

SERVICE
MANUAL

PM325



marantz

model PM325

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 equipment are generally available to our National Marantz Subsidiary or Agent.

ORDERING PARTS:

Parts can be ordered either by mail or by telex. In both cases, correct part number has to be specified. If you order by mail, fulfil MARANTZ order forms.

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

- 1. Complete address
- 2. Complete part numbers and quantities required
- 3. Description of parts
- 4. Model number for which part is required
- 5. Way of shipment
- 6. Signature: any order form or telex must be signed otherwise such part order will be considered as null and void.

PARTS ORDERING

Parts may be ordered at the following addresses:

AUSTRIA HORNYPHON Vertriebsgesellschaft GmbH Wienerbergstrasse 1 A 1101 Wien Austria Telex: 132.332	EIRE MARANTZ IRELAND Ltd. Newstead Glionkeagh Dublin 4 Telex: 25200	NORWAY MARANTZ DIVISION OF PHILIPS A/S Sandstuveien 40 Oslo 6 Norway Telex: 72640	KUWAIT AL ALAMIAH ELECTRONICS Ussama Building Fahd al Saleem Street P.O.Box 23781 Safat-Kuwait Telex: 22694	SWITZERLAND DYNAVOX ELECTRONICS Route de Villars 105 1701 Fribourg Switzerland Telex: 942377
AUSTRALIA MARANTZ AUSTRALIA PTY., Ltd. 19 Chard Road Brookvale, NSW 2100 Australia Telex: 24121	FINLAND MARANTZ DIVISION OF OY PHILIPS Ab Kaivokatu 8 00100 Helsinki Finland Telex: 124811	GREAT BRITAIN MARANTZ AUDIO U.K. Ltd Unit 15/16 Saxon Way Industrial Estate Moor Lane Harmondsworth UB7 0LW Great Britain Telex: 935196	SAUDI ARABIA AL ALAMIAH ELECTRONICS P.O.Box 5954 University Street Riyadh 11432 Saudi Arabia Telex: 201530	TURKEY DOGRUOL Ltd. I.M.C. 6 Blok N°6310 Unkapani Istanbul Turkey Telex: 22085
BELGIUM SVD DIVISION MARANTZ Industrialaan 1 1720 Groot-Bijgaarden Belgium Telex: 24466	FRANCE MARANTZ FRANCE 4 Rue Bernard Palissy 92600 Asnières France Telex: 611651	GREECE ADAMCO S.A. P.O.Box 21025 Hippocrates Street 188 Athens 11410 Greece Telex: 216.795	SOUTH AFRICA MARANTZ DIVISION OF PHILIPS S.A. Rainer House Ove Street, 10 Doornfontein Johannesburg Telex: 483.456	MALTA CACHIA & GALEA Republic Street, 68D Valetta Telex: 1682
CHILE MARANTZ DIVISION OF PHILIPS S.A. AV. Santa Maria, 0760 Casilla 2687 Santiago Telex: 240.239	GERMANY MARANTZ GERMANY GmbH Max-Planck-Strasse 22 6072 Dreieich 1 Germany Telex: 529821	ITALY MARANTZ ITALIANA S.p.A. Via Monte Napoleone 10 20121 Milano Italia	SPAIN PHONO S.A. Ignacio Iglesias 10 Badalona (Barcelona) Spain Telex: 59355	U.S.A. MARANTZ COMPANY, Inc. National Service Department P.O.Box 577 Chatsworth, CA 91311 U.S.A.
DENMARK MARANTZ DIVISION OF PHILIPS SERVICE A/S Prags Boulevard 80 Postbox 1919 DK-2300 København S Denmark Telex: 31201	THE NETHERLANDS MARANTZ De Limiet 3 4131 NR Vianen The Netherlands Telex: 47679	JAPAN MARANTZ JAPAN, Inc. 35-1, 7-chome, Sagamiono Sagamihara-shi, Kanagawa Japan	SWEDEN MARANTZ DIVISION OF PHILIPS Försäljning AB Tegeluddsvägen 1 S-115 84 Stockholm Sweden Telex: 14060	

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.

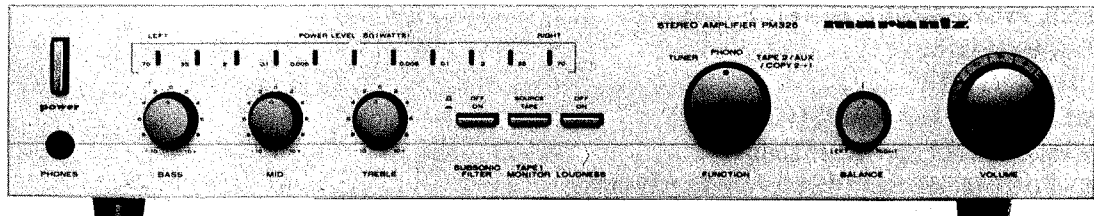
In case of difficulties, do not hesitate to contact the Technical Department at abovementioned address.

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MODEL PM 325 STEREOPHONIC AMPLIFIER



INTRODUCTION

This service manual was prepared for use by Authorized Warranty Stations and contains service information for the Marantz Model PM325 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.*

1. SHOCK, FIRE HAZARD SERVICE TEST

CAUTION: After servicing this appliance and prior to returning to customer, either primary AC cord connector pins (with unit NOT connected to AC mains and its Power switch ON), and the face or front Panel of product and controls and chassis bottom.

Any resistance measurement less than 1 Megohms should cause unit to be repaired or corrected before AC power is applied and verified before return to user/customer.

Ref. UL Standard NO, 1270. Para.66. 3. D (Mandatory Test after servicing Electrical Appliances, effective 7-1-83).

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. 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.

5. 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).

6. TEST EQUIPMENT REQUIRED FOR SERVICING

Table 1 lists the test equipment required for servicing the Model PM325 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.

7. 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:

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

2. Make sure that connections between the resistive load and the system terminals of the Model PM325 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 PM325.

Table 1. Test Equipment Required for Servicing

Item	Manufacturer and Model No.	Use
Distortion Analyzer		Distortion Measurements
Audio Oscillator	Sound Technology Model 1700B	Sinewave and squarewave signal source
AC Voltmeter		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, ±0.5% 100 W)	Commercial Grade	Provides 8-ohm load for amplifier output termination
Output Load (4 ohms, ±0.5% 100 W)	Commercial Grade	Provides 4-ohm load for amplifier output termination
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

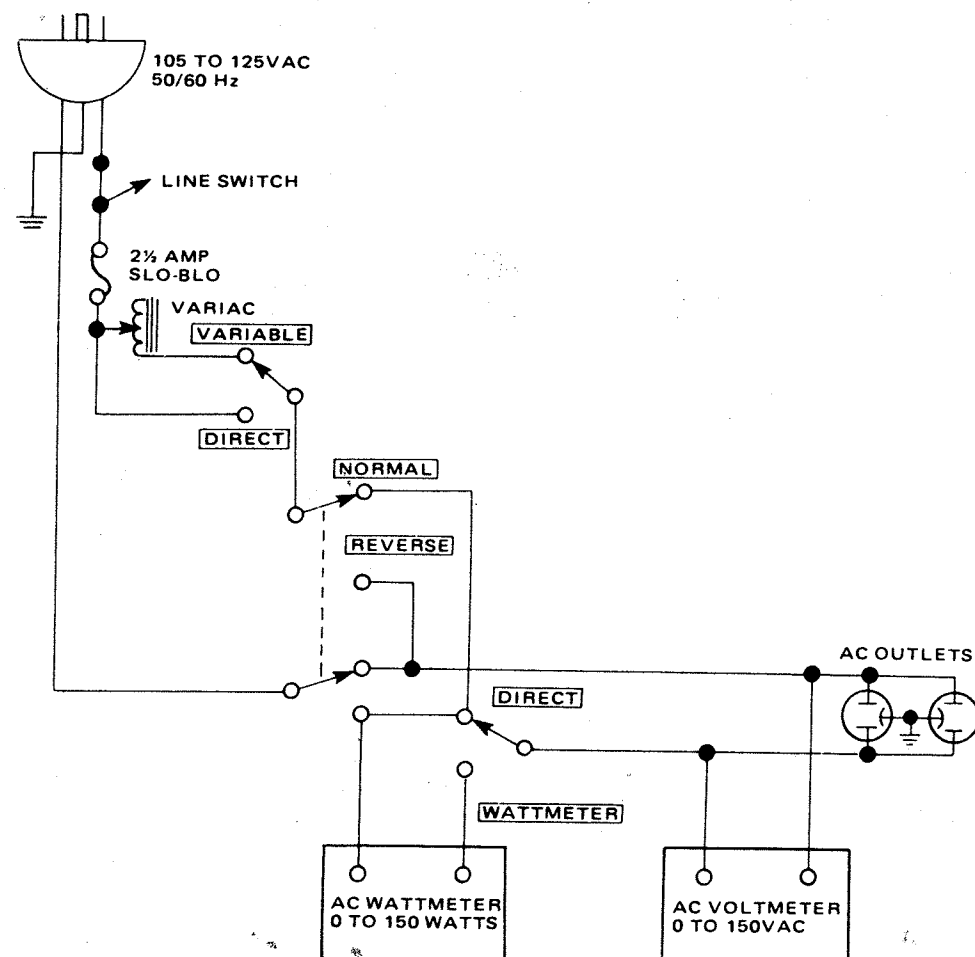


Figure 1. AC Power Control Box Simplified Schematic

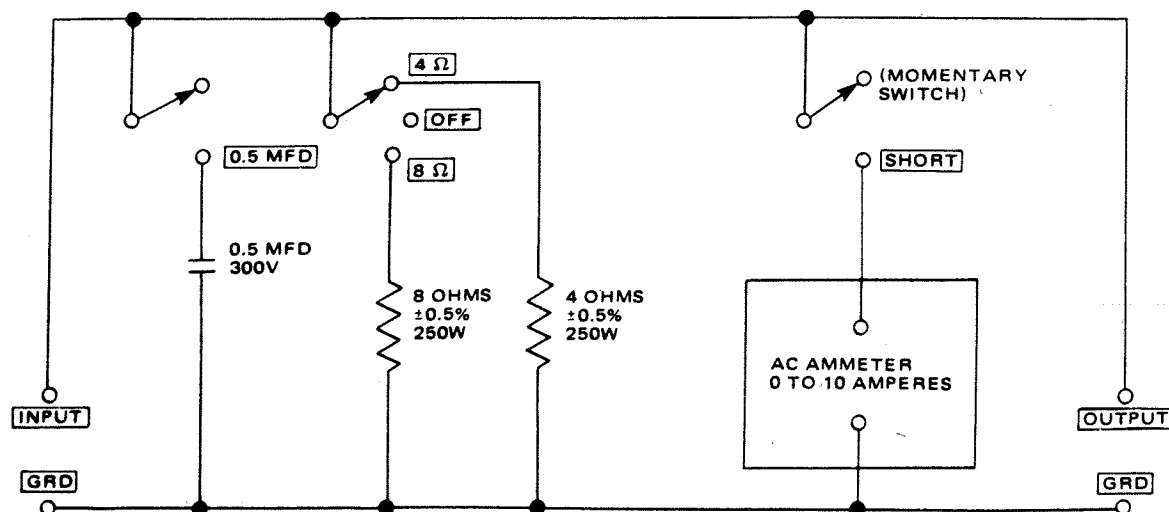


Figure 2. Amplifier Output Load Box Simplified Schematic

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:

