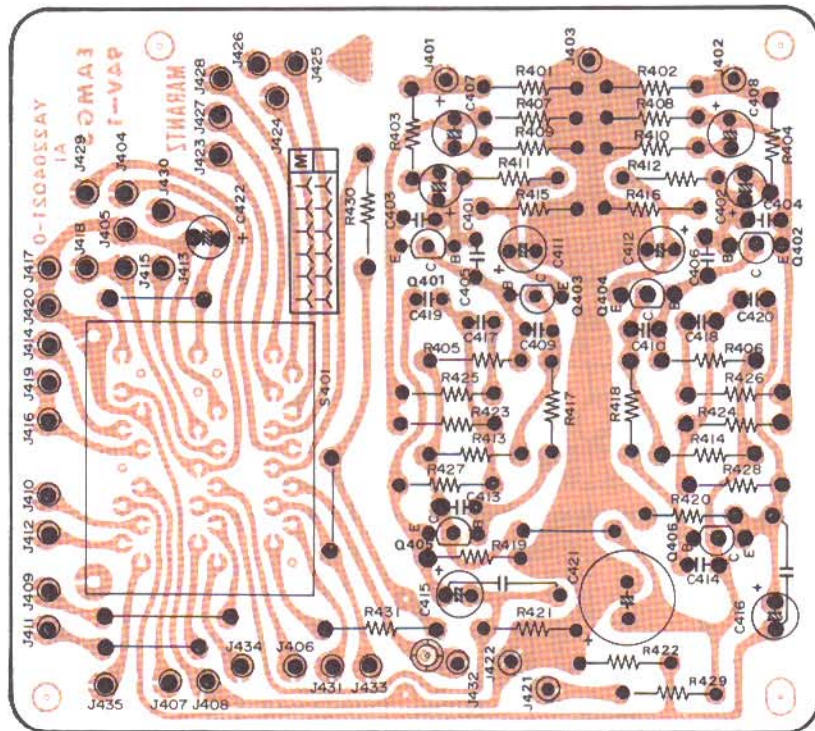
8.7 FM FRONT END BOARD SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS



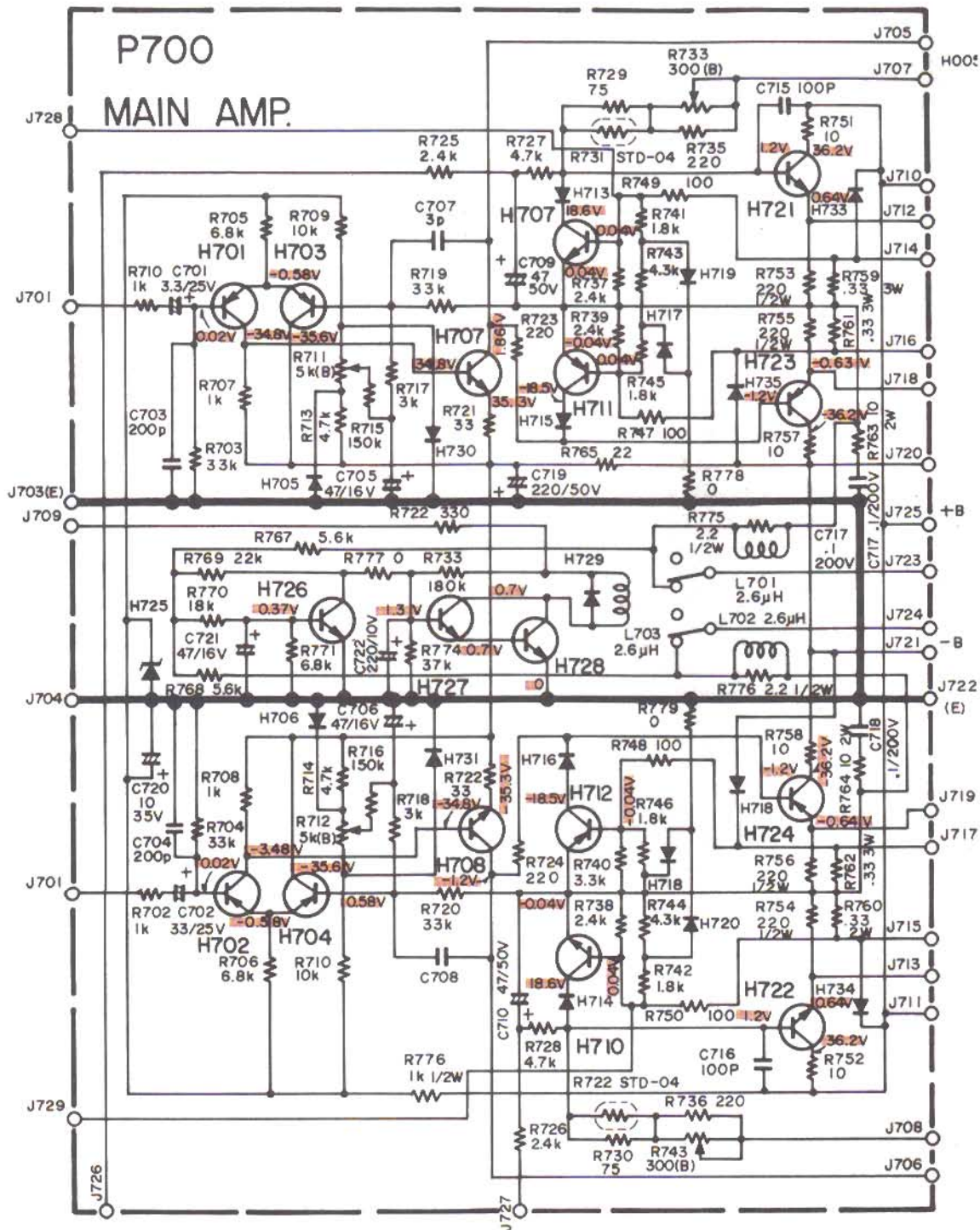
8.8 PHONO EQUALIZER AMP. BOARD SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS



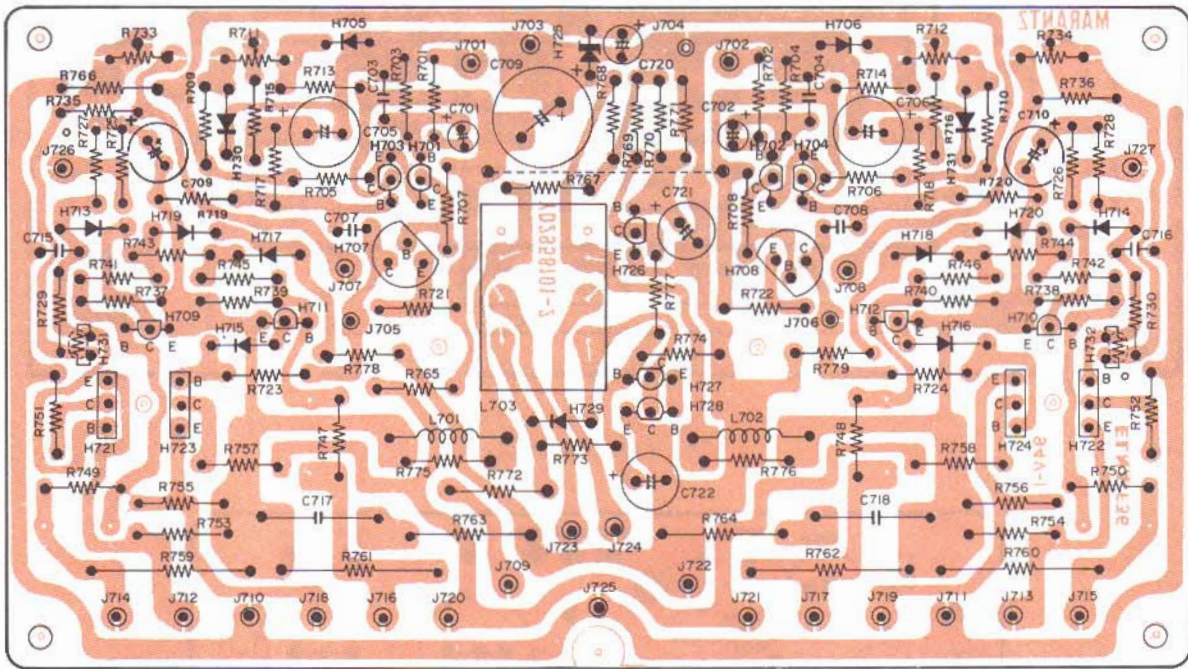




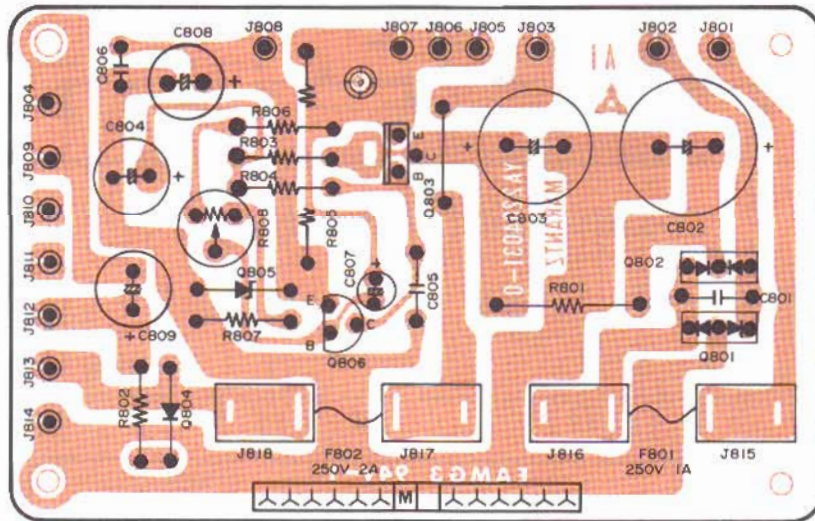
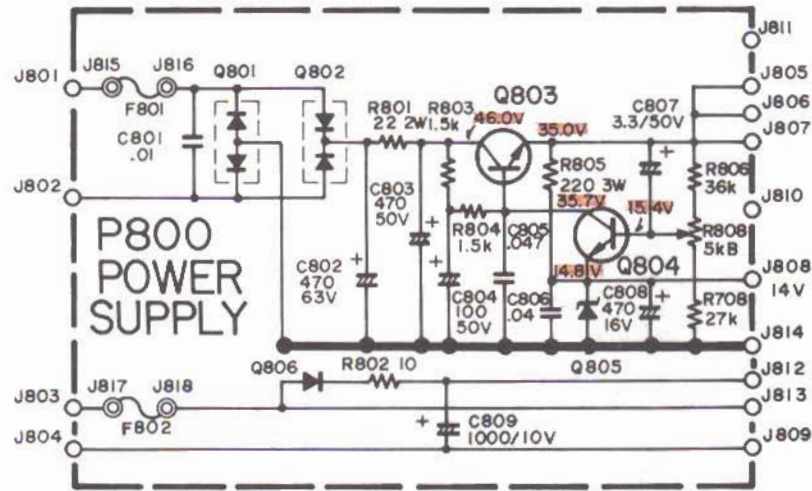
8.9 MAIN AMP. BOARD SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS





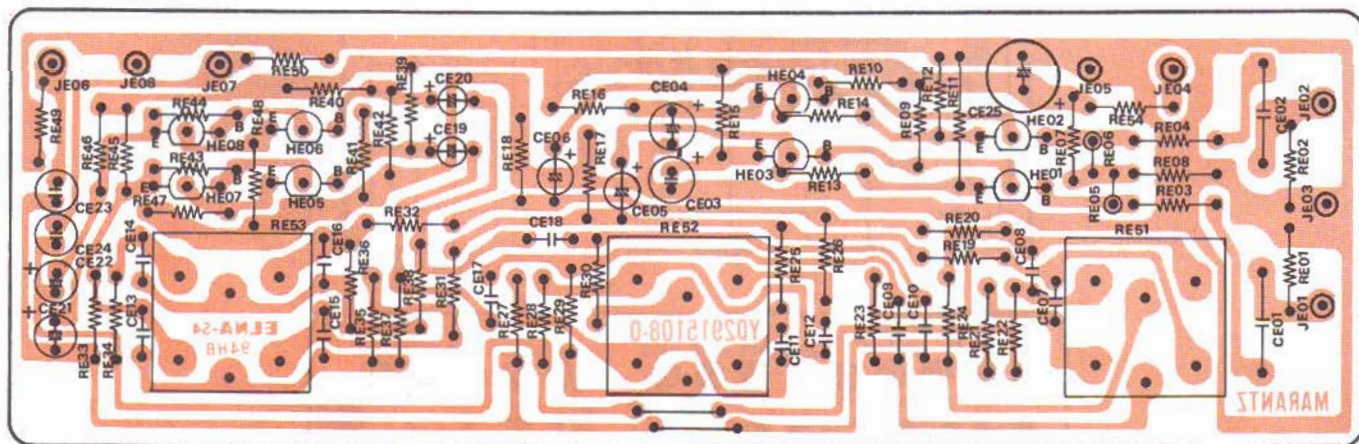
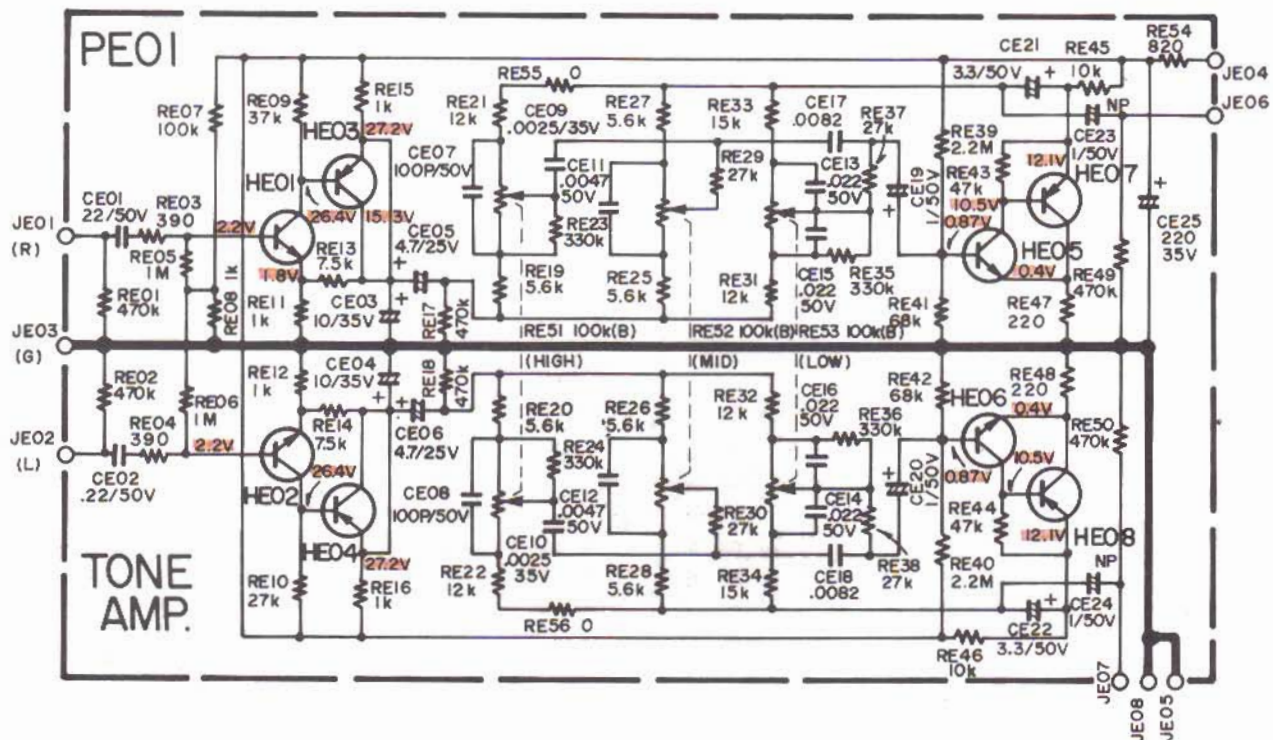


8.10 POWER SUPPLY BOARD SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS

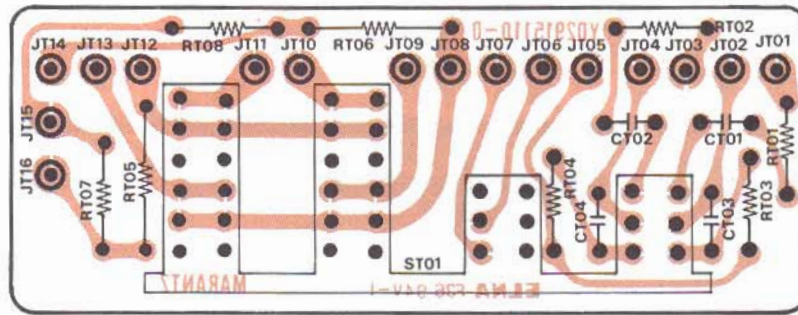
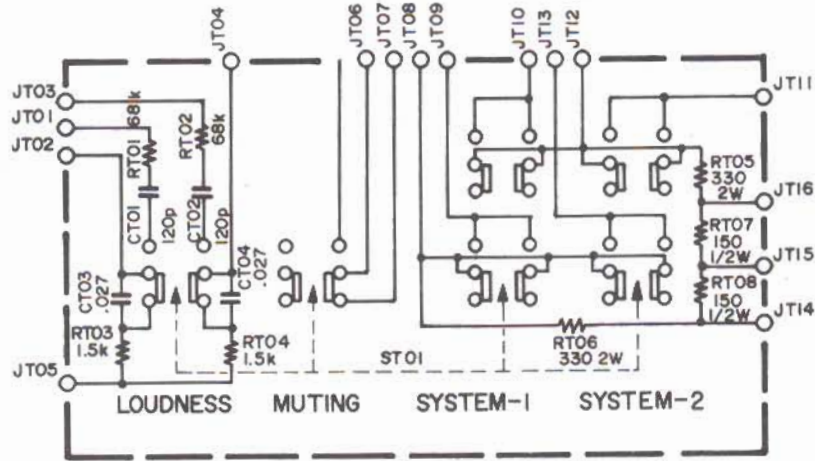




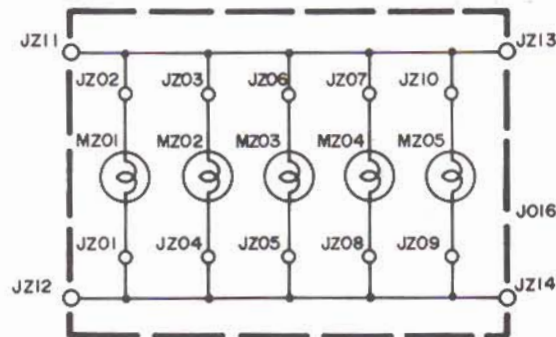
### 8.11 PRE, TONE AMP. BOARD SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS



8.14 SPEAKER SWITCH BOARD SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS



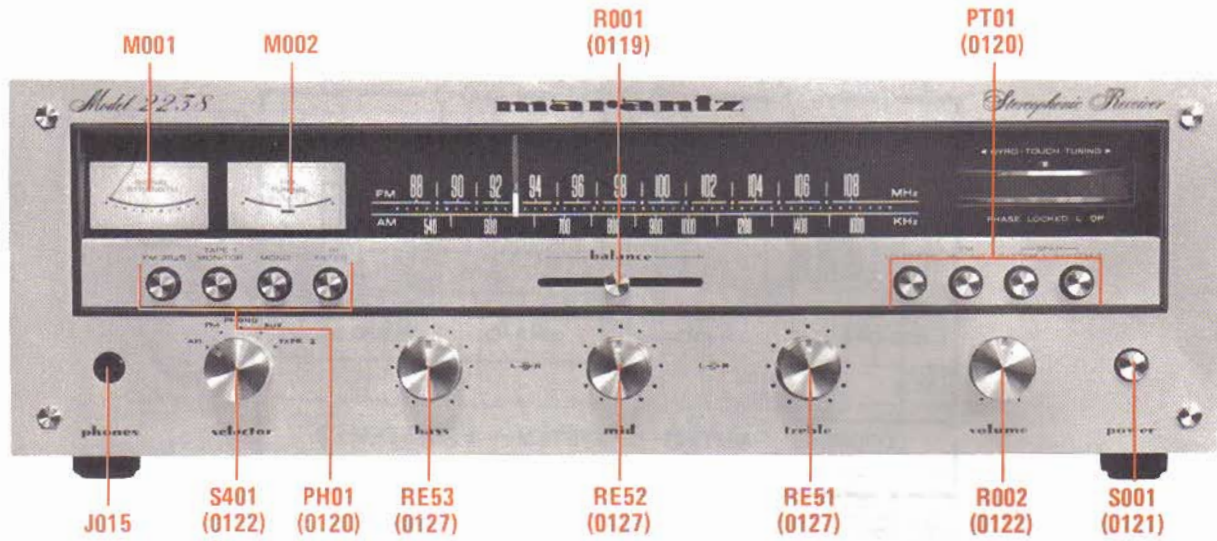
8.15 DIAL LAMP BOARD SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS



