SERVICE MANUAL PM730

marantz®

model PM730

Stereo Pre Main 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, MARANTZ part number has to be specified. If you order by mail, fulfil MARANTZ order forms.

MARANTZ S.A.
EUROPEAN PARTS DEPARTMENT
2, Avenue Léopold III
B-7120 PERONNES-lez-BINCHE
BELGIUM
TWX: 57589 SEPLT B

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

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

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

PARTS ORDERING:
Parts may be ordered from the following addresses:

EUROPE

MARANTZ S.A.
European Parts Department
2, Avenue Léopold III
B-7120 Péronnes-lez-Binche
Belgium
Telex: 57589

MARANTZ GERMANY GMBH
Max Planckstrasse, 22
6072 DREIEICH 1
West Germany
Telex: 4185316

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

MARANTZ DENMARK
Bregnerødvej 132b
3460 Birkerød
Denmark
Telex: 39137

MARANTZ GMBH AUSTRIA
Wiedner Hauptstrasse 98
1050 Wien
Austria
Telex: 113583

MARANTZ S.A.
326 Avenue Louise Bte 32
1050 Brussels
Belgium
Telex: 26602

MARANTZ NORSKE A.S.
Refstadalleen 13
Oslo 5
Norway
Telex: 19659

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

MARANTZ BELGIUM
45 Rue Auguste Van Zande
1080 Brussels
Belgium

MARANTZ SVENSKA A.B.
Svartviksvangen 56
Traneberg · Box 12016
16112 Bromma
Sweden
Telex: 13449

AUSTRALIA

MARANTZ AUSTRALIA PTY., LTD.
32 Cross Street
Brookvale, N.S.W. 2100
Australia
Telex: 24121

U.S.A.

MARANTZ COMPANY, INC.
National Service Dept.
P.O. Box 577
Chatsworth, CA 91311
U.S.A.
Telex: 4720284

CANADA

SUPERSCOPE CANADA, LTD.
3710 Nashua Drive
Mississauga
Ontario, Canada L4V1M5

JAPAN

MARANTZ JAPAN, INC.
35-1, 7-chome, Sagamiono
Sagamihara-shi, Kanagawa
Japan
Telex: 22878

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.

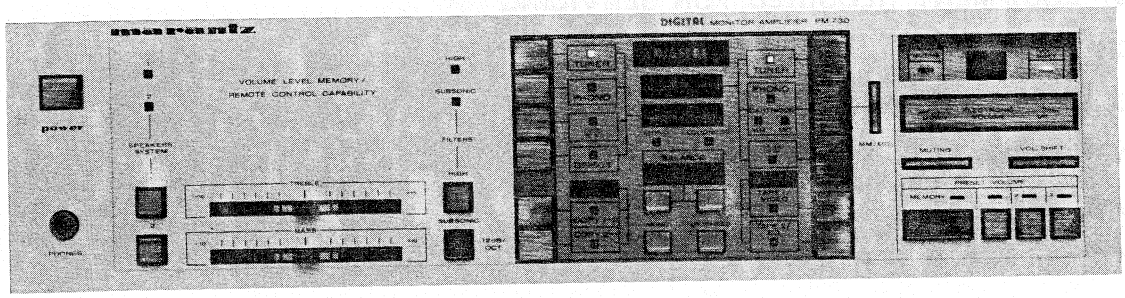
NOTE—FOR U.S.A. ONLY
Parts for your MARANTZ stereo are generally available within 72 hours throughout the nation via a toll-free line to our National Parts Depot in California. The sales professionals who take your call immediately refer to their own desk top computer terminal and can quickly determine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

Phone orders will eliminate mail delays, and we encourage the use of this method. If you order by mail, use MARANTZ parts order forms which are available from SUPERSCOPE NATIONAL PARTS DEPARTMENT.

marantz®

TABLE OF CONTENTS

MODEL PM730 STEREO PRE MAIN AMPLIFIER



INTRODUCTION

This service manual was prepared for use by Authorized Warranty Stations and contains service information for the Marantz Model PM730 Stereo Pre Main Amplifier.

Servicing information and voltage data included in this manual are intended for use by knowledgeable and experienced personnel only. All instructions should be read carefully. No attempt should be made to proceed without a good understanding of circuitry operation.

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

1. SHOCK FIRE HAZARD SERVICE TEST

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

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

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

2. P.W. BOARDS

As can be seen from the circuit diagram the chassis of Model PM730 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. Main Amp . . . . . .mounted on P.W. Board P700
2. Tone Control Amp . . . .mounted on P.W. Board PE00
3. Function/Volume . . . . .mounted on P.W. Board PS00
4. Logic Control . . . . . .mounted on P.W. Board PL00
5. Speaker Output. . . . . mounted on P.W. Board PW00
6. Speaker Switch . . . . . .mounted on P.W. Board PT00
7. Speaker LED . . . . . .mounted on P.W. Board PT50
8. Power Switch . . . . . .mounted on P.W. Board P000
9. Head Phone . . . . . mounted on P.W. Board PW50
10. Front LED Switch. . . . mounted on P.W. Board PY00

3. TEST EQUIPMENT REQUIRED FOR SERVICING

This table lists the test equipment required for servicing the Model PM730 Stereo Pre Main 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

4. MICRO COMPUTER

a. Apart from the power switch, speaker selector switch, tone control and volume control, all the functions on the front panel are controlled via a microcomputer consisting of 2 parts – LN6416E (QL11) and LC6502 (QL09).
The EASY/REMOTE signals are also processed by the microcomputer.

b. By backing up the microcomputer with capacitor, it is possible to maintain the unit in the condition it was prior to switching the power OFF for approx. 2 hours. If the back-up voltage drops below V2/2 (approx. 2.5 V), the unit returns to its original condition (Position: Tuner Direct, Volume: "00" and all other functions OFF).

c. There are 2 built-in volume memories – a relative volume memory which makes use of the special features of the microcomputer, and an absolute volume memory:
Relative volume memory –
Can compensate the level difference between PHONO, TUNER and CD.
Absolute volume memory –
Can memorize 3 arbitrary points on the volume scale.

5. LED MATRIX ARRANGEMENT TABLE

SEG / SCAN	0	1	2	3	4	5	6
0	1' DIGIT a	1' DIGIT b	1' DIGIT c	1' DIGIT d	1' DIGIT e	1' DIGIT f	1' DIGIT G
1	10' DIGIT a	10' DIGIT b	10' DIGIT c	10' DIGIT d	10' DIGIT e	10' DIGIT f	10' DIGIT G
2	FUNCTION TUNER	FUNCTION PHONO	FUNCTION AUX	FUNCTION TAPE 1	FUNCTION TAPE 2		
3	REC MODE DIRECT	REC MODE TUNER	REC MODE PHONO	REC MODE AUX	REC MODE COPY 1→2	REC MODE COPY 2→1	
4		MUTING ON	LEVEL MEMORY	LEVEL PRESET 1	LEVEL PRESET 2	LEVEL PRESET 3	
5						BALANCE CENTER	
6	LACTH OUT LOW FILTER	LACTH OUT HIGH FILTER	TACTH OUT MONO		LACTH OUT MM	LACTH OUT MC	LACTH OUT LOUDNESS

6. KEY MATRIX ARRANGEMENT TABLE

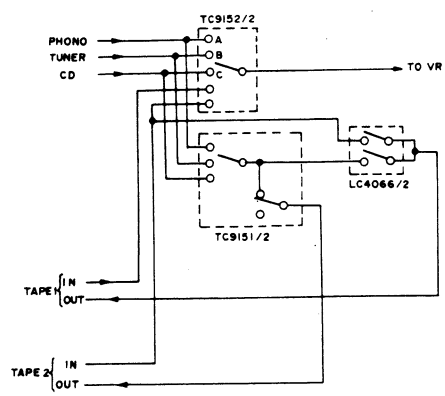
DIN / SCAN	0	1	2	3	4	5
0	BALANCE L	BALANCE R		VOLUME UP		VOLUME DOWN
1	MUTING		LEVEL MEMORY	LEVEL PRESET 1	LEVEL PRESET 2	LEVEL PRESET 3
2	FUNCTION TAPE 2		FUNCTION TUNER	FUNCTION PHONO	FUNCTION AUX	FUNCTION TAPE 1
3	REC MODE COPY 1→2	REC MODE COPY 2→1	REC MODE DIRECT	REC MODE TUNER	REC MODE PHONO	REC MODE AUX
4						
5						
6	LATCH OUT MM/MC	LATCH OUT LOUDNESS	LATCH OUT LOW FILTER	LATCH OUT HIGH FILTER	LATCH OUT MONO	

7. PHONO AMP

An FET differential input stage is installed in the primary stages of the OP Amp in order to improve the S/N ratio.
For MC/MM selection, input impedance and gain is varied by means of a plunger switch.

8. INPUT SELECTOR SECTION

a. This section, as shown in the diagram below, consists of 3 analog switches – TC9152P (QS02) for the input selector, TC9151P (SQ01) and LC4066 (QS06) for the Rec selector.
b. When the Rec Selector Direct is ON, contacts A, B, C of TC9152P and TC9151P are interlocked, and the mode can be selected by means of the Input Selector Switch.
c. An additional back-up is provided at Tape Out, which protects the analog switches when the output terminals are shorted and nullifies the effect of tape deck impedance on the unit.
d. When changing the input selector, the Mute signal from pin 5 of TC9152P mutes the volume circuit in the next stage.



9. VOLUME SECTION

a. Consists of 3 IC's – electronic volume TC9154 (QG01), analog switch LC4066 (QG03) and the OP Amp NJM4560 (QG02, QG04).
The level diagram for the max. peak signal at this stage is given in Fig A.
As the electronic volume has a low breakdown voltage (± 6 V), there is an attenuation of 10dB in the input stage so as to avoid applying a signal greater than the power supply voltage to the electronic volume, but this is later compensated by an arrangement which economizes 10dB in sensitivity. Also, when listening at low output levels, the S/N ratio is improved with the volume shift OFF.
b. The electronic volume is controlled by a serial code from the microcomputer. Balance is controlled by operating left and right channels separately in the microcomputer.

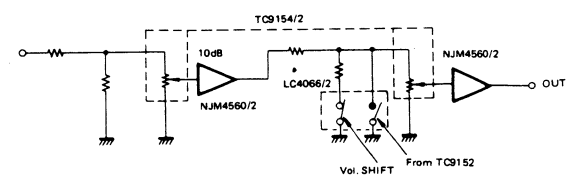


Fig A

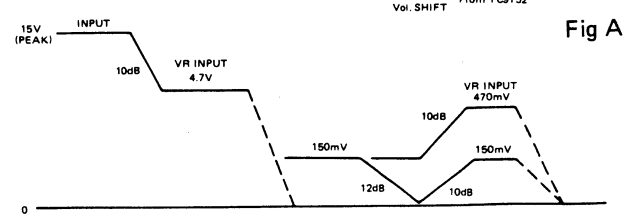
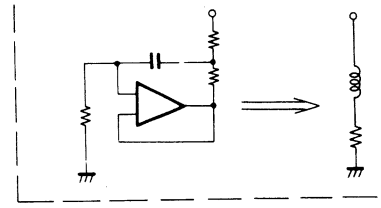


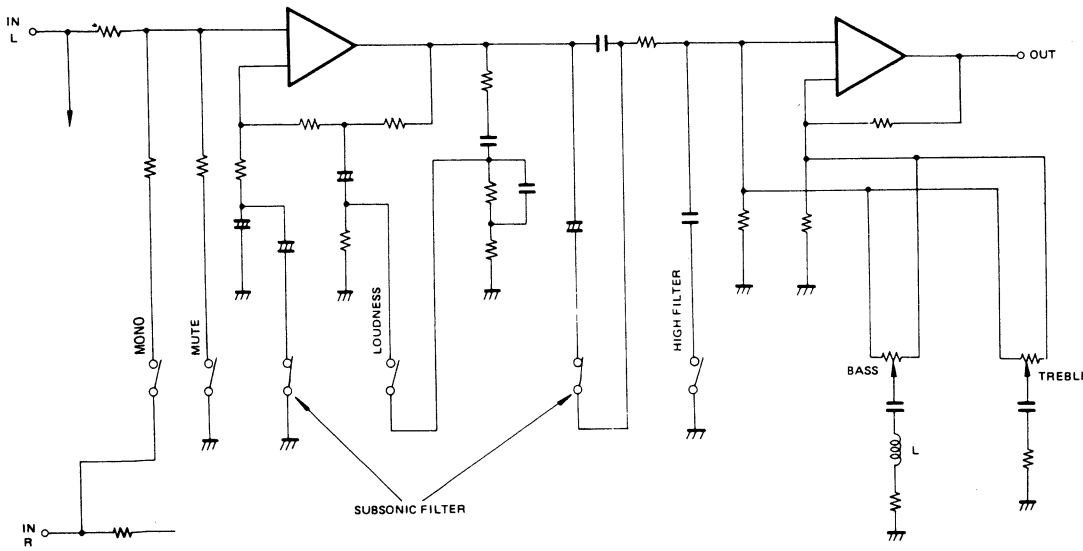
Fig B

10. TONE CONTROL SECTION

In this stage, MONO, HIGH FILTER, SUBSONIC FILTER, LOUDNESS, MUTE, TREBLE and BASS are controlled by the OP Amp and analog switches.
For the circuit diagram, refer to figure below.
The SUBSONIC FILTER consists of 2 stages in order to obtain 12 db/oct.
The BASS L consists of a simulated inductor which uses the OP Amp.

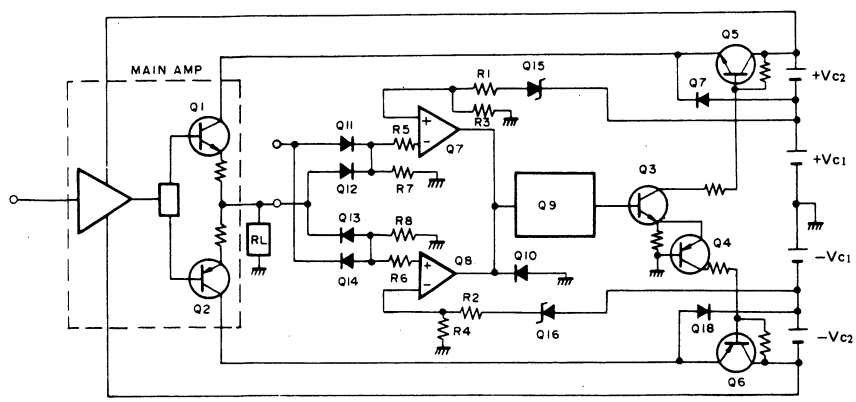
SIMULATED INDUCTOR





11. MAIN AMP SECTION

In the main amp circuit, IC's are used for the voltage amplification stage and transistors for the current amplification stage.
The basic circuit, as shown below consists of a comparator, Q15 and Q16, which compares a reference voltage to the output. If the output rises, multivibrator Q9 emits a pulse at fixed intervals of about 400 ms. This drives Q5 and Q6, and applies a high voltage to the current amplifier stage. Q9 is a re-trigger type multivibrator, and if an output higher than the comparator reference voltage appears within 400 ms, the high voltage is maintained.



Q1, Q2 . . . . . .Main output transistor
Q3, Q4 . . . . . .Switching Transistor
Q5, Q6 . . . . . .High Voltage Transistor
Q7, Q8 . . . . . .Comparator
Q9 . . . . . .Mono Multivibrator
Q10. . . . . .Clamp Diode
Q11 ~ Q14 . . .Rectifying Diode
Q15, Q16 . . . .Level Comparator Diode
Q17, Q18 . . . .Power Supply Switching Diode
±VC1, 2 . . . . .Power Supply
R1 ~ R8 . . . . .Voltage Dividing Resistor

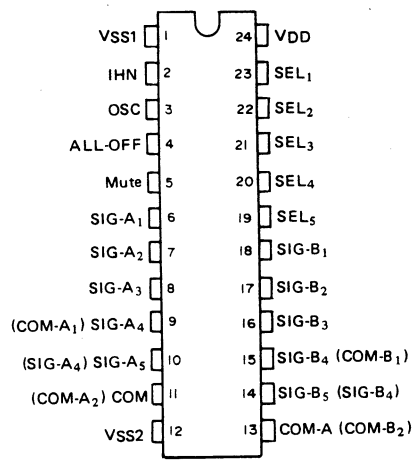
12. C-MOS DIGITAL IC TC9151P/TC9152P

This IC is used for feather-touch function selectors, and incorporates analog switches with a high breakdown voltage.

○ **Maximum Ratings (Ta = 25°C)**

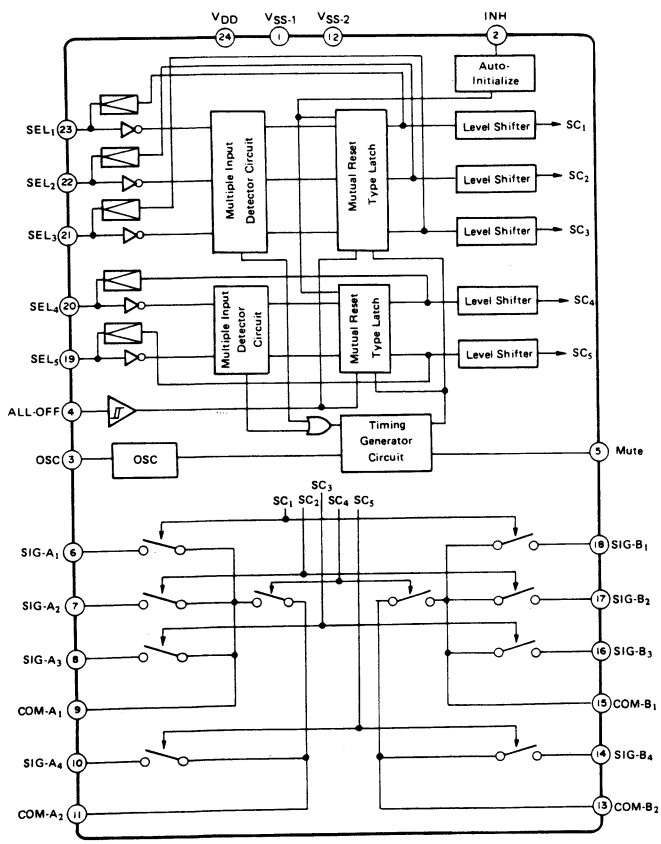
Item	Symbol	Ratings	Unit
Supply Voltage (1)	VDD VSS1	16	V
Supply Voltage (2)	VDD VSS2	32	V
Input Voltage (VSS1)	VIN(1)	−0.3 ~ VDD + 0.3	V
Input Voltage (VSS2)	VIN(2)	−0.3 ~ VDD + 0.3	V
Power Dissipation	PD	800	mw
Operating Temperature	Topr	−30 ~ 75	°C
Storage Temperature	Tstg	−55 ~ 125	°C

PIN CONNECTION

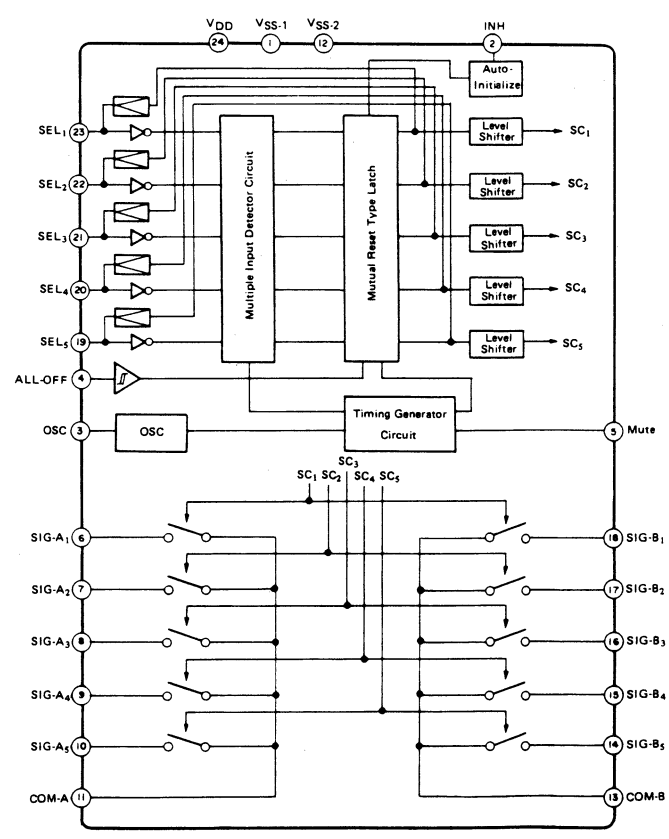


BLOCK DIAGRAM

TC9151P



TC9152P



13. PINS AND THEIR FUNCTIONS

TC9151P & TC9152P

Pin No.	Symbol	Functional Description
2	INH	Inhibit input terminal With "H" Level signals, permits normal operation. With "L" Level signals, inhibits operation.
3	OSC	C, R connection terminal for oscillator. The frequency of this oscillator determines muting time and anaolg switch selection timing.
4	ALL-OFF	"ALL ANALOG SWITCHES OFF" command input terminal. If an "H" Level signal is input to this terminal, all analog switches go OFF.
5	MUTE	Muting signal output terminal. When an "H" Level signal is received at the selector input terminals (SEL–1 ~ SEL–5), this terminal goes "H" for a certain time during which the analog switches change over. Muting output time can be set freely by the osicllator frequency.
24 1 12	V_{DD} V_{SS1} V_{SS2}	Power supply voltage terminal. For the control system, connect $V_{DD} - V_{SS1}$. For the analog switch system, connect $V_{DD} - V_{SS2}$.
19 20 21 22 23	SEL–5 SEL–4 SEL–3 SEL–2 SEL–1	Analog switch selector input terminals. If an "H" Level signal is applied to terminals SEL–1 ~ SEL–5, the analog switch selected goes ON. In TC9151P, SEL–1, SEL–2, SEL–3, and SEL–4, SEL–5, are in a mutual reset arrangement, so that in the absence of the selecting input they are OFF. In TC9152P, SEL–1 ~ SEL–5 are all in a mutual reset arrangement. This I/O terminal is also used for the display driver output.