Symbol Δ Fire or electrical shock hazard. Only original parts should be used to replace any part marked with symbol Δ . Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

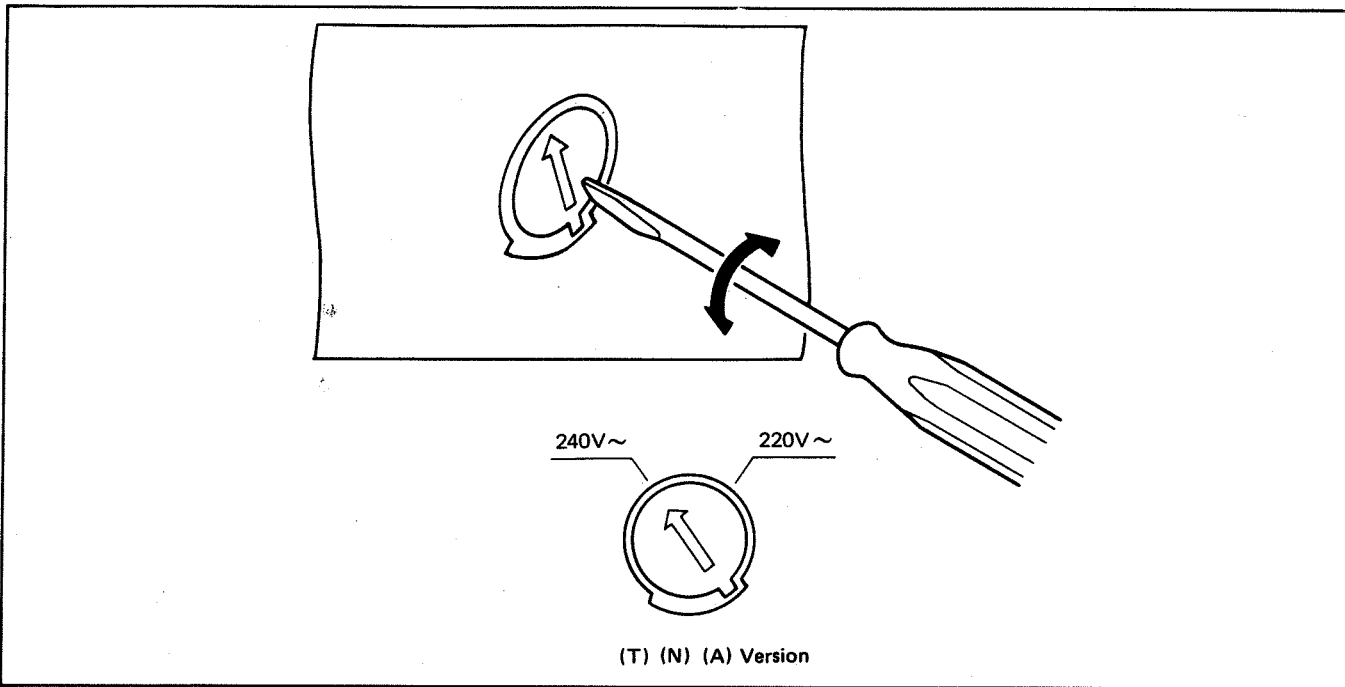
8. VOLTAGE CONVERSION

• EUROPEAN MODEL ONLY

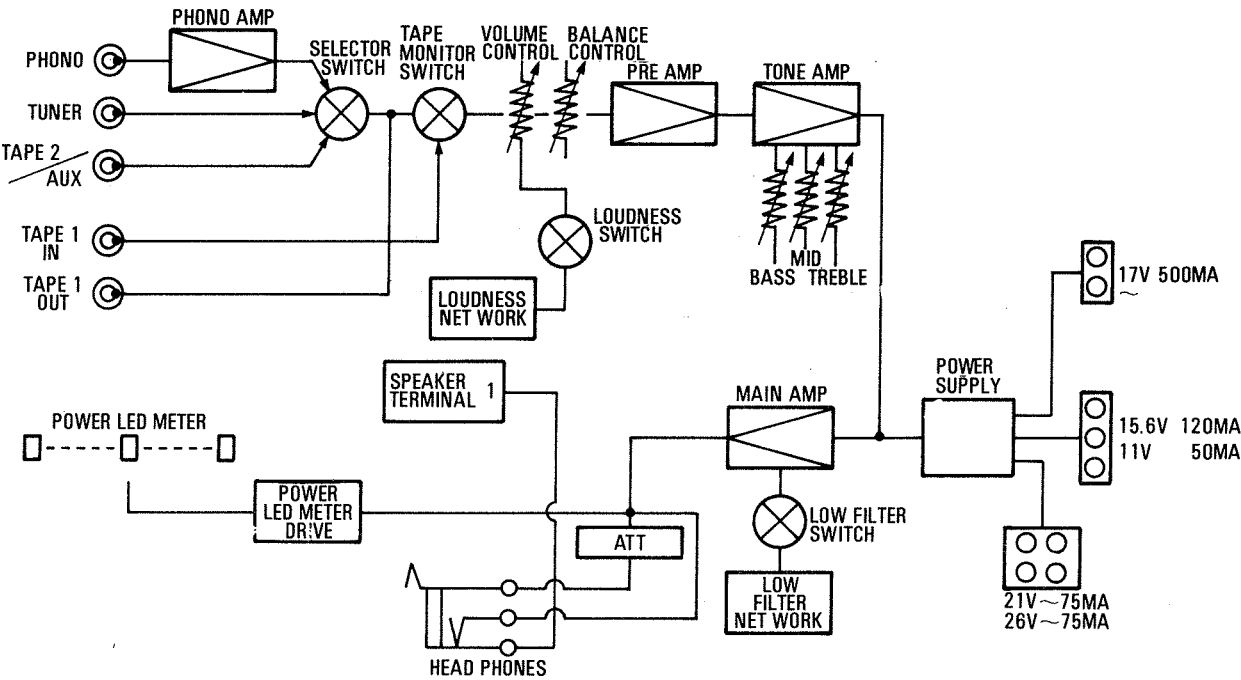
To convert the unit to a different power source voltage, change the position as illustrated in the drawing below.

