

SERVICE
MANUAL PM54II/PM64II

marantz®

model PM-54II/PM-64II

Stereo 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.

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.

TECHNICAL ASSISTANCE
Should you require any other technical support, do not hesitate to contact the Technical Department of MARANTZ INTERNATIONAL, Quality & Service Dept., 80, Rue des Deux Cèdres, B-1070 Brussels Belgium
Phone: 60.625.70.22 or 625.70.23
Telex: 62.625.6150
Telex: 23550 OR
61011 (FHEMB) routing: BELDMZT

PARTS ORDERING

Parts may be ordered at the following addresses:

AUSTRIA HORNBYRON Werkzeugmaschinen GmbH Haidmühlgasse 5 A 1101 Wien Austria Telex: 132.332	FRANCE MARANTZ FRANCE 4 Rue Serravallo 92000 Nanterre France Telex: 611651	GREAT BRITAIN MARANTZ AUDIO U.K. Ltd Unit 15/16 Sutton Way, Hounslow Estate Moor Lane Hounslow, Middlesex TW4 5LW Great Britain Telex: 550756	SAUDI ARABIA AL ALABAH ELECTRONICS P.O. Box 564 University Street Hayah 11430 Ottob Arabia Telex: 201320	SWITZERLAND DYNACON ELECTRONICS Route de Wang 105 CH 1211 Fribourg Switzerland Telex: 142271
AUSTRALIA MARANTZ AUSTRALIA PFL, Ltd. 18 Cleveland Road St Albans, VIC 3100 Australia Telex: 24121	GERMANY MARANTZ GERMANY GmbH Max-Planck-Strasse 22 60528 Frankfurt 1 Germany Telex: 539621	GREECE SHERTON ELECTRONICS S.A. P.O. Box 21025 Nicosias Street 188 Athens 11471 Greece Telex: 216.735	SOUTH AFRICA MARANTZ DIVISION OF PHILIPS S.A. Burger Street Cnr. Orange St. Dorchester Johannesburg Telex: 483.456	TURKEY DOGRUOLU Ltd. 8 Bilk 197510 Ulubatli Sultan Turkey Telex: 52965
BELGIUM SVO DIVISION MARANTZ Industriest 1 1720 Groot-Bigardien Belgium Telex: 24499	THE NETHERLANDS EDIP 15 De Linde 3 4312 NB Yvelen The Netherlands Telex: 47078	JAPAN MARANTZ JAPAN, Inc. 35-1, 7-chome, Sagamiya Sagamihara-shi, Kanagawa Japan	SPAIN PHONOS S.A. Orleans Street 18 Bilbao 48 (Bilbao) Spain Telex: 65655	MALTA CACHIA & CALIA L.L.C. Paceville Street, SLD Valletta Telex: 1562
CHILE MARANTZ DIVISION OF PHILIPS S.A. AV. Santa Maria, 0780 Casilla 2967 Santiago Telex: 243.239	NORWAY DIVISION OF PHILIPS A/S Sjögroveien 49 Oslo 5 Norway Telex: 72640	KUWAIT AL ALABAH ELECTRONICS Usamah Building, Fahd al Salem Street P.O. Box 2231 Salem-Kuwait Telex: 22684	SWEDEN MARANTZ DIVISION OF PHILIPS Föreningsgatan 1 S-115 84 Stockholm Sweden Telex: 14060	U.S.A. MARANTZ COMPANY, Inc. National Service Department P.O. Box 877 Chatsworth, CA 91311 U.S.A.
DENMARK MARANTZ DIVISION OF PHILIPS SERVICE A/S Prags Boulevard 80 Postboks 1978 DK-2000 København 5 Denmark Telex: 31201	ITALY MARANTZ ITALIANA S.P.A. Via Chiesa, 74 20126 Milano Italy			

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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How to use this service manual

- The "Common parts" which Marantz Japan, Inc. has established are eliminated from this service manual.
- These "Common parts" are applied to all models in the service manuals arranged and issued by M.J.I.
- To indicate clearly the common parts in the schematic diagram, a line is drawn above or under the Ref. Desig. No. of applicable parts.
- "Common parts" can be supplied from the Marantz service center as ever.

In case of ordering, please establish the parts number of 10 figures following the procedure mentioned in this service manual "How to establish the parts number for common parts".

(NOTE)
When you order parts to the Marantz parts center, please take notice of the following points.

- 1) Please correctly write the parts number of 10 figures following the rule.
- 2) Since ordering parts by the Ref. Desig. No. or ratings indicated in the schematic diagram does not satisfy the above conditions, the Marantz parts supply system does not work properly.

As this case is apt to cause a trouble, please pay attention to it.

MODEL PM-54II/PM-64II STEREO AMPLIFIER



Model PM-54II



Model PM-64II

INTRODUCTION

This service manual was prepared for use by Authorized Warranty Stations and contains service information for the Marantz Model PM-54II/PM-64II Stereo Amplifier.

Service 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. P.W. BOARDS

As can be seen from the circuit diagram the chassis of Model PM-54II/PM-64II 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.

(Model PM-54II)

- 1. Tone Volume mounted on P.W. Board PE01
- 2. Tone Defeat Switch mounted on P.W. Board PE51
- 3. Balance Volume mounted on P.W. Board PE51
- 4. Tape Monitor mounted on P.W. Board PJ01
- 5. Volume &
- 6. Push Switch mounted on P.W. Board PS01
- 6. AVSS mounted on P.W. Board PL01
- 7. Phone.
- 8. Input Selector mounted on P.W. Board PV01
- 8. Speaker Protector mounted on P.W. Board PW01
- 9. Speaker Switch &
- 10. Input Selector mounted on P.W. Board PWS1
- 11. Display mounted on P.W. Board PY01
- 11. Main Amp mounted on P.W. Board PZ01
- 12. Power Supply (Std) mounted on P.W. Board P801
- 13. Power Supply mounted on P.W. Board P851
- 14. Power Switch mounted on P.W. Board P901

2. TEST EQUIPMENT REQUIRED FOR SERVICING

This table lists the test equipment required for servicing the Model PM-54II/PM-64II Stereo Amplifier.

Item	Use
Distortion Analyzer	Distortion measurements
Audio Oscillator	Sinewave and squarewave signal source
AC VTVM	Voltage measurements (AC)
Oscilloscope	Waveform analysis and trouble shooting and ASO alignment
Circuit Tester	Trouble shooting
DC VTVM	Voltage measurements (DC)
AC Wattmeter	Monitors primary power to amplifier
Line Voltmeter	Monitors potential of primary power to amplifier
Variable Autotransformer (0 - 140V AC, 10A)	Adjust level of primary power to amplifier
Shorting Plug	Shorts amplifier input to eliminate noise pickup

3. ADJUSTMENT PROCEDURE

3.1 Idling Adjustment (Model PM-64II)

1. Connect DC digital voltage to test point R737 (L-CH) and R738 (R-CH) terminals.
2. Turn POWER SWITCH to ON, and adjust R719 (L-CH) and R720 (R-CH) to 6mV 30 sec. later, and to 7.5mV 1 min. later.

Note:
When adjusting, have output with no load, input to open, and volume on minimum.

3.2 Idling Adjustment (Model PM-64II)

1. Short-circuit the two pins in the AVSS board (PU01) marked CLASS A and CLASS B.
2. Adjust the main board (P701) semi-fixed resistors R719 and R720 so that the voltage between the ends of the emitter resistor is within 14 to 15 mA.
3. Immediately remove the short and adjust semi-fixed resistors RU35 and RU36 for a voltage of 100 mV between the ends of the emitter resistor.
(Do this in the shortest time possible.)
4. Short-circuit the two pins in the AVSS board (PU01) marked CLASS A-25W.
5. Adjust semi-fixed resistors RU33 and RU34 for a voltage of 174 mV between the ends of the emitter resistor.
6. Finally, remove the short.

(Model PM-64II)

1. Tone Volume (L) . . . mounted on P.W. Board PE01
2. Tone Volume (R) . . . mounted on P.W. Board PE02
3. Tone Unit mounted on P.W. Board PE50
4. Tone Defeat Switch . . . mounted on P.W. Board PE51
5. Tape Monitor mounted on P.W. Board PS01
6. Volume/Power Switch . . mounted on P.W. Board PS02
7. Master Volume mounted on P.W. Board PS02
8. AVSS mounted on P.W. Board PV01
9. Phono Input Selector . . mounted on P.W. Board PV01
10. Speaker Protector
11. Speaker Switch/Relay mounted on P.W. Board PW01
12. Phono mounted on P.W. Board PW51
13. Input Selector
14. Display mounted on P.W. Board PV01
15. Main Amp mounted on P.W. Board PV01
16. Diode Bridge mounted on P.W. Board PE01
17. Power Supply mounted on P.W. Board PE51

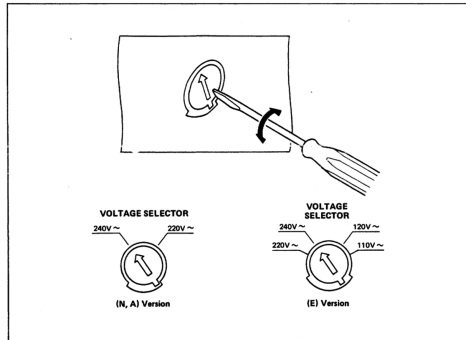
4. VOLTAGE CONVERSION

• 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.

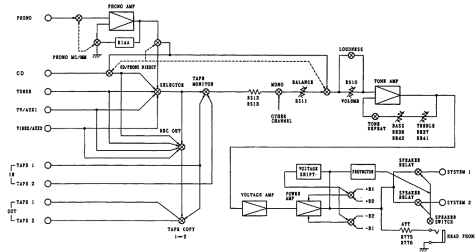
Voltage Conversion Chart



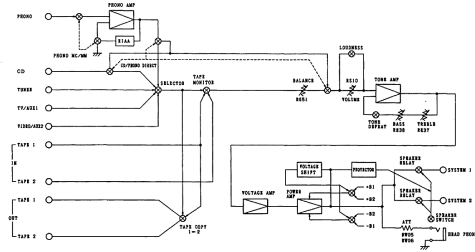
Note on safety: Symbol Δ : Fire or electrical shock hazard. Only original parts should be used to replace any part marked with symbol Δ . Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

5. BLOCK DIAGRAM

(Model PM-6411)

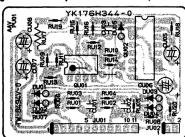
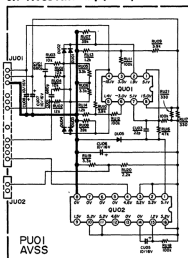


(Model PM-5411)

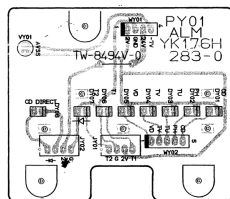
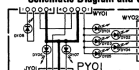


6. SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS

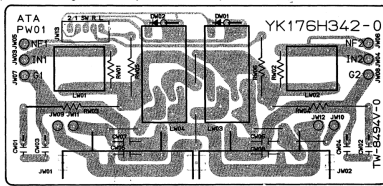
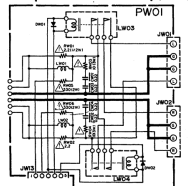
6.1 AVSS Assembly (PU01) Schematic Diagram and Component Locations (Model PM-54II)



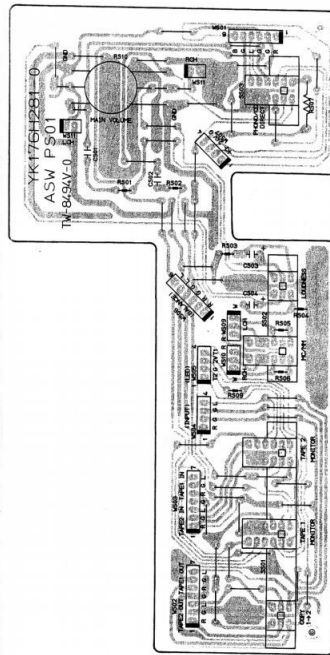
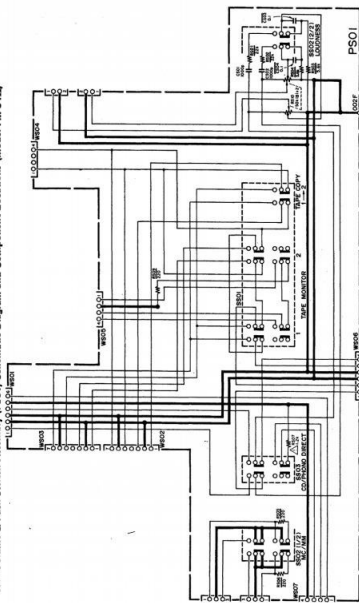
6.2 Input Selector Display Assembly (PY01) Schematic Diagram and Component Locations (Model PM-54II)



