

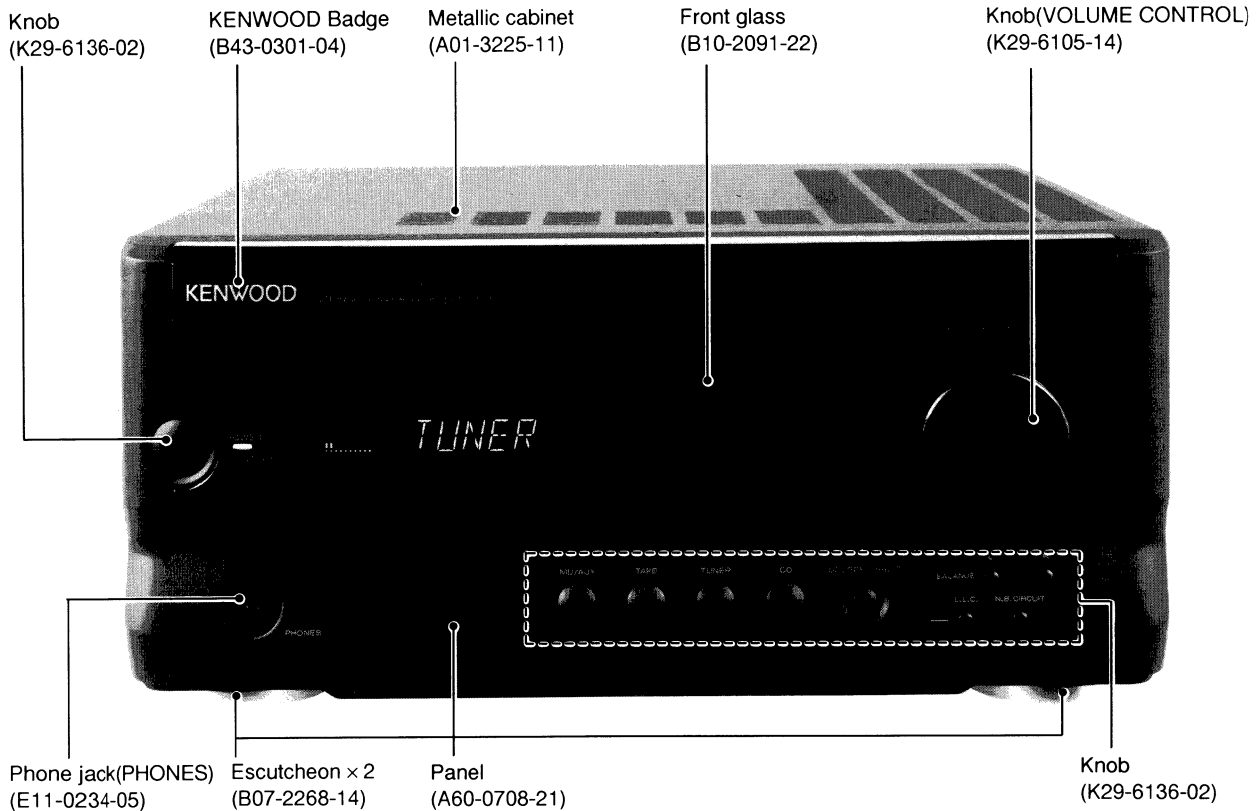
STEREO INTEGRATED AMPLIFIER

A-F5

SERVICE MANUAL

KENWOOD

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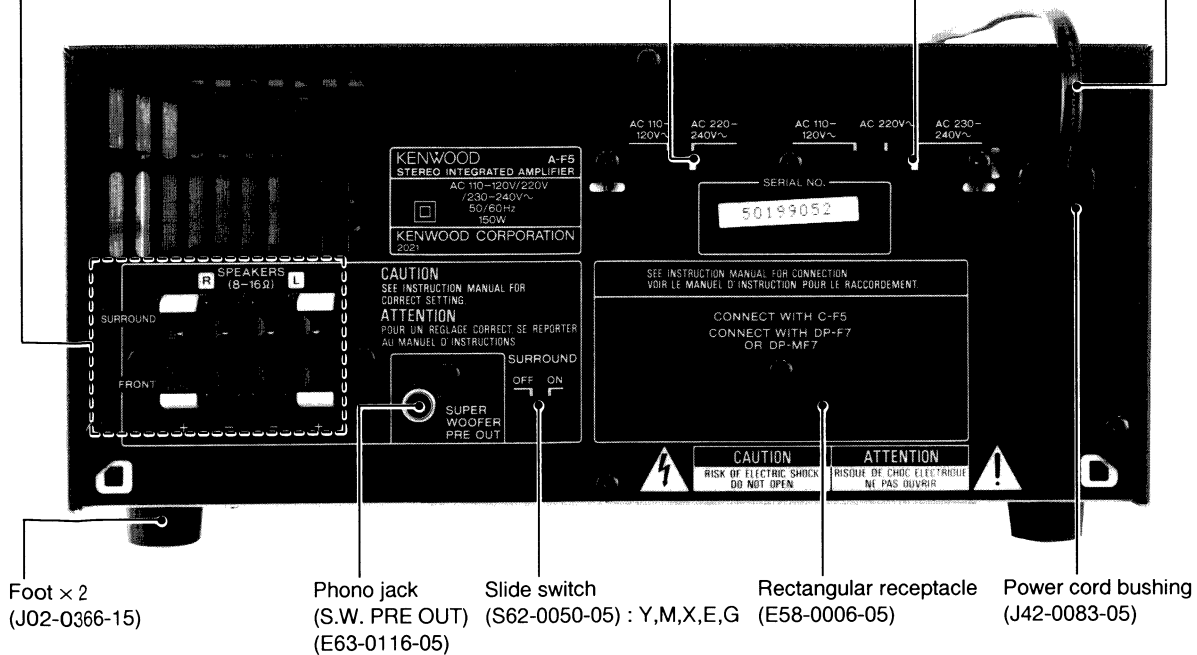


Lock terminal board(SPEAKERS) (E70-0032-05) : K,R,P
(E70-0047-05) : Y,M,X,E,G

Slide switch (S62-0001-05) : Y,M

Slide switch (S31-2322-05) : Y,M

AC powercord* (E30-)



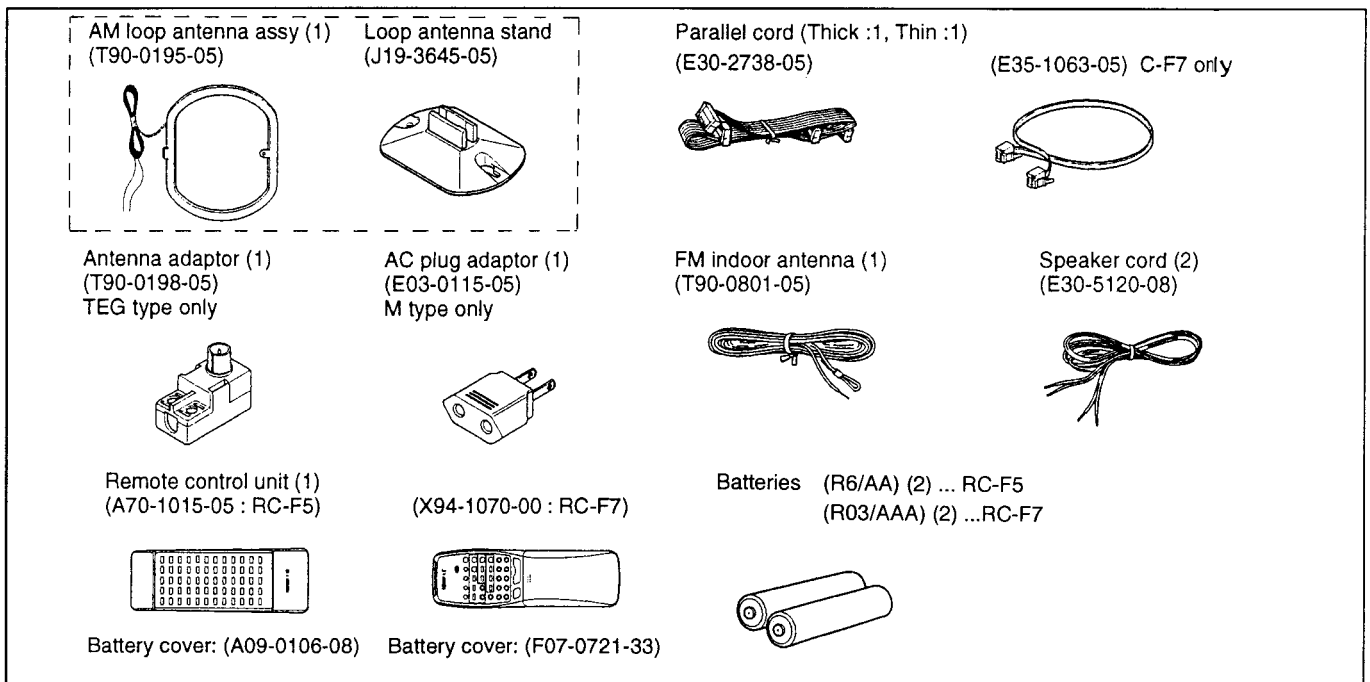
* Refer to parts list on page 25.

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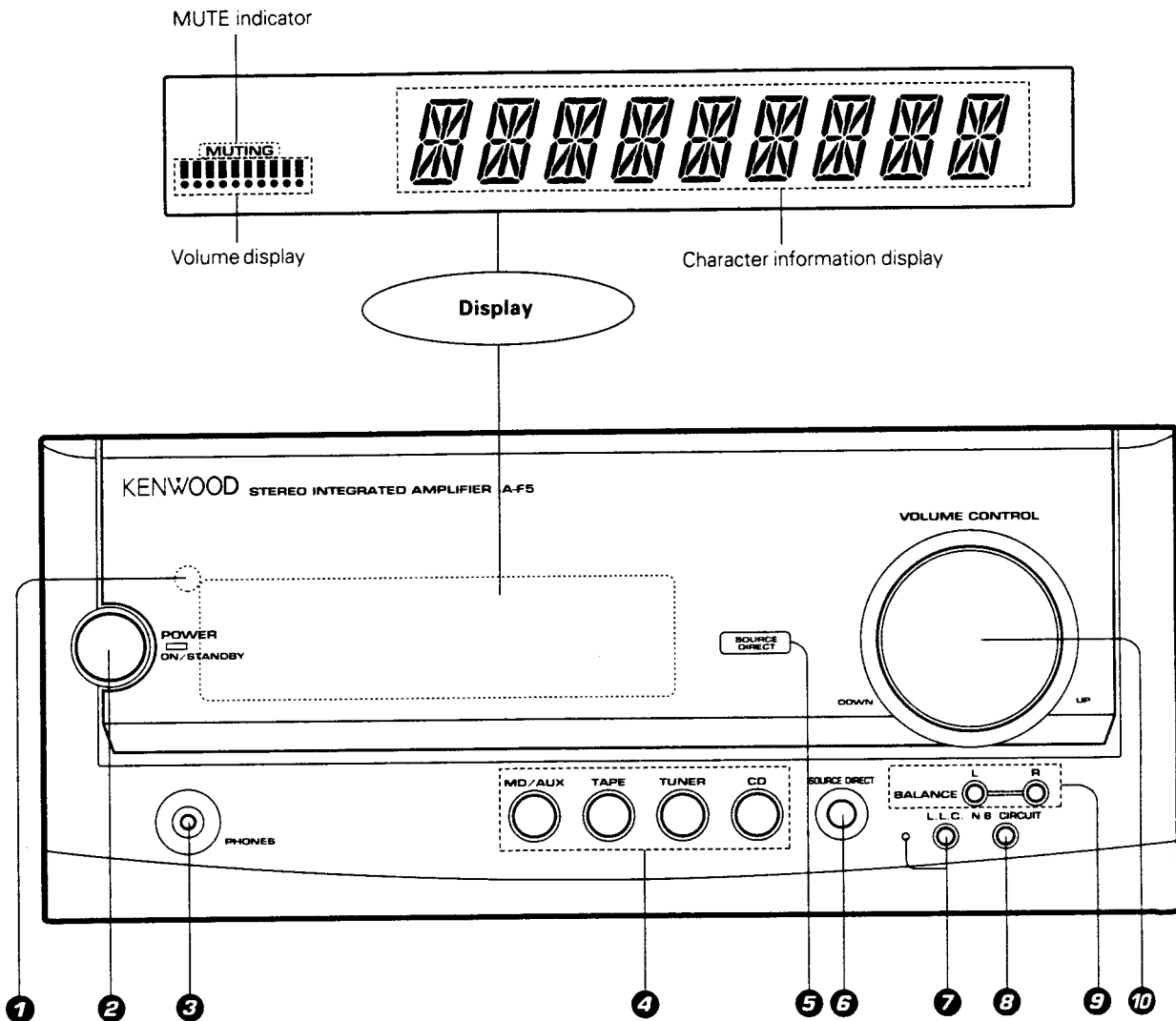
Accessories (Speaker cords are packed with the Speakers. All other accessories are packed with the Tuner unit.)



System configuration (For parts no. of INSTRUCTION MANUAL, refer to the list on Back cover.)

System	Amplifier	Tuner	CD Player	Deck	Speaker	System Carton Box (Parts Mo.)
UD-703	A-F7	C-F7	DP-F7	X-F7	LS-F5 (KP) / LS-F7 (Other)	--
UD-753	A-F7	C-F7	DP-MF7	X-F7	LS-F5 (KP) / LS-F7 (Other)	H60-0307-04 (K) / H60-0308-04 (PR)
UD-713	A-F7	C-F7	DP-F7	X-F7	LS-F7	H60-0304-04
UD-763	A-F7	C-F7	DP-MF7	X-F7	LS-F7	H60-0303-04
UD-503	A-F5	C-F5	DP-F7	X-F5	LS-F5	--
UD-553	A-F5	C-F5	DP-MF7	X-F5	LS-F5	H60-0309-04 (K) / H60-0308-04 (PR)
UD-613	A-F5	C-F5	DP-F7	X-F5	LS-F5	H60-0305-04
UD-663	A-F5	C-F5	DP-MF7	X-F5	LS-F5	H60-0304-04

CONTROLS



1 Remote sensor

2 POWER key

Press to turn the power ON/OFF.

3 PHONES jack

Connect headphones for listening through them.

4 Input selector keys

Press to select the component to be played.

5 SOURCE DIRECT indicator

Lights when the SOURCE DIRECT function is ON.

6 SOURCE DIRECT key

Press to enjoy music with a purer sound.

7 L.L.C. key

Press to listen to sound at a low level.