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

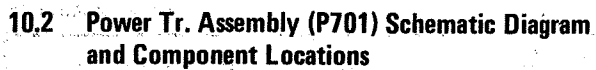
Voltage Conversion Chart



9. BLOCK DIAGRAM

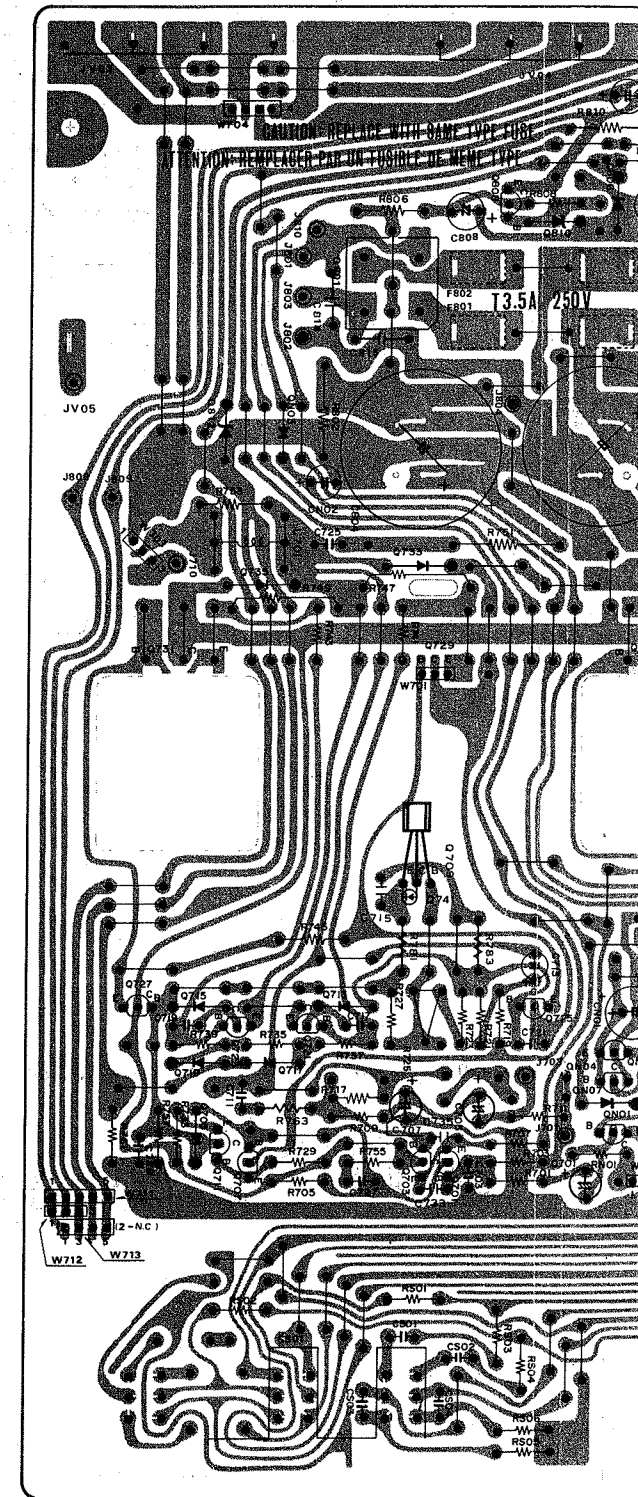


10.1 Main Amp Assembly (P700) Schematic Diagram and Component Locations

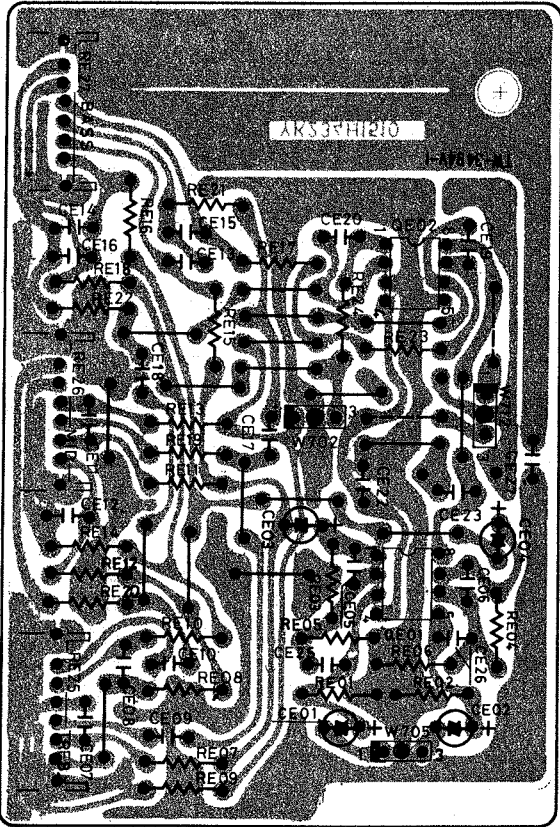
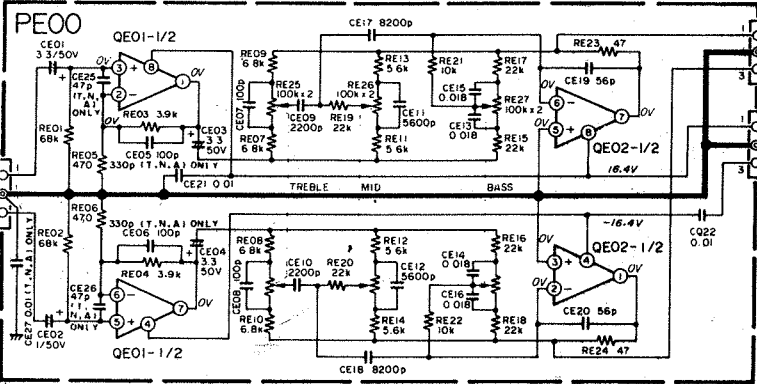


The image shows two electronic components. On the left is a transistor labeled Q807, which has a TO-18 package with three pins. On the right is an integrated circuit labeled M18M, which is a 16-pin DIP package. The pins are numbered 1 through 16 around the perimeter of the package.

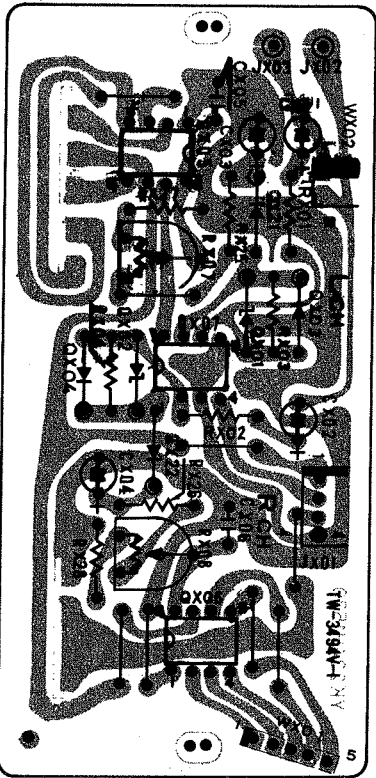
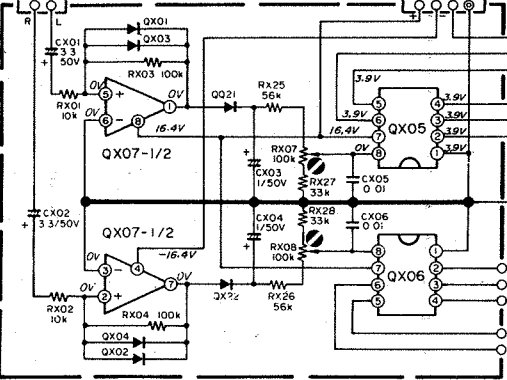
The diagram shows the internal structure of the K208H1530 component. It features a central rectangular block with two circular components labeled '1001' and 'G001'. A schematic diagram in the top left corner shows the electrical connections: a switch labeled 'S001' is connected to a terminal '4.5', and a component labeled 'G001' is connected to a terminal '0'.



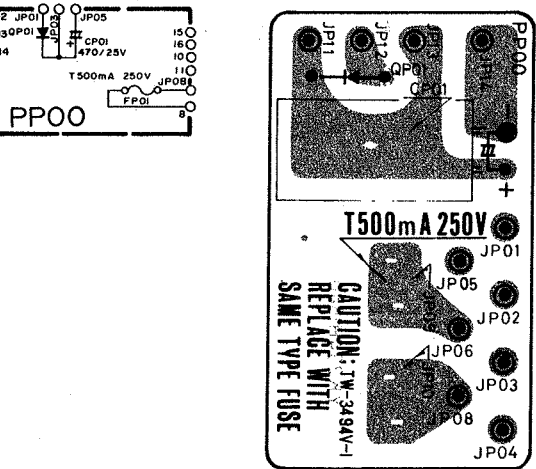
10.5 Tone Control Assembly (PE00) Schematic Diagram and Component Locations



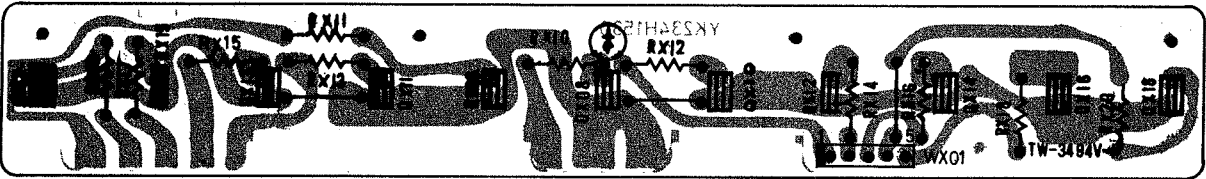
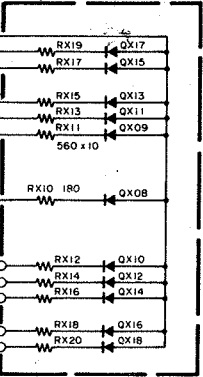
10.7 LED Level Meter Drive Assembly (PX01) Schematic Diagram and Component Locations



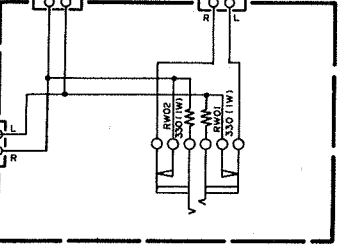
10.6 Fuse Assembly (PP00) Schematic Diagram and Component Locations



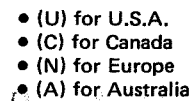
10.8 LED Level Meter Assembly (PX02) Schematic Diagram and Component Locations



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



• [C01-99] Front Panel

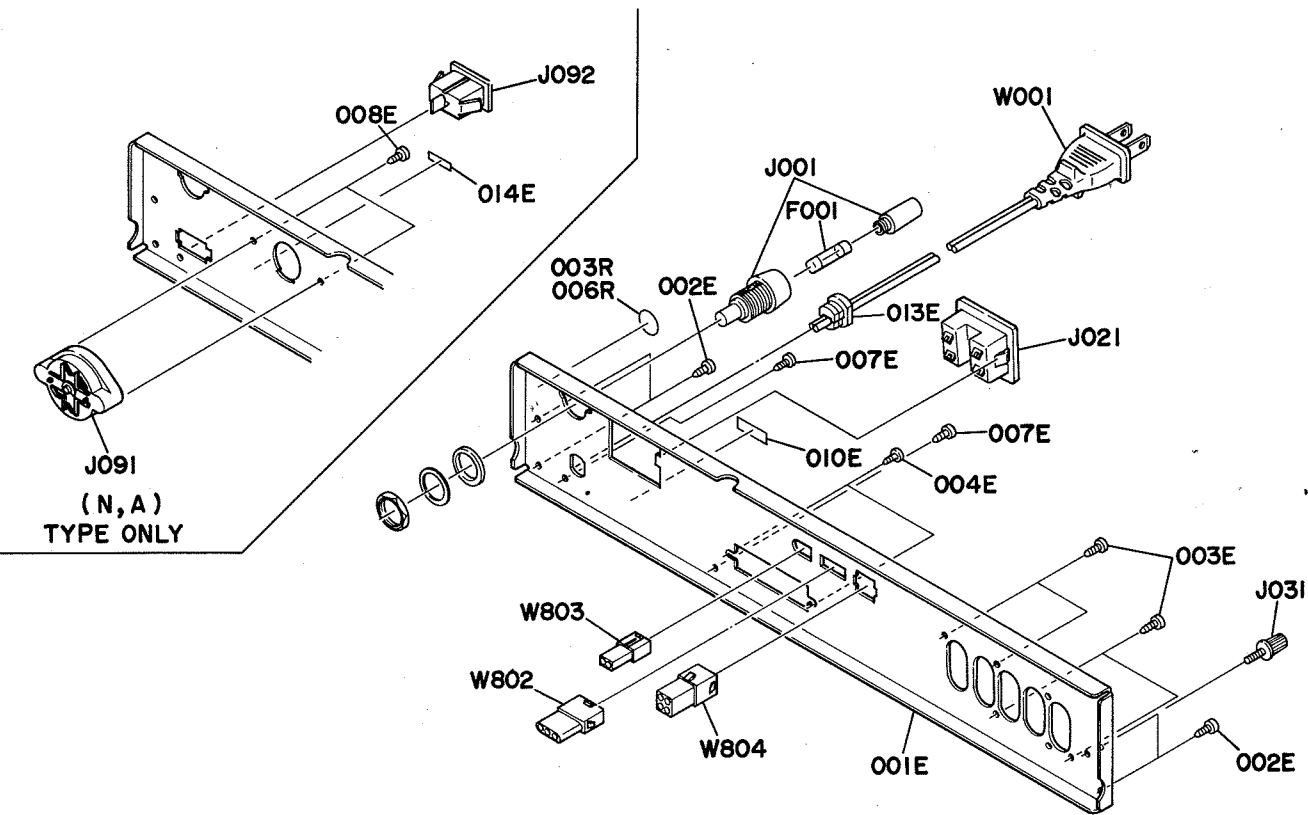


REF. DESIG.	Q'TY				PART NO.	DESCRIPTION
	U	C	N	A		
010B	1	1	1	1	226H154110	Knob
014B	4	4	4	4	226H154120	Knob
018B	2	2	2	2	51300306B0	P.H. Tapped Screw P3 x 6
019B	2	2	2	2	51300306B0	P.H. Tapped Screw P3 x 6
025B	2	2	2	2	2818056040	Buffer

