

HCD-V515

SERVICE MANUAL

*E Model
Chinese Model*



HCD-V515 is the Amplifier, Video CD player, Tape Deck and Tuner section in MHC-V515.

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "DOLBY" and the double-D symbol $\square\square$ are trademarks of Dolby Laboratories Licensing Corporation.

- HCD-V515 is almost same as HCD-V717. This manual contains only the points which differ from HCD-V717. Please refer to HCD-V717 service manual (9-922-879- $\square\square$) previously issued for other information.

SPECIFICATIONS

Amplifier section

The following measured at AC 110, 220 V 50/60 Hz
DIN power output (rated) 50 + 50 watts
(6 ohms at 1 kHz, DIN)

Continuous RMS power output (reference)
65 + 65 watts
(6 ohms at 1 kHz,
10% THD)

The following measured at AC 120, 240 V 50/60 Hz
DIN power output (rated) 60 + 60 watts
(6 ohms at 1 kHz, DIN)

Continuous RMS power output (reference)
75 + 75 watts
(6 ohms at 1 kHz,
10% THD)

Peak music power output (reference)
1000 watts

Inputs

MD/VIDEO (AUDIO) IN (phono jacks):
voltage 450/250 mV,
impedance 47 kilohms

MIC 1/2 (phone jack):
sensitivity 1 mV,
impedance 10 kilohms

Outputs

MD/VIDEO (AUDIO) OUT (phono jacks):
voltage 250 mV
impedance 1 kilohms

VIDEO OUT (phono jack): max. output level
1Vp-p, unbalanced, Sync
negative, load impedance
75 ohms

S-VIDEO OUT (4-pin/mini-DIN jack):
Y: 1Vp-p, unbalanced,
Sync negative,
C: 0.286Vp-p,
load impedance 75 ohms

PHONES (stereo phone jack):
accepts headphones of 8
ohms or more

SPEAKER:
accepts impedance of 6 to
16 ohms

SUPER WOOFER:
Voltage 1 V, impedance 1
kilohm

– Continued on next page –

MINI Hi-Fi COMPONENT SYSTEM



SONY®

VIDEO CD/CD player section

System	Compact disc and digital audio and video system
Laser	Semiconductor laser ($\lambda=780\text{nm}$)
Laser output	Emission duration: continuous Max. $41.6 \mu\text{W}^*$ <small>*This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up Block with 7 mm aperture.</small>
Wavelength	780 – 790 nm
Frequency response	2 Hz – 20 kHz (± 0.5 dB)
Signal-to-noise ratio	More than 90 dB
Dynamic range	More than 90 dB
Video color system format	NTSC, PAL

CD OPTICAL DIGITAL OUT (Square optical connector jack, rear panel)	
Wavelength	600 nm
Output Level	-18 dBm

Tape player section

Recording system	4-track 2-channel stereo
Frequency response (DOLBY NR OFF)	40 – 13,000 Hz (± 3 dB), using Sony TYPE I cassette 40 – 14,000 Hz (± 3 dB), using Sony TYPE II cassette

Tuner section

FM stereo, FM/AM superheterodyne tuner

FM tuner section

Tuning range	87.5 – 108.0 MHz
2 band models:	87.5 – 108.0 MHz
3 band (FM-MW-SW) models:	87.5 – 108.0 MHz
Antenna	FM lead antenna
Antenna terminals	75 ohm unbalanced
Intermediate frequency	10.7 MHz

AM tuner section

Tuning range	531 – 1,602 kHz
2 Band type:	(with the interval set at 9 kHz) 530 – 1,710 kHz (with the interval set at 10 kHz)
3 Band type:	
MW:	531 – 1,602 kHz (with the interval set at 9 kHz) 530 – 1,710 kHz (with the interval set at 10 kHz)
SW:	5.95 – 17.90 MHz (with the interval set at 5 kHz)
Antenna	AM loop antenna
Antenna terminals	External antenna terminal
Intermediate frequency	450 kHz

General

Power requirements	
Thai and Chinese models:	220 V AC, 50/60 Hz
Other models:	110 - 120 V or 220 - 240 V AC, 50/60 Hz Adjustable with voltage selector
Power consumption:	165 watts
Dimensions (w/h/d)	Approx. 280 x 335 x 380 mm ($13\frac{1}{8}$ x $11\frac{1}{8}$ x 15 in.)
Mass:	Approx. 9.6 kg

Design and specifications are subject to change without notice.

SECTION 1 SERVICING NOTES

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NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.

During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.

The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

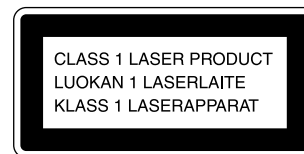
Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270 °C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

This appliance is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.

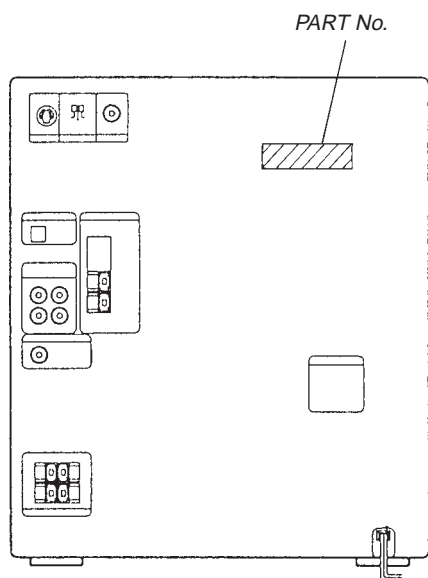


Laser component in this product is capable of emitting radiation exceeding the limit for Class 1.

The following caution label is located inside the unit.

MODEL IDENTIFICATION

– Back Panel –



MODEL	PART No.
Malaysia and Singapore models	4-999-906-0□
Saudi Arabia model	4-999-906-1□
Chinese model	4-999-906-2□
Hong Kong model	4-999-906-3□
Taiwan model	4-999-906-4□
Indonesia model	4-999-906-5□
Thai model	4-999-906-9□

IC502 OF VIDEO BOARD

IC502 of the VIDEO board consists of the former type and new type. The following table shows the differences between the two types.

Only spare parts for the new type IC502 are supplied.

Units using the former IC502 will not function when replaced with the new type without performing the following procedure.

Consequently, replace IC502 of units using the former type according to the following procedure.

Table of Differences

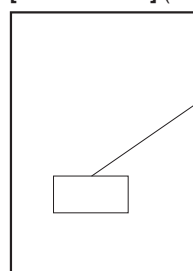
	FORMER TYPE	NEW TYPE
C407, 408	MOUNT	NO MOUNT
IC502	M30620MC-302FP	M30620MC-305FP
JW421, JW422	NO MOUNT	MOUNT
IC402	MOUNT	NO MOUNT
R413, 421, 422	MOUNT	NO MOUNT
X401	MOUNT	NO MOUNT

Replacing Procedure

1. Remove IC402.
2. Solder JW421 and JW422, or short-circuit with a lead wire, etc.
3. Replace IC502 with a new one.

How to Differentiate

[VIDEO board] (Side A)



Those with IC402 : FORMER TYPE
Those without IC402: NEW TYPE

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK \triangle OR DOTTED LINE WITH MARK \triangle ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

与安全有关的零部件须知

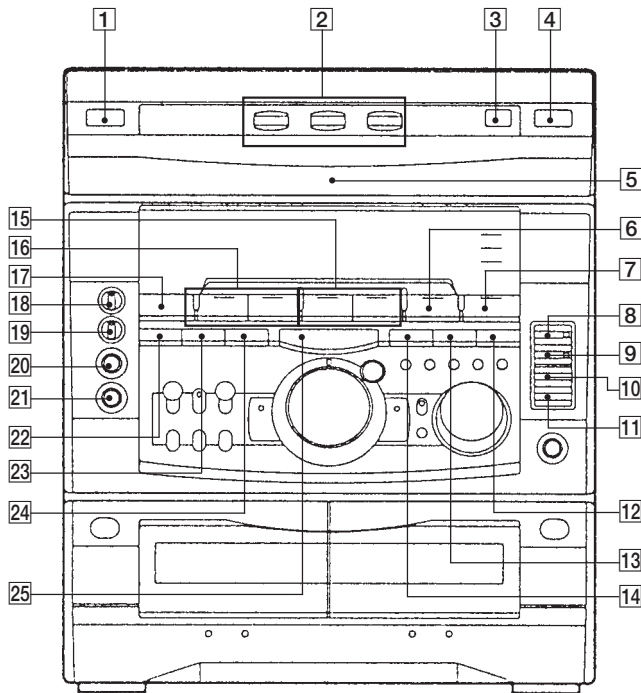
在原理图上用阴影及 \triangle 标记来识别的零部件在安全操作上是具有关键性的。这些零部件要用本手册中所示的部件号对应的索尼零部件进行更换。

在安全操作上具有关键性的电路调整与索尼公司出版的维修手册完全一致。在更换关键零部件时或怀疑动作失常时，请进行这些调整操作。

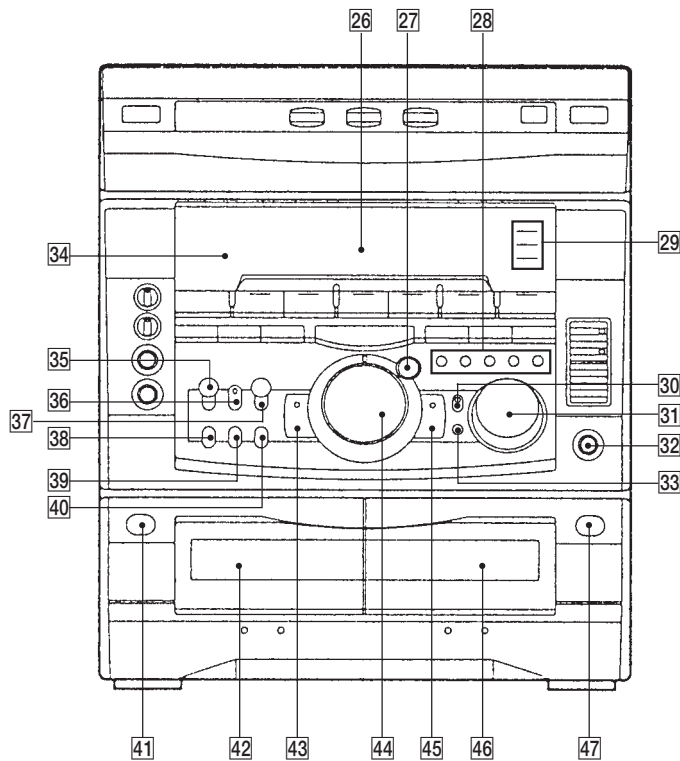
SECTION 2 GENERAL

LOCATION OF CONTROLS

• Front view

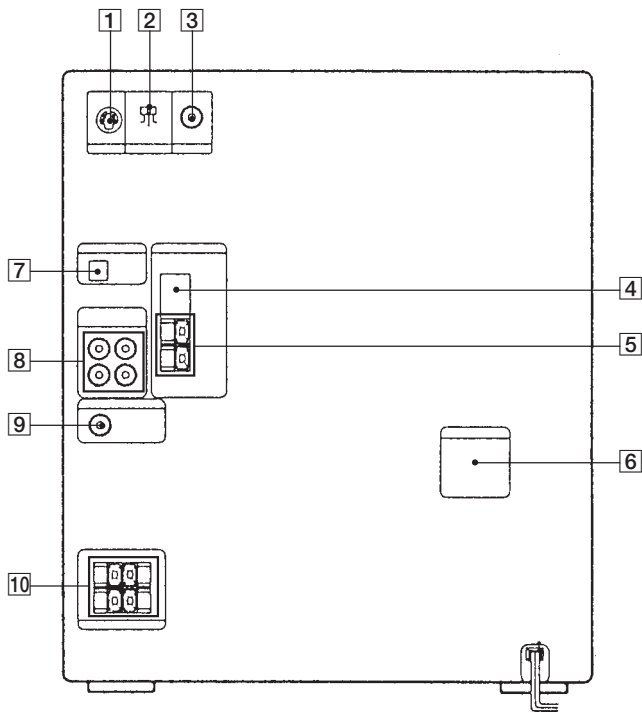


- 1 I/⏻ (Power) button
- 2 DISC 1 to 3 buttons and indicators
- 3 DISC SKIP/EX-CHANGE button
- 4 ▲ (CD) button
- 5 CD disc tray
- 6 CD ►|| button and indicator
- 7 TUNER, BAND button
- 8 ● REC button and indicator
- 9 || PAUSE button and indicator
- 10 HI-DUB button
- 11 CD SYNC button
- 12 FILE SELECT button
- 13 SURROUND button
- 14 KARAOKE PON/MPX button
- 15 DECK B ◀ and ▶ buttons and indicators
- 16 DECK A ◀ and ▶ buttons and indicators
- 17 FUNCTION button
- 18 ECHO LEVEL knob
- 19 MIC LEVEL knob
- 20 MIC1 jack
- 21 MIC2 jack
- 22 DISPLAY/DEMO button
- 23 CLOCK/TIMER SET button
- 24 TIMER SELECT button
- 25 ■ button



- 26 Fluorescent indicator tube
- 27 ENTER/NEXT button and indicator
- 28 ACTIVE, SELECT, RETURN, PREV, NEXT button
- 29 VIDEO CD, PBC, PBC OFF indicators
- 30 GROOVE button and indicator
- 31 VOLUME knob
- 32 PHONES jack
- 33 DBFB button
- 34 Remote sensor
- 35 CD LOOP button
- 36 CD NON-STOP button and indicator
- 37 CD FLASH button
- 38 EDIT, DIRECTION button
- 39 PLAY MODE, DOLBY NR button
- 40 REPEAT button
- 41 ⏻ button (deck A)
- 42 Tape deck A
- 43 -, ◀ button and indicator
- 44 JOG dial
- 45 +, ▶ button and indicator
- 46 Tape deck B
- 47 ⏻ button (deck B)

• Rear view

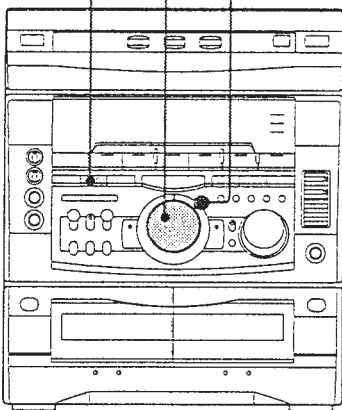


- 1 S VIDEO OUT jack
- 2 SYSTEM SELECT switch
- 3 VIDEO OUT jack
- 4 FM antenna terminal
- 5 AM antenna terminal
- 6 VOLTAGE SELECTOR switch (EXCEPT Thai and Chinese models)
- 7 CD DIGITAL OUT, OPTICAL connector
- 8 MD/VIDEO (AUDIO), IN/OUT jacks
- 9 SUPER WOOFER jack
- 10 SPEAKER terminals

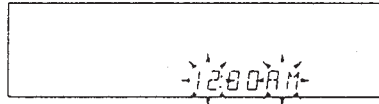
Step 2: Setting the time

You must set the time before using the timer functions.

1 2,4 3,5



- 1 Press CLOCK/TIMER SET.
The hour indication flashes.



- 2 Turn the jog dial to set the hour.

- 3 Press ENTER/NEXT.
The minute indication flashes.



- 4 Turn the jog dial to set the minute.

- 5 Press ENTER/NEXT.
The clock starts working.

Tips

- If you've made a mistake, start over from step 1.
- Setting the time deactivates the demo mode.
If you want to display the demo mode, press DISPLAY/DEMO when the power is off.

