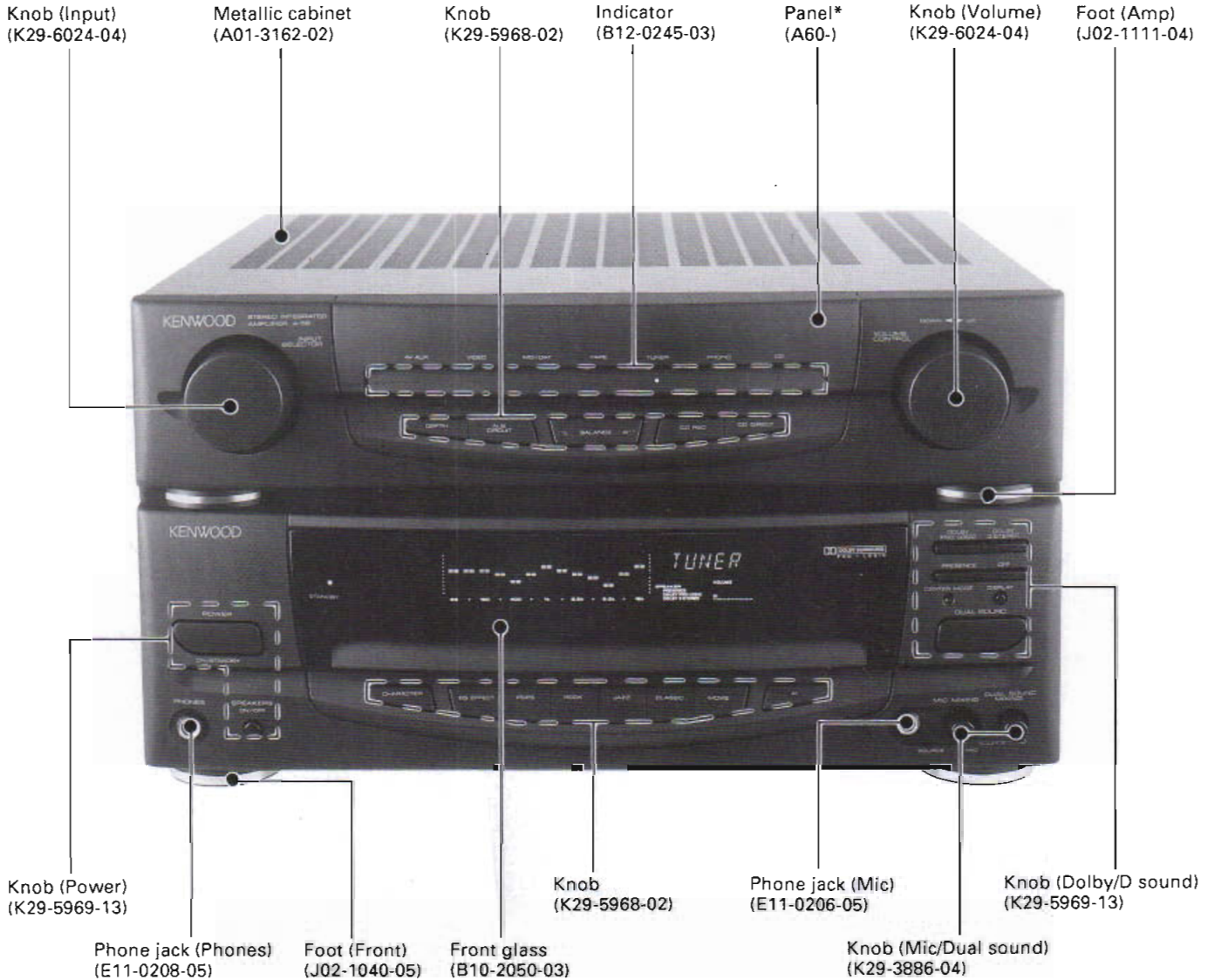


# A-58/68

## SERVICE MANUAL

© 1994-8 PRINTED IN KOREA  
B51-4909-00 (K) 2651



**Photo is A-58.**

**\*Refer to parts list on page 45.**

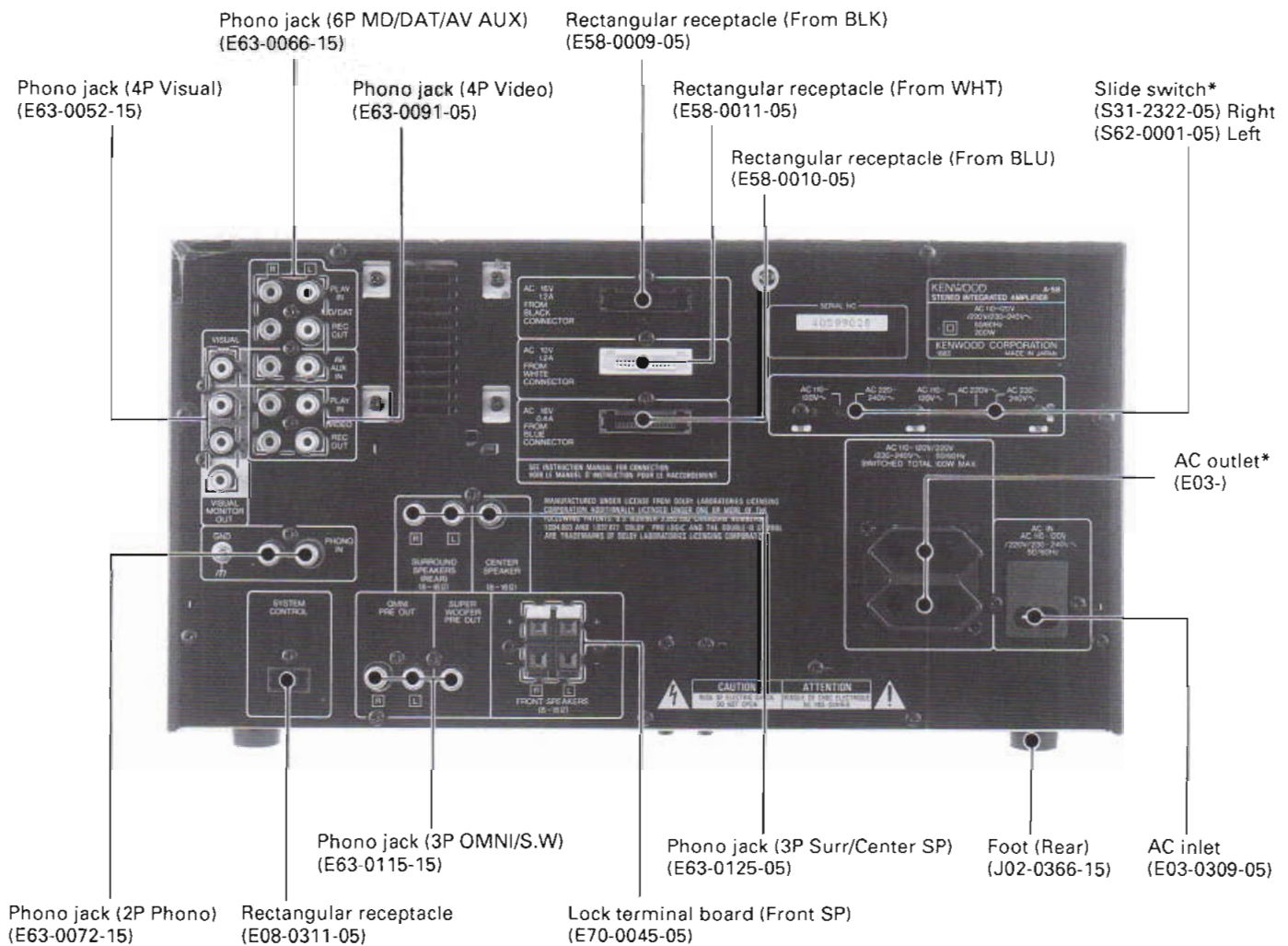
## CONTENTS/EXTERNAL VIEW

### CONTENTS

EXTERNAL VIEW .....	2
ACCESSORIES .....	4
CONTROL .....	5
REMOTE CONTROL OPERATION .....	7
DISASSEMBLY FOR REPAIR .....	8
BLOCK DIAGRAM .....	9
CIRCUIT DESCRIPTION	
1. Initial setting .....	10
2. Test mode by operating the keys of the main unit ..	11

3. $\mu$ -COM : M38197MA-090FP (X14-, IC1) .....	12
4. LED Driver : M66310P (X14-, IC4) .....	15
5. Analog IC : LC7538JM (X08-, IC8) .....	17
6. Analog IC : CXA1842S (X08-, IC7) .....	18
WIRING DIAGRAM .....	19
PC BOARD (COMPONENT SIDE VIEW) .....	21
SCHEMATIC DIAGRAM .....	27
EXPLODED VIEW .....	43
PARTS LIST .....	45
SPECIFICATIONS .....	57

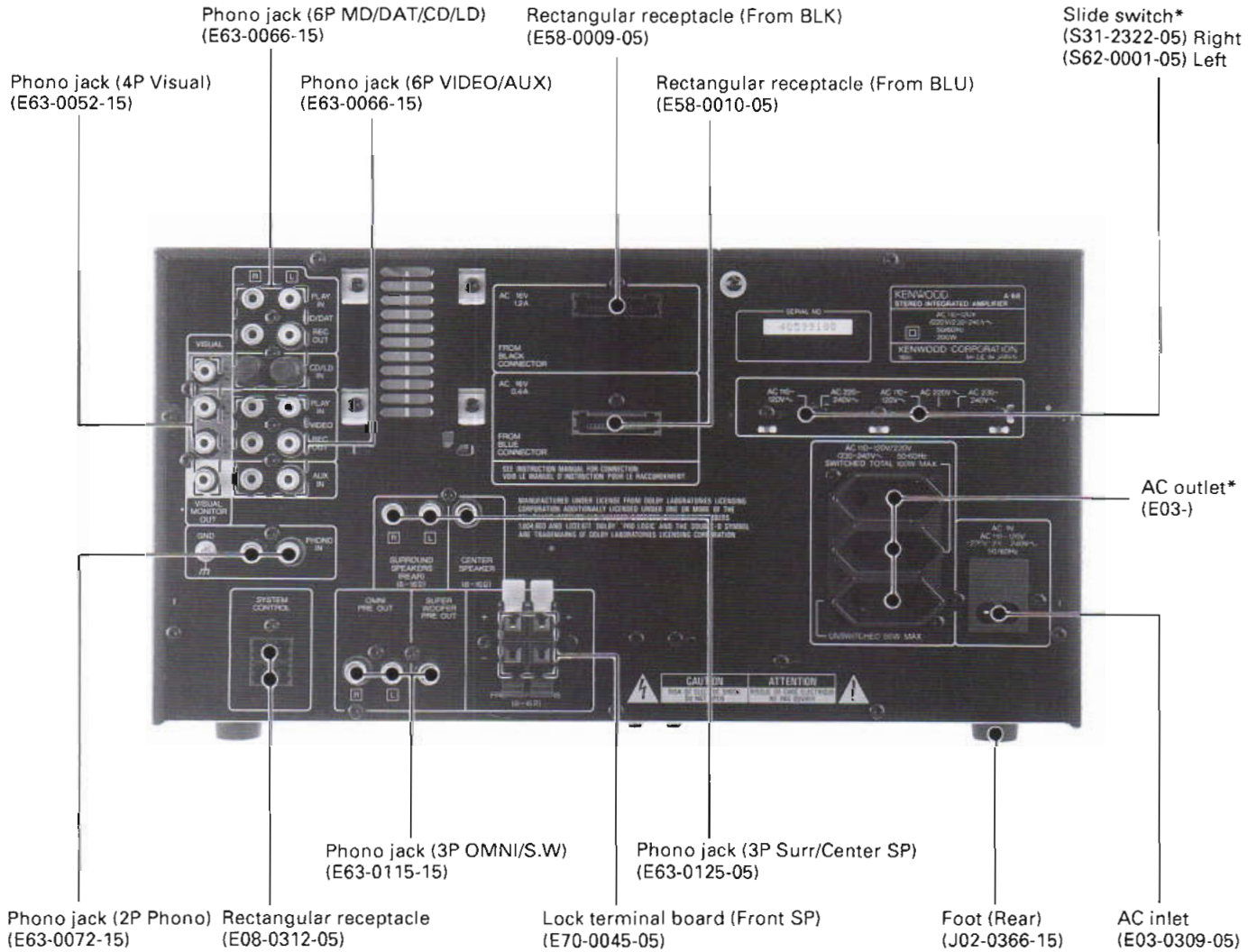
### EXTERNAL VIEW : A-58 (Rear panel)



\*Refer to parts list on page 45.

## EXTERNAL VIEW

### A-68 (Rear panel)



\*Refer to parts list on page 45.

## ACCESSORIES

### System configuration

System name	AMP / GE	TUNER	CD/LD PLAYER	CASSETTE DECK	Speakers
MIDI M-58	A-58	T-58L	DP-58	X-58	LS-58
MIDI M-58M	A-58	T-58L	DP-M58	X-58	LS-58
MIDI M-767	A-58	T-58	DP-58	X-58	S-58
MIDI M-868M	A-58	T-58	DP-M58	X-58	S-58
MIDI M-969LD	A-68	T-58	LVD-68	X-58	S-68

• **MIDI M-58, M-58M, M-767, M-868M :**

Speaker cords are packed with the Speakers. All other accessories are packed with the Amp/GE unit.

• **MIDI M-969LD**

Speaker cords are packed with the Speakers. Remote control unit and batteries are packed with the CD/LD player unit.

All other accessories are packed with the Amp/GE unit.

- FM indoor antenna ..... 1  
(T90-0182-15)



- AM loop antenna ass'y ..... 1  
(T90-0195-05)



- Loop antenna stand  
(J19-3645-05)

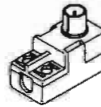


- AC plug adaptor ..... 1  
(E03-0115-05)  
M-767, M-868M, M-969LD only



Except for U.K., Europe and Australia.  
For the unit with a European AC plug  
in areas other than Europe.

- Antenna adaptor ..... 1  
(T90-0198-05)  
M-58, M-58M only



For U.K. and Europe.

- Speaker cords ..... 2  
(818. 05. 011) LS-58  
(E31-5479-08) S-58  
(E30-1271-08) S-68



For U.K. and Europe.

- Audio cord ..... 1  
(E30-0505-05) M-969LD only



- Video cord ..... 1  
(E30-1427-05) M-969LD only



- Parallel cord ..... 1  
(E30-2628-05) M-969LD only



- Power cord ..... 1  
(E30-2778-05) Y  
(E30-2779-05) M,E,G, M-969LD  
(E30-2780-05) X  
(E30-2781-05) T



- Remote control unit (RC-58) ..... 1  
(A70-0986-05)  
M-58, M-58M, M-767, M-868M only



Battery cover  
(A09-0106-08)

- Remote control unit (RC-68LD) ..... 1  
(X94-1050-71) M-969LD only



Battery cover  
(F07-0721-33)

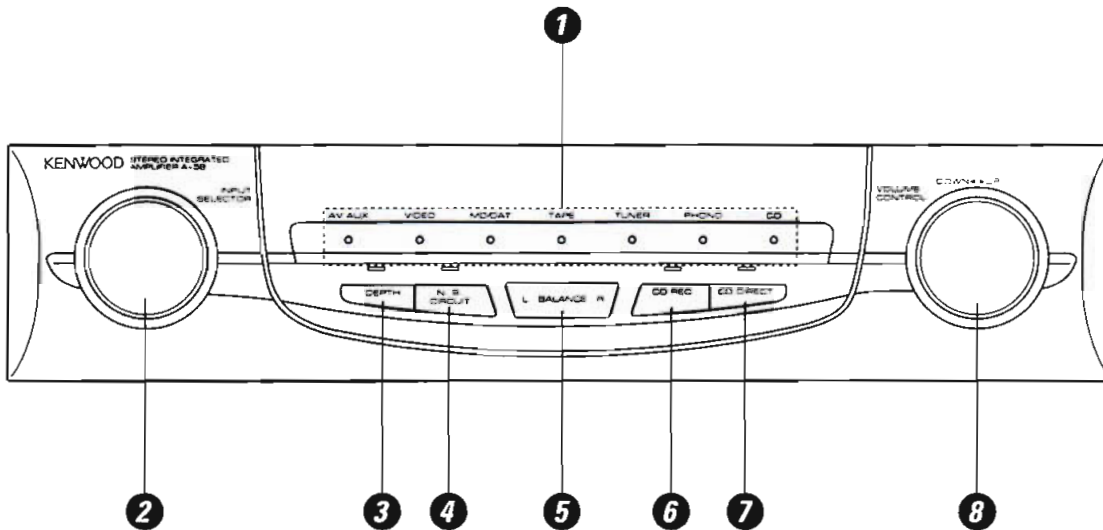
- Batteries ..... 2





## CONTROL

## AMPLIFIER UNIT

**1 Input indicators****2 INPUT SELECTOR knob**

Rotate to select the source component to be played.

**3 DEPTH key**

Press to add a depth to the sound field.

**4 N.B. CIRCUIT key**

Press to obtain a more natural bass sound.

**5 BALANCE key**

Press to adjust the volume balance between the left and right speakers

**6 CD REC key**

Press to play a source component while recording a CD on tape.

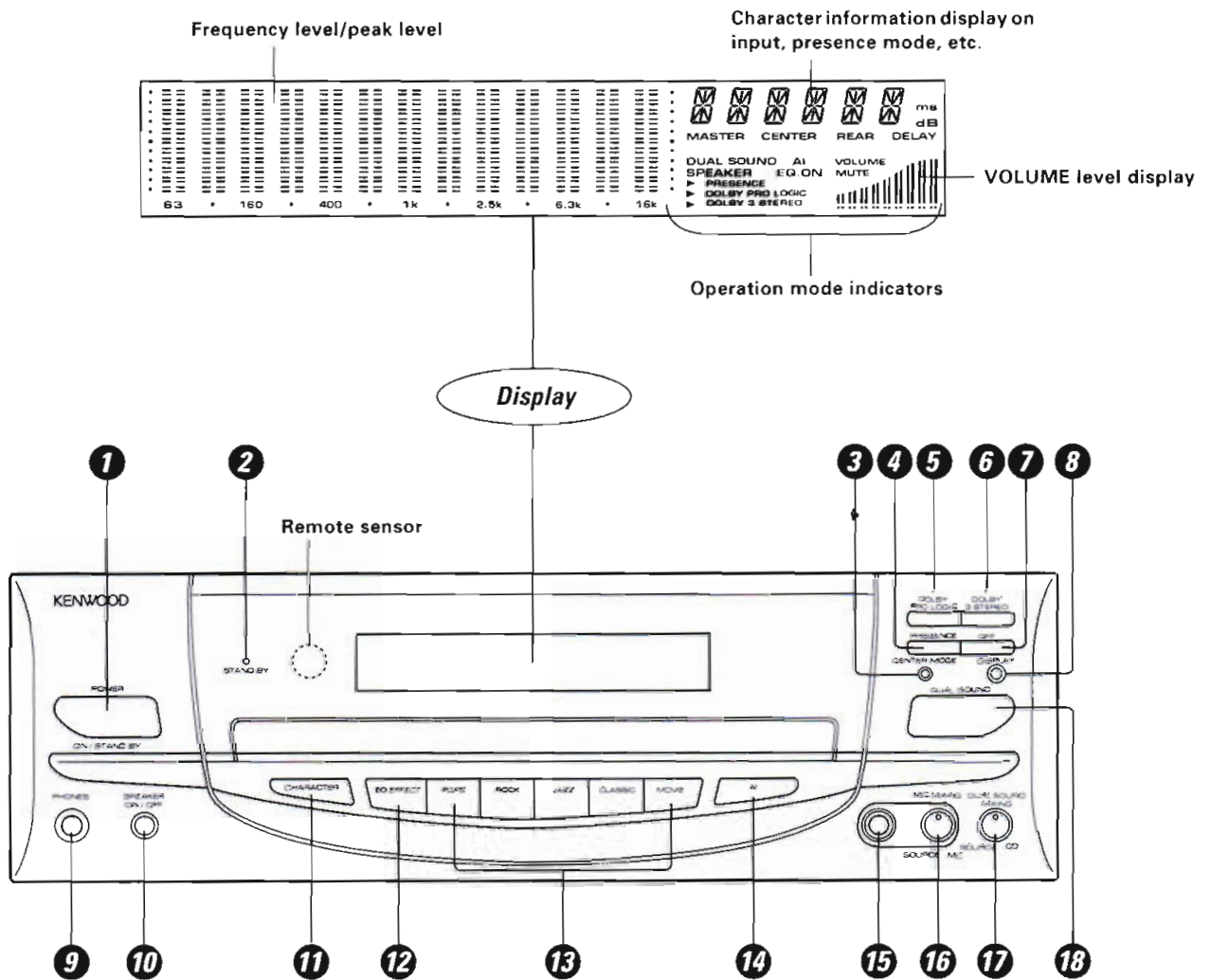
**7 CD DIRECT key**

Press to play CD with a higher sound quality.

**8 VOLUME CONTROL knob**

## CONTROL

### EQUALIZER UNIT



**1 POWER key**

**2 STAND BY indicator**

**3 CENTER MODE key**

Press when adjusting or playing the DOLBY SURROUND effect.

**4 PRESENCE key**

Press for presence play.

**5 DOLBY PRO LOGIC key**

Press when adjusting or playing the DOLBY SURROUND effect.

**6 DOLBY 3 STEREO key**

Press when adjusting or playing the DOLBY SURROUND effect.

**7 OFF key**

Press to turn the presence play or Dolby Surround play OFF.

**8 DISPLAY key**

Press to switch the display modes.

**9 PHONES jack**

Connect headphones for listening through them.

**10 SPEAKER ON/OFF key**

Press to defeat the speaker sound when listening through headphones.

**11 CHARACTER key**

Press to switch the spectrum analyzer display patterns.

**12 EQ.EFFECT key**

Press to turn the equalizer effect ON/OFF.

**13 Equalizer preset keys**

Press to recall an equalizer curve matching the music source.

**14 AI key**

Press to set the equalizer curve automatically in accordance with the CD played.

**15 MIC jack**

**16 MIC MIXING knob**

Adjust the volume balance between the karaoke accompaniment and microphone singing.

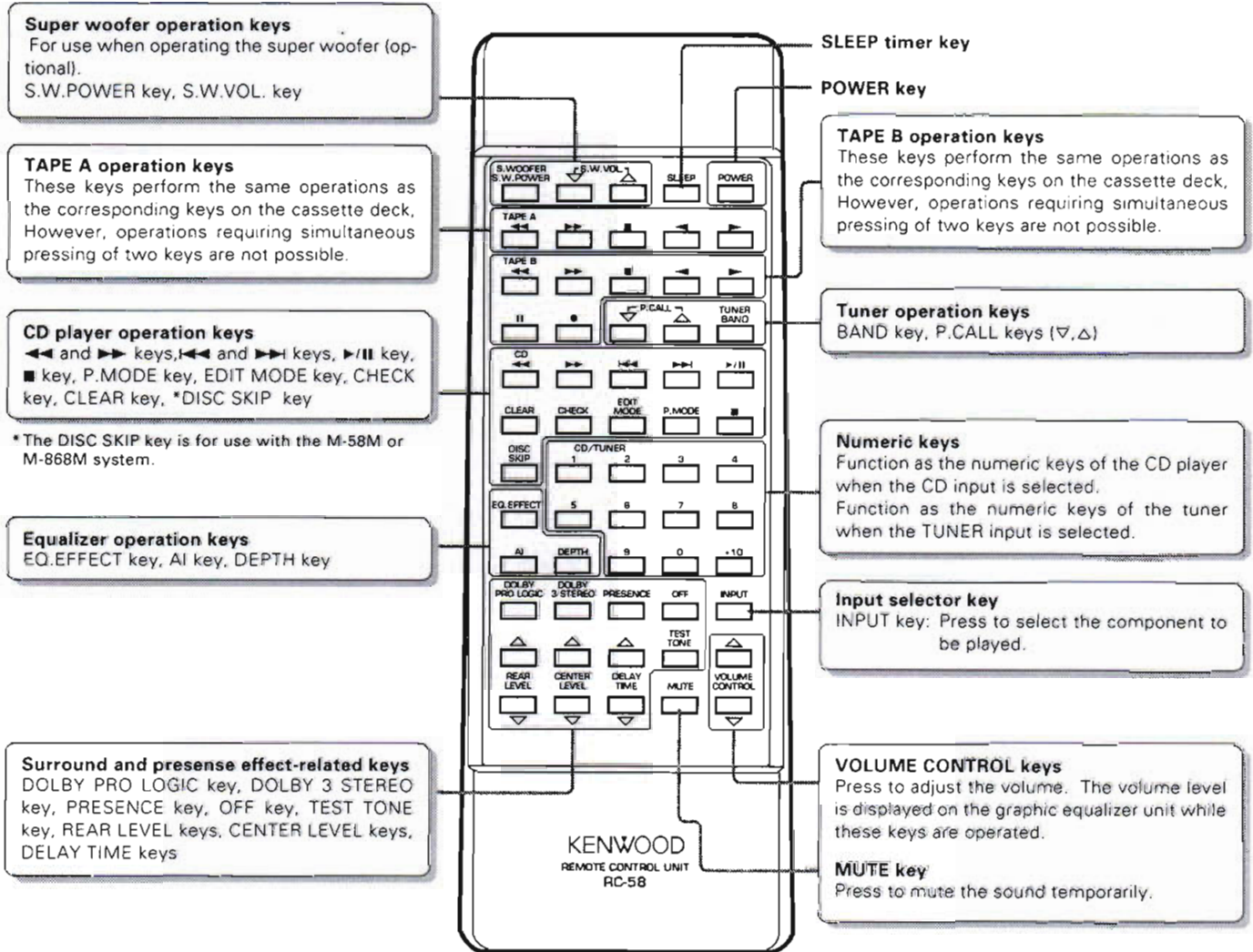
**17 DUAL SOUND MIXING knob**

Adjust the volume balance between the CD and another music source.