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

REF. DESIG.	Q'TY				PART NO.	DESCRIPTION
	U	C	N	A		
001R			1	1	2932861010	Label
001R		1			2911861110	Label
001R	1				117H861020	Label
002R			1	1	2578861010	Label
002R	1	1			117H861020	Label

• [C03-99] Rear Panel

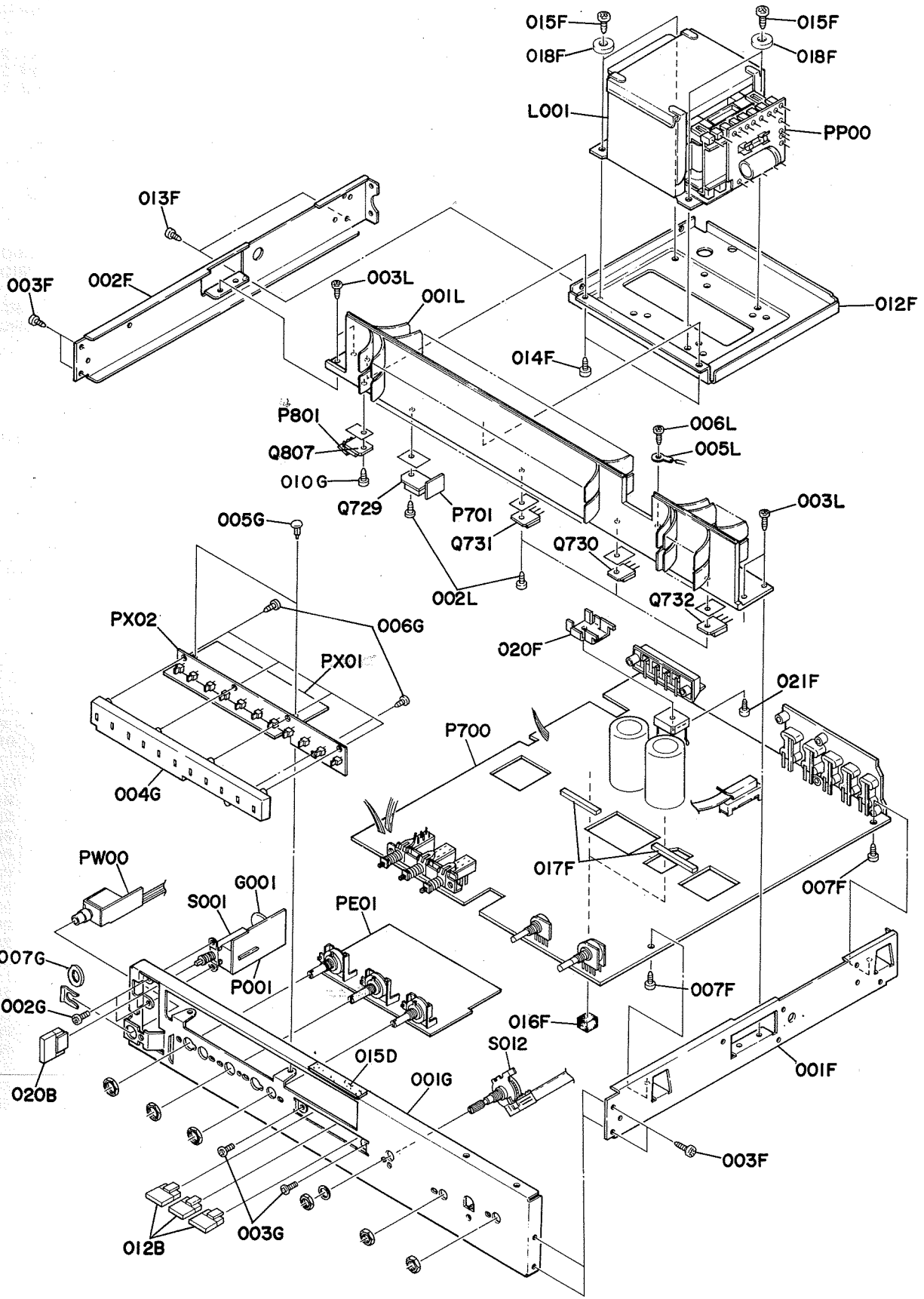


- (U) for U.S.A.
- (C) for Canada
- (N) for Europe
- (A) for Australia

REF. DESIG.	Q'TY				PART NO.	DESCRIPTION
	U	C	N	A		
001E	1	1			234H160210	Bracket, Rear Panel
001E			1	1	234H160240	Bracket, Rear Panel
002E	4	4	4	4	51280308B0	B.H. Tapped Screw B3 x 8
003E	4	4	4	4	51280308B0	B.H. Tapped Screw B3 x 8
004E	4	4	4	4	51280308B0	B.H. Tapped Screw B3 x 8
005E	2	2	2	2	51280308B0	B.H. Tapped Screw B3 x 8
013E	1	1			1455259090	Bushing
007E	2	2	2	2	51280308B0	B.H. Tapped Screw B3 x 8
008E		2	2		51280308U0	B.H. Tapped Screw B3 x 8
010E	1	1	1	1	2112265010	Indicator
014E		1	1		4581861010	Label
003R	1				9511101070	Label, UL
006R		1			2457861040	Label, CSA

REF. DESIG.	Q'TY				PART NO.	DESCRIPTION
	U	C	N	A		
△F001	1	1			FS10300500	Fuse, 3A 250V
△F001			1	1	FS10100800	Fuse, 1A 250V
△J001	1	1			YJ08000340	Jack, Fuse Holder
△J001			1	1	YJ08000290	Jack, Fuse Holder
△J021	1				YJ04001010	Jack, AC Outlet
△J021		1			YJ04001020	Jack, AC Outlet
J031	1	1	1	1	YL03010250	Terminal, Ground
△J091			1	1	BY05030040	Voltage Selector
△J092			1	1	YP04000580	Plug, Inlet
△W001	1	1			YC01900070	A.C. Power Cord
△W001			1		ZC01805010	A.C. Power Cord
△W001				1	ZC02006020	A.C. Power Cord

• [P01-99] Front Chassis and General Parts

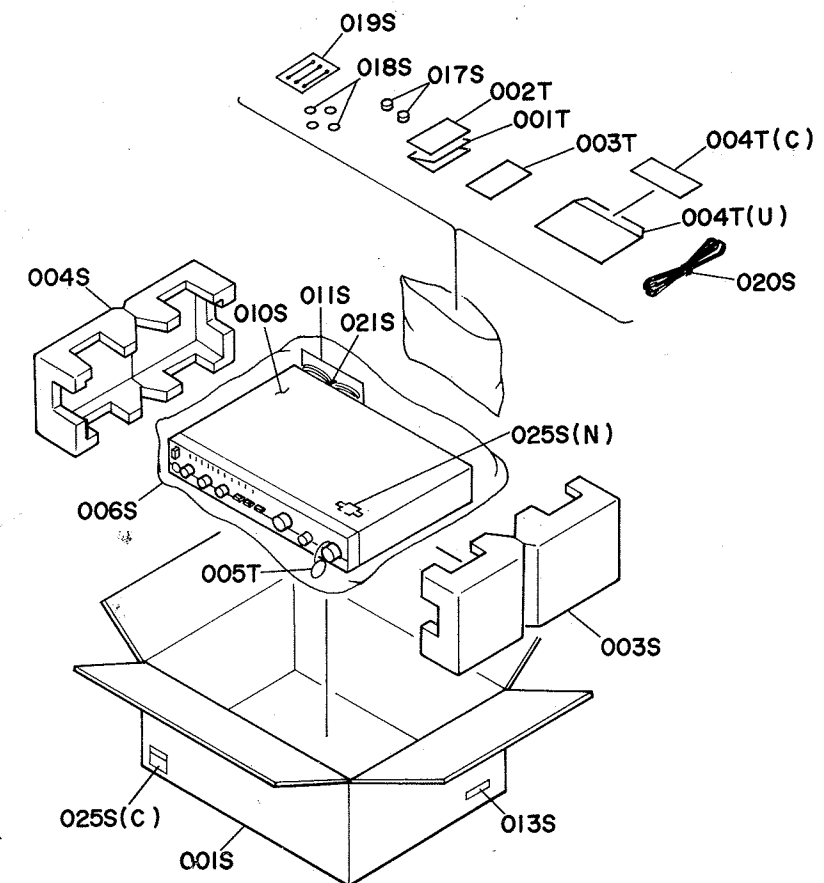


- (U) for U.S.A.
- (C) for Canada
- (N) for Europe
- (A) for Australia

REF. DESIG.	Q'TY				PART NO.	DESCRIPTION
	U	C	N	A		
015D	1	1	1	1	208H056010	Buffer
001F	1	1	1	1	208H126010	Stay, Right
002F	1	1	1	1	208H126020	Stay, Left
003F	4	4	4	4	51300308B0	P.H. Tapped Screw B3 x 8
007F	2	2	2	2	51260308B0	B.T. Screw B3 x 8
012F	1	1	1	1	234H004010	Table
013F	2	2	2	2	51280308B0	B.H. Tapped Screw B3 x 8
014F	2	2	2	2	51260308B0	B.T. Screw B3 x 8
015F	4	4	4	4	52040406A0	H. Head Bolt
016F	2	2	2	2	2147056010	Buffer
017F	2	2	2	2	208H118020	Spacer
018F	2	2	2	2	54020401A0	Washer
020F	1	1	1	1	2947267050	Heatsink
021F	1	1	1	1	51280312U0	B.H. Tapped Screw B3 x 12
001G	1	1	1	1	234H160010	Bracket, Front Chassis
002G	2	2	2	2	51100306A9	B.H.M. Screw B3 x 6
003G	2	2	2	2	51100306A9	B.H.M. Screw B3 x 6
004G	1	1	1	1	234H118010	Spacer, LED
005G	2	2	2	2	2276005050	Clamper
006G	3	3	3	3	51280308B0	B.H. Tapped Screw B3 x 8
007G	1	1	1	1	54020049B0	Washer
010G	1	1	1	1	51280312U0	B.H. Tapped Screw B3 x 12
001L	1	1	1	1	208H267010	Heatsink
002L	4	4	4	4	51280312B0	B.H. Tapped Screw B3 x 12
003L	4	4	4	4	51280308B0	B.H. Tapped Screw B3 x 8
005L	1	1	1	1	62030039W0	Lug
006L	1	1	1	1	51280308B0	B.H. Tapped Screw B3 x 8
012B	3	3	3	3	226H154140	Knob, Push Switch
020B	1	1	1	1	226H154130	Knob, Push Switch

