

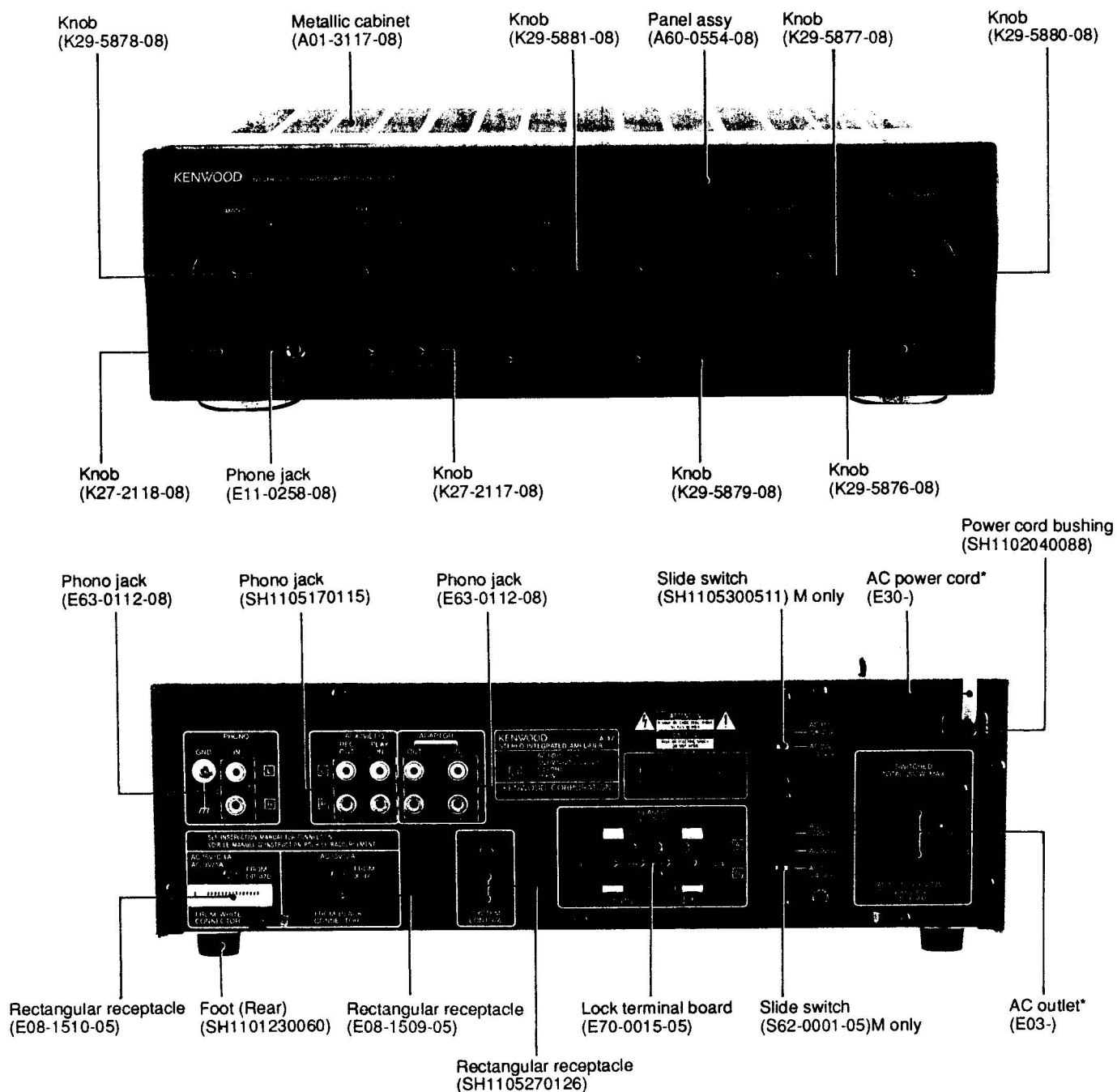
STEREO AMPLIFIER

A-47

SERVICE MANUAL

(M-47)

KENWOOD

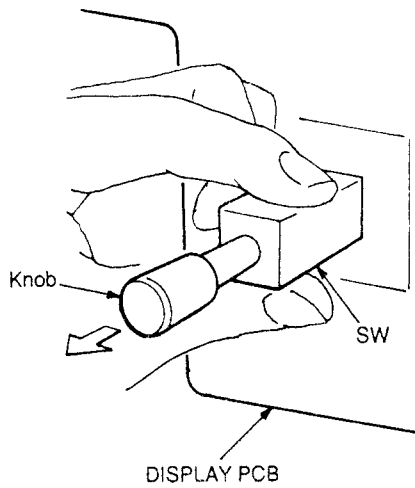


* Refer to parts list on page 18.

CONTENTS

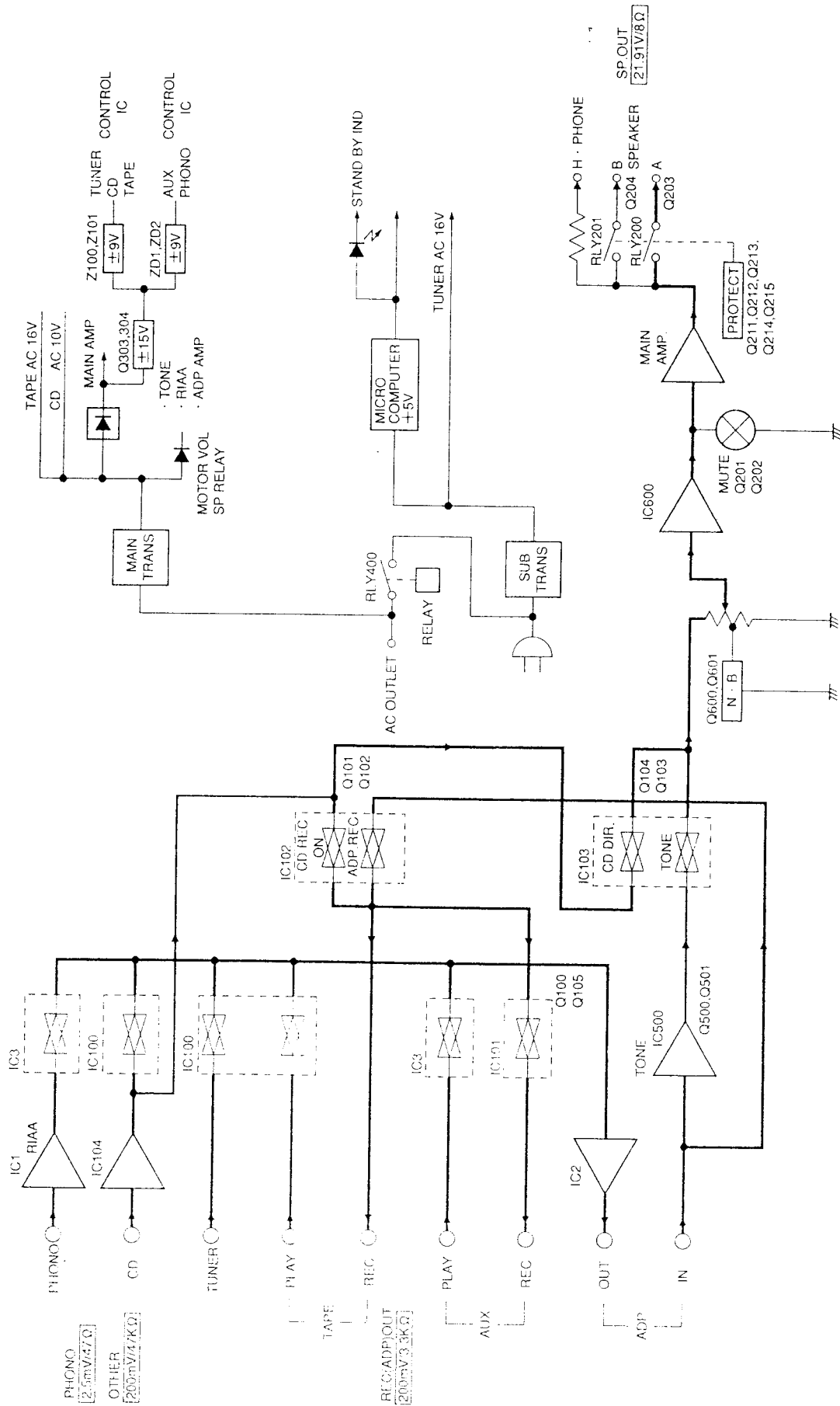
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Removing the Control Knobs of SP Selector Switches (S500 and S501)



Fix the upper and lower white molded parts of the switches manually and pull out the control knobs straightly.

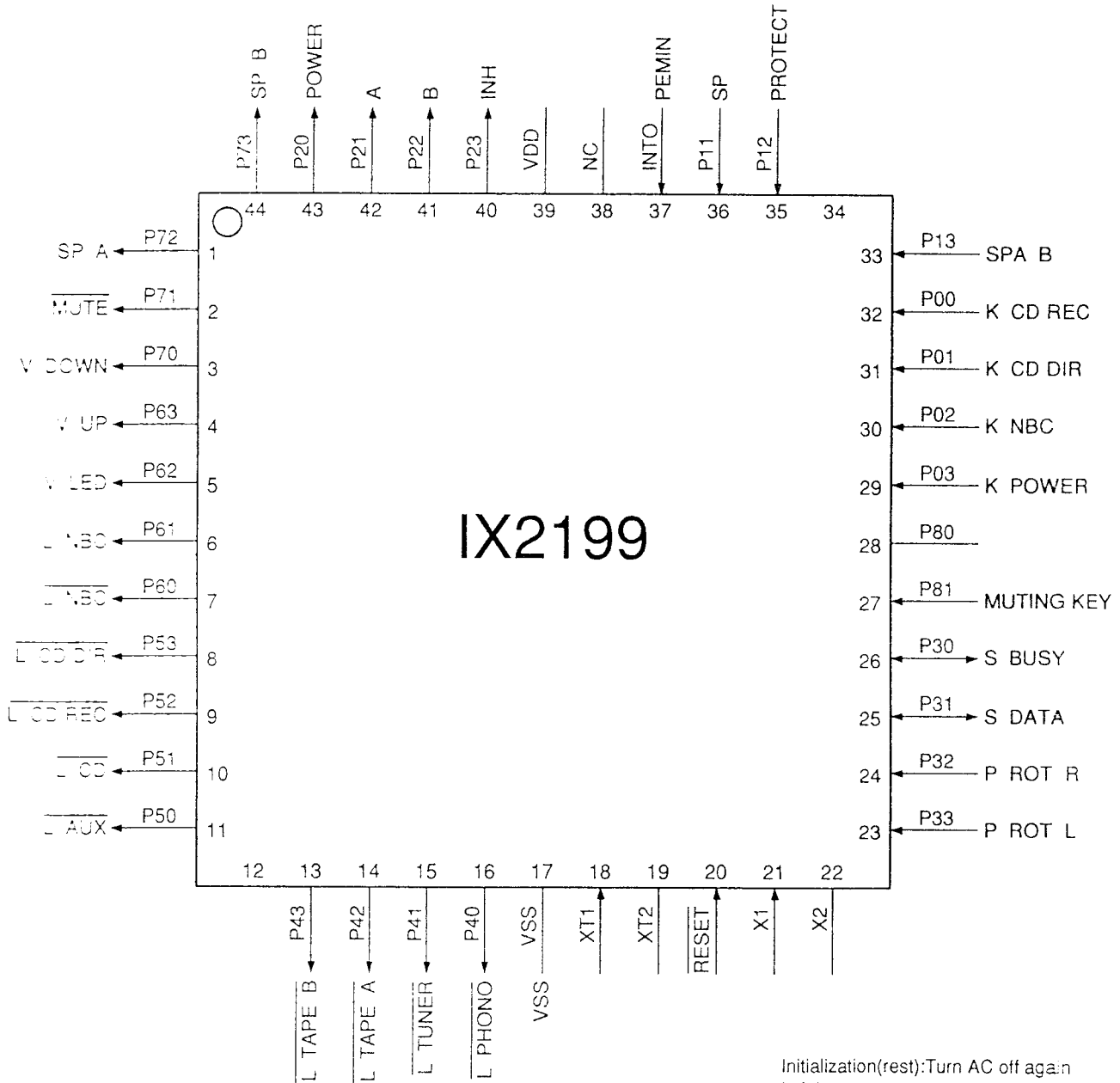
BLOCK LEVEL DIAGRAM



CIRCUIT DESCRIPTION

Amp Microprocessor: IX2199 (MAIN PCB: IC501)