Note




The previous explanation shows you how to set the time while the power is off. To change the time while the power is on, do the following:

- 1 Press CLOCK/TIMER SET.
- 2 Turn the jog dial to select SET CLOCK.
- 3 Press ENTER/NEXT.
- 4 Perform steps 2 through 5 above.

SECTION 3 DIAGRAMS











3-1. NOTE FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

Note on Schematic Diagrams:




- All capacitors are in μF unless otherwise noted. pF: μpF
50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $1/4\text{ W}$ or less unless otherwise specified.
- \triangle : internal component.
-  : nonflammable resistor.
-  : fusible resistor.
-  : panel designation.

The components identified by mark \triangle or dotted line with mark \triangle are critical for safety. Replace only with part number specified.

以阴影和 \triangle 标志来识别的零部件在安全方面具有关键性。因此只能以规定号码的零部件来更换。

-  : B+ Line.
-  : B- Line.
- Voltages are taken with a VOM (Input impedance 10 M Ω). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
 -  : TUNER (FM/AM)
 -  : PLAYBACK (DECK A)
 -  : PLAYBACK (DECK B)
 -  : RECORD
 -  : CD PLAY (AUDIO)
 -  : CD PLAY (VIDEO)
 -  : DIGITAL OUT
 -  : MIC INPUT
- Abbreviation
 - CH : Chinese model.
 - TH : Thai model.

Note on Printed Wiring Boards:

-  : parts extracted from the component side.
-  : Through hole.
-  : Pattern from the side which enables seeing.
(The other layers' patterns are not indicated.)

Caution:

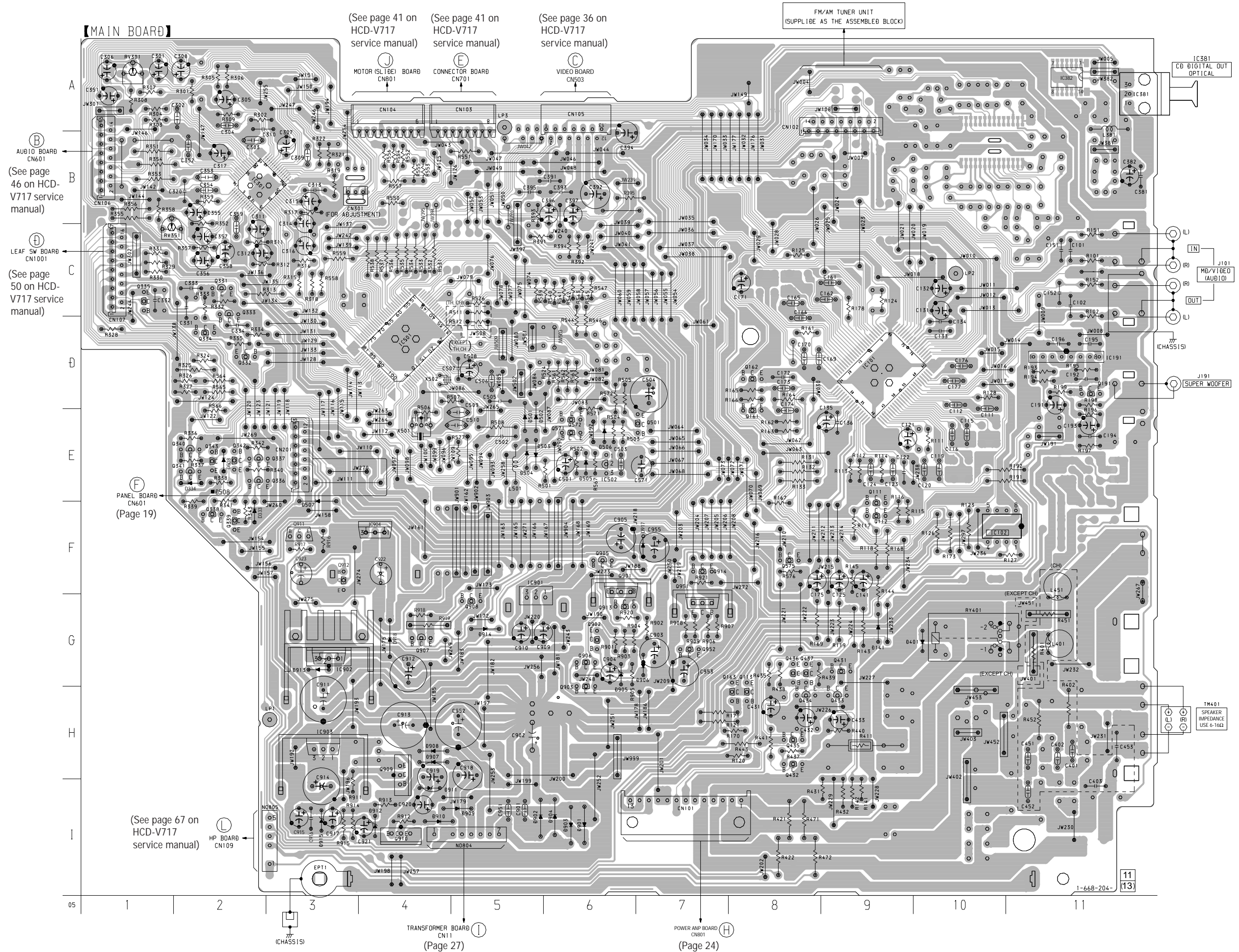
Pattern face side: Parts on the pattern face side seen from the pattern face are indicated.
(Side B)

Parts face side: Parts on the parts face side seen from the parts face are indicated.
(Side A)

• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D141	G-9	Q113	H-8
D333	E-2	Q161	E-8
D334	F-2	Q162	D-8
D401	G-10	Q163	H-8
D501	E-5	Q191	D-11
D502	E-5	Q331	C-2
D503	E-5	Q332	D-2
D504	E-5	Q333	C-2
D505	E-6	Q334	D-2
D506	E-6	Q335	C-1
D507	F-3	Q336	E-2
D508	F-2	Q337	E-2
D901	I-6	Q338	F-2
D902	I-5	Q339	F-2
D903	I-6	Q340	E-2
D904	I-6	Q341	E-2
D905	G-6	Q342	E-2
D906	G-7	Q343	E-2
D907	H-4	Q431	G-9
D908	H-4	Q432	H-8
D909	I-5	Q433	H-9
D910	I-4	Q434	H-8
D911	I-4	Q435	H-8
D912	I-4	Q436	G-8
D913	G-3	Q437	G-8
D914	G-5	Q501	E-7
D915	I-3	Q571	E-6
D-917	F-7	Q572	E-6
D-918	G-4	Q575	F-8
		Q901	F-6
IC101	D-9	Q902	G-6
IC102	F-10	Q903	H-6
IC191	D-11	Q905	F-6
IC301	B-2	Q906	G-6
IC381	A-11	Q907	G-4
IC501	D-4	Q908	G-5
IC502	E-6	Q909	H-4
IC901	G-5	Q910	I-4
IC902	G-3	Q911	F-3
IC903	H-3	Q912	F-3
IC904	F-4	Q913	G-6
		Q914	F-7
Q111	F-9	Q951	G-7
Q112	F-9	Q952	G-7

3-2. PRINTED WIRING BOARD - MAIN Section -



(See page 41 on HCD-V717 service manual) MOTOR (SLIDE) BOARD CN801

(See page 41 on HCD-V717 service manual) CONNECTOR BOARD CN701

(See page 36 on HCD-V717 service manual) VIDEO BOARD CN503

FM/AM TUNER UNIT (SUPPLIE AS THE ASSEMBLED BLOCK)

IC381 CD DIGITAL OUT OPTICAL

J101 MD/VIBCO (AUDIO)

J191 SUPER WOOFER

TM401 SPEAKER IMPEDANCE USE 8-16Ω

【MAIN BOARD】

A
B
C
D
E
F
G
H
I

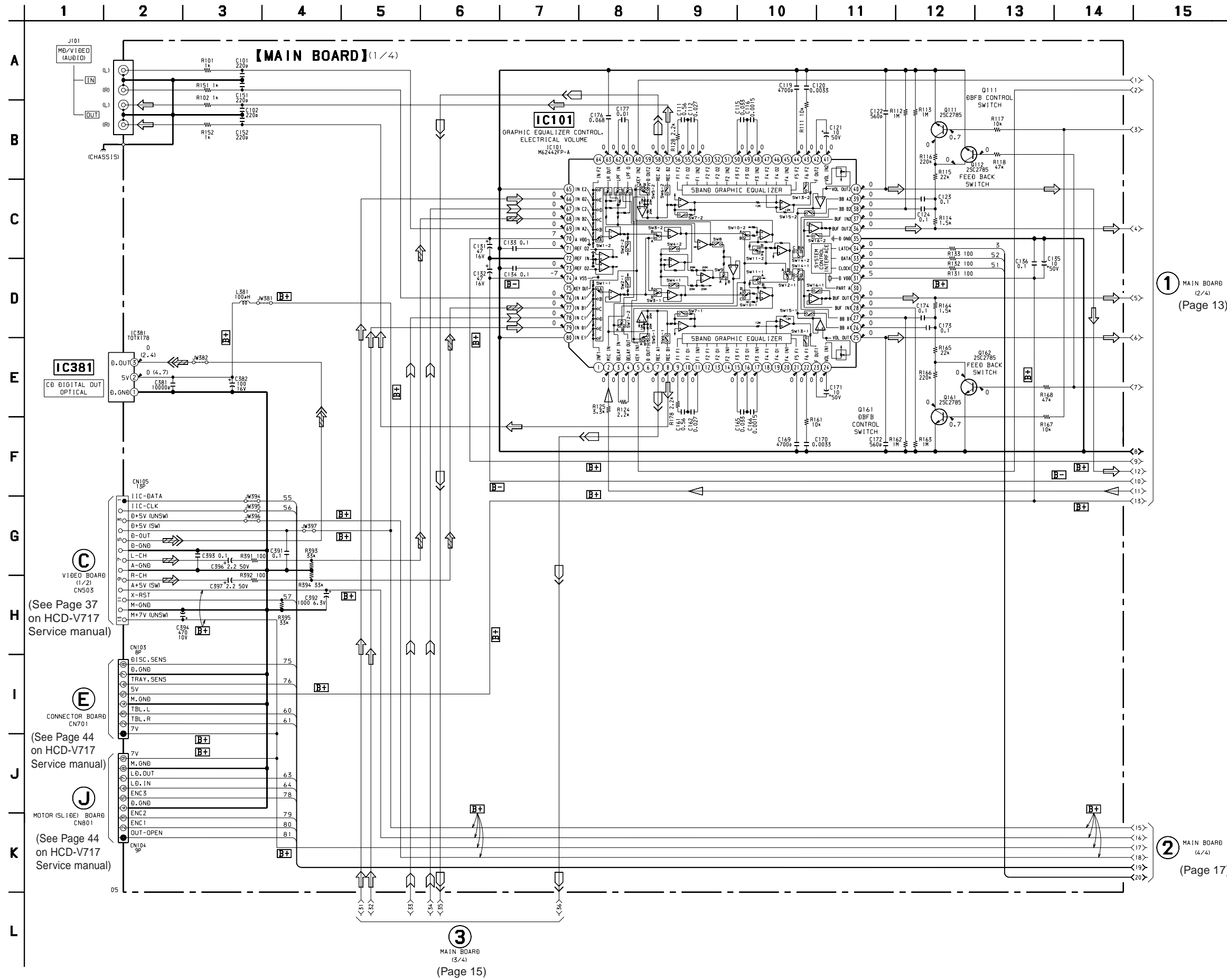
05 1 2 3 4 5 6 7 8 9 10 11

(See page 67 on HCD-V717 service manual)

TRANSFORMER BOARD CN11 (Page 27)

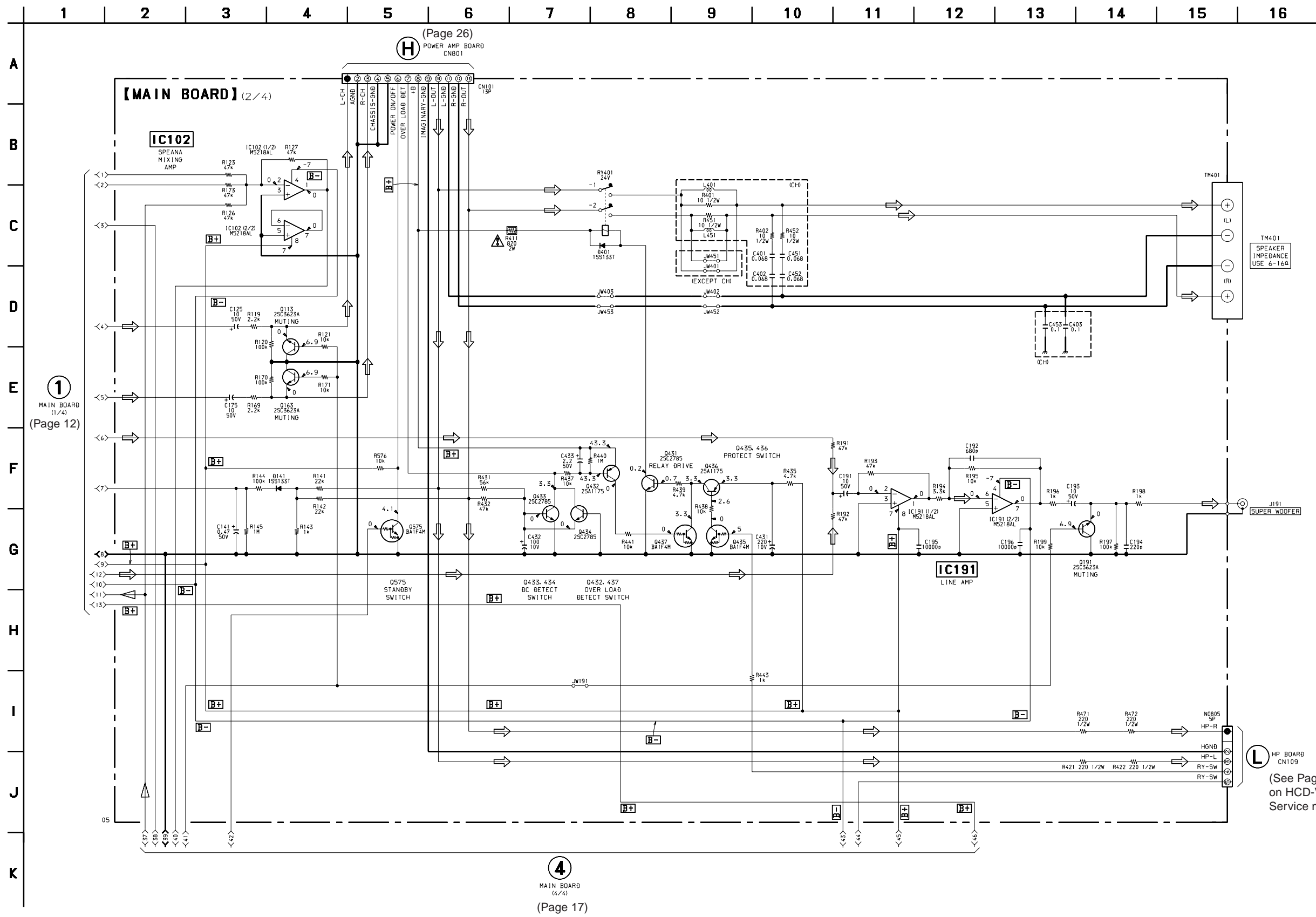
POWER AMP BOARD CN801 (Page 24)