REF. DESIG.	Q'TY				PART NO.	DESCRIPTION
	U	C	N	A		
Δ G001	1	1	1	1	DK18103530	Ceramic Cap. 0.01μF 250V
Δ G001	1	1	1	1	DK18103840	Ceramic Cap. 0.01μF 250V
Δ G001	1	1	1	1	DK18103850	Ceramic Cap. 0.01μF 250V
Δ L001	1	1	1	1	TS17622010	Power Transformer
Δ L001	1	1	1	1	TS17622030	Power Transformer
Δ S001	1	1	1	1	SP01010420	Push Switch, Power
Δ S001	1	1	1	1	SP01010390	Push Switch, Power
S012	1	1	1	1	SR00030070	Rotary Switch
Δ Q729	1	1	1	1	HT325782B0	Transistor 2SC2578(O or Y)
Δ Q730	1	1	1	1	HT325782B0	Transistor 2SC2578(O or Y)
Δ Q731	1	1	1	1	HT111032B0	Transistor 2SA1103(O or Y)
Δ Q732	1	1	1	1	HT111032B0	Transistor 2SA1103(O or Y)
Δ Q807	1	1	1	1	HT412652A0	Transistor 2SD1265(O or P)

• [H01-99] Packing Materials



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

REF. DESIG.	Q'TY				PART NO.	DESCRIPTION
	U	C	N	A		
001S	1	1	1	1	234H801010	Packing Case
003S	1	1	1	1	230H809010	Cushion, (R)
004S	1	1	1	1	230H809020	Cushion, (L)
006S	1	1	1	1	9090909030	Polyethylene Sheet
010S	1	1	1	1	2918107350	Sheet
011S	1	1	1	1	2918107390	Sheet
013S	3	3	3	3	5926019010	Serial No. Card
013S	3	3	3	3	5926019020	Serial No. Card
013S	2	2	2	2	5926019060	Serial No. Card
013S	2	2	2	2	5926019030	Serial No. Card
017S	2	2	2	2	226H057010	Leg
018S	4	4	4	4	413H060010	Clinger
019S	1	1	1	1	4136071010	Cleaner
020S	1	1	1	1	ZA02000070	EXT. Antenna
021S	1	1	1	1	402P005040	Clamper
025S	1	1	1	1	9510901020	Label
025S	1	1	1	1	2731821010	Silicagel

REF. DESIG.	Q'TY				PART NO.	DESCRIPTION
	U	C	N	A		
001T	1	1	1	1	234H851210	Instruction
001T	1	1	1	1	234H851310	Instruction
002T	1	1	1	1	234H851220	Instruction, Spec
002T	1	1	1	1	234H851320	Instruction, Spec
003T	1	1	1	1	103H854010	Guarantee Card
003T	1	1	1	1	2818854040	Guarantee Card
003T	1	1	1	1	9631000090	Guarantee Card
004T	1	1	1	1	2225813010	Envelope
004T	1	1	1	1	9650000050	S. Station Card
005T	1	1	1	1	9560000010	Hang Tag

12. ELECTRICAL PARTS LIST

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

REF. DESIG.	Q'TY				PART NO.	DESCRIPTION
	U	C	N	A		
P700	1	1	1	1	YK208H1510	P700-MAIN AMP CIRCUIT BOARD
	1	1	1	1	ZZ208H1510	P.W. Board, Main Amp
	1	1	1	1	ZZ208H2510	P.W. Board Assembly
	1	1	1	1	ZZ208H8510	P.W. Board Assembly
	1	1	1	1	ZZ208H8510	P.W. Board Assembly
P700-CAPACITORS						
C401	1	1	1	1	EA33055030	Elect 3.3μF 50V
C402	1	1	1	1	EA33055030	Elect 3.3μF 50V
C403	1	1	1	1	DK16221300	Ceramic 220pF ±10%
C404	1	1	1	1	DK16221300	Ceramic 220pF ±10%
C405	1	1	1	1	DF16332300	Film 3300pF ±10%
C406	1	1	1	1	DF16332300	Film 3300pF ±10%
C407	1	1	1	1	DF16123300	Film 0.012μF ±10%
C408	1	1	1	1	DF16123300	Film 0.012μF ±10%
C409	1	1	1	1	EA33505030	Elect 3.3μF 50V
C410	1	1	1	1	EA33505030	Elect 3.3μF 50V
C411	1	1	1	1	EA10701630	Elect 100μF 16V
C412	1	1	1	1	EA10701630	Elect 100μF 16V
C415	1	1	1	1	DK17103300	Ceramic 0.01μF ±20%
C416	1	1	1	1	DK18103300	Ceramic 0.01μF ±20%
C417	1	1	1	1	DK17103300	Ceramic 0.01μF ±20%
C418	1	1	1	1	DK17103300	Ceramic 0.01μF ±20%
C419	1	1	1	1	DK17103300	Ceramic 0.01μF ±20%
C701	1	1	1	1	EA33505030	Elect 3.3μF 50V
C702	1	1	1	1	EA33505030	Elect 3.3μF 50V
C703	1	1	1	1	DD15680370	Ceramic 68pF ±5%
C704	1	1	1	1	DD15680370	Ceramic 68pF ±5%
C705	1	1	1	1	EA10701030	Elect 100μF 10V
C706	1	1	1	1	EA10701030	Elect 100μF 10V
C707	1	1	1	1	EA22505030	Elect 2.2μF 50V
C708	1	1	1	1	EA22505030	Elect 2.2μF 50V
C711	1	1	1	1	DD15470300	Ceramic 47pF ±5%
C712	1	1	1	1	DD15470300	Ceramic 47pF ±5%
C713	1	1	1	1	EA47603530	Elect 47μF 35V
C714	1	1	1	1	EA47603530	Elect 47μF 35V
C715	1	1	1	1	DF17103300	Film 0.01μF ±20%
C716	1	1	1	1	DF17103300	Film 0.01μF ±20%
C717	1	1	1	1	DF17102300	Film 0.001μF ±20%
C718	1	1	1	1	DF17102300	Film 0.001μF ±20%
C719	1	1	1	1	DF17102300	Film 0.001μF ±20%
C720	1	1	1	1	DF17102300	Film 0.001μF ±20%
C721	1	1	1	1	DK16101550	Ceramic 100pF ±10%
C722	1	1	1	1	DK16101550	Ceramic 100pF ±10%
C723	1	1	1	1	DK16151550	Ceramic 150pF ±10%
C724	1	1	1	1	DK16151550	Ceramic 150pF ±10%
C725	1	1	1	1	DF16473540	Film 0.047μF ±10%
C726	1	1	1	1	DF16473540	Film 0.047μF ±10%
C727	1	1	1	1	DK16271300	Ceramic 270pF ±10%
C728	1	1	1	1	DK16271300	Ceramic 270pF ±10%
C729	1	1	1	1	DK16221300	Ceramic 220pF ±10%
C730	1	1	1	1	DK16221300	Ceramic 220pF ±10%
C731	1	1	1	1	DF17473300	Film 0.047μF ±20%
C733	1	1	1	1	DK16121300	Ceramic 120pF ±10%
C734	1	1	1	1	DK16121300	Ceramic 0.01μF ±10%
C735	1	1	1	1	DK16121300	Ceramic 0.01μF ±10%
C736	1	1	1	1	DK16121300	Ceramic 0.01μF ±10%
△C803	1	1	1	1	EB68804520	Elect 6800μF 45V
△C804	1	1	1	1	EB68804520	Elect 6800μF 45V
C805	1	1	1	1	EA10705030	Elect 100μF 50V
C807	1	1	1	1	EA47605030	Elect 47μF 50V
C808	1	1	1	1	EA47605030	Elect 47μF 50V
C809	1	1	1	1	EA33505030	Elect 3.3μF 50V
C811	1	1	1	1	EA10602530	Elect 10μF 25V

