

SERVICE
MANUAL

SC-8

marantz®

Model SC-8

Stereo Console 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

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

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 FRANCE
4 Rue Bernard Palissy
92600 Asnières
France
Telex: 611651

MARANTZ BELGIUM
45 Rue Auguste Van Zande
1080 Brussels
Belgium

MARANTZ SVENSKA A.B.
Svartviksvängen 56
Traneberg - Box 12016
16112 Bromma
Sweden
Telex: 13449

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

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

AUSTRALIA

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

All of the above locations are fully equipped to take care of your total service needs. Because various countries have differing configuration requirements, it is necessary that you contact the service facility in your particular country. In the event that there is no service location listed for your country, please, contact the nearest facility for the necessary assistance.

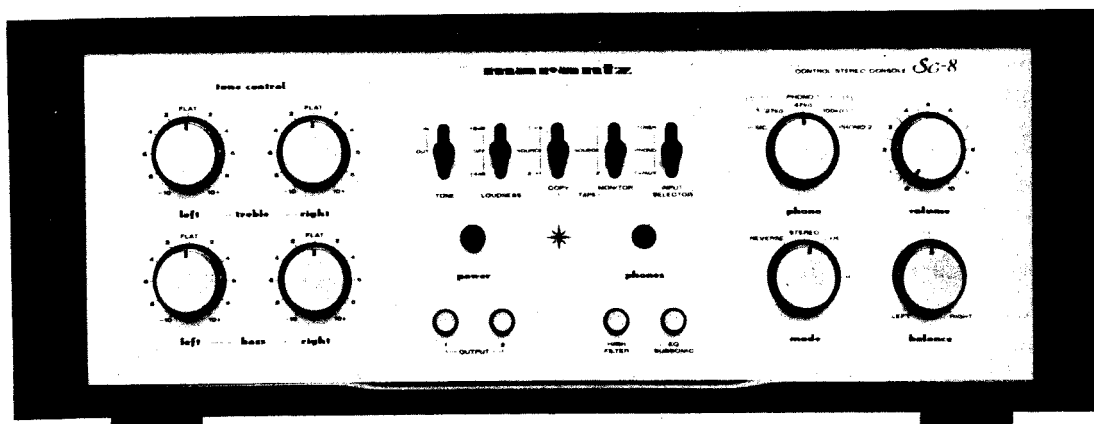
In case of difficulties, do not hesitate to contact the Technical Department at abovementioned address.

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MARANTZ MODEL Sc-8 STEREO CONSOLE AMPLIFIER



INTRODUCTION

This service manual was prepared for use by Authorized Warranty Stations and contains service information for the Marantz Model Sc-8 Stereo Console Amplifier.

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

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

1. SHOCK, FIRE HAZARD SERVICE TEST

CAUTION: After servicing this appliance and prior to returning to customer, 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. FEATURES

- **MC Head Amplifier (13 transistors for each channel)**

The MC head amplifier uses a push-pull amplifier in the first stage which consists of 4 very low noise NPN transistors and 4 very low noise PNP transistors. It uses also push-pull transistors in the second stage and an SEPP circuit in the output stage.

The feedback circuit impedance is reduced as much as possible to improve the S/N ratio, and a voltage gain of 26 dB (20 times) is obtained at a rated input level of 110 μ V.

- **PHONO Amplifier (11 transistors for each channel)**

The PHONO amplifier uses full push-pull circuits consisting of 11 transistors for each channel, so low TIM distortion and a high S/N ratio are obtained.

The first stage is a push-pull circuit consisting of very low noise, high Gm N channel and P channel FETs, combined with a cascode current Miller circuit so that degradation of characteristics of following circuits due to input stage impedance fluctuations is prevented.

The second stage consists of an emitter follower buffer amplifier and a push-pull voltage amplifier.

The output stage uses an SEPP circuit which is adequate to any type of load. The equalizer elements have very low impedance compared with conventional equalizer circuits, so a S/N ratio of 90 dB is obtained at the rated input level.

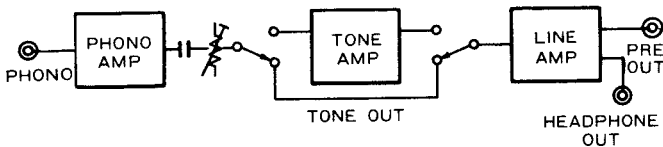
The equalizer elements used are metal film resistors with tolerance of 1% and polypropylene capacitors with tolerances of 2%, so RIAA phono equalization of 10.2 dB is obtained over the audio range from 20 Hz to 20 kHz.

The input impedances of 27 k Ω , 47 k Ω and 100 k Ω are provided to allow different cartridges to be connected when the PHONO 1 input is selected.

The output stage is provided with a relay to mute undesirable noise when the power is switched ON and OFF, and with an EQ subsonic filter to reduce turntable rumble and flutter noise.

● TONE Switch

The TONE switch allows the number of coupling capacitors to be reduced to one by applying the PHONO amplifier output signal directly to the line amplifier when the switch is set to the TONE OUT position. The gain and input sensitivity are not changed by operating this switch.



● Line Amplifier

The line amplifier consists of 15 transistors for each channel, and uses push-pull circuits which operate in class A in all stages to reduce TIM distortion and improve the S/N ratio.

The input stage uses a source follower with dual FETs to prevent it (the input stage) from affecting following stage characteristics. The source follower output signal is applied to the differential amplifier through dual transistors.

One of the differential amplifier output signals is phase-inverted, then both output signals are applied to the second stage push-pull amplifier through buffer amplifiers.

The power amplifier stage uses newly developed, super high f_T (200 – 250 MHz) power transistors which are connected in a Darlington configuration. This power amplifier stage operates in pure class A, and features flat frequency response and low TIM distortion. This amplifier can drive headphones in class A operation, as well as a main amplifier.

3. P.W. BOARDS

As can be seen from the circuit diagram the chassis of Model Sc-8 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. MC Phono mounted on P.W. Board P400
2. Power Supply mounted on P.W. Board P800
3. Tone Amp. (L-Ch) mounted on P.W. Board PE01
4. Tone Amp. (R-Ch) mounted on P.W. Board PE02
5. Balance VR/
Mode Switch mounted on P.W. Board PG00
6. Loudness Switch &
Volume mounted on P.W. Board PJ00
7. Input Selector Switch mounted on P.W. Board PS01
8. Tone In/Out Switch mounted on P.W. Board PT00
9. Headphone mounted on P.W. Board PX00
10. L.E.D. mounted on P.W. Board PY00

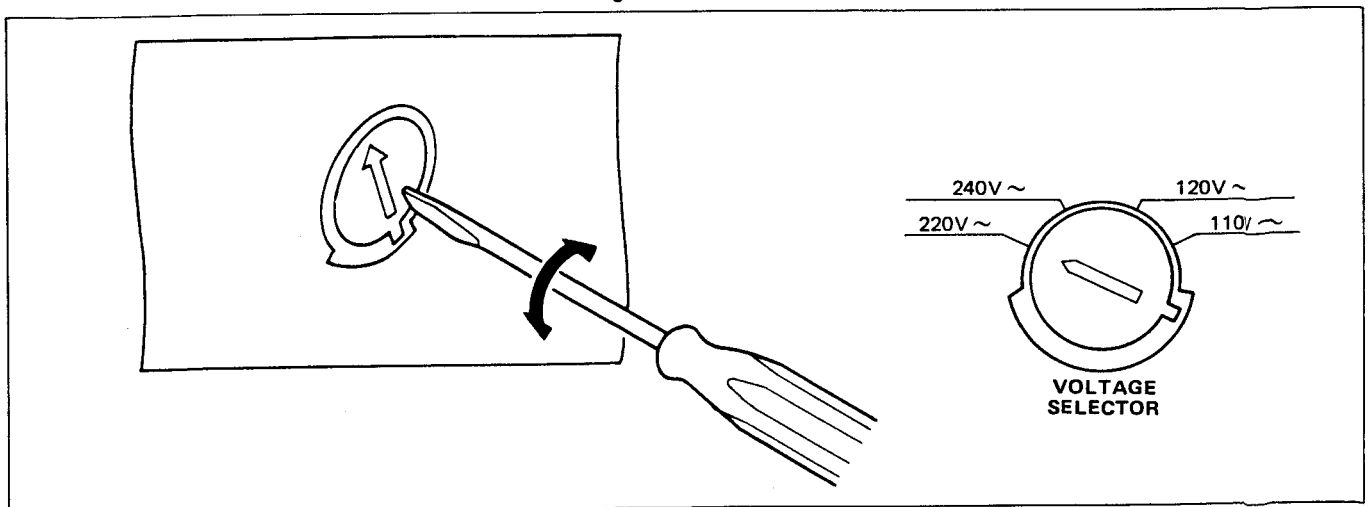
4. VOLTAGE CONVERSION

● EUROPEAN MODEL ONLY

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

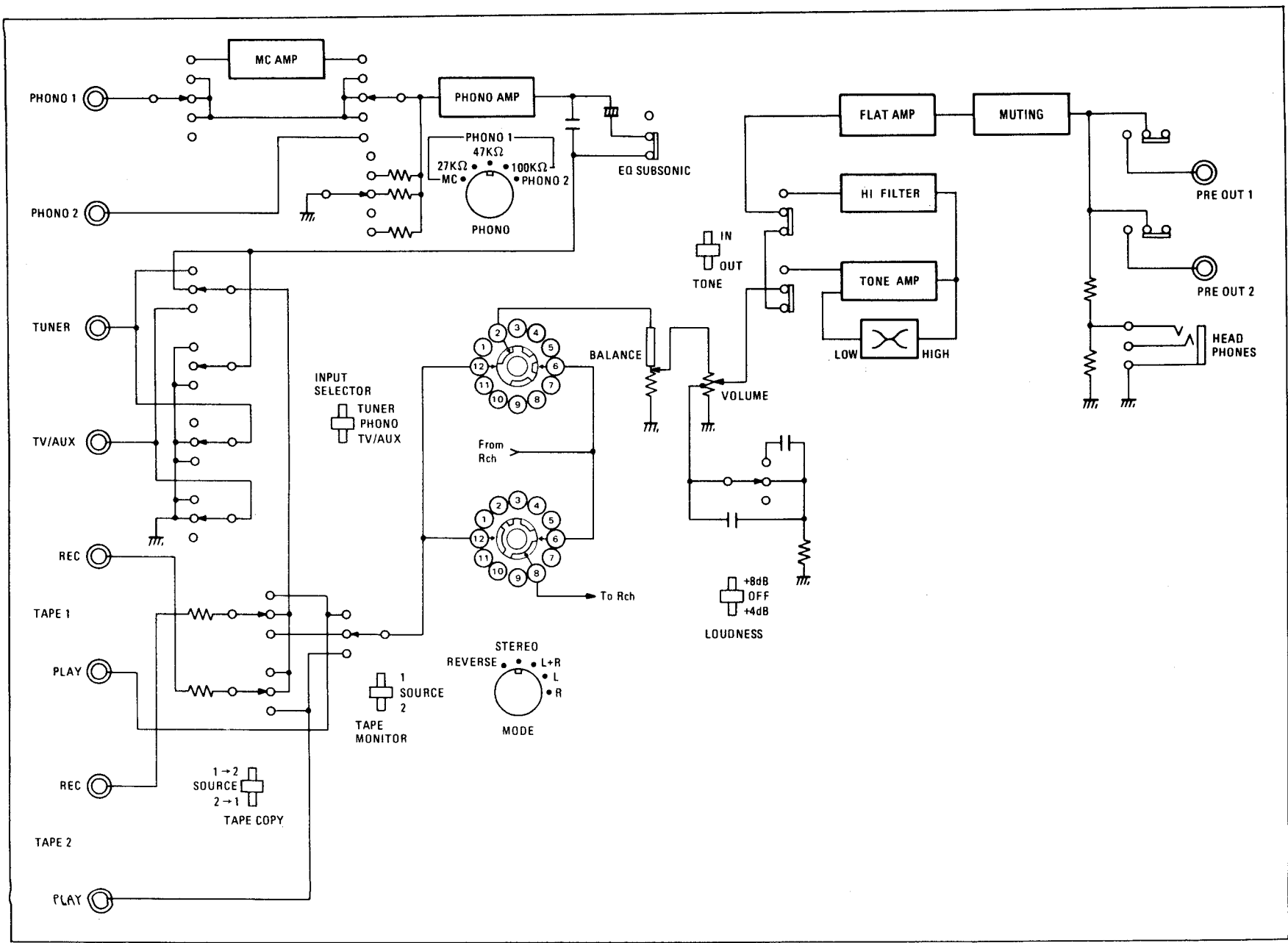
CAUTION
DISCONNECT POWER SUPPLY CORD FROM AC
OUTLET BEFORE CONVERTING VOLTAGE.

Voltage Conversion Chart



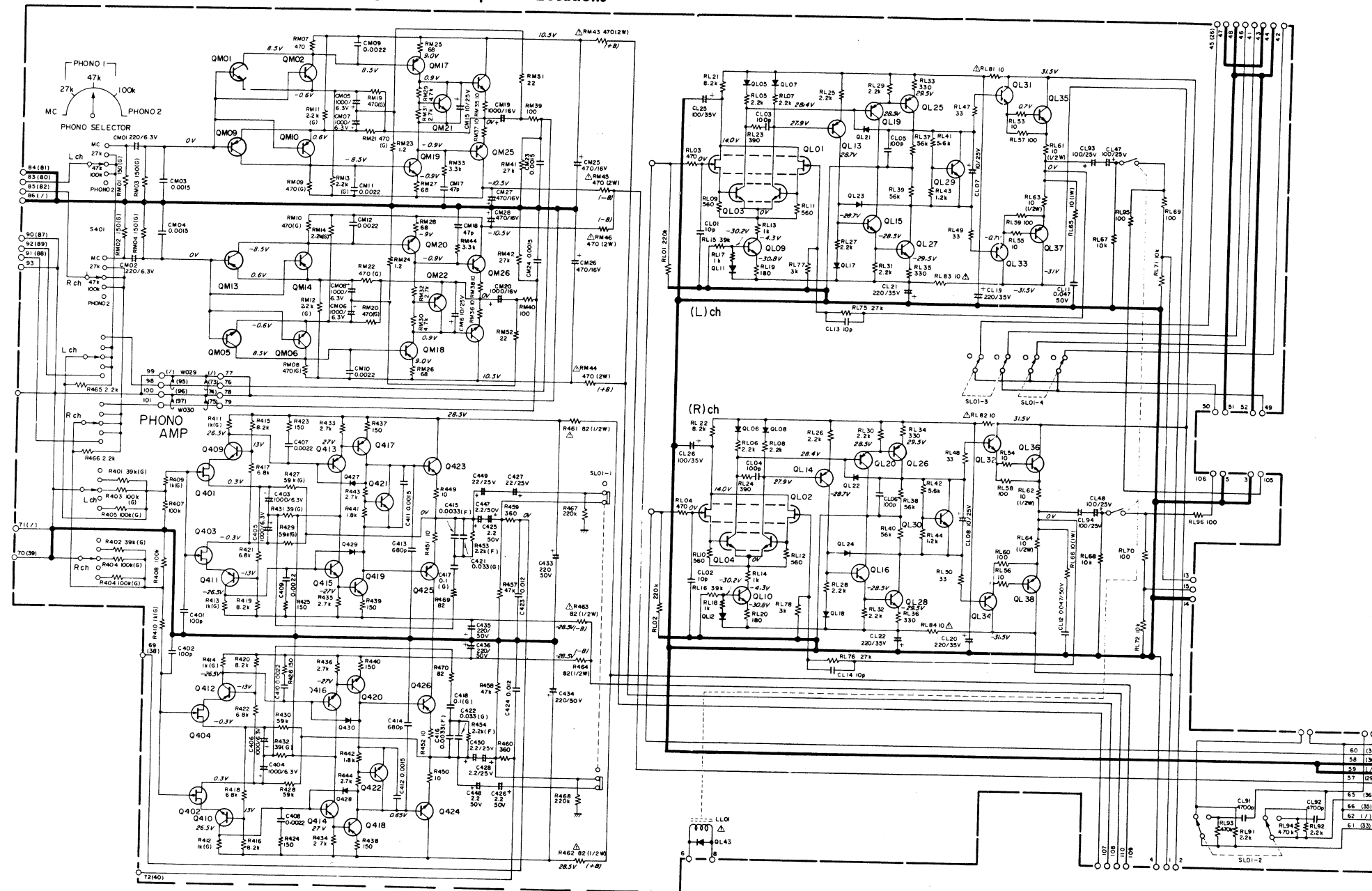
Note on safety: Symbol $\triangle$ Fire or electrical shock hazard. Only original parts should be used to replace any part marked with symbol $\triangle$. Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

