

SERVICE
MANUAL

PM65

4822 725 50852



marantz®

model PM-65AV

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.

MARANTZ INTERNATIONAL
Vestdijk 9
5600 MD Eindhoven
The Netherlands
Phone: +31/40.758290
Telefax: +31/40.75.82.99
Telex: 35000 PHTC NL routing IND NLMTFAT

PARTS ORDERING

Parts may be ordered at the following addresses:

AUSTRIA HORNYPHON Vertriebsgesellschaft GmbH Wienerbergstrasse 1 A 1101 Wien Austria Telex: 132.332	FINLAND MARANTZ DIVISION OF OY PHILIPS Ab Kaivokatu 8 00100 Helsinki Finland Telex: 124811	GREAT BRITAIN MARANTZ AUDIO U.K. Ltd Unit 15/16 Saxon Way Industrial Estate Moor Lane Harmondsworth UB7 OLW Great Britain Telex: 935196	SAUDI ARABIA AL ALAMIAH ELECTRONICS P.O.Box 5954 University Street Riyadh 11432 Saudi Arabia Telex: 401530	SWITZERLAND DYNVOX ELECTRONICS Route de Villars 105 1701 Fribourg Switzerland Telex: 942377
BELGIUM SVD DIVISION MARANTZ Industrialaan 1 1720 Groot-Bijgaarden Belgium Telex: 24466	FRANCE MARANTZ FRANCE 4 Rue Bernard Palissy 92600 Asnières France Telex: 611651	GREECE SHERTON ELECTRONICS S.A. P.O.Box 21025 Hippocrates Street 188 Athens 11471 Greece Telex: 216.795	SOUTH AFRICA MARANTZ DIVISION OF PHILIPS S.A. Main Road Martindale P.O. Box. 58088 Newville 21114 South Africa	TURKEY DOGRUOL Ltd. I.M.C. 6 Blok N°6310 Unkapani Istanbul Turkey Telex: 22085
CHILE MARANTZ DIVISION OF PHILIPS S.A. AV. Santa Maria, 0760 Casilla 2687 Santiago Telex: 240.239	GERMANY MARANTZ GERMANY GmbH Max-Planck-Strasse 22 6072 Dreieich 1 Germany Telex: 529821	JAPAN MARANTZ JAPAN, Inc. 35-1, 7-chome, Sagamiono Sagamihara-shi, Kanagawa Japan	SPAIN PHONO S.A. Ignacio Iglesias 10 Badalona (Barcelona) Spain Telex: 59355	MALTA CACHIA & GALEA Republic Street, 68D Valetta Telex: 1682
DENMARK MARANTZ DIVISION OF PHILIPS SERVICE A/S Prags Boulevard 80 Postbox 1919 DK-2300 København S Denmark Telex: 31201	THE NETHERLANDS Elpro Marantz Wint Hontlaan 28 3526 KV Utrecht The Netherlands Telex: 4748	KUWAIT AL ALAMIAH ELECTRONICS Ussama Building Fahd al Saleem Street P.O.Box 23781 Safat-Kuwait Telex: 22694	SWEDEN MARANTZ DIVISION OF PHILIPS Försäljning AB Tegeluddsvägen 1 S-115 84 Stockholm Sweden Telex: 14060	PORTUGAL MARANTZ Divisao philips S.A. service Oturela-carnaxide 2795 LinDA-A-VELHA Telex: 43906
	NORWAY MARANTZ DIVISION OF PHILIPS A/S Sandstuveien 40 0680 Oslo 6 Norway Telex: 72640	ITALY MARANTZ ITALIANA S.P.A. Via Chiese, 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.

TABLE OF CONTENTS

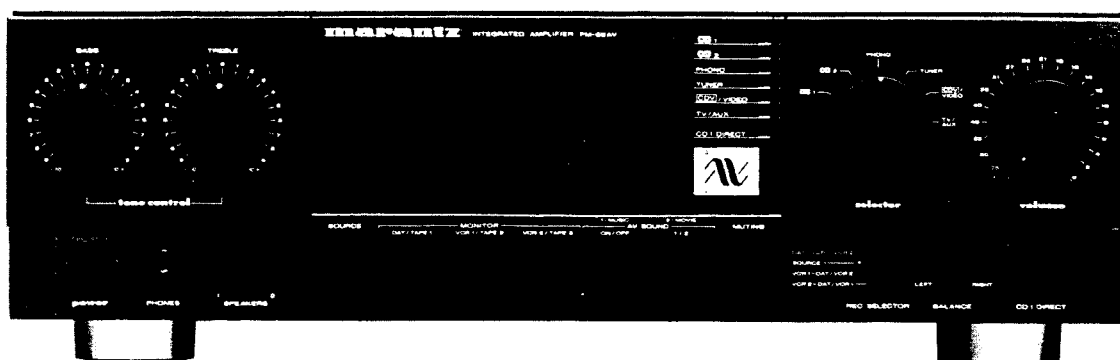
SECTION	PAGE
1. P.W. BOARDS	1
2. MAIN AMP ADJUSTMENT PROCEDURE	1
3. TEST EQUIPMENT REQUIRED FOR SERVICING	2
4. VOLTAGE CONVERSION	2
5. BLOCK DIAGRAM	3
6. PARTS LOCATIONS (Pattern Side)	4
6.1 Main Amp/Power Supply Assembly (P701) Component Locations	4
6.2 Input Selector Phono Assembly (PV01) Component Locations	4
6.3 Video Buffer Amp Assembly (PL01) Component Locations	4
6.4 Tone Amp Assembly (PE01) Component Location	5
6.5 Headphone Speaker Switch Assembly (PW01) Component Locations	5
6.6 Master Volume Assembly (PG01) Component Locations	5
6.7 Tape VCR Monitor Assembly (PJ01) Component Locations	6
6.8 Front Switch Assembly (PS01) Component Location	6
6.9 Power Supply Assembly (P801) Component Location	7
6.10 Power Switch Assembly (P901) Component Locations	7
6.11 TV Remocon Out Jack Assembly (PT01) Component Locations	7
6.12 Function LED Indicator Assembly (PY51) Component Locations	7
6.13 Input Selector Indicator Assembly (PY01) Component Locations	7
7. EXPLODED VIEW AND PARTS LIST	8
8. ELECTRICAL PARTS LIST	11
9. TECHNICAL SPECIFICATIONS	16
10. SCHEMATIC DIAGRAM	18

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 12 N/C'S following the procedure mentioned in this service manual "How to establish the parts number for common parts".

1) Please correctly write the parts number of 12 N/C'S following the rule.

MODEL PM-65AV STEREO AMPLIFIER



1. P.W. BOARDS

As can be seen from the circuit diagram the chassis of Model PM-65AV consists of the following units. Each unit mounted on a printed circuit board is described within the square enclosed by a bold dotted line on the circuit diagram.

1. Tone Amp mounted on P.W. Board PE01
2. Master Volume mounted on P.W. Board PG01
3. Tape VCR Monitor mounted on P.W. Board PJ01
4. Video Buffer Amp mounted on P.W. Board PL01
5. Front Switch mounted on P.W. Board PS01
6. TV Remocon out
Jack mounted on P.W. Board PT01
7. Input Selector,
Phono mounted on P.W. Board PV01
8. Headphone,
Speaker Switch mounted on P.W. Board PW01
9. Input Selector
Indicator mounted on P.W. Board PY01
10. Function LED
Indicator mounted on P.W. Board PY51
11. Main Amp mounted on P.W. Board P701
12. Power Supply mounted on P.W. Board P801
13. Power Switch mounted on P.W. Board P901

2. MAIN AMP ADJUSTMENT PROCEDURE

1. Test Points
Left channel: J705 (+), J707 (-)
Right channel: J706 (+), J708 (-)
2. Adjustment Points
Left channel: R719 2.2k ohm variable resistor
Right channel: R720 2.2k ohm variable resistor
3. Adjustment Procedure
 - (1) Before turning on the set's power, turn variable resistors R719 and R720 in the direction in which the current does not flow (clockwise for R719, counterclockwise for R720).
 - (2) Connect the DC digital voltmeter to the test points with the proper polarities. (Adjust both channels at once.)
 - (3) Set the set's volume to minimum, the speaker terminals to no load, and the input to open.
 - (4) Set the following after turning on the power:
After 30 seconds: 8 to 9 mV (22 to 25 mA)
After 1 minute: 9 to 10 mV (25 to 27 mA)
Be sure to set for 9 to 10 mV (25 to 27 mA) when the circuitry becomes stable.
4. Notes
When readjusting sets which have been heated up for repairs, etc., conduct a heat run at an idle for about 10 minutes, then set for 9 to 10 mV (25 to 27 mA).

3. TEST EQUIPMENT REQUIRED FOR SERVICING

This table lists the test equipment required for servicing the Model PM-65AV Stereo Amplifier.