8 N.B.CIRCUIT key

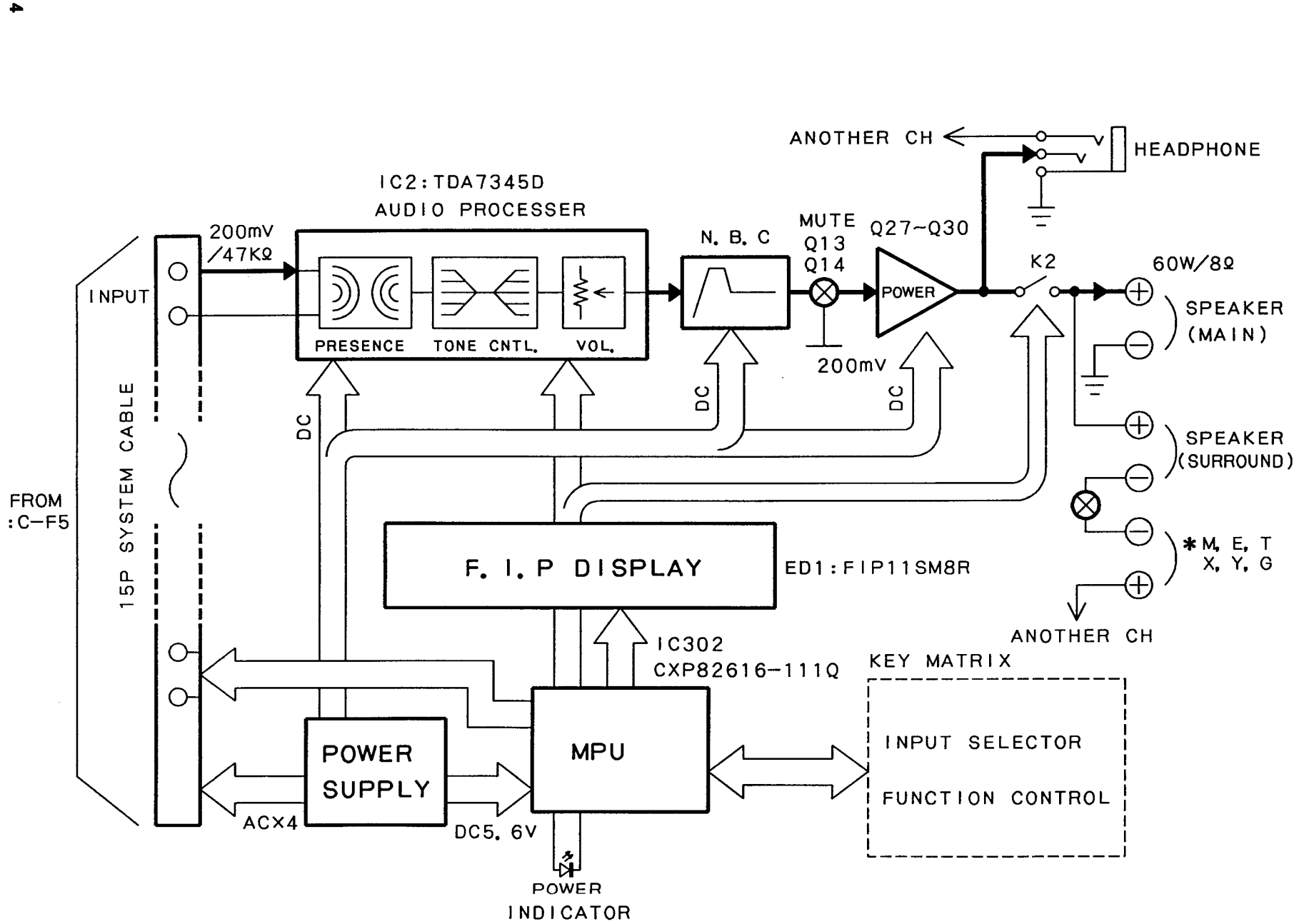
Press to ON to activate automatic control of bass tone.

9 BALANCE (LEFT, RIGHT) keys

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

10 VOLUME CONTROL knob

BLOCK DIAGRAM



CIRCUIT DESCRIPTION

1. Test mode

1-1. Test mode with the main unit keys

(1) Setting procedure

While pressing the CD key, plug the AC power cord to the power outlet.

(2) Cancellation

Unplug the AC power cord. The initial setting will take effect and the test mode will be canceled.

(3) Description

1. Auto POWER ON

- When AC power cord is plugged while pressing the CD key, the POWER will turn ON and all function will be at the initial setting.

2. ALL LED ON mode

- When AC power cord is plugged while pressing the CD key, all the LEDs will turn ON.
- When some main unit key is pressed, ALL LED ON mode will be canceled and all function will return the LEDs to normal.

3. Verification of main unit key veridity/inveridity

- Enables verifications of whether the main unit keys proper are received. For keys which do not change the display when operated, makes the display change when the keys are operated.

4. Verification of actuation of all circuits through main unit keys

- Ability to confirm actuation of all circuits through use of the main unit keys.
- For circuits which cannot be verified through actuation of the main unit keys, enables verification through use of the main unit keys. For example, enables functions through operation of the main unit keys which normally can only be done through operation of the remote controller.

5. MUTE signal output

- The MUTE signal, for the MUTE circuit immediately prior to the POWER AMP, is actuated as usual.

1-2. Test mode with the serial communications

Refer to the serial code table.

(1) Setting procedure

- Enter the TEST ON code.(C27FH)

(2) Cancellation

Enter the TEST OFF code (C27EH) or INITIAL code.(C27DH)

(3) Description

1. Other operations during the serial test mode

- During the serial test mode, the remote controller keys and normal serial code will be ineffective.

2. Required operations for the serial test mode

- The serial code for the serial test mode can be used to check the operations of all circuits.
- During the serial test mode, the MUTE signal is not output. This is for reducing the input-output switching time during the measurement.
- When a valid serial code for the test mode is received, the code identical to the code entered will be output.
- The code entered during the serial test mode will become valid regardless of the display mode.
- For checking the MUTE operation, MUTE has specific codes.

MUTE ON (C20DH)

MUTE ALL OFF (C20FH)

- To switch cyclically, enter the individual serial code.
- ALL LEDs will light. To cancel, enter the ALL LED ON cancellation code. The LEDs will then return to normal.

ALL LED ON OFF (C27BH)

- Equipment is initialized (including Test mode).

INITIAL code (C27DH)

1-3. Initial setting

- When AC power cord is plugged while pressing the POWER key, equipment is initialized.
- During the serial test mode, enter the INITIAL code. (C27DH)

CIRCUIT DESCRIPTION

1-4. Test mode operation and actuation

Operation key	Test item	Actuation															
CD + AC	Test mode setting	<ul style="list-style-type: none"> Auto POWER ON Startup in ALL LED ON mode (cleared through operation of other keys). 															
POWER+AC	Test mode clearance	<ul style="list-style-type: none"> Initial setting and turns OFF. (Test mode OFF) 															
POWER	Power actuation	<ul style="list-style-type: none"> Each time the POWER key is pressed, the power is turned on/off (cyclic actuation ; when power is on ALL LED ON does not occur). Actuations during normal use. 															
N.B. CIRCUIT	N.B. actuation	<ul style="list-style-type: none"> Each time the N.B. key is pressed, the N.B. circuit is turned on/off (cyclic actuation). Controls the surround IC (TDA7345D). Prohibited during SOURCE DIRECT ON. 															
SOURCE DIRECT	SOURCE DIRECT actuation	<ul style="list-style-type: none"> Each time the SOURCE DIRECT key is pressed, the following cyclic actuation advances one step (surround off mode). Controls the surround IC (TDA7345D). ON/OFF status shown by LED. ON ↔ OFF 															
BALANCE VOLUME	BALANCE VOLUME actuation	<ul style="list-style-type: none"> Change the actuation of L/R as shown below. L ch : three-stage setting R → CENTER → L R ch : three-stage setting R ← CENTER ← L 															
LLC*1		<ul style="list-style-type: none"> Normal operation 															
CD	ASP actuation (TDA7345D)	<ul style="list-style-type: none"> DATA transfer occurs according to the cycle shown below each time the CD key is pressed. The specified DATA is sent to DSP IC (TDA7345D) and the PRESENCE item is displayed for 5 seconds. <div style="text-align: center;"> <pre> graph LR A[ARENA [ARENA]] --> B[JAZZ CLUB [JAZZ]] B --> C[STADIUM [STADIUM]] C --> D[HIT MASTER [HIT MASTER]] D --> E[OFF [OFF]] E --> A </pre> </div>															
VIDEO1	PRO LOGIC actuation(F.C/S Relay) (TDA7315)	<ul style="list-style-type: none"> DATA transfer occurs according to the cycle shown below each time the MD key is pressed. SP status DATA is set in the volume IC (TDA7315). Displayed for 5 seconds in the 14 segment display section. <div style="text-align: center;"> <pre> graph LR A[Front [F ch]] --> B[Front-Center-Rear [F/C/R ch]] B --> C[Front-Center [F/C ch]] C --> D[Front-Rear [F/R ch]] D --> A </pre> </div> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th>Fch</th> <th>F/C ch</th> <th>F/C/S ch</th> <th>F/S ch</th> </tr> </thead> <tbody> <tr> <td>TDA7315</td> <td>C/S MUTE</td> <td>Sch MUTE</td> <td></td> <td>C ch MUTE</td> </tr> <tr> <td>Front Relay</td> <td style="text-align: center;">○</td> <td style="text-align: center;">○</td> <td style="text-align: center;">○</td> <td style="text-align: center;">○</td> </tr> </tbody> </table>		Fch	F/C ch	F/C/S ch	F/S ch	TDA7315	C/S MUTE	Sch MUTE		C ch MUTE	Front Relay	○	○	○	○
	Fch	F/C ch	F/C/S ch	F/S ch													
TDA7315	C/S MUTE	Sch MUTE		C ch MUTE													
Front Relay	○	○	○	○													
TUNER	MUTE actuation (MUTE port)	<ul style="list-style-type: none"> Each time the TUNER key is pressed, the following cyclic actuation advances one step. Controls the MUTE port (circuit). Status indicated on the segmented display section. <div style="text-align: center;"> <pre> graph LR A[MAIN HEAD MUTE MAIN ON] --> B[C/S MUTE C/S ON] B --> C[MUTE OFF] </pre> </div> <p>MUTE ON status</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th>M.H MUTE</th> <th>C/S MUTE</th> </tr> </thead> <tbody> <tr> <td>M.H MUTE PT</td> <td>H</td> <td>L</td> </tr> <tr> <td>C/S MUTE PT</td> <td>L</td> <td>H</td> </tr> <tr> <td>OMNI MUTE PT</td> <td>L</td> <td>L</td> </tr> </tbody> </table> <p style="text-align: right; margin-right: 50px;">The C/S relay does not actuated, only displays.</p>		M.H MUTE	C/S MUTE	M.H MUTE PT	H	L	C/S MUTE PT	L	H	OMNI MUTE PT	L	L			
	M.H MUTE	C/S MUTE															
M.H MUTE PT	H	L															
C/S MUTE PT	L	H															
OMNI MUTE PT	L	L															

CIRCUIT DESCRIPTION

Operation key	Test item	Actuation
TAPE	TONE actuation (TDA7345D)	<ul style="list-style-type: none"> Each time the TAPE key is pressed, the following cyclic actuation advances one step. DATA is transferred to the surround IC (TDA7345D). Displayed for 5 seconds in the 14 segment display section. <div style="text-align: center;"> </div>
MD(A-F7) MD/AUX(A-F5)	VOL actuation (TDA7345D) (TDA7315)	<ul style="list-style-type: none"> VOL turned ON/OFF each time the MD key is pressed. DATA is transferred to the surround IC(TDA7345D) and the VOL IC(TDA7315). <div style="text-align: center;"> </div>

*1 : When LLC is ON, do not press the SOURCE DIRECT key. (If pressed, unplug AC power cord and use POWER+AC to turn to initial setting OFF.)

1-5. Initial status and backup function

1-5-1. Initial status

Key status

POWER	: OFF
N.B. CIRCUIT	: OFF
SOURCE DIRECT	: OFF
LLC	: OFF (Initial value 7)
INPUT SELECTOR	: TUNER
BALANCE L/R	: CENTER
MUTE	: MUTE OFF
HEAD PHONE	: OFF
PROTECTION	: OFF

Control IC status

Surround IC (TDA7345D)	VOL IC(TDA7315)(A-F7)
ASP : OFF	CENTER VOL } Actuated
TONE(BASS/TREBLE) : CENTER	REAR VOL } simultaneously
MAIN VOLUME : 7	as MAIN VOL.

Conditions under which each memory returns to initial status.

- During RESET, when the test mode or ALL LED ON flag is set.
- When the AC is plugged.

1-5-2. BACKUP DATA

Actuates BACKUP while the power supply is on. However, does not have Super capacity.

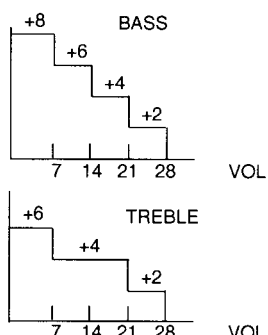
1-6. Dynamic Rotary Volume Control

Operation Key			Actuation
LLC	VOL Encoder	Remote controller	
OFF	Fast rotation		<ul style="list-style-type: none"> When the encoder pulse width(t1) is 100ms or less, the VOL value is moved up/down 3 steps for each pulse received, depending on the direction in which the encoder is rotated. <div style="display: flex; justify-content: space-between;"> <div> <p><Display> During LLC OFF LED→not lit</p> <p> During encoder operation 14 seg→VOL display</p> <p> Otherwise 14 seg→current display</p> </div> <div style="text-align: right;"> </div> </div>
	Slow		<ul style="list-style-type: none"> When the encoder pulse width(t2) is 100ms or more, the VOL value is moved up/down 1 steps for each pulse received, depending on the direction in which the encoder is rotated. <div style="text-align: right;"> </div>

CIRCUIT DESCRIPTION

Operation Key			Actuation
LLC	VOL Encoder	Remote controller	
OFF	Slow		<Display> During LLC OFF LED→not lit During encoder operation 14 seg→VOL display Otherwise 14 seg→current display
		VOLUME UP/DOWN	<ul style="list-style-type: none"> When the remote controller key is pressed, the volume goes up/down in 1-step increments. *The first time a key is pressed, if the volume is not displayed in the 14segment display section, the current volume is displayed for 500ms. *If the key continues to be pressed for 500ms or longer, from the second step the volume changes at the rate of 1 step/200ms, and at 1 step/100ms from the 5th step onward. Furthermore, if the volume is displayed in the 14segment display section, the volume changes at the rotate of 1 step/200ms, and at 1 step/100ms from the 5th step onward. <Display> During LLC ON LED→lit

1-7. LLC LEVEL memory actuation specifications

Status	Operation Key	Actuation	Display status		
			Fixed seg.	VOL.	GE.
LLC OFF	LLC key	LLC ON & LLC VOL. setting status <ul style="list-style-type: none"> When the key is pressed, the volume is shifted to either the initial value or the preceding LLC VOL value(35ms/1step) LLC initial value : 7 The LLC VOL. settable mode is entered for 5 seconds. 	Blink (500ms ON/OFF)	Volume value (7/14 segment BAR) 7/14 segment for 5 seconds	When LLC VOL. value is reached, 5 second VOL.-linked GE. curve
LLC VOL settable	LLC key	<ul style="list-style-type: none"> The current VOL. value is memorised as the LLC VOL. value. The LLC VOL. settable status is canceled and the LLC ON mode is entered. 	Illumination	Volume value (7/14 segment BAR) 7/14 segment for 5 seconds	5 second, LLC VOL.-linked GE. curve
	VOL. encoder remote control VOL.	<ul style="list-style-type: none"> Adjust the VOL. value Each time the VOL varies, the settable time duration is extended another 5 seconds. Same GE. curve as for LLC ON status displayed. 	Blink (500ms ON/OFF)	Volume value (7/14 segment BAR)	5 second LLC VOL.-linked GE. curve
	Other key	<ul style="list-style-type: none"> LLC VOL. settable status cancelled. Actuation/display varies according to key function. (Refer to remarks on processing during LLC actuation) 	LLC ON : Illumination OFF : not lit		
LLC ON	LLC key	<ul style="list-style-type: none"> LLC OFF Makes BASS, TREBLE flat. 	not lit	Current status	FLAT for 5 seconds
	VOL. encoder remote control VOL.	<ul style="list-style-type: none"> Sets stipulated BASS/TREBLE value according to VOL. value. 	Illumination	Volume value (7/14 segment BAR) 7/14 segment for 5 seconds	5 second LLC VOL.-linked GE. curve
	Other key	<ul style="list-style-type: none"> Actuation/display varies according to key function. (Refer to remarks on processing during LLC actuation) 	LLC ON : Illumination OFF : not lit		

