

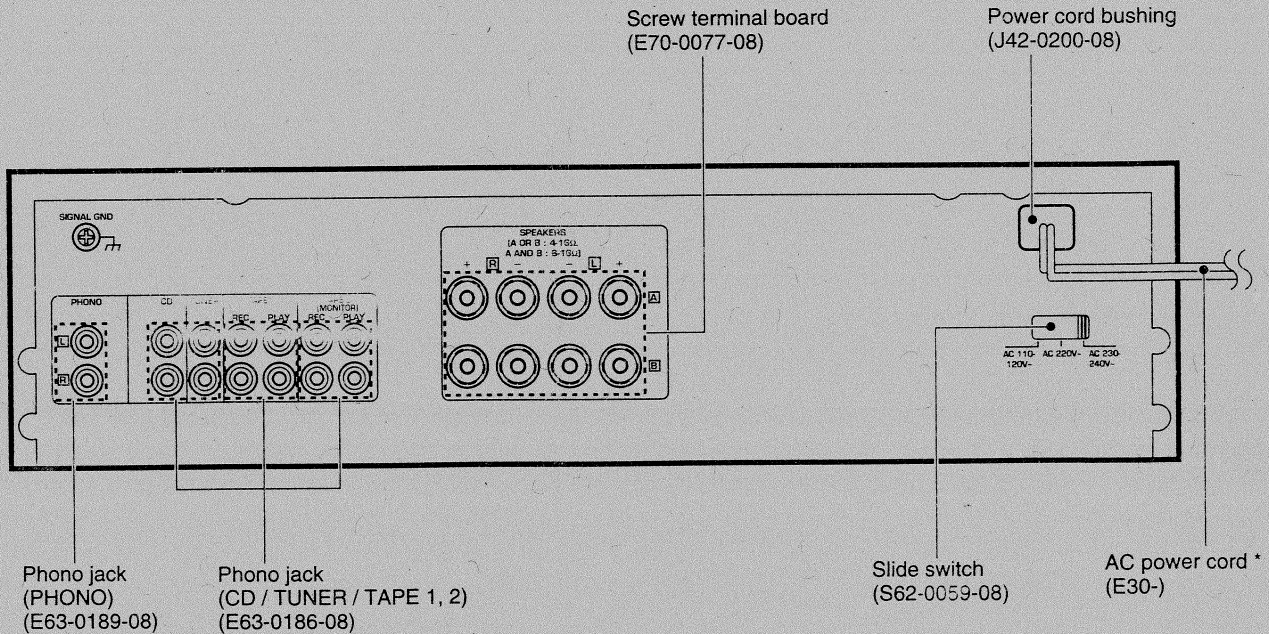
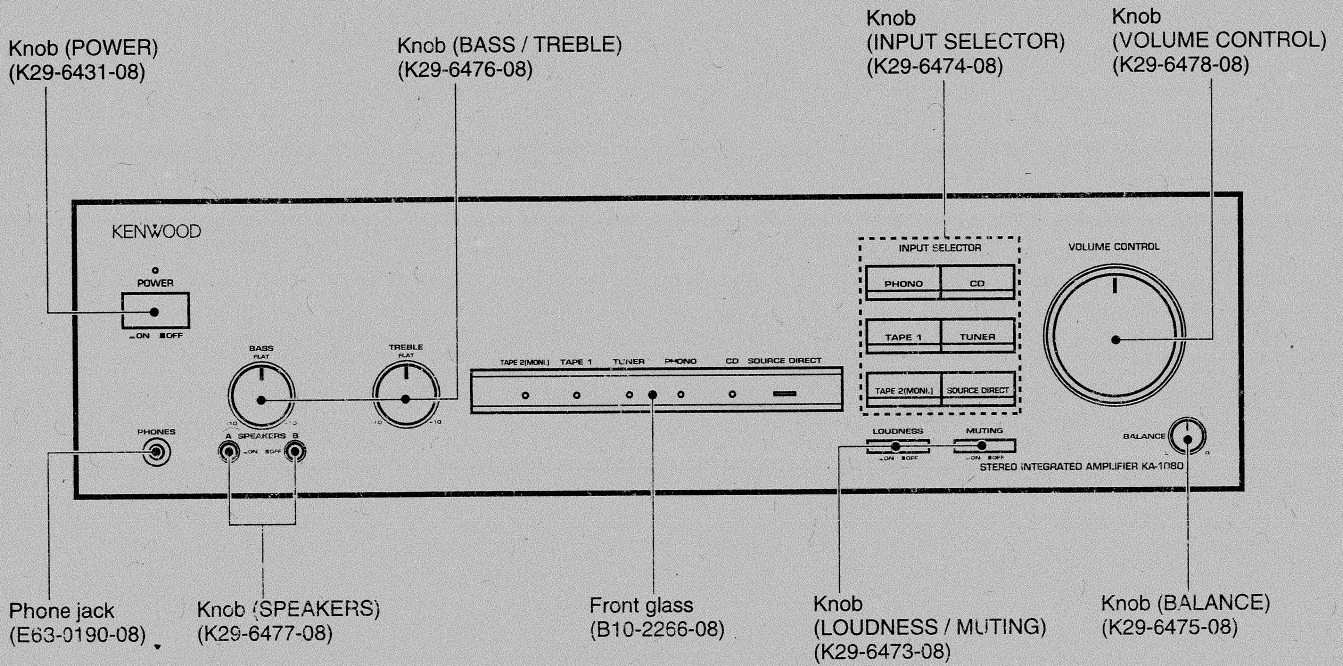
STEREO INTEGRATED AMPLIFIER

# KA-1080

## SERVICE MANUAL

# KENWOOD

© 1996-3/B51-5144-00 (K/K) 2380



\* Refer to parts list on page 14.