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

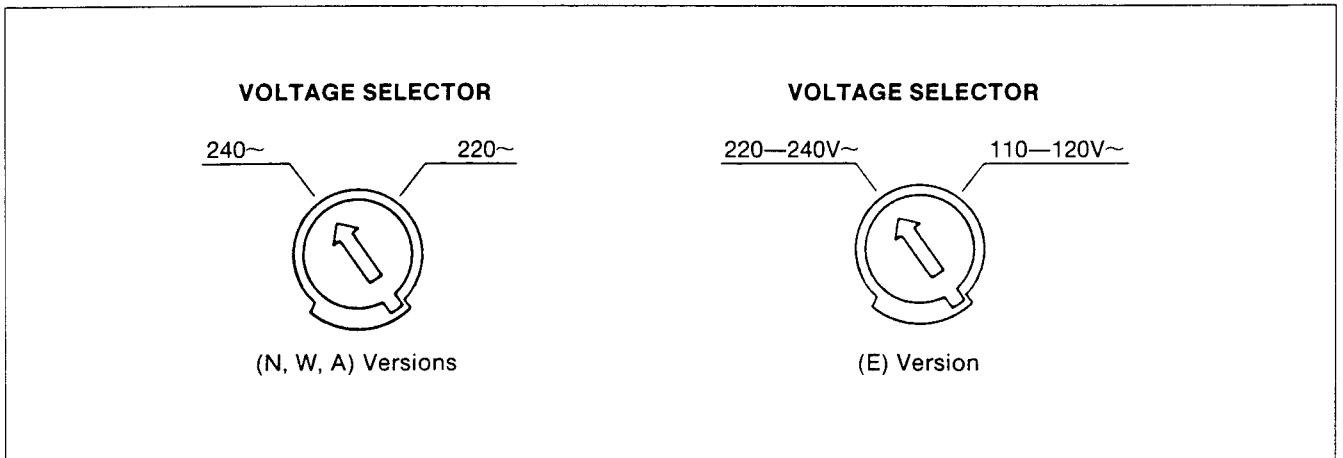
4. VOLTAGE CONVERSION

• **EUROPEAN MODEL ONLY**

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

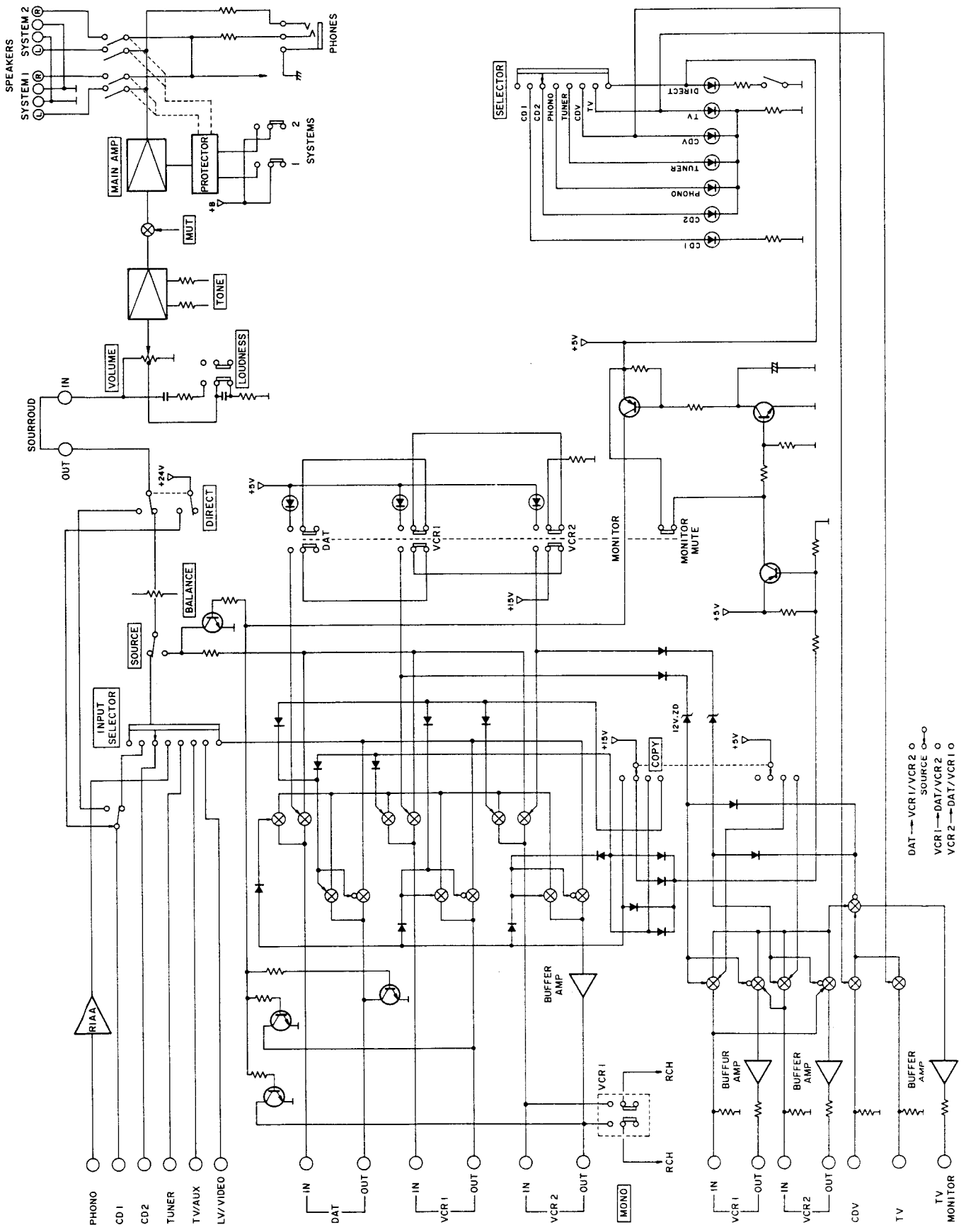
CAUTION
DISCONNECT POWER SUPPLY CORD FROM AC
OUTLET BEFORE CONCVERTING VOLTAGE.

Voltage Conversion Chart



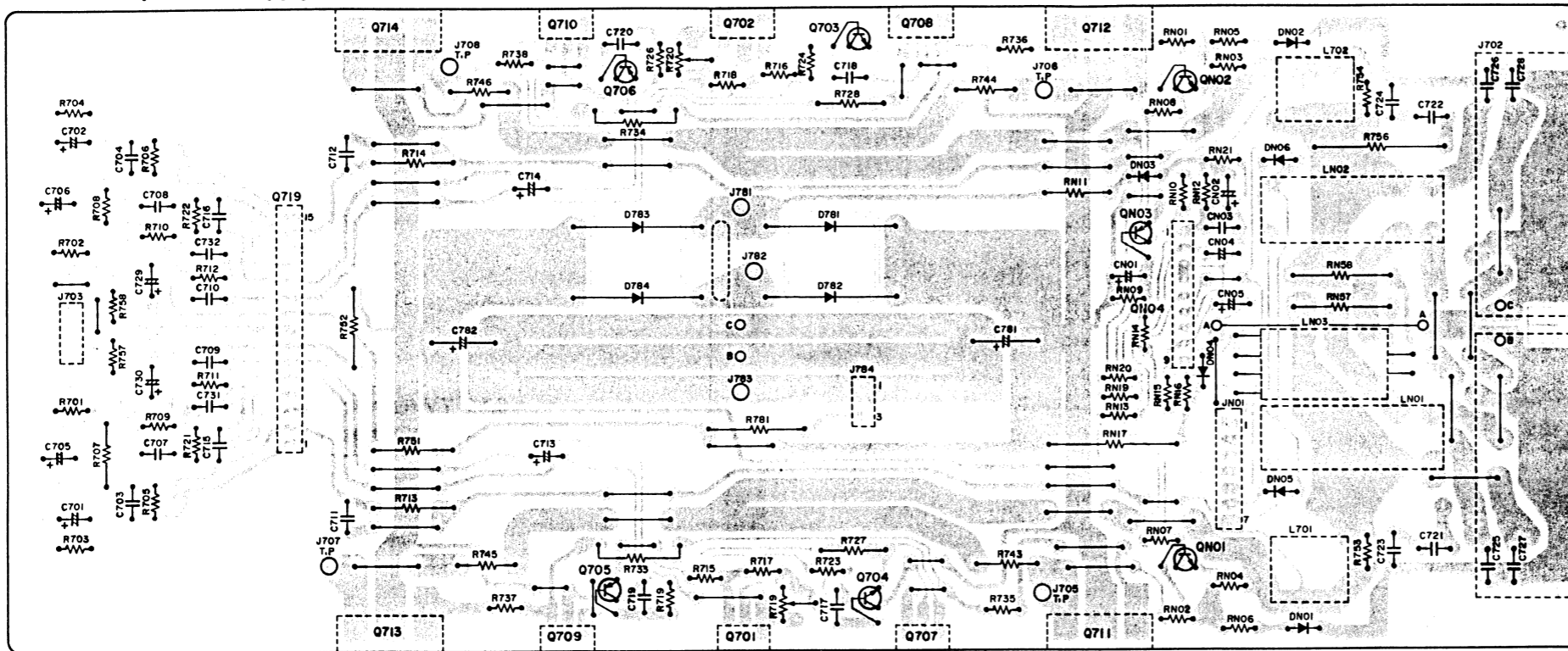
Note on Safety: Symbol Δ Fire or electrical shock hazard. Only original parts should be used to replace any part marked with symbol Δ . Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