5. BLOCK DIAGRAM

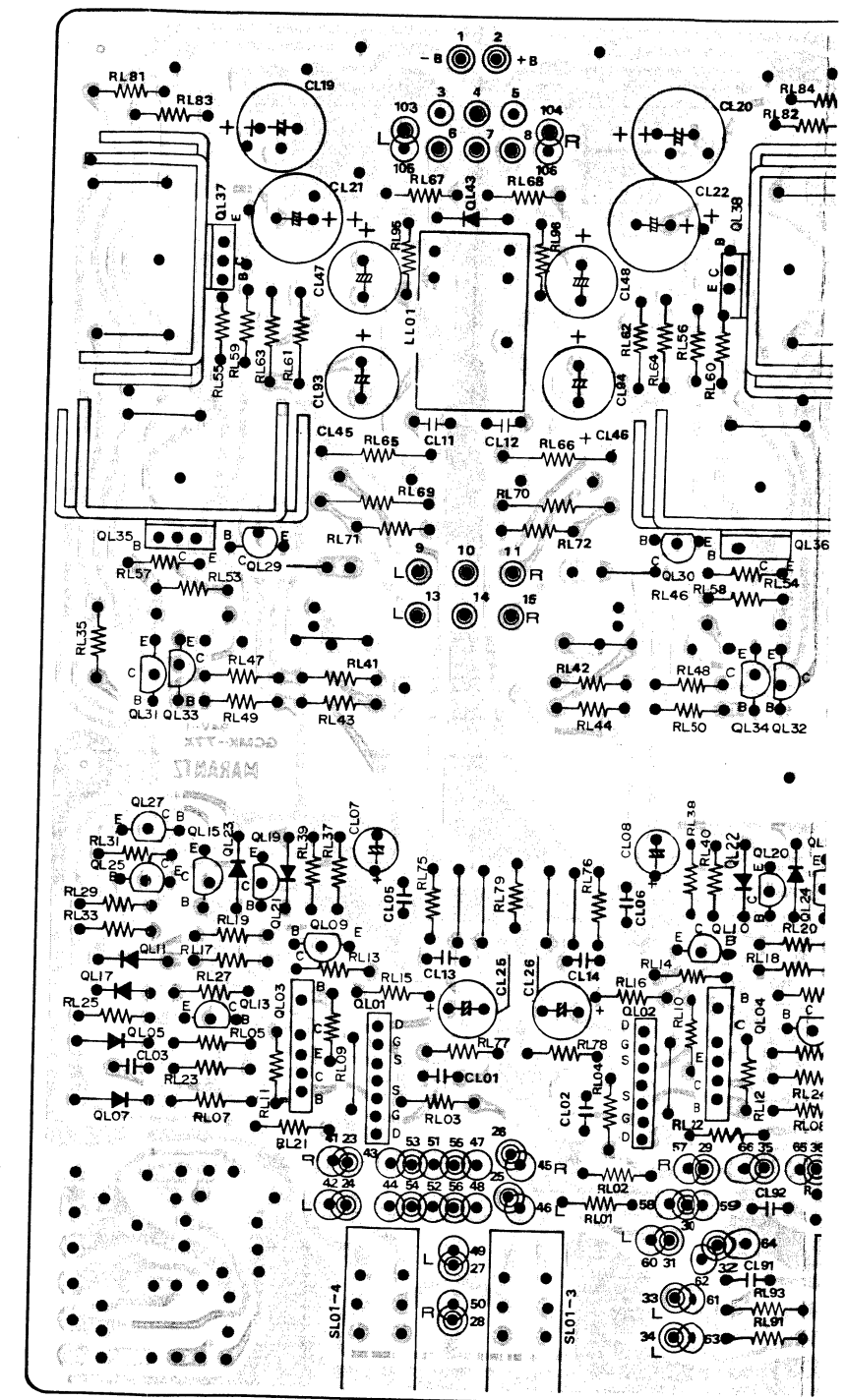
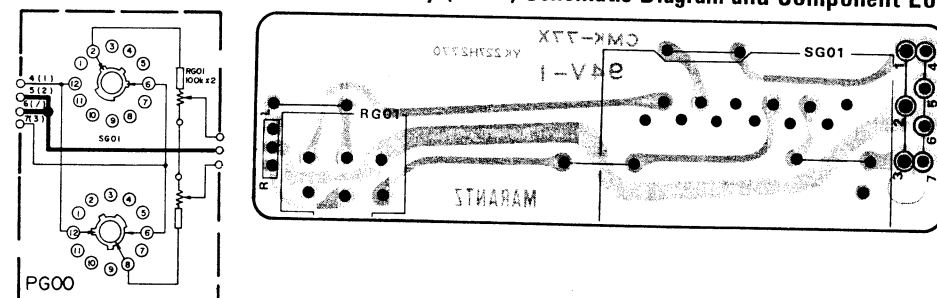


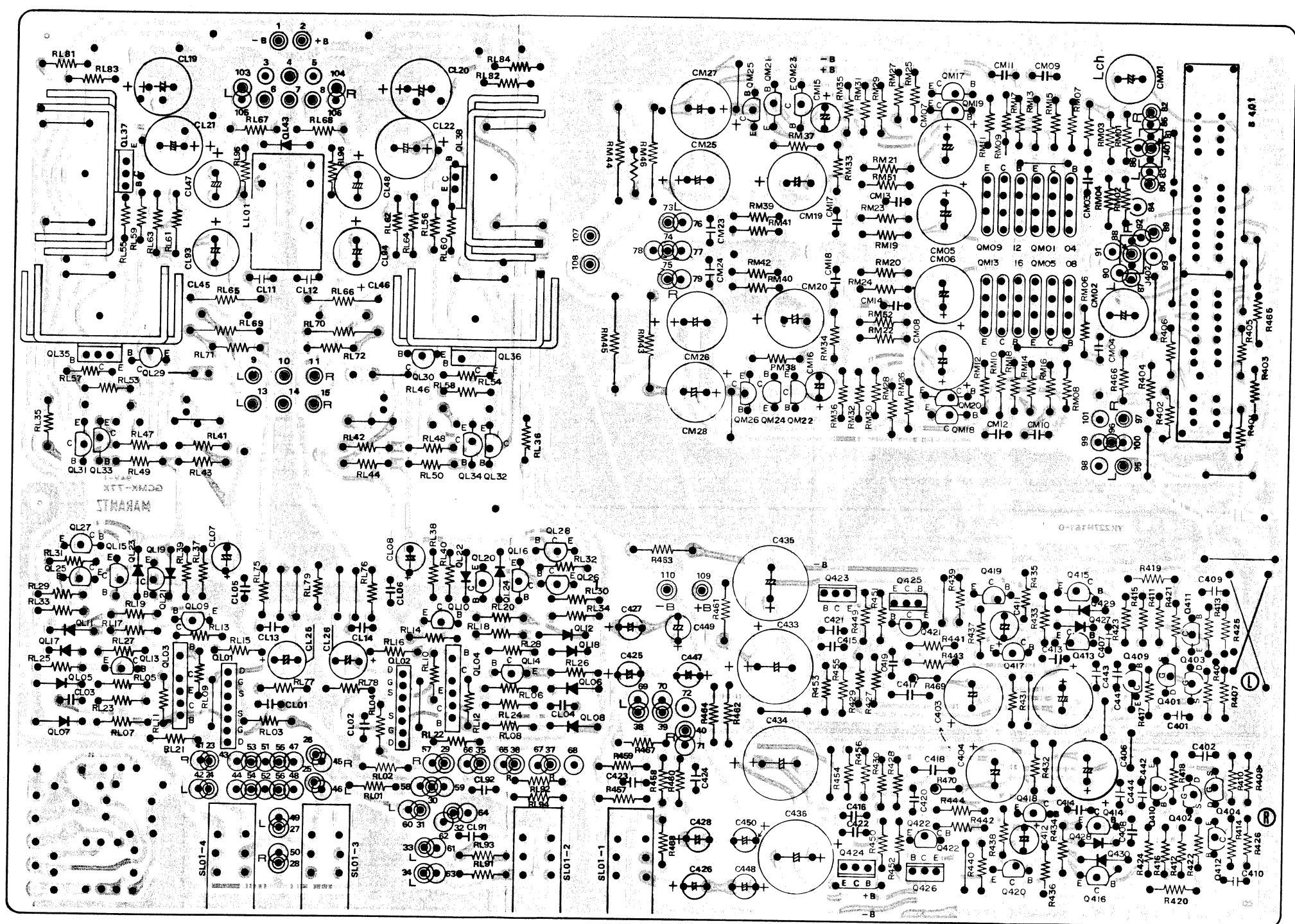
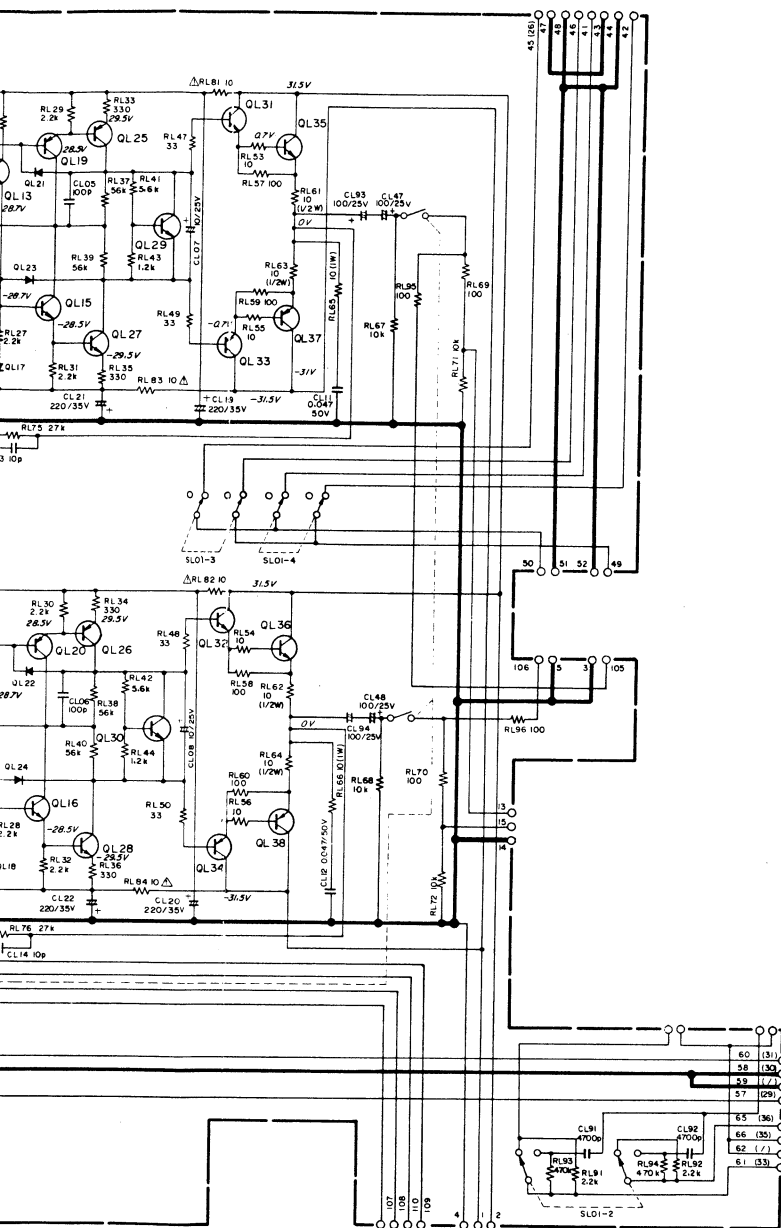
6. DIAGRAM AND COMPONENT LOCATIONS

6.1 MC Phono Assembly (P400) Schematic Diagram and Component Locations

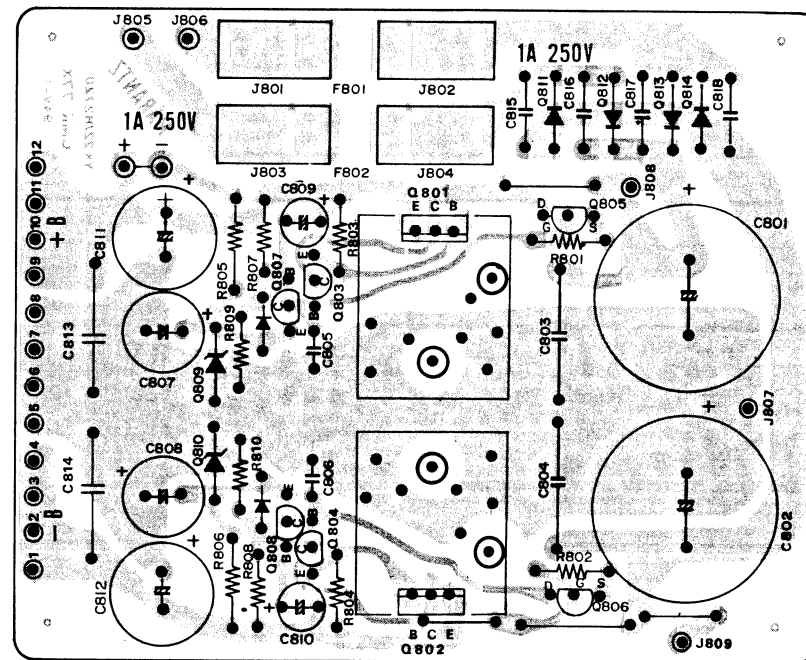
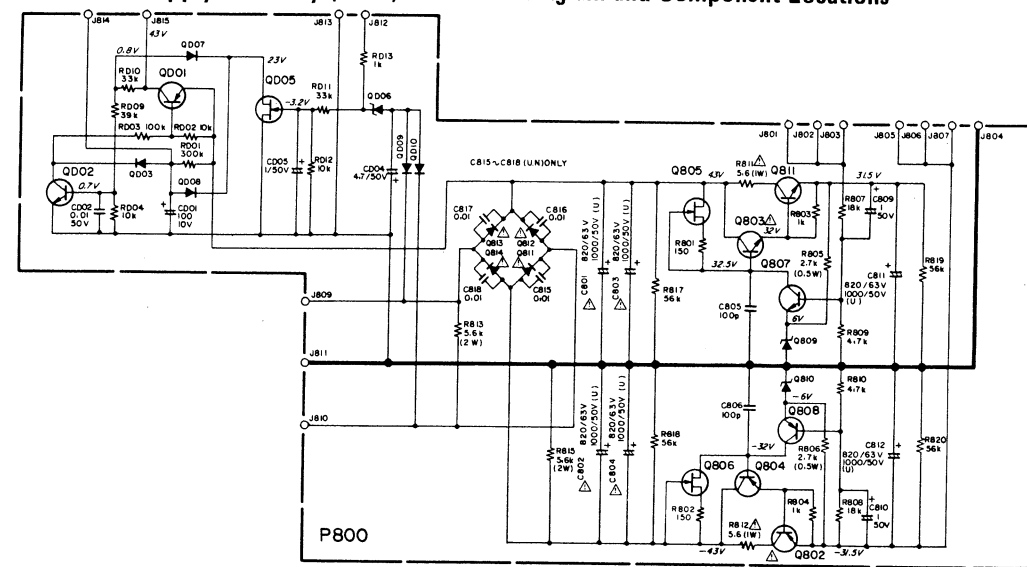


6.2 Balance VR/Mode Switch Assembly (PG00) Schematic Diagram and Component Locations

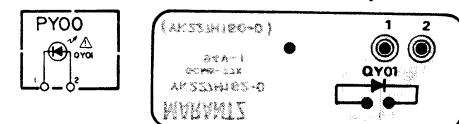




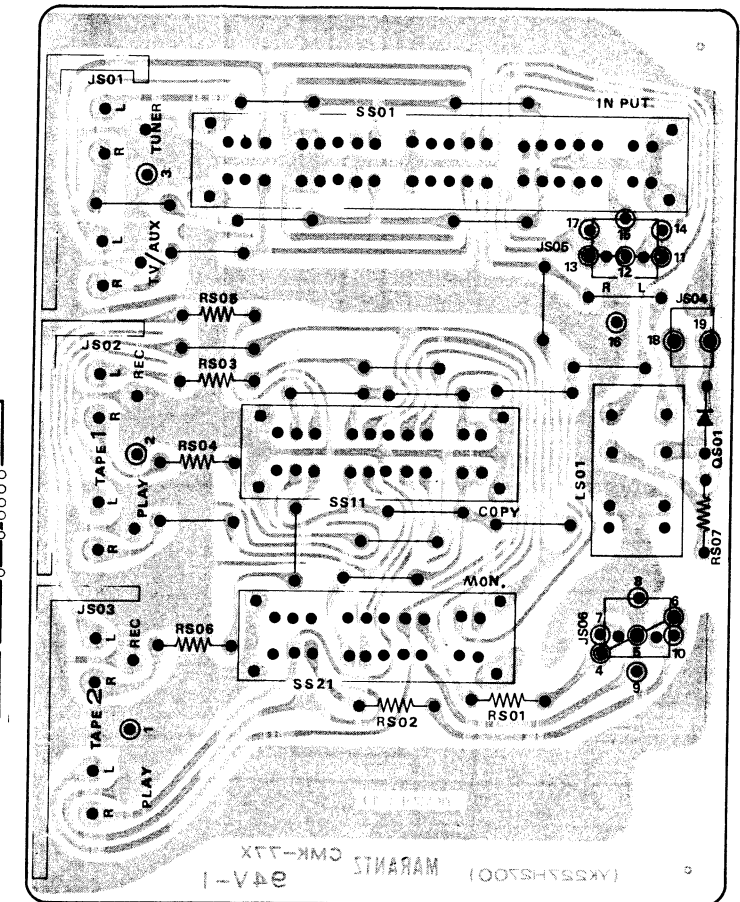
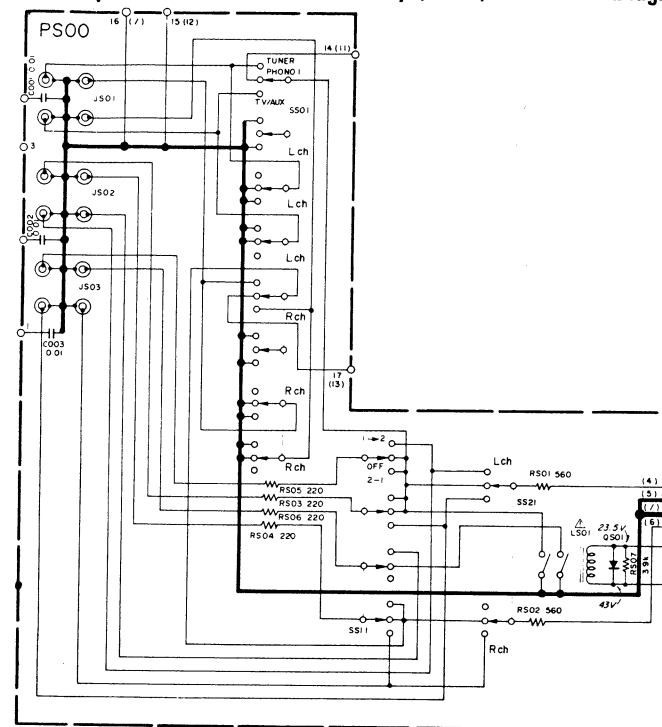
6.3 Power Supply Assembly (P800) Schematic Diagram and Component Locations



