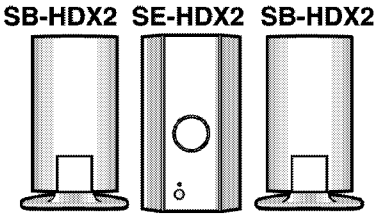
AD0008152C5
A1

Service Manual

Stereo Amplifier



SE-HDX2

Colour

(S).....Silver Type

Areas

(PP).....U.S.A and Canada.

(EB).....Great Britain.

(EG).....Europe.

System	SC-HDX2
Stereo Amplifier	**SE-HDX2**
Speakers	SB-HDX2 × 2

Specifications

Amplifier section

Power output for (PP) area:
60 – 30000 Hz, THD 1 %,
both channels driven; 2 × 10 W (6 Ω)
Power output for (EB), (EG) areas:
DIN 1 kHz, THD 1 %,
both channels driven; 2 × 7 W (6 Ω)
RMS 1 kHz, THD 10 %,
both channels driven; 2 × 12 W (6 Ω)
Total harmonic distortion:
Half power at 1 kHz; 0.3 % (6 Ω)
Frequency response:
(PP) area; 50 – 100,000 Hz (+1 dB, –6 dB)
(EB), (EG) areas; 60 – 100,000 Hz (+1 dB, –6 dB)
S/N: 100 dB (IHF A, Rated Power, S=2 V)
Load impedance: 6 Ω

General

Power supply:
(PP) area; AC 120 V, 60 Hz
(EB) area; AC 230 – 240 V, 50 Hz
(EG) area; AC 230 V, 50 Hz
Power consumption:
(PP) area; 29 W
(EB), (EG) areas; 28 W
Dimensions (W×H×D): 95×179.5×265.5 mm ($3\ ^3/_4$"×7 $^1/_{16}$"×10 $^7/_{16}$")
Mass: 3.1 kg (6.9 lb)

Power consumption in standby mode:
(PP) area; 0.5 W
(EB), (EG) areas; 0.7 W

Notes: Specifications are subject to change without notice.
Mass and dimensions are approximate.

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

Panasonic®

CONTENTS

1 Safety Precaution

(This "Safety Precaution" is applied only in U.S.A..)

1. Before servicing, unplug the power cord to prevent an electric shock.
2. When replacing parts, use only manufacture's recommended components for safety.
3. Check the condition of the power cord. Replace if wear or damage is evident.
4. After servicing, be sure to restore the lead dress, insulation barriers, insulation papers, shields etc..
5. Before returning the serviced equipment to the customer, be sure to make the following insulation resistance test to prevent the customer from being exposed to a shock hazard.

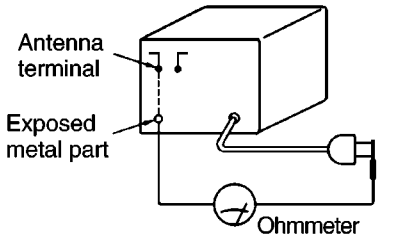
1.1. Insulation resistance test

1. Unplug the power cord and short the two prongs of the plug with a jumper wire.
2. Turn on the power switch.
3. Measure the resistance value with ohmmeter between the jumpered AC plug and each exposed metal cabinet parts, such as screw heads antenna, control shafts, handle brackets, etc.. Equipment with antenna terminals should read between 3 MΩ - 5.2 MΩ to all exposed parts. Refer to Fig. 1-1. Equipment without antenna terminals should read approximately infinity to all exposed parts. Refer to Fig. 1-2.

Note:

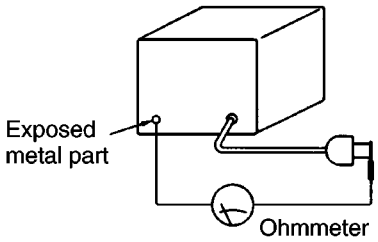
Some exposed parts may be isolated from the chassis by design. These will read infinity.

4. If the measurement is outside the specified limits, there is a possibility of a shock hazard. The equipment should be repaired and rechecked before it is returned to the customer.



Resistance = 3 MΩ — 5.2 MΩ

Fig. 1-1.



Resistance = Approx. ∞

Fig. 1-2.

2 Before Repairs

1. Turn off the power supply. Using a 10 Ω, 10 W resistor, connect both ends of power supply capacitors (C781, C782) in order to discharge the voltage.
2. Before turning the power supply on, after completion of repair, slowly apply the primary voltage by using a power supply voltage controller to make sure that the consumed current at 50/60 Hz in NO SIGNAL mode should be shown below with respect to supply voltage 120/230/240 V.

For (PP) area

Power supply voltage	AC 120 V
Consumed current 60 Hz	60 - 230 mA

For (EB) area

Power supply voltage	AC 240 V
Consumed current 50 Hz	30 - 150 mA

For (EG) area

Power supply voltage	AC 230 V
Consumed current 50 Hz	40 - 160 mA

3 Protection Circuitry

The protection circuitry may have operated if either of the following conditions is noticed:

- No sound is heard when the power is supplied.
- Sound stops during a performance.

The functions of this circuitry is to prevent circuitry damage if, for example, the positive and negative speaker connection wires are shorted, or if speaker systems with an impedance less than the indicated rated impedance of this unit are used.

If this occurs, follow the procedure outlined bellow:

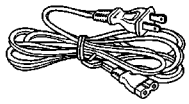
1. Switch OFF the power.
2. Determine the cause of the problem and correct it.
3. Switch ON the power once again.

Note:

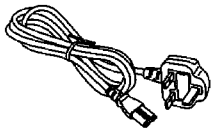
When the protection circuitry functions, the unit will not operate unless the power is first switched OFF and then ON again.

4 Accessories

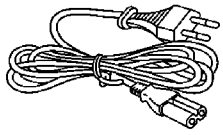
- AC power supply cord for (PP) area
  (RJA0065-A).....1 pc.



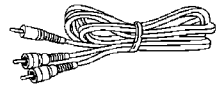
- AC power supply cord for (EB) area
  (RJA0053-2X).....1 pc.



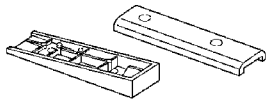
- AC power supply cord for (EG) area
  (RJA0019-1X).....1 pc.



- Stereo connection cable
  (RJL2P005X10).....1 pc.

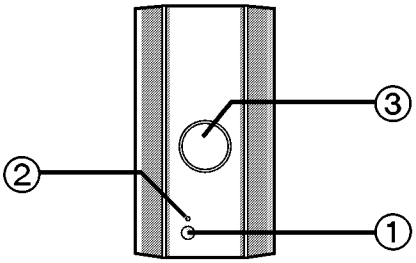


- Attachment (A, B) (for speaker)
  (A: RGQ0282-S).....2 sets
  (B: RGQ0283-S).....2 sets



- Screws (for speaker)
  (XTW3+10CFN).....4 pcs.

5 Location of Controls



① **For (PP) area**
Power switch (POWER, ⏻/I)
For (EB), (EG) areas
Standby/on switch (⏻/I)
② **Operation indicator**
③ **Volume control (VOLUME)**

6 Caution for AC Mains Lead

(For United Kingdom)

("EB" area code model only)

For your safety, please read the following text carefully.

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.
A 5-ampere fuse is fitted in this plug.
Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5-ampere and that it is approved by ASTA or BSI to BS1362.
Check for the ASTA mark or the BSI mark on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.
If you lose the fuse cover the plug must not be used until a replacement cover is obtained.
A replacement fuse cover can be purchased from your local dealer.

CAUTION!
IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY.
THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13-AMPERE SOCKET.

If a new plug is to be fitted please observe the wiring code as shown below.
If in any doubt please consult a qualified electrician.

IMPORTANT

The wires in this mains lead are coloured in accordance with the following code:
Blue: Neutral, Brown: Live.
As these colours may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:
The wire which is coloured Blue must be connected to the terminal which is marked with the letter N or coloured Black or Blue.
The wire which is coloured Brown must be connected to the terminal which is marked with the letter L or coloured Brown or Red.

WARNING: DO NOT CONNECT EITHER WIRE TO THE EARTH TERMINAL WHICH IS MARKED WITH THE LETTER E, BY THE EARTH SYMBOL ⏚ OR COLOURED GREEN OR GREEN/YELLOW.

THIS PLUG IS NOT WATERPROOF—KEEP DRY.

Before use

Remove the connector cover.

How to replace the fuse

The location of the fuse differ according to the type of AC mains plug (figures A and B). Confirm the AC mains plug fitted and follow the instructions below.
Illustrations may differ from actual AC mains plug.

1. Open the fuse cover with a screwdriver.

Figure A

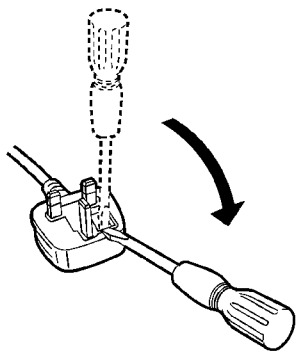
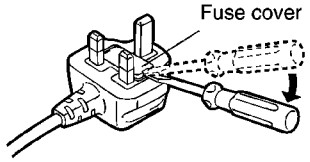


Figure B



2. Replace the fuse and close or attach the fuse cover.

Figure A

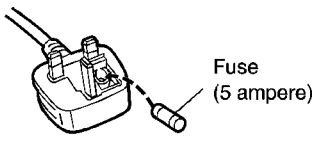
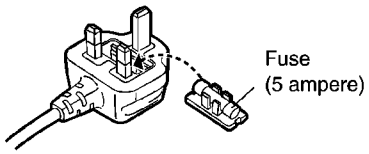


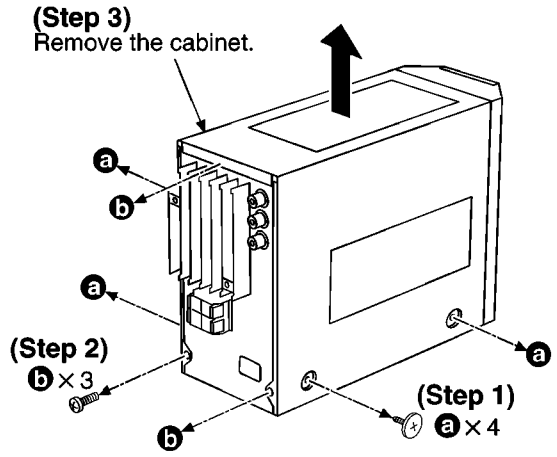
Figure B



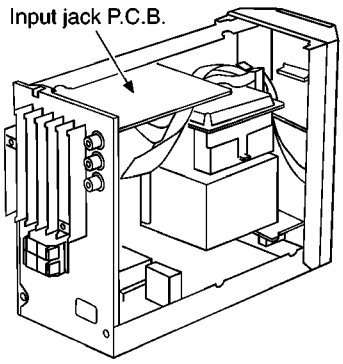
7 Operation Checks and Component Replacement Procedures