Pin Connection



CIRCUIT DESCRIPTION

Pin Function: IX2199 (MAIN PCB: IC501)

Pin No.	Pin name	I/O	Name	Description
1	P72	OUT	SP A	Speaker relay A
2	P71	OUT	MUTE	Mute
3	P70	OUT	V DOWN	Volume down
4	P63	OUT	V UP	Volume up
5	P62	OUT	V LED	Volume LED
6	P61	OUT	L NBC	NB circuit LED
7	P60	OUT	L NBC	NB circuit ON/OFF
8	P53	OUT	L CD DIR	CD direct LED
9	P52	OUT	L CD REC	CD REC LED
10	P51	OUT	L CD	CD LED
11	P50	OUT	L AUX	AUX/DAT LED
13	P43	OUT	L TAPE B	TAPE B LED
14	P42	OUT	L TAPE A	TAPE A LED
15	P41	OUT	L TUNER	TUNER LED
16	P40	OUT	L PHONO	PHONO LED
17	Vss		Vss	GND
18	XT1	IN		GND
19	XT2			Open
20	RESET	IN		Reset signal input port
21	X1	IN		Oscillator
22	X2			Oscillator
23	P33	IN	P ROT L	Rotary encoder L
24	P32	IN	P ROT R	Rotary encoder R
25	P31	I/O	S DATA	Serial data
26	P30	I/O	S BUSY	Serial busy
27	P81	IN	MUTING KEY	Key muting
28	P80			
29	P03	IN	K POWER	Key power
30	P02	IN	K NBC	Key NB circuit
31	P01	IN	K CD DIR	Key CD direct
32	P00	IN	K CD REC	Key CD REC
33	P13	IN	SP A.B.	Speaker A and B on/off
35	P12	IN	PROTECT	Detects protection
36	P11	IN	SP	SP on/off
37	INT0	IN	PEMIN	Remote control input pin
38	NC			+5V
39	VDD			+5V
40	P23	OUT	INH	Control 4052. INH
41	P22	OUT	B	Control 4052. B
42	P21	OUT	A	Control 4052. A
43	P20	OUT	POWER	Power
44	P73	OUT	SP B	Speaker relay B

ADJUSTMENT / REGLAGE / ABGLEICH

ADJUSTMENT

No.	ITEM	INPUT SETTINGS	OUTPUT SETTINGS	AMPLIFIER SETTINGS	ALIGNMENT POINTS	ALIGN FOR	FIG.
1	IDLE CURRENT	—	Connect a DC voltmeter across TP201 (L) TP202 (R) (MAIN PCB)	VOLUME: 0	VR201 (L) VR202 (R) (MAIN PCB)	3.3 - 6.6 mV (Before get up heat.)	(a)

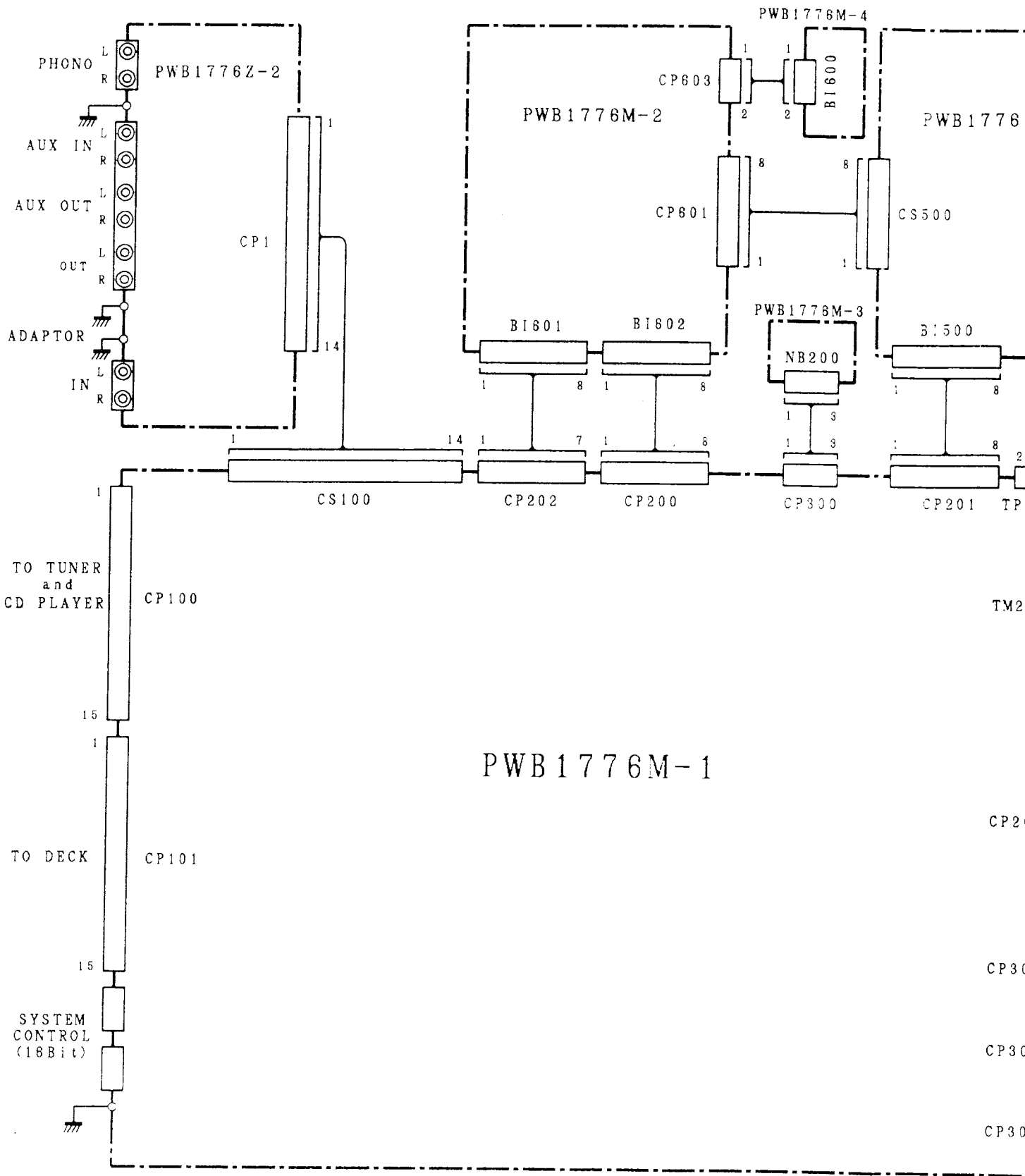
REGLAGE

N°	ITEM	REGLAGE DE L'ENTREE	REGLAGE DE LA SORTIE	REGLAGE DE L'AMPLIFICATEUR	POINT DE L'ALIGNEMENT	ALIGNER POUR	FIG.
1	COURANT DE PLARISATION	—	Connecter un voltmètre de CC sur TP201 (G) TP202 (D) (MAIN PCB)	VOLUME: 0	VR201 (G) VR202 (D) (MAIN PCB)	3.3 - 6.6 mV. (Avant que l'appareil chauffe)	(a)

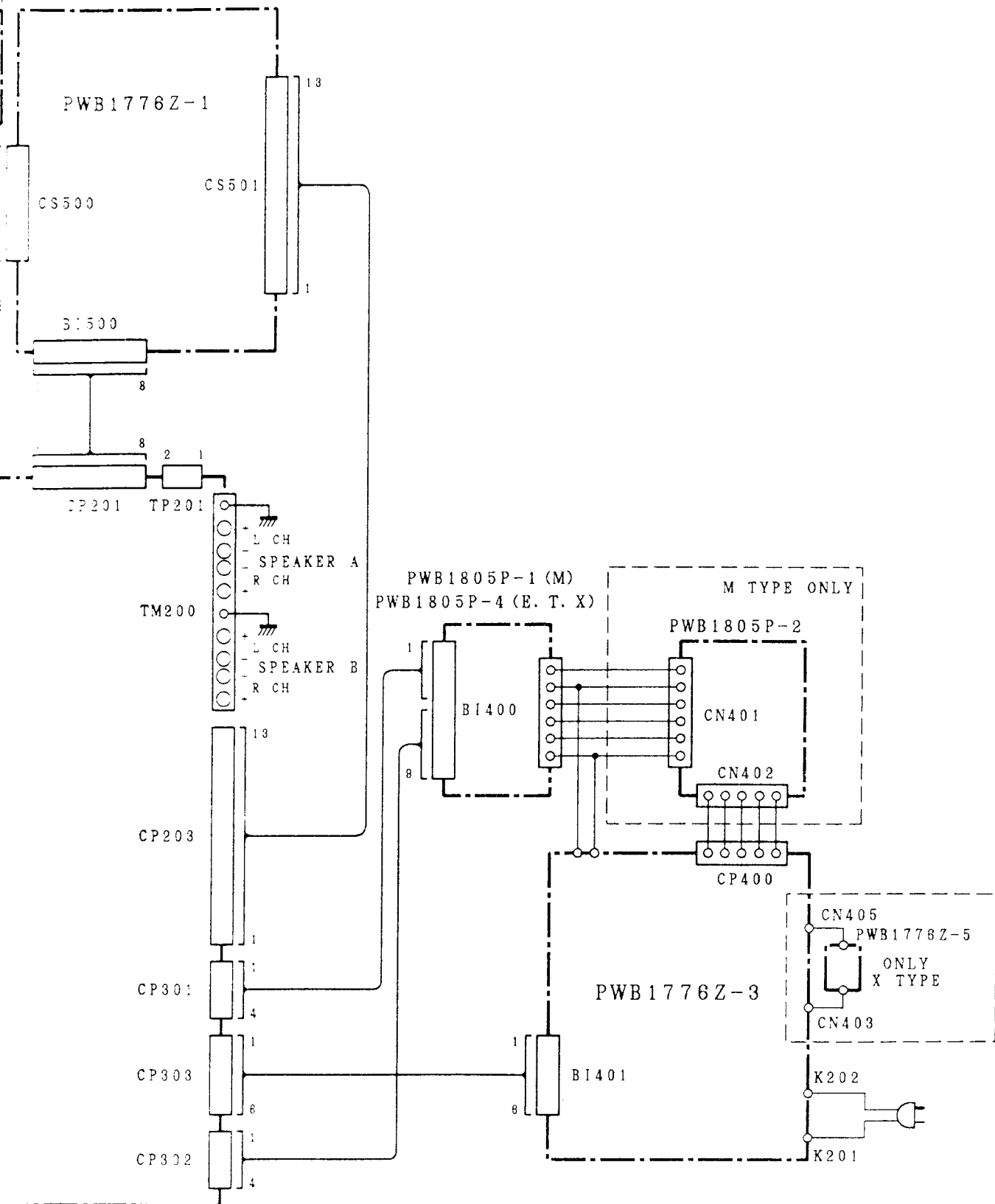
ABGLEICH

NR.	GEGENSTAND	EINGANGS-EINSTELLUNG	AUSGANGS-EINSTELLUNG	VERSTÄRKER-EINSTELLUNG	ABGLEICH-PUNKTE	ABGLEICHEN FÜR	ABB.
1	LEERLAUFSTROM	—	Einen Gleichspannungsmesser über TP201 (L) TP202 (R) anschießen. (MAIN PCB)	VOLUME: 0	VR201 (L) VR202 (R) (MAIN PCB)	3.3 - 6.6 mV (Vor dem Warmlaufen)	(a)