REF. DESIG.	Q'TY				PART NO.	DESCRIPTION
	U	C	N	A		
C812	1	1	1	1	EA10602530	Elect 10μF 25V
C814	1	1	1	1	DK18103510	Ceramic 0.01μF
C815	1	1	1	1	DK18103510	Ceramic 0.01μF
CN01	1	1	1	1	EA33700630	Elect 330μF 6.3V
CN02	1	1	1	1	EA10505030	Elect 1μF 50V
CN03	1	1	1	1	EA10705030	Elect 100μF 50V
CS01	1	1	1	1	DK16271300	Ceramic 270pF ±10%
CS02	1	1	1	1	DK16271300	Ceramic 270pF ±10%
CS03	1	1	1	1	DF16683300	Film 0.068μF ±10%
CS04	1	1	1	1	DF16683300	Film 0.068μF ±10%
CS21	1	1	1	1	DD15820370	Ceramic 82pF ±5%
CS22	1	1	1	1	DD15820370	Ceramic 82pF ±5%
CS23	1	1	1	1	DK17103300	Ceramic 0.01μF ±20%
CS24	1	1	1	1	DK17103300	Ceramic 0.01μF ±20%
CS25	1	1	1	1	DK17103300	Ceramic 0.01μF ±20%
P700-RESISTORS (All Resistors are ±5% and ¼W)						
R401	1	1	1	1	GD05154140	150KΩ
R402	1	1	1	1	GD05154140	150KΩ
R403	1	1	1	1	GD05683140	68KΩ
R404	1	1	1	1	GD05683140	68KΩ
R405	1	1	1	1	GD05222140	2.2KΩ
R406	1	1	1	1	GD05222140	2.2KΩ
R407	1	1	1	1	GD05561140	560Ω
R408	1	1	1	1	GD05561140	560Ω
R409	1	1	1	1	GD05223140	22KΩ
R410	1	1	1	1	GD05223140	22KΩ
R411	1	1	1	1	GD05274140	270KΩ
R412	1	1	1	1	GD05274140	270KΩ
R413	1	1	1	1	GD05103140	10KΩ
R414	1	1	1	1	GD05103140	10KΩ
△R415	1	1	1	1	GG05101140	100Ω
△R415	1	1	1	1	GG05561140	560Ω
△R416	1	1	1	1	GG05101140	100Ω
△R416	1	1	1	1	GG05561140	560Ω
R417	1	1	1	1	GD05271140	270Ω
R418	1	1	1	1	GD05271140	270Ω
R701	1	1	1	1	GD05471140	470Ω
R702	1	1	1	1	GD05471140	470Ω
R703	1	1	1	1	GD05333140	33KΩ
R704	1	1	1	1	GD05333140	33KΩ
R705	1	1	1	1	GD05103140	10KΩ
R706	1	1	1	1	GD05103140	10KΩ
R707	1	1	1	1	GD05333140	33KΩ
R708	1	1	1	1	GD05333140	33KΩ
R709	1	1	1	1	GD05272140	2.7KΩ
R710	1	1	1	1	GD05272140	2.7KΩ
R711	1	1	1	1	GD05104140	100KΩ
R712	1	1	1	1	GD05104140	100KΩ
R717	1	1	1	1	GD05393140	39KΩ
R718	1	1	1	1	GG05393140	39KΩ
R719	1	1	1	1	GG05332140	3.3KΩ
R720	1	1	1	1	GG05332140	3.3KΩ
R721	1	1	1	1	GD05332140	3.3KΩ
R722	1	1	1	1	GD05332140	3.3KΩ
R723	1	1	1	1	GD05222140	2.2KΩ
R724	1	1	1	1	GD05222140	2.2KΩ

REF. DESIG.	Q'TY				PART NO.	DESCRIPTION
	U	C	N	A		
R725	1	1	1	1	RA02020180	2KΩ(B), Trimming
R726	1	1	1	1	RA02020180	2KΩ(B), Trimming
R727	1	1	1	1	GD05122140	1.2KΩ
R728	1	1	1	1	GD05122140	1.2KΩ
R729	1	1	1	1	GG05152140	1.5KΩ
R730	1	1	1	1	GG05152140	1.5KΩ
R733	1	1	1	1	GG05151140	150Ω
R734	1	1	1	1	GG05151140	150Ω
R735	1	1	1	1	GD05333140	33KΩ
R736	1	1	1	1	GD05333140	33KΩ
R737	1	1	1	1	GD05822140	8.2KΩ
R738	1	1	1	1	GD05822140	8.2KΩ
R739	1	1	1	1	GD05822140	8.2KΩ
R740	1	1	1	1	GD05822140	8.2KΩ
R741	1	1	1	1	GG05471140	470Ω
R742	1	1	1	1	GG05471140	470Ω
R743	1	1	1	1	GG05471140	470Ω
R744	1	1	1	1	GG05471140	470Ω
R745	1	1	1	1	GG05221120	220Ω ¼W
R746	1	1	1	1	GG05221120	220Ω ¼W
R747	1	1	1	1	GB05272020	2.7KΩ 2W
R748	1	1	1	1	GB05272020	2.7KΩ 2W
R749	1	1	1	1	GB05272020	2.7KΩ 2W
R750	1	1	1	1	GB05272020	2.7KΩ 2W
R751	1	1	1	1	GA05100020	10Ω 2W
R752	1	1	1	1	GA05100020	10Ω 2W
R753	1	1	1	1	GG05022120	2.2Ω ¼W
R754	1	1	1	1	GG05022120	2.2Ω ¼W
R755	1	1	1	1	GD05681140	680Ω
R756	1	1	1	1	GD05681140	680Ω
R757	1	1	1	1	GD05273140	27KΩ
R758	1	1	1	1	GD05273140	27KΩ
R761	1	1	1	1	GG05100140	10Ω
R762	1	1	1	1	GG05100140	10Ω
R763	1	1	1	1	GD05222140	2.2KΩ
R764	1	1	1	1	GD05222140	2.2KΩ
△R802	1	1	1	1	GA05222020	2.2KΩ 2W
R803	1	1	1	1	GG05182120	1.8KΩ ¼W
△R805	1	1	1	1	GA05330020	33Ω 2W
△R806	1	1	1	1	GG05271120	270Ω ¼W
R806	1	1	1	1	RF05121120	120Ω ¼W
R807	1	1	1	1	GG05152140	1.5KΩ
R807	1	1	1	1	GD05332140	3.3KΩ
R808	1	1	1	1	GG05152140	1.5KΩ
R808	1	1	1	1	GD05332140	3.3KΩ
R809	1	1	1	1	GA05820020	82Ω 2W
R810	1	1	1	1	GA05390010	39Ω 1W
RN01	1	1	1	1	GD05222140	2.2KΩ
RN02	1	1	1	1	GD05222140	2.2KΩ
RN03	1	1	1	1	GD05153140	15KΩ
RN04	1	1	1	1	GD05394140	390KΩ
RN05	1	1	1	1	GD05224140	220KΩ
RN06	1	1	1	1	GD05154140	150KΩ
RS01	1	1	1	1	GD05472140	4.7KΩ
RS02	1	1	1	1	GD05472140	4.7KΩ
RS03	1	1	1	1	GD05273140	27KΩ
RS04	1	1	1	1	GD05273140	27KΩ
RS05	1	1	1	1	GD05822140	8.2KΩ
RS06	1	1	1	1	GD05822140	8.2KΩ
RS07	1	1	1	1	RM01040550	100KΩ(B)x2, Variable
RS08	1	1	1	1	RK02040160	200KΩ(B), Variable
R001	1	1	1	1	RC10225120	2.2MΩ ¼W

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

REF. DESIG.	Q'TY				PART NO.	DESCRIPTION	
	U	C	N	A			
P700-SEMICONDUCTORS							
Q401	1	1	1	1	HC10008090	IC	NJM4558D-D
Q701	1	1	1	1	HT109922B0	Transistor	2SA992(E or F)
Q702	1	1	1	1	HT109922B0	Transistor	2SA992(E or F)
Q703	1	1	1	1	HT109922B0	Transistor	2SA992(E or F)
Q704	1	1	1	1	HT109922B0	Transistor	2SA992(E or F)
Q705	1	1	1	1	HD20003210	Diode	1S2471
Q706	1	1	1	1	HD20003210	Diode	1S2471
Q707	1	1	1	1	HT317752E0	Transistor	2SC1775A(E or F)
Q708	1	1	1	1	HT317752E0	Transistor	2SC1775A(E or F)
Q709	1	1	1	1	HT309451P0	Transistor	2SC945(P)
Q710	1	1	1	1	HT309451P0	Transistor	2SC945(P)
Q711	1	1	1	1	HT406662B0	Transistor	2SD666(B or C)
Q712	1	1	1	1	HT406662B0	Transistor	2SD666(B or C)
Q713	1	1	1	1	HD20011050	Diode	1S1555
Q714	1	1	1	1	HD20011050	Diode	1S1555
Q715	1	1	1	1	HD20011050	Diode	1S1555
Q716	1	1	1	1	HD20011050	Diode	1S1555
Q717	1	1	1	1	HD20002210	Diode	1S2472
Q718	1	1	1	1	HD20002210	Diode	1S2472
Q719	1	1	1	1	HD20002210	Diode	1S2472
Q720	1	1	1	1	HD20002210	Diode	1S2472
Q721	1	1	1	1	HT309451Q0	Transistor	2SC945(Q)
Q722	1	1	1	1	HT309451Q0	Transistor	2SC945(Q)
Q723	1	1	1	1	HT107331Q0	Transistor	2SA733(Q)
Q724	1	1	1	1	HT107331Q0	Transistor	2SA733(Q)
Q725	1	1	1	1	HT406672F0	Transistor	2SD667(C or D)
Q726	1	1	1	1	HT406672F0	Transistor	2SD667(C or D)
Q727	1	1	1	1	HT206472F0	Transistor	2SB647(C or D)
Q728	1	1	1	1	HT206472F0	Transistor	2SB647(C or D)
△Q730	1	1	1	1	HT325782B0	Transistor	2SC2578(O or Y)
△Q731	1	1	1	1	HT111032B0	Transistor	2SA1103(O or Y)
△Q732	1	1	1	1	HT111032B0	Transistor	2SA1103(O or Y)
Q733	1	1	1	1	HD20005010	Diode	W06B
Q734	1	1	1	1	HD20005010	Diode	W06B
Q735	1	1	1	1	HD20005010	Diode	W06B
Q736	1	1	1	1	HD20005010	Diode	W06B
△Q801	1	1	1	1	HD20008290	Diode	S4VB20
Q805	1	1	1	1	HD20015030	Diode	DS-1350
Q806	1	1	1	1	HD30014010	Zener	HZ16L
△Q808	1	1		1	HT206052B0	Transistor	2SB605(L or K)
△Q808			1		HT205072P0	Transistor	2SB507(D or E)
Q809	1	1	1	1	HD30014010	Zener	HZ16L
Q810	1	1	1	1	HD30014010	Zener	HZ16L
△Q811	1	1	1	1	HD20015030	Diode	DS135D
Q812	1	1	1	1	HD30042090	Zener	BZ052
QN01	1	1	1	1	HT309452B0	Transistor	2SC945(P or Q)
QN02	1	1	1	1	HT309452B0	Transistor	2SC945(P or Q)
QN03	1	1	1	1	HD20015030	Diode	DS-135D
QN04	1	1	1	1	HT309452B0	Transistor	2SC945(P or Q)
QN05	1	1	1	1	HT107332A0	Transistor	2SA733(P or Q)
QN06	1	1	1	1	HD30023090	Zener	WZ071
QN07	1	1	1	1	HD20015030	Diode	DS-135D
P700-MISCELLANEOUS							
△F801	1	1			FS10500500	Fuse	4A 250V
△F801			1		FS10350800	Fuse	3.5A 250V
△F802	1	1			FS10500500	Fuse	4A 250V
△F802			1		FS10350800	Fuse	3.5A 250V
L701	1	1	1	1	LL23905120	Coil	1μH
L702	1	1	1	1	LL23905120	Coil	1μH