- **This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.**
- **For reassembly after operation checks or replacement, reverse the respective procedures. Special reassembly procedures are described only when required.**

7.1. Checking for the input jack P.C.B.

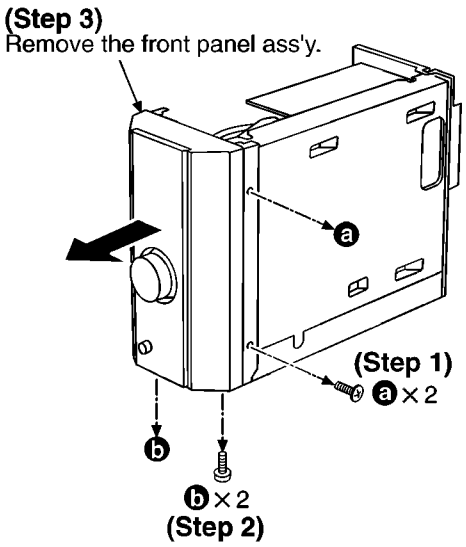


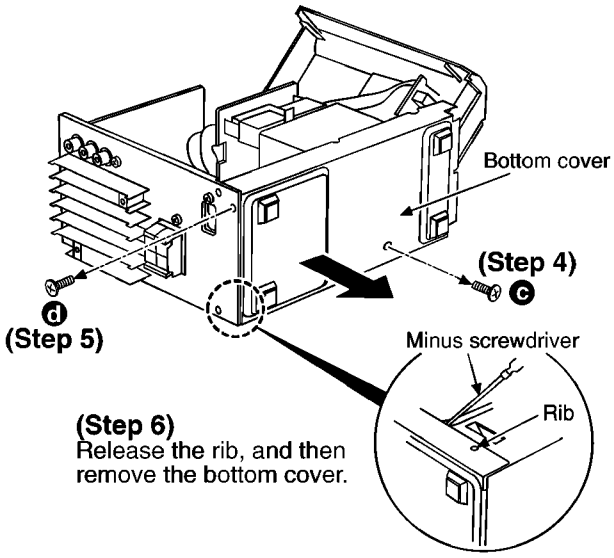
- **Check the input jack P.C.B. as shown below.**

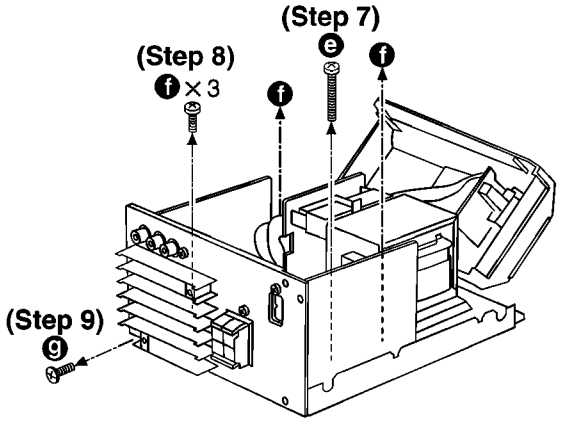


7.2. Checking for the AC IN P.C.B. and main P.C.B.

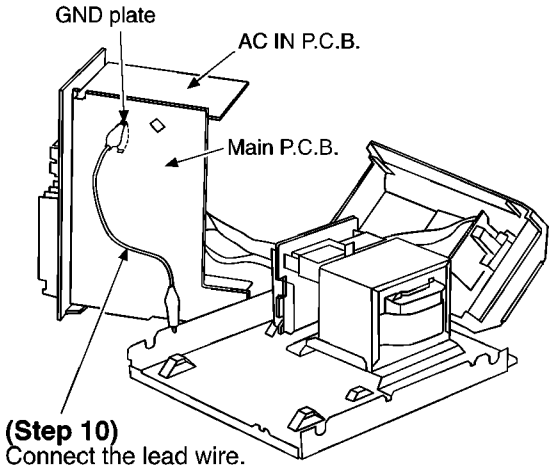
- Follow the **(Step 1)** - **(Step 3)** of item 7.1.





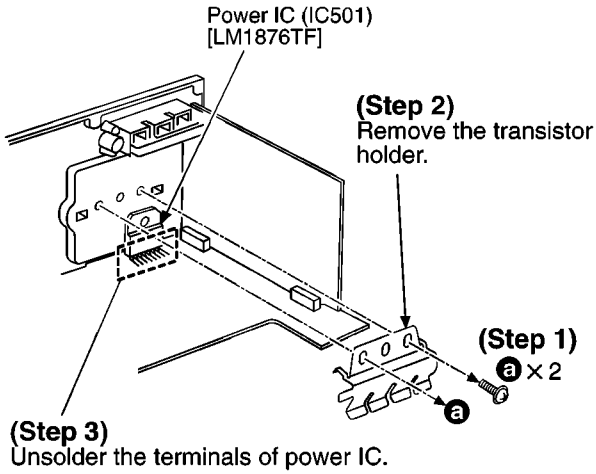


- **Check the AC IN P.C.B. and main P.C.B. as shown below.**



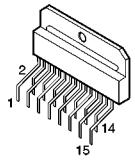
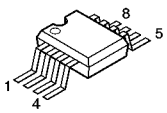
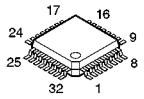
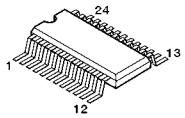
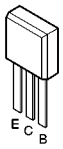
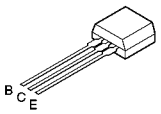
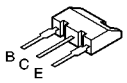
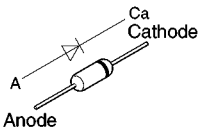
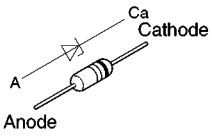
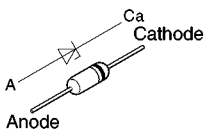
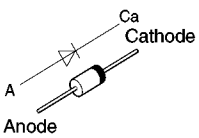
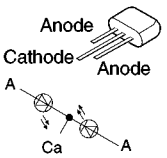
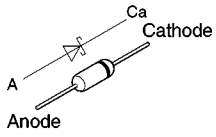
7.3. Replacement for the power IC

- Follow the **(Step 1)** - **(Step 3)** of item 7.1.
- Follow the **(Step 1)** - **(Step 9)** of item 7.2.



NOTE:
When mounting the power IC apply silicone conpound (RFKX0002) to the rear side of power IC.

8 Type Illustration of ICs, Transistors and Diodes

LM1876TF 	BA4560FT1 	C2BBEC000117 	TC9412AF 	2SC1309ATA 2SC3311ATA 	DTA114ESTP 
2SB1240QRTV6 2SD1862QRTV6 	MA165TA 	MA4051MTA MA4062MTA 	MA4100MTA 	1N5402BM21 RL1N4003N02 	SML72420C 
MA723TA 					

9 Schematic Diagram Notes

- **This schematic diagram may be modified at any time with the development of new technology.**

Notes:

S301: Power Standby/on switch (■⏻▬■)
VR301: Volume control VR (VOLUME)

- Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard. Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.

  No mark : Power ON

- Important safety notice:

  Components identified by ⚠ mark have special characteristics important for safety.

  Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.

  When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

- The supply part number is described alone in the replacement part.

- **Caution!**

  IC and LSI are sensitive to static electricity.

  Secondary trouble can be prevented by taking care during repair.

  Cover the parts boxes made of plastics with aluminum foil.

  Ground the soldering iron.

  Put a conductive mat on the work table.

  Do not touch the legs of IC or LSI with the fingers directly.

- Voltage and signal line

  ▬▶▬ : Positive voltage line
  ▪▪▶▪▪ : Negative voltage line
  ⇨ : Audio signal line

For U.S.A.

CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE 1.6 A 125 V AND 2.5 A 125 V FUSE.

RISK OF FIRE-REPLACE FUSE AS MARKED.

