

**SERVICE
MANUAL** PM350



marantz

model PM350

Stereophonic Amplifier

MARANTZ DESIGN AND SERVICE

Using superior design and selected high grade components, MARANTZ Company has created the ultimate in stereo sound. Only original MARANTZ parts can insure that your MARANTZ product will continue to perform to the specifications for which it is famous.

Parts for your MARANTZ stereo are generally available within 72 hours throughout the nation via a toll-free line to our National Parts Depot in California. The sales professionals who take your call immediately refer to their own desk top computer terminal and can quickly determine the availability and price information you require. If for some reason, your order should exceed our available stock, we usually can instantly provide an alternate replacement part or current delivery information. When the order is placed and confirmed, the computer simultaneously generates "hard copy" orders at the distribution center. As hard copies come directly from the computer to the national parts depot, your requested stock is assembled and prepared for shipment and placed on the first available carrier for delivery to you.

ORDERING PARTS

Phone orders will eliminate mail delays, and we encourage the use of this method. If you order by mail, use MARANTZ parts order forms which are available from our National Parts Depot located at the following address:

SUPERSCOPE NATIONAL PARTS DEPARTMENT
20525 Nordhoff Street
Chatsworth, California 91311
Phone: 1-800-423-5108
1-213-998-9333

The following information must be supplied to eliminate delays in processing your order:

1. Complete address.
2. Complete part numbers.
3. Complete description of parts.
4. Model number for which part is required (indicate MARANTZ).
5. Account number (for account customers only).

Direct consumers will be provided with the current retail price quotation on available parts in order to advise them of the cost of the parts and shipping.

OVERSEAS PARTS ORDERING

Parts may also be ordered from the following overseas addresses:

CANADA

Superscope Canada, Ltd.
3710 Nashua Drive
Mississauga
Ontario, Canada L4V1M5

AUSTRALIA

Superscope (Australasia) Pty., Ltd.
32 Cross Street (P.O.Box 604)
Brookvale 2100 N.S.W.
Australia

JAPAN

Marantz Japan, Inc.
3622 Kamitsuruma
Sagamihara Shi
Kanagawa, Japan

EUROPE

Superscope Europe, S.A.
Avenue Leopold III, 2
7120 Perennes-Lez-Binche
Belgium

Marantz France
Rue Louis Armand 9
92600 Asnieres
Hauts-de-Seine
France

Marantz Audio U.K. Ltd.
London Road, 203
Staines
Middlesex
England

Superscope GmbH
Max-Planck-Strass 22
D-6072 Dreieich
West Germany

All of the above locations are fully equipped to take care of your total service needs. Because various countries have differing configuration requirements, it is necessary that you contact the service facility in your particular country. In the event that there is no service location listed for your country, please contact the nearest facility for the necessary assistance.

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We sound better.

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MODEL PM 350 STEREOPHONIC AMPLIFIER



1. INTRODUCTION

This service manual was prepared for use by Authorized Warranty Stations and contains service information for the Marantz Model PM350 Stereo Console Amplifier. Servicing information and voltage data included in this manual are intended for use by knowledgeable and experienced personnel only. All instructions should be read carefully. No attempt should be made to proceed without a good understanding of circuitry operation.

The parts list furnishes complete ordering information. Most replacement parts should be ordered from the Marantz Company. However, a simple description is included for parts which can be obtained locally.

2. PRE-AMPLIFIER

Signals from the TUNER and AUX terminals are taken to the SELECTOR SWITCH (SS02).

Signals from the PHONO terminals pass through the phono amplifier (Q401) where they are amplified by 35.5dB and at the same time undergo RIAA equalization, before going to the SELECTOR SWITCH (SS02).

After being selected by the SELECTOR SWITCH, the incoming signals are taken to the TAPE MONITOR SWITCH and TAPE OUT terminals.

Signals which enter from the TAPE IN terminals are taken to the TAPE MONITOR SWITCH.

Signals which are selected by the TAPE MONITOR SWITCH are taken to the BALANCE and VOLUME potentiometers, and then enter the pre-amplifier (QE01). The pre-amplifier has a gain of 18 dB. The signals from the pre-amplifier enter TONE AMP (QE02) and the frequency response is controlled by the BASS, MID and TREBLE controls.

After passing through the pre-amplifier, the signals enter the main amplifier.

3. MAIN AMPLIFIER

The main amplifier contains an 6 dB/OCT type high pass filter network which can be switched in and out of circuit by means of the LOW FILTER switch.

4. TROUBLESHOOTING ANALYSIS

1. Excessive line consumption
 - a. Check for shorted Q801.
 - b. Check for shorted transistor Q729 through Q732.
 - c. Check for open Q709, Q710, R725, R726.
2. No line consumption or zero bias voltage
 - a. Check line cord, fuse, check for shorted Q709, Q710, R725, R726
 - b. Check for open rectifiers Q801 or open L001.
3. High hum and noise level
 - a. Check filter capacitors C801, C802, C807, C808.
 - b. Check transistors Q807, Q808.

5. POWER AMPLIFIER ADJUSTEMENT

ADJUSTMENT OF IDLING CURRENT

Connect a DC voltmeter to between emitters Q729 and Q731. Adjust R725 until 11mV is reached. Likewise, adjust Q730, Q732 and R726.

6. POWER LED METER ADJUSTMENT

Connect the speaker terminal output to the rated output voltage (15.5 V, 1 kHz), and then so adjust by RX07 (LCH) that the POWER LED METER 30W LED lights up. Adjust in the same manner by RX08 (RCH).

7. TEST EQUIPMENT REQUIRED FOR SERVICING

Table 1 lists the test equipment required for servicing the Model PM350 Stereo Console Amplifier. The wattmeter, AC voltmeter, and variable autotransformer may be assembled as a test fixture as shown schematically in Figure 1. The load resistors and AC ammeter may be assembled into a second test fixture as shown in Figure 2.

| | |
|--------------------------|----------------------|
| Line Switch | OFF |
| Variable-line switch | Variable |
| Wattmeter Switch | ON |
| Variable Autotransformer | 0 V (fully CCW) |
| Load | 8 ohms (0.5 mfd-OFF) |
| Audio Generator | 1 kHz |
| Output | 5 V range |
| Gain | Minimum |
| AC Voltmeter | 30 V range |

8. PERFORMANCE VERIFICATION

TEST PROCEDURE

A. TEST EQUIPMENT

Refer to Table 1 for required test equipment.

B. PRELIMINARY PROCEDURES

1. Make the test setup shown in Figure 1 with the instrument controls set in the following positions:

2. Make sure that connections between the resistive load and the system terminals of the Model PM350 have negligible resistance when compared with the resistance of the load itself. Appreciable resistance in wiring adds to the total load, resulting in inaccurate measurements of output power.
3. Connect amplifier output to load and connect AC cord to line power. Connect shorting plugs to the Phono input jacks of the Model PM350.

Table 1. Test Equipment Required for Servicing

| Item | Manufacturer and Model No. | Use |
|---|--|---|
| Distortion Analyzer Audio Oscillator AC Voltmeter | Sound Technology Model 1700B | Distortion Measurements Sinewave and squarewave signal source voltage measurements (AC) |
| Oscilloscope | Tektronix Model T932 Philips Model 3232 | Waveform analysis and trouble shooting and ASO alignment |
| Circuit Tester | | Trouble shooting |
| DC Voltmeter | Fluke Model 8000 "Digital" Simpson Model 313, Triplet Model 801 | Voltage measurements (DC) |
| AC Wattmeter | Simpson Model 1379 | Monitors primary power to amplifier |
| AC Ammeter | Commercial Grade (1 ~ 10 A) | Monitors amplifier output under short circuit condition |
| Line Voltmeter | Simpson Model 1359 | Monitors potential of primary power to amplifier |
| Variable Autotransformer | Superior Electronic Co., Powerstet Model 116B-10A | Adjusts level of primary power to amplifier |
| Shorting Plug | Use phono plug with 600 ohm across center pin and shell | Shorts amplifier input to eliminate noise pickup |
| Output Load (8 ohms, $\pm 0.5\%$ 100 W) | Commercial Grade | Provides 8-ohm load for amplifier output termination |
| Output Load (4 ohms, $\pm 0.5\%$ 100 W) | Commercial Grade | Provides 4-ohm load for amplifier output termination |
| Output Load Capacitor (0.5 mfd) | Mylar | Provides capacitive load for instability checks |
| AC Power Control Box | Optional Item. Fabricate in accordance with Figure 1 | Monitors and controls primary power for amplifier |
| Amplifier Output Load Box | Optional Item. Fabricate in accordance with Figure 2 | Provides various amplifier loads and can monitor shorted output |

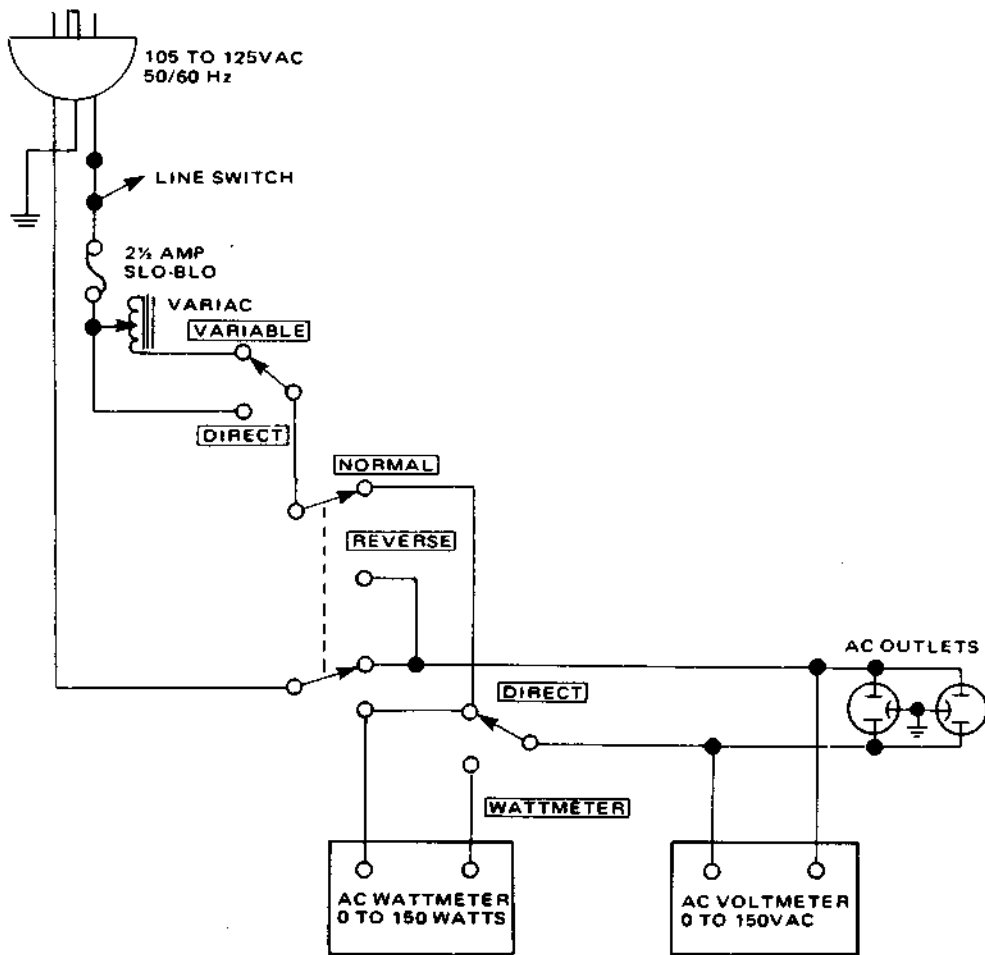


Figure 1. AC Power Control Box Simplified Schematic

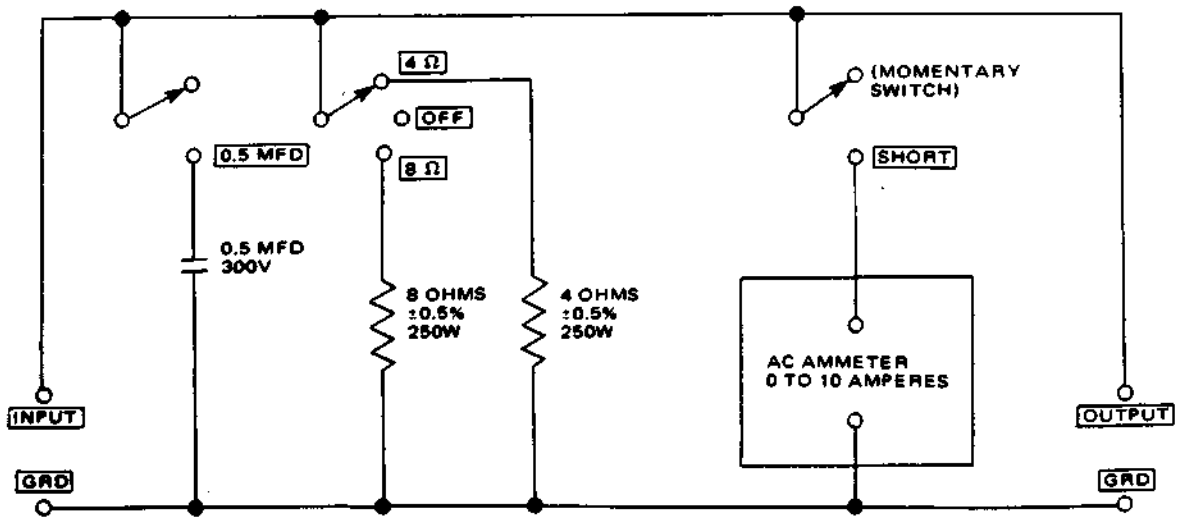


Figure 2. Amplifier Output Load Box Simplified Schematic

C. TOTAL HUM AND NOISE TEST

1. With shorting plugs connected to the Phono input jacks and an 8 ohm resistive load connected across the speaker system output terminals, connect a distortion analyzer across the load.

