SERVICE MANUAL

PM553/PM453

85.

marantz®

model PM553/PM453

Stereo Amplifier

TABLE OF CONTENTS

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 MJI.
- 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".

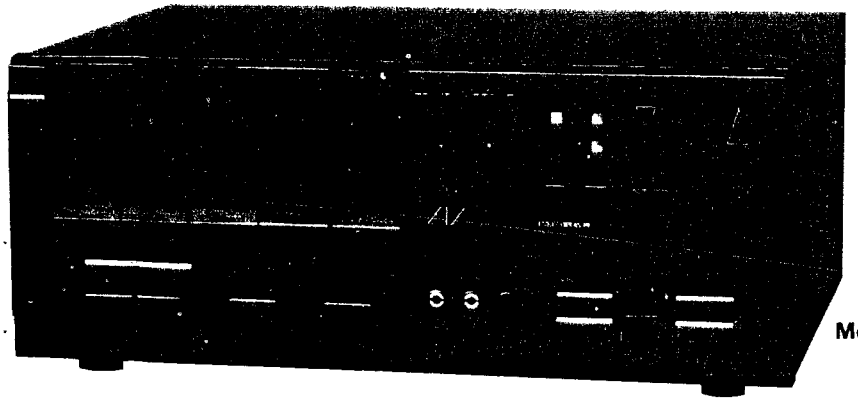
(NOTE)

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

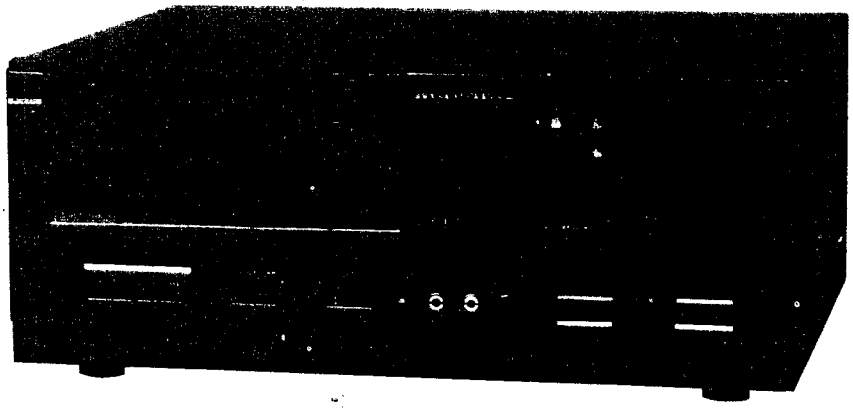
1) Please correctly write the parts number of 10 figures following the rule.
2) Since ordering parts by the Ref. Desig. No. or ratings indicated in the schematic diagram does not satisfy the above conditions, the Marantz parts supply system does not work properly.
   As this case is apt to cause a trouble, please pay attention to it.

M574

MODEL PM453/PM553 STEREO AMPLIFIER



Model PM553



Model PM453

INTRODUCTION

This service manual was prepared for use by Authorized Warranty Stations and contains service information for the Marantz Model PM453/PM553 Stereo 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. P.W. BOARDS

As can be seen from the circuit diagram the chassis of Model PM453/PM553 consists of the following units. Each unit mounted on a printed circuit board is discribed within the square enclosed by a bold dotted line on the circuit diagram.

1. **Voltage Amp . . . . . mounted on P.W. Board P700**
2. **Main Amp . . . . . mounted on P.W. Board P701**
3. **Headphon . . . . . mounted on P.W. Board P702**
4. **Speaker Terminal . . . mounted on P.W. Board P703**
5. **Power Supplu . . . . . mounted on P.W. Board P800**
6. **MIC Jack . . . . . mounted on P.W. Board PJ00**
7. **Video Selecter . . . . . mounted on P.W. Board PL00**
8. **Power Switch . . . . . mounted on P.W. Board PP00**
9. **Phono/Selecter/ Surround . . . . . mounted on P.W. Board PS00**
10. **Micon/Tone/ Mic Amp . . . . . mounted on P.W. Board PU00**
11. **Front AV Terminal . . mounted on P.W. Board PV00**
12. **Remote Easy VCR Terminal . . . . . mounted on P.W. Board PW00**

M575

2. TEST EQUIPMENT REQUIRED FOR SERVICING

This table lists the test equipment required for servicing the Model PM453/PM553 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 primery power to amplifier
Shorting Plug	Shorts amplifier input to eliminate noise pickup

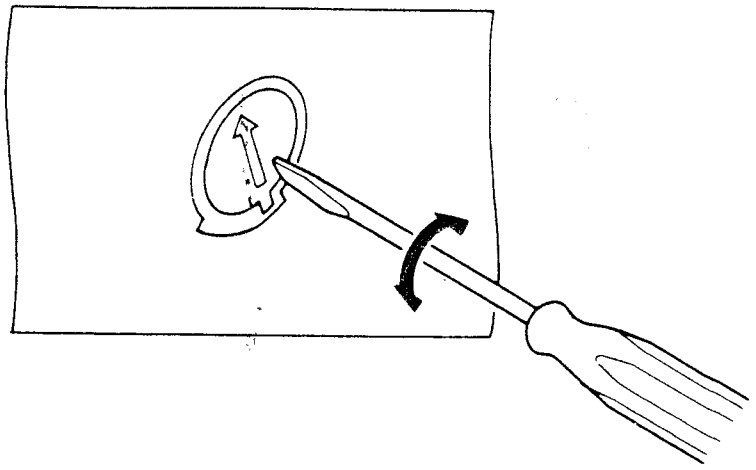
3. VOLTAGE CONVERSION

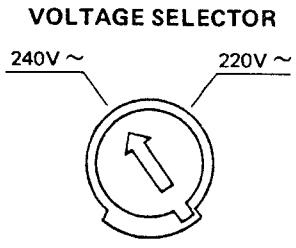
To convert the unit to a different power source voltage, change the position as illustrated in the drawing below.

CAUTION: DISCONNECT POWER SUPPLY CORD FROM AC OUTLET BEFORE CONVERTING VOLTAGE. DO NOT DISASSEMBLE THE VOLTAGE SELECTOR ABSOLUTELY.

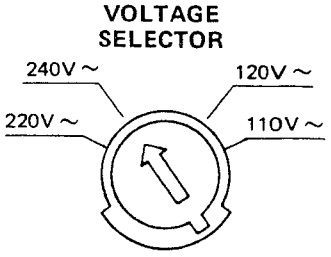
Note on safety:

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.





(N, A) Version



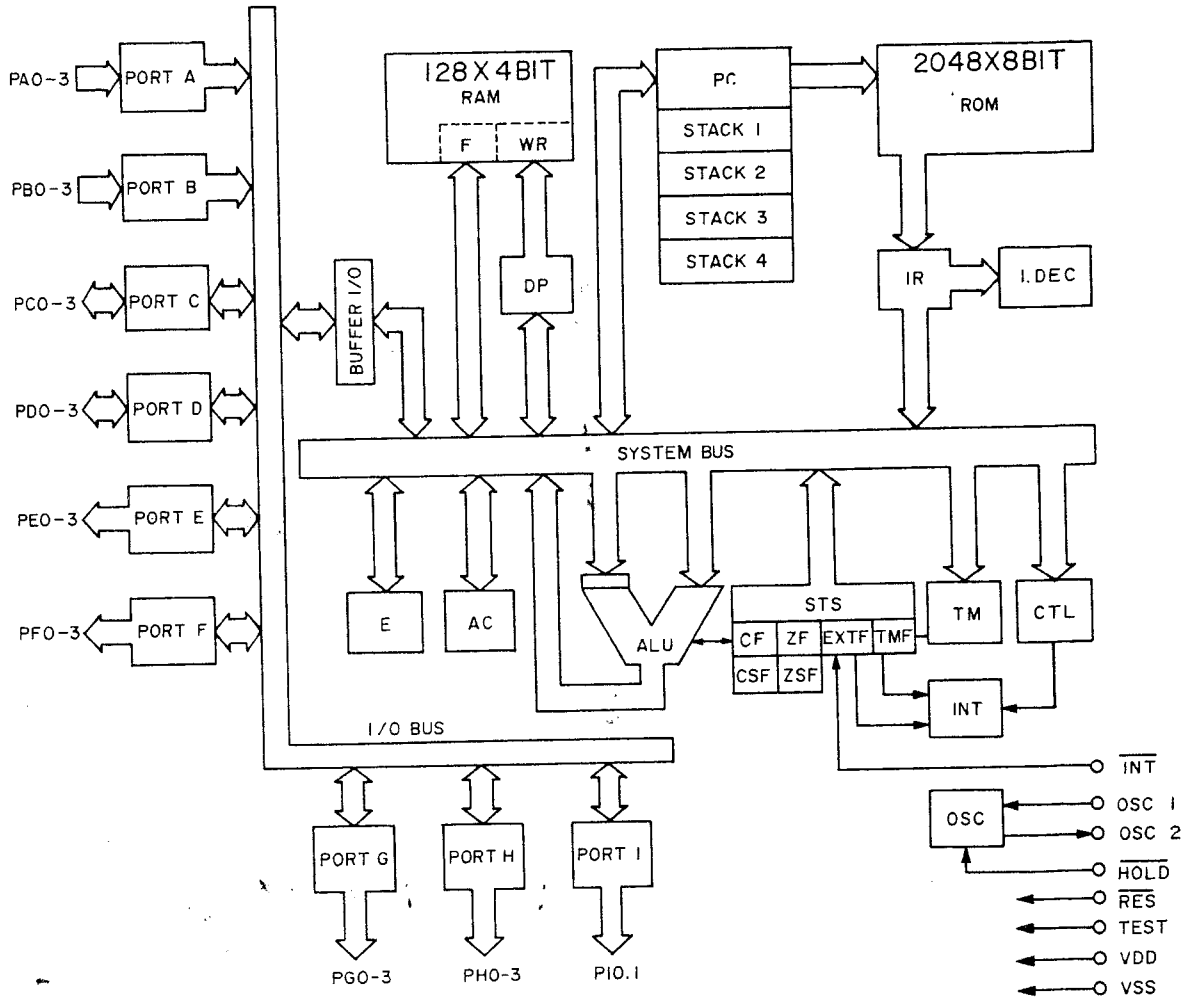
(E) Version

M576

4. CIRCUIT DESCRIPTION

SINGLE-CHIP 4-BIT MICROCOMPUTER LC6502C (QU01)

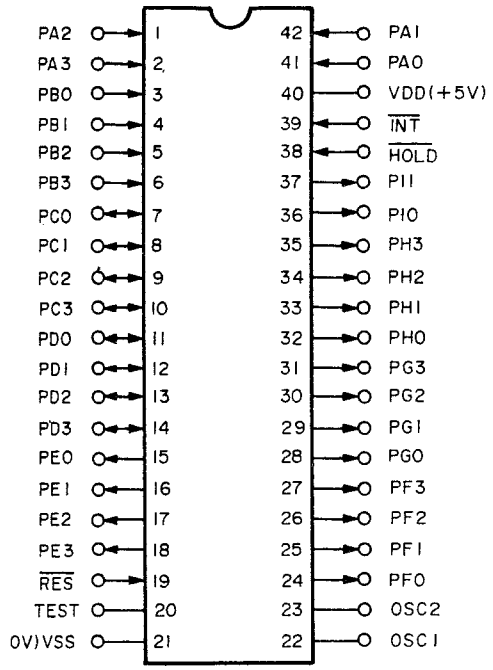
BLOCK DIAGRAM



RAM:	data memory
F:	flag
WR:	working register
AC:	accumulator
ALU:	logical operator unit
DP:	data pointer
E:	E register
CTL:	control register
OSC:	oscillator circuit
TM:	timer
STS:	status register

ROM:	program memory
PC:	program counter
INT:	interrupt control
IR:	instruction register
I. DEC:	instruction decoder
CF, CSF:	carry flag, carry save flag
ZF, ZSF:	zero flag, zero save flag
EXTF:	external interrupt request flag
TMF.	internal interrupt request flag

Terminal Connections



Terminal Function

Terminal Name	I/O	Function
$\overline{INT}$	Input	Pseudo interrupt request input terminal.
$\overline{HOLD}$	Input	Hold mode request input terminal.
$\overline{RES}$	Input	Reset input terminal.
PA_{3-0}	Input	Input ports A_3 to A_0 In input mode, 4-bit input and bit test are allowed. Used for HALT mode release and request input.
PB_{3-0}	Input	Input ports B_3 to B_0 In input mode, 4-bit input and bit test are allowed.
PC_{3-0}	I/O	I/O ports C_3 to C_0 In input mode, 4-bit input and bit test are allowed. In output mode, 4-bit output, bit set/reset output are allowed.
PD_{3-0}	I/O	I/O ports D_3 to D_0 In input mode, 4-bit input and bit test are allowed. In output mode, 4-bit output, bit set/reset output are allowed.
PE_{3-0}	Output	Output ports E_3 to E_0 4-bit output and bit set/reset are allowed. Input of output latch contents in 4-bit units and testing of output latch of bit is possible.
PF_{3-0}	Output	Output ports F_3 to F_0 4-bit output and bit set/reset are allowed. Input of output latch contents in 4-bit units and testing of output latch of bit is possible.
PG_{3-0}	Output	Output port G_3 to G_0 4-bit output and bit set/reset are allowed. Input of output latch contents in 4-bit units and testing of output latch of bit is possible.
PH_{3-0}	Output	Output ports H_3 to H_0 4-bit output and bit set/reset are allowed. Input of output latch contents in 4-bit units and testing of output latch of bit is possible.
$PI_{0,1}$	Output	Output ports $I_{0,1}$ 2-bit output and bit set/reset are allowed. Input of output latch contents in 4-bit units and testing of output latch of bit is possible.
OSC1	Input	Terminal operated with clock signal externally supplied. A ceramic resonatoe and CR are connected to the space between the X'tal and this terminals when using the local clock signal oscillator.
OSC2	I/O	External terminal of the resonance circuit for local clock signal oscillation.
V_{DD}	Input	Power terminal, usually connected to +5V.
V_{SS}		Connected to 0V of power supply.
TEST	Input	LSI test terminal, usually connected to V_{SS} (0V).