TC9151P

Pin No.	Symbol	Function Description
6, 18	SIG–A_1 SIG–B_1	Signal input terminal 1. When SEL–1 is selected, analog switch 1 goes ON, and this terminal and terminal COM–1 then become conducting.
7, 17	SIG–A_2 SIG–B_2	Signal input terminal 2. When SEL–2 is selected, analog switch 2 goes ON, and this terminal and terminal COM–1 then become conducting.
8, 16	SIG–A_3 SIG–B_3	Signal input terminal 3. When SEL–3 is selected, analog switch 3 goes ON, and this terminal and terminal COM–1 then become conducting.
9, 15	COM–A_1 COM–B_1	Analog switch common terminal 1. This is a common terminal for analog switches SIG_1 ~ SIG_3 above.
10, 14	SIG–A_4 SIG–B_4	Signal input terminal 4. When SEL–5 is selected, analog switch 5 goes ON, and this terminal and terminal COM–2 then become conducting. When SEL–4 is selected, analog switch 4 goes ON, and analog switch 5 goes OFF.
11, 13	COM–A_2 COM–B_2	Analog switch common terminal 2. This is a common terminal for analog switches 4, 5 above.

TC9152P

Pin No.	Symbol	Function Description
6, 18	SIG–A_1 SIG–B_1	Same as for TC9151P.
7, 17	SIG–A_2 SIG–B_2	
8, 16	SIG–A_3 SIG–B_3	
9, 15	SIG–A_4 SIG–B_4	Signal input terminal 4. When SEL–4 is selected, analog switch 4 goes ON, and this terminal and terminal COM–4 then become conducting.
10, 14	SIG–A_5 SIG–B_5	Signal input terminal 5. When SEL–5 is selected, analog switch 5 goes ON, and this terminal and terminal COM–5 then become conducting.
11, 13	COM–A COM–B	Analog switch common terminal.

14. ADJUSTING PROCEDURES

• IDLING ADJUSTMENT

1. Input and output are adjusted with the unit in the OPEN condition.
2. Adjust both left and right channels to give 8 mV DC (idling current 3.5 mA).

	Measuring points	Parts to be adjusted
L channel	L ch output and T.P.I.	R715
R channel	R ch output and T.P.I.	R716

15. VOLTAGE CONVERSION

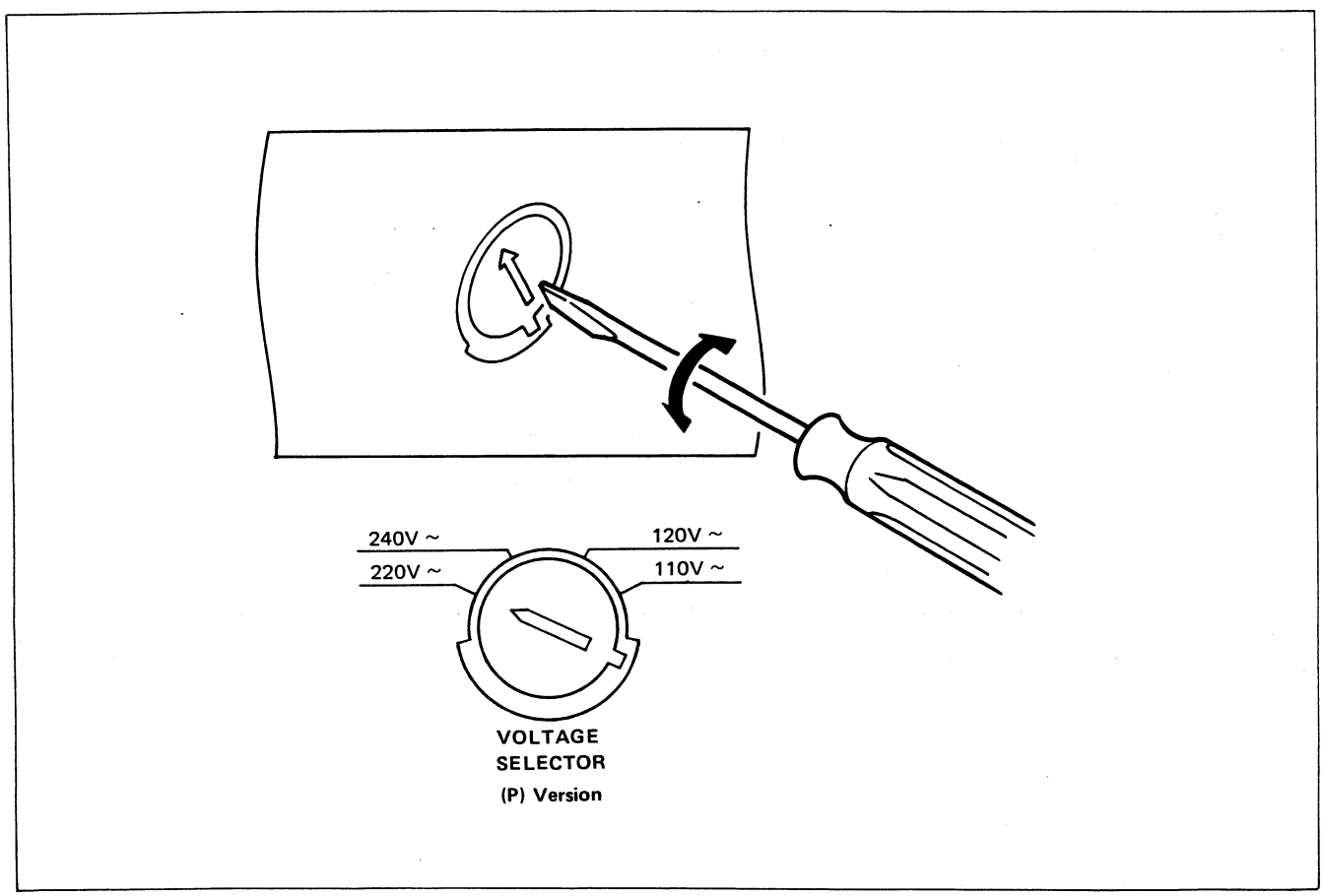
• EUROPEAN MODEL ONLY

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

CAUTION

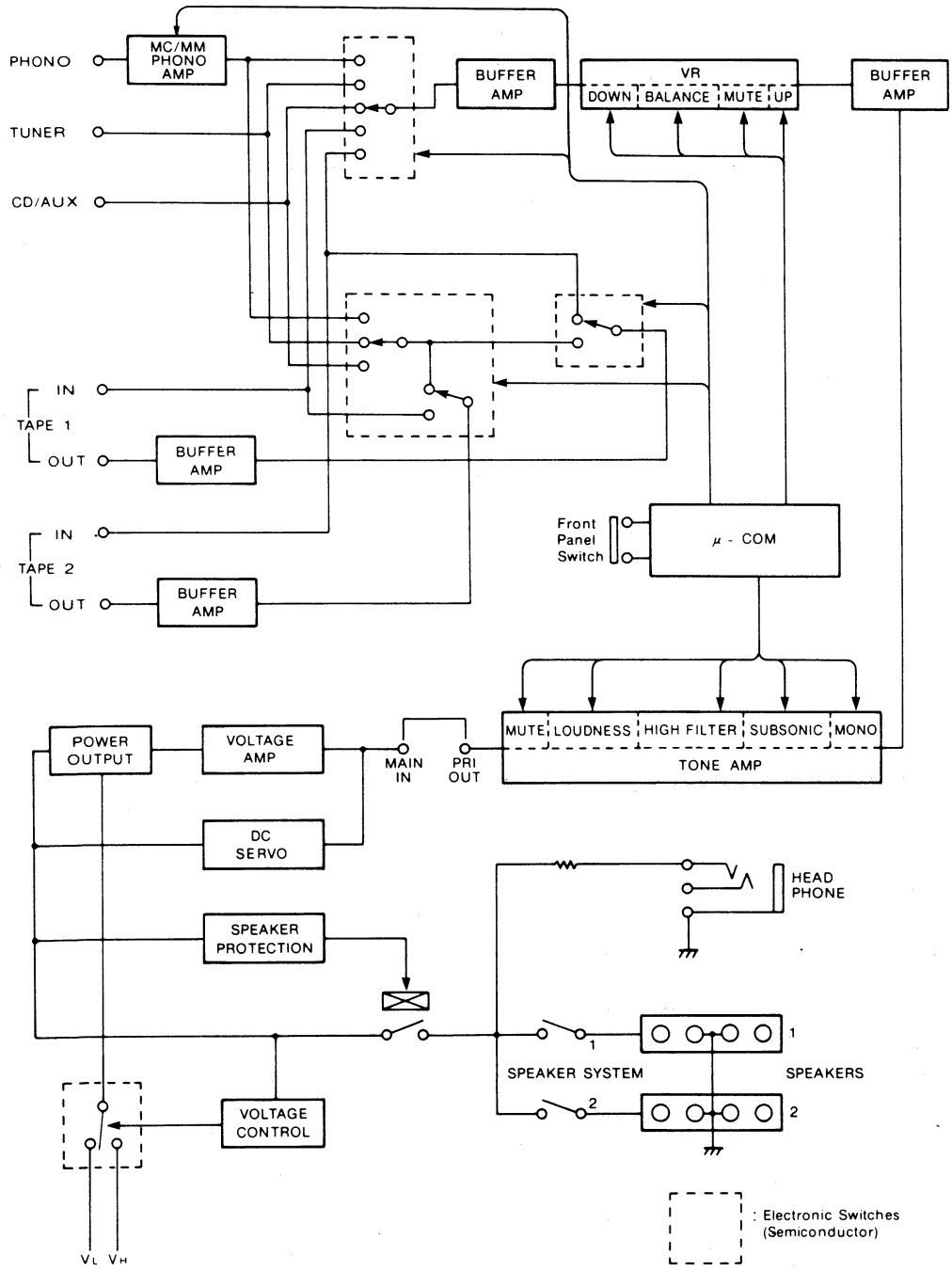
DISCONNECT POWER SUPPLY CORD FROM AC OUTLET BEFORE CONVERTING VOLTAGE.

Voltage Conversion Chart



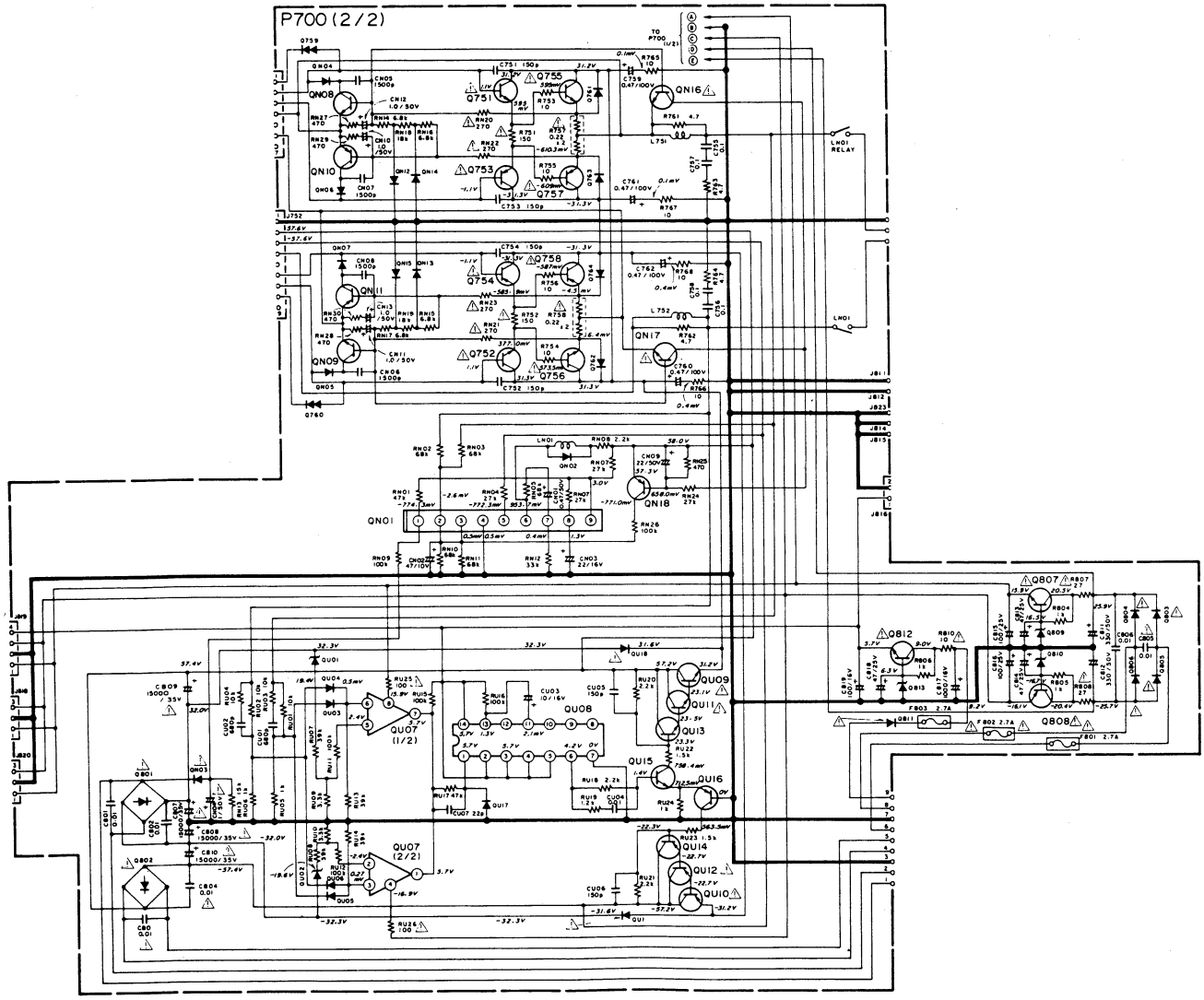
Note on safety:
Symbol ⚠ Fire or electrical shock hazard. Only original parts should be used to replace any part marked with symbol ⚠ . Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