WIRING DIAGRAM



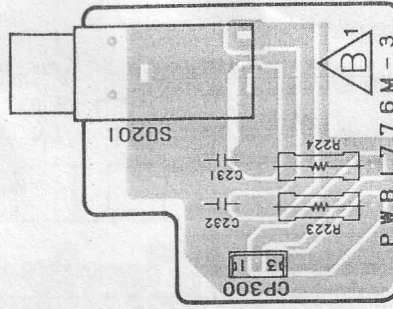
A-47



PC BOARD (Component side view) AUDIO Unit

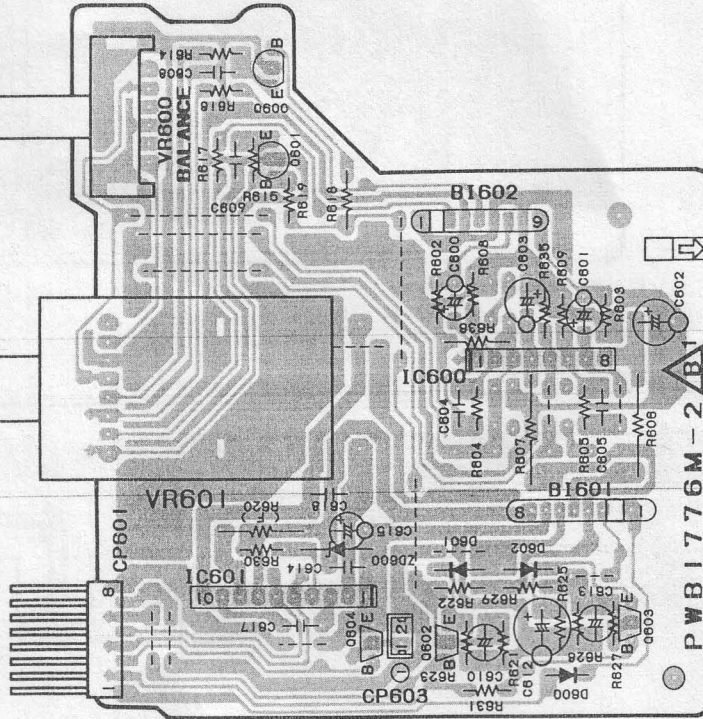
2
3
4
5
6
7

PHONES

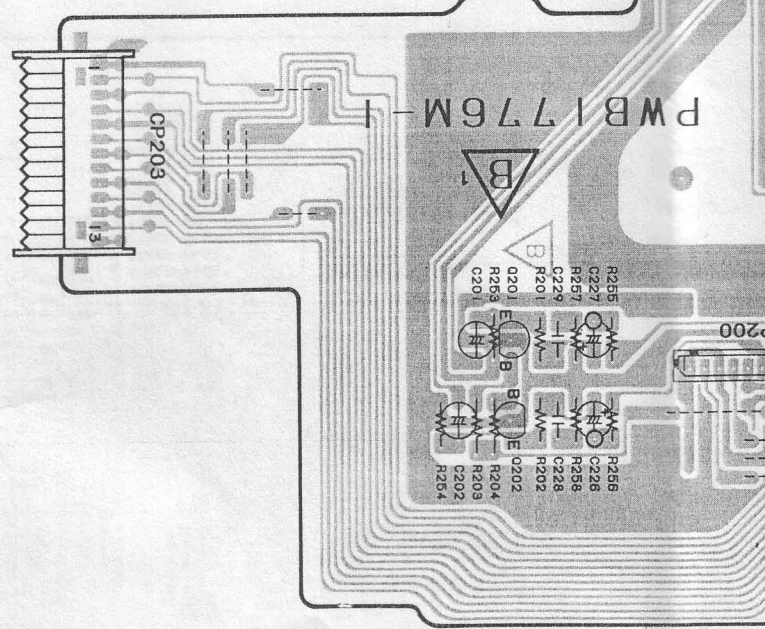
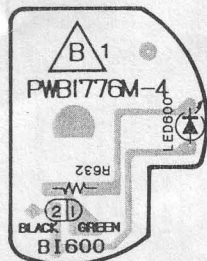