**18 DUAL SOUND key**

Press to play a CD and another music source simultaneously.

## REMOTE CONTROL OPERATION



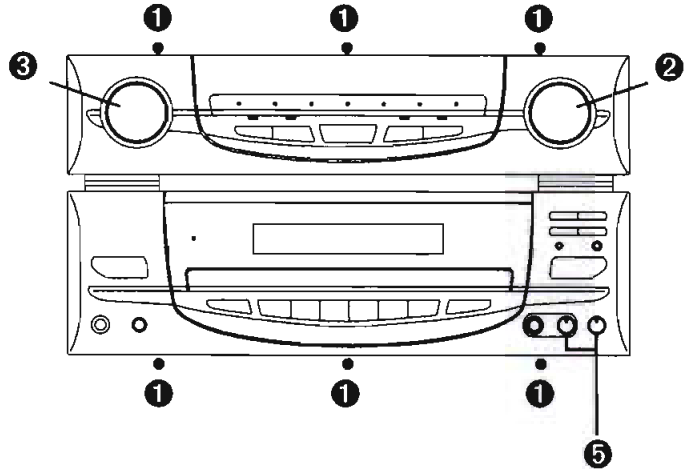
Model: RC-58  
Infrared ray system

## DISASSEMBLY FOR REPAIR

### Front Panel

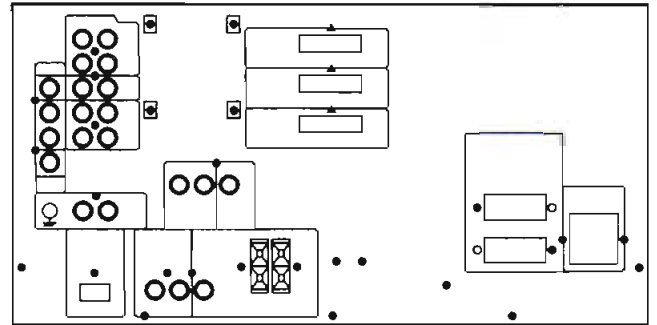
**\*Remove the case in advance.**

1. Remove the 6 screws (1) of the upper and lower sides of the panel.
2. Disconnect CN5 of Surround PCB (X08-264, A/3, Vertical PCB) and disconnect CN2 of Audio PCB (X09-404, A/6).
3. Front panel is removed by pulling it from the chassis.
4. Remove the VOLUME CONTROL knob (2) and INPUT SELECTOR knob (3) by loosening the Allen screws.
5. Remove the 12 screws of Display PCB (X14-392, A/5 [Back-side of the front panel]), and remove the Display PCB.



### Rear Panel

1. Remove the 28 screws (4) of the rear panel.
2. Disconnect CN4 and CN6 of Surround PCB (X08-264, A/3, Vertical PCB), then remove the PCB by pulling up.
3. Disconnect CN1 and CN2 of Surround PCB (X08-264, B/3, Vertical PCB).

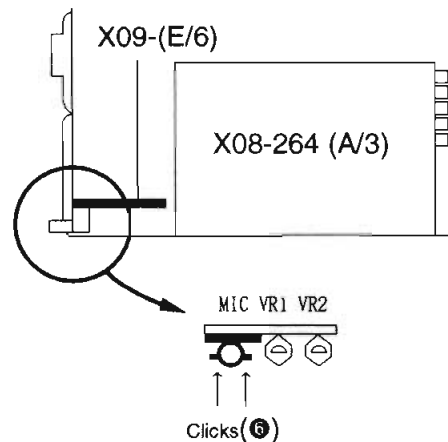


●: 4 x28

▲: For removing X09-404 (B/6) x3

### Mic Mixing PCB (X09-404, E/6)

1. Remove the MIC MIXING knob and DUAL SOUND MIXING knob (5) by loosening the Allen screws.
2. While pressing the two clicks (6) of the MIC jack (with black cover), remove the PCB.

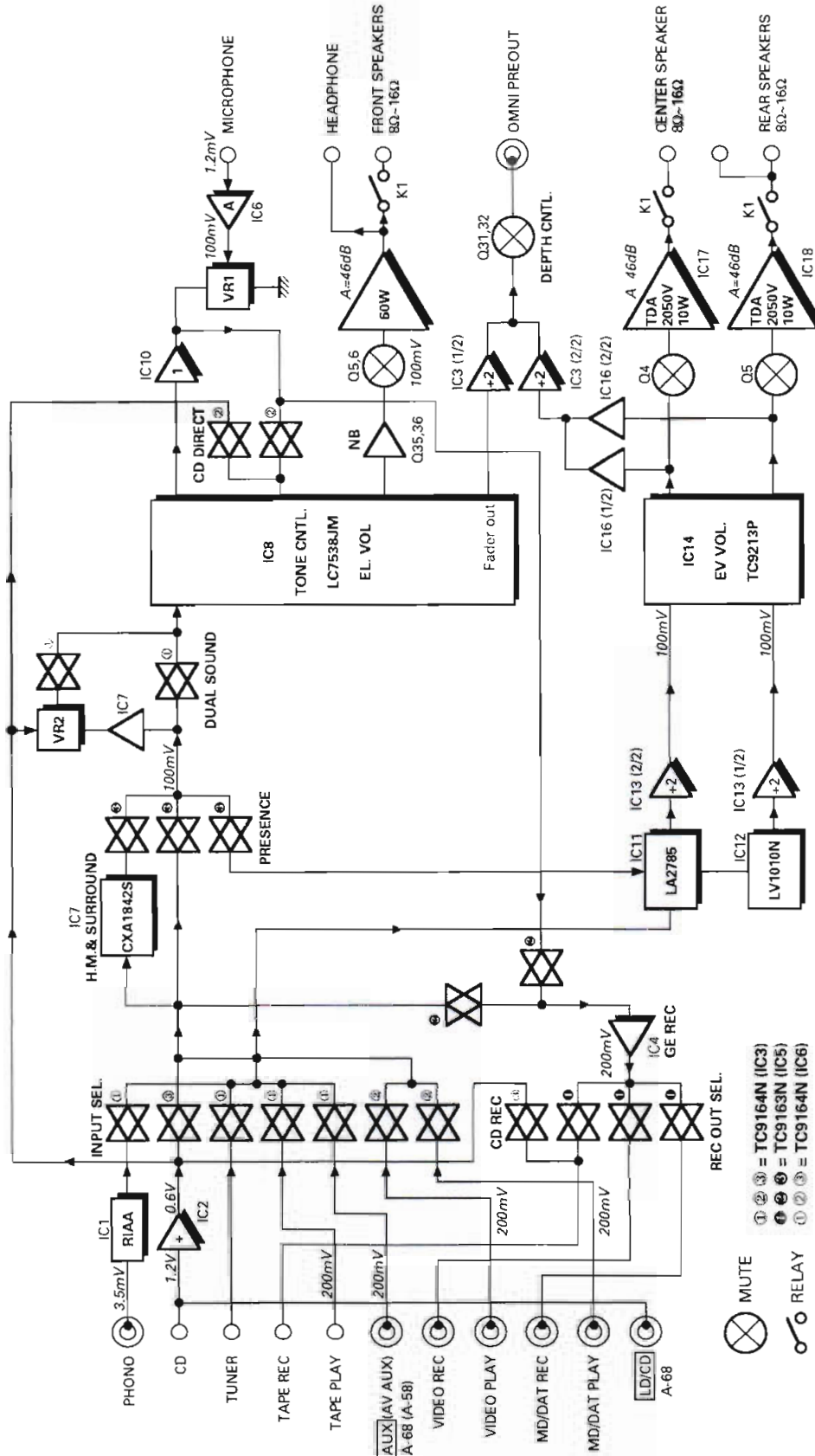


### Bottom

1. Bottom part can be cut.  
(Then, fix them with 2 screws.)
2. Power transistors can be changed from bottom part by removing the soldering.



## BLOCK DIAGRAM



## CIRCUIT DESCRIPTION

### 1. Initial setting

#### 1-1. Setting method

- With the POWER key pressed, connect the AC power plug.
- When the AC power plug is connected or disconnected in the TEST mode by operating the keys of the main unit or by serial communication.

#### 1-2. Contents

- Initialize all the functions, including the test mode.

#### 1-3. Initial setting state

POWER ON/OFF .....	OFF
MAIN VOLUME LEVEL .....	-66dB
L/R BALANCE .....	CENTER
AUDIO SIGNAL INPUT · SELECTOR STATE .....	TUNER
VIDEO SIGNAL INPUT · SELECTOR STATE .....	VIDEO
SPEAKER ON/OFF .....	ON
N.B. CIRCUIT ON/OFF .....	OFF
CD REC ON/OFF .....	OFF
CD DIRECT ON/OFF .....	OFF
DUAL SOUND ON/OFF .....	OFF
EQ CURVE .....	POPS
EQ ON/OFF .....	OFF
DISPLAY MODE .....	GRAPHIC EQUALIZER MODE
SPE.ANA. DISPLAY MODE .....	SPE.ANA. 1 (NORMAL DISPLAY)
14seg. DISPLAY .....	INPUT SELECTOR
RAM DISPLAY AREA .....	ALL CLEAR
AI AUTO .....	OFF
AI FOCUS .....	OFF
AI LINK MODE .....	OFF
DEPTH CONTROL ON/OFF .....	OFF
PRESENCE ON/OFF .....	PRESENCE OFF
LAST PRESENCE MODE .....	ARENA
DOLBY SURROUND PRO LOGIC ON/OFF .....	OFF
DOLBY SURROUND PRO LOGIC CENTER SPEAKER MODE .....	NORMAL
DOLBY SURROUND PRO LOGIC CENTER SPEAKER VOLUME LEVEL .....	0dB
DOLBY SURROUND PRO LOGIC REAR SPEAKER VOLUME LEVEL .....	0dB
DOLBY SURROUND PRO LOGIC DELAT TIME LEVEL .....	20msec.
DOLBY 3 STEREO ON/OFF .....	OFF
DOLBY 3 STEREO CENTER SPEAKER MODE .....	NORMAL
DOLBY 3 STEREO CENTER SPEAKER VOLUME LEVEL .....	0dB
TEST MODE .....	OFF
DECK REC MODE .....	NOT REC MODE
CCRS .....	NOT CCRS MODE

## CIRCUIT DESCRIPTION

### 2. Test mode by operating the keys of the main unit

#### 2-1. Setting method

- With the PRESENCE OFF key pressed, connect the AC power plug.

#### 2-2. Resetting method

- Disconnect the AC power plug, and the TEST MODE is reset and the system is initialized.

#### 2-3. Contents

##### ① **Auto power on**

- If the AC power plug is connected with the PRESENCE OFF key pressed, the power is turned on and all the functions are initialized.
- The operations used while the power is turned on (MUTE, IC control, etc.) are executed as in the normal operation mode. (If the power is turned on without turning on the MUTE, the protection may work and inspection may not be executed.)

##### ② **ALL LED ON mode**

- If the AC power plug is connected with the PRESENCE OFF key pressed, all the FL and LED segments light up. Then, if any key of the main unit is pressed, they are set under the normal indicating condition.

##### ③ **Confirmation of effectiveness of keys of the main unit**

- It can be confirmed that the keys of the main unit are accepted.
- ④ Operations of the keys and switches which operate differently in the TEST MODE from themselves in the normal condition.  
The keys and switches other than the following operate normally.

##### • **BALANCE L :**

3-stage setting used to set to R → CENTER → L.

##### • **BALANCE R :**

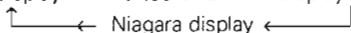
3-stage setting used to set to L → CENTER → R.

##### • **DISPLAY KEY**

Change of bar display mode of FL tube

The bar display mode of FL tube is changed cyclically as shown below.

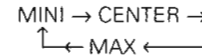
EQ display → Inverted SPE.ANA. display (Normal display mode)



##### • **CD REC KEY**

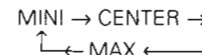
3-stage setting of CENTER SPEAKER VOLUME LEVEL

The center speaker volume level is changed cyclically as shown below in the DOLBY SURROUND, DOLBY 3-STEREO mode.



##### • **AI KEY**

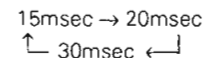
3-stage setting of REAR SPEAKER VOLUME LEVEL  
The rear speaker volume level is changed cyclically as shown below in the DOLBY SURROUND, DOLBY 3-STEREO mode.



##### • **CHARACTER KEY**

3-stage setting of DELAY TIME

The delay time is changed cyclically as shown below in the DOLBY SURROUND, DOLBY 3-STEREO mode.



##### • **POPS KEY**

EQ LEVEL FLAT

The EQ level is set to 0 dB.

##### • **ROCK KEY**

EQ LEVEL MAX

The EQ level is set to maximum.

##### • **JAZZ KEY**

EQ LEVEL MINI

The EQ level is set to minimum.

##### • **CLASSIC KEY**

TEST TONE ON/OFF

The test tone is turned on/off only in the DOLBY SURROUND, DOLBY 3-STEREO mode.

##### • **MOVIE KEY**

ALL FL DISPLAY SEGMENTS PUTTING OUT ON/OFF

All putting out and normal putting out of the FL display segments are selected alternately.

##### ⑤ **Output of MUTE signal**

- The MUTE signal operates normally.

##### ⑥ **Relay control in DOLBY mode**

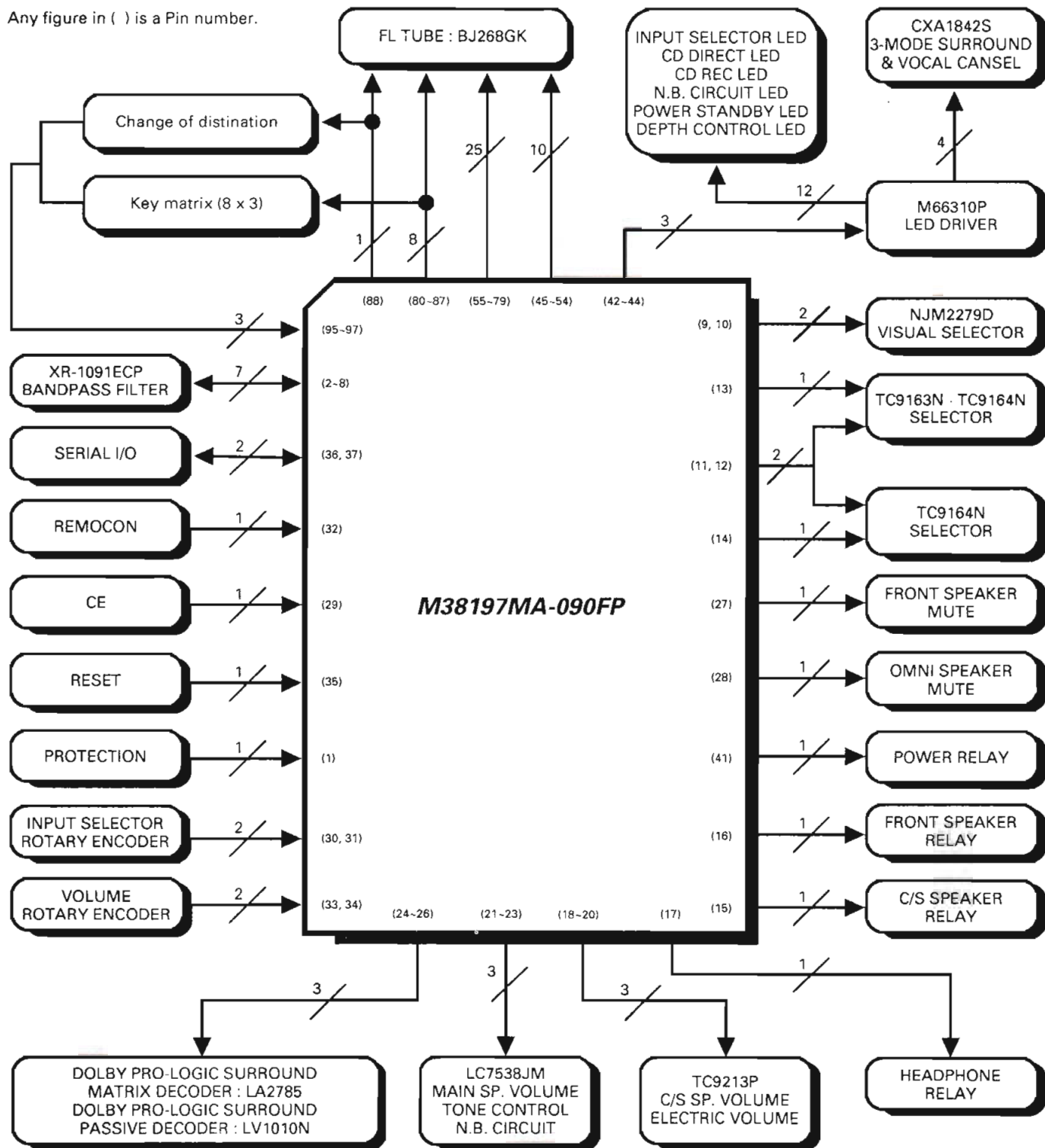
- The relays are controlled in the DOLBY mode as in the normal operation mode.

## CIRCUIT DESCRIPTION

### 3. $\mu$ -COM : M38197MA-090FP (X14- [A/5], IC1)

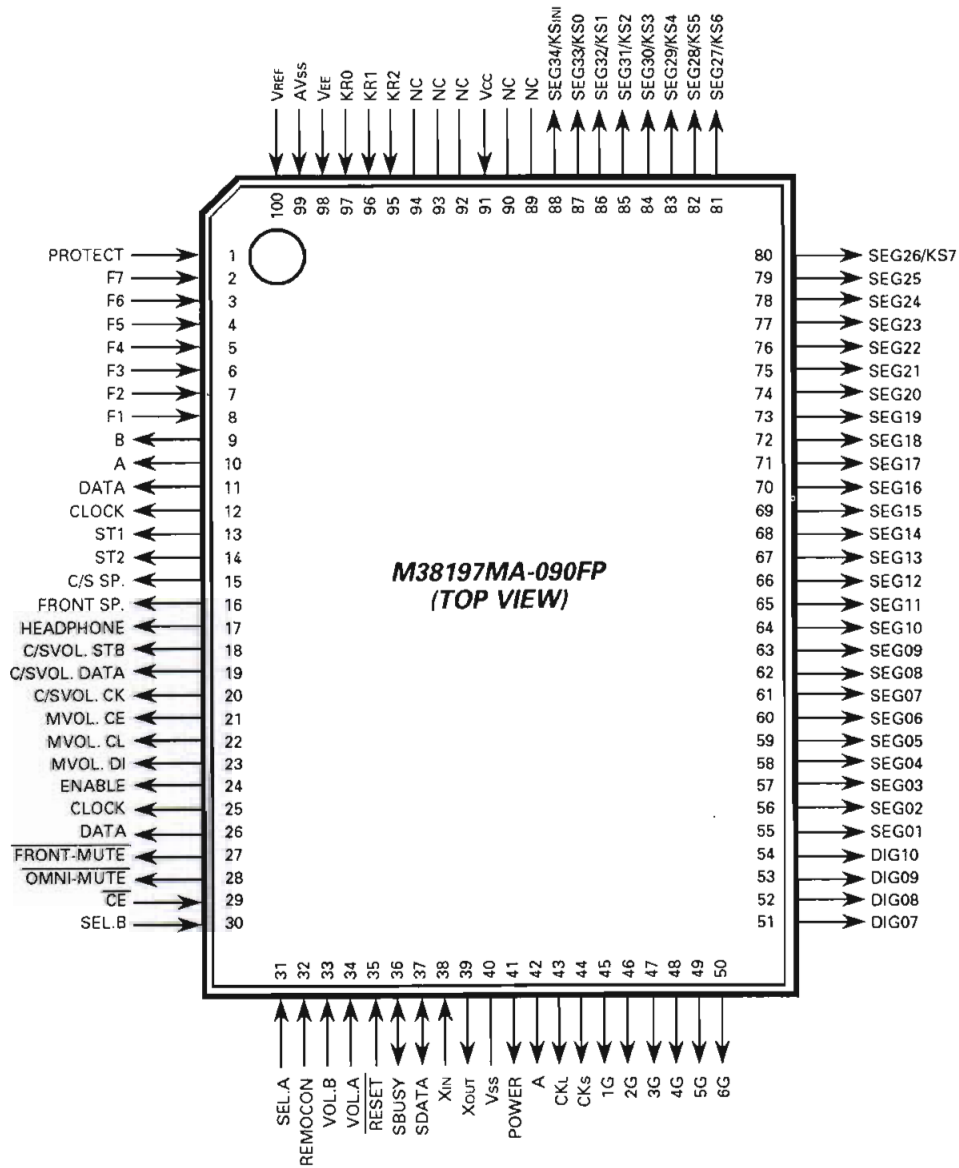
#### 3-1. Block diagram

Any figure in ( ) is a Pin number.