5. BLOCK DIAGRAM

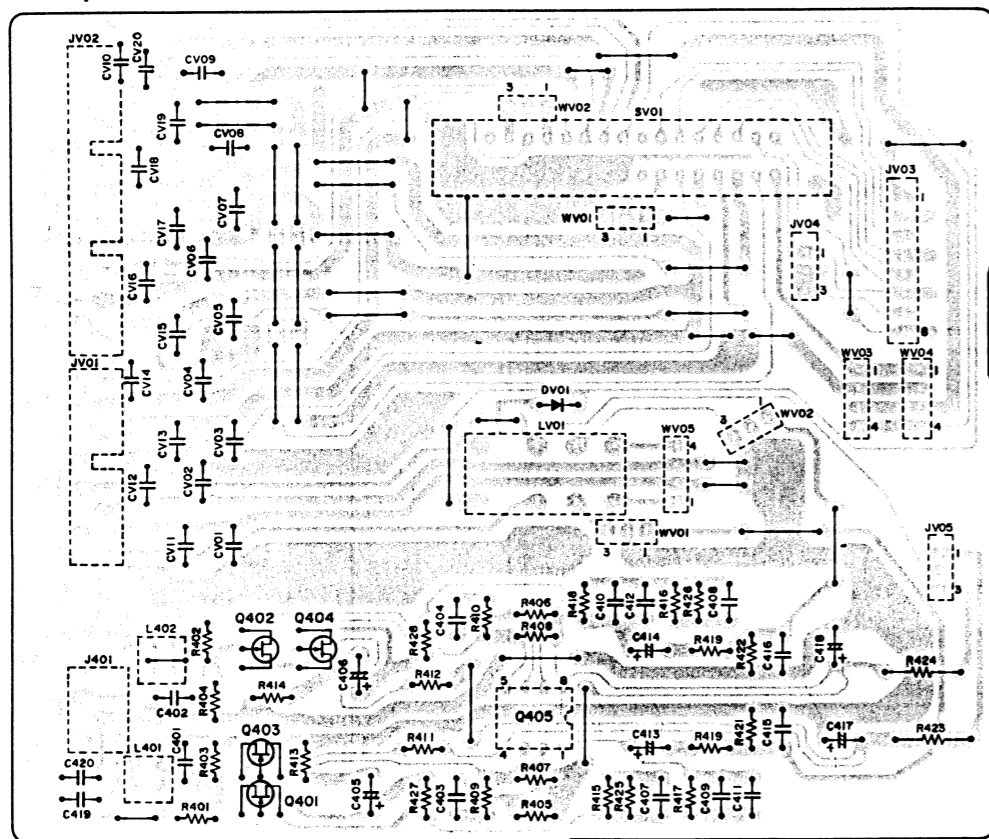


6. PARTS LOCATIONS (Pattern Side)

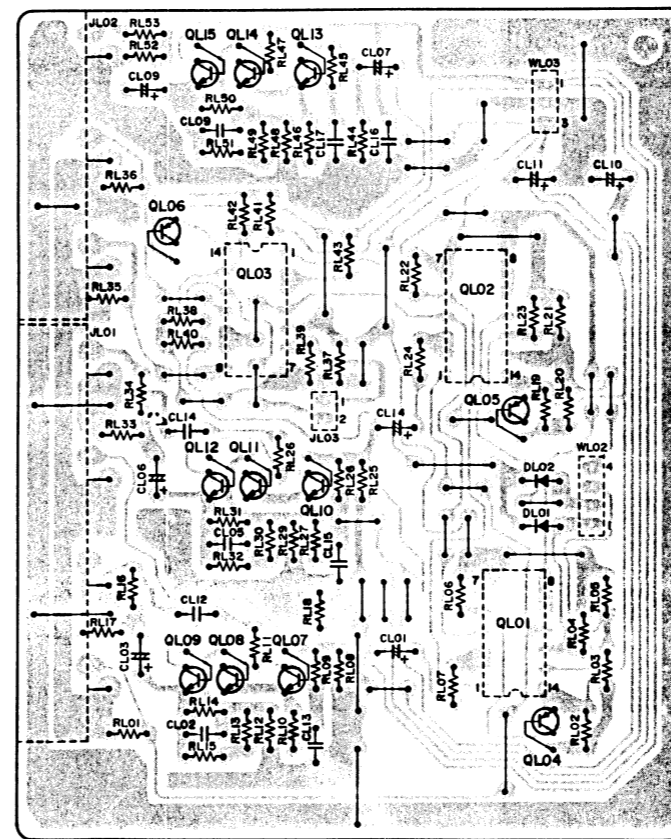
6.1 Main Amp/Power Supply Assembly (P701) Component Locations



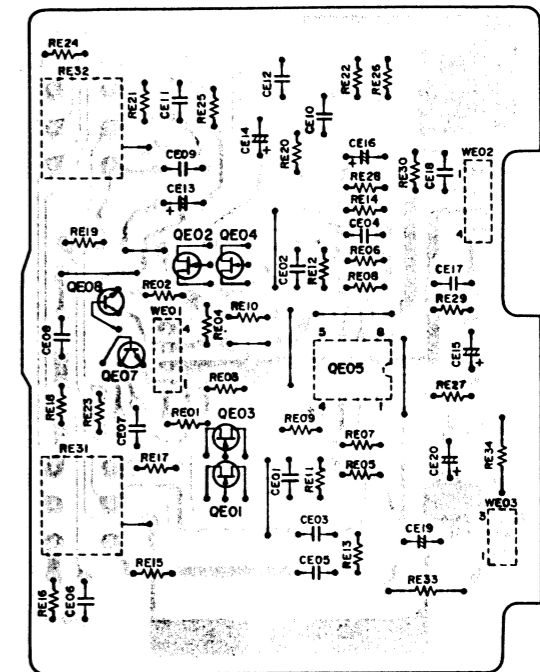
6.2 Input Selector Phono Assembly (PV01) Component Locations



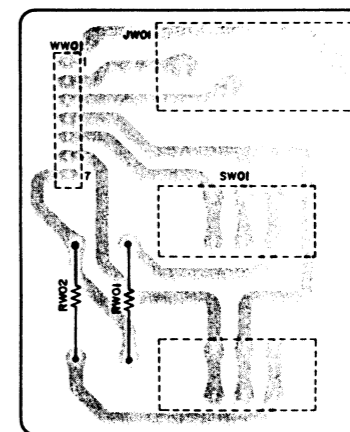
6.3 Video Buffer Amp Assembly (PL01) Component Locations



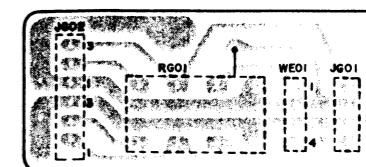
6.4 Tone Amp Assembly (PE01) Component Location



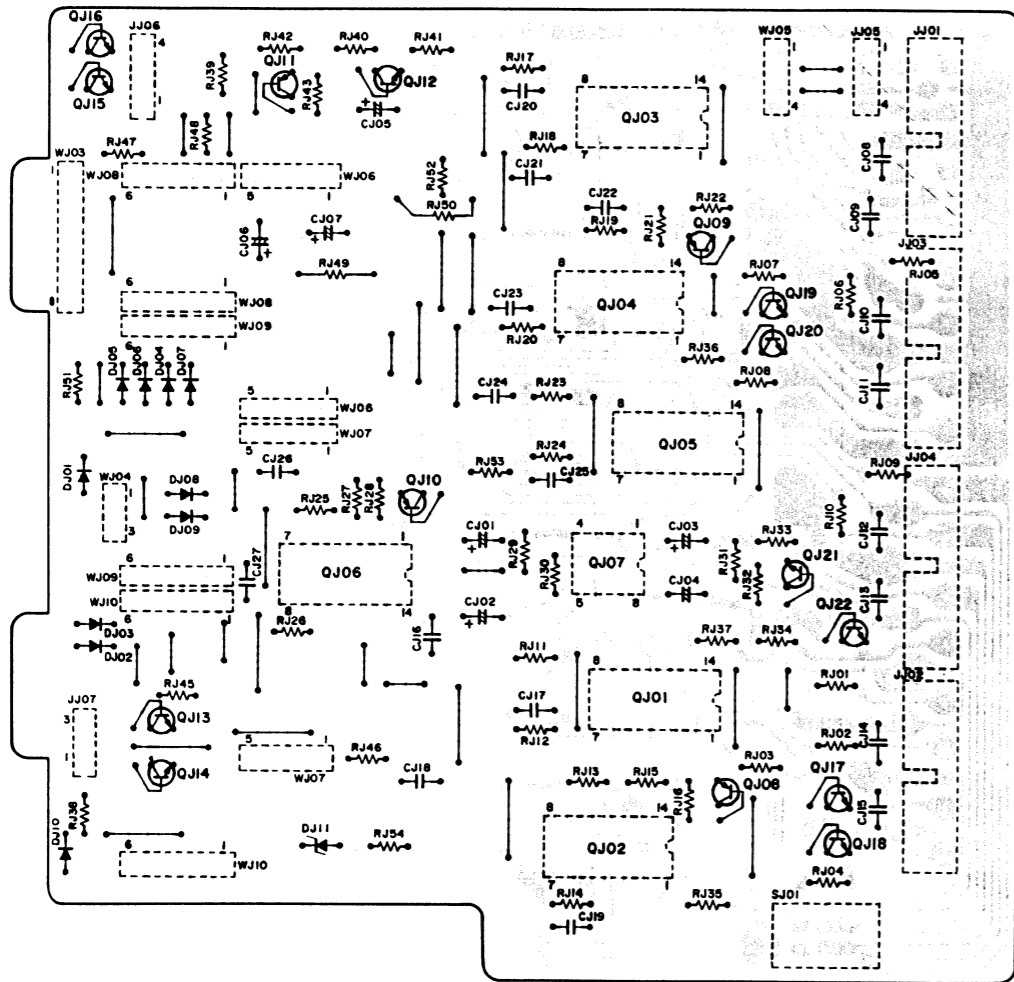
6.5 Headphone Speaker Switch Assembly (PW01) Component Locations



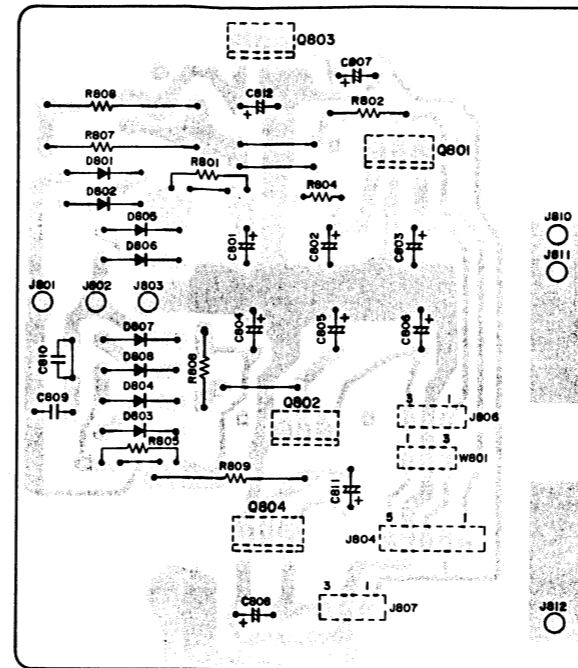
6.6 Master Volume Assembly (PG01) Component Locations