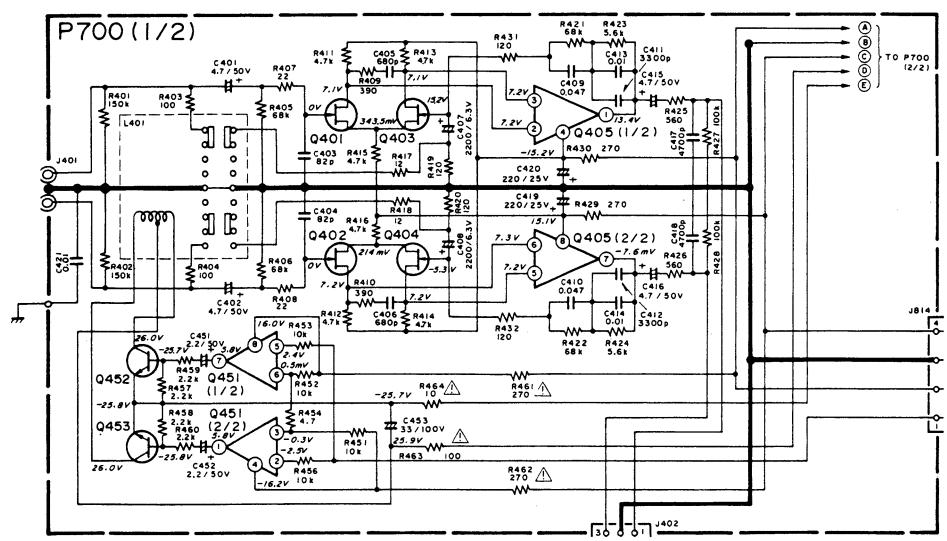
16. FUNCTIONAL BLOCK DIAGRAM

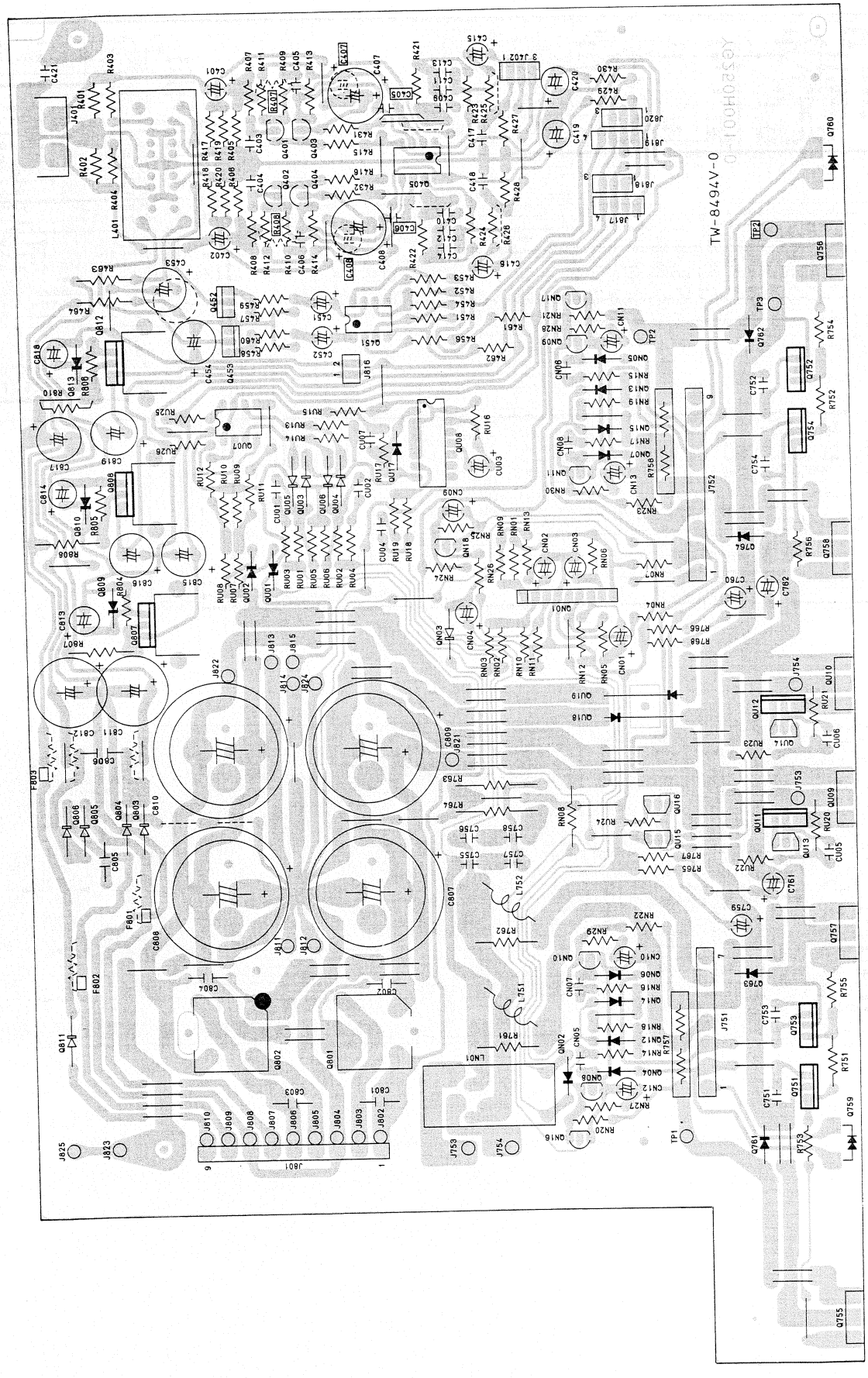


17. SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS

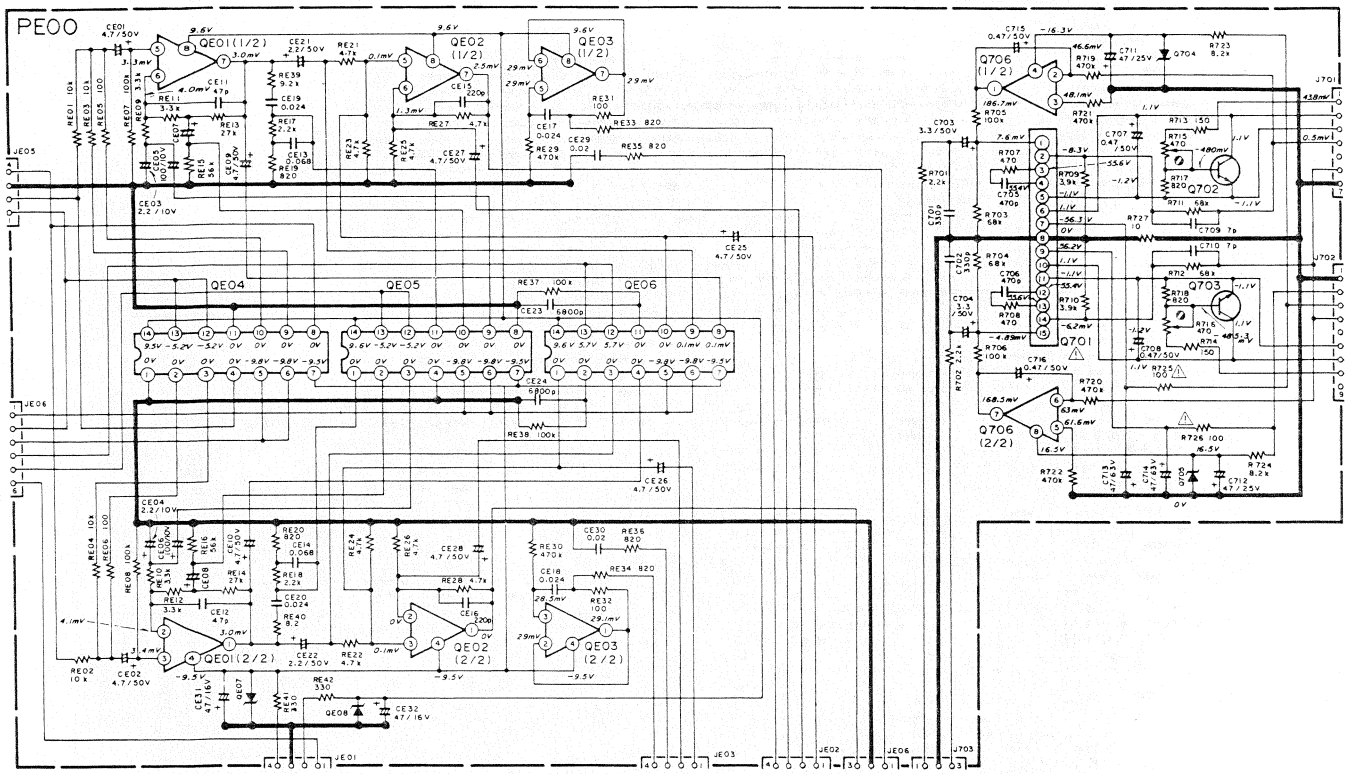
17. 1 MAIN AMP. Assembly (P700) Schematic Diagram and Component Location

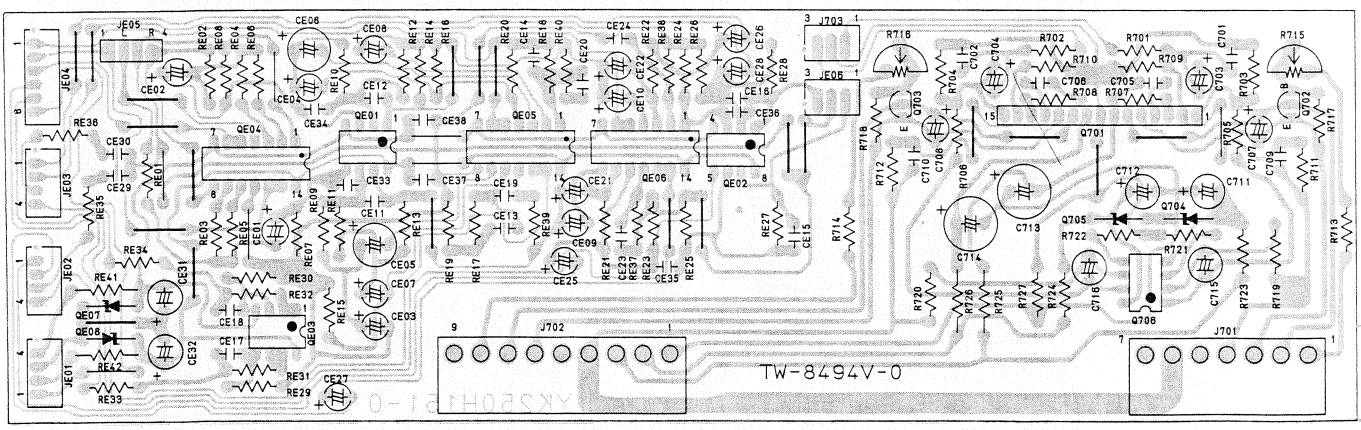




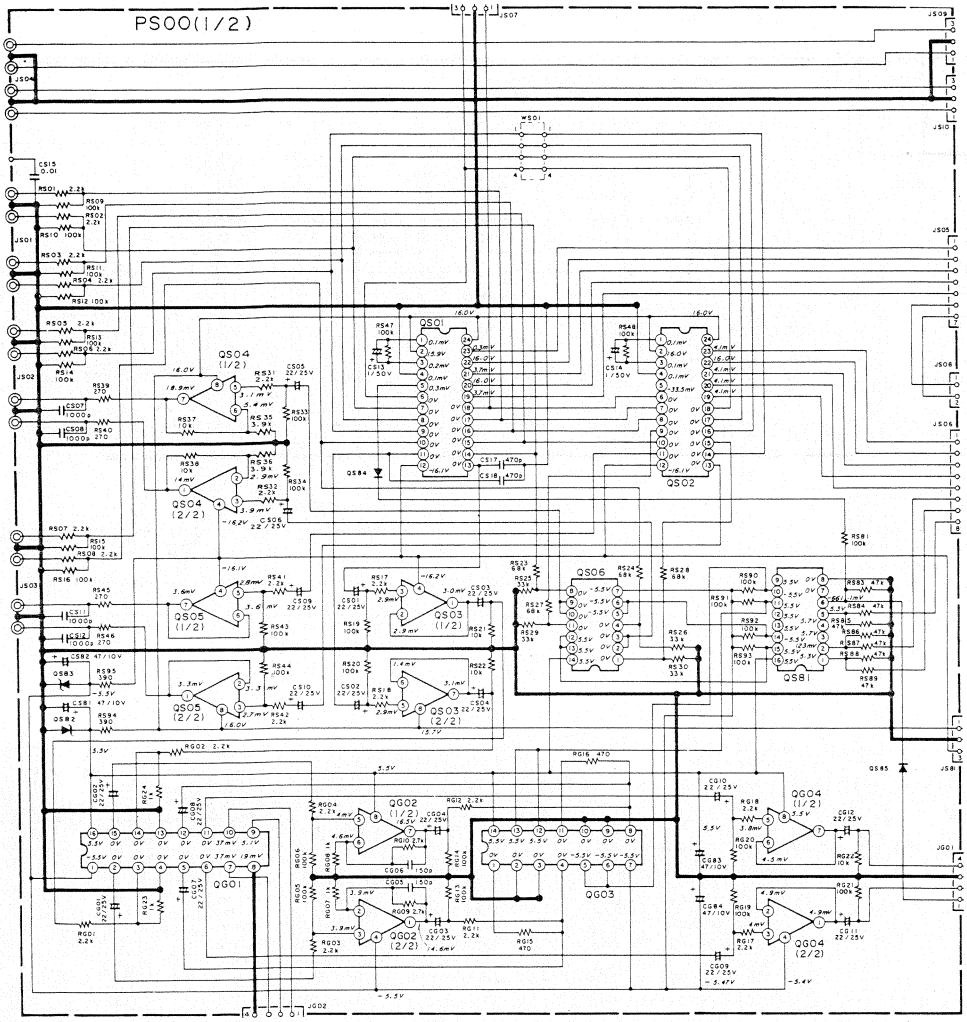

TW-8494V-0

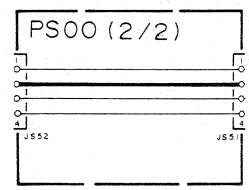
17.2 TONE CONTROL AMP. Assembly (PE00) Schematic Diagram and Component Locations

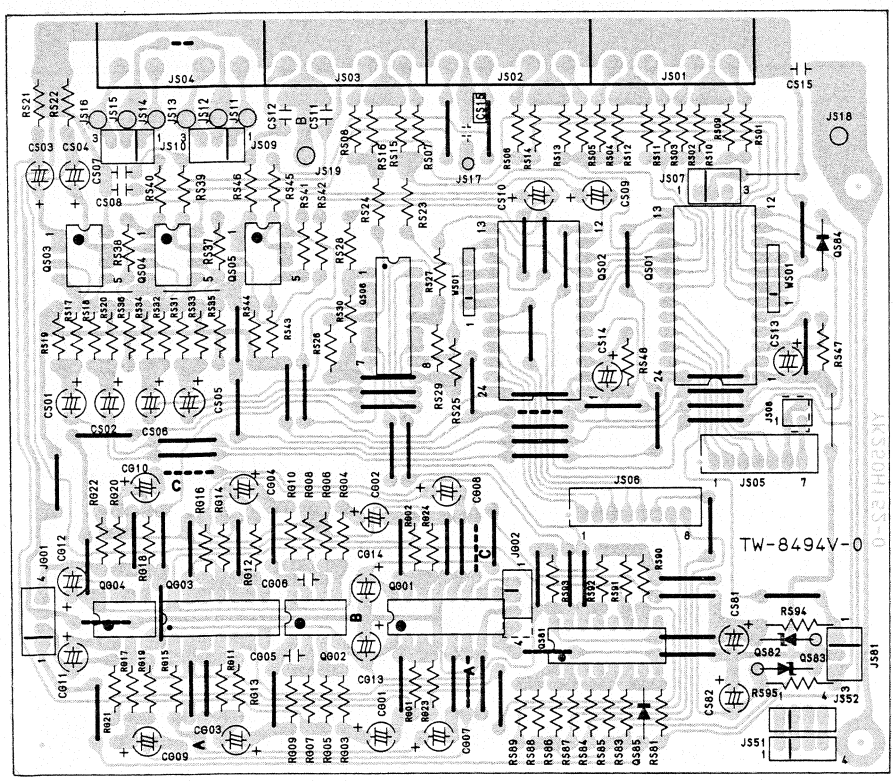




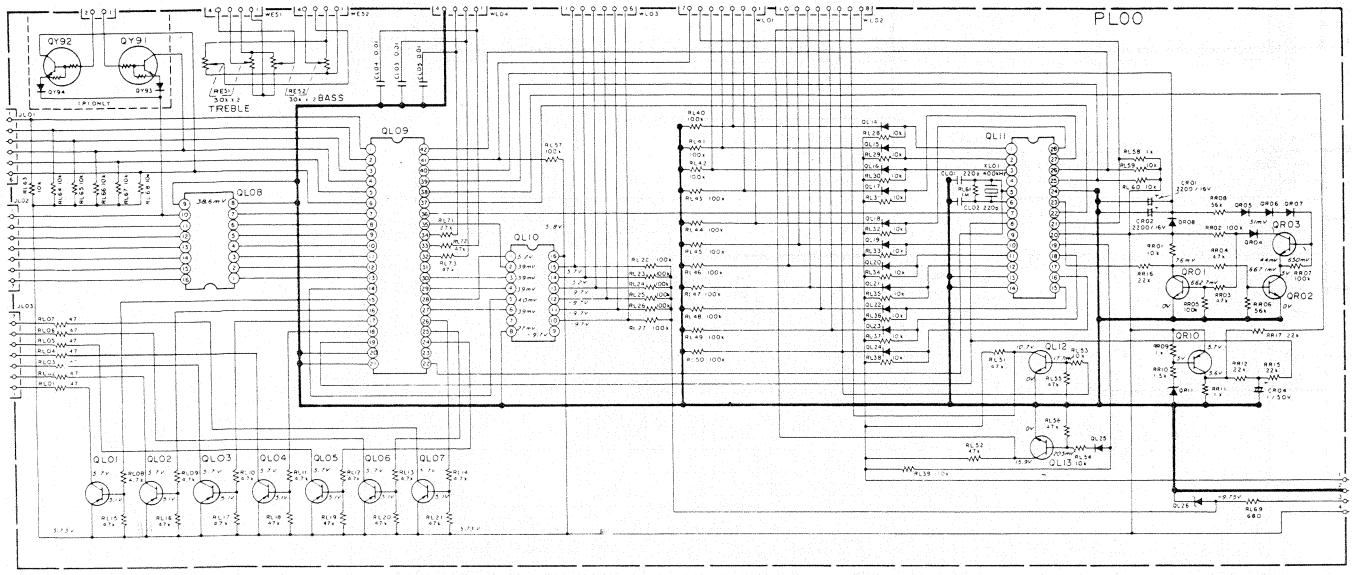
17.3 FUNCTION/VOLUME AMP. Assembly (PS00) Schematic Diagram and Component Locations

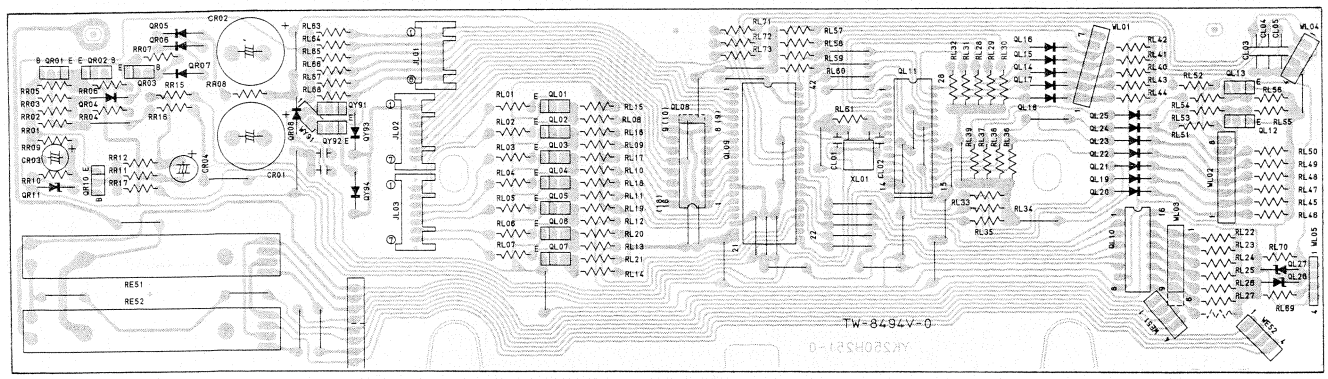




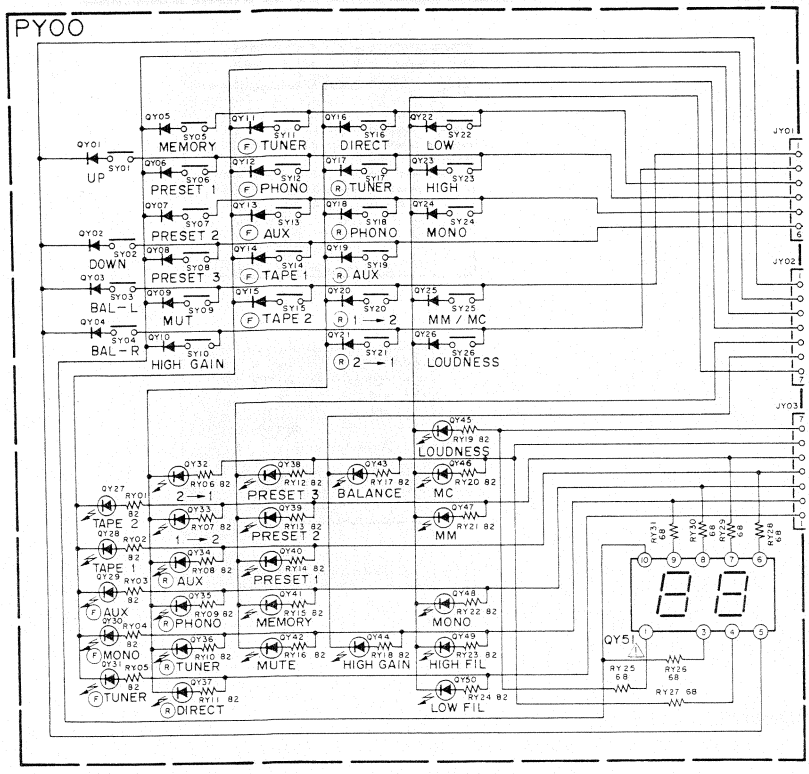


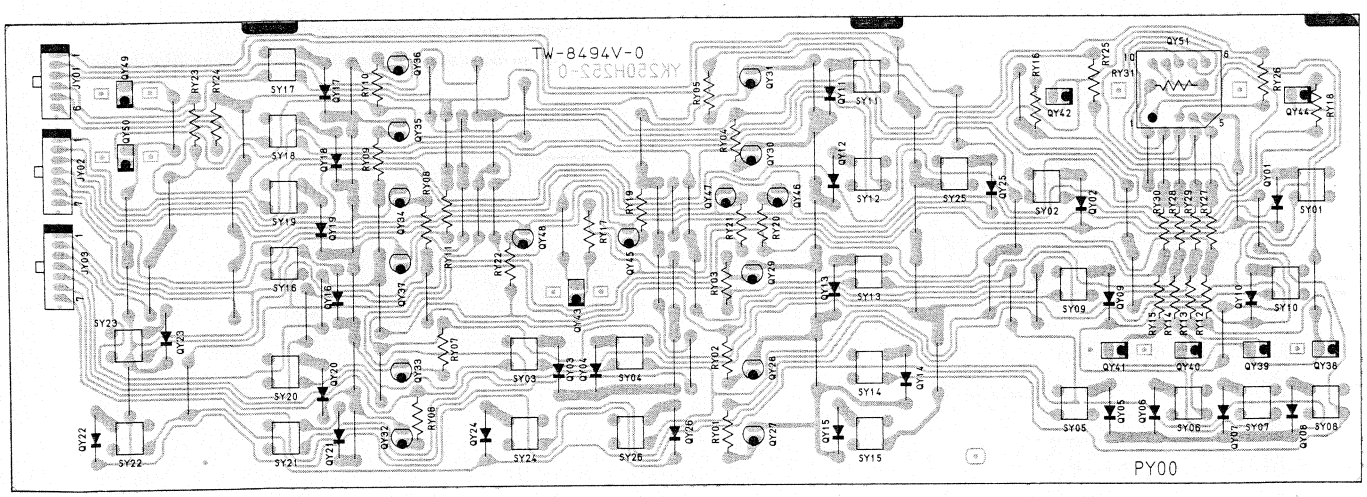
17.4 LOGIC CONTROL CIRCUIT Assembly (PL00) Schematic Diagram and Component Locations