## CIRCUIT DESCRIPTION

### 3-2. Pin connection



### 3-3. Key matrix

	KR0	KR1	KR2
KSINI	-	-	A68/A58
KS0	ROCK	DISPLAY	SPEAKER
KS1	JAZZ	CENTER MODE	POWER
KS2	AI (AUTO/FOCUS)	DUAL SOUND	CD DIRECT
KS3	MOVIE	BYPASS	CD REC
KS4	CLASSIC	DOLBY 3-STEREO	BALANCE R
KS5	POPS	DOLBY SURROUND	BALANCE L
KS6	EQ ON	PRESENCE	N.B. CIRCUIT
KS7	CHARACTER	-	DEPTH CONTROL

#### Change of destination

A58 type : Input selector CD · AV AUX

A68 type : Input selector CD/LD · AUX



## CIRCUIT DESCRIPTION

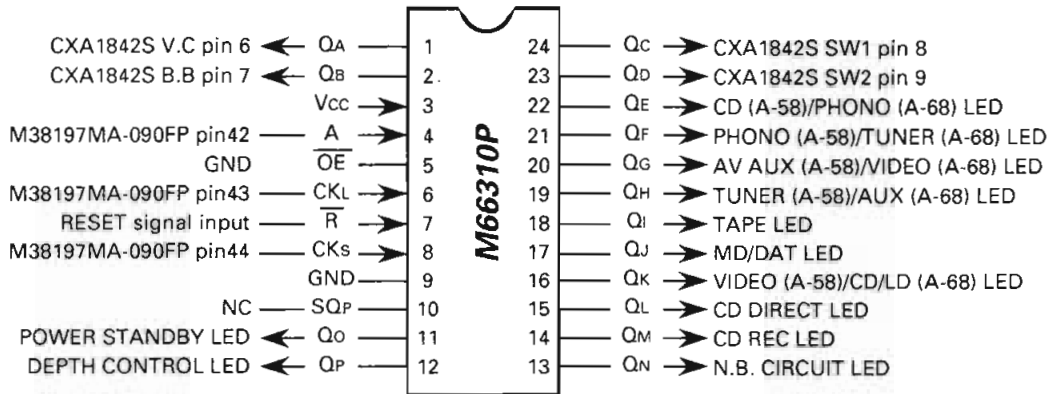
## 3-4. Pin function

No.	Name	I/O	Function
1	PROTECT	I	Detection of protection. ("H" : Detected, "L" : Not detected)
2~4	F7~F5	I	Analog signal input directly from the filter circuit. (Pin 2~4 : 16kHz, 6.3kHz, 2.5kHz)
5~8	F4~F1	I	Analog signal input directly from the filter circuit. (Pin 5~8 : 1.0kHz, 400Hz, 160Hz, 63Hz)
9, 10	B, A	O	Visual selector (NJM2279D) control signal output. ("H" : OFF, "L" : ON)
11	DATA	O	Selector (TC9163N, TC9164N) control DATA signal output.
12	CLOCK	O	Selector (TC9163N, TC9164N) control CLOCK signal output.
13	ST1	O	Selector (TC9163N : SEL2, TC9164N : SEL1) control STROBE signal output.
14	ST2	O	Selector (TC9164N : SEL3) control STROBE signal output.
15	C/S SP.	O	Center/Surround speaker relay control signal output. ("H" : ON, "L" : OFF)
16	FRONT SP.	O	Front speaker relay control signal output. ("H" : ON, "L" : OFF)
17	HEAD PHONE	O	Headphone relay control signal output. ("H" : ON, "L" : OFF)
18	C/SVOL.STB	O	Center/Surround speaker volume IC (TC9213P) control STROBE signal output.
19	C/SVOL. DATA	O	Center/Surround speaker volume IC (TC9213P) control DATA signal output.
20	C/SVOL. CK	O	Center/Surround speaker volume IC (TC9213P) control CLOCK signal output.
21	MVOL. CE	O	Main speaker volume IC (LC7538JM) control CE signal output.
22	MVOL. CL	O	Main speaker volume IC (LC7538JM) control CLOCK signal output.
23	MVOL. DI	O	Main speaker volume IC (LC7538JM) control DATA signal output.
24	ENABLE	O	Control ENABLE signal output. (Dolby Pro Logic surround matrix decoder : LA2785, Dolby surround passive decoder : LV1010N)
25	CLOCK	O	Control CLOCK signal output. (Dolby Pro Logic surround matrix decoder : LA2785, Dolby surround passive decoder : LV1010N)
26	DATA	O	Control DATA signal output. (Dolby Pro Logic surround matrix decoder : LA2785, Dolby surround passive decoder : LV1010N)
27	FRONT-MUTE	O	Signals to control muting circuit of front speaker. ("H" : OFF, "L" : ON)
28	OMNI-MUTE	O	Signals to control muting circuit of OMNI speaker. ("H" : OFF, "L" : ON)
29	CE	I	Detection of backup. ("H" : Others, "L" : Backup mode)
30, 31	SEL.B, SEL.A	I	Rotary encoder phase signal (Pin 30 : Phase B, Pin 31 : Phase A) input for input selector.
32	REMOCON	I	Remote control signal input.
33, 34	VOL.B, VOL.A	I	Rotary encoder phase signal (Pin 33 : Phase B, Pin 34 : Phase A) input for volume.
35	RESET	I	Detection of reset signal. ("H" : Others, "L" : Reset)
36	SBUSY	I/O	System serial BUSY signal Input/Output.
37	SDATA	I/O	System serial DATA signal Input/Output.
38	XIN	I	System clock input. (8.4MHz)
39	XOUT	O	System clock output (8.4MHz)
40	Vss	-	GND
41	POWER	O	Power relay control signal output. ("H" : ON, "L" : OFF)
42	A	O	LED driver (M66310P) control DATA signal output.
43	CKL	O	LED driver (M66310P) control LATCH CLOCK signal output.
44	CKs	O	LED driver (M66310P) control SHIFT CLOCK signal output.
45~54	1G~6G, DIG07~DIG10	O	FL tube grid 01G~10G (Pin 65~56) drive signal output. ("H" : ON, "L" : OFF)
55~79	SEG01~SEG25	O	FL tube segment P01~P25 (Pin 48~41, 39~37, 35~33, 30, 29, 26~18) drive signal output.
80~87	SEG26/KS7~SEG33/KS0	O	Key scan 7~0 signal output. ("H" : ON, "L" : OFF) FL tube segment P26~P33 (Pin 17, 16, 14~12, 9~7) drive signal output. ("H" : ON, "L" : OFF)
88	SEG34/KSINI	O	FL tube segment P34 (Pin 6) drive signal output. Key scan INI signal output. ("H" : ON, "L" : OFF)
89, 90	NC	-	Not used.
91	Vcc	II	Power input for $\mu$ -com. (+5V $\pm$ 10%)
92~94	NC	-	Not used.
95~97	KR2~KR0	I	Key return signal input. ("H" : ON, "L" : OFF)
98	V $\bar{E}$ E	I	Pull down power input. (-30V)
99	AVss	I	A/D converter GND input. (Vss)
100	VREF	I	A/D converter reference voltage input. (+5V)

## CIRCUIT DESCRIPTION

### 4. LED Driver : M66310P (X14- [A/5], IC4)

#### 4-1. Pin connection



#### 4-2. State of IC port (LED driver)

	A-58	A-68
QA	CXA1842S V.C (Pin 6)	
QB	CXA1842S B.B (Pin 7)	
QC	CXA1842S SW1 (Pin 8)	
QD	CXA1842S SW2 (Pin 9)	
QE	CD	PHONO
QF	PHONO	TUNER
QG	AV AUX	VIDEO
QH	TUNER	AUX
Qi	TAPE	
QJ	MD/DAT	
QK	VIDEO	CD/LD
QL	CD DIRECT	
QM	CD REC	
QN	N.B. CIRCUIT	
Qo	POWER STANDBY	
QP	DEPTH CONTROL	

#### Input selector

	QE	QF	QG	QH	Qi	QJ	QK
A-58	CD	○					
	TUNER			○			
	PHONO		○				
	TAPE				○		
	VIDEO						○
	AV AUX			○			
A-68	MD/DAT					○	
	CD/LD						○
	TUNER		○				
	PHONO	○					
	TAPE					○	
	VIDEO			○			
AUX				○			
MD/DAT						○	

○ : ON, Blank : OFF

#### Presence

	QA	QB	QC	QD
BYPASS		○	○	○
ARENA		○		○
JAZZ CLUB		○		
STADIUM		○	○	
HIT MASTER	○	○	▲	▲
DEPTH CONTROL ON		○		○

○ : ON, Blank : OFF, ▲ : Optional ON/OFF is active low

#### CD DIRECT/CD REC/N.B. CIRCUIT POWER STANDBY/DEPTH CONTROL

		QL	QM	QN	Qo	QP
CD DIRECT	ON	○	▲	▲	▲	
	OFF		▲	▲	▲	▲
CD REC	ON	▲	○	▲	▲	▲
	OFF	▲		▲	▲	▲
N.B. CIRCUIT	ON	▲	▲	○	▲	▲
	OFF	▲	▲		▲	▲
POWER STANDBY	ON	▲	▲	▲	○	▲
	OFF	▲	▲	▲		▲
DEPTH CONTROL	ON		▲	▲	▲	○
	OFF	▲	▲	▲	▲	

○ : ON, Blank : OFF

▲ : Optional (Conform to setting of each mode)



## CIRCUIT DESCRIPTION

### 4-3. State of IC port (SEL. IC)

	SEL. IC1 TC9164N (IC3)	SEL. IC2 TC9163N (IC5)	SEL. IC3 TC9164N (IC6)
1	PHONO	TAPE REC	-
2	AV AUX (AUX)	VIDEO REC	-
3	VIDEO PLAY	MD/DAT REC	-
4	MD/DAT PLAY	BYPASS	-
5	TUNER	DOLBY	DUAL SOUND OFF
6	TAPE PLAY	PRESENCE	DUAL SOUND ON
7	CD (CD/LD)	GE REC ON	CD DIRECT OFF
8	CD REC	GE REC OFF	CD DIRECT ON

- **μ-com : M38197MA-090FP (IC1)**

Pin 15 : C/S S. RELAY

Pin 28 : OMNI SP. MUTE

- **VISUAL SELECTOR : NJM2279D (IC20)**

Pin 9 : CONT B

Pin10 : CONT A

### Input · Output selector/AI/Visual selector

		SEL. IC1 (IC3)								SEL. IC2 (IC5)			IC20	
		8	7	6	5	4	3	2	1	3	2	1	CONTB	CONTA
CD REC OFF	CD		○							○	○	○	*	*
	CD/LD		○							○	○	○	H	H
	TUNER				○					○	○	○	*	*
	PHONO								○	○	○	○	*	*
	TAPE			○						○	○		*	*
	VIDEO						○			○		○	L	H
	AV AUX							○		○	○	○	H	H
	AUX							○		○	○	○	*	*
CD REC ON	MD/DAT				○						○	○	*	*
	CD	○	○							○	○		*	*
	CD/LD	○	○							○	○		H	H
	TUNER	○			○					○	○		*	*
	PHONO	○							○	○	○		*	*
	TAPE	○		○						○	○		*	*
	VIDEO	○					○			○			L	H
	AV AUX	○						○		○	○		H	H
AUX	○						○		○	○		*	*	
AI		○										*	*	
MD/DAT	○				○					○		*	*	

	NJM2279D (IC20)	
	CONTB	CONTA
V.MUTE	L	L
-	L	H
VIDEO	H	L
CD/LD · AV AUX	H	H

○ : ON, Blank : OFF, \* : Maintain last condition of visual selector

### PRESENCE/DOLBY SURROUND/DEPTHCONTROL /CD DIRECT/DUAL SOUND

	SEL. IC2 (IC5)					IC1	
	8	7	6	5	4	OMNI SP.	C/S SP.
BYPASS		○			○	H	L
DOLBY PRO-LOGIC · 3-STEREO	○			○		L	H
PRESENCE		○	○			H	L
DEPTH CONTROL (ON)		○	○			H	L
AI (AUTO/FOCUS)	▲	▲			○	L	L

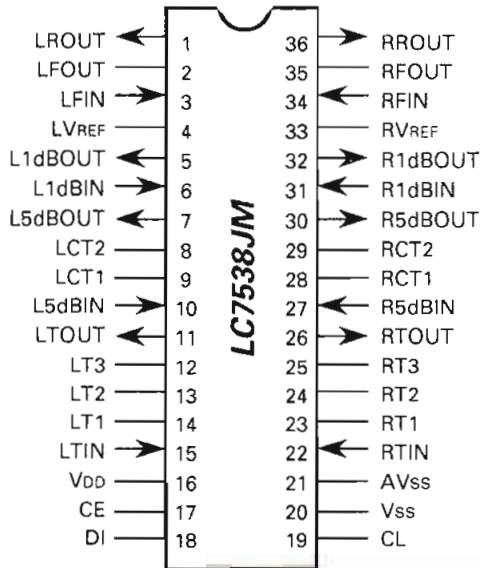
		SEL. IC3 (IC6)					IC1	
		8	7	6	5	OMNI SP.	C/S SP.	
CD	ON	○				L	L	
DIRECT	OFF		○			▲	▲	
DUAL	ON			○				
SOUND	OFF				○			

○ : ON, Blank : OFF, ▲ : Optional (Conform to setting of each mode [DOLBY · PRESENCE])

## CIRCUIT DESCRIPTION

### 5. Analog IC : LC7538JM (X08- [A/3], IC8)

#### 5-1. Pin connection



#### 5-2. Pin function

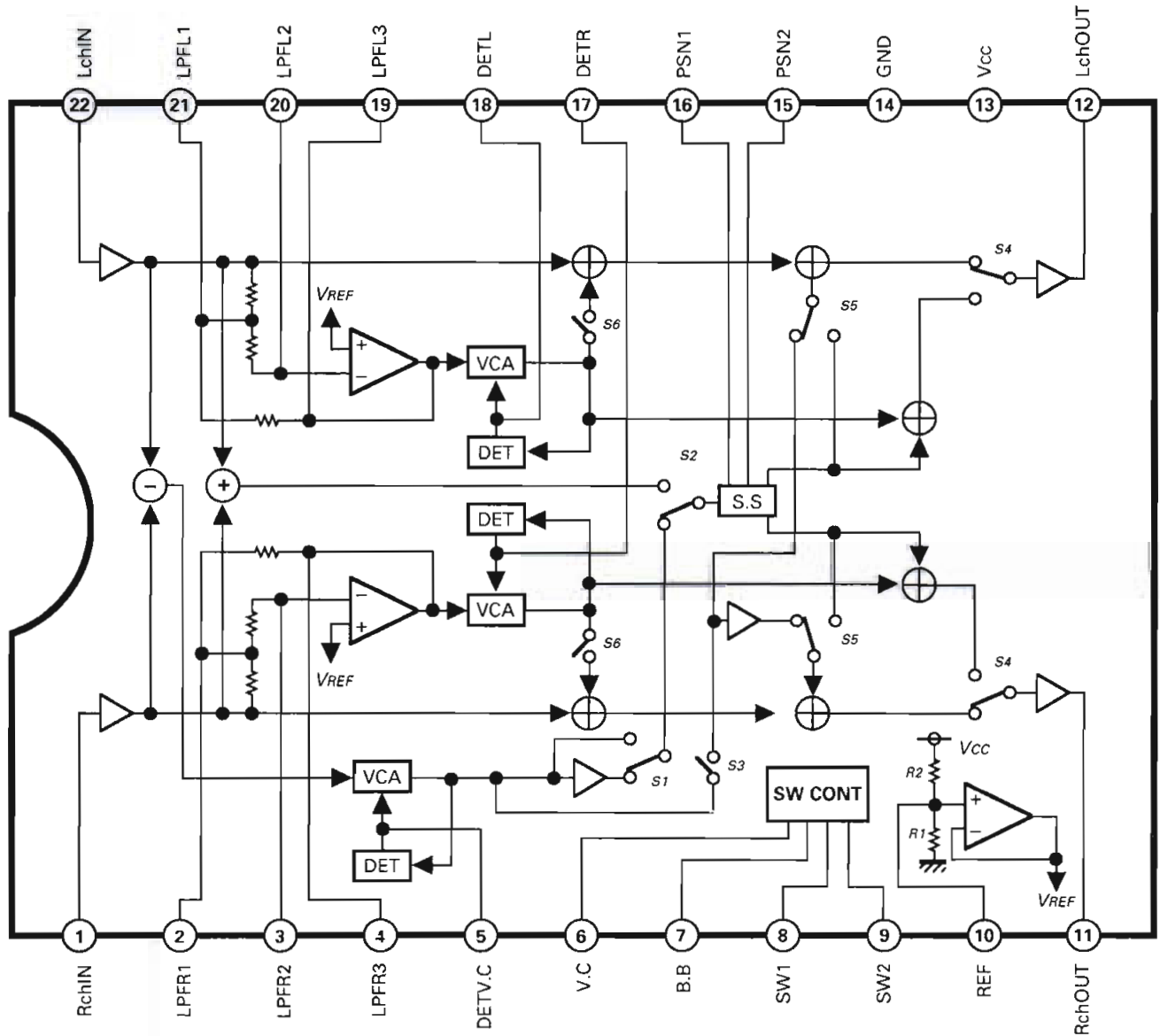
No.	Name	I/O	Function
1	LROUT	O	Output terminal of fader.
2	LFOUT	-	NC
3	LFIN	I	Input terminal of fader.
4	LVREF		Common terminal of main volume control, fader volume control and tone control.
5	L1dBOUT	O	Output terminal of 1dB step attenuator of main volume control.
6	L1dBIN	I	Input terminal of 1dB step attenuator of main volume control.
7	L5dBOUT	O	Output terminal of 5dB step attenuator of main volume control.

No.	Name	I/O	Function
8, 9	LCT2, LCT1	O	Loudness terminal.
10	L5dBIN	I	Input terminal of 5dB step attenuator of main volume control.
11	LTOUT	O	Output terminal of tone control.
12~14	LT3~LT1		Terminal to connect BASS and TREBLE compensation capacitor for tone control circuit.
15	LTIN	I	Input terminal of tone control.
16	VDD	-	Connect power supply.
17	CE		Chip enable terminal. Data are written in the internal latch and each analog switch works when "H" changes to "L". Data transfer is set enable when at "H".
18, 19	DI, CL	I	Input terminal for serial data and clock for control.
20, 21	Vss, AVss	-	Connect each power supply.
22	RTIN	I	Input terminal of tone control.
23~25	RT1~RT3		Terminal to connect BASS and TREBLE compensation capacitor for tone control circuit.
26	RTOUT	O	Output terminal of tone control.
27	R5dBIN	I	Input terminal of 5dB step attenuator of main volume control.
28, 29	RCT1, RCT2		Loudness terminal.
30	R5dBOUT	O	Output terminal of 5dB step attenuator of main volume control.
31	R1dBIN	I	Input terminal of 1dB step attenuator of main volume control.
32	R1dBOUT	O	Output terminal of 1dB step attenuator of main volume control.
33	RVREF		Common terminal of main volume control, fader volume control and tone control.
34	RFIN	I	input terminal of fader.
35	RFOUT	-	NC
36	RROUT	O	Output terminal of fader.

## CIRCUIT DESCRIPTION

### 6. Analog IC : CXA1842S (X08- [A/3], IC7)

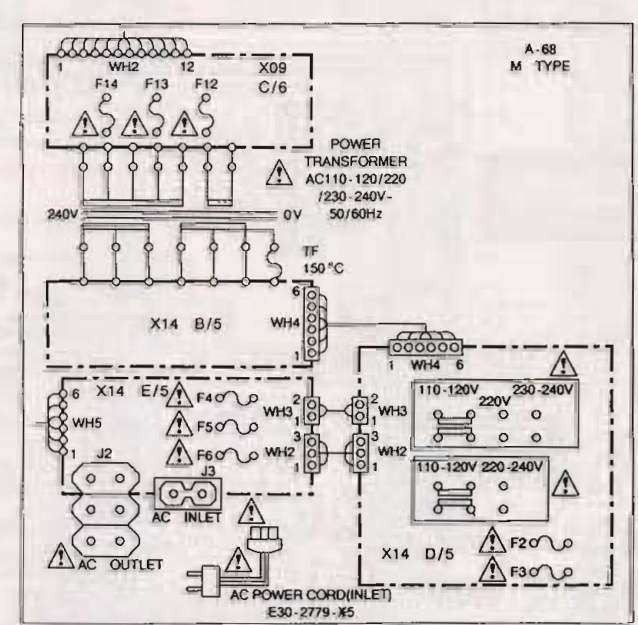
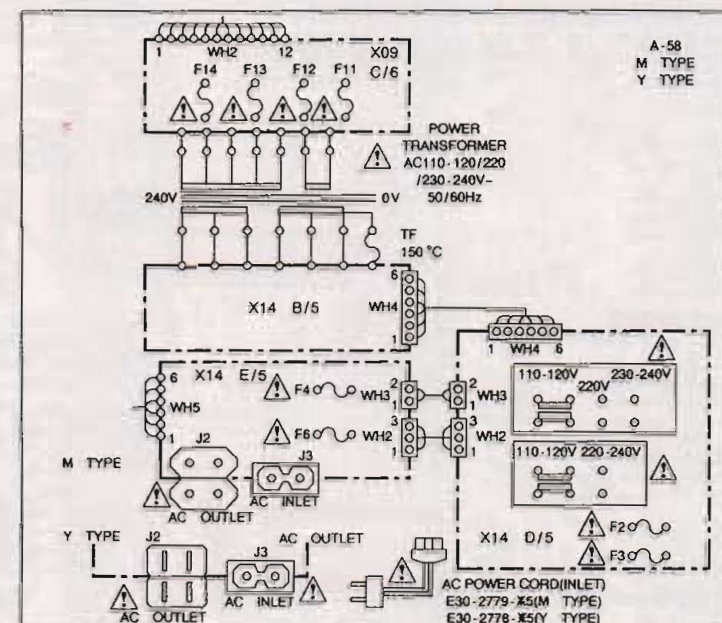
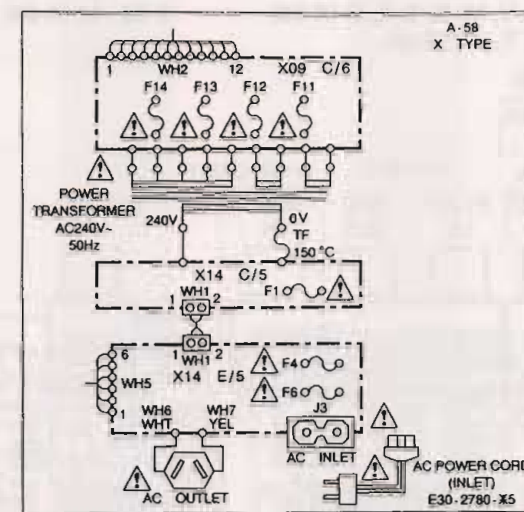
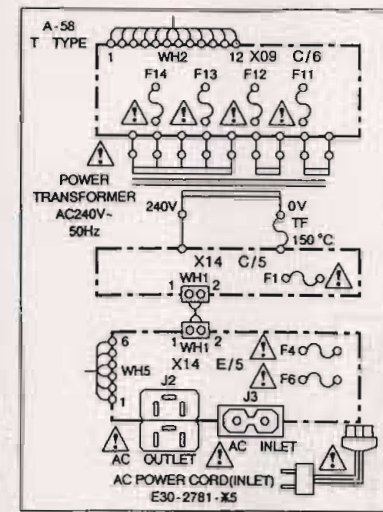
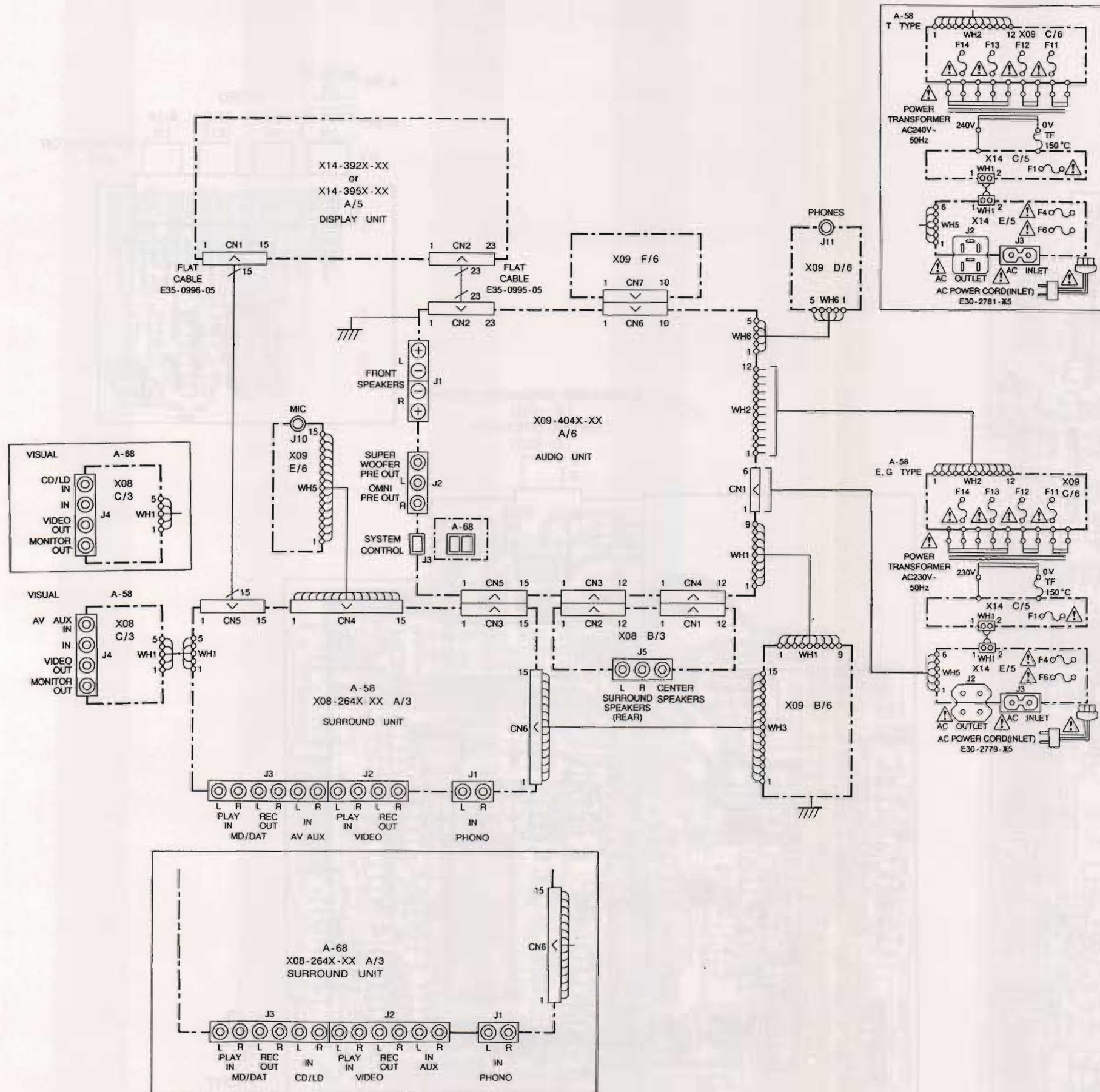
#### 6-1. Block diagram