NOTE:

If the distortion analyzer does not contain a built-in voltmeter, an AC VTVM may be substituted.

2. Set the distortion analyzer controls for voltage measurements and apply power to the amplifier. Set the volume control fully CCW. Set the SELECTOR switch to PHONO.
3. If the distortion analyzer indicates more than 2.0 mV refer to the trouble analysis section of this manual.
4. Set the volume control fully CW. If the distortion analyzer indicates more than 20 mV, refer to the trouble analysis section of this manual.

D. MAXIMUM POWER OUTPUT

1. Connect the audio oscillator to the AUX input. Set audio oscillator frequency to 1 kHz. Set SELECTOR switch to AUX.
2. With the distortion analyzer connected across the output load (8-ohm), set the analyzer on the 30 VAC scale.
3. Turn the analyzer on and increase the audio oscillator output to 150 mV. The AC VTVM should read 15.5 VAC or more.

E. HARMONIC DISTORTION TEST

1. Set the frequency of the audio oscillator and the distortion analyzer to 20 kHz.
2. Set the controls of the analyzer for voltage measurement on the 30 volt scale.
3. Adjust the audio oscillator output level until the analyzer meter indicates 15.5 VAC.
4. Switch the distortion analyzer to Set Level and adjust SENSITIVITY for full scale reading on 0 ~ 0.3% scale.
5. Measure the total harmonic distortion with the analyzer and verify it is less than 0.05%.

NOTE:

Any parasitic oscillation in the amplifier will be displayed on the oscilloscope when capacitance is switched into the load.

6. Switch the distortion analyzer back to SET LEVEL. (Do not readjust sensitivity of analyzer.)
7. Change the frequency of the audio oscillator and distortion analyzer to 1 kHz. Adjust audio oscillator output for a full scale reading on the 0 ~ 1% scale.
8. Measure the distortion, verifying it is no greater than 0.05%.
9. Repeat steps 7 and 8, changing frequency to 20 Hz. Distortion should be no more than 0.05%.
10. Check for parasitic oscillation; there should be none.

Note on safety: The parts marked with \triangle are important parts on the safety. Please use the parts having the designated parts number without fail.

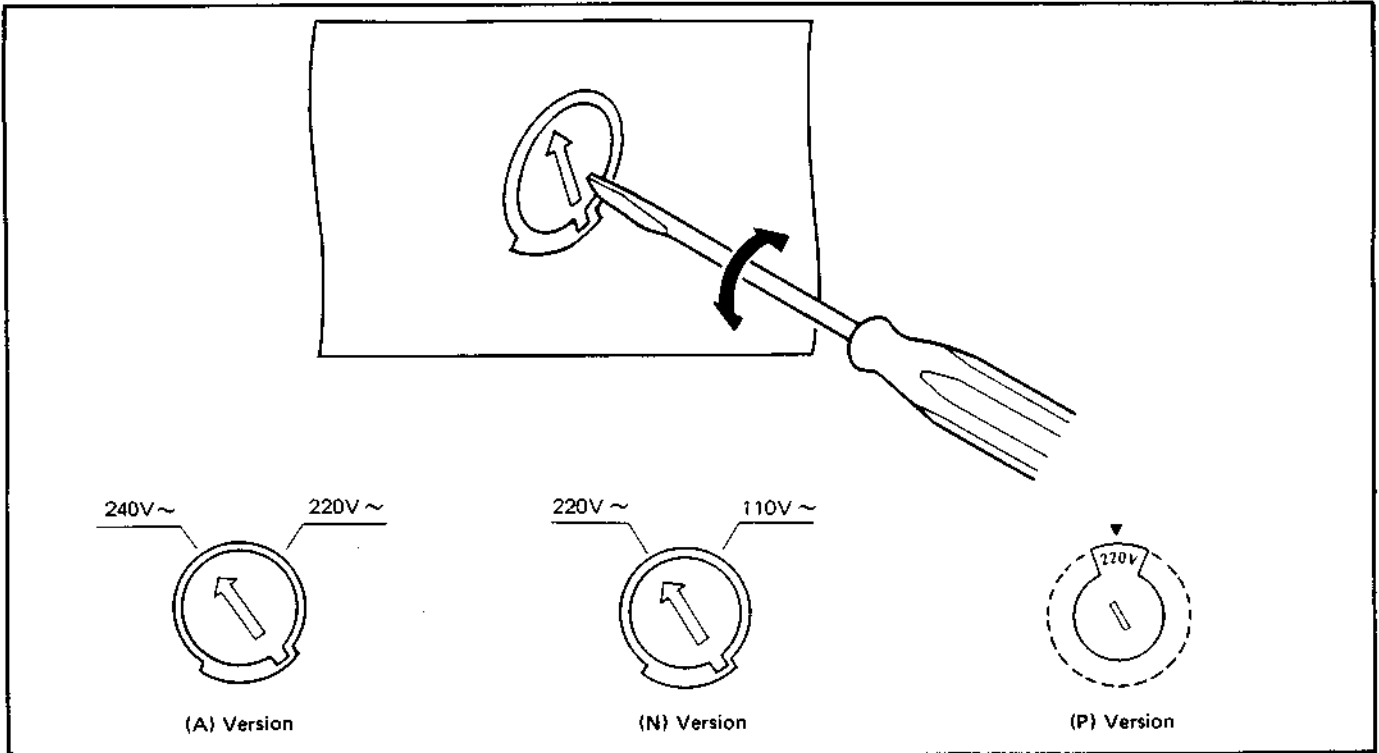
9. VOLTAGE CONVERSION

• EUROPEAN MODEL ONLY

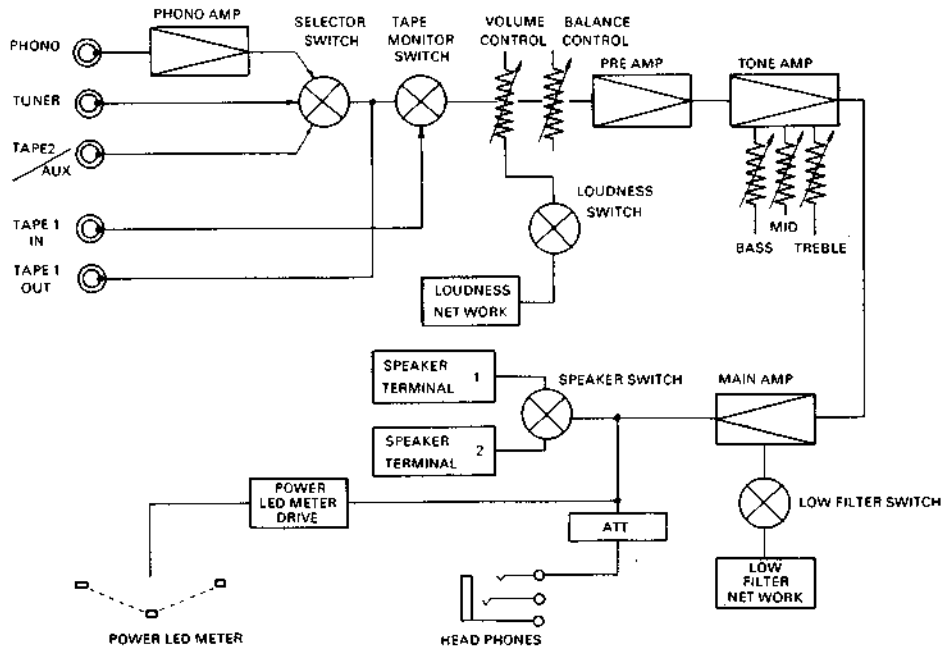
To convert the unit to a different power source voltage, change the position as illustrated in the drawing below.

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

Voltage Conversion Chart

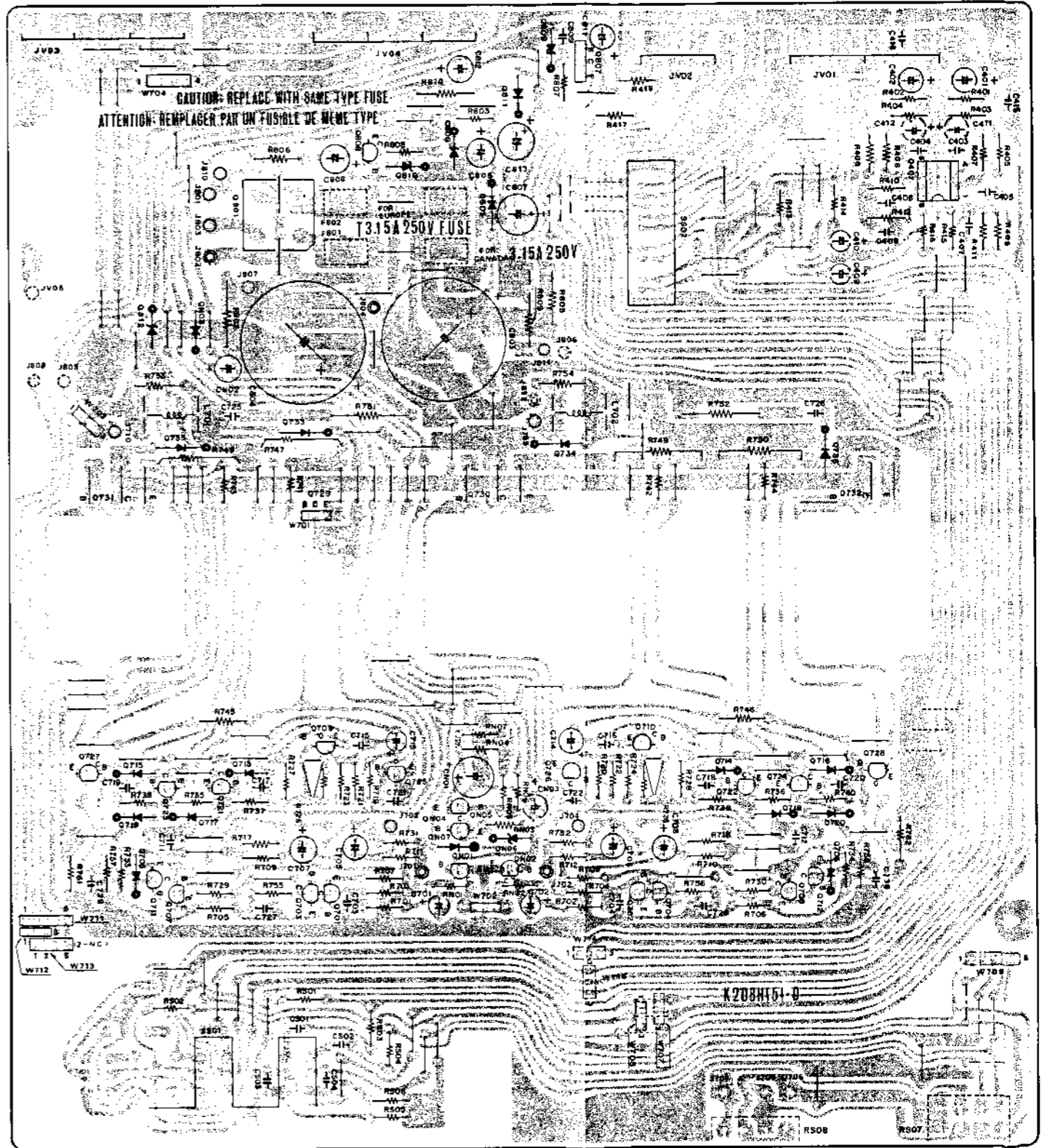
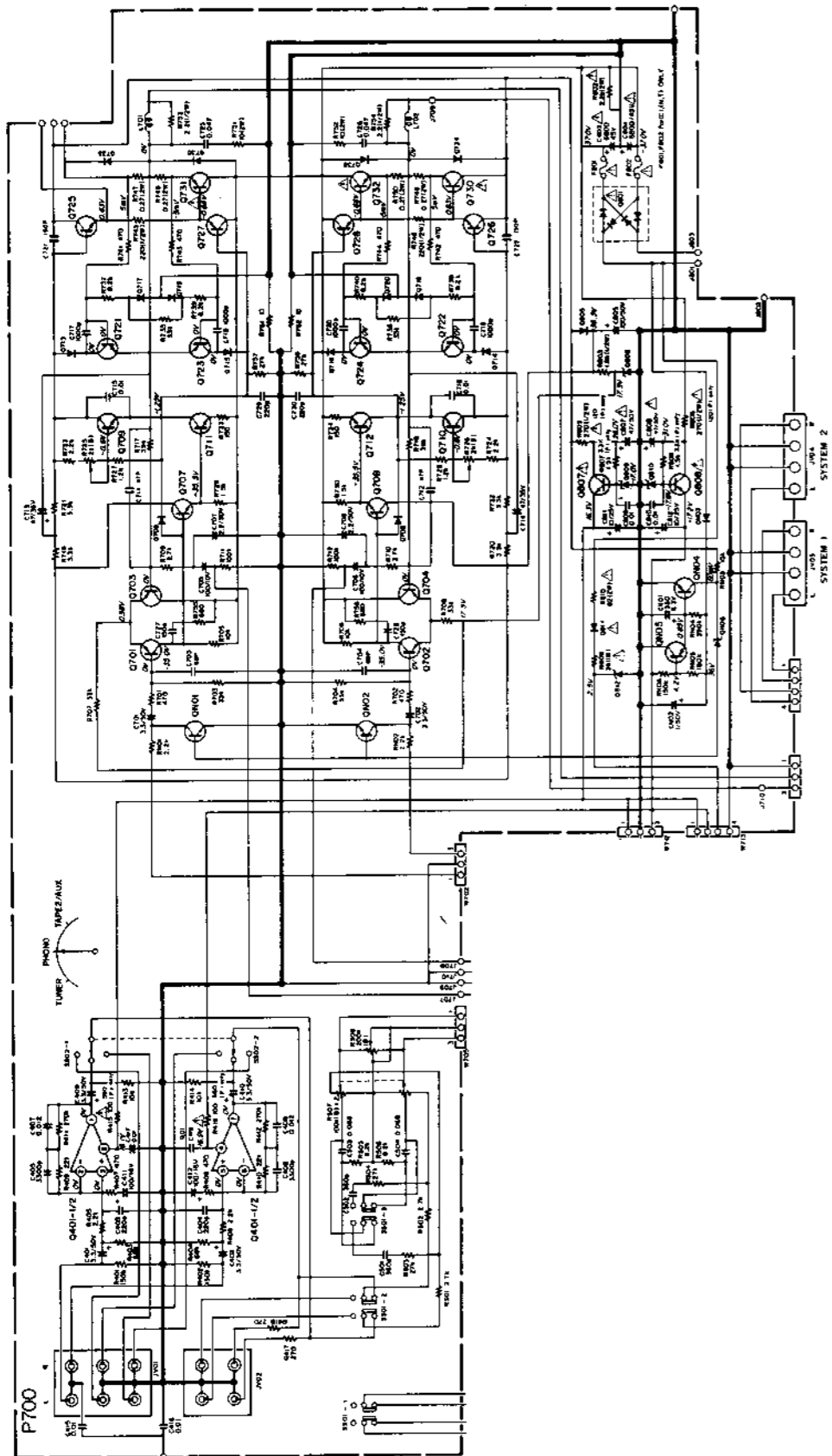