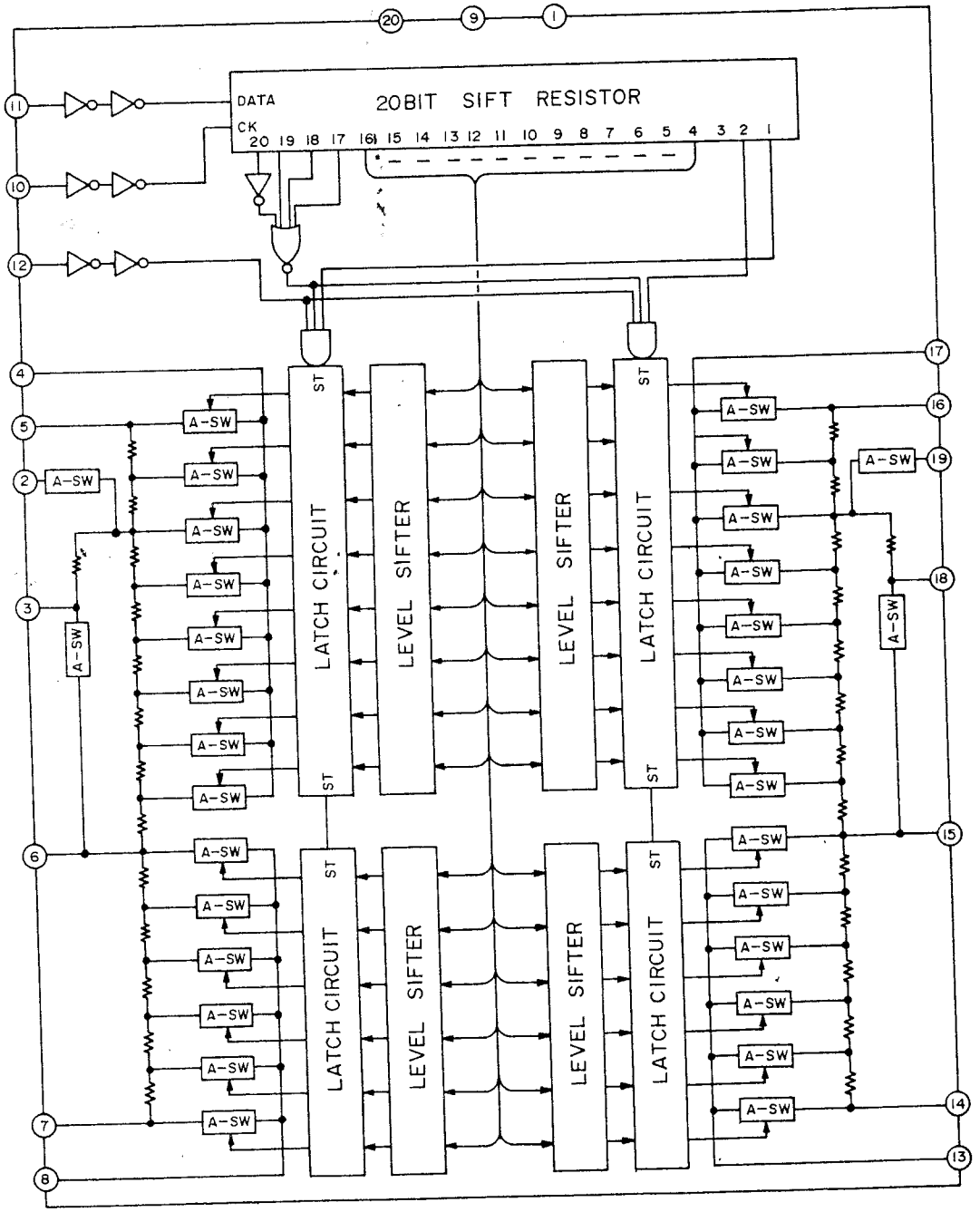
M 578

Maximum Ratings (Ta = 25°C, V_{SS} = 0V)

Item	Symbol	Condition	Min.	Max.	Unit
Maximum supply voltage	V_{DD} max.		−0.3	+7	V
Input voltage	V_{IN}		−0.3	V_{DD}+0.3	V
Output voltage	V_{OUT}	Output transistor OFF	−0.3	V_{DD}+0.3	V
Allowable power dissipation	P_d max.	−30°C to +70°C		350	mW
Ambient operating temperature	T_{opg}		−30	+70	°C
Ambient storage temperature	T_{stg}		−55	+125	°C

ELECTRON VOLUME IC TC9177P (QS03)

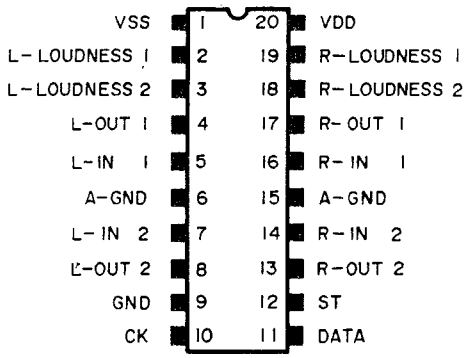
BLOCK DIAGRAM

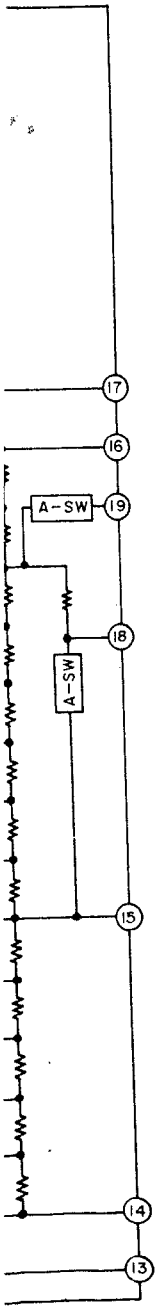


M579

Unit
V
V
V
mW
°C
°C

Terminal Connections





Terminal Function

Pin No.	Name	Function Description
2, 3 18, 19	L-LOUDNESS 1, 2 R-LOUDNESS 1, 2	Pins for loudness When loudness data is input, these pins becomes −20 dB dampened pins. Loudness control is possible through the connection of high and low range boosting circuits to these pins.
4, 17	$L\text{-}OUT_1$ $R\text{-}OUT_1$	10 dB step attenuator output. The signal applied to IN is attenuated in 8 10 dB steps from 0 to 70 dB.
5, 16	$L\text{-}IN_1$ $R\text{-}IN_1$	10 dB attenuator input.
6, 15	A-GND	AC ground pin.
7, 14	$L\text{-}IN_2$ $L\text{-}IN_2$	2 dB attenuator pin.
8, 13	$L\text{-}OUT_2$ $R\text{-}OUT_2$	2 dB attenuator output. The signal applied to IN is attenuated in 5 2 dB steps from 0 to 8 dB.
11	DATA	Data input for amount of attenuation and channel selection. Input by CK signal, configurated in 20 bits.
10	CK	Clock input. Clock input for fetching data from DATA pin.
12	ST	Strobe input. The data for the amount of attenuation and channel selection fetched from the DATA and CK pins is latched when this pin is "high". The previous data remains effective when a high level is not applied to this pin.
20	V_{DD}	Pin for (+) voltage.
9	GND	Ground pin.
1	V_{SS}	Pin for (−) voltage.

Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings	Unit
Supply voltage	V_{DD}	V_{SS}−0.3 ~ V_{SS}+36	V
Input voltage	V_{IN}	V_{SS}−0.3 ~ V_{DD}+0.3	V
Power dissipation	P_D	300	mW
Operating temperature	T_{opr}	−30 ~ 75	°C
Storage temperature	T_{stg}	−55 ~ 125	°C

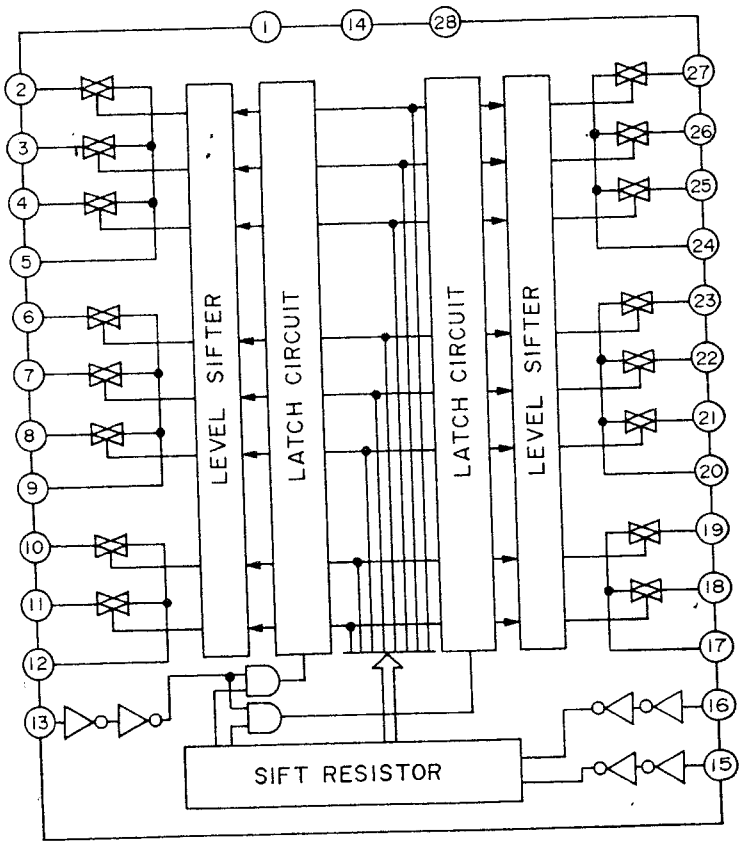
M5C

Electrical Characteristics (V_{DD} = 15V, V_{SS} = −15V Ta = 25°C)

Item		Symbol	Test Condition		Min.	Typ.	Max.	Unit
Operating power voltage range		$V_{DD}-V_{SS}$			7.5	~	32	V
Operating supply current		I_{DD}				0.5	3.0	mA
Input voltage	"H"	V_{IH}	DATA, CK, ST terminal		4.0	~	V_{DD}+0.3	V
Input voltage	"L"	V_{IL}			−0.3	~	1.0	V
Total resistance value (ATT_1)		R_{ATT_1}			90	120	160	KΩ
Total resistance value (ATT_2)		R_{ATT_2}			10	14.	20	KΩ
Step error (ATT_1)		$STEP_{(1)}$	f_{in}=DC~20 kHz R_L=∞	0 ~ 30 dB	9.2	10	10.8	dB
				−40 ~ 70 dB	8.8		11.8	
Step error (ATT_2)		$STEP_{(2)}$	f_{in}=DC~20 kHz R_L=∞		−1.2	2	2.8	dB
Total harmonic distortion (ATT_1)		$THD_{(1)}$	f_{in}=20~20 kHz, V_{in}=1.0Vrms 0 dB			0.003	0.005	%
Total harmonic distortion (ATT_2)		$THD_{(2)}$	f_{in}=20~20 kHz, V_{in}=1.0Vrms 0 dB			0.003	0.005	%
Maximum amount of attenuation		$ATT_{(max.)}$			90			dB
Output noise voltage		V_N	0 dB Position f_{out}=20~20 kHz R_g=1KΩ			2	10	μVrms
Channel separation		C.S	V_{in}=1 Vrms f_{in}=1 kHz		80			dB
CONTROL INPUT SECTION								
Maximum operating frequency		$f_{(max)}$					500	kHz
Minimum clock width ("H")		$T_{CK(H)}$			1.0			μsec
Minimum clock width ("L")		$T_{CK(L)}$			1.0			μsec

HIGH VOLTAGE RESISTING ANALOG FUNCTION SWITCH ARRAY TC9163N (QS01)

BLOCK DIAGRAM



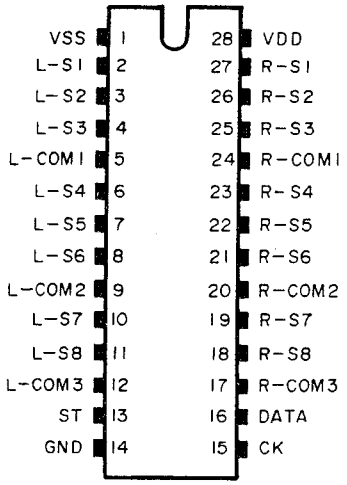
M581

lax.	Unit
32	V
3.0	mA
D+0.3	V
1.0	V
160	KΩ
20	KΩ
0.8	dB
1.8	
2.8	dB
.005	%
.005	%
	dB
10	μVrms
	dB
500	kHz
	μsec
	μsec

01)

7
6
5
24
23
22
21
20
19
18
17
16
15

Terminal Connections



Maximum Ratings

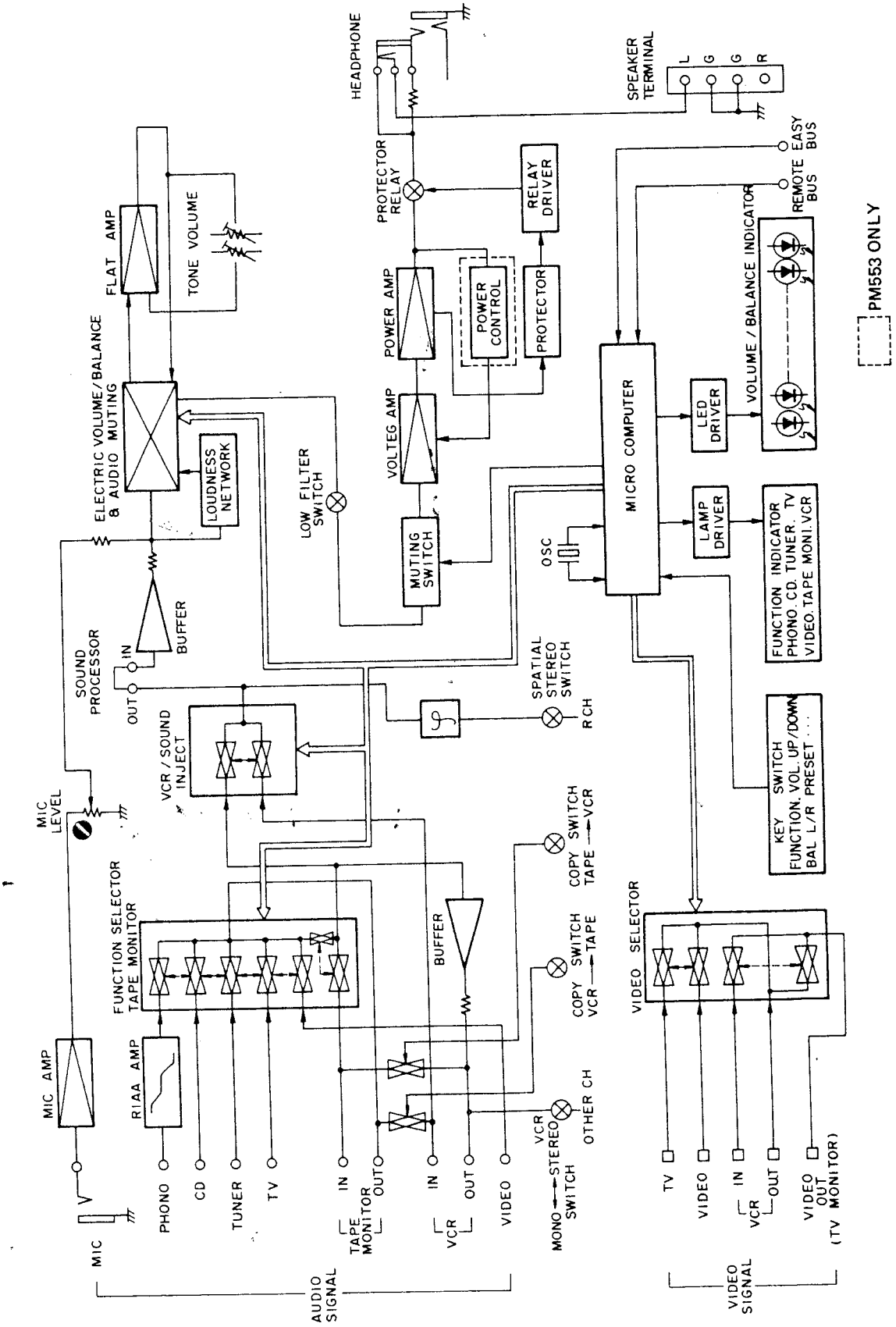
Item	Symbol	Ratings	Unit
Supply voltage (1)	V_{DD} V_{SS}	34	V
Supply voltage (2)	V_{DD} GND	17	V
Input voltage	V_{IN}	$V_{SS}-0.3 \sim V_{DD}+0.3$	V
Power dissipation	P_D	300	mW
Operating temperature	T_{opr}	−30 ~ 75	°C
Storage temperature	T_{stg}	−55 ~ 125	°C