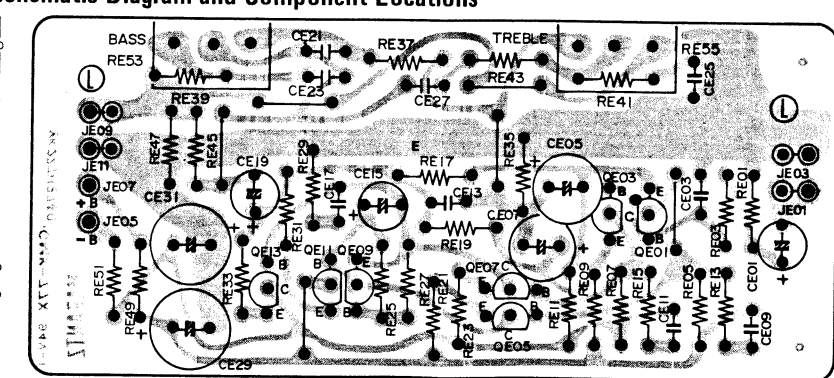
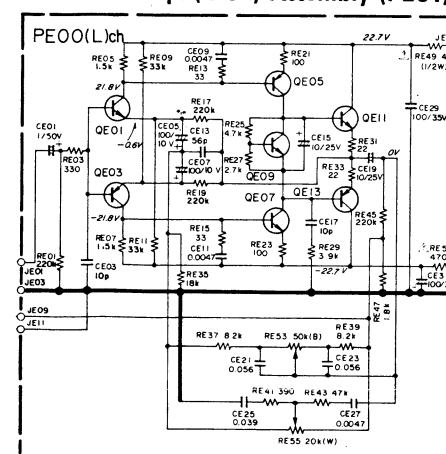
6.4 L.E.D. Assembly (PY00) Schematic Diagram and Component Locations



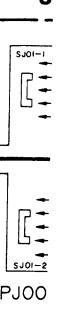
6.5 Input Selector Switch Assembly (PS01) Schematic Diagram and Component Locations



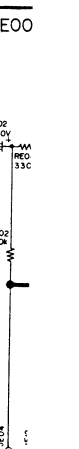
6.6 Tone Amp. (L-Ch) Assembly (PE01) Schematic Diagram and Component Locations



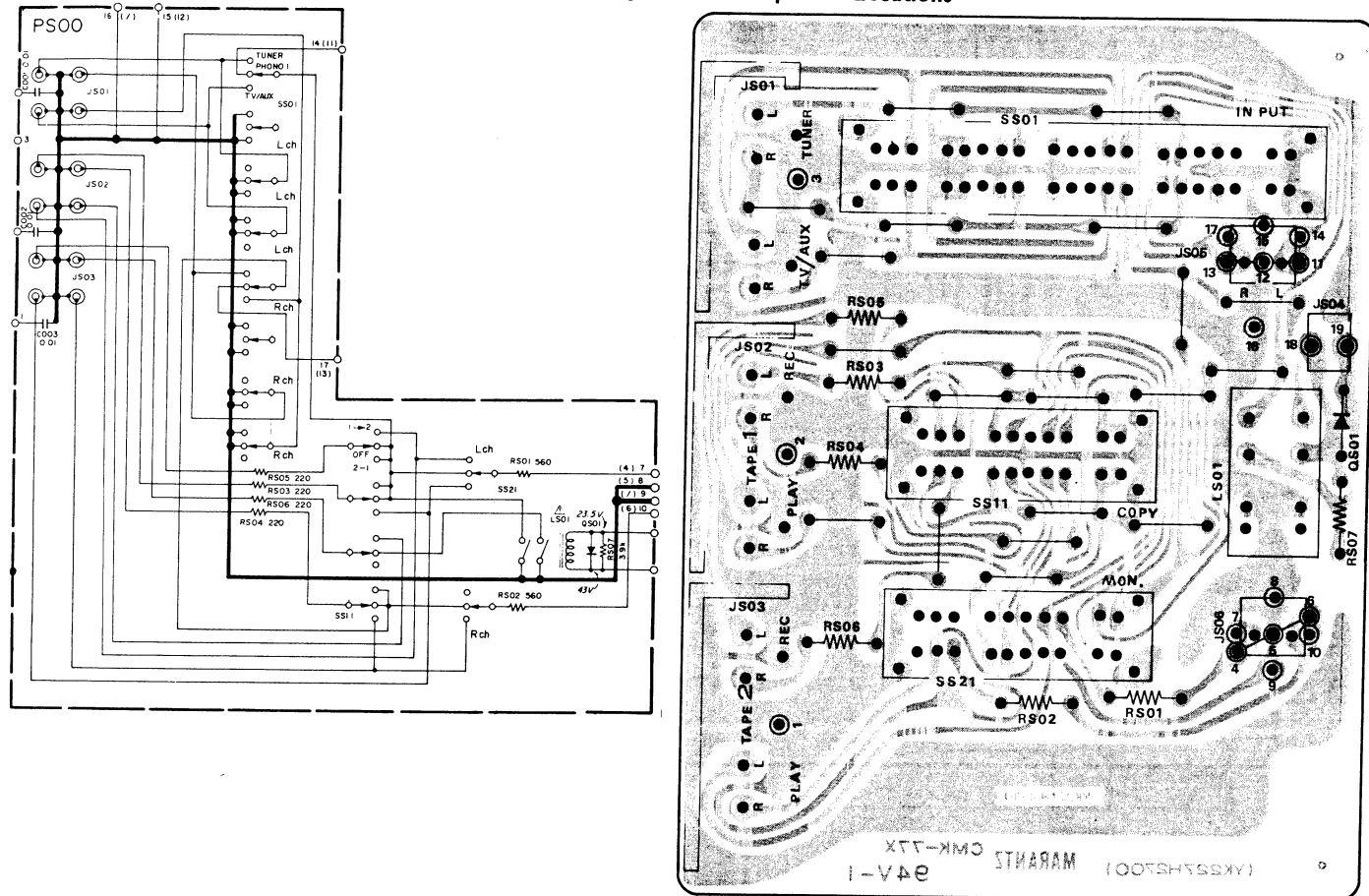
6.7 L



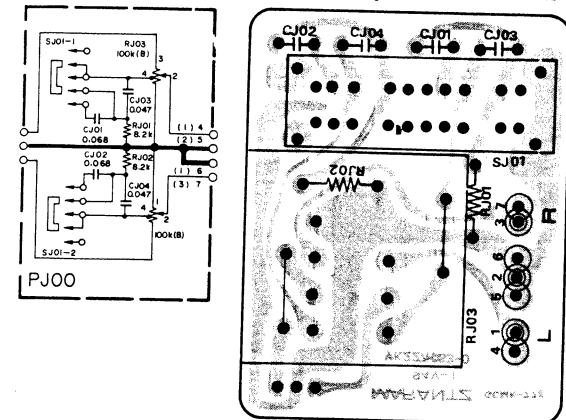
6.10



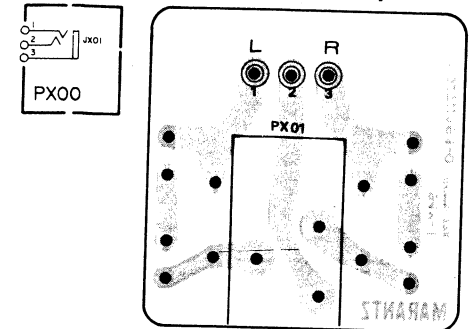
6.5 Input Selector Switch Assembly (PS01) Schematic Diagram and Component Locations



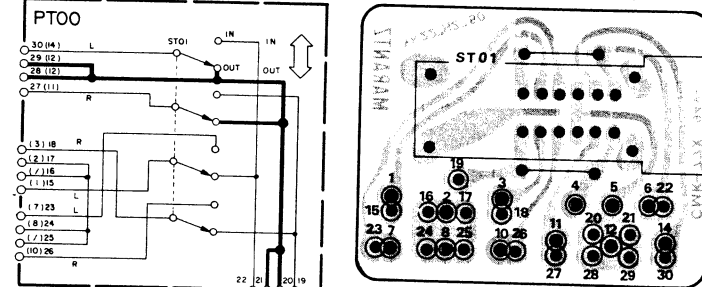
6.7 Loudness Switch & Volume Assembly (PJ00) Schematic Diagram and Component Locations



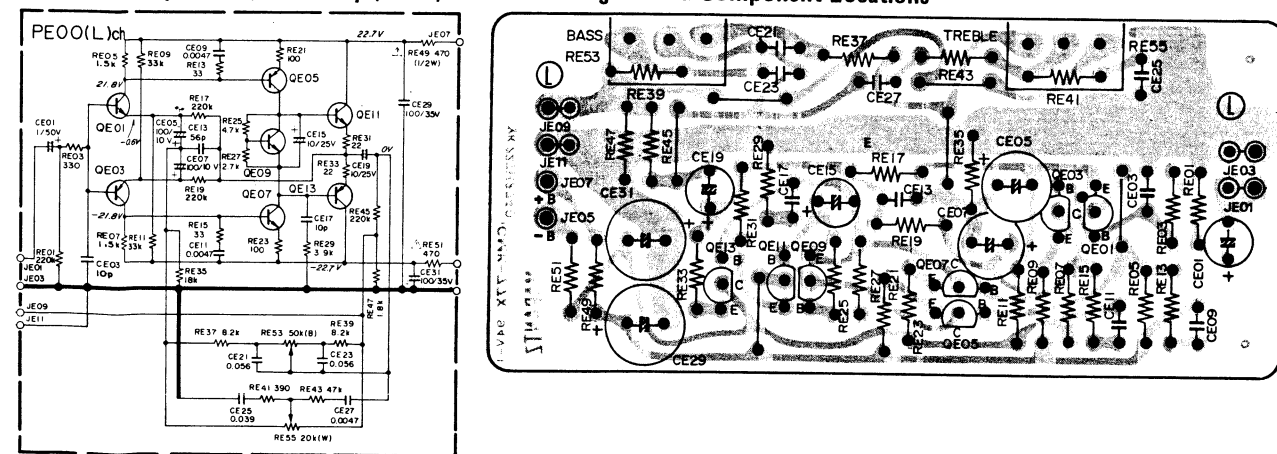
6.8 Headphone Assembly (PX00) Schematic Diagram and Component Locations



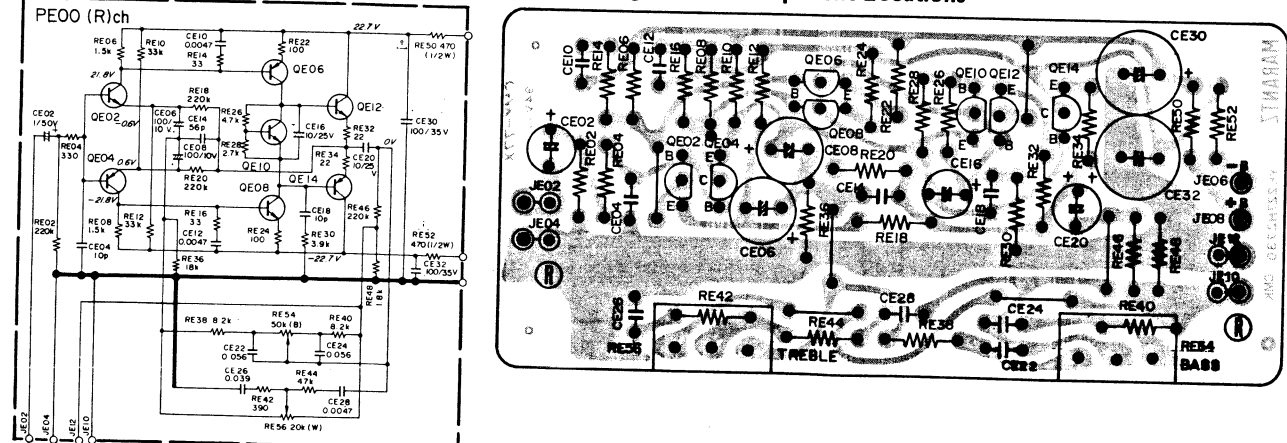
6.9 Tone In/Out Switch Assembly (PT00) Schematic Diagram and Component Locations



6.6 Tone Amp. (L-Ch) Assembly (PE01) Schematic Diagram and Component Locations

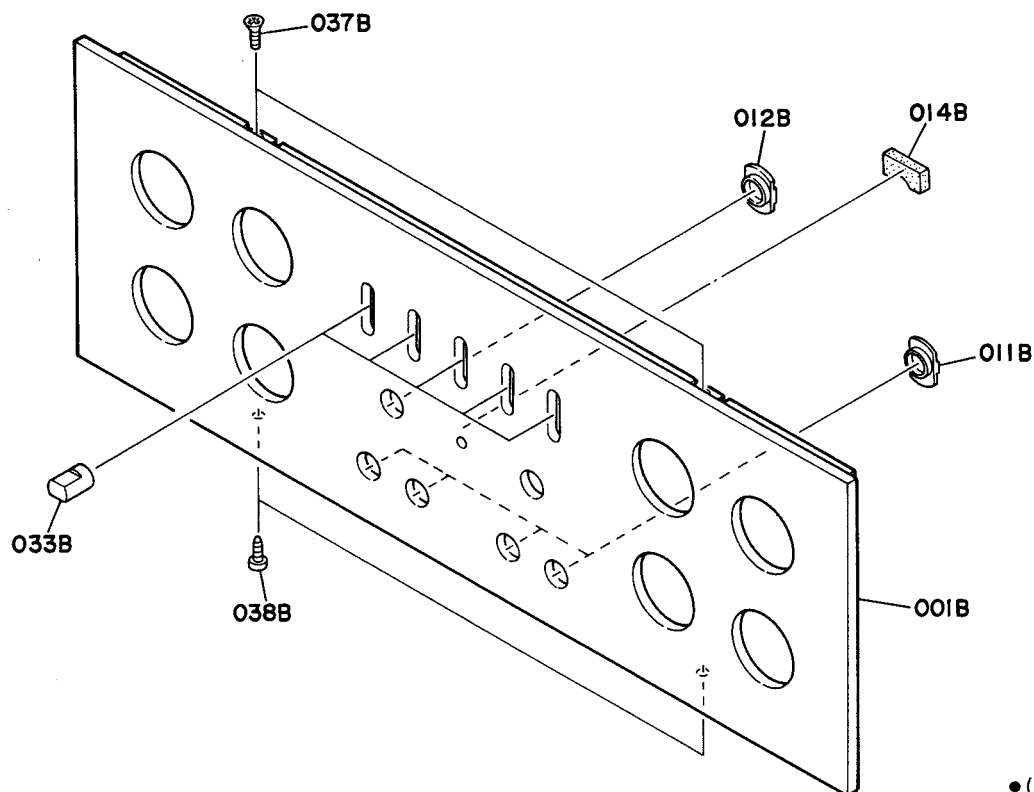


6.10 Tone Amp. (R-Ch) Assembly (PE02) Schematic Diagram and Component Locations



7. EXPLODED VIEW AND PARTS LIST

• [C01-99] Front Panel

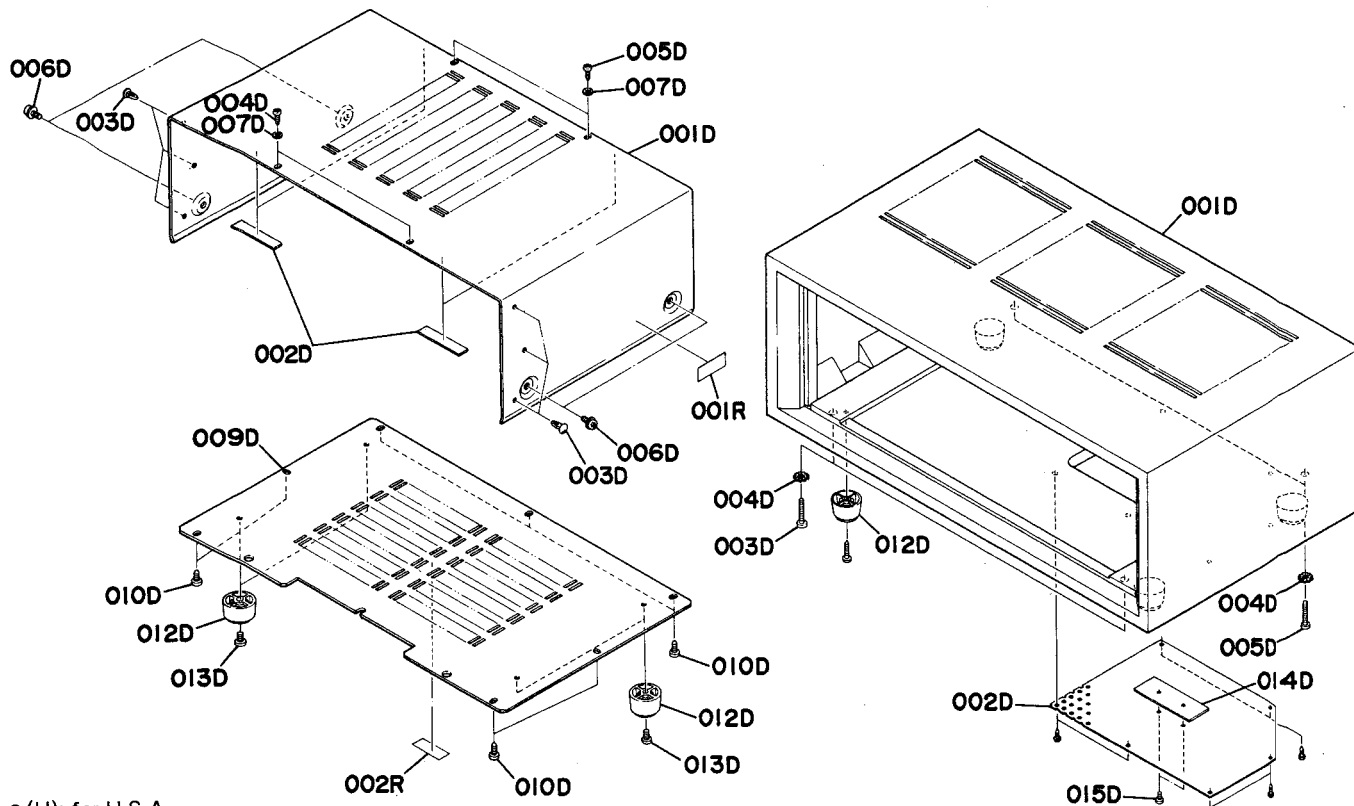


• (U): for U.S.A.
 • (E): for Europe
 • (F): for Japan

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	E	F		
A	1	1	1	227H063400	Front Panel Assembly
001B	1	1	1	227H063010	Escutcheon, Front Panel
011B	4	4	4	2978259110	Bushing
012B	1	1	1	2978259110	Bushing, Power Switch
014B	1	1	1	2112053030	Cover