16 bit SERIAL TEST CODE (C2XXH) NEW

	AMP							TUNER								
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	POWER OFF	CD DIRECT OFF	C/S SP OFF	D.SOUND LEVEL 1	NB OFF				POWER OFF	0	MEMORY (ENTER)					
1	POWER ON	CD DIRECT ON	C/S SP ON	D.SOUND LEVEL 2	OMNI SP ON				POWER ON	1	MAIN					
2	PHONO	CD REC OFF	HIT MASTER OFF	D.SOUND LEVEL 3	MUTING (-30 dB) OFF				MUTE OFF	2	SUB					
3	CD	CD REC ON	HIT MASTER ON	D.SOUND INPUT CD	MUTING (-30 dB) ON				MUTE ON	3	BOTH					
4	TUNER	SOURCE DIRECT OFF	MOTOR VOL UP	D.SOUND IN TUNER	NB LEVEL 1				AUTO STEREO	4						
5	TAPE (TAPE A)	SOURCE DIRECT ON	MOTOR VOL DOWN	D.SOUND INPUT TAPE	NB LEVEL 2				MONO	5						
6	TAPE 2 (TAPE B)	LINE STRAIGHT OFF	MOTOR VOL STOP	D.SOUND IN MD/DAT	NB LEVEL 3				TUNED OFF	6						
7	AUX	LINE STRAIGHT ON	DBS/TV	D.SOUND IN VIDEO	BALANCE Lch MAX				TUNED ON	7						
8	DAT	LOUDNESS OFF	TAPE 2 MONITOR OFF	D.SOUND IN AV/AUX	BALANCE L/R CENTER				ACTIVE RECEP. OFF	8						
9	VIDEO 1 (VIDEO)	LOUDNESS ON	TAPE 2 MONITOR ON	BGM OFF	BALANCE R ch MAX			FL ALL OFF OFF	ACTIVE RECEP. ON	9						FL ALL OFF OFF
A	VIDEO 2	SUB SONIC OFF	VIDEO MUTE ON	BGM ON	L.A.C. MAIN MAX			FL ALL OFF ON	RF DIRECT	+10						FL ALL OFF ON
B	VIDEO 3	SUB SONIC ON	LAC VOL UP	FAN OFF	L.A.C. MAIN/SUB CENTER			ALL LED ON OFF	RF DISTANCE	BAND FM						ALL LED ON OFF
C	VDP	S.WOOFER OFF	LAC VOL DOWN	FAN ON	L.A.C. SUB MIN			ALL LED ON ON	IF WIDE	BAND AM/MW						ALL LED ON ON
D	MUTE ON (MAIN)	S.WOOFER ON	LAC VOL STOP	FAN SPEED LOW	FAN STOP LOW			AMP INITIAL	IF NORMAL	BAND TV/LW						TUNER SERIAL TEST OFF
E	SEL MUTE ON	FRONT SP OFF	DUAL SOUND OFF	FAN SPEED HIGH	FAN STOP HIGH			AMP SERIAL TEST OFF	IF NARROW	DOWN						TUNER SERIAL TEST ON
F	MUTE ALL OFF	FRONT SP ON	DUAL SOUND ON	NB ON				AMP SERIAL TEST ON	DIRECT	UP						TUNER SERIAL TEST ON

CIRCUIT DESCRIPTION

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16 bit SERIAL TEST CODE (C3XXH) NEW

	SURROUND							GE								
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	POWER OFF	REAR MUTE ON	ASFC MAX	ACOUSTIC BGM	PRESENCE GAME	ECHO 2			POWER OFF							
1	POWER ON	C/S MUTE OFF	SEAT POS MIN	CINEMA SCREEN OFF	PRESENCE KARAOKE	PRESENCE HIT MASTER			POWER ON							
2	BYPASS/OFF	CENTER LEVEL MIN	SEAT POS MID	CINEMA SCREEN 1	F.2 ch				MUTE OFF							
3	DOLBY SURROUND NOR./WIDE	CENTER LEVEL MID	SEAT POS MAX	CINEMA SCREEN 2	DOLBY SURROUND (PHANTOM)				MUTE ON							
4	DOLBY 3 STEREO	CENTER LEVEL MAX	WALL MIN	CINEMA SCREEN 3	DEPTH OFF				EQ OFF							
5	DSP	REAR LEVEL MIN	WALL MID	CH MODE 2 ch	DEPTH ON				EQ ON							
6	DSP LOGIC	REAR LEVEL MID	WALL MAX	CH MODE 3 ch	DEPTH MODE VOCAL				M1 (ALL CEN)							
7	S. 4 ch	REAR LEVEL MAX	ROOM SIZE MIN	CH MODE 4 ch	DEPTH MODE INSTRUMENT				M2 (ALL MAX)							
8	F. 4 ch	DELAY TIME MIN	ROOM SIZE MID	CH MODE 5 ch	DEPTH LEVEL MIN				M3 (ALL MIN)							
9	CENTER MODE NORMAL	DELAY TIME MID	ROOM SIZE MAX	DSP THROUGH	DEPTH LEVEL MID			FL ALL OFF OFF	EEPROM TEST							FL ALL OFF OFF
A	CENTER MODE WIDE	DELAY TIME MAX	STEREO (KARAOKE)	PRESENCE ARENA	DEPTH LEVEL MAX			FL ALL OFF ON	EEPROM TEST OK							FL ALL OFF ON
B	CENTER MODE PHANTOM	PRESENCE (EFFECT) LEVEL MIN	MULTI (KARAOKE)	PRESENCE JAZZ CLUB	SUB (OMNI) MUTE ON			ALL LED ON OFF	EEPROM TEST NG							ALL LED ON OFF
C	TEST TONE OFF	PRESENCE (EFFECT) LEVEL MID	HiFi MULTI (KARAOKE)	PRESENCE STADIUM	DSP LOGIC LARGE			ALL LED ON ON	LINE ON							ALL LED ON ON
D	TEST TONE ON	PRESENCE (EFFECT) LEVEL MAX	NORMAL (KARAOKE)	PRESENCE DISCO THEQUE	DSP LOGIC SMALL			SURROUND INITIAL	TAPE ON							GE INITIAL
E	FRONT MUTE ON	ASFC MIN	ACOUSTIC NON DIRE 1	PRESENCE CHURCH	ECHO OFF			SUR. SERIAL TEST OFF								GE SERIAL TEST OFF
F	C/S MUTE ON	ASFC MID	ACOUSTIC NON DIRE 2	PRESENCE MOVIE	ECHO 1			SUR. SERIAL TEST ON								GE SERIAL TEST ON

CIRCUIT DESCRIPTION

A-F5

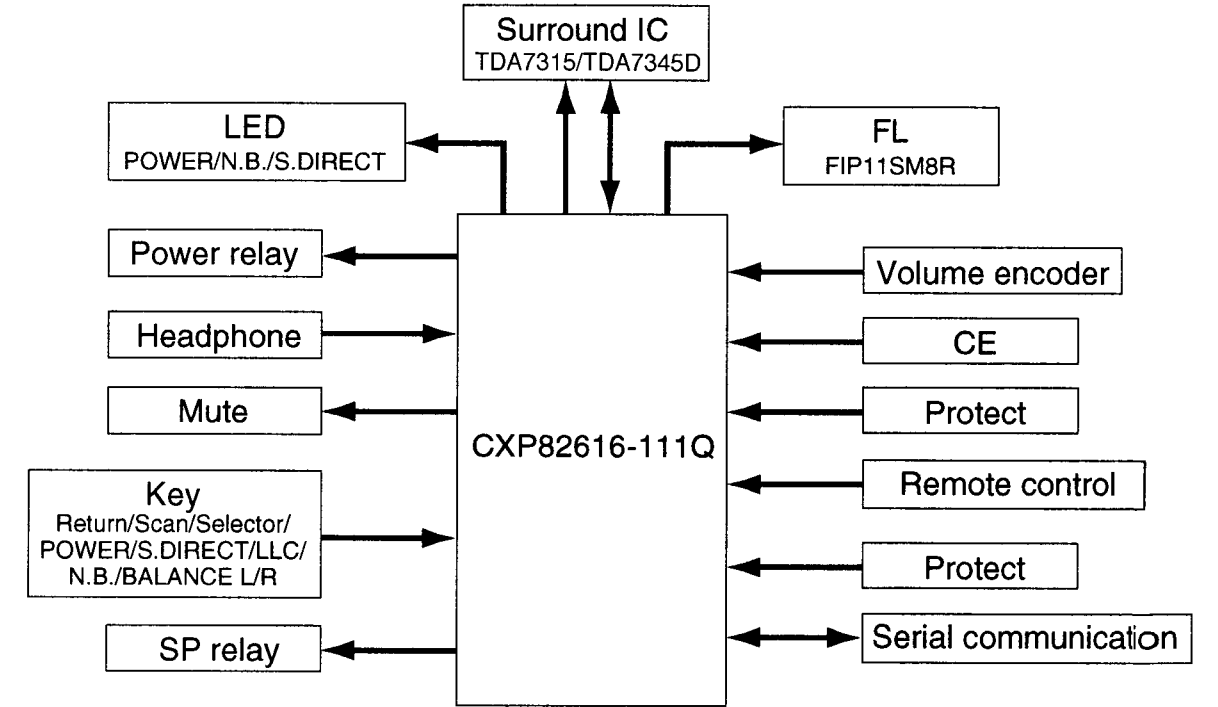
CIRCUIT DESCRIPTION

16 bit SERIAL TEST CODE (C4XXH)										VOLUME LEVEL																																																																																																																																																																																																																																																					
0	VOLUME 0	VOLUME 10	VOLUME 20	VOLUME 30	VOLUME 40	VOLUME 50	VOLUME 60			1	VOLUME 11	VOLUME 21	VOLUME 31	VOLUME 41	VOLUME 51	VOLUME 61					2	VOLUME 12	VOLUME 22	VOLUME 32	VOLUME 42	VOLUME 52	VOLUME 62									3	VOLUME 13	VOLUME 23	VOLUME 33	VOLUME 43	VOLUME 53	VOLUME 63										4	VOLUME 14	VOLUME 24	VOLUME 34	VOLUME 44	VOLUME 54												5	VOLUME 15	VOLUME 25	VOLUME 35	VOLUME 45	VOLUME 55												6	VOLUME 16	VOLUME 26	VOLUME 36	VOLUME 46	VOLUME 56												7	VOLUME 17	VOLUME 27	VOLUME 37	VOLUME 47	VOLUME 57												8	VOLUME 18	VOLUME 28	VOLUME 38	VOLUME 48	VOLUME 58												9	VOLUME 19	VOLUME 29	VOLUME 39	VOLUME 49	VOLUME 59												A																	B																	C																	D																	E																	F																