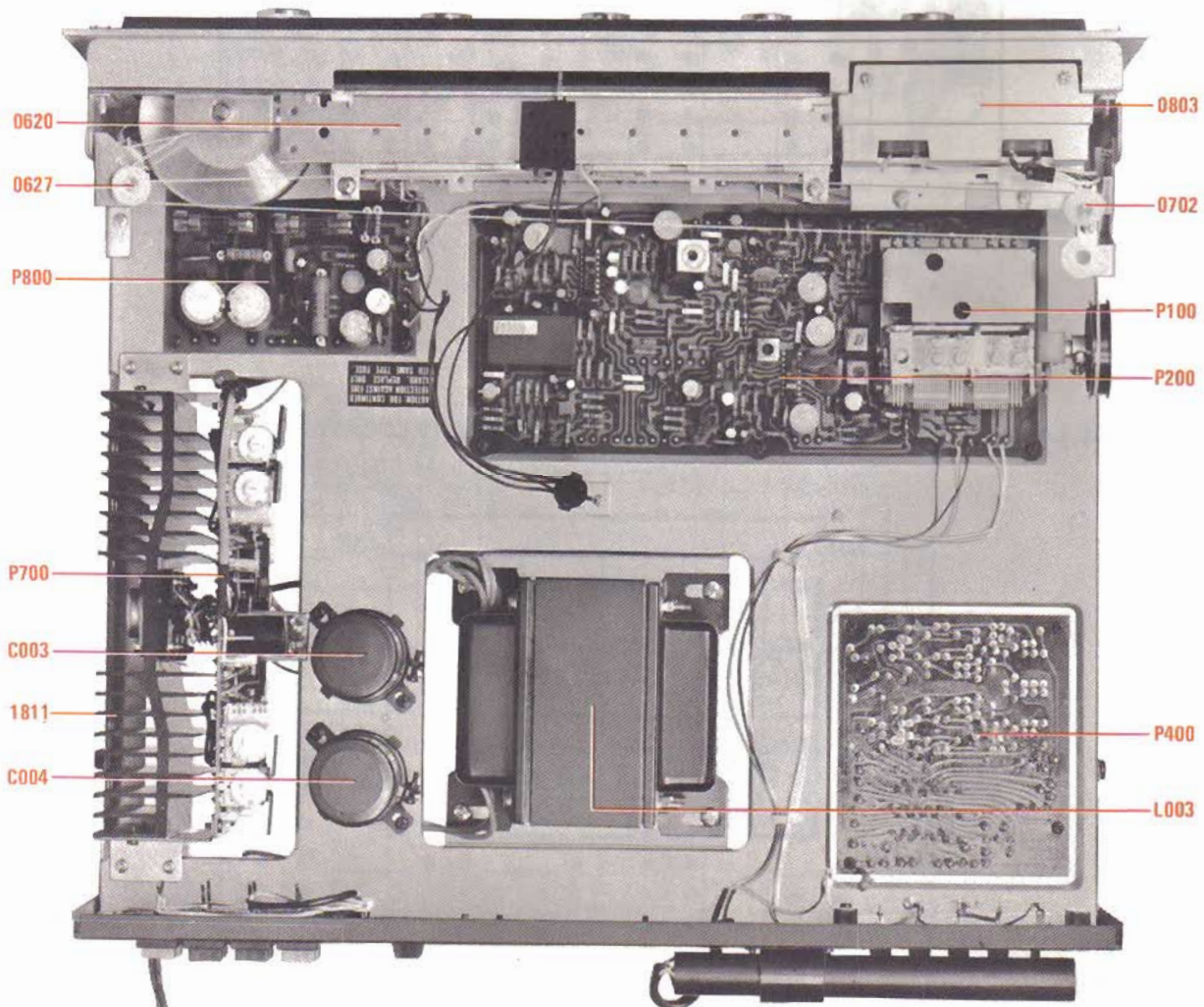


9. MAJOR COMPONENT LOCATIONS

9.1 CABINET - FRONT VIEW

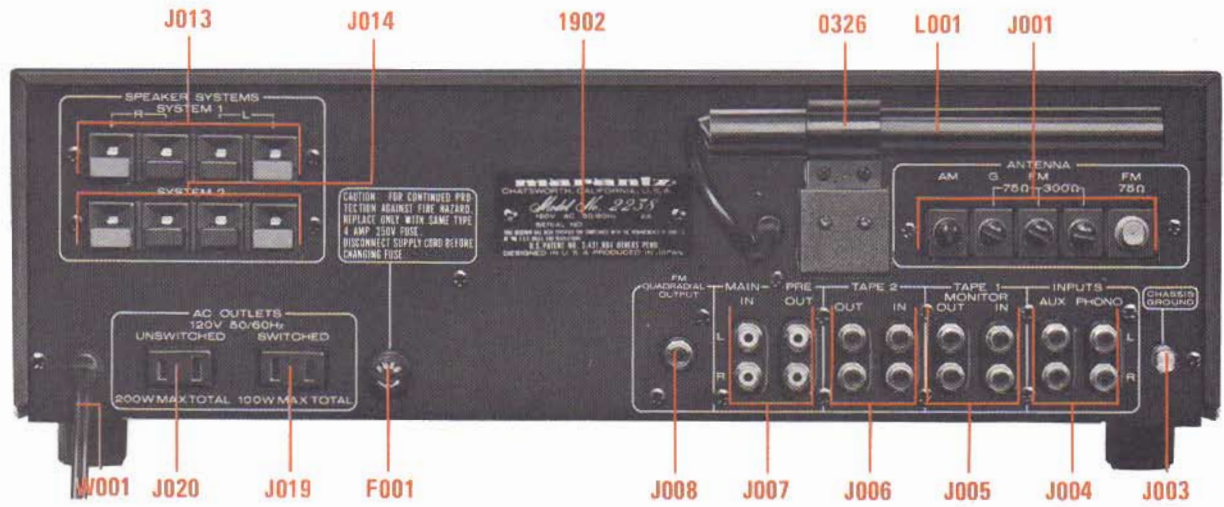


9.2 CHASSIS - TOP VIEW

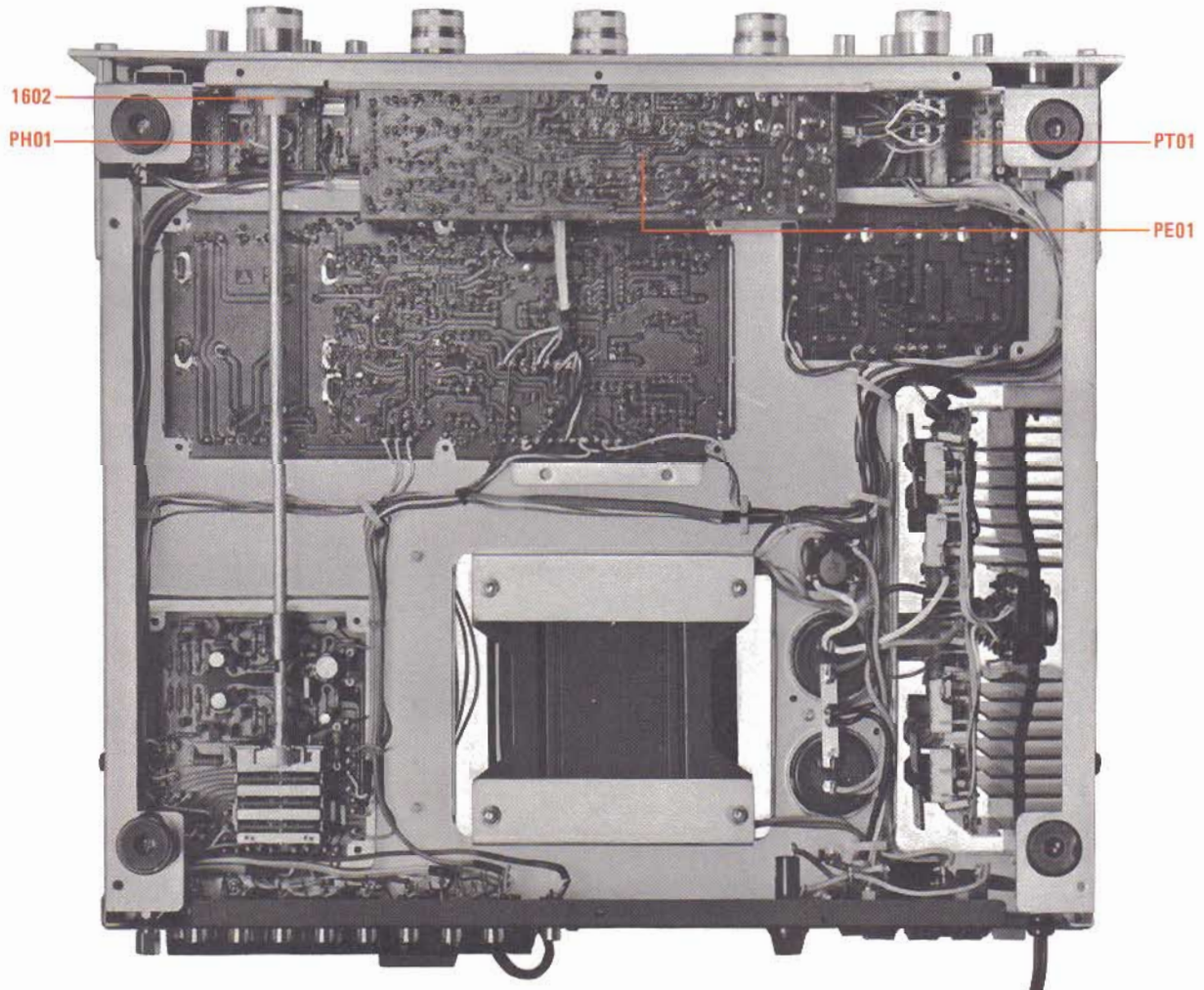




### 9.3 CABINET - REAR VIEW

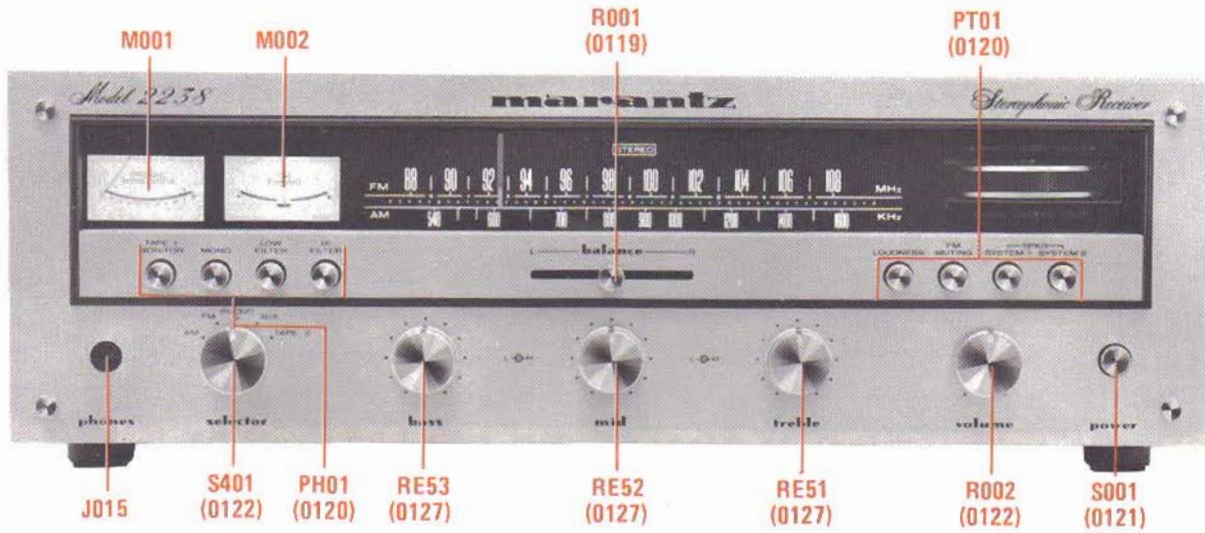


### 9.4 CHASSIS - BOTTOM VIEW

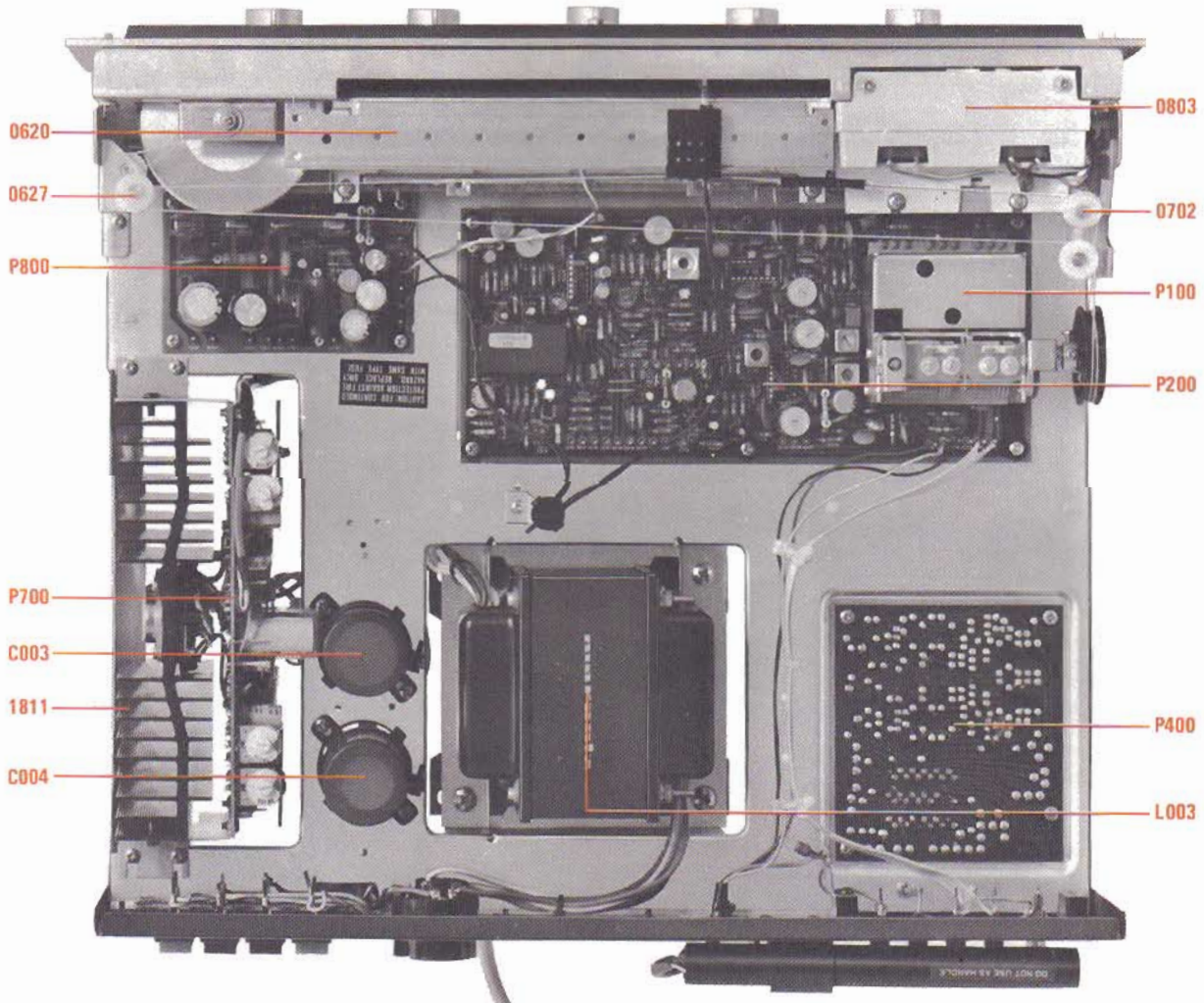




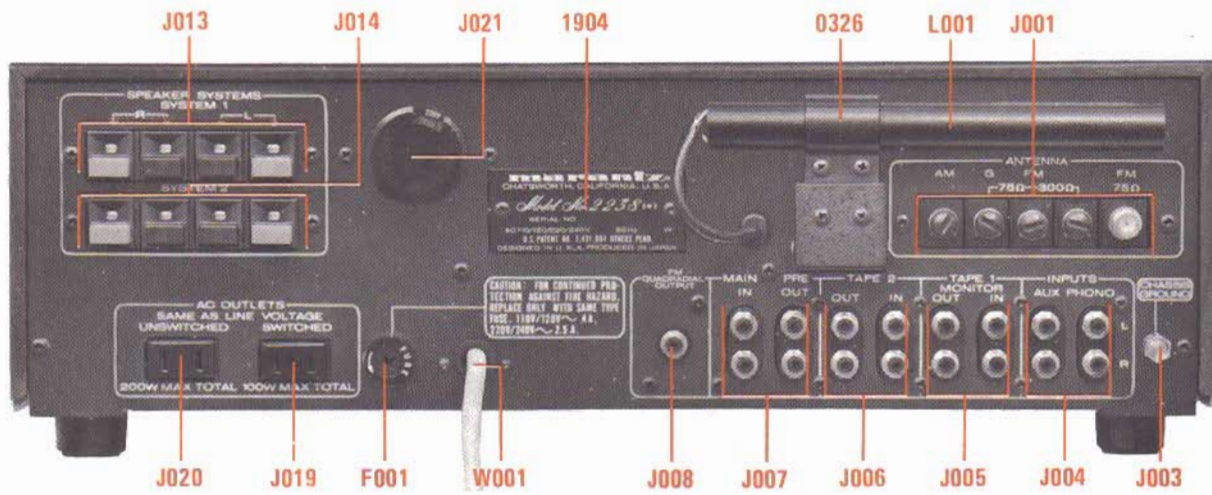
9.5 CABINET - FRONT VIEW - EUROPE



9.6 CHASSIS - TOP VIEW - EUROPE

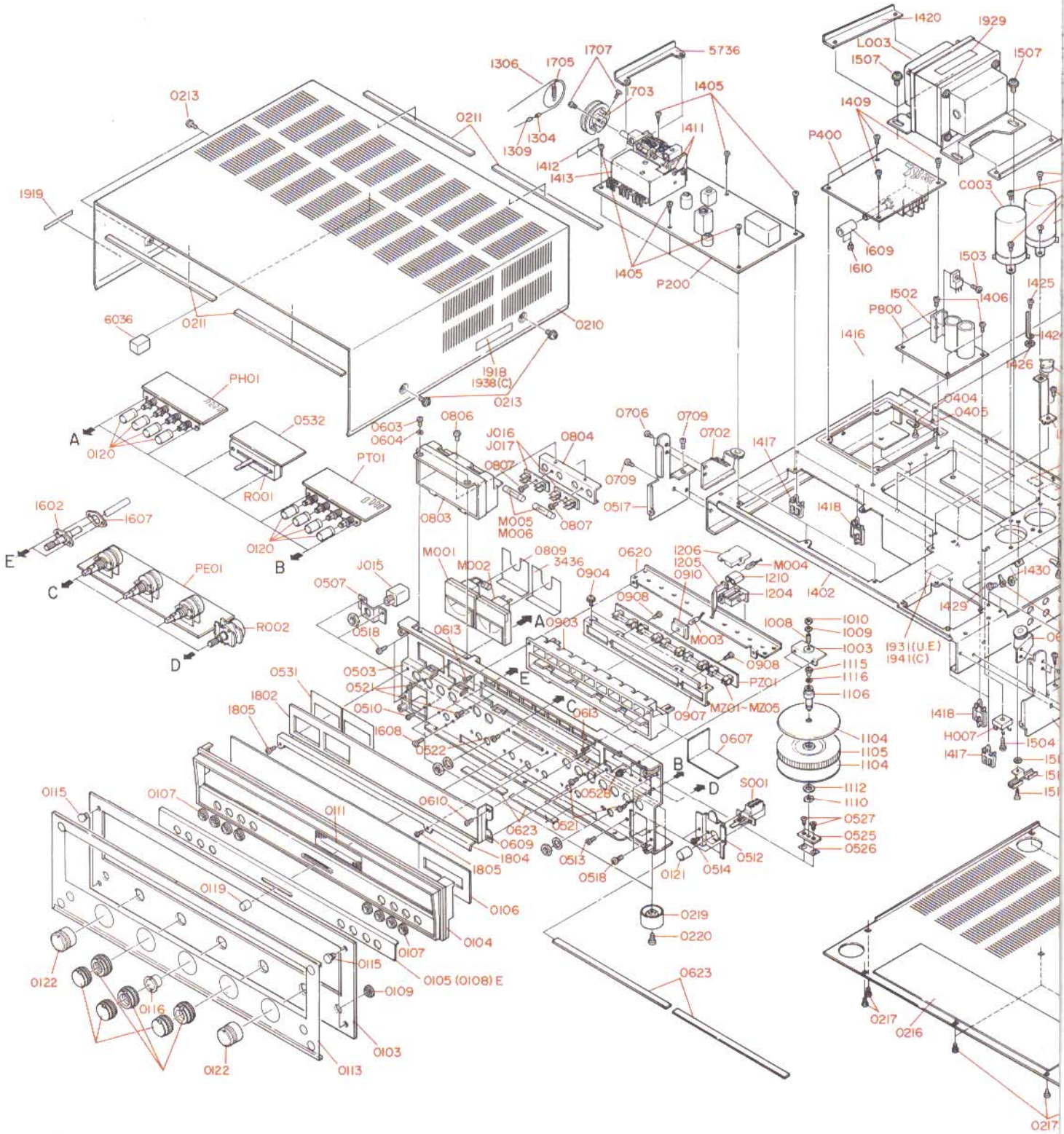


9.7 CABINET - REAR VIEW - EUROPE

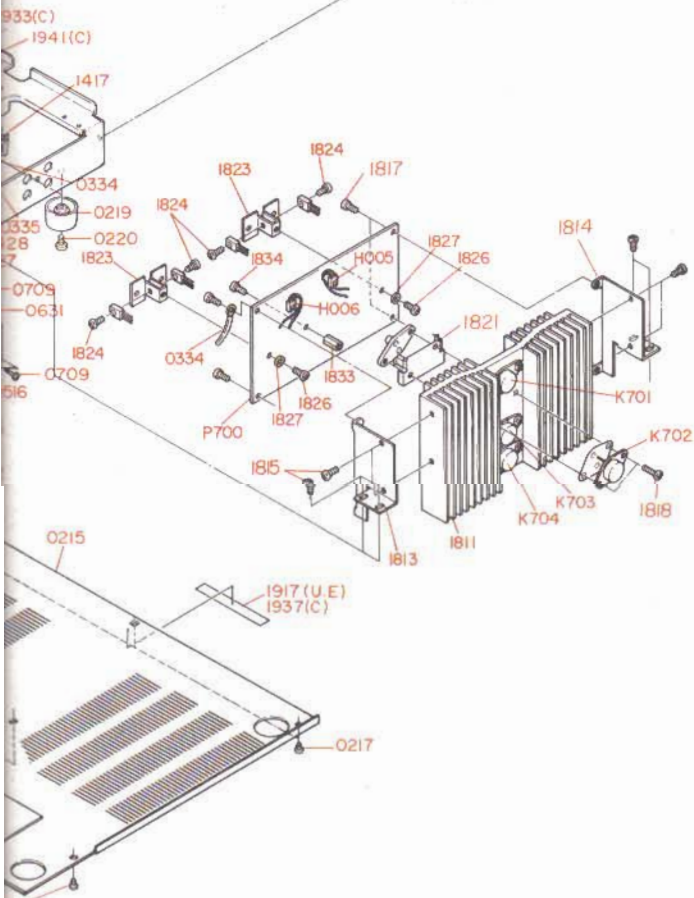
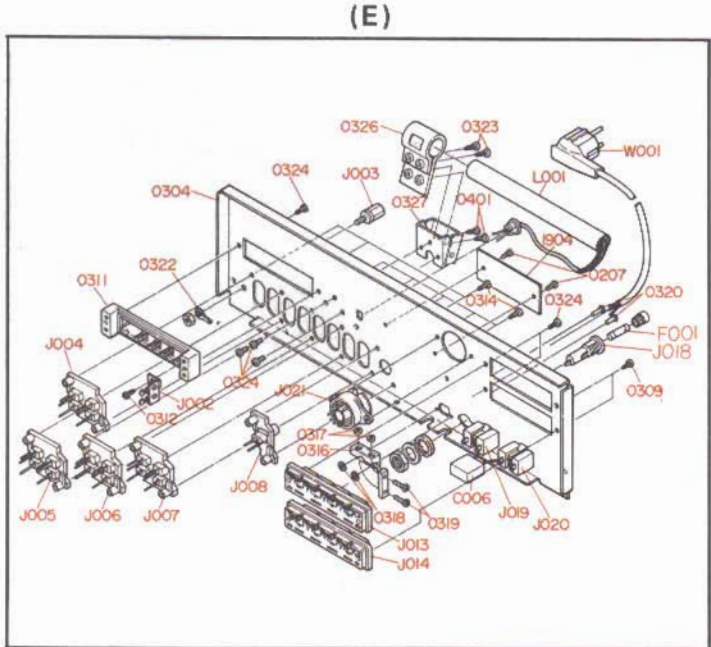
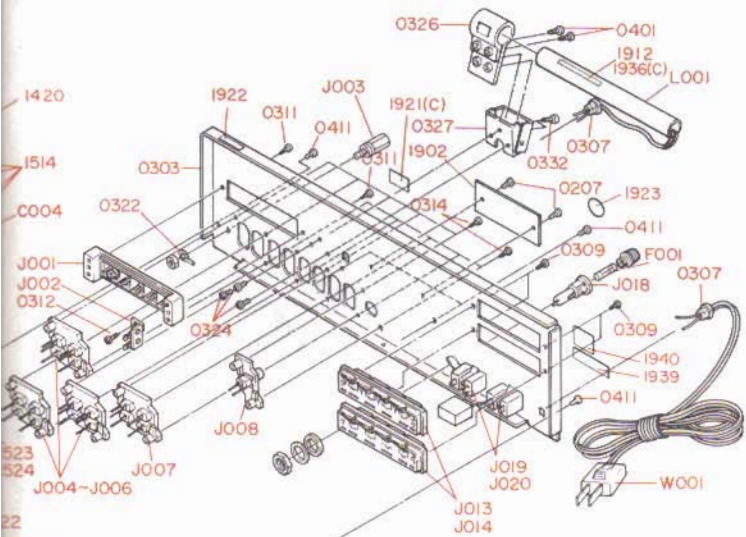




10.2 MECHANICAL EXPLODED VIEW









# 11. PARTS LIST

U: For U.S.A.  
C: For Canada  
E: For Europe

| REF. DESIG. | Q'TY |    |    | PART NO.   | DESCRIPTION          |
|-------------|------|----|----|------------|----------------------|
|             | U    | C  | E  |            |                      |
| A           | 1    | 1  |    | 2206063400 | Front Panel Assembly |
| A1          |      |    | 1  | 2206063410 | Front Panel Assembly |
| 0103        | 1    | 1  | 1  | 2206063012 | Escutcheon           |
| 0104        | 1    | 1  | 1  | 2221401012 | Frame                |
| 0105        | 1    | 1  |    | 2204063023 | Escutcheon           |
| 0106        | 1    | 1  | 1  | 2221158010 | Window               |
| 0107        | 8    | 8  | 8  | 2221259012 | Bushing              |
| 0108        |      |    | 1  | 2204063032 | Escutcheon           |
| 0109        | 1    | 1  | 1  | 2886259010 | Bushing              |
| 0113        | 1    | 1  | 1  | 2915053010 | Cover                |
| B           | 1    | 1  | 1  | 2916257420 | Lid Assembly         |
| 0210        | 1    | 1  | 1  | 2916257010 | Lid                  |
| 0211        | 4    | 4  | 4  | 2577118070 | Spacer               |
| 6036        | 1    | 1  | 1  | 2204056010 | Buffer               |
| C           | 1    | 1  | 1  | 2204257400 | Lid Assembly         |
| 0215        | 1    | 1  | 1  | 2204257010 | Lid                  |
| 0216        | 1    | 1  | 1  | 2915120010 | Insulator            |
| D           | 1    | 1  | 1  | 2204159400 | Drum Assembly        |
| 1703        | 1    | 1  | 1  | 2204159010 | Drum                 |
| 1705        | 1    | 1  | 1  | 71101689L0 | Spring               |
| 1707        | 2    | 2  | 2  | 51064019A9 | Set Screw            |
| E           | 1    | 1  | 1  | 2915103400 | Pointer Assembly     |
| 1204        | 1    | 1  | 1  | 2915103012 | Pointer              |
| 1205        | 1    | 1  | 1  | 2818103020 | Pointer              |
| 1206        | 1    | 1  | 1  | 2915103020 | Pointer              |
| 1210        | 1    | 1  | 1  | 2915267030 | Heatsink             |
| M004        | 1    | 1  | 1  | IN10080300 | Lamp                 |
| F           | 1    | 1  | 1  | 1202006430 | Hook Assembly        |
| 1304        | 1    | 1  | 1  | 1202258010 | Hook                 |
| 1306        | 1    | 1  | 1  | 72071605A0 | String               |
| G           | 1    | 1  | 1  | 2853273400 | Flywheel Assembly    |
| 1104        | 2    | 2  | 2  | 2577063022 | Escutcheon           |
| 1105        | 1    | 1  | 1  | 2577273010 | Flywheel             |
| 1106        | 1    | 1  | 1  | 2853112010 | Shaft                |
| 1110        | 1    | 1  | 1  | 53110603E9 | Hexagon Nut          |
| 1112        | 1    | 1  | 1  | 54020601E0 | Flat Washer          |
| H           |      |    | 1  | 2206160400 | Rear Panel Assembly  |
| 0304        |      |    | 1  | 2206160210 | Bracket              |
| 0316        |      |    | 1  | 2821259010 | Bushing              |
| 0318        |      |    | 2  | 54050300R0 | T.L. Washer          |
| 0320        |      |    | 2  | 55060305S0 | T.R. Rivet           |
| 0111        | 1    | 1  | 1  | 2915107010 | Sheet                |
| 0115        | 4    | 4  | 4  | 5201703950 | H. Head Bolt         |
| 0116        | 1    | 1  | 1  | 2916055010 | Collar               |
| 0119        | 1    | 1  | 1  | 2221154112 | Knob                 |
| 0120        | 8    | 8  | 8  | 2221154122 | Knob                 |
| 0121        | 1    | 1  | 1  | 2904154140 | Knob                 |
| 0122        | 2    | 2  | 2  | 2221154133 | Knob                 |
| 0124        | 3    | 3  | 3  | 2210154022 | Knob                 |
| 0127        | 3    | 3  | 3  | 2210154012 | Knob                 |
| 0207        | 2    | 2  | 2  | 51280306U0 | B.H. Tapped Screw B  |
| 0213        | 4    | 4  | 4  | 51480406S9 | B.H.M. Screw F       |
| 0217        | 10   | 10 | 10 | 51280406U0 | B.H. Tapped Screw B  |

| REF. DESIG. | Q'TY |    |    | PART NO.   | DESCRIPTION                |
|-------------|------|----|----|------------|----------------------------|
|             | U    | C  | E  |            |                            |