10. BLOCK DIAGRAM

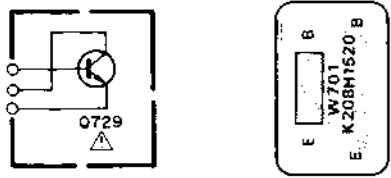


11. DIAGRAM AND COMPONENT LOCATIONS

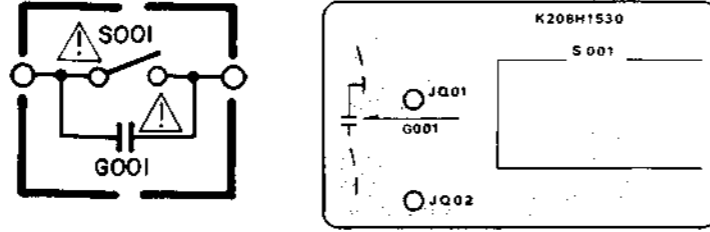
11.1 Main Amp Assembly (P700) Schematic Diagram and Component Locations



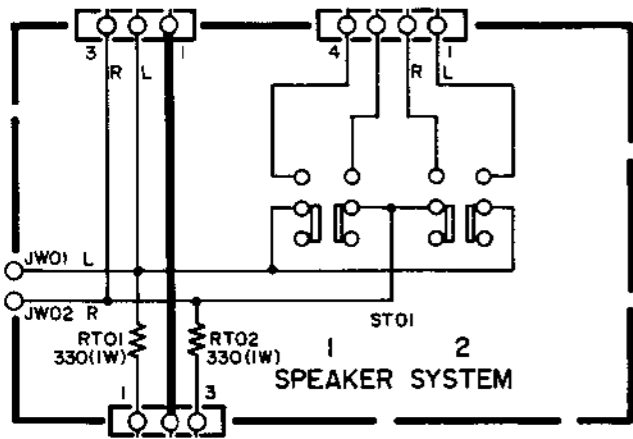
11.2 Power Tr. Assembly (P701) Schematic Diagram and Component Locations



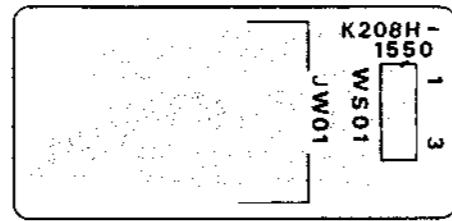
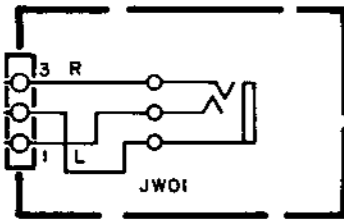
11.3 AC. Switch Assembly (P000) Schematic Diagram and Component Locations



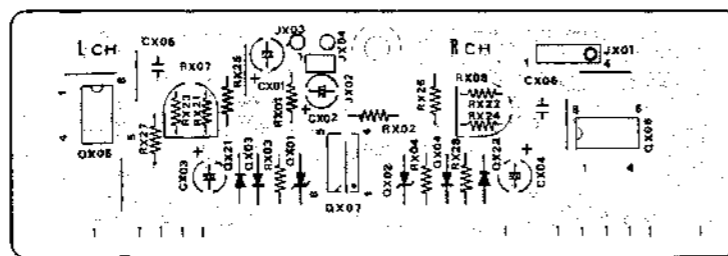
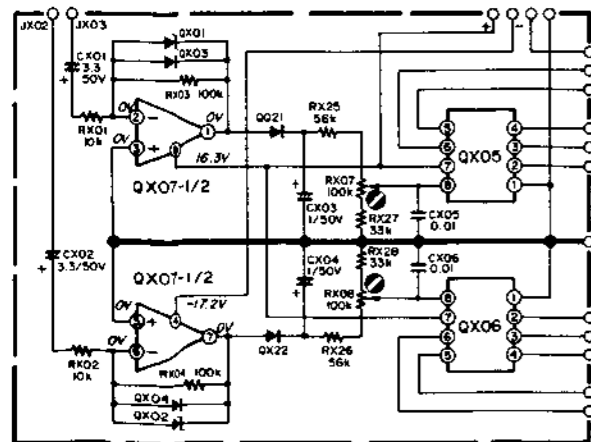
11.4 SP. Switch Assembly (PT00) Schematic Diagram and Component Locations



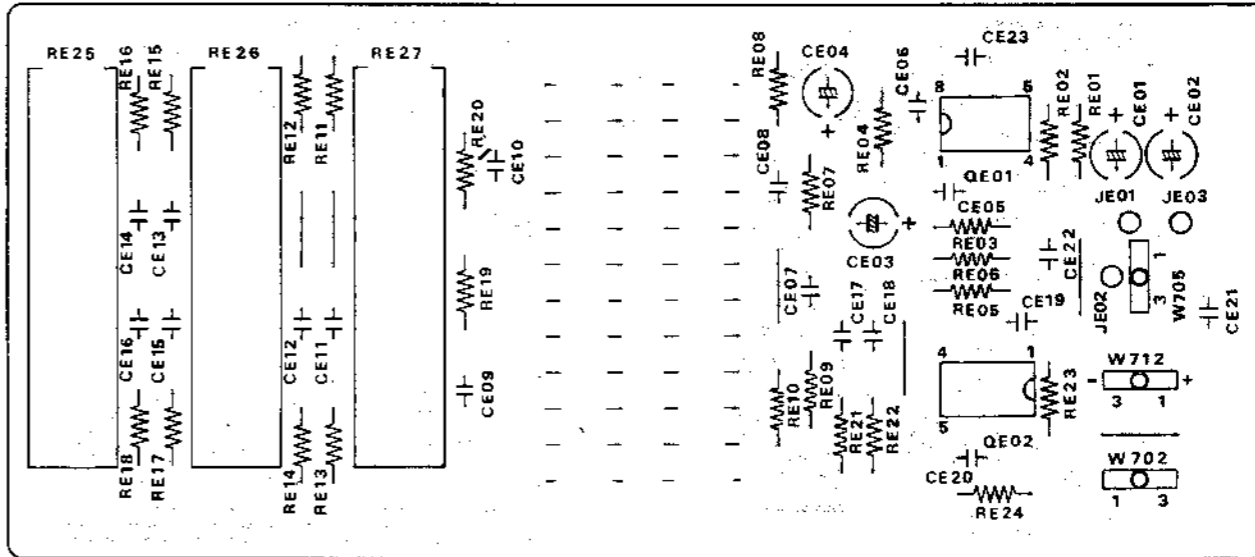
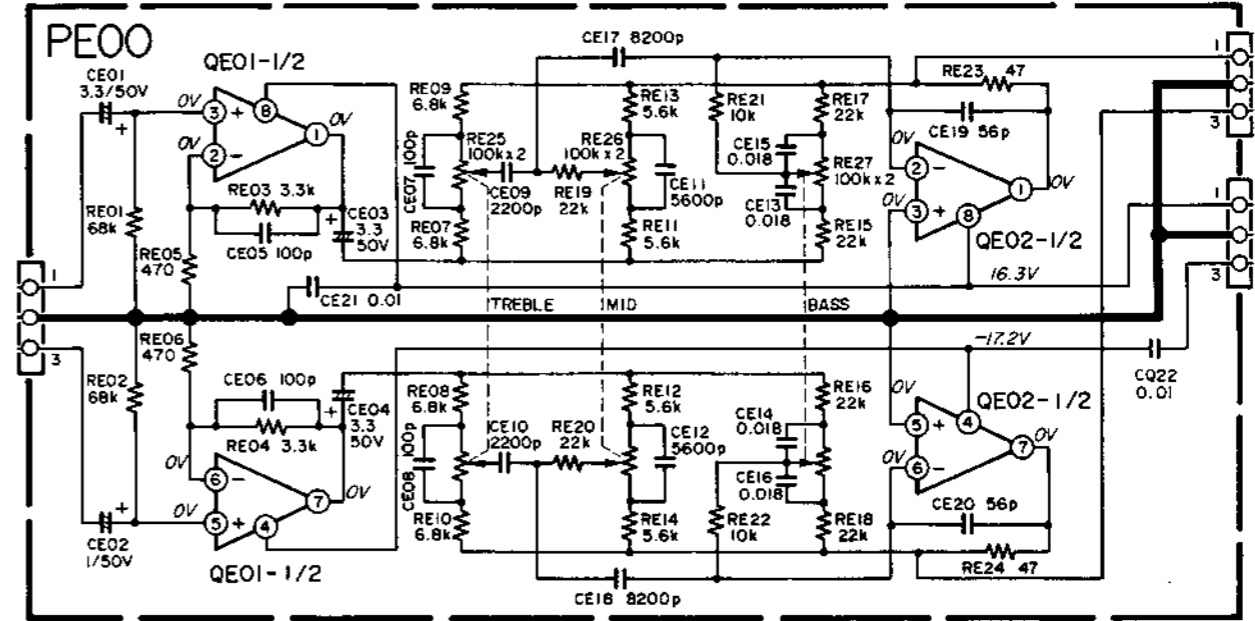
11.5 Head Phone Assembly (PW00) Schematic Diagram and Component Locations



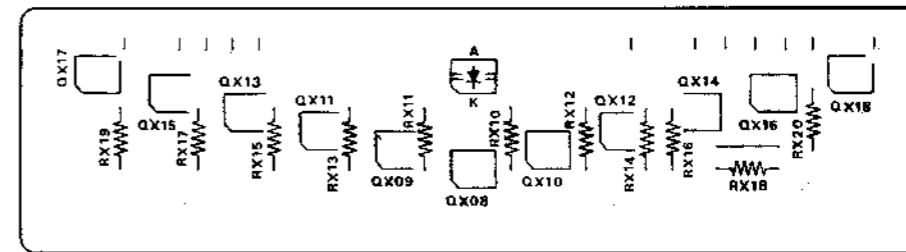
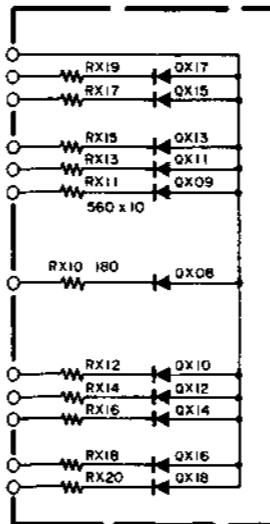
11.6 Tone Control Assembly (PE00) Schematic Diagram and Component Locations