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

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

REF. DESIG.	Q'TY				PART NO.	DESCRIPTION
	U	C	N	A		
SS01	1	1	1	1	SP02030180	Push Switch
SS02	1	1	1	1	SS04040040	Slide Switch
S012	1	1	1	1	SR00030070	Rotary Switch
J801	1	1			YJ08000170	Jack
J801			1		YJ08000270	Jack
J802	1	1			YJ08000170	Jack
J802			1		YJ08000270	Jack
J803	1	1			YJ08000170	Jack
J803			1		YJ08000270	Jack
J804	1	1			YJ08000170	Jack
J804			1		YJ08000270	Jack
JV01	1	1	1	1	YT02060130	Terminal, RCA Jack 6P
JV02	1	1	1	1	YT02040260	Terminal, RCA Jack 4P
JV03	1	1	1	1	YT03040210	Terminal, Speaker
P701	1	1	1	1	YK208H1520	P.W. Board, Power Tr.
	1	1	1	1	ZZ208H1520	P.W. Board Assembly
△Q729	1	1	1	1	HT325782B0	P701-TRANSISTOR Transistor 2SC2578(O or Y)
P801	1	1	1	1	YK234H1550	P801-TRANSISTOR CIRCUIT BOARD P.W. Board, Transistor
	1	1	1	1	ZZ234H1550	P.W. Board Assembly
△Q807	1	1	1	1	HT412652A0	Transistor 2SD1265(O or P)
PE01	1	1	1	1	YK234H1510	PE01-TONE CONTROL CIRCUIT BOARD P.W. Board, Tone Control
	1	1	1	1	ZZ234H1510	P.W. Board Assembly
CE01	1	1	1	1	EA33405030	Elect 0.33μF 50V
CE02	1	1	1	1	EA33405030	Elect 0.33μF 50V
CE03	1	1	1	1	EA33505030	Elect 3.3μF 50V
CE04	1	1	1	1	EA33505030	Elect 3.3μF 50V
CE05	1	1	1	1	DK16331300	Ceramic 330pF ±10%
CE06	1	1	1	1	DK16331300	Ceramic 330pF ±10%
CE07	1	1	1	1	DK16101300	Ceramic 100pF ±10%
CE08	1	1	1	1	DK16101300	Ceramic 100pF ±10%
CE09	1	1	1	1	DF16222300	Film 2200pF ±10%
CE10	1	1	1	1	DF16222300	Film 2200pF ±10%
CE11	1	1	1	1	DF16562300	Film 5600pF ±10%
CE12	1	1	1	1	DF16562300	Film 5600pF ±10%
CE13	1	1	1	1	DF16183300	Film 0.018μF ±10%
CE14	1	1	1	1	DF16183300	Film 0.018μF ±10%
CE15	1	1	1	1	DF16183300	Film 0.018μF ±10%
CE16	1	1	1	1	DF16183300	Film 0.018μF ±10%
CE17	1	1	1	1	DF16822300	Film 8200pF ±10%
CE18	1	1	1	1	DF16822300	Film 8200pF ±10%
CE19	1	1	1	1	DD15560370	Ceramic 56pF ±5%
CE20	1	1	1	1	DD15560370	Ceramic 56pF ±5%
CE21	1	1	1	1	DK18103310	Ceramic 0.01μF
CE22	1	1	1	1	DK18103310	Ceramic 0.01μF
CE23	1	1	1	1	DK18103310	Ceramic 0.01μF
CE25	1	1	1	1	DD15470370	Ceramic 47pF ±5%
CE26	1	1	1	1	DD15470370	Ceramic 47pF ±5%
CE27	1	1	1	1	DK17103300	Ceramic 0.01μF

REF. DESIG.	Q'TY				PART NO.	DESCRIPTION
	U	C	N	A		
RE01	1	1	1	1	GD05683140	68KΩ
RE02	1	1	1	1	GD05683140	68KΩ
RE03	1	1	1	1	GD05392140	3.9KΩ
RE04	1	1	1	1	GD05392140	3.9KΩ
RE05	1	1	1	1	GD05471140	470Ω
RE06	1	1	1	1	GD05471140	470Ω
RE07	1	1	1	1	GD05682140	6.8KΩ
RE08	1	1	1	1	GD05682140	6.8KΩ
RE09	1	1	1	1	GD05682140	6.8KΩ
RE10	1	1	1	1	GD05682140	6.8KΩ
RE11	1	1	1	1	GD05562140	5.6KΩ
RE12	1	1	1	1	GD05562140	5.6KΩ
RE13	1	1	1	1	GD05562140	5.6KΩ
RE14	1	1	1	1	GD05562140	5.6KΩ
RE15	1	1	1	1	GD05223140	22KΩ
RE16	1	1	1	1	GD05223140	22KΩ
RE17	1	1	1	1	GD05223140	22KΩ
RE18	1	1	1	1	GD05223140	22KΩ
RE19	1	1	1	1	GD05223140	22KΩ
RE20	1	1	1	1	GD05223140	22KΩ
RE21	1	1	1	1	GD05103140	10KΩ
RE22	1	1	1	1	GD05103140	10KΩ
RE23	1	1	1	1	GD05470140	47Ω
RE24	1	1	1	1	GD05470140	47Ω
RE25	1	1	1	1	RM01040540	100KΩ(B), Variable
RE26	1	1	1	1	RM01040540	100KΩ(B), Variable
RE27	1	1	1	1	RM01040540	100KΩ(B), Variable
QE01	1	1	1	1	HC10007090	IC MJM-4560
QE02	1	1	1	1	HC10003090	IC 4558D
PO00	1	1	1	1	YK208H1530	PO00-AC. SWITCH CIRCUIT BOARD P.W. Board, AC Switch
	1	1			ZZ208H1530	P.W. Board Assembly
			1		ZZ208H8530	P.W. Board Assembly
				1	ZZ208H7530	P.W. Board Assembly
△G001	1	1			DK18103530	PO00-CAPACITORS Ceramic 0.01μF
△G001			1		DK18103840	Ceramic 0.01μF
△G001				1	DK18103850	Ceramic 0.01μF
△S001	1	1			SP01010420	PO00-SWITCHES Push Switch, AC Power
△S001			1	1	SP01010390	Push Switch, AC Power

NOTE ON SAFETY:

Symbol △ Fire or electrical shock hazard. Only original parts should be used to replace any part marked with symbol △. Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

REF. DESIG.	Q'TY				PART NO.	DESCRIPTION
	U	C	N	A		
PP00	1	1	1	1	YH234H0210	PP00-FUSE CIRCUIT BOARD P.W. Board, Fuse
	1	1			ZZ234H0210	P.W. Board Assembly
			1	1	ZZ234H8210	P.W. Board Assembly
CP01	1	1	1	1	EA47702530	Elect Cap. 470μF 25V
QP01	1	1	1	1	HD20015030	Diode DS135D
FP01	1	1			FS10100500	Fuse 1A 250V
FP01			1	1	FS1005080	Fuse T500mA 250V
JP09	1	1			YJ08000170	Jack, Fuse Holder
JP09			1	1	YJ08000270	Jack, Fuse Holder
JP10	1	1			YJ08000170	Jack, Fuse Holder
JP10			1	1	YJ08000270	Jack, Fuse Holder
PW00	1	1	1	1	YK234H1660	PW00-HEADPHONE CIRCUIT BOARD P.W. Board, Headphone
	1	1	1	1	ZZ234H1660	P.W. Board Assembly
RW01	1	1	1	1	GA05331010	Resistor 330Ω ±5% 1W
RW02	1	1	1	1	GA05331010	Resistor 330Ω ±5% 1W
JW01	1	1	1	1	YJ01001650	Jack, Headphone
PX01	1	1	1	1	YK234H1520	PX01-LED LEVEL METER DRIVE CIRCUIT BOARD P.W. Board, LED Level Meter Drive
	1	1	1	1	ZZ234H1520	P.W. Board Assembly
CX01	1	1	1	1	EA33505030	PX01-CAPACITORS Elect 3.3μF 50V
CX02	1	1	1	1	EA33505030	Elect 3.3μF 50V
CX03	1	1	1	1	EA10505030	Elect 1μF 50V
CX04	1	1	1	1	EA10505030	Elect 1μF 50V
CX05	1	1	1	1	DK18103326	Ceramic 0.01μF
CX06	1	1	1	1	DK18103326	Ceramic 0.01μF
RX01	1	1	1	1	GD05103140	PX01-RESISTORS (All Resistors are ±5% and ¼W) 10KΩ
RX02	1	1	1	1	GD05103140	10KΩ
RX03	1	1	1	1	GD05104140	100KΩ
RX04	1	1	1	1	GD05104140	100KΩ
RX07	1	1	1	1	RA02030060	20KΩ, Trimming
RX08	1	1	1	1	RA02030060	20KΩ, Trimming
RX25	1	1	1	1	GD05563140	56KΩ
RX26	1	1	1	1	GD05563140	56KΩ
RX27	1	1	1	1	GD05333140	33KΩ
RX28	1	1	1	1	GD05333140	33KΩ