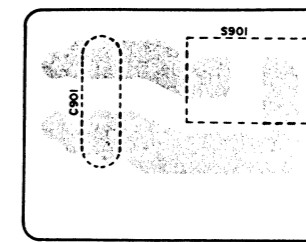
6.7 Tape VCR Monitor Assembly (PJ01) Component Locations



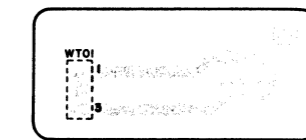
6.9 Power Supply Assembly (P801) Component Locations



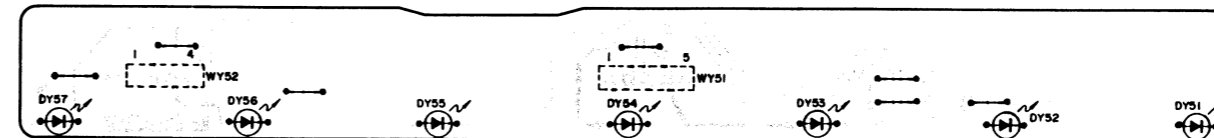
6.10 Power Switch Assembly (P901) Component Locations



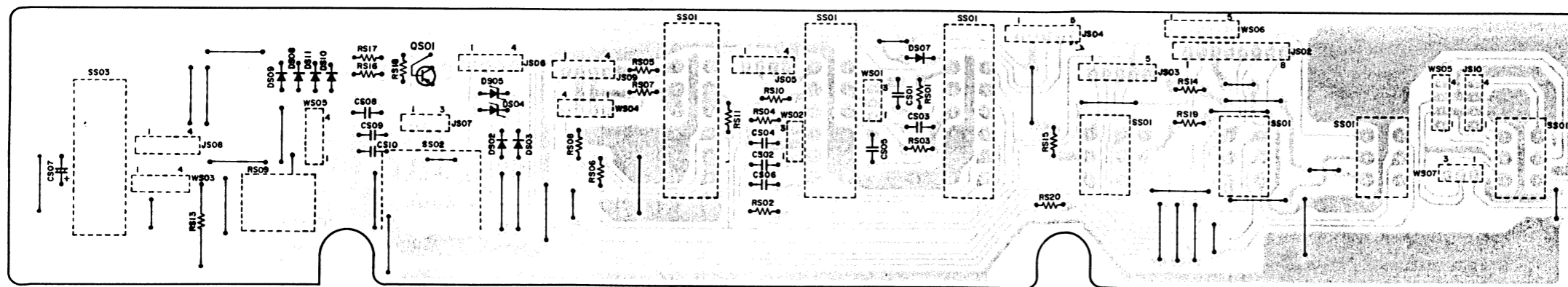
6.11 TV Remocon Out Jack Assembly (PT01) Component Locations



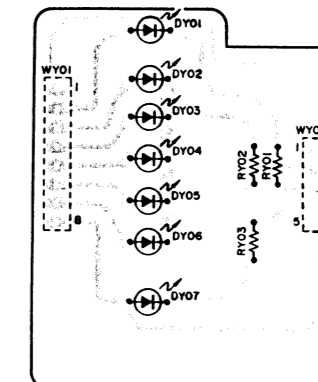
6.12 Function LED Indicator Assembly (PY51) Component Locations



6.8 Front Switch Assembly (PS01) Component Locations



6.13 Input Selector Indicator Assembly (PY01) Component Locations



REF. DESIG.	PART NO.	DESCRIPTION
001D	4822 426 60548	Lid, Top Cover
002D	4822 501 11008	B.T. Screw B4 x 8
001F	4822 466 92249	Insulator (Q711~Q714)
002F	4822 255 40764	Heatsink (Q803)
004F	4822 255 40867	Heatsink (Q719)
005F	4822 492 63973	Spring
018G	4822 459 80343	Clamper, Wire
020G	4822 501 11008	B.T. Screw B4 x 8
050G	4822 462 71481	Leg
051G	4822 501 11008	B.T. Screw B4 x 8
073G	4822 412 20506	Knob, Mono/Stereo
078G	4822 600 70229	Label, Caution
901G	4822 426 20167	Rear Panel [E]
905G	4822 532 51704	Bushing, AC Power Cord [E]
001K	4822 454 12142	Shield
002L	4822 502 12512	B.T. Screw B3 x 12
△F001	4822 253 30191	Fuse T1.6A 250V
△J001	4822 256 30233	Jack, Fuse Holder
△J021	4822 267 40663	Jack, AC Outlet [E]
J053	4822 290 40297	Terminal, GND
JJ08	4822 264 10111	Shote Plug, Surround
JJ09	4822 264 10111	Shote Plug, Surround
△L001	4822 130 61184	Power Transformer [E]
△W001	4822 321 10427	A.C. Power Cord [E]
△J091	4822 272 10227	Voltage Selector [E]
	4822 272 10236	Voltage Selector [N, A, W]
△J093	4822 265 20222	Plug, AC Inlet [N, A, W]

8. ELECTRICAL PARTS LIST

ASSIGNMENT OF COMMON PARTS CODES.

RESISTOR

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

① — Resistance value

Examples

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

(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
 Temp. coeff. P350 ~ N1000, 50V
- ①② — Capacity value
 — Tolerance

Examples

① Tolerance (Capacity deviation)

$\pm 0.25\text{pF}$...0
$\pm 0.5\text{pF}$...1
$\pm 5\%$...5

* Tolerance of COMMON PARTS handled here are as follows:

0.5pF ~ 5pF	$\pm 0.25\text{pF}$
6pF ~ 10pF	$\pm 0.5\text{pF}$
12pF ~ 560pF	$\pm 5\%$

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
 Temp. chara. 2B4, 50V
- ① — 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 $\pm 20\%$
- ①② — Dielectric strength
 — Capacity value

Examples

① Capacity value

0.1 μF ...104	4.7 μF ...475	100 μF ...107
0.33 μF ...334	10 μF ...106	330 μF ...337
1 μF ...105	22 μF ...226	1100 μF ...108
		2200 μF ...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 $\pm 5\%$ 50V
- ① — Capacity value

Examples

① Capacity value

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

REF. DESIG.	PART NO.	DESCRIPTION
		PE01-TONE AMP CIRCUIT BOARD
		PE01-CAPACITORS
CE01	4822 121 42758	Film 1800pF $\pm 5\%$
CE02	4822 121 42758	Film 1800pF $\pm 5\%$
CE03	4822 121 43135	Film 39pF $\pm 5\%$
CE04	4822 121 43135	Film 39pF $\pm 5\%$
CE05	4822 121 42757	Film 0.015 μF $\pm 5\%$
CE06	4822 121 42757	Film 0.015 μF $\pm 5\%$
CE09	4822 121 42764	Film 0.047 μF $\pm 5\%$
CE10	4822 121 42764	Film 0.047 μF $\pm 5\%$
CE13	4822 124 41539	Elect 47 μF 16V
CE14	4822 124 41539	Elect 47 μF 16V
CE15	4822 124 90358	Elect 22 μF 16V
CE16	4822 124 90358	Elect 22 μF 16V
CE17	4822 121 42762	Film 3300pF $\pm 5\%$
CE18	4822 121 42762	Film 3300pF $\pm 5\%$
CE19	4822 124 90365	Elect 220 μF 25V
CE20	4822 124 90365	Elect 220 μF 25V
		PE01-RESISTORS
RE31	4822 100 20687	10K Ω (C), Variable; Treble
RE32	4822 100 20687	10K Ω (C), Variable; Bass
Δ RE33	4822 113 90119	22 Ω $\pm 2\%$ $\frac{1}{4}$ W, Fuse
Δ RE34	4822 113 90119	22 Ω $\pm 2\%$ $\frac{1}{4}$ W, Fuse
		PE01-SEMICONDUCTORS
QE01	4822 130 42839	F.E.T. 2SK369(BL)
QE02	4822 130 42839	F.E.T. 2SK369(BL)
QE03	4822 130 42839	F.E.T. 2SK369(BL)
QE04	4822 130 42839	F.E.T. 2SK369(BL)
QE05	4822 209 81565	IC NJM2041D-D
QE07	4822 130 43818	Transistor 2SC2878(A)
QE08	4822 130 43818	Transistor 2SC2878(A)
		PE01-MISCELLANEOUS
WE03	4822 323 10074	Jumper Lead, 3P
		PG01-MASTOR VOLUME CIRCUIT BOARD
RG01	4822 100 20685	Variable Resistor 50K Ω
JG01	4822 265 30482	Plug, 4P
JG02	4822 265 10063	Jack, 6P
		PJ01-TAPE/VCR MONITOR CIRCUIT BOARD
		PJ01-CAPACITORS
CJ01	4822 124 22274	Elect 4.7 μF 50V
CJ02	4822 124 22274	Elect 4.7 μF 50V
CJ03	4822 124 41534	Elect 10 μF 25V
CJ04	4822 124 41534	Elect 10 μF 25V
CJ05	4822 124 41543	Elect 1 μF 50V
CJ06	4822 124 41535	Elect 100 μF 25V
CJ07	4822 124 41535	Elect 100 μF 25V
CJ08	?	
CJ15	4822 122 32486	Ceramic 0.01 μF +80% -20%