11.7 LED Level Meter Drive Assembly (PX01) Schematic Diagram and Component Locations

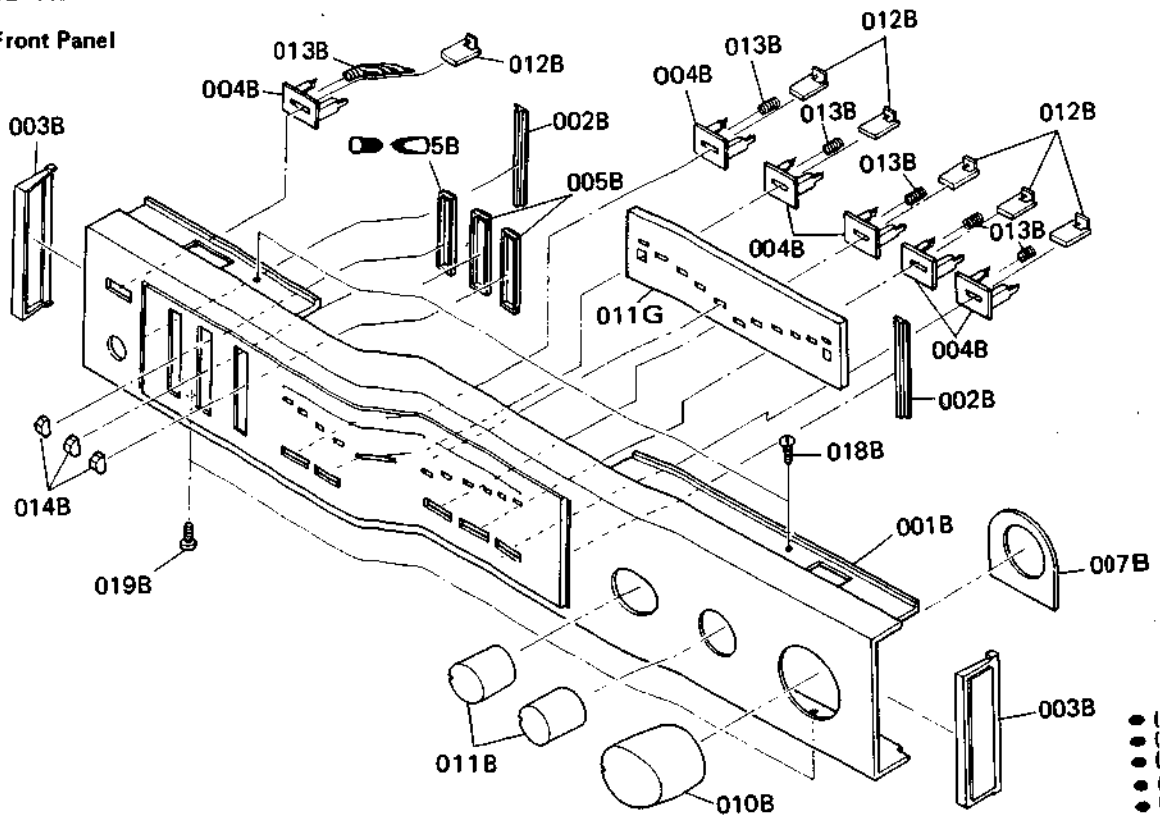


11.8 LED Level Meter Assembly (PX02) Schematic Diagram and Component Locations



12. EXPLODED VIEW AND PARTS LIST

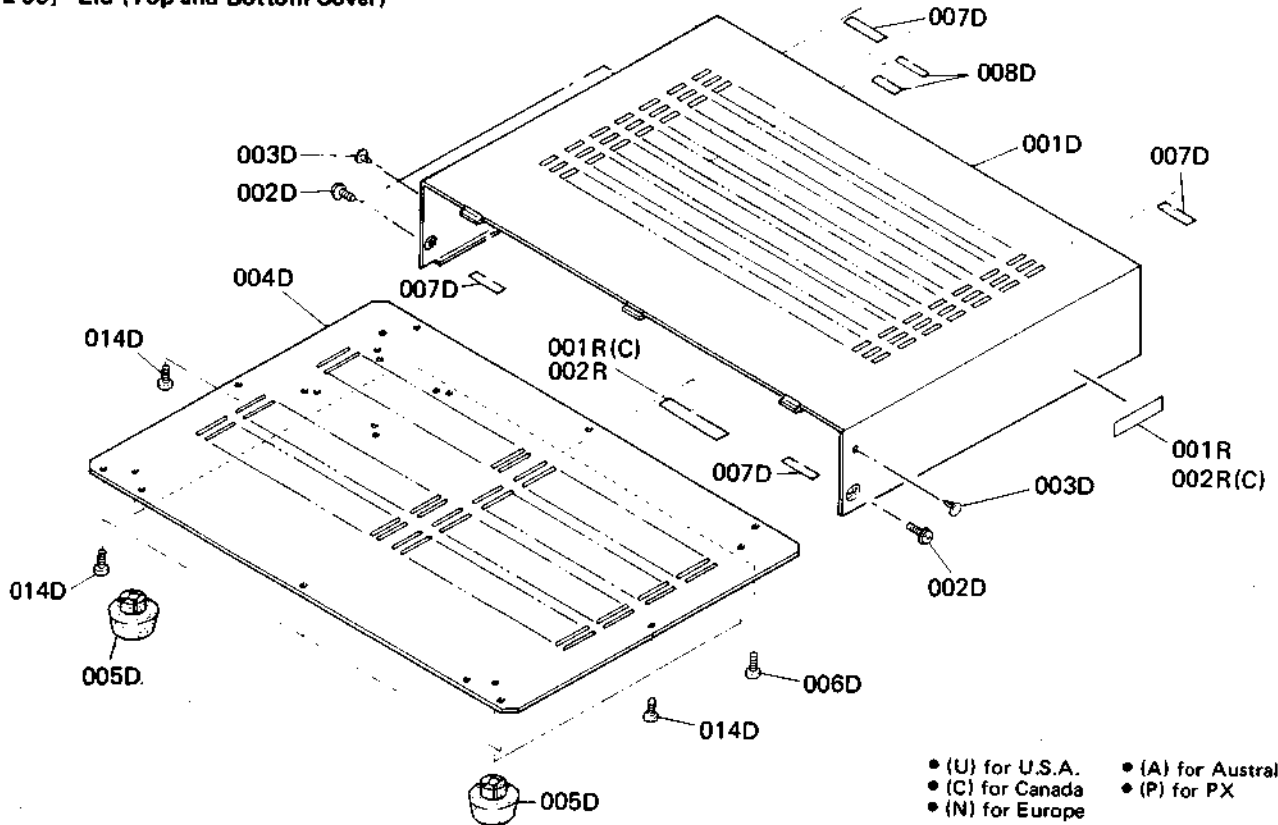
• [C01-99] Front Panel



| REF. DESIG. | QTY | | | | | PART NO. | DESCRIPTION |
|-------------|-----|---|---|---|---|------------|----------------------|
| | U | C | N | A | P | | |
| A | 1 | 1 | 1 | 1 | 1 | 208H063400 | Front Panel Assembly |
| 001B | 1 | 1 | 1 | 1 | 1 | 208H063010 | Escutcheon |
| 002B | 2 | 2 | 2 | 2 | 2 | 403H063020 | Escutcheon |
| 003B | 2 | 2 | 2 | 2 | 2 | 403H067010 | Cap |
| 004B | 6 | 6 | 6 | 6 | 6 | 403H259010 | Bushing |
| 005B | 3 | 3 | 3 | 3 | 3 | 001H259110 | Bushing |
| 007B | 1 | 1 | 1 | 1 | 1 | 208H063020 | Escutcheon |
| 012B | 6 | 6 | 6 | 6 | 6 | 403H154010 | Knob |
| 013B | 6 | 6 | 6 | 6 | 6 | 403H115010 | Spring |
| 011G | 1 | 1 | 1 | 1 | 1 | 208H118010 | Spacer |

| REF. DESIG. | QTY | | | | | PART NO. | DESCRIPTION |
|-------------|-----|---|---|---|---|------------|-----------------------|
| | U | C | N | A | P | | |
| 010B | 1 | 1 | 1 | 1 | 1 | 208H154010 | Knob |
| 011B | 2 | 2 | 2 | 2 | 2 | 208H154020 | Knob |
| 014B | 3 | 3 | 3 | 3 | 3 | 208H154050 | Knob |
| 018B | 2 | 2 | 2 | 2 | 2 | 51280306B0 | B.H.Tapped Screw B3x6 |
| 019B | 2 | 2 | 2 | 2 | 2 | 51280306B0 | B.H.Tapped Screw B3x6 |

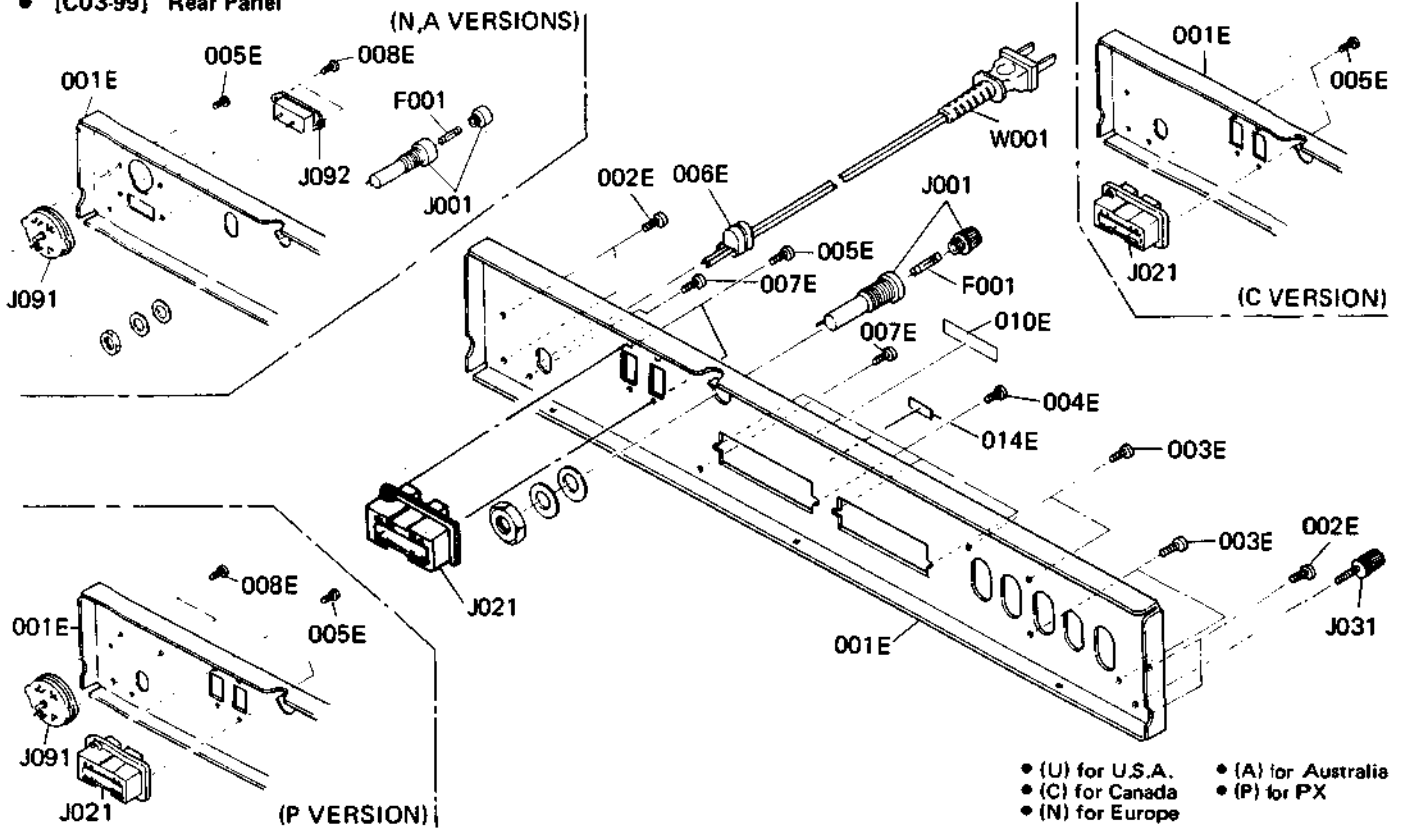
• [C02-99] Lid (Top and Bottom Cover)



| REF. DESIG. | QTY | | | | | PART NO. | DESCRIPTION |
|-------------|-----|---|---|---|---|------------|-----------------------|
| | U | C | N | A | P | | |
| 001D | 1 | 1 | 1 | 1 | 1 | 208H257010 | Lid, Top Cover |
| 002D | 4 | 4 | 4 | 4 | 4 | 5126040820 | B.T. Screw 84x8 |
| 003D | 2 | 2 | 2 | 2 | 2 | 2991259010 | Bushing |
| 004D | 1 | 1 | 1 | 1 | 1 | 208H257020 | Lid, Bottom Cover |
| 005D | 4 | 4 | 4 | 4 | 4 | 304H057010 | Leg |
| 006D | 3 | 3 | 3 | 3 | 3 | 5129030880 | B.H.Tapped Screw B3x8 |
| 007D | 4 | 4 | 4 | 4 | 4 | 2965118010 | Spacer |
| 008D | 2 | 2 | 2 | 2 | 2 | 209H056010 | Buffer |
| 014D | 5 | 5 | 5 | 5 | 5 | 5128030880 | B.H.Tapped Screw B3x8 |

| REF. DESIG. | QTY | | | | | PART NO. | DESCRIPTION |
|-------------|-----|---|---|---|---|------------|-------------|
| | U | C | N | A | P | | |
| 001R | 1 | | | | | 2932861010 | Label |
| 001R | | 1 | | | | 2911861110 | Label |
| 001R | | | 1 | 1 | 1 | 2932861010 | Label |
| 002R | 1 | | 1 | 1 | 1 | 2578861010 | Label |
| 002R | | 1 | | | | 2911861140 | Label |