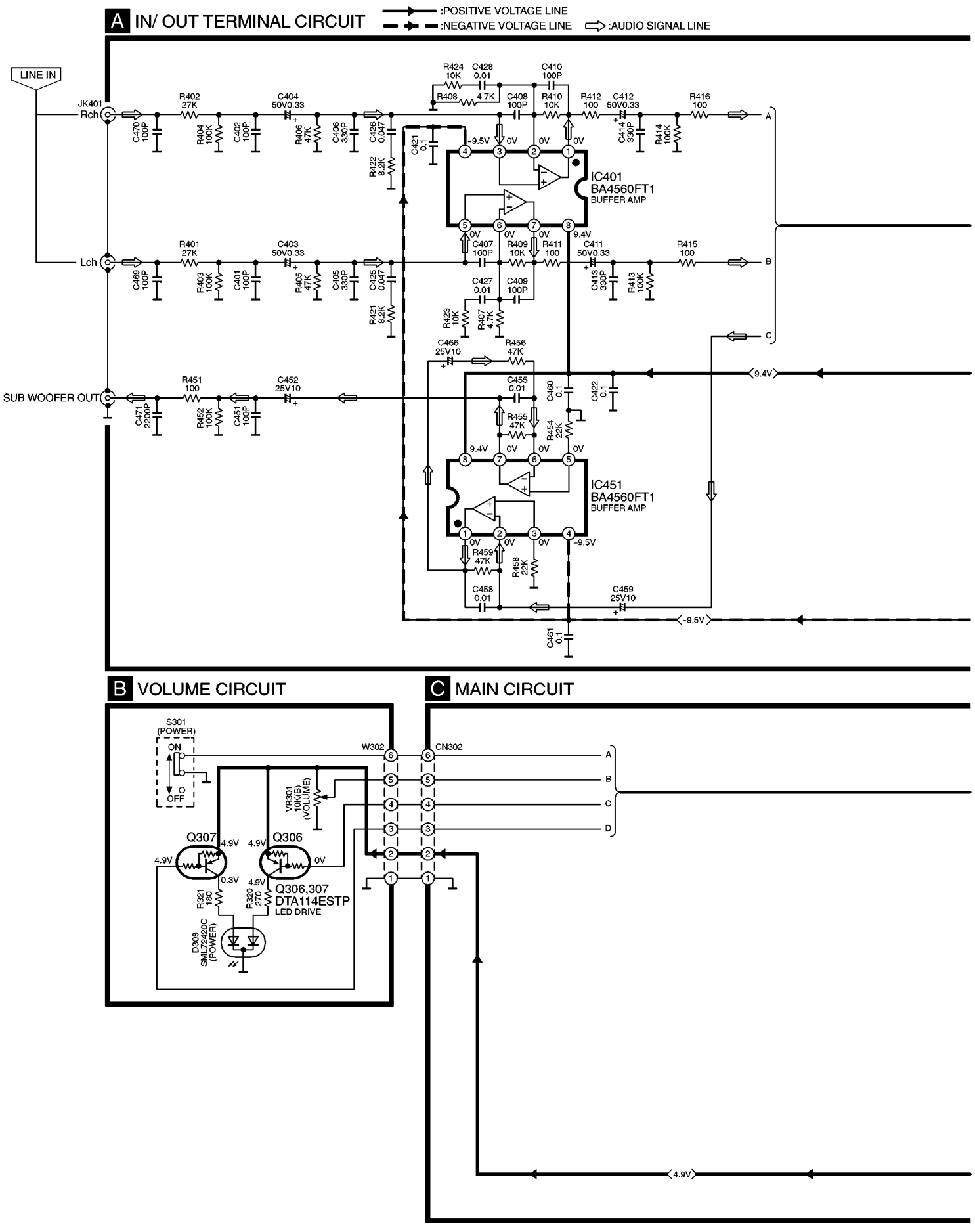
For Canada

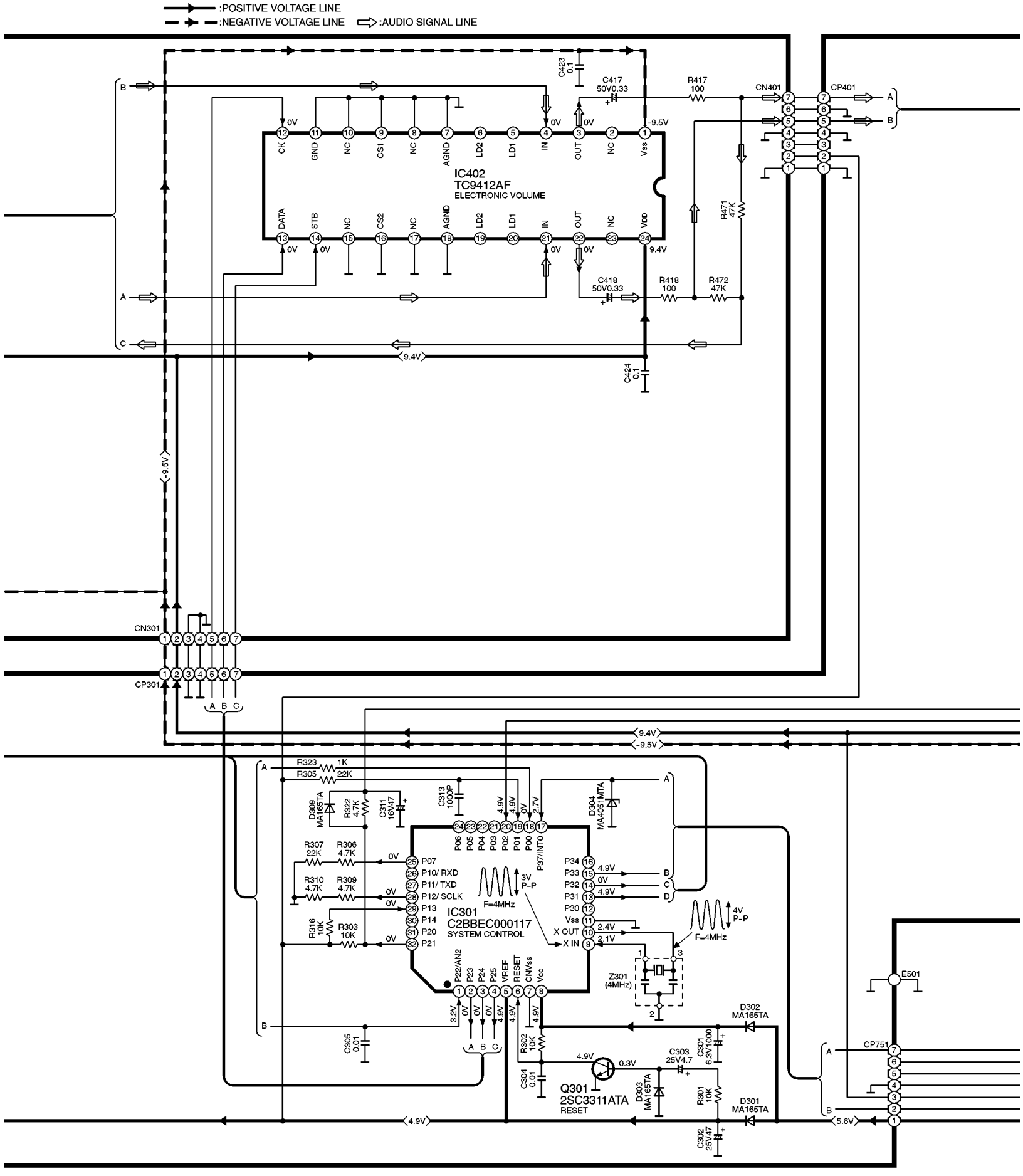
FUSE CAUTION

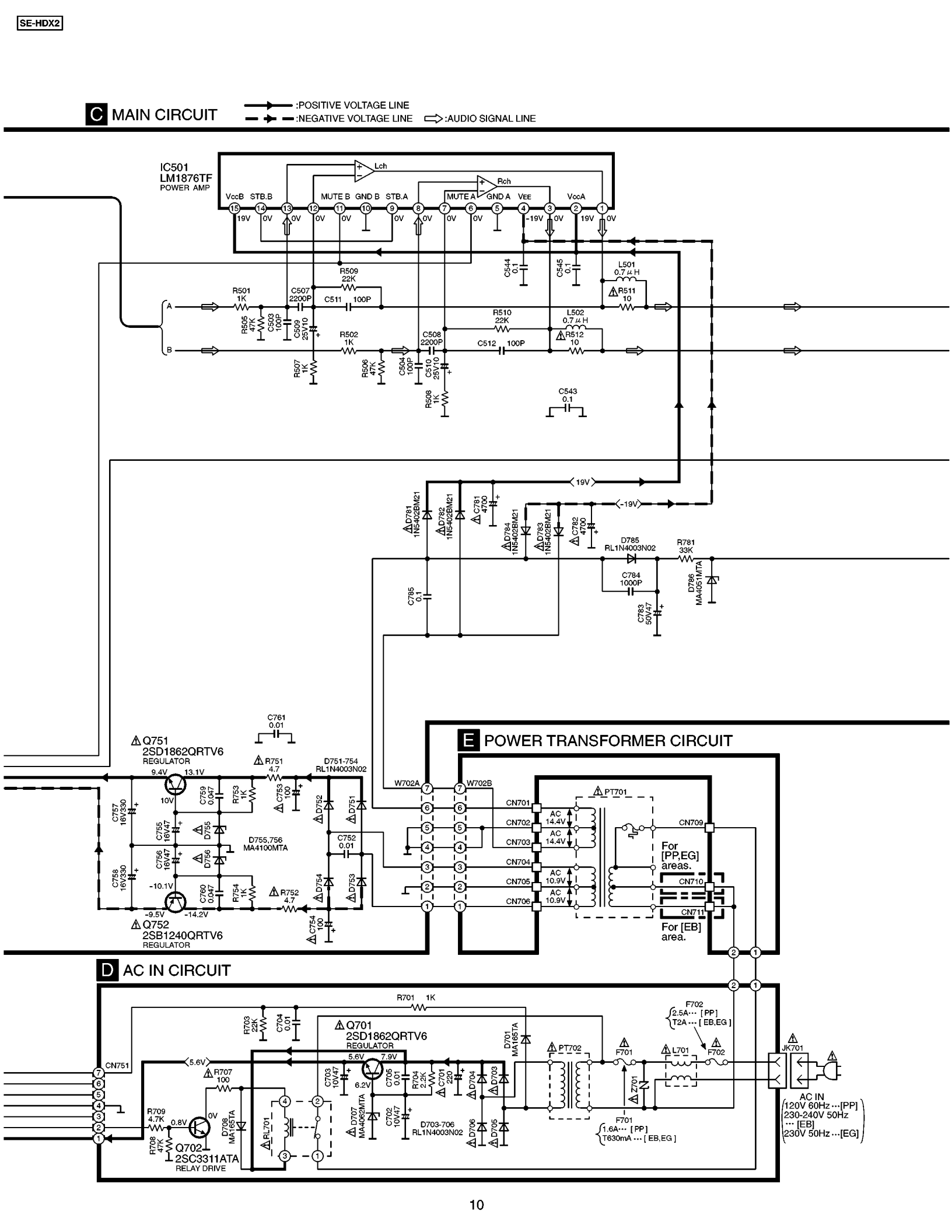
This symbol located near the fuse indicates that the used is fast operating type. For continued protection against fire hazard, replace with same type fuse. For fuse rating, refer to the making adjacent to the symbol.