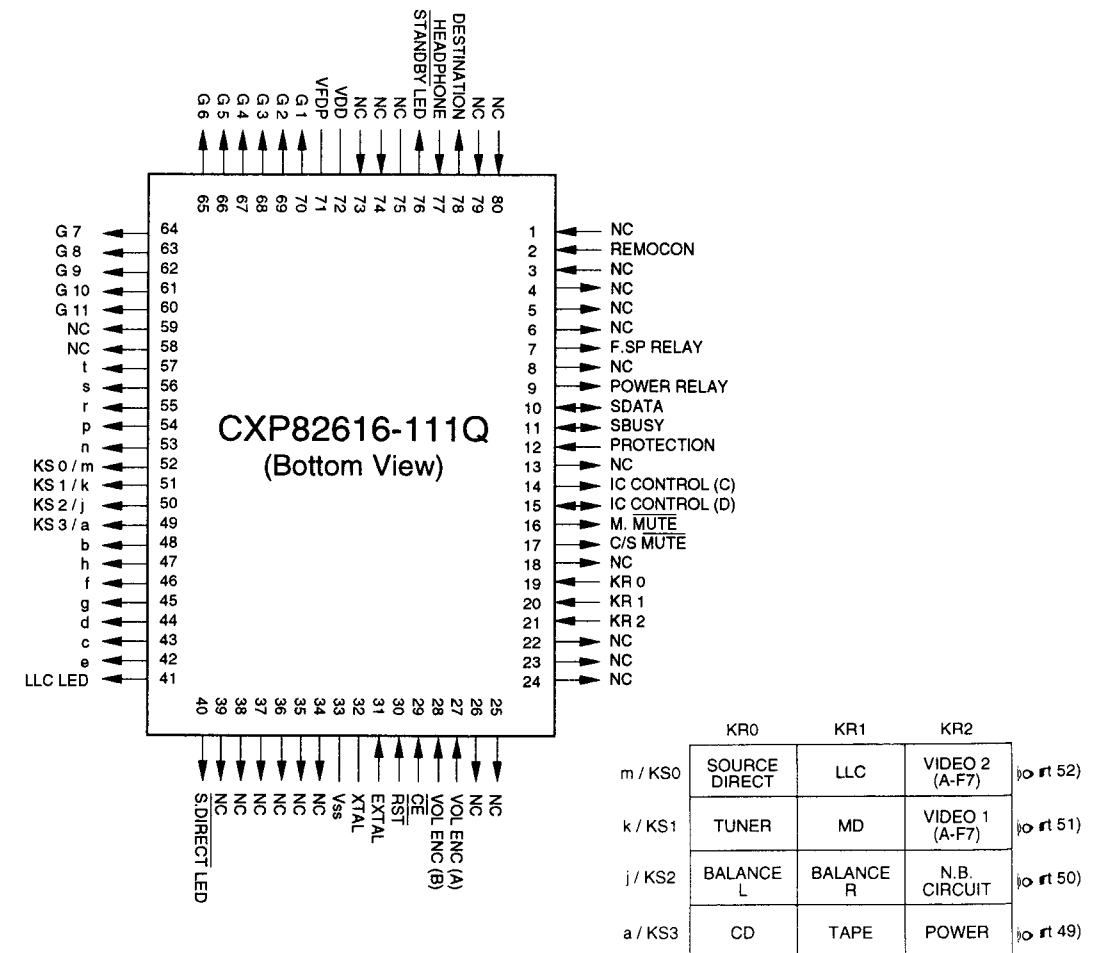
CIRCUIT DESCRIPTION

2. Microprocessor : CXP82616-111Q (X09 : IC302)

2-1. Block diagram



2-2. Pin layout

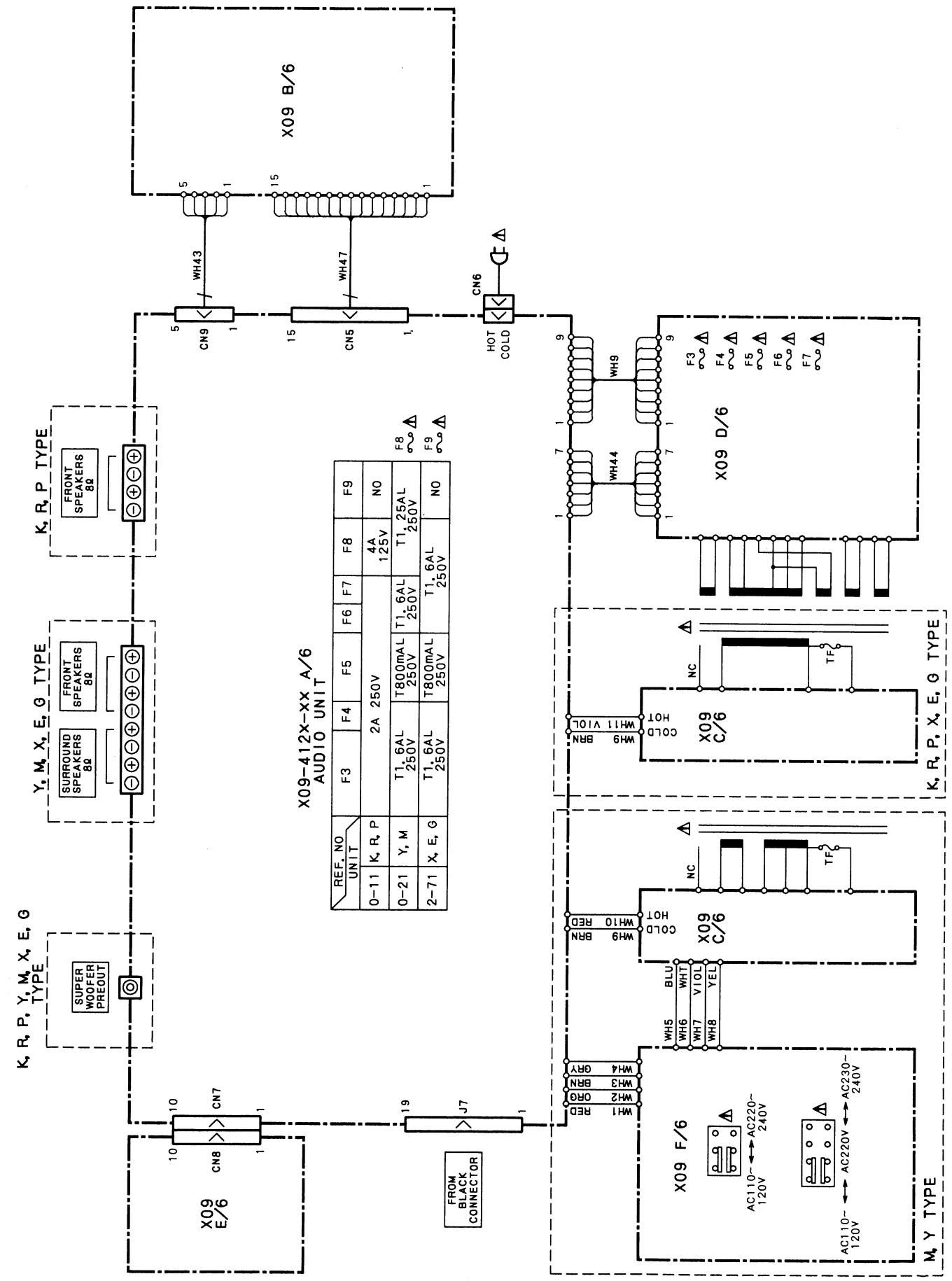


CIRCUIT DESCRIPTION

WIRING DIAGRAM

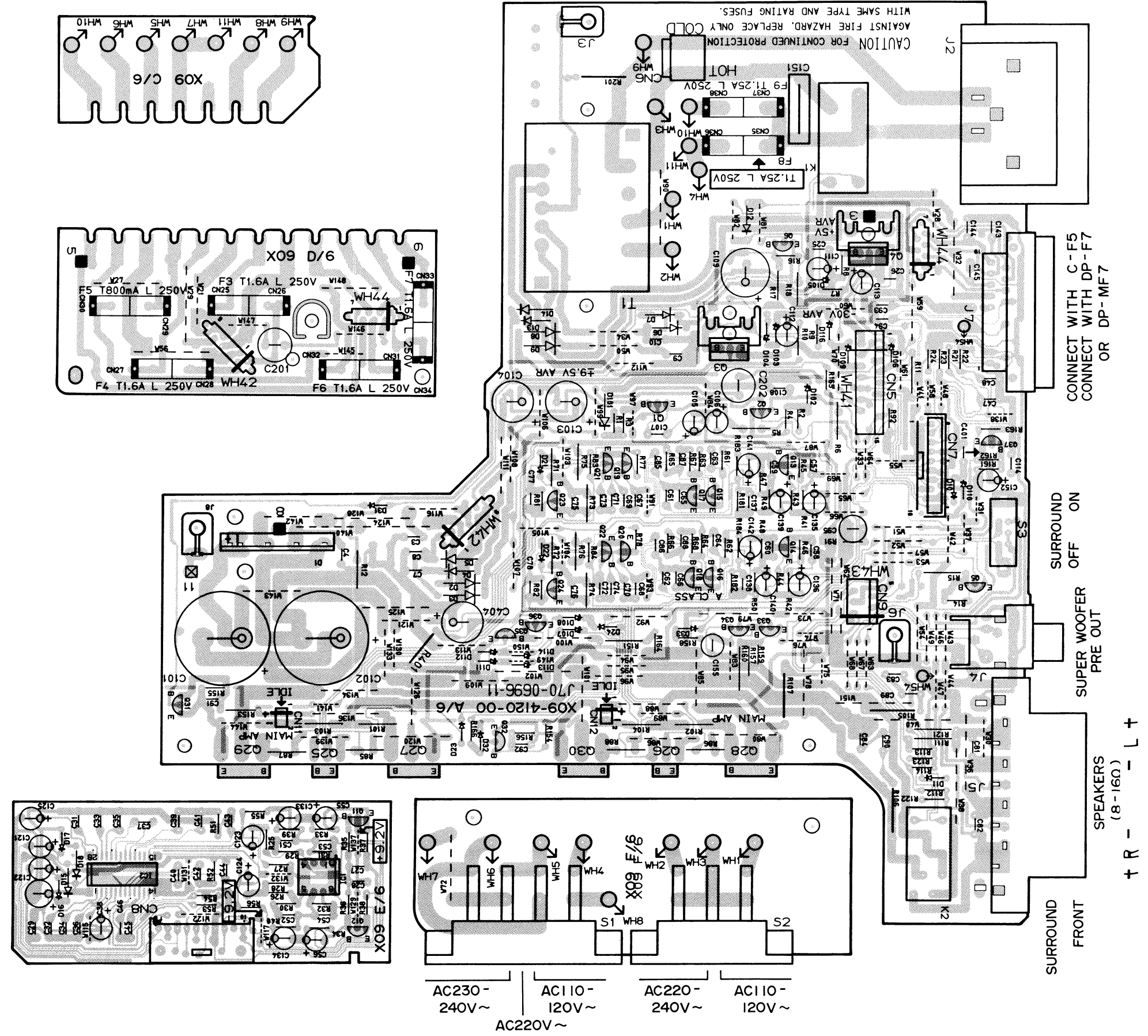
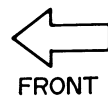
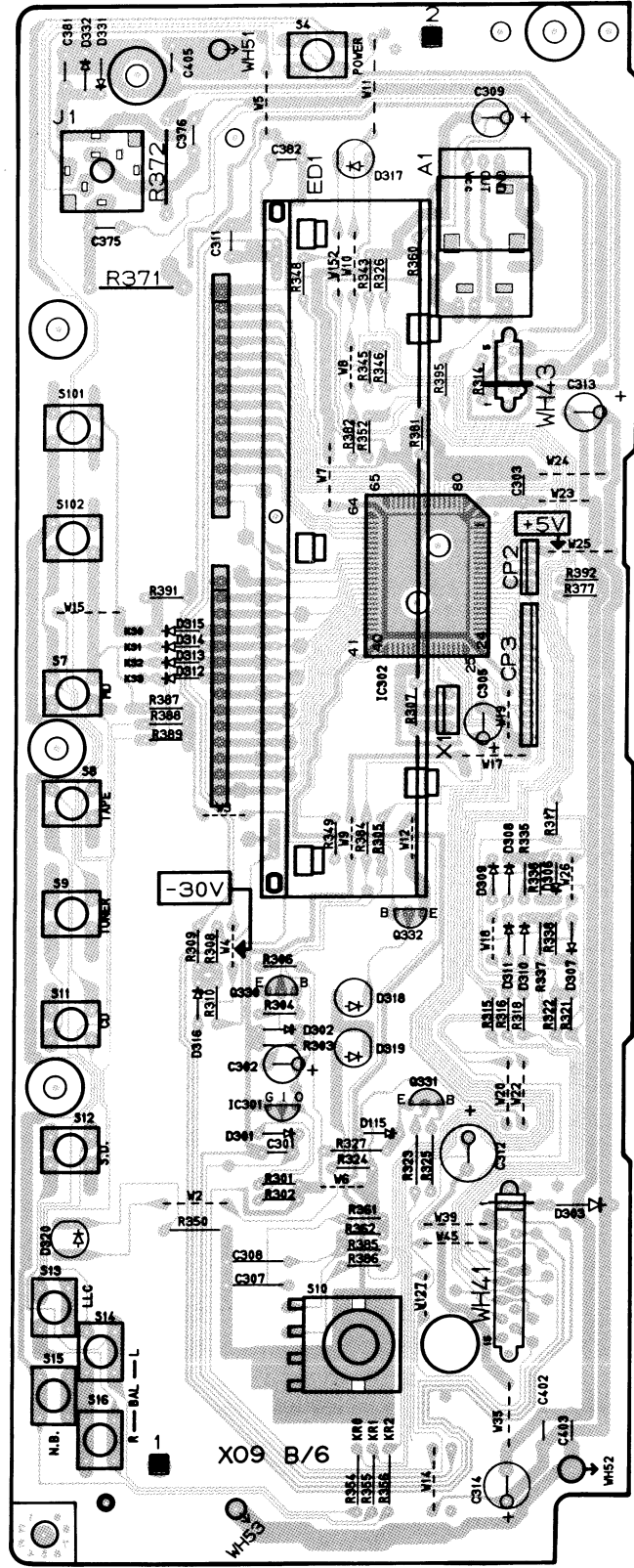
2-3. Pin description

No.	Name	I/O	Description	No.	Name	I/O	Description
1	NC	I	Not used	41	LLC LED	O	LLC LED
2	REMOCON	I	Remocon signal	42	e	O	FL segment e
3	NC	I	Not used	43	c	O	FL segment c
4	NC	O	(Prohibited)	44	d	O	FL segment d
5	NC	O	(Prohibited)	45	g	O	FL segment g
6	NC	O	Not used	46	f	O	FL segment f
7	F.SP RELAY	O	Front SP relay control	47	h	O	FL segment h
8	NC	O	Not used	48	b	O	FL segment b
9	POWER RELAY	O	Power relay control	49	KS3 / a	O	FL a / Key scan 3
10	SDATA	I/O	Serial DATA	50	KS2 / j	O	FL j / Key scan 2
11	SBUSY	I/O	Serial BUSY	51	KS1 / k	O	FL k / Key scan 1
12	PROTECTION	I	Protection detect	52	KS0 / m	O	FL m / Key scan 0
13	NC	O	(Prohibited)	53	n	O	FL segment n
14	IC CONTROL	O	TDA7345 CLOCK	54	p	O	FL segment p
15	IC CONTROL	I/O	TDA7345 DATA	55	r	O	FL segment r
16	M. MUTE	O	Main mute control	56	s	O	FL segment s
17	C/S MUTE	O	C/S mute control	57	t	O	FL segment t
18	NC	O	Not used	58	NC	O	Not used
19	KR0	I	Key return 0	59	NC	O	Not used
20	KR1	I	Key return 1	60	G11	O	FL grid 11
21	KR2	I	Key return 2	61	G10	O	FL grid 10
22	NC	O	Not used	62	G9	O	FL grid 9
23	NC	O	Not used	63	G8	O	FL grid 8
24	NC	O	Not used	64	G7	O	FL grid 7
25	NC	O	Not used	65	G6	O	FL grid 6
26	NC	O	Not used	66	G5	O	FL grid 5
27	VOL ENC (A)	I	Volume encorder A	67	G4	O	FL grid 4
28	VOL ENC (B)	I	Volume encorder B	68	G3	O	FL grid 3
29	CE	I	Chip enable	69	G2	O	FL grid 2
30	RST	I	Reset	70	G1	O	FL grid 1
31	EXTAL	I	8MHz Crystal	71	VFDP		Power supply for FDP
32	XTAL		8MHz Crystal	72	VDD		u-com power supply
33	Vss		GND	73	NC	I	Not used
34	NC	O	Not used	74	NC	I	Not used
35	NC	O	Not used	75	NC		(connected to VDD)
36	NC	O	Not used	76	STANDBY LED	O	Standby LED
37	NC	O	Not used	77	HEADPHONE	I	Headphone relay
38	NC	O	Not used	78	DESTINATION	O	Destination detect H:A-F7 L:A-F5
39	NC	O	Not used	79	NC	I	Not used
40	S.DIRECT LED	O	Source direct LED	80	NC	I	Not used



PC BOARD (Component side view)

AUDIO UNIT (X09-4120-11 : K, R, P ; 0-21 : Y, M ; 2-71 : X, E, G)