Electrical Characteristics (V_{DD}=16V, V_{SS}=−16V, GND=0V, Ta=25°C)

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating supply voltage (1)	$V_{DD}-GND$		8	~	16	V
Operating supply voltage (2)	$GND-V_{SS}$		−8	~	−16	V
Operation supply current	I_{DD}	V_{DD}=16V, V_{SS}=−16V, GND=0V	–	~	3	mA
Backup voltage	V_B		4	~	16	V
Backup current	I_B	V_{DD}=4.0V, V_{SS}=GND=0V	–	1	10	μA
High level input voltage	V_{IH}	V_{DD}=16V, CK, DATA, ST	4	–	16	V
Low level voltage	V_{IL}	V_{DD}=16V, CK, DATA, ST	0	–	10	V
Operating minimum pulse width	t_{in}		5	–	–	μsec
Switch ON resist.	R_{ON}		–	100	200	Ω
Total harmonic distortion.	THD	f_{in}=0~20 kHz, V_{in}=1Vrms	–	0.002	0.005	%
Nois voltage.	V_{NO}	f=20~50 kHz	–	2	10	μVrms

M582

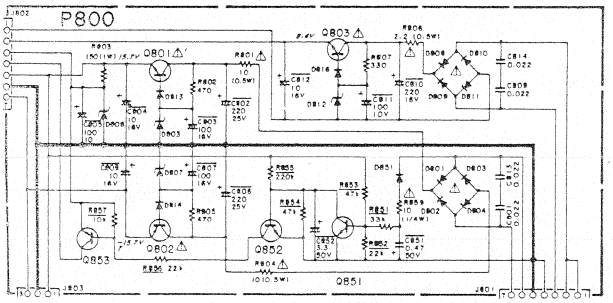
5. BLOCK DIAGRAM



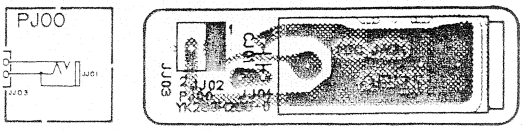
M583

6. DIAGRAM AND COMPONENT LOCATIONS

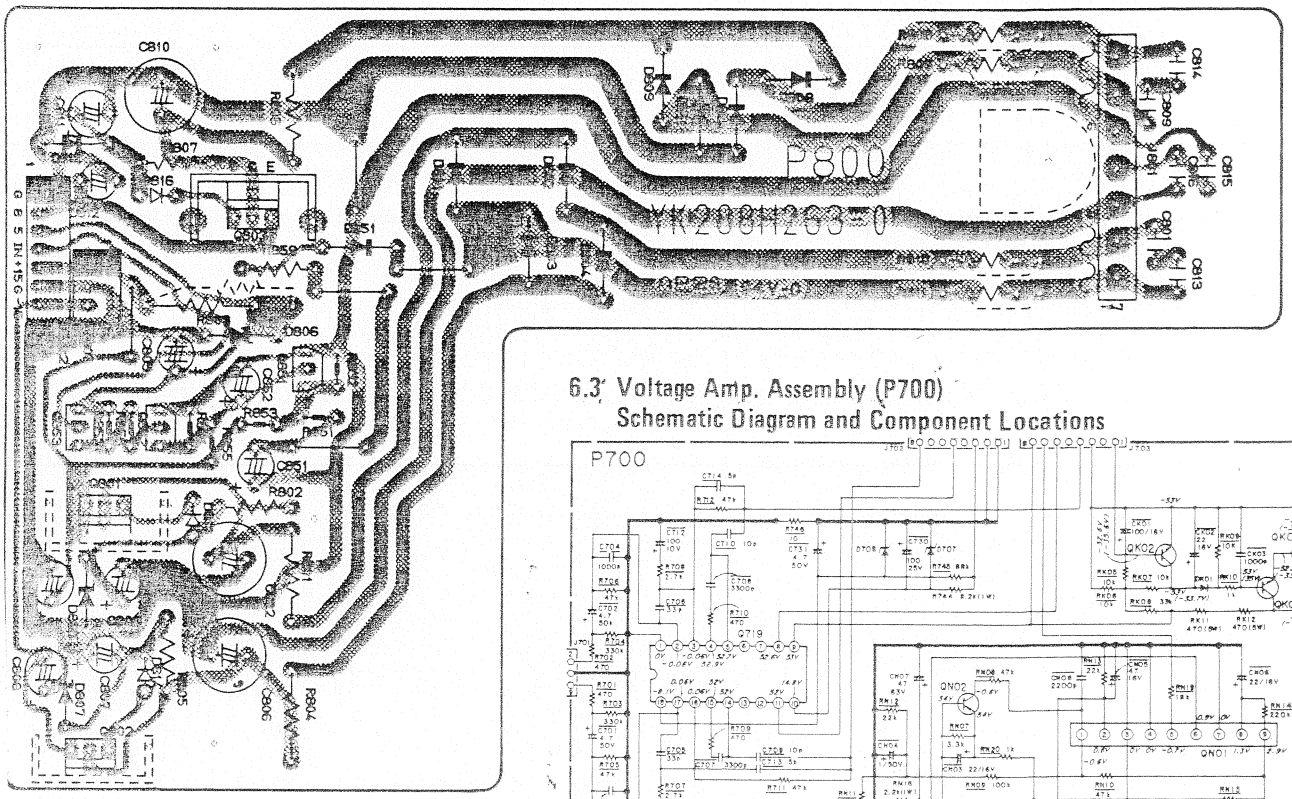
6.1 Power Supply Assembly (P800)
Schematic Diagram and Component Locations



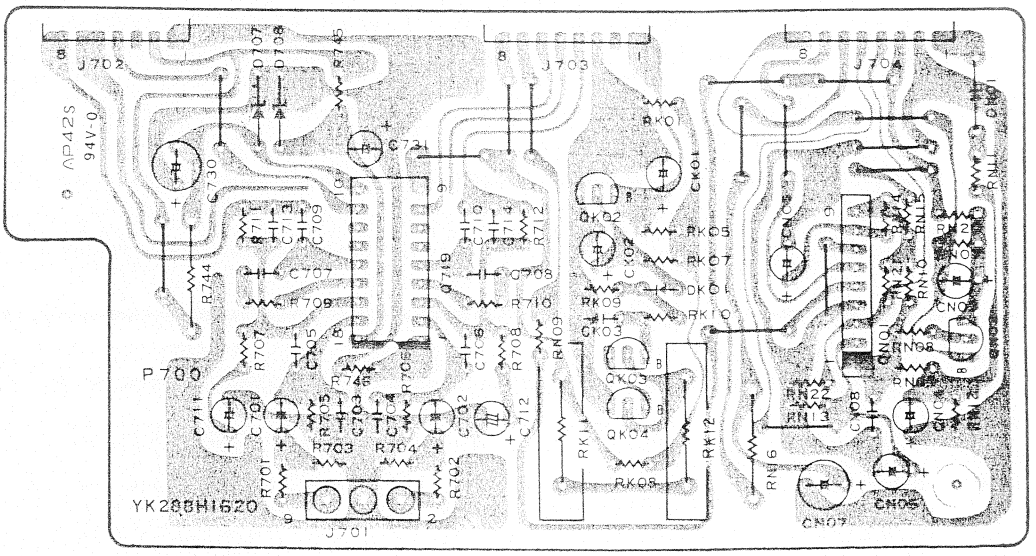
6.2 Mic Jack Assembly (PJ00)
Schematic Diagram and Component Locations



PM553 ONLY



6.3 Voltage Amp. Assembly (P700)
Schematic Diagram and Component Locations

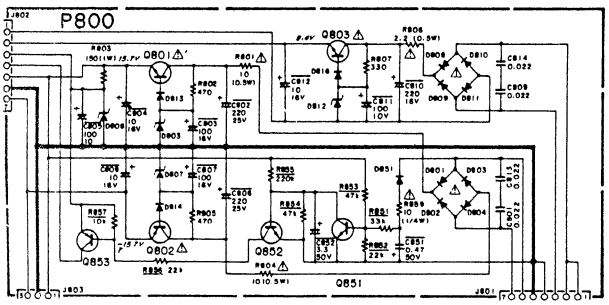


OUT (TV MONITOR)

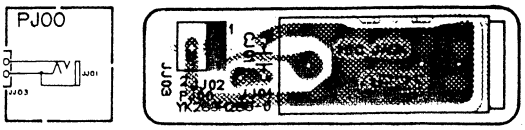
M584

6. DIAGRAM AND COMPONENT LOCATIONS

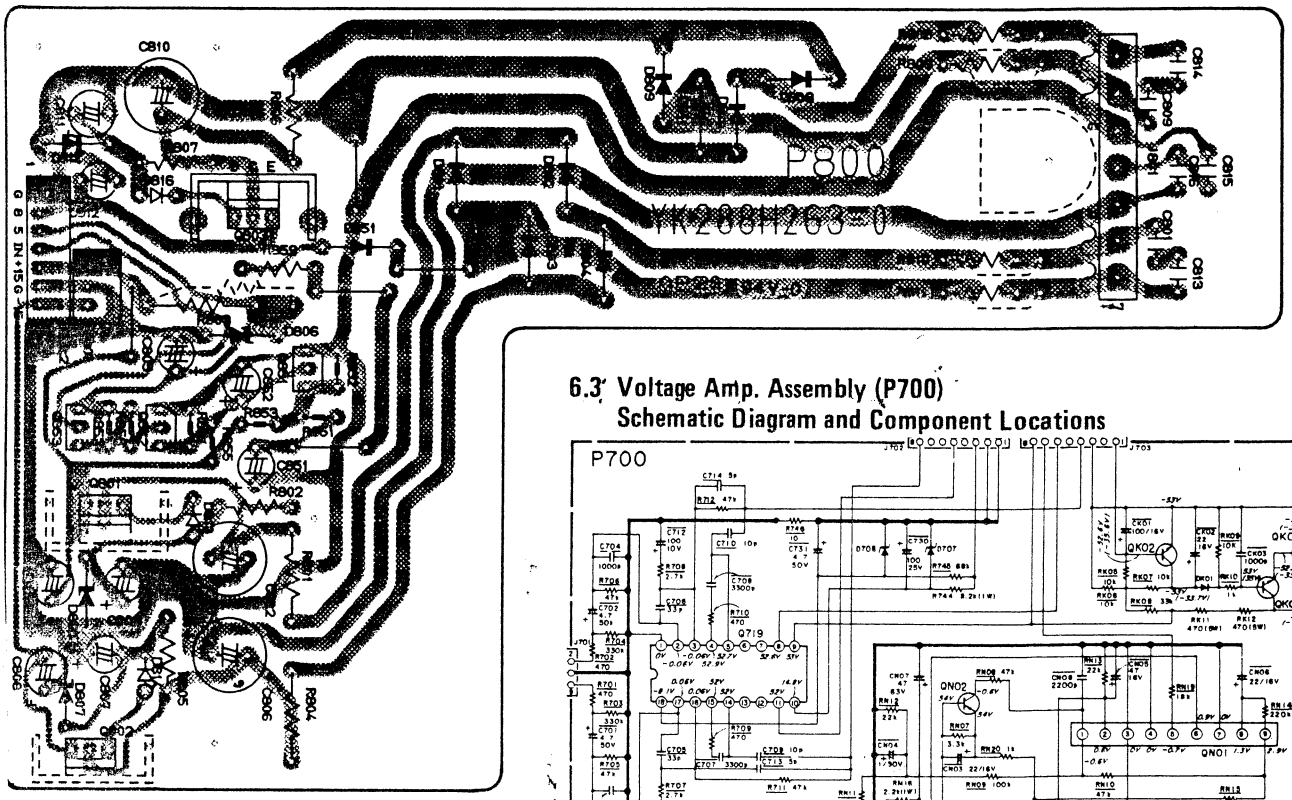
6.1 Power Supply Assembly (P800)
Schematic Diagram and Component Locations



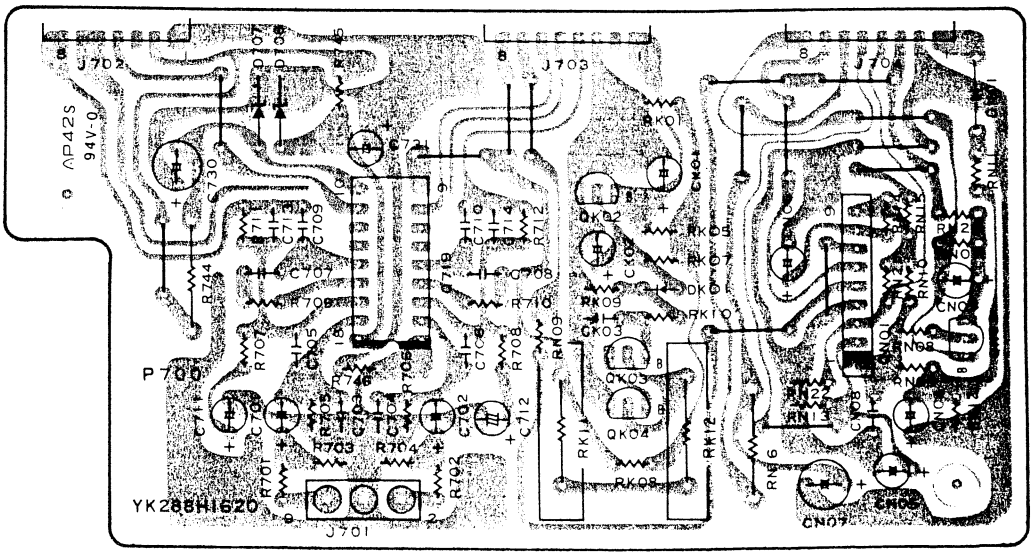
6.2 Mic Jack Assembly (PJ00)
Schematic Diagram and Component Locations



PM553 ONLY



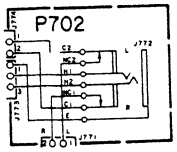
6.3 Voltage Amp. Assembly (P700)
Schematic Diagram and Component Locations

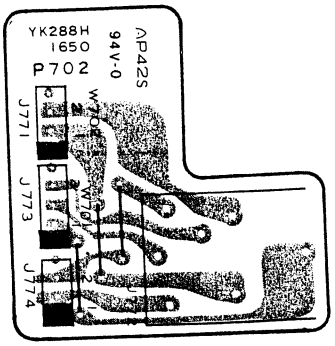


(TV MONITOR) OUT

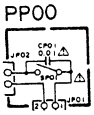
M584

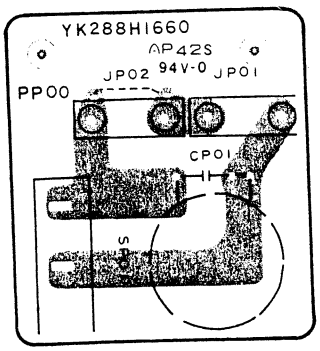
6.4 Headphone Assembly (P702) Schematic Diagram and Component Locations