3-3. SCHEMATIC DIAGRAM – MAIN Section (1/4) –



• Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
 no mark : FM
 () : CD

3-4. SCHEMATIC DIAGRAM - MAIN Section (2/4) -



(Page 26)
POWER AMP BOARD
CN801

【MAIN BOARD】(2/4)

①
MAIN BOARD
(1/4)
(Page 12)

④
MAIN BOARD
(4/4)
(Page 17)

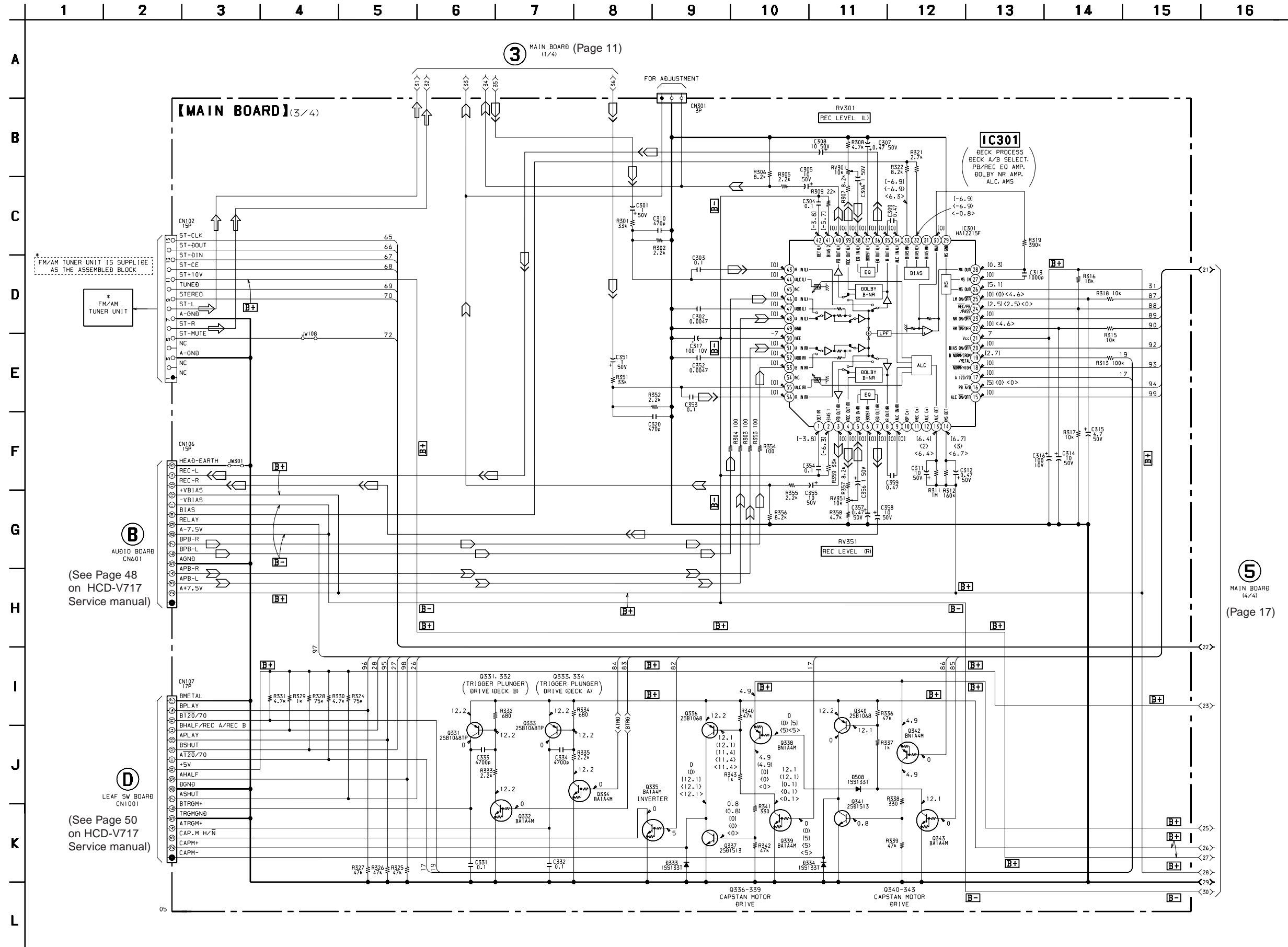
②
HP BOARD
CN109
(See Page 67
on HCD-V717
Service manual)

• Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
no mark : FM

The components identified by mark Δ or dotted line with mark Δ are critical for safety.
Replace only with part number specified.

以阴影和 Δ 标志来识别的零部件在安全方面具有关键性。因此只能以规定号码的零部件来更换。

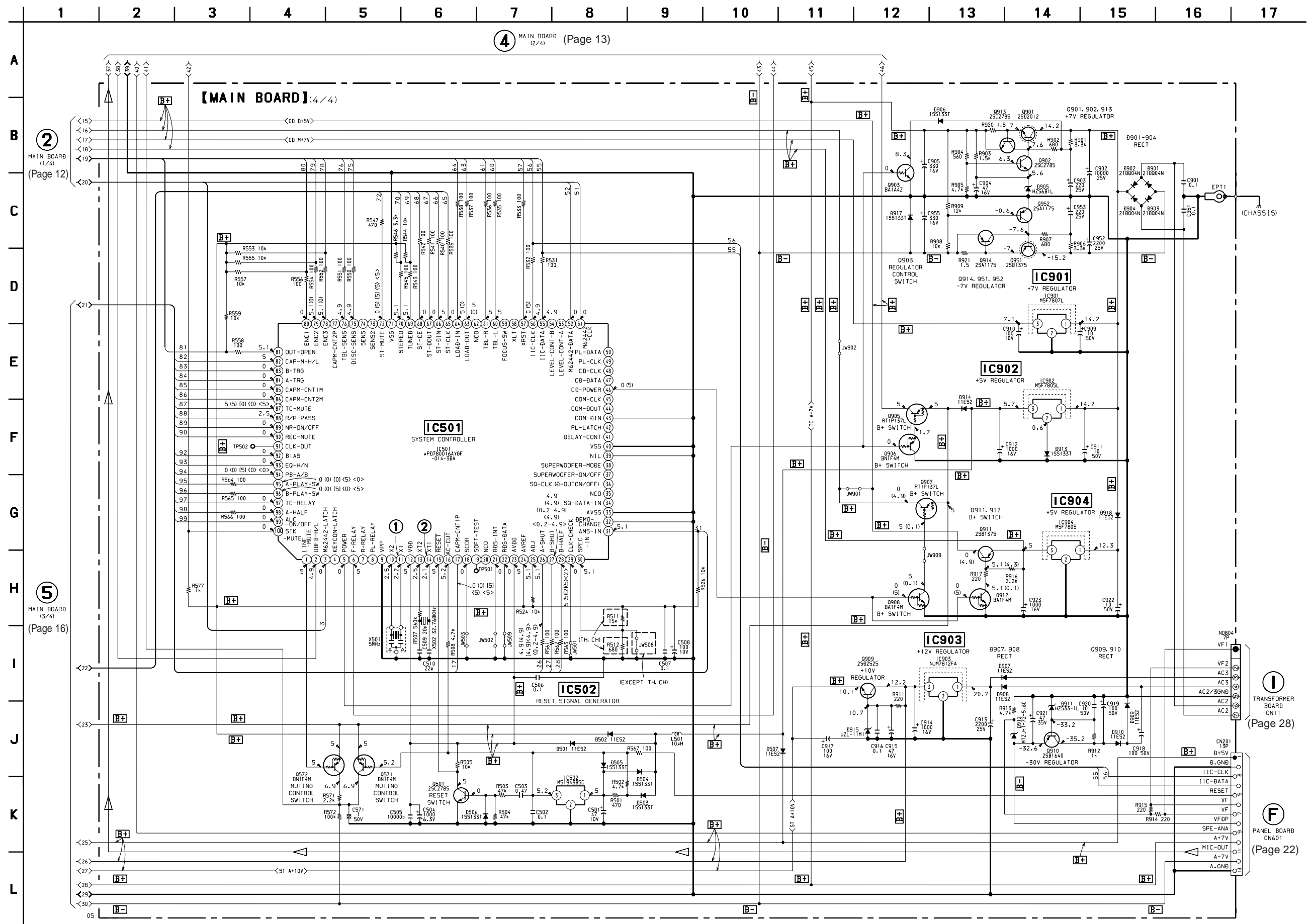
3-5. SCHEMATIC DIAGRAM - MAIN Section (3/4) -



• Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.

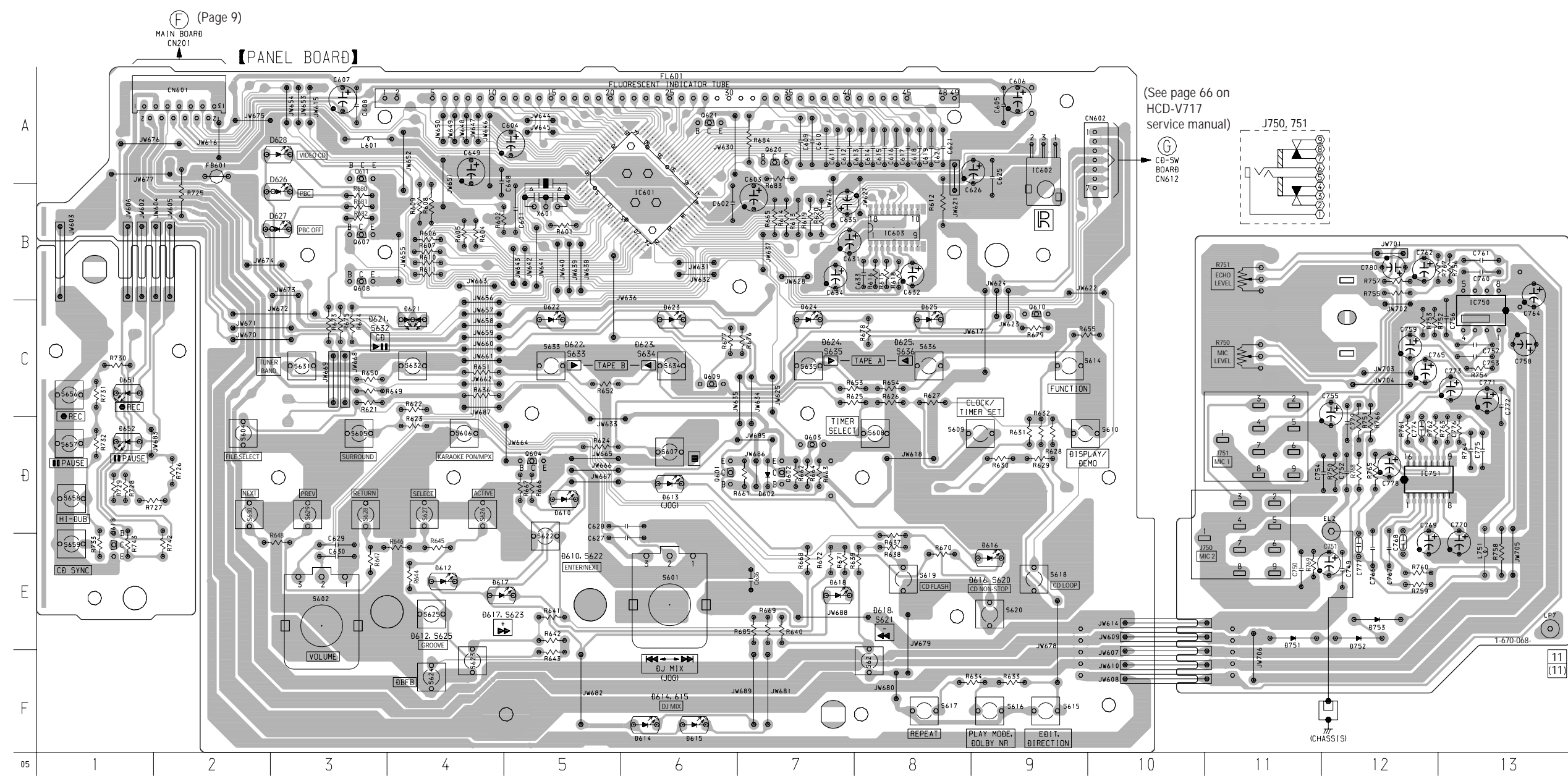
no mark	:	FM	{		:	PB (DECK A)
()	:	CD	[:	PB (DECK B)
<	:		<		:	REC

3-6. SCHEMATIC DIAGRAM – MAIN Section (4/4) –



• Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
 no mark : FM { } : PB (DECK A)
 () : CD [] : PB (DECK B)
 < > : REC

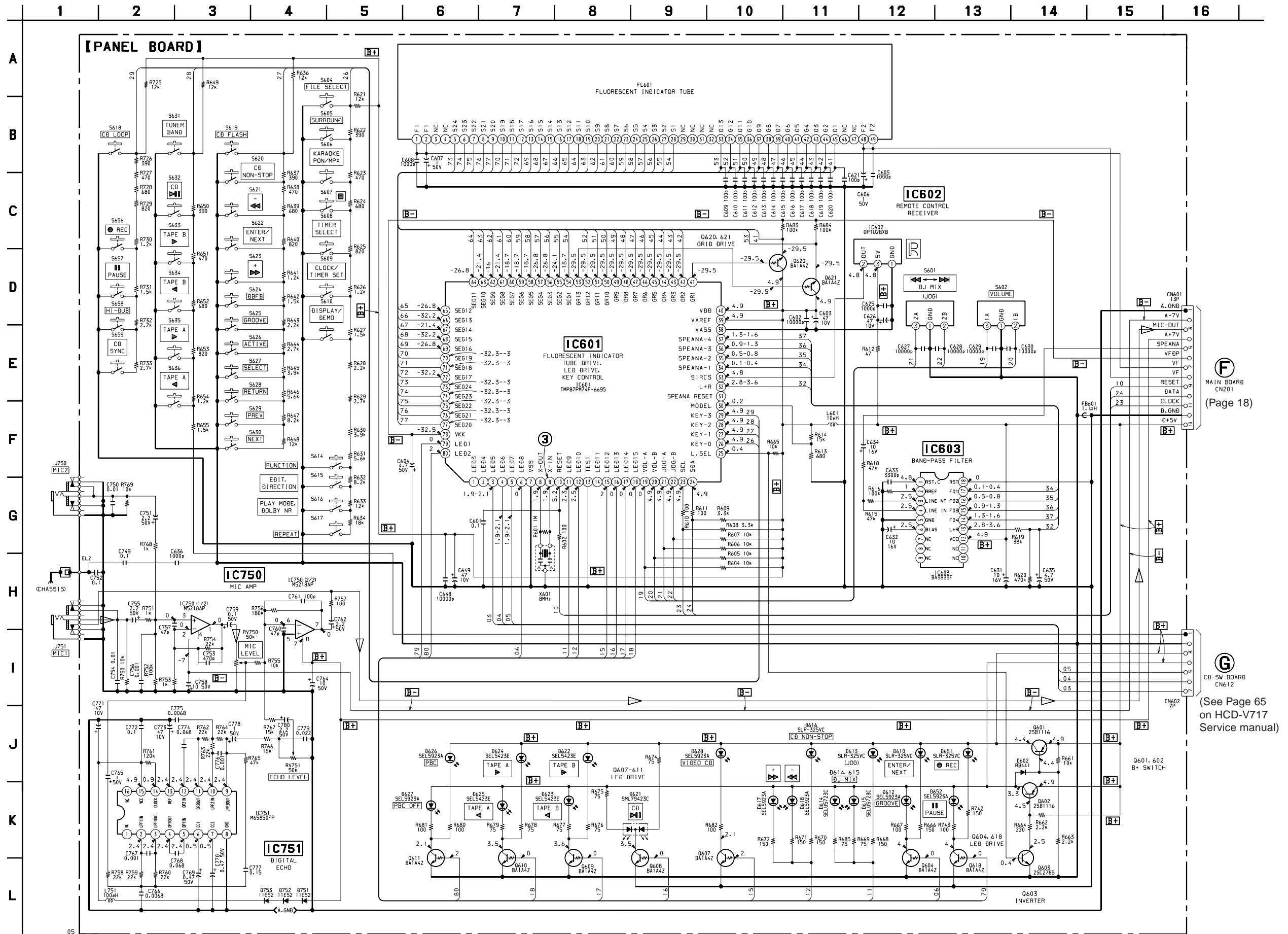
3-7. PRINTED WIRING BOARD – PANEL Section –