# KA-1080

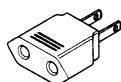
## CONTENTS / ACCESSORIES / CONTROLS

### Contents

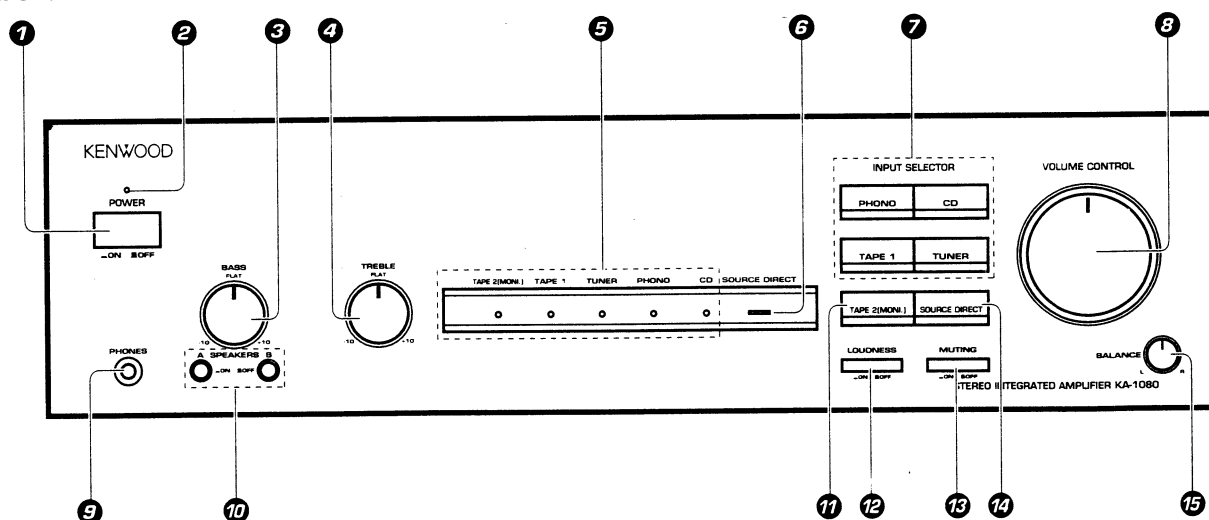
CONTENTS / ACCESSORIES / CONTROLS .....	2	SCHEMATIC DIAGRAM .....	9
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ADJUSTMENT .....	4	PARTS LIST .....	14
PC BOARD .....	5	SPECIFICATIONS .....	Back cover

### Accessories

AC plug adaptor(1)  
(E03-0115-05)  
M type only

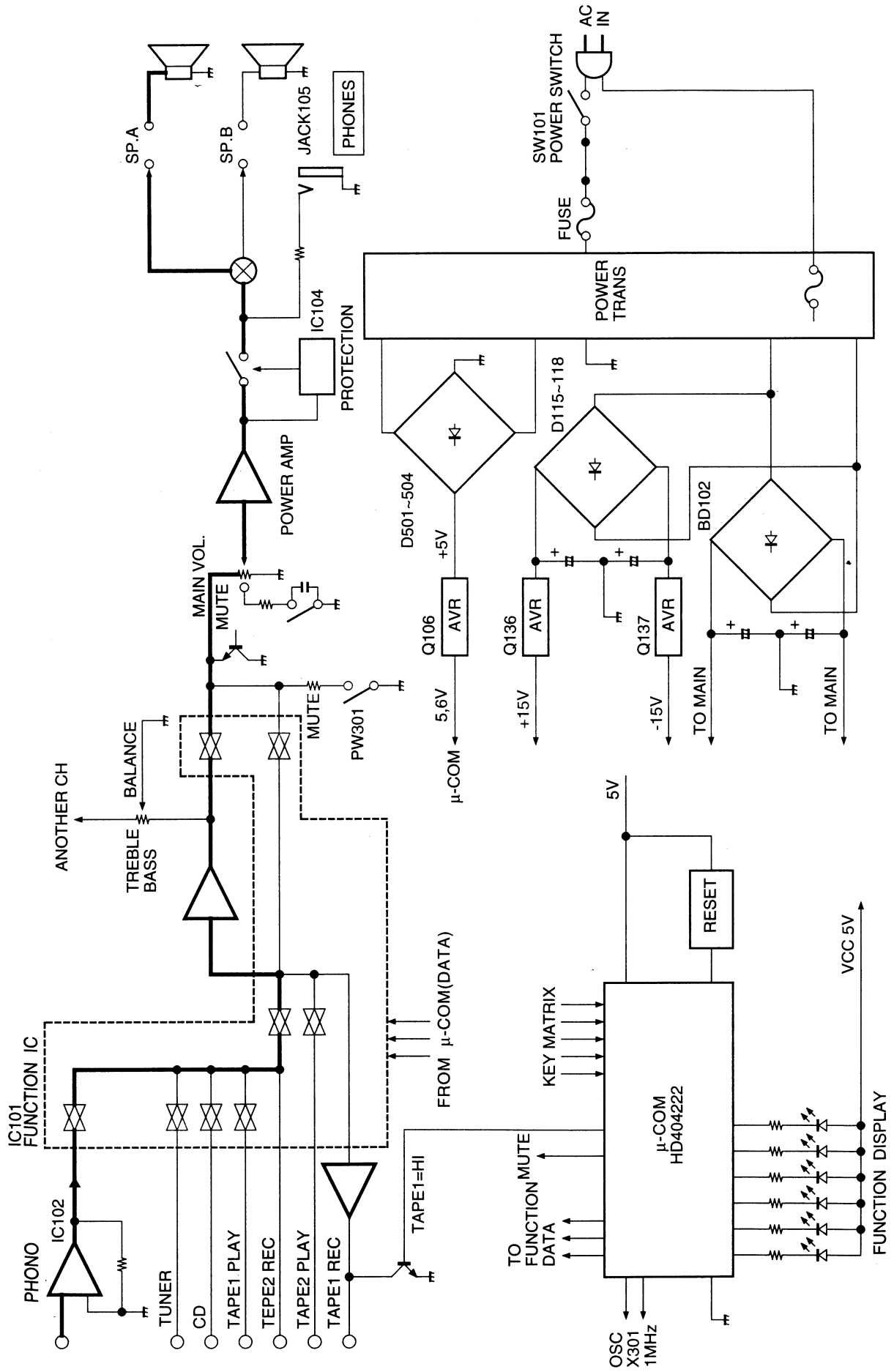


### Controls



- 1 POWER key**  
Press to turn on/off the power.
- 2 POWER indicator**
- 3 BASS knob**  
To adjust low frequencies.
- 4 TREBLE knob**  
To adjust high frequencies.
- 5 INPUT indicator**  
An indicator lights for the source selected with the INPUT SELECTOR keys.
- 6 SOURCE DIRECT indicator**
- 7 INPUT SELECTOR keys**  
Press to select the input sources.
- 8 VOLUME CONTROL knob**  
Adjust the volume.
- 9 PHONES jack**  
Used for headphone listening.
- 10 SPEAKERS A/B switches**  
Press to select the A and/or B speaker systems.
- 11 TAPE 2(MONI.) key**  
Press to monitor the sound being recorded.
- 12 LOUDNESS key**  
Use to emphasize deep bass sounds.
- 13 MUTING key**  
Mute the sound temporarily.
- 14 SOURCE DIRECT key**  
To listen to a source with high quality sound.
- 15 BALANCE knob**  
Adjust the volume balance between left and right.