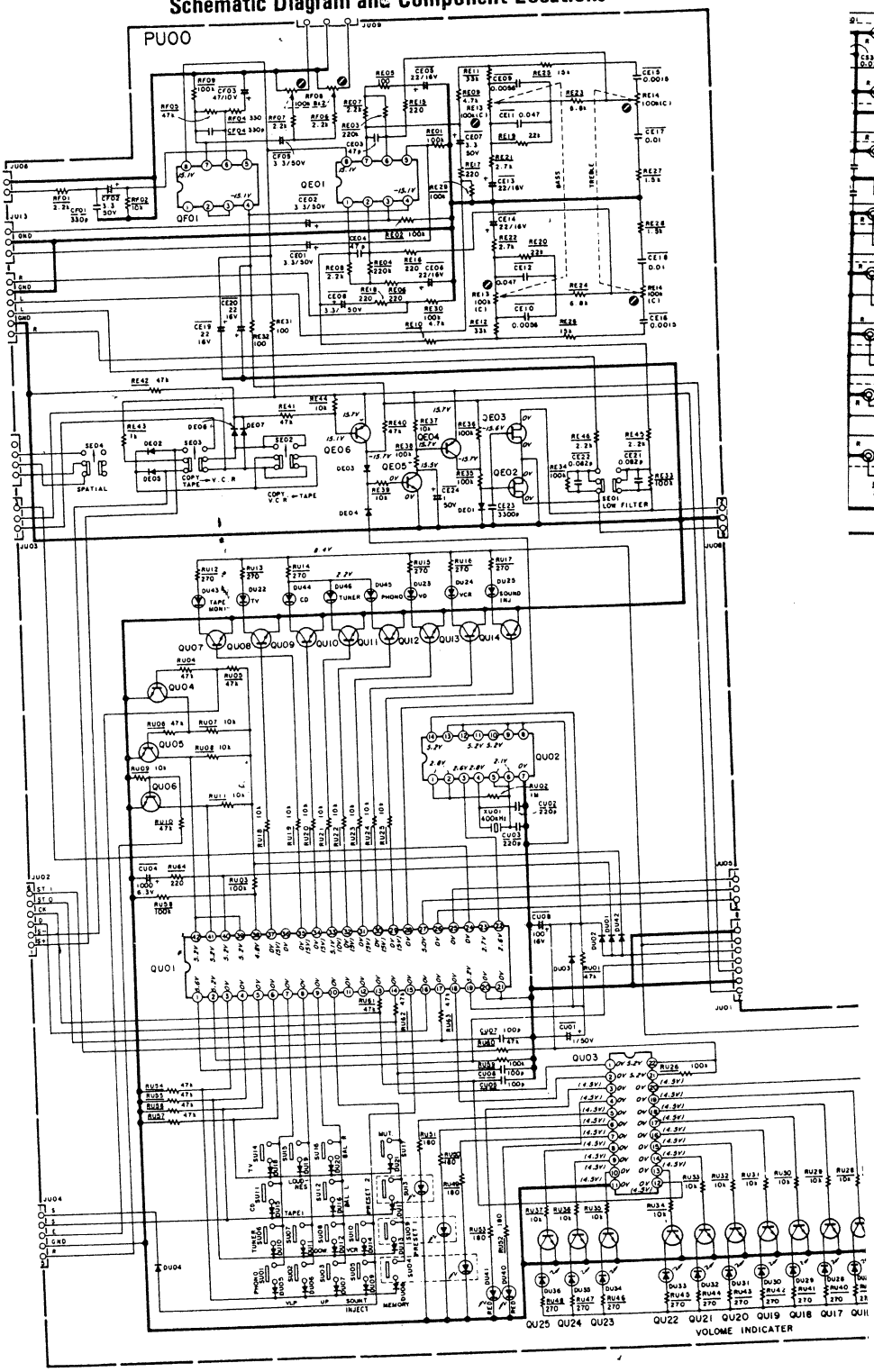


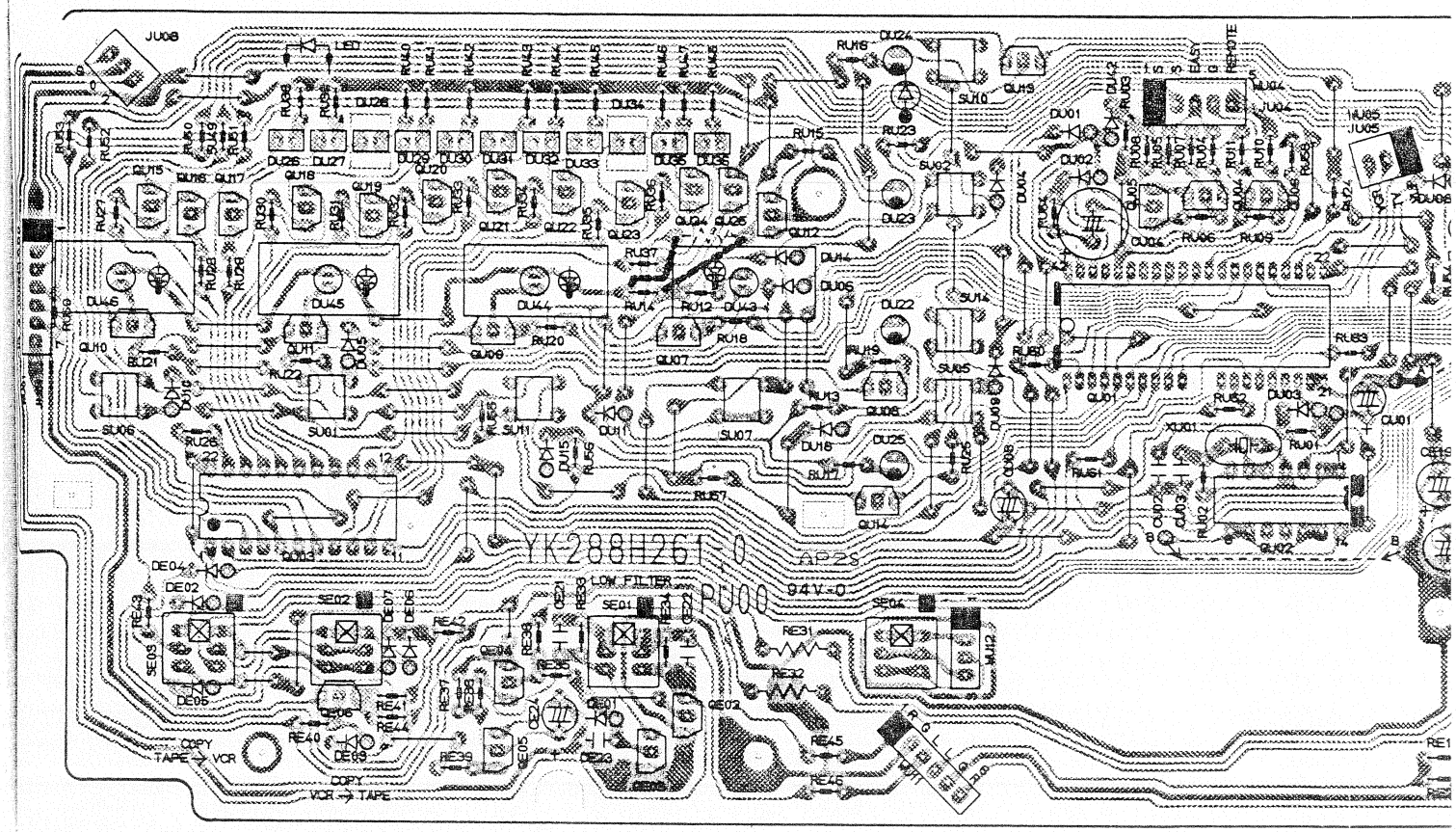
6.5 Power Switch Assembly (PP00) Schematic Diagram and Component Locations



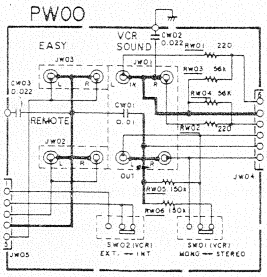


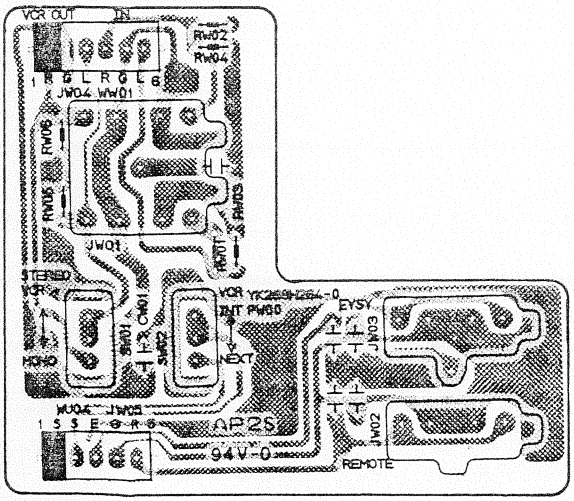
6.6 Micon/Tone/Mic Amp. Assembly (PU00) Schematic Diagram and Component Locations



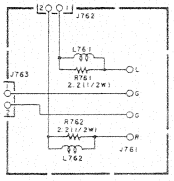


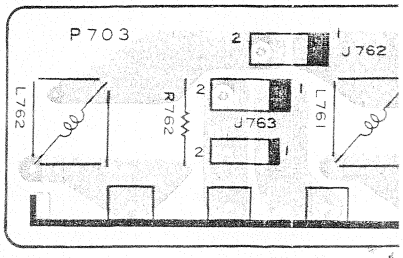
6.7 Remote Easy VCR Terminal Assembly (PW00) Schematic Diagram and Component Locations



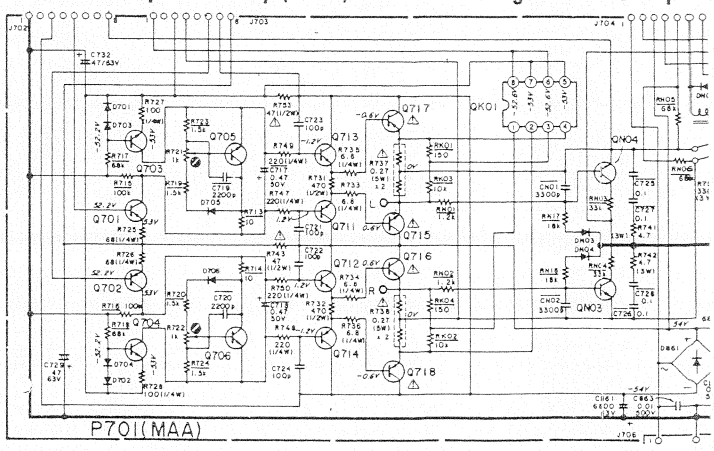


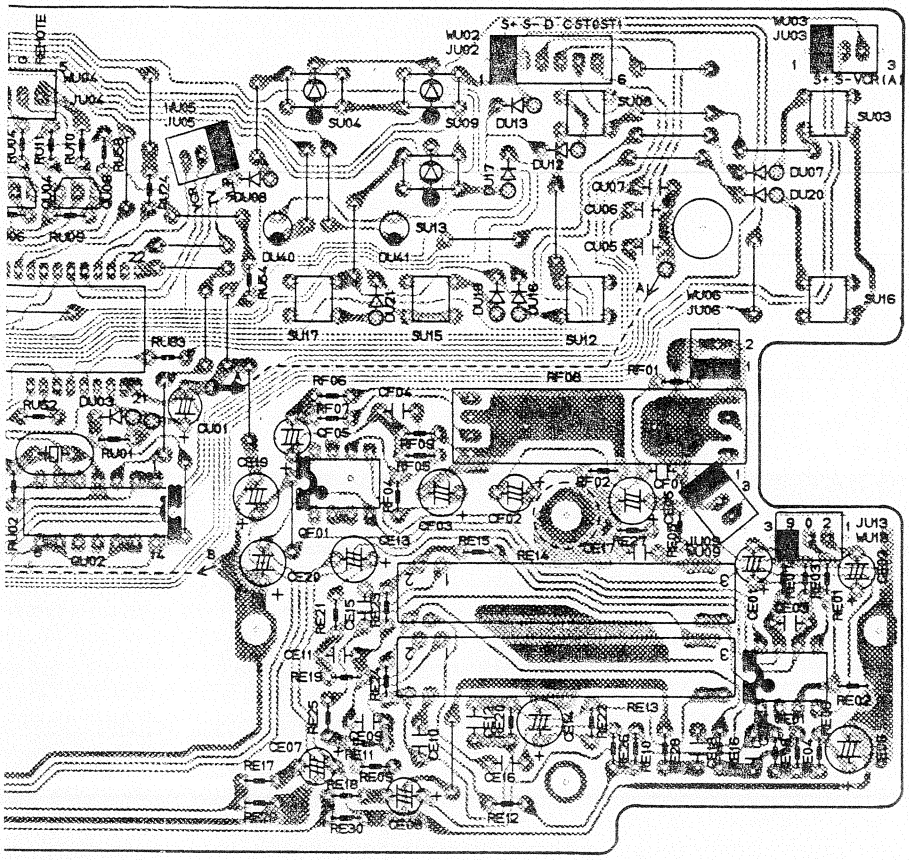
6.8 Speaker Terminal Assembly (P703) Schematic Diag

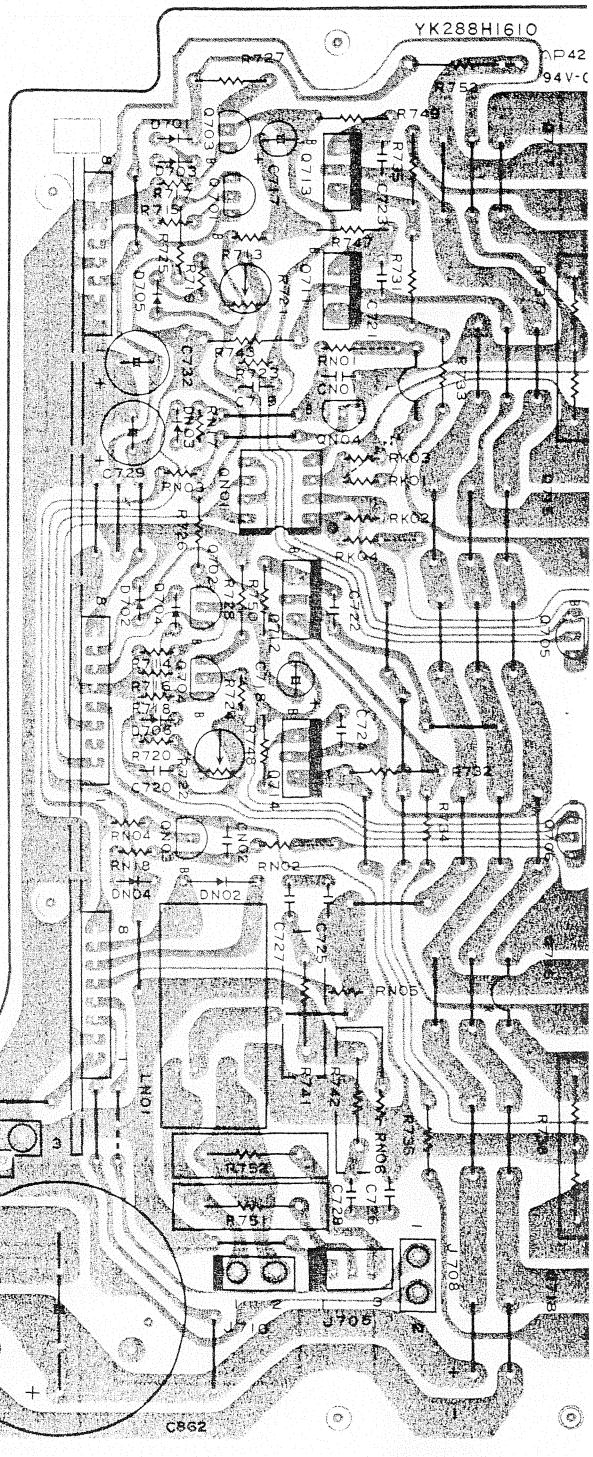




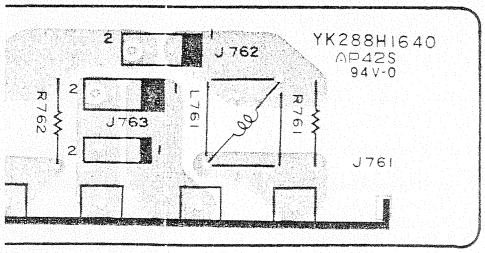
6.9 Main Amp. Assembly (P701) Schematic Diagram and Compon