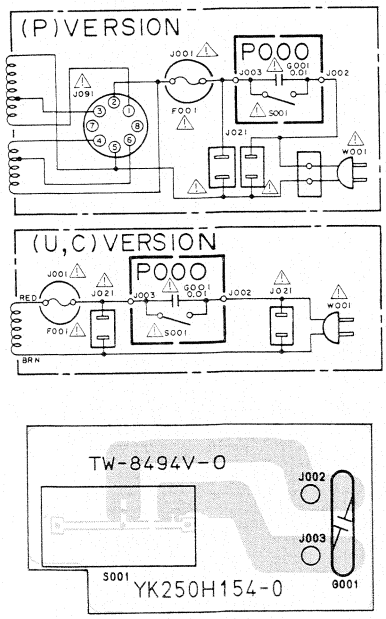


17.5 FRONT LED Swtich Assembly (PY00) Schematic Diagram and Component Locations

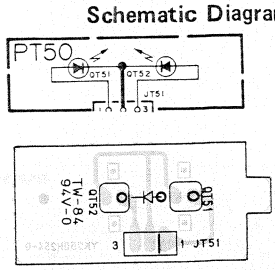




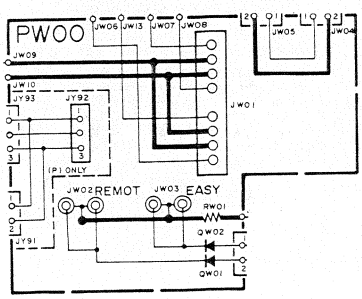
17.6 POWER Switch Assembly (PO00)
Schematic Diagram and Component Locations

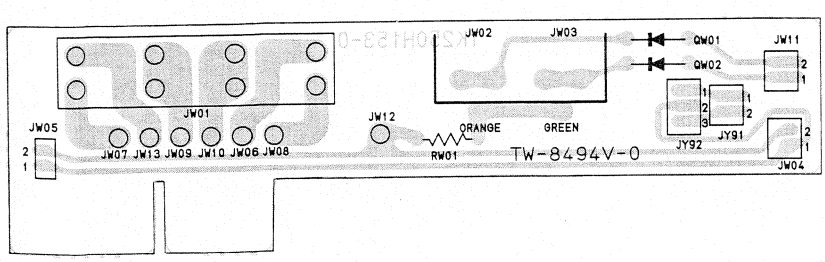


17.7 Speaker LED Assembly (PT50)
Schematic Diagram and Component Locations

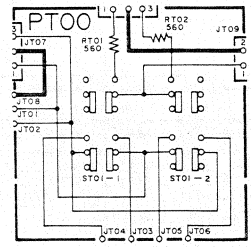


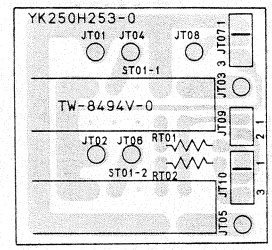
17.8 Speaker Output Assembly (PW00)
Schematic Diagram and Component Locations



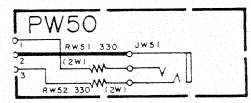


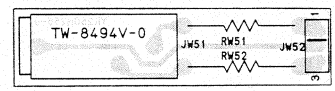
17.9 Speaker Switch Assembly (PT00)
Schematic Diagram and Component Locations





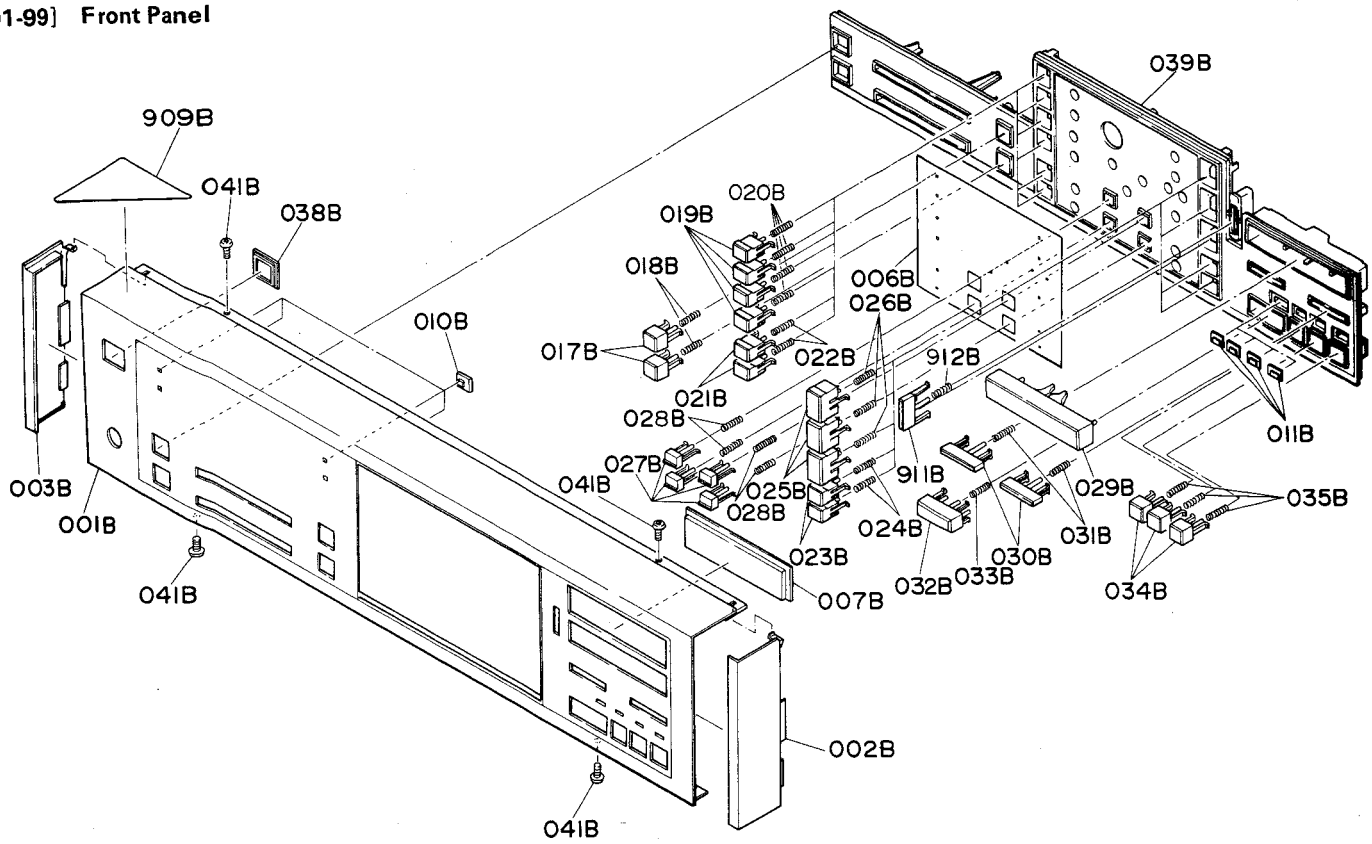
17.10 Head Phone Assembly (PW50)
Schematic Diagram and Component Locations





18. EXPLODED VIEW AND PARTS LIST

[P01-99] Front Panel

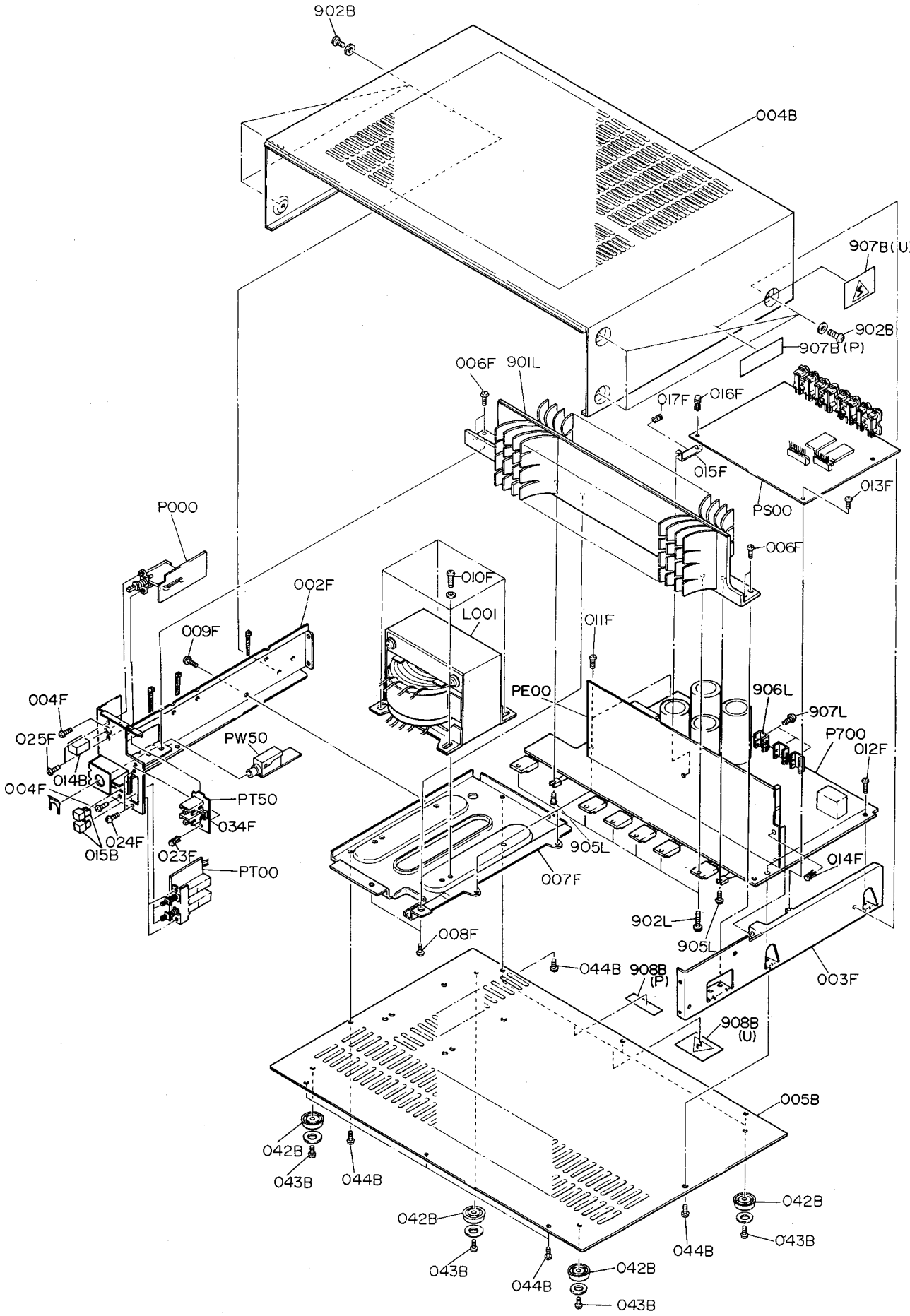


- (U):for U.S.A.
- (P):for PX

REF. DESIG.	Q'TY U	Q'TY P	PART NO.	DESCRIPTION
A	1	1	250H063400	Front Panel Assembly
001B	1	1	250H063010	Escutcheon, Front Panel
002B	1	1	229H067010	Cap (Right)
003B	1	1	229H067020	Cap (Left)
006B	1	1	250H127010	Control Board
007B	1	1	249H158010	Window, Clear Plate
010B	4	4	125H158010	Window, Speaker/Filter
011B	4	4	249H355010	Lens, Memory
017B	2	2	249H154010	Knob, Filter Switch
018B	2	2	249H115010	Spring, Filter Knob
019B	4	4	420H154210	Knob, Rec Selector
020B	4	4	249H115010	Spring, Rec Selector Knob
021B	2	2	420H154210	Knob, Tape Copy
022B	2	2	249H115010	Spring, Tape Copy Knob
023B	2	2	420H154210	Knob, Tape Monitor
024B	2	2	249H115010	Spring, Tape Monitor Knob
025B	3	3	416H154220	Knob, Input Selector
026B	3	3	249H115010	Spring, Input Selector Knob
027B	4	4	141T154010	Knob, Mono/Loudness/Balance
028B	4	4	249H115010	Spring, Mono/Loudness/Balance Knob

REF. DESIG.	Q'TY U	Q'TY P	PART NO.	DESCRIPTION
029B	1	1	249H154030	Knob, Volume
030B	2	2	431H154010	Knob, Muting/Volume Shift
031B	2	2	132T115010	Spring, Muting/Vol. Shift Knob
032B	1	1	249H154020	Knob, Memory
033B	1	1	249H115010	Spring, Memory Knob
034B	3	3	249H154010	Knob, Volume Preset
035B	3	3	249H115010	Spring, Volume Preset Knob
038B	1	1	415H259210	Bushing, Power Switch
039B	1	1	249H259010	Bushing, Front
911B	1	1	250H154010	Knob, MM/MC Selector
912B	1	1	132T115010	Spring, MM/MC Selector
041B	4	4	51280308B0	B.H. Tapped Screw B3 x 8
909B	1		105H861010	Label, ESC

[P02-99] Lid and General Parts

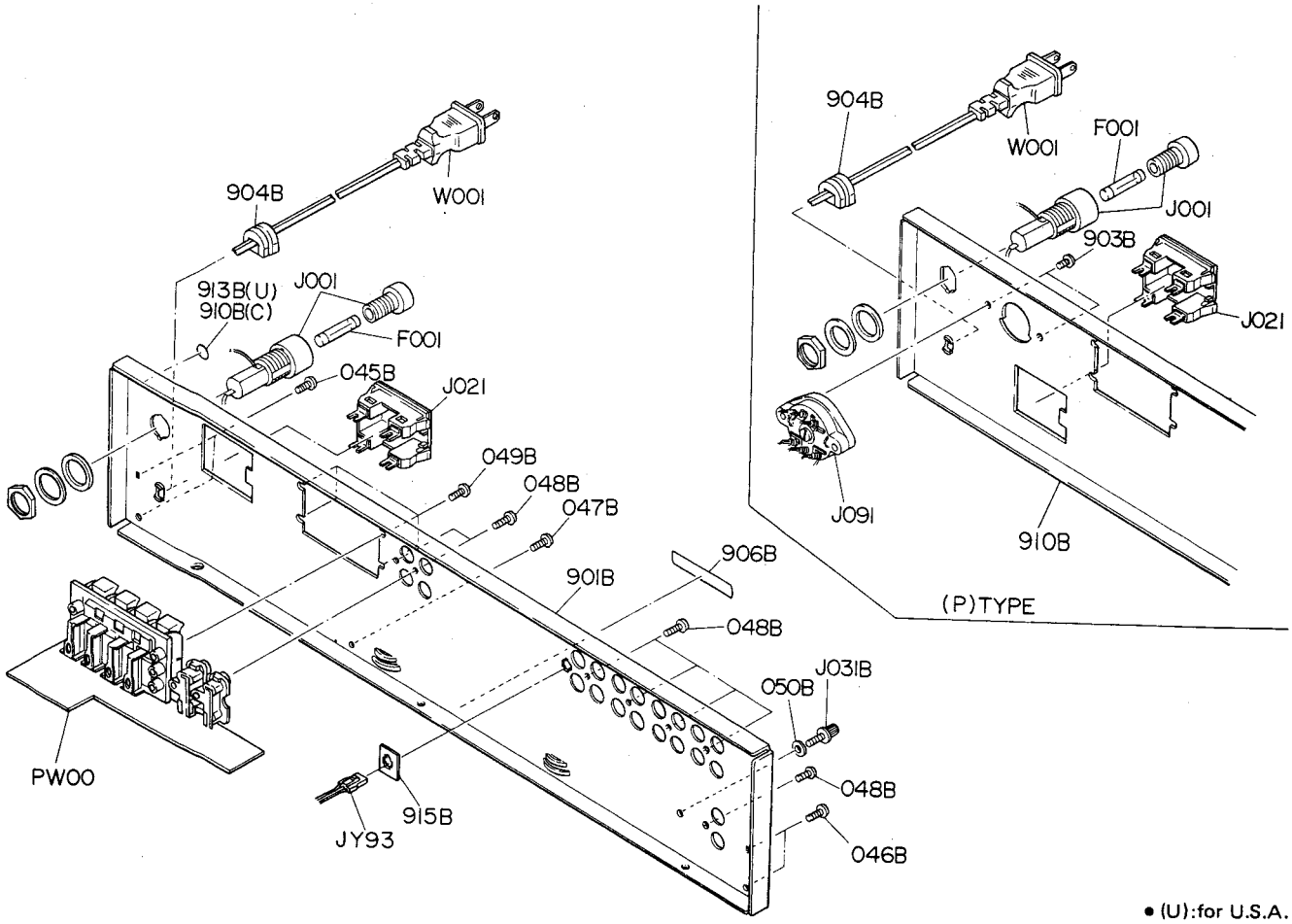


• (U):for U.S.A.
• (P):for PX

REF. DESIG.	Q'TY U	Q'TY P	PART NO.	DESCRIPTION
004B	1	1	229H257010	Lid, Top Cover
005B	1	1	249H257010	Lid, Bottom Cover
014B	1	1	415H154210	Knob, Power
015B	2	2	241H154030	Knob, Speaker
042B	4	4	416H057010	Leg
043B	4	4	51280408U0	B.H. Tapped Screw B4 x 8
044B	8	8	5128030880	B.H. Tapped Screw B3 x 8
902B	6		51260408Z0	B.T. Screw B4 x 8
902B		6	51260408U0	B.T. Screw B4 x 8
907B	1		117H861010	Label, Caution (Top)
907B		1	2911861140	Label, Caution (Top)
908B	1		117H861010	Label, Caution (Bottom)
908B		1	2911861110	Label, Caution (Bottom)