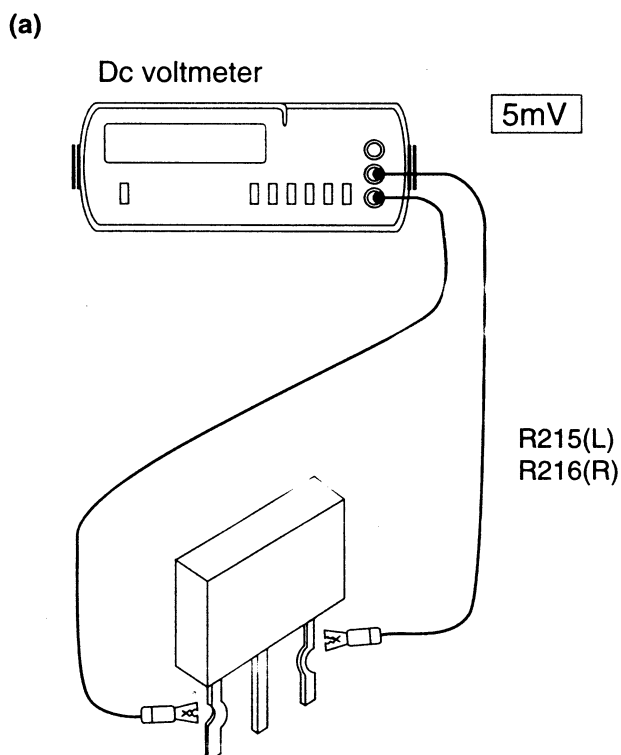
## BLOCK DIAGRAM



# KA-1080

## ADJUSTMENT

No.	ITEM	INPUT SETTINGS	OUTPUT SETTINGS	AMPLIFIER SETTINGS	ALIGNMENT POINTS	ALIGN FOR	FIG.
Unless otherwise specified, the individual switches should be set as following : POWER : ON      SPEAKER : B      SELECTOR : PHONO							
1	IDLE CURRENT	—	Connect a DC voltmeter between R215 (Lch), R216 (Rch). (MAIN PCB)	VOLUME : 0	VR101 (L) VR102 (R) (MAIN PCB)	5mV	(a)

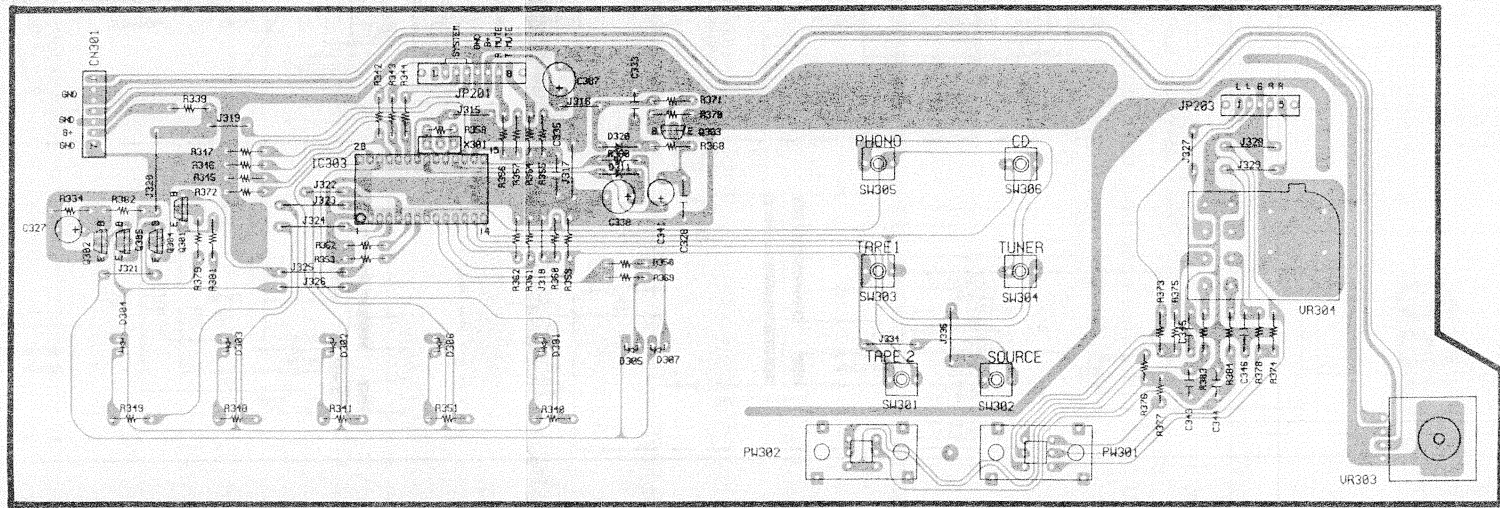
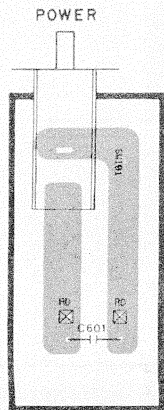
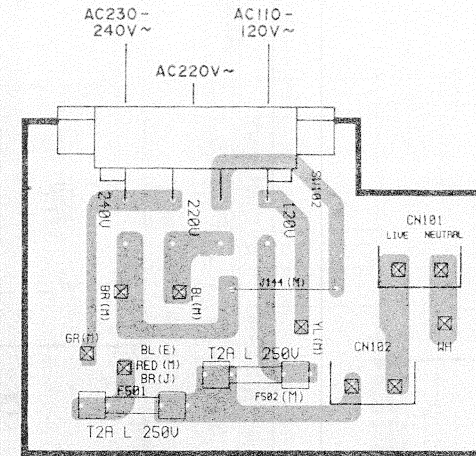
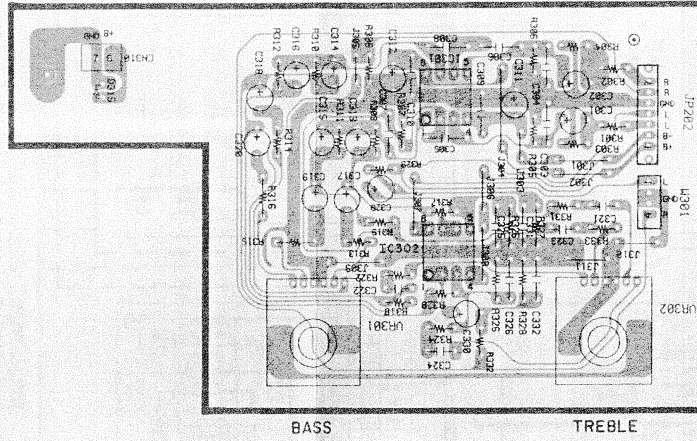
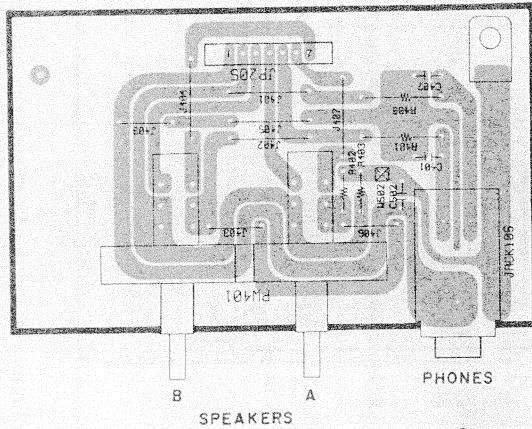
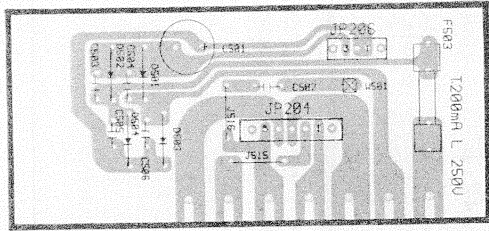