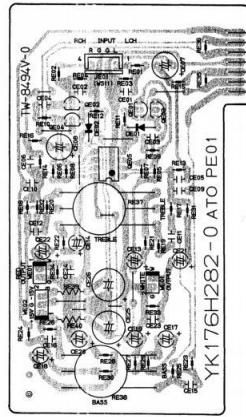
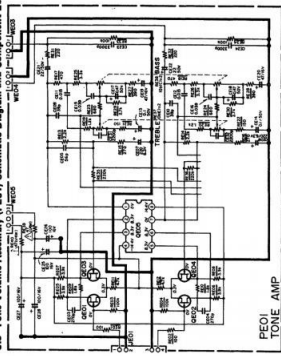
6.3 Speaker Protector Assembly (PW01) Schematic Diagram and Component Locations (Model PM-54II)



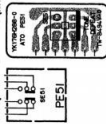
6.4 Volume & Push Switch Assembly (PS01) Schematic Diagram and Component Locations (Model PM-541D)



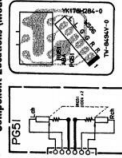
6.5 Tone Volume Assembly (PE01) Schematic Diagram and Component Locations (Model PM-541D)



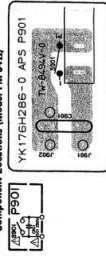
6.6 Tone Defeat Switch Assembly (PE01) Schematic Diagram and Component Locations (Model PM-541D)



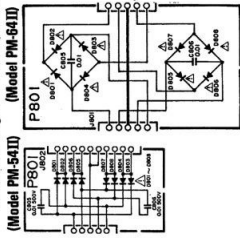
6.8 Balance Volume Assembly (PS01) Schematic Diagram and Component Locations (Model PM-541D)



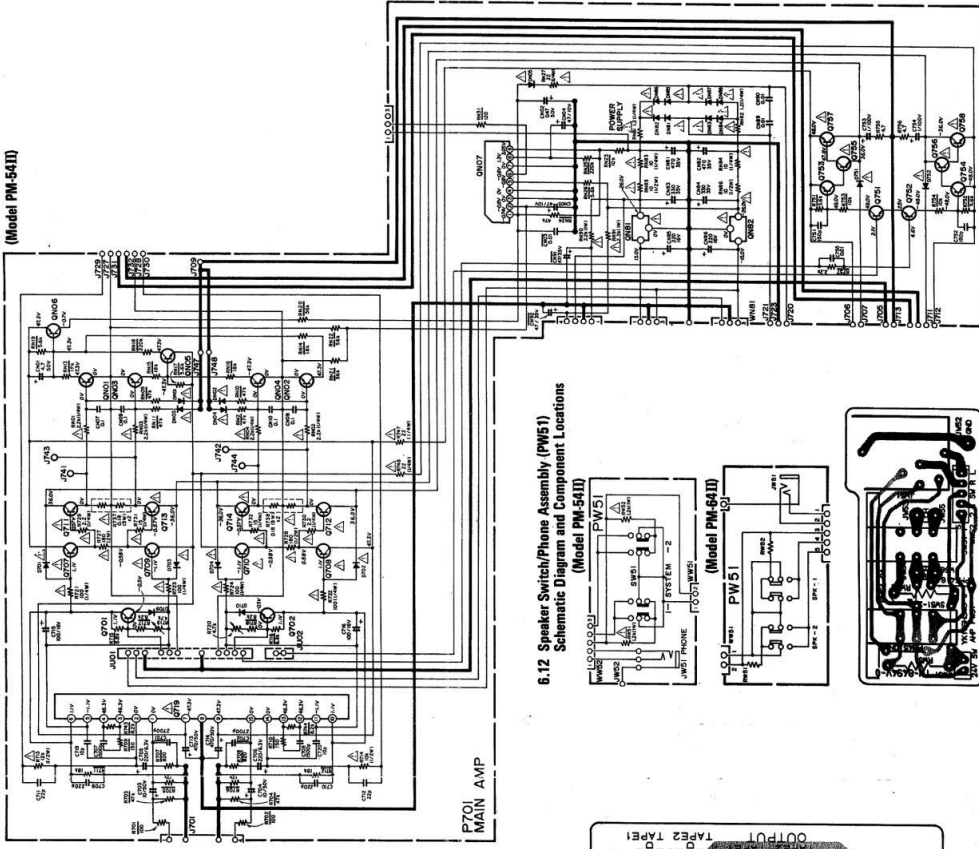
6.7 Power Switch Assembly (PS01) Schematic Diagram and Component Locations (Model PM-541D)



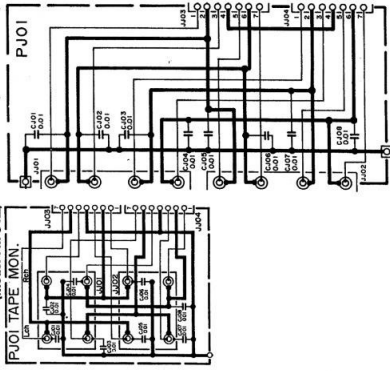
6.9 Diode Bridge Assembly (P801)
Schematic Diagram and Component Locations



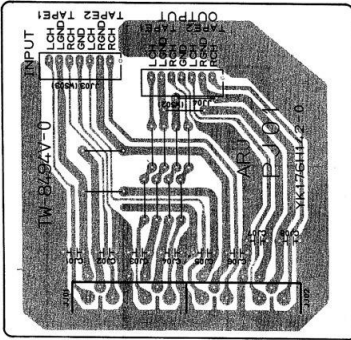
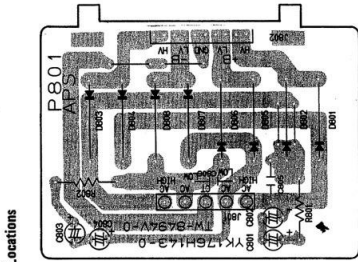
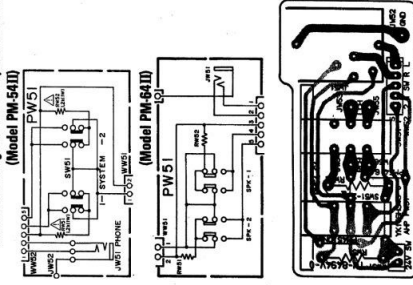
6.11 Main Amp Assembly (P701) Schematic Diagram and Component Locations
(Model PM-541I)

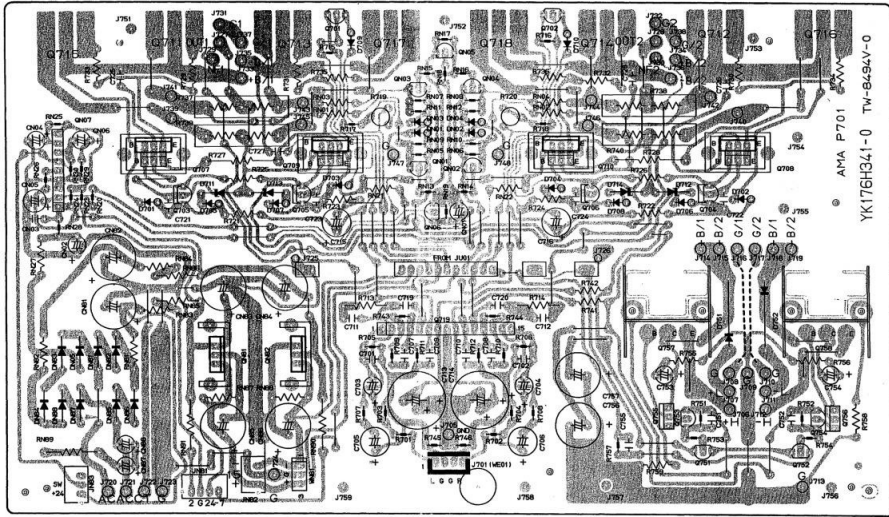


6.10 Tape Monitor Assembly (P101)
Schematic Diagram and Component Locations
(Model PM-541I)

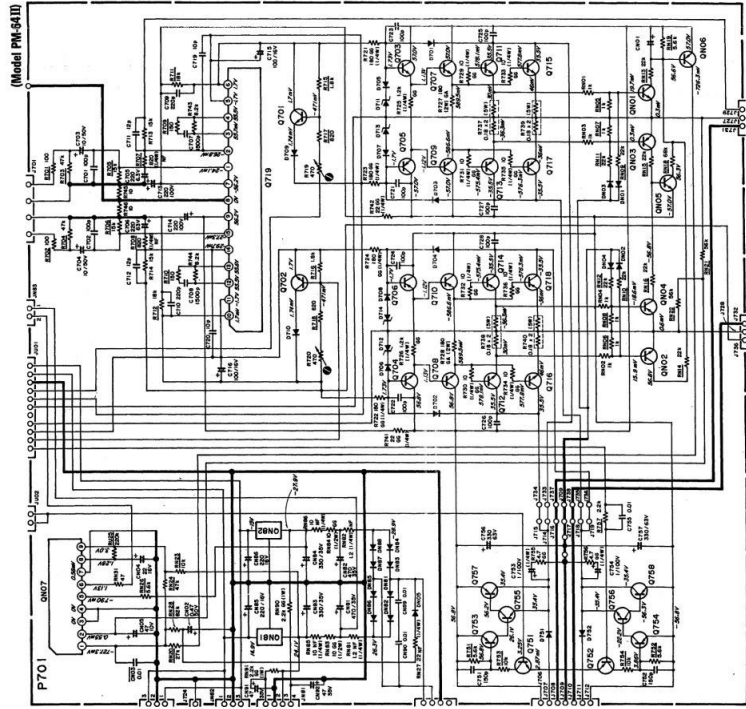


6.12 Speaker Switch/Phone Assembly (PW51)
Schematic Diagram and Component Locations
(Model PM-541I)





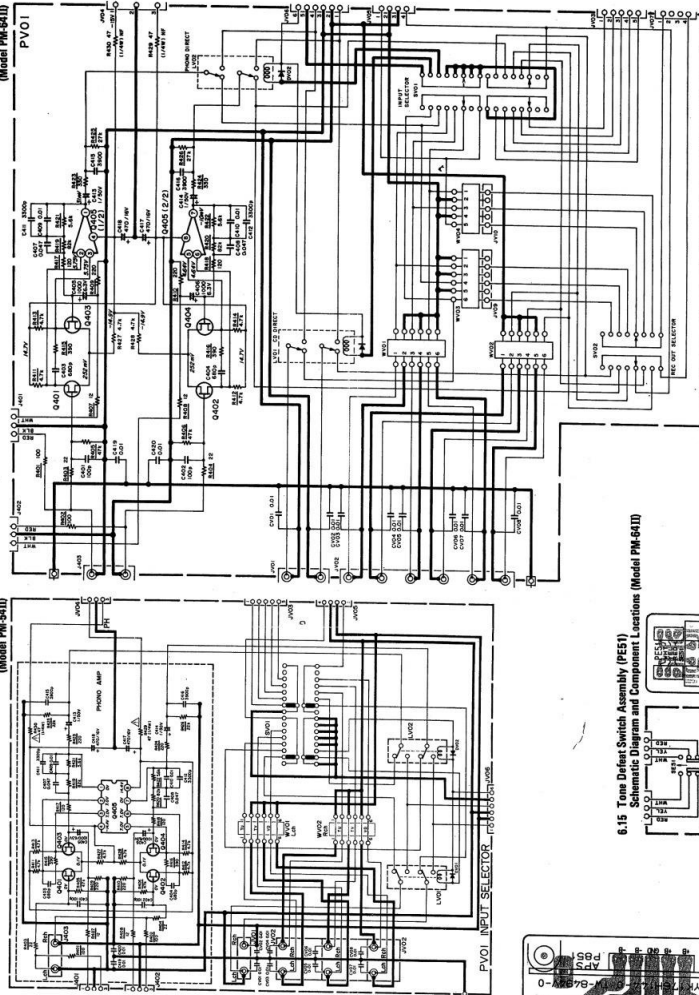
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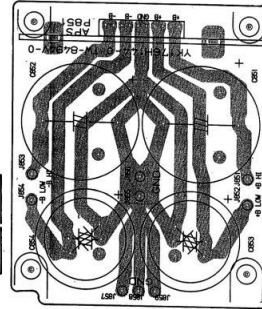
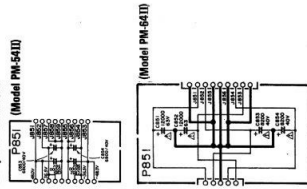
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M.3551

