

HCD-EX660Z/EX880Z/ EX990Z

SERVICE MANUAL

Ver. 1.1 2012.08



Photo: HCD-EX990Z

Russian Model
HCD-EX660Z/EX990Z

E Model
HCD-EX660Z/EX880Z/EX990Z

Mexican Model
HCD-EX880Z/EX990Z

South African Model
HCD-EX660Z

- HCD-EX660Z is the amplifier, USB, CD player and tuner section in MHC-EX660.
- HCD-EX880Z is the amplifier, USB, CD player and tuner section in MHC-EX880.
- HCD-EX990Z is the amplifier, USB, CD player and tuner section in MHC-EX990.

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CD Section	Model Name Using Similar Mechanism	HCD-EX66/EX600
	Mechanism Type	CDM76B-D1BD76
	Optical Pick-up Block Name	DA11MMVGP

SPECIFICATIONS

Amplifier section

The following are measured at
Mexican model:
AC 120 V – 240 V, 60 Hz
Other models:
AC 120 V – 240 V, 50/60 Hz

MHC-EX990

Front Speaker:
Power output (rated):
100 W + 100 W (at 2 ohms, 1 kHz,
1% THD)
RMS output power (reference):
180 W + 180 W (per channel at
2 ohms, 1 kHz)
Subwoofer:
RMS output power (reference):
360 W (at 4 ohms, 100 Hz)

MHC-EX880

Power output (rated):
140 W + 140 W (at 3 ohms, 1 kHz,
1% THD)
RMS output power (reference):
240 W + 240 W (per channel at
3 ohms, 1 kHz)

MHC-EX660

Power output (rated):
85 W + 85 W (at 4 ohms, 1 kHz,
1% THD)
RMS output power (reference):
150 W + 150 W (per channel at
4 ohms, 1 kHz)

Inputs

DVD/PC IN L/R (phono jacks):
Sensitivity 700 mV, impedance
22 kilohms

Outputs

PHONES (stereo mini jack):
accepts headphones with an impedance
of 8 ohms or more

USB section

Supported bit rate:
MP3 (MPEG 1 Audio Layer-3):
32 kbps – 320 kbps, VBR
WMA: 48 kbps – 192 kbps
AAC: 48 kbps – 320 kbps
Sampling frequencies:
MP3 (MPEG 1 Audio Layer-3):
32/44.1/48 kHz
WMA: 44.1 kHz
AAC: 44.1 kHz

⚡ (USB) port:
Maximum current: 500 mA

CD player section

System
Compact disc and digital audio system
Laser Diode Properties
Emission Duration: Continuous
Laser Output*: Less than 44.6 μ W
* This output is the value measurement
at a distance of 200 mm from the
objective lens surface on the Optical
Pick-up Block with 7 mm aperture.
Frequency response: 20 Hz – 20 kHz
Signal-to-noise ratio: More than 90 dB
Dynamic range: More than 88 dB

Tuner section

FM stereo, FM/AM superheterodyne tuner
Antenna:
FM lead antenna
AM loop antenna

FM tuner section

Tuning range:
87.5 MHz – 108.0 MHz (50 kHz step)

– Continued on next page –

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COMPACT DISC RECEIVER

SONY®

AM tuner section

Tuning range

Latin American models:

530 kHz – 1,710 kHz (10 kHz step)

531 kHz – 1,710 kHz (9 kHz step)

Russian models:

531 kHz – 1,602 kHz (9 kHz step)

Other models:

531 kHz – 1,602 kHz (9 kHz step)

530 kHz – 1,610 kHz (10 kHz step)

General

Power requirements

Mexican model:

AC 120 V – 240 V, 60 Hz

Other models:

AC 120 V – 240 V, 50/60 Hz

Power consumption

MHC-EX990: 115 W

MHC-EX880: 85 W

MHC-EX660: 65 W

Dimensions (w/h/d) (excl. speakers)

(Approx.)

MHC-EX990/EX880: 240 mm ×

315 mm × 382 mm

MHC-EX660: 240 mm × 315 mm ×

347.8 mm

Mass (excl. speakers) (Approx.)

MHC-EX990: 4.25 kg

MHC-EX880: 4.18 kg

MHC-EX660: 3.40 kg

Quantity of the main unit: 1 piece

Supplied accessories: Remote control (1),

R6 (Size AA) batteries (2), FM lead/

AM loop antenna (1)

Design and specifications are subject to change without notice.

Standby power consumption: 0.5 W

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 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.

CLASS 1 LASER PRODUCT
LUOKAN 1 LASERLAITE
KLASS 1 LASERAPPARAT

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

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.

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SECTION 1 SERVICING NOTES

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.

UNLEADED SOLDER

Boards requiring use of unleaded solder are printed with the lead-free mark (LF) indicating the solder contains no lead.

(Caution: Some printed circuit boards may not come printed with the lead free mark due to their particular size)

: LEAD FREE MARK

Unleaded solder has the following characteristics.

- Unleaded solder melts at a temperature about 40 °C higher than ordinary solder.
Ordinary soldering irons can be used but the iron tip has to be applied to the solder joint for a slightly longer time.
Soldering irons using a temperature regulator should be set to about 350 °C.
Caution: The printed pattern (copper foil) may peel away if the heated tip is applied for too long, so be careful!
- Strong viscosity
Unleaded solder is more viscous (sticky, less prone to flow) than ordinary solder so use caution not to let solder bridges occur such as on IC pins, etc.
- Usable with ordinary solder
It is best to use only unleaded solder but unleaded solder may also be added to ordinary solder.

RELEASING THE DISC TRAY LOCK

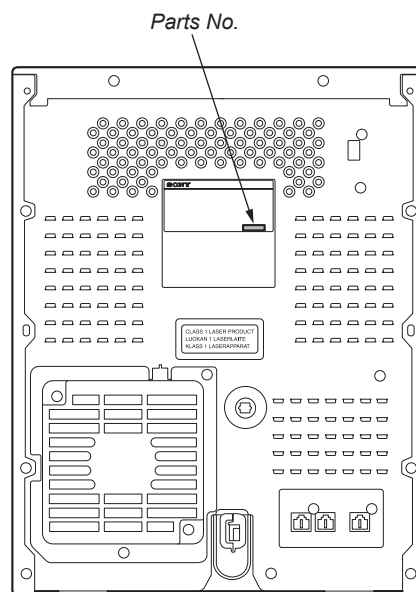
The disc tray lock function for the antitheft of an demonstration disc in the store is equipped.

Releasing Procedure:

- Press the [I/⏻] button to turn the power on.
- Press the [FUNCTION] button to select CD function.
- Press the [■] and [▲] button simultaneously and hold down for around 5 seconds.
- The message “UNLOCKED” is displayed and the disc tray is unlocked.

Note: When “LOCKED” is displayed, the slot lock is not released by turning power on/off with the [I/⏻] button.

MODEL IDENTIFICATION – Model Number Label –

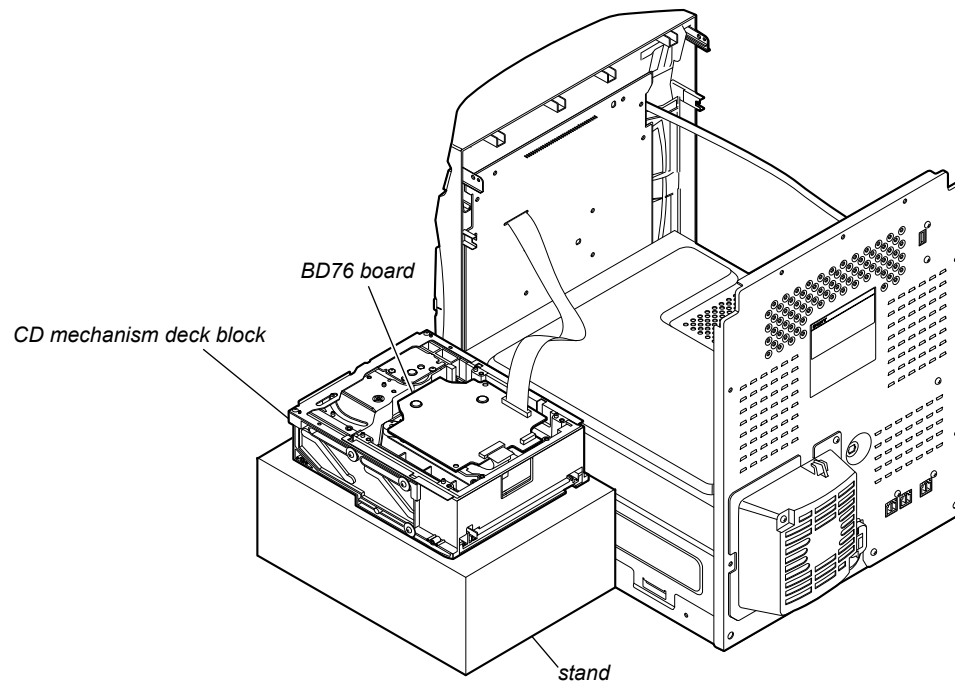


Model	Part No.
EX660Z: E2	4-422-252-0□
EX660Z: E51	4-422-258-0□
EX660Z: RU	4-422-260-0□
EX660Z: SAF	4-422-259-0□
EX880Z: E2	4-422-290-0□
EX880Z: E51	4-422-294-0□
EX880Z: MX	4-422-292-0□
EX990Z: E2	4-422-296-0□
EX990Z: E51	4-422-300-0□
EX990Z: MX	4-422-298-0□
EX990Z: RU	4-431-748-0□

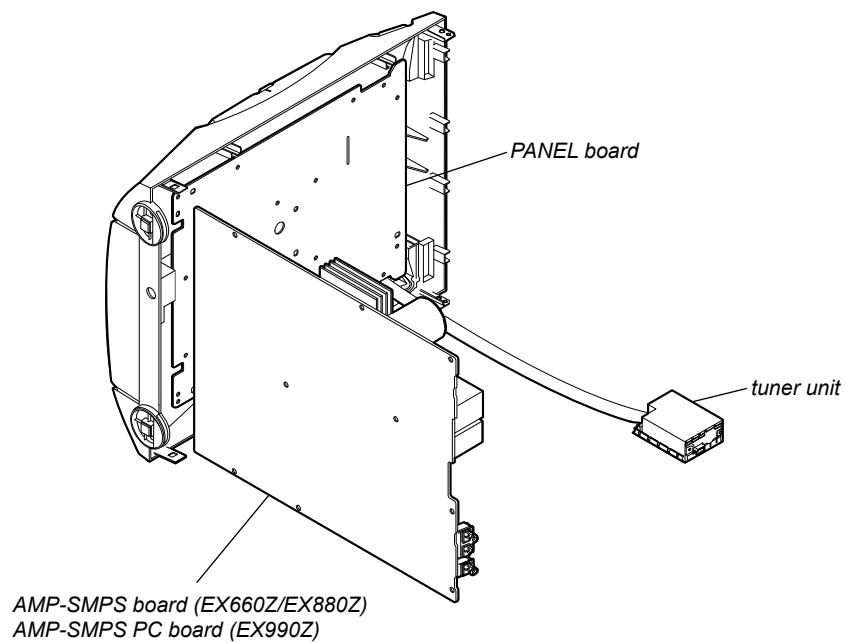
- Abbreviation
 - E2 : 120V AC area in E model
 - E51 : Chilean and Peruvian models
 - MX : Mexican model
 - RU : Russian model
 - SAF : South African model

Note: Refer to SUPPLEMENT-1 for adding SERVICING NOTES (TROUBLESHOOTING)

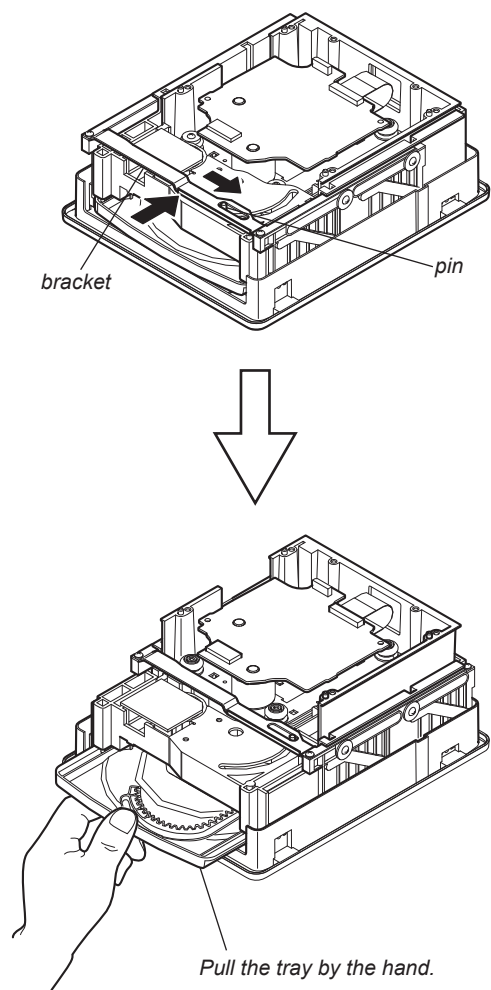
SERVICE POSITION OF CDM76



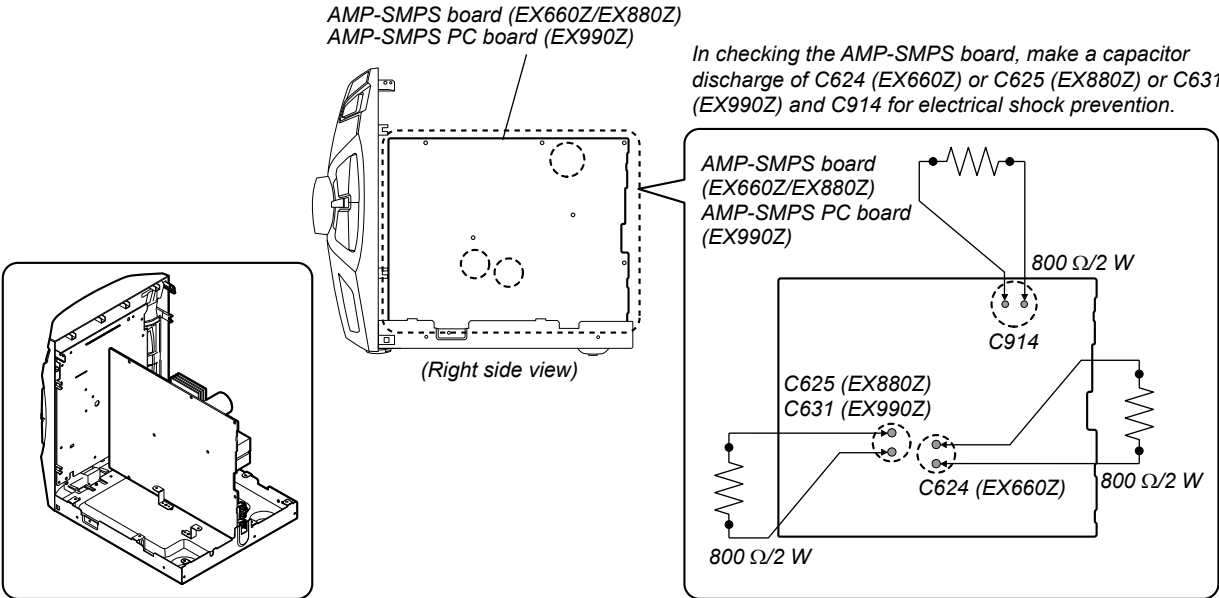
SERVICE POSITION OF BOARDS



HOW TO OPEN THE TRAY WHEN POWER SWITCH TURN OFF



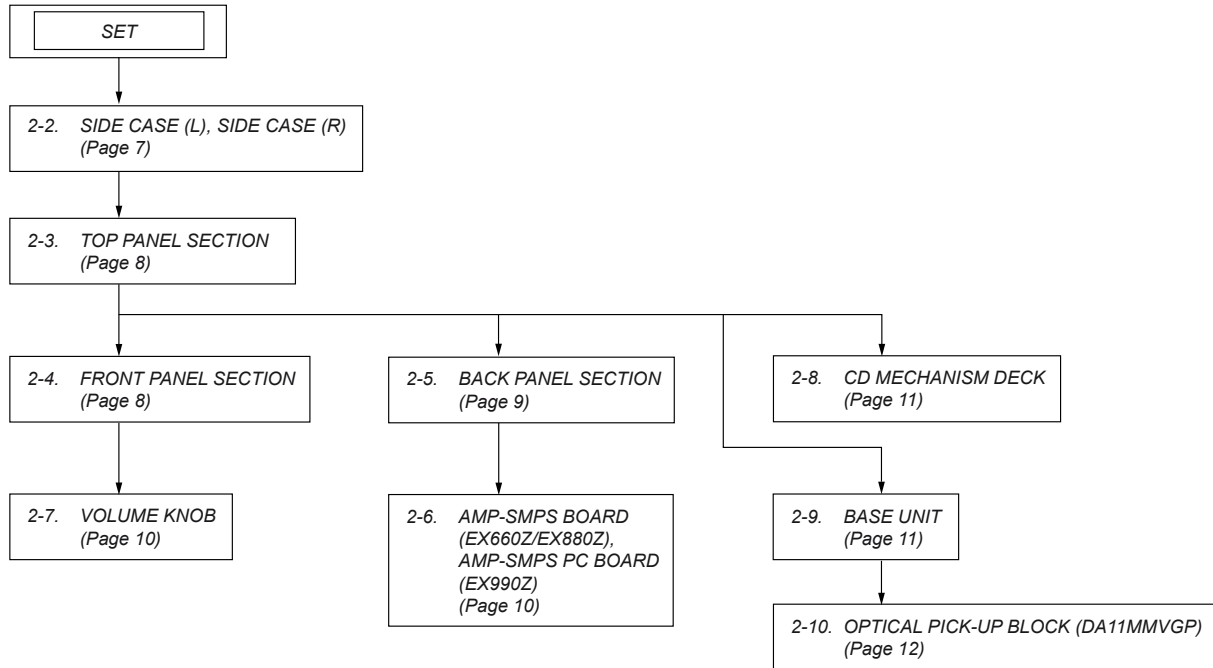
CAPACITOR DISCHARGE FOR ELECTRIC SHOCK PREVENTION



SECTION 2 DISASSEMBLY

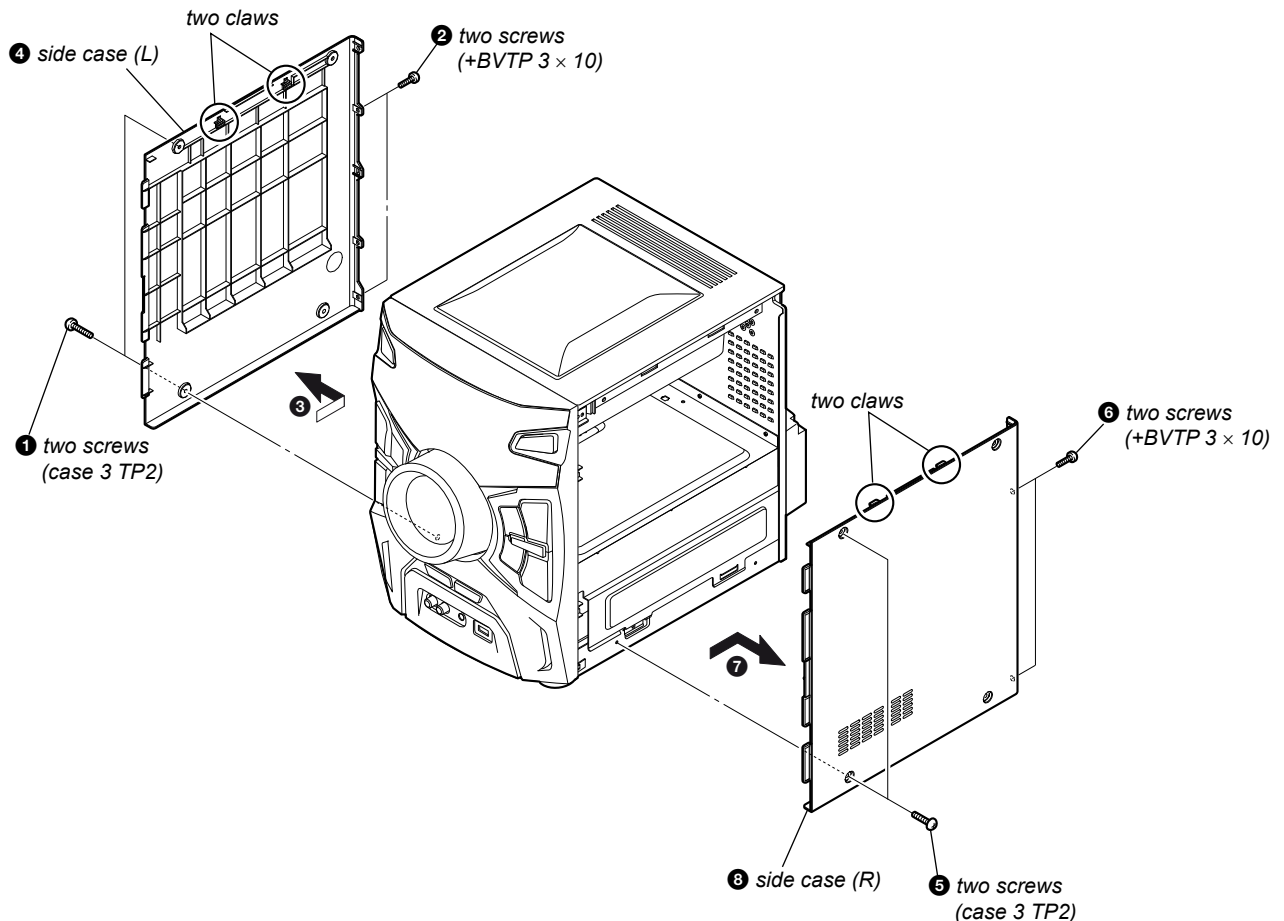
- This set can be disassembled in the order shown below.

2-1. DISASSEMBLY FLOW

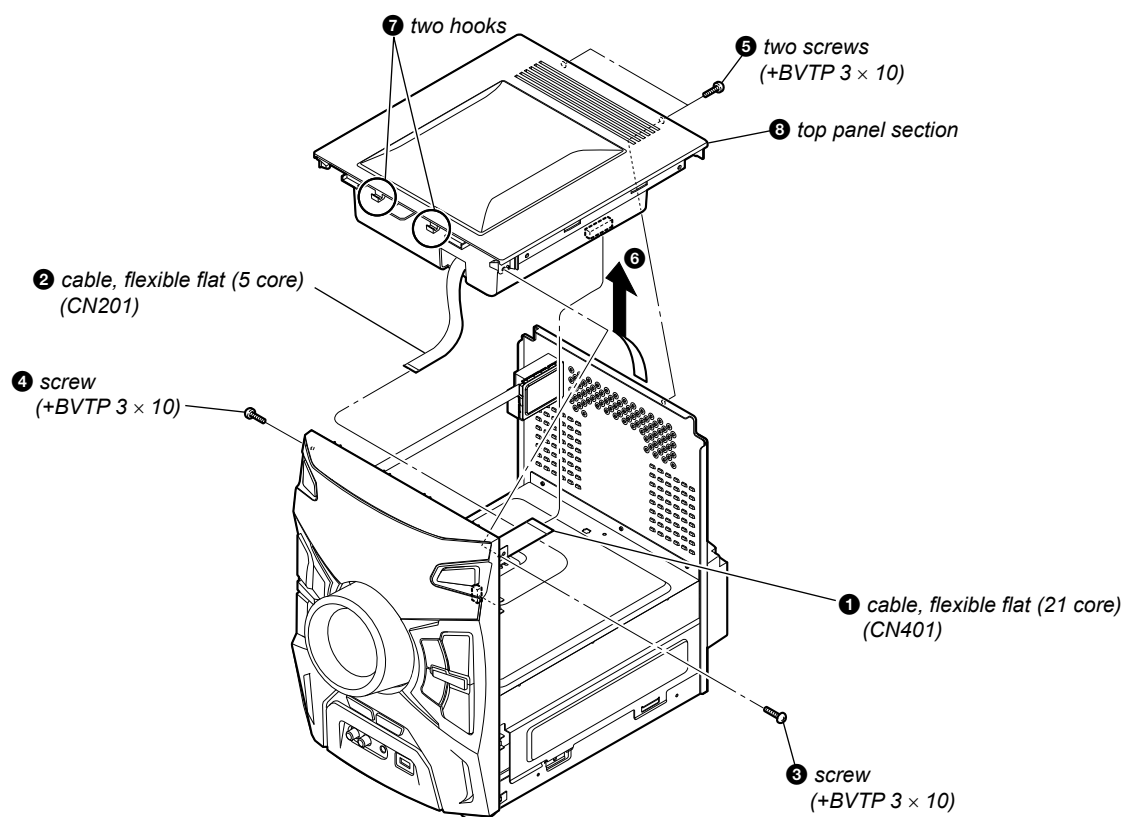


Note: Follow the disassembly procedure in the numerical order given.

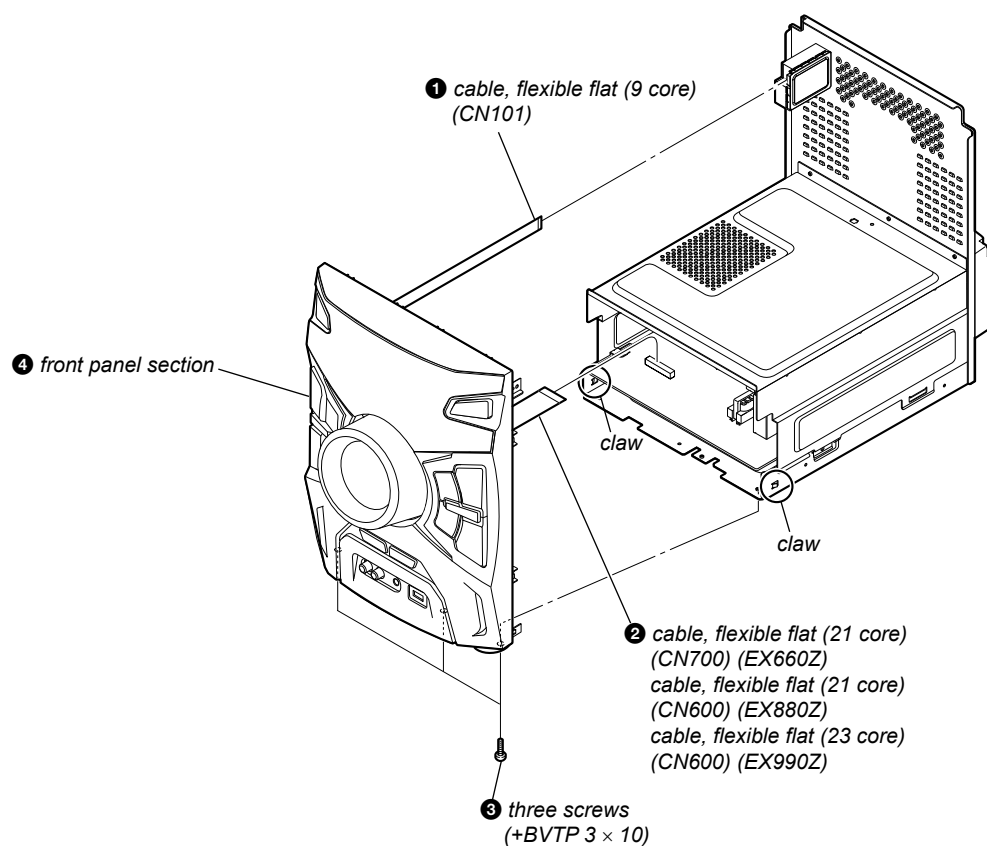
2-2. SIDE CASE (L), SIDE CASE (R)



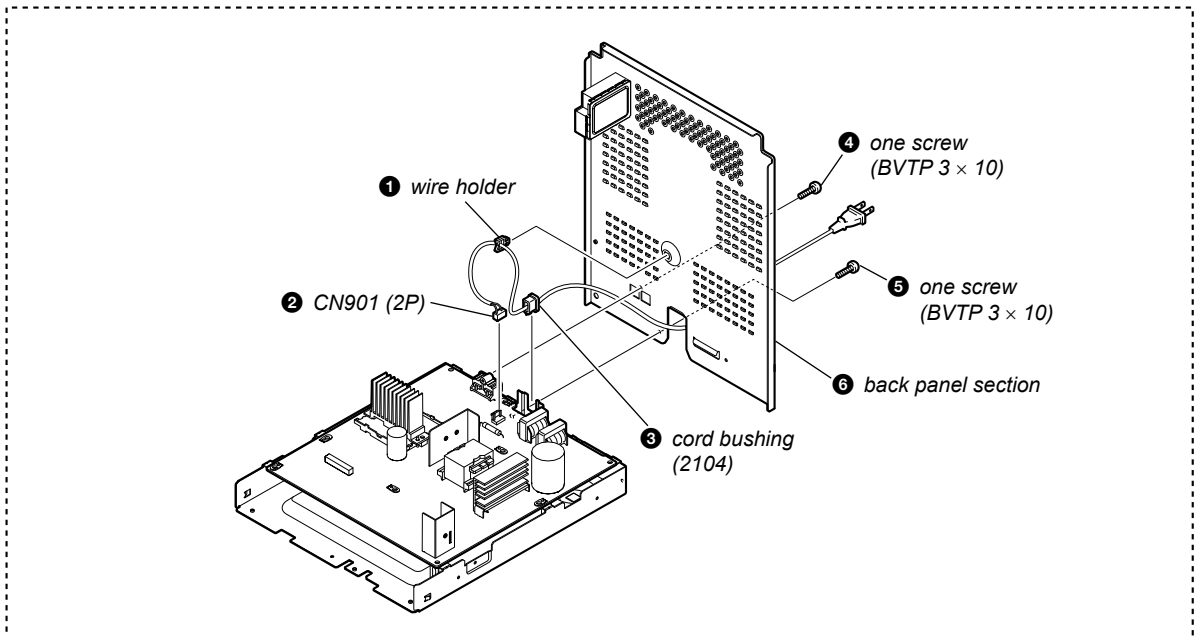
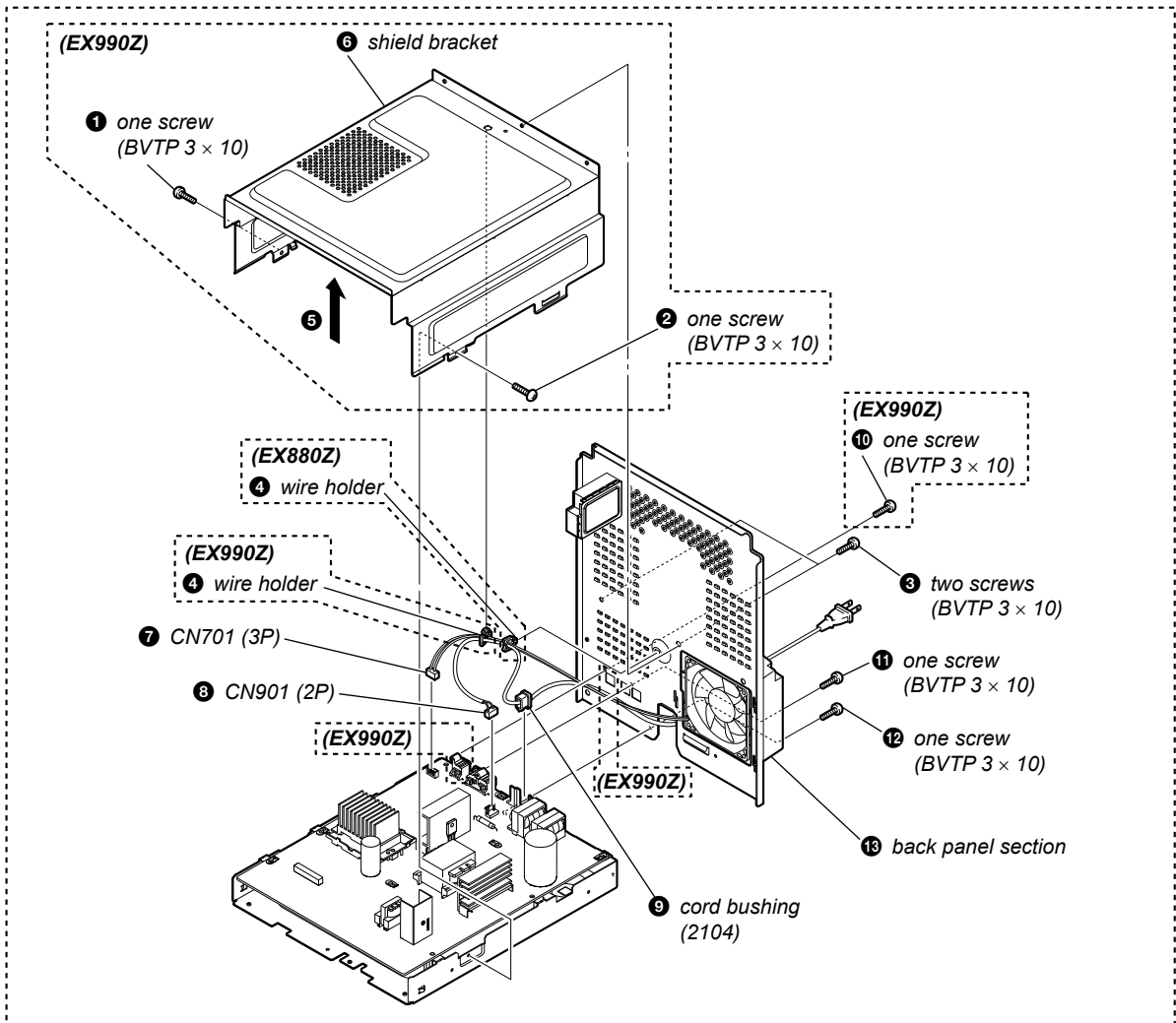
2-3. TOP PANEL SECTION



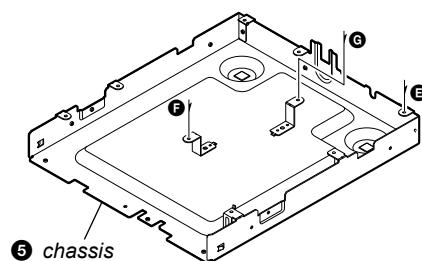
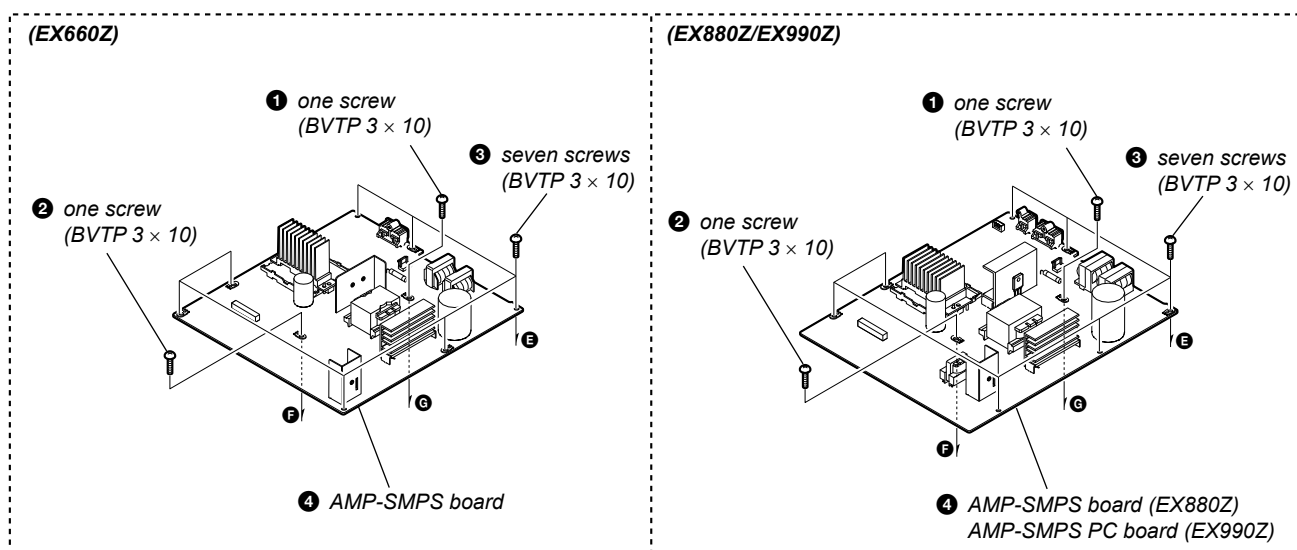
2-4. FRONT PANEL SECTION



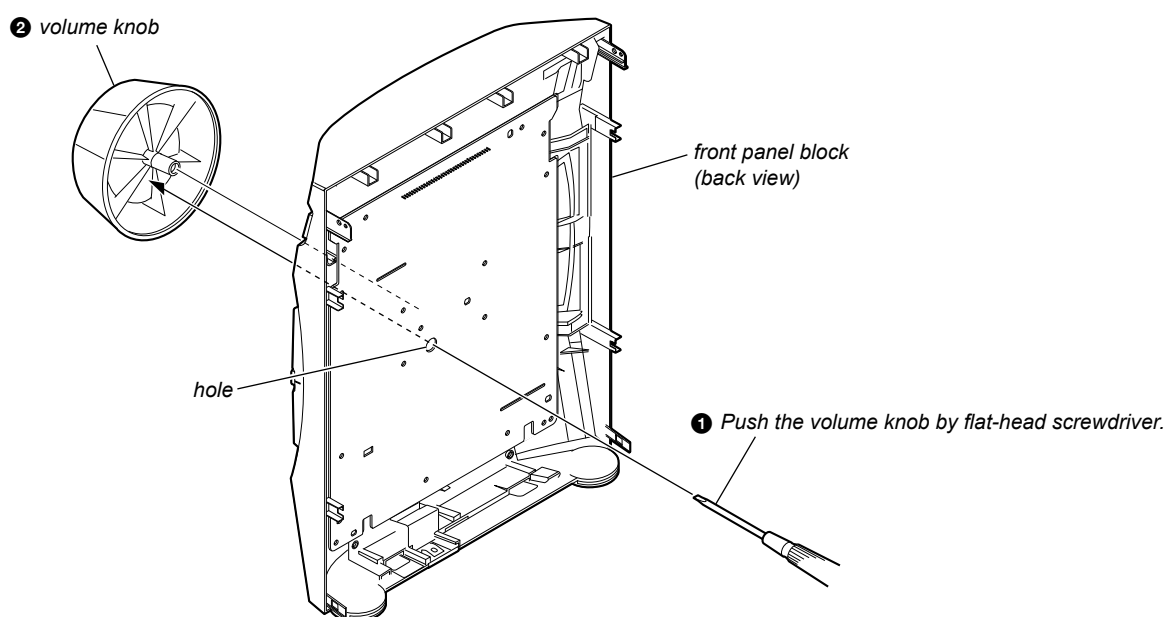
2-5. BACK PANEL SECTION

EX660Z**EX880Z/EX990Z**

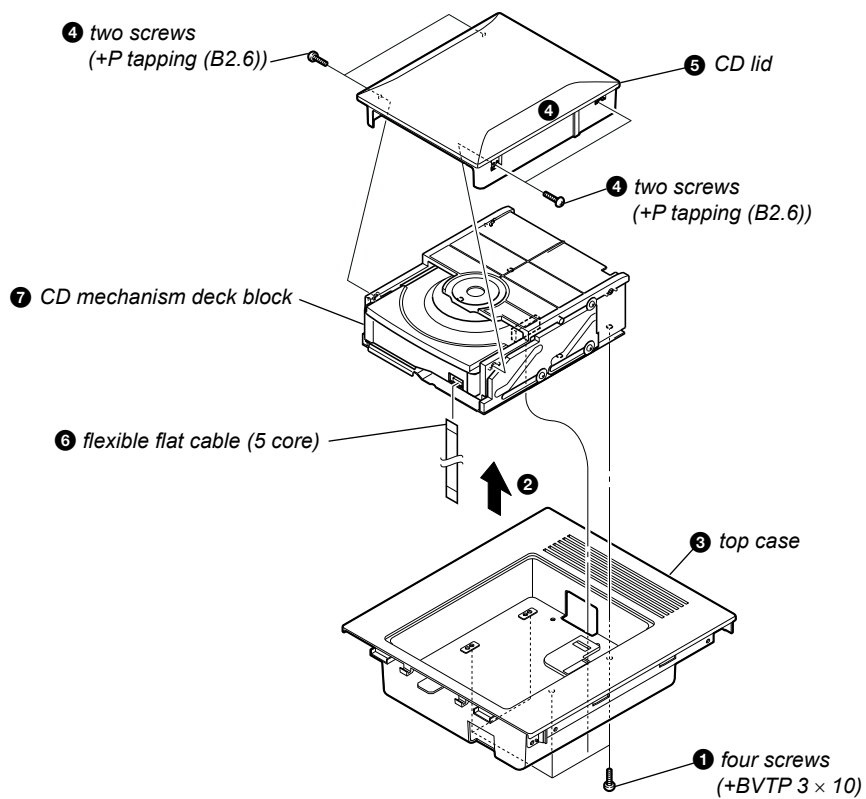
2-6. AMP-SMPS BOARD (EX660Z/EX880Z), AMP-SMPS PC BOARD (EX990Z)



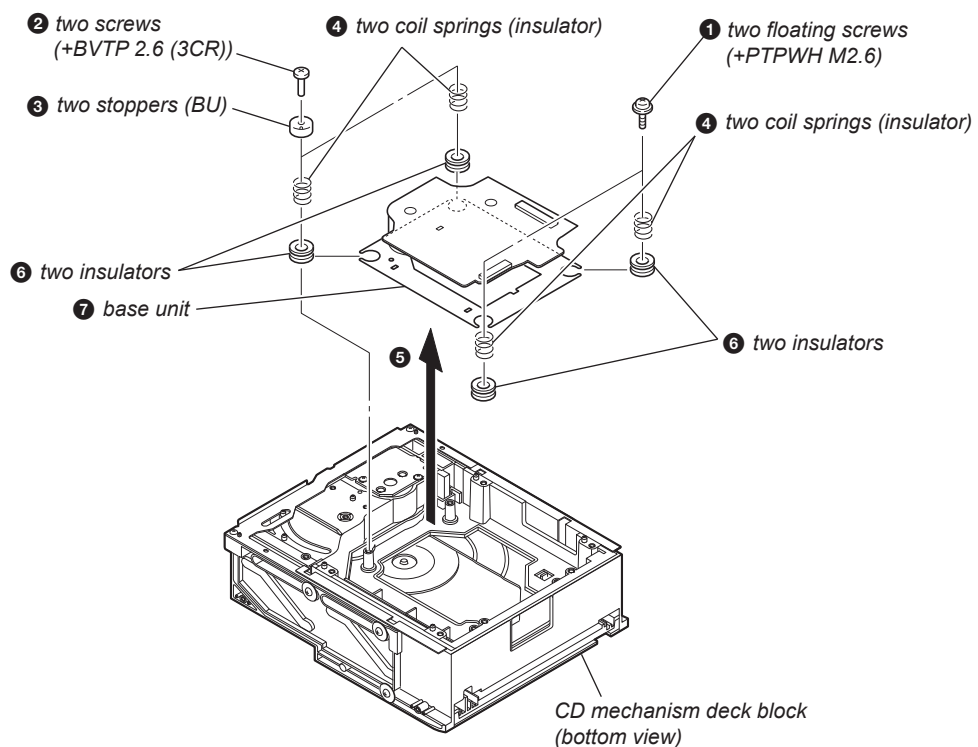
2-7. VOLUME KNOB



2-8. CD MECHANISM DECK

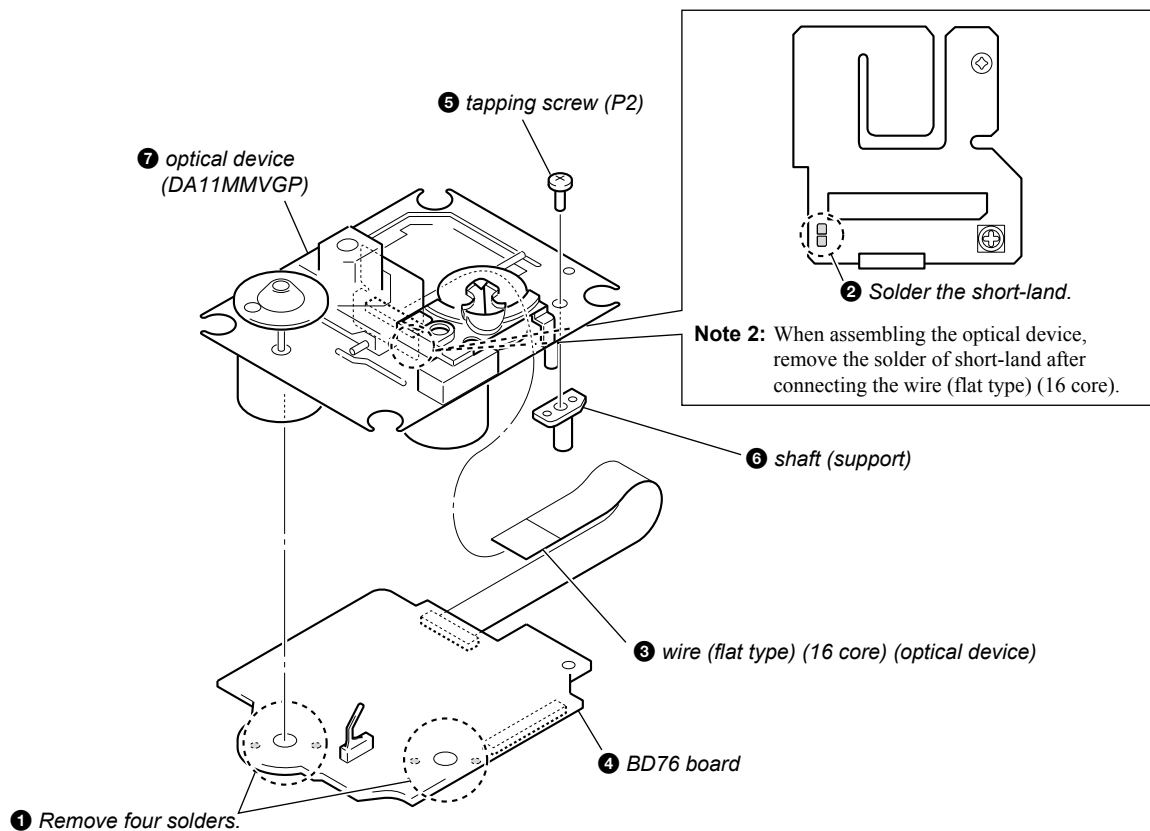


2-9. BASE UNIT



2-10. OPTICAL PICK-UP BLOCK (DA11MMVGP)

Note 1: When disconnecting the wire (flat type) (16 core) of optical device, solder the short-land.