• Semiconductor Location

Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D602	D-7	D627	B-3	Q601	D-6
D610	D-5	D628	A-3	Q602	D-7
D612	E-4	D651	C-1	Q603	D-7
D613	D-6	D652	D-1	Q604	D-5
D614	F-6	D751	E-11	Q607	B-3
D615	F-6	D752	E-12	Q608	B-3
D616	E-9	D753	E-12	Q609	C-6
D617	E-4			Q610	C-9
D618	E-7	IC601	B-6	Q611	A-3
D621	C-4	IC602	A-9	Q618	E-1
D622	C-5	IC603	B-8	Q620	A-7
D623	C-6	IC750	C-13	Q621	A-6
D624	C-7	IC751	D-12		
D625	C-8				
D626	B-3				

3-8. SCHEMATIC DIAGRAM - PANEL Section -

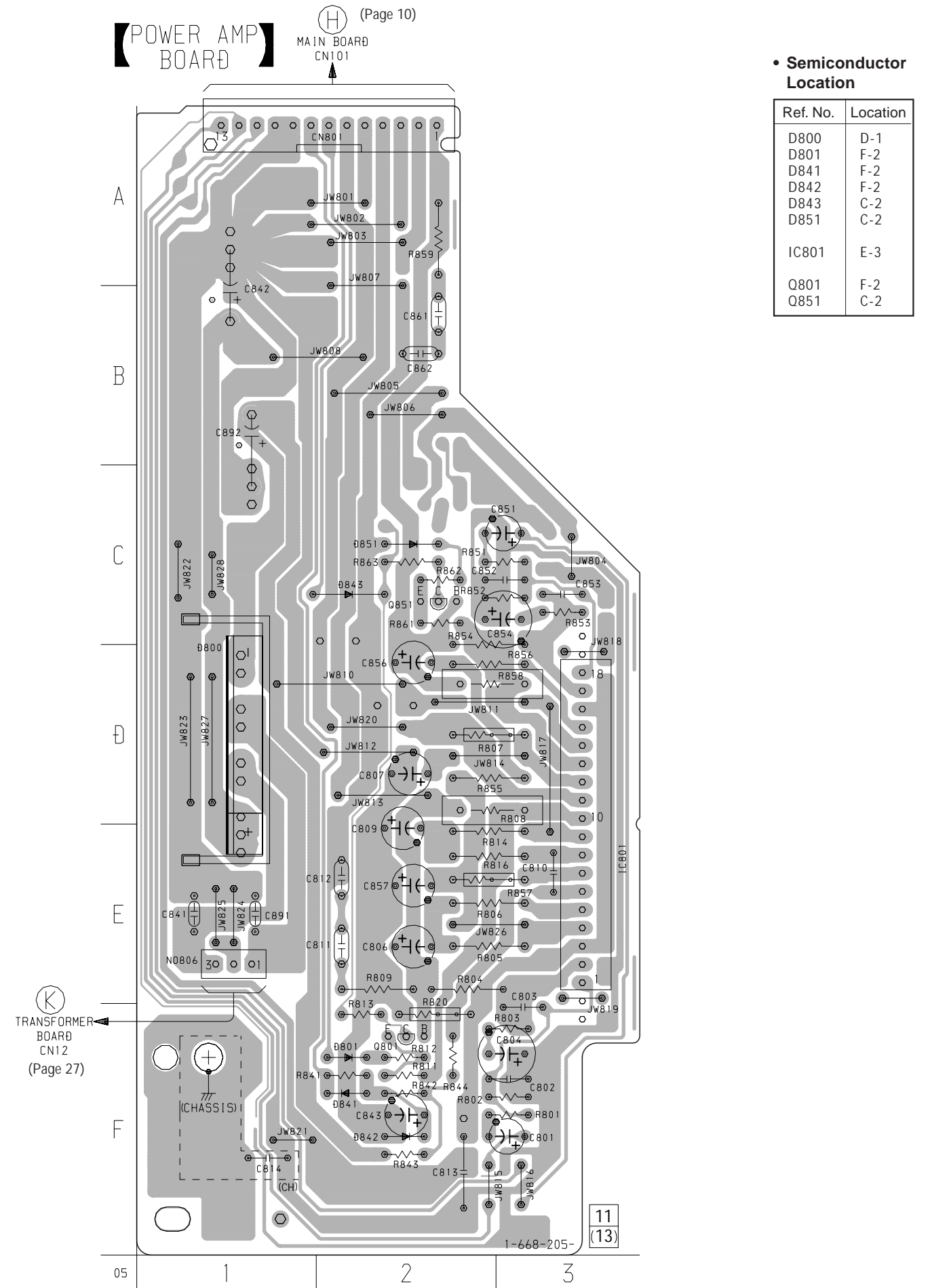


(Page 18)

(See Page 65 on HCD-V717 Service manual)

• Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions. no mark : FM

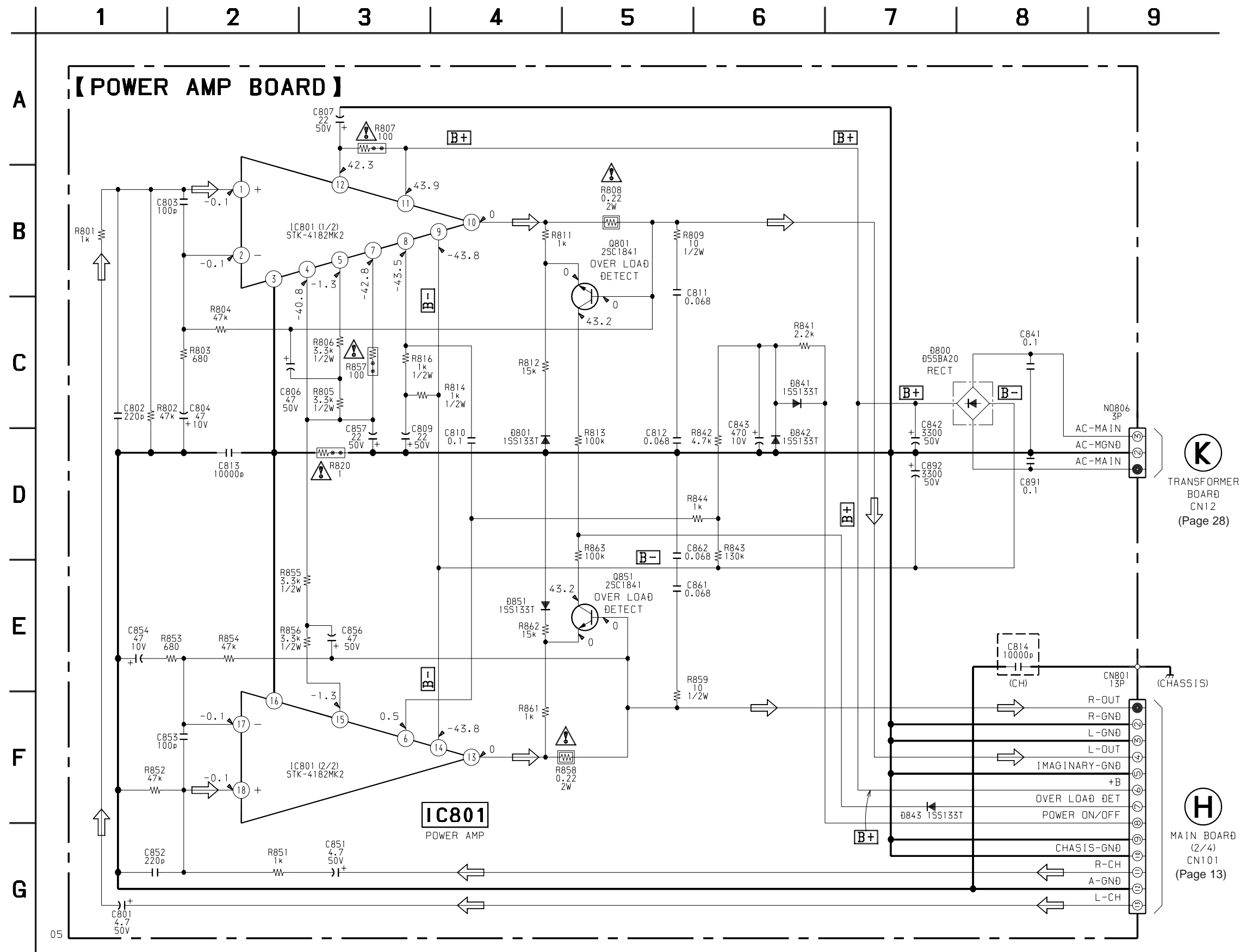
3-9. PRINTED WIRING BOARD – POWER AMP Section –



• Semiconductor Location

Ref. No.	Location
D800	D-1
D801	F-2
D841	F-2
D842	F-2
D843	C-2
D851	C-2
IC801	E-3
Q801	F-2
Q851	C-2

3-10. SCHEMATIC DIAGRAM – POWER AMP Section –

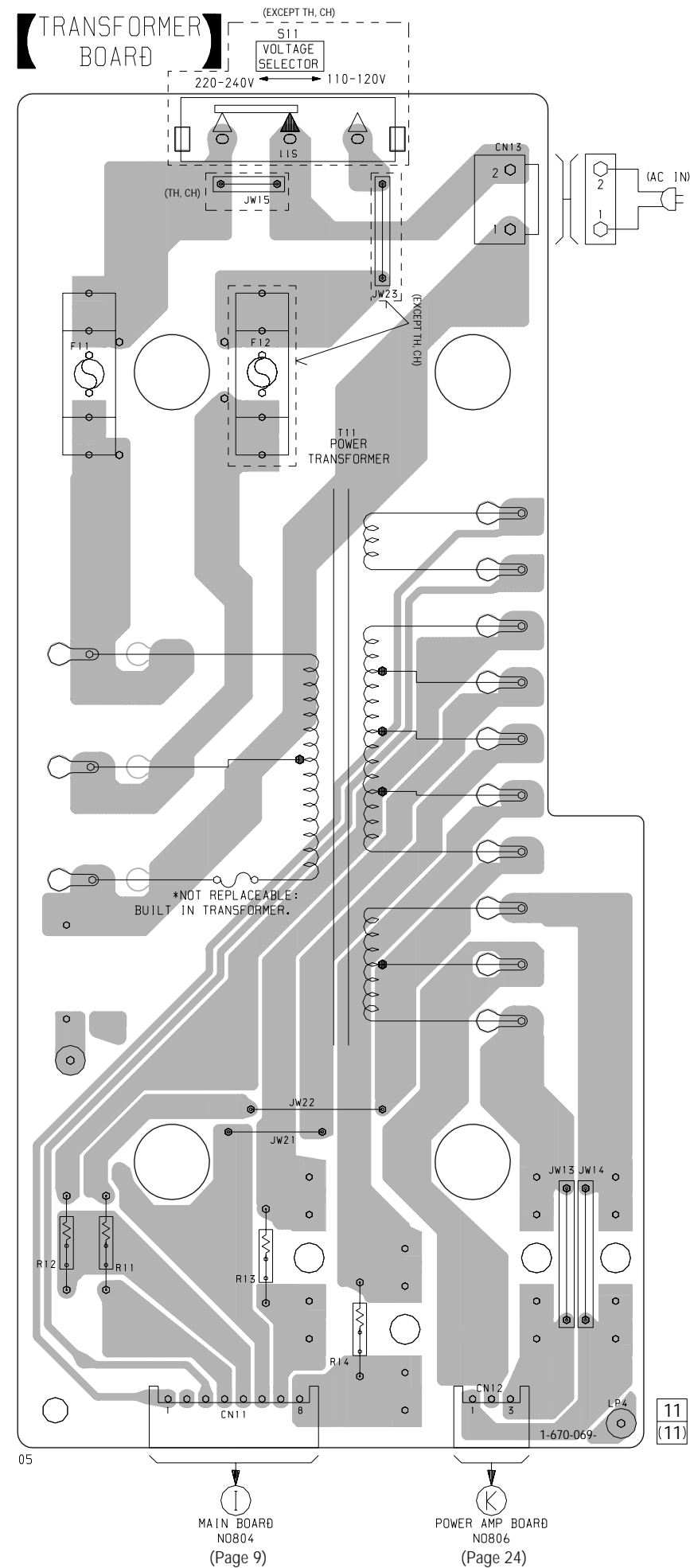


The components identified by mark \triangle or dotted line with mark \triangle are critical for safety. Replace only with part number specified.