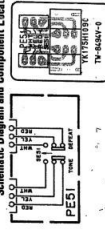
6.14 Photo Input Selector Assembly (PVOI) Schematic Diagram and Component Locations (Model PM-5410)

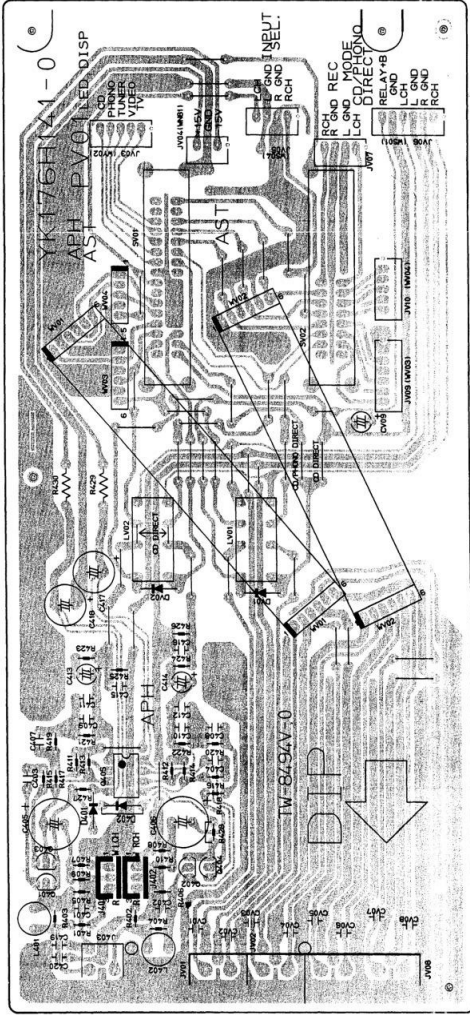


6.13 Power Supply Assembly (PES1) Schematic Diagram and Component Locations (Model PM-5410)

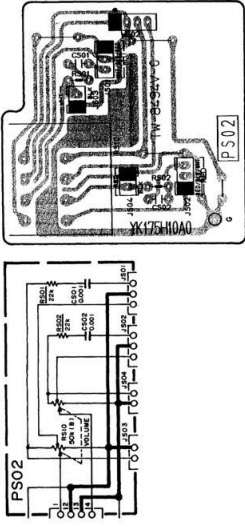


6.15 Tone Detect Switch Assembly (PES1) Schematic Diagram and Component Locations (Model PM-5410)

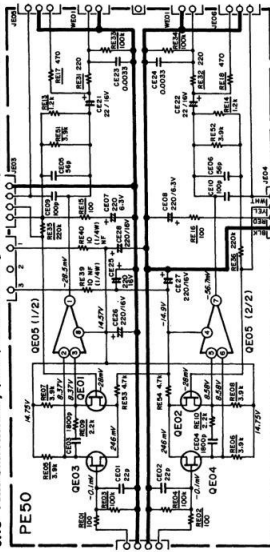




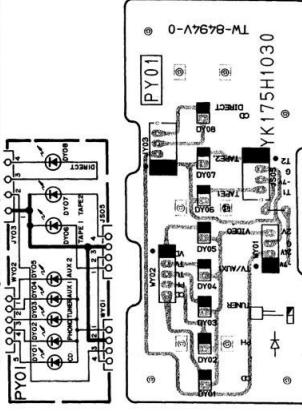
6.17 Master Volume Assembly (PS02)
Schematic Diagram and Component Locations (Model PM-641D)

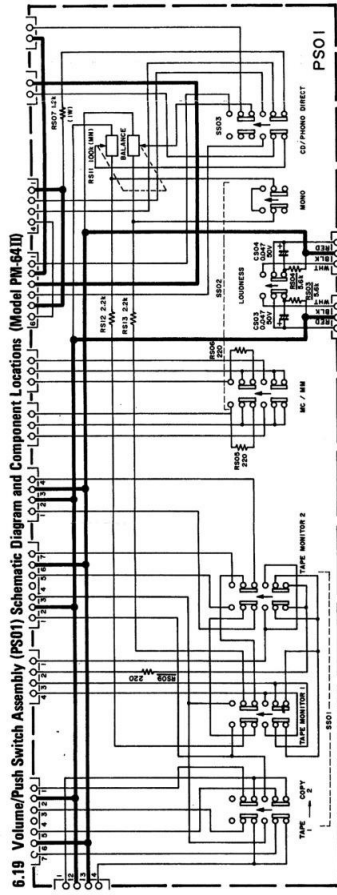


6.16 Tone Unit Assembly (PE50) Schematic Diagram and Component Locations (Model PM-641D)

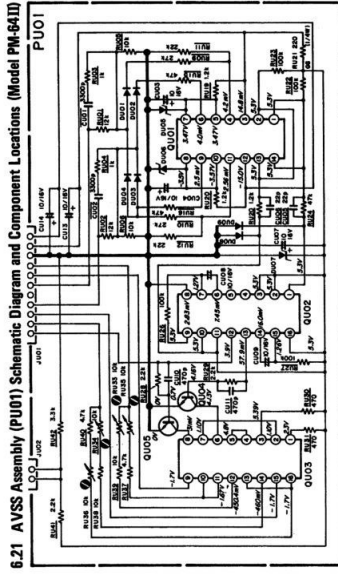
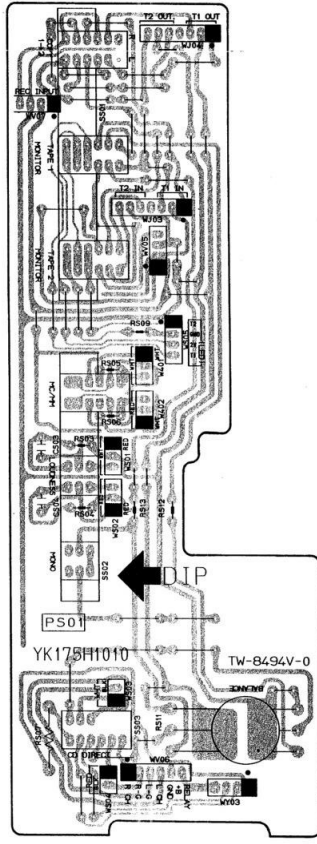


6.18 Input Selector Display Assembly (PY01)
Schematic Diagram and Component Locations (Model PM-641D)

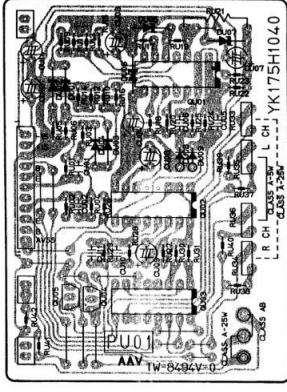




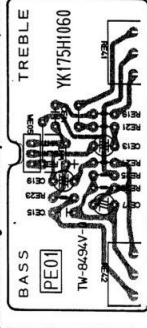
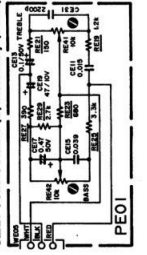
6.19 Volume/Push Switch Assembly (PS01) Schematic Diagram and Component Locations (Model PM-641D)



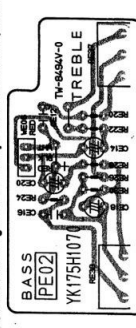
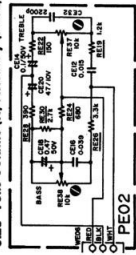
6.21 AVSS Assembly (PU01) Schematic Diagram and Component Locations (Model PM-641D)



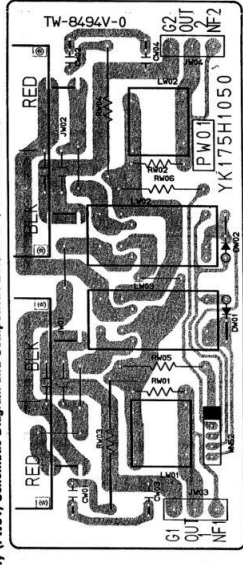
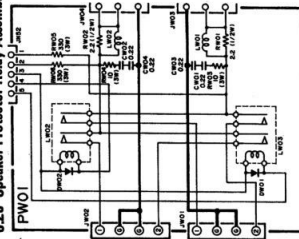
6.22 Tone Volume (L) Assembly (PE01) Schematic Diagram and Component Locations (Model PM-641D)



6.23 Tone Volume (R) Assembly (PE02) Schematic Diagram and Component Locations (Model PM-641D)

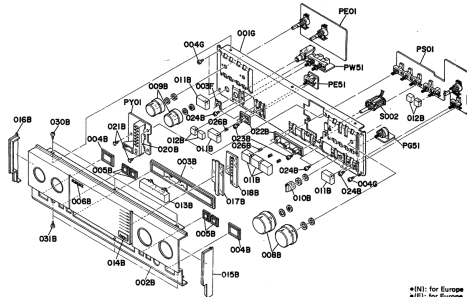


6.20 Speaker Protector Relay Assembly (PW01) Schematic Diagram and Component Locations (Model PM-641D)



7. EXPLODED VIEW AND PARTS LIST (Model PM 541I)

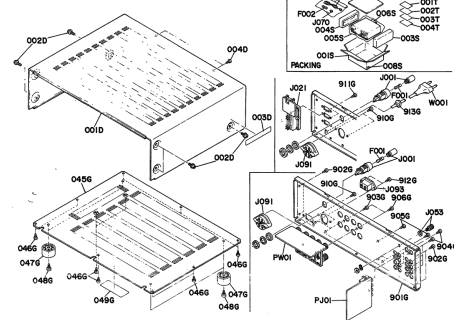
(C01-99) Front Panel and Chassis



*H1: for Europe
*E1: for Europe
*A1: for Australia
*F1: for Japan
*G1: for FX

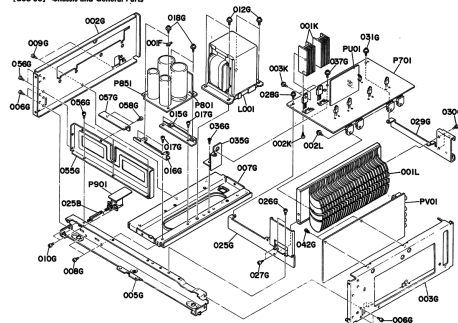
REF. DESIG.	PART NO.	DESCRIPTION	REF. DESIG.	PART NO.	DESCRIPTION
A	182H248410	Front Panel Assembly (Gold)	0098	178H154410	Knob, Selector/Volume, Black
0028	182H248110	Front Panel	178H154110	Knob, Selector/Volume, Gold	
0028	178H259020	Bushing, Tone Defeat/Tape Cope	0098	178H154420	Knob, Tone Control, Black
0048	242H289020	Bushing, Power, CD, Phone Direct	178H154120	Knob, Tone Control, Gold	
0058	242H259030	Bushing, Speaker, Direct	0108	263H114130	Knob, Balance, Black
0068	274H259100	Badge, Marantz	263H114230	Knob, Balance, Gold	
0138	263H113100	Stud	0118	242H270110	Button, Black
0148	178H259120	Badge, AVSS	242H270010	Button, Gold	
0168	178H259110	Cap, Front Side (R)	242H270230	Button, Black	
0188	178H260720	Cap, Front Side (L)	242H270020	Button, Gold	
0178	263H158010	Window	0208	178H271010	Holder, LED
0198	178H151010	Introducer	0218	2718050000	Chassis
A	182H248400	Front Panel Assembly (Black)	0228	178H051010	Guide, Button
0028	182H248010	Front Panel	0238	5110030800	B.H.M. Screw 83 x 8
0028	178H259010	Bushing, Tone Defeat/Tape Cope	0248	5110030800	B.H.M. Screw 83 x 8
0048	242H259130	Bushing, Power, CD/Phone Direct	0268	78H110010	Spring, Button
0058	242H259130	Bushing, Speaker/Loudness	0308	5128030800	B.H. Tapped Screw 83 x 8
0068	274H259100	Badge, Marantz	0318	5128030800	B.H. Tapped Screw 83 x 8
0138	263H113110	Stud	0337	198T114510	Stopper, Headphone Jack
0148	178H259110	Badge, AVSS	0348	178H150510	Chassis, Front
0168	178H260720	Cap, Right Side	0448	5128030800	B.H. Tapped Screw 83 x 8
0168	178H260730	Cap, Left Side	8002	8R00050210	Rotary Switch, Input Selector
0178	263H158010	Window			
0198	178H151010	Introducer			