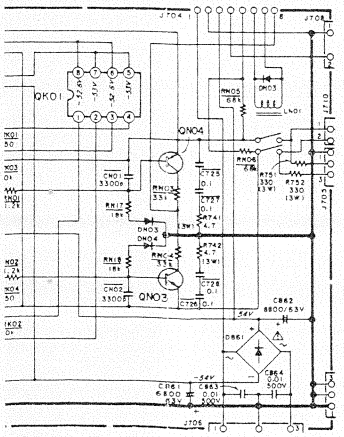




ly (P703) Schematic Diagram and Component Locations

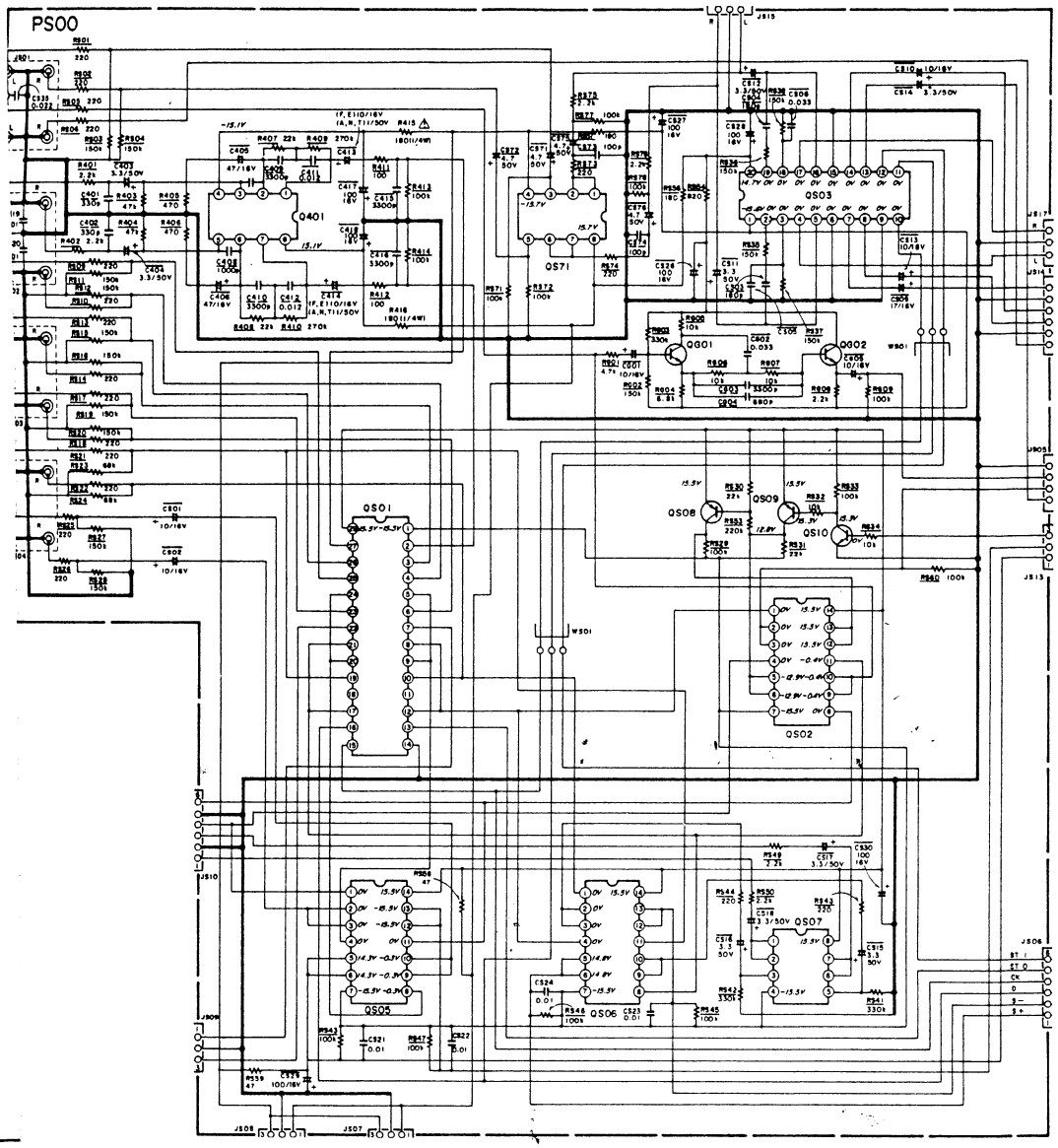


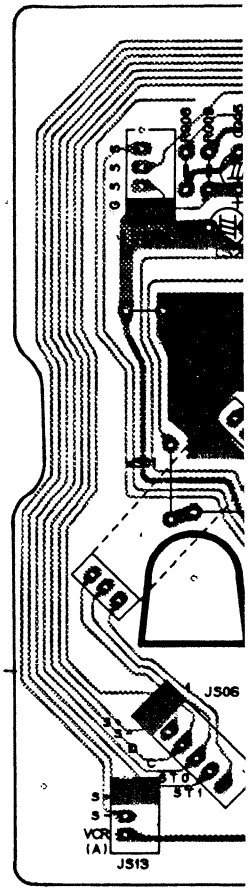
ıtic Diagram and Component Locations

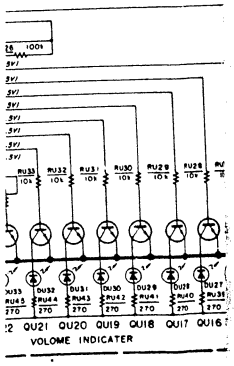


M506

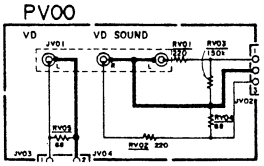
6.10 Phono/Selecter/Surround Assembly (PS00) Schematic Diagram and Component Locations

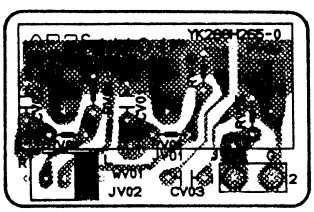




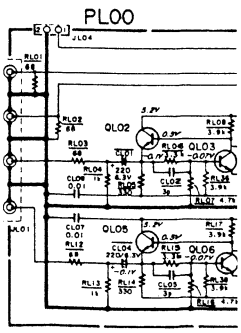


6.11 Front AV Terminal Assembly (PV00) Schematic Diagram and Component Locations





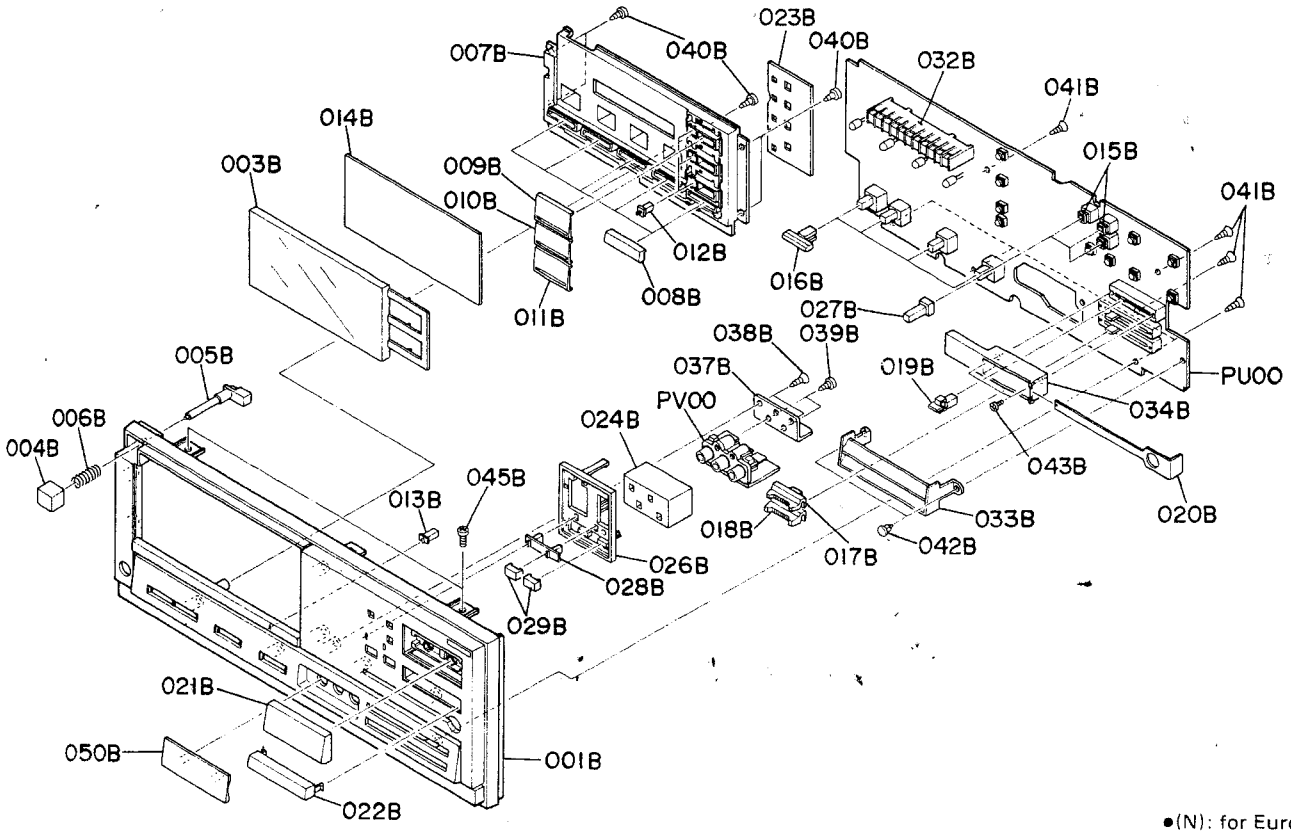
6.12 Video Selecter Schematic Diag



587

7. EXPLODED VIEW AND PARTS LIST

[C01-99] FRONT PANEL



- (N): for Europe
- (E): for Europe
- (A): for Austral
- (F): for Japan

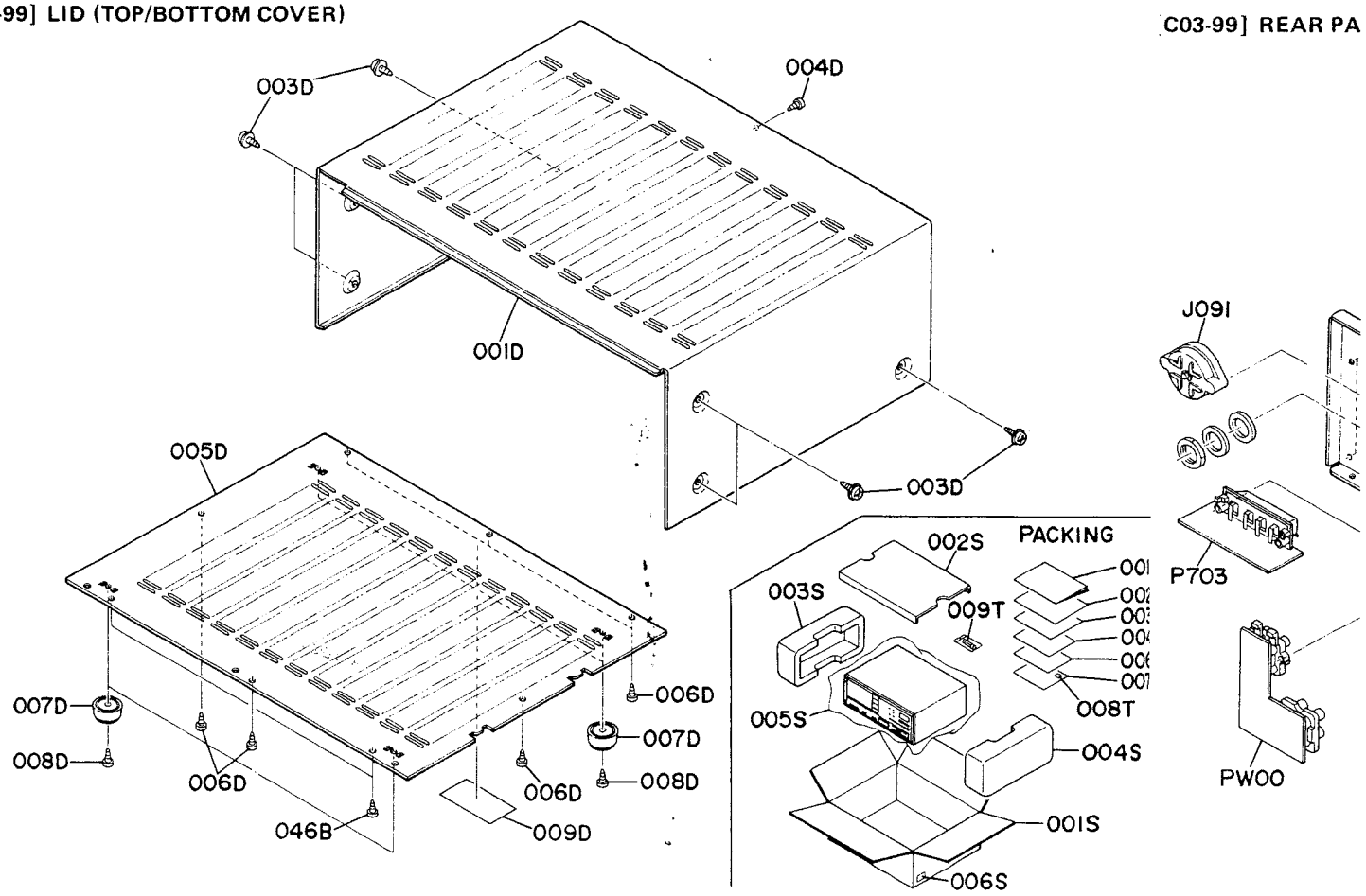
REF. DESIG.	PART NO.	DESCRIPTION
A	288H248400	Front Panel Assembly (PM553)
001B	288H248010	Front Panel
013B	288H355030	Lens, Sound Eject
026B	288H271010	Holder
028B	288H355020	Lens, Muting/Loudness
029B	289H270110	Button, Muting/Loudness
A	287H248400	Front Panel Assembly (PM453)
001B	287H248010	Front Panel
013B	288H355030	Lens, Sound Eject
026B	288H271010	Holder
028B	288H355020	Lens, Muting/Loudness
029B	289H270110	Button, Muting/Loudness
003B	288H158010	Window, Front
004B	139T154360	Knob, Power Switch
005B	012H121010	Link, Power Switch
006B	139T115020	Spring, Power Switch
007B	288H271030	Holder, Selector
008B	288H270040	Button, Input Selector
009B	288H270010	Button, VCR/MON
010B	288H270020	Button, Video
011B	288H270030	Button, TV
012B	288H355040	Lens