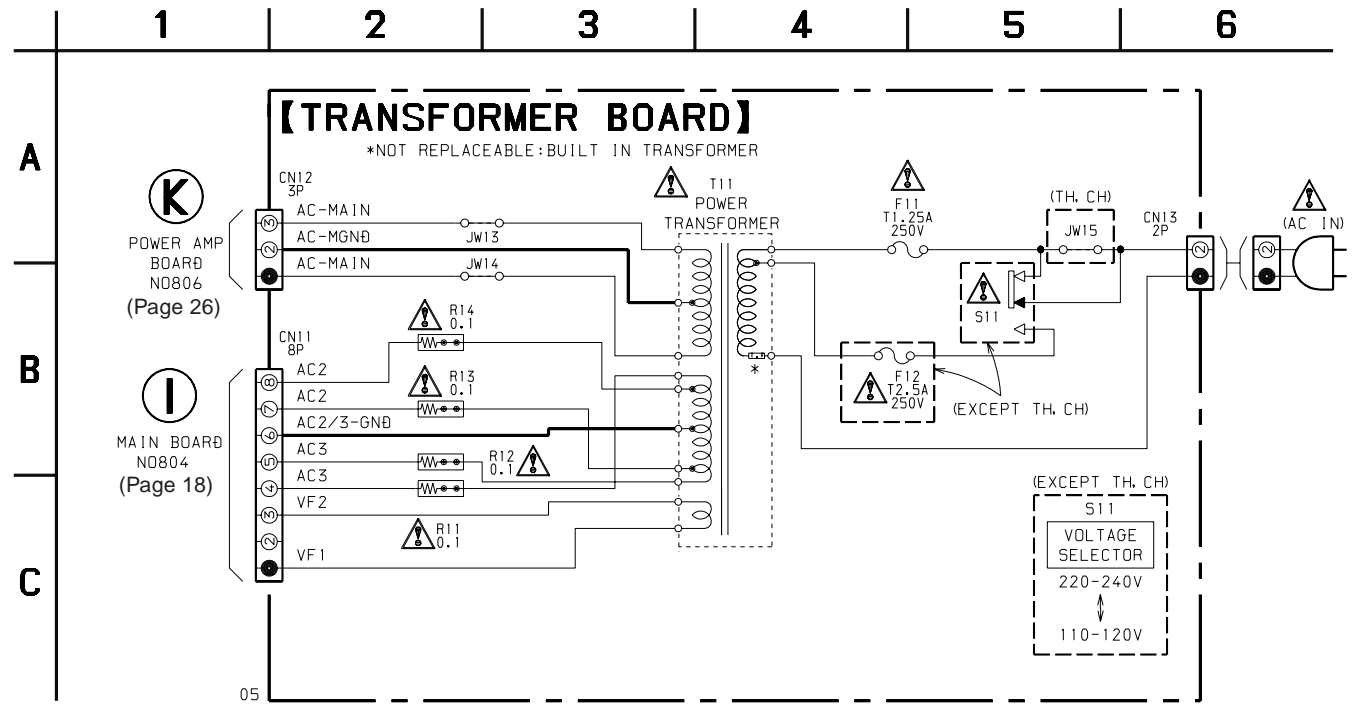
• Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
no mark : FM

以阴影和 \triangle 标志来识别的零部件在安全方面具有关键性。因此只能以规定号码的零部件来更换。

3-11. PRINTED WIRING BOARD – TRANSFORMER Section –



3-12. SCHEMATIC DIAGRAM – TRANSFORMER Section –



The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

以阴影和 Δ 标志来识别的零部件在安全方面具有关键性。因此只能以规定号码的零部件来更换。

SECTION 4 EXPLODED VIEWS

NOTE:

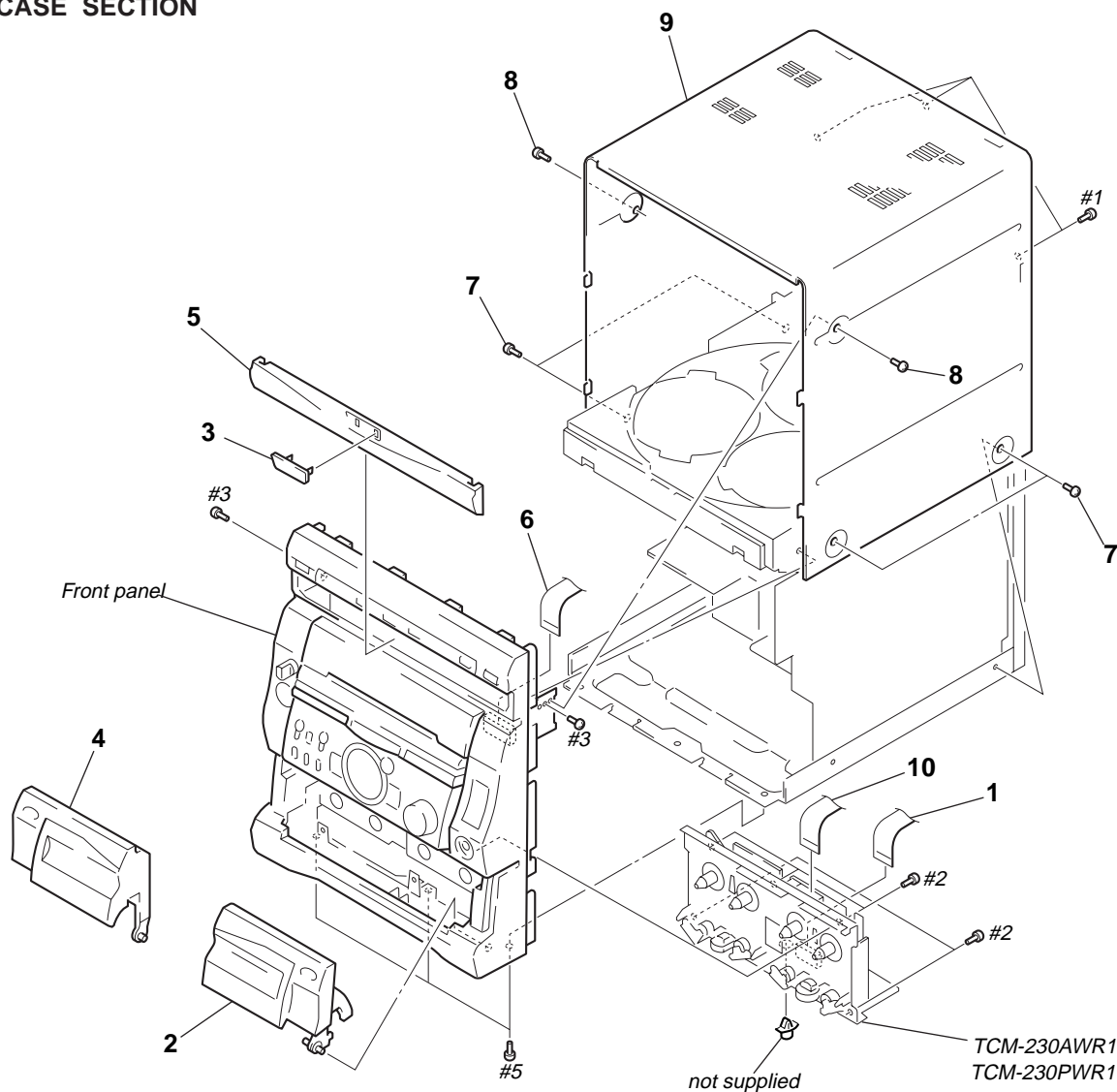
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
Example:
KNOB, BALANCE (WHITE) . . . (RED)
 ↑ ↑
 Parts Color Cabinet's Color
- Abbreviation
CH : Chinese MY : Malaysia
EA : Saudi Arabia SP : Singapore
HK : Hong Kong TH : Thai
IA : Indonesia TW : Taiwan

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list is given in the last of the electrical parts list.

The components identified by mark or dotted line with mark are critical for safety. Replace only with part number specified.

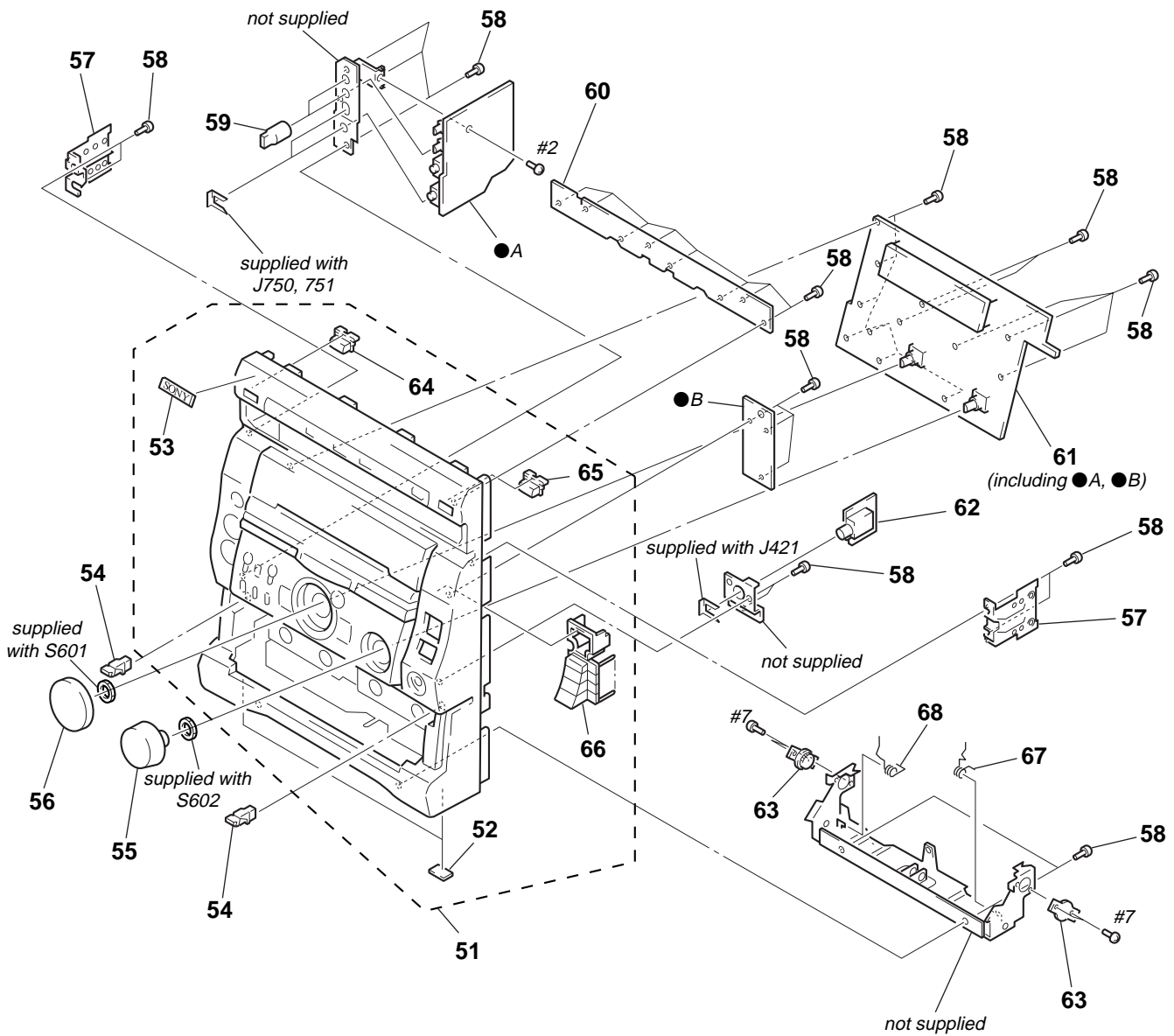
以阴影和 标志来识别的零部件，在安全方面具有关键性，因此只能以规定号码的零部件来更换。

(1) CASE SECTION



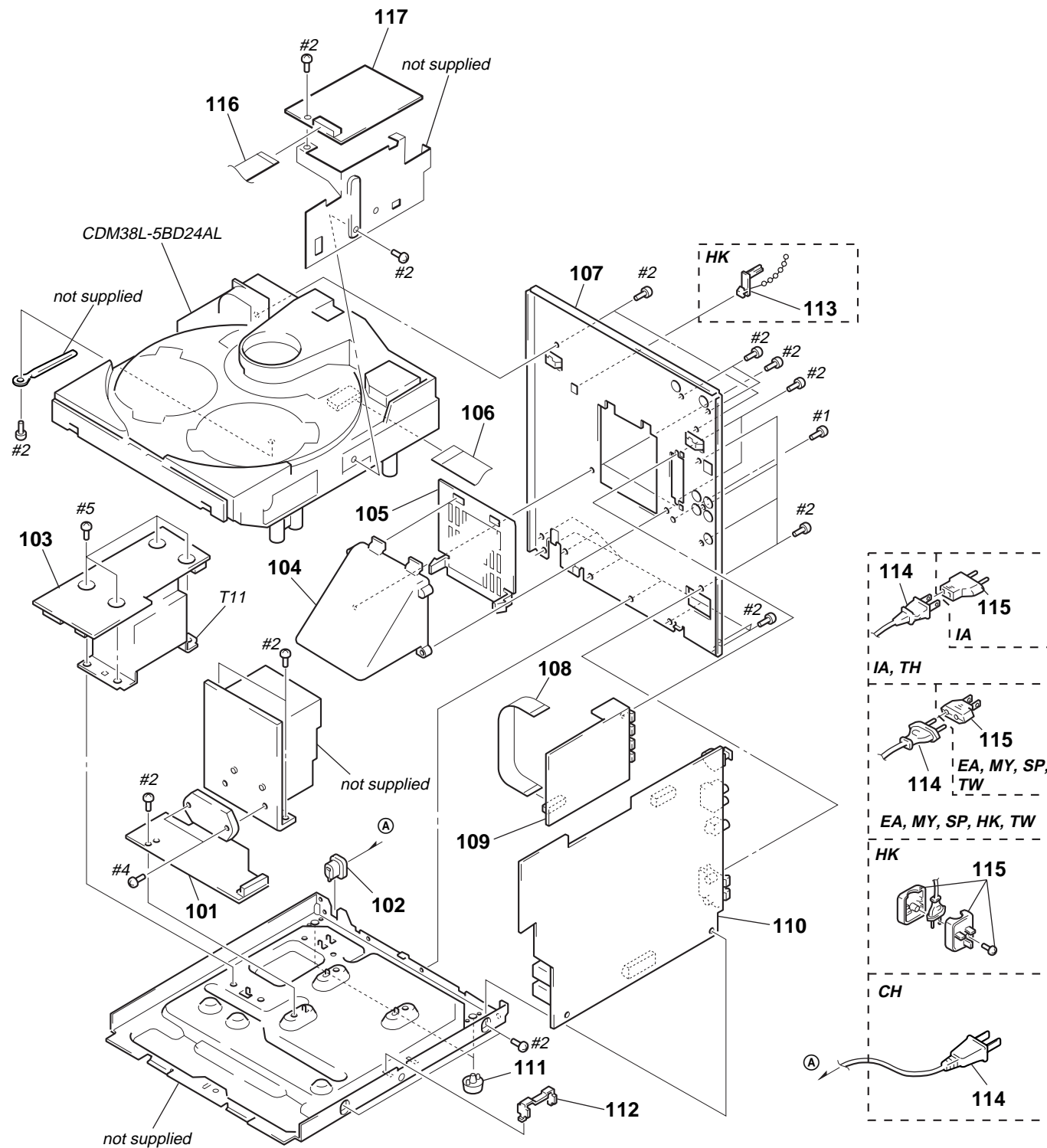
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	1-773-025-11	WIRE (FLAT TYPE) (15 CORE) (33cm)		7	3-363-099-11	SCREW (CASE 3 TP2) (3X8)	
2	X-4949-350-1	LID (R) ASSY, CASSETTE		8	3-363-099-71	SCREW (CASE 3 TP2) (3X12)	
3	4-991-781-01	EMBLEM (VCD)		* 9	4-996-728-01	CASE (EXCEPT IA)	
4	X-4949-349-1	LID (L) ASSY, CASSETTE		* 9	4-996-728-21	CASE (IA)	
5	4-900-739-01	PANEL, LOADING		10	1-773-048-11	WIRE (FLAT TYPE) (17 CORE)	
6	1-769-984-11	WIRE (FLAT TYPE) (13 CORE) (23cm)					

(2) FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	X-4949-980-1	PANEL ASSY, FRONT		* 61	A-4414-008-A	PANEL BOARD, COMPLETE	
52	4-930-336-61	FOOT (FELT)		* 62	1-670-070-11	HP BOARD	
53	4-962-708-11	EMBLEM (4-A), SONY		* 63	3-973-975-21	DAMPER, OIL	
54	4-995-081-01	LATCH, DC		64	4-996-704-01	BUTTON (POWER) (I/O)	
55	4-996-722-01	KNOB (VOL)		65	4-997-070-01	BUTTON (OPEN/CLOSE) (▲)	
56	4-996-721-01	KNOB (JOG-U4)		66	X-4949-348-1	BUTTON (REC) ASSY (● REC, PAUSE, HI-DUB, CD SYNC)	
* 57	4-996-716-01	HOLDER (CDM)		67	4-996-733-01	SPRING (B DECK)	
58	4-951-620-01	SCREW (2.6X8), +BVTP		68	4-996-732-01	SPRING (A DECK)	
59	4-986-893-51	KNOB (MICROPHONE)					
* 60	1-670-067-11	CD-SW BOARD					