SECTION 3 TEST MODE

COLD RESET

The cold reset clears all data including preset data stored in the memory to initial conditions. Execute this mode when returning the set to the customer.

Procedure:*

1. In standby status, press the [I/⏻] button to turn on the system.
2. Press three buttons of [■], [OPTIONS] and [I/⏻] simultaneously.
3. When “RESET” appears, the set enters standby status.

PANEL TEST MODE

This mode is used to check the liquid crystal display, keys, [VOLUME] knob, model, destination and software version.

Enter The Panel Test Mode

Procedure:

1. In standby status, press the [I/⏻] button to turn the power on.
2. Press three buttons of [■], [□-] and [I/⏻] simultaneously.
3. All LEDs and segments of liquid crystal display will light up.

Version Check

Procedure:

1. In Panel Test Mode, press the [FUNCTION] button.
2. On the liquid crystal display panel, date and version are displayed alternately.
3. From this status, press the [EQ] button, the destination and model name are displayed alternately.
4. To release from this mode, press three buttons of [■], [□-] and [I/⏻] simultaneously.

Key & Encoder Test check

Procedure:

1. In Panel test mode, press the [ENTER] button.
2. The message “KEY0 0 0” displayed. Whenever any buttons are pressed, the value is change.
3. To release from this mode, press three buttons of [■], [□-] and [I/⏻] simultaneously.

COMMON TEST MODE

This mode is used to check operations of the Amplifier section.

Procedure:

1. To enter Common Test Mode, press three buttons of [FUNCTION], [OPTIONS] and [I/⏻] simultaneously.
2. “COMMON” appears on the liquid crystal display panel. The volume is changed to VOLUME MIN.

Check of Amplifier

1. Press the [EQ] button repeatedly until a message “EQ MAX” appears on the liquid crystal display panel. EQ increases to its maximum.
2. Press the [EQ] button repeatedly until a message “EQ MIN” appears on the liquid crystal display panel. EQ decreases to its minimum.
3. Press the [EQ] button repeatedly until a message “EQ FLAT” appears on the liquid crystal display panel. EQ is set to flat.
4. When the [VOLUME] knob is turned clockwise even slightly, the message “VOL 29” (for EX660Z and EX880Z) or “VOL 31” (for EX990Z) appears on the liquid crystal display panel. Sound is set to Standard Volume Position (SVP).
5. When the [VOLUME] knob is turned clockwise even slightly, the message “VOL MAX” appears on the liquid crystal display panel. Sound is set to volume maximum.
6. When the [VOLUME] knob is turned counterclockwise even slightly, the message “VOL MIN” appears on the liquid crystal display panel. Sound is set to volume minimum.
3. To release from this mode, press the [I/⏻] button.
4. The cold reset is enforced at the same time.

CD THEFT PREVENTION

This mode let you lock the disc tray. When this mode is activated, the disc tray will not open when the [▲] button is pressed. The message “LOCKED” will be displayed on the liquid crystal display panel. This mode only applied when there is disc on the tray.

Procedure:

1. In standby status, press the [I/⏻] button to turn the power on.
2. Press the [FUNCTION] button to select CD function.
3. Press the [■] and [▲] button simultaneously and hold down for around 5 seconds until “LOCKED” or “UNLOCKED” is displayed on the liquid crystal display panel.

TUNER STEP CHANGE

The step interval of AM channels can be toggled between 9 kHz and 10 kHz. This mode is not available for Saudi Arabian, European and Russian models.

Procedure:

1. Press the [I/⏻] button to turn on the system.
2. Press the [FUNCTION] button repeatedly to select the “AM”.
3. Press the [I/⏻] button to turn off the system.
4. Press the [DISPLAY] button on the remote control to enter clock mode or demo mode, then press the [TUNING + ►► ►►] and [I/⏻] button simultaneously.
5. The system turns on automatically. The message “9K STEP” or “10K STEP” appears on the liquid crystal display panel and thus the channel step is changed.

PROTECT KIND CHECK TEST MODE

This mode is used to check type of protect occurred during protector on.

Procedure:

1. During protection on, LCD will toggle between “PROTECT EXX” message & protector kind message display.

Indication of display tube	Breakdown of defect
PROTECT E01	Defect of AMP circuit & SMPS overload.
PROTECT E02	Defect of fan, output speaker, 7V regulator & 9V regulator circuit.
OVER CURRENT	Defect of power supply circuit to 5V regulator (USB).

1. Defect of AMP circuit

1-1. If PROTECT mode is in “PROTECT ERROR 01”,

The following defect can be considered.

The kind of defect	The cause is considered
OTP (Over Temperature Protection)	Unusual heat of MOSFET by assemble defect of heatsink and destruction of MOSFET etc..
Unusual output of Power mount	The power mount is unusual output. Please refer the point of power mount.

SMPS overload	Current surge to MOSFET by MOSFET and defect of PS output line.
---------------	---

1-2. If output does not come out even if the set status is not in PROTECT mode

The following defect can be considered.

The kind of defect	The cause is considered
Under Voltage	SMPS switching MOSFET defect.
RESET defect	Reset signal status from micro is not 'H'.

2. Defect of power supply (regulator)

2-1. If the PROTECT mode is "PROTECT ERROR 02",

The following defect can be considered.

The kind of defect	The cause is considered
OCP (Over Current Protection)	Unusual output voltage of 7V & 9V regulator short.
Fan block	Fan supply draw current.
DC Detection	DC appears in SP terminal by defect of AMP IC and MOSFET or output of short-circuit.

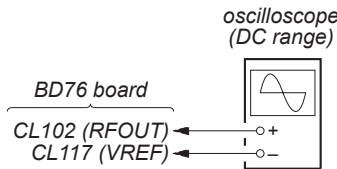
SECTION 4 ELECTRICAL ADJUSTMENTS

CD SECTION

Note:

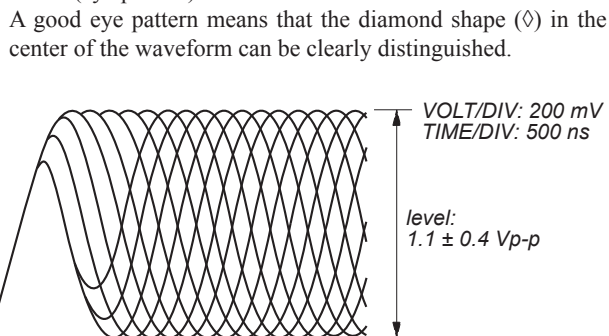
1. CD Block is basically constructed to operate without adjustment.
2. Use YEDS-18 disc (Part No. 3-702-101-01) unless otherwise indicated.
3. Use an oscilloscope with more than 10 MΩ impedance.
4. Clean the object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.
5. Check the focus bias check when optical pick-up block is replaced.

FOCUS BIAS CHECK



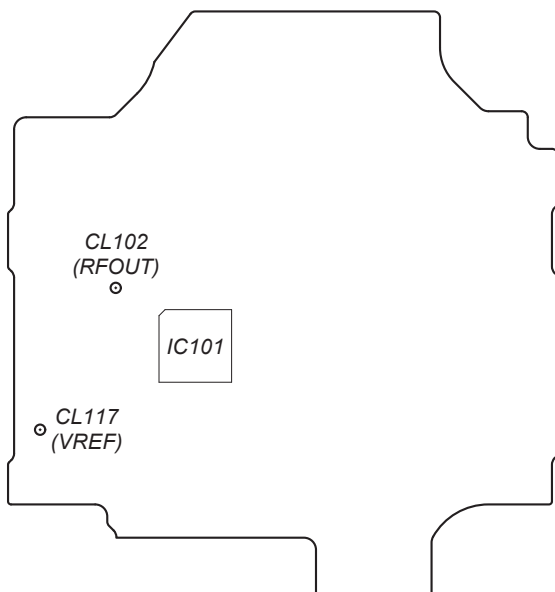
Procedure:

1. Connect the oscilloscope to CL102 (RFOUT) and CL117 (VREF) on the BD76 board.
2. Press the [I/⏏] button to turn the power on, and press the [FUNCTION] button to select CD function.
3. Set disc (YEDS-18) and press the [▶II] button to playback.
4. Confirm that oscilloscope waveform is as shown in the figure below (eye pattern).



Checking Location:

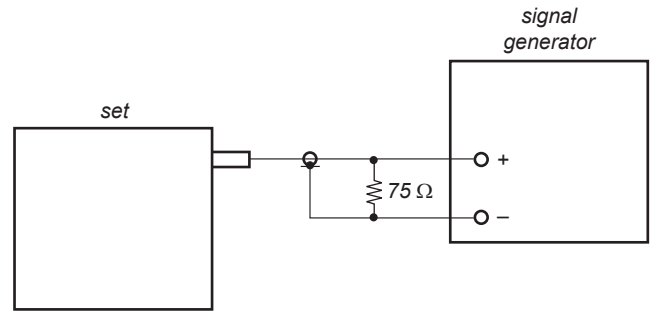
– BD76 Board (Side B) –



TUNER SECTION

0 dB = 1 μV

FM AUTO STOP CHECK



Procedure:

1. Turn the power on.
2. Input the following signal from Signal Generator to FM antenna input directly.

Carrier frequency : A = 87.5 MHz, B = 98 MHz, C = 108 MHz

Deviation : 75 kHz

Modulation : 1 kHz

ANT input : 35 dBu (EMF)

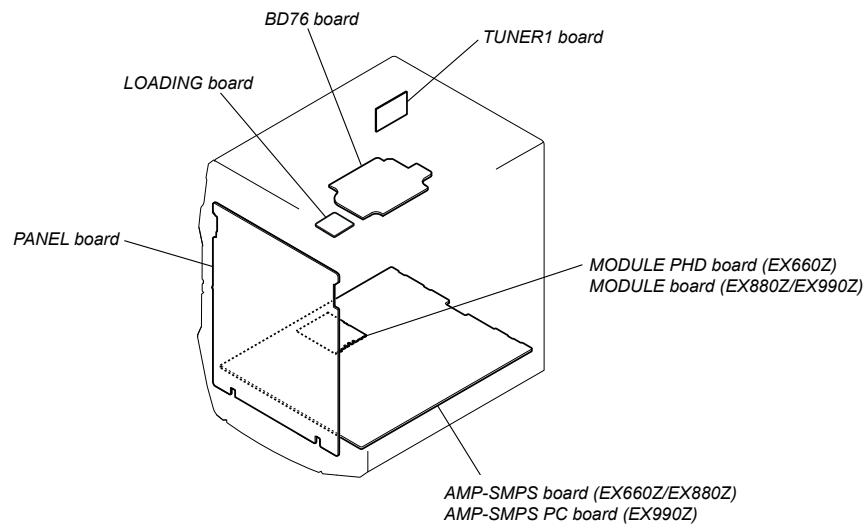
Note: Please use 75 ohm “coaxial cable” to connect SG and the set. You cannot use video cable for checking.
Please use SG whose output impedance is 75 ohm.

3. Set to FM tuner function and scan the input FM signal with automatic scanning.
4. Confirm that input Frequency of A, B and C detected and automatic scanning stops.

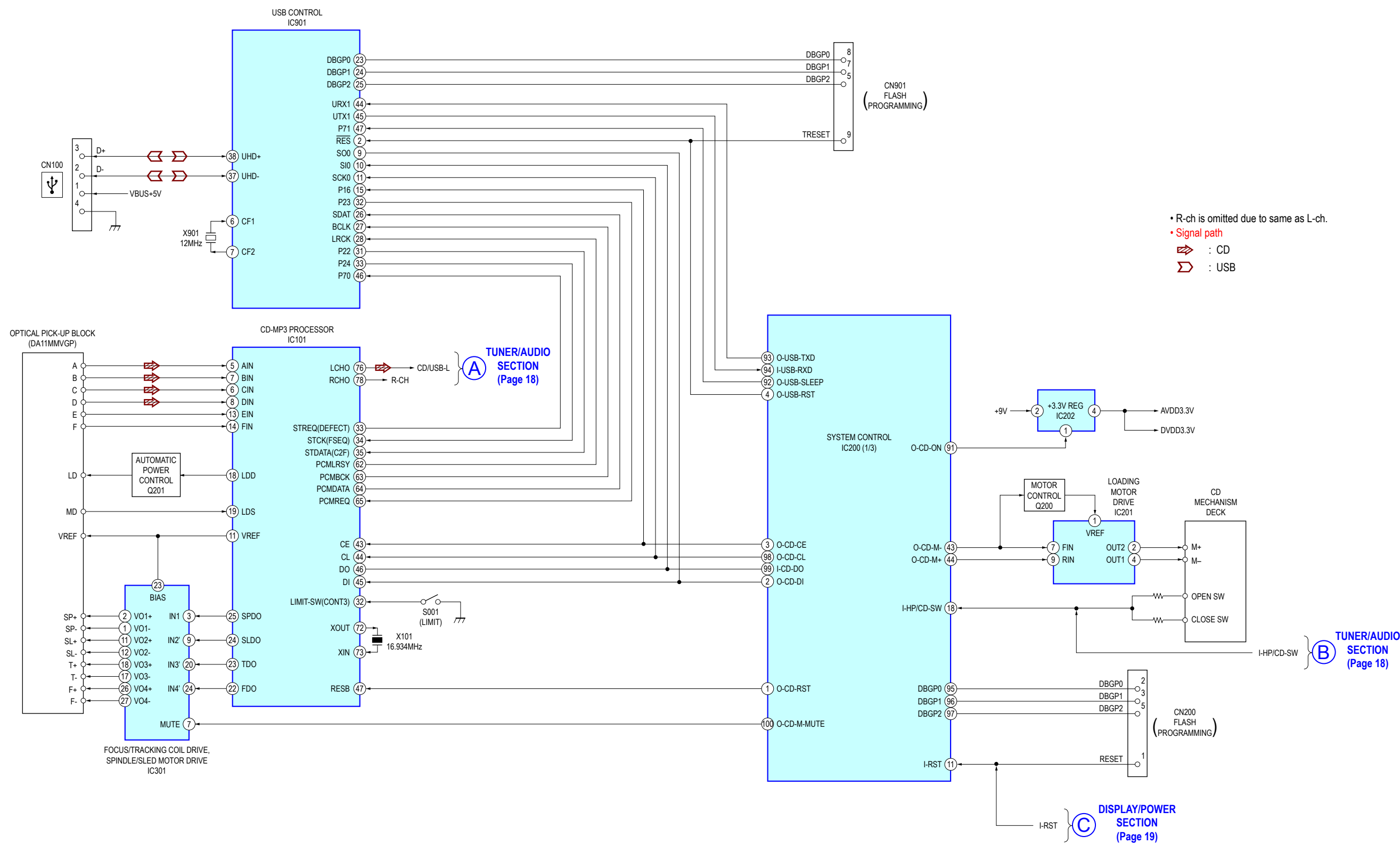
The stop of automatic scanning means “The station signal is received in good condition”.

SECTION 5 DIAGRAMS

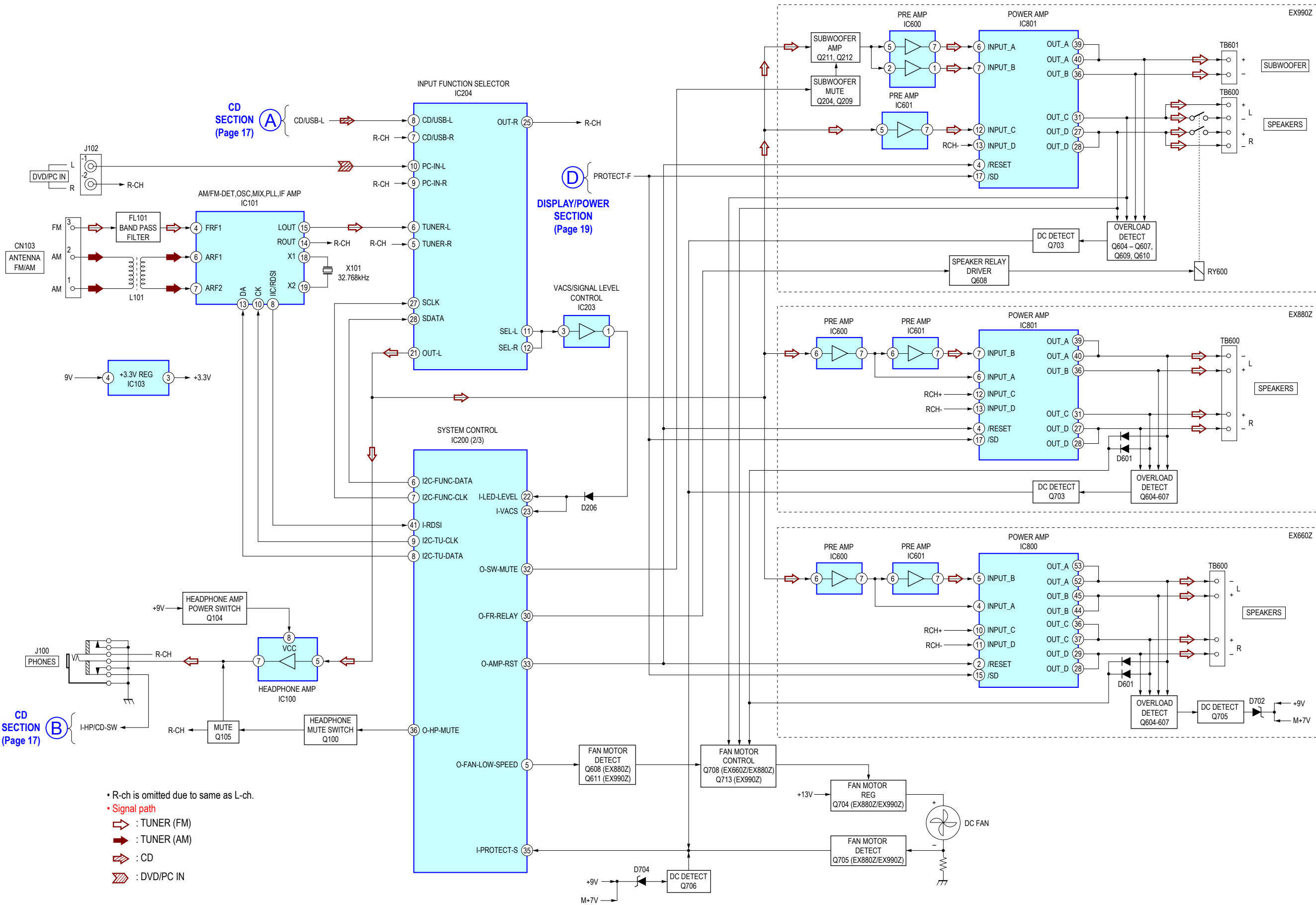
• Circuit Boards Location



5-1. BLOCK DIAGRAM - CD Section -



5-2. BLOCK DIAGRAM - TUNER/AUDIO Section -



19 19



THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.
(In addition to this, the necessary note is printed in each block.)

For Printed Wiring Boards.

- Note:**
- — : Parts extracted from the component side.
 - : 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
(Conductor Side) from the pattern face are indicated.

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

- Abbreviation
 - E2 : 120V AC area in E model
 - E51 : Chilean and Peruvian models
 - MX : Mexican model
 - RU : Russian model
 - SAF : South African model

For Schematic Diagrams.

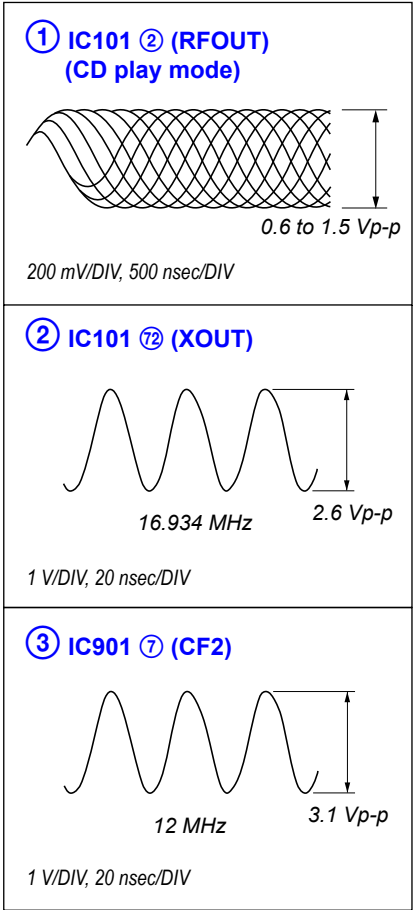
- Note:**
- All capacitors are in μF unless otherwise noted. (p: pF) 50 WV or less are not indicated except for electrolytics and tantalums.
 - All resistors are in Ω and 1/4 W or less unless otherwise specified.
 - △ : Internal component.
 - : Nonflammable resistor.
 - : Panel designation.

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

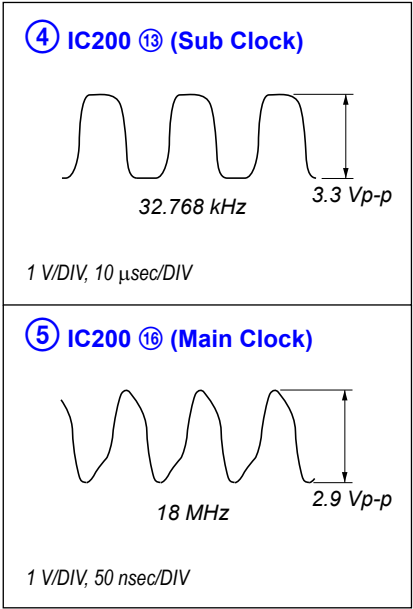
- : B+ Line.
- - - : B- Line.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- BD76 Board —
no mark: CD PLAY
- Other Boards —
no mark: TUNER (FM/AM)
* : Impossible to measure
- Voltages are taken with VOM (Input impedance 10 M Ω).
Voltage variations may be 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)
 - ➡ : TUNER (AM)
 - ⇒ : CD
 - ⇒ : USB
 - ⇒ : DVD/PC IN
- Abbreviation
 - E2 : 120V AC area in E model
 - E51 : Chilean and Peruvian models
 - MX : Mexican model
 - RU : Russian model
 - SAF : South African model

• Waveforms

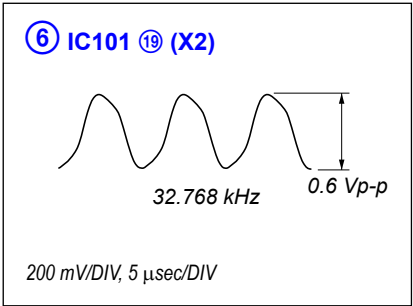
— BD76 Board —



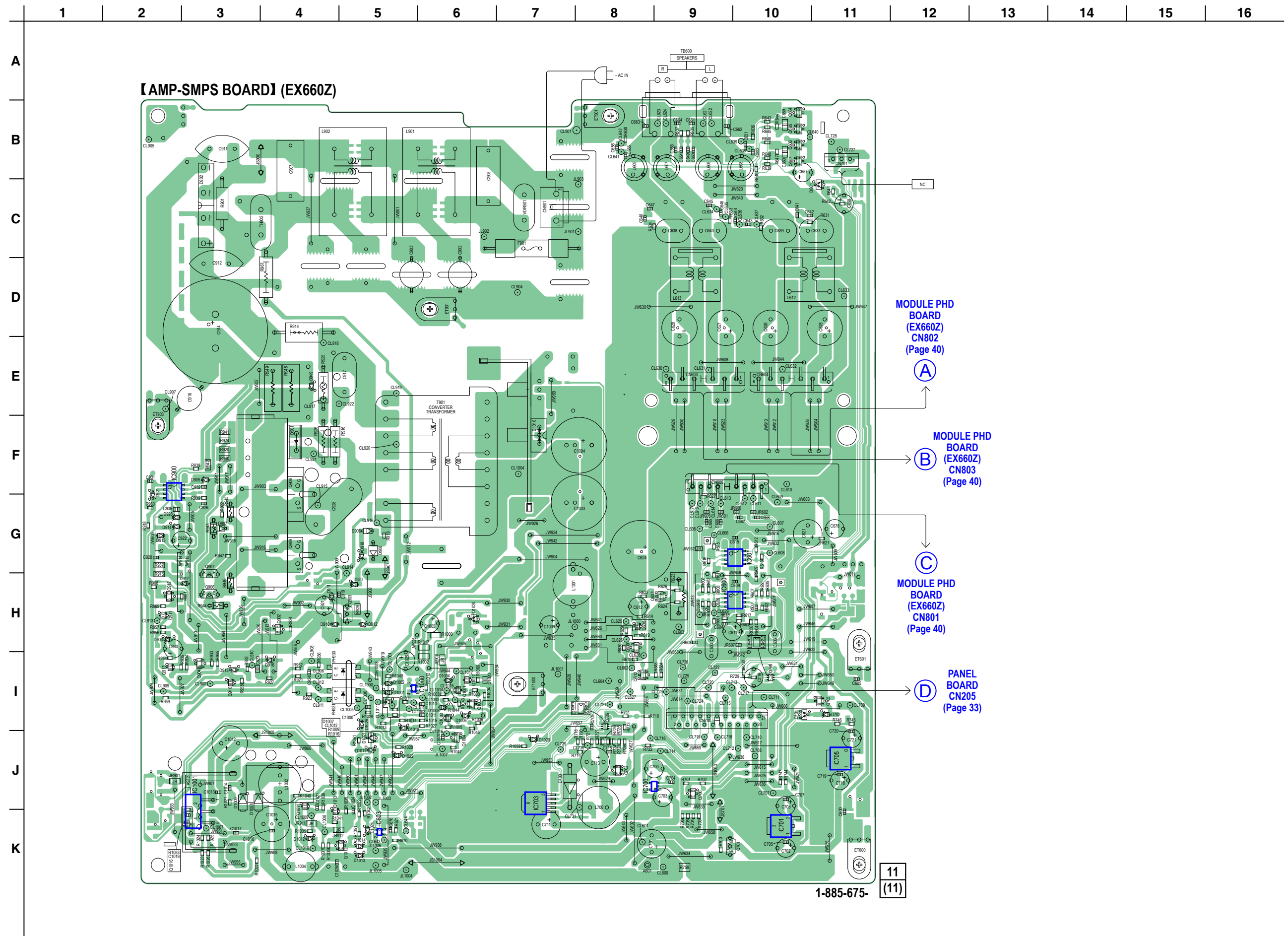
— PANEL Board —



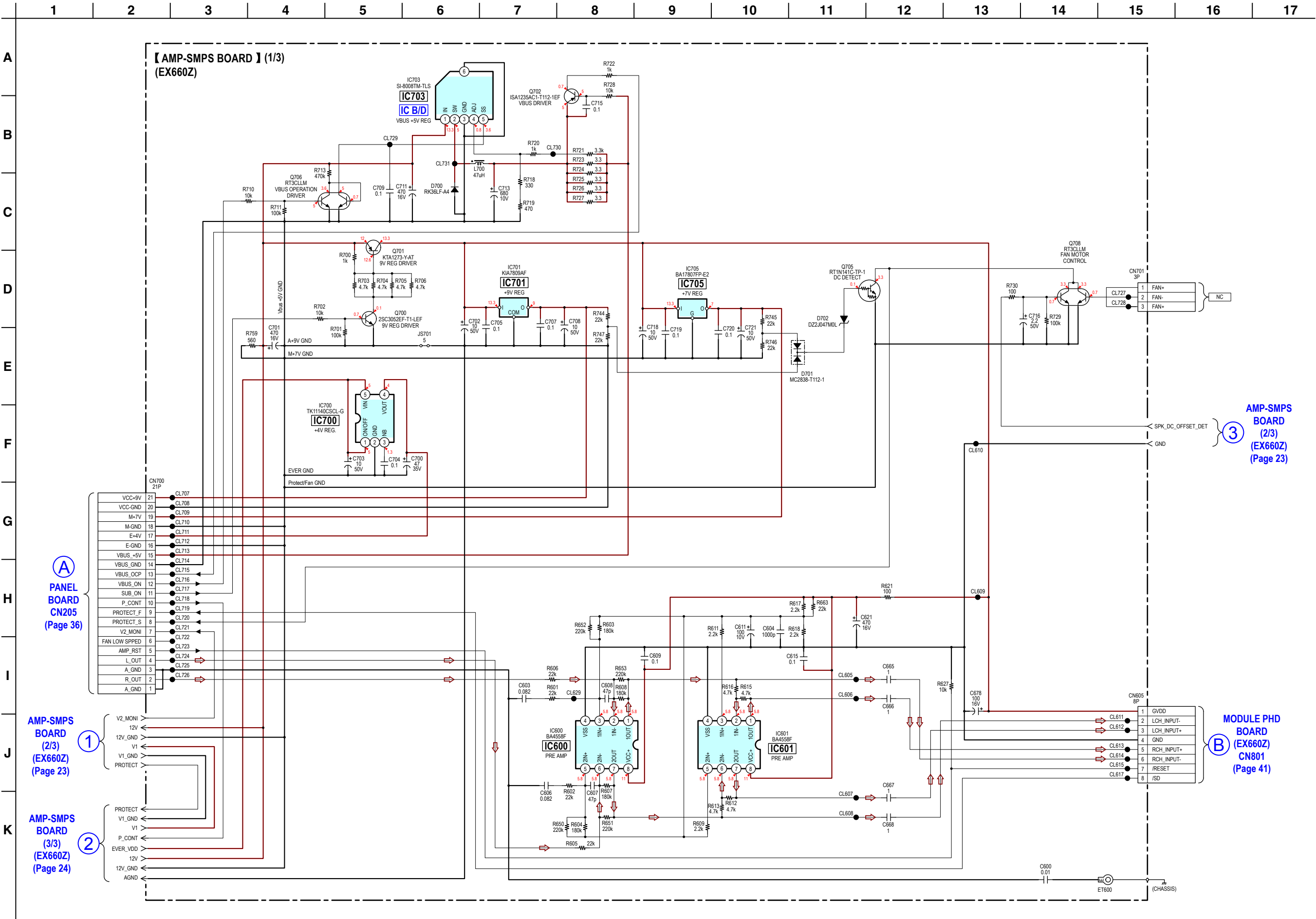
— TUNER1 Board —



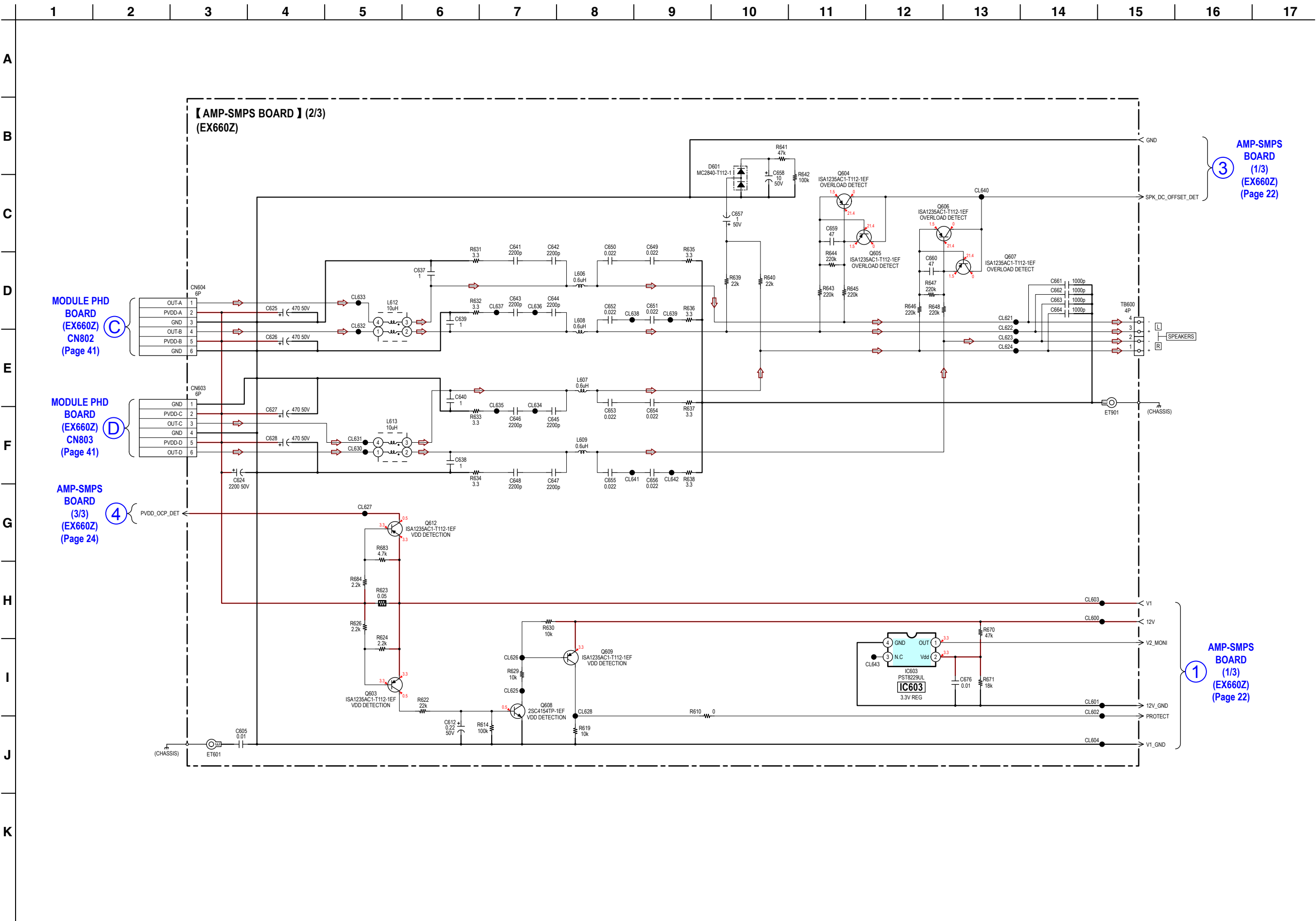
5-4. PRINTED WIRING BOARD - AMP-SMPS Board (EX660Z) - • See page 16 for Circuit Boards Location. • : Uses unleaded solder.