| 0219        | 4    | 4  | 4  | 2932057010 | Leg                        |
| 0220        | 4    | 4  | 4  | 51570410S0 | P.H. Tapped Screw, P4x10ST |
| 0303        | 1    | 1  |    | 2206160013 | Bracket                    |
| 0307        | 2    | 2  | 1  | 1455259030 | Bushing                    |
| 0309        | 4    | 4  | 4  | 51280308U0 | B.H. Tapped Screw B, 3x8   |
| 0311        | 2    | 2  | 2  | 51280308U0 | B.H. Tapped Screw B, 3x8   |
| 0312        | 1    | 1  | 1  | 51280308U0 | B.H. Tapped Screw B, 3x8   |
| 0314        | 10   | 10 | 10 | 51280308U0 | B.H. Tapped Screw B, 3x8   |
| 0317        |      |    | 2  | 53110303A9 | Hexagon Nut                |
| 0319        |      |    | 2  | 51060316A9 | P.H.M. Screw, P3x16        |
| 0322        | 1    | 1  | 1  | 62040029W0 | Lug                        |
| 0324        | 3    | 3  | 3  | 51100306S9 | B.H.M. Screw, B3x6         |
| 0326        | 1    | 1  | 1  | 2819271130 | Holder                     |
| 0327        | 1    | 1  | 1  | 2578160522 | Bracket K                  |
| 0332        | 2    | 2  | 2  | 51280312U0 | B.H. Tapped Screw B, 3x12  |
| 0334        | 1    | 1  | 1  | 62030039W0 | Lug                        |
| 0335        | 1    | 1  | 1  | 51280308U0 | B.H. Tapped Screw B, 3x8   |
| 0401        | 2    | 2  | 2  | 51280312U0 | B.H. Tapped Screw B, 3x12  |
| 0404        | 1    | 1  | 1  | 62030039W0 | Lug                        |
| 0405        | 1    | 1  | 1  | 51280308B0 | B.H. Tapped Screw B, 3x8   |
| 0408        |      |    | 2  | 51100308S9 | B.H.M. Screw, B3x8         |
| 0411        | 4    | 4  | 4  | 51280308U0 | B.H. Tapped Screw B, 3x8   |
| 0412        | 1    | 1  |    | 62030049W0 | Lug                        |
| 0413        |      |    | 1  | 62030049W0 | Lug                        |
| 0414        | 1    | 1  | 1  | 51280308B0 | B.H. Tapped Screw B, 3x8   |
| 0503        | 1    | 1  | 1  | 2915160505 | Bracket K                  |
| 0509        | 1    | 1  | 1  | 2915160060 | Bracket                    |
| 0510        | 2    | 2  | 2  | 51100306A9 | B.H.M. Screw, B3x6         |
| 0512        | 1    | 1  | 1  | 2206160020 | Bracket                    |
| 0513        | 2    | 2  | 2  | 51100306A9 | B.H.M. Screw, B3x6         |
| 0514        | 2    | 2  | 2  | 51060306A9 | P.H.M. Screw, P3x6         |
| 0516        | 1    | 1  | 1  | 2204160020 | Bracket                    |
| 0517        | 1    | 1  | 1  | 2204160030 | Bracket                    |
| 0518        | 4    | 4  | 4  | 51100406A9 | B.H.M. Screw, B4x6         |
| 0521        | 4    | 4  | 4  | 51100306A9 | B.H.M. Screw, B3x6         |
| 0522        | 2    | 2  | 2  | 51100306A9 | B.H.M. Screw, B3x6         |
| 0525        | 1    | 1  | 1  | 2577106020 | Bearing                    |
| 0526        | 1    | 1  | 1  | 1415118010 | Spacer                     |
| 0527        | 2    | 2  | 2  | 51040306A9 | F.H.M. Screw, F3x6         |
| 0528        | 2    | 2  | 2  | 51490308A9 | B.H.M. Screw FS, 3x8       |
| 0531        | 2    | 2  | 2  | 2871053020 | Cover                      |
| 0532        | 1    | 1  | 1  | 2915120040 | Insulator                  |
| 0603        | 2    | 2  | 2  | 51600306B0 | P.H. Tapped Screw, P3x6ST  |
| 0607        | 1    | 1  | 1  | 2819120050 | Insulator                  |
| 0609        | 1    | 1  | 1  | 2853269010 | Protector                  |
| 0610        | 2    | 2  | 2  | 51280306B0 | B.H. Tapped Screw B, 3x6   |
| 0613        | 2    | 2  | 2  | 51042608A0 | F.H.M. Screw, F2.6x8       |
| 0620        | 1    | 1  | 1  | 2871051020 | Guide                      |
| 0623        | 4    | 4  | 4  | 2886120020 | Insulator                  |
| 0627        | 1    | 1  | 1  | 2915262502 | Pulley K                   |
| 0631        | 2    | 2  | 2  | 51100306A9 | B.H.M. Screw, B3x6         |
| 0702        | 1    | 1  | 1  | 2204262502 | Pulley K                   |
| 0706        | 2    | 2  | 2  | 51100306A9 | B.H.M. Screw, B3x6         |
| 0709        | 6    | 6  | 6  | 51280308B0 | B.H. Tapped Screw B, 3x8   |
| 0803        | 1    | 1  | 1  | 2886274012 | Reflector                  |
| 0804        | 1    | 1  | 1  | 2886271020 | Holder                     |
| 0806        | 2    | 2  | 2  | 51480306A9 | B.H.M. Screw F, 3x6        |
| 0807        | 2    | 2  | 2  | 51570305B0 | P.H. Tapped Screw, P3x5ST  |
| 3436        | 1    | 1  | 1  | 2886107010 | Sheet                      |
| 0809        | 1    | 1  | 1  | 2886107010 | Sheet                      |
| 0903        | 1    | 1  | 1  | 2871274110 | Reflector                  |
| 0904        | 2    | 2  | 2  | 51480306A9 | B.H.M. Screw F, 3x6        |
| 0907        | 1    | 1  | 1  | 2871271010 | Holder                     |
| 0908        | 2    | 2  | 2  | 51570305B0 | P.H. Tapped Screw, P3x5ST  |