BALANCE

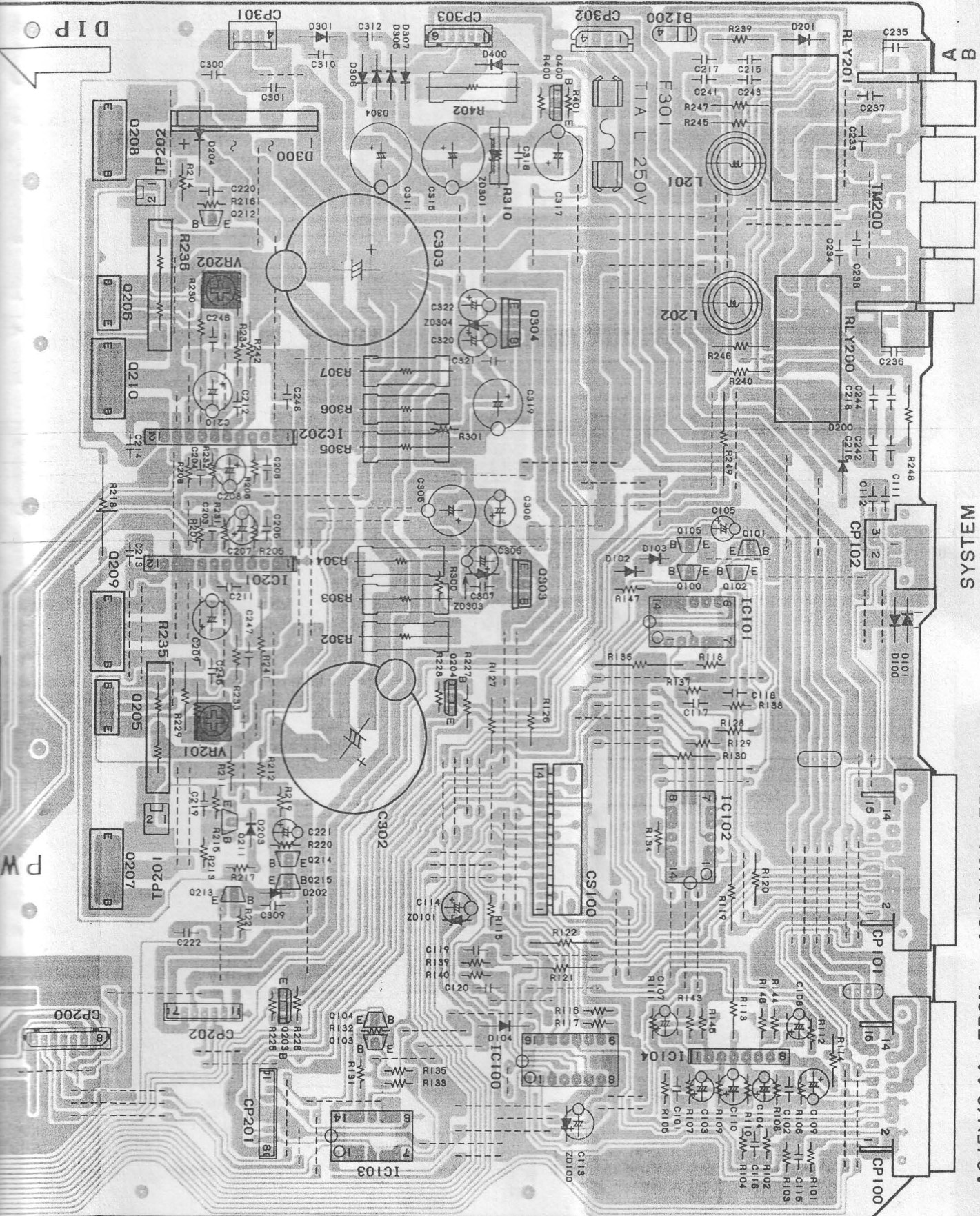
VOLUME CONTROL



← FRONT



DIP



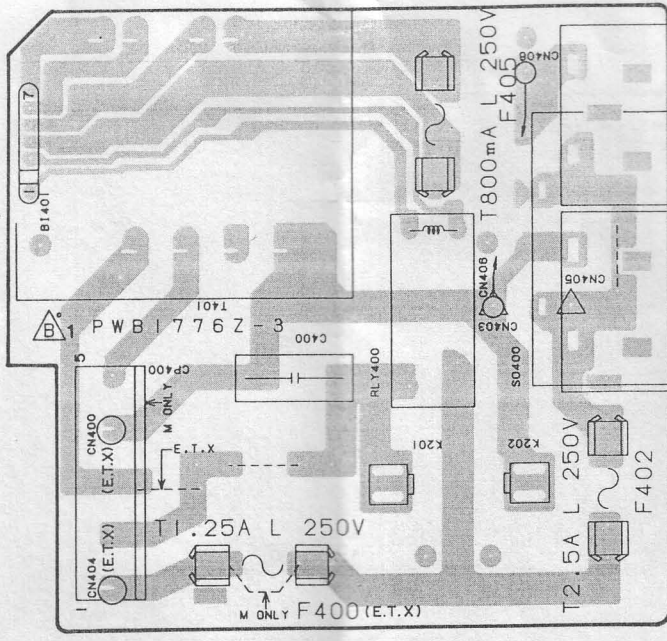
SPEAKERS

SYSTEM CONTROL

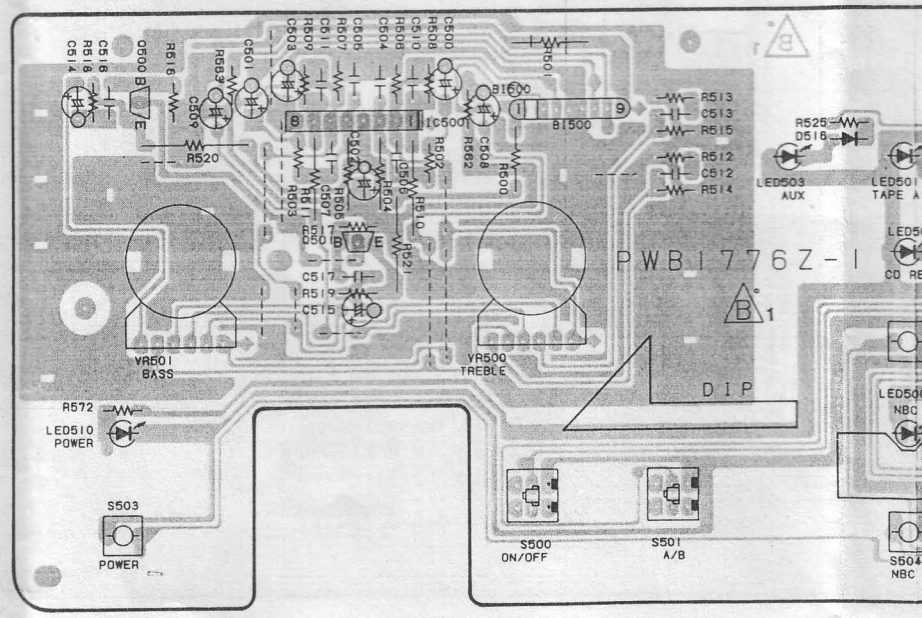
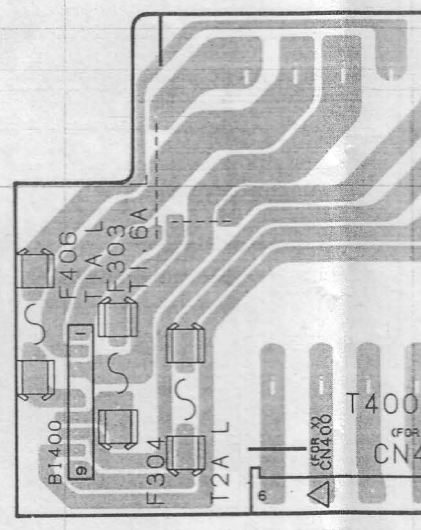
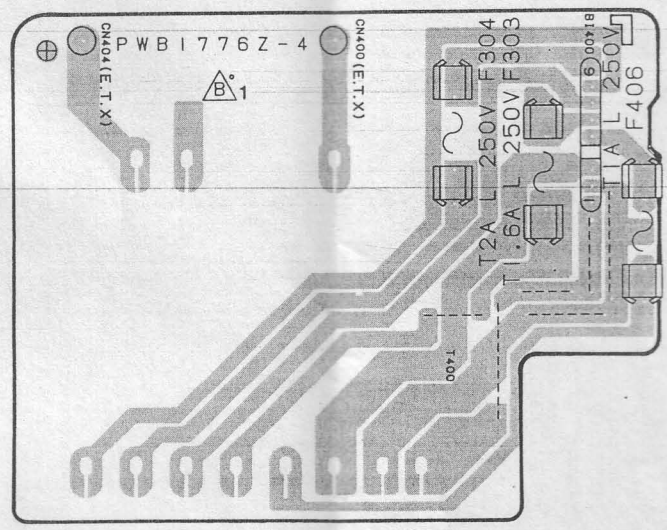
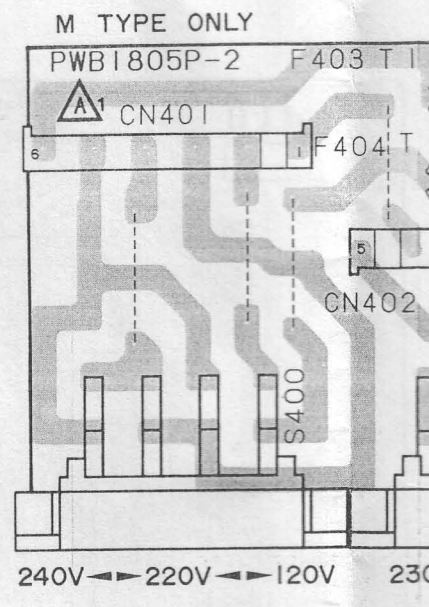
FROM BLACK CONNECTOR
AC 15V/2V
4-X

FROM WHITE CONNECTOR
AC 9V/1V
AC 15V/0.5V
DP-470

K L M N O
PC BOARD (Component side view) CONTROL Unit

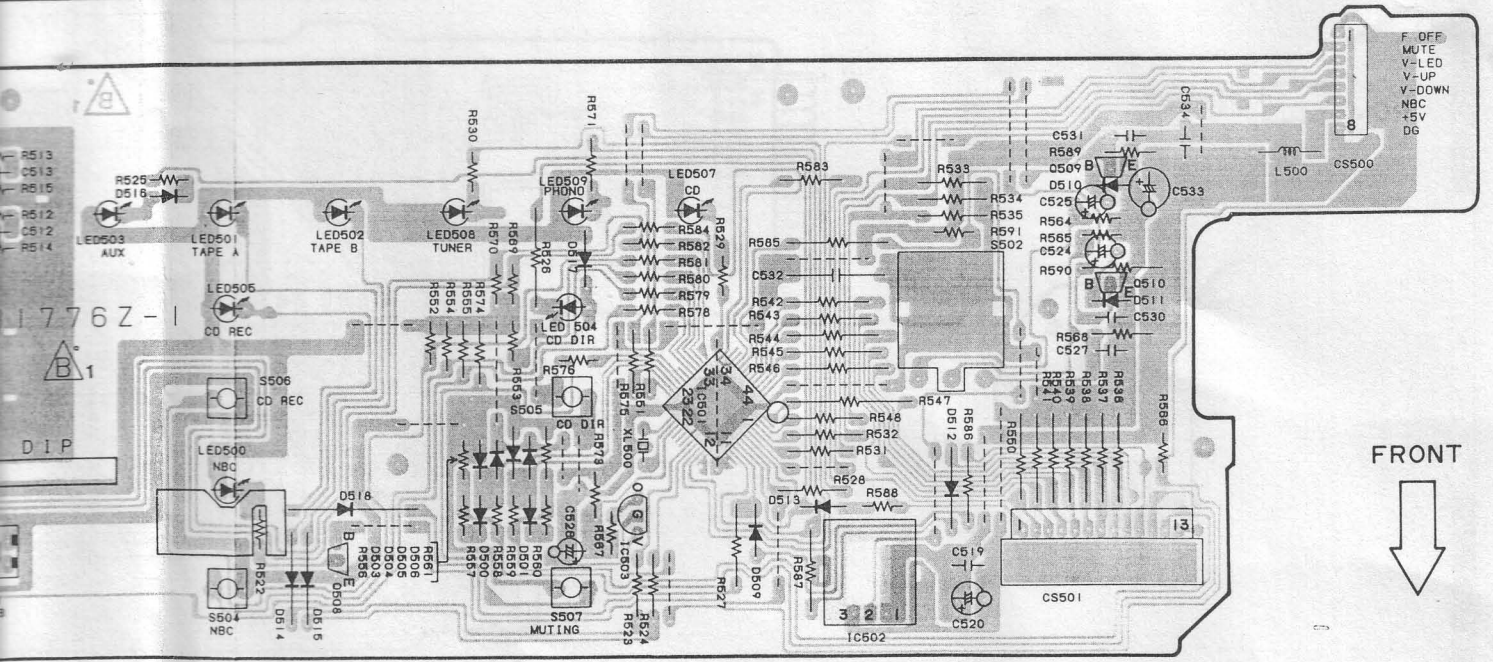
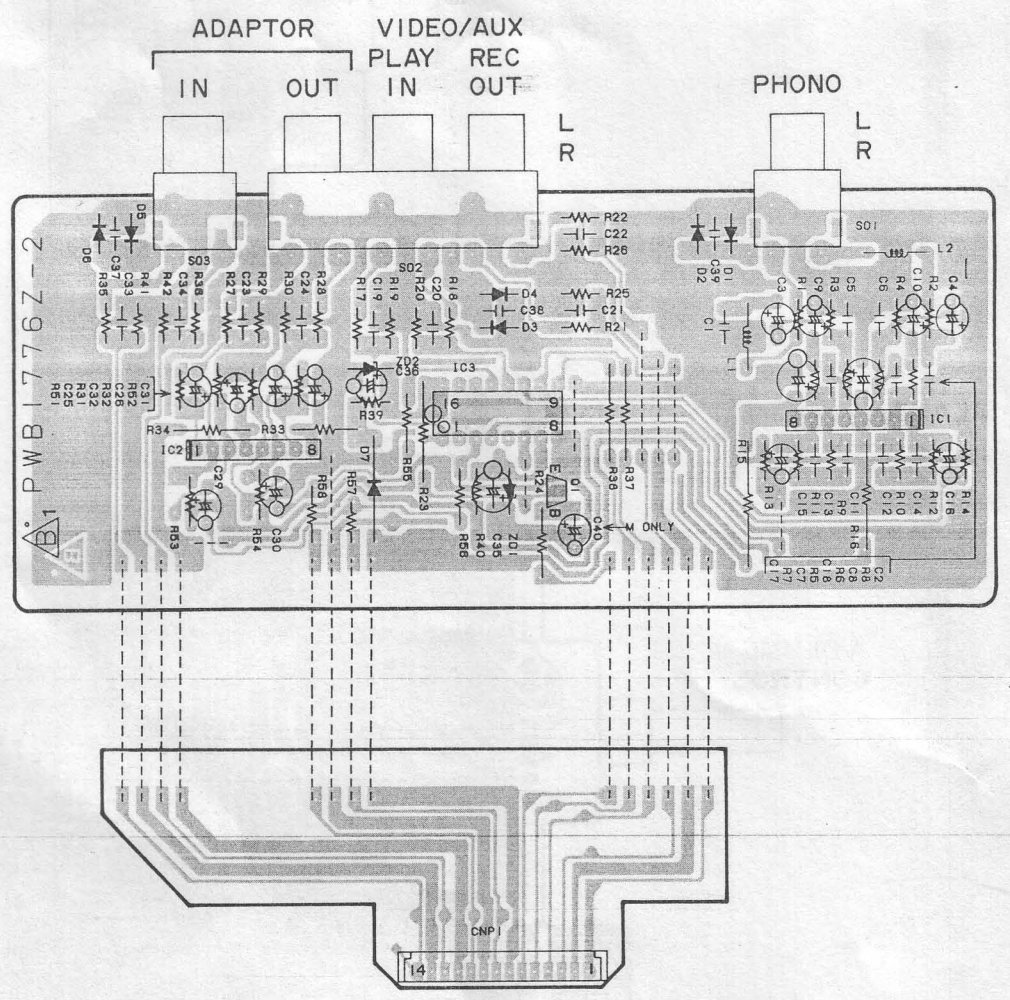
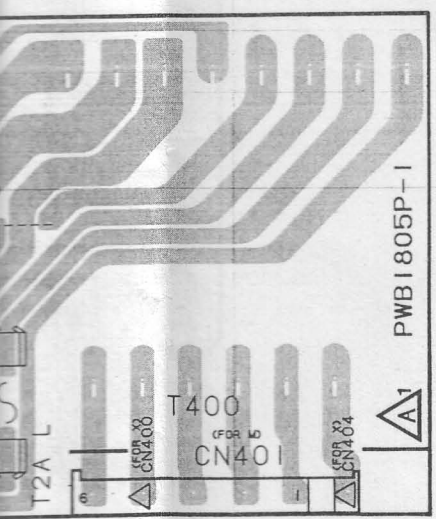
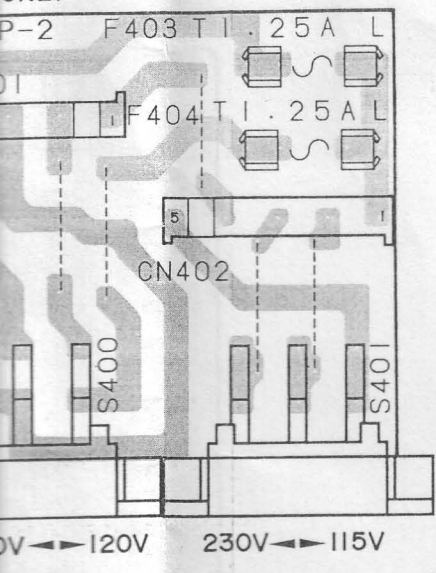