[00299] Lid and Packing Materials



REF. DESIG.	PART NO.	DESCRIPTION	REF. DESIG.	PART NO.	DESCRIPTION	
0010	178H257010	Lid, Top Cover, Black	Δ J001	YJ06000290	Jack, Fuse Holder	
0020	178H257020	Lid, Top Cover, Gold	Δ J002	YJ04000700	Jack, AC Outlet: 3P [E, G]	
0030	51260408A0	B.T. Screw	0053	Y101010100	Terminal, GND	
0040	2911861140	Label, Caution	Δ J091	BV05030040	Voltage Selector [N, A]	
	51280308A0	B.H. Tapped Screw	83 x 8	BV05080060	Voltage Selector [E, G]	
0456	268H257020	Lid, Bottom Cover	Δ J093	YF04000610	Plug, AC Inlet [N, A]	
0466	51280308A0	B.H. Tapped Screw	83 x 8	Δ W001	YC01800370	A.C. Power Cord [E, G]
0476	2789067010	B.H. Tapped Screw	84 x 10			
0486	51280308A0	B.H. Tapped Screw	83 x 8	0015	182H801010	PACKING
0496	51280308A0	B.H. Tapped Screw	83 x 8			
0015	182H801010	Packing Case [N, A]	0015	182H801020	Packing Case [E, G]	
0025	182H250020	Label, Caution	0025	178H807010	Reinforcing [E, G]	
0035	182H250020	Rear Panel [N, A]	0035	263H808010	Cushion, Right	
0045	51280308A0	B.H. Tapped Screw	83 x 8	0045	263H808020	Cushion, Left
0055	51280308A0	B.H. Tapped Screw	83 x 8	0055	908111020	Polyethylene Sheet
0065	51280308A0	B.H. Tapped Screw	83 x 8	0065	2846404010	Strip, AC Power Cord [E, G]
0085	51280308A0	B.H. Tapped Screw	83 x 8	0085	9626018050	Serial No. Card [G]
0017	178H851310	User Manual	0017	178H851310	User Manual	
0027	182H851220	User Manual, Spec	0027	182H851220	User Manual, Spec	
0037	182H856010	Circuit Diagram [N, E]	0037	182H856010	Circuit Diagram [N, E]	
	418H854010	Warranty Card [G]		418H854010	Warranty Card [G]	
0047	9631000900	Warranty Card [A]	0047	9631000900	Warranty Card [A]	
Δ F002	F510400890	Fuse	T4.0A	250V [E, G]		
Δ J070	YJ04001240	Jack, AC Adapter [E, G]				
Δ W001	ZC01806030	A.C. Power Cord [N]				
	ZC02006030	A.C. Power Cord [A]				

[C03-99] Chassis and General Parts

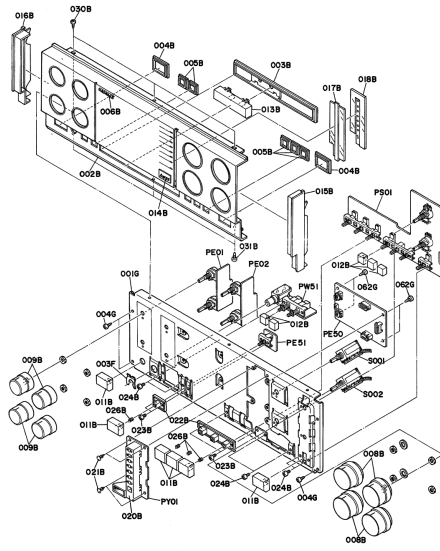


REF. DESIG.	PART NO.	DESCRIPTION	REF. DESIG.	PART NO.	DESCRIPTION
0028	178H125010	Joint, Power Switch	035G	178H104070	Retainer, Main P.W. Board
001F	62030049W0	Log, Earth	0360	51280308M0	B.H. Tapped Screw 83 x 8
002D	178H106020	Chassis, Left Side	027G	51280308M0	B.T. Screw
002B	178H106020	Chassis, Right Side	042G	2278006060	Clamper
002C	178H106020	Swy. Center	056G	178H109010	Shield
0065	51280308M0	B.H. Tapped Screw 83 x 8	058G	51280308M0	B.H. Tapped Screw 83 x 8
0076	178H160010	Bracket, Power Transformer	001L	178H287130	Heatsink, Main
0086	51280308M0	B.H. Tapped Screw 83 x 8	002L	51280312M0	B.T. Screw
0066	51280308M0	B.H. Tapped Screw 83 x 8	001K	182H267010	Heatsink (G797, G798)
0190	51100008M0	B.H.M. Screw 83 x 6	002K	51280308M0	B.H. Tapped Screw 82.6 x 8
0195	178H104040	Retainer, Rear	003K	51100308M0	B.H.M. Screw
0180	178H104050	Retainer, Front	A.L001	T818507050	Power Transformer (H, A)
0170	51280308M0	B.H. Tapped Screw 83 x 8		T818507060	Power Transformer (E, G)
0182	51280308M0	B.H. Tapped Screw 83 x 8			
0282	178H104020	Retainer, Heatsink; Front			
0280	51280308M0	B.H. Tapped Screw 83 x 8			
0270	51280308M0	B.H. Tapped Screw 83 x 8			
0288	51280308M0	B.T. Screw			
0283	178H104030	Retainer, Heatsink; Rear			
0300	51280308M0	B.H. Tapped Screw 83 x 8			
0310	51280308M0	B.H. Tapped Screw 83 x 8			

M3153

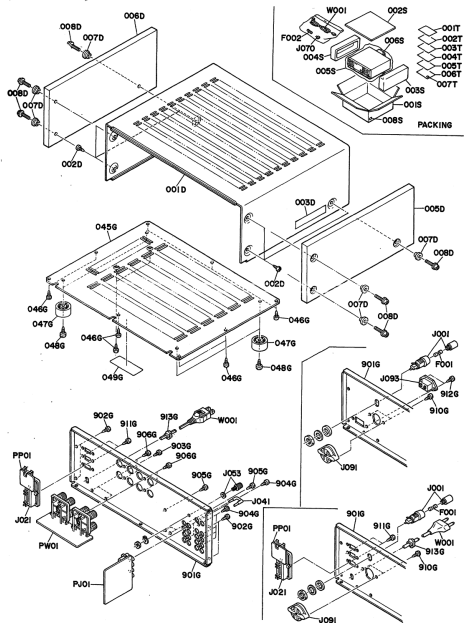
(Model FM-64T)

(C04-99) Front Panel and Chassis



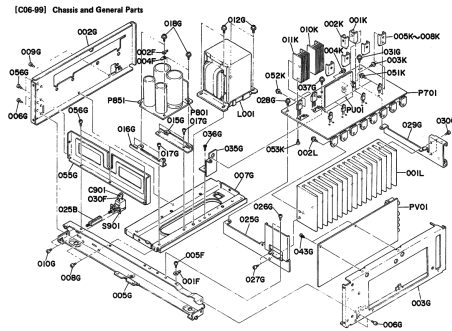
REF. DESIG.	PART NO.	DESCRIPTION	REF. DESIG.	PART NO.	DESCRIPTION
		FM-64MKII			
A	175H248400	Front Panel Assembly (Black)	0088	175H154010	Knob (Black)
A1	175H248410	Front Panel Assembly (Gold)		175H154020	Knob (Gold)
0028	175H248020	Front Panel (Black)	0088	175H154030	Knob (Black)
	175H248030	Front Panel (Gold)		175H154040	Knob (Gold)
0038	175H259010	Bushing, Tone Defeat/Tape Cope (Black)	0118	242H270110	Button (Black)
	175H259020	Bushing, Tone Defeat/Tape Cope (Gold)		242H270120	Button (Black)
0048	242H289120	Bushing, Power/CD, Phono Direct (Black)	0128	242H270130	Button (Gold)
	242H289200	Bushing, Power/CD, Phono Direct (Gold)	0208	175H271010	Holder, LED
0058	242H259130	Bushing, Speaker/Loudness/etc. (Black)	0218	51280308M0	B.T. Screw 83 x 8
	242H259200	Bushing, Speaker/Loudness/etc. (Gold)	0228	175H081010	Guide, Button
0608	274H251020	Badge, Marantz	0238	51100308M0	B.H.M. Screw 83 x 8
0138	263H113110	Stud (Black)	0248	51100308M0	B.H.M. Screw 83 x 8
	263H113210	Stud (Gold)	0268	175H119010	Spring, Button
0148	175H251010	Badge, AV/BS	0308	51280308M0	B.H. Tapped Screw 83 x 8
0158	242H067110	Cap, Right Side (Black)	0318	51280308M0	B.H. Tapped Screw 83 x 8
	242H067120	Cap, Right Side (Gold)	003F	188T114010	Stopper, Headphone Jack
0168	242H067130	Cap, Left Side (Black)	001G	175H105010	Chassis, Front
	242H067140	Cap, Left Side (Gold)	004G	51280308M0	B.H. Tapped Screw 83 x 8
0178	242H158010	Window	002G	51280308M0	B.H. Tapped Screw 83 x 8
0188	175H151010	Introducer	5001	5R00050230	Rotary Switch, Function Selector
		FM-74D	5002	5R00050090	Rotary Switch, Rec Selector
A	175H248420	Front Panel Assembly			
0028	175H248010	Front Panel			
0038	175H259010	Bushing, Tone Defeat/Tape Cope			
0048	242H259120	Bushing, Power/CD, Phono Direct			
0058	242H259200	Bushing, Speaker/Loudness/etc.			
0068	274H251020	Badge, Marantz			
0138	263H113110	Stud			
0148	175H251010	Badge, AV/BS			
0158	242H067110	Cap, Right Side			
0168	242H067120	Cap, Right Side			
0178	242H158010	Window			
0188	175H151010	Introducer			

[C05-89] Lid and Packing Materials



REF. DESIG.	PART NO.	DESCRIPTION	REF. DESIG.	PART NO.	DESCRIPTION
001D	175H257010	Lid, Top Cover (Black)	001B	175H801010	PACKING
	175H257020	Lid, Top Cover (Gold)		175H801020	Packing Case [F]
002D	5128040840	B.T. Screw 84 x 8 [N, A, E, G]		175H801030	Packing Case [N, A]
003D	2911881140	Label, Caution [N, A, E, G]	002B	175H801010	Packing Case [E, G]
006B	175H248110	Side Panel (R) [F]	003B	175H800910	Reinforcing [E, G]
006D	175H248120	Side Panel (L) [F]	004B	175H800920	Cushion, Right
007D	390K259010	Bushing [F]	006B	909111020	Cushion, Left
008D	5128043030	B.N. Tapped Screw [F]	006B	2688890010	Polystyrene Sheet
046G	268H237020	Lid, Bottom Cover	008B	909111020	Shave, AC Power Cord [E, G, F]
046G	5128030840	B.N. Tapped Screw 83 x 8	008B	9029019000	Serial No. Card [G]
047G	2759007010	Lag [N, A, E, G]	001T	175H851310	User Manual [N, F, A, G]
048G	5128041040	B.N. Tapped Screw 84 x 10		175H851320	User Manual [F]
049G	2911881110	Label, Caution [N, A, E, G]	002T	175H851320	User Manual, Spec [N, E, A, G]
901G	175H250020	Rear Panel [N, A]	003T	175H856010	Circuit Diagram [N, E]
	175H250030	Rear Panel [E, G]		416H854010	Warranty Card [G]
	175H250010	Rear Panel [F]	004T	9631000000	Warranty Card [A]
902D	5128030840	B.N. Tapped Screw 83 x 8	008T	128T354010	Warranty Card [F]
903B	5128030840	B.N. Tapped Screw 83 x 8	008T	9511000050	Warranty Card [F]
904G	5128030840	B.N. Tapped Screw 83 x 8	007T	9540000010	License [F]
905G	5128030840	B.N. Tapped Screw 83 x 8	Δ.F002	F510630850	Fuse T8.3A 250V [E, G]
906G	5128030840	B.N. Tapped Screw 83 x 8	Δ.J070	YJ04001240	Jack, AC Adapter [E, G]
910G	5128030840	B.N. Tapped Screw 83 x 8 [N, E, A, G]	Δ.W001	ZC01805020	A.C. Power Cord [N]
911G	5128030840	B.N. Tapped Screw 83 x 8 [E, G, F]		ZC02096020	A.C. Power Cord [A]
912G	5128030840	B.N. Tapped Screw 83 x 8 [N, A]			
913G	1455259090	Bushing, AC Power Cord [E, G, F]			
Δ.F001	F510318500	Fuse T3.15A 250V [E]			
	F510259850	Fuse T2.5A 250V [N, A, G]			
Δ.J001	YJ08000290	Jack, Fuse Holder [N, E, A, G]			
Δ.J021	YJ04000750	Jack, AC Outlet-3P [E, G, F]			
J053	Y701010150	Terminal, ON/OFF			
Δ.J091	BY05000440	Voltage Selector [N, A]			
	BY05000460	Voltage Selector [E, G]			
Δ.J093	YF04000610	Plug, AC Inlet [N, A]			
Δ.W001	YQ01800370	A.C. Power Cord [E, G, F]			
J041	YQ01900020	Shose Plug [F]			