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	E	F		
033B	5	5	5	227H154030	Knob, Lever Switch
037B	2	2	2	51500308Z0	F.H. Tapped Screw F3 x 8
038B	2	2	2	51280308Z0	B.H. Tapped Screw F3 x 8

● [C02-99] Lid (Top and Bottom Cover)

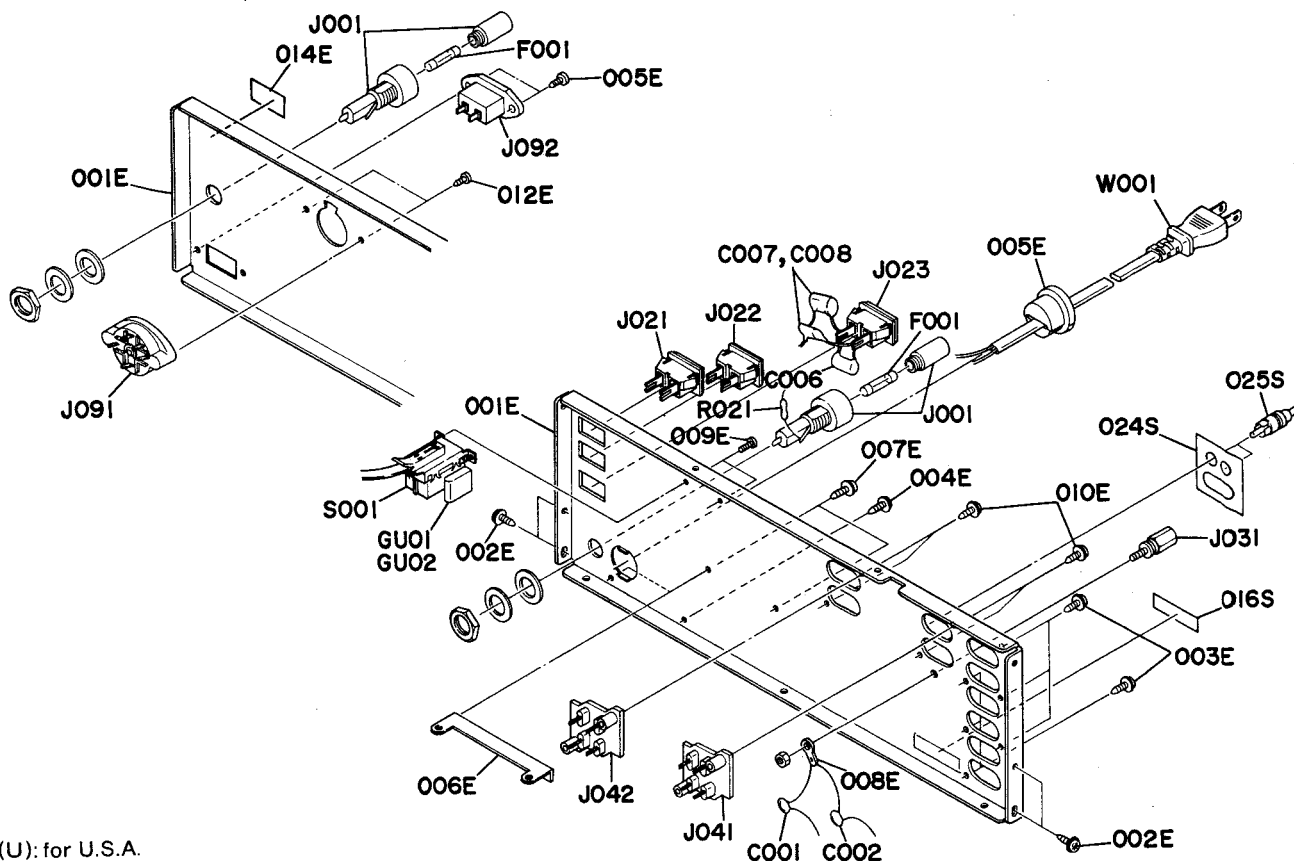


- (U): for U.S.A.
- (E): for Europe
- (F): for Japan

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	E	F		
001D	1	1		2462257010	Lid, Top Cover
001D			1	227H064500	Case, Wood
002D	4	4		2965118010	Spacer
002D			1	227H003010	Punched Plate
003D	6	6		2991259110	Bushing
003D			2	51280425U0	B.H. Tapped Screw B4 x 25
004D	2	2		51260310Z0	B.T. Screw B3 x 10
004D			4	54080400R0	T.L. Washer, RR
005D	2	2		51260308Z0	B.T. Screw B3 x 8
005D			2	51280425U0	Special Nut B4 x 25

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	E	F		
006D	4	4		51480406Z9	F. Washer Screw F4 x 6
007D	4	4		59030805S0	Washer
009D	1	1		2978257030	Lid, Bottom Cover
010D	7	7		51280410U0	B.H. Tapped Screw B4 x 10
012D	4	4	4	2932057010	Leg
013D	4	4		51570410U0	P. Tapped Screw P4 x 10
014D	1	1	1	2147109010	Shield
015D	2	2	2	51282606U0	B.H. Tapped Screw B 2.6 x 6
001R	1	1		2911861140	Label
002R	1	1		2911861110	Label

• [C03-99] Rear Panel

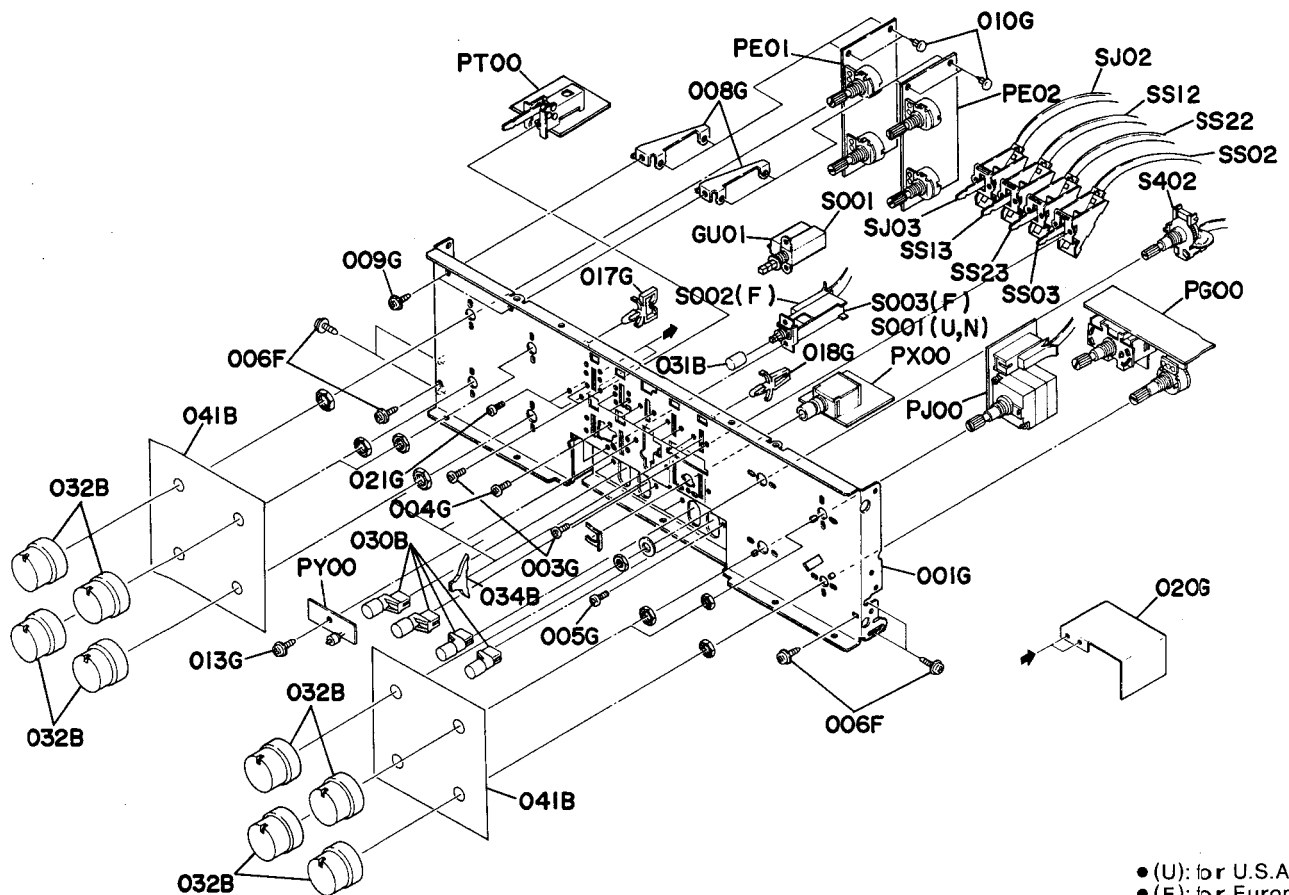


- (U): for U.S.A.
- (E): for Europe
- (F): for Japan

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	E	F		
001E	1			227H160240	Bracket, Rear Panel
001E		1		227H160230	Bracket, Rear Panel
001E			1	227H160210	Bracket, Rear Panel
002E	4	4	4	51260308Z0	B.T. Screw B3 x 8
003E	6	6	6	51260308Z0	B.T. Screw B3 x 8
004E	2	2	2	51260308Z0	B.T. Screw B3 x 8
005E	1			1455259090	Bushing, AC Cord
005E		2		51870308U0	O.C.H. Tapped Screw O3 x 8
005E			1	1455259120	Bushing, AC Cord
006E	1	1	1	2147160020	Bracket
007E	2	2	2	51260308Z0	B.T. Screw B3 x 8
008E	1	1	1	62040029W0	Lug
009E			2	51100308Z0	B.H.M. Screw B3 x 8
010E	4	4	4	51260208Z0	B.T. Screw B3 x 8
012E		2		51280308U0	B.H. Tapped Screw B3 x 8
014E		1		4581861010	Label
016S	1	1	1	2112265010	Indicator
024S	1	1	1	2147863010	Hang Tag
025S	2	2	2	YQ01000020	Shote Plug
C001	1	1	1	DK18103310	Ceramic Cap. 0.01μF 50V
C002	1	1	1	DK18103310	Ceramic Cap. 0.01μF 50V

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	E	F		
ΔF001	1			FS10100500	Fuse 1A 250V
ΔF001		1		FS10050800	Fuse 0.5A 250V
ΔF001			1	FS10100600	Fuse 1A 250V
ΔGU01			1	BF10400030	Cap. Comp. 0.1μF + 120Ω
ΔGU02			1	BF10400030	Cap. Comp. 0.1μF + 120Ω
ΔJ001	1			YJ08000310	Jack, Fuse Holder
ΔJ001		1		YJ08000290	Jack, Fuse Holder
ΔJ001			1	YJ08000300	Jack, Fuse Holder
ΔJ021	1		1	YJ04000910	Jack, AC Inlet
ΔJ022	1		1	YJ04000910	Jack, AC Inlet
ΔJ023	1		1	YJ04000910	Jack, AC Inlet
J031	1	1	1	YT01010050	Terminal, GND
J041	1	1	1	YT02040430	Pin Jack, (4P)
J042	1	1	1	YT02040430	Pin Jack, (4P)
ΔJ091			1	BY05080030	Voltage Selector
ΔJ092			1	YP04000590	Plug, AC Inlet
R021			1	GD05104140	Resistor 100KΩ ±5% ¼W
ΔS001			1	SS02020630	Slide Switch, Remote Power SW
ΔW001	1			YC02000130	A.C. Power Cord
ΔW001		1		ZC01805030	A.C. Power Cord
ΔW001			1	YC01800240	A.C. Power Cord

● [P01-99] Front Chassis and General Parts

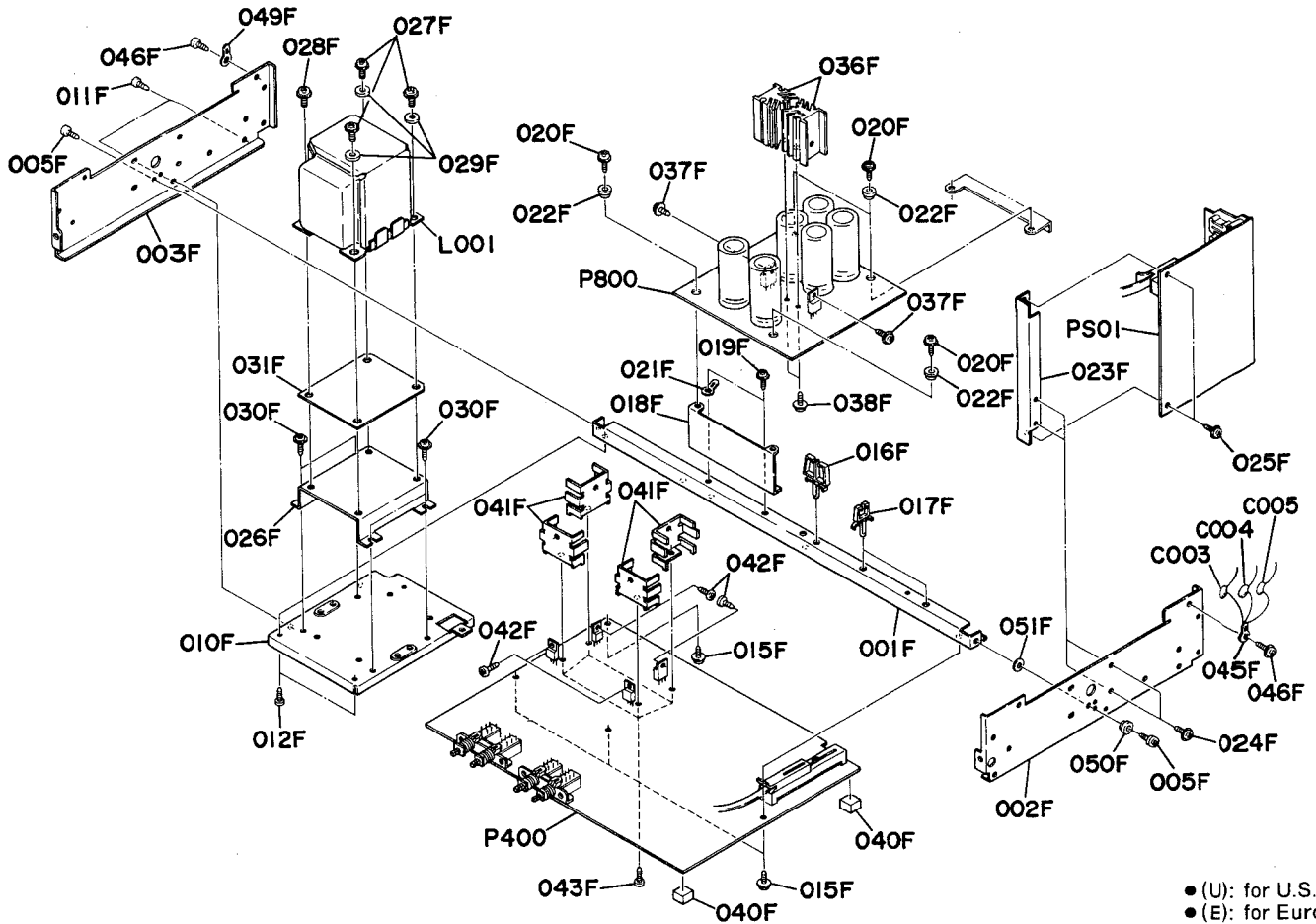


- (U): for U.S.A.
- (E): for Europe
- (F): for Japan

REF. DESIG.	QTY			PART NO.	DESCRIPTION
	U	E	F		
030B	4	4	4	227H154020	Knob, Push Switch
031B	1	1	1	2970154630	Knob, Power Switch
032B	8	8	8	227H154040	Knob
034B	5	5	5	2144259110	Bushing, Lever Switch
041B	2	2	2	223H303010	Mask
006F	6	6	6	5126030820	B.T. Screw B3 x 8
001G	1	1		2147160010	Bracket, Front Chassis
001G			1	2147160110	Bracket, Front Chassis
003G	10	10	10	51100306A9	B.H.M. Screw B3 x 6
004G	2	2	2	51100306A9	B.H.M. Screw B3 x 6
005G	4	4	4	51100306A9	B.H.M. Screw B3 x 6
008G	2	2	2	2144160130	Bracket
009G	2	2	2	5126030820	B.T. Screw B3 x 8
010G	4	4	4	2276005050	Clamper
013G	1	1	1	5126030820	B.T. Screw B3 x 8
017G	1	1	1	2886005060	Clamper
018G	1	1	1	2886005050	Clamper
020G	1	1		2144109020	Shield
021G	2	2		51100306A9	B.H.M. Screw B3 x 6