AC OUTLET



2
3
4
5
6
7

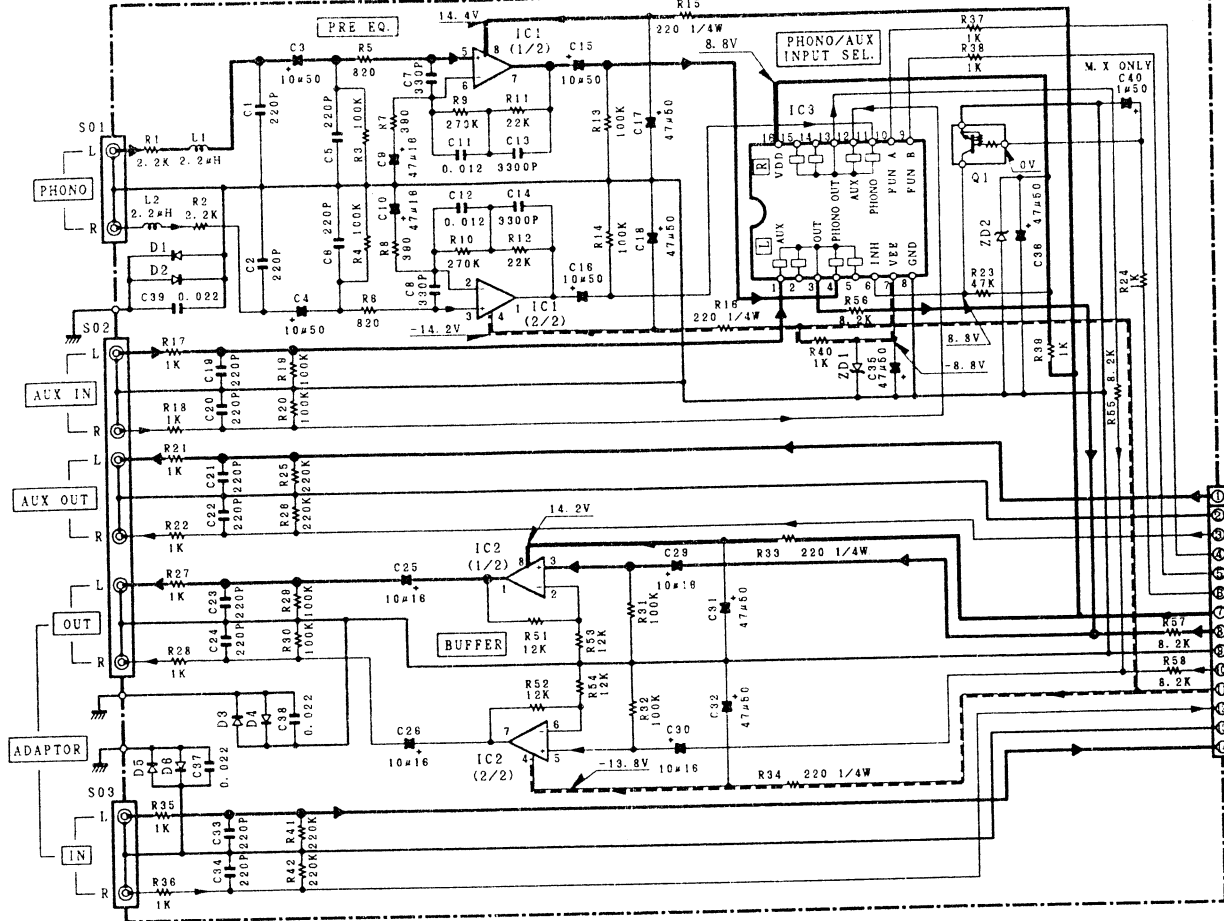
ONLY



FRONT
↓

IC1 : M5218AL Q1 : DTC114YS
 IC2, 500 : BA15218N1 D1~7 : 1SS133
 IC3 : TC4052BP ZD1, 2 : MTAJ9R1A

PWB1776Z-2



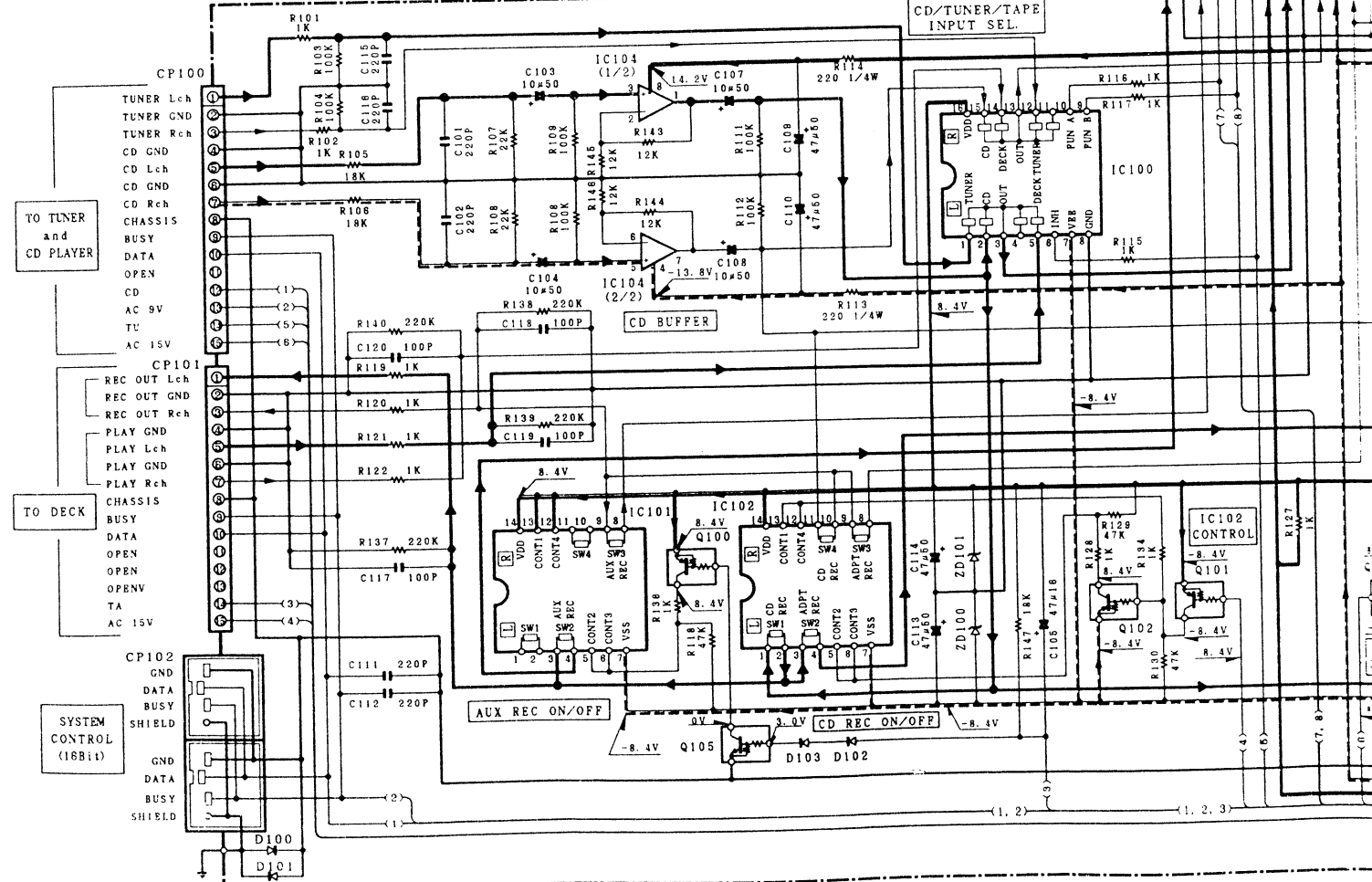
IC100 : TC4052BP
 IC101~103 : TC4066BP
 IC104, 600 : BA15218N1
 IC201, 202 : UCPL122BP
 IC601 : LB1641

Q100, 101 : DTA114YS
 104, 213 :
 Q102, 103 : DTC114YS
 604 :
 Q105 : DTC114YS
 Q201, 202 : 2SC2878
 600, 601 :
 Q203, 204 : 2SD1855
 Q205, 206 : 2SC3420
 Q207, 208 : 2SC3180
 Q209, 210 : 2SA1200
 Q211, 212 : 2SC1740
 214, 215 :
 Q303 : 2SD201
 Q304 : 2SB137
 Q400 : 2SD1855
 Q602, 603 : 2SA930

DESTINATION	
COUNTRY	A
ENGLAND	A
EUROPE	A
AUSTRALIA	A
GENERAL MARKET	A

DESTINATION	
COUNTRY	A
ENGLAND	A
EUROPE	A
AUSTRALIA	A
GENERAL MARKET	A

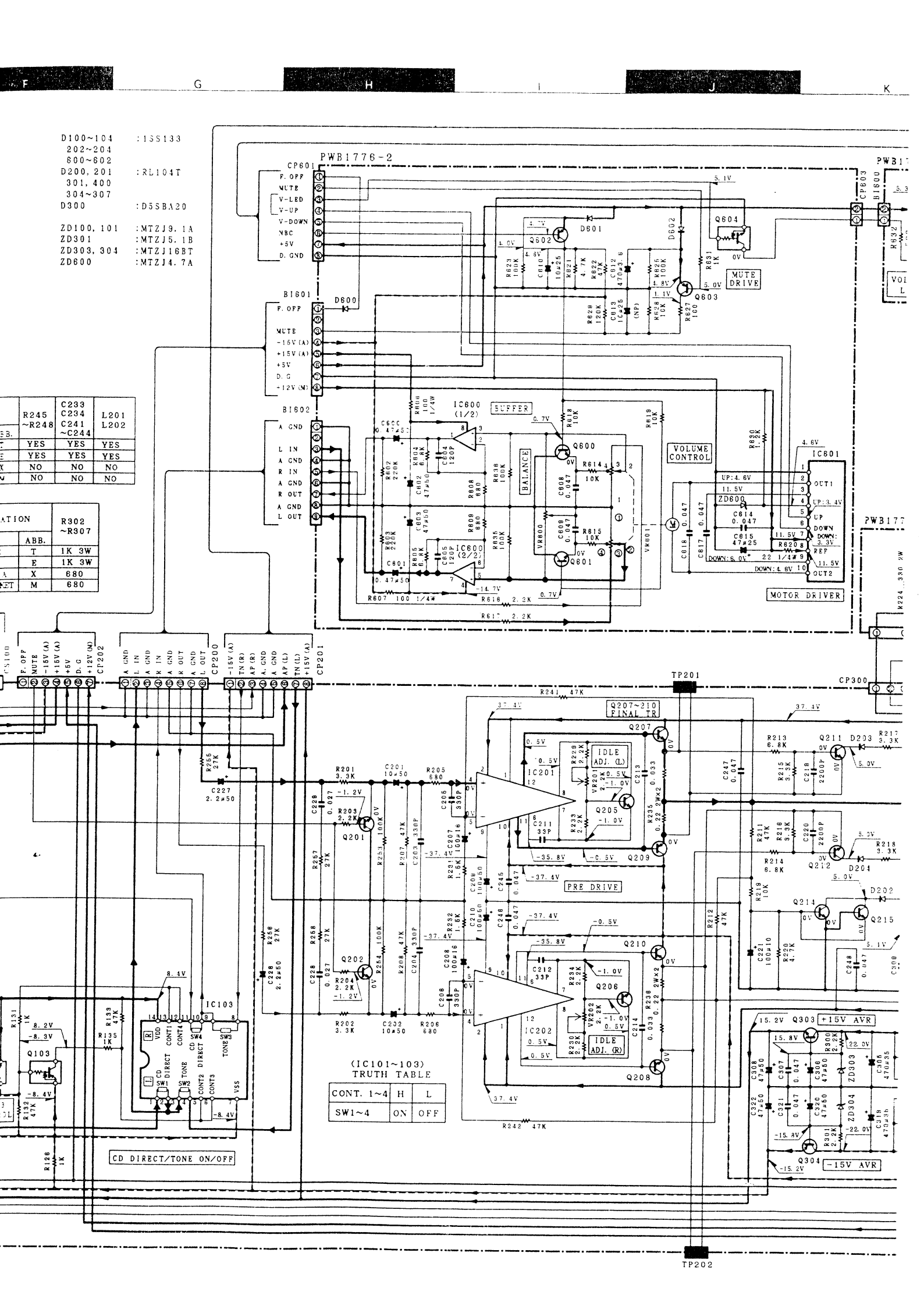
PWB1776M-1



DESTINATION	
COUNTRY	A
ENGLAND	A
EUROPE	A
AUSTRALIA	A
GENERAL MARKET	A

AUX OUT Lch	(1)
A GND	(2)
AUX OUT Rch	(3)
FUN A	(4)
FUN B	(5)
INH	(6)
+15V (A)	(7)
A GND	(8)
ADPT OUT LCH	(9)
+15V (A)	(10)
A GND	(11)
ADPT IN R	(12)
A GND	(13)
ADPT IN L	(14)