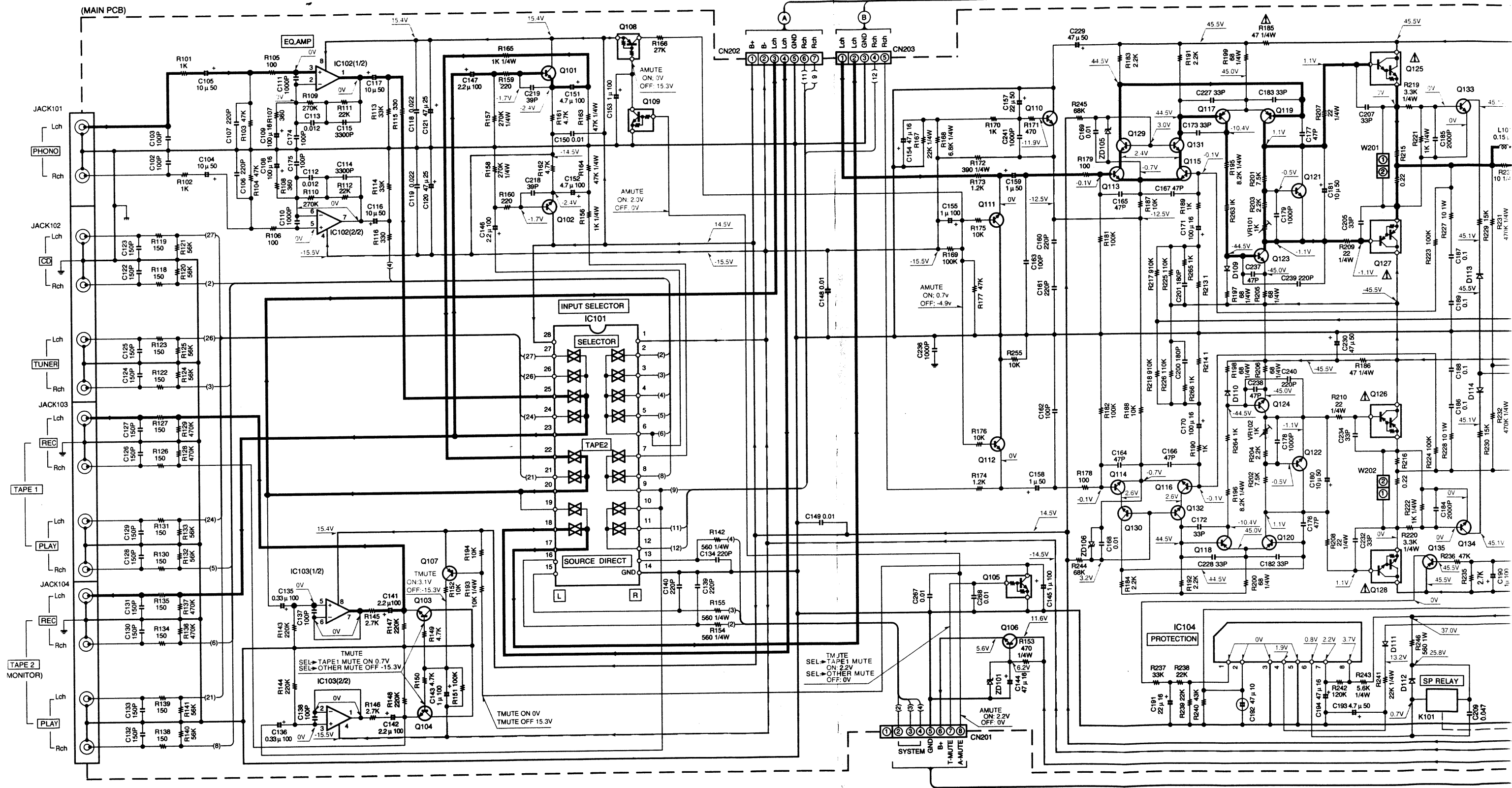
**Caution :**

Signal ground floats from chassis ground. Please connect the cold lead of tester or oscilloscope to the cold terminal of speaker or input jack if check and/or measure the voltage. (Don't connect ground of unit.)



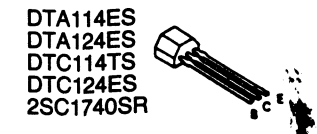
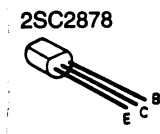
# PC BOARD (Component side view)