U : For U.S.A.  
C : For Canada  
E : For Europe

| REF. DESIG. | Q'TY |   |   | PART NO.   | DESCRIPTION   |
|-------------|------|---|---|------------|---|
|             | U    | C | E |            |   |
| 0910        | 1    | 1 | 1 | 2874259010 | Bushing   |
| 1003        | 1    | 1 | 1 | 2853106500 | Bearing K   |
| 1008        | 1    | 1 | 1 | 51640410D9 | Set Screw C.P., 4x10                                  |
| 1009        | 1    | 1 | 1 | 54040402N0 | Spring Washer   |
| 1010        | 1    | 1 | 1 | 53110403E9 | Hexagon Nut   |
| 1115        | 1    | 1 | 1 | 2850112020 | Shaft   |
| 1116        | 1    | 1 | 1 | 54040402N0 | Spring Washer   |
| 1309        | 1    | 1 | 1 | 56382540G0 | Eyelet  |
| 1402        | 1    | 1 | 1 | 2204105013 | Chassis   |
| 1405        | 6    | 6 | 6 | 51280308U0 | B.H. Tapped Screw B, 3x8                              |
| 1406        | 4    | 4 | 4 | 51280306U0 | B.H. Tapped Screw B, 3x6                              |
| 1407        | 4    | 4 | 4 | 51280306U0 | B.H. Tapped Screw B, 3x6                              |
| 1411        | 3    | 3 | 3 | 51100303B9 | B.H.M. Screw, B3x3                                    |
| 1412        | 1    | 1 | 1 | 2204109010 | Shield  |
| 1413        | 1    | 1 | 1 | 2204053010 | Cover   |
| 5736        | 1    | 1 | 1 | 2204005030 | Clamper   |
| 1416        | 2    | 2 | 2 | 2204005040 | Clamper   |
| 1417        | 4    | 4 | 4 | 2886005020 | Clamper   |
| 1418        | 3    | 3 | 3 | 2886005050 | Clamper   |
| 1420        | 2    | 2 | 2 | 2916160070 | Bracket   |
| 1424        | 1    | 1 | 1 | 1382005030 | Clamper   |
| 1425        | 1    | 1 | 1 | 51280306B0 | B.H. Tapped Screw B, 3x6                              |
| 1426        | 1    | 1 | 1 | 54050300R0 | T.L. Washer OR  |
| 1502        | 1    | 1 | 1 | 2204267020 | Heatsink  |
| 1503        | 1    | 1 | 1 | 51100306E9 | B.H.M. Screw, B3x6                                    |
| 1504        | 1    | 1 | 1 | 51570312B0 | P.H. Tapped Screw, P3x12ST                            |
| 1507        | 4    | 4 | 4 | 51490514A9 | B.H.M. Screw B, 5x14                                  |
| 1511        | 1    | 1 | 1 | 2206160030 | Bracket   |
| 1512        | 1    | 1 | 1 | 51280306B0 | B.H. Tapped Screw B, 3x6                              |
| 1513        | 1    | 1 | 1 | 54050300R0 | T.L. Washer OR  |
| 1514        | 4    | 4 | 4 | 51280306U0 | B.H. Tapped Screw B, 3x6                              |
| 1522        | 1    | 1 | 1 | 2927160050 | Bracket   |
| 1523        | 1    | 1 | 1 | 2908259010 | Bushing   |
| 1524        | 1    | 1 | 1 | 51570306B0 | P.H. Tapped Screw, P3x6ST                             |
| 1602        | 1    | 1 | 1 | 2204112503 | Shaft K   |
| 1607        | 1    | 1 | 1 | 2204005010 | Clamper   |
| 1608        | 2    | 2 | 2 | 51100310A9 | B.H.M. Screw, B3x10                                   |
| 1609        | 1    | 1 | 1 | 2896125010 | Joint   |
| 1610        | 2    | 2 | 2 | 51064019A9 | Set Screw, 40x19.                                     |
| 1802        | 1    | 1 | 1 | 2204302012 | Dial  |
| 1804        | 1    | 1 | 1 | 2915269012 | Protector   |
| 1805        | 2    | 2 | 2 | 51280306B0 | B.H. Tapped Screw B, 3x6                              |
| 1811        | 1    | 1 | 1 | 2890267012 | Heatsink  |
| 1813        | 1    | 1 | 1 | 2206104012 | Retainer  |
| 1814        | 1    | 1 | 1 | 2206104022 | Retainer  |
| 1815        | 4    | 4 | 4 | 51280306U0 | B.H. Tapped Screw B, 3x6                              |
| 1817        | 4    | 4 | 4 | 51100306S9 | B.H.M. Screw, B3x6                                    |
| 1818        | 8    | 8 | 8 | 51100316E9 | B.H.M. Screw, B3x16                                   |
| 1821        | 1    | 1 | 1 | 2206005012 | Clamper   |
| 1823        | 2    | 2 | 2 | 2912267022 | Heatsink  |
| 1824        | 4    | 4 | 4 | 51100306S9 | B.H.M. Screw, B3x6                                    |
| 1826        | 2    | 2 | 2 | 51100205A0 | B.H.M. Screw, B2x5                                    |
| 1827        | 2    | 2 | 2 | 59020604P0 | Washer  |
| 1828        | 1    | 1 | 1 | 1210005010 | Clamper   |
| 1831        | 4    | 4 | 4 | 51280306B0 | B.H. Tapped Screw B, 3x6                              |
| 1833        | 1    | 1 | 1 | 2819101010 | Support   |
| 1834        | 1    | 1 | 1 | 51100306S9 | B.H.M. Screw, B3x6                                    |
| 1902        | 1    | 1 | 1 | 2206265010 | Indicator   |
| 1903        | 1    | 1 | 1 | 2206265020 | Indicator   |
| 1904        | 1    | 1 | 1 | 2206265030 | Indicator   |
| 1912        | 1    | 1 | 1 | 2506265060 | Label, Do not use as handle.                          |
| 1936        | 1    | 1 | 1 | 2911861170 | Label, Do not use as handle.                          |
| 1937        | 1    | 1 | 1 | 2911861110 | Label, UL Caution                                     |
| 1938        | 1    | 1 | 1 | 2911861140 | Label, Do not remove cover.<br>See marking on bottom. |

| REF. DESIG. | Q'TY |   |   | PART NO.   | DESCRIPTION   |
|-------------|------|---|---|------------|---|
|             | U    | C | E |            |   |
| 1917        | 1    | 1 | 1 | 2578861010 | Label, UL Caution                                     |
| 1918        | 1    | 1 | 1 | 2932861010 | Label, Do not remove cover.<br>See marking on bottom. |
| 1919        | 1    | 1 | 1 | 2818861010 | Label, FTC  |
| 1921        | 1    | 1 | 1 | 9510911010 | Label, LL No.   |
| 1922        | 1    | 1 | 1 | 9510911020 | Label, UL Factory                                     |
| 1923        | 1    | 1 | 1 | 9511101020 | Label, UL   |
| 1939        | 1    | 1 | 1 | 2911861010 | Label   |
| 1940        | 1    | 1 | 1 | 2911861270 | Label   |
| 1929        | 1    | 1 | 1 | 2886861010 | Label, Marantz  |
| 1931        | 1    | 1 | 1 | 9510221010 | Label, Fuse Caution                                   |
| 1941        | 2    | 2 | 2 | 2911861160 | Label, Fuse Caution                                   |
| 1933        | 1    | 1 | 1 | 9510601050 | Label, 5A 250V  |
| 2004        | 1    | 1 | 1 | 2577813010 | Envelope, Orange                                      |
| 2005        | 1    | 1 | 1 | 2918813012 | Envelope, Yellow                                      |
| 2006        | 1    | 1 | 1 | 2818813010 | Envelope, Blue  |
| 2011        | 1    | 1 | 1 | 2577851020 | Instructions, Important                               |
| 2012        | 1    | 1 | 1 | 2818851120 | Instructions, Important                               |
| 2016        | 1    | 1 | 1 | 2577854012 | Guarantee Card, IBM                                   |
| 2017        | 1    | 1 | 1 | 9630000180 | Guarantee Card, IBM                                   |
| 2021        | 1    | 1 | 1 | 9650000050 | Service Station Card                                  |
| 2025        | 1    | 1 | 1 | 2818854022 | Guarantee Card  |
| 2026        | 1    | 1 | 1 | 2818854040 | Guarantee Card  |
| 2032        | 1    | 1 | 1 | 2818851040 | Instructions, Packing                                 |
| 2033        | 1    | 1 | 1 | 2818851140 | Instructions, Packing                                 |
| 2104        | 1    | 1 | 1 | 2206851010 | Instructions, Set                                     |
| 2106        | 1    | 1 | 1 | 2206851310 | Instructions, Set                                     |
| 2109        | 1    | 1 | 1 | 2886851100 | Instructions, Flysheet                                |
| 2116        | 1    | 1 | 1 | 2206856010 | Schematic Diagram                                     |
| 2202        | 1    | 1 | 1 | 2206801010 | Packing Case, Inner                                   |
| 2203        | 1    | 1 | 1 | 2206801110 | Packing Case, Outer                                   |
| 6436        | 1    | 1 | 1 | 2206856020 | Schematic Diagram                                     |
| 2211        | 2    | 2 | 2 | 2204809010 | Cushion   |
| 2216        | 1    | 1 | 1 | 9014838380 | Polyethylene Bag, Set                                 |
| 2218        | 1    | 1 | 1 | 9013025010 | Polyethylene Bag,<br>Printed Matter                   |
| 2219        | 1    | 1 | 1 | 9013025010 | Polyethylene Bag, Accessories                         |
| 2223        | 1    | 1 | 1 | 2864804010 | Sleeve, AC Cord                                       |
| 2224        | 1    | 1 | 1 | 9560000042 | Hang Tag, AC Cord                                     |
| 2226        | 1    | 1 | 1 | 2731821010 | Silicagel   |
| 2228        | 1    | 1 | 1 | 2819056010 | Buffer, AM Antenna                                    |
| 2231        | 1    | 1 | 1 | 2918107130 | Sheet   |
| 2302        | 4    | 4 | 4 | 9522815010 | Serial No. Card                                       |
| 2303        | 4    | 4 | 4 | 9523015120 | Serial No. Card                                       |
| 2304        | 4    | 4 | 4 | 9523015110 | Serial No. Card                                       |
| 2314        | 2    | 2 | 2 | 9510901020 | Label   |
| 2327        | 1    | 1 | 1 | ZA02000070 | Ext. FM Antenna                                       |
| P100        | 1    | 1 | 1 | YD29910010 | P.W. Board, FM Front End                              |
| A001        | 1    | 1 | 1 | AV01202060 | FM Front End Assembly                                 |
| R101        | 1    | 1 | 1 | GD05105140 | Fixed, 1MΩ ±5%, ¼W                                    |
| R102        | 1    | 1 | 1 | GD05101140 | Fixed, 100Ω ±5%, ¼W                                   |
| R103        | 1    | 1 | 1 | GD05101140 | Fixed, 100Ω ±5%, ¼W                                   |
| R104        | 1    | 1 | 1 | GD05101140 | Fixed, 100Ω ±5%, ¼W                                   |
| R105        | 1    | 1 | 1 | GD05223140 | Fixed, 22kΩ ±5%, ¼W                                   |
| R106        | 1    | 1 | 1 | GD05472140 | Fixed, 4.7kΩ ±5%, ¼W                                  |

**FM FRONT END CIRCUIT BOARD-P100**

P.W. Board, FM Front End  
FM Front End Assembly

**P100-RESISTORS**

Fixed, 1MΩ ±5%, ¼W  
Fixed, 100Ω ±5%, ¼W  
Fixed, 100Ω ±5%, ¼W  
Fixed, 100Ω ±5%, ¼W  
Fixed, 22kΩ ±5%, ¼W  
Fixed, 4.7kΩ ±5%, ¼W



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| REF. DESIG.                      | Q'TY |   |   | PART NO.   | DESCRIPTION                  |
|----------------------------------|------|---|---|------------|------------------------------|
|                                  | U    | C | E |            |                              |
| R107                             | 1    | 1 | 1 | GD05102140 | Fixed, 1kΩ ±5%, ¼W           |
| R108                             | 1    | 1 | 1 | GD05103140 | Fixed, 10kΩ ±5%, ¼W          |
| R109                             | 1    | 1 | 1 | GD05333140 | Fixed, 33kΩ ±5%, ¼W          |
| R110                             | 1    | 1 | 1 | GD05103140 | Fixed, 10kΩ ±5%, ¼W          |
| R111                             | 1    | 1 | 1 | GD05101140 | Fixed, 100Ω ±5%, ¼W          |
| <b>P100-CAPACITORS</b>           |      |   |   |            |                              |
| C101                             | 1    | 1 | 1 | DD16120020 | Ceramic, 12pF ±10%           |
| C102                             | 1    | 1 | 1 | DK18203030 | Ceramic, 0.02μF +80%, -20%   |
| C103                             | 1    | 1 | 1 | DK18203030 | Ceramic, 0.02μF +80%, -20%   |
| C104                             | 1    | 1 | 1 | DD11020010 | Ceramic, 2pF ±0.5pF          |
| C105                             | 1    | 1 | 1 | DK18203030 | Ceramic, 0.02μF +80%, -20%   |
| C106                             | 1    | 1 | 1 | DD16150040 | Ceramic, 15pF ±10%           |
| C107                             | 1    | 1 | 1 | DD11020010 | Ceramic, 2pF ±0.5pF          |
| C108                             | 1    | 1 | 1 | DD12050010 | Ceramic, 5pF ±1pF            |
| C109                             | 1    | 1 | 1 | DD16101010 | Ceramic, 100pF ±10%          |
| C110                             | 1    | 1 | 1 | DK18203030 | Ceramic, 0.02μF +80%, -20%   |
| C111                             | 1    | 1 | 1 | DD16101010 | Ceramic, 100pF ±10%          |
| C112                             | 1    | 1 | 1 | DK18203030 | Ceramic, 0.02μF +80%, -20%   |
| C113                             | 1    | 1 | 1 | DD15150020 | Ceramic, 15pF ±5%            |
| C114                             | 1    | 1 | 1 | DD10050030 | Ceramic, 5pF ±0.25pF         |
| C115                             | 1    | 1 | 1 | DD12050010 | Ceramic, 5pF ±1pF            |
| C116                             | 1    | 1 | 1 | DD16330020 | Ceramic, 33pF ±10%           |
| C117                             | 1    | 1 | 1 | DD12100060 | Ceramic, 10pF ±1pF           |
| C118                             | 1    | 1 | 1 | DK18203030 | Ceramic, 0.02μF +80%, -20%   |
| C119                             | 1    | 1 | 1 | DD11020010 | Ceramic, 2pF ±0.5pF          |
| C120                             | 1    | 1 | 1 | CA32400080 | Variable                     |
| C121                             | 1    | 1 | 1 | CT14200010 | Trimming, Oscillator         |
| <b>P100-MISCELLANEOUS</b>        |      |   |   |            |                              |
| L101                             | 1    | 1 | 1 | LL24700050 | Antenna Coil, FM (Primary)   |
| L102                             | 1    | 1 | 1 | LK12700040 | Antenna Coil, FM (Secondary) |
| L103                             | 1    | 1 | 1 | LL22700020 | RF Coil, FM (Primary)        |
| L104                             | 1    | 1 | 1 | LK11700040 | RF Coil, FM (Secondary)      |
| L105                             | 1    | 1 | 1 | LC12220010 | Choke Coil, 2.2μH            |
| L106                             | 1    | 1 | 1 | LI10239010 | IFT, FM                      |
| L107                             | 1    | 1 | 1 | LK12500040 | OSC Coil                     |
| Q101                             | 1    | 1 | 1 | HF400451B0 | FET, 3SK45B                  |
| Q102                             | 1    | 1 | 1 | HT305352B0 | Transistor, 2SC535           |
| Q103                             | 1    | 1 | 1 | HT313422B0 | Transistor, 2SC1342          |
| J101                             | 1    | 1 | 1 | YP10001510 | Plug                         |
| J102                             | 1    | 1 | 1 | YP10001510 | Plug                         |
| J103                             | 1    | 1 | 1 | YP10001510 | Plug                         |
| J105                             | 1    | 1 | 1 | YP10001510 | Plug                         |
| J107                             | 1    | 1 | 1 | YP10001510 | Plug                         |
| J109                             | 1    | 1 | 1 | YP10001510 | Plug                         |
| J110                             | 1    | 1 | 1 | YP10001510 | Plug                         |
| <b>TUNER CIRCUIT BOARD- P200</b> |      |   |   |            |                              |
| P200                             | 1    | 1 | 1 | YD22042010 | P.W. Board, Tuner            |
|                                  | 1    | 1 | 1 | ZZ22062010 | P.W. Board Assembly          |
|                                  |      |   | 1 | ZZ22068010 | P.W. Board Assembly          |
| <b>P200-RESISTORS</b>            |      |   |   |            |                              |
| R151                             | 1    | 1 | 1 | RT05201141 | Fixed, 200Ω ±5%, ¼W          |
| R152                             | 1    | 1 | 1 | RT05152141 | Fixed, 1.5kΩ ±5%, ¼W         |
| R153                             | 1    | 1 | 1 | RT05202141 | Fixed, 2kΩ ±5%, ¼W           |
| R154                             | 1    | 1 | 1 | RT05152141 | Fixed, 1.5kΩ ±5%, ¼W         |
| R155                             | 1    | 1 | 1 | RT05151140 | Fixed, 150Ω ±5%, ¼W          |
| R156                             | 1    | 1 | 1 | RA05020200 | Trimming, 5kΩ (B)            |
| R157                             | 1    | 1 | 1 | RT05471141 | Fixed, 470Ω ±5%, ¼W          |
| R158                             | 1    | 1 | 1 | RT05124141 | Fixed, 120kΩ ±5%, ¼W         |

| REF. DESIG. | Q'TY |   |   | PART NO.   | DESCRIPTION          |
|-------------|------|---|---|------------|----------------------|
|             | U    | C | E |            |                      |
| R159        | 1    | 1 | 1 | RT05104141 | Fixed, 100kΩ ±5%, ¼W |
| R160        | 1    | 1 | 1 | RT05103141 | Fixed, 10kΩ ±5%, ¼W  |
| R161        | 1    | 1 | 1 | RT05103141 | Fixed, 10kΩ ±5%, ¼W  |
| R162        | 1    | 1 | 1 | RT05102141 | Fixed, 1kΩ ±5%, ¼W   |
| R163        | 1    | 1 | 1 | RT05301141 | Fixed, 300Ω ±5%, ¼W  |
| R164        | 1    | 1 | 1 | RT05473141 | Fixed, 47kΩ ±5%, ¼W  |
| R165        | 1    | 1 | 1 | RT05104141 | Fixed, 100kΩ ±5%, ¼W |
| R166        | 1    | 1 | 1 | RT05152141 | Fixed, 1.5kΩ ±5%, ¼W |
| R167        | 1    | 1 | 1 | RT05242141 | Fixed, 2.4kΩ ±5%, ¼W |
| R169        | 1    | 1 | 1 | RT05473141 | Fixed, 47kΩ ±5%, ¼W  |
| R170        | 1    | 1 | 1 | RT05101140 | Fixed, 100Ω ±5%, ¼W  |
| R201        | 1    | 1 | 1 | RT05151141 | Fixed, 150Ω ±5%, ¼W  |
| R202        | 1    | 1 | 1 | RT05331141 | Fixed, 330Ω ±5%, ¼W  |
| R203        | 1    | 1 | 1 | RT05153141 | Fixed, 15kΩ ±5%, ¼W  |
| R204        | 1    | 1 | 1 | RT05272141 | Fixed, 2.7kΩ ±5%, ¼W |
| R205        | 1    | 1 | 1 | RT05331141 | Fixed, 330Ω ±5%, ¼W  |
| R206        | 1    | 1 | 1 | RT05102141 | Fixed, 1kΩ ±5%, ¼W   |
| R207        | 1    | 1 | 1 | RT05101141 | Fixed, 100Ω ±5%, ¼W  |
| R208        | 1    | 1 | 1 | RT05334141 | Fixed, 330kΩ ±5%, ¼W |
| R209        | 1    | 1 | 1 | RA05030120 | Trimming, 50kΩ (B)   |
| R210        | 1    | 1 | 1 | RT05103141 | Fixed, 10kΩ ±5%, ¼W  |
| R211        | 1    | 1 | 1 | RT05104141 | Fixed, 100kΩ ±5%, ¼W |
| R212        | 1    | 1 | 1 | RA01030250 | Trimming, 10kΩ (B)   |
| R213        | 1    | 1 | 1 | RT05123141 | Fixed, 12kΩ ±5%, ¼W  |
| R214        | 1    | 1 | 1 | RT05331141 | Fixed, 330Ω ±5%, ¼W  |
| R215        | 1    | 1 | 1 | RA05030120 | Trimming, 50kΩ (B)   |
| R216        | 1    | 1 | 1 | RT05562141 | Fixed, 5.6kΩ ±5%, ¼W |
| R217        | 1    | 1 | 1 | RT05222141 | Fixed, 2.2kΩ ±5%, ¼W |
| R218        | 1    | 1 | 1 | RT05222141 | Fixed, 2.2kΩ ±5%, ¼W |
| R219        | 1    | 1 | 1 | RT05153141 | Fixed, 15kΩ ±5%, ¼W  |
| R220        | 1    | 1 | 1 | RT05102141 | Fixed, 1kΩ ±5%, ¼W   |
| R221        | 1    | 1 | 1 | RT05223141 | Fixed, 22kΩ ±5%, ¼W  |
| R222        | 1    | 1 | 1 | RT05473141 | Fixed, 47kΩ ±5%, ¼W  |
| R301        | 1    | 1 | 1 | RA01030310 | Trimming, 10kΩ (B)   |
| R302        | 1    | 1 | 1 | RT05104141 | Fixed, 100kΩ ±5%, ¼W |
| R303        | 1    | 1 | 1 | RT05223141 | Fixed, 22kΩ ±5%, ¼W  |
| R304        | 1    | 1 | 1 | RT05102141 | Fixed, 1kΩ ±5%, ¼W   |
| R305        | 1    | 1 | 1 | RT05104141 | Fixed, 100kΩ ±5%, ¼W |
| R306        | 1    | 1 | 1 | RT05824141 | Fixed, 820kΩ ±5%, ¼W |
| R307        | 1    | 1 | 1 | RT05473141 | Fixed, 47kΩ ±5%, ¼W  |
| R308        | 1    | 1 | 1 | RC00000120 | Fixed, 0Ω, ¼W        |
| R309        | 1    | 1 | 1 | RT05224141 | Fixed, 220kΩ ±5%, ¼W |
| R310        | 1    | 1 | 1 | RT05223141 | Fixed, 22kΩ ±5%, ¼W  |
| R311        | 1    | 1 | 1 | RT05272141 | Fixed, 2.7kΩ ±5%, ¼W |
| R312        | 1    | 1 | 1 | RT05101140 | Fixed, 100Ω ±5%, ¼W  |
| R313        | 1    | 1 | 1 | RT05303141 | Fixed, 30kΩ ±5%, ¼W  |
| R314        | 1    | 1 | 1 | RT05303141 | Fixed, 30kΩ ±5%, ¼W  |
| R315        | 1    | 1 | 1 | RT05473141 | Fixed, 47kΩ ±5%, ¼W  |
| R316        | 1    | 1 | 1 | RT05473141 | Fixed, 47kΩ ±5%, ¼W  |
| R317        | 1    | 1 | 1 | RA02540010 | Trimming, 250kΩ (B)  |
| R318        | 1    | 1 | 1 | RT05104141 | Fixed, 100kΩ ±5%, ¼W |
| R319        | 1    | 1 | 1 | RT05273141 | Fixed, 27kΩ ±5%, ¼W  |
| R320        | 1    | 1 | 1 | RT05273141 | Fixed, 27kΩ ±5%, ¼W  |
| R321        | 1    | 1 | 1 | RT05332141 | Fixed, 3.3kΩ ±5%, ¼W |
| R322        | 1    | 1 | 1 | RT05332141 | Fixed, 3.3kΩ ±5%, ¼W |
| R323        | 1    | 1 | 1 | RT05332141 | Fixed, 3.3kΩ ±5%, ¼W |
| R324        | 1    | 1 | 1 | RT05332141 | Fixed, 3.3kΩ ±5%, ¼W |
| R325        | 1    | 1 | 1 | RT05243141 | Fixed, 24kΩ ±5%, ¼W  |
| R326        | 1    | 1 | 1 | RT05243141 | Fixed, 24kΩ ±5%, ¼W  |
| R327        | 1    | 1 | 1 | RT05394140 | Fixed, 390kΩ ±5%, ¼W |
| R328        | 1    | 1 | 1 | RT05394141 | Fixed, 390kΩ ±5%, ¼W |
| R329        | 1    | 1 | 1 | RT05105141 | Fixed, 1MΩ ±5%, ¼W   |