[006-99] Chassis and General Parts



REF. DESIG.	PART NO.	DESCRIPTION	REF. DESIG.	PART NO.	DESCRIPTION
025B	176H125010	Joint, Power Switch	038G	176H104070	Resistor, Main P.W. Board
001F	62030049W0	Lug, Earth	039G	51903098M0	F.H. Tapping Screw
002F	62030049W0	Lug, Earth	037D	51263098M0	B.T. Screw
004F	62030049W0	Lug	042D	27925055G0	Clamp
005F	51293036M0	B.H. Tapped Screw	055G	176H109010	Shield
020F	1397120200	Insulator	056G	51293098M0	B.H. Tapped Screw
002D	176H105020	Chassis, Left Side	001L	174H267010	Heatshink, Main
002E	176H105020	Chassis, Right Side	002L	51260312M0	B.T. Screw
006G	176H126010	Stay, Center	001K	264H267020	Heatshink (QNB1)
006G	51293098M0	B.H. Tapped Screw	002K	264H267020	Heatshink (QNB2)
007D	176H160010	Bracket, Power Transformer	003K	51100308M0	B.H.M. Screw
006G	51293098M0	B.H. Tapped Screw	004K	51100308M0	B.H.M. Screw
009G	51293098M0	B.H. Tapped Screw	005K	176H267040	Heatshink (Q2701)
010I	51102036M0	B.H.M. Screw	006K	176H267040	Heatshink (Q2702)
012J	5170600250	Special Set Screw	007K	176H267040	Heatshink (Q2703)
019G	176H104050	Resistor, Front	008K	176H267040	Heatshink (Q2704)
017D	51293098M0	B.H. Tapped Screw	009K	182H267010	Heatshink (Q2751)
018G	51293098M0	B.H. Tapped Screw	011K	182H267010	Heatshink (Q2752)
029G	176H104050	Resistor, Heatshink, Front	051K	51293098M0	B.H. Tapped Screw
027D	51293098M0	B.H. Tapped Screw	052K	51293098M0	B.H. Tapped Screw
029D	51293098M0	B.H. Tapped Screw	053K	51293098M0	B.H. Tapped Screw
027E	51293098M0	B.H. Tapped Screw	ΔL001	TS19628010	Power Transformer (N, A)
029E	51293098M0	B.H. Tapped Screw	TS19628020	Power Transformer (E, G)	
030D	51293098M0	B.H. Tapped Screw	TS19628030	Power Transformer (F)	
031D	51293098M0	B.H. Tapped Screw	DK18103840	Ceramic Cap. 0.01μF 250V	
			DK18103850	Ceramic Cap. 0.01μF 250V	
			SP01010520	Push Switch, Power	

REF. DESIG.	PART NO.	DESCRIPTION	REF. DESIG.	PART NO.	DESCRIPTION
RN86	GG05100120	100 1/2W	O711	HT332802AG	Transistor 25C3280(O, R)
RN90	GA05222010	2.2KΩ 1W	O712	HT332802AG	Transistor 25C3280(O, R)
RN91	GA05222010	2.2KΩ 1W	O713	HT113012AG	Transistor 25A1301(O, R)
R713	GG05121120	12KΩ 1/2W	O714	HT113012AG	Transistor 25A1301(O, R)
R714	RA04720750	4.7KΩ Trimming 1/2W	O715	HC10200000	IC 87K-3002(MARK)
R715	RA04720750	4.7KΩ Trimming 1/2W	O751	HT222401AG	Transistor 25C2240(GR)
R720	RA04720750	4.7KΩ Trimming 1/2W	O752	HT109701AG	Transistor 25A970(GR)
R721	GG05101140	100Ω	O753	HT109701AG	Transistor 25A970(GR)
R722	GG05101140	100Ω	O754	HT222401AG	Transistor 25C2240(GR)
R723	GG05101140	100Ω	O755	HT222401AG	Transistor 25C2240(GR)
R724	GG05101140	100Ω	O756	HT112252AG	Transistor 25A1225(O, Y)
R727	GA05181020	180Ω	O757	HT052220AG	Transistor 25B222(O, G)
R728	GA05181020	180Ω	O758	HT142282AG	Transistor 25D1228(O, R)
R729	NH05022140	2.2Ω, Fusible (N, A)	JN51	YJ0002440	Jack, 4P
R730	GG05022140	2.2Ω (E, G)	JN52	YJ0002430	Jack, 3P
R731	GG05022140	2.2Ω (E, G)	JN53	YJ0002430	Jack, 3P
R732	GG05100140	100Ω	J701	YJ0002440	Plug, 4P
R733	GG05100140	100Ω	WN51	YU00520280	Jumper Lead, 3P
R737	8W10000080	0.18Ω±2 ±10% SW			
R738	8W10000080	0.18Ω±2 ±10% SW			
R747	NF02220140	22Ω, Fuse (N, A)			
R748	NF02220140	22Ω, Fuse (N, A)			
R755	GG05047140	4.7Ω			
R756	GG05047140	4.7Ω			
		P701-SEMICONDUCTORS			
DN01	HD20014010	Diode 1S81	P801	YK175H1430	P.W. Board, Diode Bridge
DN02	HD20014010	Diode 1S81	ZZ182H1430	P.W. Board Assembly	
DN03	HD20014010	Diode 1S81	CS05	DK18103580	Ceramic Cap. 0.01μF ±80% -20%
DN04	HD20014010	Diode 1S81	CS06	DK18103580	Ceramic Cap. 0.01μF ±80% -20%
DN05	HD20022030	Diode DSF10C	ΔDB01		
DN81	HD20022030	Diode DSF10C	ΔDB02	H020030100	Diode 300-2
ΔDB01			J801	YJ00000580	Plug, 5P
ΔDB02			J802	YJ07001600	Plug, 10P
O701	HD20014010	Diode 1S81			
O702	HD20014010	Diode 1S81			
O703	HD20014010	Diode 1S81			
O704	HD20014010	Diode 1S81			
O709	HD20020000	Diode 1S8133, etc.	P851	YK175H1440	P.W. Board, Power Supply
O710	HD20020000	Diode 1S8133, etc.	ZZ182H1440	P.W. Board Assembly	
O751	HD20029100	Diode 30CL2	ΔCS81	E810905020	Elect. Cap. 10000μF 50V
O752	HD20029100	Diode 30CL2	ΔCS82	E810905020	Elect. Cap. 10000μF 50V
DN01	HT222401AG	Transistor 25C2240(GR)	ΔCS83	E868804080	Elect. Cap. 6800μF 40V
DN02	HT222401AG	Transistor 25C2240(GR)	ΔCS84	E868804080	Elect. Cap. 6800μF 40V
DN03	HT109701AG	Transistor 25A970(GR)			
DN04	HT109701AG	Transistor 25A970(GR)			
DN05	HT222401AG	Transistor 25C2240(GR)	P901	YK175H2860	P.W. Board, Power Switch
DN06	HT109701AG	Transistor 25A970(GR)	ZZ181H890	P.W. Board Assembly	
DN07	HT052220AG	IC TAY17F	ΔCB01	DK18103580	Ceramic Cap. 0.01μF 250V
DN08	HC35815090	IC NJM79M15A	ΔS801	SP01011100	Push Switch, Power
DN09	HC35815090	IC NJM79M15A			
O701	HT318151C0	Transistor 25C1815(GRN)			
O702	HT318151C0	Transistor 25C1815(GRN)			
O703	HT332802AG	Transistor 25C3280(O, Y)			
O708	HT332802AG	Transistor 25C3280(O, Y)			
O709	HT113062D0	Transistor 25A1306(O, Y)			
O710	HT113062D0	Transistor 25A1306(O, Y)			

REF. DESIG.	PART NO.	DESCRIPTION	REF. DESIG.	PART NO.	DESCRIPTION
		PE01 TONE VOLUME CIRCUIT BOARD			PE01 BALANCE VOLUME CIRCUIT BOARD
PE01	YK178H8820	P.W. Board, Tone Volume	PGS1	YK178H3840	P.W. Board, Balance Volume
		P.W. Board Assembly			P.W. Board Assembly
		PE01 CAPACITORS	RG51	RM01040890	Variable Resistor 100K(1MN)
CE03	DF6271090	Film 270F 55%			PE01 TAP MONITOR CIRCUIT BOARD
CE04	DF6271090	Film 270F 55%			
CE05	DF5960520	Mica 96F 55%			
CE06	DF5960520	Mica 96F 55%			
CE07	DA22700610	Elect 220F 6.3V	FJ01	YK178H1420	P.W. Board, Tap Monitor
CE08	DA22700610	Elect 220F 6.3V			P.W. Board Assembly
CE09	DF58380520	Mica 38F 55%			
CE10	DF58380520	Mica 38F 55%			
CE11	DF18153010	Film 0.015uF 55%	CJ01	J	Ceramic Cap. 0.01uF +50% -20%
CE12	DF18153010	Film 0.015uF 55%	CJ02	DK18103310	Ceramic Cap. 0.01uF +50% -20%
CE13	DA10406010	Elect 0.1uF 50V			
CE14	DA10406010	Elect 0.1uF 50V			
CE15	DF18330210	Film 0.033uF 55%	JJ01	VT02040890	Terminal, 4P, RCA
CE16	DF18330210	Film 0.033uF 55%	JJ02	VT02040890	Terminal, 4P, RCA
CE17	DA44740510	Elect 0.47uF 50V	JJ03	YJ0002460	Jack, 7P
CE18	DA44740510	Elect 0.47uF 50V	JJ04	YJ0002460	Jack, 7P
CE19	DA47601010	Elect 47uF 10V			PE01 VOLUME/PUSH SWITCH CIRCUIT BOARD
CE20	DA47601010	Elect 47uF 10V			
CE21	DA22601610	Elect 22uF 16V	FS01	YK178H3810	P.W. Board, Volume/Push Switch
CE22	DA22601610	Elect 22uF 16V			P.W. Board Assembly
CE23	DF15330110	Film 3300F 55%			
CE24	DF15330110	Film 3300F 55%	CS01	DF15102010	Ceramic Cap. 1000uF 50V
CE25	DA10701610	Elect 100uF 16V	CS02	DF15102010	Ceramic Cap. 1000uF 50V
CE26	DA10701610	Elect 100uF 16V	RS02	GA05123010	Resistor 1.2K 1/2W 5% 1W
CE27	DA10701610	Elect 100uF 16V	RS10	RM05031255	Variable Resistor 50K(1B)
CE28	DA10701610	Elect 100uF 16V			
CE29	DF15222250	Film 2200F 55%	SS01	SP04030360	Push Switch
CE32	DF15222250	Film 2200F 55%	SS02	SP04030360	Push Switch
		PE01 RESISTORS	SS03	SP04010220	Push Switch
RE37	RM01030310	10K(1C), Variable	WS01	VJ06140280	Jumper Lead, 6P
RE38	RM01030310	10K(1C), Variable	WS02	VJ07380280	Jumper Lead, 7P
RE39	NFG0470140	471J 5% 1/4W, Fuse	WS03	VJ07380280	Jumper Lead, 7P
RE40	NFG0470140	471J 5% 1/4W, Fuse	WS04	VJ04180280	Jumper Lead, 4P
		PE01 SEMICONDUCTORS	WS05	VJ04180280	Jumper Lead, 4P
DE01	HF20269180	F.E.T. 2SK369(BL)	WS06	VJ04120280	Jumper Lead, 4P
DE02	HF20269180	F.E.T. 2SK369	WS07	VJ04120280	Jumper Lead, 4P
DE03	HF20269180	F.E.T. 2SK369	WS08	YB00370050	Connective Cord, 3P
DE04	HF20269180	F.E.T. 2SK369	WS10	YB00370070	Connective Cord, 3P
DE05	HC10000990	IC N/AK0541DD	WS11	YB00280360	Connective Cord, 4P
		PE01 MISCELLANEOUS			
JE01	YF00003440	Plug, 4P			PU01 AVIS CIRCUIT BOARD
WE01	YB00280360	Connective Cord, 4P			P.W. Board, AVIS
WE02	YU03360200	Jumper Lead, 3P	PU01	YK178H3440	P.W. Board Assembly
WE06	YU03360200	Jumper Lead, 3P			
		PE01 TONE DEFEAT SWITCH CIRCUIT BOARD			PU01 CAPACITORS
PE01	YK178H8880	P.W. Board, Tone Defeat Switch	CU05	DA10601610	Elect 10uF 16V
		P.W. Board Assembly	CU06	DA10601610	Elect 10uF 16V
SE01	SP2001420	Push Switch, Tone Defeat	CU07	DA10601610	Elect 10uF 16V
			CU08	DA10601610	Elect 10uF 16V
					PU01 SEMICONDUCTORS
			DU01	HD20020000	Diode 1S5133, etc.
			DU02	HD20020000	Diode 1S5133, etc.
			DU03	HD20020000	Diode 1S5133, etc.
			DU04	HD20020000	Diode 1S5133, etc.
			DU05	HD20020000	Diode 1S5133, etc.
			QU01	HC10020280	IC N/AK203D
			QU02	HC712301AG	IC 74LS123P