(3) CHASSIS SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
* 101	A-4414-003-A	POWER AMP BOARD, COMPLETE (EXCEPT CH)		109	1-693-381-11	TUNER, FM/AM (CH)	
				109	1-693-421-11	TUNER (FM/AM) (EXCEPT TH, CH)	
* 101	A-4414-014-A	POWER AMP BOARD, COMPLETE (CH)		* 110	A-4414-000-A	MAIN BOARD, COMPLETE (EXCEPT TH, CH)	
* 102	3-703-244-00	BUSHING (2104), CORD (EXCEPT TH, IA)		* 110	A-4414-011-A	MAIN BOARD, COMPLETE (CH)	
102	3-703-571-11	BUSHING (S) (4516), CORD (TH)		* 110	A-4414-494-A	MAIN BOARD, COMPLETE (TH)	
102	4-966-266-01	BUSHING (S) (FBS002), CORD (IA)					
				111	4-965-822-01	FOOT	
* 103	1-670-069-11	TRANSFORMER BOARD		* 112	4-988-533-01	HOLDER, PWB	
* 104	4-996-736-01	DUCT (A)		113	4-956-370-12	BAND, PLUG FIXED (HK)	
* 105	4-996-701-01	DUCT (B)		△ 114	1-575-651-11	CORD, POWER (EA, HK, SP, MY, TW)	
106	1-775-212-11	WIRE (FLAT TYPE) (23 CORE)		△ 114	1-575-653-11	CORD, POWER (IA, TH)	
* 107	4-999-906-01	PANEL, BACK (SP, MY)					
				△ 114	1-782-464-21	CORD, POWER (CH)	
* 107	4-999-906-11	PANEL, BACK (EA)		△ 115	1-569-007-11	ADAPTOR, CONVERSION 2P (IA)	
* 107	4-999-906-21	PANEL, BACK (CH)		△ 115	1-569-008-21	ADAPTOR, CONVERSION 2P (EA, SP, MY, TW)	
* 107	4-999-906-31	PANEL, BACK (HK)		△ 115	1-770-019-11	ADAPTOR, CONVERSION PLUG 3P (HK)	
* 107	4-999-906-41	PANEL, BACK (TW)		△ 115	1-751-688-11	WIRE (FLAT TYPE) (13 CORE) (17cm)	
* 107	4-999-906-51	PANEL, BACK (IA)		116			
				* 117	A-4414-186-A	VIDEO BOARD, COMPLETE (EXCEPT CH)	
* 107	4-999-906-61	PANEL, BACK (TH)		* 117	A-4724-279-A	VIDEO BOARD, COMPLETE (CH)	
108	1-773-008-11	WIRE (FLAT TYPE) (15 CORE) (14cm)		△ T11	1-431-830-11	TRANSFORMER, POWER	
109	1-233-545-11	ENCAPSULATED COMPONENT (TH)					

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

以阴影和 △ 标志来识别的零部件，在安全方面具有关键性。因此只能以规定号码的零部件来更换。

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
L451	1-420-872-00	COIL, AIR-CORE (CH)		R114	1-249-419-11	CARBON 1.5K 5%	1/4W
L501	1-410-509-11	INDUCTOR 10uH		R115	1-249-433-11	CARBON 22K 5%	1/4W
		< TRANSISTOR >		R116	1-247-887-00	CARBON 220K 5%	1/4W
Q111	8-729-620-05	TRANSISTOR 2SC2603-EF		R117	1-249-429-11	CARBON 10K 5%	1/4W
Q112	8-729-620-05	TRANSISTOR 2SC2603-EF		R118	1-249-437-11	CARBON 47K 5%	1/4W
Q113	8-729-141-30	TRANSISTOR 2SC3623A-LK		R119	1-249-421-11	CARBON 2.2K 5%	1/4W
Q161	8-729-620-05	TRANSISTOR 2SC2603-EF		R120	1-249-441-11	CARBON 100K 5%	1/4W
Q162	8-729-620-05	TRANSISTOR 2SC2603-EF		R121	1-249-429-11	CARBON 10K 5%	1/4W
				R123	1-249-437-11	CARBON 47K 5%	1/4W
Q163	8-729-141-30	TRANSISTOR 2SC3623A-LK		R124	1-249-421-11	CARBON 2.2K 5%	1/4W
Q191	8-729-141-30	TRANSISTOR 2SC3623A-LK		R125	1-247-843-11	CARBON 3.3K 5%	1/4W
Q331	8-729-116-59	TRANSISTOR 2SB1068TP		R126	1-249-437-11	CARBON 47K 5%	1/4W
Q332	8-729-029-66	TRANSISTOR DTC114ESA		R127	1-249-437-11	CARBON 47K 5%	1/4W
Q333	8-729-116-59	TRANSISTOR 2SB1068TP		R128	1-249-421-11	CARBON 2.2K 5%	1/4W
				R131	1-247-807-31	CARBON 100 5%	1/4W
Q334	8-729-029-66	TRANSISTOR DTC114ESA		R132	1-247-807-31	CARBON 100 5%	1/4W
Q335	8-729-029-66	TRANSISTOR DTC114ESA		R133	1-247-807-31	CARBON 100 5%	1/4W
Q336	8-729-116-59	TRANSISTOR 2SB1068TP		R141	1-249-433-11	CARBON 22K 5%	1/4W
Q337	8-729-045-21	TRANSISTOR 2SD1513TP-LK		R142	1-249-433-11	CARBON 22K 5%	1/4W
Q338	8-729-029-21	TRANSISTOR DTA114ESA-TP		R143	1-249-417-11	CARBON 1K 5%	1/4W
				R144	1-249-441-11	CARBON 100K 5%	1/4W
Q339	8-729-029-66	TRANSISTOR DTC114ESA		R145	1-247-903-00	CARBON 1M 5%	1/4W
Q340	8-729-116-59	TRANSISTOR 2SB1068TP		R151	1-249-417-11	CARBON 1K 5%	1/4W
Q341	8-729-045-21	TRANSISTOR 2SD1513TP-LK		R152	1-249-417-11	CARBON 1K 5%	1/4W
Q342	8-729-029-21	TRANSISTOR DTA114ESA-TP		R155	1-249-429-11	CARBON 10K 5%	1/4W
Q343	8-729-029-66	TRANSISTOR DTC114ESA					
Q431	8-729-620-05	TRANSISTOR 2SC2603-EF		R162	1-247-903-00	CARBON 1M 5%	1/4W
Q432	8-729-119-76	TRANSISTOR 2SA1175-HFE		R163	1-247-903-00	CARBON 1M 5%	1/4W
Q433	8-729-620-05	TRANSISTOR 2SC2603-EF		R164	1-249-419-11	CARBON 1.5K 5%	1/4W
Q434	8-729-620-05	TRANSISTOR 2SC2603-EF		R165	1-249-433-11	CARBON 22K 5%	1/4W
Q435	8-729-029-86	TRANSISTOR DTC124ESA		R166	1-247-887-00	CARBON 220K 5%	1/4W
Q436	8-729-119-76	TRANSISTOR 2SA1175-HFE		R167	1-249-429-11	CARBON 10K 5%	1/4W
Q437	8-729-029-86	TRANSISTOR DTC124ESA		R168	1-249-437-11	CARBON 47K 5%	1/4W
Q501	8-729-620-05	TRANSISTOR 2SC2603-EF		R169	1-249-421-11	CARBON 2.2K 5%	1/4W
Q571	8-729-029-40	TRANSISTOR DTA124ESA		R170	1-249-441-11	CARBON 100K 5%	1/4W
Q572	8-729-029-40	TRANSISTOR DTA124ESA		R171	1-249-429-11	CARBON 10K 5%	1/4W
Q575	8-729-029-86	TRANSISTOR DTC124ESA		R173	1-249-437-11	CARBON 47K 5%	1/4W
Q901	8-729-209-15	TRANSISTOR 2SD2012		R178	1-249-421-11	CARBON 2.2K 5%	1/4W
Q902	8-729-620-05	TRANSISTOR 2SC2603-EF		R191	1-249-437-11	CARBON 47K 5%	1/4W
Q903	8-729-029-68	TRANSISTOR DTC114TSA		R192	1-249-437-11	CARBON 47K 5%	1/4W
Q905	8-729-040-20	TRANSISTOR RT1P137L-TP		R193	1-249-437-11	CARBON 47K 5%	1/4W
Q906	8-729-029-40	TRANSISTOR DTA124ESA		R194	1-247-843-11	CARBON 3.3K 5%	1/4W
Q907	8-729-040-20	TRANSISTOR RT1P137L-TP		R195	1-249-429-11	CARBON 10K 5%	1/4W
Q908	8-729-029-86	TRANSISTOR DTC124ESA		R196	1-249-417-11	CARBON 1K 5%	1/4W
Q909	8-729-026-68	TRANSISTOR 2SD2525 (TP)		R197	1-249-441-11	CARBON 100K 5%	1/4W
Q910	8-729-030-19	TRANSISTOR 2SB1640		R198	1-249-417-11	CARBON 1K 5%	1/4W
Q911	8-729-141-83	TRANSISTOR 2SB1094-LK		R199	1-249-429-11	CARBON 10K 5%	1/4W
Q912	8-729-900-36	TRANSISTOR DTC124ES		R301	1-249-435-11	CARBON 33K 5%	1/4W
Q913	8-729-620-05	TRANSISTOR 2SC2603-EF		R302	1-249-421-11	CARBON 2.2K 5%	1/4W
Q914	8-729-119-76	TRANSISTOR 2SA1175-HFE		R303	1-247-807-31	CARBON 100 5%	1/4W
Q951	8-729-141-83	TRANSISTOR 2SB1094-LK		R304	1-247-807-31	CARBON 100 5%	1/4W
Q952	8-729-119-76	TRANSISTOR 2SA1175-HFE		R305	1-249-421-11	CARBON 2.2K 5%	1/4W
		< RESISTOR >		R306	1-249-428-11	CARBON 8.2K 5%	1/4W
R101	1-249-417-11	CARBON 1K 5%	1/4W	R307	1-249-428-11	CARBON 8.2K 5%	1/4W
R102	1-249-417-11	CARBON 1K 5%	1/4W	R308	1-249-425-11	CARBON 4.7K 5%	1/4W
R111	1-249-429-11	CARBON 10K 5%	1/4W	R309	1-249-433-11	CARBON 22K 5%	1/4W
R112	1-247-903-00	CARBON 1M 5%	1/4W	R311	1-247-903-00	CARBON 1M 5%	1/4W
R113	1-247-903-00	CARBON 1M 5%	1/4W	R312	1-247-884-11	CARBON 160K 5%	1/4W
				R313	1-249-441-11	CARBON 100K 5%	1/4W

MAIN

Ref. No.	Part No.	Description			Remark	Ref. No.	Part No.	Description			Remark
R315	1-249-429-11	CARBON	10K	5%	1/4W						(CH)
R316	1-249-432-11	CARBON	18K	5%	1/4W	R452	1-260-076-11	CARBON	10	5%	1/2W (CH)
R317	1-249-429-11	CARBON	10K	5%	1/4W						
R318	1-249-429-11	CARBON	10K	5%	1/4W	R471	1-260-091-11	CARBON	220	5%	1/2W
R319	1-247-893-11	CARBON	390K	5%	1/4W	R472	1-260-091-11	CARBON	220	5%	1/2W
R321	1-249-422-11	CARBON	2.7K	5%	1/4W	R501	1-249-413-11	CARBON	470	5%	1/4W
R322	1-249-428-11	CARBON	8.2K	5%	1/4W	R502	1-249-425-11	CARBON	4.7K	5%	1/4W
						R503	1-249-437-11	CARBON	47K	5%	1/4W
R324	1-247-876-11	CARBON	75K	5%	1/4W						
R325	1-249-437-11	CARBON	47K	5%	1/4W	R504	1-249-437-11	CARBON	47K	5%	1/4W
R326	1-249-437-11	CARBON	47K	5%	1/4W	R505	1-249-429-11	CARBON	10K	5%	1/4W
R327	1-249-437-11	CARBON	47K	5%	1/4W	R507	1-247-897-11	CARBON	560K	5%	1/4W
R328	1-247-876-11	CARBON	75K	5%	1/4W	R508	1-249-425-11	CARBON	4.7K	5%	1/4W
						R511	1-249-431-11	CARBON	15K	5%	1/4W (TH, CH)
R329	1-249-417-11	CARBON	1K	5%	1/4W						
R330	1-249-425-11	CARBON	4.7K	5%	1/4W						
R331	1-249-425-11	CARBON	4.7K	5%	1/4W	R512	1-249-415-11	CARBON	680	5%	1/4W (TH, CH)
R332	1-249-415-11	CARBON	680	5%	1/4W						
R333	1-249-421-11	CARBON	2.2K	5%	1/4W	R524	1-249-429-11	CARBON	10K	5%	1/4W
						R526	1-249-429-11	CARBON	10K	5%	1/4W
R334	1-249-415-11	CARBON	680	5%	1/4W	R531	1-247-807-31	CARBON	100	5%	1/4W
R335	1-249-421-11	CARBON	2.2K	5%	1/4W	R532	1-247-807-31	CARBON	100	5%	1/4W
R336	1-249-437-11	CARBON	47K	5%	1/4W						
R337	1-249-417-11	CARBON	1K	5%	1/4W	R533	1-247-807-31	CARBON	100	5%	1/4W
R338	1-249-411-11	CARBON	330	5%	1/4W	R535	1-247-807-31	CARBON	100	5%	1/4W
						R536	1-247-807-31	CARBON	100	5%	1/4W
R339	1-249-437-11	CARBON	47K	5%	1/4W	R537	1-247-807-31	CARBON	100	5%	1/4W
R340	1-249-437-11	CARBON	47K	5%	1/4W	R538	1-247-807-31	CARBON	100	5%	1/4W
R341	1-249-411-11	CARBON	330	5%	1/4W						
R342	1-249-437-11	CARBON	47K	5%	1/4W	R539	1-247-807-31	CARBON	100	5%	1/4W
R343	1-249-417-11	CARBON	1K	5%	1/4W	R540	1-247-807-31	CARBON	100	5%	1/4W
						R541	1-247-807-31	CARBON	100	5%	1/4W
R351	1-249-435-11	CARBON	33K	5%	1/4W	R542	1-247-807-31	CARBON	100	5%	1/4W
R352	1-249-421-11	CARBON	2.2K	5%	1/4W	R543	1-247-807-31	CARBON	100	5%	1/4W
R353	1-247-807-31	CARBON	100	5%	1/4W						
R354	1-247-807-31	CARBON	100	5%	1/4W	R544	1-249-429-11	CARBON	10K	5%	1/4W
R355	1-249-421-11	CARBON	2.2K	5%	1/4W	R545	1-247-807-31	CARBON	100	5%	1/4W
						R546	1-247-843-11	CARBON	3.3K	5%	1/4W
R356	1-249-428-11	CARBON	8.2K	5%	1/4W	R547	1-249-413-11	CARBON	470	5%	1/4W
R357	1-249-428-11	CARBON	8.2K	5%	1/4W	R550	1-247-807-31	CARBON	100	5%	1/4W
R358	1-249-425-11	CARBON	4.7K	5%	1/4W						
R359	1-249-435-11	CARBON	33K	5%	1/4W	R551	1-247-807-31	CARBON	100	5%	1/4W
R391	1-247-807-31	CARBON	100	5%	1/4W	R552	1-247-807-31	CARBON	100	5%	1/4W
						R553	1-249-429-11	CARBON	10K	5%	1/4W
R392	1-247-807-31	CARBON	100	5%	1/4W	R554	1-247-807-31	CARBON	100	5%	1/4W
R393	1-249-435-11	CARBON	33K	5%	1/4W	R555	1-249-429-11	CARBON	10K	5%	1/4W
R394	1-249-435-11	CARBON	33K	5%	1/4W						
R395	1-249-435-11	CARBON	33K	5%	1/4W	R556	1-247-807-31	CARBON	100	5%	1/4W
R401	1-260-076-11	CARBON	10	5%	1/2W (CH)	R557	1-249-429-11	CARBON	10K	5%	1/4W
						R558	1-247-807-31	CARBON	100	5%	1/4W
R402	1-260-076-11	CARBON	10	5%	1/2W (CH)	R559	1-249-429-11	CARBON	10K	5%	1/4W
						R561	1-247-807-31	CARBON	100	5%	1/4W
△R411	1-216-456-00	METAL OXIDE	820	5%	2W F	R562	1-247-807-31	CARBON	100	5%	1/4W
R421	1-260-091-11	CARBON	220	5%	1/2W	R563	1-247-807-31	CARBON	100	5%	1/4W
R422	1-260-091-11	CARBON	220	5%	1/2W	R564	1-247-807-31	CARBON	100	5%	1/4W
R431	1-249-438-11	CARBON	56K	5%	1/4W	R565	1-247-807-31	CARBON	100	5%	1/4W
						R566	1-247-807-31	CARBON	100	5%	1/4W
R432	1-249-437-11	CARBON	47K	5%	1/4W						
R435	1-249-425-11	CARBON	4.7K	5%	1/4W	R567	1-247-807-31	CARBON	100	5%	1/4W
R437	1-249-429-11	CARBON	10K	5%	1/4W	R571	1-249-421-11	CARBON	2.2K	5%	1/4W
R438	1-249-429-11	CARBON	10K	5%	1/4W	R572	1-249-441-11	CARBON	100K	5%	1/4W
R439	1-249-425-11	CARBON	4.7K	5%	1/4W	R576	1-249-429-11	CARBON	10K	5%	1/4W
						R577	1-249-417-11	CARBON	1K	5%	1/4W
R440	1-247-903-00	CARBON	1M	5%	1/4W						
R441	1-249-429-11	CARBON	10K	5%	1/4W	R901	1-247-843-11	CARBON	3.3K	5%	1/4W
R443	1-249-417-11	CARBON	1K	5%	1/4W	R902	1-249-415-11	CARBON	680	5%	1/4W
R451	1-260-076-11	CARBON	10	5%	1/2W						