# A-58/68 A-58/68

## WIRING DIAGRAM

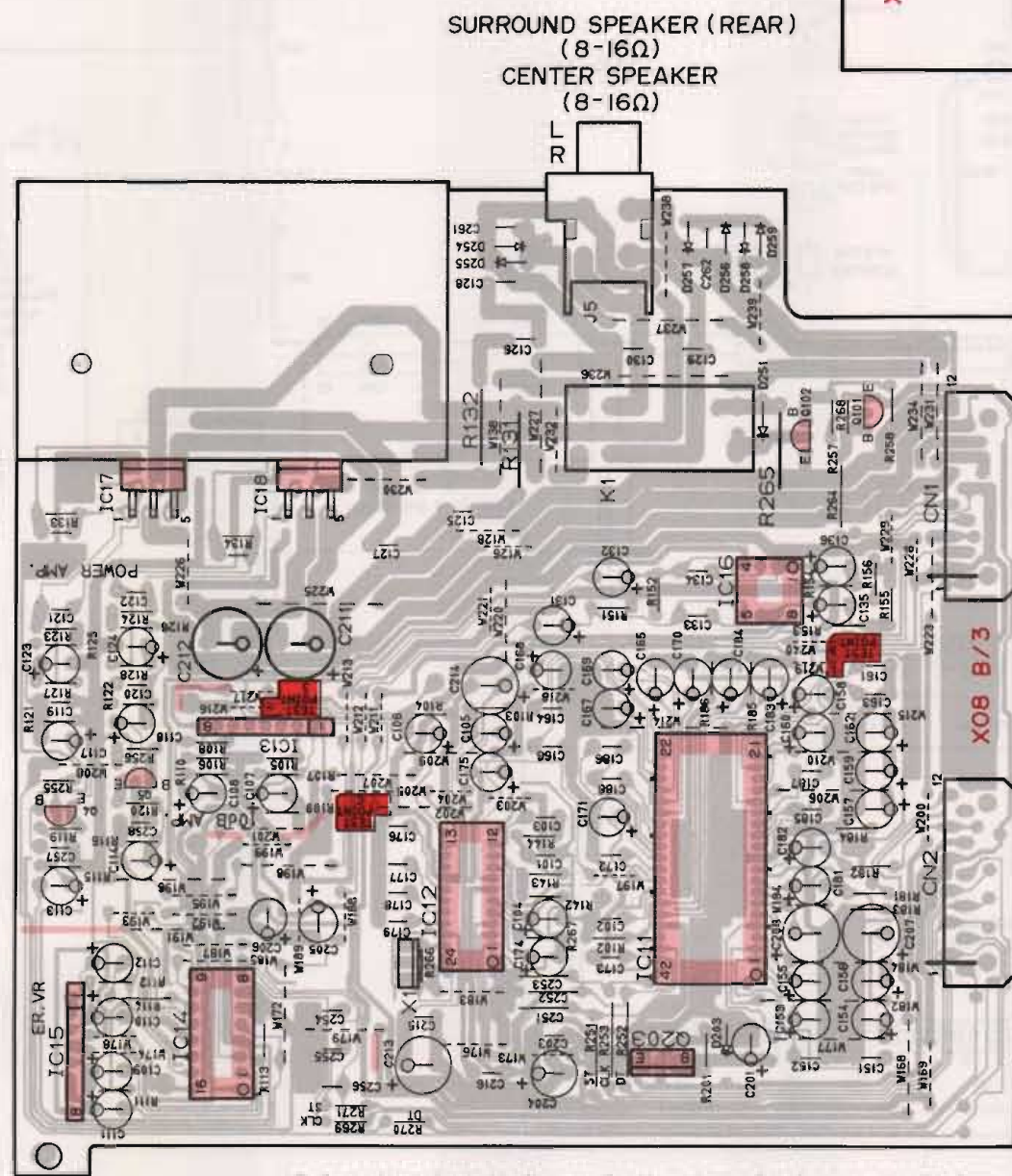
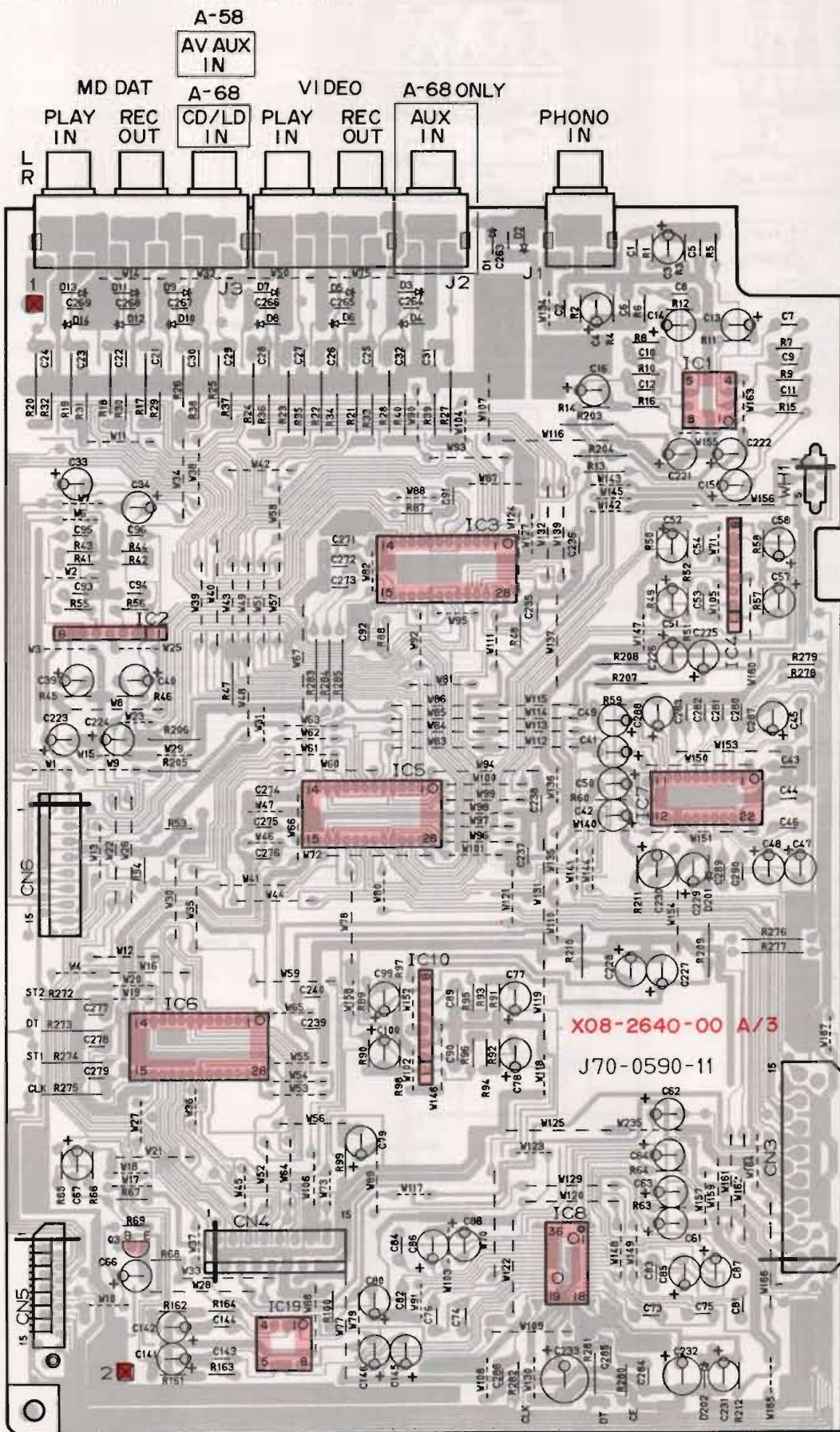




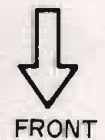
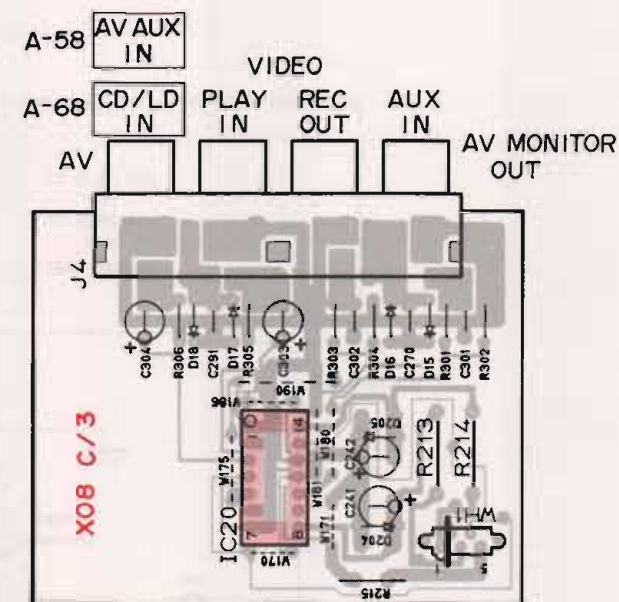
# PC BOARD (COMPONENT SIDE VIEW)

SURROUND UNIT : X08-2640-XX

JAPAN MADE 0-00 : Y, M, X, T, E, G (A-58) 0-01 : M (A-68)  
 SINGAPORE MADE 0-02 : Y, M, X, T, E, G (A-58) 0-03 : M (A-68)  
 MALAYSIA MADE 0-02 : T, E, I (A-58)



Refer to the schematic diagram for the values of resistors and capacitors.





# PC BOARD (COMPONENT SIDE VIEW)

AUDIO UNIT : X09-404X-XX

JAPAN MADE

0-21 : Y, M

2-71 : X, T, E, G (A-58)

0-22 : M (A-68)

SINGAPORE MADE

0-23 : Y, M

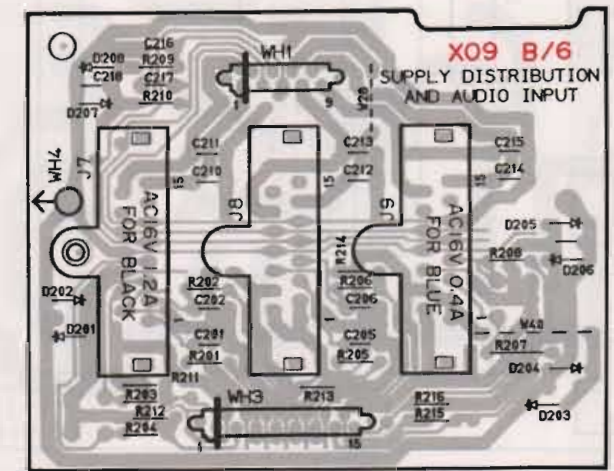
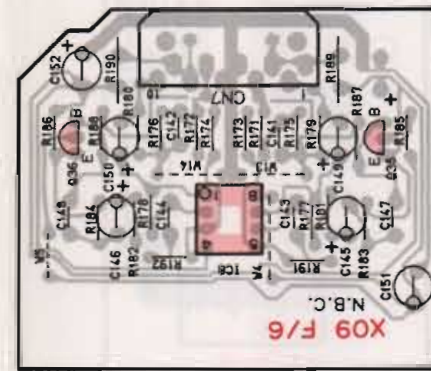
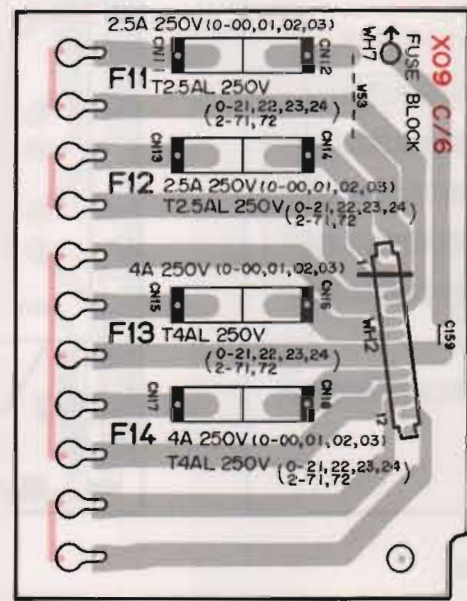
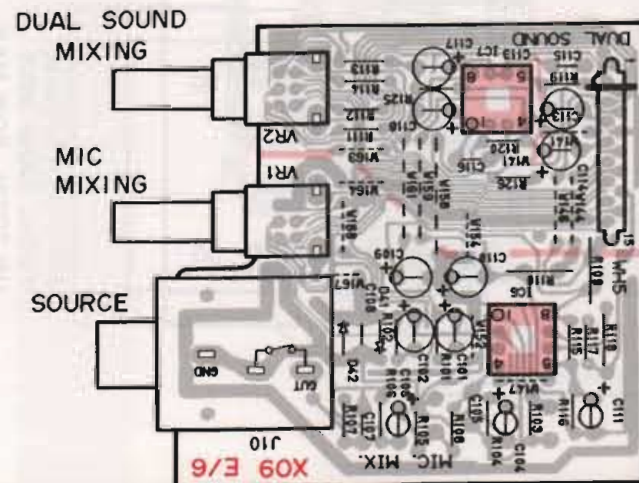
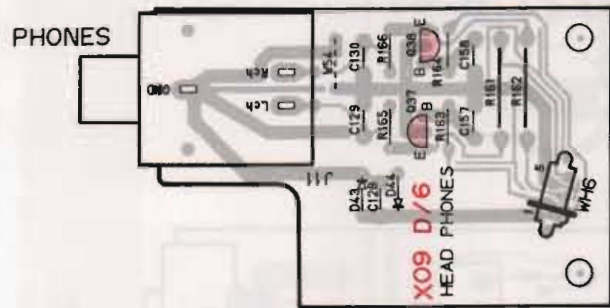
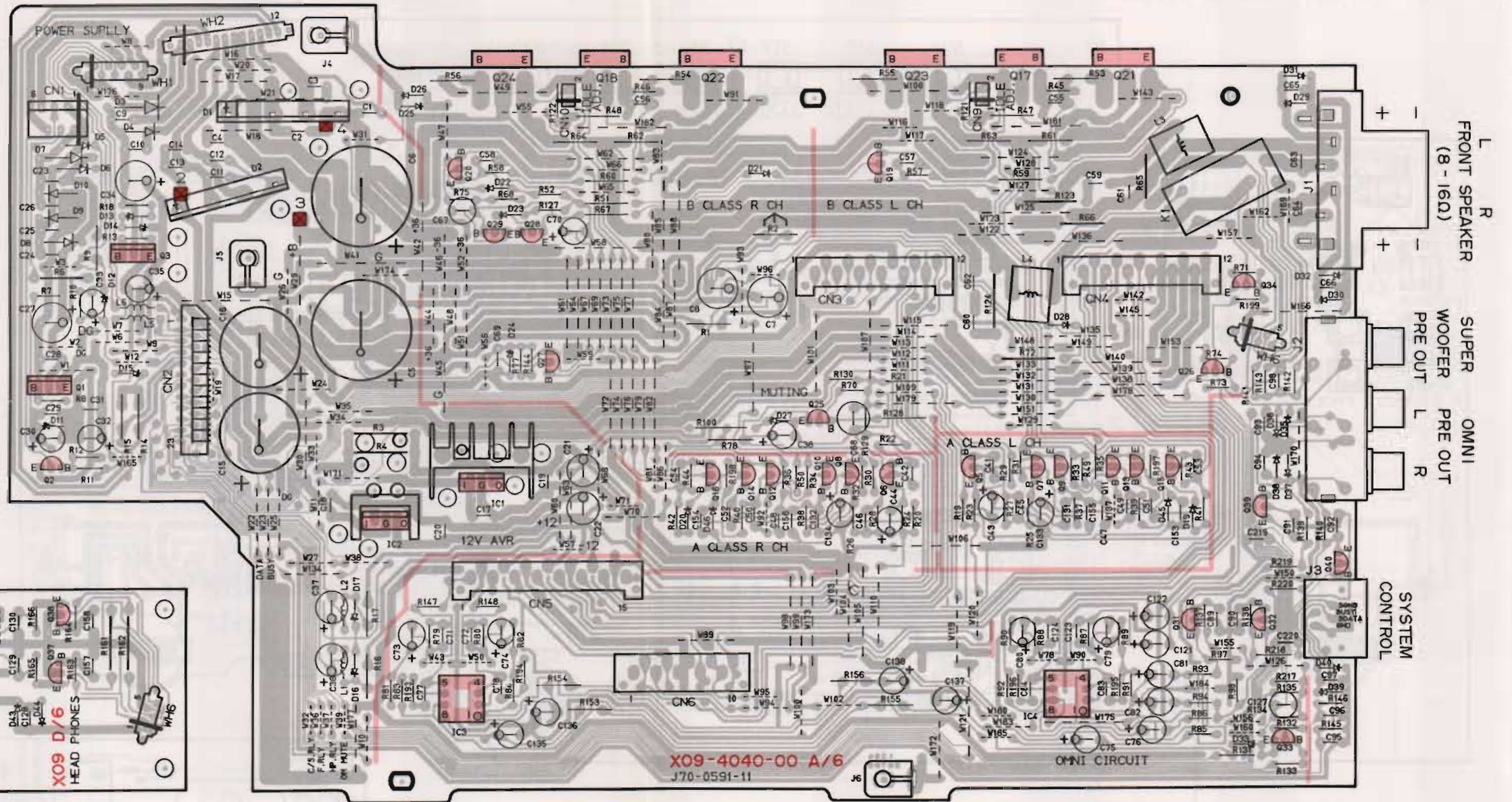
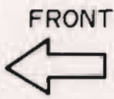
2-72 : X, T, E, G (A-58)

0-24 : M (A-68)

MALAYSIA MADE

0-23 : I

2-72 : T, E (A-58)



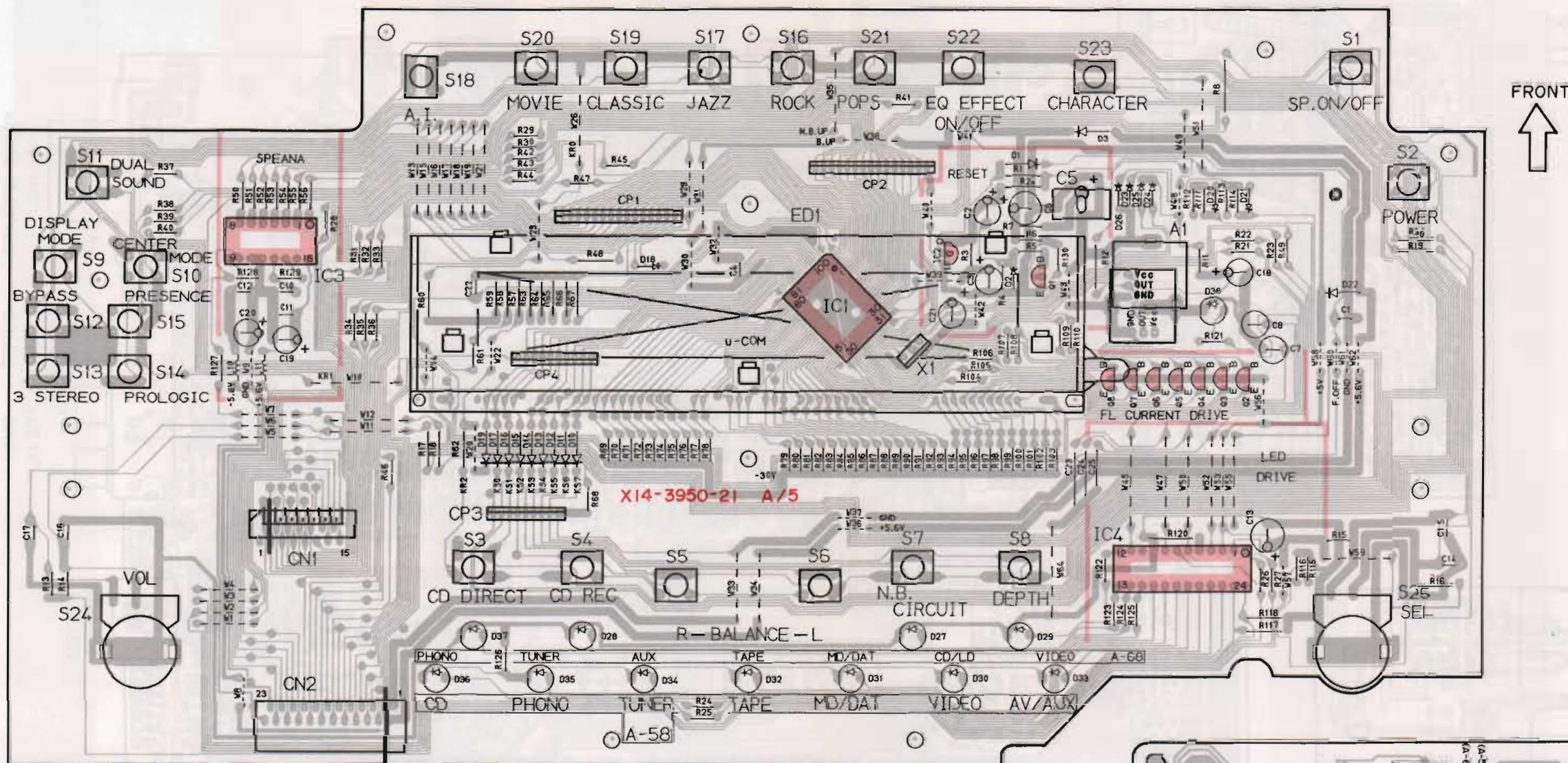
Refer to the schematic diagram for the values of resistors and capacitors.