REF. DESIG.	PART NO.	DESCRIPTION
RJ49	4822 113 90119	PJ01-RESISTORS 22Ω ±2% ¼W, Fuse [N, E, W]
RJ50	4822 113 90119	
		PJ01-SEMICONDUCTORS
DJ01	4822 130 33305	Diode 1SS133, etc.
DJ10		
DJ11	4822 130 80322	Zener RD15JB3
		PJ01-MISCELLANEOUS
QJ01	4822 209 83804	IC LC4966
QJ06		
QJ07	4822 209 83631	IC NJM4558D-D
QJ08	4822 130 42591	Transistor 2SA1175(FF, EF)
QJ11		
QJ12	4822 130 42052	Transistor 2SC2785(FF, EF)
QJ15	4822 130 43818	Transistor 2SC2878(A)
QJ22		
		PJ01-MISCELLANEOUS
JJ01	4822 266 30284	Terminal, 4P; Surround IN/OUT
JJ02	4822 267 20353	Terminal, 4P; DAT IN/OUT
JJ03	4822 267 20353	Terminal, 4P; VCR1 IN/OUT
JJ04	4822 267 20353	Terminal, 4P; VCR2 IN/OUT
JJ05	4822 265 30482	Plug, 4P
JJ06	4822 265 10105	Jack, 4P
JJ07	4822 265 10062	Jack, 3P
JJ08	4822 264 10111	Shote Plug, Surround IN/OUT
JJ09	4822 264 10111	Shote Plug, Surround IN/OUT
SJ01	4822 276 12427	Push Switch, Mono/Stereo
		PL01-VIDEO BUFFER AMP CIRCUIT BOARD
		PL01-CAPACITORS
CL01	4822 124 90353	Elect 100μF 10V
CL03	4822 124 41544	Elect 470μF 6.3V
CL04	4822 124 90353	Elect 100μF 10V
CL06	4822 124 41544	Elect 470μF 6.3V
CL07	4822 124 90353	Elect 100μF 10V
CL09	4822 124 41544	Elect 470μF 6.3V
CL10	4822 124 41537	Elect 220μF 6.3V
CL11	4822 124 41537	Elect 220μF 6.3V
		PL01-SEMICONDUCTORS
DL01	4822 130 33305	Diode 1SS133, etc.
DL02	4822 130 33305	Diode 1SS133, etc.

REF. DESIG.	PART NO.	DESCRIPTION
QL01	4822 209 81801	IC LC4066B-H
QL02	4822 209 81801	IC LC4066B-H
QL03	4822 209 81801	IC LC4066B-H
QL04	4822 130 42591	Transistor 2SA1175(FF, EF)
QL05	4822 130 42591	Transistor 2SA1175(FF, EF)
QL06	4822 130 42591	Transistor 2SA1175(FF, EF)
QL07	4822 130 42052	Transistor 2SC2785(FF, EF)
QL15		
		PL01-MISCELLANEOUS
JL01	4822 267 20352	Terminal, 4P; RCA
JL02	4822 267 20351	Terminal, 3P; RCA
JL03	4822 265 10171	Jack, 2P
WL01	4822 323 10162	Jumper Lead, 2P
WL02	4822 323 10143	Jumper Lead, 4P
WL03	4822 323 10225	Jumper Lead, 3P
		PS01-FRONT SWITCH CIRCUIT BOARD
		PS01-CAPACITORS
CS01	4822 121 42861	Film 1000pF ±5%
CS02	4822 121 42861	Film 1000pF ±5%
CS08	4822 122 32486	Ceramic 0.01μF +80% -20%
CS09	4822 122 32486	Ceramic 0.01μF +80% -20%
CS10	4822 122 32486	Ceramic 0.01μF +80% -20%
		PS01-RESISTORS
RS09	4822 100 20682	100KΩ(MN), Variable; Balance
RS13	4822 116 60331	1KΩ ±5% 1W
		PS01-SEMICONDUCTORS
DS02	4822 130 33305	Diode 1SS133, etc.
DS03	4822 130 33305	Diode 1SS133, etc.
DS04	4822 130 80091	Zener 12V
DS05	4822 130 80091	Zener 12V
DS07	4822 130 33305	Diode 1SS133, etc.
DS11		
QS01	4822 130 42591	Transistor 2SA1175(FF, EF)
		PS01-MISCELLANEOUS
JS02	4822 265 10059	Jack, 8P
JS03	4822 265 10061	Jack, 5P
JS04	4822 265 10061	Jack, 5P
JS05	4822 265 10105	Jack, 4P
JS06	4822 265 10105	Jack, 4P
JS07	4822 265 10062	Jack, 3P
JS08	4822 265 10181	Jack, 4P
JS09	4822 265 10105	Jack, 4P
JS10	4822 265 30482	Plug, 4P
SS01	4822 276 12341	Push Switch, Monitor/AV/Mute
SS02	4822 276 10172	Rotary Switch, Tape Copy
SS03	4822 276 12429	Push Switch, CD Direct
WS01	4822 323 10079	Jumper Lead, 3P
WS02	4822 323 10079	Jumper Lead, 3P
WS06	4822 323 10094	Jumper Lead, 5P
WS07	4822 323 10281	Jumper Lead, 3P

REF. DESIG.	PART NO.	DESCRIPTION
		PT01-TV REMOCON CIRCUIT BOARD
JT01	4822 267 20349	Terminal, 1P; RCA
WT01	4822 323 10079	Jumper Lead
		PV01-INPUT SELECTOR/PHONO CIRCUIT BOARD
		PV01-CAPACITORS
C401	4822 121 51037	Film 150pF ±5%
C402	4822 121 51037	Film 150pF ±5%
C403	4822 121 41518	Film 470pF ±5%
C404	4822 121 41518	Film 470pF ±5%
C405	4822 124 41539	Elect 47μF 16V
C406	4822 124 41539	Elect 47μF 16V
C407	4822 121 42764	Film 0.047μF ±5%
C408	4822 121 42764	Film 0.047μF ±5%
C409	4822 121 42755	Film 0.012μF ±5%
C410	4822 121 42755	Film 0.012μF ±5%
C411	4822 121 42758	Film 1800pF ±5%
C412	4822 121 42758	Film 1800pF ±5%
C413	4822 124 90358	Elect 22μF 16V
C414	4822 124 90358	Elect 22μF 16V
C415	4822 121 42763	Film 3900pF ±5%
C416	4822 121 42763	Film 3900pF ±5%
C417	4822 124 90365	Elect 220μF 25V
C418	4822 124 90365	Elect 220μF 25V
C419	4822 122 32486	Ceramic 0.01μF +80% -20%
C420	4822 122 32486	Ceramic 0.01μF +80% -20%
CV01 }	4822 122 32486	Ceramic 0.01μF +80% -20%
CV10		
		PV01-RESISTORS
R405	4822 116 53691	4.64KΩ ±1% 1/6W
R406	4822 116 53691	4.64KΩ ±1% 1/6W
R407	4822 116 53691	4.64KΩ ±1% 1/6W
R408	4822 116 53691	4.64KΩ ±1% 1/6W
R411	4822 116 53691	4.64KΩ ±1% 1/6W
R412	4822 116 53691	4.64KΩ ±1% 1/6W
± R423	4822 113 90119	22Ω ±2% ¼W, Fuse [N, E, W]
± R424	4822 113 90119	22Ω ±2% ¼W, Fuse [N, E, W]
		PV01-SEMICONDUCTORS
DV01	4822 130 33305	Diode 1SS133, etc.
Q401	4822 130 42839	F.E.T. 2SK369(BL)
Q402	4822 130 42839	F.E.T. 2SK369(BL)
Q403	4822 130 42839	F.E.T. 2SK369(BL)
Q404	4822 130 42839	F.E.T. 2SK369(BL)
Q405	4822 209 81565	IC NJM2041D-D
		PV01-MISCELLANEOUS
JV01	4822 267 20348	Terminal, 4P; CD1/CD2
JV02	4822 266 30285	Terminal, 6P; Tuner/TV
JV03	4822 265 10059	Jack, 8P
JV04	4822 265 10062	Jack, 3P
JV05	4822 265 10062	Jack, 3P
J401	4822 266 30282	Terminal, 2P; Phono
L401	4822 156 11019	Choke Coil, 320μH [N]
L402	4822 156 11019	Choke Coil, 320μH [N]
LV01	4822 280 20195	Relay

REF. DESIG.	PART NO.	DESCRIPTION
SV01	4822 277 20832	Slide Switch
WV01	4822 323 10106	Jumper Lead, 3P
WV02	4822 323 10076	Jumper Lead, 3P
WV03	4822 323 10133	Jumper Lead, 4P
WV05	4822 323 10143	Jumper Lead, 4P
		PW01-HEADPHONE/SPEAKER SW. CIRCUIT BOARD
RW01	4822 116 60331	Resistor 1KΩ ±5% 1W
RW02	4822 116 60331	Resistor 1KΩ ±5% 1W
JW01	4822 267 30617	Jack, Headphone
SW01	4822 276 12428	Push Switch, Speaker
		PY01-INPUT SELECTOR IND. CIRCUIT BOARD
DY01 }	4822 130 80326	L.E.D. LT3D8B
DY06		
DY07	4822 130 80327	L.E.D. LT3G8B
WY01	4822 323 10062	Jumper Lead, 8P
WY02	4822 323 10094	Jumper Lead, 5P
		PY51-FUNCTION LED IND. CIRCUIT BOARD
DY51 }	4822 130 80326	L.E.D. LT3D8B
DY57		
WY51	4822 323 10054	Jumper Lead, 5P
WY52	4822 323 10109	Jumper Lead, 4P
		P701-MAIN AMP CIRCUIT BOARD
		P701-CAPACITORS
CN01	4822 124 41543	Elect 1μF 50V
CN02	4822 124 22273	Elect 0.47μF 50V
CN04	4822 124 22275	Elect 47μF 10V
CN05	4822 124 22275	Elect 47μF 10V
C701	4822 124 22571	Elect 10μF 50V [N, E, A]
	4822 124 90386	Elect 10μF 25V [W]
C702	4822 124 22571	Elect 10μF 50V [N, E, A]
	4822 124 90386	Elect 10μF 25V [W]
C703	4822 121 51036	Film 100pF ±5% [N, E, A]
	4822 121 51008	Film 100pF ±5% [W]
C704	4822 121 51036	Film 100pF ±5% [N, E, A]
	4822 121 51008	Film 100pF ±5% [W]
C705	4822 124 90354	Elect 100μF 16V
C706	4822 124 90354	Elect 100μF 16V
C707	4822 121 42756	Film 1500pF ±5%
C708	4822 121 42756	Film 1500pF ±5%
C713	4822 124 90354	Elect 100μF 16V
C714	4822 124 90354	Elect 100μF 16V
C715	4822 121 43129	Film 15pF ±10% [N, E, A]