AUX OUT Lch	(1)
A GND	(2)
AUX OUT Rch	(3)
FUN A	(4)
FUN B	(5)
INH	(6)
+15V (A)	(7)
A GND	(8)
ADPT OUT Lch	(9)
+15V (A)	(10)
A GND	(11)
ADPT IN Rch	(12)
+15V (A)	(13)
A GND	(14)
ADPT IN Lch	(15)
+15V (A)	(16)
A GND	(17)
ADPT IN Rch	(18)
+15V (A)	(19)
A GND	(20)



- D100~104 : 1SS133
- 202~204
- 600~602
- D200, 201 : RL104T
- 301, 400
- 304~307
- D300 : D5SBA20
- ZD100, 101 : MTZJ9.1A
- ZD301 : MTZJ5.1B
- ZD303, 304 : MTZJ16BT
- ZD600 : MTZJ4.7A

R245	C233	L201
~R248	C234	L202
YES	C241	YES
YES	~C244	YES
NO	NO	NO
NO	NO	NO

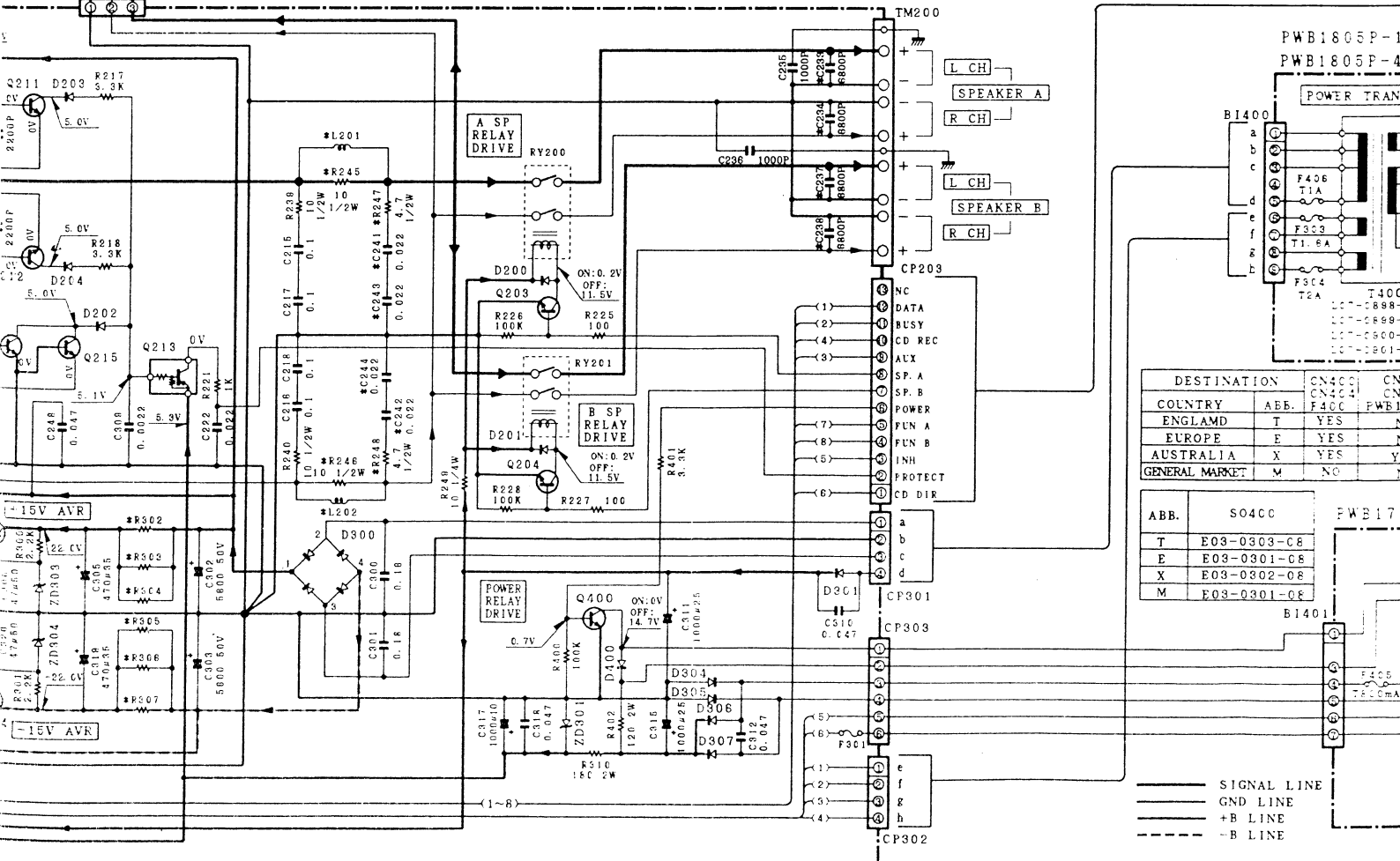
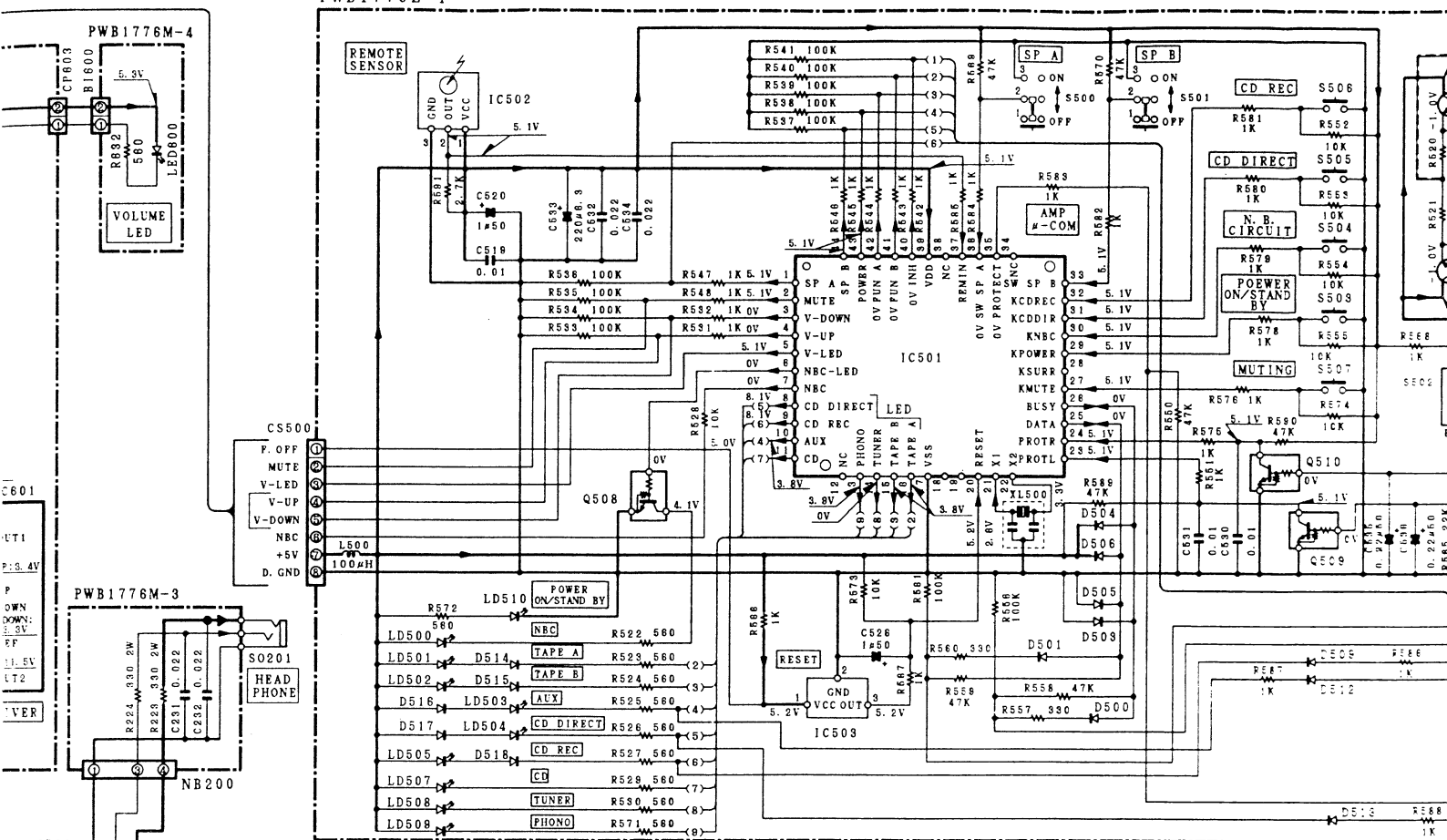
R302	~R307
ABB.	
T	1K 3W
E	1K 3W
A	680
NET	M