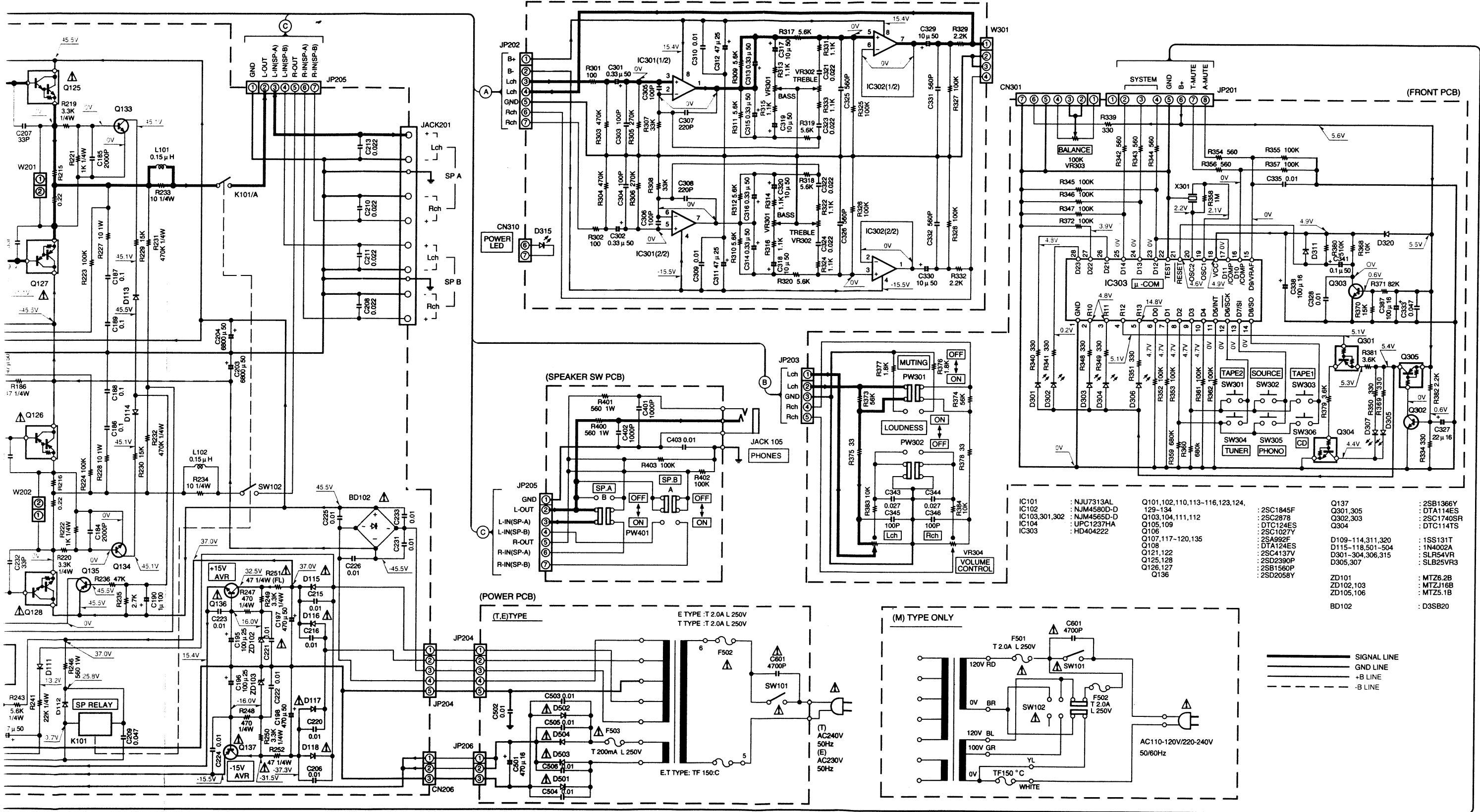




**CAUTION:** For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list).  $\Delta$  indicates safety critical components. For continued protection against risk of fire, replace only with same type and rating fuse(s). To reduce the risk of 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.

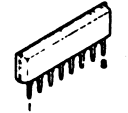
The DC voltage is an actual reading measured with a high impedance type voltmeter with no signal input. The measurement value may vary depending on the measuring instruments used or on the product.



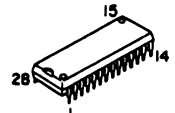


IC101	: NJU7313AL	Q101,102,110,113-116,123,124,	: 2SC1845F	Q137	: 2SB1366Y
IC102	: NJM4580D-D	129-134	: 2SC287B	Q301,305	: DTA114ES
IC103,301,302	: NJM4565D-D	Q103,104,111,112	: DTC124ES	Q302,303	: 2SC1740SF
IC104	: UPC1237HA	Q105,109	: 2SC1027Y	Q304	: DTC114TS
IC303	: HD404222	Q107,117-120,135	: 2SA992F		
		Q108	: DTA124ES		
		Q121,122	: 2SC4137V	D109-114,311,320	: 1SS131T
		Q125,128	: 2SD2390P	D115-118,501-504	: 1N4002A
		Q126,127	: 2SB1560P	D301-304,306,315	: SLR54VR
		Q136	: 2SD2058Y	D305,307	: SLB25VR3
				ZD101	: MTZ26.2B
				ZD102,103	: MTZJ16B
				ZD105,106	: MTZ5.1B
				BD102	: D3S20