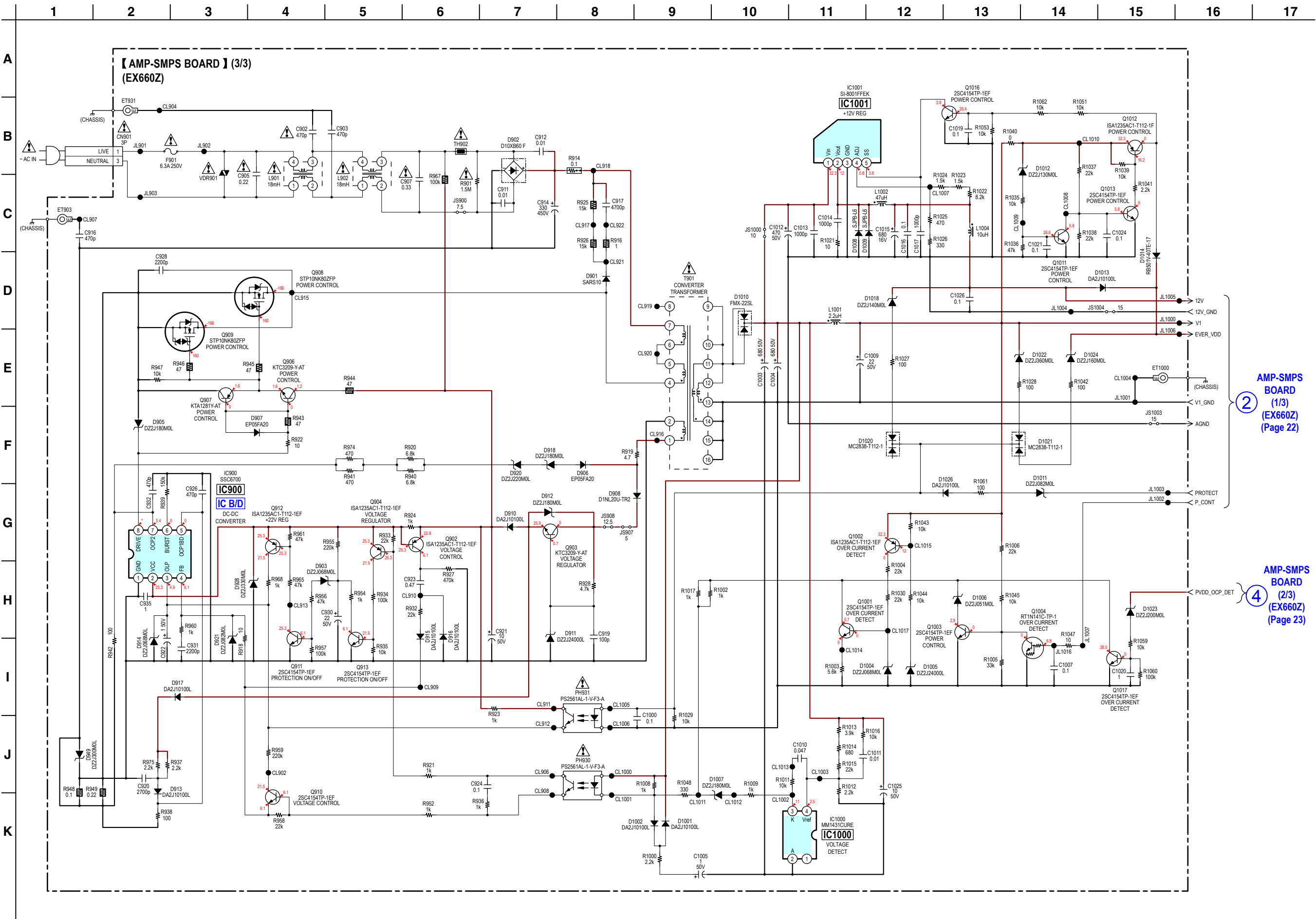
5-5. SCHEMATIC DIAGRAM - AMP-SMPS Board (1/3) (EX660Z) - • See page 45 for IC Block Diagrams.



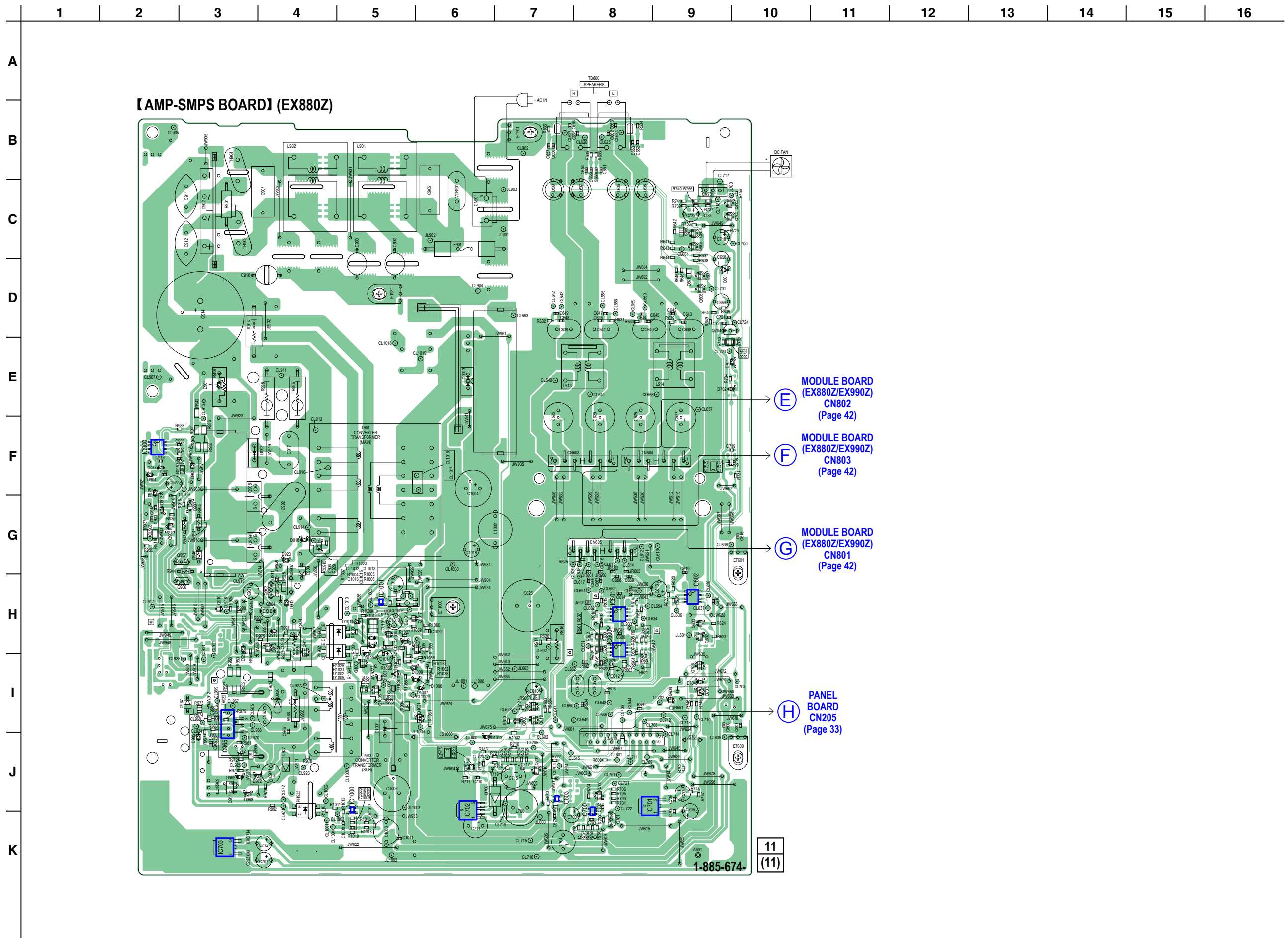
5-6. SCHEMATIC DIAGRAM - AMP-SMPS Board (2/3) (EX660Z) -



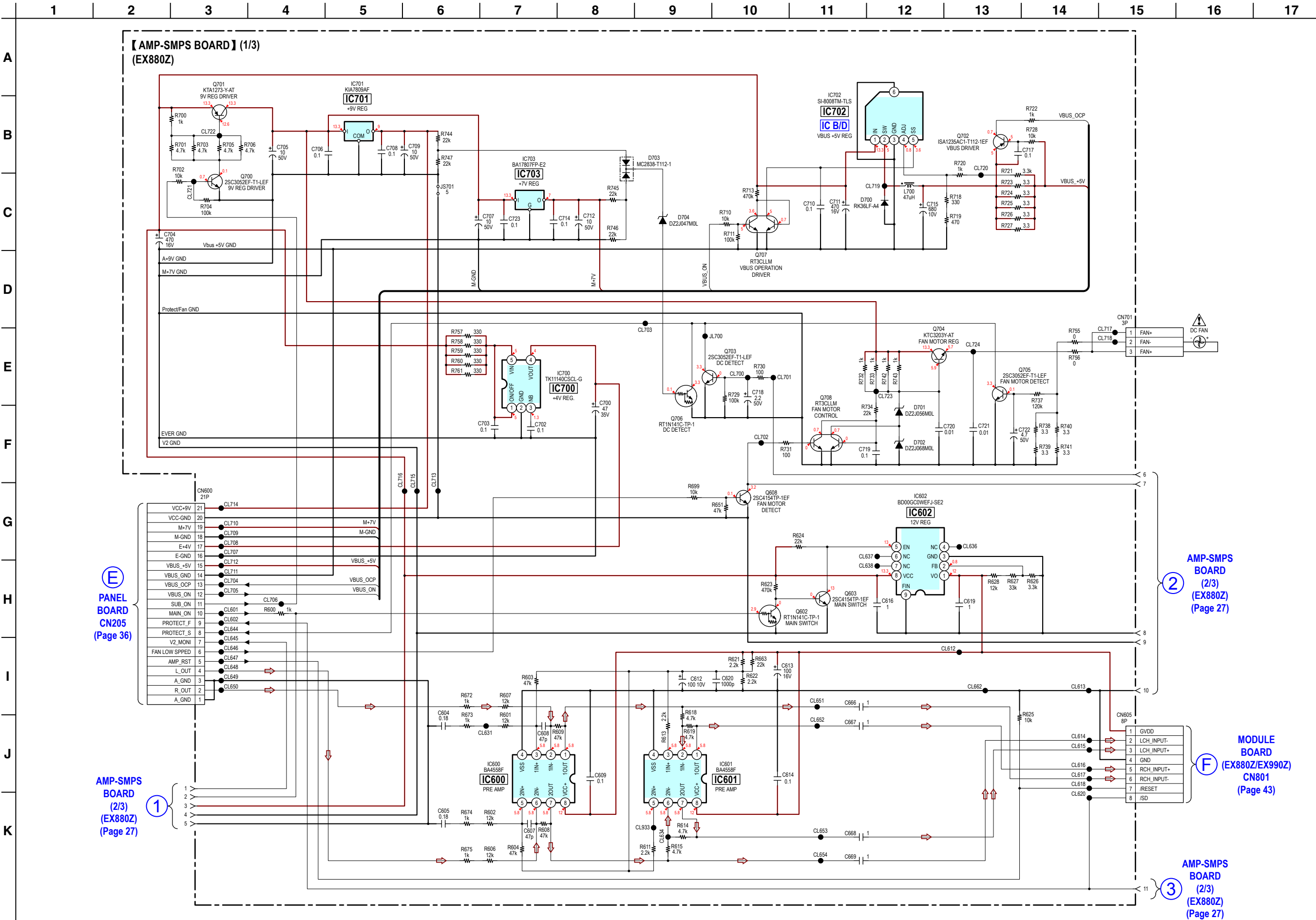
5-7. SCHEMATIC DIAGRAM - AMP-SMPS Board (3/3) (EX660Z) - • See page 45 for IC Block Diagrams.



5-8. PRINTED WIRING BOARD - AMP-SMPS Board (EX880Z) - • See page 16 for Circuit Boards Location. • : Uses unleaded solder.



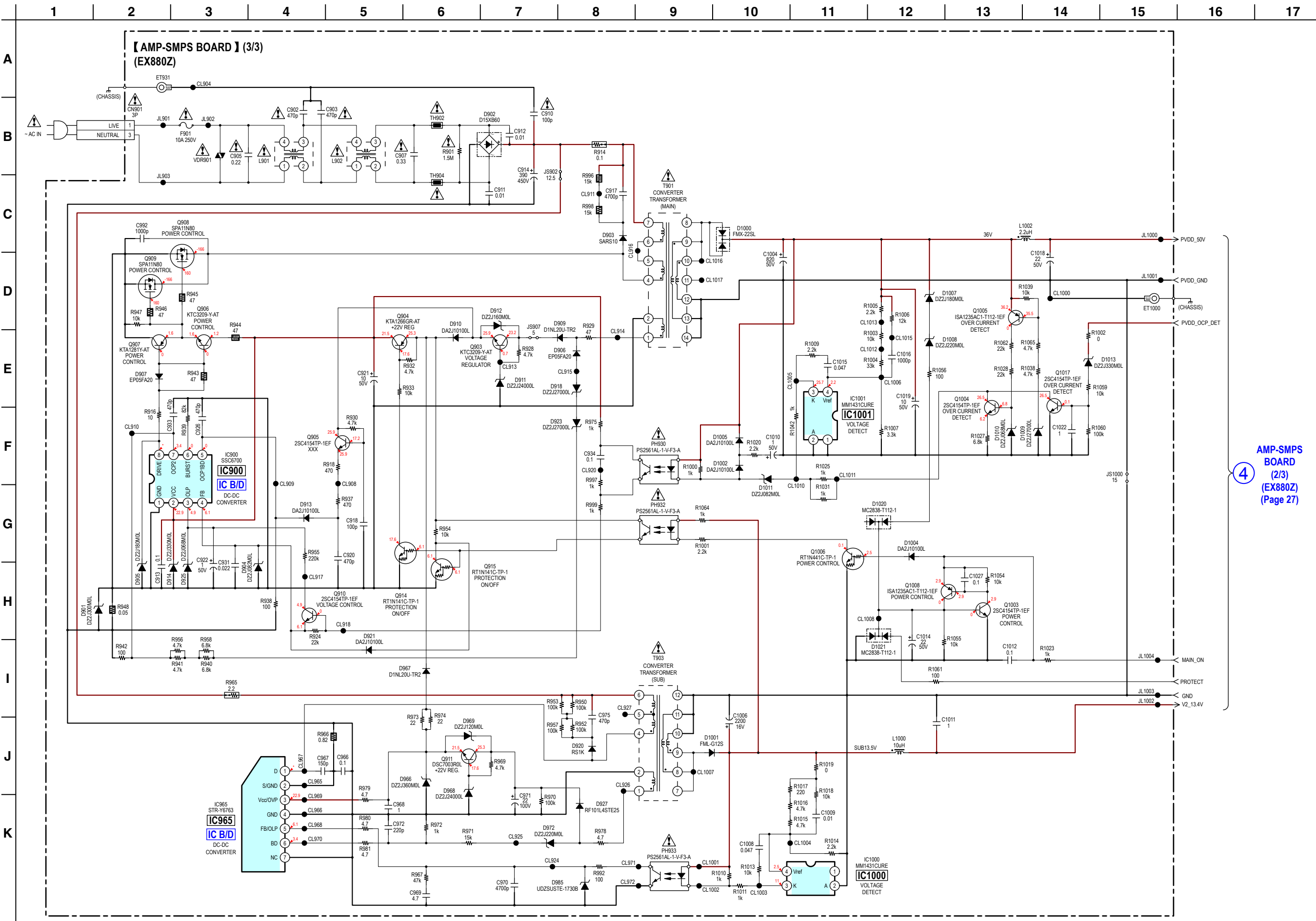
5-9. SCHEMATIC DIAGRAM - AMP-SMPS Board (1/3) (EX880Z) - • See page 45 for IC Block Diagrams.



27 27

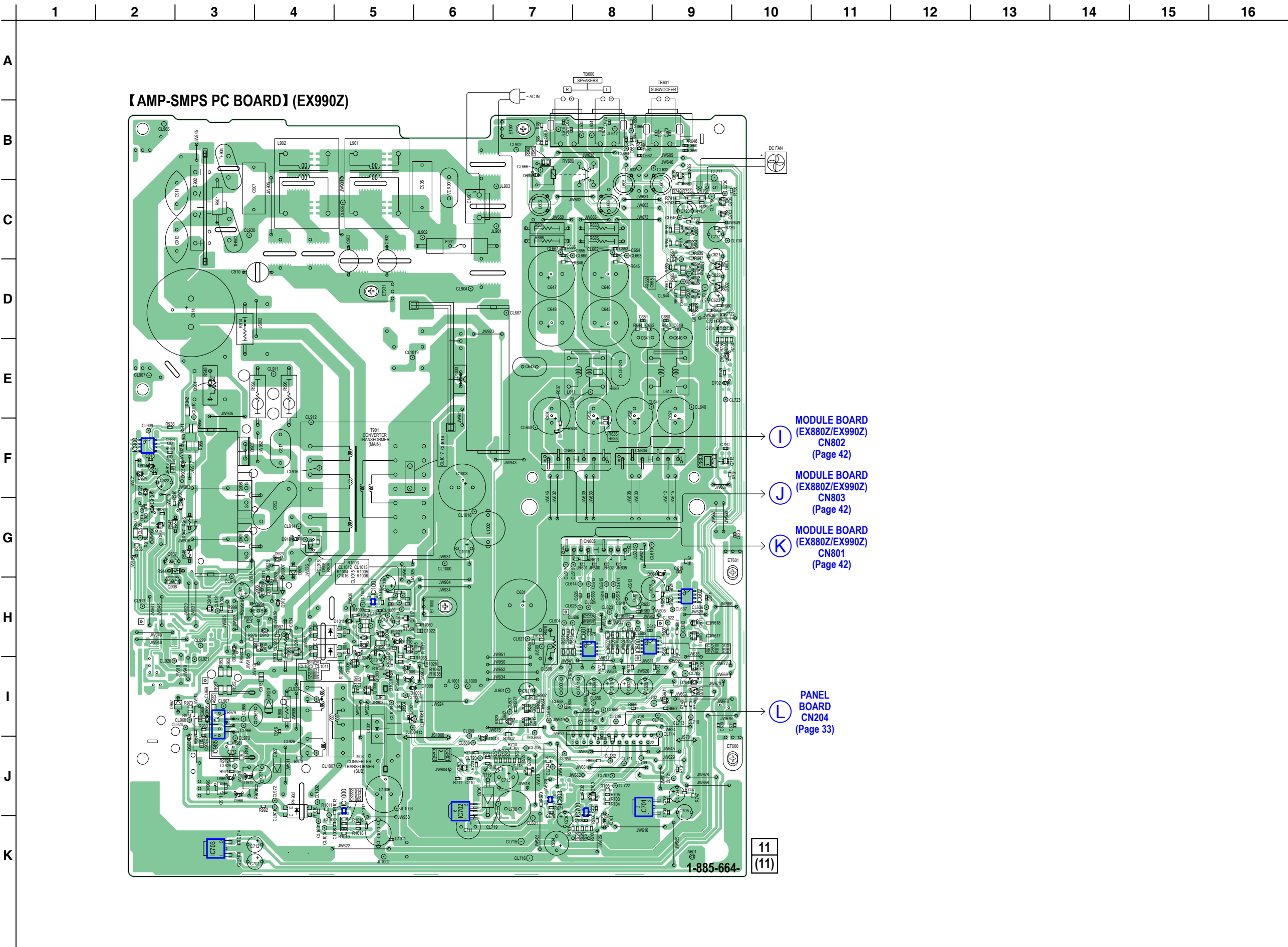


5-11. SCHEMATIC DIAGRAM - AMP-SMPS Board (3/3) (EX880Z) - • See page 45 for IC Block Diagrams.

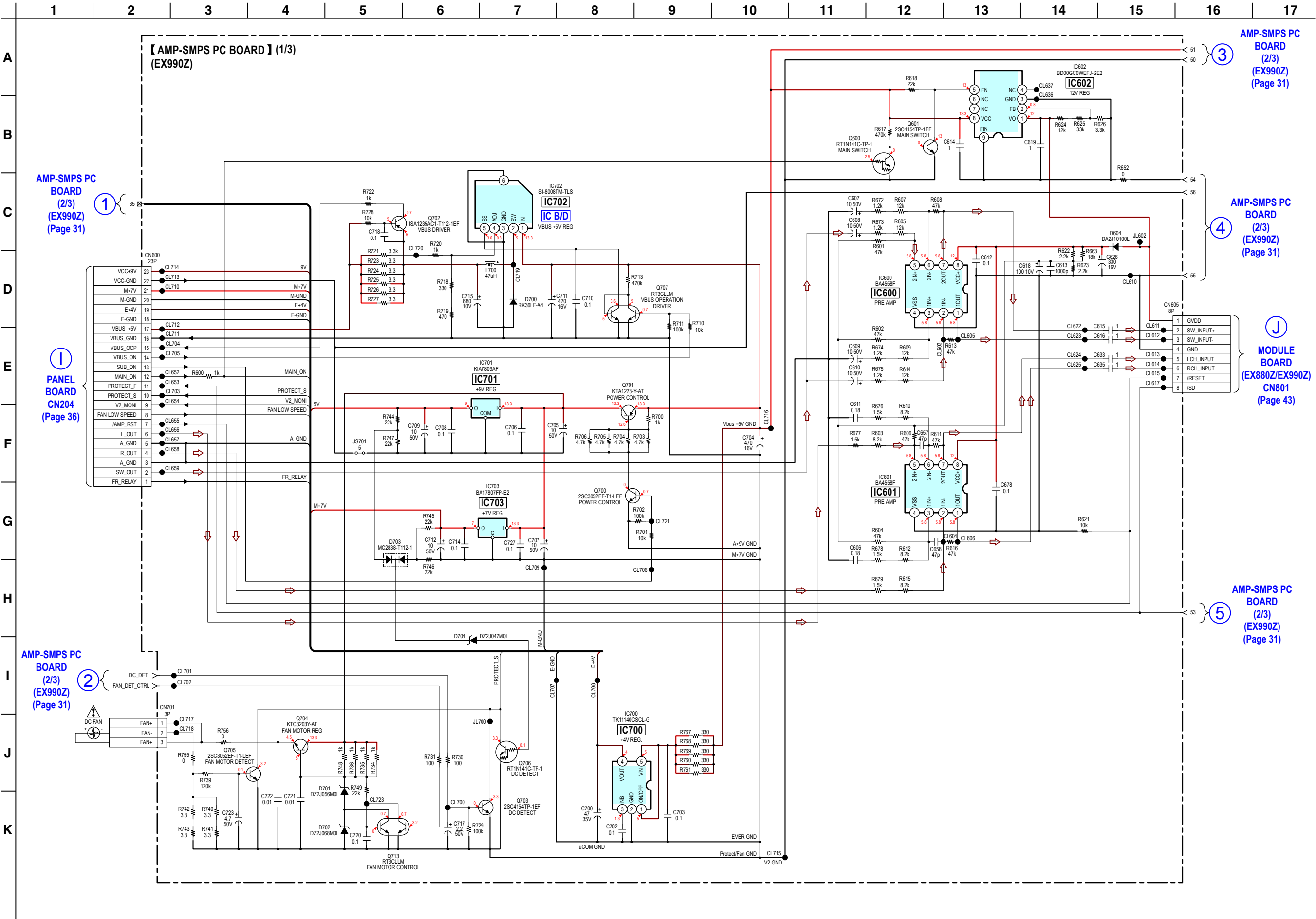


AMP-SMPS
BOARD
(2/3)
(EX880Z)
(Page 27)

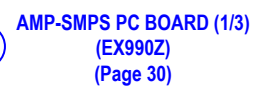
5-12. PRINTED WIRING BOARD - AMP-SMPS PC Board (EX990Z) - • See page 16 for Circuit Boards Location. • : Uses unleaded solder.



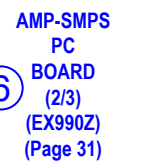
5-13. SCHEMATIC DIAGRAM - AMP-SMPS PC Board (1/3) (EX990Z) - • See page 45 for IC Block Diagrams.



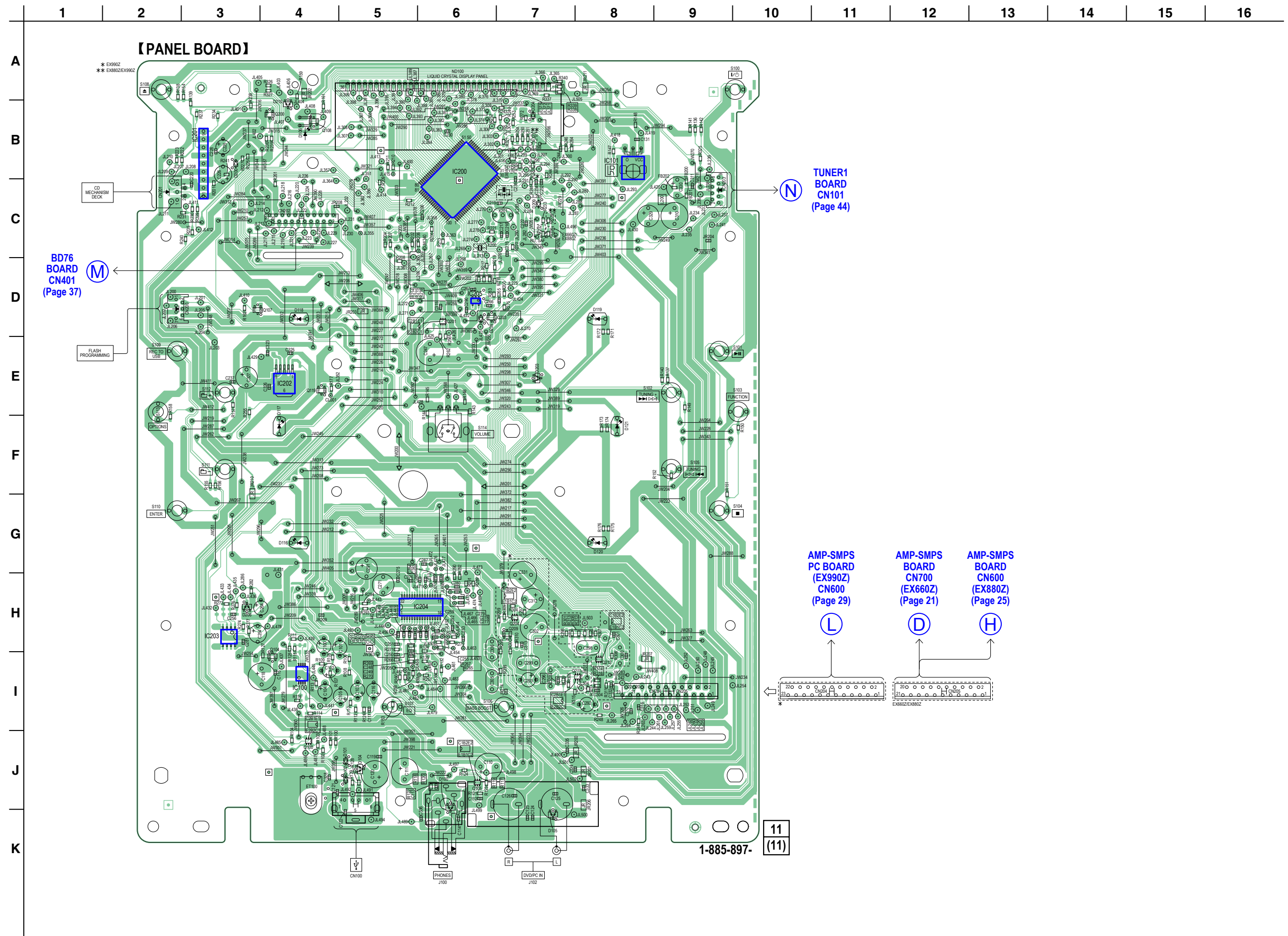
31 31



32 32



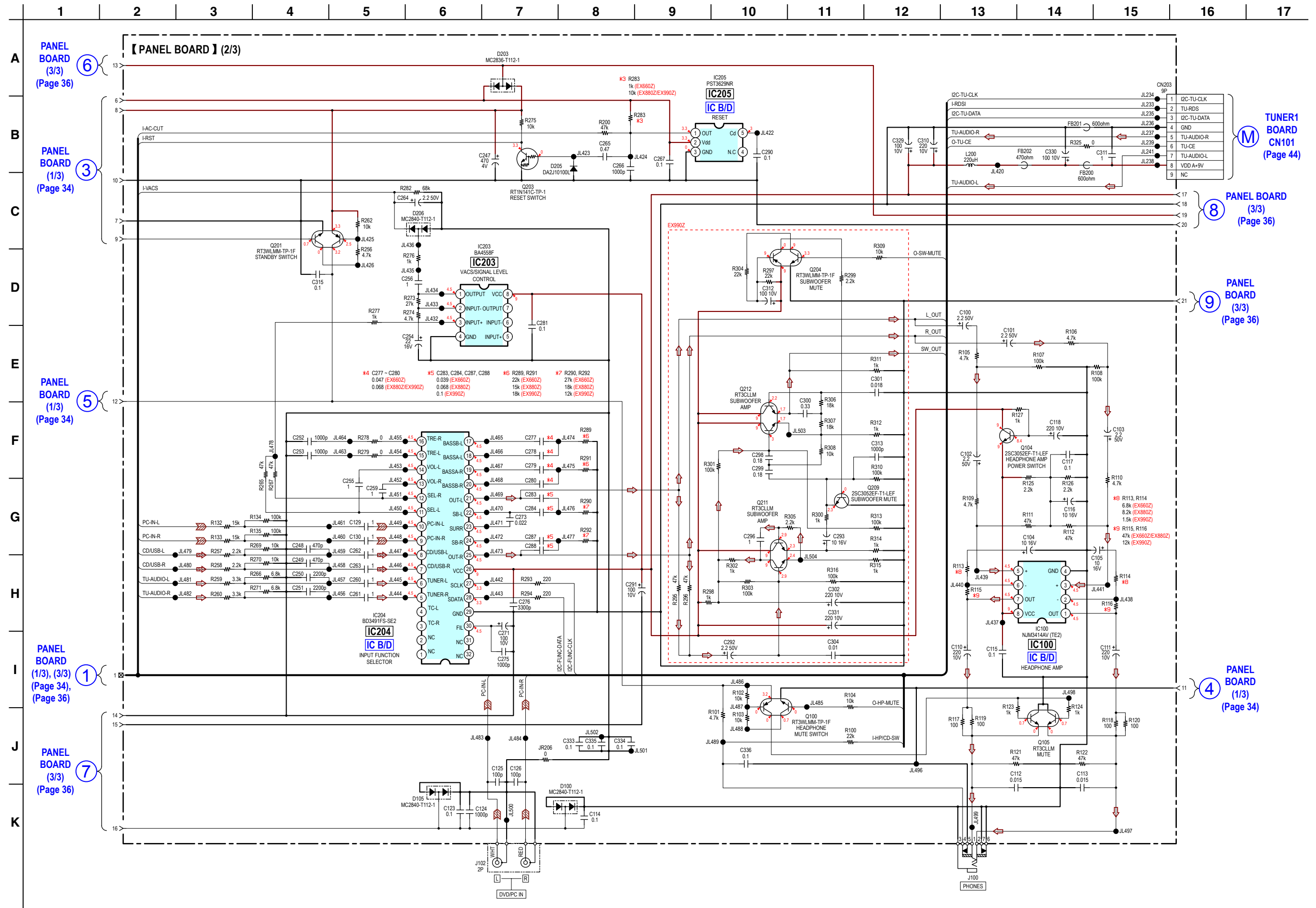
5-16. PRINTED WIRING BOARD - PANEL Board - • See page 16 for Circuit Boards Location. • : Uses unleaded solder.



34



5-18. SCHEMATIC DIAGRAM - PANEL Board (2/3) - • See page 45 for IC Block Diagrams.



36 36



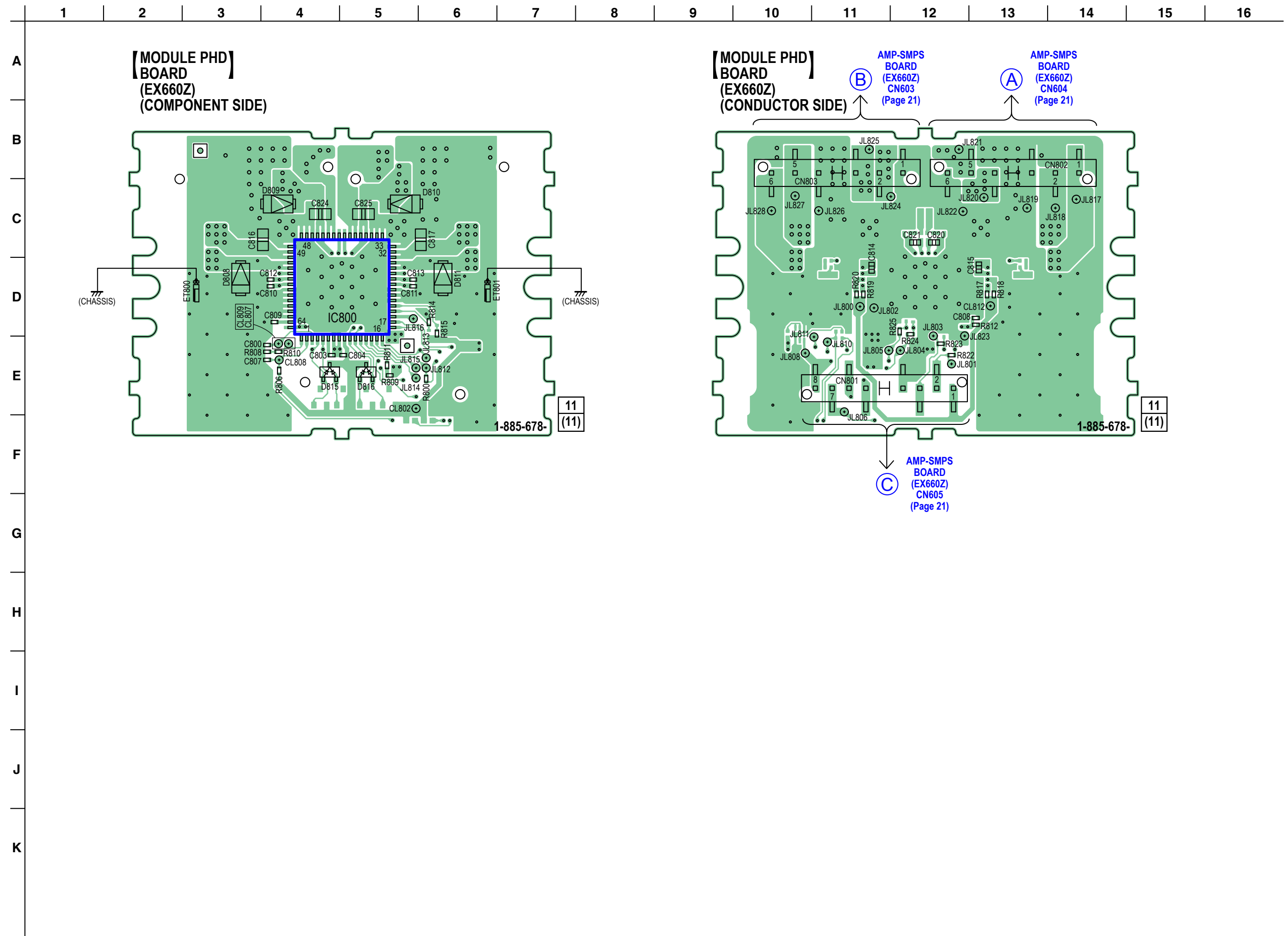
38 38



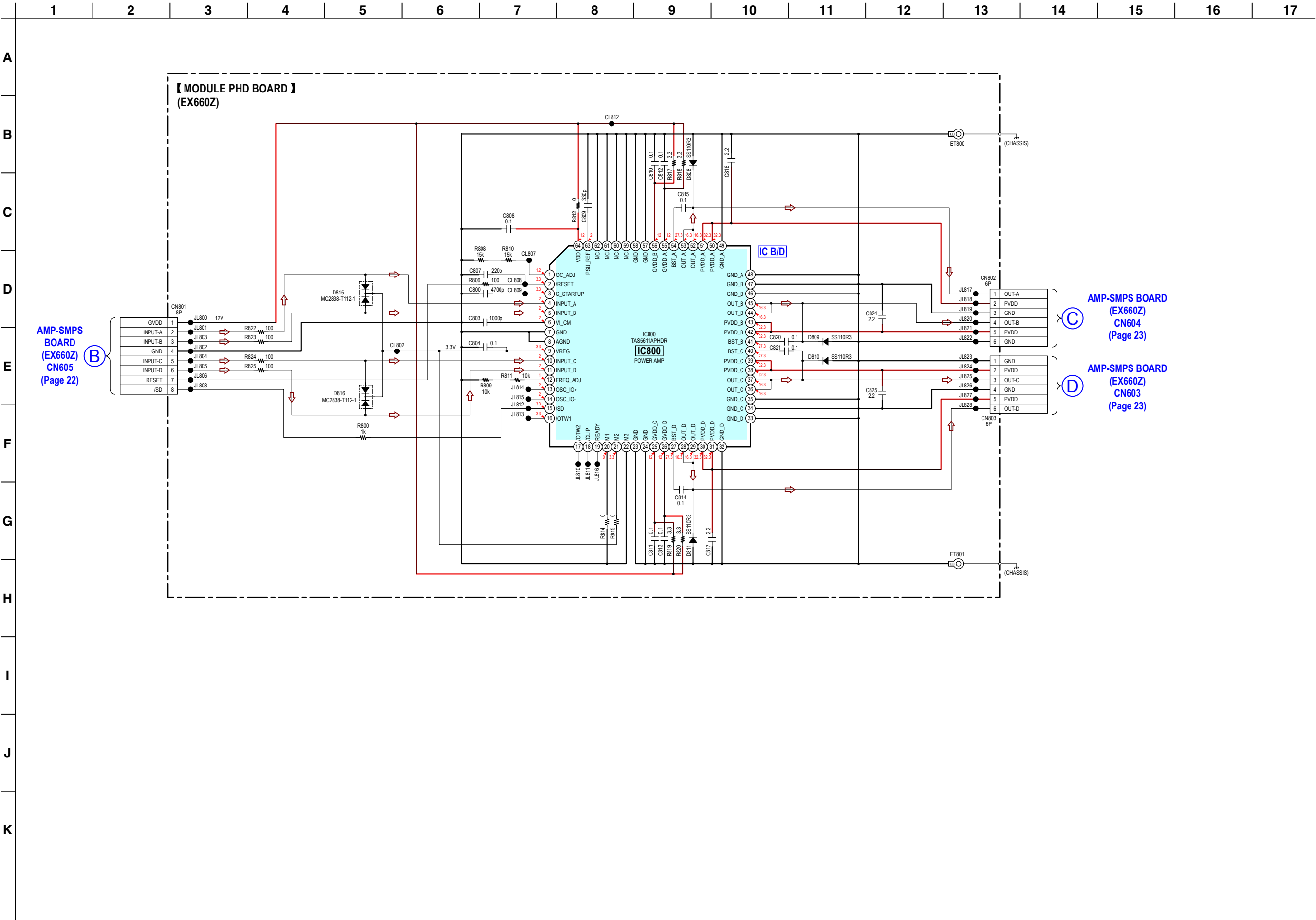
HCD-EX660Z/EX880Z/EX990Z



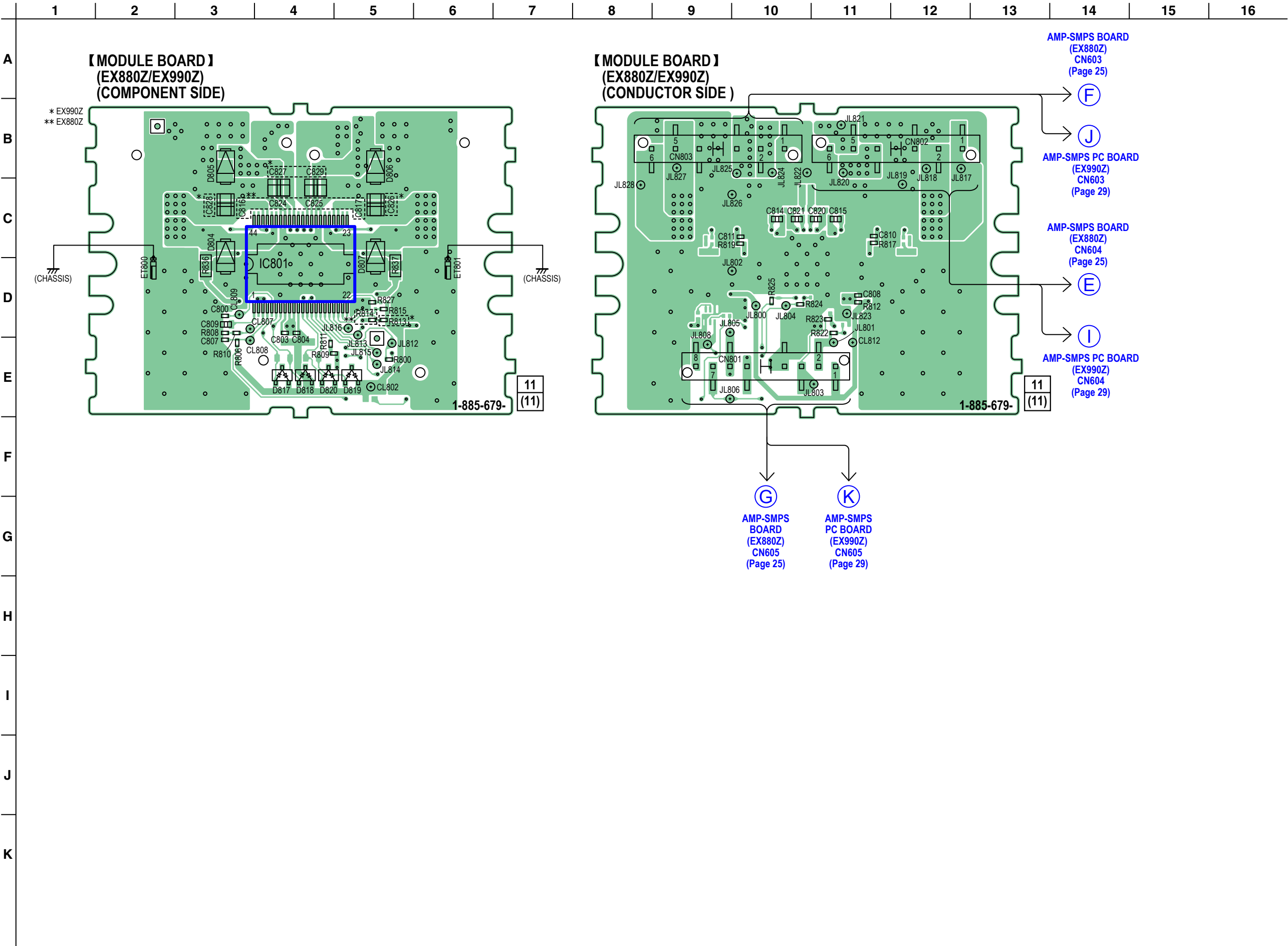
5-23. PRINTED WIRING BOARD - MODULE PHD Board (EX660Z) - • See page 16 for Circuit Boards Location. • : Uses unleaded solder.