(IC101~103)
TRUTH TABLE

CONT. 1~4	H	L
SW1~4	ON	OFF

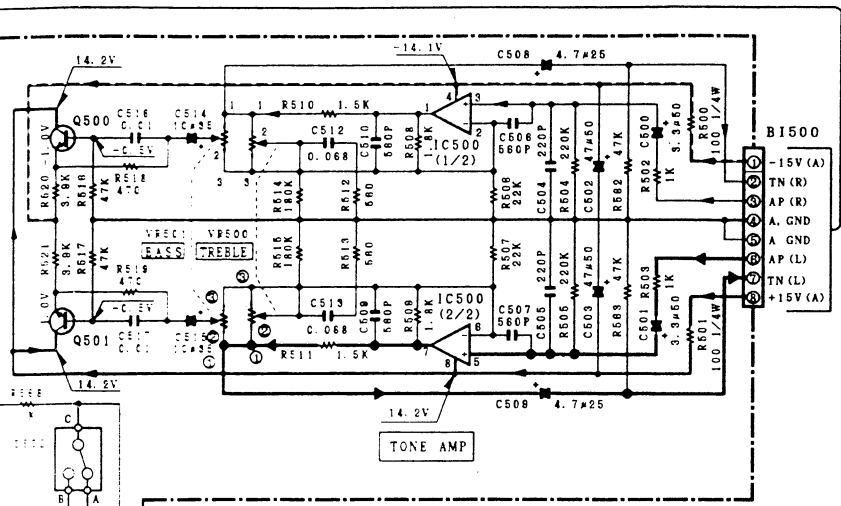
TP202

PWB17762-1



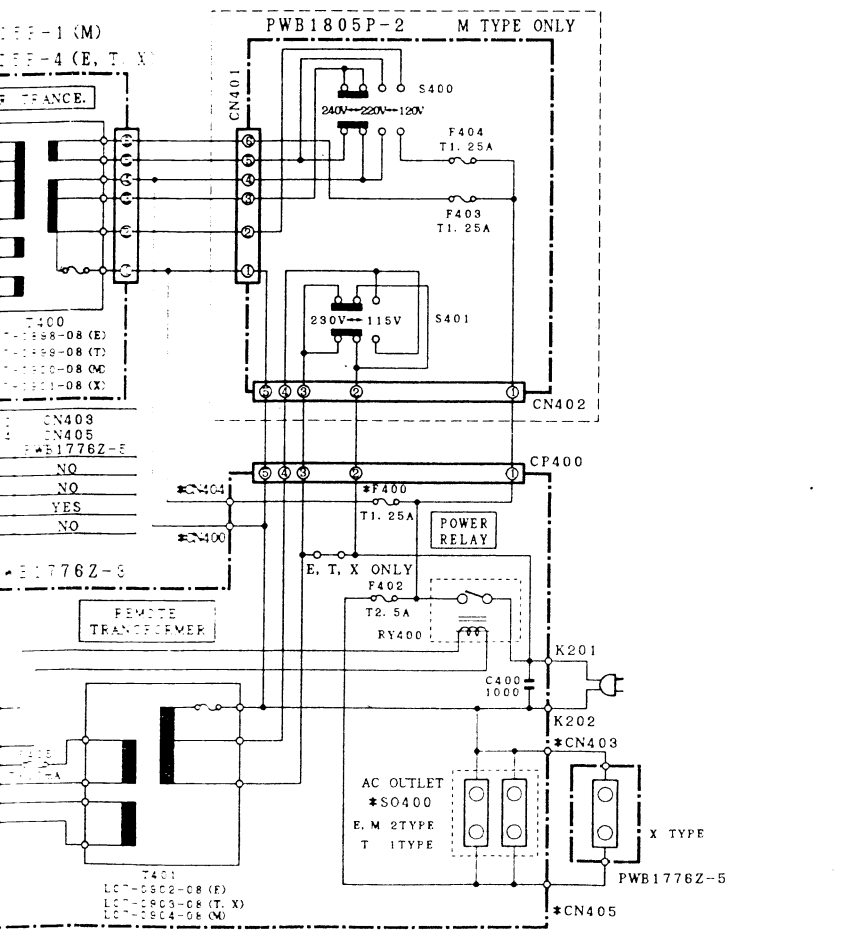
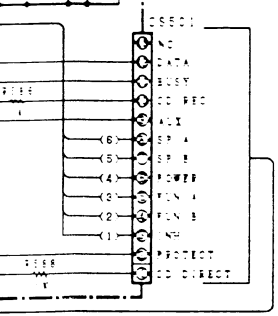
DESTINATION	CN400	CN401	CN402
COUNTRY	ABB	F400	PWB1
ENGLAND	T	YES	N
EUROPE	E	YES	N
AUSTRALIA	X	YES	Y
GENERAL MARKET	M	NO	N

ABB.	S0400	PWB17
T	E03-0303-08	
E	E03-0301-08	
X	E03-0302-08	
M	E03-0301-08	

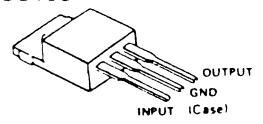


- PWB1776Z-1
- IC2, 500 : BA15218N1
 - IC3 : TC4052BP
 - IC501 : RH-1X2189AFZZ
 - IC502 : VHLSP54201AFZZ
 - IC503 : PST600D

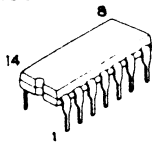
- Q508~510 : DTC114YS
 - Q500, 501 : 2SC1740SR
- D500, 501 : 1SS133
- 503~506, 509
- LD500 : SLR34VC3
 - LD501~505 : SLR34VC
 - 507~510



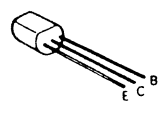
1SS133



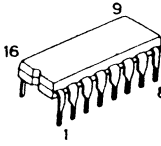
TC4066BP



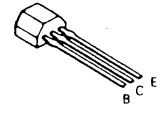
2SC2878B



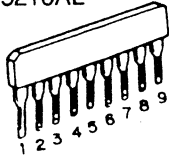
TC4052BP



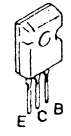
DTA114YS
DTC114ES



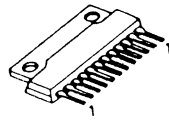
M5218AL



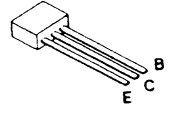
2SC3421Y



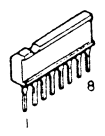
UPC1225H



DTC114YS



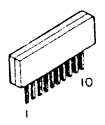
BA15218N



2SB1375
2SD2012



LB1641



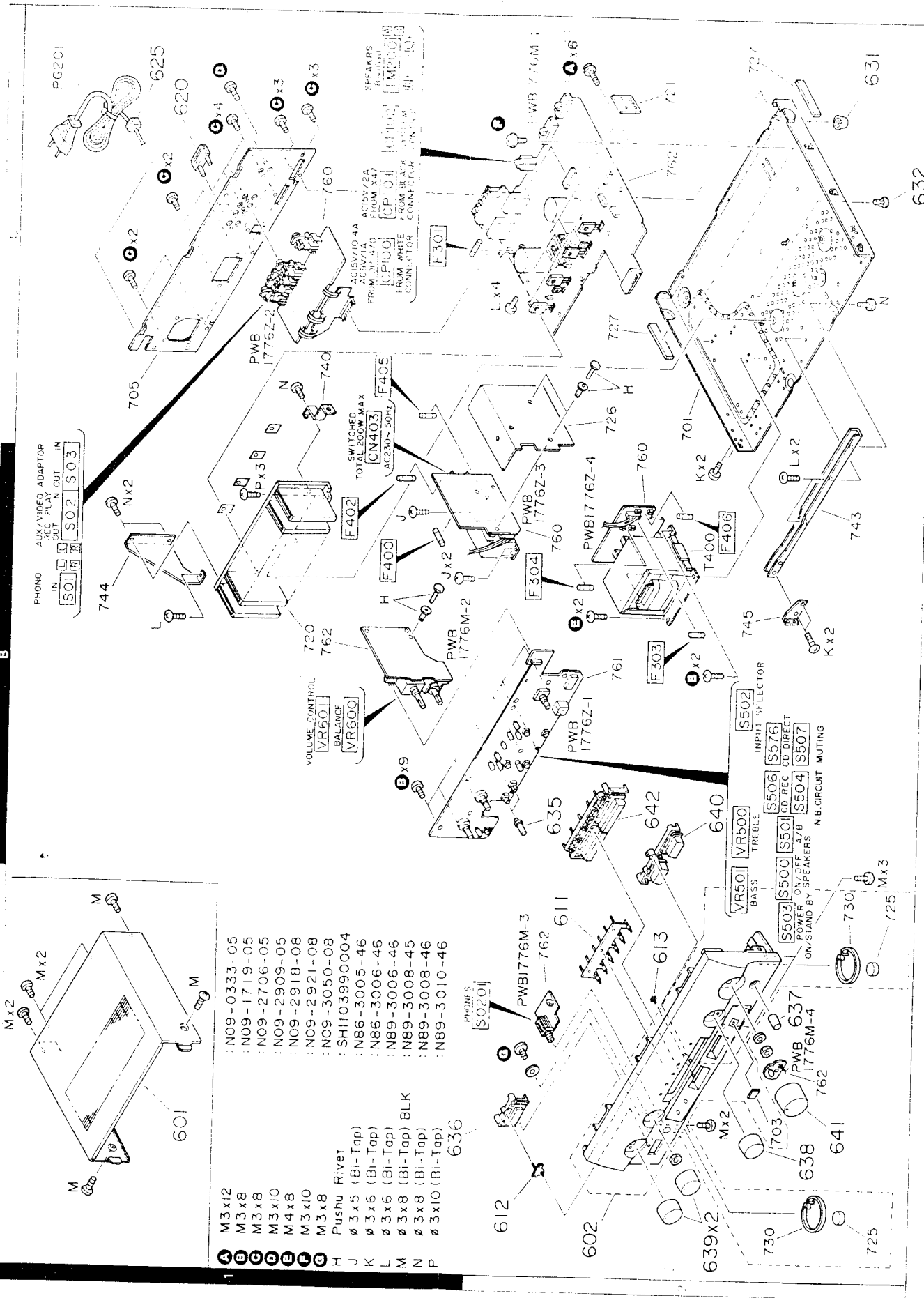
CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). ⚠ indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

DC voltages are as measured with a high impedance voltmeter with no signal input. Values may vary slightly due to variations between individual instruments or/and units.

Les tensions c.c. doivent être mesurées avec un voltmètre à haute impédance sans signal d'entrée. Les valeurs peuvent différer légèrement du fait des variations inhérentes aux appareils et aux instruments de mesure individuels.

Die angegebenen Gleichspannungswerte wurden mit einem hochohmigen Spannungsmesser ohne Eingangssignal gemessen. Dabei schwanken die Meßwerte aufgrund von Unterschieden zwischen einzelnen Instrumenten oder Geräten u. U. geringfügig.

EXPLODED VIEW



- A** M3x12
B M3x8
C M3x8
D M3x10
E M4x8
F M3x10
G M3x8
H Pushu Rivet
J ø 3 x 5 (Bl-Tap)
K ø 3 x 6 (Bl-Tap)
L ø 3 x 6 (Bl-Tap)
M ø 3 x 8 (Bl-Tap) BLK
N ø 3 x 8 (Bl-Tap)
P ø 3 x 10 (Bl-Tap)
636
- : N09-0333-05
 - : N09-1719-05
 - : N09-2706-05
 - : N09-2909-05
 - : N09-2918-08
 - : N09-2921-08
 - : N09-3050-08
 - : SH1103990004
 - : N86-3005-46
 - : N86-3006-46
 - : N89-3006-46
 - : N89-3008-45
 - : N89-3008-46
 - : N89-3010-46

Parts with the exploded numbers larger than 700 are not supplied.