UPC1237HA

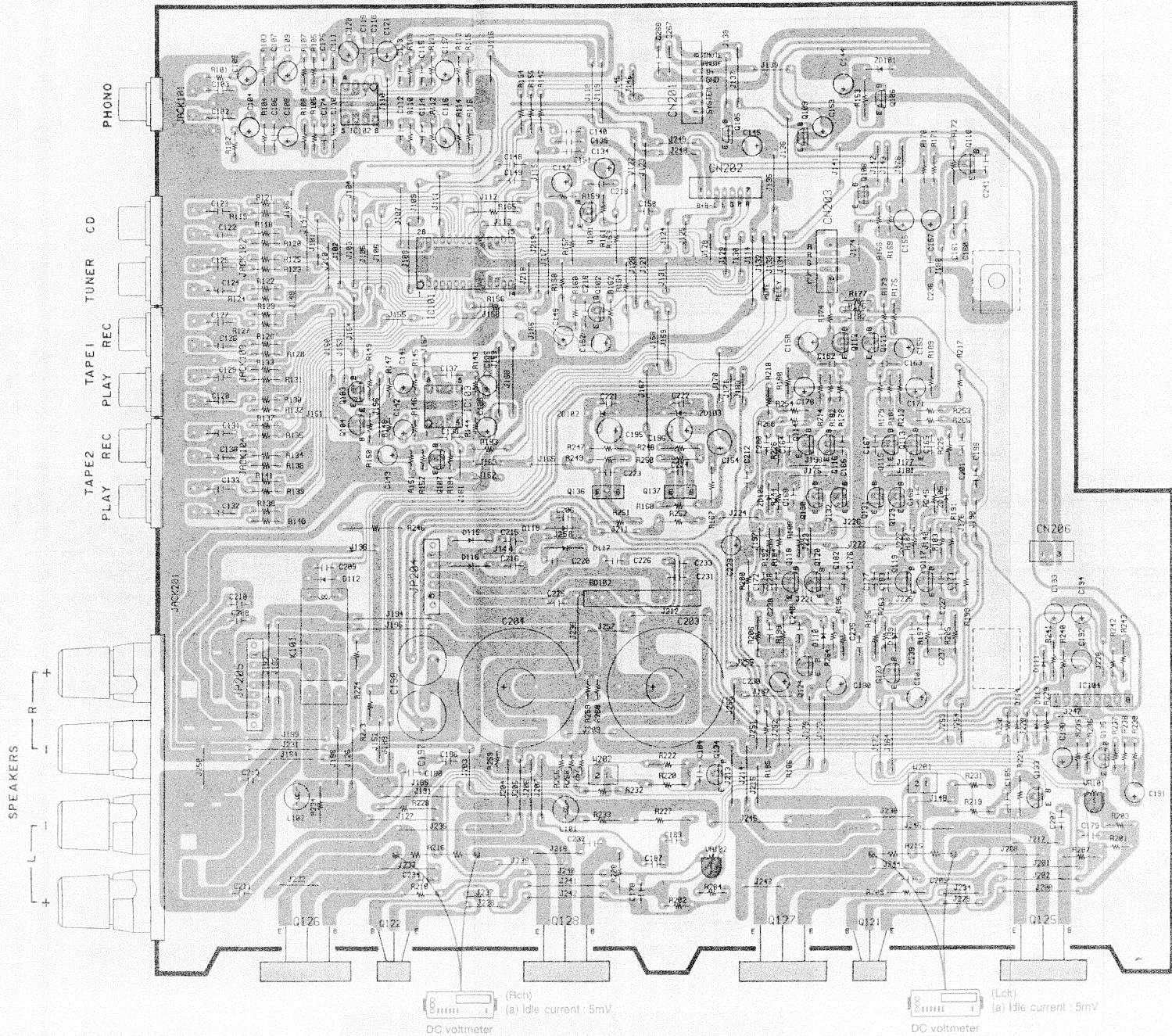


NJU7313AL





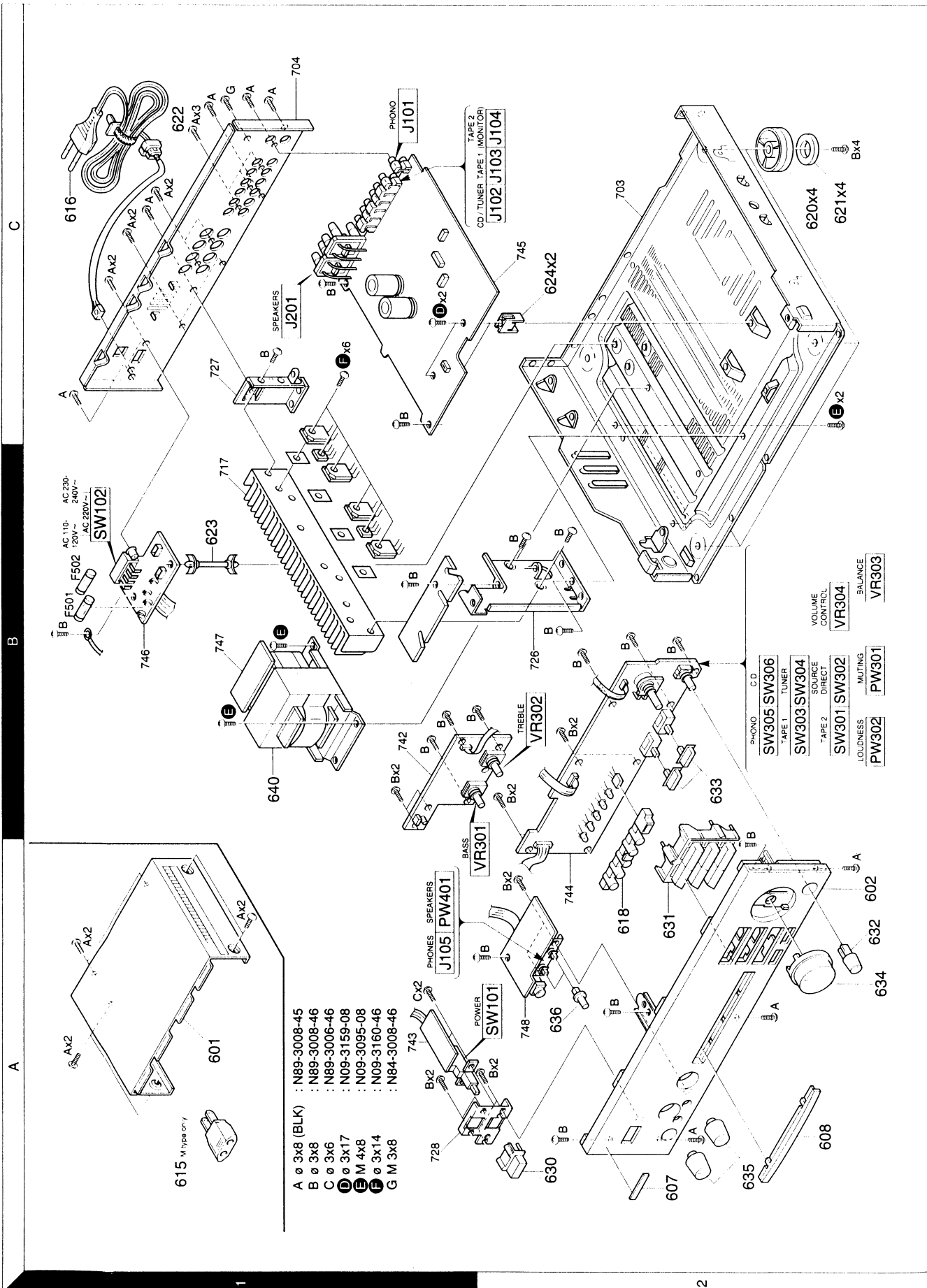
# PC BOARD (Component side view)



Rich  
DC voltmeter  
(a) Idle current : 5mV

Lcht  
DC voltmeter  
(a) Idle current : 5mV

## EXPLODED VIEW



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



# KA-1080

## PARTS LIST

②  
 \* New Parts  
 Parts without **Parts No.** are not supplied.  
 Les articles non mentionnés dans le **Parts No.** ne sont pas fournis.  
 Teile ohne **Parts No.** werden nicht geliefert.

Ref. No	Add-ress	New Parts	Parts No.	Description	Desti-nation	Re-marks
C137,138			C91-0745-05	CERAMIC		
C139,140			C91-0749-05	CERAMIC		
C141,142			CE04KW2A2R2M	ELECTRO		
C143			CE04KW2A010M	ELECTRO		
C144			CE04KW1C470M	ELECTRO		
C145			CE04KW2A010M	ELECTRO		
C146,147			CE04KW2A2R2M	ELECTRO		
C148,149			C91-0769-05	CERAMIC		
C150			CK45FB1H103K	CERAMIC		
C151,152			CE04KW2A4R7M	ELECTRO		
C153			CE04KW2A010M	ELECTRO		
C154			CE04KW1C470M	ELECTRO		
C155			CE04KW2A010M	ELECTRO		
C157			CE04KW1H220M	ELECTRO		
C158,159			CE04KW1H010M	ELECTRO		
C160,161			C91-0749-05	CERAMIC		
C162,163			C91-0745-05	CERAMIC		
C164,167			CC45FCH1H470J	CERAMIC		
C168,169			CK45FB1H103K	CERAMIC		
C170,171			CE04KW1C101M	ELECTRO		
C172,173			CC45FSL1H330J	CERAMIC		
C174,175			C91-0745-05	CERAMIC		
C176,177			CC45FCH1H470J	CERAMIC		
C178,179			CK45FB1H102K	CERAMIC		
C180,181			CE04KW1H100M	ELECTRO		
C182,183			CC45FSL1H330J	CERAMIC		
C184,185			CK45FB1H222K	CERAMIC		
C186-189			CQ92FM1H104J	MYLAR		
C190			CE04KW2A010M	ELECTRO		
C191			CE04KW1C220M	ELECTRO		
C192			CE04KW1A470M	ELECTRO		
C193			CE04KW1H457M	ELECTRO		
C194			CE04KW1C470M	ELECTRO		
C195,196			CE04KW1E101M	ELECTRO		
C197,198			CE04KW1H471M	ELECTRO		
C200,201			C91-0748-05	CERAMIC		
C203,204			CE04KW1H682M	ELECTRO		
C205			CC45FSL1H330J	CERAMIC		
C206			CK45FB2H103K	CERAMIC		
C207			CC45FSL1H330J	CERAMIC		
C208			CK45FE1H223K	CERAMIC		
C209			CQ92FM1H473J	MYLAR		
C210,211			CK45FF1H223K	CERAMIC		
C213			CK45FF1H223Z	CERAMIC		
C215,216			CK45FB2H103K	CERAMIC		
C218,219			C91-0735-05	CERAMIC		
C220			CK45FB2H103K	CERAMIC		
C221-224			CK45FB1H103K	CERAMIC		
C225,226			CK45FB2H103K	CERAMIC		
C227,228			CC45FSL1H330J	CERAMIC		
C229,230			CE04KW1H470M	ELECTRO		
C231			CK45FB2H103K	CERAMIC		
C232			CC45FSL1H330J	CERAMIC		
C233			CK45FB2H103K	CERAMIC		
C234			CC45FSL1H330J	CERAMIC		

L: Scandinavia  
 Y: PX(Far East, Hawaii)  
 Y: AAFES(Europe)  
 K: USA  
 T: Europe  
 X: Australia  
 P: Canada  
 E: Europe  
 M: Other Areas  
 R: Mexico  
 G: Germany  
 Δ indicates safety critical components.