REF. DESIG.	PART NO.	DESCRIPTION
JU01	YP07001810	PW01-MISCELLANEOUS
JU02	YP07001820	Plug, 1P
		Plug, 2P
PV01	YK178H1410	PW01-PHONE INPUT SELECTOR
	ZZ178H1410	P.W. Board, Phone Input Selector
		P.W. Board Assembly
		PW01-CAPACITORS
C401	DF58101510	Film 100pF 5%
C402	DF58101510	Film 100pF 5%
C403	DF58681510	Film 680pF 5%
C404	DF58681510	Film 680pF 5%
C406	OA10800610	Elect 1000pF 6.3V
C406	OA10800610	Elect 1000pF 6.3V
C407	OF19473010	Film 0.047uF 5%
C408	OF19473010	Film 0.047uF 5%
C409	OF15103010	Film 0.01uF 5%
C410	OF15103010	Film 0.01uF 5%
C411	OF15330010	Film 330pF 5%
C412	OF15330010	Film 330pF 5%
C413	OA10505010	Elect 1uF 50V
C414	OA10505010	Elect 1uF 50V
C415	OF15330010	Film 330pF 5%
C416	OF15330010	Film 330pF 5%
C417	OA44701510	Elect 47uF 15V
C418	OA44701510	Elect 47uF 15V
C419	DK18103310	Ceramic 0.01uF +80% -20%
C420	DK18103310	Ceramic 0.01uF +80% -20%
CV01	DK18103310	Ceramic 0.01uF +80% -20%
J		
CV08	DK18103310	Ceramic 0.01uF +80% -20%
		PW01-RESISTORS
R429	NF02070140	470 5% 1W Fuse
R430	NF02070140	470 5% 1W Fuse
		PW01-SEMICONDUCTORS
DV01	HC20001000	Diode 18155, etc.
DV02	HC20001000	Diode 18155, etc.
O401	HF20389180	F.E.T. 2SK3891BL
O404	HC10028090	IC NJM2041DD
		PW01-MISCELLANEOUS
J401	YP06003330	Plug, 3P
J402	YP06003330	Plug, 3P
J403	YT00020610	Terminal, 2P, RCA
JV01	YT00020280	Terminal, 2P, RCA
JV02	YT00020280	Terminal, 2P, RCA
JV03	YJ06002390	Jack, 6P
JV04	YJ06002450	Jack, 3P
JV05	YJ06002440	Jack, 4P
JV06	YJ06002450	Jack, 6P
LV01	LY20040230	Relay, CD Direct
LV02	LY20040230	Relay, Phone Direct
SV01	SS04000200	Slide Switch
WV01	YU06140280	Jumper Lead, 6P
WV02	YU06120280	Jumper Lead, 6P

(W01-69)	Assembly and Wiring
(T01-69)	Adjustment
(X01-00)	Correction

REF. DESIG.	PART NO.	DESCRIPTION
PW01	YK178H3420	PW01-SPEAKER PROTECTOR RELAY
	ZZ182H8420	P.W. Board, Speaker Protector Relay
		P.W. Board Assembly
		PW01-CAPACITORS
CW01	DF18224010	Film 0.22uF 5%
CW02	DF18224010	Film 0.22uF 5%
CW03	DF18224010	Film 0.22uF 5%
CW04	DF18224010	Film 0.22uF 5%
		PW01-RESISTORS
RW01	G060022120	2.2K 5% 1W
RW02	G060022120	2.2K 5% 1W
RW03	G060100030	10K 5% 1W
RW04	G060100030	10K 5% 1W
		PW01-SEMICONDUCTORS
DW01	HC00002000	Diode 1S8133, etc.
DW02	HC00002000	Diode 1S8133, etc.
		PW01-MISCELLANEOUS
JW01	YT01840010	Terminal, Speaker
JW02	YT01840020	Terminal, Speaker
JW03	YJ07001100	Jack, 5P
LW01	LL23805120	Choke Coil
LW02	LL23808120	Choke Coil
LW03	L20040280	Relay, Speaker
LW04	L20040280	Relay, Speaker
		PW01-SPEAKER SWITCH/PHONE
		CIRCUIT BOARD
		P.W. Board, Speaker Switch/Phone
		P.W. Board Assembly
PW01	YK178H3430	PW01-SPEAKER SWITCH/PHONE
	ZZ182H8430	P.W. Board, Speaker Switch/Phone
		P.W. Board Assembly
RW01	G060122010	Resistor 1.2K 5% 1W
RW02	G060122010	Resistor 1.2K 5% 1W
WV01	YU01000280	Jack, Handphone
WV02	YU020280	Push Switch, Speaker
WV03	YU02320280	Jumper Lead, 2P
WV04	YU030280	Jumper Lead, 6P
		PW01-INPUT SELECTOR DISPLAY
		CIRCUIT BOARD
PV01	YK178H2630	P.W. Board, Input Selector Display
	ZZ178H8630	P.W. Board Assembly
DY01	HI1008320	L.E.D. GL9HD4
J		
DY07	HI1008320	L.E.D. SLP281F-50U
DY08	HI1008300	L.E.D. SLP281F-50U
JV01	YJ07001090	Jack, 6P
JV02	YJ06002440	Jack, 4P
WV01	YU04400280	Jumper Lead, 4P
WV02	YU06160280	Jumper Lead, 6P

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.

ASSIGNMENT OF COMMON PARTS CODES.

RESISTOR
 (1) G005 — 140, Carbon film fixed resistor, 25%, 1/4W
 (2) G005 — 160, Carbon film fixed resistor, 25%, 1/2W

⊖ — Resistance value
 Examples
 ⊖ Resistance value
 0.1k .051 100 100 140k 100 100k 104
 0.5k .005 181 180 2.7k .272 680k .684
 1k .010 100k 100 1.8k .100 1.8k .106
 6.8k .068 390k .391 22k .223 4.7Mk .475

(Note) Please distinguish 1/4W from 1/2W by the shape of parts used actually.

CERAMIC CAP.
 (1) D01 — 370, Ceramic condenser
 Dist. type
 Temp. coeff. P350 — N1000, 50V
 ⊖ Capacity value
 ⊖ Tolerance

Examples
 ⊖ Tolerance (Capacity deviation)
 ±25% 0
 ±10% .1
 ±5% .2
 * Tolerance of COMMON PARTS handled here are as follows:
 0.1μF — 5μF — ±2.0μF
 5μF — 10μF — ±0.5μF
 10μF — 500μF — ±5%

⊖ Capacity value
 0.1μF .005 1μF .030 100μF .101
 1μF .010 10μF .100 220μF .221
 1μF .015 470μF .470 500μF .501

CERAMIC CAP.
 (1) DK16 — 300, High dielectric constant ceramic condenser
 Dist. type
 Temp. char. 284, 30V
 ⊖ Capacity value

Example
 ⊖ Capacity value
 100μF .101 1000μF .102 10000μF .103
 470μF .471 2200μF .222

ELECTROLYTIC CAP. (E), FILM CAP. (F)
 (1) E1 — 10, Electrolytic condenser
 ⊖ One-way lead type, Tolerance 20%
 ⊖ Electrolytic strength
 ⊖ Capacity value

Examples
 ⊖ Capacity value
 0.1μF .104 4.7μF .476 100μF .107
 0.33μF .334 10μF .106 330μF .337
 1μF .105 22μF .226 1100μF .108
 2200μF .208

⊖ Working voltage
 6.3V .008 25V .025
 15V .010 25V .028
 16V .016 50V .050

(2) DF15 — 350, Plastic film condenser
 Dist. type, Mylar, 15%, 50V
 ⊖ Capacity value

Examples
 ⊖ Capacity value
 0.001μF (1000pF) .102 0.1μF .104
 0.001μF .102 0.68μF .684
 0.01μF .103 1μF .105
 0.01μF .103 1μF .105

(Model PM-541)

REF. DESIG.	PART NO.	DESCRIPTION
P701	YK176H3410 Z2176H8110 Z2176H7410	P701-MAIN AMP CIRCUIT BOARD P.W. Board, Main Amp. P.W. Board Assembly [N, A] P.W. Board Assembly [E, G]
		P701-CAPACITORS
CN01	DA47605010	Elect. 4.7μF 50V
CN02	DA47605010	Elect. 4.7μF 50V
CN04	DA22601010	Elect. 22μF 16V
CN05	DA22601010	Elect. 22μF 16V
CN61	DA47703010	Elect. 47μF 35V
CN62	DA47703010	Elect. 47μF 35V
CN63	DA33703010	Elect. 33μF 35V
CN64	DA33703010	Elect. 33μF 35V
CN65	DA22701010	Elect. 22μF 16V
CN66	DA22701010	Elect. 22μF 16V
CN68	DK18103580	Ceramic 0.01μF [N, A]
CN90	DK18103580	Ceramic 0.01μF [N, A]
C701	DF15272010	Film 2700pF 55%
C702	DF15272010	Film 2700pF 55%
C703	DA10605010	Elect. 10μF 50V
C704	DA10605010	Elect. 10μF 50V
C705	DA22700610	Elect. 22μF 6.3V
C706	DA22700610	Elect. 22μF 6.3V
C707	DF15152010	Film 1500pF 55%
C708	DF15152010	Film 1500pF 55%
C709	DF55221010	Film 220pF 55%
C710	DF55221010	Film 220pF 55%
C711	DF35105020	Mica 10pF 55%
C712	DF35105020	Mica 10pF 55%
C713	DA22710010	Elect. 22μF 100V
C714	DA22710010	Elect. 22μF 100V
C715	DA10701010	Elect. 100μF 16V
C716	DA10701010	Elect. 100μF 16V
C717	DF35101020	Mica 100pF 55%
C718	DF35101020	Mica 100pF 55%
C719	DF31100520	Mica 10pF 50.5pF
C720	DF31100520	Mica 10pF 55%
C751	DF55151000	Film 150pF 55%
C752	DF55151000	Film 150pF 55%
C753	DA10610010	Elect. 10μF 100V
C754	DA10610010	Elect. 10μF 100V
C755	DF15103010	Film 0.01μF 55%
C756	DA33706310	Elect. 33μF 63V
C757	DA33706310	Elect. 33μF 63V
		P701-RESISTORS (All Resistors are 5% and 30W)
RN01	G006102140	1KΩ
RN02	G006102140	1KΩ
RN03	G006102140	1KΩ
RN04	G006102140	1KΩ
RN27	G006220140	22Ω (E, G)
RN28	NF0220140	22Ω, Fuse 52% [N, A]
RN81	NH0012140	1.2Ω, Fuseable
RN82	NH0012140	1.2Ω, Fuseable
RN83	G006100120	10Ω 3W
RN84	G006100120	10Ω 3W
RN85	NF02100140	10Ω, Fuse