2

3

4

5

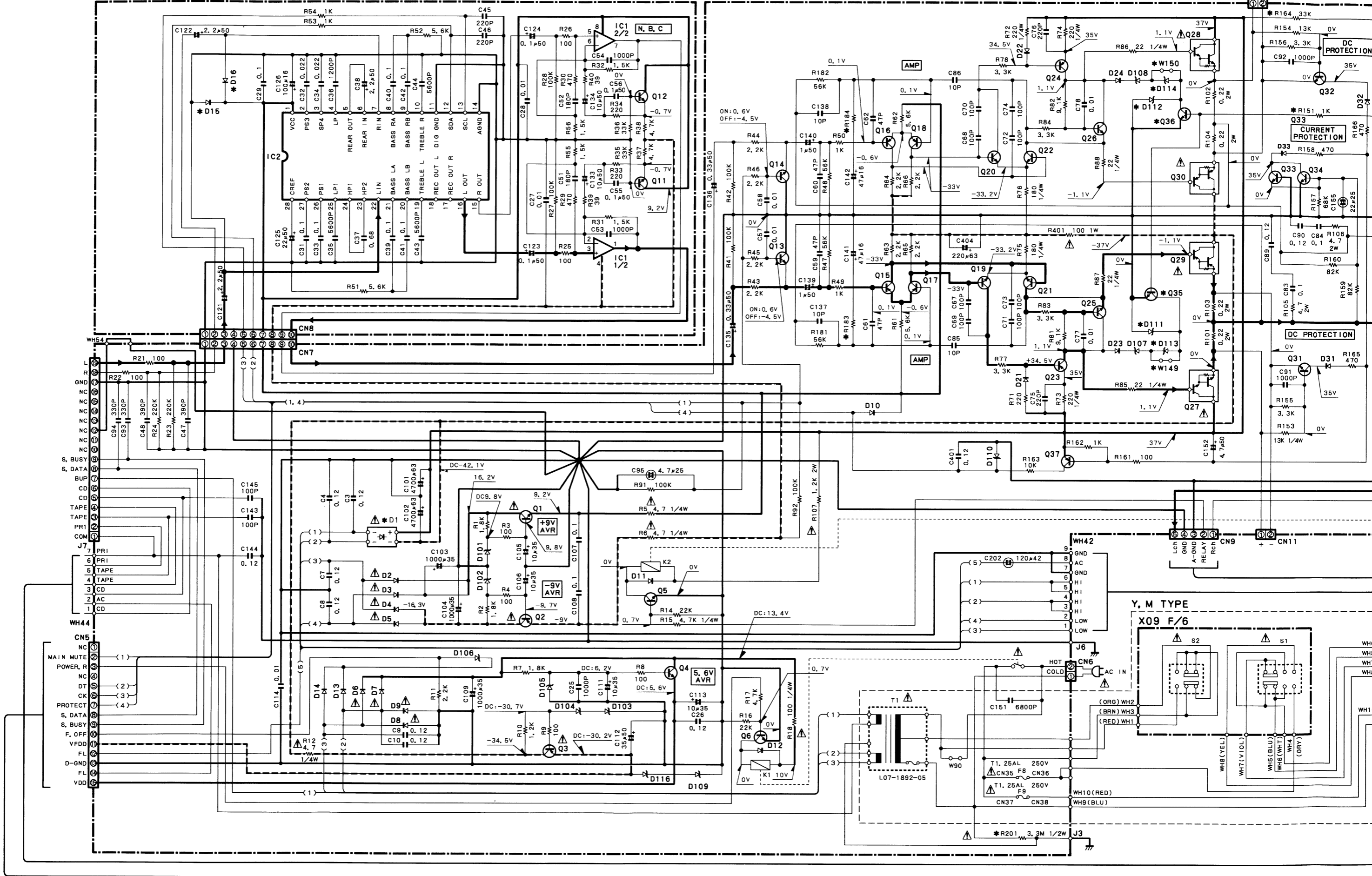
6

7

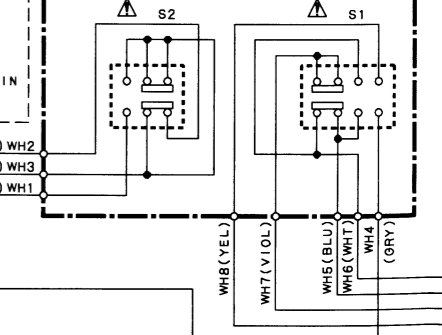
X09 E/6

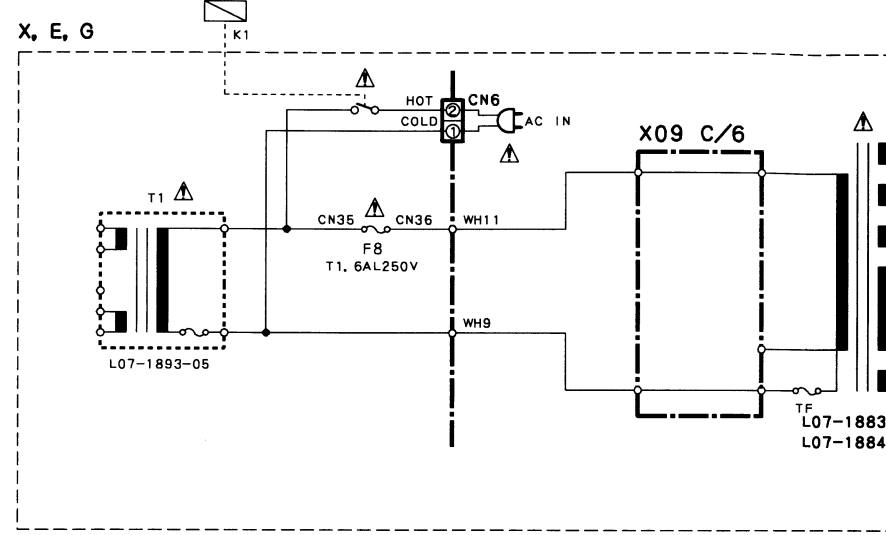
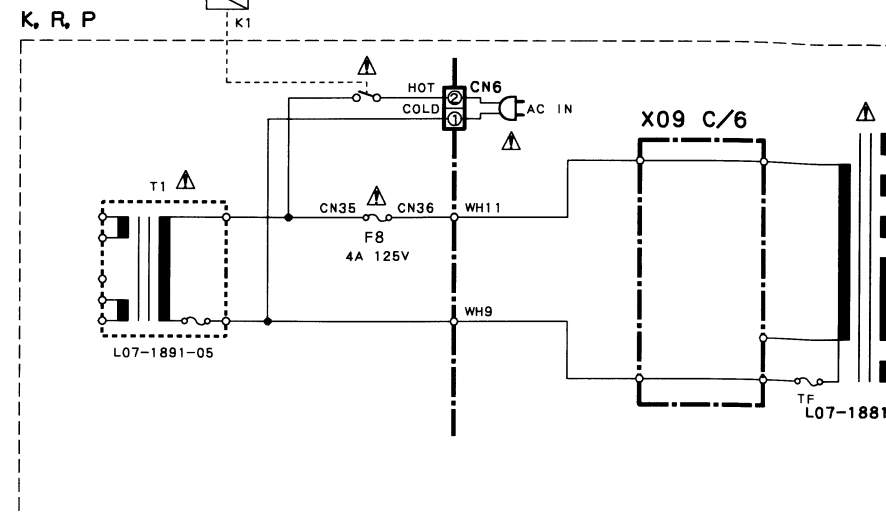
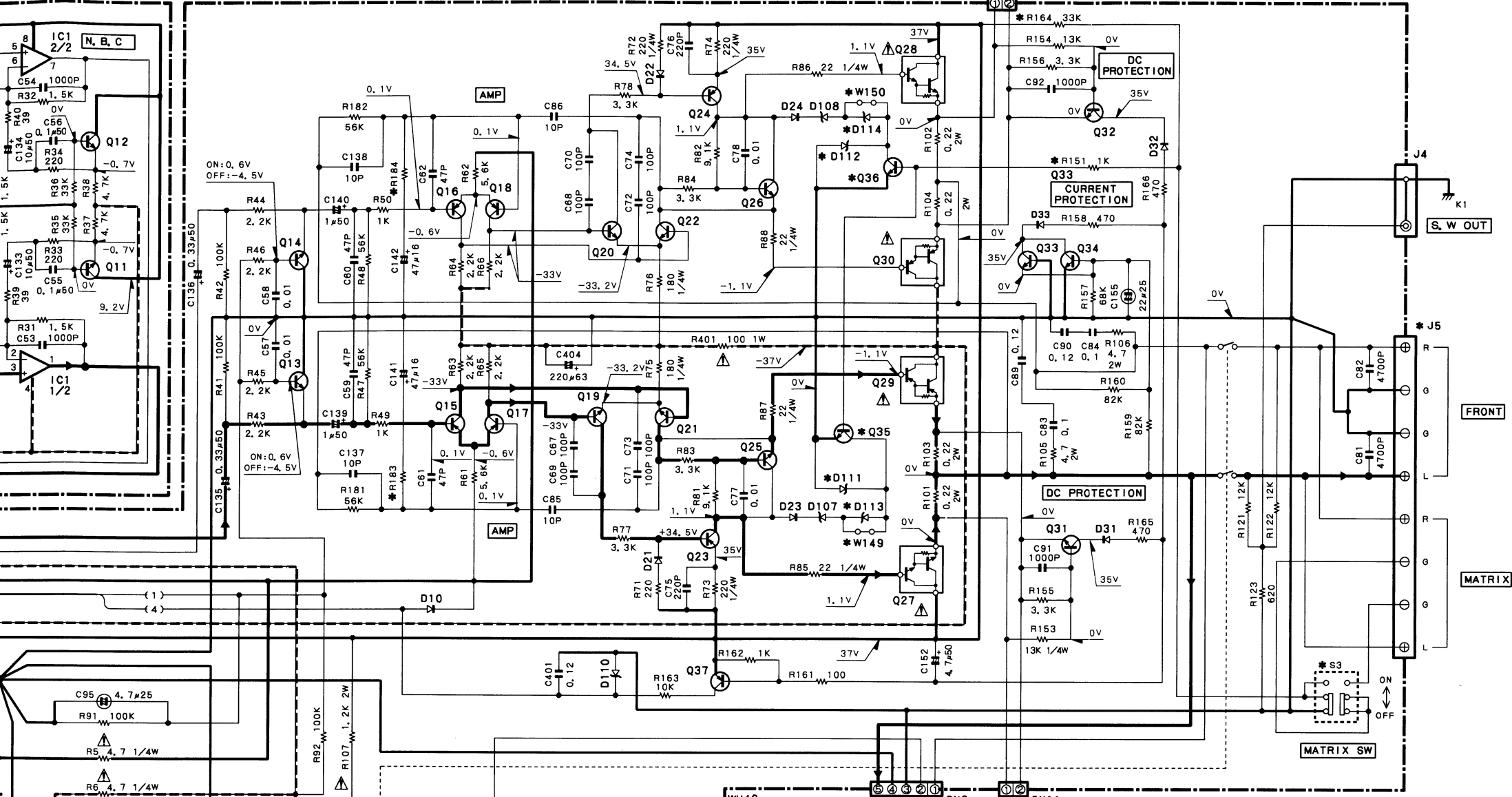
X09-412X-X1 A/6

CN12 + -

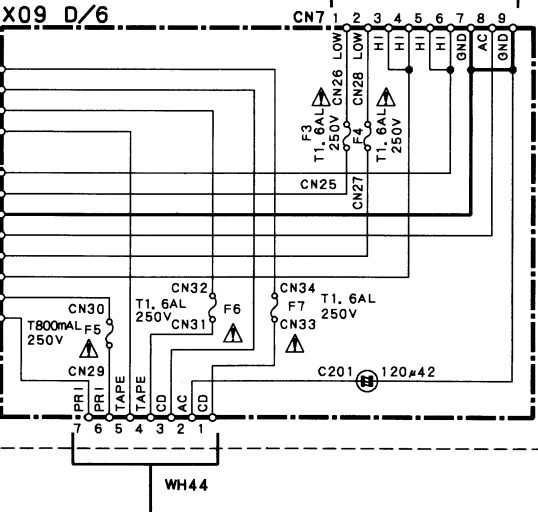
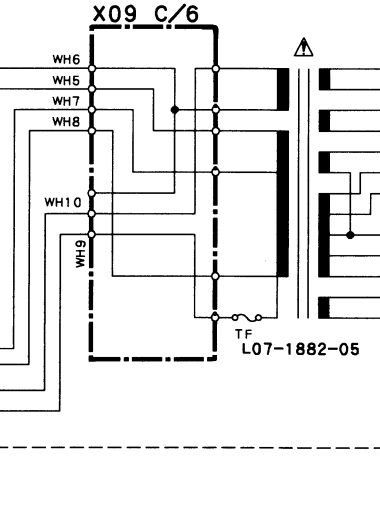
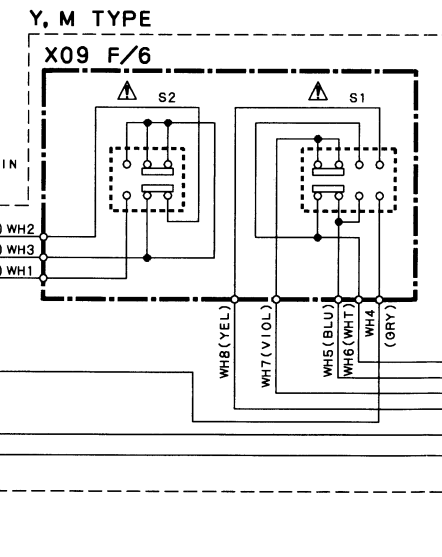
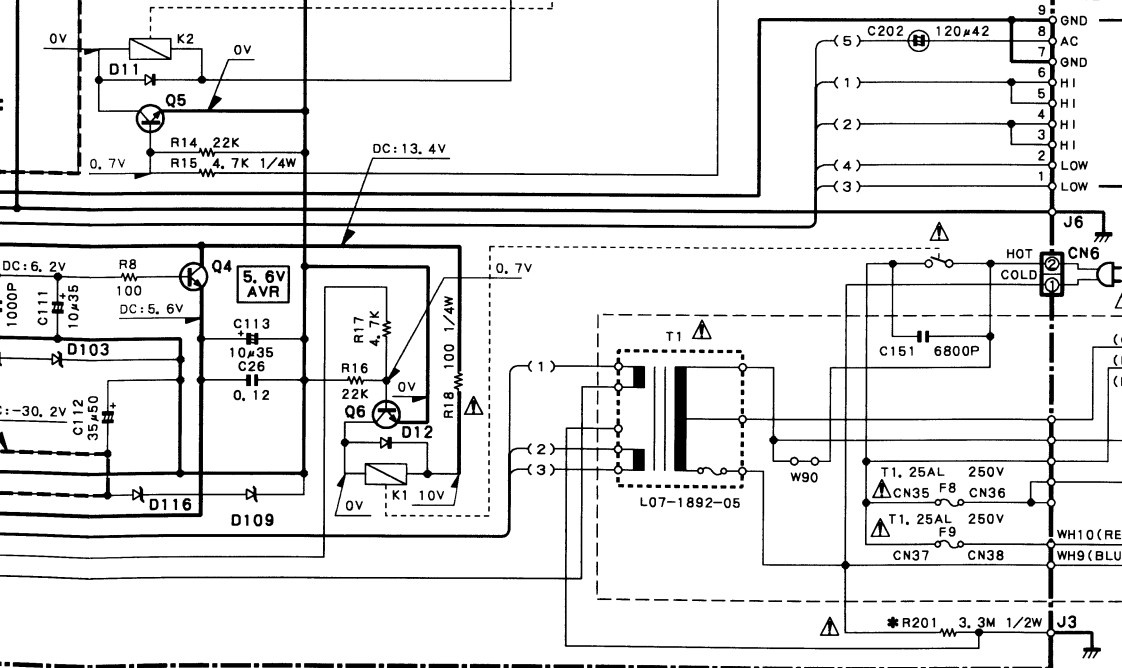