REF. DESIG.	PART NO.	DESCRIPTION
C716	4822 121 43129	Film 15pF ±10% [N, E, A]
C717	4822 121 51036	Film 100pF ±5%
C718	4822 121 51036	Film 100pF ±5%
C719	4822 121 51036	Film 100pF ±5%
C720	4822 121 51036	Film 100pF ±5%
C725	4822 122 32486	Ceramic 0.01μF +80% -20% [N]
C726	4822 122 32486	Ceramic 0.01μF +80% -20% [N]
C727	4822 122 32486	Ceramic 0.01μF +80% -20% [N]
C728	4822 122 32486	Ceramic 0.01μF +80% -20% [N]
C729	4822 124 22572	Elect 100μF 63V
C730	4822 124 22572	Elect 100μF 63V
C781	4822 124 41533	Elect 8200μF 56V
C782	4822 124 41533	Elect 8200μF 56V
C783	4822 122 30043	Ceramic 0.01μF +80% -20%
P701-RESISTORS		
RN01	4822 111 91257	1KΩ ±5% 1/6W
RN02	4822 111 91257	1KΩ ±5% 1/6W
△ RN11	4822 116 60318	22Ω ±5% ¼W, Fusible
△ RN17	4822 116 80654	270Ω ±5% 3W, Metal
△ RN57	4822 116 60455	270Ω ±5% 2W, Metal
△ RN58	4822 116 60455	270Ω ±5% 2W, Metal
R713	4822 116 53083	15KΩ ±5% ¼W
R714	4822 116 53083	15KΩ ±5% ¼W
R719	4822 100 20538	2.2KΩ, Trimming
R720	4822 100 20538	2.2KΩ, Trimming
R723	4822 111 91285	100Ω ±5% 1/6W
R724	4822 111 91285	100Ω ±5% 1/6W
R725	4822 111 91285	100Ω ±5% 1/6W
R726	4822 111 91285	100Ω ±5% 1/6W
△ R727	4822 116 80652	1KΩ ±2% ¼W, Fuse
△ R728	4822 116 80652	1KΩ ±2% ¼W, Fuse
△ R733	4822 116 60317	180Ω ±5% ¼W, Fusible
△ R734	4822 116 60317	180Ω ±5% ¼W, Fusible
R735	4822 116 52348	2.2Ω ±5% ¼W
R736	4822 116 52348	2.2Ω ±5% ¼W
R737	4822 111 91424	2.2Ω ±5% 1/6W
R738	4822 111 91424	2.2Ω ±5% 1/6W
△ R743	4822 116 80153	0.18Ω ±10% 5W
△ R744	4822 116 80153	0.18Ω ±10% 5W
△ R745	4822 116 80153	0.18Ω ±10% 5W
△ R746	4822 116 80153	0.18Ω ±10% 5W
△ R751	4822 116 80653	22Ω ±5% ¼W, Fusible
△ R752	4822 116 80653	22Ω ±5% ¼W, Fusible
R753	4822 111 91405	220Ω ±5% 1/6W
R754	4822 111 91405	220Ω ±5% 1/6W
R755	4822 111 90726	10Ω ±5% 2W
R756	4822 111 90726	10Ω ±5% 2W
R781	4822 116 60331	1KΩ ±5% 1W
P701-SEMICONDUCTORS		
DN01	4822 130 80837	Diode HSS81
DN02	4822 130 80837	Diode HSS81
DN03	4822 130 80839	Diode S5688G
DN04	4822 130 33305	Diode 1SS133, etc.
DN05	4822 130 33305	Diode 1SS133, etc.
DN06	4822 130 33305	Diode 1SS133, etc.
△ D781	4822 130 33864	Diode 30D2FC
△ D782	4822 130 33864	Diode 30D2FC
△ D783	4822 130 33864	Diode 30D2FC
△ D784	4822 130 33864	Diode 30D2FC

REF. DESIG.	PART NO.	DESCRIPTION
QN01	4822 130 43233	Transistor 2SC2240(GR, BL)
QN02	4822 130 43233	Transistor 2SC2240(GR, BL)
QN03	4822 130 42951	Transistor 2SA970(GR, BL)
QN04	4822 209 83312	IC TA7317P
Q701	4822 130 60526	Transistor 2SD1508
Q702	4822 130 60526	Transistor 2SD1508
Q703	4822 130 43233	Transistor 2SC2240(GR, BL)
Q704	4822 130 43233	Transistor 2SC2240(GR, BL)
Q705	4822 130 42951	Transistor 2SA970(GR, BL)
Q706	4822 130 42951	Transistor 2SA970(GR, BL)
Q707	4822 130 60525	Transistor 2SC3298(O, Y)
Q708	4822 130 60525	Transistor 2SC3298(O, Y)
Q709	4822 130 60524	Transistor 2SA1306(O, Y)
Q710	4822 130 60524	Transistor 2SA1306(O, Y)
△ Q711	4822 130 60116	Transistor 2SC3280(R, O)
△ Q712	4822 130 60116	Transistor 2SC3280(R, O)
△ Q713	4822 130 60109	Transistor 2SA1301(R, O)
△ Q714	4822 130 60109	Transistor 2SA1301(R, O)
Q719	4822 209 73065	IC STK3062
P701-MISCELLANEOUS		
JN01	4822 265 10064	Jack, 7P
J701	4822 266 30281	Terminal, Speaker
J702	4822 266 30279	Terminal, Speaker
J703	4822 265 30482	Plug, 4P
J784	4822 265 10062	Jack, 3P
LN01	4822 280 70354	Relay
LN02	4822 280 70354	Relay
LN03	4822 280 20196	Relay
L701	4822 157 51739	Coil
L702	4822 157 51739	Coil
P801-POWER SUPPLY CIRCUIT BOARD		
P801-CAPACITORS		
C801	4822 124 41538	Elect 220μF 35V
C803	4822 124 41534	Elect 10μF 25V
C804	4822 124 41538	Elect 220μF 35V
C806	4822 124 41534	Elect 10μF 25V
C807	4822 124 41534	Elect 10μF 25V
C808	4822 124 41534	Elect 10μF 25V
C809	4822 122 32486	Ceramic 0.01μF +80% -20%
C810	4822 122 32486	Ceramic 0.01μF +80% -20%
C811	4822 124 41543	[N, A, W] Elect 1μF 50V
P801-RESISTORS		
△ R801	4822 116 60309	2.2Ω ±5% ¼W, Fusible
△ R802	4822 113 90141	220Ω ±2% ¼W, Fuse
△ R804	4822 115 90166	10Ω ±2% ¼W, Fuse [N, E, W]
△ R805	4822 116 60309	2.2Ω ±2% ¼W, Fusible
△ R806	4822 115 90166	10Ω ±2% ¼W, Fuse [N, E, W]
△ R807	4822 116 60349	270Ω ±5% 2W [E]
△ R808	4822 116 60349	270Ω ±5% 2W [E]
△ R809	4822 116 60246	220Ω ±5% 1W [E]

REF. DESIG.	PART NO.	DESCRIPTION
P801-SEMICONDUCTORS		
△ D801	4822 130 32508	Diode RL103E, etc.
△ D802	4822 130 32508	Diode RL103E, etc. [N, A, W]
△ D803	4822 130 32508	Diode RL103E, etc.
△ D804	4822 130 32508	Diode RL103E, etc. [N, A, W]
△ D805	4822 130 32508	Diode RL103E, etc.
△ D806	4822 130 32508	Diode RL103E, etc. [N, A, W]
△ D807	4822 130 32508	Diode RL103E, etc.
△ D808	4822 130 32508	Diode RL103E, etc. [N, A, W]
P801-MISCELLANEOUS		
J804	4822 265 10061	Jack, 5P
J805	4822 290 40296	Terminal, Earth
J806	4822 265 10062	Jack, 3P
J807	4822 265 10062	Jack, 3P
P901-POWER SWITCH CIRCUIT BOARD		
⬇ C901	4822 122 33276	Ceramic Cap. 0.01μF ±20% 400V
⬇ S901	4822 276 11898	Push Switch, Power

(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.

9. TECHNICAL SPECIFICATIONS

Audio Section

IHF Dynamic Power

2 Ohms	180 W
4 Ohms	140 W
8 Ohms	95 W

Power Output per Channel

DIN 4 Ohms at 1 kHz	120 W
RMS 4 Ohms	90 W
DIN 8 Ohms at 1 kHz	85 W
RMS 8 Ohms	75 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)	±0.5dB
Signal to Noise Ratio (A weighted)	86dB
Input Impedance	47kOhms
Input Capacitance	200pF
Input Sensitivity	2.5mV

CD-Tuner-Tape Input

Input Impedance	47kOhms
Input Sensitivity	150mV
Frequency Response	15Hz-70kHz
Signal To Noise Ratio (A weighted)	96dB