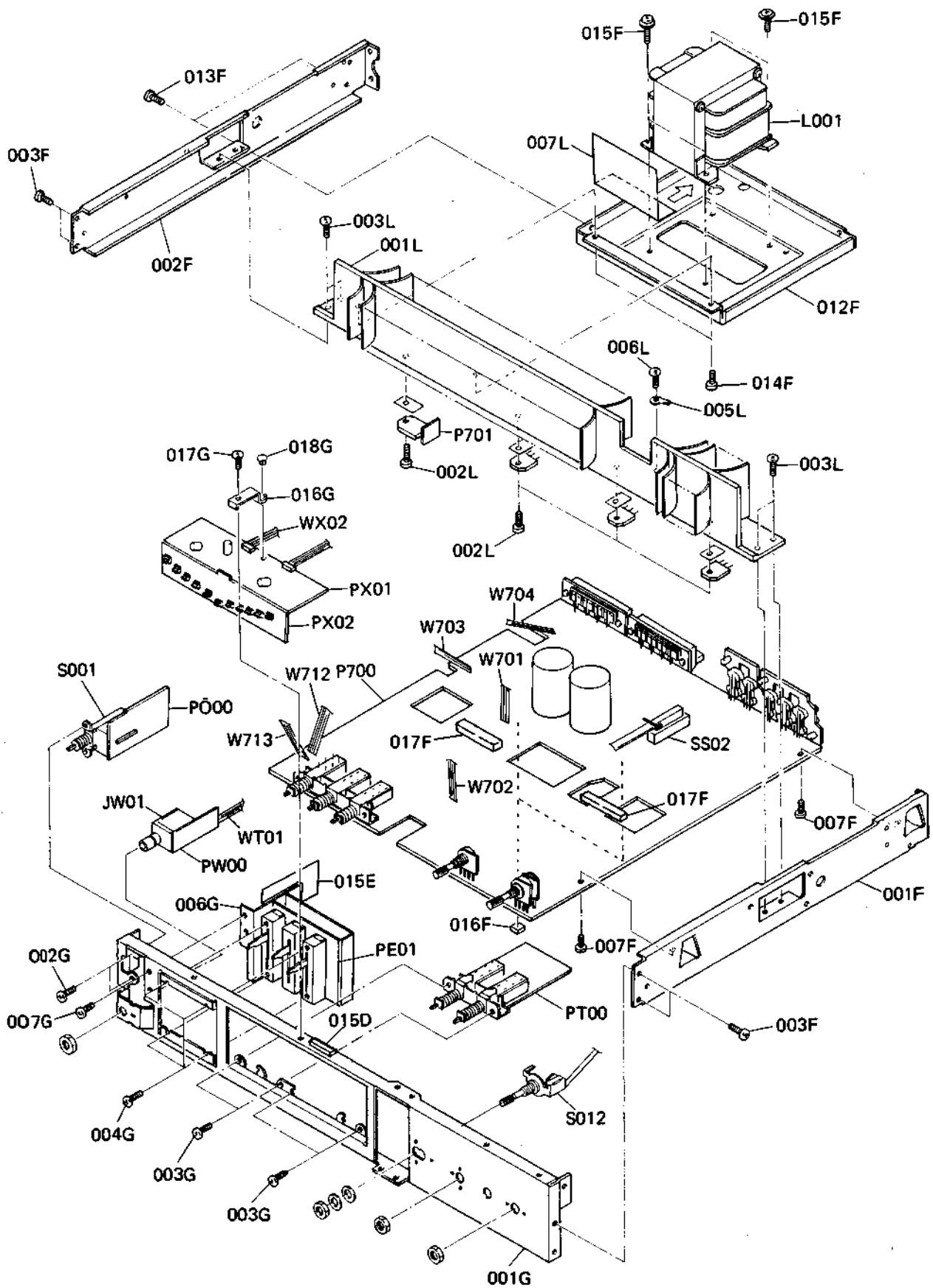
• [C03-99] Rear Panel



- (U) for U.S.A.
- (C) for Canada
- (N) for Europe
- (A) for Australia
- (P) for PX

| REF. DESIG. | QTY | | | | | PART NO. | DESCRIPTION | REF. DESIG. | QTY | | | | | PART NO. | DESCRIPTION |
|-------------|-----|---|---|---|---|------------|-----------------------|-------------|-----|---|---|---|------------|-------------------|-------------|
| | U | C | N | A | P | | | | U | C | N | A | P | | |
| 001E | 1 | | | | | 208H160210 | Bracket, Rear Panel | △ F001 | 1 | | | | FS10250500 | Fuse, 2.5A 250V | |
| 001E | | 1 | | | | 208H160250 | Bracket, Rear Panel | △ F001 | | 1 | | | FS10250600 | Fuse, 2.5A 250V | |
| 001E | | | 1 | | | 208H160280 | Bracket, Rear Panel | △ F001 | | | 1 | 1 | FS10080800 | Fuse, T800MA | |
| 001E | | | | 1 | | 208H160240 | Bracket, Rear Panel | J001 | 1 | | | | YJ08000310 | Jack, Fuse Holder | |
| 001E | | | | | 1 | 208H160260 | Bracket, Rear Panel | J001 | | 1 | | 1 | YJ08000300 | Jack, Fuse Holder | |
| 002E | 4 | 4 | 4 | 4 | 4 | 51280308U0 | B.H.Tapped Screw B3x8 | J001 | | | 1 | 1 | YJ08000290 | Jack, Fuse Holder | |
| 003E | 4 | 4 | 4 | 4 | 4 | 51280308U0 | B.H.Tapped Screw B3x8 | △ J021 | 1 | 1 | | | YJ04000740 | Jack, AC Outlet | |
| 004E | 4 | 4 | 4 | 4 | 4 | 51280308U0 | B.H.Tapped Screw B3x8 | △ J021 | | | | 1 | YJ04000750 | Jack, AC Outlet | |
| 005E | 2 | 2 | 2 | 2 | 2 | 51280308U0 | B.H.Tapped Screw B3x8 | J031 | 1 | 1 | 1 | 1 | YL03010250 | Terminal, Ground | |
| 006E | 1 | 1 | | | 1 | 1455259030 | Bushing | △ J091 | | | 1 | | BY05060040 | Voltage Selector | |
| 007E | 2 | 2 | 2 | 2 | 2 | 51280308U0 | B.H.Tapped Screw B3x8 | △ J091 | | | | 1 | BY05030040 | Voltage Selector | |
| 008E | | | 2 | 2 | 2 | 51280308U0 | B.H.Tapped Screw B3x8 | △ J091 | | | | 1 | BY05080010 | Voltage Selector | |
| 010E | 1 | 1 | 1 | 1 | 1 | 2112265010 | Indicator | △ J092 | | | 1 | 1 | YP04000590 | Plug, Inlet | |
| 014E | | | 1 | | | 4581861010 | Label | △ W001 | 1 | 1 | | | YC01900070 | A.C. Power Cord | |
| | | | | | | | | △ W001 | | | 1 | | ZC01805030 | A.C. Power Cord | |
| | | | | | | | | △ W001 | | | | 1 | ZC02006030 | A.C. Power Cord | |
| | | | | | | | | △ W001 | | | | 1 | YC01800190 | A.C. Power Cord | |

● [P01-99] Front Chassis and General Parts

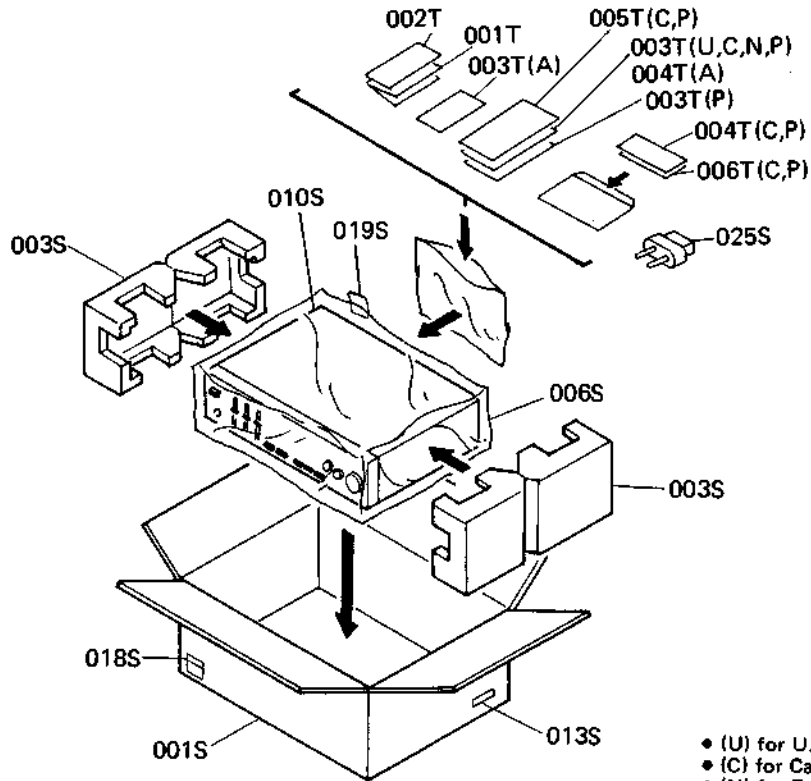


- (U) for U.S.A.
- (C) for Canada
- (N) for Europe
- (A) for Australia
- (P) for PX

| REF. DESIG. | QTY | | | | | PART NO. | DESCRIPTION |
|-------------|-----|---|---|---|---|------------|------------------------|
| | U | C | N | A | P | | |
| 015D | 1 | 1 | 1 | 1 | 1 | 208H056010 | Buffer |
| 015E | 1 | 1 | 1 | 1 | 1 | 208H120010 | Insulator |
| 001F | 1 | 1 | 1 | 1 | 1 | 208H126010 | Stay, Right |
| 002F | 1 | 1 | 1 | 1 | 1 | 208H126020 | Stay, Left |
| 003F | 4 | 4 | 4 | 4 | 4 | 51280308B0 | B.H.Tapped Screw B3x8 |
| 007F | 2 | 2 | 2 | 2 | 2 | 51260308B0 | B.T. Screw B3x8 |
| 012F | 1 | 1 | 1 | 1 | 1 | 208H004010 | Table |
| 013F | 2 | 2 | 2 | 2 | 2 | 51280308B0 | B.H.Tapped Screw B3x8 |
| 014F | 2 | 2 | 2 | 2 | 2 | 51260308B0 | B.T. Screw B3x8 |
| 015F | 4 | 4 | 4 | 4 | 4 | 51570406B0 | B.H.Tapped Screw B4x6 |
| 016F | 2 | 2 | 2 | 2 | 2 | 2147056010 | Buffer |
| 017F | 2 | 2 | 2 | 2 | 2 | 208H118020 | Spacer |
| 001G | 1 | 1 | 1 | 1 | 1 | 208H160010 | Bracket, Front Chassis |
| 002G | 2 | 2 | 2 | 2 | 2 | 51100306A9 | B.H.M. Screw B3x6 |
| 003G | 4 | 4 | 4 | 4 | 4 | 51100306A9 | B.H.M. Screw B3x6 |
| 004G | 4 | 4 | 4 | 4 | 4 | 51100204A0 | B.H.M. Screw B2x4 |
| 006G | 1 | 1 | 1 | 1 | 1 | 208H109010 | Shield |
| 007G | 1 | 1 | 1 | 1 | 1 | 51100306A9 | B.H.M. Screw B3x6 |
| 016G | 1 | 1 | 1 | 1 | 1 | 208H160010 | Bracket |
| 017G | 1 | 1 | 1 | 1 | 1 | 51280308B0 | B.H.Tapped Screw B3x8 |
| 018G | 1 | 1 | 1 | 1 | 1 | 2276005050 | Clamper |
| 001L | 1 | 1 | 1 | 1 | 1 | 208H267010 | Heat Sink |
| 002L | 4 | 4 | 4 | 4 | 4 | 5126010B0 | B.T. Screw B3x10 |
| 003L | 4 | 4 | 4 | 4 | 4 | 51280308B0 | B.H.Tapped Screw B3x8 |
| 005L | 1 | 1 | 1 | 1 | 1 | 61030039W0 | Lug |
| 006L | 1 | 1 | 1 | 1 | 1 | 51280308B0 | B.H.Tapped Screw B3x8 |
| 007L | 1 | 1 | 1 | 1 | 1 | 208H109020 | Shield |

| REF. DESIG. | QTY | | | | | PART NO. | DESCRIPTION |
|-------------|-----|---|---|---|---|------------|--------------------|
| | U | C | N | A | P | | |
| △L001 | 1 | | | | | TS17619010 | Power Transformer |
| △L001 | | 1 | | | | TS17619020 | Power Transformer |
| △L001 | | | 1 | | | TS17620030 | Power Transformer |
| △L001 | | | | 1 | | TS17620040 | Power Transformer |
| △L001 | | | | | 1 | TS17620050 | Power Transformer |
| △S001 | 1 | 1 | | | | SP01010420 | Push Switch, Power |
| △S001 | | | 1 | 1 | | SP01010390 | Push Switch, Power |
| △S001 | | | | | 1 | SP01010430 | Push Switch, Power |
| S012 | 1 | 1 | 1 | 1 | 1 | SR00030050 | Rotary Switch |
| SS02 | 1 | 1 | 1 | 1 | 1 | SS04040040 | Slide Switch |
| ST01 | 1 | 1 | 1 | 1 | 1 | YU03180260 | Jumper Lead |
| WT01 | 1 | 1 | 1 | 1 | 1 | YU03180260 | Jumper Lead |
| WX02 | 1 | 1 | 1 | 1 | 1 | YU02120240 | Jumper Lead |
| W701 | 1 | 1 | 1 | 1 | 1 | YU03180240 | Jumper Lead |
| W702 | 1 | 1 | 1 | 1 | 1 | YU03280260 | Jumper Lead |
| W703 | 1 | 1 | 1 | 1 | 1 | YU03180240 | Jumper Lead |
| W704 | 1 | 1 | 1 | 1 | 1 | YU04280240 | Jumper Lead |
| W712 | 1 | 1 | 1 | 1 | 1 | YU03180260 | Jumper Lead |
| W713 | 1 | 1 | 1 | 1 | 1 | YU04100240 | Jumper Lead |
| JW01 | 1 | 1 | 1 | 1 | 1 | YJ01001400 | Jack, Head Phone |