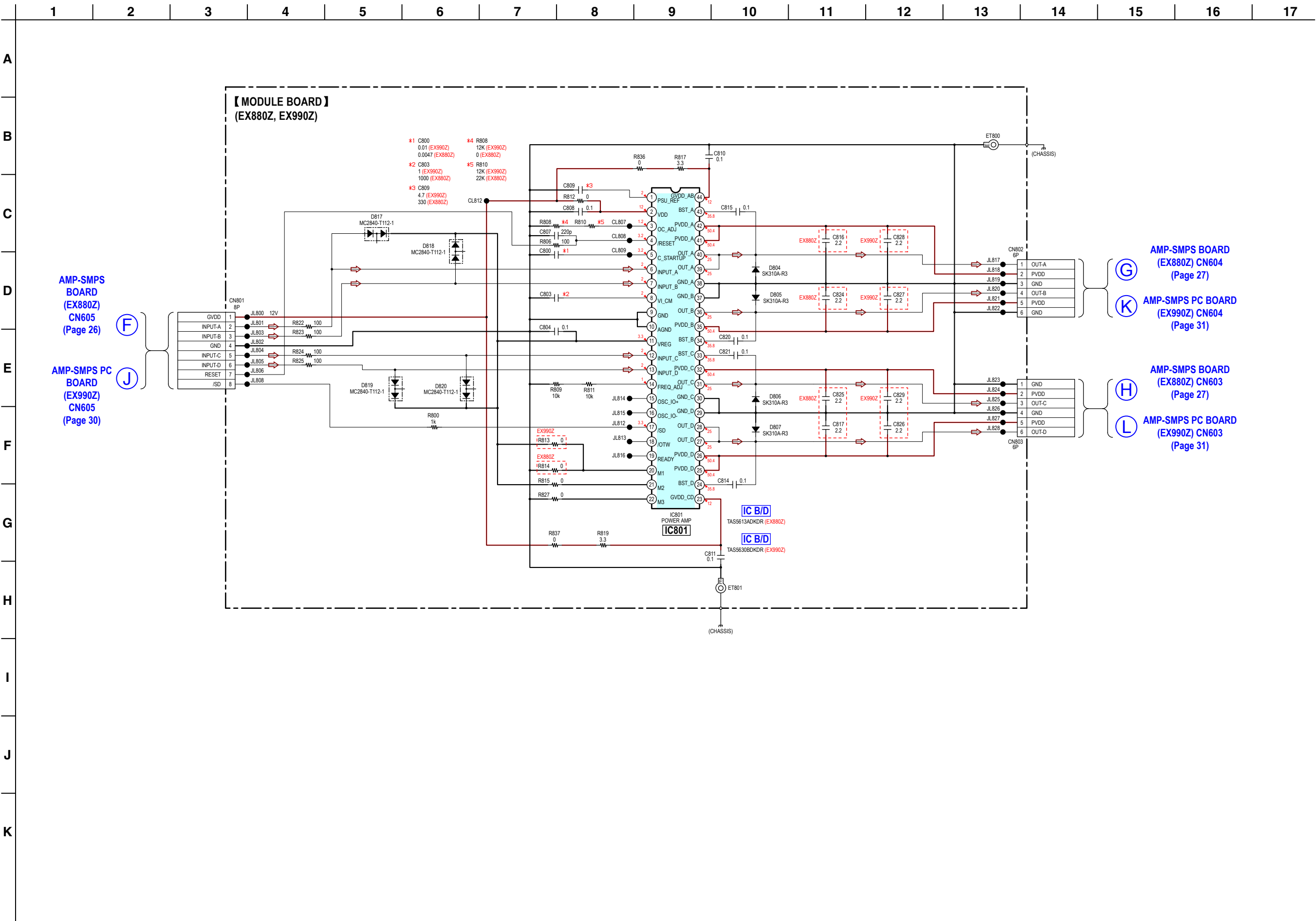
5-24. SCHEMATIC DIAGRAM - MODULE PHD Board (EX660Z) - • See page 45 for IC Block Diagrams.



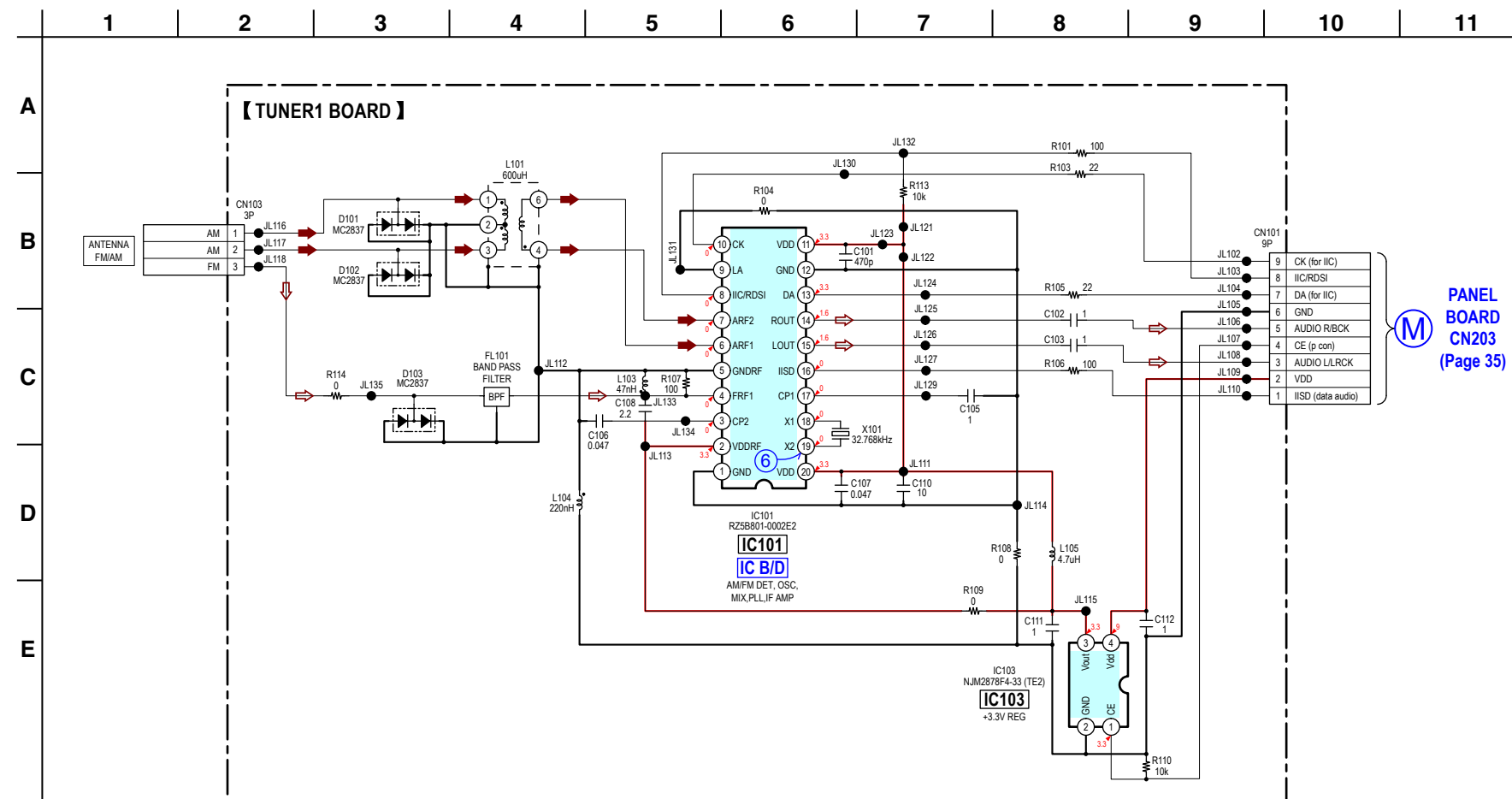
5-25. PRINTED WIRING BOARD - MODULE Board (EX880Z/EX990Z) - • See page 16 for Circuit Boards Location. • : Uses unleaded solder.



5-26. SCHEMATIC DIAGRAM - MODULE Board (EX880Z/EX990Z) - • See page 45 for IC Block Diagrams.

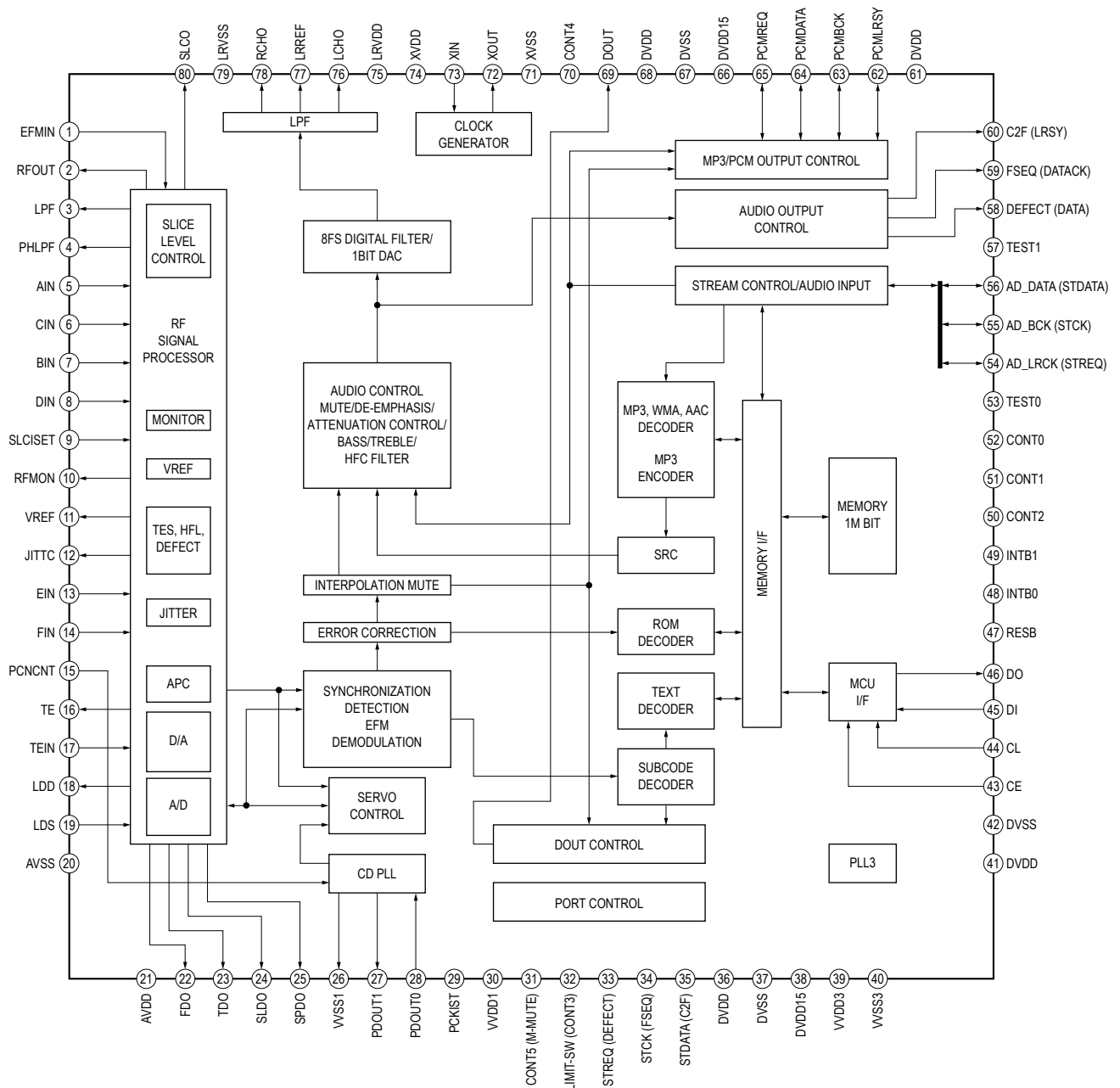


5-28. SCHEMATIC DIAGRAM - TUNER1 Board - • See page 20 for Waveforms. • See page 45 for IC Block Diagrams.

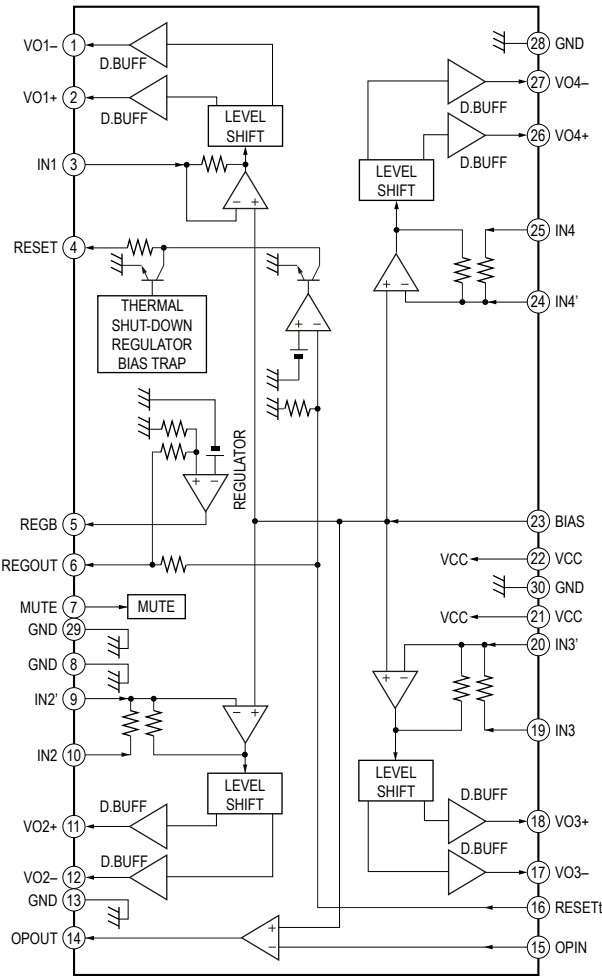


• IC Block Diagrams

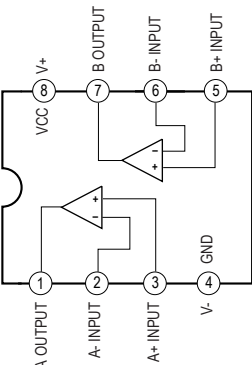
IC101 LC786950T-US-H (BD76 Board (1/2))



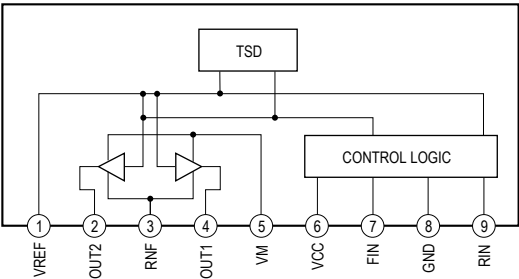
IC301 BA5826HFP-E2 (BD76 Board (1/2))



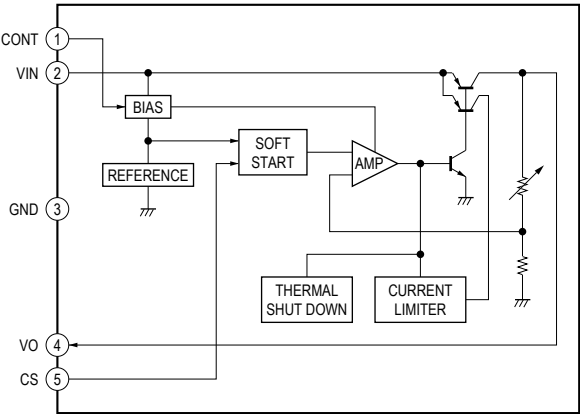
IC100 NJM3414AV (TE2) (PANEL Board (2/3))



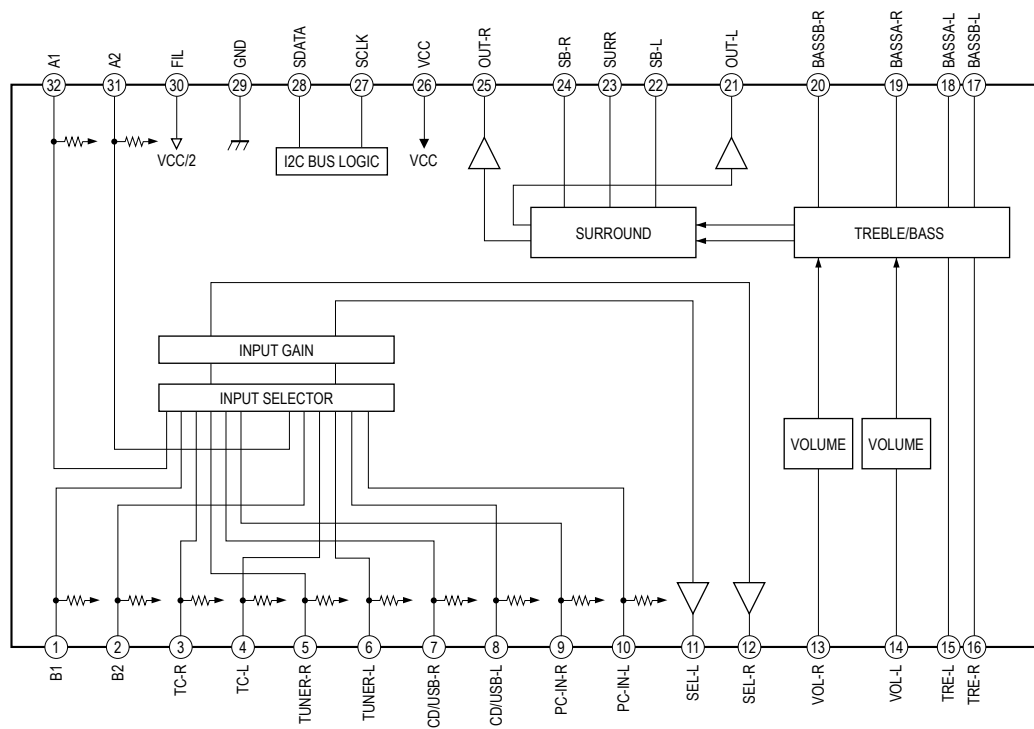
IC201 BA6956AN (PANEL Board (3/3))



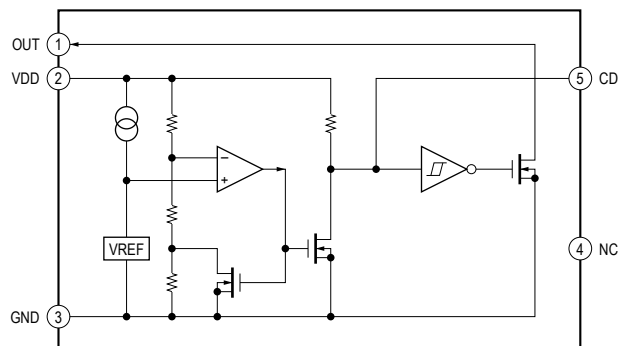
IC202 MM1923DTRE (PANEL Board (3/3))



IC204 BD3491FS-SE2 (PANEL Board (2/3))

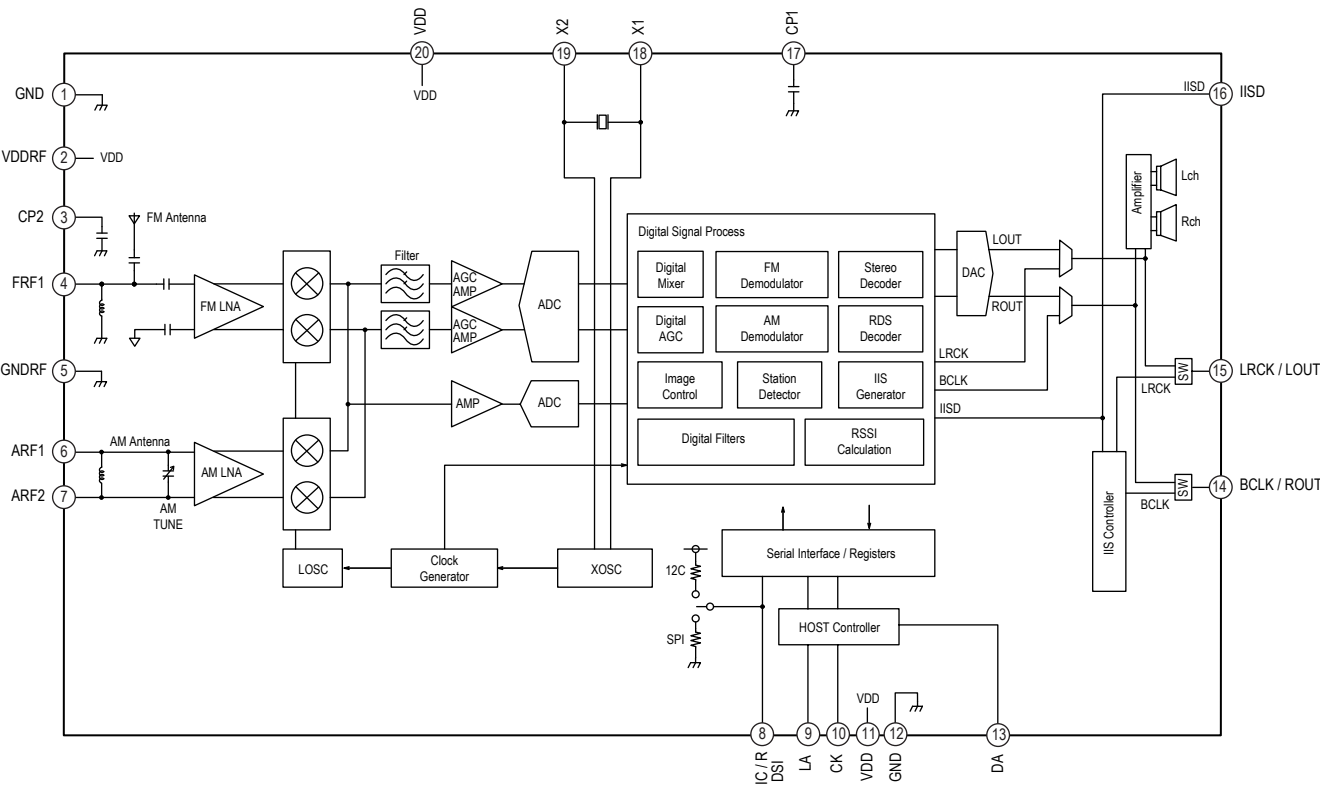


IC205 PST3629NR (PANEL Board (2/3))

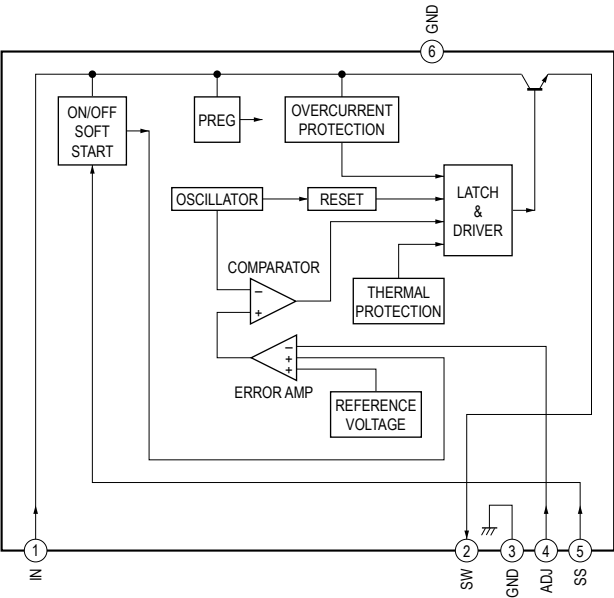


HCD-EX660Z/EX880Z/EX990Z

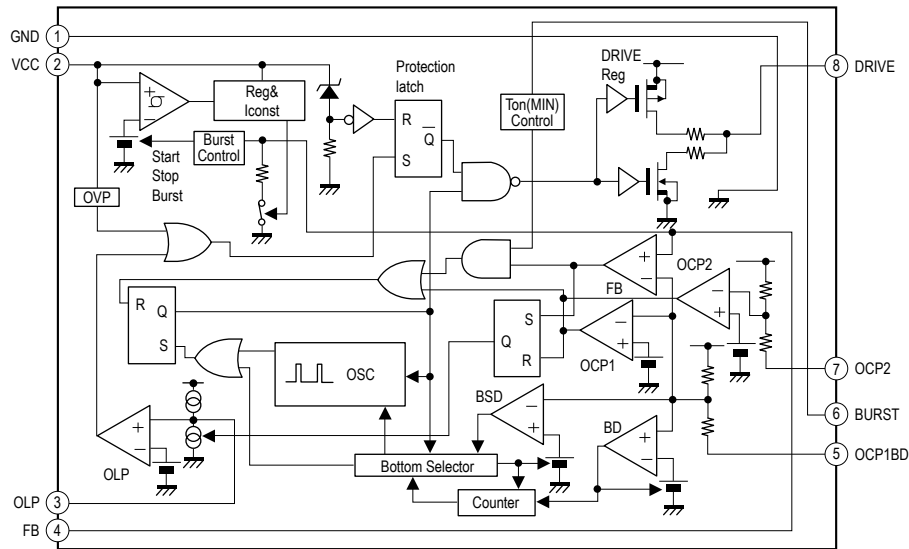
IC101 RZ5B801-0002E2 (TUNER1 Board)



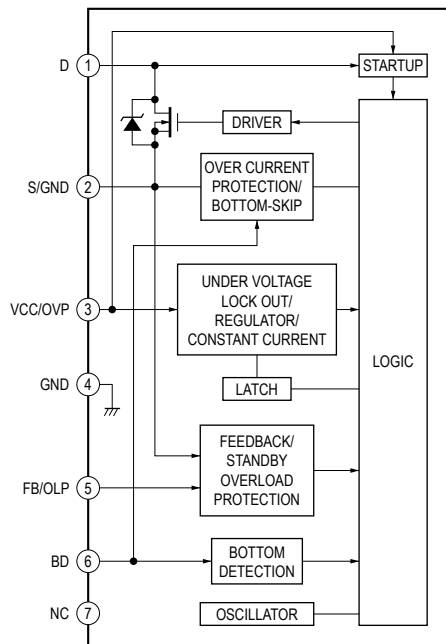
IC703 SI-8008TM-TLS (AMP-SMPS Board (1/3)) (EX660Z)
IC702 SI-8008TM-TLS (AMP-SMPS Board (1/3)) (EX880Z)
IC702 SI-8008TM-TLS (AMP-SMPS PC Board (1/3)) (EX990Z)



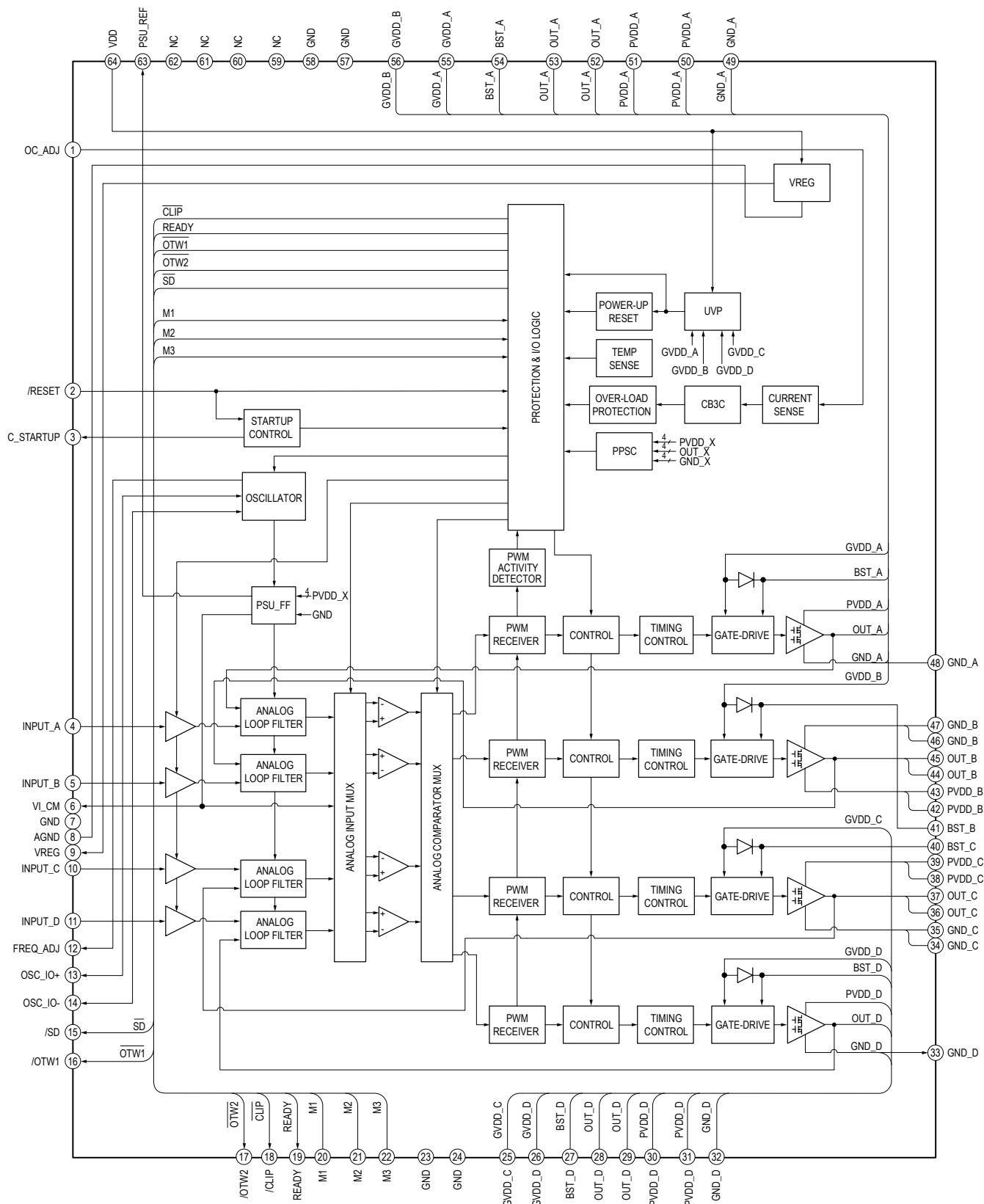
IC900 SSC6700 (AMP-SMPS Board (3/3)) (EX660Z)
 IC900 SSC6700 (AMP-SMPS Board (3/3)) (EX880Z)
 IC900 SSC6700 (AMP-SMPS PC Board (3/3)) (EX990Z)



IC965 STR-Y6763 (AMP-SMPS Board (3/3)) (EX880Z)
 IC965 STR-Y6763 (AMP-SMPS PC Board (3/3)) (EX990Z)

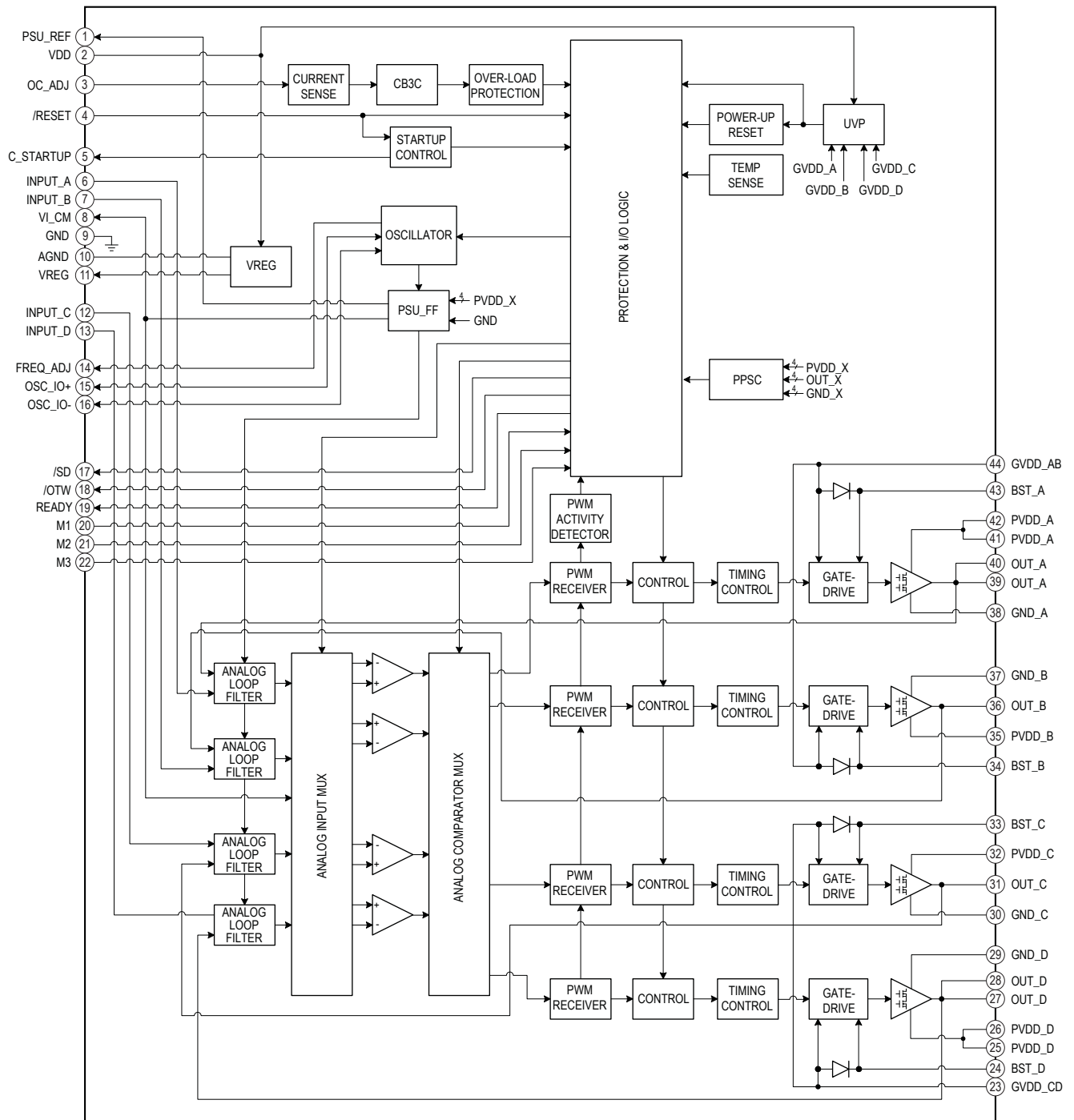


IC800 TAS5611APHDR (MODULE PHD Board) (EX660Z)



IC801 TAS5613ADKDR (MODULE Board) (EX880Z)

IC801 TAS5630BDKDR (MODULE Board) (EX990Z)



• IC Pin Function Descriptions

BD76 BOARD (2/2) IC901 LC87F1JJ2AU-SQFP-H (USB CONTROL)

Pin No.	Pin Name	I/O	Description
1	P73	O	Not used. (Open)
2	RES	—	USB control reset pin
3	XT1	—	Not used. (Connect to VDD)
4	XT2	O	Not used. (Open)
5	VSS1	—	Ground
6	CF1	I	Oscillation signal input (12 MHz)
7	CF2	O	Oscillation signal output (12 MHz)
8	VDD1	—	Power supply pin (+3.3 V)
9	SO0	O	CD digital signal processor serial data communication signal output
10	SI0	I	CD digital signal processor serial data communication signal input
11	SCK0	I/O	CD digital signal processor clock communication signal input/output
12	SO1	O	Not used. (Open)
13	SI1	O	Not used. (Open)
14	SCK1	O	Not used. (Open)
15	P16	I	CD digital signal processor enable communication signal input
16	P17	O	Not used. (Open)
17	MCLKI	O	Not used. (Open)
18	MCLKO	O	Not used. (Open)
19	VDD2	—	Power supply pin (+3.3 V)
20	VSS2	—	Ground
21, 22	P00, P01	O	Not used. (Open)
23 to 25	DBGP0 to DBGP2	O	For debugger pin
26	SDAT	I	USB record MP3 serial data signal input
27	BCLK	I	USB record MP3 serial data shift clock signal input
28	LRCK	I	USB record MP3 serial data word clock signal input
29, 30	P20, P21	O	Not used. (Open)
31	P22	O	USB playback serial data signal output
32	P23	O	USB record MP3 serial data request signal output
33	P24	O	USB playback serial data communication clock signal output
34 to 36	P25 to P27	O	Not used. (Open)
37	UHD—	I/O	USB D— serial data input/output
38	UHD+	I/O	USB D+ serial data input/output
39	VDD3	—	Power supply pin (+3.3 V)
40	VSS3	—	Ground
41	UFILT	I	USB interface PLL filter circuit connection pin (Fixed at L in this set)
42	AFILT	O	Not used. (Open)
43	P32	O	Not used. (Open)
44	URX1	I	System controller input communication signal input
45	UTX1	O	System controller output communication signal output
46	P70	I	USB playback serial data request signal input
47	P71	I	USB controller command processing cancel signal input
48	P72	O	Not used. (Open)

PANEL BOARD (1/3) IC200 LC87F7DJ2CVU-QIP-H (SYSTEM CONTROL)

Pin No.	Pin Name	I/O	Description
1	O-CD-RST	O	System reset signal output for the CD-MP3 processor
2	O-CD-DI	O	Serial data output for the CD-MP3 processor
3	O-CD-CE	O	Chip enable signal output for the CD-MP3 processor
4	O-USB-RST	O	System reset signal output for the USB control
5	O-FAN-LOW-SPEED	O	Force fan to low speed (H: fan low speed, L: no control) (EX990Z only)
6	I2C-FUNC-DATA	I/O	Audio IC data signal for IIC communication
7	I2C-FUNC-CLK	I/O	Audio IC clock signal for IIC communication
8	I2C-TU-DATA	I/O	Tuner IC data signal for IIC communication
9	I2C-TU-CLK	I/O	Tuner IC clock signal for IIC communication
10	O-LCD-LED	O	LCD back light LED ON/OFF control signal output
11	I-RST	I	Reset signal input
12	SUB-CLK(32.768KHz)	—	Sub system clock terminal (32.768kHz)
13	SUB-CLK(32.768KHz)	—	Sub system clock terminal (32.768kHz)
14	VSS1	—	Ground terminal
15	MAIN-CLK(18MHz)	—	Main system clock terminal (18MHz)
16	MAIN-CLK(18MHz)	—	Main system clock terminal (18MHz)
17	VDD1	—	Power supply pin (+3.3V)
18	I-HP/CD SW	I	CDM Open/Close switch detection and Headphone presence detection
19	I-MODEL	I	Model setting pin (A/D input)
20	I-DEST	I	Destination setting pin (A/D input)
21	NC	O	Not used
22	I-LED-LEVEL	I	Volume LED level detection pin
23	I-VACS	I	VACS level detection pin
24	I-KEY2	I	Key signal input (A/D input)
25	I-KEY1	I	Key signal input (A/D input)
26	I-KEY0	I	Key signal input (A/D input)
27	I-PROTECT-F	I	Fast protection detection pin (L: abnormal, H: normal)
28	I-AC-CUT	I	AC cut detection signal input (L: AC cut, H: AC In)
29	I-RMC	I	Remote control signal input from the remote control signal receiver
30	O-FR-RELAY	O	Speaker relay ON/OFF control signal output (L: FR RELAY off, H: FR RELAY on) (EX990Z only)
31	O-P-CONT	O	Power cont ON/OFF control signal output (L: Pcont OFF, H: Pcont ON) (EX660Z only)
32	O-SW-MUTE	O	Subwoofer ON/OFF control signal output (EX990Z only)
33	O-AMP-RST	O	Amp reset control signal output (H: have sound, L: no sound)
34	I-V2-MONI	I	V2 power source monitor input pin
35	I-PROTECT-S	I	Slow protection detection pin (L: abnormal, H: normal)
36	O-HP-MUTE	O	Headphone muting ON/OFF control signal output (H: headphone mute, L: no mute)
37	O-MAIN-ON	O	Main power source ON/OFF control signal output (L: Main OFF, H: Main ON) (except EX660Z)
38	O-SUB-ON	O	Sub power source ON/OFF control signal output (L: Sub OFF, H: Sub ON)
39	O-VBUS-ON	O	VBUS power supply ON/OFF control signal output (L: VBUS off, H: VBUS on)
40	I-VBUS-OCF	I	VBUS overcurrent detection signal input (L: abnormal, H: normal)
41	I-RDSI	I	RDS Text Detection Signal input
42	O-STBY-SW	O	Power source control at the time of standby (L: ECO mode, H: other mode)
43	O-CD-M-	O	CD motor drive (–) signal output for the CD mechanism deck
44	O-CD-M+	O	CD motor drive (+) signal output for the CD mechanism deck
45	O-TU-CE	O	Chip enable signal output for the Tuner
46 to 53	SEG0 to SEG7	O	Segment drive signal output for the liquid crystal display panel
54	VDD2	—	Power supply pin (+3.3V)
55	VSS2	—	Ground terminal
56 to 79	SEG8 to SEG31	O	Segment drive signal output for the liquid crystal display panel
80 to 82	LCD V3 to LCD V1	I	Liquid crystal display bias power source
83 to 86	COM3 to COM0	O	Common output for the liquid crystal display panel
87 to 88	O-VOL-LED1 to O-VOL-LED2	O	Volume LED ON/OFF signal output
89	VSS3	—	Ground terminal
90	VDD3	—	Power supply pin (+3.3V)
91	O-CD-ON	O	CD power supply control signal output for the CD-MP3 processor
92	O-USB-SLEEP	O	Sleep control signal output for the USB control

HCD-EX660Z/EX880Z/EX990Z

Pin No.	Pin Name	I/O	Description
93	O-USB-TXD	O	USB TX signal output for the USB control
94	I-USB-RXD	I	USB RX signal input from the USB control
95 to 97	DGBP0 to DGBP2	I	For Debugger
98	O-CD-CL	O	Clock signal output for the CD-MP3 processor
99	I-CD-DO	I	Serial data input from the CD-MP3 processor
100	O-CD-M-MUTE	O	CD motor drive ON/OFF mute control signal output for the CD motor/coil driver

SECTION 6 EXPLODED VIEWS

Note:

- -XX and -X mean standardized parts, so they may have some difference from the original one.
- 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.