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C: For Canada  
E: For Europe

| REF. DESIG.            | Q'TY |   |   | PART NO.   | DESCRIPTION                |
|------------------------|------|---|---|------------|----------------------------|
|                        | U    | C | E |            |                            |
| R330                   | 1    | 1 | 1 | RT05105141 | Fixed, 1MΩ ±5%, ¼W         |
| R331                   | 1    | 1 | 1 | RT05391140 | Fixed, 390Ω ±5%, ¼W        |
| R332                   | 1    | 1 | 1 | RT05391141 | Fixed, 390Ω ±5%, ¼W        |
| R333                   | 1    | 1 | 1 | RT05222141 | Fixed, 2.2kΩ ±5%, ¼W       |
| R334                   | 1    | 1 | 1 | RT05222141 | Fixed, 2.2kΩ ±5%, ¼W       |
| R335                   | 1    | 1 | 1 | RT05473141 | Fixed, 47kΩ ±5%, ¼W        |
| R336                   | 1    | 1 | 1 | RT05473141 | Fixed, 47kΩ ±5%, ¼W        |
| R337                   | 1    | 1 | 1 | RT05101141 | Fixed, 100Ω ±5%, ¼W        |
| R338                   | 1    | 1 | 1 | RT05101141 | Fixed, 100Ω ±5%, ¼W        |
| R339                   | 1    | 1 | 1 | RT05101140 | Fixed, 100Ω ±5%, ¼W        |
| R340                   | 1    | 1 | 1 | RT05201141 | Fixed, 200Ω ±5%, ¼W        |
| <b>P100-CAPACITORS</b> |      |   |   |            |                            |
| C151                   | 1    | 1 | 1 | DK17103040 | Ceramic, 0.01μF ±20%       |
| C152                   | 1    | 1 | 1 | DK17103040 | Ceramic, 0.01μF ±20%       |
| C153                   | 1    | 1 | 1 | DK17102010 | Ceramic, 0.001μF ±20%      |
| C154                   | 1    | 1 | 1 | EA10701690 | Electrolytic, 100μF, 16V   |
| C155                   | 1    | 1 | 1 | DK18403020 | Ceramic, 0.04μF +80%, -20% |
| C156                   | 1    | 1 | 1 | DF65391010 | Film, 390pF ±5%            |
| C157                   | 1    | 1 | 1 | DD16150070 | Ceramic, 15pF ±10%         |
| C158                   | 1    | 1 | 1 | DK17103040 | Ceramic, 0.01μF ±20%       |
| C159                   | 1    | 1 | 1 | DK17103010 | Ceramic, 0.01μF ±20%       |
| C160                   | 1    | 1 | 1 | DD15820010 | Ceramic, 82pF ±5%          |
| C161                   | 1    | 1 | 1 | DK17103040 | Ceramic, 0.01μF ±20%       |
| C162                   | 1    | 1 | 1 | DK18403020 | Ceramic, 0.04μF +80%, -20% |
| C163                   | 1    | 1 | 1 | EA10505090 | Electrolytic, 1μF, 50V     |
| C164                   | 1    | 1 | 1 | EA47503590 | Electrolytic, 4.7μF, 35V   |
| C165                   | 1    | 1 | 1 | EA33502590 | Electrolytic, 3.3μF, 25V   |
| C166                   | 1    | 1 | 1 | DK17102010 | Ceramic, 0.001μF ±20%      |
| C167                   | 1    | 1 | 1 | DK17103040 | Ceramic, 0.01μF ±20%       |
| C168                   | 1    | 1 | 1 | DK17502010 | Ceramic, 0.005μF ±20%      |
| C169                   | 1    | 1 | 1 | DK18403020 | Ceramic, 0.04μF +80%, -20% |
| C170                   | 1    | 1 | 1 | EA10701690 | Electrolytic, 100μF, 16V   |
| C171                   | 1    | 1 | 1 | DF16104010 | Film, 0.1μF, 50V           |
| C172                   | 1    | 1 | 1 | EV47501660 | Electrolytic, 4.7μF, 16V   |
| C201                   | 1    | 1 | 1 | DD15300010 | Ceramic, 30pF ±5%          |
| C202                   | 1    | 1 | 1 | DK17103040 | Ceramic, 0.01μF ±20%       |
| C203                   | 1    | 1 | 1 | DK17103040 | Ceramic, 0.01μF ±20%       |
| C204                   | 1    | 1 | 1 | DK17103040 | Ceramic, 0.01μF ±20%       |
| C205                   | 1    | 1 | 1 | DK18403020 | Ceramic, 0.04μF +80%, -20% |
| C206                   | 1    | 1 | 1 | DK18403020 | Ceramic, 0.04μF +80%, -20% |
| C207                   | 1    | 1 | 1 | DK18403020 | Ceramic, 0.04μF +80%, -20% |
| C208                   | 1    | 1 | 1 | EA47503590 | Electrolytic, 4.7μF, 35V   |
| C209                   | 1    | 1 | 1 | DD15400040 | Ceramic, 40pF ±5%          |
| C210                   | 1    | 1 | 1 | EA22601690 | Electrolytic, 22μF, 16V    |
| C211                   | 1    | 1 | 1 | EA47405010 | Electrolytic, 0.47μF, 50V  |
| C212                   | 1    | 1 | 1 | DK18403010 | Ceramic, 0.04μF +100%, -0% |
| C213                   | 1    | 1 | 1 | DK18403010 | Ceramic, 0.04μF +100%, -0% |
| C214                   | 1    | 1 | 1 | DK18203020 | Ceramic, 0.02μF +100%, -0% |
| C215                   | 1    | 1 | 1 | DK18203020 | Ceramic, 0.02μF +100%, -0% |
| C216                   | 1    | 1 | 1 | DK18403010 | Ceramic, 0.04μF +100%, -0% |
| C217                   | 1    | 1 | 1 | EA10505090 | Electrolytic, 1μF, 50V     |
| C218                   | 1    | 1 | 1 | EA10505090 | Electrolytic, 1μF, 50V     |
| C301                   | 1    | 1 | 1 | EA47503590 | Electrolytic, 4.7μF, 35V   |
| C302                   | 1    | 1 | 1 | DF65361500 | Film, 360pF ±5%            |
| C303                   | 1    | 1 | 1 | EA10701690 | Electrolytic, 100μF, 16V   |
| C304                   | 1    | 1 | 1 | EE33502510 | Electrolytic, 3.3μF, 25V   |
| C305                   | 1    | 1 | 1 | EE10505010 | Electrolytic, 1μF, 50V     |
| C306                   | 1    | 1 | 1 | EA10505090 | Electrolytic, 1μF, 50V     |
| C307                   | 1    | 1 | 1 | EQ22405010 | Electrolytic, 0.22μF, 50V  |
| C308                   | 1    | 1 | 1 | DF17473010 | Film, 0.047μF              |
| C309                   | 1    | 1 | 1 | DD15500050 | Ceramic, 50pF ±5%          |
| C310                   | 1    | 1 | 1 | DD15500050 | Ceramic, 50pF ±5%          |

| REF. DESIG.                                  | Q'TY |    |    | PART NO.   | DESCRIPTION                    |
|--|------|----|----|------------|--------------------------------|
|  | U    | C  | E  |            |                                |
| C311   | 1    | 1  | 1  | EA10601690 | Electrolytic, 10μF, 16V        |
| C312   | 1    | 1  | 1  | EA10601690 | Electrolytic, 10μF, 16V        |
| C313   | 1    | 1  | 1  | EA22505090 | Electrolytic, 2.2μF, 50V       |
| C314   | 1    | 1  | 1  | EA22505090 | Electrolytic, 2.2μF, 50V       |
| C315   | 1    | 1  | 1  | DF15102050 | Film, 1000pF ±5%               |
| C316   | 1    | 1  | 1  | DF15102050 | Film, 1000pF ±5%               |
| C315   | 1    | 1  | 1  | DF15222050 | Film, 0.0022μF ±5%             |
| C316   | 1    | 1  | 1  | DF15222050 | Film, 0.0022μF ±5%             |
| C317   | 1    | 1  | 1  | EA47405010 | Electrolytic, 0.47μF, 50V      |
| C318   | 1    | 1  | 1  | EA47405010 | Electrolytic, 0.47μF, 50V      |
| C319   | 1    | 1  | 1  | EV47501660 | Electrolytic, 4.7μF, 16V       |
| C320   | 1    | 1  | 1  | EV47501660 | Electrolytic, 4.7μF, 16V       |
| C321   | 1    | 1  | 1  | EA10701690 | Electrolytic, 100μF, 16V       |
| C322   | 1    | 1  | 1  | EE10601620 | Electrolytic, 10μF, 16V        |
| <b>P200-COILS, TRANSFORMERS &amp; FILTER</b> |      |    |    |            |                                |
| L151   | 1    | 1  | 1  | LC13320020 | Choke Coil, 3.3μH              |
| L152   | 1    | 1  | 1  | LC13320020 | Choke Coil, 3.3μH              |
| L153   | 1    | 1  | 1  | LC13320020 | Choke Coil, 3.3μH              |
| L154   | 1    | 1  | 1  | LO10010480 | AM OSC                         |
| L155   | 1    | 1  | 1  | LI10015010 | AM IFT                         |
| L156   | 1    | 1  | 1  | LI10015060 | AM IFT                         |
| L201   | 1    | 1  | 1  | LC13320020 | Choke Coil, 3.3μH              |
| L202   | 1    | 1  | 1  | LI14019010 | FM IFT                         |
| L203   | 1    | 1  | 1  | LC11830010 | Choke Coil, 18μH               |
| L301   | 1    | 1  | 1  | LS35025010 | Low Pass Filter, FB3605        |
| <b>P200-SEMICONDUCTORS</b>                   |      |    |    |            |                                |
| Q151   | 1    | 1  | 1  | HC10019010 | IC, HA1197                     |
| Q152   | 1    | 1  | 1  | HT313272A0 | Transistor, 2SC1327 S or T     |
| Q201   | 1    | 1  | 1  | HT310471C0 | Transistor, 2SC1047 C          |
| Q202   | 1    | 1  | 1  | HC10021010 | IC, HA1137 W                   |
| Q203   | 1    | 1  | 1  | HD20011050 | Diode, 1S1555                  |
| Q204   | 1    | 1  | 1  | HD20011050 | Diode, 1S1555                  |
| Q205   | 1    | 1  | 1  | HD20011050 | Diode, 1S1555                  |
| Q206   | 1    | 1  | 1  | HT308281D0 | Transistor, 2SC828 S           |
| Q207   | 1    | 1  | 1  | HD20011050 | Diode, 1S1555                  |
| Q301   | 1    | 1  | 1  | HT308281D0 | Transistor, 2SC828 S           |
| Q302   | 1    | 1  | 1  | HC10020010 | IC, HA1196                     |
| Q303   | 1    | 1  | 1  | HT313441E0 | Transistor, 2SC1344E           |
| Q304   | 1    | 1  | 1  | HT313441E0 | Transistor, 2SC1344E           |
| <b>P200-MISCELLANEOUS</b>                    |      |    |    |            |                                |
| P208   | 8    | 8  | 8  | 2933118020 | Spacer, R155, R170, R312, R339 |
| F151   | 1    | 1  | 1  | FF10045160 | Ceramic Filter, AM             |
| F201   | 1    | 1  | 1  | FF11070050 | Ceramic Filter, FM             |
| F202   | 1    | 1  | 1  | FF11070050 | Ceramic Filter, FM             |
| F203   | 1    | 1  | 1  | FF11070050 | Ceramic Filter, FM             |
| J201   | 1    | 1  | 1  | YP10001130 | Plug                           |
| J232   | 32   | 32 | 32 |            |                                |
| <b>EQUALIZER AMP. CIRCUIT BOARD-P400</b>     |      |    |    |            |                                |
| P400   | 1    | 1  | 1  | YA22040210 | P.W. Board, Equalizer Amp.     |
|  | 1    | 1  | 1  | ZZ22040210 | P.W. Board Assembly            |
| <b>P400-RESISTORS</b>                        |      |    |    |            |                                |
| R401   | 1    | 1  | 1  | RT05913141 | Fixed, 91kΩ ±5%, ¼W            |
| R402   | 1    | 1  | 1  | RT05913141 | Fixed, 91kΩ ±5%, ¼W            |
| R403   | 1    | 1  | 1  | RT05471141 | Fixed, 470Ω ±5%, ¼W            |



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| REF. DESIG.               | Q'TY |   |   | PART NO.   | DESCRIPTION                          |
|---------------------------|------|---|---|------------|--------------------------------------|
|                           | U    | C | E |            |                                      |
| R404                      | 1    | 1 | 1 | RT05471141 | Fixed, 470Ω ±5%, ¼W                  |
| R405                      | 1    | 1 | 1 | RN05394140 | Fixed, 390kΩ ±5%, ¼W                 |
| R406                      | 1    | 1 | 1 | RN05394140 | Fixed, 390kΩ ±5%, ¼W                 |
| R407                      | 1    | 1 | 1 | RT05223141 | Fixed, 22kΩ ±5%, ¼W                  |
| R408                      | 1    | 1 | 1 | RT05223141 | Fixed, 22kΩ ±5%, ¼W                  |
| R409                      | 1    | 1 | 1 | RT05681141 | Fixed, 680Ω ±5%, ¼W                  |
| R410                      | 1    | 1 | 1 | RT05681141 | Fixed, 680Ω ±5%, ¼W                  |
| R411                      | 1    | 1 | 1 | RN05104140 | Fixed, 100kΩ ±5%, ¼W                 |
| R412                      | 1    | 1 | 1 | RN05104140 | Fixed, 100kΩ ±5%, ¼W                 |
| R413                      | 1    | 1 | 1 | RT05303141 | Fixed, 30kΩ ±5%, ¼W                  |
| R414                      | 1    | 1 | 1 | RT05303141 | Fixed, 30kΩ ±5%, ¼W                  |
| R415                      | 1    | 1 | 1 | RT05562141 | Fixed, 5.6kΩ ±5%, ¼W                 |
| R416                      | 1    | 1 | 1 | RT05562141 | Fixed, 5.6kΩ ±5%, ¼W                 |
| R417                      | 1    | 1 | 1 | RT05182141 | Fixed, 1.8kΩ ±5%, ¼W                 |
| R418                      | 1    | 1 | 1 | RT05182141 | Fixed, 1.8kΩ ±5%, ¼W                 |
| R419                      | 1    | 1 | 1 | RT05472141 | Fixed, 4.7kΩ ±5%, ¼W                 |
| R420                      | 1    | 1 | 1 | RT05472141 | Fixed, 4.7kΩ ±5%, ¼W                 |
| R421                      | 1    | 1 | 1 | RT05224141 | Fixed, 220kΩ ±5%, ¼W                 |
| R422                      | 1    | 1 | 1 | RT05224141 | Fixed, 220kΩ ±5%, ¼W                 |
| R423                      | 1    | 1 | 1 | RT05473141 | Fixed, 47kΩ ±5%, ¼W                  |
| R424                      | 1    | 1 | 1 | RT05473141 | Fixed, 47kΩ ±5%, ¼W                  |
| R425                      | 1    | 1 | 1 | RT05152141 | Fixed, 1.5kΩ ±5%, ¼W                 |
| R426                      | 1    | 1 | 1 | RT05152141 | Fixed, 1.5kΩ ±5%, ¼W                 |
| R427                      | 1    | 1 | 1 | RN05564140 | Fixed, 560kΩ ±5%, ¼W                 |
| R428                      | 1    | 1 | 1 | RN05564140 | Fixed, 560kΩ ±5%, ¼W                 |
| R429                      | 1    | 1 | 1 | RT05101140 | Fixed, 100Ω ±5%, ¼W                  |
| R430                      | 1    | 1 | 1 | GJ05681010 | Fixed, 680Ω ±5%, 1W                  |
| R431                      | 1    | 1 | 1 | GF05330120 | Fixed, 33Ω ±5%, ¼W                   |
| R400                      | 1    | 1 | 1 | RC00000120 | Fixed, 0Ω, ¼W                        |
| <b>P400-CAPACITORS</b>    |      |   |   |            |                                      |
| C401                      | 1    | 1 | 1 | EV22502560 | Electrolytic, 2.2μF ±20%, 25V        |
| C402                      | 1    | 1 | 1 | EV22502560 | Electrolytic, 2.2μF ±20%, 25V        |
| C403                      | 1    | 1 | 1 | DD15201010 | Ceramic, 200pF ±10%, 50V             |
| C404                      | 1    | 1 | 1 | DD15201010 | Ceramic, 200pF ±10%, 50V             |
| C405                      | 1    | 1 | 1 | DD16151010 | Ceramic, 150pF ±10%, 50V             |
| C406                      | 1    | 1 | 1 | DD16151010 | Ceramic, 150pF ±10%, 50V             |
| C407                      | 1    | 1 | 1 | EV22600660 | Electrolytic, 22μF ±20%, 6.3V        |
| C408                      | 1    | 1 | 1 | EV22600660 | Electrolytic, 22μF ±20%, 6.3V        |
| C409                      | 1    | 1 | 1 | DD16300010 | Ceramic, 30pF ±10%, 50V              |
| C410                      | 1    | 1 | 1 | DD16300010 | Ceramic, 30pF ±10%, 50V              |
| C411                      | 1    | 1 | 1 | EA47601690 | Electrolytic, 47μF +100%, -10%, 16V  |
| C412                      | 1    | 1 | 1 | EA47601690 | Electrolytic, 47μF +100%, -10%, 16V  |
| C413                      | 1    | 1 | 1 | DD16101010 | Ceramic, 100pF ±10%, 50V             |
| C414                      | 1    | 1 | 1 | DD16101010 | Ceramic, 100pF ±10%, 50V             |
| C415                      | 1    | 1 | 1 | EE22503510 | Electrolytic, 2.2μF ±20%, 35V        |
| C416                      | 1    | 1 | 1 | EE22503510 | Electrolytic, 2.2μF ±20%, 35V        |
| C417                      | 1    | 1 | 1 | DF15152010 | Film, 0.0015μF ±20%, 50V             |
| C418                      | 1    | 1 | 1 | DF15152010 | Film, 0.0015μF ±20%, 50V             |
| C419                      | 1    | 1 | 1 | DF15562010 | Film, 0.0056μF ±50%, 50V             |
| C420                      | 1    | 1 | 1 | DF15562010 | Film, 0.0056μF ±50%, 50V             |
| C421                      | 1    | 1 | 1 | EA10705090 | Electrolytic, 100μF +100%, -10%, 50V |
| C422                      | 1    | 1 | 1 | EA47601090 | Electrolytic, 47μF +100%, -10%, 10V  |
| <b>P400-MISCELLANEOUS</b> |      |   |   |            |                                      |
| Q401                      | 1    | 1 | 1 | HT313281T0 | Transistor, 2SC1328 T                |
| Q402                      | 1    | 1 | 1 | HT313281T0 | Transistor, 2SC1328 T                |
| Q403                      | 1    | 1 | 1 | HT313282A0 | Transistor, 2SC1328 S or T           |
| Q404                      | 1    | 1 | 1 | HT313282A0 | Transistor, 2SC1328 S or T           |
| Q405                      | 1    | 1 | 1 | HT313281T0 | Transistor, 2SC1328 T                |