• [H01-99] Packing Materials



• (U) for U.S.A. • (A) for Australia
 • (C) for Canada • (P) for PX
 • (N) for Europe

| REF. DESIG. | QTY | | | | | PART NO. | DESCRIPTION |
|-------------|-----|---|---|---|---|------------|--------------------|
| | U | C | N | A | P | | |
| 001S | 1 | 1 | | | | 208H801010 | Packing Case |
| 001S | | | 1 | 1 | | 208H801020 | Packing Case |
| 001S | | | | | 1 | 208H801030 | Packing Case |
| 003S | 2 | 2 | 2 | 2 | | 001H809010 | Cushion |
| 006S | 1 | 1 | 1 | 1 | 1 | 9090909040 | Polyethylene Sheet |
| 010S | 1 | 1 | 1 | 1 | 1 | 2918107280 | Sheet |
| 013S | 2 | | | | | 9526019010 | Serial No. Card |
| 013S | | 2 | | | | 9526019020 | Serial No. Card |
| 013S | | | 2 | | | 9526019060 | Serial No. Card |
| 013S | | | | 2 | | 9526019030 | Serial No. Card |
| 013S | | | | | 4 | 9526019050 | Serial No. Card |
| 018S | | 2 | | | | 9510901020 | Label |
| 019S | | | 1 | | | 2731821010 | Silicagel |
| 025S | | | | | 1 | YJ04000240 | Jack |

| REF. DESIG. | QTY | | | | | PART NO. | DESCRIPTION |
|-------------|-----|---|---|---|---|------------|-----------------|
| | U | C | N | A | P | | |
| 001T | 1 | | | | 1 | 207H851010 | Instruction |
| 001T | | 1 | 1 | | 1 | 207H851310 | Instruction |
| 002T | 1 | | | | 1 | 208H851020 | Instruction |
| 002T | | | 1 | | | 208H851220 | Instruction |
| 002T | | | | 1 | 1 | 208H851320 | Instruction |
| 003T | 1 | | | | | 2818854020 | Guarantee Card |
| 003T | | | | | 1 | 2818854040 | Guarantee Card |
| 003T | | | | 1 | | 208H856010 | Circuit Diagram |
| 003T | | | | | 1 | 2205851040 | Instruction |
| 003T | | | | | 1 | 2818854010 | Guarantee Card |
| 004T | | | | | 1 | 2918813010 | Envelope |
| 004T | | | | | 1 | 9631000090 | Guarantee Card |
| 004T | | | | | 1 | 2713813010 | Envelope |
| 005T | | | | | 1 | 9630000180 | Guarantee Card |
| 006T | | | | | 1 | 965000050 | S. Station Card |
| 006T | | | | | 1 | 965000010 | S. Station Card |

12. ELECTRICAL PARTS LIST

• (U) for U.S.A. • (A) for Australia
 • (C) for Canada • (P) for PX
 • (N) for Europe

• (U) for U.S.A. • (A) for Australia
 • (C) for Canada • (P) for PX
 • (N) for Europe

| REF. DESIG. | QTY | | | | | PART NO. | DESCRIPTION |
|------------------------|-----|---|---|---|---|------------|----------------------|
| | U | C | N | A | P | | |
| P700 | 1 | 1 | 1 | 1 | 1 | YK208H1510 | P.W. Board, Main Amp |
| | 1 | 1 | 1 | 1 | 1 | ZZ208H1510 | P.W. Board Assembly |
| | 1 | 1 | 1 | 1 | 1 | ZZ208H2510 | P.W. Board Assembly |
| | 1 | 1 | 1 | 1 | 1 | ZZ208H8510 | P.W. Board Assembly |
| | 1 | 1 | 1 | 1 | 1 | | |
| P700-CAPACITORS | | | | | | | |
| C401 | 1 | 1 | 1 | 1 | 1 | EA33055030 | Elect 3.3μF 50V |
| C402 | 1 | 1 | 1 | 1 | 1 | EA33055030 | Elect 3.3μF 50V |
| C403 | 1 | 1 | 1 | 1 | 1 | DK16221300 | Ceramic 220pF ±10% |
| C404 | 1 | 1 | 1 | 1 | 1 | DK16221300 | Ceramic 220pF ±10% |
| C405 | 1 | 1 | 1 | 1 | 1 | DF16332300 | Film 3300pF ±10% |
| C406 | 1 | 1 | 1 | 1 | 1 | DF16332300 | Film 3300pF ±10% |
| C407 | 1 | 1 | 1 | 1 | 1 | DF16123300 | Film 0.012μF ±10% |
| C408 | 1 | 1 | 1 | 1 | 1 | DF16123300 | Film 0.012μF ±10% |
| C409 | 1 | 1 | 1 | 1 | 1 | EA33505030 | Elect 3.3μF 50V |
| C410 | 1 | 1 | 1 | 1 | 1 | EA33505030 | Elect 3.3μF 50V |
| C411 | 1 | 1 | 1 | 1 | 1 | EA10701630 | Elect 100μF 16V |
| C412 | 1 | 1 | 1 | 1 | 1 | EA10701630 | Elect 100μF 16V |
| C415 | 1 | 1 | 1 | 1 | 1 | DK17103300 | Ceramic 0.01μF ±20% |
| C416 | 1 | 1 | 1 | 1 | 1 | DK17103300 | Ceramic 0.01μF ±20% |
| C417 | 1 | 1 | 1 | 1 | 1 | DK18103300 | Ceramic 0.01μF |
| C418 | 1 | 1 | 1 | 1 | 1 | DK18103300 | Ceramic 0.01μF |
| C701 | 1 | 1 | 1 | 1 | 1 | EA33505030 | Elect 3.3μF 50V |
| C702 | 1 | 1 | 1 | 1 | 1 | EA33505030 | Elect 3.3μF 50V |
| C703 | 1 | 1 | 1 | 1 | 1 | DD15680300 | Ceramic 68pF ±5% |
| C704 | 1 | 1 | 1 | 1 | 1 | DD15680300 | Ceramic 68pF ±5% |
| C705 | 1 | 1 | 1 | 1 | 1 | EA10701030 | Elect 100μF 10V |
| C706 | 1 | 1 | 1 | 1 | 1 | EA10701030 | Elect 100μF 10V |
| C707 | 1 | 1 | 1 | 1 | 1 | EA22505030 | Elect 2.2μF 50V |
| C708 | 1 | 1 | 1 | 1 | 1 | EA22505030 | Elect 2.2μF 50V |
| C711 | 1 | 1 | 1 | 1 | 1 | DD15470300 | Ceramic 47pF ±5% |
| C712 | 1 | 1 | 1 | 1 | 1 | DD15470300 | Ceramic 47pF ±5% |
| C713 | 1 | 1 | 1 | 1 | 1 | EA47603530 | Elect 47μF 35V |
| C714 | 1 | 1 | 1 | 1 | 1 | EA47603530 | Elect 47μF 35V |
| C715 | 1 | 1 | 1 | 1 | 1 | DF17103300 | Film 0.01μF ±20% |
| C716 | 1 | 1 | 1 | 1 | 1 | DF17103300 | Film 0.01μF ±20% |
| C717 | 1 | 1 | 1 | 1 | 1 | DF17102300 | Film 0.001μF ±20% |
| C718 | 1 | 1 | 1 | 1 | 1 | DF17102300 | Film 0.001μF ±20% |
| C719 | 1 | 1 | 1 | 1 | 1 | DF17102300 | Film 0.001μF ±20% |
| C720 | 1 | 1 | 1 | 1 | 1 | DF17102300 | Film 0.001μF ±20% |
| C721 | 1 | 1 | 1 | 1 | 1 | DK16151510 | Ceramic 150pF ±10% |
| C722 | 1 | 1 | 1 | 1 | 1 | DK16151510 | Ceramic 150pF ±10% |
| C725 | 1 | 1 | 1 | 1 | 1 | DF16473540 | Film 0.047μF ±10% |
| C726 | 1 | 1 | 1 | 1 | 1 | DF16473540 | Film 0.047μF ±10% |
| C727 | 1 | 1 | 1 | 1 | 1 | DK16151300 | Ceramic 150pF ±10% |
| C728 | 1 | 1 | 1 | 1 | 1 | DK16151300 | Ceramic 150pF ±10% |
| C729 | 1 | 1 | 1 | 1 | 1 | DK16221300 | Ceramic 220pF ±10% |
| C730 | 1 | 1 | 1 | 1 | 1 | DK16221300 | Ceramic 220pF ±10% |
| △C803 | 1 | 1 | 1 | 1 | 1 | EB68804520 | Elect 6800μF 45V |
| △C804 | 1 | 1 | 1 | 1 | 1 | EB68804520 | Elect 6800μF 45V |
| C805 | 1 | 1 | 1 | 1 | 1 | EA10705030 | Elect 100μF 50V |
| △C807 | 1 | 1 | 1 | 1 | 1 | EA47605030 | Elect 47μF 50V |
| △C808 | 1 | 1 | 1 | 1 | 1 | EA47605030 | Elect 47μF 50V |
| C809 | 1 | 1 | 1 | 1 | 1 | DK18103320 | Ceramic 0.01μF |
| C811 | 1 | 1 | 1 | 1 | 1 | EA10602530 | Elect 10μF 25V |
| C812 | 1 | 1 | 1 | 1 | 1 | EA10602530 | Elect 10μF 25V |
| CN01 | 1 | 1 | 1 | 1 | 1 | EA33700630 | Elect 330μF 6.3V |
| CN02 | 1 | 1 | 1 | 1 | 1 | EA10505030 | Elect 1μF 50V |
| CN03 | 1 | 1 | 1 | 1 | 1 | EA33605030 | Elect 33μF 50V |

| REF. DESIG. | QTY | | | | | PART NO. | DESCRIPTION |
|---|-----|---|---|---|---|------------|--------------------|
| | U | C | N | A | P | | |
| CS01 | 1 | 1 | 1 | 1 | 1 | DK16271300 | Ceramic 270pF ±10% |
| CS02 | 1 | 1 | 1 | 1 | 1 | DK16271300 | Ceramic 270pF ±10% |
| CS03 | 1 | 1 | 1 | 1 | 1 | DF16683300 | Film 0.068μF ±10% |
| CS04 | 1 | 1 | 1 | 1 | 1 | DF16683300 | Film 0.068μF ±10% |
| P700-RESISTORS (All Resistors are ±5% and 1/4W) | | | | | | | |
| R401 | 1 | 1 | 1 | 1 | 1 | GD05154140 | 150kΩ |
| R402 | 1 | 1 | 1 | 1 | 1 | GD05154140 | 150kΩ |
| R403 | 1 | 1 | 1 | 1 | 1 | GD05683140 | 68kΩ |
| R404 | 1 | 1 | 1 | 1 | 1 | GD05683140 | 68kΩ |
| R405 | 1 | 1 | 1 | 1 | 1 | GD05222140 | 2.2kΩ |
| R406 | 1 | 1 | 1 | 1 | 1 | GD05222140 | 2.2kΩ |
| R407 | 1 | 1 | 1 | 1 | 1 | GD05471140 | 470Ω |
| R408 | 1 | 1 | 1 | 1 | 1 | GD05471140 | 470Ω |
| R409 | 1 | 1 | 1 | 1 | 1 | GD05223140 | 22kΩ |
| R410 | 1 | 1 | 1 | 1 | 1 | GD05274140 | 270kΩ |
| R411 | 1 | 1 | 1 | 1 | 1 | GD05274140 | 270kΩ |
| R412 | 1 | 1 | 1 | 1 | 1 | GD05274140 | 270kΩ |
| R413 | 1 | 1 | 1 | 1 | 1 | GD05103140 | 10kΩ |
| R414 | 1 | 1 | 1 | 1 | 1 | GD05103140 | 10kΩ |
| △R415 | 1 | 1 | 1 | 1 | 1 | GG05101140 | 100Ω |
| △R415 | 1 | 1 | 1 | 1 | 1 | GD05561140 | 560Ω |
| △R416 | 1 | 1 | 1 | 1 | 1 | GG05101140 | 100Ω |
| △R416 | 1 | 1 | 1 | 1 | 1 | GD05561140 | 560Ω |
| R417 | 1 | 1 | 1 | 1 | 1 | GD05271140 | 270Ω |
| R418 | 1 | 1 | 1 | 1 | 1 | GD05271140 | 270Ω |
| R701 | 1 | 1 | 1 | 1 | 1 | GD05471140 | 470Ω |
| R702 | 1 | 1 | 1 | 1 | 1 | GD05471140 | 470Ω |
| R703 | 1 | 1 | 1 | 1 | 1 | GD05333140 | 33kΩ |
| R704 | 1 | 1 | 1 | 1 | 1 | GD05333140 | 33kΩ |
| R705 | 1 | 1 | 1 | 1 | 1 | GD05103140 | 10kΩ |
| R706 | 1 | 1 | 1 | 1 | 1 | GD05103140 | 10kΩ |
| R707 | 1 | 1 | 1 | 1 | 1 | GD05333140 | 33kΩ |
| R708 | 1 | 1 | 1 | 1 | 1 | GD05333140 | 33kΩ |
| R709 | 1 | 1 | 1 | 1 | 1 | GD05272140 | 2.7kΩ |
| R710 | 1 | 1 | 1 | 1 | 1 | GD05272140 | 2.7kΩ |
| R711 | 1 | 1 | 1 | 1 | 1 | GD05104140 | 100kΩ |
| R712 | 1 | 1 | 1 | 1 | 1 | GD05104140 | 100kΩ |
| R717 | 1 | 1 | 1 | 1 | 1 | GD05393140 | 39kΩ |
| R718 | 1 | 1 | 1 | 1 | 1 | GG05393140 | 39kΩ |
| R719 | 1 | 1 | 1 | 1 | 1 | GG05332140 | 3.3kΩ |
| R720 | 1 | 1 | 1 | 1 | 1 | GG05332140 | 3.3kΩ |
| R721 | 1 | 1 | 1 | 1 | 1 | GD05332140 | 3.3kΩ |
| R723 | 1 | 1 | 1 | 1 | 1 | GD05222140 | 2.2kΩ |
| R724 | 1 | 1 | 1 | 1 | 1 | GD05222140 | 2.2kΩ |
| R725 | 1 | 1 | 1 | 1 | 1 | RA02020180 | Trimming 2kΩ |
| R726 | 1 | 1 | 1 | 1 | 1 | RA02020180 | Trimming 2kΩ |
| R727 | 1 | 1 | 1 | 1 | 1 | GD05122140 | 1.2kΩ |
| R728 | 1 | 1 | 1 | 1 | 1 | GD05122140 | 1.2kΩ |
| R729 | 1 | 1 | 1 | 1 | 1 | GG05152140 | 1.5kΩ |
| R730 | 1 | 1 | 1 | 1 | 1 | GG05152140 | 1.5kΩ |
| R733 | 1 | 1 | 1 | 1 | 1 | GG05151140 | 150Ω |
| R734 | 1 | 1 | 1 | 1 | 1 | GG05151140 | 150Ω |
| R735 | 1 | 1 | 1 | 1 | 1 | GD05333140 | 33kΩ |
| R736 | 1 | 1 | 1 | 1 | 1 | GD05333140 | 33kΩ |
| R737 | 1 | 1 | 1 | 1 | 1 | GD05822140 | 8.2kΩ |
| R738 | 1 | 1 | 1 | 1 | 1 | GD05822140 | 8.2kΩ |