Y, M TYPE
X09 F/6

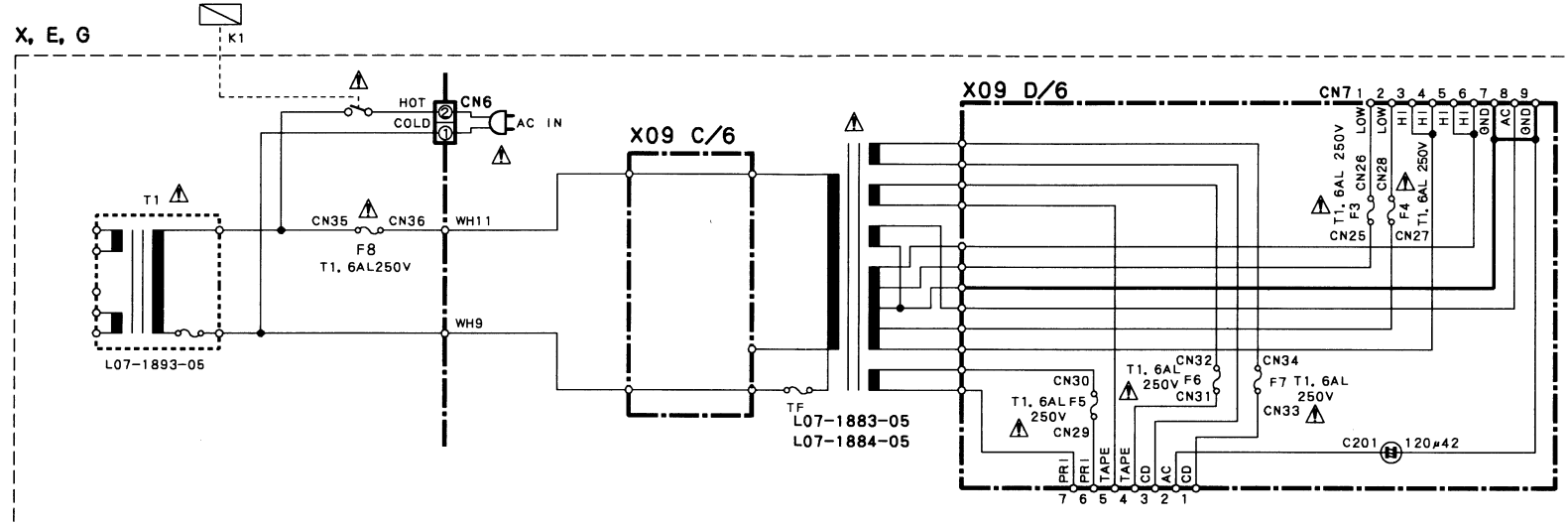
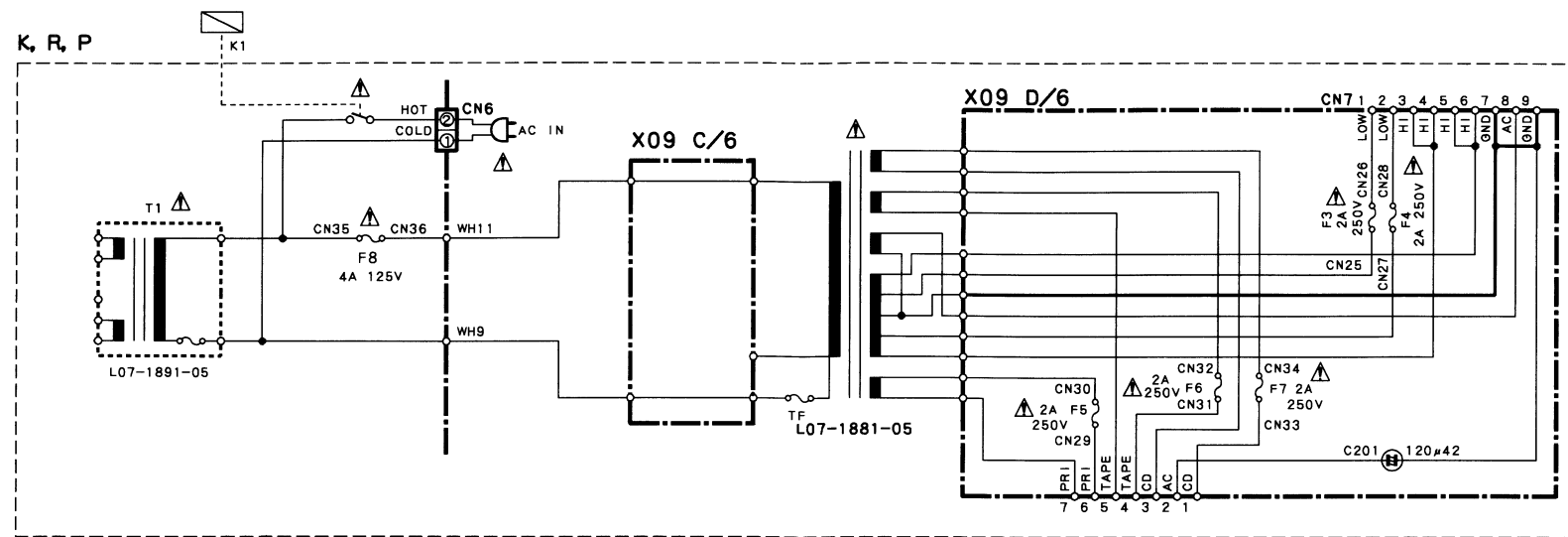
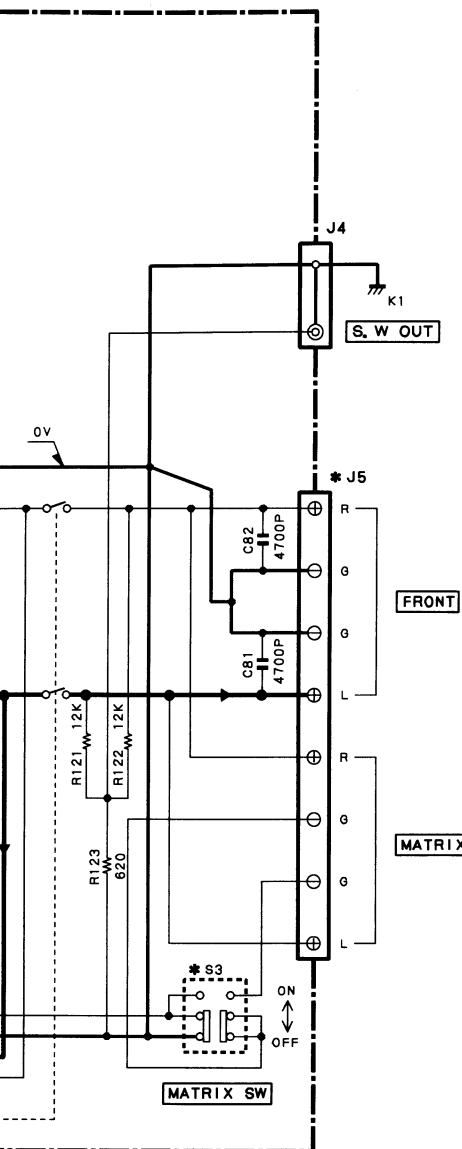




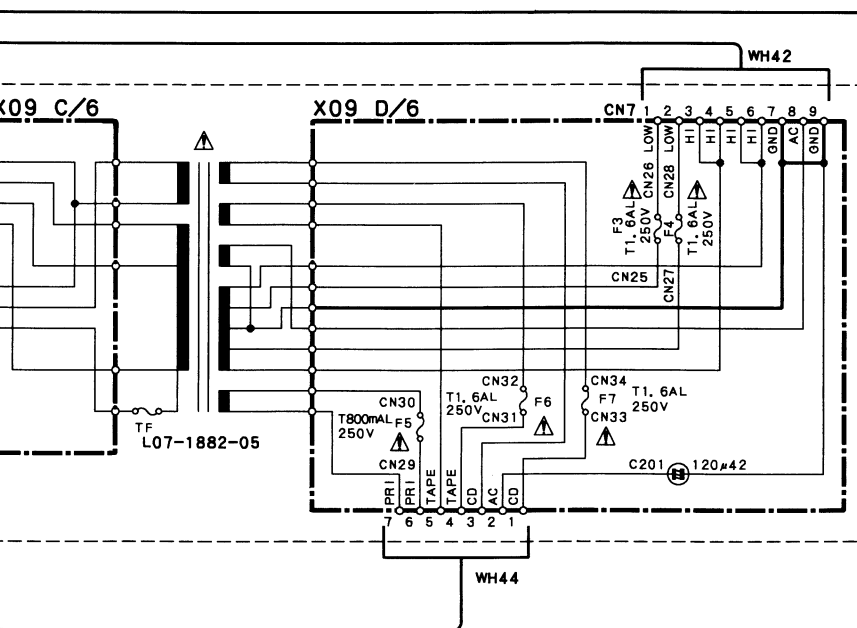
REF. NO.	J5	S3	Q35, 36	D1	D15, 16	D107, 108
UNIT	ABR					
0-11	K, R, P	E70-0032-05	NO	NO	D58BA20F03 or RBV-602LFA	RD20ES(B2) HZS20N(B2)
0-21	Y, M	E70-0047-05	YES	YES	D38BA20F03 or RBV-402LFA	RD5, 1ES(B2) HZS5, 1N(B2)
2-71	X, E, G					



- IC1 : XRA15218 or NJ
- IC2 : TDA7345D
- Q1 : 2SD882
- Q2 : 2SB764(E, F)
- Q3 : 2SB1370 or 2SB
- Q4 : 2SD2061 or 2SD
- Q5, 6, 31-34 : 2SC2003(L, K)
- Q11, 12, 19-22 : 2SC1845(F, E)
- 35, 36 : 2SC2878(B)
- Q13, 14 : 2SA992(F, E)
- Q15-18, 23, 24 : 2SC4137(V, W)
- 37 : 2SD2493
- Q25, 26 : 2SB1624
- Q27, 28 : 2SD2493
- Q29, 30 : 2SB1624



REF. NO.	UNIT	ABB	J5	S3	Q35, 36	D1	D15, 16	D107, 108	D111, 112	D113, 114	R201	R151, 164	R183, 184	W149, 150
0-11	K, R, P	E70-0032-05	NO	NO	D5SBA20F03 or RBV-602LFA	YES	RD20ES(B2) or HZS20N(B2)	RD15ES(B2) or HZS15N(B2)	NO	YES	NO	470	YES	
0-21	Y, M	E70-0047-05	YES	YES	D3SBA20F03 or RBV-402LFA	NO	RD5, 1ES(B2) or HZS5, 1N(B2)	RD16ES(B2) or HZS16N(B2)	YES	NO	YES	560	NO	
2-71	X, E, G													



- | | | | |
|----------------|-------------------------|---------------|-------------------------------|
| IC1 | :XRA15218 or NJM4565D-D | D1 | :* |
| IC2 | :TDA7345D | D2-9 | :S5688B or ISR139-100 |
| Q1 | :2SD882 | D10-14, 21-24 | :1SS131 or HSS104A |
| Q2 | :2SB764(E, F) | 31-33 | |
| Q3 | :2SB1370 or 2SB1375 | D15, 16 | :RD8, 2ES(B2) or HZS8, 2N(B2) |
| Q4 | :2SD2061 or 2SD2012 | D101, 102 | :RD10ES(B2) or HZS10N(B2) |
| Q5, 6, 31-34 | :2SC2003(L, K) | D103, 109 | :RD15ES(B2) or HZS15N(B2) |
| Q11, 12, 19-22 | :2SC1845(F, E) | D104, 116 | :RD16ES(B2) or HZS16N(B2) |
| Q13, 14 | :2SC2878(B) | D105 | :RD5, 6ES(B2) or HZS5, 6N(B2) |
| Q15-18, 23, 24 | :2SA992(F, E) | D106 | :RD3, 9ES(B2) or HZS3, 9N(B2) |
| 37 | | D107, 108 | :* |
| Q25, 26 | :2SC4137(V, W) | D110 | :RD4, 7ES(B2) or HZS4, 7N(B2) |
| Q27, 28 | :2SD2493 | D111, 112 | :* |
| Q29, 30 | :2SB1624 | D113, 114 | :RD10ES(B2) OR HZS10N(B2) |

——— SIGNAL LINE
 ——— GND LINE
 ——— +B LINE
 - - - - - -B LINE

TO X09 WH43

TO X09 WH41

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.

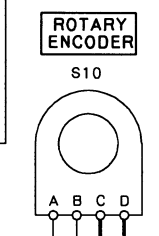
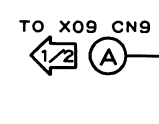
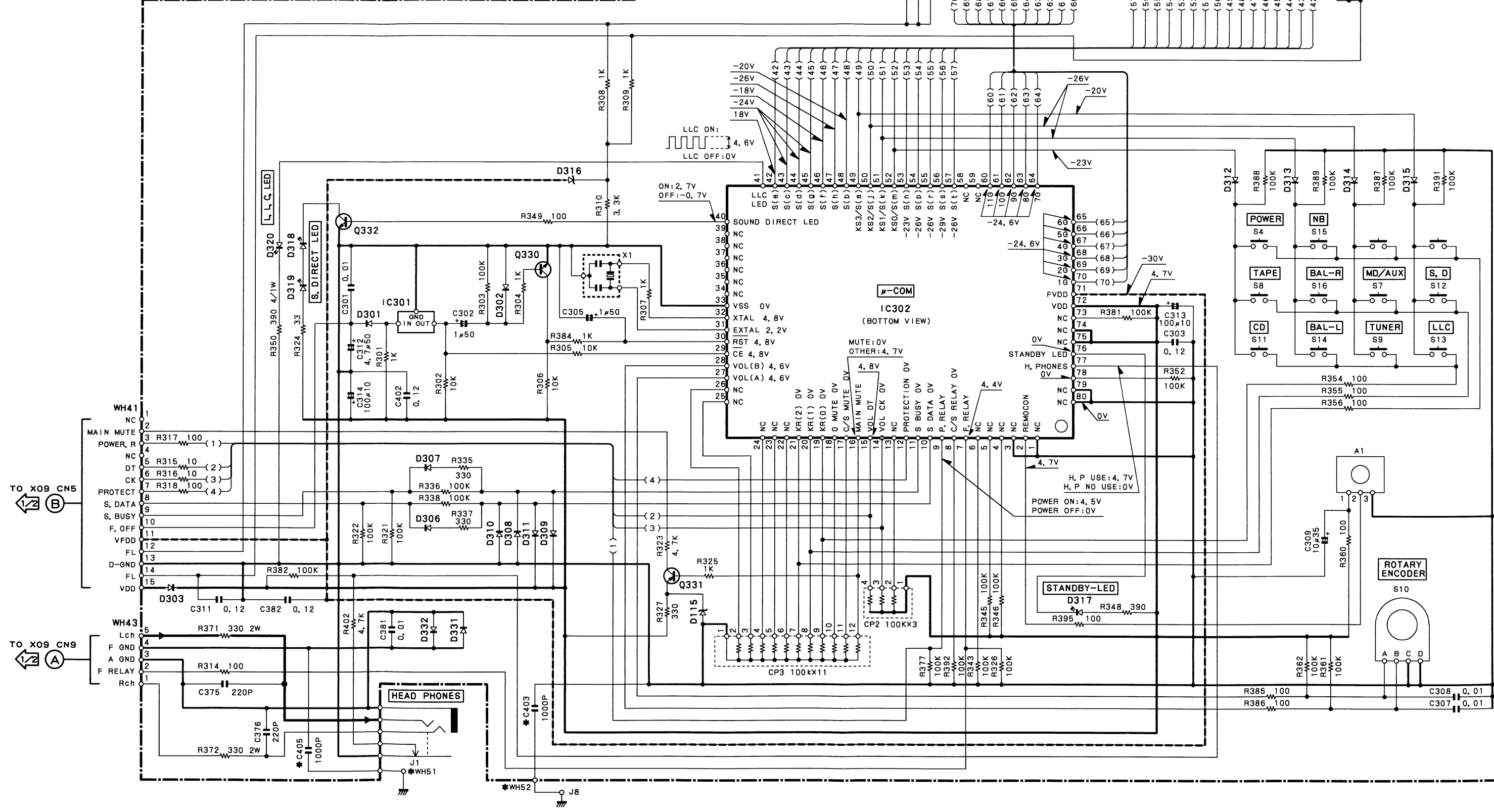
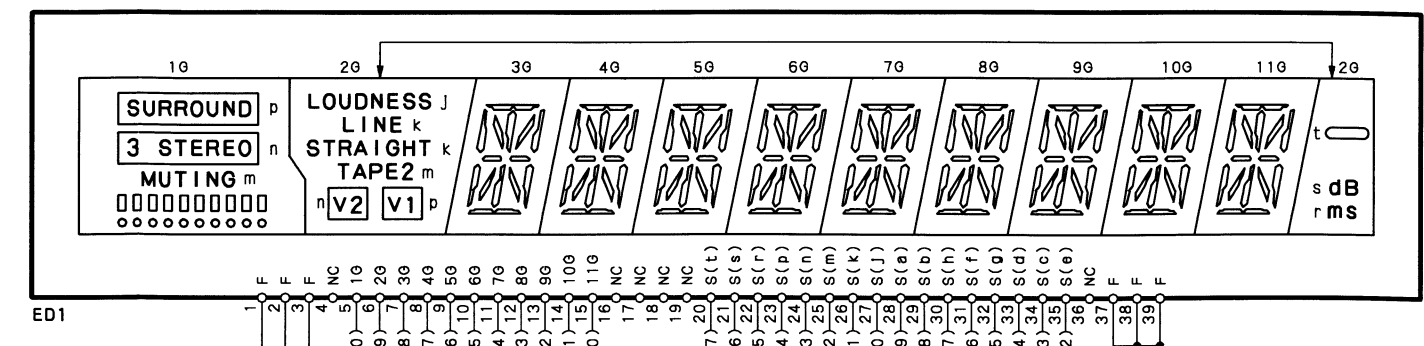
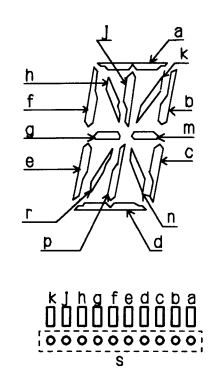
Die angegebenen Gleichspannungswerte wurden mit einem hochohmigen Spannungsmesser ohne Eingangssignal gemessen. Dabei schwanken die Meßwerte aufgrund von Unterschieden zwischen einzelnen Instrumenten oder Geräten u. U. geringfügig.