Output Voltage and Impedance

Tape Out [PHONO (MM) 5.0 mV 1 kHz Input] 300 mV/220 Ohms

Channel Separation [CD Input] >80dB

Video Section

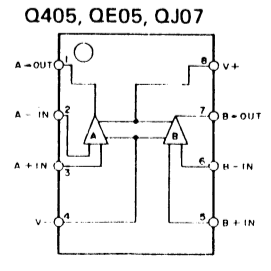
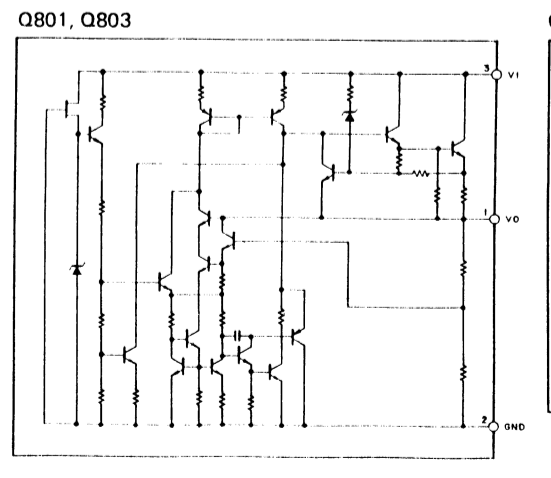
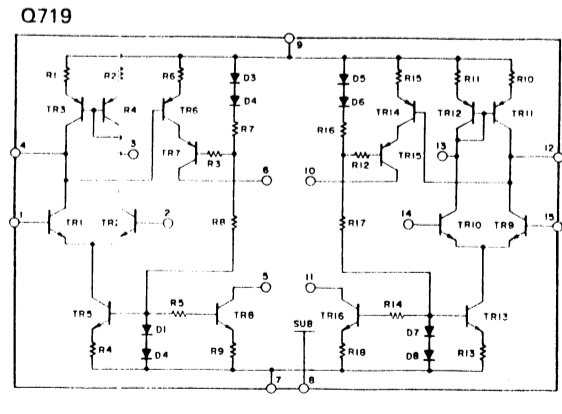
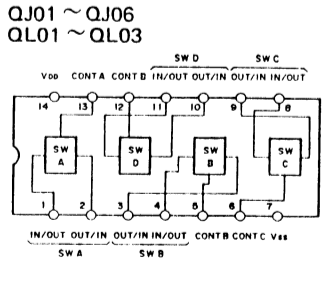
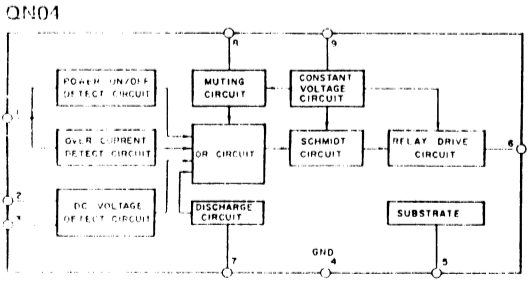
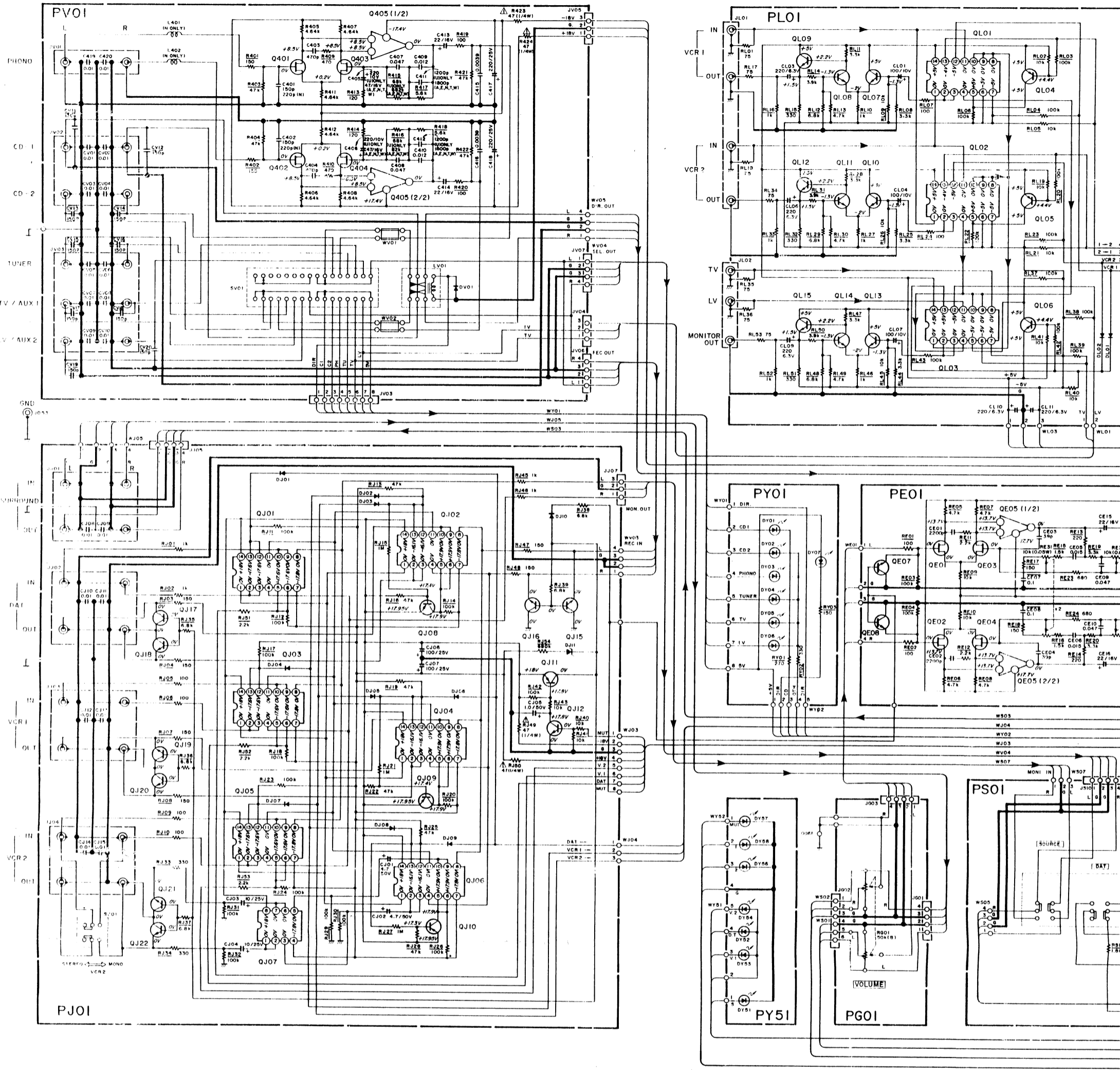
Input Sensitivity/Impedance	1V P-P/75 Ohms
Output Level/Impedance	1V P-P/75 Ohms
S/N Ratio	75 dB

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	200 W
Dimensions	
Panel Width	420 mm
Panel Height	136 mm
Depth	366 mm
Weight	
Unit alone	10 kg

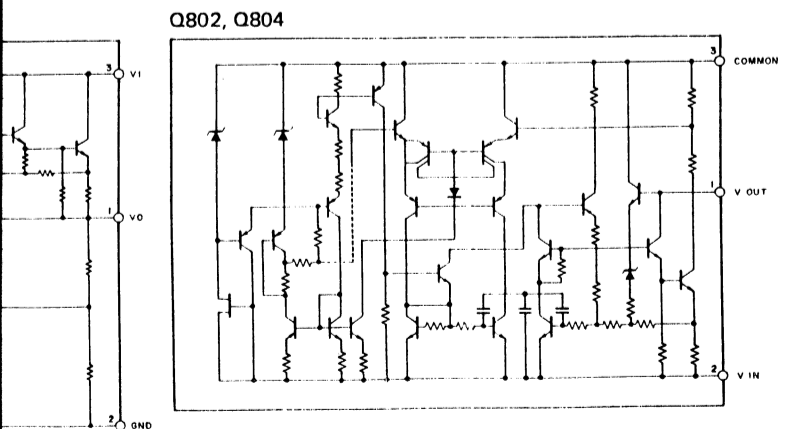
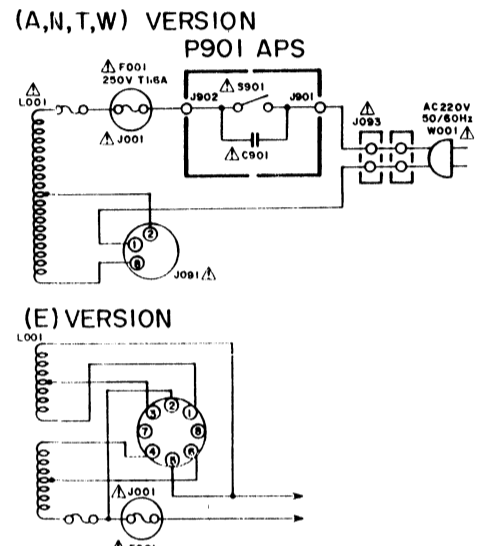
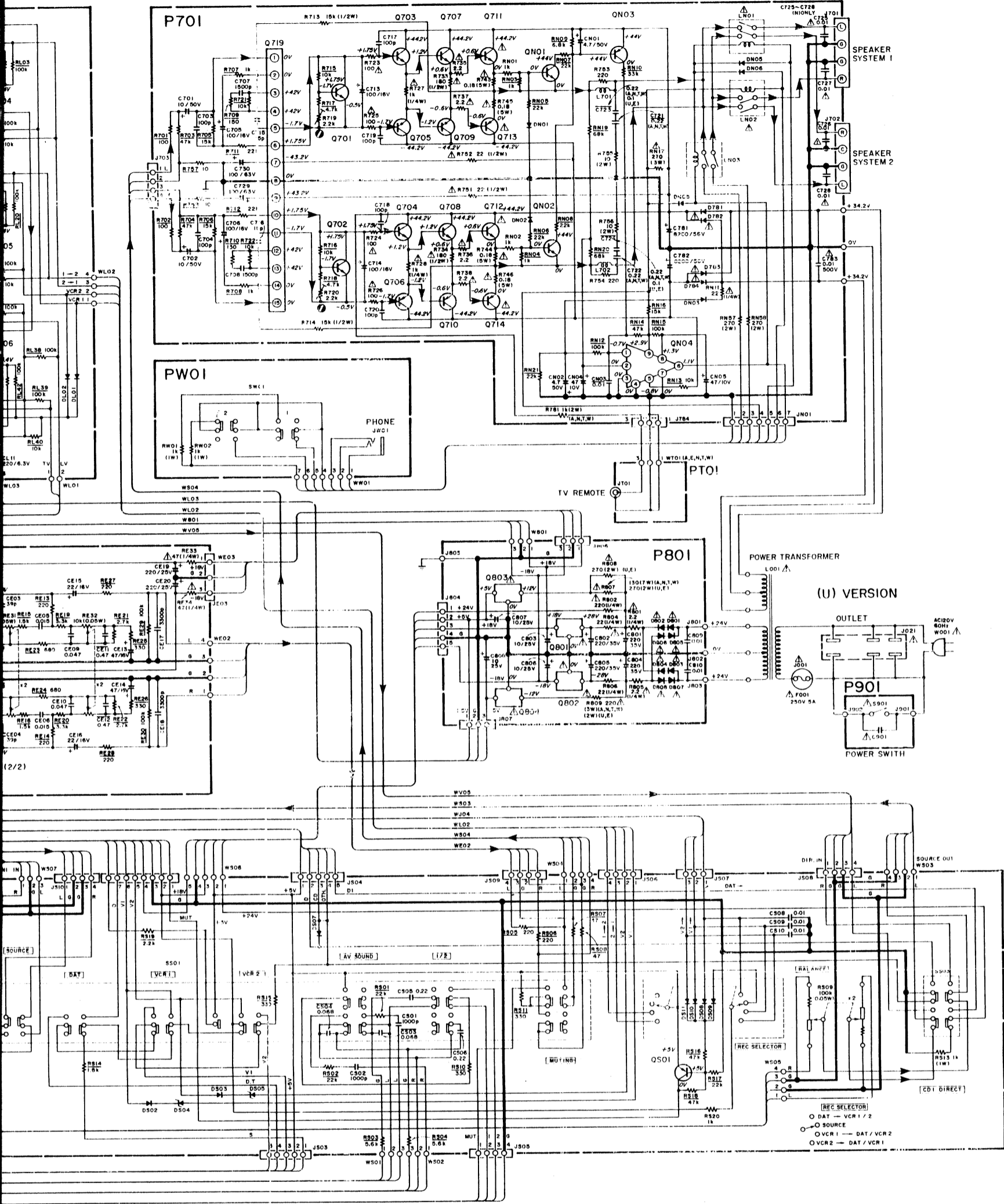
Specifications and appearance are subject to change for modification without notice.