REF. DESIG.	QTY			PART NO.	DESCRIPTION
	U	E	F		
△S001	1			SP01010280	Push Switch, Power
△S001		1		SP01010410	Push Switch, Power
S002			1	SB11900020	Switch Band, FLX
S003			1	SP00010030	Push Switch, Power
SJ02	1	1	1	SB12470010	Switch Band, FLX
SJ03	1	1	1	SC00030010	Switch, Loudness
SS02	1	1	1	SB12170010	Switch Band, FLX
SS03	1	1	1	SC00030010	Switch, Input Selector
SS12	1	1	1	SB12470010	Switch Band, FLX
SS13	1	1	1	SC00030010	Switch, Tape Copy
SS22	1	1	1	SB12470010	Switch Band, FLX
SS23	1	1	1	SC00030010	Switch, Tape Monitor
S402	1	1	1	SR00050110	Rotary Switch
△GU01	1			BF10400030	Cap. Comp. 0.1μF ± 120Ω
△GU01		1		DK18103840	Ceramic 0.01μF 400V AC

● [P02-99] Main Amp. P.W. Board and General Parts

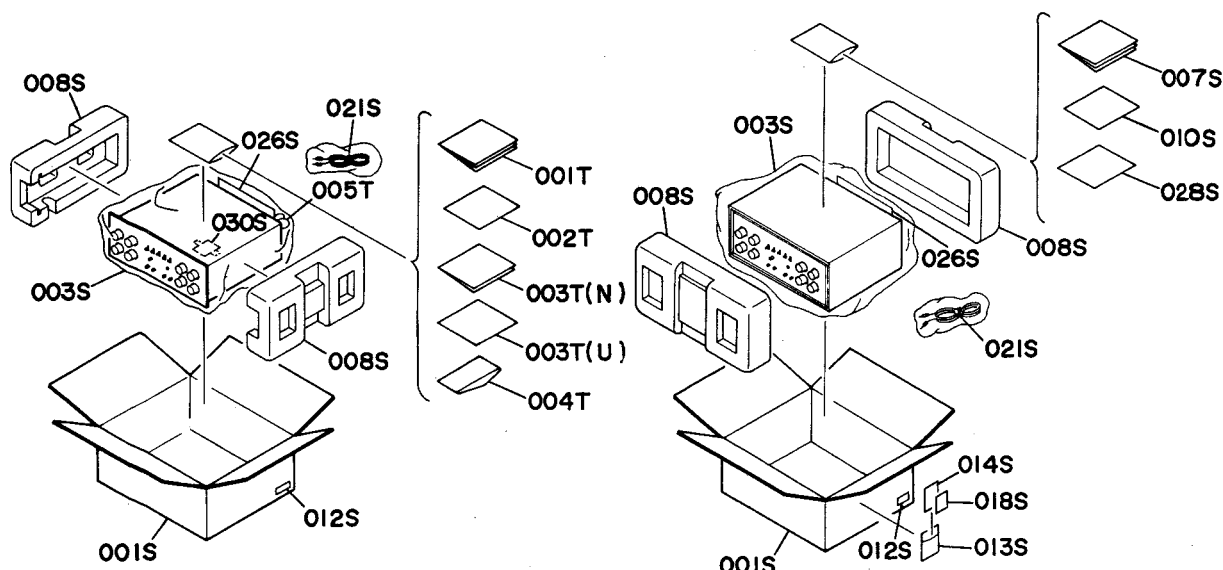


● (U): for U.S.A.
● (E): for Europe
● (F): for Japan

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	E	F		
001F			1	2147126110	Stay, Center
002F			1	2978160130	Bracket, Side Chassis (R)
003F			1	2978160140	Bracket, Side Chassis (L)
005F	2	2	2	51280312Z0	B.T. Screw B3 x 12
010F			1	2147004110	Table Transformer
011F	2	2	2	51260308Z0	B.T. Screw B3 x 8
012F	2	2	2	51260308Z0	B.T. Screw B3 x 8
015F	4	4	4	51260306Z0	B.T. Screw B3 x 6
016F	1	1	1	2886005030	Clamper
017F	2	2	2	2886005050	Clamper
018F			1	2147160130	Bracket
019F	2	2	2	51260308Z0	B.T. Screw B3 x 8
020F	4	4	4	51260308Z0	B.T. Screw B3 x 8
021F	1	1	1	62030049W0	Lug
022F	4	4	4	227H259020	Bushing
023F			1	2147160140	Bracket
024F	2	2	2	51260306Z0	B.T. Screw B3 x 6
025F	2	2	2	51260306Z0	B.T. Screw B3 x 6
026F	1	1	1	227H160050	Bracket
027F	3	3	3	51480410S9	F. Washer Screw F4 x 10
001F	1	1		2147126010	Stay Center
002F	1	1		2978160030	Bracket Side Chassis (R)
003F	1	1		2978160040	Bracket Side Chassis (L)
010F	1	1		2147004010	Table Transformer
018F	1	1		2147160010	Bracket
023F	1	1		2147160040	Bracket

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	E	F		
028F			1	51480406Z9	F. Washer Screw F4 x 6
029F			3	227H259010	Bushing
030F	4	4	4	51260408Z0	B.T. Screw B4 x 8
031F			1	227H120020	Insulator
036F	2	2	2	2147267010	Heatsink
037F	2	2	2	51260308Z0	B.T. Screw B3 x 8
038F	2	2	2	51260308Z0	B.T. Screw B3 x 8
040F	2	2	2	2147056010	Buffer
041F	4	4	4	2212267020	Heatsink
042F	4	4	4	51260308Z0	B.T. Screw B3 x 8
043F	4	4	4	51280308Z0	B.H. Tapped Screw B3 x 8
045F	1	1	1	62030049W0	Lug
046F	2	2	2	51260306Z0	B.T. Screw B3 x 6
049F	1	1	1	62030049W0	Lug
050F	1	1	1	2963259010	Bushing
051F	1	1	1	2232118300	Spacer
C003	1	1	1	DK18103310	Ceramic Cap. 0.01μ F
C004	1	1	1	DK18103310	Ceramic Cap. 0.01μ F
C005	1	1	1	DK18103310	Ceramic Cap. 0.01μ F
ΔL001	1			TS16634030	Power Transformer
ΔL001		1		TS16634020	Power Transformer
ΔL001			1	TS16634010	Power Transformer

● [H01-99] Packing Materials



(U,N) TYPE

(F) TYPE

- (U): for U.S.A.
- (E): for Europe
- (F): for Japan

REF. DESIG.	QTY			PART NO.	DESCRIPTION
	U	E	F		
001S		1		227H801010	Packing Case
001S	1			227H801020	Packing Case
001S			1	227H801030	Packing Case
003S	1	1	1	9091111030	Polyethylene Sheet
007S			1	227H851110	Instructions
008S	2	2		2970809010	Cushion
008S			2	206H809010	Cushion
010S			1	9631000130	Guarantee Card
012S	2			9526019010	Serial No. Card
012S		2		9526019060	Serial No. Card
012S			2	9526019040	Serial No. Card
013S			1	128T854010	Guarantee Card
018S			1	9650000030	S. Station Card
021S	1		1	ZD01000240	Connective Cord
021S		1		ZD01000170	Connective Cord
026S	1	1	1	2864804010	Sleeve
028S			1	9611000030	User's Card
030S		1		2731821010	Silicagel

REF. DESIG.	QTY			PART NO.	DESCRIPTION
	U	E	F		
001T	1			227H851010	Instructions
001T		1		227H851310	Instructions
002T	1			227H851020	Instructions, Spec
002T		1		227H851320	Instructions, Spec
003T	1			103H854010	Guarantee Card
003T		1		227H856010	Circuit Diagram
004T	1			2225813010	Envelope
005T	1			9560000100	Hang Tag

8. ELECTRICAL PARTS LIST

• (U): for U.S.A.
• (E): for Europe
• (F): for Japan

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	E	F		
P400	1	1	1	YK227H1610 ZZ227H1610	P400-MC PHONO CIRCUIT BOARD P.W. Board, MC Phono P.W. Board Assembly
					P400-CAPACITORS
CL01	1	1	1	DF31100520	Mica 10p F ±0.5pF
CL02	1	1	1	DF31100520	Mica 10p F ±0.5pF
CL03	1	1	1	DF35101520	Mica 100p F ±5%
CL04	1	1	1	DF35101520	Mica 100p F ±5%
CL05	1	1	1	DF35101520	Mica 100p F ±5%
CL06	1	1	1	DF35101520	Mica 100p F ±5%
CL07	1	1	1	OA10602510	Elect 10μ F 25V
CL08	1	1	1	OA10602510	Elect 10μ F 25V
CL11	1	1	1	DF75473530	Film 0.047μ F ±5%
CL12	1	1	1	DF75473530	Film 0.047μ F ±5%
CL13	1	1	1	DF31100520	Mica 10p F ±0.5pF
CL14	1	1	1	DF31100520	Mica 10p F ±0.5pF
CL19	1	1	1	OA47703510	Elect 470μ F 35V
CL20	1	1	1	OA47703510	Elect 470μ F 35V
CL21	1	1	1	OA47703510	Elect 470μ F 35V
CL22	1	1	1	OA47703510	Elect 470μ F 35V
CL25	1	1	1	EA10703540	Elect 100μ F 35V
CL26	1	1	1	EA10703540	Elect 100μ F 35V
CL47	1	1	1	OA10702510	Elect 100μ F 25V
CL48	1	1	1	OA10702510	Elect 100μ F 25V
CL91	1	1	1	DF75472530	Film 0.0047μ F ±5%
CL92	1	1	1	DF75472530	Film 0.0047μ F ±5%
CL93	1	1	1	OA10702510	Elect 100μ F 25V
CL94	1	1	1	OA10702510	Elect 100μ F 25V
CM01	1	1	1	EO22700610	Elect 220μ F 6.3V
CM02	1	1	1	EO22700610	Elect 220μ F 6.3V
CM03	1	1	1	DF75152530	Film 0.0015μ F ±5%
CM04	1	1	1	DF75152530	Film 0.0015μ F ±5%
CM05	1	1	1	OA10800610	Elect 1000μ F 6.3V
CM06	1	1	1	OA10800610	Elect 1000μ F 6.3V
CM07	1	1	1	OA10800610	Elect 1000μ F 6.3V
CM08	1	1	1	OA10800610	Elect 1000μ F 6.3V
CM09	1	1	1	DF75222530	Film 0.0022μ F ±5%
CM10	1	1	1	DF75222530	Film 0.0022μ F ±5%
CM11	1	1	1	DF75222530	Film 0.0022μ F ±5%
CM12	1	1	1	DF75222530	Film 0.0022μ F ±5%
CM15	1	1	1	OA10602510	Elect 10μ F 25V
CM16	1	1	1	OA10602510	Elect 10μ F 25V
CM17	1	1	1	DF35470520	Mica 47p F ±5%
CM18	1	1	1	DF35470520	Mica 47p F ±5%
CM19	1	1	1	OA10801610	Elect 1000μ F 16V
CM20	1	1	1	OA10801610	Elect 1000μ F 16V
CM23	1	1	1	DF75152530	Film 0.0015μ F ±5%
CM24	1	1	1	DF75152530	Film 0.0015μ F ±5%
CM25	1	1	1	OA47701610	Elect 470μ F 16V
CM26	1	1	1	OA47701610	Elect 470μ F 16V
CM27	1	1	1	OA47701610	Elect 470μ F 16V
CM28	1	1	1	OA47701610	Elect 470μ F 16V

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	E	F		
C401	1	1	1	DF35101520	Mica 100p F ±5%
C402	1	1	1	DF35101520	Mica 100p F ±5%
C403	1	1	1	OA10800610	Elect 1000μ F 6.3V
C404	1	1	1	OA10800610	Elect 1000μ F 6.3V
C405	1	1	1	OA10800610	Elect 1000μ F 6.3V
C406	1	1	1	OA10800610	Elect 1000μ F 6.3V
C407	1	1	1	DF75222530	Film 0.0022μ F ±5%
C408	1	1	1	DF75222530	Film 0.0022μ F ±5%
C409	1	1	1	DF75222530	Film 0.0022μ F ±5%
C410	1	1	1	DF75222530	Film 0.0022μ F ±5%
C411	1	1	1	DF75152530	Film 0.0015μ F ±5%
C412	1	1	1	DF75152530	Film 0.0015μ F ±5%
C413	1	1	1	DF55681520	Film 680p F ±5%
C414	1	1	1	DF55681520	Film 680p F ±5%
C415	1	1	1	DF55332520	Film 3300p F ±5%
C416	1	1	1	DF55332520	Film 3300p F ±5%
C417	1	1	1	DF74104010	Film 0.1μ F ±2%
C418	1	1	1	DF74104010	Film 0.1μ F ±2%
C421	1	1	1	DF74333010	Film 0.033μ F ±2%
C422	1	1	1	DF74333010	Film 0.033μ F ±2%
C423	1	1	1	DF75123530	Film 0.012μ F ±5%
C424	1	1	1	DF75123530	Film 0.012μ F ±5%
C425	1	1	1	OA22505010	Elect 2.2μ F 50V
C426	1	1	1	OA22505010	Elect 2.2μ F 50V
C427	1	1	1	OA22602510	Elect 22μ F 25V
C428	1	1	1	OA22602510	Elect 22μ F 25V
C433	1	1	1	EA22705060	Elect 220μ F 50V
C434	1	1	1	EA22705060	Elect 220μ F 50V
C435	1	1	1	EA22705060	Elect 220μ F 50V
C436	1	1	1	EA22705060	Elect 220μ F 50V
C447	1	1	1	OA22505010	Elect 2.2μ F 50V
C448	1	1	1	OA22505010	Elect 2.2μ F 50V
C449	1	1	1	OA22602510	Elect 22μ F 25V
C450	1	1	1	OA22602510	Elect 22μ F 25V
					P400-RESISTORS (All Resistors are ±5% and ¼W)
RL01	1	1	1	GD05224140	220KΩ
RL02	1	1	1	GD05224140	220KΩ
RL03	1	1	1	GD05471140	470Ω
RL04	1	1	1	GD05471140	470Ω
RL05	1	1	1	GD05222140	2.2KΩ
RL06	1	1	1	GD05222140	2.2KΩ
RL07	1	1	1	GD05222140	2.2KΩ
RL08	1	1	1	GD05222140	2.2KΩ
RL09	1	1	1	GD05561140	560Ω
RL10	1	1	1	GD05561140	560Ω
RL11	1	1	1	GD05561140	560Ω
RL12	1	1	1	GD05561140	560Ω
RL13	1	1	1	GD05102140	1KΩ
RL14	1	1	1	GD05102140	1KΩ
RL15	1	1	1	GD05393140	39KΩ
RL16	1	1	1	GD05393140	39KΩ
RL17	1	1	1	GD05102140	1KΩ
RL18	1	1	1	GD05102140	1KΩ
RL19	1	1	1	GD05181140	180Ω
RL20	1	1	1	GD05181140	180Ω