- Color Indication of Appearance Parts Example:
KNOB, BALANCE (WHITE) . . . (RED)

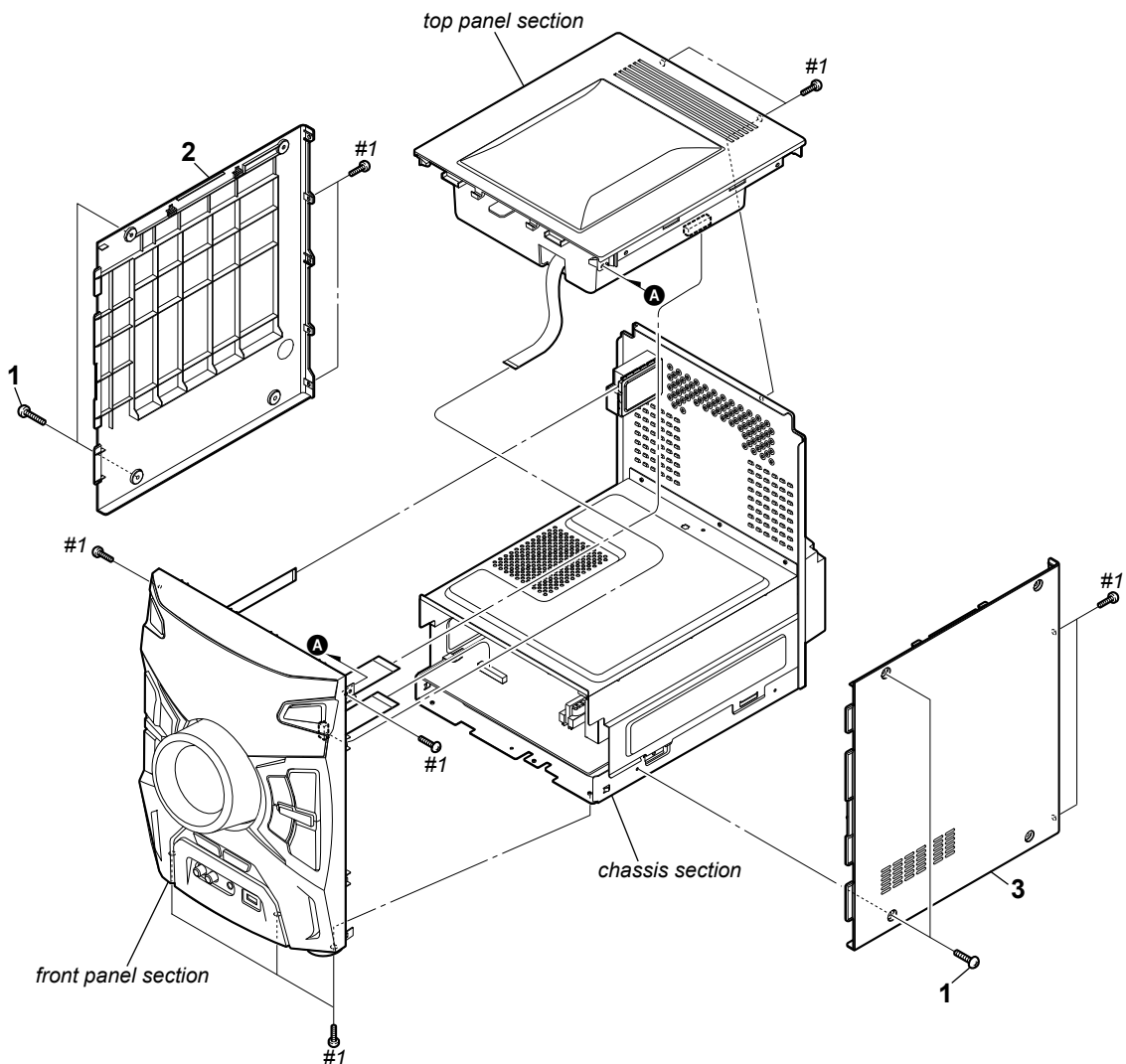
↑ ↑
Parts Color Cabinet's Color

- Abbreviation

E2 : 120V AC area in E model
E51 : Chilean and Peruvian models
MX : Mexican model
RU : Russian model
SAF : South African model

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

6-1. CASE SECTION



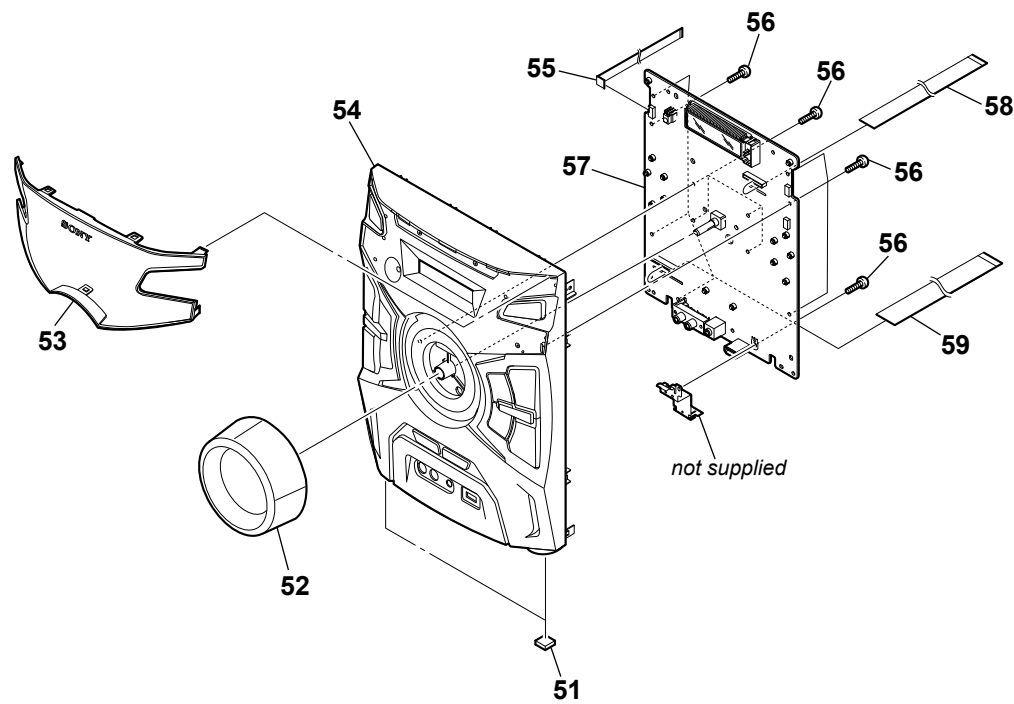
Ref. No.	Part No.	Description
1	3-363-099-32	SCREW (CASE 3 TP2)
2	4-263-388-11	CASE (L), SIDE

Remark

Ref. No.	Part No.	Description
3	4-263-389-11	CASE (R), SIDE
#1	7-685-647-71	SCREW +BVTP 3X10 TYPE2 IT-3

Remark

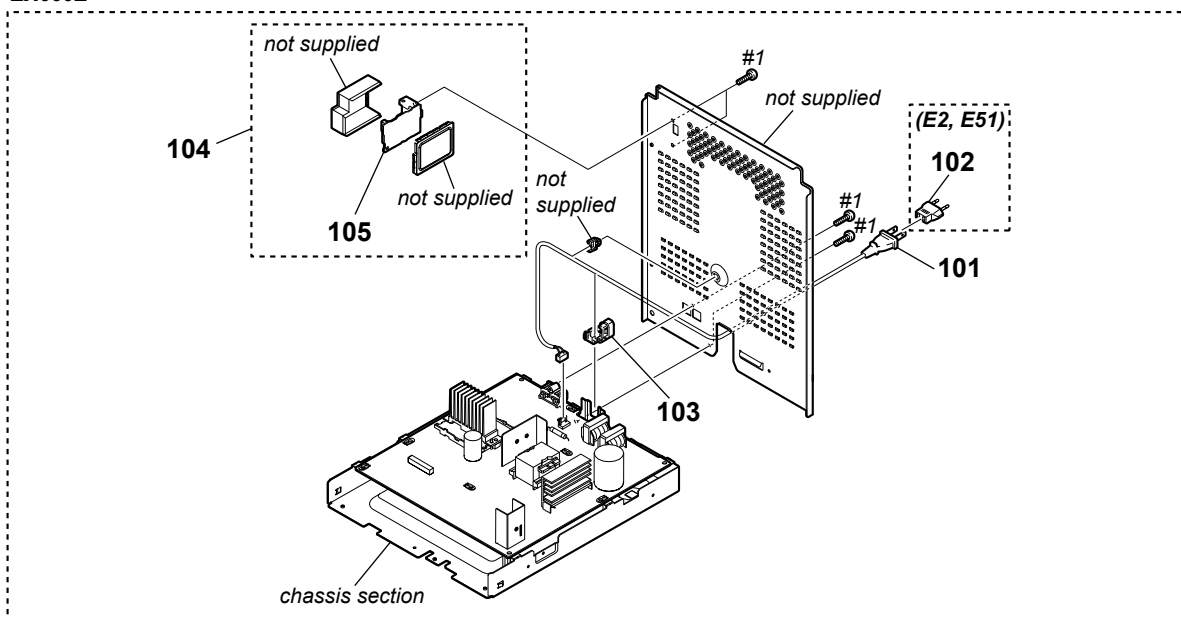
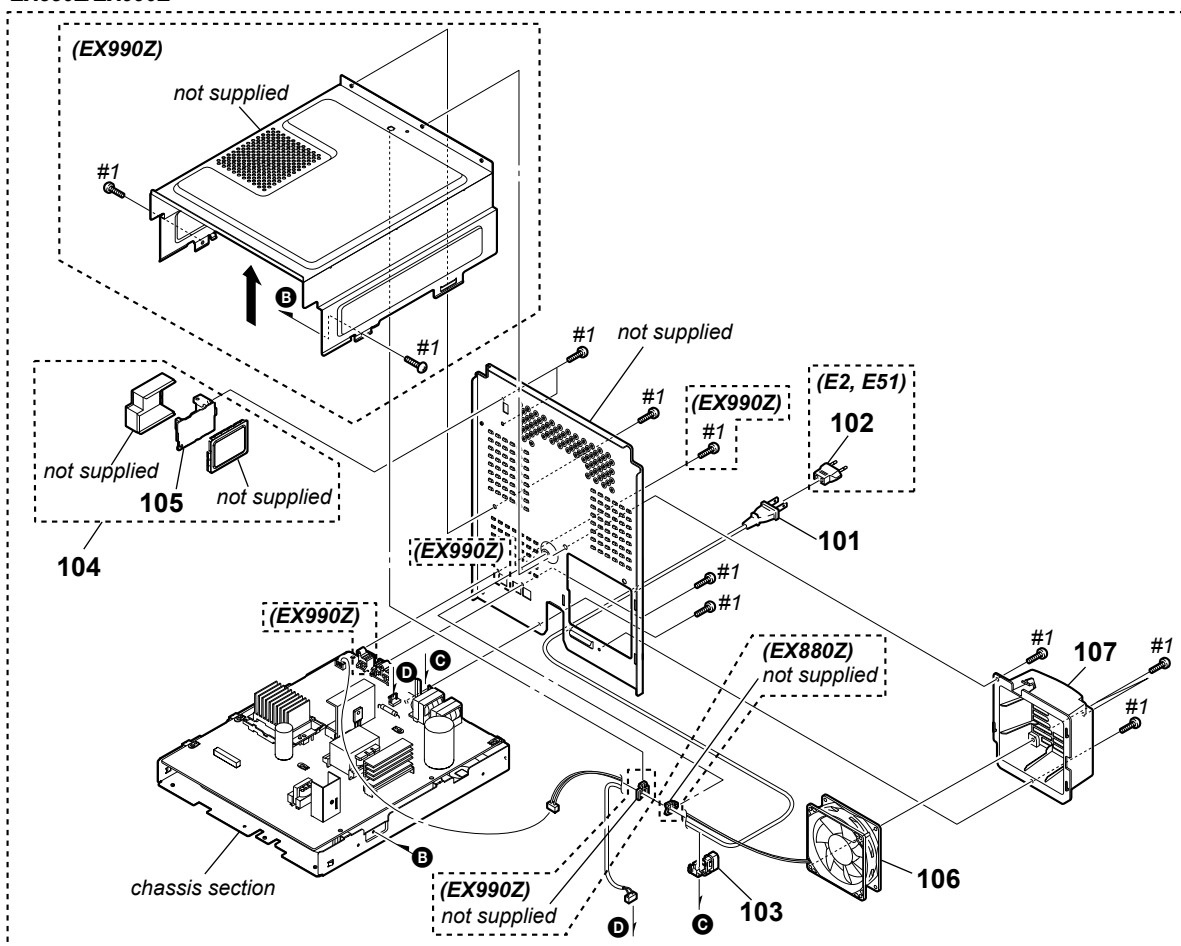
6-2. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark
51	4-264-672-01	CUSHION (FOOT)	
52	4-418-949-01	KNOB, VOLUME (EX660Z/EX880Z)	
52	4-418-949-11	KNOB, VOLUME (EX990Z)	
53	4-418-948-01	WINDOW, DISPLAY (EX660Z)	
53	4-418-948-11	WINDOW, DISPLAY (EX880Z)	
53	4-418-948-21	WINDOW, DISPLAY (EX990Z)	
54	X-2583-857-1	PANEL, FRONT SUB ASSY (EX660Z/EX880Z)	
54	X-2584-172-1	PANEL, FRONT SUB ASSY (EX990Z)	
55	1-846-143-11	CABLE, FLEXIBLE FLAT (9 CORE)	
56	3-087-053-01	+BVTP2.6 (3CR)	
57	A-1870-157-A	PANEL BOARD, COMPLETE (EX660Z: E2, E51)	

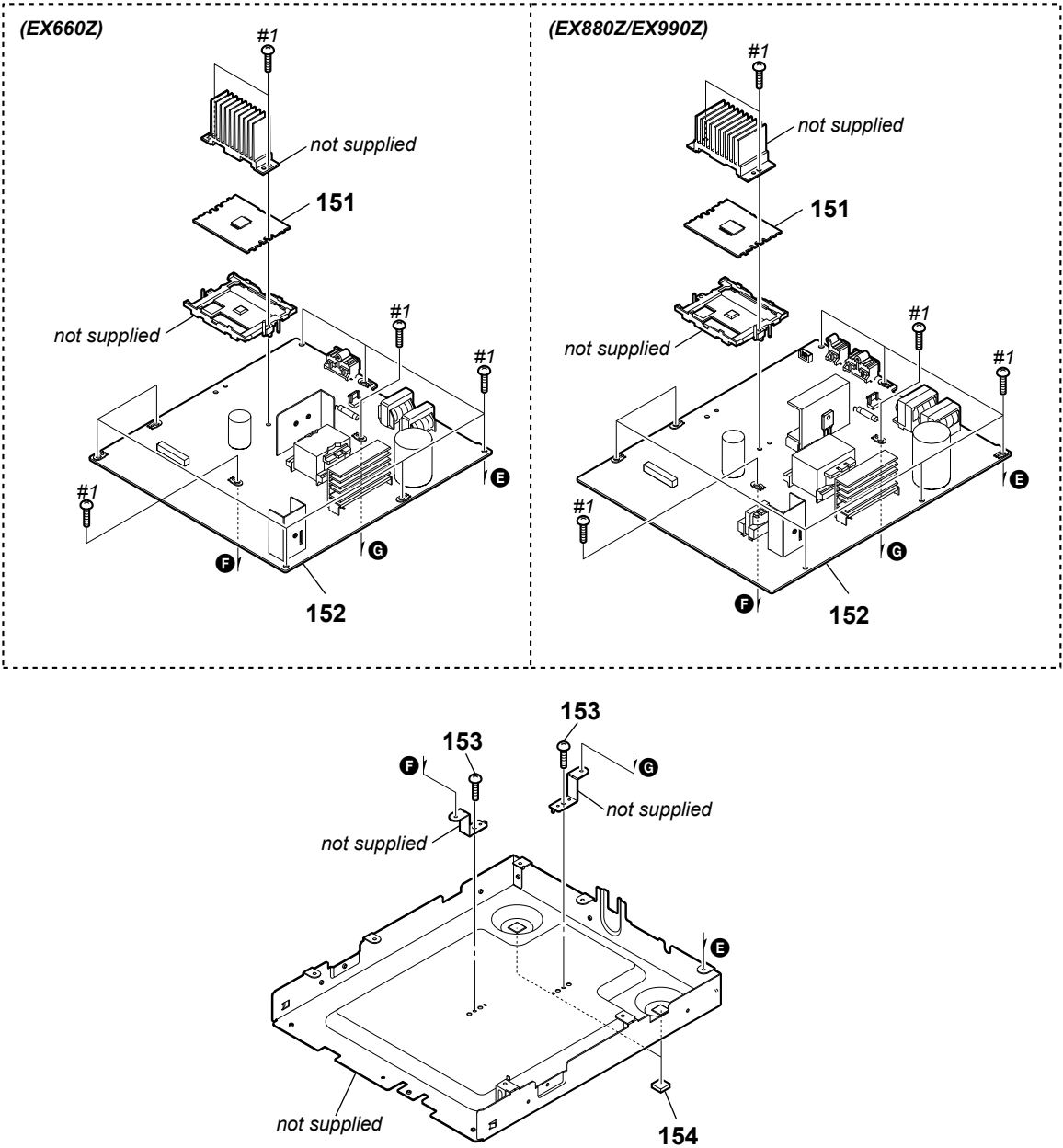
Ref. No.	Part No.	Description	Remark
57	A-1870-166-A	PANEL BOARD, COMPLETE (EX660Z: RU)	
57	A-1870-167-A	PANEL BOARD, COMPLETE (SAF)	
57	A-1870-170-A	PANEL BOARD, COMPLETE (EX880Z)	
57	A-1870-186-A	PANEL BOARD, COMPLETE	(EX990Z: E2, E51, MX)
57	A-1884-559-A	PANEL BOARD, COMPLETE (EX990Z: RU)	
58	1-846-142-11	CABLE, FLEXIBLE FLAT (21 CORE)	
59	1-832-876-21	CABLE, FLEXIBLE FLAT (21 CORE)	(EX660Z/EX880Z)
59	1-832-885-21	CABLE, FLEXIBLE FLAT (23 CORE) (EX990Z)	

6-3. BACK PANEL SECTION

EX660Z**EX880Z/EX990Z**

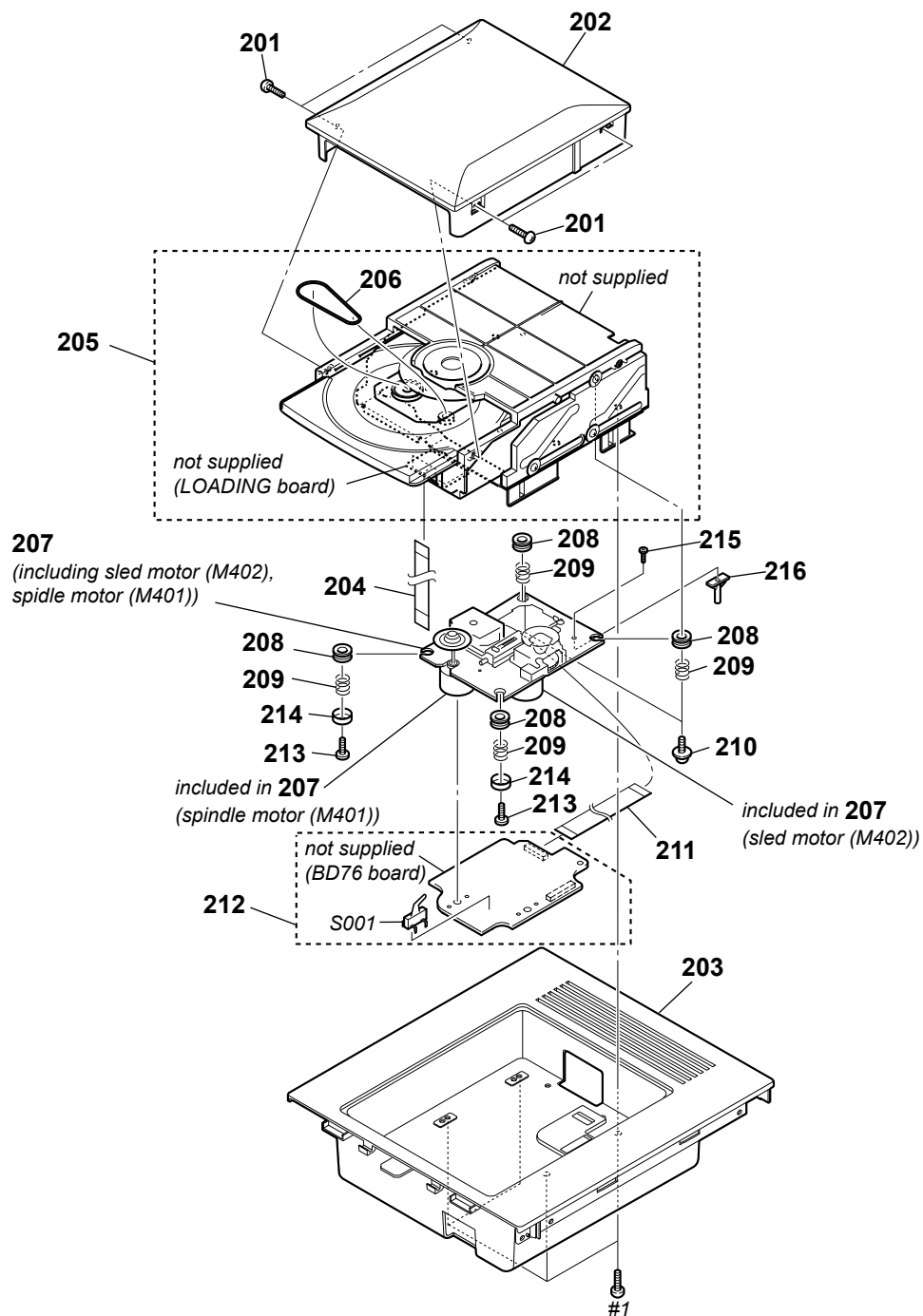
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
△ 101	1-834-966-41	POWER-SUPPLY CORD (RU, E51, SAF)		104	A-1846-569-A	TUNER1AM3RZ ASSY	
△ 101	1-837-344-11	CORD, POWER-SUPPLY (E2, MX)		105	A-1846-435-A	TUNER1 BOARD, COMPLETE	
△ 102	1-569-007-12	ADAPTOR, CONVERSION 2P (E2)		△ 106	1-855-006-11	FAN, DC (EX880Z/EX990Z)	
△ 102	1-569-008-33	ADAPTOR, CONVERSION (E51)		107	4-418-958-01	COVER, FAN (EX880Z/EX990Z)	
103	3-703-244-00	BUSHING (2104), CORD		#1	7-685-647-71	SCREW +BVTP 3X10 TYPE2 IT-3	

6-4. CHASSIS SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
151	A-1870-161-A	MODULE PHD BOARD, COMPLETE (EX660Z)		152	A-1870-190-A	AMP-SMPS PC BOARD, COMPLETE (EX990Z)	
151	A-1870-173-A	MODULE BOARD, COMPLETE (EX880Z)		153	3-077-331-21	+BV3 (3-CR)	
151	A-1870-189-A	MODULE BOARD, COMPLETE (EX990Z)		154	4-264-672-01	CUSHION (FOOT)	
152	A-1870-162-A	AMP-SMPS BOARD, COMPLETE (EX660Z)		#1	7-685-647-71	SCREW +BVTP 3X10 TYPE2 IT-3	
152	A-1870-174-A	AMP-SMPS BOARD, COMPLETE (EX880Z)					

6-5. TOP PANEL SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
201	3-253-143-01	SCREW (B2.6), (+) P TAPPING		211	1-834-268-21	WIRE (FLAT TYPE) (16 CORE)	
202	4-418-954-01	CD, LID		212	A-1853-274-A	BD76 PC BOARD ASSY	
203	4-418-953-01	CASE, TOP		213	3-087-053-01	+BVTP2.6 (3CR)	
204	1-846-147-11	CABLE, FLEXIBLE FLAT (5 CORE)		214	4-231-151-01	STOPPER (BU)	
205	A-1800-608-A	CDM76B ASSY		215	3-080-204-31	SCREW, TAPPING, P2	
206	4-120-079-01	BELT (CDM76)		216	4-166-292-01	SHAFT (SUPPORT)	
△ 207	1-856-037-11	DEVICE, OPTICAL DA11MMVGP		S001	1-771-853-11	SWITCH, DETECTION (LIMIT)	
208	4-227-549-11	INSULATOR		#1	7-685-647-71	SCREW +BVTP 3X10 TYPE2 IT-3	
209	4-227-045-31	SPRING (INSULATOR), COIL					
210	4-985-672-01	SCREW (+PTPWH M2.6), FLOATING					

SECTION 7 ELECTRICAL PARTS LIST

AMP-SMPS (EX660Z)

Note:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- XX and -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- RESISTORS
All resistors are in ohms.
METAL: Metal-film resistor.
METAL OXIDE: Metal oxide-film resistor.
F: nonflammable

- CAPACITORS
uF: μ F
- COILS
uH: μ H
- SEMICONDUCTORS
In each case, u: μ , for example:
uA. . . : μ A. . . , uPA. . . , μ PA. . . ,
uPB. . . : μ PB. . . , uPC. . . , μ PC. . . ,
uPD. . . : μ PD. . .
- Abbreviation
E2 : 120V AC area in E model
E51 : Chilean and Peruvian models
MX : Mexican model
RU : Russian model
SAF : South African model

When indicating parts by reference number, please include the board name.

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

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
	A-1870-162-A	AMP-SMPS BOARD, COMPLETE (EX660Z) *****				C660	1-100-881-91	CERAMIC CHIP 47uF 20%	6.3V		
						C661	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V		
						C662	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V		
	7-685-647-71	SCREW +BVTP 3X10 TYPE2 IT-3				C663	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V		
		< CAPACITOR >				C664	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V		
C600	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V			C665	1-165-908-11	CERAMIC CHIP 1uF 10%	10V		
C603	1-136-164-00	FILM 0.082uF 5%	50V			C666	1-165-908-11	CERAMIC CHIP 1uF 10%	10V		
C604	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V			C667	1-165-908-11	CERAMIC CHIP 1uF 10%	10V		
C605	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V			C668	1-165-908-11	CERAMIC CHIP 1uF 10%	10V		
C606	1-136-164-00	FILM 0.082uF 5%	50V			C676	1-162-974-11	CERAMIC CHIP 0.01uF 50V			
C607	1-162-923-11	CERAMIC CHIP 47PF 5%	50V			C678	1-126-933-11	ELECT 100uF 20%	16V		
C608	1-162-923-11	CERAMIC CHIP 47PF 5%	50V			C700	1-126-947-11	ELECT 47uF 20%	35V		
C609	1-100-597-91	CERAMIC CHIP 0.1uF 10%	25V			C701	1-126-935-11	ELECT 470uF 20%	16V		
C611	1-104-658-91	ELECT 100uF 20%	10V			C702	1-126-964-11	ELECT 10uF 20%	50V		
C612	1-126-957-11	ELECT 0.22uF 20%	50V			C703	1-126-964-11	ELECT 10uF 20%	50V		
C615	1-100-597-91	CERAMIC CHIP 0.1uF 10%	25V			C704	1-100-597-91	CERAMIC CHIP 0.1uF 10%	25V		
C621	1-126-935-11	ELECT 470uF 20%	16V			C705	1-100-597-91	CERAMIC CHIP 0.1uF 10%	25V		
C624	1-128-550-11	ELECT 2200uF 20%	50V			C707	1-100-597-91	CERAMIC CHIP 0.1uF 10%	25V		
C625	1-126-971-11	ELECT 470uF 20%	50V			C708	1-126-964-11	ELECT 10uF 20%	50V		
C626	1-126-971-11	ELECT 470uF 20%	50V			C709	1-100-597-91	CERAMIC CHIP 0.1uF 10%	25V		
C627	1-126-971-11	ELECT 470uF 20%	50V			C711	1-126-935-11	ELECT 470uF 20%	16V		
C628	1-126-971-11	ELECT 470uF 20%	50V			C713	1-135-977-31	ELECT 680uF 20%	10V		
C637	1-135-618-11	MYLAR 1uF 5%	63V			C715	1-164-156-11	CERAMIC CHIP 0.1uF 25V			
C638	1-135-618-11	MYLAR 1uF 5%	63V			C716	1-126-961-11	ELECT 2.2uF 20%	50V		
C639	1-135-618-11	MYLAR 1uF 5%	63V			C718	1-126-964-11	ELECT 10uF 20%	50V		
C640	1-135-618-11	MYLAR 1uF 5%	63V			C719	1-100-597-91	CERAMIC CHIP 0.1uF 10%	25V		
C641	1-162-966-11	CERAMIC CHIP 0.0022uF 10%	50V			C720	1-100-597-91	CERAMIC CHIP 0.1uF 10%	25V		
C642	1-162-966-11	CERAMIC CHIP 0.0022uF 10%	50V			C721	1-126-964-11	ELECT 10uF 20%	50V		
C643	1-162-966-11	CERAMIC CHIP 0.0022uF 10%	50V			$\triangle$ C902	1-112-869-51	CERAMIC 470PF 10%	250V		
C644	1-162-966-11	CERAMIC CHIP 0.0022uF 10%	50V			C903	1-112-869-51	CERAMIC 470PF 10%	250V		
C645	1-162-966-11	CERAMIC CHIP 0.0022uF 10%	50V			$\triangle$ C905	1-114-594-21	FILM 0.22uF 10%	250V		
C646	1-162-966-11	CERAMIC CHIP 0.0022uF 10%	50V			$\triangle$ C907	1-116-397-21	FILM 0.33uF 10%	250V		
C647	1-162-966-11	CERAMIC CHIP 0.0022uF 10%	50V			C911	1-113-925-11	CERAMIC 0.01uF 20%	250V		
C648	1-162-966-11	CERAMIC CHIP 0.0022uF 10%	50V			C912	1-113-925-11	CERAMIC 0.01uF 20%	250V		
C649	1-164-227-11	CERAMIC CHIP 0.022uF 10%	25V			C914	1-114-347-22	ELECT (BLOCK) 330uF 20%	450V		
C650	1-164-227-11	CERAMIC CHIP 0.022uF 10%	25V			C916	1-112-869-51	CERAMIC 470PF 10%	250V		
C651	1-164-227-11	CERAMIC CHIP 0.022uF 10%	25V			C917	1-118-264-11	FILM 0.0047uF 5%	630V		
C652	1-164-227-11	CERAMIC CHIP 0.022uF 10%	25V			C919	1-127-804-91	CERAMIC CHIP 100PF 1%	50V		
C653	1-164-227-11	CERAMIC CHIP 0.022uF 10%	25V			C920	1-162-979-11	CERAMIC CHIP 0.0027uF 10%	50V		
C654	1-164-227-11	CERAMIC CHIP 0.022uF 10%	25V			C921	1-126-964-11	ELECT 10uF 20%	50V		
C655	1-164-227-11	CERAMIC CHIP 0.022uF 10%	25V			C922	1-126-960-11	ELECT 1uF 20%	50V		
C656	1-164-227-11	CERAMIC CHIP 0.022uF 10%	25V			C923	1-116-739-11	CERAMIC CHIP 0.47uF 10%	50V		
C657	1-126-960-11	ELECT 1uF 20%	50V			C924	1-114-868-11	CERAMIC CHIP 0.1uF 10%	50V		
C658	1-126-964-11	ELECT 10uF 20%	50V			C926	1-162-962-11	CERAMIC CHIP 470PF 10%	50V		
C659	1-100-881-91	CERAMIC CHIP 47uF 20%	6.3V			C928	1-117-824-11	FILM 2200PF 3%	1.5KV		

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C930	1-126-965-91	ELECT 22uF 20%	50V	D1008	6-503-762-01	DI SJPB-L6	
C931	1-162-966-11	CERAMIC CHIP 0.0022uF 10%	50V	D1009	6-503-762-01	DI SJPB-L6	
C932	1-162-962-11	CERAMIC CHIP 470PF 10%	50V	D1010	6-501-849-01	DIODE FMX-22SL	
C935	1-116-078-11	CERAMIC CHIP 1uF 10%	50V	D1011	6-503-020-01	DI DZ2J082M0L	
C1000	1-100-597-91	CERAMIC CHIP 0.1uF 10%	25V	D1012	6-503-028-01	DI DZ2J130M0L	
C1003	1-165-752-21	ELECT 680uF 20%	50V	D1013	6-502-961-01	DI DA2J10100L	
C1004	1-165-752-21	ELECT 680uF 20%	50V	D1014	8-719-058-24	DIODE RB501V-40TE-17	
C1005	1-126-960-11	ELECT 1uF 20%	50V	D1018	6-502-974-01	DI DZ2J140M0L	
C1007	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V	D1020	6-500-335-01	DIODE MC2838-T112-1	
C1009	1-126-965-91	ELECT 22uF 20%	50V	D1021	6-500-335-01	DIODE MC2838-T112-1	
C1010	1-100-756-91	CERAMIC CHIP 0.047uF 10%	50V	D1022	6-503-044-01	DI DZ2J360M0L	
C1011	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V	D1023	6-503-034-01	DI DZ2J200M0L	
C1012	1-126-971-11	ELECT 470uF 20%	50V	D1024	6-503-030-01	DI DZ2J160M0L	
C1013	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V	D1026	6-502-961-01	DI DA2J10100L	
C1014	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V			< FUSE >	
C1015	1-137-906-31	ELECT 680uF 20%	16V	△ F901	1-523-042-51	FUSE (6.3A/250V)	
C1016	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V			< IC >	
C1017	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V	IC600	8-759-909-71	IC BA4558F	
C1019	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V	IC601	8-759-909-71	IC BA4558F	
C1020	1-116-078-11	CERAMIC CHIP 1uF 10%	50V	IC603	6-712-722-01	IC PST8229UL	
C1021	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V	IC700	6-703-639-01	IC TK11140CSCL-G	
C1024	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V	IC701	6-713-686-01	IC KIA7809AF	
C1025	1-126-964-11	ELECT 10uF 20%	50V	IC703	6-712-617-01	IC SI-8008TM-TLS	
C1026	1-100-597-91	CERAMIC CHIP 0.1uF 10%	25V	IC705	6-718-294-01	IC BA17807FP-E2	
		< CONNECTOR >		IC900	6-718-560-01	IC SSC6700	
CN700	1-568-838-11	CONNECTOR, FFC 21P		IC1000	6-711-947-01	IC MM1431CURE	
△ CN901	1-564-321-00	PIN, CONNECTOR (3.96mm PITCH) 2P		IC1001	6-713-826-01	IC SI-8001FFEK	
		< DIODE >				< JUMPER RESISTOR >	
D601	6-500-848-01	DIODE MC2840-T112-1		JR600	1-216-864-11	SHORT CHIP 0	
D700	8-719-079-47	DIODE RK36LF-A4		JR601	1-216-864-11	SHORT CHIP 0	
D701	6-500-335-01	DIODE MC2838-T112-1		JR602	1-216-864-11	SHORT CHIP 0	
D702	6-502-964-01	DI DZ2J047M0L		JR603	1-216-864-11	SHORT CHIP 0	
D901	6-503-731-01	DI SARS10		JR605	1-216-864-11	SHORT CHIP 0	
D902	6-502-994-01	DI D10XB60 F		JR607	1-216-864-11	SHORT CHIP 0	
D903	6-502-970-01	DI DZ2J068M0L		JR901	1-216-296-11	SHORT CHIP 0	
D905	6-503-032-01	DI DZ2J180M0L		JR906	1-216-296-11	SHORT CHIP 0	
D906	6-500-108-01	DIODE EP05FA20		JR911	1-216-296-11	SHORT CHIP 0	
D907	6-500-108-01	DIODE EP05FA20		JR912	1-216-296-11	SHORT CHIP 0	
D908	8-719-063-74	DIODE D1NL20U-TR2		JW932	1-216-295-91	SHORT CHIP 0	
D910	6-502-961-01	DI DA2J10100L				< COIL >	
D911	6-503-037-01	DI DZ2J24000L		L606	1-457-078-11	AIR-CORE COIL	
D912	6-503-032-01	DI DZ2J180M0L		L607	1-457-077-11	AIR-CORE COIL	
D913	6-502-961-01	DI DA2J10100L		L608	1-457-077-11	AIR-CORE COIL	
D914	6-502-970-01	DI DZ2J068M0L		L609	1-457-078-11	AIR-CORE COIL	
D915	6-502-961-01	DI DA2J10100L		L612	1-460-525-11	INDUCTOR 10uH	
D916	6-502-961-01	DI DA2J10100L		L613	1-460-525-11	INDUCTOR 10uH	
D917	6-502-961-01	DI DA2J10100L		L700	1-400-424-21	INDUCTOR 47uH	
D918	6-503-032-01	DI DZ2J180M0L		△ L901	1-456-082-11	COIL, LINE FILTER	
D920	6-503-036-01	DI DZ2J220M0L		△ L902	1-456-082-11	COIL, LINE FILTER	
D921	6-503-020-01	DI DZ2J082M0L		L1001	1-457-878-65	INDUCTOR 2.2uH	
D928	6-503-042-01	DI DZ2J330M0L		L1002	1-400-424-21	INDUCTOR 47uH	
D949	6-503-040-01	DI DZ2J300M0L		L1004	1-457-578-11	INDUCTOR 10uH	
D1001	6-502-961-01	DI DA2J10100L				< PHOTO COUPLER >	
D1002	6-502-961-01	DI DA2J10100L		△ PH930	6-600-277-11	PHOTOCOUPLER PS2561AL-1-V-F3-A	
D1004	6-502-970-01	DI DZ2J068M0L		△ PH931	6-600-277-11	PHOTOCOUPLER PS2561AL-1-V-F3-A	
D1005	6-503-037-01	DI DZ2J24000L					
D1006	6-503-015-01	DI DZ2J051M0L					
D1007	6-503-032-01	DI DZ2J180M0L					

HCD-EX660Z/EX880Z/EX990Z

AMP-SMPS (EX660Z)