REF. DESIG.	PART NO.	DESCRIPTION	
014B	288H265010	Indicator	
015B	288H259010	Bushing	
016B	288H270050	Button, Copy/Low Filter/Spatial	
017B	288H154010	Knob, Treble	
018B	288H154020	Knob, Bass	
019B	012H154170	Knob, Mic	
020B	288H303010	Mask, Mic	
021B	471H270140	Button, Volume	
022B	289H154120	Knob, Balance	
023B	288H303020	Mask, VCR/MON. Video/TV	
024B	288H303030	Mask, Muting/Loudness	
027B	288H355010	Lens, Memo/M1/M2	
032B	288H051010	Guide, Volume LED	
033B	288H051020	Guide, Treble	
034B	288H051030	Guide, Mic	
037B	288H160030	Bracket, Video Terminal	
038B	51330308B0	F.H. Tapped Screw	F3 x 8
039B	51280308B0	B.H. Tapped Screw	B3 x 8
040B	51280308B0	B.H. Tapped Screw	B3 x 8
041B	51280308B0	B.H. Tapped Screw	B3 x 8
042B	2276005050	Clamper	
043B	51100203A0	B.H.M. Screw	B2 x 3
045B	51280308B0	B.H. Tapped Screw	B3 x 8
050B	288H053010	Cover, 3 Pin Jack	

M580

[C02-99] LID (TOP/BOTTOM COVER)

C03-99] REAR PA

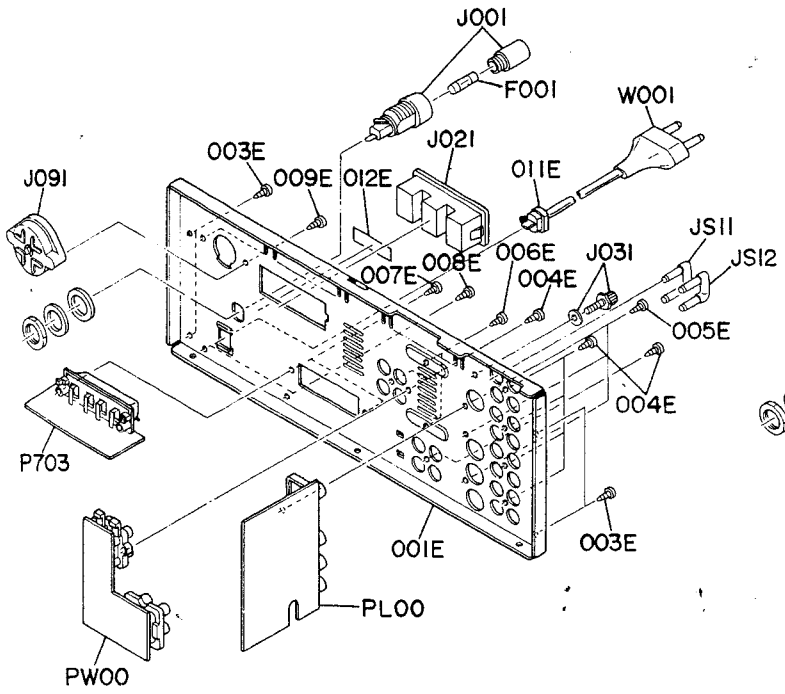


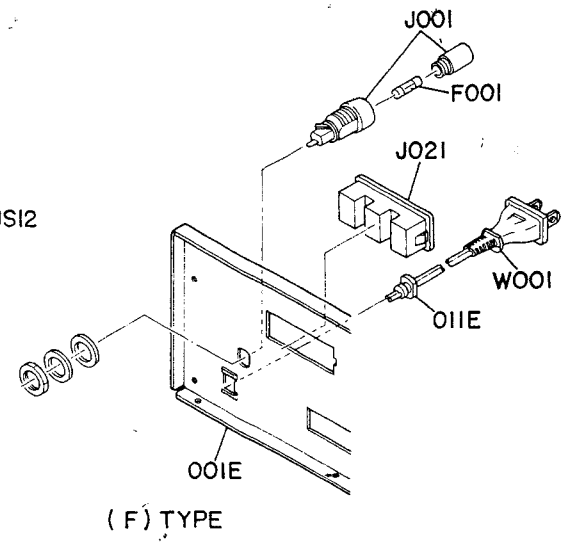
REF. DESIG.	PART NO.	DESCRIPTION	
046B	5128030880	B.H. Tapped Screw	B3 x 8
001D	179T257010	Lid, Top Cover	
003D	5126030800	B.T. Screw	B3 x 8
004D	5128030880	B.H. Tapped Screw	B3 x 8
005D	288H257020	Lid, Bottom Cover	
006D	5128030880	B.H. Tapped Screw	B3 x 8
007D	011T057010	Leg	
008D	5128040880	B.H. Tapped Screw	B4 x 8
009D	2911861110	Label, Caution [N, E, A]	
		PACKING	
001S	288H801010	Packing Case (PM553), [N, A, F]	
	288H801030	Packing Case (PM553), [E]	
	287H801010	Packing Case (PM453), [N, A, F]	
	287H801030	Packing Case (PM453), [E]	
002S	288H807010	Reinforcing [E]	
003S	179T809010	Cushion, (L)	
004S	179T809020	Cushion, (R)	
005S	9090808030	Polyethylene Sheet	

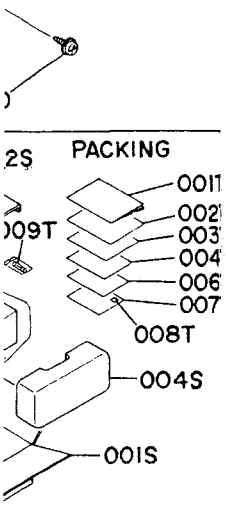
REF. DESIG.	PART NO.	DESCRIPTION	EF. SIG.	PART NO.
006S	9526019060	Serial No. Card [N, E]	01E	288H250030
	9526019030	Serial No. Card [A]		288H250010
	9526019040	Serial No. Card [F]		288H250040
				288H250020
001T	288H851310	User Manual [N, E, A]		287H250010
	288H851110	User Manual [F]		287H250040
002T	288H851320	User Manual, Spec [N, E, A]		287H250020
003T	288H856010	Circuit Diagram (PM553), [N, E]	03E	51280308B0
	287H856010	Circuit Diagram (PM453), [N, E]	04E	51280308B0
004T	9631000090	Warranty Card [A]	05E	51280308B0
	9631000130	Warranty Card [F]		
006T	128T854010	Warranty Card [F]	06E	51280308B0
007T	9611000050	User's Card [F]	07E	51280308B0
008T	9540000010	License	08E	51280308B0
⚠009T	FS10400800	Fuse 4A 250V (PM553),	09E	51280308B0
	FS10315800	Fuse 3.15A 250V (PM453),	11E	1455259130
			2E	2112265010
				2112265110

H589

[C03-99] REAR PANEL





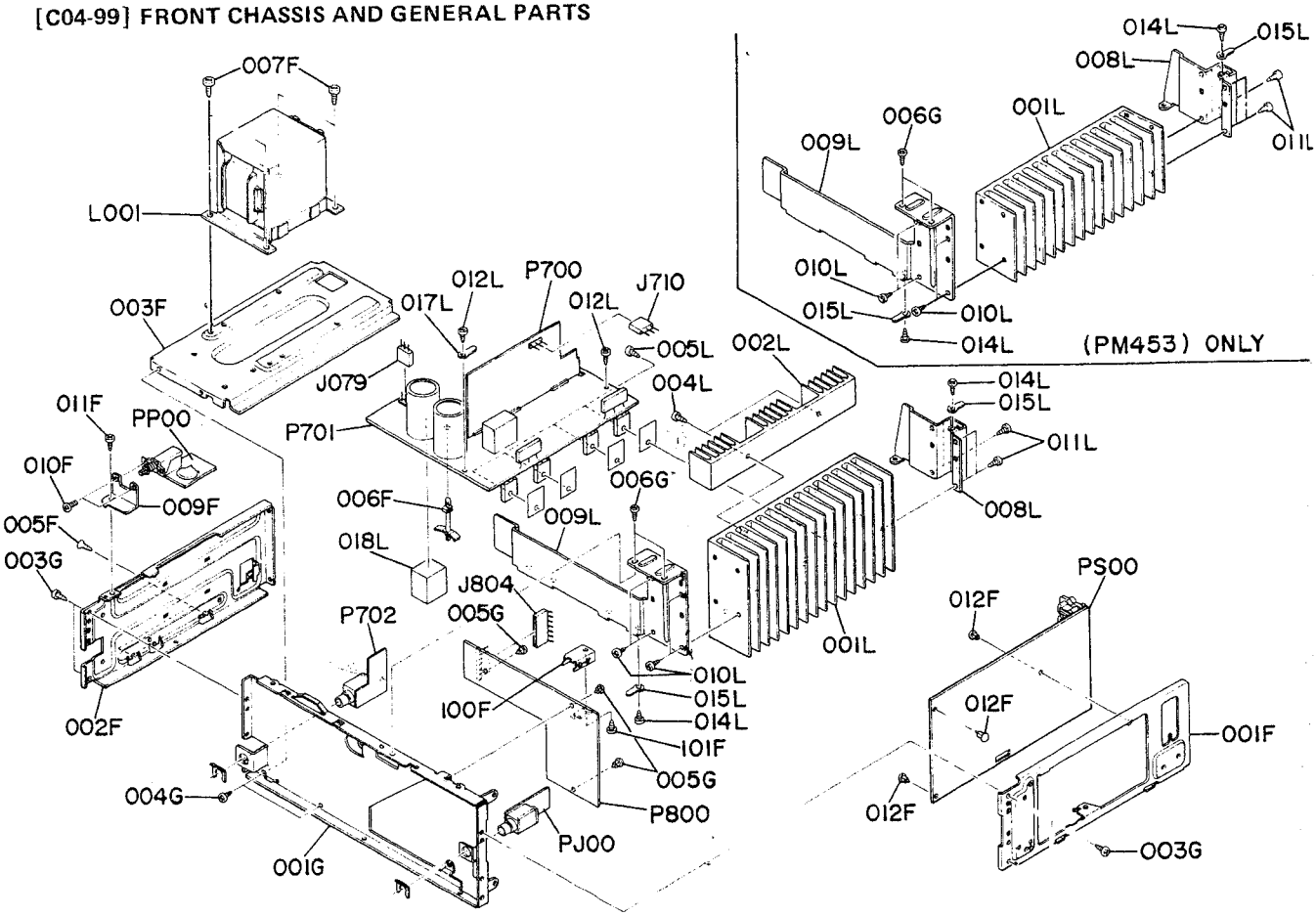


DESCRIPTION	REF. DESIG.	PART NO.	DESCRIPTION
ard [N, E]	101E	288H250030	Rear Panel (PM553), [U]
ard [A]		288H250010	Rear Panel (PM553), [N, A]
ard [F]		288H250040	Rear Panel (PM553), [E]
		288H250020	Rear Panel (PM553), [F]
l [N, E, A]		287H250010	Rear Panel (PM453), [N, A]
l [F]		287H250040	Rear Panel (PM453), [E]
l, Spec [N, E, A]		287H250020	Rear Panel (PM453), [F]
gram (PM553), [N, E]	103E	51280308B0	B.H. Tapped Screw B3 x 8
gram (PM453), [N, E]	104E	51280308B0	B.H. Tapped Screw B3 x 8
ard [A]	105E	51280308B0	B.H. Tapped Screw B3 x 8
ard [F]			
ard [F]	106E	51280308B0	B.H. Tapped Screw B3 x 8
[F]	107E	51280308B0	B.H. Tapped Screw B3 x 8
	108E	51280308B0	B.H. Tapped Screw B3 x 8
250V (PM553), [E	109E	51280308B0	B.H. Tapped Screw B3 x 8 [N, E, A]
5A 250V (PM453), [E	111E	1455259130	Bushing, AC Power Cord
	112E	2112265010	Indicator, Serial No. [F]
		2112265110	Indicator, Serial No. [N, E, A]

REF. DESIG.	PART NO.	DESCRIPTION
⚠ F001	FS10200800	Fuse T2.0A 250V (PM553), [N, E, A
	FS10400600	Fuse 4A 250V (PM553), [F]
	FS10140800	Fuse T1.4A 250V (PM453), [N, E, A
	FS10300600	Fuse 3A 250V (PM453), [F]
⚠ J001	YJ08000300	Jack, Fuse Holder [F]
	YJ08000290	Jack, Fuse Holder [N, E, A]
⚠ J021	YJ04001180	Jack, AC Outlet [E, F]
J031	YL03010250	Terminal, GND
⚠ J091	BY05030040	Voltage Selector [N, A]
	BY05080050	Voltage Selector [E]
JS11	YQ01000080	Shote Plug
JS12	YQ01000080	Shote Plug
⚠ W001	YC01800340	A.C. Power Cord [N]
	YC01900080	A.C. Power Cord [E, F]
	YC02000230	A.C. Power Cord [A]

M590

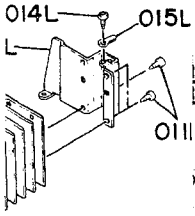
[C04-99] FRONT CHASSIS AND GENERAL PARTS



REF. DESIG.	PART NO.	DESCRIPTION	
001F	288H105020	Chassis, Side; (R)	
002F	288H105030	Chassis, Side; (L)	
003F	288H105040	Chassis, Transformer	
005F	51280308B0	B.H. Tapped Screw	B3 x 8
006F	288H101020	Support, Main Amp PWB	
007F	5128040880	B.H. Tapped Screw	B4 x 8
009F	288H160040	Bracket, Power Switch	
010F	51100306A0	B.H.M. Screw	B3 x 8
011F	51280308B0	B.H. Tapped Screw	B3 x 8
012F	2276005030	Clamper	
100F	250H267020	Heatsink, (Q803)	
101F	51280308B0	B.H. Tapped Screw	B3 x 8
001G	288H105010	Chassis, Front	
003G	51280308B0	B.H. Tapped Screw	B3 x 8
004G	51280308B0	B.H. Tapped Screw	B3 x 8
005G	2276005030	Clamper	
006G	51280308B0	B.H. Tapped Screw	B3 x 8

REF. DESIG.	PART NO.	DESCRIPTION	
001L	288H267010	Heatsink, Main (PM553)	
	288H267110	Heatsink, Main (PM453)	
002L	288H267010	Heatsink, Main (PM553)	
004L	51280308B0	B.H. Tapped Screw	B3 x 8 (PM5
005L	51280310B0	B.H. Tapped Screw	B3 x 10
008L	288H160010	Bracket, Heatsink; Rear	
009L	288H160050	Bracket, Heatsink; Front	
010L	51280308B0	B.H. Tapped Screw	B3 x
011L	51280308B0	B.H. Tapped Screw	B3 x
012L	51280308B0	B.H. Tapped Screw	B3 x
014L	51280308B0	B.H. Tapped Screw	B3 x
015L	62030039W0	Lug	
017L	62030039W0	Lug	
018L	288H056010	Buffer	
J709	YJ06001040	Jack, 3P	
J710	YJ06001040	Jack, 3P	
J804	YJ06001260	Jack, 7P	
⚠ L001	TS19623030	Power Transformer (PM553), [N,A	
	TS19623040	Power Transformer (PM553), [F]	
	TS19623010	Power Transformer (PM553), [F]	
	TS17631010	Power Transformer (PM453), [N,A	
	TS17631030	Power Transformer (PM453), [E]	
	TS17631020	Power Transformer (PM453), [F]	

M59



ASSIGNMENT OF COMMON PARTS CODES.