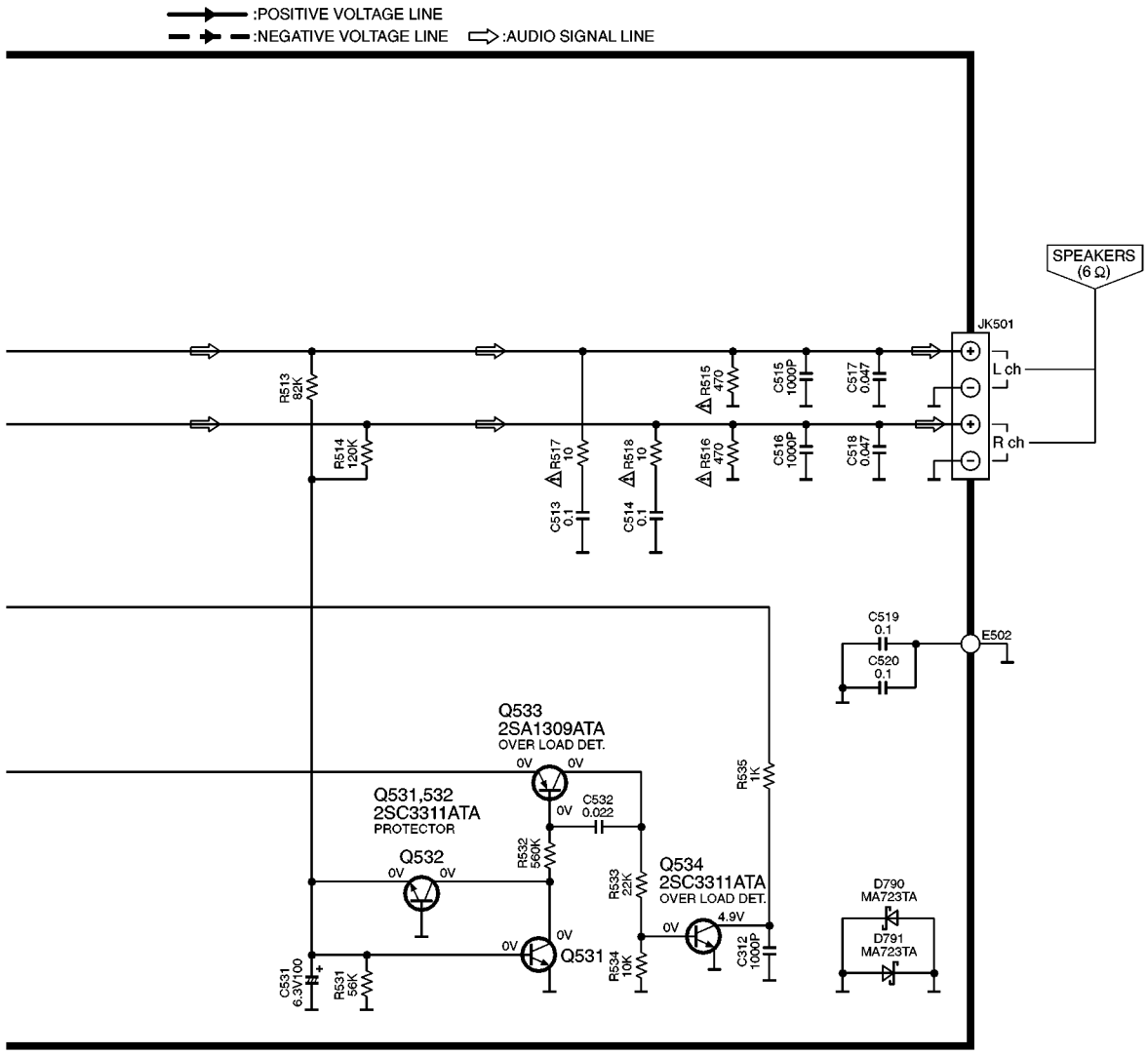
Ce symbole indique que le fusible utilisé est à rapide. Pour une protection permanente, n' utiliser que des fusibles de même type. Ce dernier est indiqué là qù le présent symbole est apposé.

10 Schematic Diagram



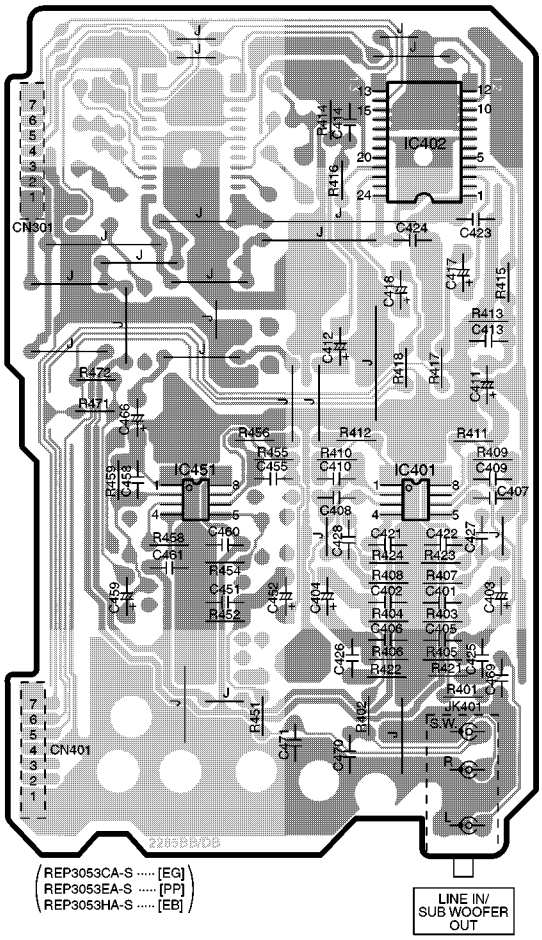

:POSITIVE VOLTAGE LINE
:NEGATIVE VOLTAGE LINE
:AUDIO SIGNAL LINE
IC402
TC9412AF
ELECTRONIC VOLUME
CK GND NC CS1 NC AGND LD2 LD1 IN OUT NC Vss
DATA STB NC CS2 NC AGND LD2 LD1 IN OUT NC Vdd
C423 0.1
C417 50V0.33
R417 100
CN401
CP401
R471 47K
R472 47K
C418 50V0.33
R418 100
C424 0.1
9.4V
-9.5V
CN301
CP301
IC301
C2BBEC000117
SYSTEM CONTROL
P07 P10/ RXD P11/ TXD P12/ SCLK P13 P14 P20 P21
P22/AN2 P23 P24 P25 VREF RESET CNVss Vcc
P06 P05 P04 P03 P02 P01 P00 P37/INT0
P34 P33 P32 P31 P30 Vss X OUT X IN
R323 1K
R305 22K
R307 22K
R306 4.7K
R310 4.7K
R309 4.7K
R316 10K
R303 10K
R322 4.7K
C311 16V47
C313 1000P
D309 MA165TA
D304 MA4051MTA
F=4MHz
3V P-P
4V P-P
Z301 (4MHz)
Q301 2SC3311ATA
RESET
R302 10K
C303 25V4.7
C301 6.3V1000
C304 0.01
C305 0.01
D303 MA165TA
R301 10K
C302 25V47
D301 MA165TA
D302 MA165TA
E501
CP751
5.6V
4.9V


C MAIN CIRCUIT
:POSITIVE VOLTAGE LINE
:NEGATIVE VOLTAGE LINE
:AUDIO SIGNAL LINE
IC501
LM1876TF
POWER AMP
Lch
Rch
VccB STB.B MUTE B GND B STB.A MUTE A GND A VEE VccA
19V 0V 0V 0V 0V 0V 0V 0V 0V -19V 0V 19V 0V
R501 1K
C507 2200P
C511 100P
R509 22K
R510 22K
L501 0.7μH
R511 10
L502 0.7μH
R512 10
R502 1K
C508 2200P
C512 100P
C543 0.1
C544 0.1
C545 0.1
19V
-19V
D781 1N5402BM21
D782 1N5402BM21
D783 1N5402BM21
D784 1N5402BM21
C781 4700
C782 4700
D785 RL1N4003N02
R781 33K
C784 1000P
C783 50V47
D786 MA4051MTA
C785 0.1
E POWER TRANSFORMER CIRCUIT
W702A
W702B
PT701
CN701
CN702
CN703
CN704
CN705
CN706
AC 14.4V
AC 14.4V
AC 10.9V
AC 10.9V
CN709
CN710
CN711
For [PP,EG] areas.
For [EB] area.
C761 0.01
Q751 2SD1862QRTV6 REGULATOR
R751 4.7
D751-754 RL1N4003N02
9.4V 13.1V 10V
C759 0.047
R753 1K
C753 100
D752
D751
C757 16V330
C755 16V47
D755
D755,756 MA4100MTA
C752 0.01
C756 16V47
D756
C758 16V330
-10.1V
C760 0.047
R754 1K
R752 4.7
D754
D753
-9.5V
-14.2V
Q752 2SB1240QRTV6 REGULATOR
C754 100
D AC IN CIRCUIT
R701 1K
R703 22K
C704 0.01
Q701 2SD1862QRTV6 REGULATOR
5.6V 7.9V
6.2V
C703 10V47
C705 0.01
R704 2.2K
C701 220
D704
D703
D701 MA165TA
PT702
F701
L701
F702
F702 2.5A··· [PP] T2A ··· [EB,EG]
JK701
AC IN 120V 60Hz ···[PP] 230-240V 50Hz ··· [EB] 230V 50Hz ···[EG]
CN751
5.6V
R707 100
R709 4.7K
0.8V
0V
D708 MA165TA
RL701
D707 MA4062MTA
C702 10V47
D703-706 RL1N4003N02
D706
D705
F701 1.6A··· [PP] T630mA ··· [EB,EG]
Z701
R708 47K
Q702 2SC3311ATA RELAY DRIVE

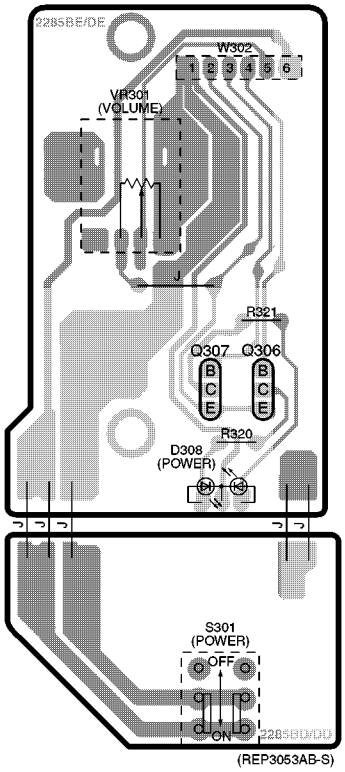

:POSITIVE VOLTAGE LINE
:NEGATIVE VOLTAGE LINE
:AUDIO SIGNAL LINE
SPEAKERS (6 Ω)
JK501
L ch
R ch
R513 82K
R514 120K
R517 10
R518 10
R515 470
R516 470
C515 1000P
C516 1000P
C517 0.047
C518 0.047
C513 0.1
C514 0.1
C519 0.1
C520 0.1
E502
Q533 2SA1309ATA
OVER LOAD DET.
Q531,532 2SC3311ATA
PROTECTOR
Q532
Q531
Q534 2SC3311ATA
OVER LOAD DET.
C532 0.022
R532 560K
R533 22K
R534 10K
R535 1K
C312 1000P
C531 6.3V100
R531 56K
D790 MA723TA
D791 MA723TA
0V
4.9V

11 Printed Circuit Board Diagram

A IN/OUT TERMINAL P.C.B.