REF. DESIG.	Q'TY U	Q'TY P	PART NO.	DESCRIPTION
002F	1	1	249H126010	Stay, Left
003F	1	1	249H126020	Stay, Right
004F	2	2	5128030880	B.H. Tapped Screw B3 x 8
006F	4	4	5128030880	B.H. Tapped Screw B3 x 8
007F	1	1	249H004010	Table, Transformer
008F	2	2	5128030880	B.H. Tapped Screw B3 x 8
009F	1	1	5128030880	B.H. Tapped Screw B3 x 8
010F	4	4	51260408U0	B.T. Screw B4 x 8
011F	2	2	5128030880	B.H. Tapped Screw B3 x 8
012F	2	2	5128030880	B.H. Tapped Screw B3 x 8
013F	2	2	5128030880	B.H. Tapped Screw B3 x 8
014F	1	1	2276005050	Clamper
015F	1	1	249H160020	Bracket
016F	1	1	2276005050	Clamper
017F	1	1	2276005050	Clamper
024F	2	2	51100306A9	B.H.M. Screw B3 x 6
025F	2	2	51100306A9	B.H.M. Screw B3 x 6
034F	2	2	249H051020	Guide L.E.D. Speaker
901L	1	1	250H267010	Heat Sink
902L	6	6	51780312B0	B.T. Screw Transistor B3 x 12
905L	2	2	5128030880	B.H. Tapped Screw B3 x 8
906L	3	3	250H267020	Heat Sink
907L	3	3	5128030880	B.H. Tapped Screw B3 x 8
L001	1		TS19620010	Power Transformer
L001		1	TS19620020	Power Transformer

[P03-99] Rear Panel

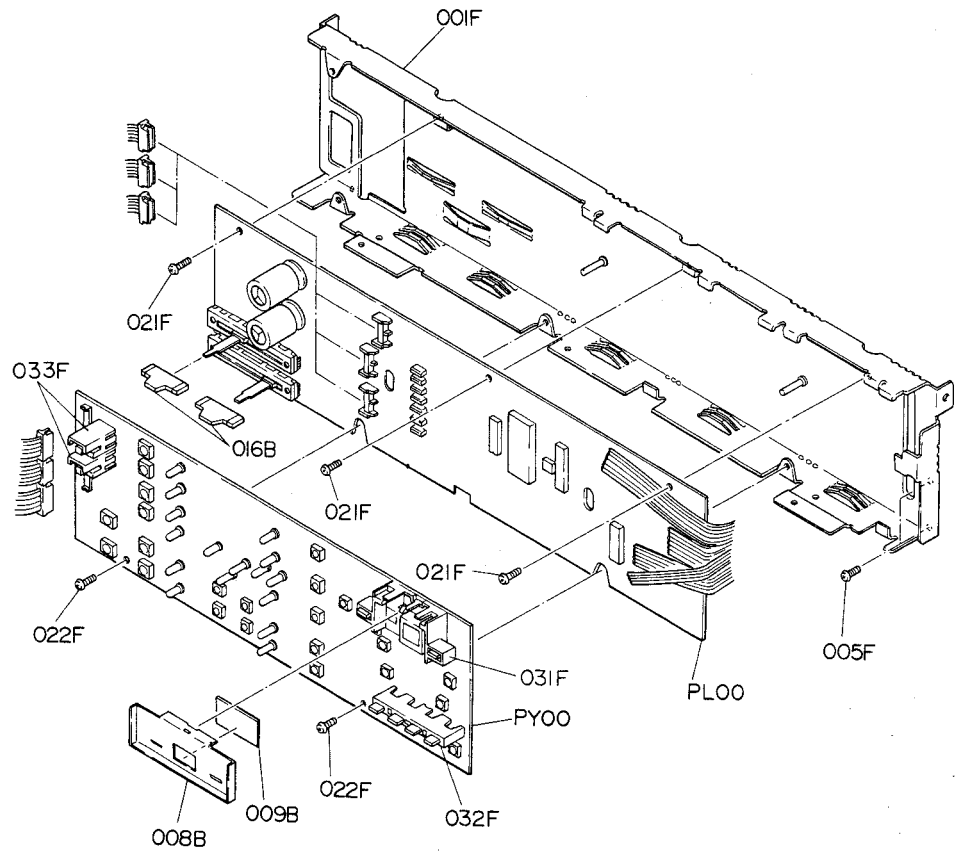


- (U):for U.S.A.
- (P):for PX

REF. DESIG.	Q'TY U	Q'TY P	PART NO.	DESCRIPTION
045B	2	2	5128030880	B.H. Tapped Screw B3 x 8
046B	2	2	5128030880	B.H. Tapped Screw B3 x 8
047B	1	1	5128030880	B.H. Tapped Screw B3 x 8
048B	7	7	5128030880	B.H. Tapped Screw B3 x 8
049B	4	4	5128030880	B.H. Tapped Screw B3 x 8
901B	1		250H160220	Bracket, Rear Panel
901B		1	250H160230	Bracket, Rear Panel
903B		2	5128030880	B.H. Tapped Screw B3 x 8
904B	1	1	1455259090	Bushing, AC Cord
906B	1	1	2112265010	Indicator, Serial No.
910B	1		2457861040	Label, CSA
913B	1		9511101070	Lavel. UL.
915B		1	228H118030	Spacer

REF. DESIG.	Q'TY U	Q'TY P	PART NO.	DESCRIPTION
⚠F001	1		FS10500500	Fuse, 5A
⚠F001		1	FS10400800	Fuse, T4A
⚠ J001	1		YJ08000300	Jack, Fuse Holder
⚠ J001		1	YJ08000290	Jack, Fuse Holder
⚠ J021	1	1	YJ04001010	Jack, AC Outlet 2P
J031	1	1	YJ03010250	Terminal, Ground
⚠ J091		1	BY05080040	Volt, Selector
JY93		1	YB00070070	Connective Cord
W001	1	1	YC01800260	AC Power Cord

[P04-99] Front Chassis

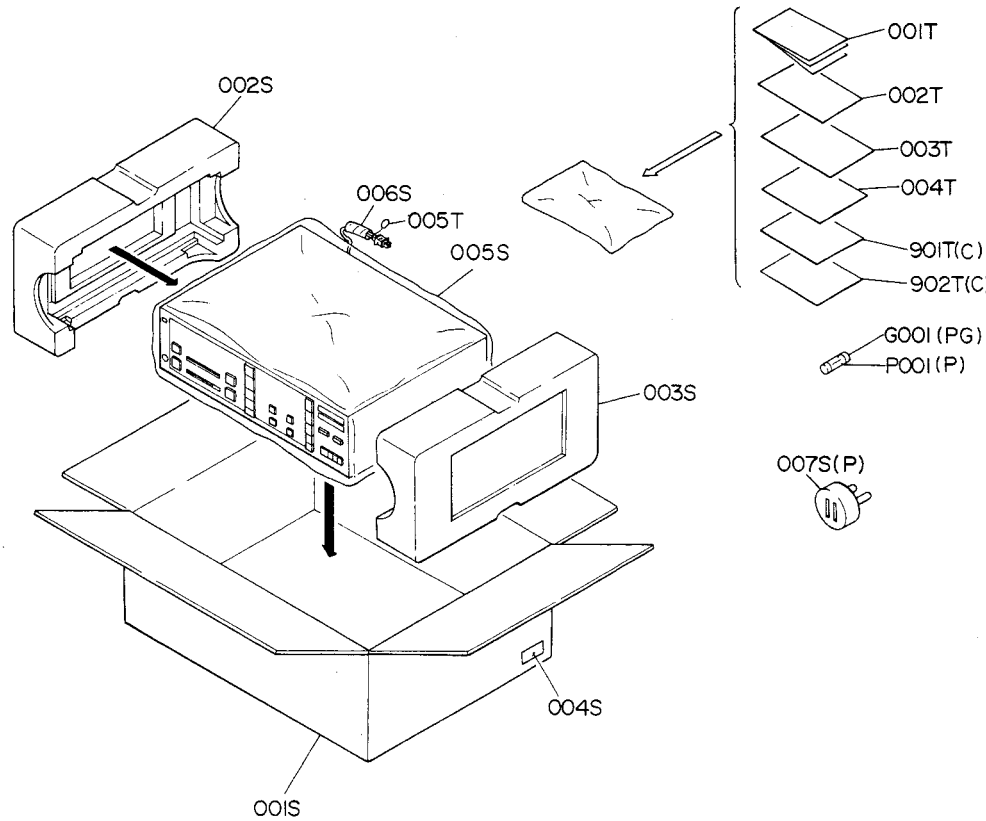


- (U):for U.S.A.
- (P):for PX

REF. DESIG.	Q'TY U	Q'TY P	PART NO.	DESCRIPTION
008B	1	1	249H302010	Dial Plate, Volume Display
009B	1	1	013H158000	Window, Volume Display
016B	1	1	141T154050	Knob, Tone

REF. DESIG.	Q'TY U	Q'TY P	PART NO.	DESCRIPTION
001F	1	1	249H105010	Chassis, Front
005F	2	2	5128030880	B.H. Tapped Screw B3 x 8
021F	3	3	5128030880	B.H. Tapped Screw B3 x 8
022F	2	2	5128030880	B.H. Tapped Screw B3 x 8
031F	1	1	249H104010	Retainer, Volume Display
032F	1	1	249H051010	Guide, Led Menory
033F	2	2	249H051020	Guide, Led Filters

[H01-99] Packing Materials



REF. DESIG.	QTY U	QTY P	PART NO.	DESCRIPTION
001S	1		250H801020	Packing Case
001S		1	250H801030	Packing Case
002S	1	1	229H809010	Cushion, Left
003S	1	1	229H809020	Cushion, Right
004S	2		9526019020	Serial No. Card
004S		3	9526019050	Serial No. Card
005S	1	1	9090808030	Polyethy Sheet
006S	1	1	2918107370	Sheet
007S		1	YJ04000240	Jack
001T	1		250H851210	Instructions
001T		1	250H851310	Instructions Spec.
002T	1		250H851220	Instructions
002T		1	250H851320	Instructions Spec.
003T	1		103H854010	Guarantee Card
003T		1	416H854010	Guarantee Card
004T	1		2225813010	Envelope
004T		1	3435851210	Instructions
005T	1		9560000100	Hang Tag

REF. DESIG.	QTY U	QTY P	PART NO.	DESCRIPTION
902T	1		9650000050	S. Station Card
P001		1	FS10200800	Fuse 220V
G001		1	FS10400800	Fuse 120V (PG)

19. ELECTRICAL PARTS LIST

• (U):for U.S.A.
• (P):for PX

REF. DESIG.	Q'TY U	Q'TY P	PART NO.	DESCRIPTION		
				PE00-TONE CONTROL CIRCUIT BOARD		
PE00	1	1	YK250H1510	P.W. Board, Tone Control		
			ZZ250H1510	P.W. Board Assembly		
				PE00-CAPACITORS		
C701	1	1	DF15331550	Film	330pF ±5%	
C702	1	1	DF15331550	Film	330pF ±5%	
C703	1	1	EA33505030	Elect	3.3μF	50V
C704	1	1	EA33505030	Elect	3.3μF	50V
C705	1	1	DK16471300	Ceramic	470pF	
C706	1	1	DK16471300	Ceramic	470pF	
C707	1	1	EA47405030	Elect	0.47μF	50V
C708	1	1	EA47405030	Elect	0.47μF	50V
C709	1	1	DD11100370	Ceramic	10pF	
C710	1	1	DD11100370	Ceramic	10pF	
C711	1	1	EA47602530	Elect	47μF	25V
C712	1	1	EA47602530	Elect	47μF	25V
C713	1	1	EA47606330	Elect	47μF	63V
C714	1	1	EA47606330	Elect	47μF	63V
C715	1	1	EQ47405030	Elect	0.47μF	50V
C716	1	1	EQ47405030	Elect	0.47μF	50V
CE01	1	1	EA47505030	Elect	4.7μF	50V
CE02	1	1	EA47505030	Elect	4.7μF	50V
CE03	1	1	EA22505030	Elect	2.2μF	50V
CE04	1	1	EA22505030	Elect	2.2μF	50V
CE05	1	1	EA10701030	Elect	100μF	10V
CE06	1	1	EA10701030	Elect	100μF	10V
CE07	1	1	EA22505030	Elect	2.2μF	50V
CE08	1	1	EA22505030	Elect	2.2μF	50V
CE09	1	1	EA47505030	Elect	4.7μF	50V
CE10	1	1	EA47505030	Elect	4.7μF	50V
CE11	1	1	DD15470370	Ceramic	47pF ±5%	
CE12	1	1	DD15470370	Ceramic	47pF ±5%	
CE13	1	1	DF15683310	Film	0.068μF ±5%	
CE14	1	1	DF15683310	Film	0.068μF ±5%	
CE15	1	1	DK16221300	Ceramic	220pF ±10%	
CE16	1	1	DK16221300	Ceramic	220pF ±10%	
CE17	1	1	DF15243310	Film	0.024μF ±5%	
CE18	1	1	DF15243310	Film	0.024μF ±5%	
CE19	1	1	DF15243310	Film	0.024μF ±5%	
CE20	1	1	DF15243310	Film	0.025μF ±5%	
CE21	1	1	EA22505030	Elect	2.2μF	50V
CE22	1	1	EA22505030	Elect	2.2μF	50V
CE23	1	1	DF15682310	Film	6800pF ±5%	
CE24	1	1	DF15682310	Film	6800pF ±5%	
CE25	1	1	EA47505030	Elect	4.7μF	50V
CE26	1	1	EA47505030	Elect	4.7μF	50V
CE27	1	1	EA47505030	Elect	4.7μF	50V
CE28	1	1	EA47505030	Elect	4.7μF	50V
CE29	1	1	DF15203310	Film	0.02μF ±5%	
CE30	1	1	DF15203310	Film	0.02μF ±5%	
CE31	1	1	EA47601630	Elect	47μF	16V
CE32	1	1	EA47601630	Elect	47μF	16V
				PE00-RESISTORS (All Resistors are ±5% & ¼W)		
R701	1	1	GD05222140	2.2kΩ		
R702	1	1	GD05222140	2.2kΩ		
R703	1	1	GD05683140	68kΩ		
R704	1	1	GD05683140	68kΩ		
R705	1	1	GD05104140	100kΩ		
R706	1	1	GD05104140	100kΩ		
R707	1	1	GD05471140	470Ω		
R708	1	1	GD05471140	470Ω		
R709	1	1	GD05392140	3.9kΩ		
R710	1	1	GD05392140	3.9kΩ		

REF. DESIG.	Q'TY U	Q'TY P	PART NO.	DESCRIPTION		
R711	1	1	GD05683140	68kΩ		
R712	1	1	GD05683140	68kΩ		
R713	1	1	GD05151140	150Ω		
R714	1	1	GD05151140	150Ω		
R715	1	1	RA04710040	Triming	470Ω	
R716	1	1	RA04710040	Triming	470Ω	
R717	1	1	GD05821140	820Ω		
R718	1	1	GD05821140	820Ω		
R719	1	1	GD05474140	470kΩ		
R720	1	1	GD05474140	470kΩ		
R721	1	1	GD05474140	470kΩ		
R722	1	1	GD05474140	470kΩ		
R723	1	1	GG05822140	8.2kΩ		
R724	1	1	GG05822140	8.2kΩ		
⚠ R725	1	1	RF05101120	Fusible	100Ω	½W
⚠ R726	1	1	RF05101120	Fusible	100Ω	½W
R727	1	1	GG05100140	10Ω		
RE01	1	1	GD05103140	10kΩ		
RE02	1	1	GD05103140	10kΩ		
RE03	1	1	GD05103140	10kΩ		
RE04	1	1	GD05103140	10kΩ		
RE05	1	1	GD05101140	100Ω		
RE06	1	1	GD05101140	100Ω		
RE07	1	1	GD05104140	100kΩ		
RE08	1	1	GD05104140	100kΩ		
RE09	1	1	GD05332140	3.3kΩ		
RE10	1	1	GD05332140	3.3kΩ		
RE11	1	1	GD05332140	3.3kΩ		
RE12	1	1	GD05332140	3.3kΩ		
RE13	1	1	GD05273140	27kΩ		
RE14	1	1	GD05273140	27kΩ		
RE15	1	1	GD05563140	56kΩ		
RE16	1	1	GD05563140	56kΩ		
RE17	1	1	GD05222140	2.2kΩ		
RE18	1	1	GD05222140	2.2kΩ		
RE19	1	1	GD05821140	820Ω		
RE20	1	1	GD05821140	820Ω		
RE21	1	1	GD05472140	4.7kΩ		
RE22	1	1	GD05472140	4.7kΩ		
RE23	1	1	GD05472140	4.7kΩ		
RE24	1	1	GD05472140	4.7kΩ		
RE25	1	1	GD05472140	4.7kΩ		
RE26	1	1	GD05472140	4.7kΩ		
RE27	1	1	GD05472140	4.7kΩ		
RE28	1	1	GD05472140	4.7kΩ		
RE29	1	1	GD05474140	470kΩ		
RE30	1	1	GD05474140	470kΩ		
RE31	1	1	GD05101140	100Ω		
RE32	1	1	GD05101140	100Ω		
RE33	1	1	GD05821140	820Ω		
RE34	1	1	GD05821140	820Ω		
RE35	1	1	GD05821140	820Ω		
RE36	1	1	GD05821140	820Ω		
RE37	1	1	GD05104140	100kΩ		
RE38	1	1	GD05104140	100kΩ		
RE39	1	1	GD05822140	8.2kΩ		
RE40	1	1	GD05822140	8.2kΩ		
RE41	1	1	GG05331120	330Ω		
RE42	1	1	GG05331120	330Ω		