Ref. No.	Part No.	Description				Remark	Ref. No.	Part No.	Description				Remark
< TRANSISTOR >							R626	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	
							R627	1-216-833-11	METAL CHIP	10K	5%	1/10W	
Q603	6-551-696-01	TR	ISA1235AC1-T112-1EF										
Q604	6-551-696-01	TR	ISA1235AC1-T112-1EF				R629	1-216-833-11	METAL CHIP	10K	5%	1/10W	
Q605	6-551-696-01	TR	ISA1235AC1-T112-1EF				R630	1-216-833-11	METAL CHIP	10K	5%	1/10W	
Q606	6-551-696-01	TR	ISA1235AC1-T112-1EF				R631	1-216-791-11	METAL CHIP	3.3	5%	1/10W	
Q607	6-551-696-01	TR	ISA1235AC1-T112-1EF				R632	1-216-791-11	METAL CHIP	3.3	5%	1/10W	
							R633	1-216-791-11	METAL CHIP	3.3	5%	1/10W	
Q608	8-729-620-13	TRANSISTOR	2SC4154TP-1EF										
Q609	6-551-696-01	TR	ISA1235AC1-T112-1EF				R634	1-216-791-11	METAL CHIP	3.3	5%	1/10W	
Q612	6-551-696-01	TR	ISA1235AC1-T112-1EF				R635	1-216-791-11	METAL CHIP	3.3	5%	1/10W	
Q700	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF				R636	1-216-791-11	METAL CHIP	3.3	5%	1/10W	
Q701	8-729-040-76	TRANSISTOR	KTA1273-Y-AT				R637	1-216-791-11	METAL CHIP	3.3	5%	1/10W	
							R638	1-216-791-11	METAL CHIP	3.3	5%	1/10W	
Q702	6-551-696-01	TR	ISA1235AC1-T112-1EF										
Q705	8-729-038-23	TRANSISTOR	RT1N141C-TP-1				R639	1-216-837-11	METAL CHIP	22K	5%	1/10W	
Q706	6-551-272-01	TRANSISTOR	RT3CLLM				R640	1-216-837-11	METAL CHIP	22K	5%	1/10W	
Q708	6-551-272-01	TRANSISTOR	RT3CLLM				R641	1-216-841-11	METAL CHIP	47K	5%	1/10W	
Q902	6-551-696-01	TR	ISA1235AC1-T112-1EF				R642	1-216-845-11	METAL CHIP	100K	5%	1/10W	
							R643	1-216-849-11	METAL CHIP	220K	5%	1/10W	
Q903	6-553-069-01	TR	KTC3209-Y-AT										
Q904	6-551-696-01	TR	ISA1235AC1-T112-1EF				R644	1-216-849-11	METAL CHIP	220K	5%	1/10W	
Q906	6-553-069-01	TR	KTC3209-Y-AT				R645	1-216-849-11	METAL CHIP	220K	5%	1/10W	
Q907	8-729-052-82	TRANSISTOR	KTA1281Y-AT				R646	1-216-849-11	METAL CHIP	220K	5%	1/10W	
Q908	6-553-071-01	TR	STP10NK80ZFP				R647	1-216-849-11	METAL CHIP	220K	5%	1/10W	
							R648	1-216-849-11	METAL CHIP	220K	5%	1/10W	
Q909	6-553-071-01	TR	STP10NK80ZFP										
Q910	8-729-620-13	TRANSISTOR	2SC4154TP-1EF				R650	1-216-849-11	METAL CHIP	220K	5%	1/10W	
Q911	8-729-620-13	TRANSISTOR	2SC4154TP-1EF				R651	1-216-849-11	METAL CHIP	220K	5%	1/10W	
Q912	6-551-696-01	TR	ISA1235AC1-T112-1EF				R652	1-216-849-11	METAL CHIP	220K	5%	1/10W	
Q913	8-729-620-13	TRANSISTOR	2SC4154TP-1EF				R653	1-216-849-11	METAL CHIP	220K	5%	1/10W	
							R663	1-218-879-11	METAL CHIP	22K	0.5%	1/10W	
Q1001	8-729-620-13	TRANSISTOR	2SC4154TP-1EF										
Q1002	6-551-696-01	TR	ISA1235AC1-T112-1EF				R670	1-216-841-11	METAL CHIP	47K	5%	1/10W	
Q1003	8-729-620-13	TRANSISTOR	2SC4154TP-1EF				R671	1-216-836-11	METAL CHIP	18K	5%	1/10W	
Q1004	8-729-038-23	TRANSISTOR	RT1N141C-TP-1				R683	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	
Q1011	8-729-620-13	TRANSISTOR	2SC4154TP-1EF				R684	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	
							R700	1-216-821-11	METAL CHIP	1K	5%	1/10W	
Q1012	6-551-697-01	TR	ISA1235AC1-T112-1F										
Q1013	8-729-620-13	TRANSISTOR	2SC4154TP-1EF				R701	1-216-845-11	METAL CHIP	100K	5%	1/10W	
Q1016	8-729-620-13	TRANSISTOR	2SC4154TP-1EF				R702	1-216-833-11	METAL CHIP	10K	5%	1/10W	
Q1017	8-729-620-13	TRANSISTOR	2SC4154TP-1EF				R703	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	
< RESISTOR >							R704	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	
							R705	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	
R601	1-216-837-11	METAL CHIP	22K	5%	1/10W		R706	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	
R602	1-216-837-11	METAL CHIP	22K	5%	1/10W		R710	1-216-833-11	METAL CHIP	10K	5%	1/10W	
R603	1-216-848-11	METAL CHIP	180K	5%	1/10W		R711	1-216-845-11	METAL CHIP	100K	5%	1/10W	
R604	1-216-848-11	METAL CHIP	180K	5%	1/10W		R713	1-216-853-11	METAL CHIP	470K	5%	1/10W	
R605	1-216-837-11	METAL CHIP	22K	5%	1/10W		R718	1-218-835-11	METAL CHIP	330	0.5%	1/10W	
R606	1-216-837-11	METAL CHIP	22K	5%	1/10W		R719	1-218-839-11	METAL CHIP	470	0.5%	1/10W	
R607	1-216-848-11	METAL CHIP	180K	5%	1/10W		R720	1-218-847-11	METAL CHIP	1K	0.5%	1/10W	
R608	1-216-848-11	METAL CHIP	180K	5%	1/10W		R721	1-218-859-11	METAL CHIP	3.3K	0.5%	1/10W	
R609	1-216-825-11	METAL CHIP	2.2K	5%	1/10W		R722	1-216-821-11	METAL CHIP	1K	5%	1/10W	
R610	1-216-864-11	SHORT CHIP	0				R723	1-216-791-11	METAL CHIP	3.3	5%	1/10W	
R611	1-216-825-11	METAL CHIP	2.2K	5%	1/10W		R724	1-216-791-11	METAL CHIP	3.3	5%	1/10W	
R612	1-216-829-11	METAL CHIP	4.7K	5%	1/10W		R725	1-216-791-11	METAL CHIP	3.3	5%	1/10W	
R613	1-216-829-11	METAL CHIP	4.7K	5%	1/10W		R726	1-216-791-11	METAL CHIP	3.3	5%	1/10W	
R614	1-216-845-11	METAL CHIP	100K	5%	1/10W		R727	1-216-791-11	METAL CHIP	3.3	5%	1/10W	
R615	1-216-829-11	METAL CHIP	4.7K	5%	1/10W		R728	1-216-833-11	METAL CHIP	10K	5%	1/10W	
R616	1-216-829-11	METAL CHIP	4.7K	5%	1/10W		R729	1-216-845-11	METAL CHIP	100K	5%	1/10W	
R617	1-218-855-11	METAL CHIP	2.2K	0.5%	1/10W		R730	1-216-809-11	METAL CHIP	100	5%	1/10W	
R618	1-218-855-11	METAL CHIP	2.2K	0.5%	1/10W		R744	1-216-837-11	METAL CHIP	22K	5%	1/10W	
R619	1-216-833-11	METAL CHIP	10K	5%	1/10W		R745	1-216-837-11	METAL CHIP	22K	5%	1/10W	
R621	1-216-809-11	METAL CHIP	100	5%	1/10W		R746	1-216-837-11	METAL CHIP	22K	5%	1/10W	
R622	1-216-837-11	METAL CHIP	22K	5%	1/10W		R747	1-216-837-11	METAL CHIP	22K	5%	1/10W	
R623	1-243-669-11	METAL	0.05	5%	5W		R759	1-257-124-11	METAL CHIP	560	5%	1/2W	
R624	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	△	R901	1-240-938-51	METAL	1.5M	5%	0.5W	

AMP-SMPS (EX660Z)

AMP-SMPS (EX880Z)

Ref. No.	Part No.	Description			Remark	Ref. No.	Part No.	Description			Remark
R914	1-246-374-11	FUSIBLE	0.1	10%	1W	R1021	1-216-797-11	METAL CHIP	10	5%	1/10W
R916	1-216-349-00	METAL OXIDE	1	5%	1W	R1022	1-218-869-11	METAL CHIP	8.2K	0.5%	1/10W
R918	1-216-797-11	METAL CHIP	10	5%	1/10W	R1023	1-218-851-11	METAL CHIP	1.5K	0.5%	1/10W
R919	1-216-793-11	METAL CHIP	4.7	5%	1/10W	R1024	1-218-851-11	METAL CHIP	1.5K	0.5%	1/10W
R920	1-216-218-91	METAL CHIP	6.8K	5%	1/8W	R1025	1-218-839-11	METAL CHIP	470	0.5%	1/10W
R921	1-216-821-11	METAL CHIP	1K	5%	1/10W	R1026	1-218-835-11	METAL CHIP	330	0.5%	1/10W
R922	1-216-797-11	METAL CHIP	10	5%	1/10W	R1027	1-216-809-11	METAL CHIP	100	5%	1/10W
R923	1-216-821-11	METAL CHIP	1K	5%	1/10W	R1028	1-216-809-11	METAL CHIP	100	5%	1/10W
R924	1-216-821-11	METAL CHIP	1K	5%	1/10W	R1029	1-216-833-11	METAL CHIP	10K	5%	1/10W
R925	1-215-876-00	METAL OXIDE	15K	5%	1W	R1030	1-216-837-11	METAL CHIP	22K	5%	1/10W
R926	1-215-876-00	METAL OXIDE	15K	5%	1W	R1035	1-216-833-11	METAL CHIP	10K	5%	1/10W
R927	1-216-853-11	METAL CHIP	470K	5%	1/10W	R1036	1-216-841-11	METAL CHIP	47K	5%	1/10W
R928	1-216-214-00	METAL CHIP	4.7K	5%	1/8W	R1037	1-216-837-11	METAL CHIP	22K	5%	1/10W
R932	1-216-837-11	METAL CHIP	22K	5%	1/10W	R1038	1-216-837-11	METAL CHIP	22K	5%	1/10W
R933	1-216-837-11	METAL CHIP	22K	5%	1/10W	R1039	1-216-833-11	METAL CHIP	10K	5%	1/10W
R934	1-216-845-11	METAL CHIP	100K	5%	1/10W	R1040	1-216-864-11	SHORT CHIP	0		
R935	1-216-833-11	METAL CHIP	10K	5%	1/10W	R1041	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R936	1-216-821-11	METAL CHIP	1K	5%	1/10W	R1042	1-216-809-11	METAL CHIP	100	5%	1/10W
R937	1-216-206-00	METAL CHIP	2.2K	5%	1/8W	R1043	1-216-833-11	METAL CHIP	10K	5%	1/10W
R938	1-216-809-11	METAL CHIP	100	5%	1/10W	R1044	1-216-833-11	METAL CHIP	10K	5%	1/10W
R939	1-216-847-11	METAL CHIP	150K	5%	1/10W	R1045	1-216-833-11	METAL CHIP	10K	5%	1/10W
R940	1-216-218-91	METAL CHIP	6.8K	5%	1/8W	R1047	1-216-797-11	METAL CHIP	10	5%	1/10W
R941	1-216-190-00	METAL CHIP	470	5%	1/8W	R1048	1-216-815-11	METAL CHIP	330	5%	1/10W
R942	1-216-174-00	METAL CHIP	100	5%	1/8W	R1051	1-216-833-11	METAL CHIP	10K	5%	1/10W
R943	1-249-401-11	CARBON	47	5%	1/4W	R1053	1-216-833-11	METAL CHIP	10K	5%	1/10W
R944	1-249-401-11	CARBON	47	5%	1/4W	R1059	1-216-833-11	METAL CHIP	10K	5%	1/10W
R945	1-249-401-11	CARBON	47	5%	1/4W	R1060	1-216-845-11	METAL CHIP	100K	5%	1/10W
R946	1-249-401-11	CARBON	47	5%	1/4W	R1061	1-216-809-11	METAL CHIP	100	5%	1/10W
R947	1-216-833-11	METAL CHIP	10K	5%	1/10W	R1062	1-216-833-11	METAL CHIP	10K	5%	1/10W
R948	1-243-670-11	METAL	0.1	5%	5W	< TRANSFORMER >					
R949	1-245-308-11	METAL	0.22	5%	5W	< TRANSFORMER >					
R952	1-216-821-11	METAL CHIP	1K	5%	1/10W	< TRANSFORMER >					
R954	1-216-821-11	METAL CHIP	1K	5%	1/10W	< TRANSFORMER >					
R955	1-216-849-11	METAL CHIP	220K	5%	1/10W	< TRANSFORMER >					
R956	1-216-841-11	METAL CHIP	47K	5%	1/10W	< TRANSFORMER >					
R957	1-216-845-11	METAL CHIP	100K	5%	1/10W	< TRANSFORMER >					
R958	1-216-837-11	METAL CHIP	22K	5%	1/10W	< TRANSFORMER >					
R959	1-216-849-11	METAL CHIP	220K	5%	1/10W	< TRANSFORMER >					
R960	1-216-821-11	METAL CHIP	1K	5%	1/10W	< TRANSFORMER >					
R961	1-216-841-11	METAL CHIP	47K	5%	1/10W	< TRANSFORMER >					
R965	1-216-841-11	METAL CHIP	47K	5%	1/10W	< TRANSFORMER >					
R967	1-215-904-11	METAL OXIDE	100K	5%	2W	< TRANSFORMER >					
R968	1-216-821-11	METAL CHIP	1K	5%	1/10W	< TRANSFORMER >					
R974	1-216-190-00	METAL CHIP	470	5%	1/8W	< TRANSFORMER >					
R975	1-216-206-00	METAL CHIP	2.2K	5%	1/8W	< TRANSFORMER >					
R1000	1-216-206-00	METAL CHIP	2.2K	5%	1/8W	< TRANSFORMER >					
R1002	1-216-198-91	METAL CHIP	1K	5%	1/8W	< TRANSFORMER >					
R1003	1-216-830-11	METAL CHIP	5.6K	5%	1/10W	< TRANSFORMER >					
R1004	1-216-837-11	METAL CHIP	22K	5%	1/10W	< TRANSFORMER >					
R1005	1-216-839-11	METAL CHIP	33K	5%	1/10W	< TRANSFORMER >					
R1006	1-216-837-11	METAL CHIP	22K	5%	1/10W	< TRANSFORMER >					
R1008	1-216-821-11	METAL CHIP	1K	5%	1/10W	< TRANSFORMER >					
R1009	1-216-821-11	METAL CHIP	1K	5%	1/10W	< TRANSFORMER >					
R1011	1-218-871-11	METAL CHIP	10K	0.5%	1/10W	< TRANSFORMER >					
R1012	1-218-855-11	METAL CHIP	2.2K	0.5%	1/10W	< TRANSFORMER >					
R1013	1-218-861-11	METAL CHIP	3.9K	0.5%	1/10W	< TRANSFORMER >					
R1014	1-218-843-11	METAL CHIP	680	0.5%	1/10W	< TRANSFORMER >					
R1015	1-218-879-11	METAL CHIP	22K	0.5%	1/10W	< TRANSFORMER >					
R1016	1-218-871-11	METAL CHIP	10K	0.5%	1/10W	< TRANSFORMER >					
R1017	1-216-198-91	METAL CHIP	1K	5%	1/8W	< TRANSFORMER >					

HCD-EX660Z/EX880Z/EX990Z

AMP-SMPS (EX880Z)

Ref. No.	Part No.	Description				Remark	Ref. No.	Part No.	Description				Remark
C614	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V		C720	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	
C615	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V		C721	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	
C616	1-112-298-91	CERAMIC CHIP	1uF	10%	16V		C722	1-126-963-11	ELECT	4.7uF	20%	50V	
C619	1-112-298-91	CERAMIC CHIP	1uF	10%	16V		C723	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V	
C620	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V		△ C902	1-112-869-51	CERAMIC	470PF	10%	250V	
C625	1-128-550-11	ELECT	2200uF	20%	50V		△ C903	1-112-869-51	CERAMIC	470PF	10%	250V	
C626	1-126-971-11	ELECT	470uF	20%	50V		△ C905	1-114-594-21	FILM	0.22uF	10%	250V	
C627	1-126-971-11	ELECT	470uF	20%	50V		△ C907	1-116-397-21	FILM	0.33uF	10%	250V	
C628	1-126-971-11	ELECT	470uF	20%	50V		△ C910	1-112-866-51	CERAMIC	100PF	10%	250V	
C629	1-126-971-11	ELECT	470uF	20%	50V		C911	1-113-925-11	CERAMIC	0.01uF	20%	250V	
C638	1-116-866-51	MYLAR	1uF	10%	100V		C912	1-113-925-11	CERAMIC	0.01uF	20%	250V	
C639	1-116-866-51	MYLAR	1uF	10%	100V		C913	1-114-868-11	CERAMIC CHIP	0.1uF	10%	50V	
C640	1-116-866-51	MYLAR	1uF	10%	100V		C914	1-112-529-11	ELECT (BLOCK)	390uF	20%	450V	
C641	1-116-866-51	MYLAR	1uF	10%	100V		C917	1-118-264-11	FILM	0.0047uF	5%	630V	
C642	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V		C918	1-127-804-91	CERAMIC CHIP	100PF	1%	50V	
C643	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V		C920	1-162-962-11	CERAMIC CHIP	470PF	10%	50V	
C644	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V		C921	1-126-964-11	ELECT	10uF	20%	50V	
C645	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V		C922	1-126-960-11	ELECT	1uF	20%	50V	
C646	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V		C926	1-162-962-11	CERAMIC CHIP	470PF	10%	50V	
C647	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V		C931	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V	
C648	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V		C933	1-162-962-11	CERAMIC CHIP	470PF	10%	50V	
C649	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V		C934	1-114-868-11	CERAMIC CHIP	0.1uF	10%	50V	
C650	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V		C966	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C651	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V		C967	1-117-220-81	CERAMIC	150PF	5%	2KV	
C652	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V		C968	1-116-078-11	CERAMIC CHIP	1uF	10%	50V	
C653	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V		C969	1-112-300-91	CERAMIC CHIP	4.7uF	10%	10V	
C654	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V		C970	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V	
C655	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V		C971	1-128-560-11	ELECT	22uF	20%	100V	
C656	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V		C972	1-162-960-11	CERAMIC CHIP	220PF	10%	50V	
C657	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V		C975	1-114-918-11	CERAMIC CHIP	470PF	5%	1KV	
C658	1-126-960-11	ELECT	1uF	20%	50V		C992	1-117-815-11	FILM	1000PF	3%	1.5KV	
C659	1-126-964-11	ELECT	10uF	20%	50V		C1004	1-165-753-21	ELECT	820uF	20%	50V	
C660	1-100-881-91	CERAMIC CHIP	47uF	20%	6.3V		C1006	1-112-231-11	ELECT	2200uF	20%	16V	
C661	1-100-881-91	CERAMIC CHIP	47uF	20%	6.3V		C1008	1-100-756-91	CERAMIC CHIP	0.047uF	10%	50V	
C662	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V		C1009	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	
C663	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V		C1010	1-126-960-11	ELECT	1uF	20%	50V	
C664	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V		C1011	1-112-298-91	CERAMIC CHIP	1uF	10%	16V	
C665	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V		C1012	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C666	1-165-908-11	CERAMIC CHIP	1uF	10%	10V		C1014	1-126-965-91	ELECT	22uF	20%	50V	
C667	1-165-908-11	CERAMIC CHIP	1uF	10%	10V		C1015	1-100-756-91	CERAMIC CHIP	0.047uF	10%	50V	
C668	1-165-908-11	CERAMIC CHIP	1uF	10%	10V		C1016	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	
C669	1-165-908-11	CERAMIC CHIP	1uF	10%	10V		C1018	1-126-965-91	ELECT	22uF	20%	50V	
C676	1-162-974-11	CERAMIC CHIP	0.01uF		50V		C1019	1-126-964-11	ELECT	10uF	20%	50V	
C700	1-126-947-11	ELECT	47uF	20%	35V		C1022	1-116-078-11	CERAMIC CHIP	1uF	10%	50V	
C702	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V		C1027	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C703	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V				< CONNECTOR >				
C704	1-126-935-11	ELECT	470uF	20%	16V								
C705	1-126-964-11	ELECT	10uF	20%	50V		CN600	1-568-838-11	CONNECTOR, FFC 21P				
C706	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V		* CN701	1-564-506-11	PLUG, CONNECTOR 3P				
C707	1-126-964-11	ELECT	10uF	20%	50V		△ CN901	1-564-321-00	PIN, CONNECTOR (3.96mm PITCH) 2P				
C708	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V				< DIODE >				
C709	1-126-964-11	ELECT	10uF	20%	50V								
C710	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V		D601	6-500-848-01	DIODE MC2840-T112-1				
C711	1-126-935-11	ELECT	470uF	20%	16V		D700	8-719-079-47	DIODE RK36LF-A4				
C712	1-126-964-11	ELECT	10uF	20%	50V		D701	6-502-966-01	DI DZ2J056M0L				
							D702	6-502-970-01	DI DZ2J068M0L				
C714	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V		D703	6-500-335-01	DIODE MC2838-T112-1				
C715	1-135-977-31	ELECT	680uF	20%	10V								
C717	1-164-156-11	CERAMIC CHIP	0.1uF		25V		D704	6-502-964-01	DI DZ2J047M0L				
C718	1-126-961-11	ELECT	2.2uF	20%	50V		D901	6-503-040-01	DI DZ2J300M0L				
C719	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V		D902	8-719-054-89	DIODE D15XB60				
							D903	6-503-731-01	DI SARS10				

AMP-SMPS (EX880Z)

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
D904	6-503-020-01	DI DZ2J082M0L		JR605	1-216-864-11	SHORT CHIP 0	
D905	6-503-032-01	DI DZ2J180M0L		JR901	1-216-295-91	SHORT CHIP 0	
D906	6-500-108-01	DIODE EP05FA20		JR902	1-216-295-91	SHORT CHIP 0	
D907	6-500-108-01	DIODE EP05FA20		JR903	1-216-296-11	SHORT CHIP 0	
D909	8-719-063-74	DIODE D1NL20U-TR2		JR904	1-216-296-11	SHORT CHIP 0	
D910	6-502-961-01	DI DA2J10100L		JR905	1-216-296-11	SHORT CHIP 0	
D911	6-503-037-01	DI DZ2J24000L		JR906	1-216-296-11	SHORT CHIP 0	
D912	6-503-030-01	DI DZ2J160M0L		JR915	1-216-296-11	SHORT CHIP 0	
D913	6-502-961-01	DI DA2J10100L				< COIL >	
D914	6-503-042-01	DI DZ2J330M0L		L606	1-457-078-11	AIR-CORE COIL	
D918	6-503-038-01	DI DZ2J27000L		L607	1-457-077-11	AIR-CORE COIL	
D920	6-503-763-01	DI RS1K		L608	1-457-077-11	AIR-CORE COIL	
D921	6-502-961-01	DI DA2J10100L		L609	1-457-078-11	AIR-CORE COIL	
D923	6-503-038-01	DI DZ2J27000L		L613	1-460-525-11	INDUCTOR 10uH	
D925	6-502-970-01	DI DZ2J068M0L		L614	1-460-525-11	INDUCTOR 10uH	
D927	6-502-642-01	DI RF101L4STE25		L700	1-400-424-21	INDUCTOR 47uH	
D966	6-503-044-01	DI DZ2J360M0L		△ L901	1-460-371-11	COIL, LINE FILTER	
D967	8-719-063-74	DIODE D1NL20U-TR2		△ L902	1-460-371-11	COIL, LINE FILTER	
D968	6-503-037-01	DI DZ2J24000L		L1000	1-457-578-11	INDUCTOR 10uH	
D969	6-503-026-01	DI DZ2J120M0L		L1002	1-457-878-65	INDUCTOR 2.2uH	
D972	6-503-036-01	DI DZ2J220M0L				< PHOTO COUPLER >	
D985	8-719-083-71	DI UDZSUSTE-1730B		△ PH930	6-600-277-11	PHOTOCOUPLER PS2561AL-1-V-F3-A	
D1000	6-501-849-01	DIODE FMX-22SL		△ PH932	6-600-277-11	PHOTOCOUPLER PS2561AL-1-V-F3-A	
D1001	8-719-045-48	DIODE FML-G12S		△ PH933	6-600-277-11	PHOTOCOUPLER PS2561AL-1-V-F3-A	
D1002	6-502-961-01	DI DA2J10100L				< TRANSISTOR >	
D1004	6-502-961-01	DI DA2J10100L		Q600	8-729-620-13	TRANSISTOR 2SC4154TP-1EF	
D1005	6-502-961-01	DI DA2J10100L		Q601	6-551-696-01	TR ISA1235AC1-T112-1EF	
D1007	6-503-032-01	DI DZ2J180M0L		Q602	8-729-038-23	TRANSISTOR RT1N141C-TP-1	
D1008	6-503-036-01	DI DZ2J220M0L		Q603	8-729-620-13	TRANSISTOR 2SC4154TP-1EF	
D1009	6-503-038-01	DI DZ2J27000L		Q604	6-551-696-01	TR ISA1235AC1-T112-1EF	
D1010	6-502-970-01	DI DZ2J068M0L		Q605	6-551-696-01	TR ISA1235AC1-T112-1EF	
D1011	6-503-020-01	DI DZ2J082M0L		Q606	6-551-696-01	TR ISA1235AC1-T112-1EF	
D1013	6-503-042-01	DI DZ2J330M0L		Q607	6-551-696-01	TR ISA1235AC1-T112-1EF	
D1020	6-500-335-01	DIODE MC2838-T112-1		Q608	8-729-620-13	TRANSISTOR 2SC4154TP-1EF	
D1021	6-500-335-01	DIODE MC2838-T112-1		Q612	6-551-696-01	TR ISA1235AC1-T112-1EF	
		< FUSE >		Q700	8-729-620-07	TRANSISTOR 2SC3052EF-T1-LEF	
△ F901	1-576-395-51	FUSE (10A/250V)		Q701	8-729-040-76	TRANSISTOR KTA1273-Y-AT	
		< IC >		Q702	6-551-696-01	TR ISA1235AC1-T112-1EF	
IC600	8-759-909-71	IC BA4558F		Q703	8-729-620-07	TRANSISTOR 2SC3052EF-T1-LEF	
IC601	8-759-909-71	IC BA4558F		Q704	8-729-036-86	TRANSISTOR KTC3203Y-AT	
IC602	6-716-739-01	IC BD00GC0WEFJ-SE2		Q705	8-729-620-07	TRANSISTOR 2SC3052EF-T1-LEF	
IC603	6-712-722-01	IC PST8229UL		Q706	8-729-038-23	TRANSISTOR RT1N141C-TP-1	
IC700	6-703-639-01	IC TK11140CSCL-G		Q707	6-551-272-01	TRANSISTOR RT3CLLM	
IC701	6-713-686-01	IC KIA7809AF		Q708	6-551-272-01	TRANSISTOR RT3CLLM	
IC702	6-712-617-01	IC SI-8008TM-TLS		Q903	6-553-069-01	TR KTC3209-Y-AT	
IC703	6-718-294-01	IC BA17807FP-E2		Q904	8-729-037-03	TRANSISTOR KTA1266GR-AT	
IC900	6-718-560-01	IC SSC6700		Q905	8-729-620-13	TRANSISTOR 2SC4154TP-1EF	
IC965	6-714-671-01	IC STR-Y6763		Q906	6-553-069-01	TR KTC3209-Y-AT	
IC1000	6-711-947-01	IC MM1431CURE		Q907	8-729-052-82	TRANSISTOR KTA1281Y-AT	
IC1001	6-711-947-01	IC MM1431CURE		Q908	6-553-076-01	TR SPA11N80	
		< JUMPER RESISTOR >		Q909	6-553-076-01	TR SPA11N80	
JR600	1-216-864-11	SHORT CHIP 0		Q910	8-729-620-13	TRANSISTOR 2SC4154TP-1EF	
JR601	1-216-864-11	SHORT CHIP 0		Q911	6-552-502-01	TR DSC7003R0L	
JR602	1-216-864-11	SHORT CHIP 0		Q914	8-729-038-23	TRANSISTOR RT1N141C-TP-1	
JR603	1-216-864-11	SHORT CHIP 0		Q915	8-729-038-23	TRANSISTOR RT1N141C-TP-1	
JR604	1-216-864-11	SHORT CHIP 0		Q1003	8-729-620-13	TRANSISTOR 2SC4154TP-1EF	
				Q1004	8-729-620-13	TRANSISTOR 2SC4154TP-1EF	

HCD-EX660Z/EX880Z/EX990Z

AMP-SMPS (EX880Z)

Ref. No.	Part No.	Description	Remark				Ref. No.	Part No.	Description	Remark			
Q1005	6-551-696-01	TR	ISA1235AC1-T112-1E				R675	1-216-821-11	METAL CHIP	1K	5%	1/10W	
Q1006	8-729-038-28	TRANSISTOR	RT1N441C-TP-1				R683	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	
Q1008	6-551-696-01	TR	ISA1235AC1-T112-1EF				R684	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	
Q1017	8-729-620-13	TRANSISTOR	2SC4154TP-1EF				R699	1-216-833-11	METAL CHIP	10K	5%	1/10W	
		< RESISTOR >					R700	1-216-821-11	METAL CHIP	1K	5%	1/10W	
							R701	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	
R600	1-216-821-11	METAL CHIP	1K	5%	1/10W		R702	1-216-833-11	METAL CHIP	10K	5%	1/10W	
R601	1-216-834-11	METAL CHIP	12K	5%	1/10W		R703	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	
R602	1-216-834-11	METAL CHIP	12K	5%	1/10W		R704	1-216-845-11	METAL CHIP	100K	5%	1/10W	
R603	1-216-841-11	METAL CHIP	47K	5%	1/10W		R705	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	
R604	1-216-841-11	METAL CHIP	47K	5%	1/10W		R706	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	
R606	1-216-834-11	METAL CHIP	12K	5%	1/10W		R710	1-216-833-11	METAL CHIP	10K	5%	1/10W	
R607	1-216-834-11	METAL CHIP	12K	5%	1/10W		R711	1-216-845-11	METAL CHIP	100K	5%	1/10W	
R608	1-216-841-11	METAL CHIP	47K	5%	1/10W		R713	1-216-853-11	METAL CHIP	470K	5%	1/10W	
R609	1-216-841-11	METAL CHIP	47K	5%	1/10W		R718	1-218-835-11	METAL CHIP	330	0.5%	1/10W	
R610	1-216-845-11	METAL CHIP	100K	5%	1/10W		R719	1-218-839-11	METAL CHIP	470	0.5%	1/10W	
R611	1-216-825-11	METAL CHIP	2.2K	5%	1/10W		R720	1-218-847-11	METAL CHIP	1K	0.5%	1/10W	
R612	1-216-837-11	METAL CHIP	22K	5%	1/10W		R721	1-218-859-11	METAL CHIP	3.3K	0.5%	1/10W	
R613	1-216-825-11	METAL CHIP	2.2K	5%	1/10W		R722	1-216-821-11	METAL CHIP	1K	5%	1/10W	
R614	1-216-829-11	METAL CHIP	4.7K	5%	1/10W		R723	1-216-791-11	METAL CHIP	3.3	5%	1/10W	
R615	1-216-829-11	METAL CHIP	4.7K	5%	1/10W		R724	1-216-791-11	METAL CHIP	3.3	5%	1/10W	
R616	1-243-669-11	METAL	0.05	5%	5W		R725	1-216-791-11	METAL CHIP	3.3	5%	1/10W	
R617	1-216-825-11	METAL CHIP	2.2K	5%	1/10W		R726	1-216-791-11	METAL CHIP	3.3	5%	1/10W	
R618	1-216-829-11	METAL CHIP	4.7K	5%	1/10W		R727	1-216-791-11	METAL CHIP	3.3	5%	1/10W	
R619	1-216-829-11	METAL CHIP	4.7K	5%	1/10W		R728	1-216-833-11	METAL CHIP	10K	5%	1/10W	
R620	1-216-825-11	METAL CHIP	2.2K	5%	1/10W		R729	1-216-845-11	METAL CHIP	100K	5%	1/10W	
R621	1-218-855-11	METAL CHIP	2.2K	0.5%	1/10W		R730	1-216-809-11	METAL CHIP	100	5%	1/10W	
R622	1-218-855-11	METAL CHIP	2.2K	0.5%	1/10W		R731	1-216-809-11	METAL CHIP	100	5%	1/10W	
R623	1-216-853-11	METAL CHIP	470K	5%	1/10W		R732	1-216-821-11	METAL CHIP	1K	5%	1/10W	
R624	1-216-837-11	METAL CHIP	22K	5%	1/10W		R733	1-216-821-11	METAL CHIP	1K	5%	1/10W	
R625	1-216-833-11	METAL CHIP	10K	5%	1/10W		R734	1-216-837-11	METAL CHIP	22K	5%	1/10W	
R626	1-218-859-11	METAL CHIP	3.3K	0.5%	1/10W		R737	1-216-846-11	METAL CHIP	120K	5%	1/10W	
R627	1-218-883-11	METAL CHIP	33K	0.5%	1/10W		R738	1-216-791-11	METAL CHIP	3.3	5%	1/10W	
R628	1-218-873-11	METAL CHIP	12K	0.5%	1/10W		R739	1-216-791-11	METAL CHIP	3.3	5%	1/10W	
R629	1-216-791-11	METAL CHIP	3.3	5%	1/10W		R740	1-216-791-11	METAL CHIP	3.3	5%	1/10W	
R630	1-216-791-11	METAL CHIP	3.3	5%	1/10W		R741	1-216-791-11	METAL CHIP	3.3	5%	1/10W	
R631	1-216-791-11	METAL CHIP	3.3	5%	1/10W		R742	1-216-821-11	METAL CHIP	1K	5%	1/10W	
R632	1-216-791-11	METAL CHIP	3.3	5%	1/10W		R743	1-216-821-11	METAL CHIP	1K	5%	1/10W	
R633	1-216-791-11	METAL CHIP	3.3	5%	1/10W		R744	1-216-837-11	METAL CHIP	22K	5%	1/10W	
R634	1-216-791-11	METAL CHIP	3.3	5%	1/10W		R745	1-216-837-11	METAL CHIP	22K	5%	1/10W	
R635	1-216-791-11	METAL CHIP	3.3	5%	1/10W		R746	1-216-837-11	METAL CHIP	22K	5%	1/10W	
R636	1-216-791-11	METAL CHIP	3.3	5%	1/10W		R747	1-216-837-11	METAL CHIP	22K	5%	1/10W	
R637	1-216-837-11	METAL CHIP	22K	5%	1/10W		R755	1-216-864-11	SHORT CHIP	0			
R638	1-216-837-11	METAL CHIP	22K	5%	1/10W		R756	1-216-864-11	SHORT CHIP	0			
R639	1-216-841-11	METAL CHIP	47K	5%	1/10W		R757	1-216-815-11	METAL CHIP	330	5%	1/10W	
R640	1-216-845-11	METAL CHIP	100K	5%	1/10W		R758	1-216-815-11	METAL CHIP	330	5%	1/10W	
R641	1-216-849-11	METAL CHIP	220K	5%	1/10W		R759	1-216-815-11	METAL CHIP	330	5%	1/10W	
R642	1-216-849-11	METAL CHIP	220K	5%	1/10W		R760	1-216-815-11	METAL CHIP	330	5%	1/10W	
R643	1-216-849-11	METAL CHIP	220K	5%	1/10W		R761	1-216-815-11	METAL CHIP	330	5%	1/10W	
R644	1-216-849-11	METAL CHIP	220K	5%	1/10W		△ R901	1-240-938-51	METAL	1.5M	5%	0.5W	F
R645	1-216-849-11	METAL CHIP	220K	5%	1/10W		R914	1-246-374-11	FUSIBLE	0.1	10%	1W	
R646	1-216-849-11	METAL CHIP	220K	5%	1/10W		R916	1-216-797-11	METAL CHIP	10	5%	1/10W	
R649	1-216-864-11	SHORT CHIP	0				R918	1-216-190-00	METAL CHIP	470	5%	1/8W	
R651	1-216-841-11	METAL CHIP	47K	5%	1/10W		R924	1-216-837-11	METAL CHIP	22K	5%	1/10W	
R663	1-218-879-11	METAL CHIP	22K	0.5%	1/10W		R928	1-216-214-00	METAL CHIP	4.7K	5%	1/8W	
R670	1-216-841-11	METAL CHIP	47K	5%	1/10W		R929	1-216-805-11	METAL CHIP	47	5%	1/10W	
R671	1-216-836-11	METAL CHIP	18K	5%	1/10W		R930	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	
R672	1-216-821-11	METAL CHIP	1K	5%	1/10W		R932	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	
R673	1-216-821-11	METAL CHIP	1K	5%	1/10W		R933	1-216-222-00	METAL CHIP	10K	5%	1/8W	
R674	1-216-821-11	METAL CHIP	1K	5%	1/10W		R937	1-216-190-00	METAL CHIP	470	5%	1/8W	

AMP-SMPS (EX880Z)

AMP-SMPS PC (EX990Z)

Ref. No.	Part No.	Description			Remark	Ref. No.	Part No.	Description			Remark
R938	1-216-809-11	METAL CHIP	100	5%	1/10W	R1028	1-216-837-11	METAL CHIP	22K	5%	1/10W
R939	1-216-844-11	METAL CHIP	82K	5%	1/10W	R1031	1-216-198-91	METAL CHIP	1K	5%	1/8W
R940	1-216-218-91	METAL CHIP	6.8K	5%	1/8W	R1038	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R941	1-216-214-00	METAL CHIP	4.7K	5%	1/8W	R1039	1-216-833-11	METAL CHIP	10K	5%	1/10W
R942	1-216-174-00	METAL CHIP	100	5%	1/8W	R1042	1-216-821-11	METAL CHIP	1K	5%	1/10W
R943	1-249-401-11	CARBON	47	5%	1/4W	R1054	1-216-833-11	METAL CHIP	10K	5%	1/10W
R944	1-249-401-11	CARBON	47	5%	1/4W	R1055	1-216-833-11	METAL CHIP	10K	5%	1/10W
R945	1-249-401-11	CARBON	47	5%	1/4W	R1056	1-216-809-11	METAL CHIP	100	5%	1/10W
R946	1-249-401-11	CARBON	47	5%	1/4W	R1059	1-216-833-11	METAL CHIP	10K	5%	1/10W
R947	1-216-833-11	METAL CHIP	10K	5%	1/10W	R1060	1-216-845-11	METAL CHIP	100K	5%	1/10W
R948	1-243-669-11	METAL	0.05	5%	5W	R1061	1-216-809-11	METAL CHIP	100	5%	1/10W
R950	1-216-246-00	METAL CHIP	100K	5%	1/8W	R1062	1-216-837-11	METAL CHIP	22K	5%	1/10W
R952	1-216-246-00	METAL CHIP	100K	5%	1/8W	R1064	1-216-821-11	METAL CHIP	1K	5%	1/10W
R953	1-216-246-00	METAL CHIP	100K	5%	1/8W	R1065	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R954	1-216-833-11	METAL CHIP	10K	5%	1/10W			< TRANSFORMER >			
R955	1-216-849-11	METAL CHIP	220K	5%	1/10W						
R956	1-216-214-00	METAL CHIP	4.7K	5%	1/8W	△ T901	1-697-163-11	CONVERTER TRANSFORMER (MAIN)			
R957	1-216-246-00	METAL CHIP	100K	5%	1/8W	△ T903	1-445-951-11	TRANSFORMER, CONVERTER (SUB)			
R958	1-216-218-91	METAL CHIP	6.8K	5%	1/8W			< TERMINAL BOARD >			
R965	1-257-123-11	FUSIBLE	2.2	10%	1/2W						
R966	1-216-348-00	METAL OXIDE	0.82	5%	1W						
R967	1-218-887-11	METAL CHIP	47K	0.5%	1/10W	TB600	1-780-893-11	TERMINAL BOARD (SPEAKERS)			
R969	1-216-829-11	METAL CHIP	4.7K	5%	1/10W			< THERMISTOR >			
R970	1-216-845-11	METAL CHIP	100K	5%	1/10W						
R971	1-218-875-11	METAL CHIP	15K	0.5%	1/10W	△ TH902	1-811-615-21	THERMISTOR, POWER			
R972	1-218-847-11	METAL CHIP	1K	0.5%	1/10W	△ TH904	1-811-615-21	THERMISTOR, POWER			
R973	1-216-801-11	METAL CHIP	22	5%	1/10W			< VARISTOR >			
R974	1-216-801-11	METAL CHIP	22	5%	1/10W						
R975	1-216-821-11	METAL CHIP	1K	5%	1/10W	△ VDR901	1-811-165-31	VARISTOR (TVR10471-D)			
R978	1-216-793-11	METAL CHIP	4.7	5%	1/10W	*****					
R979	1-216-793-11	METAL CHIP	4.7	5%	1/10W						
R980	1-216-793-11	METAL CHIP	4.7	5%	1/10W		A-1870-190-A	AMP-SMPS PC BOARD, COMPLETE (EX990Z)			
R981	1-216-793-11	METAL CHIP	4.7	5%	1/10W			*****			
R992	1-216-809-11	METAL CHIP	100	5%	1/10W						
R996	1-215-924-00	METAL OXIDE	15K	5%	3W		7-685-647-71	SCREW +BVTP 3X10 TYPE2 IT-3			
R997	1-216-821-11	METAL CHIP	1K	5%	1/10W			< CAPACITOR >			
R998	1-215-924-00	METAL OXIDE	15K	5%	3W	C600	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
R999	1-216-821-11	METAL CHIP	1K	5%	1/10W	C601	1-100-831-91	CERAMIC CHIP	0.001uF	2%	50V
R1000	1-216-821-11	METAL CHIP	1K	5%	1/10W	C606	1-137-189-11	FILM	0.18uF	5%	50V
R1001	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	C607	1-126-964-11	ELECT	10uF	20%	50V
R1002	1-216-295-91	SHORT CHIP	0			C608	1-126-964-11	ELECT	10uF	20%	50V
R1003	1-218-871-11	METAL CHIP	10K	0.5%	1/10W	C609	1-126-964-11	ELECT	10uF	20%	50V
R1004	1-218-883-11	METAL CHIP	33K	0.5%	1/10W	C610	1-126-964-11	ELECT	10uF	20%	50V
R1005	1-218-855-11	METAL CHIP	2.2K	0.5%	1/10W	C611	1-137-189-11	FILM	0.18uF	5%	50V
R1006	1-218-873-11	METAL CHIP	12K	0.5%	1/10W	C612	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V
R1007	1-218-859-11	METAL CHIP	3.3K	0.5%	1/10W	C613	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
R1009	1-218-855-11	METAL CHIP	2.2K	0.5%	1/10W	C614	1-112-298-91	CERAMIC CHIP	1uF	10%	16V
R1010	1-216-821-11	METAL CHIP	1K	5%	1/10W	C615	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
R1011	1-216-821-11	METAL CHIP	1K	5%	1/10W	C616	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
R1013	1-218-871-11	METAL CHIP	10K	0.5%	1/10W	C617	1-126-957-11	ELECT	0.22uF	20%	50V
R1014	1-218-855-11	METAL CHIP	2.2K	0.5%	1/10W	C618	1-104-658-91	ELECT	100uF	20%	10V
R1015	1-218-863-11	METAL CHIP	4.7K	0.5%	1/10W	C619	1-112-298-91	CERAMIC CHIP	1uF	10%	16V
R1016	1-218-863-11	METAL CHIP	4.7K	0.5%	1/10W	C620	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
R1017	1-216-813-11	METAL CHIP	220	5%	1/10W	C621	1-126-960-11	ELECT	1uF	20%	50V
R1018	1-218-871-11	METAL CHIP	10K	0.5%	1/10W	C622	1-126-960-11	ELECT	1uF	20%	50V
R1019	1-216-864-11	SHORT CHIP	0			C623	1-126-964-11	ELECT	10uF	20%	50V
R1020	1-216-206-00	METAL CHIP	2.2K	5%	1/8W	C626	1-104-661-91	ELECT	330uF	20%	16V
R1023	1-216-821-11	METAL CHIP	1K	5%	1/10W	C627	1-128-555-91	ELECT	470uF	20%	63V
R1025	1-216-198-91	METAL CHIP	1K	5%	1/8W	C628	1-128-555-91	ELECT	470uF	20%	63V
R1027	1-218-867-11	METAL CHIP	6.8K	0.5%	1/10W	C629	1-128-555-91	ELECT	470uF	20%	63V