| REF. DESIG.                         | Q'TY |    |    | PART NO.   | DESCRIPTION              |
|-------------------------------------|------|----|----|------------|--------------------------|
|                                     | U    | C  | E  |            |                          |
| Q406                                | 1    | 1  | 1  | HT313281T0 | Transistor, 2SC1328 T    |
| S401                                | 1    | 1  | 1  | SR10050120 | Rotary Switch, Selector  |
| P408                                | 6    | 6  | 6  | 2933118020 | Spacer, R429~R431 (10mm) |
| J401                                | ?    |    |    |            |                          |
| J435                                | 35   | 35 | 35 | YP10001131 | Plug                     |
| <b>MAIN AMP. CIRCUIT BOARD-P700</b> |      |    |    |            |                          |
| P700                                | 1    | 1  | 1  | YD29581013 | P.W. Board, Main Amp.    |
|                                     | 1    | 1  | 1  | ZZ22061012 | P.W. Board Assembly      |
| <b>P700-RESISTORS</b>               |      |    |    |            |                          |
| R701                                | 1    | 1  | 1  | RT05102140 | Fixed, 1.0kΩ ±5%, ¼W     |
| R702                                | 1    | 1  | 1  | RT05102140 | Fixed, 1.0kΩ ±5%, ¼W     |
| R703                                | 1    | 1  | 1  | RT05333140 | Fixed, 33kΩ ±5%, ¼W      |
| R704                                | 1    | 1  | 1  | RT05333140 | Fixed, 33kΩ ±5%, ¼W      |
| R705                                | 1    | 1  | 1  | RT05682140 | Fixed, 6.8kΩ ±5%, ¼W     |
| R706                                | 1    | 1  | 1  | RT05682140 | Fixed, 6.8kΩ ±5%, ¼W     |
| R707                                | 1    | 1  | 1  | RT05102140 | Fixed, 1kΩ ±5%, ¼W       |
| R708                                | 1    | 1  | 1  | RT05102140 | Fixed, 1kΩ ±5%, ¼W       |
| R709                                | 1    | 1  | 1  | RT05103140 | Fixed, 10kΩ ±5%, ¼W      |
| R710                                | 1    | 1  | 1  | RT05103140 | Fixed, 10kΩ ±5%, ¼W      |
| R711                                | 1    | 1  | 1  | RA05020170 | Trimming, 5kΩ (B)        |
| R712                                | 1    | 1  | 1  | RA05020170 | Trimming, 5kΩ (B)        |
| R713                                | 1    | 1  | 1  | RT05472140 | Fixed, 4.7kΩ ±5%, ¼W     |
| R714                                | 1    | 1  | 1  | RT05472140 | Fixed, 4.7kΩ ±5%, ¼W     |
| R715                                | 1    | 1  | 1  | RT05154140 | Fixed, 150kΩ ±5%, ¼W     |
| R716                                | 1    | 1  | 1  | RT05154140 | Fixed, 150kΩ ±5%, ¼W     |
| R717                                | 1    | 1  | 1  | RT05302140 | Fixed, 3.0kΩ ±5%, ¼W     |
| R718                                | 1    | 1  | 1  | RT05302140 | Fixed, 3.0kΩ ±5%, ¼W     |
| R719                                | 1    | 1  | 1  | RT05333140 | Fixed, 33kΩ ±5%, ¼W      |
| R720                                | 1    | 1  | 1  | RT05333140 | Fixed, 33kΩ ±5%, ¼W      |
| R721                                | 1    | 1  | 1  | GF05330140 | Fixed, 33Ω ±5%, ¼W       |
| R722                                | 1    | 1  | 1  | GF05330140 | Fixed, 33Ω ±5%, ¼W       |
| R723                                | 1    | 1  | 1  | GF05221140 | Fixed, 220Ω ±5%, ¼W      |
| R724                                | 1    | 1  | 1  | GF05221140 | Fixed, 220Ω ±5%, ¼W      |
| R725                                | 1    | 1  | 1  | RT05242140 | Fixed, 2.4kΩ ±5%, ¼W     |
| R726                                | 1    | 1  | 1  | RT05242140 | Fixed, 2.4kΩ ±5%, ¼W     |
| R727                                | 1    | 1  | 1  | RT05472140 | Fixed, 4.7kΩ ±5%, ¼W     |
| R728                                | 1    | 1  | 1  | RT05472140 | Fixed, 4.7kΩ ±5%, ¼W     |
| R729                                | 1    | 1  | 1  | RT05750140 | Fixed, 75Ω ±5%, ¼W       |
| R730                                | 1    | 1  | 1  | RT05750140 | Fixed, 75Ω ±5%, ¼W       |
| R731                                | 1    | 1  | 1  | HH00003030 | Thermistor, STD-04       |
| R732                                | 1    | 1  | 1  | HH00003030 | Thermistor, STD-04       |
| R733                                | 1    | 1  | 1  | RA03010020 | Trimming, 300Ω (B)       |
| R734                                | 1    | 1  | 1  | RA03010020 | Trimming, 300Ω (B)       |
| R735                                | 1    | 1  | 1  | RT05221140 | Fixed, 220Ω ±5%, ¼W      |
| R736                                | 1    | 1  | 1  | RT05221140 | Fixed, 220Ω ±5%, ¼W      |
| R737                                | 1    | 1  | 1  | GF05242140 | Fixed, 2.4kΩ ±5%, ¼W     |
| R738                                | 1    | 1  | 1  | GF05242140 | Fixed, 2.4kΩ ±5%, ¼W     |
| R739                                | 1    | 1  | 1  | GF05332140 | Fixed, 3.3kΩ ±5%, ¼W     |
| R740                                | 1    | 1  | 1  | GF05332140 | Fixed, 3.3kΩ ±5%, ¼W     |
| R741                                | 1    | 1  | 1  | GF05182140 | Fixed, 1.8kΩ ±5%, ¼W     |
| R742                                | 1    | 1  | 1  | GF05182140 | Fixed, 1.8kΩ ±5%, ¼W     |
| R743                                | 1    | 1  | 1  | GF05432140 | Fixed, 4.3kΩ ±5%, ¼W     |
| R744                                | 1    | 1  | 1  | GF05432140 | Fixed, 4.3kΩ ±5%, ¼W     |
| R745                                | 1    | 1  | 1  | GF05182140 | Fixed, 1.8kΩ ±5%, ¼W     |
| R746                                | 1    | 1  | 1  | GF05182140 | Fixed, 1.8kΩ ±5%, ¼W     |
| R747                                | 1    | 1  | 1  | GF05101140 | Fixed, 100Ω ±5%, ¼W      |



U: For U.S.A.  
C: For Canada  
E: For Europe

| REF. DESIG.                | Q'TY |   |   | PART NO.   | DESCRIPTION                          |
|----------------------------|------|---|---|------------|--------------------------------------|
|                            | U    | C | E |            |                                      |
| R748                       | 1    | 1 | 1 | GF05101140 | Fixed, 100Ω ±5%, ¼W                  |
| R749                       | 1    | 1 | 1 | GF05101140 | Fixed, 100Ω ±5%, ¼W                  |
| R750                       | 1    | 1 | 1 | GF05101140 | Fixed, 100Ω ±5%, ¼W                  |
| R751                       | 1    | 1 | 1 | GF05100140 | Fixed, 10Ω ±5%, ¼W                   |
| R752                       | 1    | 1 | 1 | GF05100140 | Fixed, 10Ω ±5%, ¼W                   |
| R753                       | 1    | 1 | 1 | GF05221120 | Fixed, 220Ω ±5%, ½W                  |
| R754                       | 1    | 1 | 1 | GF05221120 | Fixed, 220Ω ±5%, ½W                  |
| R755                       | 1    | 1 | 1 | GF05221120 | Fixed, 220Ω ±5%, ½W                  |
| R756                       | 1    | 1 | 1 | GF05221120 | Fixed, 220Ω ±5%, ½W                  |
| R757                       | 1    | 1 | 1 | GF05100140 | Fixed, 10Ω ±5%, ¼W                   |
| R758                       | 1    | 1 | 1 | GF05100140 | Fixed, 10Ω ±5%, ¼W                   |
| R759                       | 1    | 1 | 1 | GW10332030 | Fixed, 0.33Ω ±10%, 3W                |
| R760                       | 1    | 1 | 1 | GW10332030 | Fixed, 0.33Ω ±10%, 3W                |
| R761                       | 1    | 1 | 1 | GW10332030 | Fixed, 0.33Ω ±10%, 3W                |
| R762                       | 1    | 1 | 1 | GW10332030 | Fixed, 0.33Ω ±10%, 3W                |
| R763                       | 1    | 1 | 1 | GJ05100020 | Fixed, 10Ω ±5%, 2W                   |
| R764                       | 1    | 1 | 1 | GJ05100020 | Fixed, 10Ω ±5%, 2W                   |
| R765                       | 1    | 1 | 1 | GF05220140 | Fixed, 22Ω ±5%, ¼W                   |
| R766                       | 1    | 1 | 1 | GF05102120 | Fixed, 1kΩ ±5%, ½W                   |
| R767                       | 1    | 1 | 1 | RC10562120 | Fixed, 5.6kΩ ±10%, ½W                |
| R768                       | 1    | 1 | 1 | RC10562120 | Fixed, 5.6kΩ ±10%, ½W                |
| R769                       | 1    | 1 | 1 | RT05223140 | Fixed, 22kΩ ±5%, ¼W                  |
| R770                       | 1    | 1 | 1 | RT05183140 | Fixed, 18kΩ ±5%, ¼W                  |
| R771                       | 1    | 1 | 1 | RT05682140 | Fixed, 6.8kΩ ±5%, ¼W                 |
| R772                       | 1    | 1 | 1 | GJ05331010 | Fixed, 330Ω ±5%, 1W                  |
| R773                       | 1    | 1 | 1 | RT05184140 | Fixed, 180kΩ ±5%, ¼W                 |
| R774                       | 1    | 1 | 1 | RT05393140 | Fixed, 39kΩ ±5%, ¼W                  |
| R775                       | 1    | 1 | 1 | RC10022120 | Fixed, 2.2Ω ±10%, ½W                 |
| R776                       | 1    | 1 | 1 | RC10022120 | Fixed, 2.2Ω ±10%, ½W                 |
| R777                       | 1    | 1 | 1 | RC00000120 | Fixed, 0Ω, ½W                        |
| R778                       | 1    | 1 | 1 | RC00000120 | Fixed, 0Ω, ½W                        |
| R779                       | 1    | 1 | 1 | RC00000120 | Fixed, 0Ω, ½W                        |
| <b>P700-CAPACITORS</b>     |      |   |   |            |                                      |
| C701                       | 1    | 1 | 1 | EE33502510 | Electrolytic, 3.3μF ±20%, 25V        |
| C702                       | 1    | 1 | 1 | EE33502510 | Electrolytic, 3.3μF ±20%, 25V        |
| C703                       | 1    | 1 | 1 | DD16201010 | Ceramic, 200pF, 50V                  |
| C704                       | 1    | 1 | 1 | DD16201010 | Ceramic, 200pF, 50V                  |
| C705                       | 1    | 1 | 1 | EE47601620 | Electrolytic, 47μF ±20%, 16V         |
| C706                       | 1    | 1 | 1 | EE47601620 | Electrolytic, 47μF ±20%, 16V         |
| C707                       | 1    | 1 | 1 | DD10030500 | Ceramic, 3pF, 500V                   |
| C708                       | 1    | 1 | 1 | DD10030500 | Ceramic, 3pF, 500V                   |
| C709                       | 1    | 1 | 1 | EA47605090 | Electrolytic, 47μF +100%, -10%, 50V  |
| C710                       | 1    | 1 | 1 | EA47605090 | Electrolytic, 47μF +100%, -10%, 50V  |
| C715                       | 1    | 1 | 1 | DK16101500 | Ceramic, 100pF                       |
| C716                       | 1    | 1 | 1 | DK16101500 | Ceramic, 100pF                       |
| C717                       | 1    | 1 | 1 | DF17104520 | Film, 0.1μF, 200V                    |
| C718                       | 1    | 1 | 1 | DF17104520 | Film, 0.1μF, 200V                    |
| C719                       | 1    | 1 | 1 | EA22705090 | Electrolytic, 220μF +100%, -10%, 50V |
| C720                       | 1    | 1 | 1 | EA10603590 | Electrolytic, 10μF +100%, -10%, 35V  |
| C721                       | 1    | 1 | 1 | EA47601690 | Electrolytic, 47μF +100%, -10%, 16V  |
| C722                       | 1    | 1 | 1 | EA22701090 | Electrolytic, 220μF +100%, -10%, 10V |
| <b>P700-SEMICONDUCTORS</b> |      |   |   |            |                                      |
| H701                       | 1    | 1 | 1 | HT107222B0 | Transistor, 2SA722 T or U            |
| H702                       | 1    | 1 | 1 | HT107222B0 | Transistor, 2SA722 T or U            |
| H703                       | 1    | 1 | 1 | HT107222B0 | Transistor, 2SA722 T or U            |
| H704                       | 1    | 1 | 1 | HT107222B0 | Transistor, 2SA722 T or U            |
| H705                       | 1    | 1 | 1 | HV00003120 | Varistor, MV-13                      |

| REF. DESIG.                            | Q'TY |    |    | PART NO.   | DESCRIPTION                                     |
|--|------|----|----|------------|---|
|  | U    | C  | E  |            |   |
| H706                                   | 1    | 1  | 1  | HV00003120 | Varistor, MV-13                                 |
| H707                                   | 1    | 1  | 1  | HT318853B0 | Transistor, 2SC1885 C, Dor E                    |
| H708                                   | 1    | 1  | 1  | HT318853B0 | Transistor, 2SC1885 C, Dor E                    |
| H709                                   | 1    | 1  | 1  | HT309451Q0 | Transistor, 2SC945 Q                            |
| H710                                   | 1    | 1  | 1  | HT309451Q0 | Transistor, 2SC945 Q                            |
| H711                                   | 1    | 1  | 1  | HT107331Q0 | Transistor, 2SA733 Q                            |
| H712                                   | 1    | 1  | 1  | HT107331Q0 | Transistor, 2SA733 Q                            |
| H713                                   | 1    | 1  | 1  | HD20002210 | Diode, 1S2472 (Gr)                              |
| H714                                   | 1    | 1  | 1  | HD20002210 | Diode, 1S2472 (Gr)                              |
| H715                                   | 1    | 1  | 1  | HD20002210 | Diode, 1S2472 (Gr)                              |
| H716                                   | 1    | 1  | 1  | HD20002210 | Diode, 1S2472 (Gr)                              |
| H717                                   | 1    | 1  | 1  | HD20002210 | Diode, 1S2472 (Gr)                              |
| H718                                   | 1    | 1  | 1  | HD20002210 | Diode, 1S2472 (Gr)                              |
| H719                                   | 1    | 1  | 1  | HD20002210 | Diode, 1S2472 (Gr)                              |
| H720                                   | 1    | 1  | 1  | HD20002210 | Diode, 1S2472 (Gr)                              |
| H721                                   | 1    | 1  | 1  | HT315672B0 | Transistor, 2SC1567 Q or R                      |
| H722                                   | 1    | 1  | 1  | HT315672B0 | Transistor, 2SC1567 Q or R                      |
| H723                                   | 1    | 1  | 1  | HT107942B0 | Transistor, 2SA794 Q or R                       |
| H724                                   | 1    | 1  | 1  | HT107942B0 | Transistor, 2SA794 Q or R                       |
| H725                                   | 1    | 1  | 1  | HD30030090 | Diode, WZ-177                                   |
| H726                                   | 1    | 1  | 1  | HT309452A0 | Transistor, 2SC945 Q or R                       |
| H727                                   | 1    | 1  | 1  | HT309452A0 | Transistor, 2SC945 Q or R                       |
| H728                                   | 1    | 1  | 1  | HT313182C0 | Transistor, 2SC1318 R or S                      |
| H729                                   | 1    | 1  | 1  | HD20003210 | Diode, 1S2471                                   |
| H730                                   | 1    | 1  | 1  | HV00003120 | Varistor, MV-13                                 |
| H731                                   | 1    | 1  | 1  | HV00003120 | Varistor, MV-13                                 |
| H733                                   | 1    | 1  | 1  | HD20005010 | Diode, W06B                                     |
| H734                                   | 1    | 1  | 1  | HD20005010 | Diode, W06B                                     |
| H735                                   | 1    | 1  | 1  | HD20005010 | Diode, W06B                                     |
| H736                                   | 1    | 1  | 1  | HD20005010 | Diode, W06B                                     |
| <b>P700-MISCELLANEOUS</b>              |      |    |    |            |   |
| L701                                   | 1    | 1  | 1  | LC22620010 | Coil, 2.6μH                                     |
| L702                                   | 1    | 1  | 1  | LC22620010 | Coil, 2.6μH                                     |
| L703                                   | 1    | 1  | 1  | LY20240090 | Relay   |
| P707                                   | 26   | 26 | 26 | 3444118050 | Spacer, R723, R724, R735~R742, R745, R746, R765 |
| P708                                   | 22   | 22 | 22 | 2933118020 | Spacer, R753~R756, R759~R764, R772              |
| J701                                   | 1    | 1  | 1  | YP10001130 | Plug  |
| J729                                   | 29   | 29 | 29 | YP10001130 | Plug  |
| <b>POWER SUPPLY CIRCUIT BOARD-P800</b> |      |    |    |            |   |
| P800                                   | 1    | 1  | 1  | YA22040310 | P.W. Board, Power Supply                        |
|  | 1    | 1  | 1  | ZZ22040310 | P.W. Board Assembly                             |
| <b>P800-RESISTORS</b>                  |      |    |    |            |   |
| R801                                   | 1    | 1  | 1  | GJ05220020 | Fixed, 22Ω ±5%, 2W                              |
| R802                                   | 1    | 1  | 1  | GF05100140 | Fixed, 10Ω ±5%, ¼W                              |
| R803                                   | 1    | 1  | 1  | RT05152141 | Fixed, 1.5kΩ ±5%, ¼W                            |
| R804                                   | 1    | 1  | 1  | RT05152141 | Fixed, 1.5kΩ ±5%, ¼W                            |
| R805                                   | 1    | 1  | 1  | GJ05221030 | Fixed, 220Ω ±5%, 3W                             |
| R806                                   | 1    | 1  | 1  | RT05363141 | Fixed, 36kΩ ±5%, ¼W                             |
| R807                                   | 1    | 1  | 1  | RT05273141 | Fixed, 27kΩ ±5%, ¼W                             |
| R808                                   | 1    | 1  | 1  | RA05020130 | Trimming, 5kΩ (B)                               |
| <b>P800-CAPACITORS</b>                 |      |    |    |            |   |
| C801                                   | 1    | 1  | 1  | DK18103510 | Ceramic, 0.01μF, 500V                           |
| C802                                   | 1    | 1  | 1  | EA47706310 | Electrolytic, 470μF, 63V                        |