①  
 \* New Parts  
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Ref. No	Add-ress	New Parts	Parts No.	Description	Desti-nation	Re-marks
<b>KA-1080</b>						
601	1A	*	A01-3357-08	METALLIC CABINET		
602	2A	*	A60-0998-08	PANEL		
607	2A	*	B43-0302-04	KENWOOD BADGE	ET	
608	2A	*	B70-2266-08	FRONT GLASS	T	
		*	B46-0310-03	WARRANTY CARD	M	
		*	B60-2770-08	INSTRUCTION MANUAL(EN)	M	
		*	B60-2771-08	INSTRUCTION MANUAL(EN/SP/C)	M	
		*	B60-2772-08	INSTRUCTION MANUAL(F/G/D/ISP)	E	
		*	B60-2773-08	INSTRUCTION MANUAL(TAIWAN)	M	
		*	B60-2774-08	INSTRUCTION MANUAL(PO)	E	
615	1A		E03-0115-05	AC PURG ADAPTOR		
616	1C		E30-2718-08	AC POWER CORD		
616	1C		E30-2799-08	AC POWER CORD		
		*	H50-2013-08	ITEM CARTON CASE	EM	
		*	H50-2015-08	ITEM CARTON CASE	ET	
		*	H10-7232-08	POLYSTYRENE FOAMED FIXTURE	M	
		*	H23-1572-08	PROTECTION BAG(MANUAL)		
		*	H23-1587-08	PROTECTION BAG(SET)	ET	
618	2A	*	J19-5724-08	HOLDER		
620	2B,2C	*	J02-1166-08	FOOT		
621	2C	*	G13-0534-08	CUSHION(FOOT)		
622	1C	*	J42-0200-08	POWER CORD BUSHING		
623	1B	*	J19-3631-08	UNIT HOLDER		
624	2C	*	J19-5725-08	UNIT HOLDER		
630	2A	*	K29-6431-08	K110B POWER		
631	2A	*	K29-6474-08	K110B INPUT SELECTOR		
632	2A	*	K29-6475-08	K110B BALANCE		
633	2B	*	K29-6473-08	KNOB LOUDNESS/MUTING		
634	2A	*	K29-6478-08	KNOB VOLUME CONTROL		
635	2A	*	K29-6476-08	KNOB BASS/TREBLE		
636	2A	*	K29-6477-08	KNOB SPEAKER A/B		
640	1B	*	L07-2218-08	POWER TRANSFORMER	ET	
640	1B	*	L07-2219-08	POWER TRANSFORMER	M	
D			N09-3159-08	TAPTITE SCREW M3X17		
E			N09-3095-08	TAPTITE SCREW M4X8		
F			N09-3160-08	TAPTITE SCREW M3X14		
<b>ELECTRICAL UNIT</b>						
C102,103			C91-0745-05	CERAMIC		
C104,105			CE04KW1H100M	ELECTRO		
C106,107			C91-0749-05	CERAMIC		
C108,109			CE04KW1C101M	ELECTRO		
C110,111			C91-0757-05	CERAMIC		
C112,113			CQ92FM1H123J	MYLAR		
C114,115			CQ92FM1H332J	MYLAR		
C116,117			CE04KW1H100M	ELECTRO		
C118,119			CK14FF1E223Z	CERAMIC		
C120,121			CE04KW1E470M	ELECTRO		
C122-133			C91-0747-05	CERAMIC		
C134			C91-0749-05	CERAMIC		
C135,136			CE04KW2AR33M	ELECTRO		

L: Scandinavia  
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 K: USA  
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## PARTS LIST

4 \* New Parts  
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Ref. No	Add-ress	New Parts	Parts No.	Description	Desti-nation	Re-marks
R400.401			RS14GB3A561J	FL-PROOF RS		
VR101.102			R12-1066-05	SEMI FIXED VARIABLE RESISTOR		
VR301.302		*	R39-0013-08	VARIABLE RESISTOR TONE BALANCE		J 1W
VR303			R31-0055-08	VARIABLE RESISTOR		
VR304			R39-0005-08	VARIABLE RESISTOR VOLUME CONTROL		
PW301.302			S68-0040-08	PUSH SWITCH		
PW401			S68-0045-08	PUSH SWITCH		
SW101			S40-1089-05	SLIDE SWITCH		
SW102			S62-0059-08	PUSH SWITCH		
SW301-306			S70-0030-08	TACT SWITCH		M
BD102			D3SB20	DIODE		
D109-114			1SS131T	DIODE		
D115-118			1N4002A	DIODE		
D301-304		*	SLR54VR	LED		
D305		*	SLB25VR3	LED		
D306		*	SLR54VR	LED		
D307		*	SLB25VR3	LED		
D311			1SS131T	DIODE		
D315			SLR54VR	LED		
D320			1SS131T	DIODE		
D501-504			1N4002A	DIODE		
IC101			NIJ7313AL	IC(ANALOG SWITCH)		
IC102			NJM4580D-D	IC(OP AMP X2)		
IC103			NJM4585D-D	IC(OP AMP X2)		
IC104			UPC1237HA	IC(POWER AMP)		
IC301.302		*	NJM4585D-D	IC(OP AMP X2)		
IC303			HD404222	IC(U-COM)		
Q101.102			2SC1845F	TRANSISTOR		
Q103.104			2SC2878	TRANSISTOR		
Q105			DTC124ES	TRANSISTOR		
Q106			2SC1027Y	TRANSISTOR		
Q107			2SA992F	TRANSISTOR		
Q108			DTA124ES	TRANSISTOR		
Q109			DTC124ES	TRANSISTOR		
Q110			2SC1845F	TRANSISTOR		
Q111.112			SC2878	TRANSISTOR		
Q113-116			SC1845F	TRANSISTOR		
Q117-120			2SA992F	TRANSISTOR		
Q121.122			2SC4137V	TRANSISTOR		
Q123.124			2SC1845F	TRANSISTOR		
Q125			2SD2390P	TRANSISTOR		
Q126.127			2SB1560P	TRANSISTOR		
Q128			2SD2390P	TRANSISTOR		
Q129-134			2SC1845F	TRANSISTOR		
Q135			2SA992F	TRANSISTOR		
Q136			2SD2058Y	TRANSISTOR		
Q137			2SB1366Y	TRANSISTOR		
Q301			DTA114ES	TRANSISTOR		
Q302.303			2SC1740SR	TRANSISTOR		
Q304			DTC1141TS	TRANSISTOR		
Q305			DTA114ES	TRANSISTOR		
ZD101			MTZ6.2B	ZENER DIODE		
ZD102.103			MTZJ16B	ZENER DIODE		
ZD105.106			MTZ5.1B	ZENER DIODE		