| REF. DESIG. | QTY | | | | | PART NO. | DESCRIPTION |
|-------------|-----|---|---|---|---|------------|-------------|
| | U | C | N | A | P | | |
| R739 | 1 | 1 | 1 | 1 | 1 | GD05822140 | 8.2kΩ |
| R740 | 1 | 1 | 1 | 1 | 1 | GD05822140 | 8.2kΩ |
| R741 | 1 | 1 | 1 | 1 | 1 | GG05471140 | 470Ω |
| R742 | 1 | 1 | 1 | 1 | 1 | GG05471140 | 470Ω |
| R743 | 1 | 1 | 1 | 1 | 1 | GG05471140 | 470Ω |
| R744 | 1 | 1 | 1 | 1 | 1 | GG05471140 | 470Ω |
| R745 | 1 | 1 | 1 | 1 | 1 | GG05221120 | 220Ω 1/4W |
| R746 | 1 | 1 | 1 | 1 | 1 | GG05221120 | 220Ω 1/4W |
| R747 | 1 | 1 | 1 | 1 | 1 | GB05272020 | 2.7kΩ 2W |
| R748 | 1 | 1 | 1 | 1 | 1 | GB05272020 | 2.7kΩ 2W |
| R749 | 1 | 1 | 1 | 1 | 1 | GB05272020 | 2.7kΩ 2W |
| R750 | 1 | 1 | 1 | 1 | 1 | GB05272020 | 2.7kΩ 2W |
| R751 | 1 | 1 | 1 | 1 | 1 | GA05100020 | 10Ω 2W |
| R752 | 1 | 1 | 1 | 1 | 1 | GA05100020 | 10Ω 2W |
| R753 | 1 | 1 | 1 | 1 | 1 | GG05022120 | 2.2Ω 1/4W |
| R754 | 1 | 1 | 1 | 1 | 1 | GG05022120 | 2.2Ω 1/4W |
| R755 | 1 | 1 | 1 | 1 | 1 | GD05681140 | 680Ω |
| R756 | 1 | 1 | 1 | 1 | 1 | GD05681140 | 680Ω |
| R757 | 1 | 1 | 1 | 1 | 1 | GD05273140 | 27kΩ |
| R758 | 1 | 1 | 1 | 1 | 1 | GD05273140 | 27kΩ |
| R761 | 1 | 1 | 1 | 1 | 1 | GG05100140 | 10Ω |
| R762 | 1 | 1 | 1 | 1 | 1 | GG05100140 | 10Ω |
| △R802 | 1 | 1 | 1 | 1 | 1 | GA05222020 | 2.2kΩ 2W |
| R803 | 1 | 1 | 1 | 1 | 1 | GG05182120 | 1.8kΩ 1/4W |
| △R805 | 1 | 1 | 1 | 1 | 1 | GG05271120 | 270Ω 1/4W |
| △R805 | 1 | 1 | 1 | 1 | 1 | RF05121120 | 120Ω 1/4W |
| △R806 | 1 | 1 | 1 | 1 | 1 | GG05271120 | 270Ω 1/4W |
| △R806 | 1 | 1 | 1 | 1 | 1 | RF05121120 | 120Ω 1/4W |
| R807 | 1 | 1 | 1 | 1 | 1 | GG05152140 | 1.5kΩ |
| R807 | 1 | 1 | 1 | 1 | 1 | GD05332140 | 3.3kΩ |
| R808 | 1 | 1 | 1 | 1 | 1 | GG05152140 | 1.5kΩ |
| R808 | 1 | 1 | 1 | 1 | 1 | GD05332140 | 3.3kΩ |
| △R809 | 1 | 1 | 1 | 1 | 1 | GA05820020 | 82Ω 2W |
| △R810 | 1 | 1 | 1 | 1 | 1 | GA05390010 | 39Ω 1W |
| RN01 | 1 | 1 | 1 | | | | |

• (U) for U.S.A. • (A) for Australia
 • (C) for Canada • (P) for PX
 • (N) for Europe

• (U) for U.S.A. • (A) for Australia
 • (C) for Canada • (P) for PX
 • (N) for Europe

| REF. DESIG. | Q'TY | | | | | PART NO. | DESCRIPTION |
|-------------|------|---|---|---|---|------------|----------------------------|
| | U | C | N | A | P | | |
| SS01 | 1 | 1 | 1 | 1 | 1 | SP02030120 | Push Switch |
| SS02 | 1 | 1 | 1 | 1 | 1 | SS04040040 | Slide Switch |
| S012 | 1 | 1 | 1 | 1 | 1 | SR00030050 | Rotary Switch |
| J801 | 1 | 1 | 1 | 1 | 1 | YJ08000170 | Jack |
| J801 | 1 | 1 | 1 | 1 | 1 | YJ08000270 | Jack |
| J802 | 1 | 1 | 1 | 1 | 1 | YJ08000170 | Jack |
| J802 | 1 | 1 | 1 | 1 | 1 | YJ08000270 | Jack |
| J803 | 1 | 1 | 1 | 1 | 1 | YJ08000170 | Jack |
| J803 | 1 | 1 | 1 | 1 | 1 | YJ08000270 | Jack |
| J804 | 1 | 1 | 1 | 1 | 1 | YJ08000170 | Jack |
| J804 | 1 | 1 | 1 | 1 | 1 | YJ08000270 | Jack |
| JV01 | 1 | 1 | 1 | 1 | 1 | YT02060130 | Terminal, RCA Jack 6P |
| JV02 | 1 | 1 | 1 | 1 | 1 | YT02040260 | Terminal, RCA Jack 4P |
| JV03 | 1 | 1 | 1 | 1 | 1 | YT03040190 | Terminal, Speaker |
| JV04 | 1 | 1 | 1 | 1 | 1 | YT03040190 | Terminal, Speaker |
| P701 | 1 | 1 | 1 | 1 | 1 | YK208H1520 | P.W. Board, Power Tr. |
| | 1 | 1 | 1 | 1 | 1 | ZZ208H1520 | P.W. Board Assembly |
| Q729 | 1 | 1 | 1 | 1 | 1 | HT325782B0 | Transistor 2SC2578(O or Y) |
| PO00 | 1 | 1 | 1 | 1 | 1 | YK208H1530 | P.W. Board, AC Switch |
| | 1 | 1 | 1 | 1 | 1 | ZZ208H1530 | P.W. Board Assembly |
| G001 | 1 | 1 | 1 | 1 | 1 | DK18103530 | Ceramic 0.01μF |
| G001 | 1 | 1 | 1 | 1 | 1 | DK18103840 | Ceramic 0.01μF |
| G001 | 1 | 1 | 1 | 1 | 1 | DK18103850 | Ceramic 0.01μF |
| S001 | 1 | 1 | 1 | 1 | 1 | SP01010420 | Push Switch, AC Power |
| S001 | 1 | 1 | 1 | 1 | 1 | SP01010390 | Push Switch, AC Power |
| S001 | 1 | 1 | 1 | 1 | 1 | SP01010430 | Push Switch, AC Power |
| PT00 | 1 | 1 | 1 | 1 | 1 | YK208H1540 | P.W. Board, Sp. Switch |
| | 1 | 1 | 1 | 1 | 1 | ZZ208H1540 | P.W. Board Assembly |
| RT01 | 1 | 1 | 1 | 1 | 1 | GA05331010 | 330Ω |
| RT02 | 1 | 1 | 1 | 1 | 1 | GA05331010 | 330Ω |
| ST01 | 1 | 1 | 1 | 1 | 1 | SP02020520 | Push Switch, Speaker |
| PW00 | 1 | 1 | 1 | 1 | 1 | YK208H1550 | P.W. Board, Head Phone |
| | 1 | 1 | 1 | 1 | 1 | ZZ208H3310 | P.W. Board Assembly |
| JW01 | 1 | 1 | 1 | 1 | 1 | YJ01001400 | Jack, Head Phone |

| REF. DESIG. | Q'TY | | | | | PART NO. | DESCRIPTION |
|-------------|------|---|---|---|---|------------|--|
| | U | C | N | A | P | | |
| PE01 | 1 | 1 | 1 | 1 | 1 | WN208H3310 | PE01-VOLUME CIRCUIT BOARD |
| | 1 | 1 | 1 | 1 | 1 | ZZ208H3310 | P.W. Board, Volume P.W. Board Assembly |
| CE01 | 1 | 1 | 1 | 1 | 1 | EA33505030 | PE01-CAPACITORS |
| CE02 | 1 | 1 | 1 | 1 | 1 | EA33505030 | Elect 3.3μF 50V |
| CE03 | 1 | 1 | 1 | 1 | 1 | EA33505030 | Elect 3.3μF 50V |
| CE04 | 1 | 1 | 1 | 1 | 1 | EA33505030 | Elect 3.3μF 50V |
| CE05 | 1 | 1 | 1 | 1 | 1 | DK16101300 | Ceramic 100pF ±10% |
| CE06 | 1 | 1 | 1 | 1 | 1 | DK16101300 | Ceramic 100pF ±10% |
| CE07 | 1 | 1 | 1 | 1 | 1 | DK16101300 | Ceramic 100pF ±10% |
| CE08 | 1 | 1 | 1 | 1 | 1 | DK16101300 | Ceramic 100pF ±10% |
| CE17 | 1 | 1 | 1 | 1 | 1 | DF16822300 | Film 8200pF ±10% |
| CE18 | 1 | 1 | 1 | 1 | 1 | DF16822300 | Film 8200pF ±10% |
| CE19 | 1 | 1 | 1 | 1 | 1 | DD15560370 | Ceramic 56pF ±5% |
| CE20 | 1 | 1 | 1 | 1 | 1 | DD15560370 | Ceramic 56pF ±5% |
| CE21 | 1 | 1 | 1 | 1 | 1 | DK18103310 | Ceramic 0.01μF |
| CE22 | 1 | 1 | 1 | 1 | 1 | DK18103310 | Ceramic 0.01μF |
| CE23 | 1 | 1 | 1 | 1 | 1 | DK18103310 | Ceramic 0.01μF |
| RE01 | 1 | 1 | 1 | 1 | 1 | GD05683140 | PE01-RESISTORS |
| RE02 | 1 | 1 | 1 | 1 | 1 | GD05683140 | (All Resistors are ±5% and ¼W) |
| RE03 | 1 | 1 | 1 | 1 | 1 | GD05332140 | 68kΩ |
| RE04 | 1 | 1 | 1 | 1 | 1 | GD05332140 | 68kΩ |
| RE05 | 1 | 1 | 1 | 1 | 1 | GD05471140 | 3.3kΩ |
| RE06 | 1 | 1 | 1 | 1 | 1 | GD05471140 | 3.3kΩ |
| RE07 | 1 | 1 | 1 | 1 | 1 | GD05682140 | 470Ω |
| RE08 | 1 | 1 | 1 | 1 | 1 | GD05682140 | 470Ω |
| RE09 | 1 | 1 | 1 | 1 | 1 | GD05682140 | 6.8kΩ |
| RE10 | 1 | 1 | 1 | 1 | 1 | GD05682140 | 6.8kΩ |
| RE21 | 1 | 1 | 1 | 1 | 1 | GD05103140 | 10kΩ |
| RE22 | 1 | 1 | 1 | 1 | 1 | GD05103140 | 10kΩ |
| RE23 | 1 | 1 | 1 | 1 | 1 | GD05470140 | 47Ω |
| RE24 | 1 | 1 | 1 | 1 | 1 | GD05470140 | 47Ω |
| QE01 | 1 | 1 | 1 | 1 | 1 | HC10003090 | PE01-SEMICONDUCTORS |
| QE02 | 1 | 1 | 1 | 1 | 1 | HC10003090 | IC 4558D |
| PE02 | 1 | 1 | 1 | 1 | 1 | WN208H3320 | PE02-CONNECTION CIRCUIT BOARD |
| | | | | | | | P.W. Board, Connection |
| PE03 | 1 | 1 | 1 | 1 | 1 | WN208H3330 | PE03-TONE AMP CIRCUIT BOARD |
| | | | | | | | P.W. Board, Tone Amp P.W. Board Assembly |
| CE09 | 1 | 1 | 1 | 1 | 1 | DF16222300 | PE03-CAPACITORS |
| CE10 | 1 | 1 | 1 | 1 | 1 | DF16222300 | Film 2200pF ±10% |
| CE11 | 1 | 1 | 1 | 1 | 1 | DF16562300 | Film 5600pF ±10% |
| CE12 | 1 | 1 | 1 | 1 | 1 | DF16562300 | Film 5600pF ±10% |
| CE13 | 1 | 1 | 1 | 1 | 1 | DF16183300 | Film 0.018μF ±10% |
| CE14 | 1 | 1 | 1 | 1 | 1 | DF16183300 | Film 0.018μF ±10% |
| CE15 | 1 | 1 | 1 | 1 | 1 | DF16183300 | Film 0.018μF ±10% |
| CE16 | 1 | 1 | 1 | 1 | 1 | DF16183300 | Film 0.018μF ±10% |