以阴影和△标志来识别的零部件在安全方面具有关键性。因此只能以规定号码的零部件来更换。

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R903	1-249-419-11	CARBON	1.5K 5% 1/4W	C620	1-162-282-31	CERAMIC	100PF 10% 50V
R904	1-249-414-11	CARBON	560 5% 1/4W	C621	1-162-282-31	CERAMIC	100PF 10% 50V
R905	1-249-425-11	CARBON	4.7K 5% 1/4W	C625	1-162-294-31	CERAMIC	0.001uF 10% 50V
R906	1-247-843-11	CARBON	3.3K 5% 1/4W	C626	1-124-589-11	ELECT	47uF 20% 16V
R907	1-249-415-11	CARBON	680 5% 1/4W	C627	1-162-306-11	CERAMIC	0.01uF 20% 16V
R908	1-249-429-11	CARBON	10K 5% 1/4W	C628	1-162-306-11	CERAMIC	0.01uF 20% 16V
R909	1-249-430-11	CARBON	12K 5% 1/4W	C629	1-162-306-11	CERAMIC	0.01uF 20% 16V
R911	1-249-409-11	CARBON	220 5% 1/4W	C630	1-162-306-11	CERAMIC	0.01uF 20% 16V
R912	1-249-417-11	CARBON	1K 5% 1/4W	C631	1-126-157-11	ELECT	10uF 20% 16V
R913	1-249-425-11	CARBON	4.7K 5% 1/4W	C632	1-126-157-11	ELECT	10uF 20% 16V
R914	1-249-409-11	CARBON	220 5% 1/4W	C633	1-162-303-11	CERAMIC	0.0033uF 30% 16V
R915	1-249-409-11	CARBON	220 5% 1/4W	C634	1-126-157-11	ELECT	10uF 20% 16V
R916	1-249-421-11	CARBON	2.2K 5% 1/4W	C635	1-126-163-11	ELECT	4.7uF 20% 50V
R917	1-249-409-11	CARBON	220 5% 1/4W	C636	1-162-294-31	CERAMIC	0.001uF 10% 50V
R920	1-249-383-11	CARBON	1.5 5% 1/6W	C648	1-162-306-11	CERAMIC	0.01uF 20% 16V
R921	1-249-383-11	CARBON	1.5 5% 1/6W	C649	1-124-589-11	ELECT	47uF 20% 16V
		< VARIABLE RESISTOR >		C749	1-164-159-11	CERAMIC	0.1uF 50V
RV301	1-238-600-11	RES, ADJ, CARBON 10K		C750	1-162-306-11	CERAMIC	0.01uF 20% 16V
RV351	1-238-600-11	RES, ADJ, CARBON 10K		C751	1-126-961-11	ELECT	2.2uF 20% 50V
		< RELAY >		C752	1-164-159-11	CERAMIC	0.1uF 50V
RY401	1-515-920-11	RELAY (24V)		C753	1-162-290-31	CERAMIC	470PF 10% 50V
		< TERMINAL >		C754	1-162-306-11	CERAMIC	0.01uF 20% 16V
TM401	1-537-240-31	TERMINAL BOARD (CHECKER PIN) (SPEAKER)		C755	1-126-961-11	ELECT	2.2uF 20% 50V
		< VIBRATOR >		C756	1-162-294-31	CERAMIC	0.001uF 10% 50V
X501	1-760-489-11	VIBRATOR, CERAMIC (5MHz)		C757	1-162-215-31	CERAMIC	47PF 5% 50V
X502	1-567-098-41	VIBRATOR, CRYSTAL (32.768kHz)		C758	1-126-964-11	ELECT	10uF 20% 50V
*****				C759	1-126-956-91	ELECT	0.1uF 20% 50V
*	A-4414-008-A	PANEL BOARD, COMPLETE	*****	C760	1-162-215-31	CERAMIC	47PF 5% 50V
				C761	1-162-282-31	CERAMIC	100PF 10% 50V
*	4-949-935-21	CUSHION (FL)		C762	1-126-961-11	ELECT	2.2uF 20% 50V
*	4-996-724-01	HOLDER, FL TUBE		C764	1-126-964-11	ELECT	10uF 20% 50V
		< CAPACITOR >		C765	1-126-960-11	ELECT	1uF 20% 50V
C601	1-164-159-11	CERAMIC	0.1uF 50V	C766	1-162-305-11	CERAMIC	0.0068uF 20% 16V
C602	1-162-306-11	CERAMIC	0.01uF 20% 16V	C767	1-162-294-31	CERAMIC	0.001uF 10% 50V
C603	1-124-589-11	ELECT	47uF 20% 16V	C768	1-136-495-11	FILM	0.068uF 5% 50V
C604	1-126-163-11	ELECT	4.7uF 20% 50V	C769	1-126-959-11	ELECT	0.47uF 20% 50V
C605	1-162-294-31	CERAMIC	0.001uF 10% 50V	C770	1-126-959-11	ELECT	0.47uF 20% 50V
C606	1-126-160-11	ELECT	1uF 20% 50V	C771	1-104-664-11	ELECT	47uF 20% 25V
C607	1-126-160-11	ELECT	1uF 20% 50V	C772	1-164-159-11	CERAMIC	0.1uF 50V
C608	1-162-294-31	CERAMIC	0.001uF 10% 50V	C773	1-104-664-11	ELECT	47uF 20% 25V
C609	1-162-282-31	CERAMIC	100PF 10% 50V	C774	1-136-495-11	FILM	0.068uF 5% 50V
C610	1-162-282-31	CERAMIC	100PF 10% 50V	C775	1-162-305-11	CERAMIC	0.0068uF 20% 16V
C611	1-162-282-31	CERAMIC	100PF 10% 50V	C776	1-162-294-31	CERAMIC	0.001uF 10% 50V
C612	1-162-282-31	CERAMIC	100PF 10% 50V	C777	1-136-167-00	FILM	0.15uF 5% 50V
C613	1-162-282-31	CERAMIC	100PF 10% 50V	C778	1-126-960-11	ELECT	1uF 20% 50V
C614	1-162-282-31	CERAMIC	100PF 10% 50V	C779	1-161-494-00	CERAMIC	0.022uF 25V
C615	1-162-282-31	CERAMIC	100PF 10% 50V	C780	1-126-961-11	ELECT	2.2uF 20% 50V
C616	1-162-282-31	CERAMIC	100PF 10% 50V			< CONNECTOR >	
C617	1-162-282-31	CERAMIC	100PF 10% 50V	* CN601	1-568-856-11	SOCKET, CONNECTOR 13P	
C618	1-162-282-31	CERAMIC	100PF 10% 50V			< DIODE >	
C619	1-162-282-31	CERAMIC	100PF 10% 50V	D602	8-719-986-73	DIODE RB441Q	
				D610	8-719-063-93	LED SLR325VC-N-T32 (ENTER/NEXT)	
				D612	8-719-057-97	LED SEL5923A-TP15 (GROOVE)	
				D613	8-719-063-93	LED SLR325VC-N-T32 (JOG)	
				D614	8-719-064-65	LED SELU5723C-TP15 (DJ MIX)	

PANEL

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
D615	8-719-064-65	LED SELU5723C-TP15 (DJ MIX)				< RESISTOR >	
D616	8-719-063-93	LED SLR325VC-N-T32 (CD NON-STOP)		R601	1-247-903-00	CARBON 1M 5%	1/4W
D617	8-719-057-97	LED SEL5923A-TP15 (+, ►►)		R602	1-247-807-31	CARBON 100 5%	1/4W
D618	8-719-057-97	LED SEL5923A-TP15 (-, ◄◄)		R604	1-249-429-11	CARBON 10K 5%	1/4W
D621	8-719-056-13	LED SML79423C-TP15 (CD, ►►)		R605	1-249-429-11	CARBON 10K 5%	1/4W
D622	8-719-058-03	LED SEL5423E-TP15 (TAPE B, ►)		R606	1-249-429-11	CARBON 10K 5%	1/4W
D623	8-719-058-03	LED SEL5423E-TP15 (TAPE B, ◄)		R607	1-249-429-11	CARBON 10K 5%	1/4W
D624	8-719-058-03	LED SEL5423E-TP15 (TAPE A, ►)		R608	1-247-843-11	CARBON 3.3K 5%	1/4W
D625	8-719-058-03	LED SEL5423E-TP15 (TAPE A, ◄)		R609	1-247-843-11	CARBON 3.3K 5%	1/4W
D626	8-719-057-97	LED SEL5923A-TP15 (PBC)		R610	1-247-807-31	CARBON 100 5%	1/4W
D627	8-719-057-97	LED SEL5923A-TP15 (PBC OFF)		R611	1-247-807-31	CARBON 100 5%	1/4W
D628	8-719-057-97	LED SEL5923A-TP15 (VIDEO CD)		R612	1-249-401-11	CARBON 47 5%	1/4W
D651	8-719-063-93	LED SLR325VC-N-T32 (● REC)		R613	1-249-415-11	CARBON 680 5%	1/4W
D652	8-719-057-97	LED SEL5923A-TP15 (■ PAUSE)		R614	1-249-431-11	CARBON 15K 5%	1/4W
D751	8-719-024-99	DIODE 11ES2-NTA2B		R615	1-249-437-11	CARBON 47K 5%	1/4W
D752	8-719-024-99	DIODE 11ES2-NTA2B		R616	1-249-441-11	CARBON 100K 5%	1/4W
D753	8-719-024-99	DIODE 11ES2-NTA2B		R618	1-249-437-11	CARBON 47K 5%	1/4W
		< LEAD >		R619	1-249-435-11	CARBON 33K 5%	1/4W
EL2	1-690-880-51	LEAD (WITH CONNECTOR)		R620	1-247-895-00	CARBON 470K 5%	1/4W
		< FERRITE BEAD >		R621	1-249-430-11	CARBON 12K 5%	1/4W
FB601	1-410-397-21	FERRITE BEAD INDUCTOR		R622	1-249-412-11	CARBON 390 5%	1/4W
		< FLUORESCENT INDICATOR TUBE >		R623	1-249-413-11	CARBON 470 5%	1/4W
FL601	1-517-731-11	INDICATOR TUBE, FLUORESCENT		R624	1-249-415-11	CARBON 680 5%	1/4W
		< IC >		R625	1-249-416-11	CARBON 820 5%	1/4W
IC601	8-759-536-41	IC TMP87PM74F-6695		R626	1-249-418-11	CARBON 1.2K 5%	1/4W
IC602	8-749-011-05	IC GP1U28X		R627	1-249-419-11	CARBON 1.5K 5%	1/4W
IC603	8-759-495-25	IC BA3833F-E2		R628	1-249-421-11	CARBON 2.2K 5%	1/4W
IC750	8-759-634-51	IC M5218AP		R629	1-249-422-11	CARBON 2.7K 5%	1/4W
IC751	8-759-496-41	IC M65850FP-E1		R630	1-249-424-11	CARBON 3.9K 5%	1/4W
		< JACK >		R631	1-249-426-11	CARBON 5.6K 5%	1/4W
J750	1-785-200-11	JACK (LARGE TYPE) (MIC2)		R632	1-249-428-11	CARBON 8.2K 5%	1/4W
J751	1-785-200-11	JACK (LARGE TYPE) (MIC1)		R633	1-249-430-11	CARBON 12K 5%	1/4W
		< COIL >		R634	1-249-432-11	CARBON 18K 5%	1/4W
L601	1-410-509-11	INDUCTOR 10uH		R636	1-249-430-11	CARBON 12K 5%	1/4W
L751	1-410-521-11	INDUCTOR 100uH		R637	1-249-412-11	CARBON 390 5%	1/4W
		< TRANSISTOR >		R638	1-249-413-11	CARBON 470 5%	1/4W
Q601	8-729-118-00	TRANSISTOR 2SB1116-L		R639	1-249-415-11	CARBON 680 5%	1/4W
Q602	8-729-118-00	TRANSISTOR 2SB1116-L		R640	1-249-416-11	CARBON 820 5%	1/4W
Q603	8-729-620-05	TRANSISTOR 2SC2603-EF		R641	1-249-418-11	CARBON 1.2K 5%	1/4W
Q604	8-729-029-68	TRANSISTOR DTC114TSA		R642	1-249-419-11	CARBON 1.5K 5%	1/4W
Q607	8-729-029-68	TRANSISTOR DTC114TSA		R643	1-249-421-11	CARBON 2.2K 5%	1/4W
Q608	8-729-029-68	TRANSISTOR DTC114TSA		R644	1-249-422-11	CARBON 2.7K 5%	1/4W
Q609	8-729-029-68	TRANSISTOR DTC114TSA		R645	1-249-424-11	CARBON 3.9K 5%	1/4W
Q610	8-729-029-68	TRANSISTOR DTC114TSA		R646	1-249-426-11	CARBON 5.6K 5%	1/4W
Q611	8-729-029-68	TRANSISTOR DTC114TSA		R647	1-249-428-11	CARBON 8.2K 5%	1/4W
Q618	8-729-029-68	TRANSISTOR DTC114TSA		R648	1-249-430-11	CARBON 12K 5%	1/4W
Q620	8-729-029-68	TRANSISTOR DTC114TSA		R649	1-249-430-11	CARBON 12K 5%	1/4W
Q621	8-729-029-68	TRANSISTOR DTC114TSA		R650	1-249-412-11	CARBON 390 5%	1/4W
				R651	1-249-413-11	CARBON 470 5%	1/4W
				R652	1-249-415-11	CARBON 680 5%	1/4W
				R653	1-249-416-11	CARBON 820 5%	1/4W
				R654	1-249-418-11	CARBON 1.2K 5%	1/4W
				R655	1-249-419-11	CARBON 1.5K 5%	1/4W
				R661	1-249-429-11	CARBON 10K 5%	1/4W
				R662	1-249-421-11	CARBON 2.2K 5%	1/4W
				R663	1-249-421-11	CARBON 2.2K 5%	1/4W
				R664	1-249-409-11	CARBON 220 5%	1/4W