PARTS LIST

No.2

Ref. No. 参照番号	Address 位	Part No. 部品番号	Description 部 品 名 / 規 格	Description 部 品 名 / 規 格	Destr. Re- nation marks 仕 向 備考
C9	10	CE04KW1C470M	47UF 16WV	ELECTR0	
C11	12	SH1125900162	0.012UF J	CERAMIC	
C13	14	SH1125900164	3300PF J	CERAMIC	
C15	16	CE04KW1H100M	10UF 50WV	ELECTR0	
C17	18	CE04KW1H470M	47UF 50WV	ELECTR0	
C19	24	CC45SL1H221J	220PF J	CERAMIC	
C25	26	CE04KW1C100M	10UF 16WV	ELECTR0	
C29	30	CE04KW1C100M	10UF 16WV	ELECTR0	
C31	32	CE04KW1H470M	47UF 50WV	ELECTR0	
C33	34	CC45SL1H221J	220PF J	CERAMIC	
C35	36	CE04KW1H470M	47UF 50WV	ELECTR0	
C37	39	CK45FF1H23Z	0.022UF Z	CERAMIC	
C40		CE04KW1H100M	1.00UF 50WV	ELECTR0	MX1
C101	102	CC45SL1H221J	220PF J	CERAMIC	
C103	104	CE04KW1H100M	10UF 50WV	ELECTR0	
C105		CE04KW1C470M	47UF 16WV	ELECTR0	
C107	108	CE04KW1H100M	10UF 50WV	ELECTR0	
C109	110	CE04KW1H470M	47UF 50WV	ELECTR0	
C111	112	CC45SL1H221J	220PF J	CERAMIC	
C113	114	CE04KW1H470M	47UF 50WV	ELECTR0	
C115	116	CC45SL1H221J	220PF J	CERAMIC	
C117	120	CC45SL1H101J	100PF J	CERAMIC	
C201	202	SH1105940135	10UF 50WV	NP-ELECT	
C203	206	CC45SL1H331J	330PF J	CERAMIC	
C207	208	CE04KW1C101M	100UF 16WV	ELECTR0	
C209	210	CE04KW1H101M	100UF 50WV	ELECTR0	
C211	212	CC45SL1H330J	33PF J	CERAMIC	
C213	214	SH1255900094	0.033UF J	FILM	
C215	218	SH1255900079	0.1UF J	CERAMIC	
C219	220	SH1125900145	2200PF K	CERAMIC	ET
C221		CE04KW1A101M	100UF 10WV	ELECTR0	
C222		CK45FF1H23Z	0.022UF Z	CERAMIC	
C226	227	CE04KW1H22M	2.2UF 50WV	ELECTR0	
C228	229	SH1165900065	0.027UF K	CERAMIC	
C231	232	CK45FF1H23Z	0.022UF Z	CERAMIC	
C233	234	SH115900277	6800PF J	FILM	ET
C235	236	CK45FF1E102K	1000PF K	CERAMIC	
C237	238	SH115900277	6800PF J	FILM	ET
C241	244	CK45FF1H23Z	0.022UF Z	CERAMIC	
C245	248	CK45FF1H473Z	0.047UF Z	CERAMIC	
C300	301	SH1305900734	0.18UF J	FILM	
C302	303	SH1105900385	5600UF 50WV	ELECTR0	
C305		SH1105900403	4700UF 35WV	ELECTR0	
C306		CE04KW1H470M	47UF 50WV	ELECTR0	
C307		CK45FF1H473Z	0.047UF Z	CERAMIC	
C308		CE04KW1H470M	47UF 50WV	ELECTR0	
C309		SH1125900195	2200PF J	FILM	
C310		CK45FF1H473Z	0.047UF Z	CERAMIC	
C311		CE04KW1C102M	1000PF 16WV	ELECTR0	
C312		CK45FF1H473Z	0.047UF Z	CERAMIC	
C315		CE04KW1E102M	1000UF 25WV	ELECTR0	
C316		CK45FF1H473Z	0.047UF Z	CERAMIC	
C317		CE04KW0J101M	1000UF 6.3WV	ELECTR0	
C319		CE04KW1V471M	470UF 35WV	ELECTR0	
C420		CE04KW1H470M	47UF 50WV	ELECTR0	

USA, Mexico, Canada, KUSA P/Canada
 Y/N/E/S of Unit (Japan) T/England ET/Germany
 Y/A/L/C of (Europe) X/Australia M/C/Others/Spain

No.1

Ref. No. 参照番号	Address 位	Part No. 部品番号	Description 部 品 名 / 規 格	Description 部 品 名 / 規 格	Destr. Re- nation marks 仕 向 備考
601	1A	A01-3117-08	METALLIC CABINET		
602	2A	A60-0354-08	PANEL ASSY		
611	2A	B11-0274-08	INDICATOR	INPUT	
612	2A	B11-0275-08	INDICATOR	POWER	
613	2A	B11-0276-08	INDICATOR	NB CIRCUIT	X
		B46-0096-33	WARRANTY CARD		ET
		B46-0310-03	WARRANTY CARD		
626	1C	SH1105240052	PIN		
PG201	1C	E30-2750-08	AC POWER CORD		X
PG201	1C	E30-2753-08	AC POWER CORD		T
PG201	1C	SH1105000038	AC POWER CORD		ME
		H50-0825-08	ITEM CARTON CASE		ETX
		H50-0826-08	ITEM CARTON CASE		MI
		H10-5728-08	POLYSTYRENE FOAMED FIXTURE L		
		H10-5729-08	POLYSTYRENE FOAMED FIXTURE R		
		H12-2185-08	PACKING FIXTURE		
		H25-1612-08	PROTECTION BAG		
625	1C	SH1102040086	POWER CORD BUSHING		
631	2C	SH1101230060	REAR FOOT		
632	2C	SH1104130267	UNIT HOLDER		
635	2B	K27-2117-08	KN09 SPEAKER		
636	2A	K27-2118-08	KN08 POWER		
637	2A	K29-5876-08	KN08 BALANCE		
638	2A	K29-5877-08	KN08 INPUT SELECTOR		
639	2A	K29-5878-08	KN08 TONE		
640	2B	K09-5879-08	KN08 NB CIRCUIT MUTING		
641	2A	K29-5880-08	KN08 VOLUME		
642	2B	K29-5881-08	KN08 CD DIRECT, CD REC		
1400	2B	L07-0898-08	POWER TRANS		E
1400	2B	L07-0899-08	POWER TRANS		T
1400	2B	L07-0900-08	POWER TRANS		MJ
1400	2B	L07-0901-08	POWER TRANS		X
A	2C	N09-0333-05	TAPPING SCREW (3X12)		
B	1B	N09-1719-05	TAPTITE SCREW (3X8)		
C	1C	N09-2706-05	TAPTITE SCREW (3X8)		
D	1C	N09-2909-05	TAPTITE SCREW (3X10)		
E	2B	N09-2918-08	SCREW (4X8)		
F	2C	N09-2921-08	SCREW (3X10)		
G	2A	N09-3050-08	SCREW (3X8)		
H	1B, 2C	SH1103990004	PUSHU RIVET		
J	1B, 2C	N86-3005-46	BINDING HEAD TAPTITE SCREW		
K	2B	N86-3006-46	BINDING HEAD TAPTITE SCREW		
L	1B, 2B	N89-3006-45	BINDING HEAD TAPTITE SCREW		
M	1A, 2A	N89-3008-45	BINDING HEAD TAPTITE SCREW		
N	1B, 1C	N89-3008-46	BINDING HEAD TAPTITE SCREW		
P	1B	N89-3010-46	BINDING HEAD TAPTITE SCREW		
ELECTRICAL UNIT					
C1	2	CC45SL1H221J	220PF J	CERAMIC	
C3	14	CE04KW1H100M	10UF 50WV	ELECTR0	
C5	16	CC45SL1H221J	2200PF J	CERAMIC	
C7	18	CC45SL1H331J	330PF J	CERAMIC	

USA, Mexico, Canada, KUSA P/Canada
 Y/N/E/S of Unit (Japan) T/England ET/Germany
 Y/A/L/C of (Europe) X/Australia M/C/Others/Spain

No.4

No.3

PARTS LIST

No.4

Table with columns: Ref. No., Address, New Parts, Parts No., Description, Desti-nation marks. Contains parts like POWER BOARD, METER BOARD, and various relays.

No.3

Table with columns: Ref. No., Address, New Parts, Parts No., Description, Desti-nation marks. Contains parts like CERAMIC, ELECTRO, and various relays.

Legend for No.4: KUSA, P-Canada, T-England, Y-Other Areas, etc.

Legend for No.3: KUSA, P-Canada, T-England, Y-Other Areas, etc.

A indicates safety critical components

A indicates safety critical components

PARTS LIST

No.5

* New Parts
 Parts without Parts No. are not included.
 Les articles non répertoriés dans le Parts No. ne sont pas fournis.
 Teile ohne Parts No. werden nicht geliefert.

Ref. No. 参照番号	Address 位置	Parts No. 部品番号	Description 部品名 / 规格	Desti- nation 目的地
L0501-505		* SLR34VC	LED	
L0507-510		* SLR34UC	LED	
L80600		* SLR34UC	LED	
Q1		DTC114YS	DIGITAL TRANSISTOR	
Q100, 101		DTA114YS	DIGITAL TRANSISTOR	
Q102, 103		DTC114YS	DIGITAL TRANSISTOR	
Q104		DTA114YS	DIGITAL TRANSISTOR	
Q105		DTC114ES	DIGITAL TRANSISTOR	
Q201, 202		ZSC2878B	TRANSISTOR	
Q203, 204		ZSD1858R3	TRANSISTOR	
Q205, 206		ZSC3421Y	TRANSISTOR	
Q207, 208		ZSC3180NR	TRANSISTOR	
Q209, 210		ZSA1263NR	TRANSISTOR	
Q211, 212		ZSC1740SR	TRANSISTOR	
Q213		DTA114YS	DIGITAL TRANSISTOR	
Q214, 215		ZSC1740SR	TRANSISTOR	
Q303		ZSD2012	TRANSISTOR	
Q304		ZSB1375	TRANSISTOR	
Q400		ZSD1858R3	TRANSISTOR	
Q500, 501		ZSC1740SR	TRANSISTOR	
Q508-510		DTC114YS	DIGITAL TRANSISTOR	
Q600, 601		ZSC2878B	TRANSISTOR	
Q602, 603		ZSA933SR	TRANSISTOR	
Q604		DTC114YS	DIGITAL TRANSISTOR	
Z01, 2		MTZ59.1A	ZENER DIODE	
ZD100, 101		MTZ59.1A	ZENER DIODE	
ZD301		MTZ5.1B	ZENER DIODE	
ZD303, 304		MTZ3168T	ZENER DIODE	
ZD600		MTZ24.7A	ZENER DIODE	

L:Standard
 Y:Y (For East, Hawaii)
 Y:Y:ES (Europe)

K:USA
 T:England
 X:Australia

P:Canada
 E:Europe
 M:Other Areas

① Includes safety related components.

SPECIFICATIONS

Rated power output	
(IEC/NF) from 63 Hz to 12,500 Hz, 0.7% T.H.D.	
at 8Ω	45W + 45W
(EIAJ) 1kHz, 10% T.H.D.	
at 6Ω	60W + 60W
Total harmonic distortion (1kHz, 8Ω)	0.02% at 20W
Signal to noise ratio (IHF-A)	
PHONO (MM)	72dB for 2.5mV input
CD, TAPE	94dB for 200mV input
Input sensitivity/impedance	
PHONO (MM)	2.5mV/47kΩ
CD, TAPE	200mV/47kΩ
Tone controls	
BASS	± 10dB (at 100Hz)
TREBLE	± 10dB (at 10kHz)
General	
Power consumption	145W (E, T) 155W(M, X)
Dimensions	W: 360 mm H : 119 mm D : 330 mm
Weight	7.4 kg
AC outlets (switched)	2 (Total 200W max.)
(For AUSTRALIA)	1 (200W max.)

KENWOOD follows a policy of continuous advancements in development.
For this reason specifications may be changed without notice.

KENWOOD poursuit une politique de progrès constants en ce qui concerne le développement.
Pour cette raison, les spécifications sont sujettes à modifications sans préavis.

KENWOOD strebt ständige Verbesserungen in der Entwicklung an.
Daher bleiben Änderungen der technischen Daten jederzeit vorbehalten.

Note:

Component and circuitry are subject to modification to insure best operation under differing local conditions. This manual is based on the U.S.A. (K) standard, and provides information on regional circuit modification through use of alternate schematic diagrams, and information on regional component variations through use of parts list.

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