REF. DESIG.	Q'TY U	Q'TY P	PART NO.	DESCRIPTION
				PE00-SEMICONDUCTORS
⚠Q701	1	1	HC10130030	IC STK3082IIA
Q702	1	1	HT327852C0	Transistor 2SC2785 (HF or FF)
Q703	1	1	HT327852C0	Transistor 2SC2785 (HF or EF)
Q704	1	1	HD30014010	Zener HZ16L
Q705	1	1	HD30014010	Zener HZ16L
Q706	1	1	HC10007090	IC NJM4560D
QE01	1	1	HC10021090	IC NJM4560D-D
QE02	1	1	HC10021090	IC NJM4560D-D
QE03	1	1	HC10003090	IC NJM4558D
QE04	1	1	HC406600B0	IC IC-4066
QE05	1	1	HC406600B0	IC IC-4066
QE06	1	1	HC406600B0	IC IC-4066
QE07	1	1	HD30045010	Zener HZ9L-1C
QE08	1	1	HD30045010	Zener HZ9L-1C
				PE00-MISCELLANEOUS
JS01	1	1	YJ06002440	Jack (4P)
JS02	1	1	YJ06002440	Jack (4P)
JS03	1	1	YJ06002440	Jack (4P)
JS04	1	1	YJ06002450	Jack (6P)
JS05	1	1	YJ07000860	Jack (4P)
JS06	1	1	YJ06002430	Jack (3P)
J701	1	1	YJ06001260	Jack (7P)
J702	1	1	YJ06001430	Jack (9P)
				PS00-FUNCTION/VOLUME CIRCUIT BOARD
PS00	1	1	YK250H1520	P.W. Board, Function/Volume
	1	1	ZZ250H1520	P.W. Board Assembly
				PS00-CAPACITORS
CG01	1	1	EA22602530	Elect 22μF 25V
CG02	1	1	EA22602530	Elect 22μF 25V
CG03	1	1	EA22602530	Elect 22μF 25V
CG04	1	1	EA22602530	Elect 22μF 25V
CG05	1	1	DK16151300	Ceramic 150pF ±10%
CG06	1	1	DK16151300	Ceramic 150pF ±10%
CG07	1	1	EA22602530	Elect 22μF 25V
CG08	1	1	EA22602530	Elect 22μF 25V
CG09	1	1	EA22602530	Elect 22μF 25V
CG10	1	1	EA22602530	Elect 22μF 25V
CG11	1	1	EA22602530	Elect 22μF 25V
CG12	1	1	EA22602530	Elect 22μF 25V
CG13	1	1	EA47601030	Elect 47μF 10V
CG14	1	1	EA47601030	Elect 47μF 10V
CS01	1	1	EA22602530	Elect 22μF 25V
CS02	1	1	EA22602530	Elect 22μF 25V
CS03	1	1	EA22602530	Elect 22μF 25V
CS04	1	1	EA22602530	Elect 22μF 25V
CS05	1	1	EA22602530	Elect 22μF 25V
CS06	1	1	EA22602530	Elect 22μF 25V
CS07	1	1	DK16102300	Ceramic 1000pF ±10%
CS08	1	1	DK16102300	Ceramic 1000pF ±10%
CS09	1	1	EA22602530	Elect 22μF 25V
CS10	1	1	EA22602530	Elect 22μF 25V
CS11	1	1	DK16102300	Ceramic 1000pF ±10%
CS12	1	1	DK16102300	Ceramic 1000pF ±10%
CS13	1	1	EA10505030	Elect 1μF 50V
CS14	1	1	EA10505030	Elect 1μF 50V
CS15	1	1	DK17103300	Ceramic 0.01μF ±20%
CS17	1	1	DK16471300	Ceramic 470pF ±10%
CS18	1	1	DK16471300	Ceramic 470pF ±10%
CS81	1	1	EA47601030	Elect 47μF 10V
CS82	1	1	EA47601030	Elect 47μF 10V

REF. DESIG.	Q'TY U	Q'TY P	PART NO.	DESCRIPTION
				PS00-RESISTORS (All Resistors are ±5% & ¼W)
RG01	1	1	GD05222140	2.2kΩ
RG02	1	1	GD05222140	2.2kΩ
RG03	1	1	GD05222140	2.2kΩ
RG04	1	1	GD05222140	2.2kΩ
RG05	1	1	GD05104140	100kΩ
RG06	1	1	GD05104140	100kΩ
RG07	1	1	GD05102140	1kΩ
RG08	1	1	GD05102140	1kΩ
RG09	1	1	GD05272140	2.7kΩ
RG10	1	1	GD05272140	2.7kΩ
RG11	1	1	GD05222140	2.2kΩ
RG12	1	1	GD05222140	2.2kΩ
RG13	1	1	GD05104140	100kΩ
RG14	1	1	GD05104140	100kΩ
RG15	1	1	GD05471140	470Ω
RG16	1	1	GD05471140	470Ω
RG17	1	1	GD05222140	2.2kΩ
RG18	1	1	GD05222140	2.2kΩ
RG19	1	1	GD05104140	100kΩ
RG20	1	1	GD05104140	100kΩ
RG21	1	1	GD05103140	10kΩ
RG22	1	1	GD05103140	10kΩ
RG23	1	1	GD05102140	1kΩ
RG24	1	1	GD05102140	1kΩ
RS01	1	1	GD05222140	2.2kΩ
RS02	1	1	GD05222140	2.2kΩ
RS03	1	1	GD05222140	2.2kΩ
RS04	1	1	GD05222140	2.2kΩ
RS05	1	1	GD05222140	2.2kΩ
RS06	1	1	GD05222140	2.2kΩ
RS07	1	1	GD05222140	2.2kΩ
RS08	1	1	GD05222140	2.2kΩ
RS09	1	1	GD05104140	100kΩ
RS10	1	1	GD05104140	100kΩ
RS11	1	1	GD05104140	100kΩ
RS12	1	1	GD05104140	100kΩ
RS13	1	1	GD05104140	100kΩ
RS14	1	1	GD05104140	100kΩ
RS15	1	1	GD05104140	100kΩ
RS16	1	1	GD05104140	100kΩ
RS17	1	1	GD05222140	2.2kΩ
RS18	1	1	GD05222140	2.2kΩ
RS19	1	1	GD05104140	100kΩ
RS20	1	1	GD05104140	100kΩ
RS21	1	1	GD05103140	10kΩ
RS22	1	1	GD05103140	10kΩ
RS23	1	1	GD05683140	68kΩ
RS24	1	1	GD05683140	68kΩ
RS25	1	1	GD05333140	33kΩ
RS26	1	1	GD05333140	33kΩ
RS27	1	1	GD05683140	68kΩ
RS28	1	1	GD05683140	68kΩ
RS29	1	1	GD05333140	33kΩ
RS30	1	1	GD05333140	33kΩ

REF. DESIG.	Q'TY U	Q'TY P	PART NO.	DESCRIPTION
RS31	1	1	GD05222140	2.2kΩ
RS32	1	1	GD05222140	2.2kΩ
RS33	1	1	GD05104140	100kΩ
RS34	1	1	GD05104140	100kΩ
RS35	1	1	GD05392140	3.9kΩ
RS36	1	1	GD05392140	3.9kΩ
RS37	1	1	GD05103140	10kΩ
RS38	1	1	GD05103140	10kΩ
RS39	1	1	GD05271140	270Ω
RS40	1	1	GD05271140	270Ω
RS41	1	1	GD05222140	2.2kΩ
RS42	1	1	GD05222140	2.2kΩ
RS43	1	1	GD05104140	100kΩ
RS44	1	1	GD05104140	100kΩ
RS45	1	1	GD05271140	270Ω
RS46	1	1	GD05271140	270Ω
RS47	1	1	GD05104140	100kΩ
RS48	1	1	GD05104140	100kΩ
RS81	1	1	GD05104140	100kΩ
RS83	1	1	GD05473140	47kΩ
RS84	1	1	GD05473140	47kΩ
RS85	1	1	GD05473140	47kΩ
RS86	1	1	GD05154140	150kΩ
RS87	1	1	GD05473140	47kΩ
RS88	1	1	GD05473140	47kΩ
RS89	1	1	GD05473140	47kΩ
RS90	1	1	GD05104140	100kΩ
RS91	1	1	GD05104140	100kΩ
RS92	1	1	GD05104140	100kΩ
RS93	1	1	GD05104140	100kΩ
RS94	1	1	GG05391120	390Ω ½W
RS95	1	1	GG05391120	390Ω ½W
QG01	1	1	HC10092050	IC TC9154P
QG02	1	1	HC10021090	IC NTM4560D-D
QG03	1	1	HC406600B0	IC IC-4066
QG04	1	1	HC10021090	IC NJM4560D-D
				PS00-SEMICONDUCTORS
QS01	1	1	HC10091050	IC TC9152P
QS02	1	1	HC10090050	IC TC9151P
QS03	1	1	HC10021090	IC NJM4560DD
QS04	1	1	HC10021090	IC NJM4560DD
QS05	1	1	HC10021090	IC NJM4560DD
QS06	1	1	HC406600B0	IC IC-4066
QS81	1	1	HC10048050	IC TC5066BP
QS82	1	1	HD30036010	Zener HZ6L
QS83	1	1	HD30036010	Zener HZ6L
QS84	1	1	HD20001000	Diode 1S1555
QS85	1	1	HD20001000	Diode 1S1555
				PS00-MISCELLANEOUS
JG01	1	1	YJ07000870	Jack HBRB4S-1J Output
JG02	1	1	YJ07000870	Jack HBRB4S-1J VR-Control
JS01	1		YT02040480	Terminal, RCA Pin Jack
JS01		1	YT02040470	Terminal, RCA Pin Jack
JS02	1		YT02040480	Terminal, RCA Pin Jack
JS02		1	YT02040470	Terminal, RCA Pin Jack
JS03	1		YT02040480	Terminal, RCA Pin Jack
JS03		1	YT02040470	Terminal, RCA Pin Jack
JS04	1		YT02040480	Terminal, RCA Pin Jack
JS04		1	YT02040470	Terminal, RCA Pin Jack
JS05	1	1	YJ06002460	Jack Function Control
JS06	1	1	YJ06002270	Jack REC Out Control

REF. DESIG.	Q'TY U	Q'TY P	PART NO.	DESCRIPTION
JS07	1	1	YJ07000860	Jack, Phono Input
JS08	1	1	YJ07000850	Jack, Remove Control
JS09	1	1	YJ07000860	Jack, PRI Output
JS10	1	1	YJ07000860	Jack, Main Input
JS11	1		YQ01000050	Plug, Shote
JS11		1	YQ01000040	Plug, Shote
JS12	1		YQ01000050	Plug, Shote
JS12		1	YQ01000040	Plug, Shote
JS51	1	1	YJ07000870	Jack, HBRB4S-1J Jumper
JS52	1	1	YJ07000870	Jack, HBRB4S-1J Jumper
JS81	1	1	YJ07000860	Jack, HBRB3S-1J Power
				PW00-SPEAKER OUTPUT CIRCUIT BOARD
PW00	1	1	YK250H1530	P.W. Board, Speaker Output
	1		ZZ250H1530	P.W. Board Assembly
		1	ZZ250H7530	P.W. Board Assembly
				PW00-RESISTORS (All Resistors are ±5% & ¼W)
RW01	1	1	GD05100140	10Ω
				PW00-SEMICONDUCTORS
QW01	1	1	HD20001000	Diode 1S1555
QW02	1	1	HD20001000	Diode 1S1555
				PW00-MISCELLANEOUS
JW01	1	1	YT03080010	Terminal (8P) Speaker Out
JW02	1	1	YT02020390	Terminal (2P) Remote Control
JW03	1	1	YT02020400	Terminal (2P) Easy Control
JW04	1	1	YJ07000850	Jack (2P) 5V in
JW05	1	1	YJ07000850	Jack (2P) 5V to L.E.D.
JW11	1	1	YJ07000850	Jack (2P) Easy/Remote
JY91	1	1	YJ07000850	Jack (2P)
JY92	1	1	YJ07000860	Jack (3P)
				PO00-POWER SWITCH CIRCUIT BOARD
P000	1	1	YK250H1540	P.W. Board, Power Switch
	1		ZZ250H1540	P.W. Board Assembly
		1	ZZ250H7540	P.W. Board Assembly
				PO00-CAPACITORS
⚠G001	1	1	DK18103840	Ceramic 0.01μF
				PO00-MISCELLANEOUS
⚠S001	1		SP01010240	Push Switch, Power
⚠S001		1	SP01010390	Push Switch, Power
				PL00-LOGIC CONTROL CIRCUIT BOARD
PL00	1	1	YK250H2510	P.W. Board, Logic Control
	1		ZZ250H2510	P.W. Board Assembly
		1	ZZ250H7510	P.W. Board Assembly
				PL00-CAPACITORS
CL01	1	1	DK16221300	Ceramic 220pF
CL02	1	1	DK16221300	Ceramic 220pF
CL03	1	1	DA17103010	Ceramic 0.01μF
CL04	1	1	DA17103010	Ceramic 0.01μF
CL05	1	1	DA17103010	Ceramic 0.01μF
CR01	1	1	EA22801630	Elect 2200μF 16V
CR02	1	1	EA22801630	Elect 2200μF 16V
CR04	1	1	EA10505030	Elect 1μF 50V

REF. DESIG.	Q'TY U	Q'TY P	PART NO.	DESCRIPTION
				PL00-RESISTORS
				(All Resistors are ±5% & ¼W)
RE51	1	1	RS03030010	Variable 30kΩ Treble
RE52	1	1	RS03030010	Variable 30kΩ Bass
RL01	1	1	GD05470140	47Ω
RL02	1	1	GD05470140	47Ω
RL03	1	1	GD05470140	47Ω
RL04	1	1	GD05470140	47Ω
RL05	1	1	GD05470140	47Ω
RL06	1	1	GD05470140	47Ω
RL07	1	1	GD05470140	47Ω
RL08	1	1	GD05472140	4.7kΩ
RL09	1	1	GD05472140	4.7kΩ
RL10	1	1	GD05472140	4.7kΩ
RL11	1	1	GD05472140	4.7kΩ
RL12	1	1	GD05472140	4.7kΩ
RL13	1	1	GD05472140	4.7kΩ
RL14	1	1	GD05472140	4.7kΩ
RL15	1	1	GD05473140	47kΩ
RL16	1	1	GD05473140	47kΩ
RL17	1	1	GD05473140	47kΩ
RL18	1	1	GD05473140	47kΩ
RL19	1	1	GD05473140	47kΩ
RL20	1	1	GD05473140	47kΩ
RL21	1	1	GD05473140	47kΩ
RL22	1	1	GD05104140	100kΩ
RL23	1	1	GD05104140	100kΩ
RL24	1	1	GD05104140	100kΩ
RL25	1	1	GD05104140	100kΩ
RL26	1	1	GD05104140	100kΩ
RL27	1	1	GD05104140	100kΩ
RL28 ≀ RL39	12	12	GD05103140	10kΩ
RL40 ≀ RL50	11	11	GD05104140	100kΩ
RL51	1	1	GD05473140	47kΩ
RL52	1	1	GD05473140	47kΩ
RL53	1	1	GD05103140	10kΩ
RL54	1	1	GD05103140	10kΩ
RL55	1	1	GD05473140	47kΩ
RL56	1	1	GD05473140	47kΩ
RL57	1	1	GD05472140	4.7kΩ
RL58	1	1	GD05102140	1kΩ
RL59	1	1	GD05103140	10kΩ
RL60	1	1	GD05103140	10kΩ
RL61	1	1	GD05105140	1MΩ
RL63	1	1	GD05103140	10kΩ
RL64	1	1	GD05103140	10kΩ
RL65	1	1	GD05103140	10kΩ
RL66	1	1	GD05103140	10kΩ
RL67	1	1	GD05103140	10kΩ
RL68	1	1	GD05103140	10kΩ
RL69	1	1	GD05681140	680Ω
RL71	1	1	GD05273140	27kΩ
RL72	1	1	GD05473140	47kΩ
RL73	1	1	GD05473140	47kΩ

REF. DESIG.	Q'TY U	Q'TY P	PART NO.	DESCRIPTION
RR01	1	1	GD05103140	10kΩ
RR02	1	1	GD05104140	100kΩ
RR03	1	1	GD05473140	47kΩ
RR04	1	1	GD05473140	47kΩ
RR05	1	1	GD05104140	100kΩ
RR06	1	1	GD05563140	56kΩ
RR07	1	1	GD05104140	100kΩ
RR08	1	1	GD05563140	56kΩ
RR09	1	1	GD05102140	1kΩ
RR10	1	1	GD05152140	1.5kΩ
RR11	1	1	GD05102140	1kΩ
RR12	1	1	GD05223140	22kΩ
RR15	1	1	GD05223140	22kΩ
RR16	1	1	GD05223140	22kΩ
RR17	1	1	GD05223140	22kΩ
				PL00-SEMICONDUCTORS
QL01	1	1	HT206412C0	Transistor 2SB641
QL02	1	1	HT206412C0	Transistor 2SB641
QL03	1	1	HT206412C0	Transistor 2SB641
QL04	1	1	HT206412C0	Transistor 2SB641
QL05	1	1	HT206412C0	Transistor 2SB641
QL06	1	1	HT206412C0	Transistor 2SB641
QL07	1	1	HT206412C0	Transistor 2SB641
QL08	1	1	HC10094050	IC TD62104P
QL09	1	1	HC10133030	IC LL6502C
QL10	1	1	HC10048050	IC TC5066BP
QL11	1	1	HC10121030	IC LM6416E
QL12	1	1	HT406362B0	Transistor 2SD636
QL13	1	1	HT406362B0	Transistor 2SD636
QL14 ≀ QL25	12	12	HD20001000	Diode 1S1555
QL26	1	1	HD30045010	Zener HZ9L-1C
QR01	1	1	HT406362B0	Transistor 2SD636
QR02	1	1	HT406362B0	Transistor 2SD636
QR03	1	1	HT406363B0	Transistor 2SD636
QR04	1	1	HD20001000	Diode 1S1555
QR05	1	1	HD20001000	Diode 1S1555
QR06	1	1	HD20001000	Diode 1S1555
QR07	1	1	HD20001000	Diode 1S1555
QR08	1	1	HD20001000	Diode 1S1555
QR10	1	1	HT206412C0	Transistor 2SB641
QR11	1	1	HD30025060	Zener RD3.3E-B1
QY91		1	BA20001210	Digi Tra. DTC124F
QY92		1	BA20001210	Digi Tra. DTC124F
QY93		1	HD20001000	Diode 1S1555
QY94		1	HD20001000	Diode 1S1555
				PL00-MISCELLANEOUS
JL01	1	1	YP07001430	Plug (6P)
JL02	1	1	YP07001440	Plug (7P)
JL03	1	1	YP07001440	Plug (7P)
XL01	1	1	FC04003020	Seramic, Vibrator (400kHz)

REF. DESIG.	Q'TY U	Q'TY P	PART NO.	DESCRIPTION
				PY00-FRONT LED SWITCH CIRCUIT BOARD
PY00	1	1	YK250H2520	P.W. Board, Front Led Switch
	1	1	ZZ250H2520	P.W. Board Assembly
				PY00-RESISTORS (All Resistors are ±5% & ¼W)
RY01 ~ RY11	11	11	GD05820140	82Ω
RY12 ~ RY15	1	1	GD05680140	68Ω
RY16 ~ RY24	9	9	GD05820140	82Ω
RY25 ~ RY31			GD05680140	68Ω
				PY00-SEMICONDUCTOR
QY01 ~ QY26	26	26	HD20001000	Diode 1S1555
QY27 ~ QY31	5	5	HI10022320	L.E.D. GL-5NG10
QY32 ~ QY37	7	7	HI10023320	L.E.D. GL-5HD10
QY38	1	1	HI10053020	L.E.D. LN842RP
QY39	1	1	HI10053020	L.E.D. LN842RP
QY40	1	1	HI10053020	L.E.D. LN842RP
QY41	1	1	HI10053020	L.E.D. LN842RP
QY42	1	1	HI10027320	L.E.D. GL-9HD24
QY43	1	1	HI10023320	L.E.D. GL-5HD10
QY44	1	1	HI10027320	L.E.D. GL-9HD24
QY45	1	1	HI10023320	L.E.D. GL-5HD10
QY46	1	1	HI10023320	L.E.D. GL-5HD10
QY47	1	1	HI10023320	L.E.D. GL-5HD10
QY48	1	1	HI10023320	L.E.D. GL-5HD10
QY49	1	1	HI10028320	L.E.D. GL-9HD4
QY50	1	1	HI10028320	L.E.D. GL-9HD4
QY51	1	1	HQ10201050	Display TLG322
				PY00-MISCELLANEOUS
JY01	1	1	YP07001410	Plug (6P)
JY02	1	1	YP07001420	Plug (7P)
JY03	1	1	YP07001420	Plug (7P)
SY01 ~ SY26	26	26	SP01010570	Push Switch
				PT00-SPEAKER SWITCH CIRCUIT BOARD
PT00	1	1	YK250H2530	P.W. Board, Speaker Switch
	1	1	ZZ250H2530	P.W. Board Assembly