HCD-EX660Z/EX880Z/EX990Z

AMP-SMPS PC (EX990Z)

Ref. No.	Part No.	Description			Remark	Ref. No.	Part No.	Description			Remark
C630	1-128-555-91	ELECT	470uF	20%	63V	C723	1-126-963-11	ELECT	4.7uF	20%	50V
C631	1-135-632-51	ELECT	2200uF	20%	63V	C727	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V
C633	1-165-908-11	CERAMIC CHIP	1uF	10%	10V	△ C902	1-112-869-51	CERAMIC	470PF	10%	250V
C635	1-165-908-11	CERAMIC CHIP	1uF	10%	10V	△ C903	1-112-869-51	CERAMIC	470PF	10%	250V
C640	1-135-618-11	MYLAR	1uF	5%	63V	△ C905	1-114-594-21	FILM	0.22uF	10%	250V
C641	1-135-618-11	MYLAR	1uF	5%	63V	△ C907	1-116-397-21	FILM	0.33uF	10%	250V
C642	1-116-866-51	MYLAR	1uF	10%	100V	△ C910	1-112-866-51	CERAMIC	100PF	10%	250V
C643	1-116-866-51	MYLAR	1uF	10%	100V	C911	1-113-925-11	CERAMIC	0.01uF	20%	250V
C645	1-128-963-11	ELECT	1000uF	20%	50V	C912	1-113-925-11	CERAMIC	0.01uF	20%	250V
C646	1-128-963-11	ELECT	1000uF	20%	50V	C913	1-114-868-11	CERAMIC CHIP	0.1uF	10%	50V
C647	1-128-963-11	ELECT	1000uF	20%	50V	C914	1-112-529-11	ELECT (BLOCK)	390uF	20%	450V
C648	1-128-963-11	ELECT	1000uF	20%	50V	C917	1-118-264-11	FILM	0.0047uF	5%	630V
C649	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V	C918	1-127-804-91	CERAMIC CHIP	100PF	1%	50V
C650	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V	C920	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C651	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V	C921	1-126-964-11	ELECT	10uF	20%	50V
C652	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V	C922	1-126-960-11	ELECT	1uF	20%	50V
C653	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V	C926	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C654	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V	C931	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C655	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V	C933	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C656	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V	C934	1-114-868-11	CERAMIC CHIP	0.1uF	10%	50V
C657	1-162-923-11	CERAMIC CHIP	47PF	5%	50V	C966	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C658	1-162-923-11	CERAMIC CHIP	47PF	5%	50V	C967	1-117-220-81	CERAMIC	150PF	5%	2KV
C659	1-162-995-11	CERAMIC CHIP	0.022uF		50V	C968	1-116-078-11	CERAMIC CHIP	1uF	10%	50V
C660	1-162-995-11	CERAMIC CHIP	0.022uF		50V	C969	1-112-300-91	CERAMIC CHIP	4.7uF	10%	10V
C661	1-162-995-11	CERAMIC CHIP	0.022uF		50V	C970	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C662	1-162-995-11	CERAMIC CHIP	0.022uF		50V	C971	1-128-560-11	ELECT	22uF	20%	100V
C663	1-162-995-11	CERAMIC CHIP	0.022uF		50V	C972	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C664	1-162-995-11	CERAMIC CHIP	0.022uF		50V	C975	1-114-918-11	CERAMIC CHIP	470PF	5%	1KV
C665	1-162-995-11	CERAMIC CHIP	0.022uF		50V	C992	1-117-815-11	FILM	1000PF	3%	1.5KV
C666	1-162-995-11	CERAMIC CHIP	0.022uF		50V	C1003	1-165-761-21	ELECT	1200uF	20%	63V
C667	1-100-881-91	CERAMIC CHIP	47uF	20%	6.3V	C1006	1-112-231-11	ELECT	2200uF	20%	16V
C668	1-100-881-91	CERAMIC CHIP	47uF	20%	6.3V	C1008	1-100-756-91	CERAMIC CHIP	0.047uF	10%	50V
C669	1-100-881-91	CERAMIC CHIP	47uF	20%	6.3V	C1009	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C670	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V	C1010	1-128-578-11	ELECT	1uF	20%	100V
C671	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V	C1011	1-112-298-91	CERAMIC CHIP	1uF	10%	16V
C672	1-162-974-11	CERAMIC CHIP	0.01uF		50V	C1012	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C673	1-162-974-11	CERAMIC CHIP	0.01uF		50V	C1014	1-126-965-91	ELECT	22uF	20%	50V
C674	1-162-974-11	CERAMIC CHIP	0.01uF		50V	C1015	1-100-756-91	CERAMIC CHIP	0.047uF	10%	50V
C675	1-162-974-11	CERAMIC CHIP	0.01uF		50V	C1016	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C676	1-162-974-11	CERAMIC CHIP	0.01uF		50V	C1018	1-128-560-11	ELECT	22uF	20%	100V
C678	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V	C1019	1-128-582-11	ELECT	10uF	20%	100V
C700	1-126-947-11	ELECT	47uF	20%	35V	C1022	1-116-078-11	CERAMIC CHIP	1uF	10%	50V
C702	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V	C1027	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C703	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V	< CONNECTOR >					
C704	1-126-935-11	ELECT	470uF	20%	16V	* CN600 1-784-784-11 CONNECTOR, FFC 23P CN701 1-564-506-11 PLUG, CONNECTOR 3P △ CN901 1-564-321-00 PIN, CONNECTOR (3.96mm PITCH) 2P					
C705	1-126-964-11	ELECT	10uF	20%	50V						
C706	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V						
C707	1-126-964-11	ELECT	10uF	20%	50V						
C708	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V						
C709	1-126-964-11	ELECT	10uF	20%	50V	< DIODE >					
C710	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V	D601	6-500-848-01	DIODE	MC2840-T112-1		
C711	1-126-935-11	ELECT	470uF	20%	16V	D602	6-500-848-01	DIODE	MC2840-T112-1		
C712	1-126-964-11	ELECT	10uF	20%	50V	D603	6-502-961-01	DI	DA2J10100L		
C714	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V	D604	6-502-961-01	DI	DA2J10100L		
C715	1-135-977-31	ELECT	680uF	20%	10V	D700	8-719-079-47	DIODE	RK36LF-A4		
C717	1-126-961-11	ELECT	2.2uF	20%	50V	D701	6-502-966-01	DI	DZ2J056M0L		
C718	1-164-156-11	CERAMIC CHIP	0.1uF		25V	D702	6-502-970-01	DI	DZ2J068M0L		
C720	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V	D703	6-500-335-01	DIODE	MC2838-T112-1		
C721	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	D704	6-502-964-01	DI	DZ2J047M0L		
C722	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	D901	6-503-040-01	DI	DZ2J300M0L		

AMP-SMPS PC (EX990Z)

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
D902	8-719-054-89	DIODE D15XB60		JR604	1-216-864-11	SHORT CHIP 0	
D903	6-503-731-01	DI SARS10		JR605	1-216-864-11	SHORT CHIP 0	
D904	6-503-020-01	DI DZ2J082M0L		JR903	1-216-296-11	SHORT CHIP 0	
D905	6-503-032-01	DI DZ2J180M0L		JR904	1-216-296-11	SHORT CHIP 0	
D906	6-500-108-01	DIODE EP05FA20		JR905	1-216-296-11	SHORT CHIP 0	
D907	6-500-108-01	DIODE EP05FA20		JR907	1-216-296-11	SHORT CHIP 0	
D909	8-719-063-74	DIODE D1NL20U-TR2		JR915	1-216-296-11	SHORT CHIP 0	
D910	6-502-961-01	DI DA2J10100L				< COIL >	
D911	6-503-037-01	DI DZ2J24000L		L605	1-457-078-11	AIR-CORE COIL	
D912	6-503-030-01	DI DZ2J160M0L		L606	1-457-078-11	AIR-CORE COIL	
D913	6-502-961-01	DI DA2J10100L		L607	1-457-077-11	AIR-CORE COIL	
D914	6-503-042-01	DI DZ2J330M0L		L608	1-457-077-11	AIR-CORE COIL	
D918	6-503-040-01	DI DZ2J300M0L		L611	1-460-525-11	INDUCTOR 10uH	
D920	6-503-763-01	DI RS1K		L612	1-460-525-11	INDUCTOR 10uH	
D921	6-502-961-01	DI DA2J10100L		L700	1-400-424-21	INDUCTOR 47uH	
D923	6-503-040-01	DI DZ2J300M0L		△ L901	1-460-371-11	COIL, LINE FILTER	
D925	6-502-970-01	DI DZ2J068M0L		△ L902	1-460-371-11	COIL, LINE FILTER	
D927	6-502-642-01	DI RF101L4STE25		L1000	1-457-578-11	INDUCTOR 10uH	
D966	6-503-044-01	DI DZ2J360M0L		L1002	1-457-878-65	INDUCTOR 2.2uH	
D967	8-719-063-74	DIODE D1NL20U-TR2				< PHOTO COUPLER >	
D968	6-503-037-01	DI DZ2J24000L		△ PH930	6-600-277-11	PHOTOCOUPLER PS2561AL-1-V-F3-A	
D969	6-503-026-01	DI DZ2J120M0L		△ PH932	6-600-277-11	PHOTOCOUPLER PS2561AL-1-V-F3-A	
D972	6-503-036-01	DI DZ2J220M0L		△ PH933	6-600-277-11	PHOTOCOUPLER PS2561AL-1-V-F3-A	
D985	8-719-083-71	DI UDZSUSTE-1730B				< TRANSISTOR >	
D1000	6-501-849-01	DIODE FMX-22SL		Q600	8-729-038-23	TRANSISTOR RT1N141C-TP-1	
D1001	8-719-045-48	DIODE FML-G12S		Q601	8-729-620-13	TRANSISTOR 2SC4154TP-1EF	
D1002	6-502-961-01	DI DA2J10100L		Q602	8-729-620-13	TRANSISTOR 2SC4154TP-1EF	
D1004	6-502-961-01	DI DA2J10100L		Q603	6-551-696-01	TR ISA1235AC1-T112-1EF	
D1005	6-502-961-01	DI DA2J10100L		Q604	6-551-696-01	TR ISA1235AC1-T112-1EF	
D1007	6-503-038-01	DI DZ2J27000L		Q605	6-551-696-01	TR ISA1235AC1-T112-1EF	
D1008	6-503-038-01	DI DZ2J27000L		Q606	6-551-696-01	TR ISA1235AC1-T112-1EF	
D1009	6-503-038-01	DI DZ2J27000L		Q607	6-551-696-01	TR ISA1235AC1-T112-1EF	
D1010	6-502-970-01	DI DZ2J068M0L		Q608	8-729-620-13	TRANSISTOR 2SC4154TP-1EF	
D1011	6-503-036-01	DI DZ2J220M0L		Q609	6-551-696-01	TR ISA1235AC1-T112-1EF	
D1013	6-503-044-01	DI DZ2J360M0L		Q610	6-551-696-01	TR ISA1235AC1-T112-1EF	
D1020	6-500-335-01	DIODE MC2838-T112-1		Q611	8-729-620-13	TRANSISTOR 2SC4154TP-1EF	
D1021	6-500-335-01	DIODE MC2838-T112-1		Q612	6-551-696-01	TR ISA1235AC1-T112-1EF	
		< FUSE >		Q700	8-729-620-07	TRANSISTOR 2SC3052EF-T1-LEF	
△ F901	1-576-395-51	FUSE (10A/250V)		Q701	8-729-040-76	TRANSISTOR KTA1273-Y-AT	
		< IC >		Q702	6-551-696-01	TR ISA1235AC1-T112-1EF	
IC600	8-759-909-71	IC BA4558F		Q703	8-729-620-13	TRANSISTOR 2SC4154TP-1EF	
IC601	8-759-909-71	IC BA4558F		Q704	8-729-036-86	TRANSISTOR KTC3203Y-AT	
IC602	6-716-739-01	IC BD00GC0WEFJ-SE2		Q705	8-729-620-07	TRANSISTOR 2SC3052EF-T1-LEF	
IC603	6-712-722-01	IC PST8229UL		Q706	8-729-038-23	TRANSISTOR RT1N141C-TP-1	
IC700	6-703-639-01	IC TK11140CSCL-G		Q707	6-551-272-01	TRANSISTOR RT3CLLM	
IC701	6-713-686-01	IC KIA7809AF		Q713	6-551-272-01	TRANSISTOR RT3CLLM	
IC702	6-712-617-01	IC SI-8008TM-TLS		Q903	6-553-069-01	TR KTC3209-Y-AT	
IC703	6-718-294-01	IC BA17807FP-E2		Q904	8-729-037-03	TRANSISTOR KTA1266GR-AT	
IC900	6-718-560-01	IC SSC6700		Q905	8-729-620-13	TRANSISTOR 2SC4154TP-1EF	
IC965	6-714-671-01	IC STR-Y6763		Q906	6-553-069-01	TR KTC3209-Y-AT	
IC1000	6-711-947-01	IC MM1431CURE		Q907	8-729-052-82	TRANSISTOR KTA1281Y-AT	
IC1001	6-711-947-01	IC MM1431CURE		Q908	6-553-076-01	TR SPA11N80	
		< JUMPER RESISTOR >		Q909	6-553-076-01	TR SPA11N80	
JR600	1-216-864-11	SHORT CHIP 0		Q910	8-729-620-13	TRANSISTOR 2SC4154TP-1EF	
JR601	1-216-864-11	SHORT CHIP 0		Q911	6-552-502-01	TR DSC7003R0L	
JR602	1-216-864-11	SHORT CHIP 0		Q914	8-729-038-23	TRANSISTOR RT1N141C-TP-1	
JR603	1-216-864-11	SHORT CHIP 0					

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Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
Q915	8-729-038-23	TRANSISTOR	RT1N141C-TP-1			R658	1-216-849-11	METAL CHIP	220K	5%	1/10W
Q1003	8-729-620-13	TRANSISTOR	2SC4154TP-1EF			R659	1-216-849-11	METAL CHIP	220K	5%	1/10W
Q1004	8-729-620-13	TRANSISTOR	2SC4154TP-1EF			R660	1-216-841-11	METAL CHIP	47K	5%	1/10W
Q1005	6-551-696-01	TR	ISA1235AC1-T112-1EF			R661	1-216-849-11	METAL CHIP	220K	5%	1/10W
Q1006	8-729-038-28	TRANSISTOR	RT1N441C-TP-1			R662	1-216-845-11	METAL CHIP	100K	5%	1/10W
Q1008	6-551-696-01	TR	ISA1235AC1-T112-1EF			R663	1-218-877-11	METAL CHIP	18K	0.5%	1/10W
Q1017	8-729-620-13	TRANSISTOR	2SC4154TP-1EF			R664	1-216-849-11	METAL CHIP	220K	5%	1/10W
		< RESISTOR >				R665	1-216-849-11	METAL CHIP	220K	5%	1/10W
						R666	1-216-833-11	METAL CHIP	10K	5%	1/10W
R600	1-216-821-11	METAL CHIP	1K	5%	1/10W	R667	1-216-841-11	METAL CHIP	47K	5%	1/10W
R601	1-216-841-11	METAL CHIP	47K	5%	1/10W	R668	1-216-805-11	METAL CHIP	47	5%	1/10W
R602	1-216-841-11	METAL CHIP	47K	5%	1/10W	R669	1-216-805-11	METAL CHIP	47	5%	1/10W
R603	1-216-832-11	METAL CHIP	8.2K	5%	1/10W	R670	1-216-841-11	METAL CHIP	47K	5%	1/10W
R604	1-216-841-11	METAL CHIP	47K	5%	1/10W	R671	1-216-836-11	METAL CHIP	18K	5%	1/10W
R605	1-216-834-11	METAL CHIP	12K	5%	1/10W	R672	1-216-822-11	METAL CHIP	1.2K	5%	1/10W
R606	1-216-841-11	METAL CHIP	47K	5%	1/10W	R673	1-216-822-11	METAL CHIP	1.2K	5%	1/10W
R607	1-216-834-11	METAL CHIP	12K	5%	1/10W	R674	1-216-822-11	METAL CHIP	1.2K	5%	1/10W
R608	1-216-841-11	METAL CHIP	47K	5%	1/10W	R675	1-216-822-11	METAL CHIP	1.2K	5%	1/10W
R609	1-216-834-11	METAL CHIP	12K	5%	1/10W	R676	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R610	1-216-832-11	METAL CHIP	8.2K	5%	1/10W	R677	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R611	1-216-841-11	METAL CHIP	47K	5%	1/10W	R678	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R612	1-216-832-11	METAL CHIP	8.2K	5%	1/10W	R679	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R613	1-216-841-11	METAL CHIP	47K	5%	1/10W	R681	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R614	1-216-834-11	METAL CHIP	12K	5%	1/10W	R682	1-216-833-11	METAL CHIP	10K	5%	1/10W
R615	1-216-832-11	METAL CHIP	8.2K	5%	1/10W	R683	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R616	1-216-841-11	METAL CHIP	47K	5%	1/10W	R684	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R617	1-216-853-11	METAL CHIP	470K	5%	1/10W	R685	1-215-889-00	METAL OXIDE	330	5%	2W
R618	1-216-837-11	METAL CHIP	22K	5%	1/10W	R686	1-215-889-00	METAL OXIDE	330	5%	2W
R620	1-216-845-11	METAL CHIP	100K	5%	1/10W	R689	1-216-296-11	SHORT CHIP	0		
R621	1-216-833-11	METAL CHIP	10K	5%	1/10W	R700	1-216-821-11	METAL CHIP	1K	5%	1/10W
R622	1-218-855-11	METAL CHIP	2.2K	0.5%	1/10W	R701	1-216-833-11	METAL CHIP	10K	5%	1/10W
R623	1-218-855-11	METAL CHIP	2.2K	0.5%	1/10W	R702	1-216-845-11	METAL CHIP	100K	5%	1/10W
R624	1-218-873-11	METAL CHIP	12K	0.5%	1/10W	R703	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R625	1-218-883-11	METAL CHIP	33K	0.5%	1/10W	R704	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R626	1-218-859-11	METAL CHIP	3.3K	0.5%	1/10W	R705	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R627	1-216-837-11	METAL CHIP	22K	5%	1/10W	R706	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R628	1-243-669-11	METAL	0.05	5%	5W	R710	1-216-833-11	METAL CHIP	10K	5%	1/10W
R629	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	R711	1-216-845-11	METAL CHIP	100K	5%	1/10W
R630	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	R713	1-216-853-11	METAL CHIP	470K	5%	1/10W
R633	1-215-889-00	METAL OXIDE	330	5%	2W	R718	1-218-835-11	METAL CHIP	330	0.5%	1/10W
R634	1-215-889-00	METAL OXIDE	330	5%	2W	R719	1-218-839-11	METAL CHIP	470	0.5%	1/10W
R635	1-216-833-11	METAL CHIP	10K	5%	1/10W	R720	1-218-847-11	METAL CHIP	1K	0.5%	1/10W
R636	1-216-833-11	METAL CHIP	10K	5%	1/10W	R721	1-218-859-11	METAL CHIP	3.3K	0.5%	1/10W
R637	1-216-833-11	METAL CHIP	10K	5%	1/10W	R722	1-216-821-11	METAL CHIP	1K	5%	1/10W
R638	1-216-833-11	METAL CHIP	10K	5%	1/10W	R723	1-216-791-11	METAL CHIP	3.3	5%	1/10W
R639	1-216-837-11	METAL CHIP	22K	5%	1/10W	R724	1-216-791-11	METAL CHIP	3.3	5%	1/10W
R643	1-216-791-11	METAL CHIP	3.3	5%	1/10W	R725	1-216-791-11	METAL CHIP	3.3	5%	1/10W
R644	1-216-791-11	METAL CHIP	3.3	5%	1/10W	R726	1-216-791-11	METAL CHIP	3.3	5%	1/10W
R645	1-216-791-11	METAL CHIP	3.3	5%	1/10W	R727	1-216-791-11	METAL CHIP	3.3	5%	1/10W
R646	1-216-791-11	METAL CHIP	3.3	5%	1/10W	R728	1-216-833-11	METAL CHIP	10K	5%	1/10W
R647	1-216-837-11	METAL CHIP	22K	5%	1/10W	R729	1-216-845-11	METAL CHIP	100K	5%	1/10W
R648	1-216-791-11	METAL CHIP	3.3	5%	1/10W	R730	1-216-809-11	METAL CHIP	100	5%	1/10W
R649	1-216-791-11	METAL CHIP	3.3	5%	1/10W	R731	1-216-809-11	METAL CHIP	100	5%	1/10W
R650	1-216-791-11	METAL CHIP	3.3	5%	1/10W	R734	1-216-821-11	METAL CHIP	1K	5%	1/10W
R651	1-216-791-11	METAL CHIP	3.3	5%	1/10W	R735	1-216-821-11	METAL CHIP	1K	5%	1/10W
R652	1-216-864-11	SHORT CHIP	0			R736	1-216-821-11	METAL CHIP	1K	5%	1/10W
R654	1-216-849-11	METAL CHIP	220K	5%	1/10W	R739	1-216-846-11	METAL CHIP	120K	5%	1/10W
R655	1-216-849-11	METAL CHIP	220K	5%	1/10W	R740	1-216-791-11	METAL CHIP	3.3	5%	1/10W
R656	1-216-849-11	METAL CHIP	220K	5%	1/10W	R741	1-216-791-11	METAL CHIP	3.3	5%	1/10W
R657	1-216-849-11	METAL CHIP	220K	5%	1/10W	R742	1-216-791-11	METAL CHIP	3.3	5%	1/10W

AMP-SMPS PC (EX990Z)

Ref. No.	Part No.	Description			Remark	Ref. No.	Part No.	Description			Remark	
R743	1-216-791-11	METAL CHIP	3.3	5%	1/10W	R997	1-216-821-11	METAL CHIP	1K	5%	1/10W	
R744	1-216-837-11	METAL CHIP	22K	5%	1/10W	R998	1-215-924-00	METAL OXIDE	15K	5%	3W	
R745	1-216-837-11	METAL CHIP	22K	5%	1/10W	R999	1-216-821-11	METAL CHIP	1K	5%	1/10W	
R746	1-216-837-11	METAL CHIP	22K	5%	1/10W	R1000	1-216-821-11	METAL CHIP	1K	5%	1/10W	
R747	1-216-837-11	METAL CHIP	22K	5%	1/10W	R1001	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	
R748	1-216-821-11	METAL CHIP	1K	5%	1/10W	R1002	1-216-295-91	SHORT CHIP	0			
R749	1-216-837-11	METAL CHIP	22K	5%	1/10W	R1003	1-218-869-11	METAL CHIP	8.2K	0.5%	1/10W	
R755	1-216-864-11	SHORT CHIP	0			R1004	1-218-883-11	METAL CHIP	33K	0.5%	1/10W	
R756	1-216-864-11	SHORT CHIP	0			R1005	1-218-851-11	METAL CHIP	1.5K	0.5%	1/10W	
R760	1-216-815-11	METAL CHIP	330	5%	1/10W	R1006	1-218-873-11	METAL CHIP	12K	0.5%	1/10W	
R761	1-216-815-11	METAL CHIP	330	5%	1/10W	R1007	1-218-855-11	METAL CHIP	2.2K	0.5%	1/10W	
R767	1-216-815-11	METAL CHIP	330	5%	1/10W	R1009	1-218-855-11	METAL CHIP	2.2K	0.5%	1/10W	
R768	1-216-815-11	METAL CHIP	330	5%	1/10W	R1010	1-216-821-11	METAL CHIP	1K	5%	1/10W	
R769	1-216-815-11	METAL CHIP	330	5%	1/10W	R1011	1-216-821-11	METAL CHIP	1K	5%	1/10W	
△ R901	1-240-938-51	METAL	1.5M	5%	0.5W	F	R1013	1-218-871-11	METAL CHIP	10K	0.5%	1/10W
R914	1-246-374-11	FUSIBLE	0.1	10%	1W	R1014	1-218-855-11	METAL CHIP	2.2K	0.5%	1/10W	
R916	1-216-797-11	METAL CHIP	10	5%	1/10W	R1015	1-218-863-11	METAL CHIP	4.7K	0.5%	1/10W	
R918	1-216-190-00	METAL CHIP	470	5%	1/8W	R1016	1-218-863-11	METAL CHIP	4.7K	0.5%	1/10W	
R924	1-216-837-11	METAL CHIP	22K	5%	1/10W	R1017	1-216-813-11	METAL CHIP	220	5%	1/10W	
R928	1-216-214-00	METAL CHIP	4.7K	5%	1/8W	R1018	1-218-871-11	METAL CHIP	10K	0.5%	1/10W	
R929	1-216-801-11	METAL CHIP	22	5%	1/10W	R1019	1-216-864-11	SHORT CHIP	0			
R930	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R1020	1-216-206-00	METAL CHIP	2.2K	5%	1/8W	
R932	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R1023	1-216-821-11	METAL CHIP	1K	5%	1/10W	
R933	1-216-222-00	METAL CHIP	10K	5%	1/8W	R1025	1-216-198-91	METAL CHIP	1K	5%	1/8W	
R937	1-216-190-00	METAL CHIP	470	5%	1/8W	R1027	1-218-867-11	METAL CHIP	6.8K	0.5%	1/10W	
R938	1-216-809-11	METAL CHIP	100	5%	1/10W	R1028	1-216-837-11	METAL CHIP	22K	5%	1/10W	
R939	1-216-844-11	METAL CHIP	82K	5%	1/10W	R1031	1-216-198-91	METAL CHIP	1K	5%	1/8W	
R940	1-216-218-91	METAL CHIP	6.8K	5%	1/8W	R1038	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	
R941	1-216-210-00	METAL CHIP	3.3K	5%	1/8W	R1039	1-216-833-11	METAL CHIP	10K	5%	1/10W	
R942	1-216-174-00	METAL CHIP	100	5%	1/8W	R1042	1-216-821-11	METAL CHIP	1K	5%	1/10W	
R943	1-249-401-11	CARBON	47	5%	1/4W	R1054	1-216-833-11	METAL CHIP	10K	5%	1/10W	
R944	1-249-401-11	CARBON	47	5%	1/4W	R1055	1-216-833-11	METAL CHIP	10K	5%	1/10W	
R945	1-249-401-11	CARBON	47	5%	1/4W	R1056	1-216-809-11	METAL CHIP	100	5%	1/10W	
R946	1-249-401-11	CARBON	47	5%	1/4W	R1059	1-216-833-11	METAL CHIP	10K	5%	1/10W	
R947	1-216-833-11	METAL CHIP	10K	5%	1/10W	R1060	1-216-845-11	METAL CHIP	100K	5%	1/10W	
R948	1-243-669-11	METAL	0.05	5%	5W	R1061	1-216-809-11	METAL CHIP	100	5%	1/10W	
R950	1-216-246-00	METAL CHIP	100K	5%	1/8W	R1062	1-216-837-11	METAL CHIP	22K	5%	1/10W	
R952	1-216-246-00	METAL CHIP	100K	5%	1/8W	R1064	1-216-821-11	METAL CHIP	1K	5%	1/10W	
R953	1-216-246-00	METAL CHIP	100K	5%	1/8W	R1065	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	
R954	1-216-833-11	METAL CHIP	10K	5%	1/10W	< RELAY >						
R955	1-216-849-11	METAL CHIP	220K	5%	1/10W	RY600	1-755-421-11	RELAY				
R956	1-216-210-00	METAL CHIP	3.3K	5%	1/8W	< TRANSFORMER >						
R957	1-216-246-00	METAL CHIP	100K	5%	1/8W	△ T901	1-697-163-11	CONVERTER TRANSFORMER (MAIN)				
R958	1-216-218-91	METAL CHIP	6.8K	5%	1/8W	△ T903	1-445-951-11	TRANSFORMER, CONVERTER (SUB)				
R965	1-257-123-11	FUSIBLE	2.2	10%	1/2W	< TERMINAL BOARD >						
R966	1-216-348-00	METAL OXIDE	0.82	5%	1W	TB600	1-780-893-11	TERMINAL BOARD (SPEAKERS)				
R967	1-218-887-11	METAL CHIP	47K	0.5%	1/10W	TB601	1-780-812-11	TERMINAL BOARD (SUBWOOFER)				
R969	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	< THERMISTOR >						
R970	1-216-845-11	METAL CHIP	100K	5%	1/10W	△ TH902	1-811-615-21	THERMISTOR, POWER				
R971	1-218-875-11	METAL CHIP	15K	0.5%	1/10W	△ TH904	1-811-615-21	THERMISTOR, POWER				
R972	1-218-847-11	METAL CHIP	1K	0.5%	1/10W	< VARISTOR >						
R973	1-216-801-11	METAL CHIP	22	5%	1/10W	△ VDR901	1-811-165-31	VARISTOR (TVR10471-D)				
R974	1-216-801-11	METAL CHIP	22	5%	1/10W	*****						
R975	1-216-821-11	METAL CHIP	1K	5%	1/10W							
R978	1-216-793-11	METAL CHIP	4.7	5%	1/10W							
R979	1-216-793-11	METAL CHIP	4.7	5%	1/10W							
R980	1-216-793-11	METAL CHIP	4.7	5%	1/10W							
R981	1-216-793-11	METAL CHIP	4.7	5%	1/10W							
R992	1-216-809-11	METAL CHIP	100	5%	1/10W							
R996	1-215-924-00	METAL OXIDE	15K	5%	3W							

HCD-EX660Z/EX880Z/EX990Z

BD76

Ref. No.	Part No.	Description	Remark			
		BD76 BOARD *****				
		< CAPACITOR >				
C101	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V	
C102	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	
C103	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C104	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C105	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	
C106	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V	
C107	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C108	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	
C110	1-127-715-11	CERAMIC CHIP	0.22uF	10%	16V	
C111	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V	
C112	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C113	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C116	1-117-681-11	ELECT CHIP	100uF	20%	16V	
C117	1-100-756-91	CERAMIC CHIP	0.047uF	10%	50V	
C118	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C119	1-117-681-11	ELECT CHIP	100uF	20%	16V	
C120	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C121	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C122	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C123	1-165-908-11	CERAMIC CHIP	1uF	10%	10V	
C124	1-117-681-11	ELECT CHIP	100uF	20%	16V	
C125	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C126	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C127	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C128	1-165-908-11	CERAMIC CHIP	1uF	10%	10V	
C129	1-117-681-11	ELECT CHIP	100uF	20%	16V	
C130	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C131	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C132	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C133	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C201	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C202	1-165-908-11	CERAMIC CHIP	1uF	10%	10V	
C204	1-165-908-11	CERAMIC CHIP	1uF	10%	10V	
C206	1-165-908-11	CERAMIC CHIP	1uF	10%	10V	
C207	1-117-681-11	ELECT CHIP	100uF	20%	16V	
C208	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	
C209	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C301	1-128-394-11	ELECT CHIP	220uF	20%	10V	
C302	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C303	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C304	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C401	1-117-681-11	ELECT CHIP	100uF	20%	16V	
C402	1-117-681-11	ELECT CHIP	100uF	20%	16V	
C405	1-162-927-11	CERAMIC CHIP	100PF	5%	50V	
C406	1-162-923-11	CERAMIC CHIP	47PF	5%	50V	
C407	1-162-923-11	CERAMIC CHIP	47PF	5%	50V	
C415	1-162-923-11	CERAMIC CHIP	47PF	5%	50V	
C416	1-162-923-11	CERAMIC CHIP	47PF	5%	50V	
C417	1-162-923-11	CERAMIC CHIP	47PF	5%	50V	
C418	1-162-927-11	CERAMIC CHIP	100PF	5%	50V	
C901	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C902	1-162-919-11	CERAMIC CHIP	22PF	5%	50V	
C903	1-162-920-11	CERAMIC CHIP	27PF	5%	50V	
C904	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	
C905	1-162-927-11	CERAMIC CHIP	100PF	5%	50V	
C906	1-162-927-11	CERAMIC CHIP	100PF	5%	50V	

Ref. No.	Part No.	Description	Remark		
C907	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C908	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C909	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C951	1-162-910-11	CERAMIC CHIP	5PF	0.25PF	50V
C952	1-162-910-11	CERAMIC CHIP	5PF	0.25PF	50V
C953	1-165-884-11	CERAMIC CHIP	2.2uF	10%	6.3V
C955	1-165-884-11	CERAMIC CHIP	2.2uF	10%	6.3V
< CONNECTOR >					
CN201	1-770-425-51	CONNECTOR, FFC/FPC 16P			
CN401	1-820-119-41	CONNECTOR, FFC/FPC 21P			
CN901	1-820-112-41	CONNECTOR, FFC/FPC 9P			
< IC >					
IC101	6-713-623-01	IC LC786950T-US-H			
IC301	6-710-637-01	IC BA5826HFP-E2			
IC901	A-1768-193-A	IC LC87F1JJ2AU-SQFP-H (for SERVICE)			
< TRANSISTOR >					
Q201	6-551-120-01	TRANSISTOR	2SA2119K		
< RESISTOR >					
R101	1-216-815-11	METAL CHIP	330	5%	1/10W
R102	1-216-833-11	METAL CHIP	10K	5%	1/10W
R103	1-216-864-11	SHORT CHIP	0		
R104	1-216-864-11	SHORT CHIP	0		
R105	1-216-864-11	SHORT CHIP	0		
R106	1-216-864-11	SHORT CHIP	0		
R107	1-216-843-11	METAL CHIP	68K	5%	1/10W
R108	1-216-821-11	METAL CHIP	1K	5%	1/10W
R109	1-216-821-11	METAL CHIP	1K	5%	1/10W
R111	1-216-837-11	METAL CHIP	22K	5%	1/10W
R112	1-216-864-11	SHORT CHIP	0		
R113	1-216-819-11	METAL CHIP	680	5%	1/10W
R114	1-216-819-11	METAL CHIP	680	5%	1/10W
R116	1-216-843-11	METAL CHIP	68K	5%	1/10W
R117	1-216-833-11	METAL CHIP	10K	5%	1/10W
R118	1-216-809-11	METAL CHIP	100	5%	1/10W
R120	1-216-833-11	METAL CHIP	10K	5%	1/10W
R121	1-216-833-11	METAL CHIP	10K	5%	1/10W
R122	1-216-833-11	METAL CHIP	10K	5%	1/10W
R123	1-216-833-11	METAL CHIP	10K	5%	1/10W
R124	1-216-833-11	METAL CHIP	10K	5%	1/10W
R126	1-216-864-11	SHORT CHIP	0		
R129	1-216-809-11	METAL CHIP	100	5%	1/10W
R201	1-218-446-11	METAL CHIP	1	5%	1/10W
R202	1-216-789-11	METAL CHIP	2.2	5%	1/10W
R203	1-216-864-11	SHORT CHIP	0		
R301	1-216-830-11	METAL CHIP	5.6K	5%	1/10W
R302	1-216-839-11	METAL CHIP	33K	5%	1/10W
R303	1-216-834-11	METAL CHIP	12K	5%	1/10W
R304	1-216-833-11	METAL CHIP	10K	5%	1/10W
R305	1-216-832-11	METAL CHIP	8.2K	5%	1/10W
R401	1-216-295-91	SHORT CHIP	0		
R402	1-216-295-91	SHORT CHIP	0		
R403	1-216-809-11	METAL CHIP	100	5%	1/10W
R404	1-216-809-11	METAL CHIP	100	5%	1/10W
R405	1-216-809-11	METAL CHIP	100	5%	1/10W
R406	1-216-809-11	METAL CHIP	100	5%	1/10W
R407	1-216-809-11	METAL CHIP	100	5%	1/10W