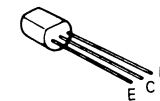
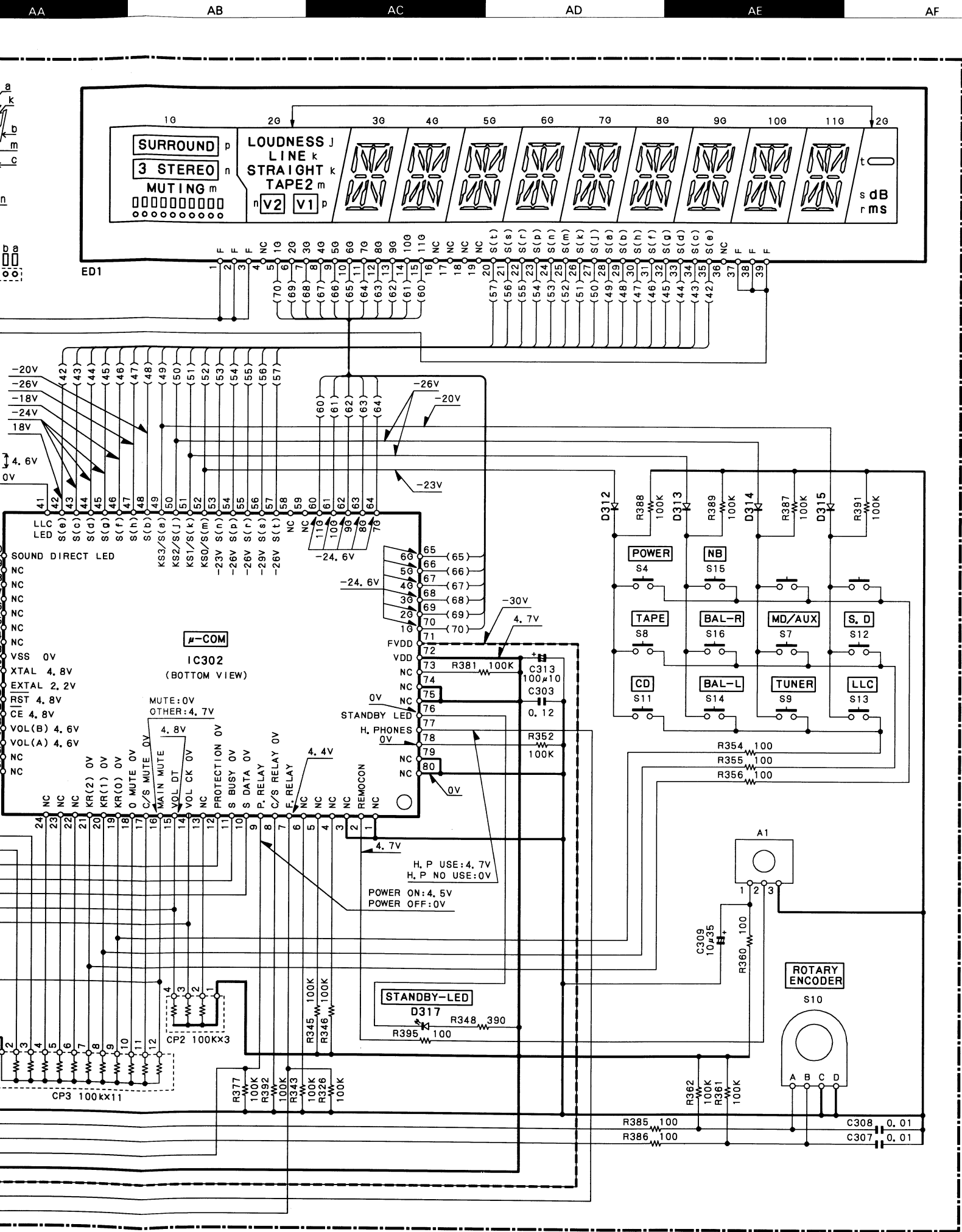
CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). ⚠ Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably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

- IC301 :PST9140-T D115 :RD3, 9ES(B2) or HZS3, 9N(B2)
 IC302 :CXP82616-111Q D301-303 :1SS131 or HSS104A
 Q330 :2SC1845(F, E) 331, 332
 Q331 :2SA992(F, E) D316 :RD13ES(B2) or HZS13N(B2)
 Q332 :2SC4038(Q, R) D317, 320 :B30-2461-05
 D318, 319 :B30-2462-05
 ED1 :FIP11SM8R

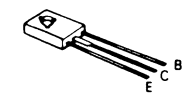
REF. NO.	C403	C405	WH51	WH52
0-11	K, R, P	YES	NO	NO
0-21	Y, M	NO	NO	NO
2-71	X, E, G	YES	YES	YES

X09- B/6

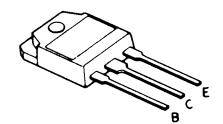




2SA992
2SB764
2SC1845
2SC2003
2SC2878



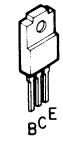
2SD882



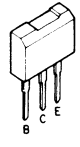
2SB1624
2SD2493



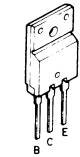
2SC4137



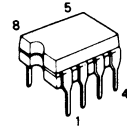
2SB1370
2SD2061



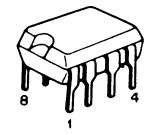
2SB1375
2SD2012



2SC4038



NJM4565D-D



XRA15218

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.

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.

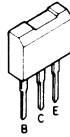
A-F5

EXPLODED VIEW

2SA992
2SB764
2SC1845
2SC2003
2SC2878

2SD882

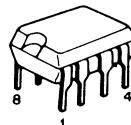
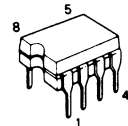
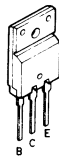
2SB1624
2SD2493



2SC4137

2SB1370
2SD2061

2SB1375
2SD2012



2SC4038

NJM4565D-D

XRA15218

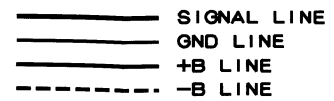
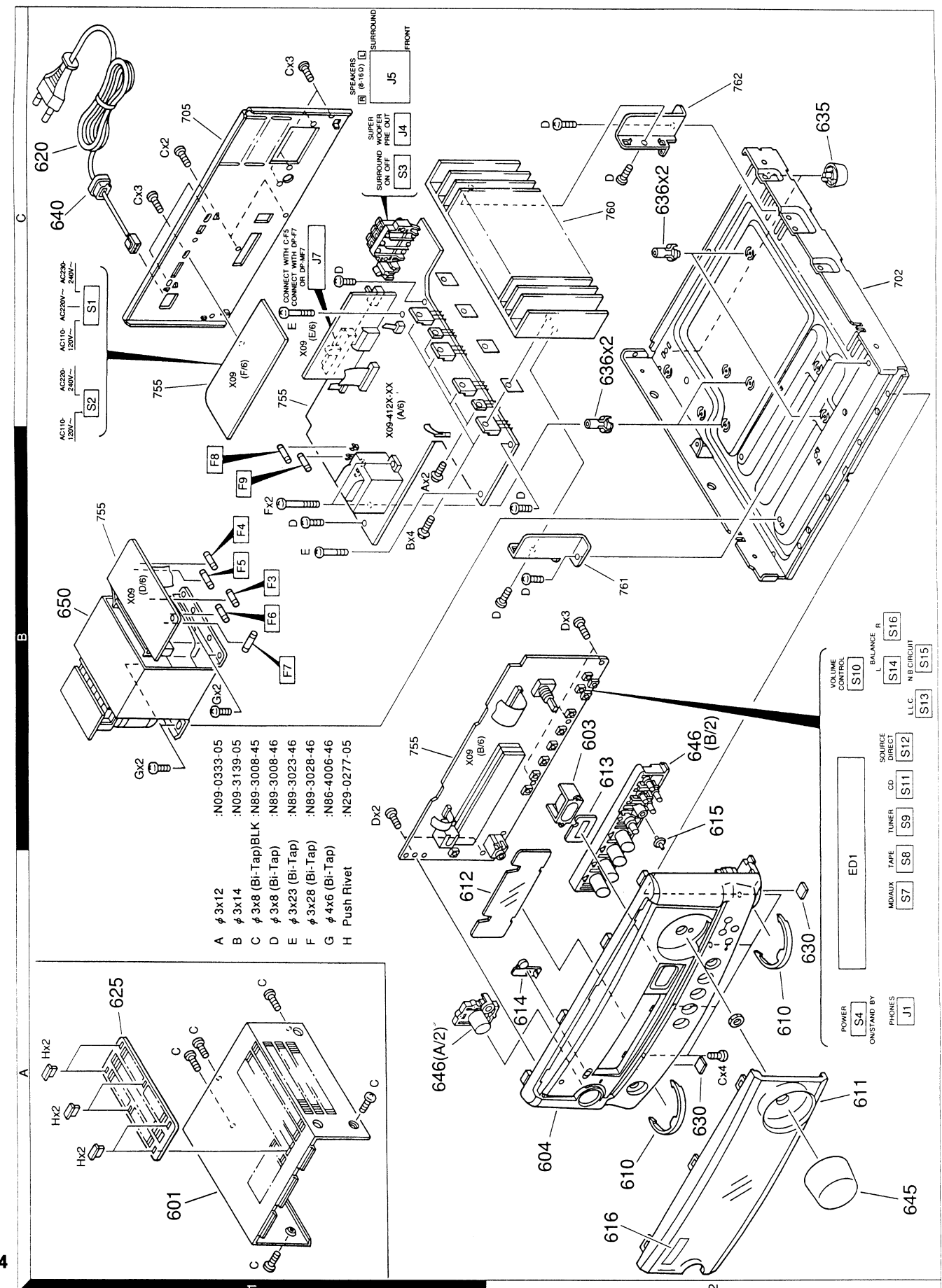
DC voltages are as measured with a high impedance voltmeter with no signal input. Values may vary slightly due to variations between individual instruments or/and units.

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.

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.

- A ϕ 3x12 :N09-0333-05
- B ϕ 3x14 :N09-3139-05
- C ϕ 3x8 (Bi-Tap)BLK :N89-3008-45
- D ϕ 3x8 (Bi-Tap) :N89-3008-46
- E ϕ 3x23 (Bi-Tap) :N89-3023-46
- F ϕ 3x28 (Bi-Tap) :N89-3028-46
- G ϕ 4x6 (Bi-Tap) :N86-4006-46
- H Push Rivet :N29-0277-05



2/2

Y08-5230-11



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

× 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.

NO.1

Ref. No.	Address	New Parts	Parts No.	Description	Destination	Remarks
参照番号	位置	新	部品番号	部品名/規格	仕向	備考
A-F5						
601	1A	*	A01-3225-11	METALLIC CABINET		
603	2B	*	A33-0132-04	REFLECTOR		
604	2A	*	A60-0708-21	PANEL		
610	2A	*	B07-2268-14	ESCUTCHEON		
611	2A	*	B10-2091-22	FRONT GLASS		
612	1A	*	B11-0289-04	COLOR FILTER		
613	2B	*	B12-0253-04	INDICATOR		
614	2A	*	B12-0254-14	INDICATOR		
615	2B	*	B12-0263-14	INDICATOR		
616	2A	*	B43-0301-04	KENWOOD BADGE		
-		*	B46-0310-03	WARRANTY CARD	EG	
-		*	B58-0968-04	CAUTION CARD	Y	
△△△ 620	1C		E30-2592-15	AC POWER CORD	MEG	
△△△ 620	1C		E30-2605-05	AC POWER CORD	Y	
△△△ 620	1C		E30-2650-05	AC POWER CORD	KRP	
△△△ 620	1C		E30-2717-05	AC POWER CORD	X	
625	1A	*	F20-1427-03	INSULATING BOARD	M	
630	2A	*	G11-2231-14	CUSHION		
		*	H50-1443-04	ITEM CARTON CASE	KRPYX	S
		*	H50-1444-04	ITEM CARTON CASE	M	S
		*	H50-1445-04	ITEM CARTON CASE	EG	S
		*	H50-1535-04	ITEM CARTON CASE	KRPYX	W
		*	H50-1536-04	ITEM CARTON CASE	M	W
		*	H50-1537-04	ITEM CARTON CASE	EG	W
-		*	H10-5991-02	POLYSTYRENE FOAMED FIXTURE (L)		S
-		*	H10-5992-02	POLYSTYRENE FOAMED FIXTURE (R)		S
-		*	H10-7035-02	POLYSTYRENE FOAMED FIXTURE (L)		W
-		*	H10-7036-02	POLYSTYRENE FOAMED FIXTURE (R)		W
-			H13-0138-14	CARTON BOARD	X	
-			H25-0681-04	PROTECTION BAG		
635	2C		J02-0366-15	FOOT REAR		
△ 636	2C		J19-3752-14	UNIT HOLDER		
640	1C		J42-0083-05	POWER CORD BUSHING		
-			J61-0307-05	WIRE BAND		
645	2A	*	K29-6105-14	KNOB VOLUME CONTROL		
646	1A, 2B	*	K29-6136-02	KNOB		
650	1B	*	L07-1881-05	POWER TRANSFORMER	KRP	
650	1B	*	L07-1882-05	POWER TRANSFORMER	YM	
650	1B	*	L07-1883-05	POWER TRANSFORMER	EG	
650	1B	*	L07-1884-05	POWER TRANSFORMER	X	
C	1A, 1C		N89-3008-45	BINDING HEAD TAPTITE SCREW		
D	2B, 2C		N89-3008-46	BINDING HEAD TAPTITE SCREW		
E	1B, 1C		N89-3023-46	BINDING HEAD TAPTITE SCREW		
F	1B	*	N89-3028-46	BINDING HEAD TAPTITE SCREW		
G	1B		N86-4006-46	BINDING HEAD TAPTITE SCREW		
H	1A		N29-0277-05	PUSH RIVET	M	
AUDIO UNIT (X09-412X-XX)						
D317			B30-2461-05	LED(RED,5)		
D318, 319			B30-2462-05	LED(GRN)		

L: Scandinavia K: USA P: Canada R: Mexico S: SINGAPORE MADE
 Y: PX(Far East, Hawaii) T: England E: Europe G: Germany W: MALAYSIA MADE
 Y: AAFES (Europe) X: Australia M: Other Areas △ indicates safety critical components

× 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.