M3167

REF. DESIG.	PART NO.	DESCRIPTION	REF. DESIG.	PART NO.	DESCRIPTION
RN88	AF02100140	10Ω, Fuse	O701	HT338640AO	Transistor 2SC3964
RN89	GA06280010	86Ω	O702	HT338640AO	Transistor 2SC3964
RN90	GA06222010	2.2KΩ	O703	HT332290AO	Transistor 2SC2229(O, V)
RN91	GA06222010	2.2KΩ	O704	HT332290AO	Transistor 2SC2229(O, V)
R707	NF02021140	820Ω, Fuse	O705	HT109482AO	Transistor 2SA948(O, V)
R708	NF02021140	820Ω, Fuse	O706	HT109482AO	Transistor 2SA948(O, V)
R713	G050153120	15KΩ	O707	HT332822AO	Transistor 2SC3282(O, V)
R714	G050153120	15KΩ	O708	HT332822AO	Transistor 2SC3282(O, V)
R719	MA04110750	470Ω, Trimming	O709	HT113062DO	Transistor 2SA1306(O, V)
R720	G050181140	180Ω	O710	HT113062DO	Transistor 2SA1306(O, V)
R721	G050181140	180Ω	O711	HT331822AO	Transistor 2SC3182(O, R)
R722	G050181140	180Ω	O712	HT331822AO	Transistor 2SC3182(O, R)
R723	G050181140	180Ω	O713	HT112852AO	Transistor 2SA1285(O, R)
R724	G050181140	180Ω	O714	HT112852AO	Transistor 2SA1285(O, R)
R726	G050122140	1.2KΩ	O715	HT331822AO	Transistor 2SC3182(O, R)
R728	G050122140	1.2KΩ	O716	HT331822AO	Transistor 2SC3182(O, R)
R729	GA05181020	180Ω	O717	HT112852AO	Transistor 2SA1285(O, R)
R728	GA05181020	180Ω	O718	HT112852AO	Transistor 2SA1285(O, R)
R729	G050101140	10Ω	O719	HC10181030	IC STK-3102MARK3
R730	G050101140	10Ω			
R738	SW10000080	0.18Ω±2 210% SW	O751	HT322401AO	Transistor 2SC2240(GR)
R739	SW10000080	0.18Ω±2 210% SW	O752	HT109701AO	Transistor 2SA970(GR)
R740	SW10000080	0.18Ω±2 210% SW	O753	HT109701AO	Transistor 2SA970(GR)
R741	G05020140	22Ω	O754	HT322401AO	Transistor 2SC2240(GR)
R742	G05020140	22Ω	O755	HT32852AO	Transistor 2SC285(O, V)
R743	G0505047140	4.7Ω	O756	HT112250AO	Transistor 2SA1225(O, V)
R744	G0505047140	4.7Ω	O757	HT113882AO	Transistor 2SA1388(R, O)
R745	G0505047140	4.7Ω	O758	HT331850AO	Transistor 2SC3185(O, R, V)
R746	G0505047140	4.7Ω			
		F701-SEMICONDUCTORS	JN81	VJ06002440	Jack, 4P
DN01	HD20014010	Diode 1S81	JN82	VJ06002430	Jack, 3P
DN02	HD20014010	Diode 1S81	JN83	VJ06002430	Jack, 3P
DN03	HD20014010	Diode 1S81	J701	YP00003440	Plug, 4P
DN04	HD20014010	Diode 1S81	J751	176H006010	Clamper, Wire
DN05	HD20022030	Diode D8F10C	J752	176H006010	Clamper, Wire
DN06	HD20022030	Diode D8F10C	J753	176H006010	Clamper, Wire
DN07	HD20022030	Diode D8F10C	J754	176H006010	Clamper, Wire
DN08	HD20022030	Diode D8F10C	J755	176H006010	Clamper, Wire
DN09	HD20022030	Diode D8F10C	J756	176H006010	Clamper, Wire
D701	HD20014010	Diode 1S81	J757	176H006010	Clamper, Wire
D702	HD20014010	Diode 1S81	WN81	VJ06020260	Jumper Lead, 3P
D703	HD20014010	Diode 1S81	WN03	VJ06030260	Jumper Lead, 3P
D704	HD20014010	Diode 1S81			
D705	HD20014010	Diode 1S81			
D706	HD20014010	Diode 1S81			
D707	HD20002000	Diode 1S8133, etc.			
D710	HD30001020	Zener MA1033M	P801	YK176H1430	P.W. Board, Diode Bridge P.W. Board Assembly
D712	HD30001020	Zener MA1033M	C805	DK18103660	Ceramic Cap. 0.01µF ±80% -20% (R&M&M1)
D714	HD30001020	Zener MA1033M	C806	DK18103660	Ceramic Cap. 0.01µF ±80% -20% (R&M&M1)
D714	HD30001020	Zener MA1033M			
D715	HD300027100	Diode 30DF-2	ΔD801	J	
D752	HD20027100	Diode 30DF-2	ΔD802	HD20033030	Diode D530C
QN01	HT322401AO	Transistor 2SC2240(GR)	ΔD804	J	
QN02	HT322401AO	Transistor 2SC2240(GR)	ΔD805	J	
QN03	HT109701AO	Transistor 2SA970(GR)	ΔD806	HD200330100	Diode 30D-2
QN04	HT109701AO	Transistor 2SA970(GR)	ΔD808	J	
QN05	HT322401AO	Transistor 2SC2240(GR)	J801	YF00000680	Plug, 6P
QN06	HT109701AO	Transistor 2SA970(GR)	J802	YF00010000	Plug, 10P
QN07	HC10642050	IC TA7317			
QN81	HC38150900	IC NJM79M15A			
QN82	HC38150900	IC NJM79M15A			

REF. DESIG.	PART NO.	DESCRIPTION	REF. DESIG.	PART NO.	DESCRIPTION		
		P81-POWER SUPPLY CIRCUIT BOARD			P82-RESISTORS		
P81	YK178H1440 ZZ178H1440	F.W. Board, Power Supply F.W. Board Assembly	RE30	NF02100140	10Ω 25% 1/4W, Fuse		
ΔCB81	EB1200310	Elect. Cap. 1200μF 63V	RE40	NF02100140	10Ω 25% 1/4W, Fuse		
ΔCB82	EB1200310	Elect. Cap. 1200μF 63V			P83-SEMICONDUCTORS		
ΔCB83	EB82804010	Elect. Cap. 820μF 40V	D001	HD00001160	C.R. Diode E-652		
ΔCB84	EB82804010	Elect. Cap. 820μF 40V	D002	HD00001160	C.R. Diode E-652		
		P81-TONE VOLUME(L) CIRCUIT BOARD	D001	HF20389180	F.E.T. 2SK-369(8L)		
PE01	YK178H1090 ZZ178H1090	F.W. Board, Tone Volume(L) F.W. Board Assembly	D002	HF20389180	F.E.T. 2SK-369(8L)		
CE11	OF16153010	Film 0.015μF 5%	D003	HF20389180	F.E.T. 2SK-369(8L)		
CE13	OA10605010	Elect. 0.1μF 50V	D004	HF20389180	F.E.T. 2SK-369(8L)		
CE16	OF16153010	Film 0.015μF 5%	D005	HF20389180	F.E.T. 2SK-369(8L)		
CE17	OA47405010	Elect. 0.47μF 50V	D006	HC10020000	IC NA00204100		
CE18	OA47405010	Elect. 0.47μF 10V			P84-MISCELLANEOUS		
RE41	RK01030630	Variable Resistor 10K(10), Taper	JE02	YJ06002440	Jack, 4P		
RE42	RK01030630	Variable Resistor 10K(10), Bass	JE03	YJ06002440	Plug, 4P		
WE05	YB00202030	Connective Cord, 3P	JE04	YJ06003330	Plug, 4P		
		P82-TONE VOLUME(R) CIRCUIT BOARD	JE05	YJ06003330	Plug, 3P		
PE02	YK178H1030 ZZ178H8070	F.W. Board, Tone Volume(R) F.W. Board Assembly	JE06	YJ06003330	Plug, 3P		
CE12	OF16153010	Film Cap. 0.015μF 5%	WE01	YB00203080	Connective Cord, 2P		
CE14	OA10605010	Elect. Cap. 0.1μF 50V			P81-TONE DEFEAT SWITCH CIRCUIT BOARD		
CE16	OF16153010	Film Cap. 0.015μF 5%	PE51	YK178H1090 ZZ178H8090	F.W. Board, Tone Defeat Switch F.W. Board Assembly		
CE18	OA47405010	Elect. Cap. 0.47μF 50V	SE51	SP02011420	Push Switch, Tone Defeat		
CE20	OA47405010	Elect. Cap. 0.47μF 10V	WE02	YB00204150	Connective Cord, 4P		
RE37	RK01030630	Variable Resistor 10K(10), Taper	WE04	YB00202030	Connective Cord, 4P		
RE38	RK01030630	Variable Resistor 10K(10), Bass			P81-TAPE MONITOR CIRCUIT BOARD		
WE06	YB00160280	Connective Cord, 3P	PJ01	YK178H1420 ZZ178H1420	F.W. Board, Tape Monitor F.W. Board Assembly		
		P82-TONE UNIT CIRCUIT BOARD	CJ01	DK18103310	Ceramic Cap. 0.01μF +50% -20%		
PE50	YK178H1030 ZZ178H8020	F.W. Board, Tone Unit F.W. Board Assembly			J001	YT02040090	Terminal, 4P, RCA
		P83-CAPACITORS	J002	YT02040090	Terminal, 4P, RCA		
CE01	DF35220020	Mica 22pF 5%	J003	YJ06002440	Jack, 7P		
CE02	DF35220020	Mica 22pF 5%	J004	YJ06002440	Jack, 7P		
CE03	OF16153010	Film 180pF 5%			P81-BUREAC OUTLET CIRCUIT BOARD(P81-74D)		
CE04	OF16153010	Film 180pF 5%	FP01	YK178H1080	F.W. Board, Fuse/AC Outlet		
CE05	DF35660020	Mica 66pF 5%	ΔF001	FS10000000	Fuse 8A 250V (F)		
CE06	DF35660020	Mica 66pF 5%					
CE07	OA22700610	Elect. 220pF 6.3V	JF01	YJ06000370	Jack, Fuse Clip (F)		
CE08	OA22700610	Elect. 220pF 6.3V	JF02	YJ06000370	Jack, Fuse Clip (F)		
CE09	DF35101520	Mica 100pF 5%	JF03	YJ06003340	Plug, 2P (F)		
CE10	DF35101520	Mica 100pF 5%					
CE21	OA22801610	Elect. 22μF 16V					
CE22	OA22801610	Elect. 22μF 16V					
CE23	OF16153010	Film 330pF 5%					
CE24	OF16153010	Film 330pF 5%					
CE25	OA22701610	Elect. 220pF 16V					
CE26	OA22701610	Elect. 220pF 16V					
CE27	OA22701610	Elect. 220pF 16V					
CE28	OA22701610	Elect. 220pF 16V					