REF. DESIG.	Q'TY				PART NO.	DESCRIPTION
	U	C	N	A		
QX01	1	1	1	1	HD30076090	PX01-SEMICONDUCTORS Zener WZ038
QX02	1	1	1	1	HD30076090	Zener WZ038
QX03	1	1	1	1	HD20011050	Diode 1S1555
QX04	1	1	1	1	HD20011050	Diode 1S1555
QX05	1	1	1	1	HC10008370	IC TL489C
QX06	1	1	1	1	HC10008370	IC TL489C
QX07	1	1	1	1	HC10003090	IC 4558D
QX21	1	1	1	1	HD20011050	Diode 1S1555
QX22	1	1	1	1	HD20011050	Diode 1S1555
JX01	1	1	1	1	YJ07000750	PX01-MISCELLANEOUS Jack, 4P
JX02	1	1	1	1	YJ07000760	Jack, 2P
PX02	1	1	1	1	YK234H1530	PX02-LED LEVEL METER CIRCUIT BOARD P.W. Board, LED Level Meter
	1	1	1	1	ZZ234H1530	P.W. Board Assembly
RX10	1	1	1	1	GD05181140	PX02-RESISTORS (All Resistors are ±5% and ¼W) 180Ω
RX11	1	1	1	1	GD05561140	560Ω
RX12	1	1	1	1	GD05561140	560Ω
RX13	1	1	1	1	GD05561140	560Ω
RX14	1	1	1	1	GD05561140	560Ω
RX15	1	1	1	1	GD05561140	560Ω
RX16	1	1	1	1	GD05561140	560Ω
RX17	1	1	1	1	GD05561140	560Ω
RX18	1	1	1	1	GD05561140	560Ω
RX19	1	1	1	1	GD05561140	560Ω
RX20	1	1	1	1	GD05561140	560Ω
QX08	1	1	1	1	HI10031020	PX02-SEMICONDUCTORS L.E.D. LN-224GP
QX09	1	1	1	1	HI10030020	L.E.D. LN-224RP
QX10	1	1	1	1	HI10030020	L.E.D. LN-224RP
QX11	1	1	1	1	HI10030020	L.E.D. LN-224RP
QX12	1	1	1	1	HI10030020	L.E.D. LN-224RP
QX13	1	1	1	1	HI10030020	L.E.D. LN-224RP
QX14	1	1	1	1	HI10030020	L.E.D. LN-224RP
QX15	1	1	1	1	HI10030020	L.E.D. LN-224RP
QX16	1	1	1	1	HI10030020	L.E.D. LN-224RP
QX17	1	1	1	1	HI10030020	L.E.D. LN-224RP
QX18	1	1	1	1	HI10030020	L.E.D. LN-224RP

(W01-99)

Assembly and Wiring

(T01-99)

Adjustment

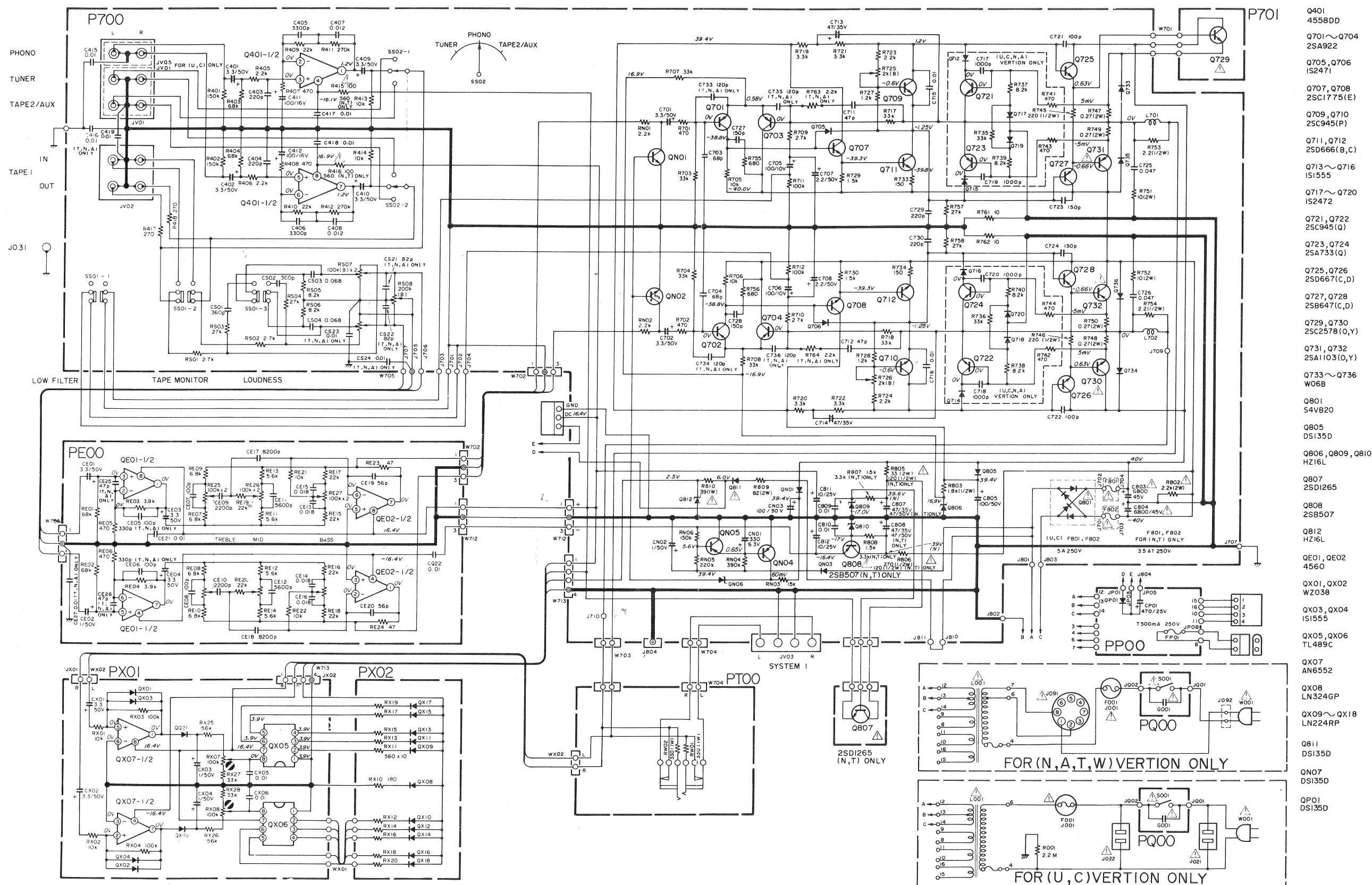
(X01-00)

Correction

13. TECHNICAL SPECIFICATIONS

POWER OUTPUT PER CHANNEL	
DIN 8 OHMS 1 kHz	42 W
RMS 8 OHMS 1 kHz	40 W
TOTAL HARMONIC DISTORTION AT RMS 8 OHMS	0.05 %
Frequency Response	
MM (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
Dimensions (W x H x D)	416 x 73 x 302 mm
Weight	.5 kg

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

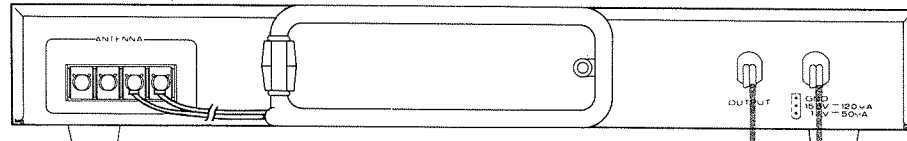


Components and wiring are subject to change for modification without notice.

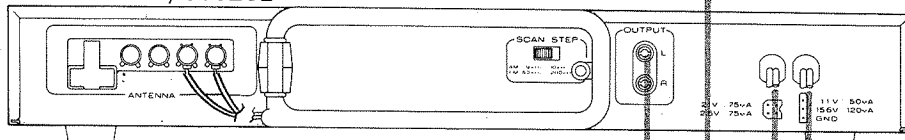
SYSTEM CONNECTION

(DC625/DC625L & DC425/DC425L)

Model ST325/ST325L



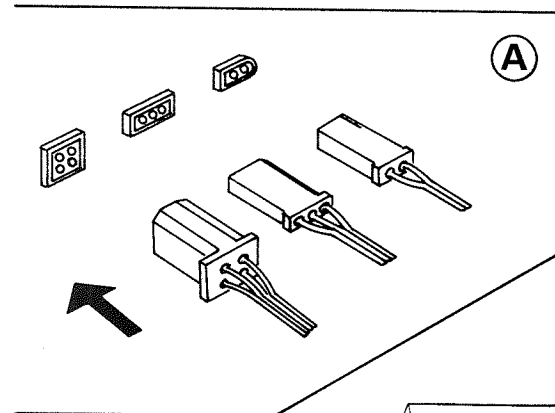
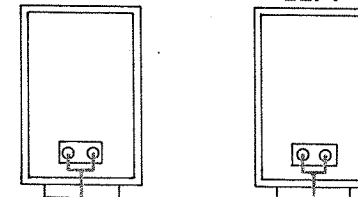
Model ST525/ST525L



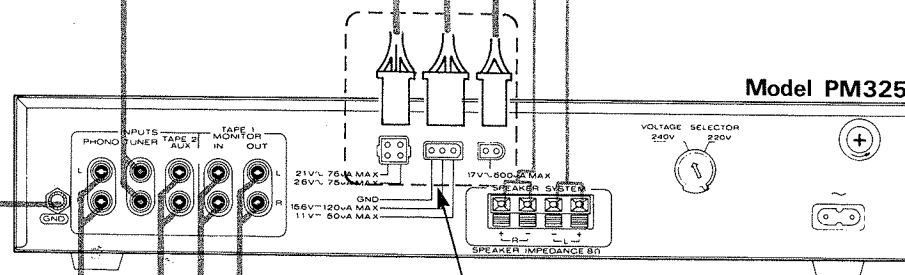
SPEAKER

RIGHT

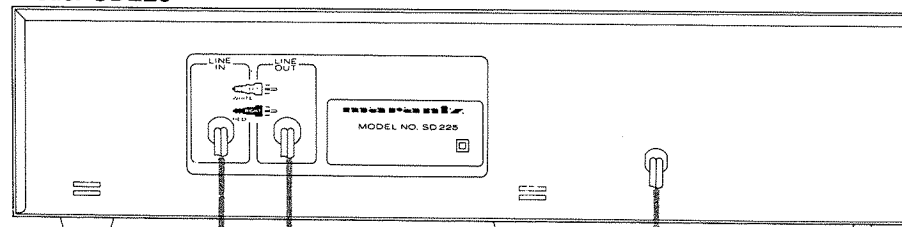
LEFT



TURNTABLE



Model SD225



FOR TV SOUND ETC.