NO.2

Ref. No.	Address	New Parts	Parts No.	Description	Destination	Remarks
参照番号	位置	新	部品番号	部品名/規格	仕向	備考
D320			B30-2461-05	LED(RED,5)		
C3 ,4			CF92FV1H124J	MF-C		0.12UF J
C7 -10			CF92FV1H124J	MF-C		0.12UF J
C25			CK45FB1H102K	CERAMIC		1000PF K
C26			CF92FV1H124J	MF-C		0.12UF J
C27 ,28			CQ93FMG1H103J	MYLAR		0.010UF J
C29			CQ93FMG1H104J	MYLAR		0.10UF J
C31			CQ93FMG1H104J	MYLAR		0.10UF J
C32			CQ93FMG1H223J	MYLAR		0.022UF J
C33			CQ93FMG1H104J	MYLAR		0.10UF J
C34			CQ93FMG1H223J	MYLAR		0.022UF J
C35			CQ93FMG1H562J	MYLAR		5600PF J
C36			CQ93FMG1H122J	MYLAR		1200PF J
C37			CF92FV1H684J	MF-C		0.68UF J
C38			CE04LW1H2R2M	ELECTRO		2.2UF 50WV
C39 -42			CQ93FMG1H104J	MYLAR		0.10UF J
C43 ,44			CQ93FMG1H562J	MYLAR		5600PF J
C45 ,46			CC45FSL1H221J	CERAMIC		220PF J
C47 ,48		*	CQ93FMG1H391K	MYLAR		390PF K
C51 ,52			CC45FSL1H181J	CERAMIC		180PF J
C53 ,54			CK45FB1H102K	CERAMIC		1000PF K
C55 ,56			CE04LW1H0R1M	ELECTRO		0.1UF 50WV
C57 ,58			CK45FF1H103Z	CERAMIC		0.010UF Z
C59 -62			CC45FSL1H470J	CERAMIC		47PF J
C67 -74			CC45FSL1H101J	CERAMIC		100PF J
C75 ,76			CC45FSL1H221J	CERAMIC		220PF J
C77 ,78			CK45FF1H103Z	CERAMIC		0.010UF Z
C81 ,82			CQ93FMG1H472J	MYLAR		4700PF J
C83 ,84			CQ93FMG1H104J	MYLAR		0.10UF J
C85 ,86			CC45FSL1H100D	CERAMIC		10PF D
C89 ,90			CF92FV1H124J	MF-C		0.12UF J
C91 ,92			CK45FB1H102K	CERAMIC		1000PF K
C93 ,94			CC45FSL1H331J	CERAMIC		330PF J
C95			CE04HW1E4R7M	NP-ELEC		4.7UF 25WV
C101,102		*	C90-3580-05	ALUMINIUM ELECTROLYTIC C.		
C103,104			CE04LW1V102M	ELECTRO		1000UF 35WV
C105,106			CE04LW1V100M	ELECTRO		10UF 35WV
C107,108			CQ93FMG1H104J	MYLAR		0.10UF J
C109			CE04LW1V102M	ELECTRO		1000UF 35WV
C111			CE04LW1V100M	ELECTRO		10UF 35WV
C112			CE04LW1H100M	ELECTRO		10UF 50WV
C113			CE04LW1V100M	ELECTRO		10UF 35WV
C114			CK45FF1H103Z	CERAMIC		0.010UF Z
C121,122			CE04LW1H2R2M	ELECTRO		2.2UF 50WV
C123,124			CE04LW1H0R1M	ELECTRO		0.1UF 50WV
C125			CE04LW1H220M	ELECTRO		22UF 50WV
C126			CE04LW1C101M	ELECTRO		100UF 16WV
C133,134			CE04LW1H100M	ELECTRO		10UF 50WV
C135,136			CE04LW1HR33M	ELECTRO		0.33UF 50WV
C137,138			CC45FSL1H100D	CERAMIC		10PF D
C139,140			CE04LW1H010M	ELECTRO		1.0UF 50WV
C141,142			CE04LW1C470M	ELECTRO		47UF 16WV
C143			CC45FSL1H101J	CERAMIC		100PF J
C144			CF92FV1H124J	MF-C		0.12UF J

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PARTS LIST

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NO.3

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
C145			CC45FSL1H101J	CERAMIC 100PF J		
C151			C91-1488-05	MF 6800PF 250VAC		
C152			CE04LW1H4R7M	ELECTRO 4.7UF 50WV		
C155			CE04HW1E220M	NP-ELEC 22UF 25WV		
C201		*	C90-3591-05	ELECTRO 120UF 42WV		
C202			C90-1839-05	NP-ELEC 120UF 42WV		
C301			CK45FF1H103Z	CERAMIC 0.010UF Z		
C302			CE04LW1H010M	ELECTRO 1.0UF 50WV		
C303			CF92FV1H124J	MF-C 0.12UF J		
C305			CE04LW1H010M	ELECTRO 1.0UF 50WV		
C307, 308			C91-0769-05	CERAMIC 0.010UF K		
C309			CE04LW1V100M	ELECTRO 10UF 35WV		
C311			CF92FV1H124J	MF-C 0.12UF J		
C312			CE04LW1V4R7M	ELECTRO 4.7UF 35WV		
C313, 314			CE04LW1A101M	ELECTRO 100UF 10WV		
C375, 376			CC45FSL1H221J	CERAMIC 220PF J		
C381			CK45FF1H103Z	CERAMIC 0.010UF Z		
C382			CF92FV1H124J	MF-C 0.12UF J		
C401, 402			CF92FV1H124J	MF-C 0.12UF J		
C403			CQ93FMG1H102J	MYLAR 1000PF J	KRPXEG	
C404			CE04LW1J221M	ELECTRO 220UF 63WV	XEG	
C405			CQ93FMG1H102J	MYLAR 1000PF J	XEG	
CN5	1B, 1C		E40-4244-05	SOCKET FOR PIN ASSY		
CN6	1B, 1C		E40-4245-05	PIN ASSY		
CN7	1C	*	E40-4866-05	SOCKET FOR PIN ASSY		
CN8	1C	*	E40-4861-05	PIN ASSY		
CN9	1C	*	E40-4295-05	FLAT CABLE CONNECTOR		
CN11, 12	1B, 1C		E40-0211-05	PIN ASSY		
J1			E11-0234-05	PHONE JACK PHONES		
J4			E63-0116-05	PHONE JACK S.W. PRE OUT		
J5			E70-0032-05	LOCK TERMINAL BOARD SPEAKERS	KRP	
J5			E70-0047-05	LOCK TERMINAL BOARD SPEAKERS	YMXEG	
J7			E58-0006-05	RECTANGULAR RECEPTACLE C-F5/DP		
F3	-7		F04-2025-05	FUSE (UL) (250V 2A)	KRP	
F3	, 4		F05-1623-05	FUSE (SEMKO) (250V T1.6AL)	YMXEG	
F5			F05-8013-05	FUSE (SEMKO) (250V T800MA)	YMXEG	
F6	-8		F05-1623-05	FUSE (SEMKO) (250V T1.6AL)	XEG	
F6	, 7		F05-1623-05	FUSE (SEMKO) (250V T1.6AL)	YM	
F8			F05-4028-05	FUSE (UL) (125V 4A)	KRP	
F8	, 9		F05-1222-05	FUSE (SEMKO) (250V T1.25A)	YM	
CN25-36			J13-0075-05	FUSE CLIP	KRPXEG	
CN25-38			J13-0075-05	FUSE CLIP	YM	
T1		*	L07-1891-05	POWER TRANSFORMER	KRP	
T1		*	L07-1892-05	POWER TRANSFORMER	YM	
T1		*	L07-1893-05	POWER TRANSFORMER	XEG	
X1			L78-0290-05	RESONATOR (8MHz)		
A	1B		N09-0333-05	HEXAGON HD TAPPING SCREW(3X12)		
B	1B		N09-3139-05	HEXAGON WITH WASHER (3X14)		
CP2			R90-0850-05	MULTI-COMP 100KX3 J 1/6W		
CP3			R90-0851-05	MULTI-COMP 100KX11		
R5	, 6		RD14NB2E4R7J	RD 4.7 J 1/4W		
R12			RD14NB2E4R7J	RD 4.7 J 1/4W		

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NO.4

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
R18			RD14NB2E101J	RD 100 J 1/4W		
R71	-74		RD14NB2E221J	RD 220 J 1/4W		
R75	, 76		RD14NB2E181J	RD 180 J 1/4W		
R85	-88		RD14NB2E220J	RD 22 J 1/4W		
R101-104			R92-1771-05	METAL PLATE RESISTOR		
R105, 106			RS14KB3D4R7J	FL-PROOF RS 4.7 J 2W		
R107			RS14KB3D122J	FL-PROOF RS 1.2K J 2W	KRP	
R201			R92-1769-05	CARBON 3.3M J 1/2W		
R371, 372			RS14KB3D331J	FL-PROOF RS 330 J 2W		
R401			RS14KB3A101J	FL-PROOF RS 100 J 1W		
K1			S51-1052-05	MAGNETIC RELAY		
K2			S76-0005-05	MAGNETIC RELAY		
S1			S31-2322-05	SLIDE SWITCH 110-/220-/230-	YM	
S2			S62-0001-05	SLIDE SWITCH 110-/220-	YM	
S3		*	S62-0050-05	SLIDE SWITCH SURROUND ON/OFF	YMXEG	
S4			S40-1064-05	PUSH SWITCH POWER		
S7	-9		S40-1064-05	PUSH SWITCH MD/AUX/TAPE/TUNER		
S11	-16		S40-1064-05	PUSH SWITCH		
S10		*	T99-0559-05	ROTARY ENCODER VOLUME CONTROL		
D1			D35BA20F03	DIODE	YMXEG	
D1			D55BA20F03	DIODE	KRP	
D1			RBV-402LFA	DIODE	YMXEG	
D1			RBV-602LFA	DIODE	KRP	
D2	-9		S5688B	DIODE		
D2	-9		1SR139-100	DIODE		
D10	-14		HSS104A	DIODE		
D10	-14		1SS131	DIODE		
D15	16		HZS8.2N(B2)	DIODE	KRPYM	
D15	16		RD8.2ES(B2)	DIODE	KRPYM	
D21	-24		HSS104A	DIODE		
D21	-24		1SS131	DIODE		
D31	-33		HSS104A	DIODE		
D31	-33		1SS131	DIODE		
D101, 102			HZS10N(B2)	ZENER DIODE		
D101, 102			RD10ES(B2)	ZENER DIODE		
D103			HZS15N(B2)	ZENER DIODE		
D103			RD15ES(B2)	ZENER DIODE		
D104			HZS16N(B2)	ZENER DIODE		
D104			RD16ES(B2)	ZENER DIODE		
D105			HZS5.6N(B2)	ZENER DIODE		
D105			RD5.6ES(B2)	ZENER DIODE		
D106			HZS3.9N(B2)	ZENER DIODE		
D106			RD3.9ES(B2)	ZENER DIODE		
D107, 108			HZS20N(B2)	ZENER DIODE	KRP	
D107, 108			HZS5.1N(B2)	ZENER DIODE	YMXEG	
D107, 108			RD20ES(B2)	ZENER DIODE	KRP	
D107, 108			RD5.1ES(B2)	ZENER DIODE	YMXEG	
D109			HZS15N(B2)	ZENER DIODE		
D109			RD15ES(B2)	ZENER DIODE		
D110			HZS4.7N(B2)	ZENER DIODE		
D110			RD4.7ES(B2)	ZENER DIODE		
D111, 112			HZS15N(B2)	ZENER DIODE	KRP	
D111, 112			HZS16N(B2)	ZENER DIODE	YMXEG	
D111, 112			RD15ES(B2)	ZENER DIODE	KRP	

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NO.5

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D111, 112			RD16ES(B2)	ZENER DIODE	YMXEG	
D113, 114			HZS10N(B2)	ZENER DIODE	YMXEG	
D113, 114			RD10ES(B2)	ZENER DIODE	YMXEG	
D115			HZS3.9N(B2)	ZENER DIODE		
D115			RD3.9ES(B2)	ZENER DIODE		
D116			HZS16N(B2)	ZENER DIODE		
D116			RD16ES(B2)	ZENER DIODE		
D301-303			HSS104A	DIODE		
D301-303			1SS131	DIODE		
D306-315			HSS104A	DIODE		
D306-315			1SS131	DIODE		
D316			HZS13N(B2)	ZENER DIODE		
D316			RD13ES(B2)	ZENER DIODE		
D331, 332			HSS104A	DIODE		
D331, 332			1SS131	DIODE		
ED1			FIP11SM0R	INDICATOR TUBE		
IC1			NJM4565D-D	IC(OP AMP X2)		
IC1			XRA15218	IC(OP AMP)		
IC2		*	TDA7845D	ANALOGUE IC		
IC301			PST9140-T	ANALOGUE IC		
IC302		*	CXP82616-111Q	MI-COM IC		
Q1			2SD882	TRANSISTOR		
Q2			2SB764(E,F)	TRANSISTOR		
Q3			2SB1370	TRANSISTOR		
Q3			2SB1375	TRANSISTOR		
Q4			2SD2012	TRANSISTOR		
Q4			2SD2061	TRANSISTOR		
Q5 ,6			2SC2003(L,K)	TRANSISTOR		
Q11 ,12			2SC1845(F,E)	TRANSISTOR		
Q13 ,14			2SC2878(B)	TRANSISTOR		
Q15 -18			2SA992(F,E)	TRANSISTOR		
Q19 -22			2SC1845(F,E)	TRANSISTOR		
Q23 ,24			2SA992(F,E)	TRANSISTOR		
Q25 ,26			2SC4137(V,W)	TRANSISTOR		
Q27 ,28			2SD2493	TRANSISTOR		
Q29 ,30			2SB1624	TRANSISTOR		
Q31 -34			2SC2003(L,K)	TRANSISTOR		
Q35 ,36			2SC1845(F,E)	TRANSISTOR	YMXEG	
Q37			2SA992(F,E)	TRANSISTOR		
Q330			2SC1845(F,E)	TRANSISTOR		
Q331			2SA992(F,E)	TRANSISTOR		
Q332			2SC4038(Q,R)	TRANSISTOR		
A1			W02-1191-05	ELECTRIC CIRCUIT MODULE		

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