| REF. DESIG. | Q'TY | | | | | PART NO. | DESCRIPTION |
|-------------|------|---|---|---|---|------------|---|
| | U | C | N | A | P | | |
| RE11 | 1 | 1 | 1 | 1 | 1 | GD05562140 | PE03-RESISTORS |
| RE12 | 1 | 1 | 1 | 1 | 1 | GD05562140 | (All Resistors are ±5% and ¼W) |
| RE13 | 1 | 1 | 1 | 1 | 1 | GD05562140 | 5.6kΩ |
| RE14 | 1 | 1 | 1 | 1 | 1 | GD05562140 | 5.6kΩ |
| RE15 | 1 | 1 | 1 | 1 | 1 | GD05223140 | 22kΩ |
| RE16 | 1 | 1 | 1 | 1 | 1 | GD05223140 | 22kΩ |
| RE17 | 1 | 1 | 1 | 1 | 1 | GD05223140 | 22kΩ |
| RE18 | 1 | 1 | 1 | 1 | 1 | GD05223140 | 22kΩ |
| RE19 | 1 | 1 | 1 | 1 | 1 | GD05223140 | 22kΩ |
| RE20 | 1 | 1 | 1 | 1 | 1 | GD05223140 | 22kΩ |
| RE25 | 1 | 1 | 1 | 1 | 1 | RS01040150 | Variable 100kΩ (B) |
| RE26 | 1 | 1 | 1 | 1 | 1 | RS01040150 | Variable 100kΩ (B) |
| RE27 | 1 | 1 | 1 | 1 | 1 | RS01040150 | Variable 100kΩ (B) |
| PX01 | 1 | 1 | 1 | 1 | 1 | WN207H3210 | PX01-LED LEVEL METER DRIVE CIRCUIT BOARD |
| | 1 | 1 | 1 | 1 | 1 | ZZ207H3210 | P.W. Board, LED Level Meter Drive P.W. Board Assembly |
| CX01 | 1 | 1 | 1 | 1 | 1 | EA33505030 | PX01-CAPACITORS |
| CX02 | 1 | 1 | 1 | 1 | 1 | EA33505030 | Elect 3.3μF 50V |
| CX03 | 1 | 1 | 1 | 1 | 1 | EA10505030 | Elect 1μF 50V |
| CX04 | 1 | 1 | 1 | 1 | 1 | EA10505030 | Elect 1μF 50V |
| CX05 | 1 | 1 | 1 | 1 | 1 | DF16103300 | Film 0.01μF ±10% |
| CX06 | 1 | 1 | 1 | 1 | 1 | DF16103300 | Film 0.01μF ±10% |
| RX01 | 1 | 1 | 1 | 1 | 1 | GD05103140 | PX01-RESISTORS |
| RX02 | 1 | 1 | 1 | 1 | 1 | GD05103140 | (All Resistors are ±5% and ¼W) |
| RX03 | 1 | 1 | 1 | 1 | 1 | GD05104140 | 10kΩ |
| RX04 | 1 | 1 | 1 | 1 | 1 | GD05104140 | 10kΩ |
| RX07 | 1 | 1 | 1 | 1 | 1 | RA02030060 | Trimming 20kΩ |
| RX08 | 1 | 1 | 1 | 1 | 1 | RA02030060 | Trimming 20kΩ |
| RX25 | 1 | 1 | 1 | 1 | 1 | GD05563140 | 56kΩ |
| RX26 | 1 | 1 | 1 | 1 | 1 | GD05563140 | 56kΩ |
| RX27 | 1 | 1 | 1 | 1 | 1 | GD05333140 | 33kΩ |
| RX28 | 1 | 1 | 1 | 1 | 1 | GD05333140 | 33kΩ |
| QX01 | 1 | 1 | 1 | 1 | 1 | HD30076090 | PX01-SEMICONDUCTORS |
| QX02 | 1 | 1 | 1 | 1 | 1 | HD30076090 | Zener WZ038 |
| QX03 | 1 | 1 | 1 | 1 | 1 | HD20001210 | Zener WZ038 |
| QX04 | 1 | 1 | 1 | 1 | 1 | HD20001210 | Diode 1S2473 |
| QX05 | 1 | 1 | 1 | 1 | 1 | HC10008370 | Diode 1S2473 |
| QX06 | 1 | 1 | 1 | 1 | 1 | HC10008370 | IC TL489C |
| QX07 | 1 | 1 | 1 | 1 | 1 | HC10019020 | IC TL489C |
| QX21 | 1 | 1 | 1 | 1 | 1 | HD20001210 | IC AN6552 |
| QX22 | 1 | 1 | 1 | 1 | 1 | HD20001210 | Diode 1S2473 |

| REF. DESIG. | Q'TY | | | | | PART NO. | DESCRIPTION |
|-------------|------|---|---|---|---|------------|---|
| | U | C | N | A | P | | |
| JX01 | 1 | 1 | 1 | 1 | 1 | YJ07000750 | PX01-MISCELLANEOUS |
| JX02 | 1 | 1 | 1 | 1 | 1 | YJ07000760 | Jack, 4P |
| PX02 | 1 | 1 | 1 | 1 | 1 | WN207H3220 | PX02-LED LEVEL METER CIRCUIT BOARD |
| | 1 | 1 | 1 | 1 | 1 | ZZ207H3220 | P.W. Board, LED Level Meter P.W. Board Assembly |
| RX10 | 1 | 1 | 1 | 1 | 1 | GD05181140 | PX02-CAPACITORS |
| RX11 | 1 | 1 | 1 | 1 | 1 | GD05561140 | (All Resistors are ±5% and ¼W) |
| RX12 | 1 | 1 | 1 | 1 | 1 | GD05561140 | 180Ω |
| RX13 | 1 | 1 | 1 | 1 | 1 | GD05561140 | 560Ω |
| RX14 | 1 | 1 | 1 | 1 | 1 | GD05561140 | 560Ω |
| RX15 | 1 | 1 | 1 | 1 | 1 | GD05561140 | 560Ω |
| RX16 | 1 | 1 | 1 | 1 | 1 | GD05561140 | 560Ω |
| RX17 | 1 | 1 | 1 | 1 | 1 | GD05561140 | 560Ω |
| RX18 | 1 | 1 | 1 | 1 | 1 | GD05561140 | 560Ω |
| RX19 | 1 | 1 | 1 | 1 | 1 | GD05561140 | 560Ω |
| RX20 | 1 | 1 | 1 | 1 | 1 | GD05561140 | 560Ω |
| QX08 | 1 | 1 | 1 | 1 | 1 | HI10006320 | PX02-SEMICONDUCTORS |
| QX09 | 1 | 1 | 1 | 1 | 1 | HI10007320 | L.E.D. GL-9NG9 |
| QX10 | 1 | 1 | 1 | 1 | 1 | HI10007320 | L.E.D. GL-9PR9 |
| QX11 | 1 | 1 | 1 | 1 | 1 | HI10007320 | L.E.D. GL-9PR9 |
| QX12 | 1 | 1 | 1 | 1 | 1 | HI10007320 | L.E.D. GL-9PR9 |
| QX13 | 1 | 1 | 1 | 1 | 1 | HI10007320 | L.E.D. GL-9PR9 |
| QX14 | 1 | 1 | 1 | 1 | 1 | HI10007320 | L.E.D. GL-9PR9 |
| QX15 | 1 | 1 | 1 | 1 | 1 | HI10007320 | L.E.D. GL-9PR9 |
| QX16 | 1 | 1 | 1 | 1 | 1 | HI10007320 | L.E.D. GL-9PR9 |
| QX17 | 1 | 1 | 1 | 1 | 1 | HI10007320 | L.E.D. GL-9PR9 |
| QX18 | 1 | 1 | 1 | 1 | 1 | HI10007320 | L.E.D. GL-9PR9 |

(W01-99) Assembly and Wiring
 (T01-99) Adjustment
 (X01-00) Correction

14. TECHNICAL SPECIFICATIONS

AUDIO SECTION

| | |
|--|----------------|
| POWER OUTPUT, DIN, 4 OHM, PER CHANNEL | 51 W |
| POWER OUTPUT, RMS 1kHz 4 OHM, PER CHANNEL | 48 W |
| POWER OUTPUT, DIN, 8 OHM, PER CHANNEL | 40 W |
| POWER OUTPUT, RMS 1kHz 8 OHM, PER CHANNEL | 38 W |
| TOTAL HARMONIC DISTORTION AT RATED POWER OUTPUT | 0.05% |
| I.M. DISTORTION AT RATED POWER OUTPUT (250 Hz AND 8 kHz MIXED, AMPLITUDE RATIO 4:1) | 0.04% |
| POWER BANDWIDTH | 10 Hz ~ 30 kHz |
| DAMPING FACTOR 8 OHM | 60 |

Frequency Response

| | |
|--------------|----------------|
| Phono (RIAA) | ±1.0 dB |
| Aux (±1 dB) | 10 Hz ~ 60 kHz |

Signal-to-Noise Ratio (IHF-A Network)

| | |
|------------|-------|
| Phono (MM) | 77 dB |
| Aux | 98 dB |

Input Terminals

| | |
|---|----------|
| Phono: Input Impedance | 47k ohms |
| Input Capacitance | 250 pF |
| Overload Margin | 33 dB |
| Input Sensitivity | 2.8 mV |
| Aux: Input Impedance | 25k ohms |
| Input Sensitivity | 150 mV |
| phono Equivalent Input Noise | 0.5 µV |
| Phono Dynamic Range (Ratio of input overload to equivalent input noise) | 100 dB |
| Channel Balance (0 to -40 dB/40 Hz ~ 16 kHz) | |
| Phono | 2.0 dB |
| Aux | 2.0 dB |
| Output Voltage, 1 kHz | |
| Tape Out | 415 mV |
| Output Impedance, 1 kHz | |
| Tape Out | 220 ohms |

GENERAL

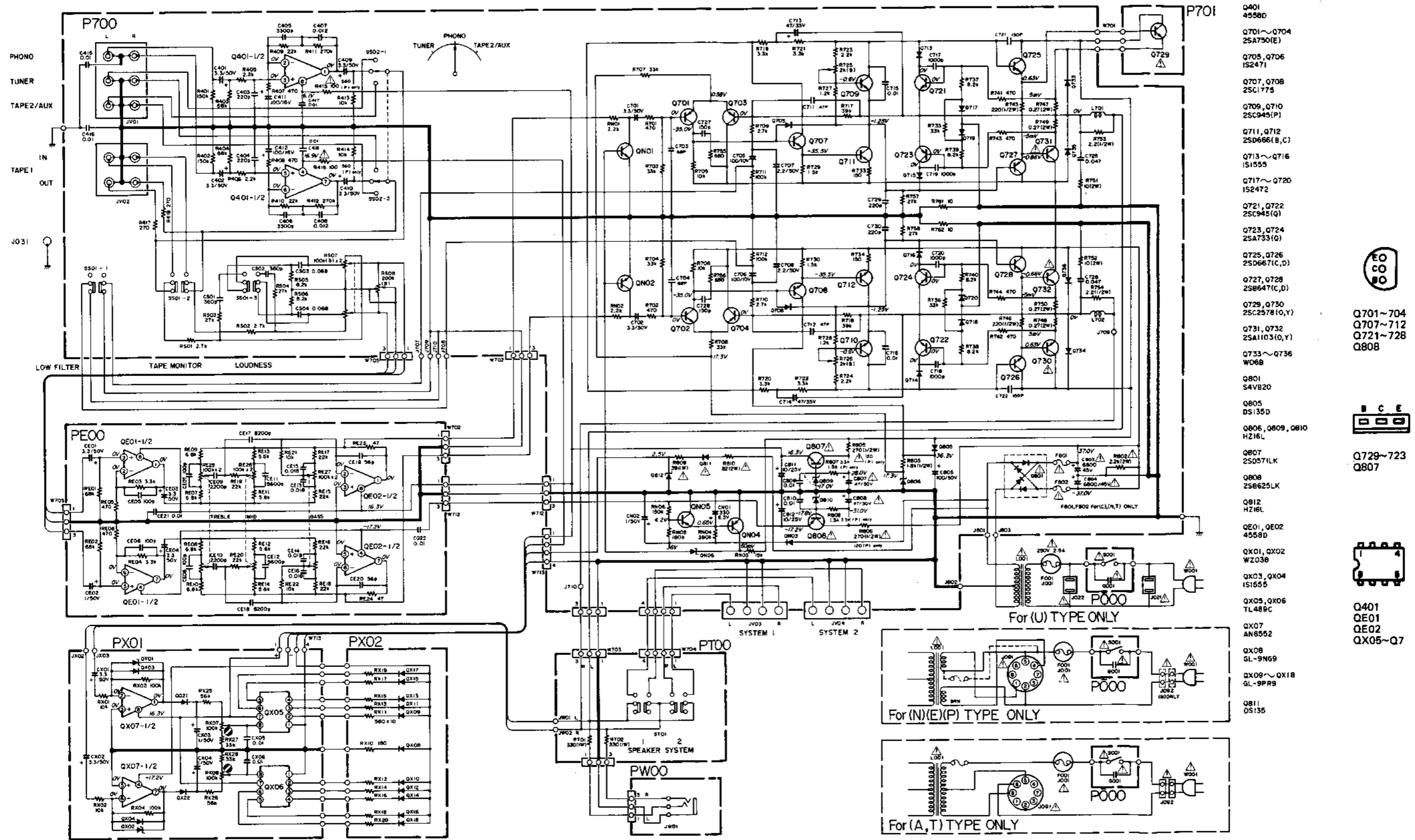
| | |
|---|---|
| Power Requirements | 220 V AC, 50 Hz (N version is featuring an external voltage selector for use on 110V. Other versions can be converted by a qualified technician to operate on 240V.) |
| Power Consumption at Rated Output, both Channels Driven | 145 W |
| Idling Power | 18 W |
| Semiconductor Complement | |
| Transistors | 29 |
| Diodes | 22 |
| Integrated Circuits | 6 |
| Dimensions | |
| Panel Width | 416 mm |
| Panel Height | 73 mm |
| Depth | 302 mm |
| Weight | |
| Unit Alone | 5.2 kg |

Specifications and appearance are subject to change for modification without notice.

Note

15. SCHEMATIC DIAGRAM

MODEL PM350



Components and wiring are subject to change for modification without notice.

NOTE ON SAFETY:
The parts marked with Δ are important parts on the safety. Please use the parts having the designated parts numbers without fail.