RESISTOR

R***: (1) GD05 --- 140, Carbon film fixed resistor, ±5%, 1/4W
R***: (2) GD05 --- 160, Carbon film fixed resistor, ±5%, 1/6W

① — Resistance value

Examples

① Resistance value

0.1Ω...001	10Ω...100	1kΩ...102	100kΩ...104
0.5Ω...005	18Ω...180	2.7kΩ...272	680kΩ...684
1Ω...010	100Ω...101	10kΩ...103	1MkΩ...105
6.8Ω...068	390Ω...391	22kΩ...223	4.7MkΩ...475

M453) ONLY

(Note) Please distinguish 1/4W from 1/6W by the shape of parts used actually.

C***: CERAMIC CAP.

(1) DD1 ---- 370, Ceramic condenser
Disc type
①②
Temp. coeff. P350 ~ N1000, 50V
② — Capacity value
① — Tolerance

Examples

① Tolerance (Capacity deviation)
±0.25pF...0
±0.5pF...1
±5%...5

* Tolerance of COMMON PARTS handled here are as follows:
0.5pF ~ 5pF...±0.25pF
6pF ~ 10pF...±0.5pF
12pF ~ 560pF...±5%

② Capacity value

0.5pF...005	3pF...030	100pF...101
1pF...010	10pF...100	220pF...221
1.5pF...015	47pF...470	560pF...561

C***: CERAMIC CAP.

(1) DK16 --- 300, High dielectric constant ceramic condenser
Disc type
①
Temp. chara. 2B4, 50V
② — Capacity value

Example

② Capacity value

100pF...101	1000pF...102	10000pF...103
470pF...471	2200pF...222	

C***: ELECTROLY CAP. (⫩), FILM CAP. (⫫)

(1) EA ------ 10, Electrolytic condenser
One-way lead type, Tolerance ±20%
①②
② — Dielectric strength
① — Capacity value

Examples

① Capacity value

0.1μF...104	4.7μF...475	100μF...107
0.33μF...334	10μF...106	330μF...337
1μF...105	22μF...226	1100μF...108
		2200μF...228

② Working voltage

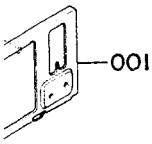
6.3V...006	25V...025
10V...010	35V...035
16V...016	50V...050

(2) DF15 --- 350, Plastic film condenser
One-way type, Mylar ±5% 50V
①
② — Capacity value

Examples

① Capacity value

0.001μF (1000pF)...102	0.1μF...104
0.0018μF.....182	0.56μF...564
0.01μF.....103	1μF...105
0.015μF.....153	



003G

SCRIPTION

(PM553)
(PM453)
(PM553)
crew B3 x 8 (PM5
crew B3 x 10
ink; Rear
ink; Front
crew B3 x
crew B3 x
crew B3 x
crew B3 x

ormer (PM553), [N, A]
ormer (PM553), [F]
ormer (PM553), [F]
ormer (PM453), [N, A]
ormer (PM453), [E]
ormer (PM453), [F]

8. ELECTRICAL PARTS LIST

•(N): for Europe
•(E): for Europe
•(A): for Australia
•(F): for Japan

REF. DESIG.	PART NO.	DESCRIPTION
		P700-VOLTAGE AMP CIRCUIT BOARD
P700	YK288H1620	P.W. Board, Voltage Amp
	ZZ288H8620	P.W. Board Assembly (PM553)
	ZZ287H8620	P.W. Board Assembly (PM453)
		P700-CAPACITOR
CN07	EA47606310	Elect 47μF 63V
		P700-RESISTORS
RK11	GP05471050	470Ω ±5% 5W (PM553)
RK12	GP05471050	470Ω ±5% 5W (PM553)
RN16	GA05222010	2.2KΩ ±5% 1W (PM553)
	GA05182010	1.8KΩ ±5% 1W (PM453)
R744	GA05822010	8.2KΩ ±5% 1W
		P700-SEMICONDUCTORS
DK01	HD20015210	Diode 1SS133 (PM553)
DN01	HD20022030	Diode DSF10C
D707	HD30012020	Zener MA1150
D708	HD30024020	Zener MA1082
QK02	HT322401A0	Transistor 2SC2240(GR) (PM553)
QK03	HT322401A0	Transistor 2SC2240(GR) (PM553)
QK04	HT322401A0	Transistor 2SC2240(GR) (PM553)
QN01	HC10042050	IC TA7317P
QN02	HT109701A0	Transistor 2SA970(GR)
Q719	HC10066020	IC AN7062
		P700-MISCELLANEOUS
J701	YP06001040	Plug, 3P
J702	YP07001580	Plug, 8P
J703	YP07001580	Plug, 8P
J704	YP07001580	Plug, 8P
J710	YJ06001040	Jack, 3P
		P701-MAIN AMP CIRCUIT BOARD
P701	YK288H1610	P.W. Board, Main Amp
	ZZ288H8610	P.W. Board Assembly (PM553)
	ZZ287H8610	P.W. Board Assembly (PM453)
		P701-CAPACITORS
C721	DD15101560	Ceramic 100pF ±5% 500V
C722	DD15101560	Ceramic 100pF ±5% 500V
C723	DD15101560	Ceramic 100pF ±5% 500V
C724	DD15101560	Ceramic 100pF ±5% 500V
C729	EA47606310	Elect 47μF 63V
C732	EA47606310	Elect 47μF 63V
C861	EB68806310	Elect 6800μF 63V
C862	EB68806310	Elect 6800μF 63V
C863	DK18103560	Ceramic 0.01μF 500V
C864	DK18103560	Ceramic 0.01μF 500V
		P701-RESISTORS (All Resistors are ±5%)
R721	RA01020600	1KΩ, Trimming
R722	RA01020600	1KΩ, Trimming
R725	GG05680140	68Ω ¼W
R726	GG05680140	68Ω ¼W
R727	GG05101140	100Ω ¼W
R728	GG05101140	100Ω ¼W
R731	GG05471120	470Ω ½W
R732	GG05471120	470Ω ½W
R733	GG05068140	6.8Ω ¼W
R734	GG05068140	6.8Ω ¼W

M592

REF. DESIG.	PART NO.	DESCRIPTION
R735	GG05068140	6.8Ω ¼W
R736	GG05068140	6.8Ω ¼W
⚠ R737	BW10000030	0.27Ω×2 ±10% 5W, Composite(PM553)
	BW10000040	0.27Ω×2 ±10% 3W, Composite(PM453)
⚠ R738	BW10000030	0.27Ω×2 ±10% 5W, Composite(PM553)
	BW10000040	0.27Ω×2 ±10% 3W, Composite(PM453)
R741	GP05047030	4.7Ω 3W
R742	GP05047030	4.7Ω 3W
⚠ R743	NH05740120	47Ω ½W, Fusible
R747	GG05221140	220Ω ¼W
R748	GG05221140	220Ω ¼W
R749	GG05221140	220Ω ¼W
R750	GG05221140	220Ω ¼W
R751	GP10331030	330Ω ±10% 3W
R752	GP10331030	330Ω ±10% 3W
⚠ R753	NH05470120	47Ω ½W, Fusible
		P701-SEMICONDUCTORS
DN02	HD20022030	Diode DSF10C
DN03	HD20015210	Diode 1SS133
DN04	HD20015210	Diode 1SS133
D701 ≀ D706	HD20015210	Diode 1SS133
⚠ D861	HE20009290	Diode S5VB20 (PM553)
	HD20008290	Diode S4VB20 (PM453)
QK01	HW10004320	Photo Unit PC827
QN03	HT322401A0	Transistor 2SC2240(GR)
QN04	HT322401A0	Transistor 2SC2240(GR)
Q701	HT112082A0	Transistor 2SA1208(R, S)
Q702	HT112082A0	Transistor 2SA1208(R, S)
Q703	HT329102A0	Transistor 2SC2910(R, S)
Q704	HT329102A0	Transistor 2SC2910(R, S)
Q705	HT309452B0	Transistor 2SC945(P, Q)
Q706	HT309452B0	Transistor 2SC945(P, Q)
Q711	HT332982D0	Transistor 2SC3298(O, Y)
Q712	HT332982D0	Transistor 2SC3298(O, Y)
Q713	HT113062D0	Transistor 2SA1306(O, Y)
Q714	HT113062D0	Transistor 2SA1306(O, Y)
⚠ Q715	HT329872A0	Transistor 2SC2987A(R, Q) (PM553)
	HT330122A0	Transistor 2SC3012A(R, Q) (PM453)
⚠ Q716	HT329872A0	Transistor 2SC2987A(R, Q) (PM553)
	HT330122A0	Transistor 2SC3012A(R, Q) (PM453)
⚠ Q717	HT112272A0	Transistor 2SA1227A(R, Q) (PM553)
	HT112322A0	Transistor 2SA1232A(R, Q) (PM453)
⚠ Q718	HT112272A0	Transistor 2SA1227A(R, Q) (PM553)
	HT112322A0	Transistor 2SA1232A(R, Q) (PM453)
		P701-MISCELLANEOUS
J706	YP06001040	Plug, 3P
J707	YP06001040	Plug, 3P
J708	YP06000610	Plug, 2P (PM553)
J709	YJ06001040	Jack, 3P
LN01	LY20240190	Relay, AP2U-24V (PM553)
	LY20240260	Relay, DH2SU-24V (PM453)
		P702-HEADPHONE CIRCUIT BOARD
P702	YK288H1650	P.W. Board, Headphone
	ZZ288H8650	P.W. Board Assembly
J772	YJ01002090	Jack, Headphone
W701	YU05200240	Jumper Lead, 5P
W702	YU02320240	Jumper Lead, 3P

REF. DESIG.	PART NO.	DESCRIPTION
		P703-SPEAKER TERMINAL CIRCUIT BOARD
P703	YK288H1640	P.W. Board, Speaker Terminal
	ZZ288H8640	P.W. Board Assembly
R761	GG05022120	Resistor 22Ω ±5% ½W
R762	GG05022120	Resistor 22Ω ±5% ½W
J761	YT03040230	Terminal, 4P
L761	LL23905120	Coil
L762	LL23905120	Coil
W703	YU02220240	Jumper Lead, 2P
		P800-POWER SUPPLY CIRCUIT BOARD
P800	YK288H2630	P.W. Board, Power Supply
	ZZ288H2630	P.W. Board Assembly
		P800-CAPACITORS
C801	DK18223310	Ceramic 0.022μF 50V
C809	DK18223310	Ceramic 0.022μF 50V
C813	DK18223310	Ceramic 0.022μF 50V
C814	DK18223310	Ceramic 0.022μF 50V
		P800-RESISTORS
⚠ R801	NH05100120	10Ω ±5% ½W, Fusible
R802	GG05471140	470Ω ±5% ¼W
R803	GA05151010	150Ω ±5% 1W
⚠ R804	NH05100120	10Ω ±5% ½W, Fusible
R805	GG05471140	470Ω ±5% ¼W
⚠ R806	NH05022120	2.2Ω ±5% ½W, Fusible
R807	GG05331140	330Ω ±5% ¼W
⚠ R859	NH05100140	10Ω ±5% ¼W, Fusible
		P800-SEMICONDUCTORS
⚠ D801	HD20022030	Diode DSF10C
⚠ D802	HD20022030	Diode DSF10C
⚠ D803	HD20022030	Diode DSF10C
⚠ D804	HD20022030	Diode DSF10C
D805	HD30020020	Zener MA1160
D806	HD30005020	Zener MA1056
D807	HD30020020	Zener MA1160
⚠ D808	HD20022030	Diode DSF10C
⚠ D809	HD20022030	Diode DSF10C
⚠ D810	HD20022030	Diode DSF10C
⚠ D811	HD20022030	Diode DSF10C
D812	HD30007020	Zener MA1091
D813	HD20015210	Diode 1SS133
D814	HD20015210	Diode 1SS133
D816	HD20015210	Diode 1SS133
D851	HD20022030	Diode DSF10C
⚠ Q801	HT332982D0	Transistor 2SC3298(O, Y)
⚠ Q802	HT113062D0	Transistor 2SA1306(O, Y)
⚠ Q803	HT332982D0	Transistor 2SC3298(O, Y)
Q851	HT30001000	Transistor 2SC536SP(F, G), etc
⚠ Q852	HT30001000	Transistor 2SC536SP(F, G), etc
Q853	HT30001000	Transistor 2SC536SP(F, G), etc
		P800-MISCELLANEOUS
J801	YP06001060	Plug, 7P
J802	YJ06002460	Jack, 7P
J803	YJ06002430	Jack, 3P
J804	YJ06001260	Jack, 7P

REF. DESIG.	
PJ00	
JJ01	
JJ03	
PL00	Y Z Z
CL07	D
CL08	D
RL29	G
RL30	G
DL01	HI
DL02	HI
DL03	HI
QL01	HC
QL02	
≀ QL07	HT
QL08	
≀ QL11	HT
JL01	YT
	YT
JL02	YJC
JL03	YJC
JL04	YPC
WL01	YUC
PP00	YK2 ZZ2 ZZ2
⚠ CP01	DK1
JP01	YP0E
JP02	YP0E
⚠ SP01	SP01

M593

REF. DESIG.	PART NO.	DESCRIPTION
		PJ00-MIC JACK CIRCUIT BOARD
PJ00	YK288H2660	P.W. Bord, Mic Jack
	ZZ288H2660	P.W. Board Assembly
JJ01	YJ01002110	Jack, Mic
JJ03	YJ07001720	Jack, 2P
		PL00-VIDEO SELECTOR CIRCUIT BOARD
PL00	YK288H1630	P.W. Board, Video Selector
	ZZ288H8630	P.W. Board Assembly [N, A]
	ZZ288H7630	P.W. Board Assembly [E, F]
		PL00-CAPACITORS
CL07	DK18103310	Ceramic 0.01μF 50V
CL08	DK18173310	Ceramic 0.01μF 50V
		PL00-RESISTORS
RL29	GA05221010	220Ω ±5% 1W
RL30	GA05221010	220Ω ±5% 1W
		PL00-SEMICONDUCTORS
DL01	HD30004020	Zener MA1051A
DL02	HD30004020	Zener MA1051A
DL03	HD20015210	Diode 1SS133
QL01	HC406603C0	IC LC4066BH
QL02 ~ QL07	HT327852D0	Transistor 2SC2785(FF, EF)
QL08 ~ QL11	HT111752D0	Transistor 2SA1175(FF, EF)
		PL00-MISCELLANEOUS
JL01	YT01040340	Terminal, 4P; AV [N, A]
	YT01040560	Terminal, 4P; AV [E, F]
JL02	YJ07001730	Jack, 3P
JL03	YJ07001730	Jack, 3P
JL04	YP06000610	Plug, 2P
WL01	YU03150260	Jumper Lead, 3P
		PP00-POWER SWITCH CIRCUIT BOARD
PP00	YK288H1660	P.W. Board, Power Switch
	ZZ288H8660	P.W. Board Assembly [N, A]
	ZZ288H7660	P.W. Board Assembly [E]
⚠CP01	DK18103840	Ceramic Cap. 0.01μF
JP01	YP06003400	Plug, 2P
JP02	YP06003400	Plug, 2P [N, A]
⚠SP01	SP01010960	Push Switch, Power