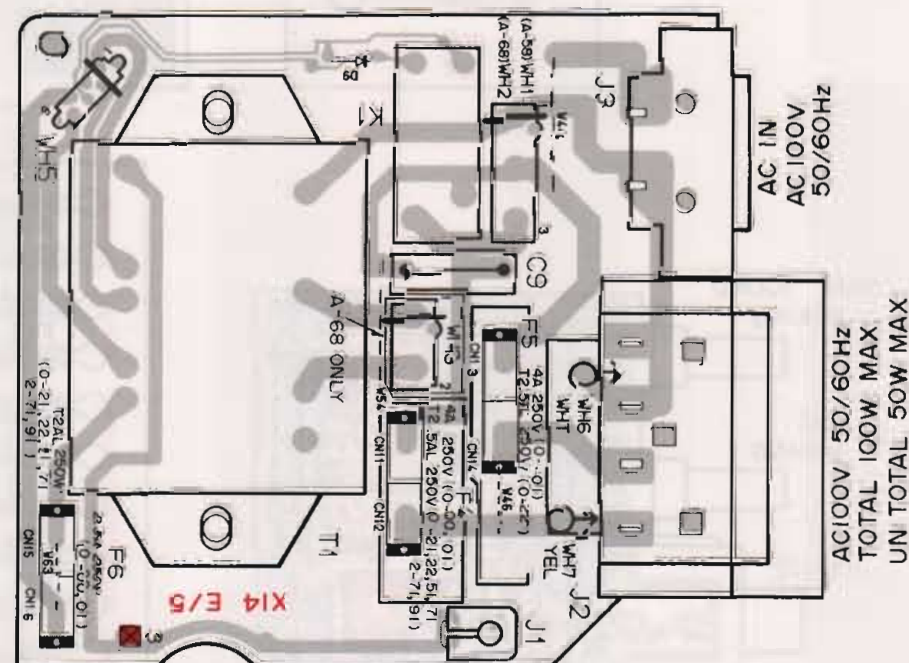
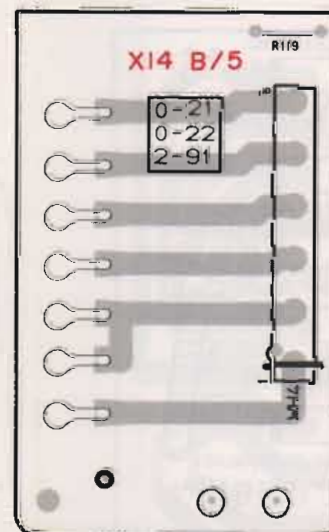
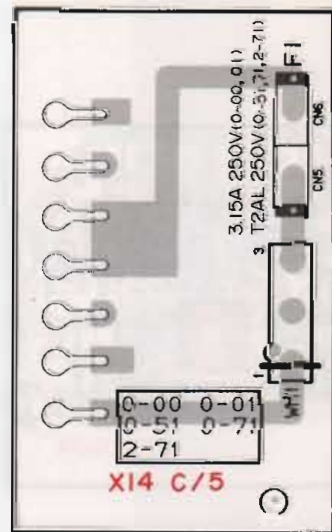
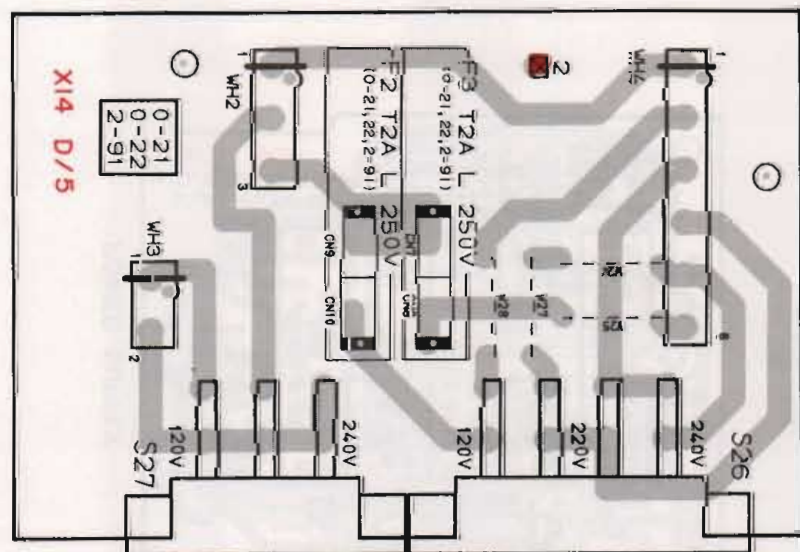
# PC BOARD (COMPONENT SIDE VIEW)

DISPLAY UNIT : X14-39XX-XX

JAPAN MADE 22-91 : Y, 20-21 : M, 20-71 : X, 20-51 : T, 22-71 : E, G (A-58) 20-22 : M (A-68)  
 SINGAPORE MADE 52-91 : Y, 50-21 : M, 50-71 : X, 50-51 : T, 52-71 : E, G (A-58) 50-22 : M (A-68)  
 MALAYSIA MADE 50-21 : I, 50-51 : T, 52-71 : E (A-58)



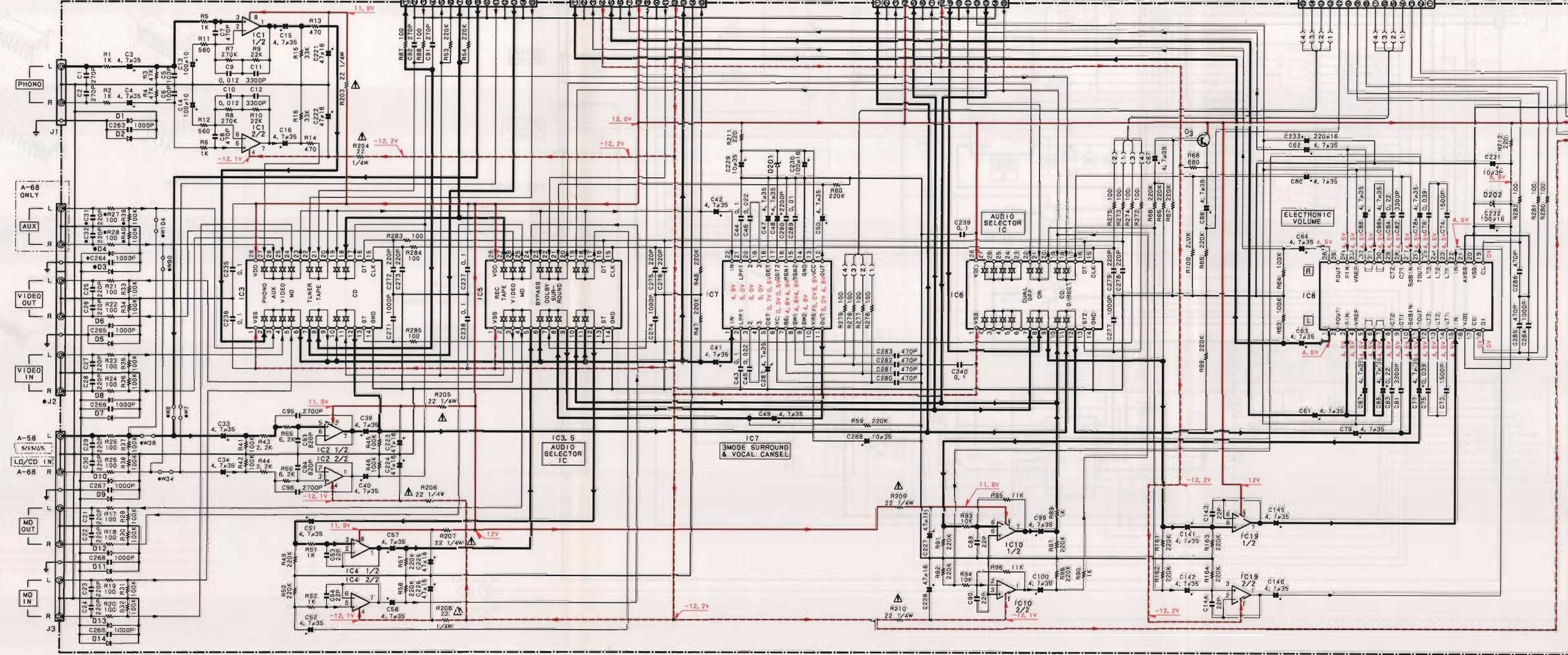
FRONT



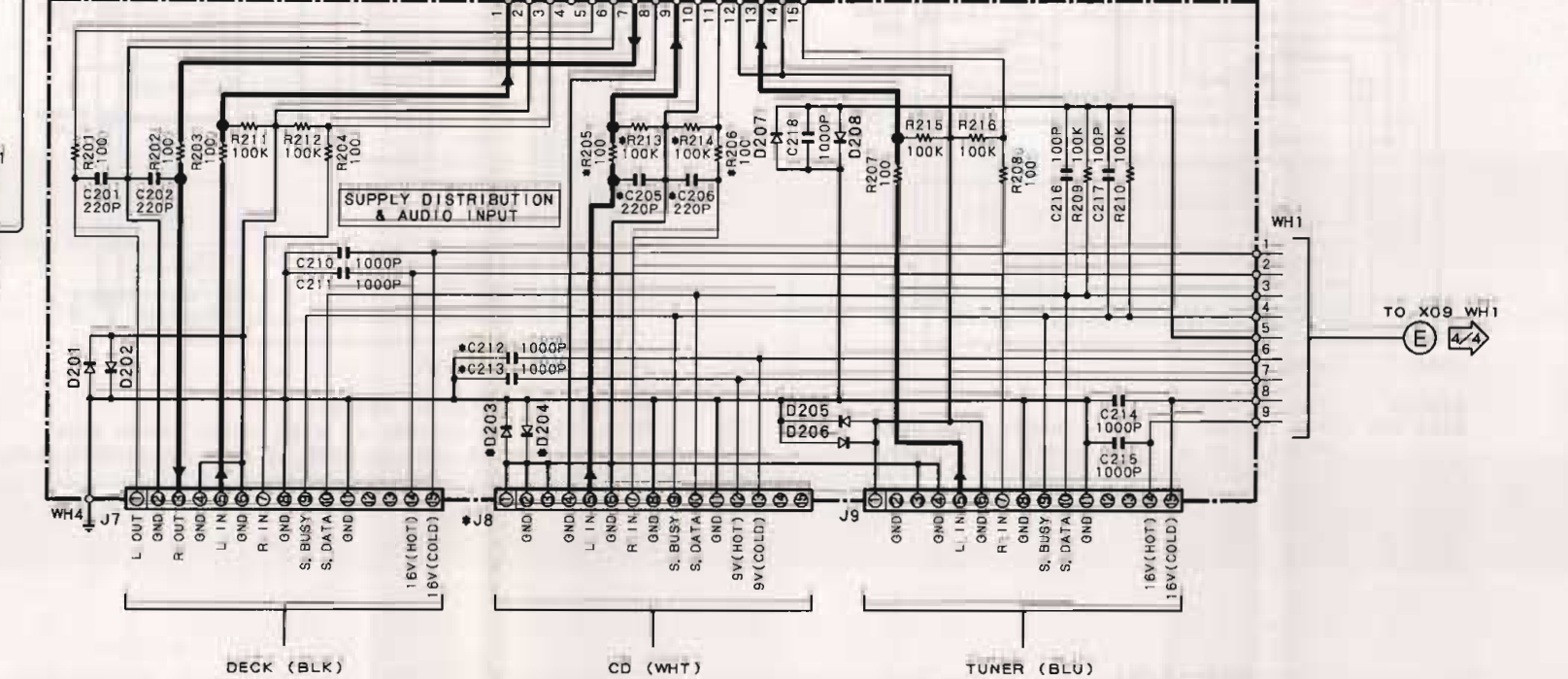
AC100V 50/60Hz  
 TOTAL 100W MAX  
 UN TOTAL 50W MAX



X08-2640-XX (A/3) SURROUND UNIT



X09-(B/6) AUDIO UNIT



X08-(A/3)

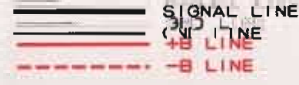
MODEL NAME	DESTINATION	ABB.	UNIT NO.	C31, 32, 264 R27, 28, 39, 40 W34, 38, D3, 4	WE, 7 90, 104	J2
A-58 JAPAN MADE	GENERAL MARKET	M	0-00			
	PX	Y				
	AUSTRALIA	X				
	ENGLAND	T				
	EUROPE	E				
	GERMANY	G				
A-58 SINGAPORE MADE	GENERAL MARKET	M	0-02	NO	YES	E63-0091-05
	PX	Y				
	AUSTRALIA	X				
	ENGLAND	T				
	EUROPE	E				
	GERMANY	G				
A-58 MALAYSIA MADE	GENERAL MARKET	M	0-01			
	PX	Y				
	AUSTRALIA	X				
	ENGLAND	T				
	EUROPE	E				
A-58 SINGAPORE MADE	GENERAL MARKET	M	0-03	YES	NO	E63-0066-15

X08-(A/3)

- IC1, 19 : XRA15218-DX or NJM45650-D
- IC2, 4, 10 : NJM4565L-D
- IC3, 6 : TC9164N
- IC5 : TC9163N
- IC7 : CXA1842S
- IC8 : LC7538JM
- Q3 : 2SC1845(F, E)
- D1-14 : 1SS131 or HSS104A
- D201, 202 : RD10ES(B2) or HZS10N(B2) JAPAN MADE
- : RD10ES(B2) or MTZJ10(B) SINGAPORE MADE

X09-(B/6)

MODEL NAME	DESTINATION	ABB.	UNIT NO.	C205, 206, 212, 213 R205, 206, 213, 214 D203, 204	J8
A-58 JAPAN MADE	GENERAL MARKET	M	0-21		
	PX	Y			
	AUSTRALIA	X			
	ENGLAND	T			
	EUROPE	E	2-71		
	GERMANY	G			
A-58 SINGAPORE MADE	GENERAL MARKET	M	0-23		YES
	PX	Y			
	AUSTRALIA	X			
	ENGLAND	T	2-72		
	EUROPE	E			
	GERMANY	G			
A-58 MALAYSIA MADE	GENERAL MARKET	M	0-23		
	PX	Y			
	AUSTRALIA	X			
	ENGLAND	T	2-72		
	EUROPE	E			
A-58 SINGAPORE MADE	GENERAL MARKET	M	0-22		NO
	PX	Y			
	AUSTRALIA	X			
	ENGLAND	T			
	EUROPE	E			
A-58 SINGAPORE MADE	GENERAL MARKET	M	0-24		



2SA954 2SC2003  
2SA992 2SC2878  
2SC1845

2SC2785

DTA124ES  
UN4112  
2SC1740S  
2SC2458

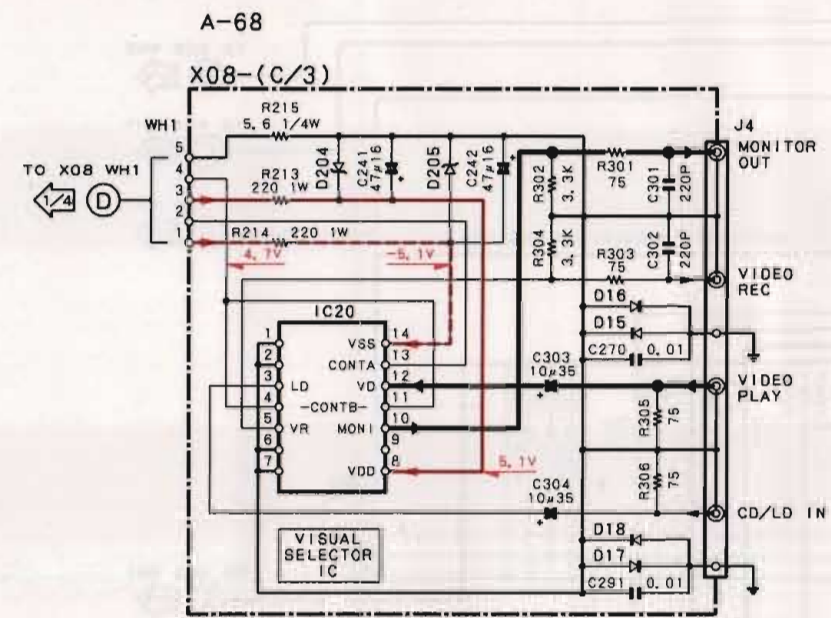
2SB1492BT\*5  
2SD2254BT\*5

2SB1370  
2SD2061

**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.

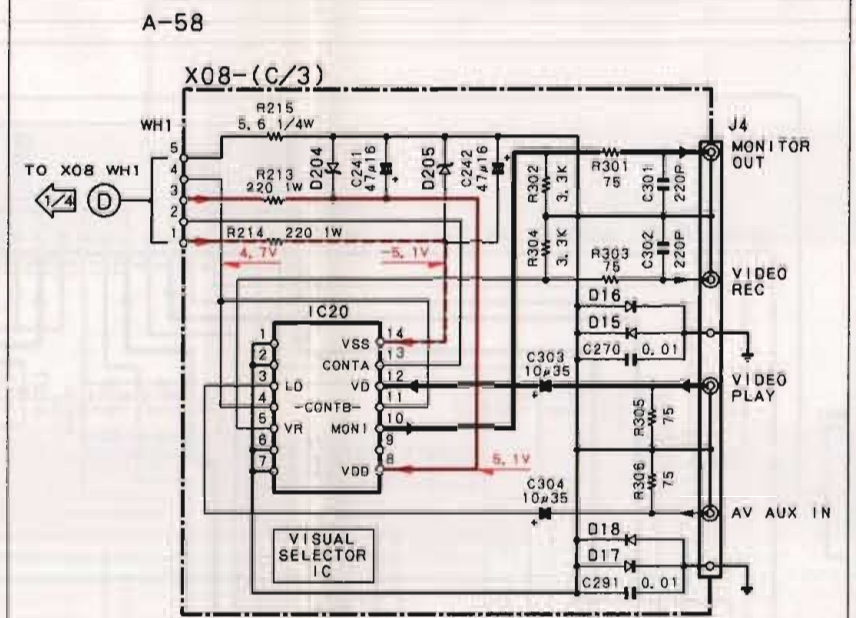
\* DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instruments or units.





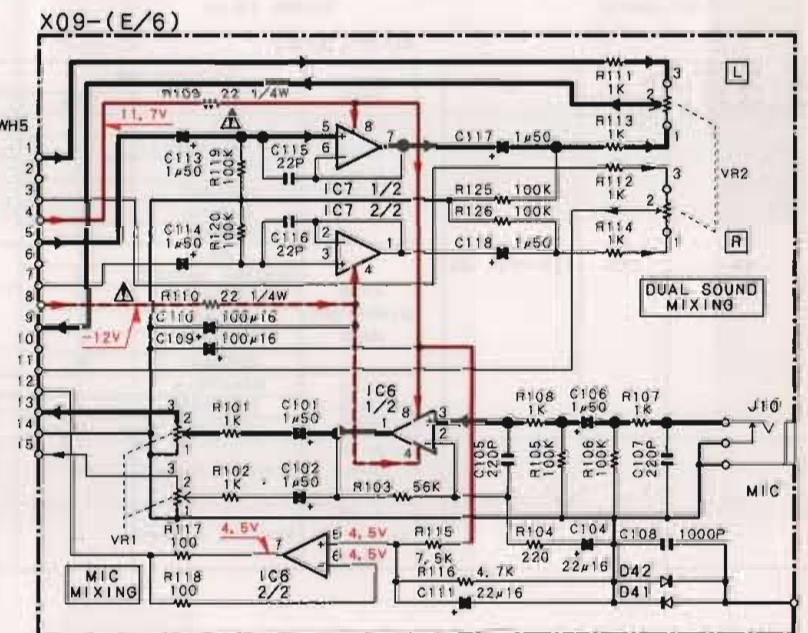
**A-68**  
X08-(C/3)

IC20 : NJM2279D  
D15-18 : 1SS131 or HSS104A  
D204, 205 : RD5, 1ES(B2) or HZS5, 1N(B2) JAPAN MADE  
          : MTZJ5, 1(B) or HZS5, 1N(B2) SINGAPORE MADE

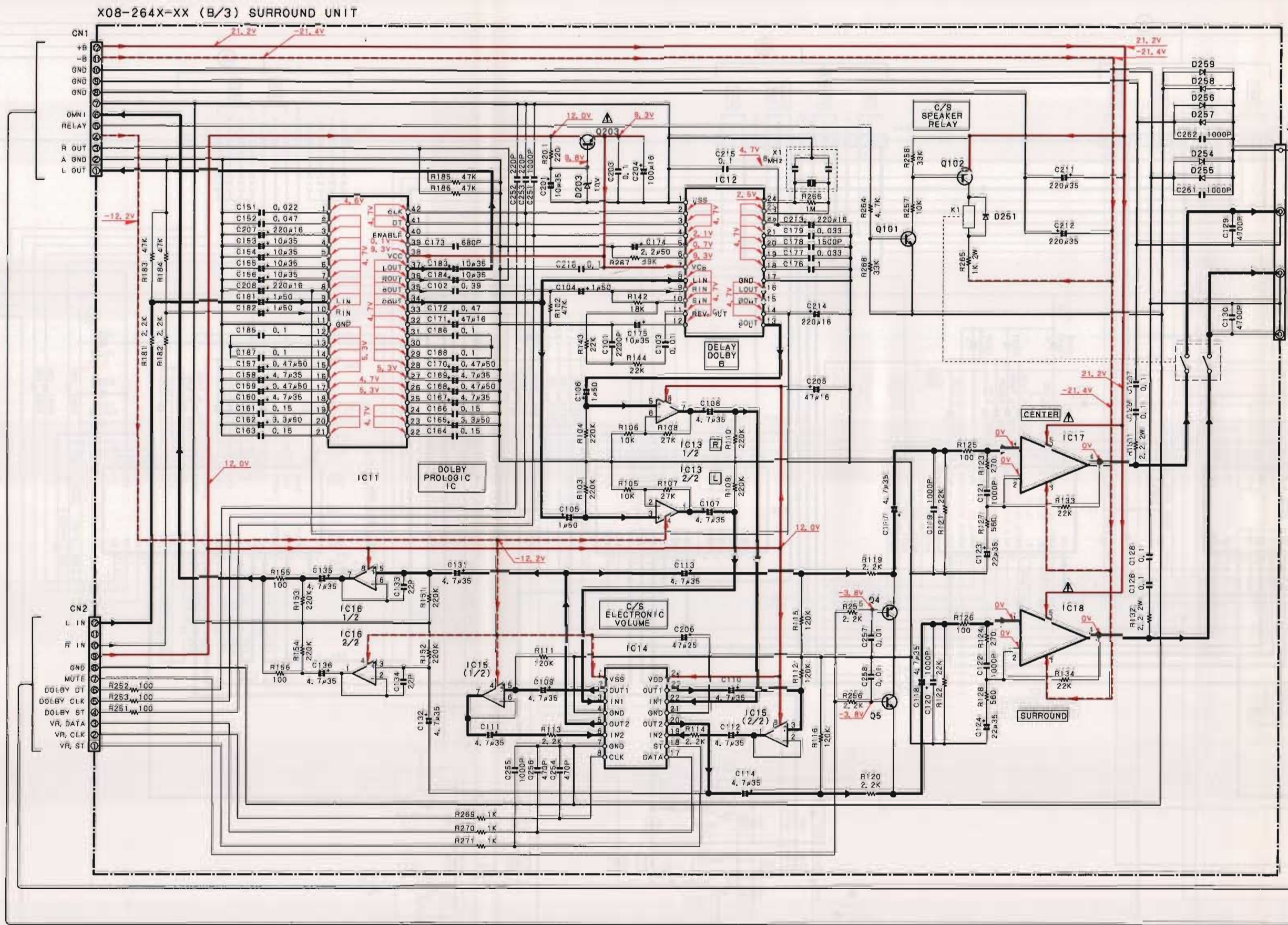


**A-58**  
X08-(C/3)

IC20 : NJM2279D  
D15-18 : 1SS131 or HSS104A  
D204, 205 : RD5, 1ES(B2) or HZS5, 1N(B2) JAPAN MADE  
          : MTZJ5, 1(B) or HZS5, 1N(B2) SINGAPORE MADE



IC6, 7 : XRA15218-DX or NJM4565D-D  
D41, 42 : 1SS131 or HSS104A

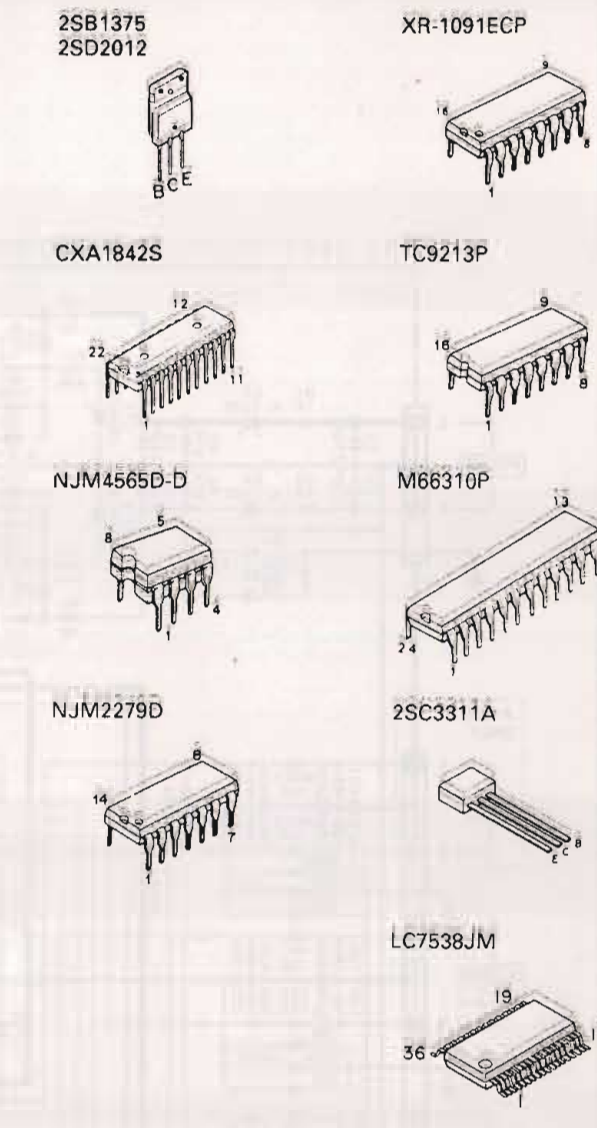


**X08-(B/3)**

IC11 : LA2785  
IC12 : LV1010N  
IC13, 15 : NJM4565L-D  
IC14 : TC9213P  
IC16 : XRA15218-DX or NJM4565D-D  
IC17, 18 : TDA2050V