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| REF. DESIG.                                   | Q'TY |    |    | PART NO.   | DESCRIPTION                                    |
|---|------|----|----|------------|--|
|   | U    | C  | E  |            |  |
| C803  | 1    | 1  | 1  | EA47705090 | Electrolytic, 470 $\mu$ F, 50V                 |
| C804  | 1    | 1  | 1  | EA10705090 | Electrolytic, 100 $\mu$ F, 50V                 |
| C805  | 1    | 1  | 1  | DF17473050 | Film, 0.047 $\mu$ F, 50V                       |
| C806  | 1    | 1  | 1  | DK18403020 | Ceramic, 0.04 $\mu$ F, 50V                     |
| C807  | 1    | 1  | 1  | EA33505090 | Electrolytic, 3.3 $\mu$ F, 50V                 |
| C808  | 1    | 1  | 1  | EA47701690 | Electrolytic, 470 $\mu$ F, 16V                 |
| C809  | 1    | 1  | 1  | EA10801090 | Electrolytic, 1000 $\mu$ F, 10V                |
| <b>P800-SEMICONDUCTORS</b>                    |      |    |    |            |  |
| Q801  | 1    | 1  | 1  | HD20012030 | Diode, DS132 B                                 |
| Q802  | 1    | 1  | 1  | HD20011030 | Diode, DS131 B                                 |
| Q803  | 1    | 1  | 1  | HT403302A0 | Transistor, 2SD330 D or E                      |
| Q804  | 1    | 1  | 1  | HT309452A0 | Transistor, 2SC945 Q or R                      |
| Q805  | 1    | 1  | 1  | HD30021090 | Diode, BZ-140 14V                              |
| Q806  | 1    | 1  | 1  | HD20004130 | Diode, S1B01-02                                |
| <b>P800-MISCELLANEOUS</b>                     |      |    |    |            |  |
| J801  | ?    |    |    |            |  |
| J814  | 14   | 14 | 14 | YJ10001140 | Plug   |
| J815  | ?    |    |    |            |  |
| J818  | 4    | 4  | 4  | YJ08000210 | Socket, Fuse                                   |
| F801  | 1    | 1  |    | FS10100080 | Fuse, MGC 1A (30 mm)                           |
| F802  | 1    | 1  |    | FS10200060 | Fuse, MGC 2A (30 mm)                           |
| F801  |      | 1  |    | FS10100900 | Fuse, SLA 1A (20 mm)                           |
| F802  |      | 1  |    | FS10200900 | Fuse, SLA 2A (20 mm)                           |
| P803  | 10   | 10 | 10 | 2933118020 | Spacer, R801, R802, R805, Q806, Q801, Q802     |
| <b>PRE &amp; TONE AMP. CIRCUIT BOARD-PE01</b> |      |    |    |            |  |
| PE01  | 1    | 1  | 1  | YD29151082 | P.W. Board, Pre & Tone Amp.                    |
|   | 1    | 1  | 1  | ZZ22041082 | P.W. Board Assembly                            |
| <b>PE01-RESISTORS</b>                         |      |    |    |            |  |
| RE01  | 1    | 1  | 1  | RT05474140 | Fixed, 470k $\Omega$ $\pm$ 5%, $\frac{1}{4}$ W |
| RE02  | 1    | 1  | 1  | RT05474140 | Fixed, 470k $\Omega$ $\pm$ 5%, $\frac{1}{4}$ W |
| RE03  | 1    | 1  | 1  | RT05391140 | Fixed, 390 $\Omega$ $\pm$ 5%, $\frac{1}{4}$ W  |
| RE04  | 1    | 1  | 1  | RT05391140 | Fixed, 390 $\Omega$ $\pm$ 5%, $\frac{1}{4}$ W  |
| RE05  | 1    | 1  | 1  | RN05105140 | Fixed, 1M $\Omega$ $\pm$ 5%, $\frac{1}{4}$ W   |
| RE06  | 1    | 1  | 1  | RN05105140 | Fixed, 1M $\Omega$ $\pm$ 5%, $\frac{1}{4}$ W   |
| RE07  | 1    | 1  | 1  | RN05104140 | Fixed, 100k $\Omega$ $\pm$ 5%, $\frac{1}{4}$ W |
| RE08  | 1    | 1  | 1  | RT05103140 | Fixed, 10k $\Omega$ $\pm$ 5%, $\frac{1}{4}$ W  |
| RE09  | 1    | 1  | 1  | RT05273140 | Fixed, 27k $\Omega$ $\pm$ 5%, $\frac{1}{4}$ W  |
| RE10  | 1    | 1  | 1  | RT05273140 | Fixed, 27k $\Omega$ $\pm$ 5%, $\frac{1}{4}$ W  |
| RE11  | 1    | 1  | 1  | RT05102140 | Fixed, 1k $\Omega$ $\pm$ 5%, $\frac{1}{4}$ W   |
| RE12  | 1    | 1  | 1  | RT05102140 | Fixed, 1k $\Omega$ $\pm$ 5%, $\frac{1}{4}$ W   |
| RE13  | 1    | 1  | 1  | RT05752140 | Fixed, 7.5k $\Omega$ $\pm$ 5%, $\frac{1}{4}$ W |
| RE14  | 1    | 1  | 1  | RT05752140 | Fixed, 7.5k $\Omega$ $\pm$ 5%, $\frac{1}{4}$ W |
| RE15  | 1    | 1  | 1  | RT05102140 | Fixed, 1k $\Omega$ $\pm$ 5%, $\frac{1}{4}$ W   |
| RE16  | 1    | 1  | 1  | RT05102140 | Fixed, 1k $\Omega$ $\pm$ 5%, $\frac{1}{4}$ W   |
| RE17  | 1    | 1  | 1  | RT05474140 | Fixed, 470k $\Omega$ $\pm$ 5%, $\frac{1}{4}$ W |
| RE18  | 1    | 1  | 1  | RT05474140 | Fixed, 470k $\Omega$ $\pm$ 5%, $\frac{1}{4}$ W |
| RE19  | 1    | 1  | 1  | RT05562140 | Fixed, 5.6k $\Omega$ $\pm$ 5%, $\frac{1}{4}$ W |
| RE20  | 1    | 1  | 1  | RT05562140 | Fixed, 5.6k $\Omega$ $\pm$ 5%, $\frac{1}{4}$ W |
| RE21  | 1    | 1  | 1  | RT05123140 | Fixed, 12k $\Omega$ $\pm$ 5%, $\frac{1}{4}$ W  |
| RE22  | 1    | 1  | 1  | RT05123140 | Fixed, 12k $\Omega$ $\pm$ 5%, $\frac{1}{4}$ W  |
| RE23  | 1    | 1  | 1  | RT05334140 | Fixed, 330k $\Omega$ $\pm$ 5%, $\frac{1}{4}$ W |
| RE24  | 1    | 1  | 1  | RT05334140 | Fixed, 330k $\Omega$ $\pm$ 5%, $\frac{1}{4}$ W |
| RE25  | 1    | 1  | 1  | RT05562140 | Fixed, 5.6k $\Omega$ $\pm$ 5%, $\frac{1}{4}$ W |
| RE26  | 1    | 1  | 1  | RT05562140 | Fixed, 5.6k $\Omega$ $\pm$ 5%, $\frac{1}{4}$ W |
| RE27  | 1    | 1  | 1  | RT05562140 | Fixed, 5.6k $\Omega$ $\pm$ 5%, $\frac{1}{4}$ W |

| REF. DESIG.               | Q'TY |   |   | PART NO.   | DESCRIPTION                                    |
|---------------------------|------|---|---|------------|--|
|                           | U    | C | E |            |  |
| RE28                      | 1    | 1 | 1 | RT05562140 | Fixed, 5.6k $\Omega$ $\pm$ 5%, $\frac{1}{4}$ W |
| RE29                      | 1    | 1 | 1 | RT05273140 | Fixed, 27k $\Omega$ $\pm$ 5%, $\frac{1}{4}$ W  |
| RE30                      | 1    | 1 | 1 | RT05273140 | Fixed, 27k $\Omega$ $\pm$ 5%, $\frac{1}{4}$ W  |
| RE31                      | 1    | 1 | 1 | RT05123140 | Fixed, 12k $\Omega$ $\pm$ 5%, $\frac{1}{4}$ W  |
| RE32                      | 1    | 1 | 1 | RT05123140 | Fixed, 12k $\Omega$ $\pm$ 5%, $\frac{1}{4}$ W  |
| RE33                      | 1    | 1 | 1 | RT05153140 | Fixed, 15k $\Omega$ $\pm$ 5%, $\frac{1}{4}$ W  |
| RE34                      | 1    | 1 | 1 | RT05153140 | Fixed, 15k $\Omega$ $\pm$ 5%, $\frac{1}{4}$ W  |
| RE35                      | 1    | 1 | 1 | RT05334140 | Fixed, 330k $\Omega$ $\pm$ 5%, $\frac{1}{4}$ W |
| RE36                      | 1    | 1 | 1 | RT05334140 | Fixed, 330k $\Omega$ $\pm$ 5%, $\frac{1}{4}$ W |
| RE37                      | 1    | 1 | 1 | RT05273140 | Fixed, 27k $\Omega$ $\pm$ 5%, $\frac{1}{4}$ W  |
| RE38                      | 1    | 1 | 1 | RT05273140 | Fixed, 27k $\Omega$ $\pm$ 5%, $\frac{1}{4}$ W  |
| RE39                      | 1    | 1 | 1 | RT05225140 | Fixed, 2.2M $\Omega$ $\pm$ 5%, $\frac{1}{4}$ W |
| RE40                      | 1    | 1 | 1 | RT05225140 | Fixed, 2.2M $\Omega$ $\pm$ 5%, $\frac{1}{4}$ W |
| RE41                      | 1    | 1 | 1 | RT05683140 | Fixed, 68k $\Omega$ $\pm$ 5%, $\frac{1}{4}$ W  |
| RE42                      | 1    | 1 | 1 | RT05683140 | Fixed, 68k $\Omega$ $\pm$ 5%, $\frac{1}{4}$ W  |
| RE43                      | 1    | 1 | 1 | RT05473140 | Fixed, 47k $\Omega$ $\pm$ 5%, $\frac{1}{4}$ W  |
| RE44                      | 1    | 1 | 1 | RT05473140 | Fixed, 47k $\Omega$ $\pm$ 5%, $\frac{1}{4}$ W  |
| RE45                      | 1    | 1 | 1 | RT05103140 | Fixed, 10k $\Omega$ $\pm$ 5%, $\frac{1}{4}$ W  |
| RE46                      | 1    | 1 | 1 | RT05103140 | Fixed, 10k $\Omega$ $\pm$ 5%, $\frac{1}{4}$ W  |
| RE47                      | 1    | 1 | 1 | RT05221140 | Fixed, 220 $\Omega$ $\pm$ 5%, $\frac{1}{4}$ W  |
| RE48                      | 1    | 1 | 1 | RT05221140 | Fixed, 220 $\Omega$ $\pm$ 5%, $\frac{1}{4}$ W  |
| RE49                      | 1    | 1 | 1 | RT05474140 | Fixed, 470k $\Omega$ $\pm$ 5%, $\frac{1}{4}$ W |
| RE50                      | 1    | 1 | 1 | RT05474140 | Fixed, 470k $\Omega$ $\pm$ 5%, $\frac{1}{4}$ W |
| RE51                      | 1    | 1 | 1 | RD01040052 | Variable, Treble, 100k $\Omega$ (B)            |
| RE52                      | 1    | 1 | 1 | RD01040052 | Variable, Mid, 100k $\Omega$ (B)               |
| RE53                      | 1    | 1 | 1 | RD01040052 | Variable, Bass, 100k $\Omega$ (B)              |
| RE54                      | 1    | 1 | 1 | RT05821140 | Fixed, 820 $\Omega$ $\pm$ 5%, $\frac{1}{4}$ W  |
| RE55                      | 1    | 1 | 1 | RC00000120 | Fixed, 0 $\Omega$ , $\frac{1}{4}$ W            |
| RE56                      | 1    | 1 | 1 | RC00000120 | Fixed, 0 $\Omega$ , $\frac{1}{4}$ W            |
| <b>PE01-CAPACITORS</b>    |      |   |   |            |  |
| CE01                      | 1    | 1 | 1 | DF17224050 | Film, 0.22 $\mu$ F $\pm$ 20%, 50V              |
| CE02                      | 1    | 1 | 1 | DF17224050 | Film, 0.22 $\mu$ F $\pm$ 20%, 50V              |
| CE03                      | 1    | 1 | 1 | EA10603590 | Electrolytic, 10 $\mu$ F +100%, -10%, 35V      |
| CE04                      | 1    | 1 | 1 | EA10603590 | Electrolytic, 10 $\mu$ F +100%, -10%, 35V      |
| CE05                      | 1    | 1 | 1 | EE47502510 | Electrolytic, 4.7 $\mu$ F $\pm$ 20%, 25V       |
| CE06                      | 1    | 1 | 1 | EE47502510 | Electrolytic, 4.7 $\mu$ F $\pm$ 20%, 25V       |
| CE07                      | 1    | 1 | 1 | DD16101010 | Ceramic, 100pF $\pm$ 10%, 50V                  |
| CE08                      | 1    | 1 | 1 | DD16101010 | Ceramic, 100pF $\pm$ 10%, 50V                  |
| CE09                      | 1    | 1 | 1 | DF16222050 | Film, 0.0022 $\mu$ F $\pm$ 10%, 50V            |
| CE10                      | 1    | 1 | 1 | DF16122650 | Film, 0.0022 $\mu$ F $\pm$ 10%, 50V            |
| CE11                      | 1    | 1 | 1 | DF16472050 | Film, 0.0047 $\mu$ F $\pm$ 10%, 50V            |
| CE12                      | 1    | 1 | 1 | DF16472050 | Film, 0.0047 $\mu$ F $\pm$ 10%, 50V            |
| CE13                      | 1    | 1 | 1 | DF16223050 | Film, 0.022 $\mu$ F $\pm$ 10%, 50V             |
| CE14                      | 1    | 1 | 1 | DF16223050 | Film, 0.022 $\mu$ F $\pm$ 10%, 50V             |
| CE15                      | 1    | 1 | 1 | DF16223050 | Film, 0.022 $\mu$ F $\pm$ 10%, 50V             |
| CE16                      | 1    | 1 | 1 | DF16223050 | Film, 0.022 $\mu$ F $\pm$ 10%, 50V             |
| CE17                      | 1    | 1 | 1 | DF16822050 | Film, 0.0082 $\mu$ F $\pm$ 10%, 50V            |
| CE18                      | 1    | 1 | 1 | DF16822050 | Film, 0.0082 $\mu$ F $\pm$ 10%, 50V            |
| CE19                      | 1    | 1 | 1 | EE10505010 | Electrolytic, 1 $\mu$ F $\pm$ 20%, 50V         |
| CE20                      | 1    | 1 | 1 | EE10505010 | Electrolytic, 1 $\mu$ F $\pm$ 20%, 50V         |
| CE21                      | 1    | 1 | 1 | EE33505010 | Electrolytic, 3.3 $\mu$ F $\pm$ 20%, 50V       |
| CE22                      | 1    | 1 | 1 | EE33505010 | Electrolytic, 3.3 $\mu$ F $\pm$ 20%, 50V       |
| CE23                      | 1    | 1 | 1 | EQ10505010 | Electrolytic, 1 $\mu$ F $\pm$ 30%, 50V         |
| CE24                      | 1    | 1 | 1 | EQ10505010 | Electrolytic, 1 $\mu$ F $\pm$ 30%, 50V         |
| CE25                      | 1    | 1 | 1 | EA22703590 | Electrolytic, 220 $\mu$ F +100%, -10%, 35V     |
| <b>PE01-MISCELLANEOUS</b> |      |   |   |            |  |
| HE01                      | 1    | 1 | 1 | HT313283A0 | Transistor, 2SC1328 S, T or U                  |
| HE02                      | 1    | 1 | 1 | HT313283A0 | Transistor, 2SC1328 S, T or U                  |
| HE03                      | 1    | 1 | 1 | HT107222A0 | Transistor, 2SA722 S or T                      |