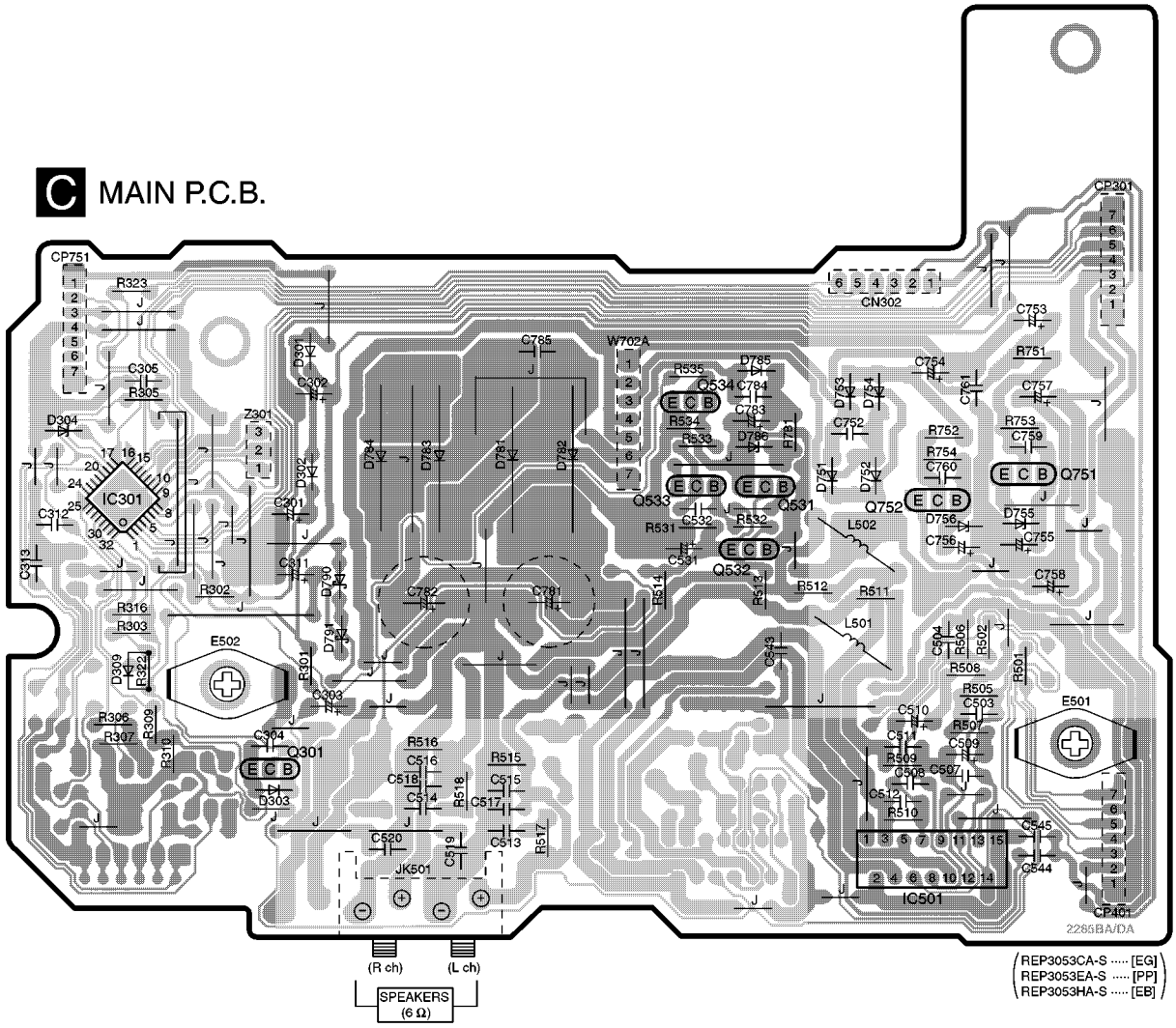
B VOLUME P.C.B.



■ELECTRICAL PARTS LOCATION

Ref. No.	Lo. No.	Ref. No.	Lo. No.	Ref. No.	Lo. No.	Ref. No.	Lo. No.	Ref. No.	Lo. No.	Ref. No.	Lo. No.
A IN/OUT TERMINAL P.C.B.											
IC401	3C	R407	4C	R421	4C	R472	3A	C412	3B	C428	4C
IC402	2C	R408	4C	R422	4C	C401	4C	C413	3C	C451	4B
IC451	3B	R409	3C	R423	4C	C402	4C	C414	2C	C452	4B
CN301	2A	R410	3B	R424	4C	C403	4C	C417	2C	C455	3B
CN401	4A	R411	3C	R451	4B	C404	4B	C418	2C	C458	3B
JK401	5C	R412	3C	R452	4B	C405	4C	C421	4C	C459	4B
R401	4C	R413	3C	R454	4B	C406	4C	C422	4C	C460	4B
R402	4C	R414	2B	R455	3B	C407	3C	C423	2C	C461	4B
R403	4C	R415	2C	R456	3B	C408	3B	C424	2C	C466	3B
R404	4C	R416	2B	R458	4B	C409	3C	C425	4C	C469	4C
R405	4C	R417	3C	R459	3A	C410	3B	C426	4C	C470	4C
R406	4C	R418	3C	R471	3A	C411	3C	C427	4C	C471	4B
B VOLUME P.C.B.											
Q306	3F	D308	3E	S301	4E	R320	3E				
Q307	3E	VR301	2E	W302	1E	R321	3F				

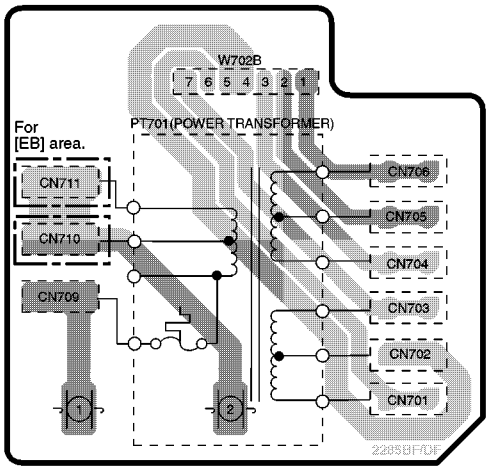
C MAIN P.C.B.



■ELECTRICAL PARTS LOCATION

Ref. No.	Lo. No.	Ref. No.	Lo. No.	Ref. No.	Lo. No.	Ref. No.	Lo. No.	Ref. No.	Lo. No.	Ref. No.	Lo. No.	Ref. No.	Lo. No.
C MAIN P.C.B.													
IC301	3B	D755	3F	E501	4F	R507	4E	R752	3E	C511	4E	C755	3F
IC501	5E	D756	3E	E502	4B	R508	4E	R753	3F	C512	5E	C756	3E
Q301	4B	D781	3C	W702A	3D	R509	4E	R754	3E	C513	5C	C757	3F
Q531	3E	D782	3D	R301	4B	R510	5E	R781	3E	C514	5C	C758	4F
Q532	3D	D783	3C	R302	4B	R511	4E	C301	3B	C515	5C	C759	3F
Q533	3D	D784	3C	R303	4B	R512	4E	C302	3B	C516	4C	C760	3E
Q534	3D	D785	3E	R305	3B	R513	4E	C303	4C	C517	5C	C761	3F
Q751	3F	D786	3D	R306	4B	R514	4D	C304	4B	C518	5C	C781	4D
Q752	3E	D790	4C	R307	4B	R515	4C	C305	3B	C519	5C	C782	4C
D301	3B	D791	4C	R309	4B	R516	4C	C311	4B	C520	5C	C783	3D
D302	3B	L501	4E	R310	4B	R517	5D	C312	3A	C531	3D	C784	3D
D303	5B	L502	3E	R316	4B	R518	5C	C313	3A	C532	3D	C785	2C
D304	3A	Z301	3B	R322	4B	R531	3D	C503	4F	C543	4E		
D309	4B	CN302	2E	R323	2B	R532	3D	C504	4E	C544	5F		
D751	3E	CP301	2F	R501	4F	R533	3D	C507	4E	C545	5F		
D752	3E	CP401	5F	R502	4F	R534	3D	C508	5E	C752	3E		
D753	3E	CP751	2A	R505	4F	R535	3D	C509	4E	C753	2F		
D754	3E	JK501	5C	R506	4E	R751	3F	C510	4E	C754	3E		

E POWER TRANSFORMER P.C.B.