Q4, 5 : 2SC2878(B)  
Q101 : 2SC2003(L, K)  
Q102 : 2SA954(L, K)  
Q203 : 2SD2061 or 2SD2012

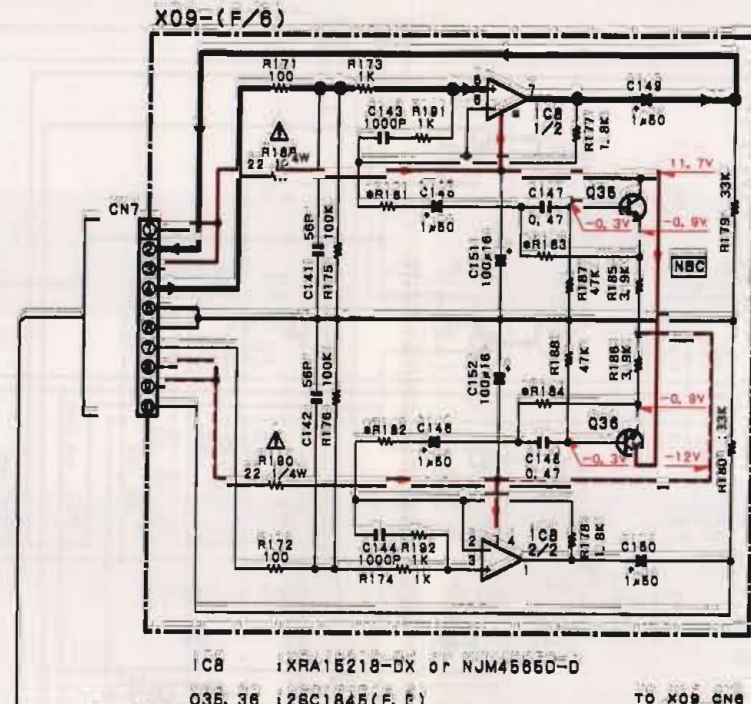
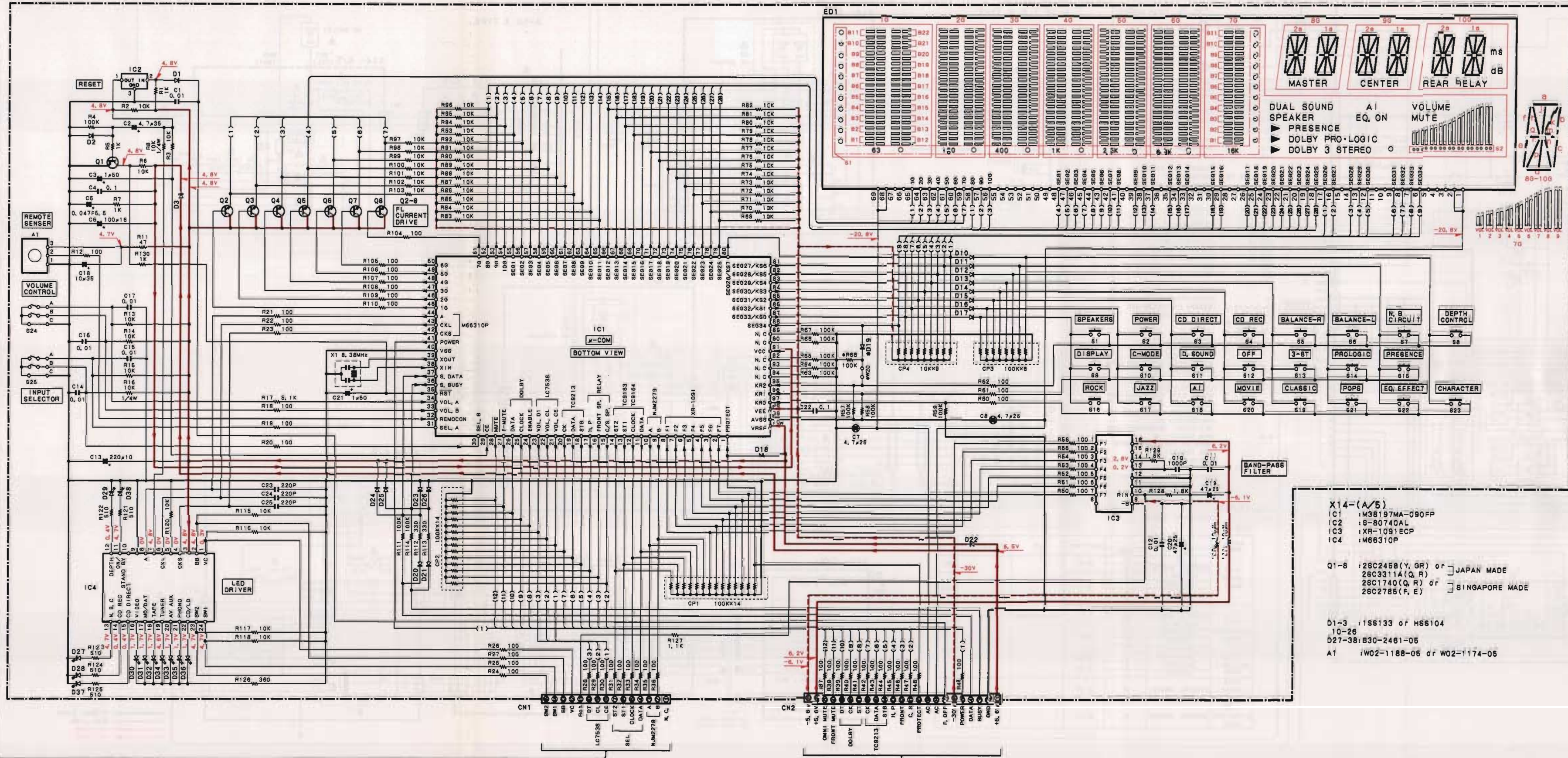
D203 : RD10ES(B2) or HZS10N(B2) JAPAN MADE  
          : RD10ES(B2) or MTZJ10(B) SINGAPORE MADE  
D251, 254-259 : 1SS131 or HSS104A



**CAUTION:** For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list).  
Δ 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.

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X09-(F/6)

MODEL NAME	DEST. NATION	COUNTRY	ABB.	UNIT NO.	R181, 182	R183, 184
A-68 JAPAN MADE	GENERAL MARKET	Y	M	0-21	680	330
	AUSTRALIA	X	T	0-21	680	330
	ENGLAND	T	E	2-71	2, 2K	330
	EUROPE	E	E	2-71	2, 2K	330
A-68 SINGAPORE MADE	GENERAL MARKET	Y	M	0-23	680	330
	AUSTRALIA	X	T	2-72	2, 2K	330
	EUROPE	E	E	2-72	2, 2K	330
A-68 MALAYSIA MADE	MALAYSIA	I	L	0-23	680	330
	ENGLAND	T	E	2-72	2, 2K	330
A-68 JAPAN MADE	GENERAL MARKET	Y	M	0-22	1K	470
A-68 SINGAPORE MADE	GENERAL MARKET	Y	M	0-24	1K	470

X14-(A/5)

MODEL NAME	DEST. NATION	COUNTRY	ABB.	UNIT NO.	D18, R88, W20
A-68 JAPAN MADE	GENERAL MARKET	Y	M	2-91	NO
	AUSTRALIA	X	T	0-21	NO
	ENGLAND	T	E	0-61	NO
A-68 SINGAPORE MADE	GENERAL MARKET	Y	M	2-91	NO
	AUSTRALIA	X	T	0-21	NO
	ENGLAND	T	E	0-61	NO
A-68 MALAYSIA MADE	MALAYSIA	I	L	0-21	NO
	ENGLAND	T	E	0-61	NO
A-68 JAPAN MADE	GENERAL MARKET	Y	M	2-72	NO
A-68 SINGAPORE MADE	GENERAL MARKET	Y	M	0-22	YES
	GENERAL MARKET	Y	M	0-22	YES

- X14-(A/5)  
 IC1 : M38197MA-090FP  
 IC2 : S-80740AL  
 IC3 : XR-1091ECP  
 IC4 : M66310P
- Q1-8 : 28C245B(Y, GR) or 28C3311A(Q, R) or 28C1740(Q, R) or 28C2785(F, E) } JAPAN MADE  
 28C2785(F, E) } SINGAPORE MADE
- D1-3 : 1S8133 or H86104  
 10-26  
 D27-38: B30-2461-05  
 A1 : W02-1188-05 or W02-1174-05

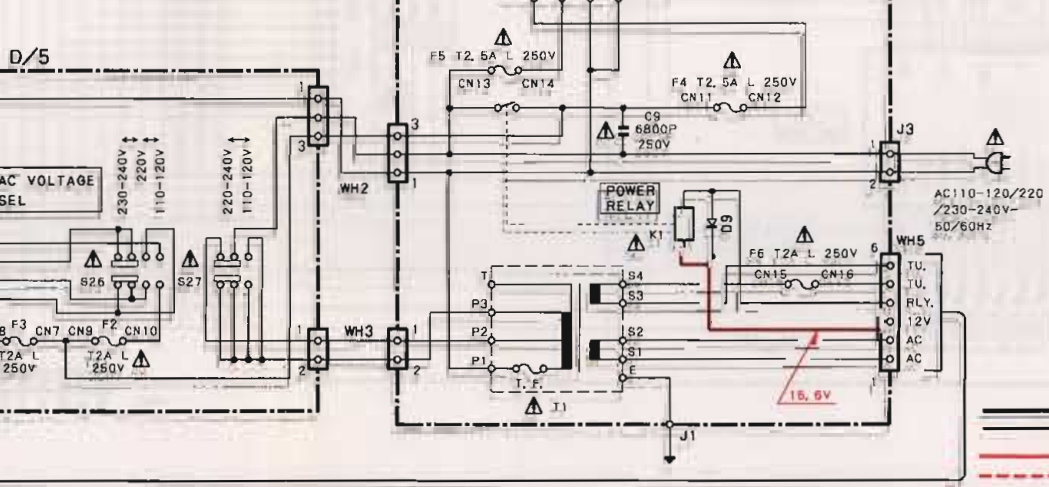
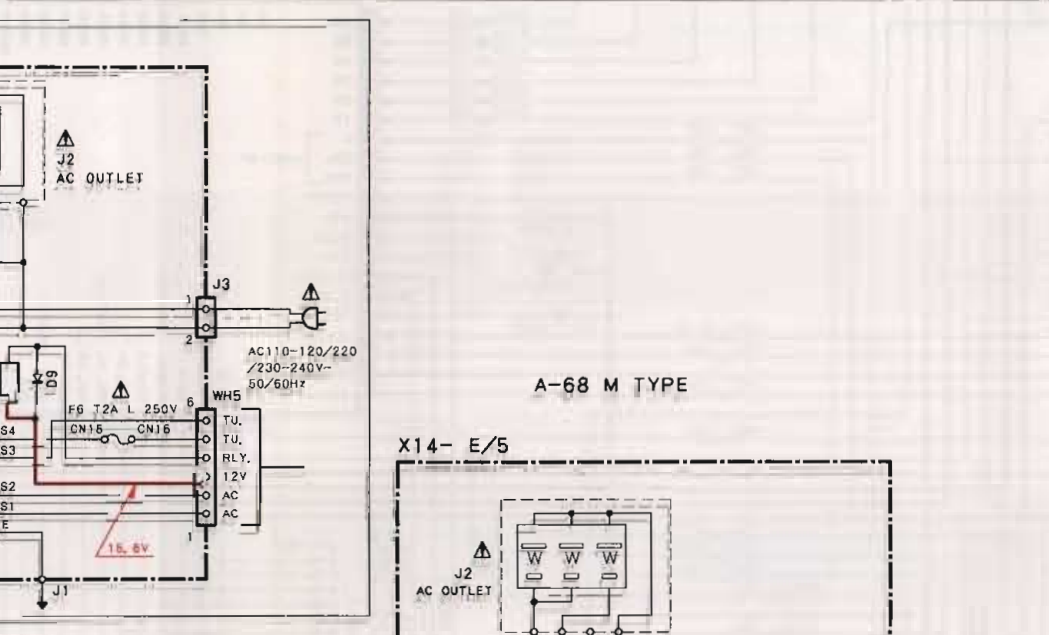
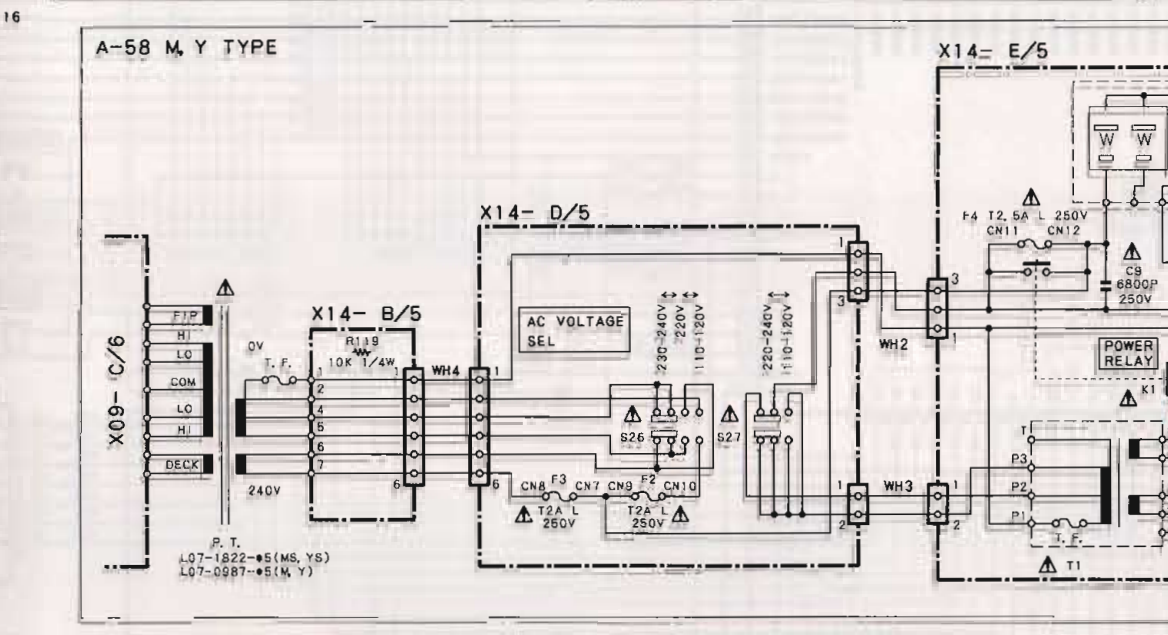
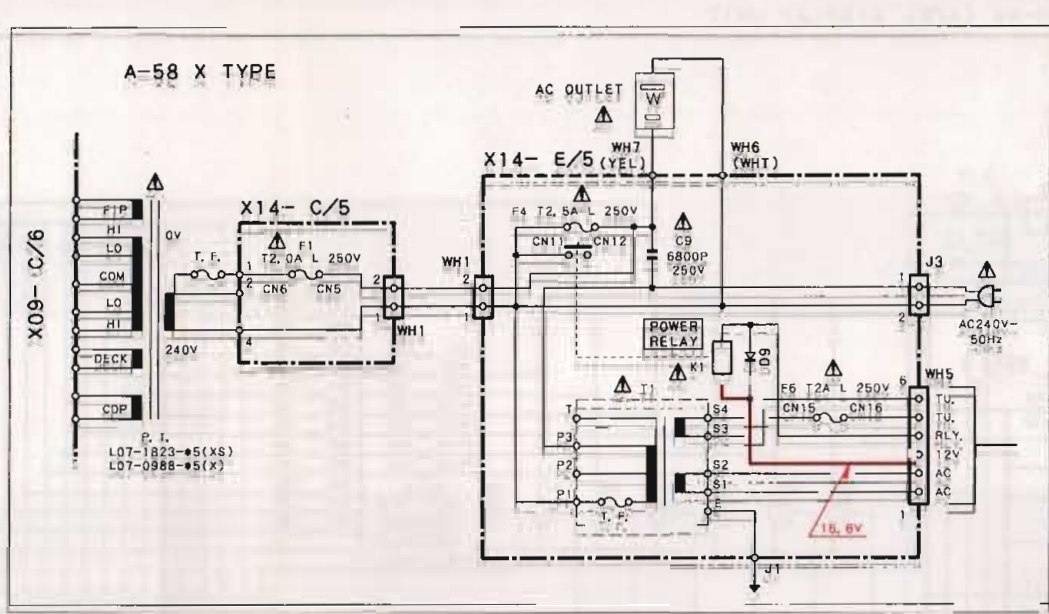
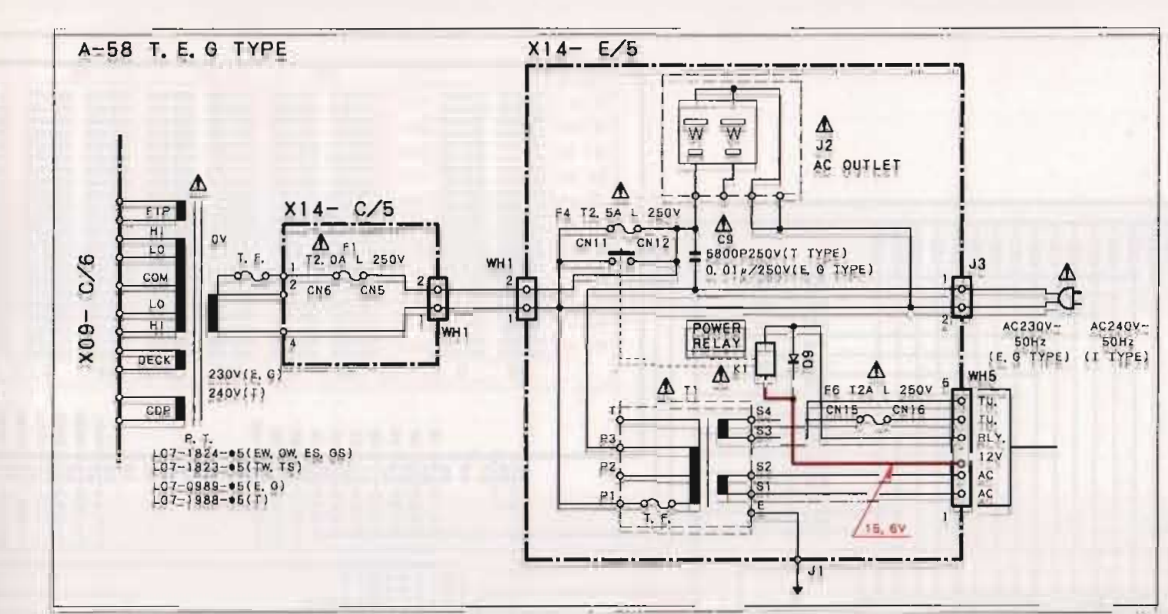
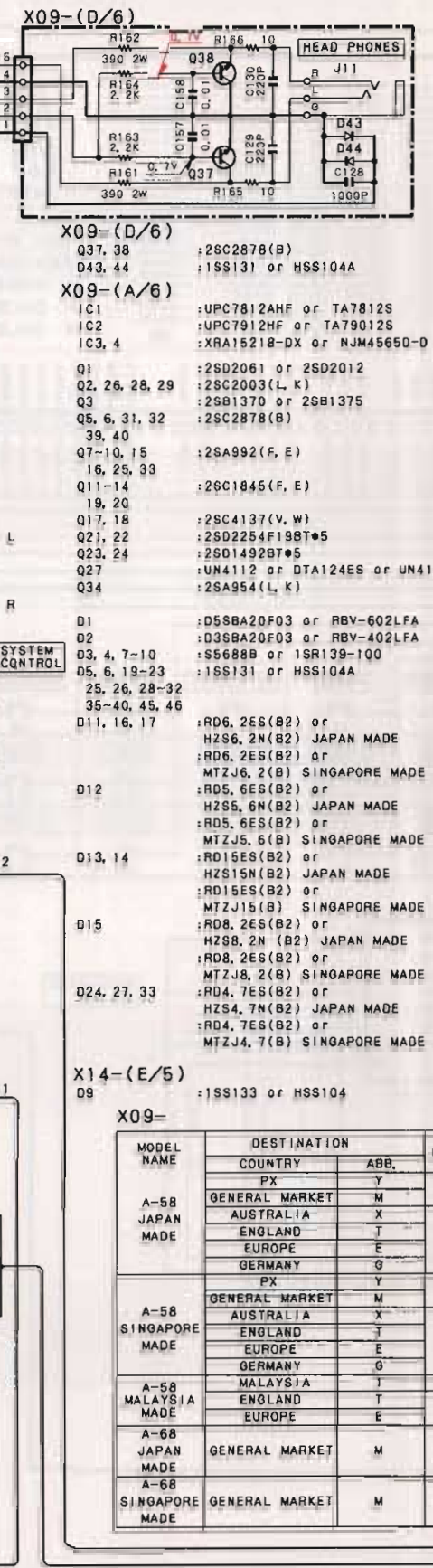
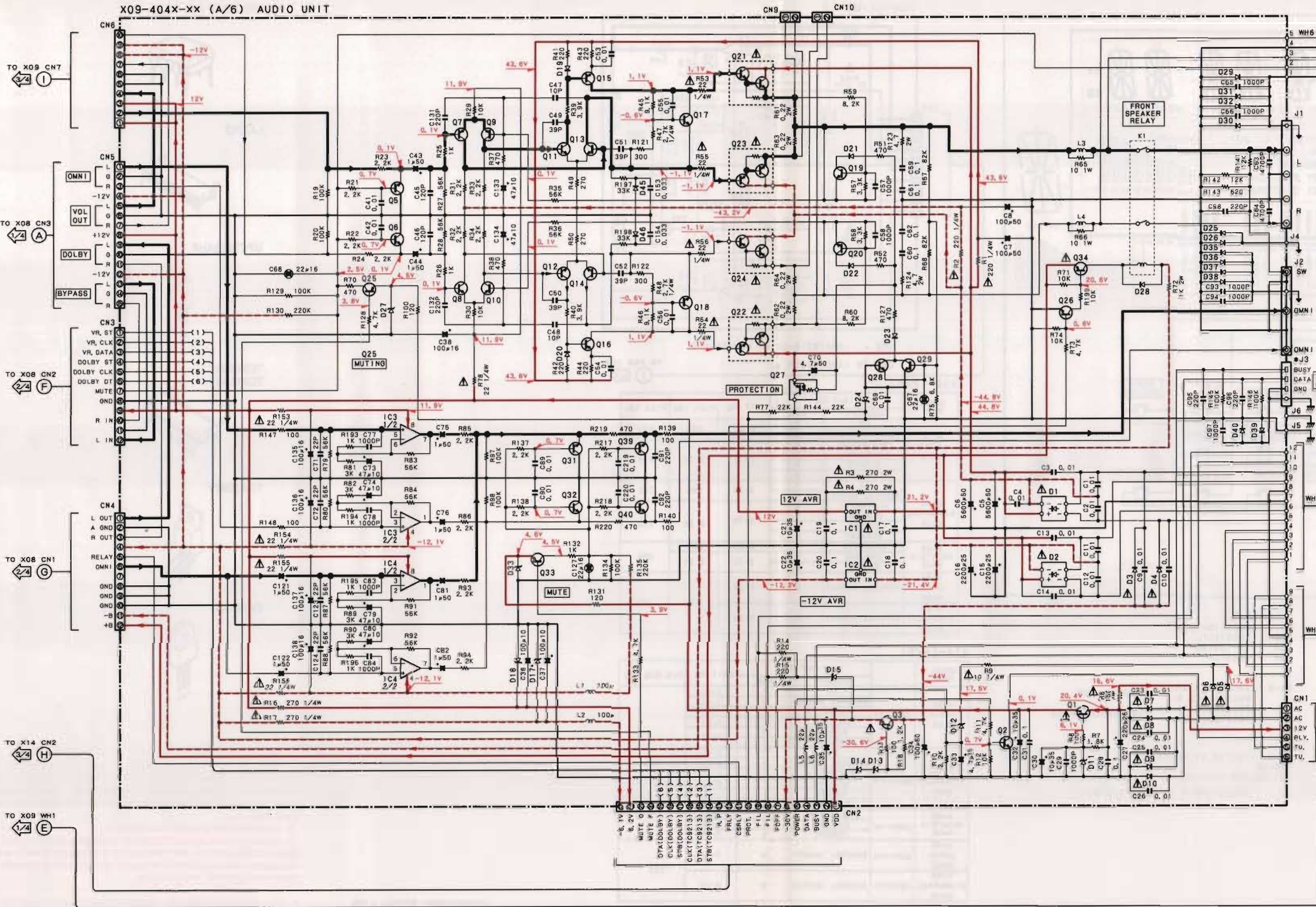


- XRA15218-DX
- LA2785
- UPC7812AHF
- TC9163N
- TC9164N
- TDA2050V
- TA7812S

**CAUTION:** For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list).  
 Δ 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. Values may vary slightly due to variations between individual instruments or/and units.