REF. DESIG.	Q'TY U	Q'TY P	PART NO.	DESCRIPTION
				PT00-RESISTORS (All Resistors are ±5% & ¼W)
RT01	1	1	GD05561140	560Ω
RT02	1	1	GD05561140	560Ω
				PT00-MISCELLANEOUS
ST01	1	1	SP04020380	Push Switch, Speaker
				PT50-SPEAKER L.E.D. CIRCUIT BOARD
PT50	1	1	YK250H2540	P.W. Board, Speaker L.E.D.
	1	1	ZZ250H2540	P.W. Board Assembly
				PT50-SEMICONDUCTORS
QT51	1	1	HI10028320	L.E.D. GL-9HD4
QT52	1	1	HI10028320	L.E.D. GL-9HD4
				PT50-MISCELLANEOUS
JT51	1	1	YJ07000990	Jack (3P)
				PW50-HEAD PHONE CIRCUIT BOARD
PW50	1	1	YK250H2550	P.W. Board, Head Phone
	1	1	ZZ250H2550	P.W. Board Assembly
				PW50-RESISTORS (All Resistors are ±5% & 2W)
RW51	1	1	GA05331020	330Ω
RW52	1	1	GA05331020	330Ω
				PW50-MISCELLANEOUS
JW51	1	1	YJ01001790	Jack, Head Phone
JW52	1	1	YJ07000860	Jack (3P)
				P700-MAIN AMP. CIRCUIT BOARD
P700	1	1	YG250H0010	P.W. Board, Main Amp
	1	1	ZZ250H0010	P.W. Board Assembly
				P700-CAPACITORS
C401	1	1	EA47505030	Elect 4.7μF 50V
C402	1	1	EA47505030	Elect 4.7μF 50V
C403	1	1	DD15820370	Ceramic 82pF 50V
C404	1	1	DD15820370	Ceramic 82pF 50V
C405	1	1	DK16681300	Ceramic 680pF 50V
C406	1	1	DK16681300	Ceramic 680pF 50V
C407	1	1	EA22800630	Elect 2200μF 6.3V
C408	1	1	EA22800630	Elect 2200μF 6.3V
C409	1	1	DF15473310	Film 0.047μF ±5%
C410	1	1	DF15473310	Film 0.047μF ±5%
C411	1	1	DF15332310	Film 3300pF ±5%
C412	1	1	DF15332310	Film 3300pF ±5%
C413	1	1	DF15103310	Film 0.01μF ±5%
C414	1	1	DF15103310	Film 0.01μF ±5%
C415	1	1	EA47505030	Elect 4.7μF 50V
C416	1	1	EA47505030	Elect 4.7μF 50V
C417	1	1	DF15472310	Film 4700pF ±5%
C418	1	1	DF15472310	Film 4700pF ±5%
C419	1	1	EA22702530	Elect 220μF 25V
C420	1	1	EA22702530	Elect 220μF 25V

REF. DESIG.	Q'TY U	Q'TY P	PART NO.	DESCRIPTION
C421	1	1	DK17103300	Ceramic 0.01μF 50V
C451	1	1	EA22505030	Elect 2.2μF 50V
C452	1	1	EA22505030	Elect 2.2μF 50V
C453	1	1	EA33610030	Elect 33μF 100V
C751	1	1	DK16221550	Ceramic 220pF
C752	1	1	DK16221550	Ceramic 220pF
C753	1	1	DK16221550	Ceramic 220pF
C754	1	1	DK16221550	Ceramic 220pF
C755	1	1	DF15104300	Film 0.1μF ±5%
C756	1	1	DF15104300	Film 0.1μF ±5%
C757	1	1	DF15104300	Film 0.1μF ±5%
C758	1	1	DF15104300	Film 0.1μF ±5%
C759	1	1	EA47410030	Elect 0.47μF 100V
C760	1	1	EA47410030	Elect 0.47μF 100V
C761	1	1	EA47410030	Elect 0.47μF 100V
C762	1	1	EA47410030	Elect 0.47μF 100V
C801	1	1	DK18103560	Ceramic 0.01μF
C802	1	1	DK18103560	Ceramic 0.01μF
⚠C803	1	1	DK18103560	Ceramic 0.01μF
⚠C804	1	1	DK18103560	Ceramic 0.01μF
⚠C805	1	1	DK18103560	Ceramic 0.01μF
⚠C806	1	1	DK18103560	Ceramic 0.01μF
⚠C807	1	1	EB15903510	Elect 15000μF 35V
⚠C808	1	1	EB15903510	Elect 15000μF 35V
⚠C809	1	1	EB15903510	Elect 15000μF 35V
⚠C810	1	1	EB15903510	Elect 15000μF 35V
C811	1	1	EA33703530	Elect 330μF 35V
C812	1	1	EA33703530	Elect 330μF 35V
C813	1	1	EA47602530	Elect 47μF 25V
C814	1	1	EA47602530	Elect 47μF 25V
C815	1	1	EA10702530	Elect 100μF 25V
C816	1	1	EA10702530	Elect 100μF 25V
C817	1	1	EA10801630	Elect 1000μF 16V
C818	1	1	EA47602530	Elect 47μF 25V
C819	1	1	EA10701630	Elect 100μF 16V
CU01	1	1	DK16561300	Ceramic 680pF
CU02	1	1	DK16561300	Ceramic 680pF
CU03	1	1	EA10601630	Elect 10μF 16V
⚠CU04	1	1	DF15103310	Film 0.01μF ±5%
CU05	1	1	DK16151300	Ceramic 150pF 50V
CU06	1	1	DK16151300	Ceramic 150pF 50V
CU07	1	1	DD15220370	Ceramic 22pF 50V
CN01	1	1	EA47405030	Elect 0.47μF 50V
CN02	1	1	EA47601030	Elect 47μF 10V
CN03	1	1	EA22601630	Elect 22μF 16V
CN04	1	1	EA10505030	Elect 1μF 50V
CN05	1	1	DF16152300	Film 1500pF ±10%
CN06	1	1	DF16152300	Film 1500pF ±10%
CN07	1	1	DF16152300	Film 1500pF ±10%
CN08	1	1	DF16152300	Film 1500pF ±10%
CN09	1	1	EA22605030	Elect 22μF 50V
CN10	1	1	EA10505030	Elect 1μF 50V
CN11	1	1	EA10505030	Elect 1μF 50V
CN12	1	1	EA10505030	Elect 1μF 50V
CN13	1	1	EA10505030	Elect 1μF 50V

REF. DESIG.	Q'TY U	Q'TY P	PART NO.	DESCRIPTION
				P700-RESISTORS (All Resistors are ±5% & ¼W)
R401	1	1	GD05154140	150kΩ
R402	1	1	GD05154140	150kΩ
R403	1	1	GD05101140	100Ω
R404	1	1	GD05101140	100Ω
R405	1	1	GD05683140	68kΩ
R406	1	1	GD05683140	68kΩ
R407	1	1	GD05220140	22Ω
R408	1	1	GD05220140	22Ω
R409	1	1	GD05391140	390Ω
R410	1	1	GD05391140	390Ω
R411	1	1	GD05472140	4.7kΩ
R412	1	1	GD05472140	4.7kΩ
R413	1	1	GD05472140	4.7kΩ
R414	1	1	GD05472140	4.7kΩ
R415	1	1	GD05472140	4.7kΩ
R416	1	1	GD05472140	4.7kΩ
R417	1	1	GD05120140	12Ω
R418	1	1	GD05120140	12Ω
R419	1	1	GD05121140	120Ω
R420	1	1	GD05121140	120Ω
R421	1	1	GD05683140	68kΩ
R422	1	1	GD05683140	68kΩ
R423	1	1	GD05562140	5.6kΩ
R424	1	1	GD05562140	5.6kΩ
R425	1	1	GD05561140	560Ω
R426	1	1	GD05561140	560Ω
R427	1	1	GD05104140	100kΩ
R428	1	1	GD05104140	100kΩ
R429	1	1	GG05271140	270Ω
R430	1	1	GG05271140	270Ω
R431	1	1	GD05121140	120Ω
R432	1	1	GD05121140	120Ω
R451	1	1	GD05103140	10kΩ
R452	1	1	GD05103140	10kΩ
R453	1	1	GD05103140	10kΩ
R454	1	1	GD05472140	4.7kΩ
R456	1	1	GD05103140	10kΩ
R457	1	1	GD05222140	2.2kΩ
R458	1	1	GD05222140	2.2kΩ
R459	1	1	GD05222140	2.2kΩ
R460	1	1	GD05222140	2.2kΩ
R461	1	1	GC05101140	100Ω
R462	1	1	GC05101140	100Ω
R463	1	1	RF05101120	Fusible 100Ω ½W
R464	1	1	GG05100120	10Ω ½W
⚠R751	1	1	GG05151120	150Ω ½W
⚠R752	1	1	GG05151120	150Ω ½W
⚠R753	1	1	GG05100140	10Ω
⚠R754	1	1	GG05100140	10Ω
⚠R755	1	1	GG05100140	10Ω
⚠R756	1	1	GG05100140	10Ω
⚠R757	1	1	BW10000060	0.22Ω 5W x 2
⚠R758	1	1	BW10000060	0.22Ω 5W x 2
R761	1	1	GA05047010	4.7Ω 1W
R762	1	1	GA05047010	4.7Ω 1W

REF. DESIG.	QTY U	QTY P	PART NO.	DESCRIPTION		
R763	1	1	GA05047020		4.7Ω	2W
R764	1	1	GA05047020		4.7Ω	2W
R765	1	1	GA05100140		10Ω	
R766	1	1	GG05100140		10Ω	
R767	1	1	GG05100140		10Ω	
R768	1	1	GG05100140		10Ω	
R804	1	1	GD05102140		10kΩ	
R805	1	1	GD05102140		10kΩ	
R806	1	1	GD05102140		10kΩ	
R807	1	1	RF05270120	Fusible	27Ω	½W
R808	1	1	RF05270120	Fusible	27Ω	½W
R810	1	1	GG05100120		10Ω	½W
RN01	1	1	GD05473140		47kΩ	
RN02	1	1	GD05683140		68kΩ	
RN03	1	1	GD05683140		68kΩ	
RN04	1	1	GD05273140		27kΩ	
RN05	1	1	GD05683140		68kΩ	
RN06	1	1	GD05224140		220kΩ	
RN07	1	1	GD05273140		27kΩ	
RN08	1	1	GA05222010		2.2kΩ	
RN09	1	1	GD05104140		100kΩ	
RN10	1	1	GD05683140		68kΩ	
RN11	1	1	GD05683140		68kΩ	
RN12	1	1	GD05333140		33kΩ	
RN13	1	1	GD05153140		15kΩ	
RN14	1	1	GG05682140		6.8kΩ	
RN15	1	1	GG05682140		6.8kΩ	
RN16	1	1	GG05682140		6.8kΩ	
RN17	1	1	GG05682140		6.8kΩ	
RN18	1	1	GD05183140		18kΩ	
RN19	1	1	GD05183140		18kΩ	
RN20	1	1	GG05271140		270Ω	
RN21	1	1	GG05221140		270Ω	
RN22	1	1	GG05271140		270Ω	
RN23	1	1	GG05271140		270Ω	
RN24	1	1	GD05273140		27kΩ	
RN25	1	1	GD05222140		2.2kΩ	
RN26	1	1	GD05104140		100kΩ	
RN27	1	1	GD05471140		470Ω	
RN28	1	1	GD05471140		470Ω	
RN29	1	1	GD05471140		470Ω	
RN30	1	1	GD05471141		270Ω	
RU01	1	1	GD05103140		10kΩ	
RU02	1	1	GD05103140		10kΩ	
RU03	1	1	GD05103140		10kΩ	
RU04	1	1	GD05103140		10kΩ	
RU05	1	1	GD05102140		1kΩ	
RU06	1	1	GD05102140		1kΩ	
RU07	1	1	GD05393140		39kΩ	
RU08	1	1	GD05393140		39kΩ	
RU09	1	1	GD05332140		3.3kΩ	
RU10	1	1	GD05332140		3.3kΩ	

REF. DESIG.	QTY U	QTY P	PART NO.	DESCRIPTION		
RU11	1	1	GD05104140		100kΩ	
RU12	1	1	GD05104140		100kΩ	
RU13	1	1	GD05393140		39kΩ	
RU14	1	1	GD05393140		39kΩ	
RU15	1	1	GD05104140		100kΩ	
RU16	1	1	GD05104140		100kΩ	
RU17	1	1	GD05473140		47kΩ	
RU18	1	1	GD05222140		2.2kΩ	
RU19	1	1	GD05152140		1.5kΩ	
RU20	1	1	GG05222120		2.2kΩ	½W
RU21	1	1	GG05222120		2.2kΩ	½W
RU22	1	1	GG05152140		1.5kΩ	
RU23	1	1	GG05152140		1.5kΩ	
RU24	1	1	GG05102140		1kΩ	
RU25	1	1	GG05101140		100Ω	
RU26	1	1	GG05101140		100Ω	
				P700 SEMICONDUCTORS		
Q401	1	1	HF201702B0	F.E.T.	2SK170 (GR or BL)	
Q402	1	1	HF201702B0	F.E.T.	2SK170 (GR or BL)	
Q403	1	1	HF201702B0	F.E.T.	2SK170 (GR or BL)	
Q404	1	1	HF201702B0	F.E.T.	2SK170 (GR or BL)	
Q405	1	1	HC10008090	IC	NJM4558DD	
Q451	1	1	HC10003090	IC	NJM4558D	
Q452	1	1	HT409852B0	Transistor	2SD985 (L or K)	
Q453	1	1	HT409852B0	Transistor	2SD985 (L or K)	
Q751	1	1	HT323442A0	Transistor	2SC2344 (D or E)	
Q752	1	1	HT323442A0	Transistor	2SC2344 (D or E)	
Q753	1	1	HT110112A0	Transistor	2SA1011 (D or E)	
Q754	1	1	HT110112A0	Transistor	2SA1011 (D or E)	
Q755	1	1	HT328372B0	Transistor	2SC2837 (O or Y)	
Q756	1	1	HT328372B0	Transistor	2SC2837 (O or Y)	
Q757	1	1	HT111862B0	Transistor	2SA1186 (O or Y)	
Q758	1	1	HT111862B0	Transistor	2SA1186 (O or Y)	
Q759	1	1	HV00009080	Varistor	STV-3HR (O or Y)	
Q760	1	1	HV00009080	Varistor	STV-3HR (O or Y)	
Q761	1	1	HD20005010	Diode	W06B	
Q762	1	1	HD20005010	Diode	W06B	
Q763	1	1	HD20005010	Diode	W06B	
Q764	1	1	HD20005010	Diode	W06B	
⚠Q801	1	1	HD20008290	Diode	S4VB20	
⚠Q802	1	1	HE20009290	Diode	S5VB20	
Q803	1	1	HD20015030	Diode	DS135D	
Q804	1	1	HD20015030	Diode	DS135D	
Q805	1	1	HD20015030	Diode	DS135D	
Q806	1	1	HD20015030	Diode	ES135D	
Q807	1	1	HT403132P0	Transistor	2SD313 (D or E)	
Q808	1	1	HT205072P0	Transistor	2SB507 (D or E)	
Q809	1	1	HD30014010	Zener	HZ16L	
Q810	1	1	HD30014010	Zener	HZ16L	
Q811	1	1	HD20015030	Diode	DS135D	
Q812	1	1	HT403132P0	Transistor	2SD313 (D or E)	
Q813	1	1	HD30044010	Zener	HZ6L-3C	

REF. DESIG.	Q'TY U	Q'TY P	PART NO.	DESCRIPTION	
QN01	1	1	HC10042050	IC	TA7317P
QN02	1	1	HD20003210	Diode	1S2471
QN03	1	1	HD20015030	Diode	DS1350
QN04	1	1	HD20001000	Diode	1S1555
QN05	1	1	HD20001000	Diode	1S1555
QN06	1	1	HD20001000	Diode	1S1555
QN07	1	1	HD20001000	Diode	1S1555
QN08	1	1	HT313181R0	Transistor	2SC1318R
QN09	1	1	HT313181R0	Transistor	2SC1318R
QN10	1	1	HT107201R0	Transistor	2SA720R
QN11	1	1	HT107201R0	Transistor	2SA720R
QN12	1	1	HD20002210	Diode	1S2472
QN13	1	1	HD20002210	Diode	1S2472
QN14	1	1	HD20002210	Diode	1S2472
QN15	1	1	HD20002210	Diode	1S2472
QN16	1	1	HT313181R0	Transistor	2SC1318R
QN17	1	1	HT313181R0	Transistor	2SC1318R
QN18	1	1	HT107201R0	Transistor	2SA720R
QU01	1	1	HD30044010	Zener	HZ6L-3C
QU02	1	1	HD30044010	Zener	HZ6L-3C
QU03	1	1	HD10003030	Diode	1S188FM
QU04	1	1	HD10003030	Diode	1S188FM
QU05	1	1	HD10003030	Diode	1S188FM
QU06	1	1	HD10003030	Diode	1S188FM
QU07	1	1	HC10022090	IC	NJM2903D
QU08	1	1	HC712200A0	IC	HD74LS122P
QU09	1	1	HT410652B0	Transistor	2SD1065
QU10	1	1	HT208292B0	Transistor	2SB829
QU11	1	1	HT323441D0	Transistor	2SC2344D
QU12	1	1	HT110111D0	Transistor	2SA1011D
QU13	1	1	HT327852C0	Transistor	2SC2785 (HF or FF)
QU14	1	1	HT111752C0	Transistor	2SA1175 (HF or FF)
QU15	1	1	HT327852C0	Transistor	2SC2785 (HF or FF)
QU16	1	1	HT111752C0	Transistor	2SA1175 (HF or FF)
QU17	1	1	HD20001000	Diode	1S1555
QU18	1	1	HD20011290	Diode	S3V20
QU19	1	1	HD20011290	Diode	S3V20
				P700-MISCELLANEOUS	
⚠F801	1	1	FU27215010	Protector Unit (2.7A)	
⚠F802	1	1	FU27215010	Protector Unit (2.7A)	
⚠F803	1	1	FU27215010	Protector Unit (2.7A)	
J401	1		YT02020290	Terminal RCA Pin Jack (2P)	
J401		1	YT02020280	Terminal RCA Pin Jack (2P)	
J751	1	1	YP06001060	Plug (7P)	
J752	1	1	YP06001070	Plug (9P)	
L401	1	1	SZ04240020	Solenoid SW (4-2) MM/MC	
L751	1	1	LL23905120	Coil, Choke	
L752	1	1	LL23905120	Coil, Choke	
LN01	1	1	LY20240190	Relay	

REF. DESIG.	Q'TY U	Q'TY P	PART NO.	DESCRIPTION
				P.W. BOARD WIRE PARTS
WE01	1	1	YU04100260	Jumper Lead (JE01-J817)
WE51	1	1	YU04220260	Jumper Lead (WE51-JE03)
WE52	1	1	YU04220260	Jumper Lead (WE52-JE02)
WG01	1	1	YU04200260	Jumper Lead (JG01-JE05)
WL01	1	1	YU07320260	Jumper Lead (WL01-JS05)
WL02	1	1	YU08300260	Jumper Lead (WL02-JS06)
WL03	1	1	YU06240260	Jumper Lead (WL03-JE04)
WL04	1	1	YU04280260	Jumper Lead (WL04-JG02)
WL05	1	1	YU04200260	Jumper Lead (WL05-JS52)
WS01	1	1	YU04080260	Jumper Lead (WS01-WS01)
WS07	1	1	YU03200260	Jumper Lead (JS07-J402)
WS08	1	1	YU02220260	Jumper Lead (JS08-JW11)
WS09	1	1	YU03260260	Jumper Lead (JS09-JE06)
WS10	1	1	YU03240260	Jumper Lead (JS10-J703)
WS51	1	1	YU04120260	Jumper Lead (JS51-J819)
WS81	1	1	YU03140260	Jumper Lead (JS81-J818)
WT07	1	1	YU03150260	Jumper Lead (JT07-JW52)
WT09	1	1	YU02400260	Jumper Lead (JT09-JW05)
WT10	1	1	YU03120260	Jumper Lead (JT10-JT51)
WW04	1	1	YU02180260	Jumper Lead (JW04-J806)
WY01	1	1	YB00050100	Connective Cord (JY01-JL01)
WY02	1	1	YB00050110	Connective Cord (JY02-JL02)
WY03	1	1	YB00050110	Connective Cord (JY03-JL03)
WY91		1	YU02720260	Jumper Lead (WY91-JY91)

(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 incresse risk of fire or electrical shock hazard.