- (U): for U.S.A.
- (E): for Europe
- (F): for Japan

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION	
	U	E	F			
RL21	1	1	1	GD05822140	8.2K Ω	
RL22	1	1	1	GD05822140	8.2K Ω	
RL23	1	1	1	GD05391140	390 Ω	
RL24	1	1	1	GD05391140	390 Ω	
RL25	1	1	1	GD05222140	2.2K Ω	
RL26	1	1	1	GD05222140	2.2K Ω	
RL27	1	1	1	GD05222140	2.2K Ω	
RL28	1	1	1	GD05222140	2.2K Ω	
RL29	1	1	1	GD05222140	2.2K Ω	
RL30	1	1	1	GD05222140	2.2K Ω	
RL31	1	1	1	GD05222140	2.2K Ω	
RL32	1	1	1	GD05222140	2.2K Ω	
RL33	1	1	1	GD05331140	330 Ω	
RL34	1	1	1	GD05331140	330 Ω	
RL35	1	1	1	GD05331140	330 Ω	
RL36	1	1	1	GD05331140	330 Ω	
RL37	1	1	1	GD05563140	56K Ω	
RL38	1	1	1	GD05563140	56K Ω	
RL39	1	1	1	GD05563140	56K Ω	
RL40	1	1	1	GD05563140	56K Ω	
RL41	1	1	1	GD05562140	5.6K Ω	
RL42	1	1	1	GD05562140	5.6K Ω	
RL43	1	1	1	GD05122140	5.1K Ω	
RL44	1	1	1	GD05122140	5.1K Ω	
RL47	1	1	1	GG05330140	33 Ω	
RL48	1	1	1	GG05330140	33 Ω	
RL49	1	1	1	GG05330140	33 Ω	
RL50	1	1	1	GG05330140	33 Ω	
RL53	1	1	1	GG05100140	10 Ω	
RL54	1	1	1	GG05100140	10 Ω	
RL55	1	1	1	GG05100140	10 Ω	
RL56	1	1	1	GG05100140	10 Ω	
RL57	1	1	1	GG05101140	100 Ω	
RL58	1	1	1	GG05101140	100 Ω	
RL59	1	1	1	GG05101140	100 Ω	
RL60	1	1	1	GG05101140	100 Ω	
RL61	1	1	1	GG05100120	100 Ω	
RL62	1	1	1	GG05100120	100 Ω	
RL63	1	1	1	GG05100120	100 Ω	
RL64	1	1	1	GG05100120	100 Ω	
RL65	1	1	1	GA05100010	10 Ω	1W
RL66	1	1	1	GA05100010	10 Ω	1W
RL67	1	1	1	GD05103140	10K Ω	
RL68	1	1	1	GD05103140	10K Ω	
RL69	1	1	1	GA05101020	100 Ω	2W
RL70	1	1	1	GA05101020	100 Ω	2W
RL71	1	1	1	GD05103140	10K Ω	
RL72	1	1	1	GD05103140	10K Ω	
RL75	1	1	1	GD05273140	27K Ω	
RL76	1	1	1	GD05273140	27K Ω	
RL77	1	1	1	GD05302140	3K Ω	
RL78	1	1	1	GD05302140	3K Ω	
ΔRL81	1	1	1	GG05100140	10 Ω	
ΔRL82	1	1	1	GG05100140	10 Ω	
ΔRL83	1	1	1	GG05100140	10 Ω	
ΔRL84	1	1	1	GG05100140	10 Ω	
RL91	1	1	1	GD05222140	2.2K Ω	
RL92	1	1	1	GD05222140	2.2K Ω	
RL93	1	1	1	GD05474140	470K Ω	
RL94	1	1	1	GD05474140	470K Ω	
RL95	1	1	1	GD05101140	100 Ω	
RL96	1	1	1	GD05101140	100 Ω	

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION	
	U	E	F			
RM01	1	1	1	GM21418000	180 Ω	±2%
RM02	1	1	1	GM21418000	180 Ω	±2%
RM03	1	1	1	GM21422000	220 Ω	±2%
RM04	1	1	1	GM21422000	220 Ω	±2%
RM07	1	1	1	GM21447000	470 Ω	±2%
RM08	1	1	1	GM21447000	470 Ω	±2%
RM09	1	1	1	GM21447000	470 Ω	±2%
RM10	1	1	1	GM21447000	470 Ω	±2%
RM11	1	1	1	GM21422010	2.2K Ω	±2%
RM12	1	1	1	GM21422010	2.2K Ω	±2%
RM13	1	1	1	GM21456010	5.6K Ω	±2%
RM14	1	1	1	GM21456010	5.6K Ω	±2%
RM19	1	1	1	GM21447000	470 Ω	±2%
RM20	1	1	1	GM21447000	470 Ω	±2%
RM21	1	1	1	GM21447000	470 Ω	±2%
RM22	1	1	1	GM21447000	470 Ω	±2%
RM23	1	1	1	GG05011140	1.1 Ω	
RM24	1	1	1	GG05011140	1.1 Ω	
RM25	1	1	1	GD05680140	68 Ω	
RM26	1	1	1	GD05680140	68 Ω	
RM27	1	1	1	GD05680140	68 Ω	
RM28	1	1	1	GD05680140	68 Ω	
RM29	1	1	1	GD05472140	4.7K Ω	
RM30	1	1	1	GD05472140	4.7K Ω	
RM31	1	1	1	GD05272140	2.7K Ω	
RM32	1	1	1	GD05272140	2.7K Ω	
RM33	1	1	1	GD05332140	3.3K Ω	
RM34	1	1	1	GD05332140	3.3K Ω	
RM35	1	1	1	GG05100140	10 Ω	
RM36	1	1	1	GG05100140	10 Ω	
RM37	1	1	1	GG05100140	10 Ω	
RM38	1	1	1	GG05100140	10 Ω	
RM39	1	1	1	GD05101140	100 Ω	
RM40	1	1	1	GD05101140	100 Ω	
RM41	1	1	1	GD05273140	27K Ω	
RM42	1	1	1	GD05273140	27K Ω	
RM43						
RM46	4	4	4	GA05471020	470 Ω	1/4W
RM47	1	1	1	GD05153140	15K Ω	
RM51	1	1	1	GG05220140	220 Ω	
RM52	1	1	1	GG05220140	220 Ω	
R401	1	1	1	GM21439020	39K Ω	±2%
R402	1	1	1	GM21439020	39K Ω	±2%
R403	1	1	1	GM21410030	100K Ω	±2%
R404	1	1	1	GM21410030	100K Ω	±2%
R405	1	1	1	GM21410030	100K Ω	±2%
R406	1	1	1	GM21410030	100K Ω	±2%
R407	1	1	1	GM21410030	100K Ω	±2%
R408	1	1	1	GM21410030	100K Ω	±2%
R409	1	1	1	GM21410010	1K Ω	±2%
R410	1	1	1	GM21410010	1K Ω	±2%
R411	1	1	1	GM21410010	1K Ω	±2%
R412	1	1	1	GM21410010	1K Ω	±2%
R413	1	1	1	GM21410010	1K Ω	±2%
R414	1	1	1	GM21410010	1K Ω	±2%
R415	1	1	1	GD05822140	8.2K Ω	
R416	1	1	1	GD05822140	8.2K Ω	
R417	1	1	1	GD05682140	6.8K Ω	
R418	1	1	1	GD05682140	6.8K Ω	
R419	1	1	1	GD05822140	8.2K Ω	
R420	1	1	1	GD05822140	8.2K Ω	

- (U): for U.S.A.
- (E): for Europe
- (F): for Japan

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	E	F		
R421	1	1	1	GD05682140	6.8K Ω
R422	1	1	1	GD05682140	6.8K Ω
R423	1	1	1	GD05151140	150 Ω
R424	1	1	1	GD05151140	150 Ω
R425	1	1	1	GD05151140	150 Ω
R426	1	1	1	GD05151140	150 Ω
R427	1	1	1	GM21459020	59K Ω $\pm 2\%$
R428	1	1	1	GM21459020	59K Ω $\pm 2\%$
R429	1	1	1	GM21459010	59K Ω $\pm 2\%$
R430	1	1	1	GM21459020	59K Ω $\pm 2\%$
R431	1	1	1	GM214390G0	39 Ω $\pm 2\%$
R432	1	1	1	GM214390G0	39 Ω $\pm 2\%$
R433	1	1	1	GD05272140	2.7K Ω
R434	1	1	1	GD05272140	2.7K Ω
R435	1	1	1	GD05272140	2.7K Ω
R436	1	1	1	GD05272140	2.7K Ω
R437	1	1	1	GD05151140	150 Ω
R438	1	1	1	GD05151140	150 Ω
R439	1	1	1	GD05151140	150 Ω
R440	1	1	1	GD05151140	150 Ω
R441	1	1	1	GD05182140	1.8K Ω
R442	1	1	1	GD05182140	1.8K Ω
R443	1	1	1	GD05272140	2.7K Ω
R444	1	1	1	GD05272140	2.7K Ω
R449	1	1	1	GG05100140	10 Ω
R450	1	1	1	GG05100140	10 Ω
R451	1	1	1	GG05100140	10 Ω
R452	1	1	1	GG05100140	10 Ω
R453	1	1	1	GM21422010	2.2K Ω $\pm 2\%$
R454	1	1	1	GM21422010	2.2K Ω $\pm 2\%$
R457	1	1	1	GD05473140	47K Ω
R458	1	1	1	GD05473140	47K Ω
R459	1	1	1	GM21436000	360 Ω $\pm 2\%$
R460	1	1	1	GM21436000	360 Ω $\pm 2\%$
△R461	1	1	1	GG05820120	82 Ω $\frac{1}{4}W$
△R462	1	1	1	GG05820120	82 Ω $\frac{1}{4}W$
△R463	1	1	1	GG05820120	82 Ω $\frac{1}{4}W$
△R464	1	1	1	GG05820120	82 Ω $\frac{1}{4}W$
R465	1	1	1	GD05222140	2.2K Ω
R466	1	1	1	GD05222140	2.2K Ω
R467	1	1	1	GD05224140	220K Ω
R468	1	1	1	GD05224140	220K Ω
R469	1	1	1	GD05151140	150 Ω
R470	1	1	1	GD05151140	150 Ω
P400-SEMICONDUCTORS					
QL01	1	1	1	HC10043050	IC 2SK150GR
QL02	1	1	1	HC10043050	IC 2SK150GR
QL03	1	1	1	HT322592F0	Transistor 2SC2259 (F or G)
QL04	1	1	1	HT322592F0	Transistor 2SC2259 (F or G)
QL05	1	1	1	HD20011050	Diode 1S1555
QL06	1	1	1	HD20011050	Diode 1S1555
QL07	1	1	1	HD20011050	Diode 1S1555
QL08	1	1	1	HD20011050	Diode 1S1555
QL09	1	1	1	HT317752D0	Transistor 2SC1775A (D or E)
QL10	1	1	1	HT317752D0	Transistor 2SC1775A (D or E)

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	E	F		
QL11	1	1	1	HD20011050	Diode 1S1555
QL12	1	1	1	HD20011050	Diode 1S1555
QL13	1	1	1	HT108722D0	Transistor 2SA872A (D or E)
QL14	1	1	1	HT108722D0	Transistor 2SA872A (D or E)
QL15	1	1	1	HT317752D0	Transistor 2SC1775A (D or E)
QL16	1	1	1	HT317752D0	Transistor 2SC1775A (D or E)
QL17	1	1	1	HD20011050	Diode 1S1555
QL18	1	1	1	HD20011050	Diode 1S1555
QL19	1	1	1	HT108722D0	Transistor 2SA872A (D or E)
QL20	1	1	1	HT108722D0	Transistor 2SA872A (D or E)
QL21	1	1	1	HD20014010	Diode 1SS81
QL22	1	1	1	HD20014010	Diode 1SS81
QL23	1	1	1	HD20014010	Diode 1SS81
QL24	1	1	1	HD20014010	Diode 1SS81
QL25	1	1	1	HT108722D0	Transistor 2SA872A (D or E)
QL26	1	1	1	HT108722D0	Transistor 2SA872A (D or E)
QL27	1	1	1	HT317752D0	Transistor 2SC1775A (D or E)
QL28	1	1	1	HT317752D0	Transistor 2SC1775A (D or E)
QL29	1	1	1	HT323202B0	Transistor 2SC2320 (E or F)
QL30	1	1	1	HT323202B0	Transistor 2SC2320 (E or F)
QL31	1	1	1	HT406661C0	Transistor 2SD666 (C)
QL32	1	1	1	HT406661C0	Transistor 2SD666 (C)
QL33	1	1	1	HT206461C0	Transistor 2SB646 (C)
QL34	1	1	1	HT206461C0	Transistor 2SB646 (C)
QL35	1	1	1	HT322382E0	Transistor 2SC2238 (O or Y)
QL36	1	1	1	HT322382E0	Transistor 2SC2238 (O or Y)
QL37	1	1	1	HT109682E0	Transistor 2SA968 (O or Y)
QL38	1	1	1	HT109682E0	Transistor 2SA968 (O or Y)
QL43	1	1	1	HD20005010	Diode WO6B
QM01	1	1	1	HT325451E0	Transistor 2SC2545 (E)
QM02	1	1	1	HT325451E0	Transistor 2SC2545 (E)
QM05	1	1	1	HT325451E0	Transistor 2SC2545 (E)
QM06	1	1	1	HT325451E0	Transistor 2SC2545 (E)
QM09	1	1	1	HT110831E0	Transistor 2SA1083 (E)
QM10	1	1	1	HT110831E0	Transistor 2SA1083 (E)
QM13	1	1	1	HT110831E0	Transistor 2SA1083 (E)
QM14	1	1	1	HT110831E0	Transistor 2SA1083 (E)
QM17	1	1	1	HT110831E0	Transistor 2SA1083 (E)
QM18	1	1	1	HT110831E0	Transistor 2SA1083 (E)
QM19	1	1	1	HT325451E0	Transistor 2SC2545 (E)
QM20	1	1	1	HT325451E0	Transistor 2SC2545 (E)
QM21	1	1	1	HT325451E0	Transistor 2SC2545 (E)
QM22	1	1	1	HT325451E0	Transistor 2SC2545 (E)
QM23	1	1	1	HT406661C0	Transistor 2SD666 (C)
QM24	1	1	1	HT406661C0	Transistor 2SD666 (C)
QM25	1	1	1	HT206461C0	Transistor 2SB646 (C)
QM26	1	1	1	HT206461C0	Transistor 2SB646 (C)
Q401	1	1	1	HF201472B0	F.E.T. 2SK147 (B R or V)
Q402	1	1	1	HF201472B0	F.E.T. 2SK147 (B R or V)
Q403	1	1	1	HF100722B0	F.E.T. 2SJ72 (B R or V)
Q404	1	1	1	HF100722B0	F.E.T. 2SJ72 (B R or V)
Q409	1	1	1	HT322401B0	Transistor 2SC2240 (B L)
Q410	1	1	1	HT322401B0	Transistor 2SC2240 (B L)
Q411	1	1	1	HT109701B0	Transistor 2SA970 (B L)
Q412	1	1	1	HT109701B0	Transistor 2SA970 (B L)
Q413	1	1	1	HT109701A0	Transistor 2SA970 (B L)
Q414	1	1	1	HT109701A0	Transistor 2SA970 (B L)

- (U): for U.S.A.
- (E): for Europe
- (F): for Japan

REF. DESIG.	QTY			PART NO.	DESCRIPTION
	U	E	F		
Q415	1	1	1	HT322401A0	Transistor 2SC2240 (GR)
Q416	1	1	1	HT322401A0	Transistor 2SC2240 (GR)
Q417	1	1	1	HT108722D0	Transistor 2SA872A (D or E)
Q418	1	1	1	HT108722D0	Transistor 2SA872A (D or E)
Q419	1	1	1	HT317752D0	Transistor 2SC1775A (D or E)
Q420	1	1	1	HT317752D0	Transistor 2SC1775A (D or E)
Q421	1	1	1	HT323201F0	Transistor 2SC2320F (F)
Q422	1	1	1	HT323201F0	Transistor 2SC2320F (F)
Q423	1	1	1	HT322382E0	Transistor 2SC2238 (O or Y)
Q424	1	1	1	HT322382E0	Transistor 2SC2238 (O or Y)
Q425	1	1	1	HT109682E0	Transistor 2SA968 (O or Y)
Q426	1	1	1	HT109682E0	Transistor 2SA968 (O or Y)
Q427	1	1	1	HD20014010	Diode 1SS81
Q428	1	1	1	HD20014010	Diode 1SS81
Q429	1	1	1	HD20014010	Diode 1SS81
Q430	1	1	1	HD20014010	Diode 1SS81
P400-MISCELLANEOUS					
SL01	1	1	1	SP02020490	Push Switch
SL02	1	1	1	SP02020490	Push Switch
S401	1	1	1	SS06060070	Slide Switch
S402	1	1	1	SR00050110	Rotary Switch
△LL01	1	1	1	LY20240010	Relay
P800-POWER SUPPLY CIRCUIT BOARD					
P800	1	1	1	YK227H0200	P.W. Board, Power Supply
	1			ZZ227H0200	P.W. Board Assembly
		1		ZZ227H8200	P.W. Board Assembly
P800-CAPACITORS					
CD01	1	1	1	OA10701010	Elect 100μ F 10V
CD02	1	1	1	DF75103530	Film 0.01μ F ±5%
CD04	1	1	1	OA47505010	Elect 4.7μ F 50V
CD05	1	1	1	OA10505010	Elect 1μ F 50V
△C801	1	1		EB10805080	Elect 1000μ F 50V
△C801			1	OB82706310	Elect 820μ F 63V
△C802	1	1		EB10805080	Elect 1000μ F 50V
△C802			1	OB82706310	Elect 820μ F 63V
△C803	1	1		EB10805080	Elect 1000μ F 50V
△C803			1	OB82706310	Elect 820μ F 63V
△C804	1	1		EB10805080	Elect 1000μ F 50V
△C804			1	OB82706310	Elect 820μ F 63V
C805	1	1	1	DF35101520	Mica 100p F ±5%
C806	1	1	1	DF35101520	Mica 100p F ±5%
C809	1	1	1	OA10505010	Elect 1μ F 50V
C810	1	1	1	OA10505010	Elect 1μ F 50V
C811	1	1		EB10805080	Elect 1000μ F 50V
C811			1	OB82706310	Elect 820μ F 63V
C812	1	1		EB10805080	Elect 1000μ F 50V
C812			1	OB82706310	Elect 820μ F 63V
C815	1	1		DK18103510	Ceramic 0.01μ F
C816	1	1		DK18103510	Ceramic 0.01μ F
C817	1	1		DK18103510	Ceramic 0.01μ F
C818	1	1		DK18103510	Ceramic 0.01μ F