**X09-(A/6)**

Q1 : 28D2061 or 2SD2012  
 Q2 : 28C2003(L,K)  
 Q3 : 28H1370 or 28H1375  
 Q5 : 6, 31, 32  
 Q6 : 35, 40  
 Q7 : 10, 15  
 Q8 : 16, 25, 33  
 Q11-14 : 28A992(F,E)  
 Q17-18 : 28C4137(V,W)  
 Q21, 22 : 2SD2254(F198)\*5  
 Q23, 24 : 28D1492B\*5  
 Q27 : UN4112 or DTA124ES or UN4116  
 Q34 : 28A954(L,K)

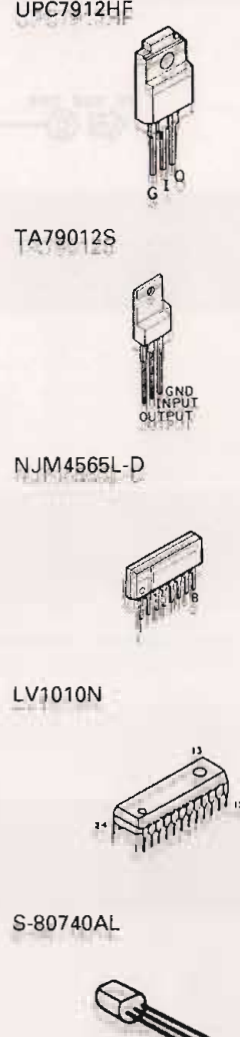
**X09-(D/6)**

D1 : D58B20F03 or RBV-602LFA  
 D2 : D35B20F03 or RBV-402LFA  
 D3, 4, 7-10 : S568B or 1SR139-100  
 D5, 6, 19-23 : 1S5131 or HSS104A  
 D25, 26, 28-32 : 35-40, 45, 46  
 D11, 16, 17

**X14-(E/5)**

D8 : 1S5133 or HSS104

MODEL NAME	COUNTRY	ABB.	UNIT NO.	J3	F11, CN11, 12	C159
A-58 JAPAN MADE	GENERAL MARKET	M	0-21			NO
	AUSTRALIA	X				
	ENGLAND	T	2-71			YES
	EUROPE	E				
	GERMANY	Y				
A-58 SINGAPORE MADE	GENERAL MARKET	M	0-23	E08-0311-05	YES	NO
	AUSTRALIA	X				
	ENGLAND	T	2-72			YES
	EUROPE	E				
	GERMANY	Y				
A-58 MALAYSIA MADE	GENERAL MARKET	M	0-22	E08-0312-05	NO	NO
	AUSTRALIA	X				
	ENGLAND	T	2-72			YES
	EUROPE	E				
	GERMANY	Y				



**CAUTION :** For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list).  $\Delta$  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. Values may vary slightly due to variations between individual instruments or/and units.

A58/68 (K) 4/4







PARTS LIST

× New Parts

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Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名/規格	Desti- nation 仕向	Re- marks 備考
<b>A-58</b>						
601	1A	*	A01-3162-02	METALLIC CABINET		
605	3A	*	A60-0620-11	PANEL		
606	1B	*	A70-0986-05	REMOTE CONTROLLER ASSY		J
606	1B	*	A70-1003-05	REMOTE CONTROLLER ASSY	S/W	
607	1B	*	A09-0106-08	BATTERY COVER		
610	3A	*	B10-2050-03	FRONT GLASS		
611	3A	*	B11-0286-04	SMOKED FILTER		
612	2A	*	B12-0245-03	INDICATOR		
-			B46-0094-03	WARRANTY CARD	Y	
-			B46-0095-03	WARRANTY CARD	Y	
-			B46-0096-43	WARRANTY CARD	X	
-			B46-0310-03	WARRANTY CARD	TEG	
-		*	B58-0964-13	CAUTION CARD (UL)	Y	
-		*	B58-0965-13	CAUTION CARD (PTX TYPE PL)	XT	
-		*	B58-0966-13	CAUTION CARD (ELM TYPE PL)	ME	
-		*	B58-0968-04	CAUTION CARD	Y	
-		*	B58-0970-13	CAUTION CARD (RG TYPE PL)	G	
-		*	B60-1710-00	INSTRUCTION MANUAL (EN)	YMXTE	
-		*	B60-1711-00	INSTRUCTION MANUAL (FR)	E	
-		*	B60-1712-00	INSTRUCTION MANUAL (GE)	EG	
-		*	B60-1713-00	INSTRUCTION MANUAL (DU)	E	
-		*	B60-1714-00	INSTRUCTION MANUAL (IT)	E	
-		*	B60-1715-00	INSTRUCTION MANUAL (SP)	ME	
-		*	B60-1716-00	INSTRUCTION MANUAL (C)	M	
-		*	B60-1717-00	INSTRUCTION MANUAL (TAIWAN)	M	
△ 615	1B		E03-0115-05	AC PLUG ADAPTER	M	
△ 616	1D	*	E30-2778-05	AC POWER CORD (INLET)	Y	
△ 616	1D	*	E30-2779-05	AC POWER CORD (INLET)	MEG	
△ 616	1D	*	E30-2780-05	AC POWER CORD (INLET)	X	
△ 616	1D	*	E30-2781-05	AC POWER CORD (INLET)	T	
△ 617	2B, 2C	*	E35-0995-05	FLAT CABLE(23P)X14CN2-X09CN2		
618	1C, 3B	*	E35-0996-05	FLAT CABLE(15P)X14CN1-X08CN5		
J2	2D		E03-0141-05	AC OUTLET	X	
625	3A	*	G10-0414-04	NON-WOVEN FABRIC		
626	3C		G11-0155-14	SOFT TAPE (40X9X2)		
627	3A		G11-2186-04	CUSHION		
-		*	H50-1181-04	ITEM CARTON CASE	YMXEG	J
-		*	H50-1182-04	ITEM CARTON CASE	T	J
-		*	H50-1227-04	ITEM CARTON CASE	E	W
-		*	H50-1229-04	ITEM CARTON CASE	M	S
-		*	H50-1230-04	ITEM CARTON CASE	YXEG	S
-		*	H50-1233-04	ITEM CARTON CASE	T	S
-		*	H50-1234-04	ITEM CARTON CASE	T	W
-		*	H50-1271-04	ITEM CARTON CASE	E	S
-		*	H10-5846-12	POLYSTYRENE FOAMED FIXTURE (L)	YMXEG	J
-		*	H10-5847-02	POLYSTYRENE FOAMED FIXTURE (R)	YMXEG	J
-		*	H10-5848-12	POLYSTYRENE FOAMED FIXTURE (L)	T	J
-		*	H10-5849-02	POLYSTYRENE FOAMED FIXTURE (R)	T	J
-		*	H10-5869-02	POLYSTYRENE FOAMED FIXTURE (L)	T	W
-		*	H10-5870-02	POLYSTYRENE FOAMED FIXTURE (R)	T	W
-		*	H10-5873-02	POLYSTYRENE FOAMED FIXTURE (L)	YMXEG	S
-		*	H10-5874-02	POLYSTYRENE FOAMED FIXTURE (R)	YMXEG	S

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PARTS LIST

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Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名/規格	Desti- nation 仕向	Re- marks 備考
-		*	H10-5875-02	POLYSTYRENE FOAMED FIXTURE (L)	T	S
-		*	H10-5876-02	POLYSTYRENE FOAMED FIXTURE (R)	T	S
-		*	H10-5877-02	POLYSTYRENE FOAMED FIXTURE (L)	E	W
-		*	H10-5878-02	POLYSTYRENE FOAMED FIXTURE (R)	E	W
-			H13-0110-04	CARTON BOARD	X	J
-			H13-0111-14	CARTON BOARD	X	S
-			H25-0232-04	PROTECTION BAG (235X350X0.03)	YMXEG	
-			H25-0382-04	PROTECTION BAG (SET)		
-			H25-0632-24	PROTECTION BAG	YMXEG	
-			H25-0644-04	PROTECTION BAG (0632 PRINTED)	T	
-			H25-0651-04	PROTECTION BAG (0232 PRINTED)	T	
-		*	H25-1540-04	PROTECTION BAG		
630	3D		J02-0366-15	FOOT REAR		
631	3C		J02-1040-05	FOOT FRONT		
632	2A, 3B	*	J02-1111-04	FOOT AMP		
647	1B		J19-3645-05	LOOP ANTENNA STAND		
-			J61-0307-05	WIRE BAND		
635	3B		K29-3886-04	KNOB MIC/DUAL SOUND		
636	3A, 3B	*	K29-5968-02	KNOB		
637	2A, 3B	*	K29-5969-13	KNOB POWER/DOLBY/D SOUND		
638	3A	*	K29-6024-04	KNOB INPUT/VOLUME		
△ 640	2C	*	L07-0987-05	POWER TRANSFORMER	YM	J
△ 640	2C	*	L07-0988-05	POWER TRANSFORMER	XT	J
△ 640	2C	*	L07-0989-05	POWER TRANSFORMER	EG	J
△ 640	2C	*	L07-1822-05	POWER TRANSFORMER	YM	S
△ 640	2C	*	L07-1823-05	POWER TRANSFORMER	T	W
△ 640	2C	*	L07-1823-05	POWER TRANSFORMER	XT	S
△ 640	2C	*	L07-1824-05	POWER TRANSFORMER	GE	W
△ 640	2C	*	L07-1824-05	POWER TRANSFORMER	EG	S
A	1D		N09-0292-05	STEPPED SCREW (3X19)		
C	1D		N09-2909-05	TAPTITE SCREW (EARTH)		
D	2C, 3C		N86-4008-45	BINDING HEAD TAPTITE SCREW		
E	1A, 1D		N89-3008-45	BINDING HEAD TAPTITE SCREW		
F	3A, 3D		N89-3006-46	BINDING HEAD TAPTITE SCREW		
G	2B, 3B		N89-3010-46	BINDING HEAD TAPTITE SCREW		
645	1B		T90-0182-15	LEAD WIRE ANTENNA		
646	1B		T90-0195-05	LOOP ANTENNA		
648	1B		T90-0198-05	ANTENNA ADAPTOR	TEG	
<b>A-68</b>						
601	1A	*	A01-3162-02	METALLIC CABINET		
605	3A	*	A60-0621-11	PANEL		
610	3A	*	B10-2050-03	FRONT GLASS		
611	3A	*	B11-0286-04	SMOKED FILTER		
612	2A	*	B12-0245-03	INDICATOR		
-		*	B58-0966-13	CAUTION CARD (ELM TYPE PL)		
-		*	B60-1785-00	INSTRUCTION MANUAL (EN)		
-		*	B60-1786-00	INSTRUCTION MANUAL (SP)		
-		*	B60-1787-00	INSTRUCTION MANUAL (C)		
-		*	B60-1788-00	INSTRUCTION MANUAL (TAIWAN)		
615	1B		E03-0115-05	AC PLUG ADAPTER		
△ 616	1D	*	E30-2779-05	AC POWER CORD (INLET)		
△ 617	2B, 2C	*	E35-0995-05	FLAT CABLE(23P)X14CN2-X09CN2		

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618	1C, 3B	*	E35-0996-05	FLAT CABLE(15P)X14CN1-X08CN5		
619	1B		E30-0505-05	AUDIO CORD		
620	1B		E30-1427-05	AUDIO CORD		
621	1B		E30-2628-05	CORD WITH CONNECTOR		
625	3A	*	G10-0414-04	NON-WOVEN FABRIC		
626	3C		G11-0155-14	SOFT TAPE (40X9X2)		
627	3A		G11-2186-04	CUSHION		
		*	H50-1185-04	ITEM CARTON CASE		J
		*	H50-1232-04	ITEM CARTON CASE		S
-		*	H10-5846-12	POLYSTYRENE FOAMED FIXTURE (L)		J
-		*	H10-5847-02	POLYSTYRENE FOAMED FIXTURE (R)		J
-		*	H10-5873-02	POLYSTYRENE FOAMED FIXTURE (L)		S
-		*	H10-5874-02	POLYSTYRENE FOAMED FIXTURE (R)		S
-			H25-0232-04	PROTECTION BAG (235X350X0.03)		
-			H25-0382-04	PROTECTION BAG (SET)		
-			H25-0632-24	PROTECTION BAG		
-		*	H25-1540-04	PROTECTION BAG		
630	3D		J02-0366-15	FOOT REAR		
631	3C		J02-1040-05	FOOT FRONT		
632	2A, 3B	*	J02-1111-04	FOOT AMP		
-			J61-0307-05	WIRE BAND		
635	3B		K29-3886-04	KNOB MIC/DUAL SOUND		
636	3A, 3B	*	K29-5968-02	KNOB		
637	2A, 3B	*	K29-5969-13	KNOB POWER/DOLBY/D SOUND		
638	3A	*	K29-6024-04	KNOB INPUT/VOLUME		
△ 640	2C	*	L07-0991-05	POWER TRANSFORMER		J
△ 640	2C	*	L07-1826-05	POWER TRANSFORMER		S
A	1D		N09-0292-05	STEPPED SCREW (3X19)		
C	1D		N09-2909-05	TAPTITE SCREW (EARTH)		
D	2C, 3C		N86-4008-45	BINDING HEAD TAPTITE SCREW		
E	1A, 1D		N89-3008-45	BINDING HEAD TAPTITE SCREW		
F	3A, 3D		N89-3006-46	BINDING HEAD TAPTITE SCREW		
G	2B, 3B		N89-3010-46	BINDING HEAD TAPTITE SCREW		
645	1B		T90-0182-15	LEAD WIRE ANTENNA		
646	1B		T90-0195-05	LOOP ANTENNA		
647	1B		J19-3645-05	LOOP ANTENNA STAND		
<b>SURROUND UNIT (X08-2640-XX)</b>						
C1 ,2			CC45FSL1H271J	CERAMIC 270PF	J	
C3 ,4			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
C5 ,6			CC45FSL1H101J	CERAMIC 100PF	J	
C7 ,8			CK45FB1H471K	CERAMIC 470PF	K	
C9 ,10		*	CQ93FMG1H123J	MYLAR 0.012UF	J	
C11 ,12		*	CQ93FMG1H332J	MYLAR 3300PF	J	
C13 ,14			CE04KW1A101M	ELECTRO 100UF	10WV	
C15 ,16			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
C21 -30			CC45FSL1H221J	CERAMIC 220PF	J	
C30 ,31			CC45FSL1H221J	CERAMIC 220PF	J	6
C33 ,34			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
C39 -42			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
C43 ,44			CF92FV1H104J	MF 0.10UF	J	
C45 ,46			CQ93FMG1H223J	MYLAR 0.022UF	J	
C47 -52			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		

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5: A-58

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C53 ,54			CC45FSL1H220J	CERAMIC 22PF J		
C57 ,58			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
C61 -64			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
C66 ,67			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
C73 ,74		*	CQ93FMG1H152J	MYLAR 1500PF J		
C75 ,76		*	CQ93FMG1H393J	MYLAR 0.039UF J		
C77 -80			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
C81 ,82		*	CQ93FMG1H332J	MYLAR 3300PF J		
C83 ,84			CF92FV1H224J	MF 0.22UF J		
C85 -88			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
C89 ,90			CC45FSL1H220J	CERAMIC 22PF J		
C91 ,92			CC45FSL1H271J	CERAMIC 270PF J		
C93 ,94		*	CQ93FMG1H821J	MYLAR 820PF J		
C95 ,96			CQ93FMG1H272J	MYLAR 2700PF J		
C99 ,100			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
C101			CQ93FMG1H222J	MYLAR 2200PF J		
C102			CF92FV1H394J	MF 0.39UF J		
C103			CQ93FMG1H103J	MYLAR 0.010UF J		
C104 -106			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C107-114			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
C117,118			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
C119-122			CK45FB1H102K	CERAMIC 1000PF K		
C123,124			CE04KW1V220M	ELECTRO 22UF 35WV		
C125-128			CF92FV1H104J	MF 0.10UF J		
C129,130			CQ93FMG1H472J	MYLAR 4700PF J		
C131,132			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
C133,134			CC45FSL1H220J	CERAMIC 22PF J		
C135,136			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
C141,142			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
C143,144			CC45FSL1H220J	CERAMIC 22PF J		
C145,146			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
C151			CQ93FMG1H223J	MYLAR 0.022UF J		
C152			CQ93FMG1H473J	MYLAR 0.047UF J		
C153-156			CE04KW1V100M	ELECTRO 10UF 35WV		
C157			CE04KW1HR47M	ELECTRO 0.47UF 50WV		
C158			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
C159			CE04KW1HR47M	ELECTRO 0.47UF 50WV		
C160			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
C161			CF92FV1H154J	MF 0.15UF J		
C162			CE04KW1H3R3M	ELECTRO 3.3UF 50WV		
C163,164			CF92FV1H154J	MF 0.15UF J		
C165			CE04KW1H3R3M	ELECTRO 3.3UF 50WV		
C166			CF92FV1H154J	MF 0.15UF J		
C167			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
C168			CE04KW1HR47M	ELECTRO 0.47UF 50WV		
C169			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
C170			CE04KW1HR47M	ELECTRO 0.47UF 50WV		
C171			CE04KW1C470M	ELECTRO 47UF 16WV		
C172			CF92FV1H474J	MF 0.47UF J		
C173			CK45FB1H681K	CERAMIC 680PF K		
C174			CE04KW1H2R2M	ELECTRO 2.2UF 50WV		
C175			CE04KW1V100M	ELECTRO 10UF 35WV		
C176			CF92FV1H105J	MF 1.0UF J		
C177			CQ93FMG1H333J	MYLAR 0.033UF J		
C178		*	CQ93FMG1H152J	MYLAR 1500PF J		

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C179 C181, 182 C183, 184 C185-188 C201			CQ93FMG1H333J CE04KW1H010M CE04KW1V100M CF92FV1H104J CE04KW1V100M	MYLAR 0.033UF J ELECTRO 1.0UF 50WV ELECTRO 10UF 35WV MF 0.10UF J ELECTRO 10UF 35WV		
C203 C204 C205, 206 C207, 208 C211, 212			CF92FV1H104J CE04KW1C101M CE04KW1C470M CE04KW1C221M CE04KW1V221M	MF 0.10UF J ELECTRO 100UF 16WV ELECTRO 47UF 16WV ELECTRO 220UF 16WV ELECTRO 220UF 35WV		
C213, 214 C215, 216 C221-228 C229 C230			CE04KW1C221M CF92FV1H104J CE04KW1C470M CE04KW1V100M CE04KW1C101M	ELECTRO 220UF 16WV MF 0.10UF J ELECTRO 47UF 16WV ELECTRO 10UF 35WV ELECTRO 100UF 16WV		
C231 C232 C233 C235-240 C241, 242			CE04KW1V100M CE04KW1C101M CE04KW1C221M CF92FV1H104J CE04KW1C470M	ELECTRO 10UF 35WV ELECTRO 100UF 16WV ELECTRO 220UF 16WV MF 0.10UF J ELECTRO 47UF 16WV		
C251 C252, 253 C254 C255 C256			C91-0757-05 C91-0749-05 CK45FB1H471K CK45FB1H102K CK45FB1H471K	CERAMIC 1000PF K CERAMIC 220PF K CERAMIC 470PF K CERAMIC 1000PF K CERAMIC 470PF K		
C257, 258 C261-263 C264 C265-269 C270			CK45FF1H103Z CK45FB1H102K CK45FB1H102K CK45FB1H102K CK45FF1H103Z	CERAMIC 0.010UF Z CERAMIC 1000PF K CERAMIC 1000PF K CERAMIC 1000PF K CERAMIC 0.010UF Z		6
C271 C272, 273 C274 C275, 276 C277			CK45FB1H102K CC45FSL1H221J CK45FB1H102K CC45FSL1H221J CK45FB1H102K	CERAMIC 1000PF K CERAMIC 220PF J CERAMIC 1000PF K CERAMIC 220PF J CERAMIC 1000PF K		
C278, 279 C280-283 C284 C285, 286 C287			CC45FSL1H221J CK45FB1H471K CK45FB1H102K CK45FB1H471K CE04KW1V4R7M	CERAMIC 220PF J CERAMIC 470PF K CERAMIC 1000PF K CERAMIC 470PF K ELECTRO 4.7UF 35WV		
C288 C289 C290 C291 C301, 302			CE04KW1V100M CQ93FMG1H103J CQ93FMG1H222J CK45FF1H103Z CC45FSL1H221J	ELECTRO 10UF 35WV MYLAR 0.010UF J MYLAR 2200PF J CERAMIC 0.010UF Z CERAMIC 220PF J		
C303, 304			CE04KW1V100M	ELECTRO 10UF 35WV		
J1 J2 J2 J3 J4			E63-0072-15 E63-0066-15 E63-0091-05 E63-0066-15 E63-0052-15	PHONO JACK (2P)PHONO PHONO JACK (6P)AUX/VIDEO PHONO JACK (4P)VIDEO PHONO JACK (6P)MD/DAT/CD/LD PHONO JACK (4P)VISUAL		6 5
J5		*	E63-0125-05	PHONO JACK (3P)SURRE/CENTER SP		
661	1B, 1C		F20-1297-05	INSULATING SHEET		