3 \* New Parts  
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Ref. No	Add-ress	New Parts	Parts No.	Description	Desti-nation	Re-marks
C235			CQ92FM1H102J	MYLAR		
C235.236			CK45FB1H102K	CERAMIC		J
C237.238			C045FCH1H470J	CERAMIC		K
C239.240			C91-0749-05	CERAMIC		K
C241			CK45FB1H102K	CERAMIC		K
C261			CK45FB2H103K	CERAMIC		K
C267.268			C91-0769-05	CERAMIC		K
C301.302			CE04KW1HR33M	ELECTRO		50WV
C302.306			C91-0745-05	CERAMIC		K
C307.308			C91-0749-05	CERAMIC		K
C309.310			C91-0769-05	CERAMIC		K
C311.312			CE04KW1E470M	ELECTRO		25WV
C313.316			CE04KW1HR33M	ELECTRO		50WV
C317-320			CE04KW1H100M	ELECTRO		50WV
C321-324			CQ92FM1H223J	MYLAR		J
C325.326			C91-0754-05	CERAMIC		J
C327			CE04KW1C220M	ELECTRO		16WV
C328			C91-0769-05	CERAMIC		K
C329.330			CE04KW1H100M	ELECTRO		50WV
C331.332			C91-0754-05	CERAMIC		J
C333			CK45FF1H473Z	CERAMIC		Z
C335			C91-0769-05	CERAMIC		K
C338			CE04KW1C101M	ELECTRO		16WV
C341			CE04KW1HR10M	ELECTRO		50WV
C343.344			CQ92FM1H273J	MYLAR		J
C345.346			C91-0745-05	CERAMIC		K
C387			CE04KW1C101M	ELECTRO		16WV
C401.402			CK45FB1H102K	CERAMIC		K
C403			CK45FB1H103K	CERAMIC		K
C501			CE04KW1C471M	ELECTRO		16WV
C502.506			CK45FB1H103K	CERAMIC		K
C601			C91-1441-08	CERAMIC		250WV
CN101.102			J13-0084-08	FUSE CLIP		(F501-503)
CN310			E40-9986-08	PIN ASSY		
JACK101		*	E40-9970-08	PIN ASSY		
JACK102-104			E63-0189-08	PHONO JACK(2P)PHONO		
JACK105			E63-0186-08	PHONO JACK(4P)CD/TUNER/TAPE		
JACK201		*	E63-0190-08	PHONE JACK PHONES		
F501		*	E70-0077-08	TERMINAL BOARD(6P)SPEAKERS		
F502			F06-2021-05	FUSE		
F503			F06-2021-05	FUSE		
L101.102			F50-0008-08	FUSE		
X301			L39-1303-08	PHASE COMPENSATION COIL		
K101			L78-0617-08	RESONATOR		
R185.186			S76-0054-08	MAGNETIC RELAY		1/4W
R197-200			RD14GB2E470J	FL-PROOF RD		J
R205.206			RD14GB2E680J	FL-PROOF RD		J
R207-210			RD14GB2E680J	FL-PROOF RD		J
R215.216			RD14GB2E220J	FL-PROOF RD		J
R227-228			R90-0948-08	MULTI-COMP		K 3W
R246			RS14GB3A100J	FL-PROOF RS		J 1W
R251.252			RS14GB3A561J	FL-PROOF RS		J 1W
			RD14GB2E470J	FL-PROOF RD		J 1/4W

L : Scandinavia K : USA P : Canada R : Mexico  
 Y : PX(Far East, Hawaii) T : Europe E : Europe G : Germany  
 V : AAFES(Europe) X : Australia M : Other Areas  
 Δ indicates safety critical components.

# KA-1080

## SPECIFICATIONS

### For U.K. and Europe

#### Continuous rated power output

(DIN) 1 kHz

at 8  $\Omega$  .....60 W + 60 W

at 4  $\Omega$  .....80 W + 80 W

(IEC / NF) From 63 Hz to 12,500 Hz, 0.7 % T.H.D.

at 8  $\Omega$  .....60 W + 60 W

at 4  $\Omega$  .....80 W + 80 W

Damping factor .....42 (50 Hz)

#### Total harmonic distortion

.....0.06 % (40 Hz ~ 20,000 Hz, 30 W, 8  $\Omega$ )

.....0.01 % (1 kHz, 60 W, 8  $\Omega$ )

#### Frequency response (IHF'78)

CD / TUNER / TAPE .....10 Hz ~ 60 kHz, +0 dB, -3 dB

PHONO 'RIAA' response...20 Hz ~ 20 kHz, +1.0 dB, -1.0 dB

#### Maximum input level

PHONO (MM) .....100 mV, 0.5% T.H.D. at 1 kHz

#### Signal to noise ratio

PHONO (MM) .....70 dB (IHF '66)

CD / TUNER / TAPE.....97 dB (IHF '66)

PHONO (MM) .....57 dB (DIN, 50 mW output)

CD / TUNER / TAPE .....60 dB (DIN, 50 mW output)

#### Input sensitivity / impedance

PHONO (MM) .....2.5 mV / 47 k $\Omega$

CD / TUNER / TAPE .....200 mV / 47 k $\Omega$

#### Tone control

BASS ..... $\pm 10$  dB (at 100 Hz)

TREBLE ..... $\pm 10$  dB (at 10 kHz)

#### Loudness control

VOLUME at -30 dB level .....+9 dB (at 100 Hz)

#### Output level / impedance

TAPE REC.....200 mV / 220  $\Omega$

### General

Power consumption .....160 W

Dimensions .....W : 440 mm

.....H : 123 mm

.....D : 395 mm

Weight (Net) .....7.0 kg

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

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### For other countries

#### Continuous rated power output

(EIAJ) 1 kHz, 10 % T.H.D.

at 8  $\Omega$  .....80 W + 80 W

at 4  $\Omega$  .....110 W + 110 W

(DIN / IEC)

at 8  $\Omega$  .....60 W + 60 W

at 4  $\Omega$  .....80 W + 80 W

Damping factor .....42 (50 Hz)

#### Total harmonic distortion

.....0.06 % (40 Hz ~ 20,000 Hz, 30 W, 8  $\Omega$ )

.....0.01 % (1 kHz, 60 W, 8  $\Omega$ )

#### Frequency response (IHF'78)

CD / TUNER / TAPE .....10 Hz ~ 60 kHz, +0 dB, -3 dB

PHONO 'RIAA' response...20 Hz ~ 20 kHz, +1.0 dB, -1.0 dB

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VOLUME at -30 dB level .....+9 dB (at 100 Hz)

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TAPE REC.....200 mV / 220  $\Omega$

### General

Power consumption .....160 W

Dimensions .....W : 440 mm

.....H : 123 mm

.....D : 395 mm

Weight (Net) .....7.0 kg

#### Note:

Component and circuitry are subject to modification to insure best operation under differing local conditions. This manual is based on Europe (E) 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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