REF. DESIG.	QTY			PART NO.	DESCRIPTION
	U	E	F		
RD01	1	1	1	GD05304140	300KΩ
RD02	1	1	1	GD05103140	10KΩ
RD03	1	1	1	GD05104140	100KΩ
RD04	1	1	1	GD05103140	10KΩ
RD09	1	1	1	GD05393140	39KΩ
RD10	1	1	1	GD05333140	33KΩ
RD11	1	1	1	GD05333140	33KΩ
RD12	1	1	1	GD05103140	10KΩ
RD13	1	1	1	GG05272120	2.7KΩ ½W
R801	1	1	1	GD05151140	150Ω
R802	1	1	1	GD05151140	150Ω
R803	1	1	1	GD05102140	1KΩ
R804	1	1	1	GD05102140	1KΩ
R805	1	1	1	GG05272120	2.7KΩ ½W
R806	1	1	1	GG05272120	2.7KΩ ½W
R807	1	1	1	GD05183140	18KΩ
R808	1	1	1	GD05183140	18KΩ
R809	1	1	1	GD05472140	4.7KΩ
R810	1	1	1	GD05472140	4.7KΩ
△R811	1	1	1	GA05056010	5.6Ω 1W
△R812	1	1	1	GA05056010	5.6Ω 1W
R813	1	1	1	GA05562020	5.6KΩ 2W
R815	1	1	1	GA05182020	1.8KΩ 2W
R817	1	1	1	GD05563140	56KΩ
R818	1	1	1	GD05563140	56KΩ
R819	1	1	1	GD05563140	56KΩ
R820	1	1	1	GD05563140	56KΩ
P800-SEMICONDUCTORS					
QD01	1	1	1	HT110152A0	Transistor 2SA1015 (O or Y)
QD02	1	1	1	HT323202B0	Transistor 2SC2320 (E or F)
QD03	1	1	1	HD20011050	Diode 1S1555
QD05	1	1	1	HF200301D0	F.E.T. 2SK30 (Y)
QD06	1	1	1	HD30012010	Zener 24V, Low Noise
QD07	1	1	1	HD20011050	Diode 1S1555
QD08	1	1	1	HD20011050	Diode 1S1555
QD09	1	1	1	HD20014010	Diode 1SS81
QD10	1	1	1	HD20014010	Diode 1SS81
Q801	1	1	1	HT322382E0	Transistor 2SC2238 (O or Y)
△Q802	1	1	1	HT109682E0	Transistor 2SA968 (O or Y)
△Q803	1	1	1	HT322402A0	Transistor 2SC2240 (GR or BL)
Q804	1	1	1	HT109702A0	Transistor 2SA970 (GR or BL)
Q805	1	1	1	HF200301C0	F.E.T. 2SK30 (Y)
Q806	1	1	1	HF200301C0	F.E.T. 2SK30 (Y)
Q807	1	1	1	HT317752D0	Transistor 2SC1775A (D or E)
Q808	1	1	1	HT108722D0	Transistor 2SA872A (D or E)
Q809	1	1	1	HD30008010	Zener HZ6BIL
Q810	1	1	1	HD30008010	Zener HZ6BIL
△Q811	1	1	1	HD20005010	Diode WO6B
△Q812	1	1	1	HD20005010	Diode WO6B
△Q813	1	1	1	HD20005010	Diode WO6B
△Q814	1	1	1	HD20005010	Diode WO6B
P800-MISCELLANEOUS					
F801		1		FS10100800	Fuse T1A 250V
F802		1		FS10100800	Fuse T1A 250V
J801		1		YJ08000270	Jack, Fuse Folder
J802		1		YJ08000270	Jack, Fuse Folder
J803		1		YJ08000270	Jack, Fuse Folder
J804		1		YJ08000270	Jack, Fuse Folder

- (U): for U.S.A.
- (E): for Europe
- (F): for Japan

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	E	F		
PE01	1	1	1	YK227H2730 ZZ227H2730	PE01-TONE AMP (L) CIRCUIT BOARD P.W. Board Tone Amp (L) P.W. Board Assembly
CE01	1	1	1	OA10505010	Elect 1μ F 50V
CE03	1	1	1	DF31100520	Mica 10p F ±5%
CE05	1	1	1	OA10701010	Elect 100μ F 10V
CE07	1	1	1	OA10701010	Elect 100μ F 10V
CE09	1	1	1	DF75472530	Film 4700p F ±5%
CE11	1	1	1	DF75472530	Film 4700p F ±5%
CE13	1	1	1	DF35560520	Mica 56p F ±5%
CE15	1	1	1	OA10602510	Elect 10μ F 25V
CE17	1	1	1	DF31100520	Mica 10p F ±0.5pF
CE19	1	1	1	EQ10602510	Elect 10μ F 25V
CE21	1	1	1	DF75563530	Film 0.056μ F ±5%
CE23	1	1	1	DF75563530	Film 0.056μ F ±5%
CE25	1	1	1	DF75393530	Film 0.039μ F ±5%
CE27	1	1	1	DF75472530	Film 4700p F ±5%
CE29	1	1	1	OA10703510	Elect 100μ F 35V
CE31	1	1	1	OA10703510	Elect 100μ F 35V
RE01	1	1	1	GD05224140	220KΩ
RE03	1	1	1	GD05331140	330Ω
RE05	1	1	1	GD05152140	1.5KΩ
RE07	1	1	1	GD05152140	1.5KΩ
RE09	1	1	1	GD05333140	33KΩ
RE11	1	1	1	GD05333140	33KΩ
RE13	1	1	1	GD05330140	33Ω
RE15	1	1	1	GD05330140	33Ω
RE17	1	1	1	GD05224140	220KΩ
RE19	1	1	1	GD05224140	220KΩ
RE21	1	1	1	GD05101140	100Ω
RE23	1	1	1	GD05101140	100Ω
RE25	1	1	1	GD05472140	4.7KΩ
RE27	1	1	1	GD05272140	2.7KΩ
RE29	1	1	1	GD05392140	3.9KΩ
RE31	1	1	1	GG05220140	22Ω
RE33	1	1	1	GG05220140	22Ω
RE35	1	1	1	GD05182140	1.8KΩ
RE37	1	1	1	GD05822140	8.2KΩ
RE39	1	1	1	GD05822140	8.2KΩ
RE41	1	1	1	GD05391140	390Ω
RE43	1	1	1	GD05473140	47KΩ
RE45	1	1	1	GD05224140	220KΩ
RE47	1	1	1	GD05182140	1.8KΩ
Δ RE49	1	1	1	GG05471140	470Ω
Δ RE51	1	1	1	GG05471140	470Ω
Δ RE53	1	1	1	RK05030370	Variable 50K 8 DETENT
Δ RE55	1	1	1	RK02030580	Variable 20KΩ W DETENT
QE01	1	1	1	HT322401A0	Transistor 2SC2240 (GR)
QE03	1	1	1	HT109701A0	Transistor 2SA970 (GR)
QE05	1	1	1	HT108722D0	Transistor 2SA872A (D or E)
QE07	1	1	1	HT317752D0	Transistor 2SC1775A (D or E)
QE09	1	1	1	HT323202B0	Transistor 2SC2320 (E or F)
QE11	1	1	1	HT406661C0	Transistor 2SD666 (C)
QE13	1	1	1	HT206461C0	Transistor 2SB646 (C)

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	E	F		
PE02	1	1	1	YK227H2740 ZZ227H2740	PE02-TONE AMP (R) CIRCUIT BOARD P.W. Board Tone Amp (R) P.W. Board Assembly
CE02	1	1	1	OA10505010	Elect 1μ F 50V
CE04	1	1	1	DF31100520	Mica 10p F ±0.5pF
CE06	1	1	1	OA10701010	Elect 100μ F 10V
CE08	1	1	1	OA10701010	Elect 100μ F 10V
CE10	1	1	1	DF75472530	Film 4700p F ±5%
CE12	1	1	1	DF75472530	Film 4700p F ±5%
CE14	1	1	1	DF35560520	Mica 56p F ±5%
CE16	1	1	1	OA10602510	Elect 10μ F 25V
CE18	1	1	1	DF31100520	Mica 10p F ±0.5pF
CE20	1	1	1	EQ10602510	Elect 10μ F 25V
CE22	1	1	1	DF75563530	Film 0.056μ F ±5%
CE24	1	1	1	DF75563530	Film 0.056μ F ±5%
CE26	1	1	1	DF75393530	Film 0.039μ F ±5%
CE28	1	1	1	DF75472530	Film 4700p F ±5% 100V
CE30	1	1	1	OA10703510	Elect 100μ F 35V
CE32	1	1	1	OA10703510	Elect 100μ F 35V
RE02	1	1	1	GD05224140	220KΩ
RE04	1	1	1	GD05331140	330Ω
RE06	1	1	1	GD05152140	1.5KΩ
RE08	1	1	1	GD05152140	1.5KΩ
RE10	1	1	1	GD05333140	33KΩ
RE12	1	1	1	GD05333140	33KΩ
RE14	1	1	1	GD05330140	33Ω
RE16	1	1	1	GD05330140	33Ω
RE18	1	1	1	GD05224140	220KΩ
RE20	1	1	1	GF05224140	220KΩ
RE22	1	1	1	GD05101140	100Ω
RE24	1	1	1	GD05101140	100Ω
RE26	1	1	1	GD05472140	4.7KΩ
RE28	1	1	1	GD05272140	2.7KΩ
RE30	1	1	1	GD05392140	3.9KΩ
RE32	1	1	1	GG05220140	22Ω
RE34	1	1	1	GG05220140	22Ω
RE36	1	1	1	GD05182140	1.8KΩ
RE38	1	1	1	GD05822140	8.2KΩ
RE40	1	1	1	GD05822140	8.2KΩ
RE42	1	1	1	GD05391140	390Ω
RE44	1	1	1	GD05473140	47KΩ
RE46	1	1	1	GD05224140	220KΩ
RE48	1	1	1	GD05182140	1.8KΩ
RE50	1	1	1	GG05471140	470Ω
RE52	1	1	1	GG05471140	470Ω
RE54	1	1	1	RK05030370	Variable 50K 8 DETENT
RE56	1	1	1	RK02030580	Variable 20KΩ W DETENT
QE02	1	1	1	HT322401A0	Transistor 2SC2240 (GR)
QE04	1	1	1	HT109701A0	Transistor 2SA970 (GR)
QE06	1	1	1	HT108722D0	Transistor 2SA872A (D or E)
QE08	1	1	1	HT317752D0	Transistor 2SC1775A (D or E)
QE10	1	1	1	HT323202B0	Transistor 2SC2320 (E or F)
QE12	1	1	1	HT406661C0	Transistor 2SD666 (C)
QE14	1	1	1	HT206461C0	Transistor 2SB646 (C)

- (U): for U.S.A.
- (E): for Europe
- (F): for Japan

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	E	F		
PG00	1	1	1	YK227H2770	PG00-BALANCE VR/MODE SWITCH CIRCUIT BOARD P.W. Board, Balance VR/Mode Switch
	1	1		ZZ227H2770	P.W. Board Assembly
RG01	1	1	1	RM01040510	PG00-RESISTOR Variable 100K Ω MN Balance
SG01	1	1	1	SR04050250	PG00-MISCELLANEOUS Rotary Switch, Mode
PJ00	1	1	1	YK227H1630	PJ00-LOUDNESS SW. & VOLUME CIRCUIT BOARD P.W. Board, Loudness SW & Volume
	1	1		ZZ227H1630	P.W. Board Assembly
CJ01	1	1	1	DF75683530	PJ00-CAPACITORS Film 0.068 μ F $\pm$ 5%
CJ02	1	1	1	DF75683530	Film 0.068 μ F $\pm$ 5%
CJ03	1	1	1	DF75473530	Film 0.047 μ F $\pm$ 5%
CJ04	1	1	1	DF75473530	Film 0.047 μ F $\pm$ 5%
RJ01	1	1	1	GD05822140	PJ00-RESISTORS 8.2K Ω $\pm$ 5% $\frac{1}{4}$ W
RJ02	1	1	1	GD05822140	8.2K Ω $\pm$ 5% $\frac{1}{4}$ W
RJ03	1	1	1	RM01040520	Variable 100K Ω (B)x2 Volume
SJ01	1	1	1	SS04040040	PJ00-MISCELLANEOUS Slide Switch
SJ02	1	1	1	SB12470010	Switch Band, FLX
SJ03	1	1	1	SC00030010	Switch, Loudness
PS01	1	1	1	YK227H2710	PS01-INPUT SELECTOR SW CIRCUIT BOARD P.W. Board, Input Selector SW.
	1	1		ZZ227H2710	P.W. Board Assembly
RS01	1	1	1	GD05561140	PS01-RESISTORS (All Resistors are $\pm$ 5% and $\frac{1}{4}$ W) 560 Ω
RS02	1	1	1	GD05561140	560 Ω
RS03	1	1	1	GD05221140	220 Ω
RS04	1	1	1	GD05221140	220 Ω
RS05	1	1	1	GD05221140	220 Ω
RS06	1	1	1	GD05221140	220 Ω
RS07	1	1	1	GD05392140	3.9K Ω

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	E	F		
QS01	1	1	1	HD20011050	PS01-SEMICONDUCTOR Diode 1S1555
JS01	1	1	1	YT02040330	PS01-MISCELLANEOUS Terminal, RCA Pin 4P Gold
JS02	1	1	1	YT02040330	Terminal, RCA Pin 4P Gold
JS03	1	1	1	YT02040330	Terminal, RCA Pin 4P Gold
Δ LS01	1	1	1	LY20240160	Relay, FRL-644D2412BS
SS01	1	1	1	SS08040030	Slide Switch
SS02	1	1	1	SB12170010	Switch Band, FLX
SS03	1	1	1	SC00030010	Switch, Input Selector
SS11	1	1	1	SS04040040	Slide Switch
SS12	1	1	1	SB12470010	Switch Band, FLX
SS13	1	1	1	SC00030010	Switch, Tape Copy
SS21	1	1	1	SS04040060	Slide Switch
SS22	1	1	1	SB12470010	Switch Band, FLX
SS23	1	1	1	SC00030010	Switch, Tape Monitor
PT00	1	1	1	YK227H2750 ZZ227H2750	PT00-TONE IN/OUT SWITCH CIRCUIT BOARD P.W. Board, Tone in/out Switch P.W. Board Assembly
ST01	1	1	1	SC04020150	PT00-MISCELLANEOUS Switch, Tone
PX00	1	1	1	YK227H1640 ZZ227H1640	PX00-HEADPHONE CIRCUIT BOARD P.W. Board, Headphone P.W. Board Assembly
JX01	1	1	1	YJ01001400	Jack, Headphone
PY00	1	1	1	YK227H1620 ZZ227H1620	PY00-L.E.D. CIRCUIT BOARD P.W. Board, L.E.D. P.W. Board Assembly
Δ QY01	1	1	1	HI10004030	PY00-SEMICONDUCTOR L.E.D.

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

NOTE ON SAFETY :

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

9. TECHNICAL SPECIFICATIONS

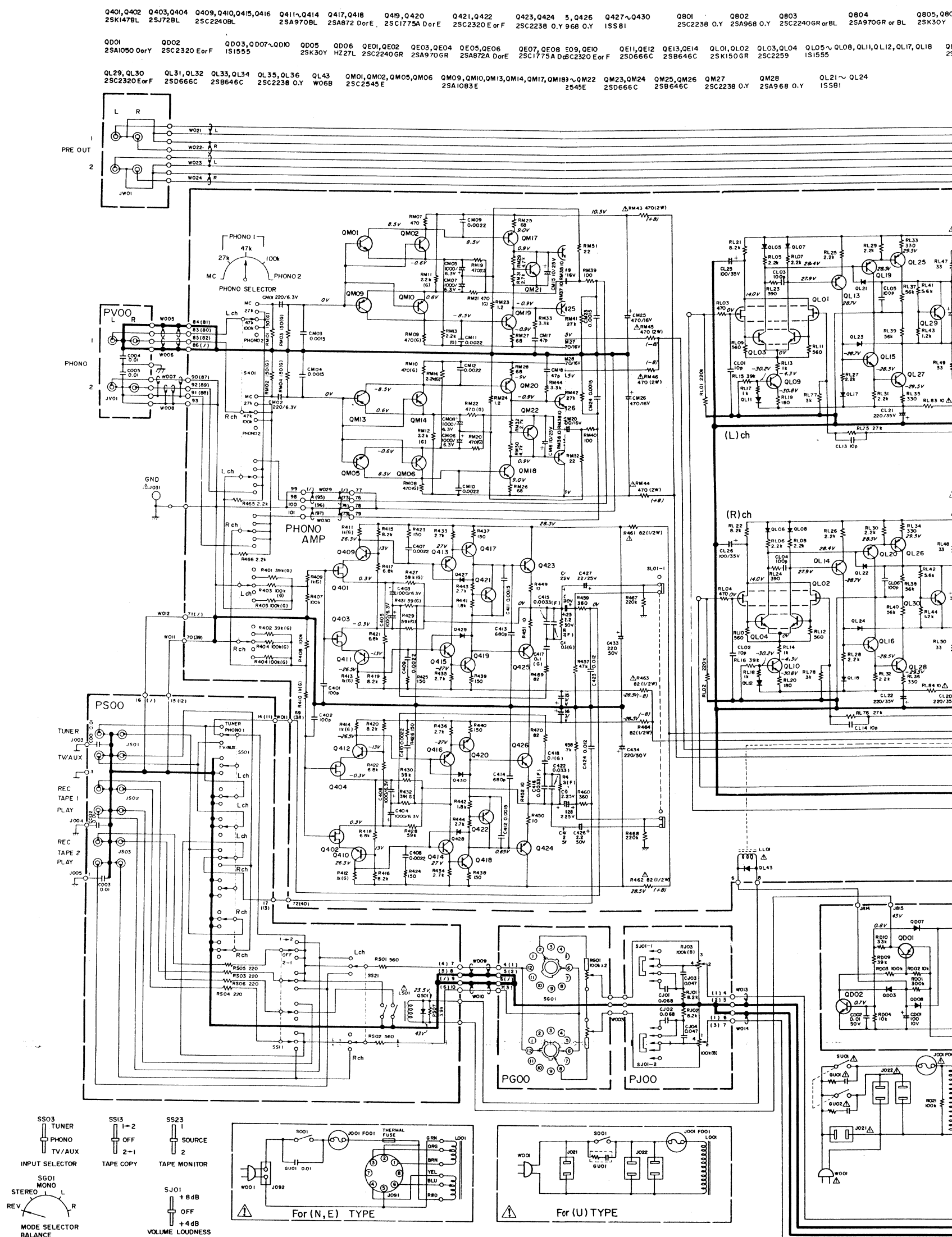
Input Terminals	
Phono (MM):	Frequency Responce (RIAA, 20 Hz — 20 kHz) ± 0.3 dB
	Signal-to-Noise Ratio ("A" Weighted 7.75 mV Input) 90 dB
	Input Impedance Phono 1 47 k ohms
	Phono 2 100/47/27 k ohms
	Input Sensitivity 2.2 mV
Phono (MC):	Input Equivalent Noise ("A" Weighted) $0.24 \mu\text{V}$
	Dynamic Range 110 dB
	Input Impedance 100 ohms
Aux.:	Input Sensitivity 120 μV
	Input Impedance 37 k ohm
	Input Sensitivity 150 mV
	Frequency Response (+0, -1 dB, IHF-A-202) 10 Hz — 100 kHz
	Signal-to-Noise Ratio ("A" Weighted 775 mV Input) 100 dB
Output Voltage, 1 kHz	
Tape Out 150 mV	
Pre Out 1.5 V	
Output Impedance, 1 kHz	
Tape Out 560 ohms	
Pre Out 100 ohms	