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X1			L78-0290-05	RESONATOR (8MHZ)		
E	1B		N89-3008-45	BINDING HEAD TAPTITE SCREW		
G	1C		N30-3008-46	PAN HEAD MACHINE SCREW		
R131, 132			RS14KB3D2R2J	FL-PROOF RS 2.2 J 2W		
R203-210			RD14NB2E220J	RD 22 J 1/4W		
R213, 214			RS14KB3A221J	FL-PROOF RS 220 J 1W		
R215			RD14NB2E5R6J	RD 5.6 J 1/4W		
R265			RS14KB3D102J	FL-PROOF RS 1.0K J 2W		
R267			RN14BK2C3902F	RN 39.0K F 1/6W		
K1			S76-0036-05	MAGNETIC RELAY C/SUR SPEAKER		
D1 ,2			HSS104A	DIODE		
D1 ,2			1SS131	DIODE		
D3 ,4			HSS104A	DIODE		6
D3 ,4			1SS131	DIODE		6
D5 -18			HSS104A	DIODE		
D5 -18			1SS131	DIODE		
D201-203			HZS10N(B2)	ZENER DIODE		J
D201-203			MTZJ10(B)	ZENER DIODE	S/W	
D201-203			RD10ES(B2)	ZENER DIODE		J
D204, 205			HZS5.1N(B2)	ZENER DIODE		
D204, 205			MTZJ5.1(B)	ZENER DIODE	S/W	
D204, 205			RD5.1ES(B2)	ZENER DIODE		
D251			HSS104A	DIODE		
D251			1SS131	DIODE		
D254-259			HSS104A	DIODE		
D254-259			1SS131	DIODE		
IC1			NJM4565D-D	IC(OP AMP X2)		
IC1			XRA15218-DX	IC(OP AMP X2)		
IC2			NJM4565L-D	IC(OP AMP X2)		
IC3			TC9164N	IC(16CH BILATERAL SELECTOR SW)		
IC4			NJM4565L-D	IC(OP AMP X2)		
IC5			TC9163N	IC(BILATERAL SWITCH X16)		
IC6			TC9164N	IC(16CH BILATERAL SELECTOR SW)		
IC7		*	CXA1842S	ANALOGUE IC		
IC8			LC7538JM	ANALOGUE IC		
IC10			NJM4565L-D	IC(OP AMP X2)		
IC11			LA2785	IC(DOLBY PRO LOGIC DECODER IC)		
IC12			LV1010N	DI BI-POLAR IC		
IC13			NJM4565L-D	IC(OP AMP X2)		
IC14			TC9213P	IC(2CH ELECTRONIC VOLUME)		
IC15			NJM4565L-D	IC(OP AMP X2)		
IC16			NJM4565D-D	IC(OP AMP X2)		
IC16			XRA15218-DX	IC(OP AMP X2)		
IC17, 18		*	TDA2050V	ANALOGUE IC		
IC19			NJM4565D-D	IC(OP AMP X2)		
IC19			XRA15218-DX	IC(OP AMP X2)		
IC20			NJM2279D	IC(VIDEO IC)		
Q3			2SC1845(F, E)	TRANSISTOR		
Q4 ,5			2SC2878(B)	TRANSISTOR		
Q101			2SC2003(L, K)	TRANSISTOR		
Q102			2SA954(L, K)	TRANSISTOR		
Q203			2SD2012	TRANSISTOR		

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Q203			2SD2061	TRANSISTOR		
<b>AUDIO UNIT (X09-404X-XX)</b>						
C1	-4		CK45FF1H103Z	CERAMIC	0.010UF	Z
C5	,6	*	C90-3571-05	ELECTRO	5600UF	50WV
C7	,8		CE04KW1H101M	ELECTRO	100UF	50WV
C9	-14		CK45FF1H103Z	CERAMIC	0.010UF	Z
C15	,16		CE04KW1E222M	ELECTRO	2200UF	25WV
C17	-20		CQ93FMG1H104J	MYLAR	0.10UF	J
C21	,22		CE04KW1V100M	ELECTRO	10UF	35WV
C23	-26		CK45FF1H103Z	CERAMIC	0.010UF	Z
C27			CE04KW1E221M	ELECTRO	220UF	25WV
C28			CQ93FMG1H104J	MYLAR	0.10UF	J
C29			CK45FB1H102K	CERAMIC	1000PF	K
C30			CE04KW1V100M	ELECTRO	10UF	35WV
C31			CQ93FMG1H104J	MYLAR	0.10UF	J
C32			CE04KW1V100M	ELECTRO	10UF	35WV
C33			CE04KW1V4R7M	ELECTRO	4.7UF	35WV
C34			CE04KW1H101M	ELECTRO	100UF	50WV
C35			CE04KW1V100M	ELECTRO	10UF	35WV
C36	,37		CE04KW1A101M	ELECTRO	100UF	10WV
C38			CE04KW1C101M	ELECTRO	100UF	16WV
C41	,42		CK45FF1H103Z	CERAMIC	0.010UF	Z
C43	,44		CE04KW1H010M	ELECTRO	1.0UF	50WV
C45	,46		CC45FSL1H121J	CERAMIC	120PF	J
C47	,48		CC45FSL1H100D	CERAMIC	10PF	D
C49	-52		CC45FSL1H390J	CERAMIC	39PF	J
C53	-56		CK45FF1H103Z	CERAMIC	0.010UF	Z
C57	,58		CK45FB1H102K	CERAMIC	1000PF	K
C59	-62		CQ93FMG1H104J	MYLAR	0.10UF	J
C63	,64		CQ93FMG1H472J	MYLAR	4700PF	J
C65	,66		CK45FB1H102K	CERAMIC	1000PF	K
C67	,68		CE04HW1C220M	NP-ELEC	22UF	16WV
C69			CK45FF1H103Z	CERAMIC	0.010UF	Z
C70			CE04KW1H4R7M	ELECTRO	4.7UF	50WV
C71	,72		CC45FSL1H220J	CERAMIC	22PF	J
C73	,74		CE04KW1A470M	ELECTRO	47UF	10WV
C75	,76		CE04KW1H010M	ELECTRO	1.0UF	50WV
C77	,78		CK45FB1H102K	CERAMIC	1000PF	K
C79	,80		CE04KW1A470M	ELECTRO	47UF	10WV
C81	,82		CE04KW1H010M	ELECTRO	1.0UF	50WV
C83	,84		CK45FB1H102K	CERAMIC	1000PF	K
C89	,90		CK45FF1H103Z	CERAMIC	0.010UF	Z
C91	,92		CC45FSL1H221J	CERAMIC	220PF	J
C93	,94		CK45FB1H102K	CERAMIC	1000PF	K
C95	,96		CC45FSL1H221J	CERAMIC	220PF	J
C97			CK45FB1H102K	CERAMIC	1000PF	K
C98			CC45FSL1H221J	CERAMIC	220PF	J
C101,102			CE04KW1H010M	ELECTRO	1.0UF	50WV
C104			C90-3226-05	ELECTRO	22UF	16WV
C105			CC45FSL1H221J	CERAMIC	220PF	J
C106			C90-3253-05	ELECTRO	1UF	50WV
C107			CC45FSL1H221J	CERAMIC	220PF	J
C108			CK45FB1H102K	CERAMIC	1000PF	K
C109,110			CE04KW1C101M	ELECTRO	100UF	16WV

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C111			C90-3226-05	ELECTRO 22UF 16WV		
C113, 114			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C115, 116			CC45FSL1H220J	CERAMIC 22PF J		
C117, 118			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C121, 122			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C123, 124			CC45FSL1H220J	CERAMIC 22PF J		
C127			CE04HW1C220M	NP-ELEC 22UF 16WV		
C128			CK45FB1H102K	CERAMIC 1000PF K		
C129-132			CC45FSL1H221J	CERAMIC 220PF J		
C133, 134			CE04KW1A470M	ELECTRO 47UF 10WV		
C135-138			CE04KW1C101M	ELECTRO 100UF 16WV		
C141, 142			CC45FSL1H560J	CERAMIC 56PF J		
C143, 144			CK45FB1H102K	CERAMIC 1000PF K		
C145, 146			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C147, 148			CF92FV1H474J	MF 0.47UF J		
C149, 150			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C151, 152			CE04KW1C101M	ELECTRO 100UF 16WV		
C153, 154			CQ93FMG1H333J	MYLAR 0.033UF J		
C157, 158			CK45FF1H103Z	CERAMIC 0.010UF Z		
C159			CK45FF1H223Z	CERAMIC 0.022UF Z	XTEG	5
C201, 202			CC45FSL1H221J	CERAMIC 220PF J		
C205, 206			CC45FSL1H221J	CERAMIC 220PF J		5
C210, 211			CK45FB1H102K	CERAMIC 1000PF K		
C212, 213			CK45FB1H102K	CERAMIC 1000PF K		5
C214, 215			CK45FB1H102K	CERAMIC 1000PF K		
C216, 217			CC45FSL1H101J	CERAMIC 100PF J		
C218			CK45FB1H102K	CERAMIC 1000PF K		
C219, 220			CK45FF1H103Z	CERAMIC 0.010UF Z		
J1			E70-0045-05	LOCK TERMINAL BOARD FRONT SP		
J2		*	E63-0115-15	PHONE JACK (3P)OMNI/S.W		
J3			E08-0311-05	RECTANGULAR RECEPTACLE		5
J3			E08-0312-05	RECTANGULAR RECEPTACLE		6
J7		*	E58-0009-05	RECTANGULAR RECEPTACLE FROMBLK		
J8		*	E58-0011-05	RECTANGULAR RECEPTACLE FROMWHT		5
J9		*	E58-0010-05	RECTANGULAR RECEPTACLE FROMBLU		
J10			E11-0206-05	PHONE JACK MIC		
J11			E11-0208-05	PHONE JACK PHONES		
668	1B		F20-1284-05	INSULATING BOARD		
△ F11			F05-2525-05	FUSE (SEMKO) (250V T2.5AL)		5
△ F12			F05-2525-05	FUSE (SEMKO) (250V T2.5AL)		
△ F13, 14			F05-4025-05	FUSE (SEMKO) (250V T4A)		
CN11, 12			J13-0075-05	FUSE CLIP		
CN13-18			J13-0075-05	FUSE CLIP		5
L1, 2			L40-1011-17	SMALL FIXED INDUCTOR(100UH,K)		
L3, 4			L39-0085-05	PHASE COMPENSATION COIL		
L5, 6			L40-2201-17	SMALL FIXED INDUCTOR(22UH,K)		
B	2B		N09-2907-05	SEMS (TAPTITE SCREW)(3X14)		
F	2B, 2C		N89-3008-46	BINDING HEAD TAPTITE SCREW		
H	2C		N35-3008-46	BINDING HEAD MACHINE SCREW		
△ R1, 2			RD14NB2E221J	RD 220 J 1/4W		
△ R3, 4			RS14KB3D271J	FL-PROOF RS 270 J 2W		
△ R6			RS14KB3A151J	FL-PROOF RS 150 J 1W		
△ R9			RD14NB2E100J	RD 10 J 1/4W		

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△ △ △ △ △	R14 ,15		RD14NB2E221J	RD 220 J 1/4W		
	R16 ,17		RD14NB2E271J	RD 270 J 1/4W		
	R53 -56		RD14NB2E220J	RD 22 J 1/4W		
	R61 -64		R92-1771-05	METAL PLATE RESISTOR 0.22 2W		
	R65 ,66		RS14KB3A100J	FL-PROOF RS 10 J 1W		
		*				
△ △ △ △ △	R72		RS14KB3D102J	FL-PROOF RS 1.0K J 2W		
	R78		RD14NB2E220J	RD 22 J 1/4W		
	R109,110		RD14NB2E220J	RD 22 J 1/4W		
	R123,124		RS14KB3D4R7J	FL-PROOF RS 4.7 J 2W		
	R153-156		RD14NB2E220J	RD 22 J 1/4W		
△ △ △	R161,162		RS14KB3D391J	FL-PROOF RS 390 J 2W		
	R189,190		RD14NB2E220J	RD 22 J 1/4W		
	VR1		R10-5041-05	POTENTIOMETER(100KX2)MICMIXING		
		*	R31-0016-05	VARIABLE RESISTOR D.SOUND		
			S76-0005-05	MAGNETIC RELAY FRONT SPEAKER		
△ △ △ △ △	D1		D5SBA20F03	DIODE		
	D1		RBV-602LFA	DIODE		
	D2		D3SBA20F03	DIODE		
	D2		RBV-402LFA	DIODE		
	D3 ,4		S5688B	DIODE		
△ △ △ △ △	D3 ,4		1SR139-100	DIODE		
	D5 ,6		HSS104A	DIODE		
	D5 ,6		1SS131	DIODE		
	D7 -10		S5688B	DIODE		
	D7 -10		1SR139-100	DIODE		
			HZS6.2N(B2)	ZENER DIODE		J
			MTZJ6.2(B)	ZENER DIODE	S/W	
			RD6.2ES(B2)	ZENER DIODE		J
			HZS5.6N(B2)	ZENER DIODE		J
			MTZJ5.6(B)	ZENER DIODE	S/W	
			RD5.6ES(B2)	ZENER DIODE		J
			HZS15N(B2)	ZENER DIODE		J
			MTZJ15(B)	ZENER DIODE	S/W	
			RD15ES(B2)	ZENER DIODE		J
			HZS8.2N(B2)	ZENER DIODE		J
			MTZJ8.2(B)	ZENER DIODE	S/W	
			RD8.2ES(B2)	ZENER DIODE		J
			HZS6.2N(B2)	ZENER DIODE		J
			MTZJ6.2(B)	ZENER DIODE	S/W	
			RD6.2ES(B2)	ZENER DIODE		J
			HSS104A	DIODE		J
			1SS131	DIODE		J
			HZS4.7N(B2)	ZENER DIODE		J
			MTZJ4.7(B)	ZENER DIODE	S/W	
			RD4.7ES(B2)	ZENER DIODE		J
			HSS104A	DIODE		J
			1SS131	DIODE		J
			HZS4.7N(B2)	ZENER DIODE		J
			MTZJ4.7(B)	ZENER DIODE	S/W	
			RD4.7ES(B2)	ZENER DIODE		J
			HSS104A	DIODE		J
			1SS131	DIODE		J
			HZS4.7N(B2)	ZENER DIODE		J
			MTZJ4.7(B)	ZENER DIODE	S/W	
			RD4.7ES(B2)	ZENER DIODE		J
			HSS104A	DIODE		J
			1SS131	DIODE		J
			HZS4.7N(B2)	ZENER DIODE		J
			MTZJ4.7(B)	ZENER DIODE	S/W	

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D33			RD4.7ES(B2)	ZENER DIODE		
D35 -46			HSS104A	DIODE		
D35 -46			1SS131	DIODE		
D201,202			HSS104A	DIODE		
D201,202			1SS131	DIODE		
D203,204			HSS104A	DIODE		5 5
D203,204			1SS131	DIODE		
D205-208			HSS104A	DIODE		
D205-208			1SS131	DIODE		
△ IC1			TA7812S	IC(VOLTAGE REGULATOR/ +12V)		
△ IC1			UPC7812AHF	IC(VOLTAGE REGULATOR/ +12V)		
△ IC2			TA79012S	IC(VOLTAGE REGULATOR/ -12V)		
△ IC2			UPC7912HF	IC(VOLTAGE REGULATOR/ -12V)		
IC3 ,4			NJM4565D-D	IC(OP AMP X2)		
IC3 ,4			XRA15218-DX	IC(OP AMP X2)		
IC6 -8			NJM4565D-D	IC(OP AMP X2)		
△ IC6 -8			XRA15218-DX	IC(OP AMP X2)		
△ Q1			2SD2012	TRANSISTOR		
△ Q1			2SD2061	TRANSISTOR		
Q2			2SC2003(L,K)	TRANSISTOR		
△ Q3			2SB1370	TRANSISTOR		
△ Q3			2SB1375	TRANSISTOR		
Q5 ,6			2SC2878(B)	TRANSISTOR		
Q7 -10			2SA992(F,E)	TRANSISTOR		
Q11 -14			2SC1845(F,E)	TRANSISTOR		
Q15 ,16			2SA992(F,E)	TRANSISTOR		
Q17 ,18			2SC4137F19(V,W)	TRANSISTOR		
Q19 ,20			2SC1845(F,E)	TRANSISTOR		
△ Q21 ,22			2SD2254BT*5	TRANSISTOR		
△ Q23 ,24			2SB1492BT*5	TRANSISTOR		
Q25			2SA992(F,E)	TRANSISTOR		
Q26			2SC2003(L,K)	TRANSISTOR		
Q27			DTA124ES	DIGITAL TRANSISTOR		
Q27			UN4112	TRANSISTOR		
Q28 ,29			2SC2003(L,K)	TRANSISTOR		
Q31 ,32			2SC2878(B)	TRANSISTOR		
Q33			2SA992(F,E)	TRANSISTOR		
△ Q34			2SA954(L,K)	TRANSISTOR		
Q35 ,36			2SC1845(F,E)	TRANSISTOR		
Q37 -40			2SC2878(B)	TRANSISTOR		
<b>DISPLAY UNIT (X14-39XX-XX)</b>						
D27 -38			B30-2461-05	LED(RED) INPUT SELECTOR		
C1			CK45FF1H103Z	CERAMIC 0.010UF Z		
C2			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
C3			C90-3253-05	ELECTRO 1UF 50WV		
C4			CQ93FMC1H104J	MYLAR 0.10UF J		
C5			C90-1826-05	BACKUP 0.047F 5.5WV		
C6			CE04KW1C101M	ELECTRO 100UF 16WV		
C7 ,8			CE04HW1E4R7M	NP-ELEC 4.7UF 25WV		
△ C9			C91-0647-05	CERAMIC 0.01UF AC250V	EG	
△ C9			C91-1488-05	MF 6800PF 250VAC	YXT	
△ C9			C91-1488-05	MF 6800PF 250VAC	M	
C10			CQ93FMC1H102J	MYLAR 1000PF J		
C11 ,12			CK45FF1H103Z	CERAMIC 0.010UF Z		

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C13			CE04KW1A221M	ELECTRO 220UF 10WV		
C14 -17			CK45FF1H103Z	CERAMIC 0.010UF Z		
C18			CE04KW1V100M	ELECTRO 10UF 35WV		
C19 ,20			CE04KW1E470M	ELECTRO 47UF 25WV		
C21			C90-3253-05	ELECTRO 1UF 50WV		
C22			CQ93FMG1H104J	MYLAR 0.10UF J		
C23 -25			C91-0749-05	CERAMIC 220PF K		
△ J2			E03-0147-05	AC OUTLET		6
△ J2			E03-0148-05	AC OUTLET	Y	
△ J2			E03-0149-05	AC OUTLET	MEG	5
△ J2		*	E03-0310-05	AC OUTLET	T	
△ J3		*	E03-0309-05	AC INLET		
△ F1			F06-2021-05	FUSE (SEMKO) (250V T2AL)	XTEG	
△ F2 ,3			F06-2021-05	FUSE (SEMKO) (250V T2AL)	YM	
△ F4			F05-2525-05	FUSE (SEMKO) (250V T2.5AL)		6
△ F5			F05-2525-05	FUSE (SEMKO) (250V T2.5AL)		
△ F6			F06-2021-05	FUSE (SEMKO) (250V T2AL)		
CN5 ,6			J13-0075-05	FUSE CLIP	XTEG	
CN7 -10			J13-0075-05	FUSE CLIP	YM	
CN11,12			J13-0075-05	FUSE CLIP		6
CN13,14			J13-0075-05	FUSE CLIP		
CN15,16			J13-0075-05	FUSE CLIP		
L10 ,11			L40-1001-17	SMALL FIXED INDUCTOR(10UH,K)		
△ T1		*	L07-0979-05	POWER TRANSFORMER	YM	J
△ T1		*	L07-0980-05	POWER TRANSFORMER	EG	J
△ T1		*	L07-0981-05	POWER TRANSFORMER	XT	J
△ T1		*	L07-1828-05	POWER TRANSFORMER	YM	S
△ T1		*	L07-1829-05	POWER TRANSFORMER	EG	S
△ T1		*	L07-1830-05	POWER TRANSFORMER	XT	S
X1			L78-0605-05	RESONATOR (8.38MHZ)		
CP1 ,2			R90-0864-05	MULTI-COMP 100KX14		
CP3			R90-0492-05	MULTI-COMP 100KX8 J 1/6W		
CP4			R90-0895-05	MULTI-COMP 10KX9		
△ K1			S51-1052-05	MAGNETIC RELAY POWER		
S1 -23			S40-1064-05	PUSH SWITCH		
△ S26			S31-2322-05	SLIDE SWITCH AC VOLTAGE SEL	YM	
△ S27			S62-0001-05	SLIDE SWITCH AC VOLTAGE SEL	YM	
S24			T99-0548-05	SPEED DETECTOR VOLUME		
S25			T99-0547-05	SPEED DETECTOR INPUT SEL		
D1 -3			HSS104	DIODE		
D1 -3			1SS133	DIODE		
D9 -18			HSS104	DIODE		6
D9 -18			1SS133	DIODE		
D19			HSS104	DIODE		
D19			1SS133	DIODE		6
D20 -26			HSS104	DIODE		
D20 -26			1SS133	DIODE		
ED1		*	BJ268GK	INDICATOR TUBE		
IC1		*	M38197MA-090FP	MI-COM IC		
IC2			S-80740AL	IC(VOLTAGE DETECTOR)		
IC3			XR-1091ECP	IC(GE FILTER)		
IC4		*	M66310P	MOS-IC		
Q1 -8			2SC1740S(Q,R)	TRANSISTOR	S/W	

L: Scandinavia    K: USA    P: Canada    R: Mexico    J: JAPAN MADE    5: A-58  
 Y: PX (Far East, Hawaii)    T: England    E: Europe    G: Germany    S: SINGAPORE MADE    6: A-68  
 Y: AAFES (Europe)    X: Australia    M: Other Areas    W: MALAYSIA MADE

△ indicates safety critical components.



## PARTS LIST

× 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. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 仕向	Re- marks 備考
Q1 -8			2SC2458(Y,GR)	TRANSISTOR	S/W	J
Q1 -8			2SC2785(F,E)	TRANSISTOR		J
Q1 -8			2SC3311A(Q,R)	TRANSISTOR		
A1			W02-1174-05	ELECTRIC CIRCUIT MODULE		
A1			W02-1188-05	ELECTRIC CIRCUIT MODULE		

L: Scandinavia

K: USA

P: Canada

R: Mexico

J: JAPAN MADE

Y: PX (Far East, Hawaii)

T: England

E: Europe

G: Germany

S: SINGAPORE MADE

Y: AAFES (Europe)

X: Australia

M: Other Areas

W: MALAYSIA MADE

## SPECIFICATIONS

### A-58

#### Power amplifier section

Rated power output	
Stereo mode	
(DIN) 1kHz at 8Ω	60W+60W
Surround mode	
Center (1kHz, 0.9% T.H.D. at 8Ω)	10W
Rear (1kHz, 0.9% T.H.D. at 8Ω)	10W
Total harmonic distortion	0.06% (1kHz, 20W, 8Ω)
Frequency response	
LINE (AV AUX)	40Hz~20kHz, +0dB, -3.0dB
Signal to noise ratio	
PHONO (MM)	70dB (IHF'66)
LINE (AV AUX)	85dB (IHF'66)
Input sensitivity/Impedance	
MIC	1.5mV/10kΩ
PHONO (MM)	4mV/47kΩ
LINE (AV AUX)	200mV/47kΩ
Output level/Impedance	
TAPE REC	200mV/10kΩ
SUPER WOOFER PRE OUT	2.0V/10kΩ
OMNI PRE OUT	2.0V/10kΩ

#### VIDEO section

Input level/Impedance	
VIDEO (Composite)	1Vp-p/75Ω
Input (VIDEO : 1, AV AUX : 1)	
Output level/Impedance	
VIDEO (Composite)	1Vp-p/75Ω
Output (MONITOR : 1, VIDEO : 1)	

#### [GENERAL]

AC outlet (SWITCHED)	2 (Total 100W max.)
Power consumption	200W
Dimensions	W : 360mm (14-3/16")
	H : 196mm (7-11/16")
	D : 353mm (13-7/8")
Weight (net)	9.0kg (19.8lb)

### A-68

#### Power amplifier section

Rated power output	
Stereo mode	
(EIAJ) 1kHz at 8Ω	75W+75W
Surround mode	
Center	12W (EIAJ)
Rear	12W (EIAJ)
Total harmonic distortion	0.06% (1kHz, 20W, 8Ω)
Frequency response	
LINE (AUX)	40Hz~20kHz, +0dB, -3.0dB
Signal to noise ratio	
PHONO (MM)	70dB (IHF'66)
LINE (AUX)	85dB (IHF'66)
Input sensitivity/Impedance	
MIC	1.5mV/10kΩ
PHONO (MM)	4mV/47kΩ
LINE (AUX)	200mV/47kΩ
Output level/Impedance	
TAPE REC	200mV/10kΩ
SUPER WOOFER PRE OUT	2.0V/10kΩ
OMNI PRE OUT	2.0V/10kΩ

#### VIDEO section

Input level/Impedance	
VIDEO (Composite)	1Vp-p/75Ω
Input (VIDEO : 1, AUX : 1)	
Output level/Impedance	
VIDEO (Composite)	1Vp-p/75Ω
Output (MONITOR : 1, VIDEO : 1)	

#### [GENERAL]

AC outlet	
SWITCHED	2 (Total 100W max.)
UNSWITCHED	1 (50W max.)
Power consumption	200W
Dimensions	W : 360mm (14-3/16")
	H : 196mm (7-11/16")
	D : 353mm (13-7/8")
Weight (net)	9.0kg (19.8lb)

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

**Note :**

Component and circuitry are subject to modification to insure best operation under differing local conditions. This manual is based on, the General Market (M) 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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