REF. DESIG.	PART NO.	DESCRIPTION	REF. DESIG.	PART NO.	DESCRIPTION
		FS01-VOLUME/PUSH SWITCH CIRCUIT BOARD			PV01-SEMICONDUCTORS
FS01	YK178H1010 ZZ178H8010	P.W. Board, Volume/Push Switch P.W. Board Assembly	DU01	HD20011090	Diode 1S1565
CS03	OA10409010	Elect. Cap. 0.1uF 50V	DU02	HD20011090	Diode 1S1565
CS04	OA10409010	Elect. Cap. 0.1uF 50V	DU03	HD20011090	Diode 1S1565
RS07	GA05122010	Resistor 1.2KΩ 25% 1W	DU04	HD20011090	Diode 1S1565
RS11	RM01040940	Variable Resistor 100KΩ(MN)	DU05	HD30001020	Zener MA1023
SS01	SP04030380	Push Switch	DU06	HD30001020	Zener MA1023
SS02	SP04030370	Push Switch	DU07	HD30004020	Zener MA1021
SS03	SP04010520	Push Switch	DU08	HD20002000	Diode 1S3133, etc.
WJ03	YU07402080	Jumper Lead, 7P	DU09	HD20002000	Diode 1S3133, etc.
WJ04	YU07402080	Jumper Lead, 7P	QU01	HC10009090	IC NJM2901
WJ01	YB00201370	Connective Cord, 3P	QU02	HCT12001A0	IC 74LS123P
WJ02	YB00201380	Connective Cord, 3P	QU03	HW10006030	Photo Unit PCB47
WJ03	YB00205080	Connective Cord, 2P	QU04	HT32785DC0	Transistor 2SC2785(HF, FF)
WJ04	YB00205080	Connective Cord, 2P	QU05	HT32785DC0	Transistor 2SC2785(HF, FF)
WJ05	YU04120280	Jumper Lead, 4P			PV01-MISCELLANEOUS
WJ06	YU04020280	Jumper Lead, 4P	JU01	YP07001010	Plug, 11P
WJ08	YU05140280	Jumper Lead, 8P	JU02	YP07001020	Plug, 2P
WJ07	YU04020280	Jumper Lead, 4P			PV01-PHONE INPUT SELECTOR CIRCUIT BOARD
WJ03	YU04090280	Jumper Lead, 4P	PV01	YK178H1410 ZZ178H1410	P.W. Board, Phone Input Selector P.W. Board Assembly
		FS02-MASTER VOLUME CIRCUIT BOARD			PV01-CAPACITORS
FS02	YK178H10A0 ZZ178H0A0	P.W. Board, Master Volume P.W. Board Assembly	C401	DF56101510	Film 100uF 25%
CS01	OF15102010	Film Cap. 1000uF 5%	C402	DF56101510	Film 100uF 25%
CS02	OF15102010	Film Cap. 1000uF 5%	C403	DF56881510	Film 880uF 25%
RS10	RM56031270	Variable Resistor 50KΩ(B)	C404	DF56881510	Film 880uF 25%
JS01	YP06003410	Plug, 2P	C405	DA28000610	Elect 2200uF 6.3V
JS02	YP06003410	Plug, 2P	C406	DA28000610	Elect 2200uF 6.3V
WE02	YU04070280	Jumper Lead, 4P	C407	OF18470010	Film 0.047uF 55%
		PV01-AVSS CIRCUIT BOARD	C408	OF18470010	Film 0.047uF 55%
PV01	YK178H10A0 ZZ178H80A0	P.W. Board, AVSS P.W. Board Assembly	C409	OF15102010	Film 0.01uF 25%
		PV01-CAPACITORS	C410	OF15102010	Film 0.01uF 25%
CU03	OA10601810	Elect 10uF 16V	C411	OF15320010	Film 3300uF 55%
CU04	OA10601810	Elect 10uF 16V	C412	OF15320010	Film 3300uF 55%
CU07	OA10601810	Elect 10uF 16V	C413	OA19601810	Elect 10uF 16V
CU08	OA10601810	Elect 10uF 16V	C414	OA19601810	Elect 10uF 16V
CU09	OA10601810	Elect 10uF 16V	C415	OF15320010	Film 3300uF 55%
CU14	OA10601810	Elect 10uF 16V	C416	OF15320010	Film 3300uF 55%
		PV01-RESISTORS	C417	DA47701810	Elect 470uF 16V
RU21	GA05020110	220Ω 5% 1/4W	C418	DA47701810	Elect 470uF 16V
RU22	RA01030780	10KΩ, Trimming	C419	DK18103310	Ceramic 0.01uF +80% -20%
RU24	RA01030780	10KΩ, Trimming	C420	DK18103310	Ceramic 0.01uF +80% -20%
RU25	RA01030780	10KΩ, Trimming			PV01-RESISTORS
RU26	RA01030780	10KΩ, Trimming	R420	NF02470140	47Ω 21% 1/4W, Fuse
			R430	NF02470140	47Ω 21% 1/4W, Fuse
			D401	HD60001160	PV01-SEMICONDUCTORS
			D402	HD60001160	C.R. Diode E-452
			DV01	HD20022030	Diode DSF10C
			DV02	HD20022030	Diode DSF10C
			O401	J	
			O404	HF20089180	F.E.T. 2SK368(BL)
			O405	HC10020090	IC NJM2041DD

REF. DESIG.	PART NO.	DESCRIPTION	REF. DESIG.	PART NO.	DESCRIPTION
		PW01-MISCELLANEOUS			PW01-MISCELLANEOUS
J401	Y70000330	Plug, 3P	JW01	Y701040360	Terminal, Speaker
J402	Y70000330	Plug, 3P	JW02	Y701040370	Terminal, Speaker
J403	Y702002610	Terminal, 2P, RCA	JW03	Y706001040	Plug, 3P
			JW04	Y706001040	Plug, 3P
JV01	Y702002090	Terminal, 2P, RCA	JW13	Y707001100	Jack, 5P
JV02	Y702002090	Terminal, 6P, RCA	LW01	LJ31115080	Choke Coil
JV03	Y706002390	Jack, 5P	LW02	LJ31115080	Choke Coil
JV04	Y706002440	Jack, 4P	LW03	LY20240190	Relay, Speaker
JV05	Y706002440	Jack, 4P	LW04	LY20240190	Relay, Speaker
JV06	Y706002460	Jack, 4P			
JV07	Y706002440	Jack, 4P			
JV08	Y706002460	Jack, 5P			
JV10	Y706002390	Jack, 5P			
LV01	LV20240230	Relay, CD Direct			
LV02	LV20240230	Relay, Phone Direct			
SV01	SS04060020	Slide Switch			
SV02	SS04060010	Slide Switch			
W401	Y800370060	Connective Cord, 3P			
W402	Y800370070	Connective Cord, 3P			
WV01	YU05140260	Jumper Lead, 6P			
WV02	YU05120260	Jumper Lead, 5P			
WV04	YU05102260	Jumper Lead, 5P			
		PW01-SPEAKER PROTECTOR RELAY			PW01-SPEAKER SWITCHPHONE
		CIRCUIT BOARD			CIRCUIT BOARD
PW01	YK175H1050	P.W. Board, Speaker Protector Relay	PW51	YK179H3430	P.W. Board, Speaker Switch/Phone
		PW01-CAPACITORS			CIRCUIT BOARD
CM01	OF15224010	Film 0.22uF 5%	PW52	ZZ176H4830	P.W. Board Assembly
CM02	OF15224010	Film 0.22uF 5%	RW51	GA06122010	Resistor 1.2K Ω 5% 1W
CM03	OF15224010	Film 0.22uF 5%	RW52	GA06122010	Resistor 1.2K Ω 5% 1W
CM04	OF15224010	Film 0.22uF 5%			
		PW01-RESISTORS	JW51	YJ01002340	Jack, Headphone
RW01	G506022120	2.2 Ω 5% 1/2W	SWS1	SP02020940	Push Switch, Speaker
RW02	G506022120	2.2 Ω 5% 1/2W	WW11	YU02380260	Jumper Lead, 2P
RW03	GA06100030	10 Ω 5% 3W	WW22	YU06402260	Jumper Lead, 5P
RW04	GA06100030	15 Ω 5% 3W			
RW05	GA06310300	330 Ω 5% 3W			
RW06	GA06310300	330 Ω 5% 3W			
		PW01-SEMICONDUCTORS			PW01-INPUT SELECTOR DISPLAY
DW01	HD20020200	Diode DSF10C	FX01	YK175H1030	P.W. Board, Input Selector Display
DW02	HD20020200	Diode DSF10C			
			FX02	ZZ176H4830	P.W. Board Assembly
			DY01	HI10028220	L.E.D. GL9HD4
			DY02	HI10028220	L.E.D. GL9HD4
			DY08	HI10038000	L.E.D. SLP281F-50U
			J505	Y706002440	Jack, 4P
			J701	Y707001090	Jack, 4P
			J702	Y706002440	Jack, 4P
			J703	Y706002440	Jack, 4P
			WY01	YU04400260	Jumper Lead, 4P
			WY02	YU05180260	Jumper Lead, 5P

WD01 001	Assembly and Wiring
TD01 001	Adjustment
CD01 001	Connection

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.

9. TECHNICAL SPECIFICATIONS

(Model PM-54II)

AUDIO SECTION

IHF Dynamic Power	
4 OHMS	140 W
8 OHMS	100 W

POWER OUTPUT PER CHANNEL

DIN 4 OHMS	100 W
RMS 4 OHMS (20 Hz - 20 kHz)	70 W
DIN 8 OHMS AT 1 kHz	80 W
RMS 8 OHMS (20 Hz - 20 kHz)	60 W
TOTAL HARMONIC DISTORTION AT RMS 8 OHMS	0.02 %
I.M. DISTORTION	
DAMPING FACTOR 8 OHMS (1 kHz)	100

MM CARTRIDGE INPUT

Frequency Response (IEC R1AA)	+0.5 dB
Signal-to-Noise Ratio (IEC A weighted)	86 dB
Input Impedance	47 k ohms
Input Capacitance	200 pF
Input Sensitivity	2.5 mV
Equivalent Input Noise	0.25 μ V
Dynamic Range	113 dB

MC CARTRIDGE INPUT

Input Sensitivity	250 μ V
Input Impedance	100 ohms

CD-TUNER-TAPE INPUT

Input Impedance	20 k ohms
Input Sensitivity	150 mV
Frequency Response +0, -1 dB	10 Hz - 70 kHz
Signal to Noise Ratio (IEC A weighted)	96 dB

OUTPUT VOLTAGE

Tape Out [PHONO (MM) 7.75 mV]	465 mV
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OUTPUT IMPEDANCE

Tape Out	220 ohms
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GENERAL

Power Requirements N and T versions	220/240 V AC, 50/60 Hz
E version	110/120/220/240 V AC, 50/60 Hz
Power Consumption at Rated Output, both Channels Operating	250 W
Dimensions	
Panel Width	416 mm
Panel Height	116 mm
Depth	334 mm
Weight	
Unit Alone	9.5 kg

(Model PM-64II)

AUDIO SECTION

IHF Dynamic Power
4 OHMS 225 W
8 OHMS 146 W

POWER OUTPUT PER CHANNEL
DIN 4 OHMS 160 W
RMS 4 OHMS (20 Hz - 20 kHz) 105 W
DIN 8 OHMS AT 1 kHz 115 W
RMS 8 OHMS (20 Hz - 20 kHz) 100 W
TOTAL HARMONIC DISTORTION AT RMS 8 OHMS 0.02 %
I.M. DISTORTION 0.02 %
DAMPING FACTOR 8 OHMS (1 kHz) 100

MM CARTRIDGE INPUT
Frequency Response (IEC RIAA) 40.5 dB
Signal-to-Noise Ratio (IEC A weighted) 86 dB
Input Impedance 47 k ohms
Input Capacitance 200 pF
Input Sensitivity 2.5 mV
Equivalent Input Noise 0.25 μ V
Dynamic Range 113 dB

MC CARTRIDGE INPUT
Input Sensitivity 250 μ V
Input Impedance 100 ohms

CD-TUNER-TAPE INPUT
Input Impedance 20 k ohms
Input Sensitivity 150 mV
Frequency Response +0, -1 dB 10 Hz ~ 70 kHz
Signal to Noise Ratio (IEC A weighted) 96 dB

OUTPUT VOLTAGE
Tape Out [PHONO (MM) 7.75 mV] 465 mV

OUTPUT IMPEDANCE
Tape Out 220 ohms

GENERAL
Power Requirements N and T versions 220/240 V AC, 50/60 Hz
E version 110/120/220/240 V AC, 50/60 Hz
Power Consumption at Rated Output, both Channels Operating 380 W
Dimensions
Panel Width 416 mm
Panel Height 146 mm
Depth 354 mm
Weight
Unit Alone 12.5 kg