GENERAL

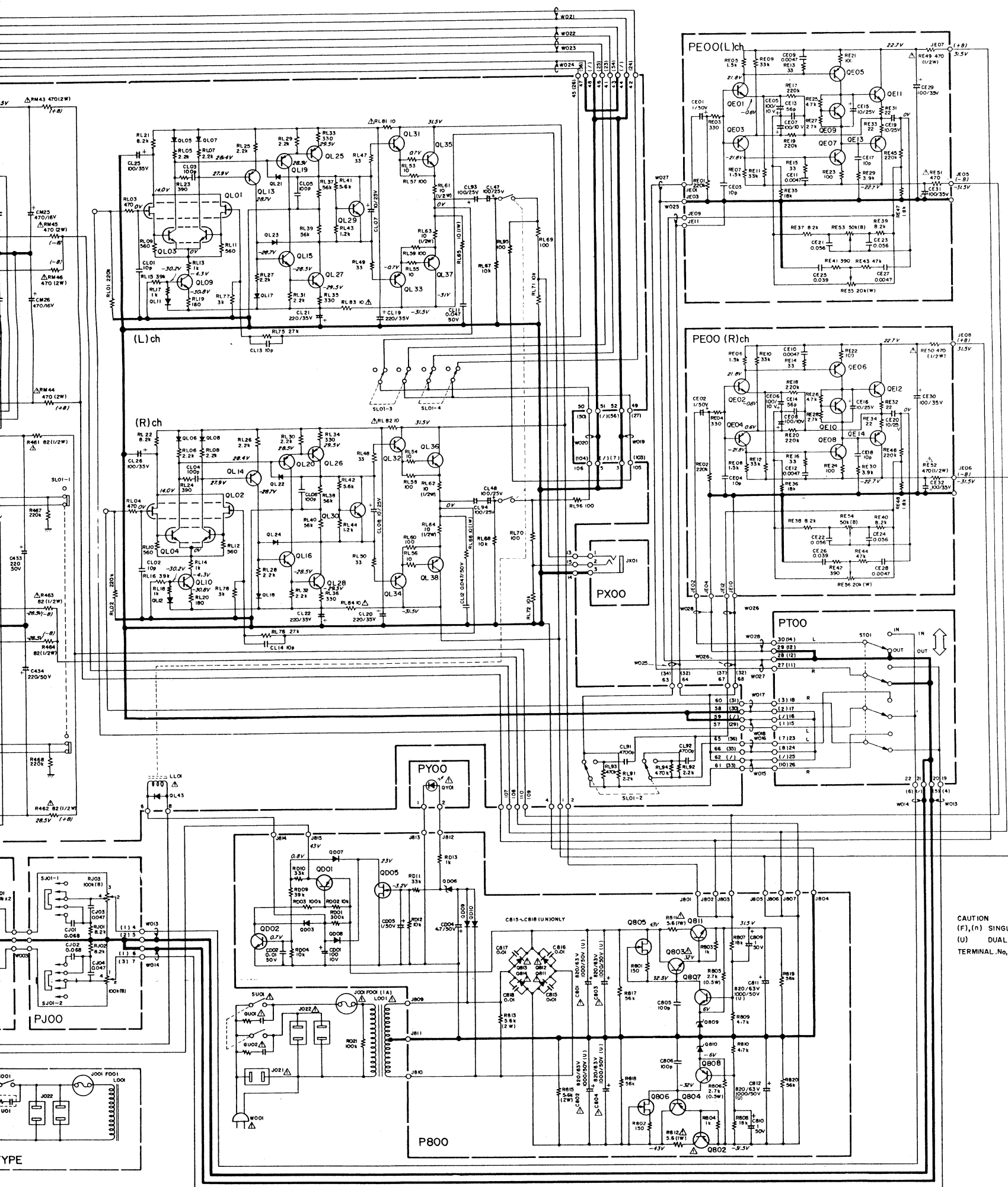
Power Requirements	110/120/220/240 V AC, 50/60 Hz
	(Voltage selection can be done by external voltage selector.)
Power Consumption (at Rated Output, Both Channels Operating)	42 W
Dimensions	
Panel Width	473.5 mm
Panel Height	172.5 mm
Depth	266 mm
Weight	
Unit alone	8.5 kg

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

10. SCHEMATIC DIAGRAM



Q427~Q430 1S5B1	Q801 2SC2238 O.Y.	Q802 2SA968 O.Y.	Q803 2SC2240GR or BL	Q804 2SA970GR or BL	Q805, Q806 2SK30Y	Q807 2SC1775A DofE	Q808 2SA872A DofE	Q809, Q810 HZ6B1L	Q811~Q814 W06B
QE11, QE12 2SD666C	QE13, QE14 2SB646C	QL01, QL02 2SK150GR	QL03, QL04 2SC2259	QL05~QL08, QL11, QL12, QL17, QL18 1S1555	QL09, QL10, QL15, QL16, QL27, QL28 2SC1775A DofE	QL13, QL14, QL19, QL20, QL25, QL26 2SA872A DofE			
QM23, QM24 2SD666C	QM25, QM26 2SB646C	QM27 2SC2238 O.Y.	QM28 2SA968 O.Y.	QL21~QL24 1S5B1					

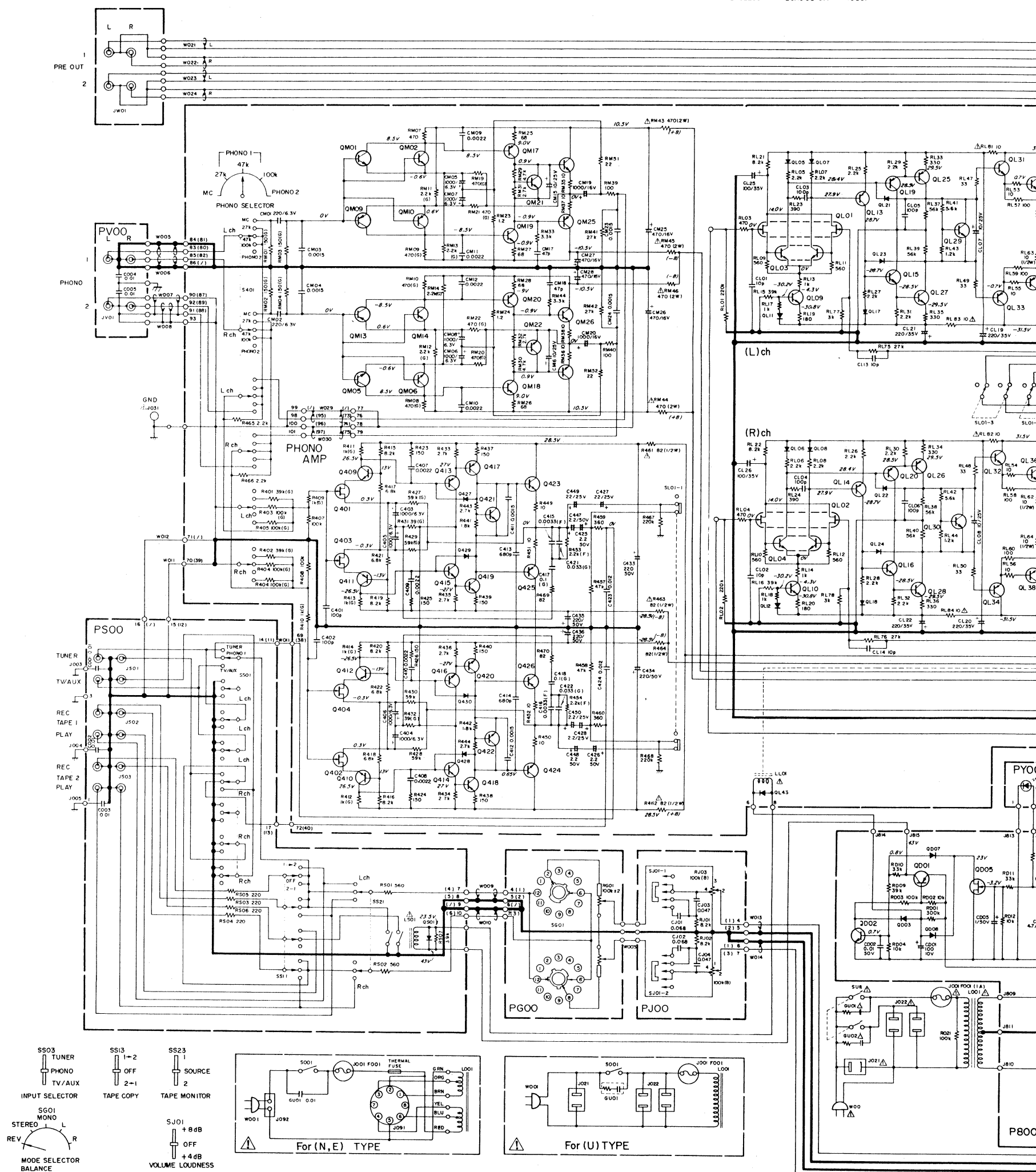


- 2SC2240B, 2SA970BL
- 2SA872A D.E., 2SC1775A D.E.
- 2SC2320E F, 2SA970GR
- 2SA1050 O.Y., 2SC2545E
- 2SA1085C, 2SK30Y
- 2SD666C, 2SB646C
- 2SJ72BL, 2SK147BL
- 2SC2238 O.Y., 2SA968 O.Y.
- 2SC2259
- 2SK150GR

CAUTION
(F), (n) SINGLE SHIELDED LINE.
(U) DUAL SHIELDED LINE.
TERMINAL No. 15 (U) TYPE ONLY.

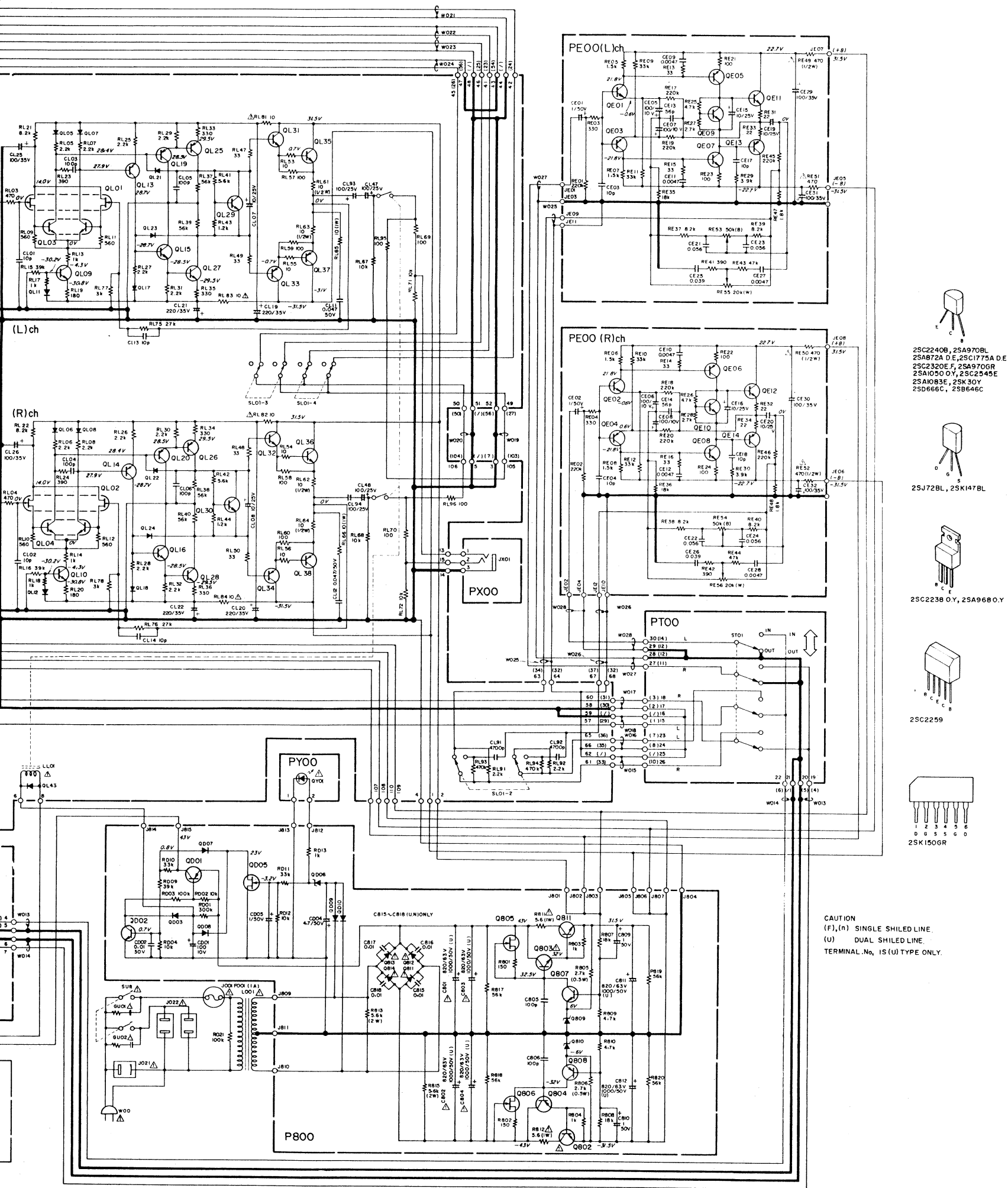
Components and wiring are subject to change for modification without notice.

Q401, Q402 2SK147BL	Q403, Q404 2SJ72BL	Q409, Q410, Q415, Q416 2SC2240BL	Q411, Q414 2SA970BL	Q417, Q418 2SA872 DorE	Q419, Q420 2SC1775A DorE	Q421, Q422 2SC2320E or F	Q423, Q424 2SC2238 O.Y	Q425, Q426 2SA968 O.Y	Q427, Q430 1SS81	Q801 2SC2238 O.Y	Q802 2SA968 O.Y	Q803 2SC2240GR or BL	Q804 2SA970GR or BL	Q805, Q806 2SK30Y	Q807 2SC1775A DorE
QD01 2SA1050 DorY	QD02 2SC2320E or F	QD03, QD07, QD10 1S1555	QD05 2SK30Y	QD06 HZ27L	QD01, QD02 2SC2240GR	QD03, QD04 2SA970GR	QD05, QD06 2SA872A DorE	QD07, QD08 2SC1775A DorE	QD09, QD10 2SC2320E or F	QD11, QD12 2SD666C	QD13, QD14 2SB646C	QD15, QD16 2SK150GR	QD17, QD18 2SC2259	QD19, QD20 1S1555	QD21, QD22 2SA968 O.Y
QL29, QL30 2SC2320E or F	QL31, QL32 2SD666C	QL33, QL34 2SB646C	QL35, QL36 2SC2238 O.Y	QL43 W06B	QM01, QM02, QM05, QM06 2SC2545E	QM09, QM10, QM13, QM14, QM17, QM18 2SA1083E	QM19, QM22 2SC2545E	QM23, QM24 2SD666C	QM25, QM26 2SB646C	QM27 2SC2238 O.Y	QM28 2SA968 O.Y	QL21 ~ QL24 1SS81			



SCHEMATIC DIAGRAM FOR Model SC-8

Q802 O.Y. 25A968 O.Y.	Q803 25C2240GR or BL	Q804 25A970GR or BL	Q805, Q806 25K30Y	Q807 25C1775A DorE	Q808 25A872A DorE	Q809, Q810 HZ68BL	Q811~Q814 W06B
QL01, QL02 25K150GR	QL03, QL04 25C2259	QL05~QL08, QL11, QL12, QL17, QL18 1S1555	QL09, QL10, QL15, QL16, QL27, QL28 25C1775A DorE	QL13, QL14, QL19, QL20, QL25, QL26 25A872A DorE			
M27 SC2238 O.Y.	QM28 25A968 O.Y.	QL21~QL24 1S581					



wiring are subject to change for modification without notice.

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