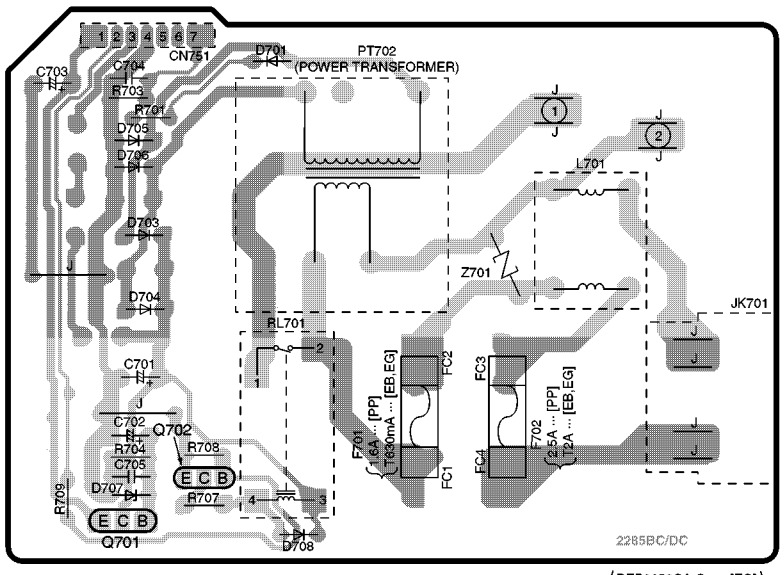


(REP3053CA-S ..... [EG]
REP3053EA-S ..... [PP]
REP3053HA-S ..... [EB])

■ ELECTRICAL PARTS LOCATION

Ref. No.	Lo. No.	Ref. No.	Lo. No.
E POWER TRANSFORMER P.C.B.			
CN701	3C	CN709	3A
CN702	3C	CN710	2A
CN703	3C	CN711	2A
CN704	3C	PT701	2B
CN705	2C	W702B	2B
CN706	2C		
D AC IN P.C.B.			
Q701	7B	FC1	7C
Q702	7B	FC2	7C
D701	5B	FC3	7C
D703	6B	FC4	7C
D704	6B	PT702	6B
D705	6B	R701	6B
D706	6B	R703	6B
D707	7B	R704	7B
D708	7B	R707	7B
L701	6D	R708	7B
Z701	6C	R709	7A
F701	7C	C701	7B
F702	7C	C702	7B
RL701	7B	C703	5A
CN751	5B	C704	5B
JK701	7D	C705	7B

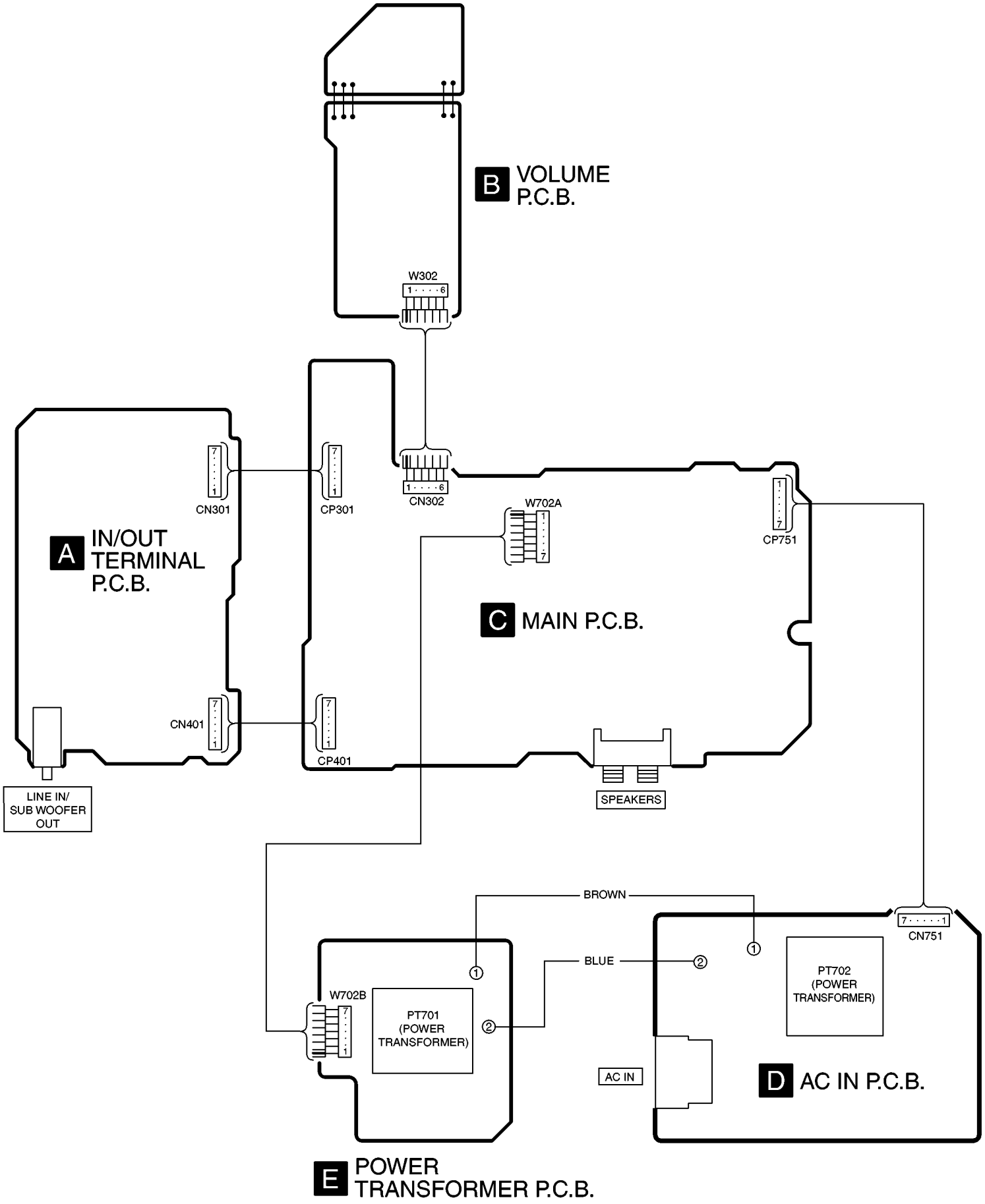
D AC IN P.C.B.



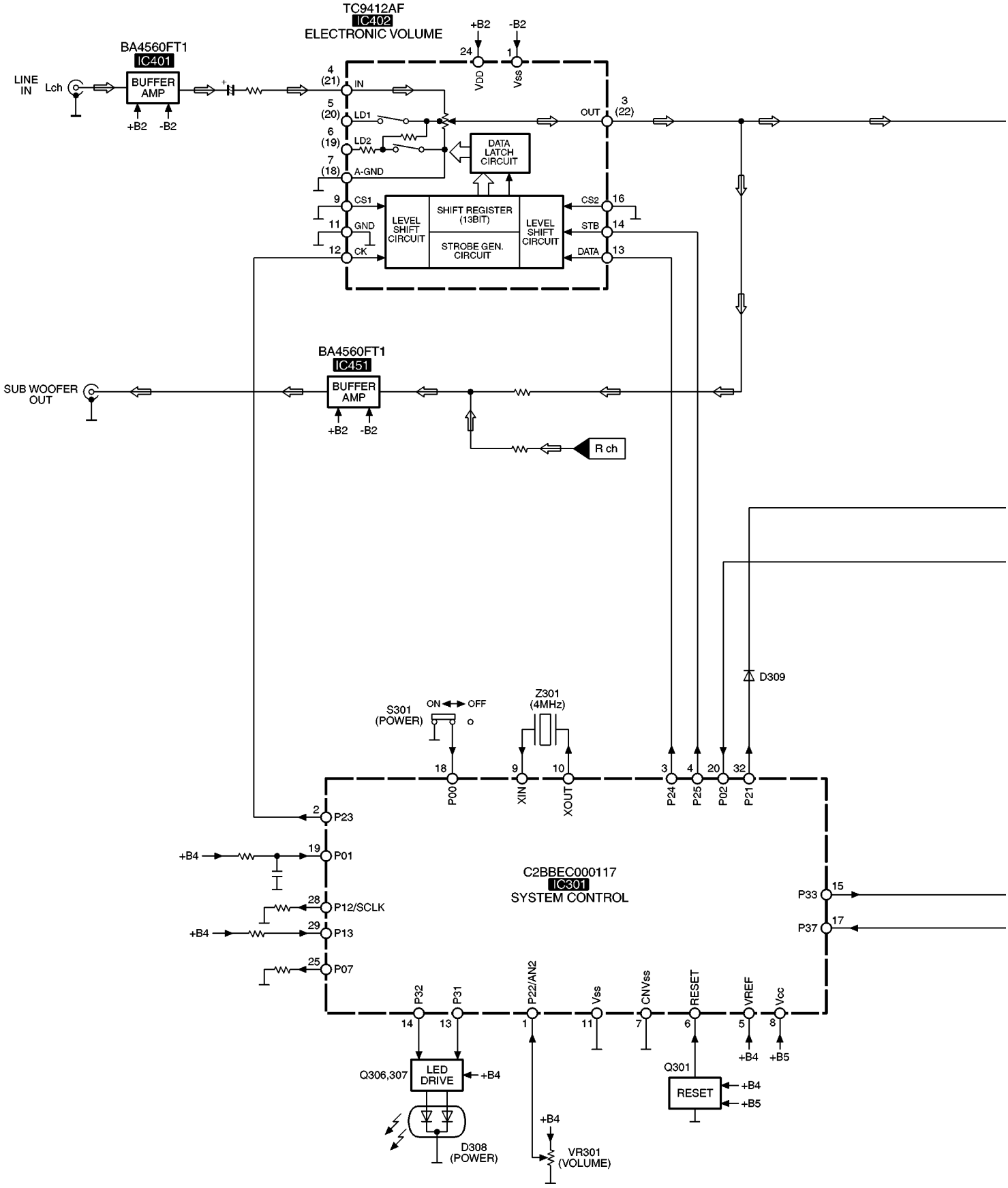
AC IN
(120V 60Hz ..... [PP]
230V 50Hz ..... [EG]
230-240V 50Hz ..... [EB])