REF. DESIG.	PART NO.	DESCRIPTION
		PS00-PHONO SELECTOR SURRO CIRCUIT BOARD
PS00	YK288H2620	P.W. Board, Phono Selector Surrou
	ZZ288H2620	P.W. Board Assembly
		PS00-CAPACITORS
CS19 ~ CS24	DK18103310	Ceramic 0.01μF +80% −20%
		PS00-RESISTORS
RS56	GG05181140	180Ω ±5% ¼W
RS57	GG05181140	180Ω ±5% ¼W
RS58	GG05470140	47Ω ±5% ¼W
RS59	GG05470140	47Ω ±5% ¼W
R415	GG05181140	180Ω ±5% ¼W
R416	GG05181140	180Ω ±5% ¼W
		PS00-SEMICONDUCTOR
QG01	HT327852D0	Transistor 2SC2785(FF, EF)
QG02	HT327852D0	Transistor 2SC2785(FF, EF)
QS01	HC10117050	IC TC9163N
QS02	HC10150030	IC LC4966
QS03	HC10116050	IC TC9177P
QS05	HC10150030	IC LC4966
QS06	HC10150030	IC LC4966
QS07	HC10008090	IC NJM4558DD
QS08	HT10001000	Transistor 2SA608SP(F, G), etc.
QS09	HT10001000	Transistor 2SA608SP(F, G), etc.
QS10	HT30001000	Transistor 2SC536SP(F, G), etc.
QS71	HC10008090	IC NJM4558DD
Q401	HC10008090	IC NJM4558DD
		PS00-MISCELLANEOUS
JS01	YT02040500	Terminal, 4P; RCA
JS02	YT02040500	Terminal, 4P; RCA
JS03	YT02040500	Terminal, 4P, RCA
JS04	YT02040500	Terminal, 4P; RCA
JS05	YJ06002440	Jack, 4P
JS06	YJ06002450	Jack, 6P
JS07	YJ06002430	Jack, 3P
JS08	YJ06002430	Jack, 3P
JS09	YJ06002430	Jack, 3P
JS10	YJ06002450	Jack, 6P
JS11	YQ01000080	Shote Plug
JS12	YQ01000080	Shote Plug
JS13	YJ06002430	Jack, 3P
JS14	YJ06002430	Jack, 3P
JS15	YJ06002430	Jack, 3P
JS16	YJ06002430	Jack, 3P
JS17	YJ06002430	Jack, 3P
WS01	YU03060260	Jumper Lead, 3P
WU07	YU03120260	Jumper Lead, 3P
		PU00-MICON/TONE/MIC AMP CIRCUIT BOARD
PU00	YK288H2610	P.W. Board, Micon/Tone/Mic Amp
	ZZ288H2610	P.W. Board Assembly
		PU00-CAPACITORS
CE03	DD15470300	Ceramic 47pF ±5%
CE04	DD15470300	Ceramic 47pF ±5%

REF. DESIG.	PART NO.	DESCRIPTION
		PU00-RESISTORS
RE13	RS01040340	100KΩ(C), Variable; Tone Volume(L)
RE14	RS01040340	100KΩ(C), Variable; Tone Volume(R)
RE31	GG05101140	100Ω ±5% ¼W
RE32	GG05101140	100Ω ±5% ¼W
RF08	RS01040200	100KΩ, Variable; Mic Mix
		PU00-SEMICONDUCTORS
DE01 ~ DE07	HD20015210	Diode 1SS133
DU01 ~ DU21	HD20015210	Diode 1SS133
DU22 ~ DU25	HI10053320	L.E.D. GL-3NG1
DU26 ~ DU36	HI10034320	L.E.D. GL-9EG14; Green
DU40	HI10037030	L.E.D. SLP-981C; Red
DU41	HI10037030	L.E.D. SLP-981C; Red
DU42	HD20015210	Diode 1SS133
DU43	HI10038030	L.E.D. SLP-281F; Green
DU44	HI10038030	L.E.D. SLP-281F; Green
DU45	HI10038030	L.E.D. SLP-281F; Green
DU46	HI10039030	L.E.D. SLP-281F; Green
QE01	HC10008090	IC NJM4558DD
QE02	HF203722A0	F.E.T. 2SK372(GR, BL)
QE03	HF203722A0	F.E.T. 2SK372(GR, BL)
QE04	HT111752D0	Transistor 2SA1175(FF, EF)
QE05	HT327852D0	Transistor 2SC2785(FF, EF)
QE06	HT111752D0	Transistor 2SA1175(FF, EF)
QF01	HC10008090	IC NJM4558DD
QU01	HC10169030	IC LM6502C
QU02	HC40110B0	IC 4011
QU03	HC10001260	IC MSM59371RS
QU04 ~ QU25	HT327852D0	Transistor 2SC2785(FF, EF)
		PU00-MISCELLANEOUS
JU08	ZP01030010	Wire Holder, 3P
SE01 ~ SE04	SP02020670	Push Switch, SPH-1
SU01	SP01010970	Push Switch, Tact
SU02	SP01010970	Push Switch, Tact
SU03	SP01010970	Push Switch, Tact
SU04	SP01010980	Push Switch, Tact
SU05	SP01010970	Push Switch, Tact
SU06	SP01010970	Push Switch, Tact
SU07	SP01010970	Push Switch, Tact

REF. DESIG.	PART NO.	DESCRIPTION
SU08	SP01010970	Push Switch, Tact
SU09	SP01010990	Push Switch, Tact
SU10	SP01010970	Push Switch, Tact
SU11	SP01010970	Push Switch, Tact
SU12	SP01010970	Push Switch, Tact
SU13	SP01010990	Push Switch, Tact
SU14	SP01010970	Push Switch, Tact
SU15	SP01010970	Push Switch, Tact
SU16	SP01010970	Push Switch, Tact
SU17	SP01010970	Push Switch, Tact
WU01	YU07340260	Jumper Lead, 7P
WU02	YU06120260	Jumper Lead, 6P
WU03	YU03120260	Jumper Lead, 3P
WU04	YU05300260	Jumper Lead, 5P
WU05	YU03400260	Jumper Lead, 3P
WU06	YU02100260	Jumper Lead, 2P
WU09	YU03100260	Jumper Lead, 3P
WU10	YU03200260	Jumper Lead, 3P
WU11	YU03220260	Jumper Lead, 3P
WU12	YU04220260	Jumper Lead, 4P
WU13	YU03100260	Jumper Lead, 3P
XU01	FQ04003010	Seramic Vibrator, CSB-400P
		PV00-FRONT AV TERMINAL CIRCUIT BOARD
PV00	YK288H2650	P.W. Board, Front AV Terminal
	ZZ288H2650	P.W. Board Assembly
JV01	YT02030020	Terminal, 3P; RCA
WV01	YU03200260	Jumper Lead, 3P
		PW00-REMOTE/EASY/VCR TERMINAL CIRCUIT BOARD
PW00	YK288H2640	P.W. Board, Remote/Easy/VCR Terminal
	ZZ288H2640	P.W. Board Assembly
CW01	DK18103310	Ceramic Cap. 0.01μF +80% −20%
CW02	DK18223310	Ceramic Cap. 0.022μF +80% −20%
CW03	DK18223310	Ceramic Cap. 0.022μF +80% −20%
JW01	YT02040600	Terminal, 4P; VCR IN/OUT
JW02	YT02020340	Terminal, 2P; Remote
JW03	YT02020350	Terminal, 2P; Easy
SW01	SS01020520	Slide Switch, Mono/Stereo
SW02	SS01020520	Slide Switch, Exit/Int
WW01	YU06120260	Jumper Lead, 6P

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

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.

M595

9. TECHN

AUDIO SECT
POWER OUT
DIN 4 OH
RMS 4 OH
DIN 8 OH
RMS 8 OH
TOTAL HAR
I.M. DISTOR
DAMPING F

MM CARTR
Frequency R
Signal to Noi
Input Impeda
Input Capaci
Input Sensiti
Equivalent In
Dynamic Rar

MIC. INPUT
Input Impeda
Input Sensiti

AUX. INPUT
Input Impeda
Input Sensiti
Frequency R
Signal to Noi

OUTPUT VO
Tape Out . .

OUTPUT IMP
Tape Out . .

GENERAL
Power Requir

Power Consur
Dimensions
Panel Widt
Panel Heigh
Depth . . .
Weight
Unit Alone

9. TECHNICAL SPECIFICATIONS

(Model PM553)

AUDIO SECTION

POWER OUTPUT PER CHANNEL	85 W
DIN 4 OHMS	70 W
RMS 4 OHMS	80 W
DIN 8 OHMS	70 W
RMS 8 OHMS	0.05%
TOTAL HARMONIC DISTORTION AT RMS 8 OHMS	0.05%
I.M. DISTORTION	35
DAMPING FACTOR 8 OHMS (1 kHz)	

MM CARTRIDGE INPUT

Frequency Response (RIAA)	±0.5 dB
Signal to Noise Ratio	80 dB
Input Impedance	47 k ohms
Input Capacitance	330 pF
Input Sensitivity	2.5 mV
Equivalent Input Noise	1.6 μV
Dynamic Range	103 dB

MIC. INPUT

Input Impedance	12 k ohms
Input Sensitivity	2.5 mV

AUX. INPUT

Input Impedance	22 k ohms
Input Sensitivity	150 mV
Frequency Response	10 Hz ~ 25 kHz
Signal to Noise Ratio	95 dB

OUTPUT VOLTAGE

Tape Out	150 mV

OUTPUT IMPEDANCE

Tape Out	550 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		290 W
Dimensions		
Panel Width		320 mm
Panel Height		125 mm
Depth		260 mm
Weight		
Unit Alone		7.9 kg

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

M596

(Model PM453)

AUDIO SECTION

POWER OUTPUT PER CHANNEL

DIN 4 OHMS	65 W
RMS 4 OHMS	50 W
DIN 8 OHMS	60 W
RMS 8 OHMS	50 W
TOTAL HARMONIC DISTORTION AT RMS 8 OHMS	0.05%
I.M. DISTORTION	0.05%
DAMPING FACTOR 8 OHMS (1 kHz)	35

MM CARTRIDGE INPUT

Frequency Response (RIAA)	±0.5 dB
Signal to Noise Ratio	80 dB
Input Impedance	47 k ohms
Input Capacitance	330 pF
Input Sensitivity	2.5 mV
Equivalent Input Noise	1.6 μV
Dynamic Range	103 dB

MIC. INPUT

Input Impedance	12 k ohms
Input Sensitivity	2.5 mV

AUX. INPUT

Input Impedance	22 k ohms
Input Sensitivity	150 mV
Frequency Response	10 Hz ~ 25 kHz
Signal to Noise Ratio	95 dB

OUTPUT VOLTAGE

Tape Out	150 mV

OUTPUT IMPEDANCE

Tape Out	550 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		230 W
Dimensions		
Panel Width		320 mm
Panel Height		125 mm
Depth		260 mm
Weight		
Unit Alone		7.1 kg

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

M597

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:
. Complete address
. Complete part numbers and quanties required
. Description of parts
. Model number for which part is required
. Way of shipment
. 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 EUROPE & Co.
Avenue Louise 326 - Bte. 32
B-1050 Brussels
Belgium
Telephone: (02) 6407830 (10 l)
Telex: 26602
Fax.: (02) 649.29.20

PARTS ORDERING

Parts may be ordered at the following addresses:

AUSTRIA
HARNYPHON
Vertriebsgesellschaft GmbH
Wienerbergstrasse 1
A 1101 Wien
Austria
Telex: 132.332

AUSTRALIA
MARANTZ AUSTRALIA
PTY., Ltd.
9 Chard Road
Brookvale, NSW 2100
Australia
Telex: 24121

BELGIUM
VD DIVISION MARANTZ
Industrialaan 1
1720 Groot-Bijgaarden
Belgium
Telex: 24466

CHILE
MARANTZ
DIVISION OF PHILIPS S.A.
Av. Santa Maria, 0760
Casilla 2687
Santiago
Telex: 240.239

DENMARK
MARANTZ
DIVISION OF PHILIPS
SERVICE A/S
Tagas Boulevard 80
Postbox 1919
DK-2300 København S
Danmark
Telex: 31201

EIRE
MARANTZ IRELAND Ltd.
Newstead
Glonkeagh
Dublin 4
Telex: 25200

FINLAND
MARANTZ
DIVISION OF OY PHILIPS Ab
Kaivokatu 8
00100 Helsinki
Finland
Telex: 124811

FRANCE
MARANTZ FRANCE
4 Rue Bernard Palissy
92600 Asnières
France
Telex: 611651

GERMANY
MARANTZ GERMANY GmbH
Max-Planck-Strasse 22
6072 Dreieich 1
Germany
Telex: 529821

THE NETHERLANDS
MARANTZ
De Limiet 3
4131 NR Vianen
The Netherlands
Telex: 47679

NORWAY
MARANTZ
DIVISION OF PHILIPS A/S
Sandstuveien 40
Oslo 6
Norway
Telex: 72640

GREAT BRITAIN
MARANTZ AUDIO U.K. Ltd
Unit 15/16
Saxon Way Industrial Estate
Moor Lane
Harmondsworth UB7 OLW
Great Britain
Telex: 935196

GREECE
ADAMCO S.A.
P.O.Box 21025
Hippocratus Street 188
Athens 11410
Greece
Telex: 216.795

ITALY
MARANTZ ITALIANA S.p.A.
Via Monte Napoleone 10
20121 Milano
Italia

JAPAN
MARANTZ JAPAN, Inc.
35-1, 7-chome, Sagamiono
Sagamihara-shi, Kanagawa
Japan

KUWAIT
AL ALAMIAH ELECTRONICS
Ussama Building
Fahd al Saleem Street
P.O.Box 23781
Safat-Kuwait
Telex: 22694

SAUDI ARABIA
AL ALAMIAH ELECTRONICS
P.O.Box 5954
University Street
Riyadh 11432
Saudi Arabia
Telex: 201530

SOUTH AFRICA
MARANTZ
DIVISION OF PHILIPS S.A.
Rainer House
Ove Street, 10
Doornfontein
Johannesburg
Telex: 483.456

SPAIN
PHONO S.A.
Ignacio Iglesias 10
Badalona (Barcelona)
Spain
Telex: 59355

SWEDEN
MARANTZ
DIVISION OF PHILIPS
Försäljning AB
Tegeluddsvägen 1
S-115 84 Stockholm
Sweden
Telex: 14060

SWITZERLAND
DYNAVOX ELECTRONICS
Route de Villars 105
1701 Fribourg
Switzerland
Telex: 942377

TURKEY
DOGRUOL Ltd.
I.M.C.
6 Blok N°6310
Unkapani
Istanbul
Turkey
Telex: 22085

MALTA
CACHIA & GALEA
Republic Street, 68D
Valetta
Telex: 1682

U.S.A.
MARANTZ COMPANY, Inc.
National Service Departmer
P.O.Box 577
Chatsworth, CA 91311
U.S.A.

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.

marantz®

1199