10. SCHEMATIC DIAGRAM



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.

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



"SERVICE INFORMATION IS FOR USE BY QUALIFIED PERSONNEL ONLY — ANY MISADJUSTMENT OR MISALIGNMENT MAY BE TREATED AS A NON-WARRANTY REPAIR BY ANY MARANTZ SERVICE CENTRE —"

Kind of Common Parts

RESISTOR

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

C* : CERAMIC CAP.**

- (1) DD1 370, Ceramic condenser, disc type (titan condenser) Temp. coeff. P350 to N1000 50V

C* : CERAMIC CAP.**

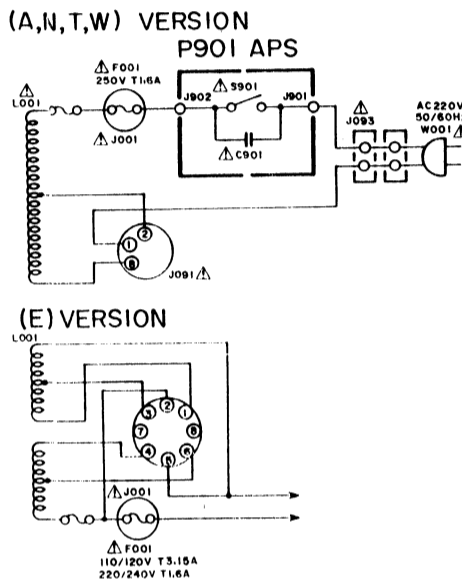
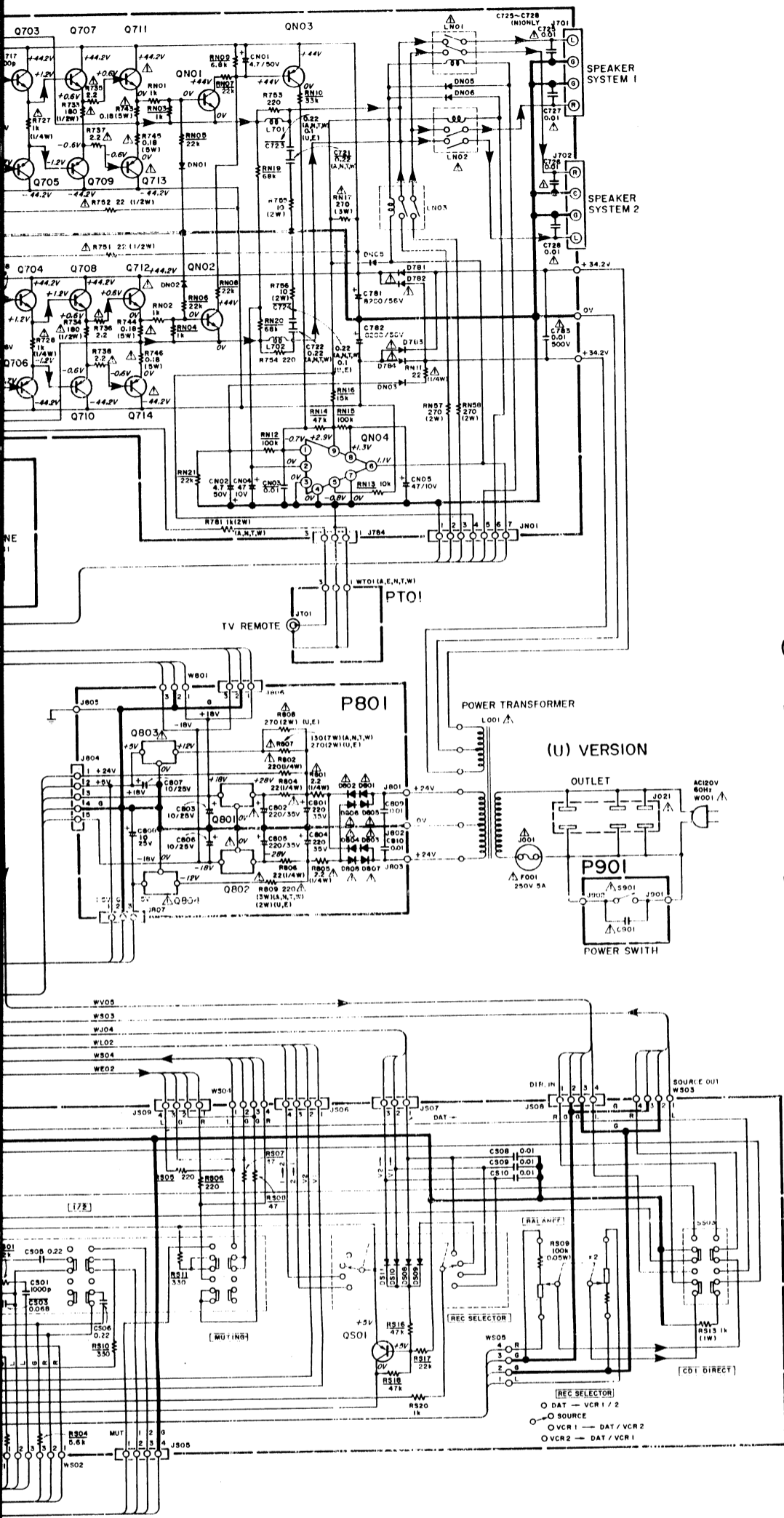
- (1) DK16 300, High dielectric constant ceramic condenser, disc type (titan variable) Temp. chara. 2B4 50V

C* : ELECTROLY CA**

- (1) EA 10,
- (2) DF15 350,

* In case of ordering the parts number of 10 fig COMMON PARTS CO

Model P.M-65AV



QEO1-QEO4, Q401-Q404	Q803	
2SK369(BL)	NJM78M05A	
QE05, Q405	Q804	
NJM2041D-C	NJM79M05A	
QJ01-QJ06		
LC4966		
QJ07		
NJM4558D-D		
QJ08-QJ11, Q104-Q106		
Q501		
2SA1175(FF,EF)		
QJ12, Q107-Q115		
2SC2785(FF,EF)		
QE07, QE08		
QJ15-QJ22		
2SC2878(A)		
QLO1-QLO3		
LC4066B-H		
QN01, QN02, Q703, Q704		
2SC2240(GP, BL)		
QN03, Q705, Q706		
2SA970(GR, BL)		
QN04		
TA7317P		
Q701, Q702		
2SD1508		
Q707, Q708		
2SC3298(O, Y)		
Q709, Q710		
2SA1306(O, Y)		
Q711, Q712		
2SC3280(R, O)		
Q713, Q714		
2SA1301(R, O)		
Q719		
STK3062		
Q801		
NJM78M18A		
Q802		
NJM79M18A		

"SERVICE INFORMATION IS FOR USE BY QUALIFIED PERSONNEL ONLY — ANY MISADJUSTMENT OR MISALIGNMENT MAY BE TREATED AS A NON-WARRANTY REPAIR BY ANY MARANTZ SERVICE CENTRE —"

Kind of Common Parts

- RESISTOR**
- R*** (1) GD05 140, Carbon film fixed resistor, ±5% 1/4W
 - R*** (2) GD05 160, Carbon film fixed resistor, ±5% 1/6W
- CERAMIC CAP.**
- C*** (1) DD1 370, Ceramic condenser, disc type (titan condenser) Temp. coeff. P350 to N1000 50V
 - C*** (2) DK16 300, High dielectric constant ceramic condenser, disc type (titan variable) Temp. chara. 2B4 50V

- ELECTROLY. CAP. (E) / FILM CAP. (F)**
- (1) EA 10, Electrolytic condenser, one-way lead type, tolerance ±20%
 - (2) DF15 350, Plastic film condenser, one-way type, Mylar, ±5% 50V

* In case of ordering the common parts, please establish the correct parts number of 10 figures by the procedure "ASSIGNMENT OF COMMON PARTS CODES"