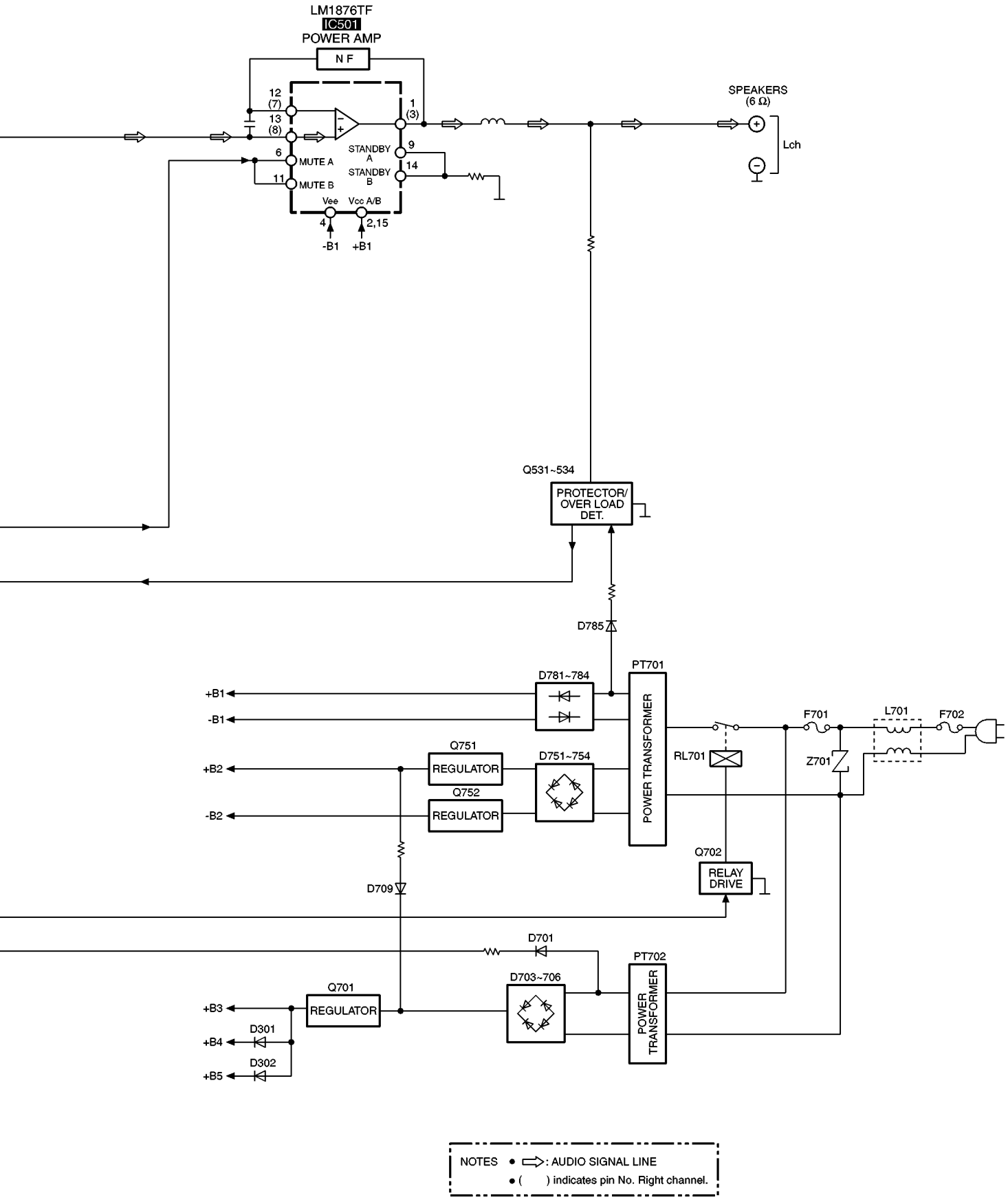
(REP3053CA-S ..... [EG]
REP3053EA-S ..... [PP]
REP3053HA-S ..... [EB])

12 Wiring Connection Diagram



13 Block Diagram





NOTES • ⇨: AUDIO SIGNAL LINE
• ( ) indicates pin No. Right channel.

14 Replacement Parts List

Notes:

- Important safety notice:

  Components identified by ⚠ mark have special characteristics important for safety.

  Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.

  When replacing any of components, be sure to use only manufacture's specified parts shown in the parts list.

- The <IA> <IB> <IC> marks in Remarks indicate language of instruction manual.

  <IA>: German, French, Italian, Netherlands, Swedish, Polish, Danish

  <IB>: English

  <IC>: English, Canadian French

- The parenthesized indications in the Remarks columns specify the areas. (Refer to the cover page for area.)

- The marking [RTL] indicates that Retention Time is Limited for this item. After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of availability is dependent on the type of assembly, and in accordance with the laws governing part and product retention. After the end of this period, the assembly will no longer be available.

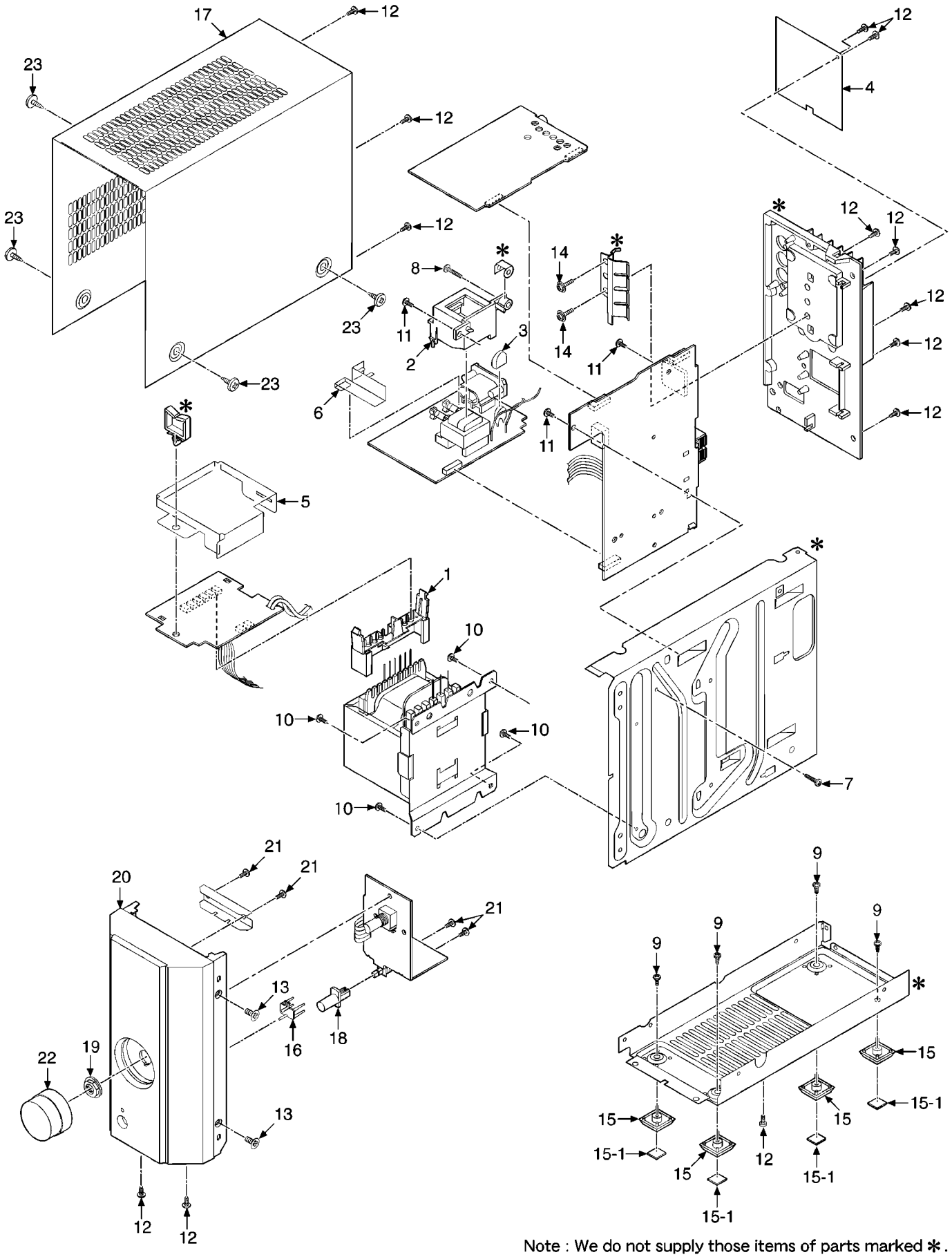
- All parts are supplied by MESA.