20. TECHNICAL SPECIFICATIONS

MODEL PM730

AMPLIFIER SECTION

Rated Power Output, Minimum Continuous Watts per Channel from 20 Hz to 20 kHz, both Channels driven into 8 ohms	70 W
Total Harmonic Distortion (MAIN IN) at 8 ohms	0.03 %
I.M. Distortion (MAIN IN) (IHF method, 60 Hz and 7 kHz mixed 4 : 1 at rated power output) at 8 ohms	0.03 %
Damping Factor at 20 Hz	60

PREAMPLIFIER SECTION

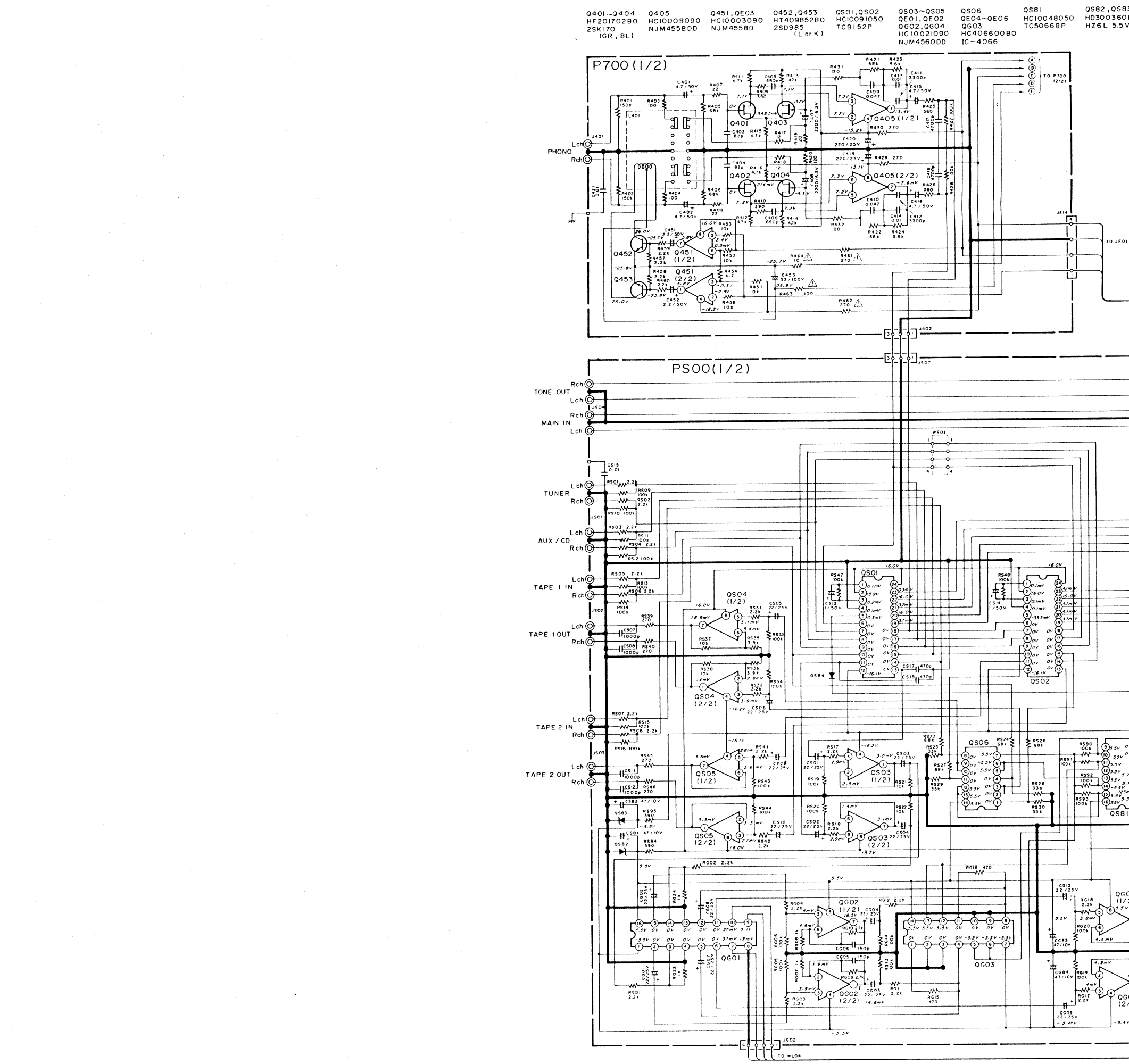
Phono	
Input Overload at 1 kHz	120 mV
Input Sensitivity (Input Impedance, 40 k ohms)	2.5 mV
Frequency Response (RIAA 20 Hz to 20 kHz)	±0.5 dB
Signal to Noise Ratio "A" weighted (at rated output and 10 mV input)	85 dB
Hight Level Inputs (Aux and Tape)	
Input Sensitivity	150 mV
Input Impedance	25 k ohms
Frequency Response	10 Hz ~ 50 kHz ±1 dB
Signal to Noise Ratio "A" weighted (at rated output and 775 mV input)	95 dB
Output Impedance Tape Out	800 ohms

GENERAL

Power Requirements	120 V 60 Hz
Power Consumption at rated output, both channels operating	290 W
Idling Power (Volume Control at zero)	25 W
Dimensions	
Panel Width	416 mm (16-3/8 inches)
Panel Height	100 mm (3-15/16 inches)
Depth	300 mm (11-13/16 inches)
Weight	
Unit alone	8 kg (17.6 lbs)
Packed for Shipment	9 kg (19.8 lbs)

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

21. SCHEMATIC DIAGRAM

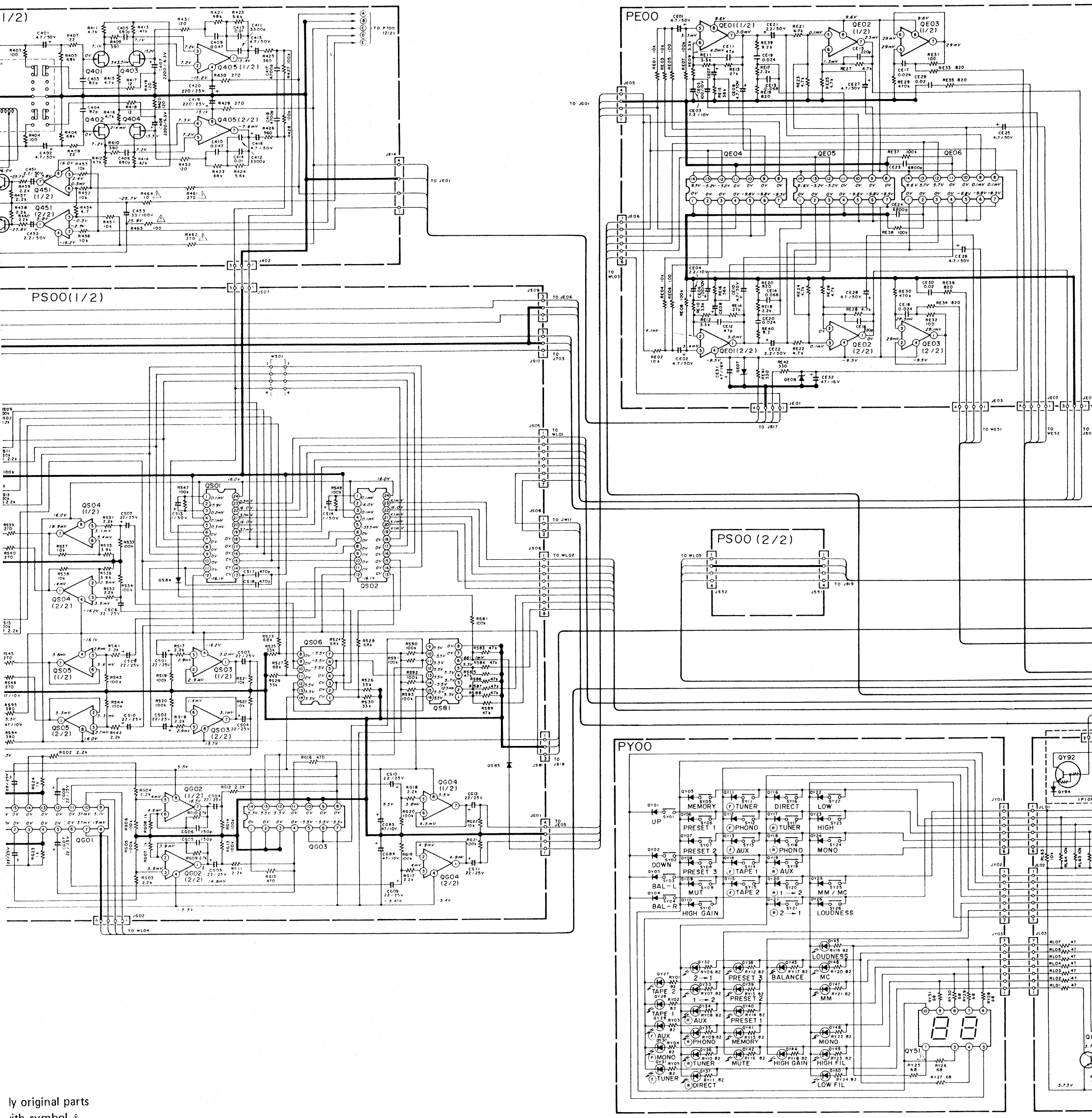


NOTE ON SAFETY:

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 mo

Q405	Q451,QE03	Q452,Q453	QS01,QS02	QS03~QS05	QS06	QS81	QS82,QS83	QG01	QE07,QE08	Q701	Q702,Q703	Q704,Q705	Q706	Q751,Q752	Q753,Q754	Q755,Q756	Q757,Q758	Q759,Q760
HC10009090 NJM4558DD	HC10003090 NJM4558D	HT409852B0 2SD985 (L or K)	HC10091050 TC9152P	QE01,QE02 QG02,QG04 HC10021090 NJM4560DD	QE04~QE06 QG03 HC406600B0 IC-4066	HC10048050 TC5066BP	HD30036010 HZ6L 5.5V	HC10092052 TC9154P	HD30045011 HZ9L-1C 9.3V	HC10130030 STK3082IIA	QU13,QU15 HT327852C1 2SC2785 (HF or FF)	Q809,Q810 HD30014010 HZ16L	HC10007090 NJM4560D	HT323442A0 2SC2344 (D,E)	QU12 HT110112A0 2SA1011 (D,E)	HT328372B0 2SC2837 (O,Y)	HT111862B0 2SA1186 (O,Y)	HV00009080 STV-3HR (O,Y)



ly original parts
ith symbol ⚠ .
than original
ock hazard.

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

Q1,Q752	Q753,Q754	Q755,Q756	Q757,Q758	Q759,Q760	Q761~Q764	QN01	QN02	QN03	QN08,QN09	QN10,QN11	QN12~QN15	QU01,QU02	QU03~QU06	QU07	QU08	QU09	QU10	QU11	QU14
2SC3442A0	QU12	HT32837B0	HT11862B0	HV00009080	HD20005010	HC10042050	HD20003201O	Q803~Q806	HT3131810	HT10720110	HD20002210	Q813	HD10003030	HC10022090	HC7122000A0	HT41065280	HT208292B0	HT32344D0	HTII
2SC2344	HT11011210	2SC2837	2SA1186	STV-3HR	W06B	TA7317P	IS2471	Q811	2SC1318R	2SA720R	IS2472	HD30044010	IS188FM	NJM2903D	HD74LS122P	2SD1065	2SB829	2SC2344D	2SAI
(D,E)	2SA1011(D,E)	(O,Y)	(O,Y)	(O,Y)				HD20015032				HZ6L-3C							
								DS135D											

~QN15
002210
'2

QU01,QU02
Q813
HD30044010
HZ6L-3C

QU03~QU06
HD10003030
IS188FM

QU07
HC10022090
NJM2903D

QU08
HC712200A0
HD74LS122P

QU09
HT410652B0
2SD1065

QU10
HT208292B0
2SB829

QU11
HT32344ID0
2SC2344D

QU14,QU16
HT1111752C1
2SA1175
(HForFF)

QU18,QU19
HD20011290
S3V20

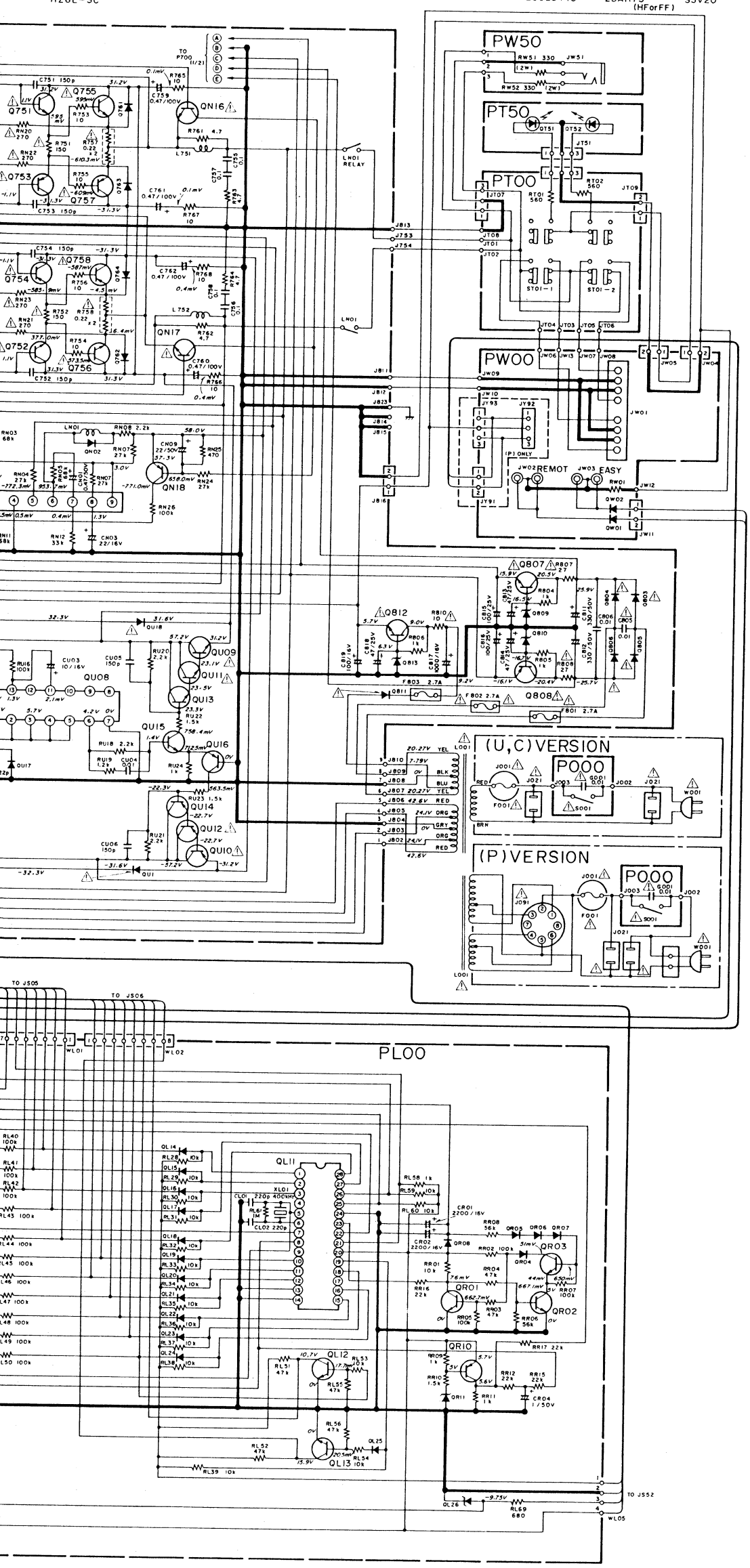
Q801
HE20008290
S4VB20

Q802
HE20009290
S5VB20

Q807,Q812
HT403132P0
2SD313
(D,E)

Q808
HT205072P0
2SB507
(D,E)

QY01~QY26, QY93, QY94, QL14~QL25
QR04~QR08, QN04~QN07
QU17, QS84, QS85, QW01, QW02
HD20001000
IS1555 etc....



Q401~Q404
2SK170
(GR, BL)

QN08, QN09
2SC1318R

QN10, QN11
2SA720R

QN16, QN17
2SC1845F

QN18
2SA992F

Q452, Q453
2SD985
(L or K)

Q755, Q756
2SC2837
(O, Y)

Q757, Q758
2SA1186
(O, Y)

QU10
2SB829

QU09
2SD1065

Q702, Q703
QU13, QU15
2SC2785
(HF, FF)

QU14, QU16
2SA1175
(HF, FF)

Q759, Q760
STV-3HR
(O, Y)

Q751, Q752
2SC2344
(D, E)

QU11
2SC2344D

Q807, Q812
2SD313
(D, E)

QL01~QL07
QR10
2SB641

QL12, QL13
2SD636

Q753, Q754
QU12
2SA1011
(D, E)

2SB507
(D, E)

QY91, QY92
DTC124F

(P) ONLY

NJM4558DD
Q405

NJM4560D
Q706

NJM4558D
Q451, QE03

NJM2903D
QU07

NJM4560DD
QS03~QS05
QE01, QE02
QG02, QG04

QS01, QS02
TC9152P

QS06
QE04~QE06
QG03
IC-4066

QU08
HD74LS122P

QS81
TC5066BP

QG01
TC9154P

Q701
STK3082IIA

QN01
TA7317P

QL08
TD62104P

QL10
TC5066BP

QL09
LC6502C

QL11
LM6416E

QY27~QY32
HI10022320
GL-5NG10

QY32~QY37
QY43, QY45~QY48
HI10023320
GL-5HD10

QY38~QY41
HI10053020
LN842RP

QY42, QY44
HI10027320
GL-9HD24

QY49, QY50
QT51, QT52
HI10028320
GL-9HD4

QY51
HQ10201050
TLG322

QL01~QL07, QR10
HT206412C0
2SB641

QL08
HC100094050
TD62104P

QL09
HC10133030
LC6502C

QL10
HC10048050
TC5066BP

QL11
HC10121030
LM6416E

QL12, QL13
QR01~QR03
HT406362B0
2SD636

QL26
HD30045011
HZ9L-1C

QR11
HD30025060
RD3.3E-B1

QN16, QN17
HT31845IF0
2SC1845F

QN18
HT10992IF0
2SA992F

QY91, QY92
BA20001210
DTC124F
(P)VERSION ONLY