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| REF. DESIG.       | Q'TY |    |   | PART NO.   | DESCRIPTION                                      |
|-------------------|------|----|---|------------|--|
|                   | U    | C  | E |            |  |
| HE04              | 1    | 1  | 1 | HT107222A0 | Transistor, 2SA722 S or T                        |
| HE05              | 1    | 1  | 1 | HT313283A0 | Transistor, 2SC1328 S, T or U                    |
| HE06              | 1    | 1  | 1 | HT313283A0 | Transistor, 2SC1328 S, T or U                    |
| HE07              | 1    | 1  | 1 | HT107222A0 | Transistor, 2SA722 S or T                        |
| HE08              | 1    | 1  | 1 | HT107222A0 | Transistor, 2SA722 S or T                        |
| PE08              | 2    | 2  | 2 | 2933118020 | Spacer, RE54                                     |
| JE01<br>?<br>JE08 | 8    | 8  | 8 | YP10001130 | Plug   |
|                   |      |    |   |            | <b>FILTER &amp; DOLBY CIRCUIT BOARD-PH01</b>     |
| PH01              | 1    | 1  |   | YD29151090 | P.W. Board, Filter & Dolby                       |
|                   | 1    | 1  |   | ZZ22041090 | P.W. Board Assembly                              |
|                   |      |    | 1 | YD29150050 | P.W. Board, Low & Hi Filter                      |
|                   |      |    | 1 | ZZ22048050 | P.W. Board Assembly                              |
| RH01              | 1    | 1  |   | RT05102140 | Resistor, Fixed, 1kΩ ±5%, ¼W                     |
| RH02              | 1    | 1  |   | RT05102140 | Resistor, Fixed, 1kΩ ±5%, ¼W                     |
| RH04              | 1    | 1  |   | RT05105140 | Resistor, Fixed, 1MΩ ±5%, ¼W                     |
| RH05              | 1    | 1  |   | RT05105140 | Resistor, Fixed, 1MΩ ±5%, ¼W                     |
| RH06              | 1    | 1  |   | RT05472140 | Resistor, Fixed, 4.7kΩ ±5%, ¼W                   |
| RH07              | 1    | 1  |   | RT05472140 | Resistor, Fixed, 4.7kΩ ±5%, ¼W                   |
| RH08              | 1    | 1  |   | RT05225140 | Resistor, Fixed, 2.2MΩ ±5%, ¼W                   |
| RH09              | 1    | 1  |   | RT05225140 | Resistor, Fixed, 2.2MΩ ±5%, ¼W                   |
| CH01              | 1    | 1  |   | DF15222050 | Capacitor, Film, 0.0022μF ±10%, 50V              |
| CH02              | 1    | 1  |   | DF15222050 | Capacitor, Film, 0.0022μF ±10%, 50V              |
| CH03              | 1    | 1  |   | DF16682050 | Capacitor, Film, 0.0068μF ±10%, 50V              |
| CH04              | 1    | 1  |   | DF16682050 | Capacitor, Film, 0.0068μF ±10%, 50V              |
| CH05              | 1    | 1  |   | EV22403510 | Capacitor, Electrolytic, 0.22μF ±20%, 35V        |
| CH06              | 1    | 1  |   | EV22403510 | Capacitor, Electrolytic, 0.22μF ±20%, 35V        |
| SH01              | 1    | 1  |   | SP04040140 | Pushswitch                                       |
| JH01              | 1    | 1  |   | YP10001200 | Plug   |
| JH02              | 1    | 1  |   | YP10001200 | Plug   |
| JH09<br>?<br>JH28 | 20   | 20 |   | YP10001200 | Plug   |
|                   |      |    |   |            | <b>LOW &amp; HIGH FILTERS CIRCUIT BOARD-PH01</b> |
| PH01              |      |    | 1 | YD29150050 | P.W. Board, Low & Hi Filters                     |
|                   |      |    | 1 | ZZ22048090 | P.W. Board Assembly                              |
|                   |      |    |   |            | <b>PH01-MISCELLANEOUS</b>                        |
| RH01              | 1    |    |   | RT05102140 | Resistor, Fixed, 1kΩ ±5%, ¼W                     |
| RH02              | 1    |    |   | RT05102140 | Resistor, Fixed, 1kΩ ±5%, ¼W                     |
| RH06              | 1    |    |   | RT05472140 | Resistor, Fixed, 4.7kΩ ±5%, ¼W                   |
| RH07              | 1    |    |   | RT05472140 | Resistor, Fixed, 4.7kΩ ±5%, ¼W                   |
| RH08              | 1    |    |   | RT05225140 | Resistor, Fixed, 2.2MΩ ±5%, ¼W                   |

| REF. DESIG.                            | Q'TY |    |    | PART NO.   | DESCRIPTION                              |
|--|------|----|----|------------|--|
|  | U    | C  | E  |            |  |
| RH09                                   |      |    | 1  | RT05225140 | Resistor, Fixed, 2.2MΩ ±5%, ¼W           |
| CH01                                   |      |    | 1  | DF16333050 | Capacitor, Film, 0.033μF ±10%, 50V       |
| CH02                                   |      |    | 1  | DF16333050 | Capacitor, Film, 0.033μF ±10%, 50V       |
| CH03                                   |      |    | 1  | DF16682050 | Capacitor, Film, 0.0068μF ±10%, 50V      |
| CH04                                   |      |    | 1  | DF16682050 | Capacitor, Film, 0.0068μF ±10%, 50V      |
| SH01                                   |      |    | 1  | SP04040130 | Pushswitch                               |
| JH01<br>?<br>JH17                      |      |    | 17 | YP10001200 | Plug                                     |
|  |      |    |    |            | <b>SPEAKER SWITCH CIRCUIT BOARD-PT01</b> |
| PT01                                   | 1    | 1  | 1  | YD29151100 | P.W. Board, Speaker Switch               |
|  | 1    | 1  | 1  | ZZ22043100 | P.W. Board Assembly                      |
|  |      |    |    |            | <b>PT01-MISCELLANEOUS</b>                |
| RT01                                   | 1    | 1  | 1  | RT05683140 | Resistor, Fixed, 68kΩ ±5%, ¼W            |
| RT02                                   | 1    | 1  | 1  | RT05683140 | Resistor, Fixed, 68kΩ ±5%, ¼W            |
| RT03                                   | 1    | 1  | 1  | RT05153140 | Resistor, Fixed, 15kΩ ±5%, ¼W            |
| RT04                                   | 1    | 1  | 1  | RT05153140 | Resistor, Fixed, 15kΩ ±5%, ¼W            |
| RT05                                   | 1    | 1  | 1  | GJ05331020 | Resistor, Fixed, 330Ω ±5%, 2W            |
| RT06                                   | 1    | 1  | 1  | GJ05331020 | Resistor, Fixed, 330Ω ±5%, 2W            |
| RT07                                   | 1    | 1  | 1  | GU05151120 | Resistor, Fixed, 150Ω ±5%, ½W            |
| RT08                                   | 1    | 1  | 1  | GU05151120 | Resistor, Fixed, 150Ω ±5%, ½W            |
| CT01                                   | 1    | 1  | 1  | DD16121010 | Capacitor, Ceramic, 120pF ±10%, 50V      |
| CT02                                   | 1    | 1  | 1  | DD16121010 | Capacitor, Ceramic, 120pF ±10%, 50V      |
| CT03                                   | 1    | 1  | 1  | DF16273050 | Capacitor, Film, 0.027μF ±10%, 50V       |
| CT04                                   | 1    | 1  | 1  | DF16273050 | Capacitor, Film, 0.027μF ±10%, 50V       |
| ST01                                   | 1    | 1  | 1  | SP04040110 | Pushswitch                               |
| PT07                                   | 4    | 4  | 4  | 3444118050 | Spacer, RT05, RT06                       |
| JT01<br>?<br>JT16                      | 16   | 16 | 16 | YP10001200 | Plug                                     |
|  |      |    |    |            | <b>DIAL LAMP CIRCUIT BOARD-PZ01</b>      |
| PZ01                                   | 1    | 1  | 1  | YD28860160 | P.W. Board, Dial Lamp                    |
|  | 1    | 1  | 1  | ZZ22041160 | P.W. Board Assembly                      |
|  |      |    |    |            | <b>PZ01-MISCELLANEOUS</b>                |
| MZ01<br>?<br>MZ05                      | 5    | 5  | 5  | IN10080070 | Lamp                                     |
| JZ01<br>?<br>JZ10<br>JZ11<br>?<br>JZ14 | 10   | 10 | 10 | YJ08000170 | Socket                                   |
|  | 4    | 4  | 4  | YP10001200 | Plug                                     |



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 C : For Canada  
 E : For Europe

| REF. DESIG.                  | Q'TY |   |   | PART NO.   | DESCRIPTION                                    |
|------------------------------|------|---|---|------------|--|
|                              | U    | C | E |            |  |
| <b>GENERAL MISCELLANEOUS</b> |      |   |   |            |  |
| M001                         | 1    | 1 | 1 | IM11042270 | DC Meter, Signal Strength                      |
| M002                         | 1    | 1 | 1 | IM11042240 | DC Meter, Tuning                               |
| M003                         | 1    | 1 | 1 | IN10080340 | Lamp, Stereo Indicator                         |
| M005                         | 1    | 1 | 1 | IN10080070 | Lamp, Meter Indicator                          |
| M006                         | 1    | 1 | 1 | IN10080070 | Lamp, Meter Indicator                          |
| L001                         | 1    | 1 | 1 | LF11200460 | Antenna Coil, AM                               |
| L002                         | 1    | 1 | 1 | LC11540020 | Choke Coil                                     |
| L003                         | 1    | 1 |   | TS19609010 | Power Transformer                              |
| L003                         |      |   | 1 | TS19609020 | Power Transformer                              |
| S001                         | 1    | 1 | 1 | SP02010150 | Power Switch                                   |
| C001                         | 1    | 1 | 1 | DK18103010 | Capacitor, Ceramic, 0.01 $\mu$ F, 50V          |
| C002                         | 1    | 1 | 1 | DK18103010 | Capacitor, Ceramic, 0.01 $\mu$ F, 50V          |
| C003                         | 1    | 1 | 1 | EC10905020 | Capacitor, Electrolytic, 10000 $\mu$ F, 50V    |
| C004                         | 1    | 1 | 1 | EC10905020 | Capacitor, Electrolytic, 10000 $\mu$ F, 50V    |
| C006                         |      | 1 |   | DF17473590 | Capacitor, Film, 0.047 $\mu$ F                 |
| C006                         |      |   | 1 | DF17223800 | Capacitor, Film, 0.02 $\mu$ F, 1000V           |
| C007                         | 1    | 1 | 1 | DK18103510 | Capacitor, Ceramic, 0.01 $\mu$ F, 500V         |
| G001                         | 1    |   |   | BF10400040 | Printed Comp.                                  |
| R001                         | 1    | 1 | 1 | RS05040050 | Resistor, Variable, Balance, 500k $\Omega$     |
| R002                         | 1    | 1 | 1 | RM02540220 | Resistor, Variable, Volume, 250k $\Omega$      |
| R003                         | 1    | 1 |   | RC10225120 | Resistor, Fixed, 2.2M $\Omega$ $\pm$ 10%, 1/2W |
| H007                         | 1    | 1 | 1 | HD20004290 | Diode, S5VB                                    |
| J001                         | 1    | 1 | 1 | BY04050010 | Terminal, Antenna                              |
| J002                         | 1    | 1 | 1 | YL01020030 | Terminal, 2P Lug                               |
| J003                         | 1    | 1 | 1 | YT01010050 | Terminal, Ground                               |
| J004                         | 1    | 1 | 1 | YT02040140 | Terminal, Phono/Aux                            |
| J005                         | 1    | 1 | 1 | YT02040140 | Terminal, Tape 1                               |
| J006                         | 1    | 1 | 1 | YT02040140 | Terminal, Tape 2                               |
| J007                         | 1    | 1 | 1 | YT02040170 | Terminal, Pre Out/Main In                      |
| J008                         | 1    | 1 | 1 | YT02010130 | Terminal, Quadradial Output                    |
| J009                         | 1    | 1 | 1 | YJ05000220 | Socket, Transistor                             |
| J010                         | 1    | 1 | 1 | YJ05000220 | Socket, Transistor                             |
| J011                         | 1    | 1 | 1 | YJ05000220 | Socket, Transistor                             |
| J012                         | 1    | 1 | 1 | YJ05000220 | Socket, Transistor                             |
| J013                         | 1    | 1 | 1 | YT03040160 | Terminal, Speaker (System 1)                   |
| J014                         | 1    | 1 | 1 | YT03040160 | Terminal, Speaker (System 2)                   |
| J015                         | 1    | 1 | 1 | YJ01000980 | Jack, Headphones                               |
| J016                         | 1    | 1 | 1 | YJ08000190 | Socket, Meter Lamp Holder                      |
| J017                         | 1    | 1 | 1 | YJ08000190 | Socket, Meter Lamp Holder                      |
| J018                         | 1    | 1 |   | YJ08000120 | Socket, Fuse Holder                            |
| J018                         |      |   | 1 | YJ08000220 | Socket, Fuse Holder                            |
| J019                         | 1    | 1 | 1 | YJ04000570 | Socket, AC Outlet (Switched)                   |
| J020                         | 1    | 1 | 1 | YJ04000570 | Socket, AC Outlet (Unswitched)                 |
| J021                         |      |   | 1 | BY03110010 | Terminal, Voltage Conversion                   |
| H001                         | 1    | 1 | 1 | HT403883A0 | Transistor, 2SD388 S, R or Q                   |
| H002                         | 1    | 1 | 1 | HT403883A0 | Transistor, 2SD388 S, R or Q                   |
| H003                         | 1    | 1 | 1 | HT205413A0 | Transistor, 2SB541 S, R or Q                   |
| H004                         | 1    | 1 | 1 | HT205413A0 | Transistor, 2SB541 S, R or Q                   |
| H005                         | 1    | 1 | 1 | HV00005080 | Varistor, STV-3H                               |

| REF. DESIG. | Q'TY |   |   | PART NO.   | DESCRIPTION            |
|-------------|------|---|---|------------|------------------------|
|             | U    | C | E |            |                        |
| H006        | 1    | 1 | 1 | HV00005080 | Varistor, STV-3H       |
| W001        | 1    | 1 |   | YC02400220 | AC Cord, UL            |
| W001        |      |   | 1 | YC01900030 | AC Cord                |
| F001        |      |   | 1 | FS10250900 | Fuse, 2.5A SGA (20 mm) |
| F001        | 1    | 1 |   | FS10400050 | Fuse, 4A MGC (30 mm)   |
| F002        |      | 1 |   | FS20500900 | Fuse, 5A               |
| 2121        | 1    | 1 | 1 | 2991109010 | Shield, HB112          |
| 2122        | 1    | 1 | 1 | 2991053110 | Cover, VB116           |

**12. TECHNICAL SPECIFICATIONS**

**AMPLIFIER SECTION:**

|  |                 |
|--|-----------------|
| Rated Power Output, Minimum Continuous Average Power per Channel, both Channels Driven | 38 W            |
| Power Band   | 20 Hz to 20 kHz |
| Total Harmonic Distortion  | 0.1%            |
| Load Impedance   | 8 ohms          |
| Maximum Power Output, DIN 45500<br>(Less than 1% THD, 10 min. test at 1 kHz)           | 42 W            |
| Power Bandwidth at 1% THD, DIN 45500   | 10 Hz to 70 kHz |
| I.M. Distortion<br>(I.H.F. method, 60 Hz and 7 kHz mixed 4:1 at rated power output)    | 0.1%            |
| Damping Factor   | 45              |
| Sensitivity (at MAIN IN)   | 1.5 V           |
| Impedance (at MAIN IN)   | 30 kohms        |
| Frequency Response for Power Amp Only<br>(at 1 W output, 20 Hz to 20 kHz)              | ±0.25 dB        |

**PREAMPLIFIER SECTION:**

**Phono**

|  |                          |
|--|--------------------------|
| Input Overload at 1 kHz  | 100 mV                   |
| Equivalent Input Noise   | 1.5 µV                   |
| Dynamic Range<br>(Dynamic Range is the ratio of input overload to equivalent input noise.) | 96 dB                    |
| Input Sensitivity  | 1.8 mV                   |
| Input Impedance  | 47 kohms                 |
| Frequency Response, RIAA 20 Hz to 20 kHz   | ±1.0 dB                  |
| Signal-to-Noise Ratio<br>(at rated output and 7.75 mV input)                               | 75 dB                    |
| Signal-to-Noise Ratio, unweighted (DIN 45500)  | 47 dB                    |
| <b>High Level (Aux and Tape)</b>   |                          |
| Input Sensitivity  | 180 mV                   |
| Input Impedance  | 85 kohms                 |
| Frequency Response<br>(includes power amp)   | 15 Hz to 60 kHz, ±1.5 dB |
| Signal-to-Noise Ratio<br>(ref. to rated output and 775 mV input)                           | 87 dB                    |
| <b>Output Levels</b>   |                          |
| Tape Out (ref. 7.75 mV at Phono inputs)  | 775 mV                   |
| Pre-Out (ref. 180 mV at Aux inputs)<br>(ref. 500 mV at Aux inputs, main amp disconnected)  | 1.5 V<br>4.2 V           |
| <b>Output Impedance</b>  |                          |
| Tape Out   | 600 ohms                 |
| Pre-Out  | 900 ohms                 |

**FM TUNER SECTION:**

**Sensitivity**

|  |                   |
|--|-------------------|
| IHF Usable                                       | 10.8 dBf (1.9 µV) |
| IHF 50 dB Quieting (mono)                        | 17.3 dBf (4.0 µV) |
| (Stereo)   | 37.2 dBf (40 µV)  |
| DIN Sensitivity (Mono, 26 dB S/N, 300 ohm input) | 1.6 µV            |
| (Stereo, 46 dB S/N, 300 ohm input)               | 80 µV             |
| <b>Quieting Slope (Mono)</b>                     |                   |
| RF Input for 30 dB Quieting                      | 9.8 dBf (1.7 µV)  |
| <b>Quieting at:</b>                              |                   |
| 20 dBf ( 5.5 µV)                                 | 51 dB             |
| 25 dBf ( 10 µV)                                  | 58 dB             |
| 40 dBf ( 55 µV)                                  | 65 dB             |
| 65 dBf (1000 µV)                                 | 72 dB             |
| <b>Quieting Slope (Stereo)</b>                   |                   |
| <b>Quieting at:</b>                              |                   |
| 30 dBf ( 17 µV)                                  | 40 dB             |
| 40 dBf ( 55 µV)                                  | 50 dB             |
| 50 dBf ( 173 µV)                                 | 56 dB             |
| 65 dBf (1000 µV)                                 | 62 dB             |



|                                   |               |
|-----------------------------------|---------------|
| Distortion (Mono)                 |               |
| at 50 dB Quieting, 1000 Hz        | 0.6%          |
| at 65 dBf (1000 $\mu$ V), 1000 Hz | 0.15%         |
| Distortion (Stereo)               |               |
| at 50 dB Quieting, 1000 Hz        | 0.6%          |
| at 65 dBf (1000 $\mu$ V), 1000 Hz | 0.3%          |
| Hum and Noise                     |               |
| at 65 dBf (1000 $\mu$ V)          |               |
| Mono                              | 70 dB         |
| Stereo                            | 62 dB         |
| Frequency Response                |               |
| 30 Hz to 15 kHz                   |               |
| Mono                              | +0.2, -2.0 dB |
| Stereo                            | $\pm$ 2.0 dB  |
| Capture Ratio                     |               |
| at 45 dBf (100 $\mu$ V)           | 1.5 dB        |
| at 65 dBf (1000 $\mu$ V)          | 1.0 dB        |
| Alternate Channel Selectivity     | 70 dB         |
| Spurious Response Rejection       | 90 dB         |
| Image Response Rejection          | 60 dB         |
| I.F. Rejection (Balanced)         | 90 dB         |
| A.M. Suppression                  | 50 dB         |
| Stereo Separation                 |               |
| 100 Hz                            | 42 dB         |
| 1000 Hz                           | 45 dB         |
| 10 kHz                            | 32 dB         |
| Subcarrier Rejection              | 60 dB         |

#### AM TUNER SECTION:

|                                  |                  |
|----------------------------------|------------------|
| IHF Usable Sensitivity           | 20 $\mu$ V       |
| Distortion (THD), 30% Modulation | 0.6%             |
| Signal-to-Noise Ratio            | 49 dB            |
| Frequency Response ( $\pm$ 3 dB) | 40 Hz to 2.3 kHz |
| Alternate Channel Selectivity    | 46 dB            |
| Image Rejection                  | 45 dB            |
| Spurious Response Rejection      | 50 dB            |
| I.F. Rejection                   | 40 dB            |

#### GENERAL:

|  |  |
|--|--|
| Power Requirements   | 120 V AC, 60 Hz (U.S.A. and Canadian Versions)<br>220 V AC, 50 Hz (European Version) |
| (This unit can be converted by a qualified technician to operate on 110/120/240 V AC, 50/60 Hz.) |  |
| Power Consumption at rated output, both channels operating                                       | 170 W  |
| Idling Power (Volume Control at zero)  | 30 W   |
| Semiconductor Complement:  |  |
| Integrated Circuits  | 3  |
| Transistors  | 45   |
| Diodes   | 29   |
| Field Effect Transistors   | 1  |
| Dimensions:  |  |
| Panel Width  | 440 mm (17-5/16 inches)  |
| Panel Height   | 137 mm ( 5-3/8 inches)   |
| Depth  | 365 mm (14-3/8 inches)   |
| Weight:  |  |
| Unit alone   | 12 kg (26.4 lbs)   |
| Packed for shipment  | 15 kg ( 33 lbs)  |

model 2238



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

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2238

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**SERVICE BULLETIN**

|   |                                    |
|---|------------------------------------|
| model number<br>2238                              | bulletin number<br><b>M-2238-1</b> |
| for serial numbers<br>ALL                         |                                    |
| subject<br>SERVICE MANUAL CORRECTION              |                                    |
| technical services approval<br><i>[Signature]</i> | writer<br><i>SKJ</i>               |
| engineering approval<br><i>[Signature]</i>        | date<br>6-1-77                     |

OBJECTIVE

This bulletin is issued to inform you of a misprint in the Marantz Model 2238 Service Manual.

APPLICATION

Incorporate this change into your Service Manual as soon as possible to ensure correct service information.

PROCEDURE

- A. Refer to the Service Manual, pages 12, 14, and 22, Schematic Diagrams and change the Ref. Desig. H707 to H709 of the transistor on the P700, Main Amp PC Board as shown by the illustration below.