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
1	RMN0429A	P.C.B.HOLDER	1	
2	RMN0614	TRANSHOLDER	1	
3	RMZ0339	ZNR COVER	1	
4	RGN1942B-K	NAME PLATE	1	(EB)
4	RGN1942G-K	NAME PLATE	1	(EG)
4	RGN1942-K1	NAME PLATE	1	(PP)
5	RMV0205	RCA COVER	1	
6	RMV0213	INLET COVER	1	(EB/EG) ⚠
7	XTB3+12FFZ	SCREW	1	
8	XTB3+20JFZ	SCREW	1	
9	XTB3+5JFZ	SCREW	4	
10	XTB3+6JFZ	SCREW	4	
11	XTB3+8JFZ	SCREW	3	
12	XTBS3+8JFZ1	SCREW	13	
13	XTS3+8J	SCREW	2	
14	XTW3+8T	SCREW	2	
15	RKA0114-K	FOOT	4	
15-1	RKA0113-K	LEG RUBBER	4	
16	RGL0521-Q	STAND-BY INDICATOR	1	
17	RKM0428-S	TOP CABINET	1	
18	RGU0282-1S	BUTTON,POWER	1	
19	RHN90001	NUT	1	
20	RFKGEHDXX2PP	FRONT PANEL ASS'Y	1	(PP)
20	RFKGEHDX2EBS	FRONT PANEL ASS'Y	1	(EB/EG)
21	XTBS26+8J	SCREW	4	
22	RGW0355-S	KNOB,VOLUME	1	
23	RHD30007-S	SCREW	4	
A1	RJA0053-2X	AC POWER SUPPLY CORD	1	(EB) ⚠
A1	RJA0019-1X	AC POWER SUPPLY CORD	1	(EG) ⚠
A1	RJA0065-A	AC POWER SUPPLY CORD	1	(PP) ⚠
A2	RJL2P005X10	RCA CODE	1	(EG)
A3	RQCB0169	SERVICE CENTER LIST	1	(EB/EG)
A3	RQCB0831	SERVICE CENTER LIST	1	(PP)
A4	RQT5616-E	OPERATING INSTRUCTIONS	1	(EG) <IA>
A4	RQT5615-B	OPERATING INSTRUCTIONS	1	(EB) <IB>
A4	RQT5578-Y	OPERATING INSTRUCTIONS	1	(PP) <IC>
A5	RGQ0282-S	COVER A	2	
A6	RGQ0283-S	COVER B	2	
A7	XTW3+10CFN	SCREW	4	
C301	ECA0JM102	6.3V 1000U	1	
C302	ECEA1EKA470B	25V 47U	1	
C303	ECEA1EKS4R7	25V 4.7U	1	
C304,05	ECBA1E103ZF5	25V 0.01U	2	
C311	ECEA1CKA470	16V 47U	1	
C312,13	ECBT1H102KB5	50V 1000P	2	
C401,02	ECBT1H101KB5	50V 100P	2	
C403,04	ECEA1HKSR33	50V 0.33UF	2	
C405,06	ECBT1H331KB5	50V 330P	2	
C407-10	ECBT1H101KB5	50V 100P	4	
C411,12	ECEA1HKSR33	50V 0.33UF	2	
C413,14	ECBT1H331KB5	50V 330P	2	
C417,18	ECEA1HKSR33	50V 0.33UF	2	
C421-24	ECBT1H104ZF5	50V 0.1U	4	
C425,26	ECBT1H473KB5	50V 0.047U	2	
C427,28	ECBT1H103KB5	50V 0.01U	2	
C451	ECBT1H101KB5	50V 100P	1	
C452	ECA1EAK100XB	25V 10U	1	
C455	ECBT1H103KB5	50V 0.01U	1	
C458	ECBT1H103KB5	50V 0.01U	1	
C459	ECA1EAK100XB	25V 10U	1	
C460,61	ECBT1H104ZF5	50V 0.1U	2	
C466	ECA1EAK100XB	25V 10U	1	
C469,70	ECBT1H101KB5	50V 100P	2	
C471	ECBT1C222KR5	16V 2200P	1	
C503,04	ECBT1H101KB5	50V 100P	2	
C507,08	ECBT1C222KR5	16V 2200P	2	
C509,10	ECA1EAK100XB	25V 10U	2	
C511,12	ECBT1H101KB5	50V 100P	2	
C513,14	ECBT1H104ZF5	50V 0.1U	2	
C515,16	ECBT1H102KB5	50V 1000P	2	
C517,18	ECBT1H473KB5	50V 0.047U	2	
C519,20	ECBT1H104ZF5	50V 0.1U	2	
C531	ECEA0JKS101	6.3V 100U	1	
C532	ECBT1E223ZF	25V 0.022U	1	
C543-45	ECBT1H104KB5	50V 0.1U	3	
C701	ECA1EM221	220UF	1	⚠
C702,03	ECEA1AKS470	10V 47U	2	
C704	ECBA1E103ZF5	25V 0.01U	1	
C705	ECBT1H103KB5	50V 0.01U	1	
C752	ECBT1H103KB5	50V 0.01U	1	
C753,54	ECA1EM101	100U	2	⚠
C755,56	ECEA1CKA470	16V 47U	2	
C757,58	ECA1CM331	16V 330U	2	
C759,60	ECBT1H473KB5	50V 0.047U	2	
C761	ECBA1E103ZF5	25V 0.01U	1	
C781,82	EEUPL27472E	4700U	2	⚠
C783	ECA1HM470	50V 47U	1	
C784	ECBT1H102KB5	50V 1000P	1	
C785	ECQE1104KF3	100V 0.1U	1	
CN301	RJU100W07	CONNECTOR(7P)	1	
CN302	RJS1A6606T1	CONNECTOR(6P)	1	
CN401	RJU100W07	CONNECTOR(7P)	1	
CN701-06	RJS1A1101T1	CONNECTOR(1P)	6	
CN709	RJS1A1101T1	CONNECTOR(1P)	1	
CN710	RJS1A1101T1	CONNECTOR(1P)	1	(PP/EG)
CN711	RJS1A1101T1	CONNECTOR(1P)	1	(EB)
CN751	RJU100W07	CONNECTOR(7P)	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
CP301	RJT100W07	CONNECTOR(7P)	1	
CP401	RJT100W07	CONNECTOR(7P)	1	
CP751	RJT100W07	CONNECTOR(7P)	1	
D301-03	MA165	DIODE	3	
D304	MA4051M	DIODE	1	
D308	SML72420C	LED	1	
D309	MA165	DIODE	1	
D701	MA165	DIODE	1	
D703-06	RL1N4003N02	DIODE	4	⚠
D707	MA4062M	DIODE	1	⚠
D708	MA165	DIODE	1	
D751-54	RL1N4003N02	DIODE	4	⚠
D755,56	MA4100M	DIODE	2	⚠
D781-84	1N5402BF	DIODE	4	⚠
D785	RL1N4003N02	DIODE	1	
D786	MA4051M	DIODE	1	
D790,91	MA723TA	DIODE	2	
F701	XBA1C16NBAU	FUSE,1.6A	1	(PP) ⚠
F701	XBA2C06TB0	FUSE,T630mA	1	(EB/EG) ⚠
F702	XBA1C25NBAU	FUSE,2.5A	1	(PP) ⚠
F702	XBA2C20TB0	FUSE,T2A	1	(EB/EG) ⚠
IC301	M37531E4GP	IC	1	
IC401	SVIBA4560FT1	IC	1	
IC402	TC9412AF	IC	1	
IC451	SVIBA4560FT1	IC	1	
IC501	LM1876TF	IC	1	
JK401	RJH2311	JACK,LINE IN/S.W OUT	1	
JK501	RJR0054L	SP TERMINAL	1	
JK701	SJS9236-1	JACK,AC INLET	1	(EB/EG) ⚠
JK701	SJSD16-1	JACK,AC INLET	1	(PP) ⚠
L501,02	RLQYR73MW1-0	COIL	2	
L701	RLQZ371	COIL	1	⚠
P1	SPP740-1	POLYETHYLENE COVER	1	
P2	XZB15X40A04	POLYETHYLENE COVER	1	
P3	RPF0139	PROTECTION BAG(F.B.)	1	
P4	RPG5182	CARTON BOX	1	
P5	RPN1344	PAD	1	
P6	RPG5098	PACKING CASE	1	(EB)
P6	RPG5097	PACKING CASE	1	(EG)
P6	RPG5095	PACKING CASE	1	(PP)
P7	RQX9467ZA	ENVELOPE	1	(PP)
P8	RPF0139	PROTECTION COVER	2	
P9	RPF0270	PROTECTION COVER	2	
P10	RPN1342	PAD	1	
P11	XZB80X60A08	POLETYLENE COVER	1	
PCB1	REP3053HA-S	MAIN PCB UNIT	1	(EB) [RTL]
PCB1	REP3053CA-S	MAIN PCB UNIT	1	(EG) [RTL]
PCB1	REP3053EA-S	MAIN PCB UNIT	1	(PP) [RTL]
PT701	RTP2M5E023	POWER TRANSFORMER	1	(EB/EG) ⚠
PT701	RTP2M5C007	POWER TRANSFORMER	1	(PP) ⚠
PT702	RTP1H3E001	POWER TRANSFORMER	1	(EB/EG) ⚠
PT702	RTP1H3C002	POWER TRANSFORMER	1	(PP) ⚠
Q301	2SC3311ATA	TRANSISTOR	1	
Q306,07	DTA114ESTP	TRANSISTOR	2	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
Q531,32	2SC3311ATA	TRANSISTOR	2	
Q533	2SA1309ATA	TRANSISTOR	1	
Q534	2SC3311ATA	TRANSISTOR	1	
Q701	2SD1862QRTV6	TRANSISTOR	1	⚠
Q702	2SC3311ATA	TRANSISTOR	1	
Q751	2SD1862QRTV6	TRANSISTOR	1	⚠
Q752	2SB1240-P	TRANSISTOR	1	⚠
R301-03	ERDS2FJ103	1/4W 10K	3	
R305	ERDS2FJ223	1/4W 22K	1	
R306	ERDS2FJ472	1/4W 4.7K	1	
R307	ERDS2FJ223	1/4W 22K	1	
R309,10	ERDS2FJ472	1/4W 4.7K	2	
R316	ERDS2FJ103	1/4W 10K	1	
R320	ERDS2FJ271	1/4W 270	1	
R321	ERDS2FJ181	1/4W 180	1	
R322	ERDS2FJ472	1/4W 4.7K	1	
R323	ERDS2FJ102	1/4W 1K	1	
R401,02	ERDS2FJ273	1/4W 27K	2	
R403,04	ERDS2FJ104	1/4W 100K	2	
R405,06	ERDS2FJ473	1/4W 47K	2	
R407,08	ERDS2FJ472	1/4W 4.7K	2	
R409,10	ERDS2FJ103	1/4W 10K	2	
R411,12	ERDS2FJ101	1/4W 100	2	
R413,14	ERDS2FJ104	1/4W 100K	2	
R415-18	ERDS2FJ101	1/4W 100	4	
R421,22	ERDS2FJ822	1/4W 8.2K	2	
R423,24	ERDS2FJ103	1/4W 10K	2	
R451	ERDS2FJ101	1/4W 100	1	
R452	ERDS2FJ104	1/4W 100K	1	
R454	ERDS2FJ223	1/4W 22K	1	
R455,56	ERDS2FJ473	1/4W 47K	2	
R458	ERDS2FJ223	1/4W 22K	1	
R459	ERDS2FJ473	1/4W 47K	1	
R471,72	ERDS2FJ473	1/4W 47K	2	
R501,02	ERDS2FJ102	1/4W 1K	2	
R505,06	ERDS2FJ473	1/4W 47K	2	
R507,08	ERDS2FJ102	1/4W 1K	2	
R509,10	ERDS2FJ223	1/4W 22K	2	
R511,12	ERDS2FJ100	10	2	⚠
R513	ERDS2FJ823	1/4W 82K	1	
R514	ERDS2FJ124	1/4W 120K	1	
R515,16	ERDS1FJ471	470	2	⚠
R517,18	ERDS1FJ100	10	2	⚠
R531	ERDS2FJ563	1/4W 56K	1	
R532	ERDS2FJ564	1/4W 560K	1	
R533	ERDS2FJ223	1/4W 22K	1	
R534	ERDS2FJ103	1/4W 10K	1	
R535	ERDS2FJ102	1/4W 1K	1	
R701	ERDS2FJ102	1/4W 1K	1	
R703	ERDS2FJ223	1/4W 22K	1	
R704	ERDS2FJ222	1/4W 2.2K	1	
R707	ERDS1FJ101	100	1	⚠
R708	ERDS2FJ473	1/4W 47K	1	
R709	ERDS2FJ472	1/4W 4.7K	1	
R751,52	ERD2FCJ4R7	4.7	2	⚠
R753,54	ERDS2FJ102	1/4W 1K	2	
R781	ERDS2FJ333	1/4W 33K	1	
RL701	RSY0040M-0	RELAY	1	⚠
S301	RSP2B023-A	SW,POWER	1	
VR301	D2BEA14B0007	VR	1	
Z301	EF0EC4004T4	OSCILLATOR	1	
Z701	ERZV10V511CS	ZNR	1	⚠

15 Cabinet Parts Location



Note : We do not supply those items of parts marked ✻.

16 Packaging