PANEL

POWER AMP

Ref. No.	Part No.	Description	Remark
R665	1-249-429-11	CARBON 10K	5% 1/4W
R666	1-249-407-11	CARBON 150	5% 1/4W
R667	1-247-807-31	CARBON 100	5% 1/4W
R668	1-249-407-11	CARBON 150	5% 1/4W
R669	1-247-804-11	CARBON 75	5% 1/4W
R670	1-249-407-11	CARBON 150	5% 1/4W
R671	1-249-407-11	CARBON 150	5% 1/4W
R672	1-249-407-11	CARBON 150	5% 1/4W
R674	1-247-804-11	CARBON 75	5% 1/4W
R675	1-247-804-11	CARBON 75	5% 1/4W
R676	1-247-804-11	CARBON 75	5% 1/4W
R677	1-247-804-11	CARBON 75	5% 1/4W
R678	1-247-804-11	CARBON 75	5% 1/4W
R679	1-247-804-11	CARBON 75	5% 1/4W
R680	1-247-807-31	CARBON 100	5% 1/4W
R681	1-247-807-31	CARBON 100	5% 1/4W
R682	1-247-807-31	CARBON 100	5% 1/4W
R683	1-249-441-11	CARBON 100K	5% 1/4W
R684	1-249-441-11	CARBON 100K	5% 1/4W
R685	1-247-804-11	CARBON 75	5% 1/4W
R725	1-249-430-11	CARBON 12K	5% 1/4W
R726	1-249-412-11	CARBON 390	5% 1/4W
R727	1-249-413-11	CARBON 470	5% 1/4W
R728	1-249-415-11	CARBON 680	5% 1/4W
R729	1-249-416-11	CARBON 820	5% 1/4W
R730	1-249-418-11	CARBON 1.2K	5% 1/4W
R731	1-249-419-11	CARBON 1.5K	5% 1/4W
R732	1-249-421-11	CARBON 2.2K	5% 1/4W
R733	1-249-422-11	CARBON 2.7K	5% 1/4W
R742	1-249-407-11	CARBON 150	5% 1/4W
R743	1-247-807-31	CARBON 100	5% 1/4W
R750	1-249-429-11	CARBON 10K	5% 1/4W
R751	1-249-417-11	CARBON 1K	5% 1/4W
R752	1-249-441-11	CARBON 100K	5% 1/4W
R753	1-249-417-11	CARBON 1K	5% 1/4W
R754	1-249-437-11	CARBON 47K	5% 1/4W
R755	1-249-429-11	CARBON 10K	5% 1/4W
R756	1-247-886-11	CARBON 200K	5% 1/4W
R757	1-247-807-31	CARBON 100	5% 1/4W
R758	1-249-433-11	CARBON 22K	5% 1/4W
R759	1-249-433-11	CARBON 22K	5% 1/4W
R760	1-249-433-11	CARBON 22K	5% 1/4W
R761	1-247-881-00	CARBON 120K	5% 1/4W
R762	1-249-433-11	CARBON 22K	5% 1/4W
R763	1-249-433-11	CARBON 22K	5% 1/4W
R764	1-249-433-11	CARBON 22K	5% 1/4W
R765	1-249-437-11	CARBON 47K	5% 1/4W
R766	1-249-431-11	CARBON 15K	5% 1/4W
R767	1-249-431-11	CARBON 15K	5% 1/4W
R768	1-249-417-11	CARBON 1K	5% 1/4W
R769	1-249-429-11	CARBON 10K	5% 1/4W

< VARIABLE RESISTOR >

RV750	1-225-574-11	RES, VAR, CARBON 50K (MIC LEVEL)
RV751	1-225-574-11	RES, VAR, CARBON 50K (ECHO LEVEL)

Ref. No.	Part No.	Description	Remark
< SWITCH >			
S601	1-473-534-11	ENCODER, ROTARY (◀◀◀↔▶▶▶, DJ MIX (JOG))	
S602	1-473-392-11	ENCODER, ROTARY (VOLUME)	
S604	1-762-875-21	SWITCH, KEYBOARD (FILE SELECT)	
S605	1-762-875-21	SWITCH, KEYBOARD (SURROUND)	
S606	1-762-875-21	SWITCH, KEYBOARD (KARAOKE PON/MPX)	
S607	1-762-875-21	SWITCH, KEYBOARD (■)	
S608	1-762-875-21	SWITCH, KEYBOARD (TIMER SELECT)	
S609	1-762-875-21	SWITCH, KEYBOARD (CLOCK/TIMER SET)	
S610	1-762-875-21	SWITCH, KEYBOARD (DISPLAY/DEMO)	
S614	1-762-875-21	SWITCH, KEYBOARD (FUNCTION)	
S615	1-762-875-21	SWITCH, KEYBOARD (EDIT, DIRECTION)	
S616	1-762-875-21	SWITCH, KEYBOARD (PLAY MODE, DOLBY NR)	
S617	1-762-875-21	SWITCH, KEYBOARD (CD REPEAT)	
S618	1-762-875-21	SWITCH, KEYBOARD (CD LOOP)	
S619	1-762-875-21	SWITCH, KEYBOARD (CD FLASH)	
S620	1-762-875-21	SWITCH, KEYBOARD (NON-STOP)	
S621	1-762-875-21	SWITCH, KEYBOARD (-, ◀◀)	
S622	1-762-875-21	SWITCH, KEYBOARD (ENTER/NEXT)	
S623	1-762-875-21	SWITCH, KEYBOARD (+, ▶▶)	
S624	1-762-875-21	SWITCH, KEYBOARD (DBFB)	
S625	1-762-875-21	SWITCH, KEYBOARD (GROOVE)	
S626	1-762-875-21	SWITCH, KEYBOARD (ACTIVE)	
S627	1-762-875-21	SWITCH, KEYBOARD (SELECT)	
S628	1-762-875-21	SWITCH, KEYBOARD (RETURN)	
S629	1-762-875-21	SWITCH, KEYBOARD (PREV)	
S630	1-762-875-21	SWITCH, KEYBOARD (NEXT)	
S631	1-762-875-21	SWITCH, KEYBOARD (TUNER, BAND)	
S632	1-762-875-21	SWITCH, KEYBOARD (CD, ▶▶▶)	
S633	1-762-875-21	SWITCH, KEYBOARD (TAPE B, ▶▶)	
S634	1-762-875-21	SWITCH, KEYBOARD (TAPE B, ◀◀)	
S635	1-762-875-21	SWITCH, KEYBOARD (TAPE A, ▶▶)	
S636	1-762-875-21	SWITCH, KEYBOARD (TAPE A, ◀◀)	
S656	1-762-875-21	SWITCH, KEYBOARD (● REC)	
S657	1-762-875-21	SWITCH, KEYBOARD (■ PAUSE)	
S658	1-762-875-21	SWITCH, KEYBOARD (HI-DUB)	
S659	1-762-875-21	SWITCH, KEYBOARD (CD SYNC)	
< VIBRATOR >			
X601	1-579-952-21	VIBRATOR, CERAMIC (8MHz)	

*	A-4414-003-A	POWER AMP BOARD, COMPLETE (EXCEPT CH)	
*	A-4414-014-A	POWER AMP BOARD, COMPLETE (CH)	

7-685-646-79 SCREW +BVTP 3X8 TYPE2 N-S			
< CAPACITOR >			
C801	1-126-963-11	ELECT 4.7uF 20% 50V	
C802	1-162-286-31	CERAMIC 220PF 10% 50V	
C803	1-162-282-31	CERAMIC 100PF 10% 50V	
C804	1-104-664-11	ELECT 47uF 20% 10V	
C806	1-126-967-11	ELECT 47uF 20% 50V	
C807	1-126-965-11	ELECT 22uF 20% 50V	
C809	1-126-965-11	ELECT 22uF 20% 50V	

POWER AMP

TRANSFORMER

Ref. No.	Part No.	Description		Remark
C810	1-164-159-11	CERAMIC	0.1uF	50V
C811	1-136-495-11	FILM	0.068uF	5% 50V
C812	1-136-495-11	FILM	0.068uF	5% 50V
C813	1-162-306-11	CERAMIC	0.01uF	20% 16V
C814	1-162-306-11	CERAMIC	0.01uF	20% 16V
(CH)				
C841	1-136-165-00	FILM	0.1uF	5% 50V
C842	1-126-974-11	ELECT	3300uF	20% 50V
C843	1-126-925-11	ELECT	470uF	20% 10V
C851	1-126-963-11	ELECT	4.7uF	20% 50V
C852	1-162-286-31	CERAMIC	220PF	10% 50V
C853	1-162-282-31	CERAMIC	100PF	10% 50V
C854	1-104-664-11	ELECT	47uF	20% 10V
C856	1-126-967-11	ELECT	47uF	20% 50V
C857	1-126-965-11	ELECT	22uF	20% 50V
C861	1-136-495-11	FILM	0.068uF	5% 50V
C862	1-136-495-11	FILM	0.068uF	5% 50V
C891	1-136-165-00	FILM	0.1uF	5% 50V
C892	1-126-974-11	ELECT	3300uF	20% 50V
< CONNECTOR >				
CN801	1-778-981-11	CONNECTOR, BOARD TO BOARD	13P	
< DIODE >				
D800	8-719-510-68	DIODE	D5SBA20F01	
D801	8-719-911-19	DIODE	1SS119	
D841	8-719-911-19	DIODE	1SS119	
D842	8-719-911-19	DIODE	1SS119	
D843	8-719-911-19	DIODE	1SS119	
D851	8-719-911-19	DIODE	1SS119	
< IC >				
IC801	8-749-900-34	IC	STK-4182MK2	
< TRANSISTOR >				
Q801	8-729-140-84	TRANSISTOR	2SC1841-PAFAEA	
Q851	8-729-140-84	TRANSISTOR	2SC1841-PAFAEA	
< RESISTOR >				
R801	1-249-417-11	CARBON	1K	5% 1/4W
R802	1-249-437-11	CARBON	47K	5% 1/4W
R803	1-249-415-11	CARBON	680	5% 1/4W
R804	1-249-437-11	CARBON	47K	5% 1/4W
R805	1-260-105-11	CARBON	3.3K	5% 1/2W
R806	1-260-105-11	CARBON	3.3K	5% 1/2W
△R807	1-212-881-11	FUSIBLE	100	5% 1/4W F
△R808	1-220-755-11	METAL	0.22	10% 2W F
R809	1-260-076-11	CARBON	10	5% 1/2W
R811	1-249-417-11	CARBON	1K	5% 1/4W
R812	1-249-431-11	CARBON	15K	5% 1/4W
R813	1-249-441-11	CARBON	100K	5% 1/4W
R814	1-260-099-11	CARBON	1K	5% 1/2W
R816	1-260-099-11	CARBON	1K	5% 1/2W
△R820	1-202-972-61	FUSIBLE	1	5% 1/4W F
R841	1-249-421-11	CARBON	2.2K	5% 1/4W
R842	1-249-425-11	CARBON	4.7K	5% 1/4W
R843	1-247-882-11	CARBON	130K	5% 1/4W

Ref. No.	Part No.	Description		Remark
R844	1-249-417-11	CARBON	1K	5% 1/4W
R851	1-249-417-11	CARBON	1K	5% 1/4W
R852	1-249-437-11	CARBON	47K	5% 1/4W
R853	1-249-415-11	CARBON	680	5% 1/4W
R854	1-249-437-11	CARBON	47K	5% 1/4W
R855	1-260-105-11	CARBON	3.3K	5% 1/2W
R856	1-260-105-11	CARBON	3.3K	5% 1/2W
△R857	1-212-881-11	FUSIBLE	100	5% 1/4W F
△R858	1-220-755-11	METAL	0.22	10% 2W F
R859	1-260-076-11	CARBON	10	5% 1/2W
R861	1-249-417-11	CARBON	1K	5% 1/4W
R862	1-249-431-11	CARBON	15K	5% 1/4W
R863	1-249-441-11	CARBON	100K	5% 1/4W

*	1-670-069-11	TRANSFORMER BOARD		

	1-533-217-31	HOLDER, FUSE		
< CONNECTOR >				
CN11	1-564-523-11	PLUG, CONNECTOR	8P	
* CN12	1-564-518-11	PLUG, CONNECTOR	3P	
CN13	1-564-321-00	PIN, CONNECTOR	2P	
< FUSE >				
△F11	1-532-502-31	FUSE (T1.25A/250V)		
△F12	1-532-464-31	FUSE (T2.5AL/250V)		
< RESISTOR >				
△R11	1-219-119-81	FUSIBLE	0.1	5% 1/4W F
△R12	1-219-119-81	FUSIBLE	0.1	5% 1/4W F
△R13	1-219-119-81	FUSIBLE	0.1	5% 1/4W F
△R14	1-219-119-81	FUSIBLE	0.1	5% 1/4W F
< SWITCH >				
△S11	1-572-675-11	SWITCH, POWER VOLTAGE CHANGE (VOLTAGE SELECTOR) (EXCEPT TH, CH)		
< TRANSFORMER >				
△T11	1-431-830-11	TRANSFORMER, POWER		

MISCELLANEOUS				

6	1-769-984-11	WIRE (FLAT TYPE) (13 CORE) (23cm)		
10	1-773-048-11	WIRE (FLAT TYPE) (17 CORE)		
11	1-773-025-11	WIRE (FLAT TYPE) (15 CORE) (33cm)		
106	1-775-212-11	WIRE (FLAT TYPE) (23 CORE)		
108	1-773-008-11	WIRE (FLAT TYPE) (15 CORE) (14cm)		
109	1-233-545-11	ENCAPSULATED COMPONENT (TH)		
109	1-693-381-11	TUNER, FM/AM (CH)		
109	1-693-421-11	TUNER (FM/AM) (EXCEPT TH, CH)		
△114	1-575-651-11	CORD, POWER (EA, HK, SP, MY, TW)		
△114	1-575-653-11	CORD, POWER (IA, TH)		
△114	1-782-464-21	CORD, POWER (CH)		
△115	1-569-007-11	ADAPTOR, CONVERSION 2P (IA)		
△115	1-569-008-21	ADAPTOR, CONVERSION 2P (EA, SP, MY, TW)		

以阴影和△标志来识别的零部件在安全方面具有关键性。因此只能以规定号码的零部件来更换。

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
△ 115	1-770-019-11	ADAPTOR, CONVERSION PLUG 3P (HK)	
116	1-751-688-11	WIRE (FLAT TYPE) (13 CORE) (17cm)	

△ T11 1-431-830-11 TRANSFORMER, POWER

HARDWARE LIST

#1	7-685-872-09	SCREW +BVTT 3X8 (S)
#2	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S
#3	7-685-647-01	SCREW +BVTP 3X10 TYPE1 (TH)
#3	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S (EXCEPT TH)
#4	7-685-650-79	SCREW +BVTP 3X16 TYPE2 IT-3
#5	7-685-871-01	SCREW +BVTT 3X6 (S)
#7	7-685-851-04	SCREW +BVTT 2X4 (S)

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

以阴影和△标志来识别的零部件在安全方面具有关键性。因此只能以规定号码的零部件来更换。