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LOADING

MODULE

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
R408	1-216-809-11	METAL CHIP	100	5%	1/10W	C807	1-164-882-11	CERAMIC CHIP 220PF	5%	16V	
R409	1-216-809-11	METAL CHIP	100	5%	1/10W	C808	1-107-820-81	CERAMIC CHIP 0.1uF		16V	
						C809	1-112-746-11	CERAMIC CHIP 4.7uF	10%	6.3V (EX990Z)	
R411	1-216-809-11	METAL CHIP	100	5%	1/10W						
R412	1-216-864-11	SHORT CHIP	0			C809	1-162-961-11	CERAMIC CHIP 330PF	10%	50V (EX880Z)	
R413	1-216-864-11	SHORT CHIP	0								
R414	1-216-809-11	METAL CHIP	100	5%	1/10W	C809	1-164-934-11	CERAMIC CHIP 330PF	10%	50V (EX660Z)	
R415	1-216-809-11	METAL CHIP	100	5%	1/10W						
R416	1-216-809-11	METAL CHIP	100	5%	1/10W	C810	1-107-820-81	CERAMIC CHIP 0.1uF		16V	
R417	1-216-295-91	SHORT CHIP	0			C811	1-107-820-81	CERAMIC CHIP 0.1uF		16V	
R901	1-216-809-11	METAL CHIP	100	5%	1/10W	C812	1-107-820-81	CERAMIC CHIP 0.1uF		16V (EX660Z)	
R902	1-216-809-11	METAL CHIP	100	5%	1/10W						
R903	1-216-857-11	METAL CHIP	1M	5%	1/10W	C813	1-107-820-81	CERAMIC CHIP 0.1uF		16V (EX660Z)	
R904	1-216-864-11	SHORT CHIP	0			C814	1-114-325-11	CERAMIC CHIP 0.1uF	10%	25V	
R905	1-216-809-11	METAL CHIP	100	5%	1/10W						
R906	1-216-809-11	METAL CHIP	100	5%	1/10W	C815	1-114-325-11	CERAMIC CHIP 0.1uF	10%	25V	
R907	1-216-809-11	METAL CHIP	100	5%	1/10W	C816	1-114-817-11	CERAMIC CHIP 2.2uF	10%	50V (EX660Z/EX880Z)	
R908	1-216-809-11	METAL CHIP	100	5%	1/10W						
						C817	1-114-817-11	CERAMIC CHIP 2.2uF	10%	50V (EX660Z/EX880Z)	
R909	1-216-809-11	METAL CHIP	100	5%	1/10W						
R910	1-216-845-11	METAL CHIP	100K	5%	1/10W	C820	1-114-325-11	CERAMIC CHIP 0.1uF	10%	25V	
R911	1-216-809-11	METAL CHIP	100	5%	1/10W	C821	1-114-325-11	CERAMIC CHIP 0.1uF	10%	25V	
R912	1-216-845-11	METAL CHIP	100K	5%	1/10W						
R913	1-216-809-11	METAL CHIP	100	5%	1/10W	C824	1-114-817-11	CERAMIC CHIP 2.2uF	10%	50V (EX660Z/EX880Z)	
R914	1-216-845-11	METAL CHIP	100K	5%	1/10W	C825	1-114-817-11	CERAMIC CHIP 2.2uF	10%	50V (EX660Z/EX880Z)	
R922	1-216-809-11	METAL CHIP	100	5%	1/10W						
R923	1-216-809-11	METAL CHIP	100	5%	1/10W	C826	1-116-782-91	CERAMIC CHIP 2.2uF	10%	100V (EX990Z)	
R924	1-216-809-11	METAL CHIP	100	5%	1/10W						
R951	1-216-835-11	METAL CHIP	15K	5%	1/10W	C827	1-116-782-91	CERAMIC CHIP 2.2uF	10%	100V (EX990Z)	
R952	1-216-835-11	METAL CHIP	15K	5%	1/10W	C828	1-116-782-91	CERAMIC CHIP 2.2uF	10%	100V (EX990Z)	
R953	1-216-803-11	METAL CHIP	33	5%	1/10W						
R954	1-216-803-11	METAL CHIP	33	5%	1/10W						
R955	1-216-864-11	SHORT CHIP	0			C829	1-116-782-91	CERAMIC CHIP 2.2uF	10%	100V (EX990Z)	
< VIBRATOR >						< CONNECTOR >					
X101	1-795-101-21	VIBRATOR, CERAMIC (16.934MHz)									
X901	1-814-365-11	QUARTZ CRYSTAL UNITS (12MHz)				CN801	1-843-277-11	HEADER, PIN 8P			
*****						CN802	1-842-458-11	PIN HEADER 6P			
LOADING BOARD						CN803	1-842-458-11	PIN HEADER 6P			
*****						< DIODE >					
< SWITCH >						D804	6-503-732-01	DI SK310A-R3 (EX880Z/EX990Z)			
						D805	6-503-732-01	DI SK310A-R3 (EX880Z/EX990Z)			
1-786-514-31		SWITCH, LEVER (SLIDE)				D806	6-503-732-01	DI SK310A-R3 (EX880Z/EX990Z)			
< CONNECTOR >						D807	6-503-732-01	DI SK310A-R3 (EX880Z/EX990Z)			
						D808	6-503-543-01	DI SS110R3 (EX660Z)			
CN1	1-784-727-11	CONNECTOR, FFC 5P				D809	6-503-543-01	DI SS110R3 (EX660Z)			
*****						D810	6-503-543-01	DI SS110R3 (EX660Z)			
	A-1870-161-A	MODULE PHD BOARD, COMPLETE (EX660Z)				D811	6-503-543-01	DI SS110R3 (EX660Z)			
	A-1870-173-A	MODULE BOARD, COMPLETE (EX880Z)				D815	6-500-335-01	DIODE MC2838-T112-1 (EX660Z)			
	A-1870-189-A	MODULE BOARD, COMPLETE (EX990Z)				D816	6-500-335-01	DIODE MC2838-T112-1 (EX660Z)			

< CAPACITOR >						D817	6-500-848-01	DIODE MC2840-T112-1 (EX880Z/EX990Z)			
C800	1-100-567-81	CERAMIC CHIP	0.01uF	10%	25V (EX990Z)	D818	6-500-848-01	DIODE MC2840-T112-1 (EX880Z/EX990Z)			
C800	1-100-581-81	CERAMIC CHIP	0.0047uF	10%	50V (EX660Z/EX880Z)	D819	6-500-848-01	DIODE MC2840-T112-1 (EX880Z/EX990Z)			
C803	1-112-692-11	CERAMIC CHIP	1000PF	5%	50V (EX660Z/EX880Z)	D820	6-500-848-01	DIODE MC2840-T112-1 (EX880Z/EX990Z)			
C803	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V (EX990Z)	< IC >					
C804	1-107-820-81	CERAMIC CHIP	0.1uF		16V	IC800	6-716-819-01	IC TAS5611APHDR (EX660Z)			

HCD-EX660Z/EX880Z/EX990Z

Ver. 1.1

MODULE PANEL

Ref. No.	Part No.	Description	Remark				Ref. No.	Part No.	Description	Remark			
IC801	6-718-558-01	IC TAS5630BDKDR (EX990Z)					C119	1-125-837-91	CERAMIC CHIP 1uF	10%	6.3V		
IC801	6-718-559-01	IC TAS5613ADKDR (EX880Z)					C120	1-126-176-11	ELECT 220uF	20%	10V		
< RESISTOR >							C121	1-107-826-11	CERAMIC CHIP 0.1uF	10%	16V		
							C122	1-107-826-11	CERAMIC CHIP 0.1uF	10%	16V		
R800	1-218-953-11	METAL CHIP 1K	5%	1/16W			C123	1-107-826-11	CERAMIC CHIP 0.1uF	10%	16V		
R806	1-218-941-81	METAL CHIP 100	5%	1/16W			C124	1-162-964-11	CERAMIC CHIP 0.001uF	10%	50V		
R808	1-208-709-11	METAL CHIP 12K	0.5%	1/16W (EX990Z)			C125	1-162-927-11	CERAMIC CHIP 100PF	5%	50V		
							C126	1-162-927-11	CERAMIC CHIP 100PF	5%	50V		
R808	1-208-711-11	METAL CHIP 15K	0.5%	1/16W (EX660Z)			C129	1-125-837-91	CERAMIC CHIP 1uF	10%	6.3V		
							C130	1-125-837-91	CERAMIC CHIP 1uF	10%	6.3V		
R808	1-218-990-81	SHORT CHIP 0 (EX880Z)											
R809	1-208-911-11	METAL CHIP 10K	0.5%	1/16W			C131	1-107-826-11	CERAMIC CHIP 0.1uF	10%	16V		
R810	1-208-709-11	METAL CHIP 12K	0.5%	1/16W (EX990Z)			C206	1-107-826-11	CERAMIC CHIP 0.1uF	10%	16V		
							C215	1-107-826-11	CERAMIC CHIP 0.1uF	10%	16V		
R810	1-208-711-11	METAL CHIP 15K	0.5%	1/16W (EX660Z)			C216	1-162-918-11	CERAMIC CHIP 18PF	5%	50V		
							C217	1-162-919-11	CERAMIC CHIP 22PF	5%	50V		
R810	1-208-715-11	METAL CHIP 22K	0.5%	1/16W (EX880Z)			C219	1-107-826-11	CERAMIC CHIP 0.1uF	10%	16V		
							C220	1-107-826-11	CERAMIC CHIP 0.1uF	10%	16V		
R811	1-208-911-11	METAL CHIP 10K	0.5%	1/16W			C222	1-162-964-11	CERAMIC CHIP 0.001uF	10%	50V		
							C225	1-126-791-11	ELECT 10uF	20%	16V		
R812	1-218-990-81	SHORT CHIP 0					C226	1-126-514-11	ELECT 22uF	20%	16V		
R813	1-218-990-81	SHORT CHIP 0 (EX990Z)											
R814	1-218-990-81	SHORT CHIP 0 (EX660Z/EX880Z)					C228	1-107-826-11	CERAMIC CHIP 0.1uF	10%	16V		
R815	1-218-990-81	SHORT CHIP 0					C230	1-107-826-11	CERAMIC CHIP 0.1uF	10%	16V		
R817	1-220-802-11	METAL CHIP 3.3	5%	1/16W			C232	1-162-964-11	CERAMIC CHIP 0.001uF	10%	50V		
							C234	1-162-964-11	CERAMIC CHIP 0.001uF	10%	50V		
R818	1-220-802-11	METAL CHIP 3.3	5%	1/16W (EX660Z)			C235	1-162-960-11	CERAMIC CHIP 220PF	10%	50V		
R819	1-220-802-11	METAL CHIP 3.3	5%	1/16W			C237	1-164-360-11	CERAMIC CHIP 0.1uF		16V		
R820	1-220-802-11	METAL CHIP 3.3	5%	1/16W (EX660Z)			C244	1-162-964-11	CERAMIC CHIP 0.001uF	10%	50V		
							C247	1-126-518-11	ELECT 470uF	20%	4V		
R822	1-218-941-81	METAL CHIP 100	5%	1/16W			C248	1-164-315-11	CERAMIC CHIP 470PF	5%	50V		
R823	1-218-941-81	METAL CHIP 100	5%	1/16W			C249	1-164-315-11	CERAMIC CHIP 470PF	5%	50V		
R824	1-218-941-81	METAL CHIP 100	5%	1/16W			C250	1-162-966-11	CERAMIC CHIP 0.0022uF	10%	50V		
R825	1-218-941-81	METAL CHIP 100	5%	1/16W			C251	1-162-966-11	CERAMIC CHIP 0.0022uF	10%	50V		
R827	1-218-990-81	SHORT CHIP 0 (EX880Z/EX990Z)					C252	1-162-964-11	CERAMIC CHIP 0.001uF	10%	50V		
R836	1-216-296-11	SHORT CHIP 0 (EX880Z/EX990Z)					C253	1-162-964-11	CERAMIC CHIP 0.001uF	10%	50V		
R837	1-216-296-11	SHORT CHIP 0 (EX880Z/EX990Z)					C254	1-126-514-11	ELECT 22uF	20%	16V		

	A-1870-157-A	PANEL BOARD, COMPLETE (EX660Z: E2, E51)											
	A-1870-166-A	PANEL BOARD, COMPLETE (EX660Z: RU)											
	A-1870-167-A	PANEL BOARD, COMPLETE (SAF)											
	A-1870-170-A	PANEL BOARD, COMPLETE (EX880Z)											
	A-1870-186-A	PANEL BOARD, COMPLETE (EX990Z: E2, E51, MX)											
	A-1884-559-A	PANEL BOARD, COMPLETE (EX990Z: RU)											

< CAPACITOR >													
C100	1-124-257-00	ELECT 2.2uF	20%	50V			C255	1-125-837-91	CERAMIC CHIP 1uF	10%	6.3V		
C101	1-124-257-00	ELECT 2.2uF	20%	50V			C256	1-165-908-11	CERAMIC CHIP 1uF	10%	10V		
C102	1-124-257-00	ELECT 2.2uF	20%	50V			C259	1-125-837-91	CERAMIC CHIP 1uF	10%	6.3V		
C103	1-124-257-00	ELECT 2.2uF	20%	50V			C260	1-125-837-91	CERAMIC CHIP 1uF	10%	6.3V		
C104	1-126-157-11	ELECT 10uF	20%	16V			C261	1-125-837-91	CERAMIC CHIP 1uF	10%	6.3V		
C105	1-126-157-11	ELECT 10uF	20%	16V			C262	1-125-837-91	CERAMIC CHIP 1uF	10%	6.3V		
C110	1-126-176-11	ELECT 220uF	20%	10V			C263	1-125-837-91	CERAMIC CHIP 1uF	10%	6.3V		
C111	1-126-176-11	ELECT 220uF	20%	10V			C264	1-115-872-11	ELECT 2.2uF	20%	50V		
C112	1-164-245-11	CERAMIC CHIP 0.015uF	10%	25V			C265	1-125-891-11	CERAMIC CHIP 0.47uF	10%	10V		
C113	1-164-245-11	CERAMIC CHIP 0.015uF	10%	25V			C266	1-162-964-11	CERAMIC CHIP 0.001uF	10%	50V		
							C267	1-107-826-11	CERAMIC CHIP 0.1uF	10%	16V		
C114	1-107-826-11	CERAMIC CHIP 0.1uF	10%	16V			C271	1-124-584-00	ELECT 100uF	20%	6.3V		
C115	1-107-826-11	CERAMIC CHIP 0.1uF	10%	16V			C273	1-164-227-11	CERAMIC CHIP 0.022uF	10%	25V		
C116	1-126-157-11	ELECT 10uF	20%	16V			C275	1-162-964-11	CERAMIC CHIP 0.001uF	10%	50V		
C117	1-107-826-11	CERAMIC CHIP 0.1uF	10%	16V			C276	1-162-967-11	CERAMIC CHIP 0.0033uF	10%	50V		
C118	1-126-176-11	ELECT 220uF	20%	10V									
							C277	1-110-563-11	CERAMIC CHIP 0.068uF	10%	16V (EX880Z/EX990Z)		
							C277	1-165-176-11	CERAMIC CHIP 0.047uF	10%	16V (EX660Z)		
							C278	1-110-563-11	CERAMIC CHIP 0.068uF	10%	16V (EX880Z/EX990Z)		
							C278	1-165-176-11	CERAMIC CHIP 0.047uF	10%	16V (EX660Z)		
							C279	1-110-563-11	CERAMIC CHIP 0.068uF	10%	16V (EX880Z/EX990Z)		

Ref. No.	Part No.	Description	Remark		Ref. No.	Part No.	Description	Remark	
C279	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V (EX660Z)	C315	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V
C280	1-110-563-11	CERAMIC CHIP	0.068uF	10%	16V (EX880Z/EX990Z)	C316	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
C280	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V (EX660Z)	C317	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
C281	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	C323	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V
C283	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V (EX990Z)	C325	1-165-908-11	CERAMIC CHIP	1uF 10% 10V
C283	1-110-563-11	CERAMIC CHIP	0.068uF	10%	16V (EX880Z)	C326	1-125-837-91	CERAMIC CHIP	1uF 10% 6.3V
C283	1-137-652-91	CERAMIC CHIP	0.039uF	10%	16V (EX660Z)	C327	1-124-584-00	ELECT	100uF 20% 10V
C284	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V (EX990Z)	C328	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V
C284	1-110-563-11	CERAMIC CHIP	0.068uF	10%	16V (EX880Z)	C329	1-126-382-11	ELECT	100uF 20% 10V
C284	1-137-652-91	CERAMIC CHIP	0.039uF	10%	16V (EX660Z)	C330	1-126-382-11	ELECT	100uF 20% 10V
C287	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V (EX990Z)	C331	1-126-176-11	ELECT	220uF 20% 10V (EX990Z)
C287	1-110-563-11	CERAMIC CHIP	0.068uF	10%	16V (EX880Z)	C332	1-100-155-91	CERAMIC CHIP	470PF 5% 100V (EX990Z)
C287	1-137-652-91	CERAMIC CHIP	0.039uF	10%	16V (EX660Z)	C333	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V
C288	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V (EX990Z)	C334	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V
C288	1-110-563-11	CERAMIC CHIP	0.068uF	10%	16V (EX880Z)	C335	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V
C288	1-137-652-91	CERAMIC CHIP	0.039uF	10%	16V (EX660Z)	C336	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V
C290	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	< CONNECTOR >			
C291	1-124-584-00	ELECT	100uF	20%	10V	CN100	1-819-866-11	USB CONNECTOR (A) (ψ)	
C292	1-124-257-00	ELECT	2.2uF	20%	50V (EX990Z)	CN201	1-784-727-11	CONNECTOR, FFC 5P	
C293	1-126-157-11	ELECT	10uF	20%	16V (EX990Z)	CN202	1-779-289-11	CONNECTOR, FFC (LIF (NON-ZIF)) 21P	
C296	1-165-908-11	CERAMIC CHIP	1uF	10%	10V (EX990Z)	CN203	1-779-546-11	CONNECTOR, FFC (LIF (NON-ZIF)) 9P	
C298	1-137-189-11	FILM	0.18uF	5%	50V (EX990Z)	CN204	1-784-784-11	CONNECTOR, FFC 23P (EX990Z)	
C299	1-137-189-11	FILM	0.18uF	5%	50V (EX990Z)	CN205	1-568-838-11	CONNECTOR, FFC 21P (EX660Z/EX880Z)	
C300	1-165-112-11	CERAMIC CHIP	0.33uF		16V (EX990Z)	< DIODE >			
C301	1-104-509-11	CERAMIC CHIP	0.018uF	10%	16V (EX990Z)	D100	6-500-848-01	DIODE MC2840-T112-1	
C302	1-126-176-11	ELECT	220uF	20%	10V (EX990Z)	D101	6-502-970-01	DI D22J068M0L	
C304	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V (EX990Z)	D102	6-502-970-01	DI D22J068M0L	
C305	1-136-164-00	FILM	0.082uF	5%	50V (EX660Z)	D104	6-500-335-01	DIODE MC2838-T112-1	
C305	1-137-189-11	FILM	0.18uF	5%	50V (EX880Z/EX990Z)	D105	6-500-848-01	DIODE MC2840-T112-1	
C306	1-136-164-00	FILM	0.082uF	5%	50V (EX660Z)	D106	6-503-770-01	DI 1L043RW32EOCI7A11 (WHITE)	
C306	1-137-189-11	FILM	0.18uF	5%	50V (EX880Z/EX990Z)	D116	6-503-224-02	DI 1L0352V22F3MIT02	
C310	1-126-176-11	ELECT	220uF	20%	10V	D117	6-503-224-02	DI 1L0352V22F3MIT02	
C311	1-165-908-11	CERAMIC CHIP	1uF	10%	10V	D118	6-503-224-02	DI 1L0352V22F3MIT02	
C312	1-124-584-00	ELECT	100uF	20%	10V (EX990Z)	D119	6-503-224-02	DI 1L0352V22F3MIT02	
C313	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V (EX990Z)	D120	6-503-224-02	DI 1L0352V22F3MIT02	
						D121	6-503-224-02	DI 1L0352V22F3MIT02	
						D200	6-502-961-01	DI DA2J10100L	
						D203	6-500-334-01	DIODE MC2836-T112-1	
						D204	8-719-058-24	DIODE RB501V-40TE-17	
						D205	6-502-961-01	DI DA2J10100L	
						D206	6-500-848-01	DIODE MC2840-T112-1	
						D209	8-719-058-24	DIODE RB501V-40TE-17	
						D210	6-500-335-01	DIODE MC2838-T112-1	
						< FERRITE BEAD >			
						FB200	1-414-445-11	FERRITE, EMI (SMD) (1608)	
						FB201	1-414-445-11	FERRITE, EMI (SMD) (1608)	
						FB202	1-469-121-21	FERRITE, EMI (SMD) (1608)	
						< IC >			
						IC100	8-759-359-49	IC NJM3414AV (TE2)	
						IC101	6-600-768-01	IC PNA4823M03S0	
						IC200	A-1887-086-A	IC LC87F7DJ2CVU-QIP-H (for SERVICE)	
						IC201	8-759-598-69	IC BA6956AN	
						IC202	6-714-881-01	IC MM1923DTRTE	
						IC203	8-759-909-71	IC BA4558F	

HCD-EX660Z/EX880Z/EX990Z

PANEL

Ref. No.	Part No.	Description	Remark
IC204	6-713-384-01	IC BD3491FS-SE2	
IC205	6-701-680-01	IC PST3629NR	
		< JACK >	
J100	1-842-549-11	JACK (PHONES)	
J102	1-842-550-11	JACK BLOCK, PIN 2P (DVD/PC IN)	
		< JUMPER RESISTOR >	
JR200	1-216-296-11	SHORT CHIP 0	
JR201	1-216-296-11	SHORT CHIP 0	
JR202	1-216-296-11	SHORT CHIP 0	
JR203	1-216-296-11	SHORT CHIP 0	
JR204	1-216-864-11	SHORT CHIP 0	
JR205	1-216-296-11	SHORT CHIP 0 (EX660Z)	
JR206	1-216-296-11	SHORT CHIP 0	
JR207	1-216-296-11	SHORT CHIP 0	
JR208	1-216-864-11	SHORT CHIP 0	
JR209	1-216-864-11	SHORT CHIP 0	
JR210	1-216-296-11	SHORT CHIP 0	
JR211	1-216-296-11	SHORT CHIP 0	
JR214	1-216-864-11	SHORT CHIP 0	
		< COIL >	
L200	1-414-406-11	INDUCTOR 220uH	
		< LIQUID CRYSTAL DISPLAY >	
ND100	1-811-616-11	DISPLAY PANEL, LIQUID CRYSTAL	
		< TRANSISTOR >	
Q100	6-551-321-01	TRANSISTOR RT3WLMM-TP-1F	
Q104	8-729-620-07	TRANSISTOR 2SC3052EF-T1-LEF	
Q105	6-551-272-01	TRANSISTOR RT3CLLM	
Q107	8-729-620-07	TRANSISTOR 2SC3052EF-T1-LEF	
Q108	8-729-620-07	TRANSISTOR 2SC3052EF-T1-LEF	
Q119	8-729-620-07	TRANSISTOR 2SC3052EF-T1-LEF	
Q200	8-729-620-07	TRANSISTOR 2SC3052EF-T1-LEF	
Q201	6-551-321-01	TRANSISTOR RT3WLMM-TP-1F	
Q203	8-729-038-23	TRANSISTOR RT1N141C-TP-1	
Q204	6-551-321-01	TRANSISTOR RT3WLMM-TP-1F (EX990Z)	
Q209	8-729-620-07	TRANSISTOR 2SC3052EF-T1-LEF (EX990Z)	
Q211	6-551-272-01	TRANSISTOR RT3CLLM (EX990Z)	
Q212	6-551-272-01	TRANSISTOR RT3CLLM (EX990Z)	
		< RESISTOR >	
R100	1-216-837-11	METAL CHIP 22K 5% 1/10W	
R101	1-216-829-11	METAL CHIP 4.7K 5% 1/10W	
R102	1-216-833-11	METAL CHIP 10K 5% 1/10W	
R103	1-216-833-11	METAL CHIP 10K 5% 1/10W	
R104	1-216-833-11	METAL CHIP 10K 5% 1/10W	
R105	1-216-829-11	METAL CHIP 4.7K 5% 1/10W	
R106	1-216-829-11	METAL CHIP 4.7K 5% 1/10W	
R107	1-216-845-11	METAL CHIP 100K 5% 1/10W	
R108	1-216-845-11	METAL CHIP 100K 5% 1/10W	
R109	1-216-829-11	METAL CHIP 4.7K 5% 1/10W	
R110	1-216-829-11	METAL CHIP 4.7K 5% 1/10W	
R111	1-216-841-11	METAL CHIP 47K 5% 1/10W	
R112	1-216-841-11	METAL CHIP 47K 5% 1/10W	
R113	1-216-823-11	METAL CHIP 1.5K 5% 1/10W	(EX990Z)

Ref. No.	Part No.	Description	Remark
R113	1-218-867-11	METAL CHIP 6.8K 0.5% 1/10W	(EX660Z)
R113	1-216-832-11	METAL CHIP 8.2K 5% 1/10W	(EX880Z)
R114	1-216-823-11	METAL CHIP 1.5K 5% 1/10W	(EX990Z)
R114	1-218-867-11	METAL CHIP 6.8K 0.5% 1/10W	(EX660Z)
R114	1-216-832-11	METAL CHIP 8.2K 5% 1/10W	(EX880Z)
R115	1-216-834-11	METAL CHIP 12K 5% 1/10W	(EX990Z)
R115	1-216-841-11	METAL CHIP 47K 5% 1/10W	(EX660Z/EX880Z)
R116	1-216-834-11	METAL CHIP 12K 5% 1/10W	(EX990Z)
R116	1-216-841-11	METAL CHIP 47K 5% 1/10W	(EX660Z/EX880Z)
R117	1-216-174-00	METAL CHIP 100 5% 1/8W	
R118	1-216-174-00	METAL CHIP 100 5% 1/8W	
R119	1-216-174-00	METAL CHIP 100 5% 1/8W	
R120	1-216-174-00	METAL CHIP 100 5% 1/8W	
R121	1-216-841-11	METAL CHIP 47K 5% 1/10W	
R122	1-216-841-11	METAL CHIP 47K 5% 1/10W	
R123	1-216-821-11	METAL CHIP 1K 5% 1/10W	
R124	1-216-821-11	METAL CHIP 1K 5% 1/10W	
R125	1-216-825-11	METAL CHIP 2.2K 5% 1/10W	
R126	1-216-825-11	METAL CHIP 2.2K 5% 1/10W	
R127	1-216-821-11	METAL CHIP 1K 5% 1/10W	
R128	1-216-789-11	METAL CHIP 2.2 5% 1/10W	
R129	1-216-789-11	METAL CHIP 2.2 5% 1/10W	
R132	1-216-835-11	METAL CHIP 15K 5% 1/10W	
R133	1-216-835-11	METAL CHIP 15K 5% 1/10W	
R134	1-216-845-11	METAL CHIP 100K 5% 1/10W	
R135	1-216-845-11	METAL CHIP 100K 5% 1/10W	
R136	1-216-821-11	METAL CHIP 1K 5% 1/10W	
R137	1-216-821-11	METAL CHIP 1K 5% 1/10W	
R138	1-216-821-11	METAL CHIP 1K 5% 1/10W	
R139	1-216-833-11	METAL CHIP 10K 5% 1/10W	
R140	1-216-833-11	METAL CHIP 10K 5% 1/10W	
R141	1-216-833-11	METAL CHIP 10K 5% 1/10W	
R142	1-216-829-11	METAL CHIP 4.7K 5% 1/10W	
R143	1-216-835-11	METAL CHIP 15K 5% 1/10W	
R144	1-216-832-11	METAL CHIP 8.2K 5% 1/10W	
R145	1-216-833-11	METAL CHIP 10K 5% 1/10W	
R146	1-216-833-11	METAL CHIP 10K 5% 1/10W	
R147	1-216-821-11	METAL CHIP 1K 5% 1/10W	
R148	1-216-817-11	METAL CHIP 470 5% 1/10W	
R149	1-216-821-11	METAL CHIP 1K 5% 1/10W	
R150	1-216-825-11	METAL CHIP 2.2K 5% 1/10W	
R151	1-216-825-11	METAL CHIP 2.2K 5% 1/10W	
R152	1-216-829-11	METAL CHIP 4.7K 5% 1/10W	
R153	1-216-833-11	METAL CHIP 10K 5% 1/10W	
R154	1-216-821-11	METAL CHIP 1K 5% 1/10W	
R155	1-216-825-11	METAL CHIP 2.2K 5% 1/10W	
R156	1-216-825-11	METAL CHIP 2.2K 5% 1/10W	
R157	1-216-829-11	METAL CHIP 4.7K 5% 1/10W	
R158	1-216-833-11	METAL CHIP 10K 5% 1/10W	
R159	1-216-814-11	METAL CHIP 270 5% 1/10W	
R161	1-216-829-11	METAL CHIP 4.7K 5% 1/10W	
R162	1-216-829-11	METAL CHIP 4.7K 5% 1/10W	

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
R171	1-216-815-11	METAL CHIP	330	5%	1/10W	R246	1-216-833-11	METAL CHIP	10K	5%	1/10W
R172	1-216-815-11	METAL CHIP	330	5%	1/10W	R247	1-216-809-11	METAL CHIP	100	5%	1/10W
R173	1-216-815-11	METAL CHIP	330	5%	1/10W	R248	1-216-809-11	METAL CHIP	100	5%	1/10W
R174	1-216-815-11	METAL CHIP	330	5%	1/10W	R249	1-216-809-11	METAL CHIP	100	5%	1/10W
						R250	1-216-809-11	METAL CHIP	100	5%	1/10W
R175	1-216-815-11	METAL CHIP	330	5%	1/10W	R251	1-216-809-11	METAL CHIP	100	5%	1/10W
R176	1-216-815-11	METAL CHIP	330	5%	1/10W	R252	1-216-833-11	METAL CHIP	10K	5%	1/10W
R177	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R253	1-216-821-11	METAL CHIP	1K	5%	1/10W
R200	1-216-841-11	METAL CHIP	47K	5%	1/10W	R254	1-216-809-11	METAL CHIP	100	5%	1/10W
R201	1-216-839-11	METAL CHIP	33K	5%	1/10W	R255	1-216-837-11	METAL CHIP	22K	5%	1/10W
R202	1-216-845-11	METAL CHIP	100K	5%	1/10W	R256	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R203	1-216-845-11	METAL CHIP	100K	5%	1/10W	R257	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R204	1-216-845-11	METAL CHIP	100K	5%	1/10W	R258	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R205	1-216-809-11	METAL CHIP	100	5%	1/10W	R259	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R206	1-216-809-11	METAL CHIP	100	5%	1/10W	R260	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R207	1-216-809-11	METAL CHIP	100	5%	1/10W	R261	1-216-833-11	METAL CHIP	10K	5%	1/10W
R208	1-216-809-11	METAL CHIP	100	5%	1/10W	R262	1-216-833-11	METAL CHIP	10K	5%	1/10W
R209	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R264	1-216-833-11	METAL CHIP	10K	5%	1/10W
R210	1-216-821-11	METAL CHIP	1K	5%	1/10W	R265	1-216-841-11	METAL CHIP	47K	5%	1/10W
R211	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R266	1-218-867-11	METAL CHIP	6.8K	0.5%	1/10W
R212	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R267	1-216-841-11	METAL CHIP	47K	5%	1/10W
R213	1-216-809-11	METAL CHIP	100	5%	1/10W	R269	1-216-833-11	METAL CHIP	10K	5%	1/10W
R214	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R270	1-216-833-11	METAL CHIP	10K	5%	1/10W
R215	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R271	1-218-867-11	METAL CHIP	6.8K	0.5%	1/10W
R216	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R272	1-216-833-11	METAL CHIP	10K	5%	1/10W
R217	1-216-809-11	METAL CHIP	100	5%	1/10W	R273	1-216-838-11	METAL CHIP	27K	5%	1/10W
R218	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R274	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R219	1-216-809-11	METAL CHIP	100	5%	1/10W	R275	1-216-833-11	METAL CHIP	10K	5%	1/10W
R220	1-216-809-11	METAL CHIP	100	5%	1/10W	R276	1-216-821-11	METAL CHIP	1K	5%	1/10W
R221	1-216-845-11	METAL CHIP	100K	5%	1/10W	R277	1-216-821-11	METAL CHIP	1K	5%	1/10W
R222	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R278	1-216-864-11	SHORT CHIP	0		
R223	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R279	1-216-864-11	SHORT CHIP	0		
R225	1-216-833-11	METAL CHIP	10K	5%	1/10W	R282	1-216-843-11	METAL CHIP	68K	5%	1/10W
R226	1-216-821-11	METAL CHIP	1K	5%	1/10W	R283	1-216-821-11	METAL CHIP	1K	5%	1/10W
R226	1-216-833-11	METAL CHIP	10K	5%	1/10W (EX660Z) (EX880Z)	R283	1-216-833-11	METAL CHIP	10K	5%	1/10W (EX660Z) (EX880Z/EX990Z)
R227	1-216-837-11	METAL CHIP	22K	5%	1/10W	R289	1-216-835-11	METAL CHIP	15K	5%	1/10W (EX880Z)
R228	1-216-833-11	METAL CHIP	10K	5%	1/10W (EX880Z/EX990Z)	R289	1-216-836-11	METAL CHIP	18K	5%	1/10W (EX990Z)
R229	1-216-837-11	METAL CHIP	22K	5%	1/10W	R289	1-216-837-11	METAL CHIP	22K	5%	1/10W (EX660Z)
R230	1-216-837-11	METAL CHIP	22K	5%	1/10W	R290	1-216-834-11	METAL CHIP	12K	5%	1/10W (EX990Z)
R231	1-216-837-11	METAL CHIP	22K	5%	1/10W	R290	1-216-836-11	METAL CHIP	18K	5%	1/10W (EX880Z)
R232	1-216-833-11	METAL CHIP	10K	5%	1/10W (RU, SAF)	R290	1-216-838-11	METAL CHIP	27K	5%	1/10W (EX660Z)
R233	1-216-821-11	METAL CHIP	1K	5%	1/10W (E2, E51, MX)	R291	1-216-835-11	METAL CHIP	15K	5%	1/10W (EX880Z)
R233	1-216-825-11	METAL CHIP	2.2K	5%	1/10W (RU)	R291	1-216-836-11	METAL CHIP	18K	5%	1/10W (EX990Z)
R233	1-216-829-11	METAL CHIP	4.7K	5%	1/10W (SAF)	R291	1-216-837-11	METAL CHIP	22K	5%	1/10W (EX660Z)
R234	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R292	1-216-834-11	METAL CHIP	12K	5%	1/10W (EX990Z)
R235	1-216-833-11	METAL CHIP	10K	5%	1/10W	R292	1-216-836-11	METAL CHIP	18K	5%	1/10W (EX880Z)
R236	1-216-837-11	METAL CHIP	22K	5%	1/10W	R292	1-216-838-11	METAL CHIP	27K	5%	1/10W (EX660Z)
R237	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R293	1-216-813-11	METAL CHIP	220	5%	1/10W
R238	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R294	1-216-813-11	METAL CHIP	220	5%	1/10W
R239	1-216-839-11	METAL CHIP	33K	5%	1/10W						
R240	1-216-833-11	METAL CHIP	10K	5%	1/10W						
R241	1-216-839-11	METAL CHIP	33K	5%	1/10W						
R243	1-216-809-11	METAL CHIP	100	5%	1/10W						
R244	1-216-833-11	METAL CHIP	10K	5%	1/10W						
R245	1-216-809-11	METAL CHIP	100	5%	1/10W						

PANEL TUNER1

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Ref. No.	Part No.	Description	Remark		
< RESISTOR >					
R101	1-216-809-11	METAL CHIP	100	5%	1/10W
R103	1-216-801-11	METAL CHIP	22	5%	1/10W
R104	1-216-864-11	SHORT CHIP	0		
R105	1-216-801-11	METAL CHIP	22	5%	1/10W
R106	1-216-809-11	METAL CHIP	100	5%	1/10W
R107	1-216-809-11	METAL CHIP	100	5%	1/10W
R108	1-216-296-11	SHORT CHIP	0		
R109	1-216-864-11	SHORT CHIP	0		
R110	1-216-833-11	METAL CHIP	10K	5%	1/10W
R113	1-216-833-11	METAL CHIP	10K	5%	1/10W
R114	1-216-864-11	SHORT CHIP	0		
< VIBRATOR >					
X101	1-767-317-11	VIBRATOR, CRYSTAL (32.768kHz)			

MISCELLANEOUS					

55	1-846-143-11	CABLE, FLEXIBLE FLAT (9 CORE)			
58	1-846-142-11	CABLE, FLEXIBLE FLAT (21 CORE)			
59	1-832-876-21	CABLE, FLEXIBLE FLAT (21 CORE)			
59	1-832-885-21	CABLE, FLEXIBLE FLAT (23 CORE) (EX660Z/EX880Z)			
△ 101	1-834-966-41	POWER-SUPPLY CORD (RU, E51, SAF)			
△ 101	1-837-344-11	CORD, POWER-SUPPLY (E2, MX)			
△ 102	1-569-007-12	ADAPTOR, CONVERSION 2P (E2)			
△ 102	1-569-008-33	ADAPTOR, CONVERSION (E51)			
104	A-1846-569-A	TUNER1AM3RZ ASSY			
△ 106	1-855-006-11	FAN, DC (EX880Z/EX990Z)			
204	1-846-147-11	CABLE, FLEXIBLE FLAT (5 CORE)			
△ 207	1-856-037-11	DEVICE, OPTICAL DA11MMVGP			
211	1-834-268-21	WIRE (FLAT TYPE) (16 CORE)			
S001	1-771-853-11	SWITCH, DETECTION (LIMIT)			

MEMO

HCD-EX660Z/EX880Z/ EX990Z

SONY®

SERVICE MANUAL

Ver. 1.1 2012.08

Russian Model

HCD-EX660Z/EX990Z

E Model

HCD-EX660Z/EX880Z/EX990Z

Mexican Model

HCD-EX880Z/EX990Z

South African Model

HCD-EX660Z

SUPPLEMENT-1

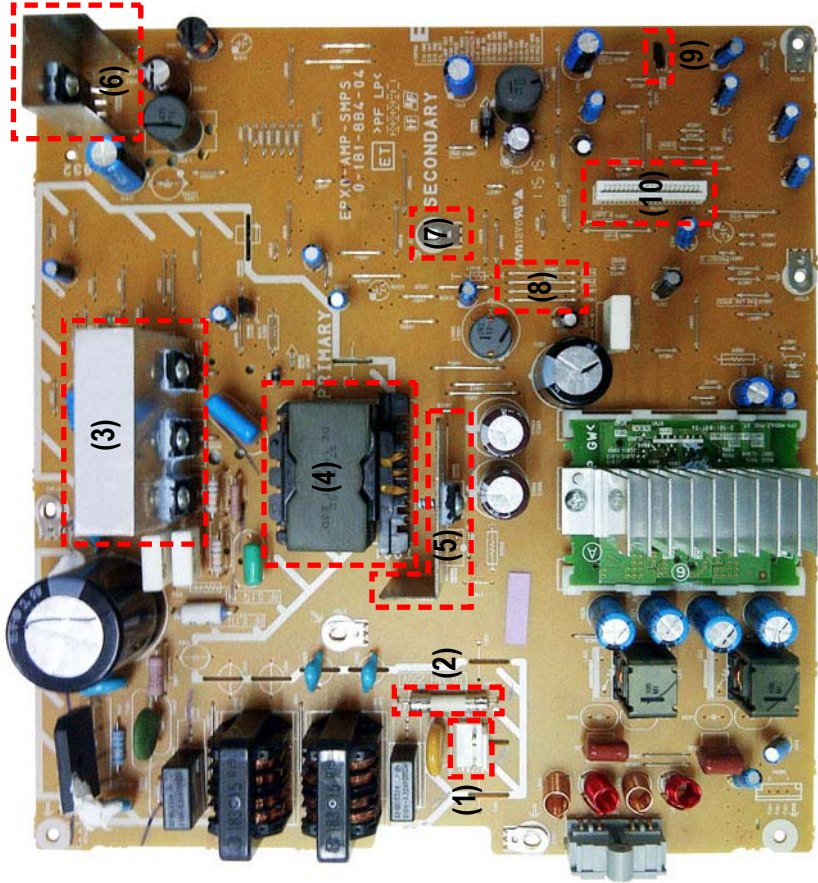
File this supplement with the service manual.

Subject: Addition of SERVICING NOTES (TROUBLESHOOTING)

TROUBLESHOOTING

Switching Regulator (AMP-SMPS) Diagnosis Flow (1/3)

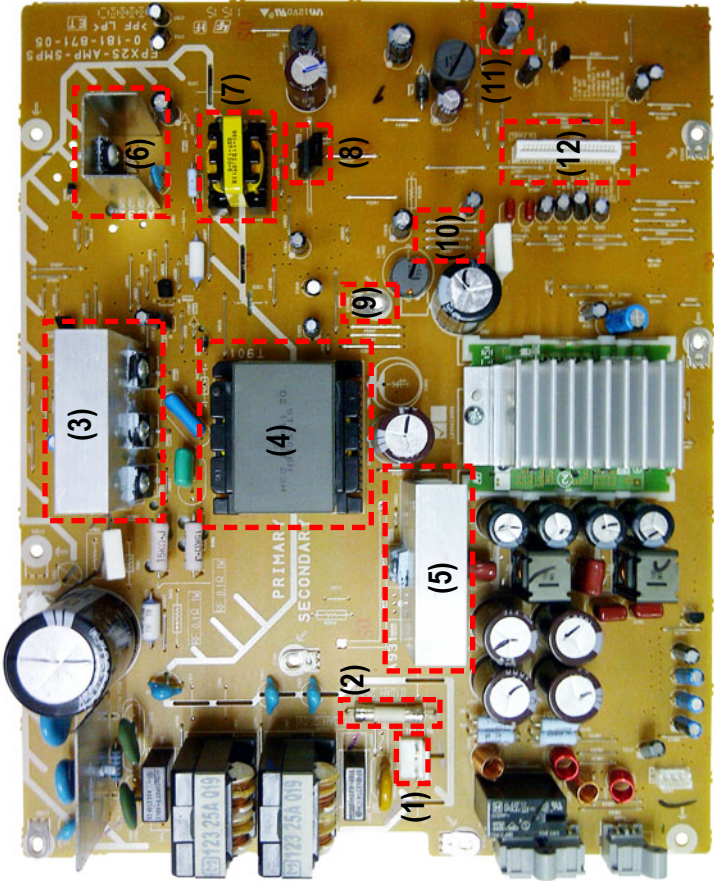
(EX660Z)



- (1) CN901 AC Input
- (2) F901 AC Fuse
- (3) A930 Main Primary Heat Sink ASSY
- (4) T901 Main Switching Transformer
- (5) A931 Main Secondary Diode Heat Sink
- (6) IC1001 12V DC-DC Switching IC
- (7) ET1000 for PVDD(-)
- (8) JW641 / JW626 / JW660 / JW661 for PVDD(+)
- (9) JW634 [+12V]
- (10) CN700 Connector
- pin 1: GND
- pin 2: OUT
- pin 3: GND
- pin 4:
- pin 5:
- pin 6:
- pin 7:
- pin 8: Protect S
- pin 9: Protect F
- pin10: P-CONT.
- pin11: Sub ON
- pin12:
- pin13:
- pin14:
- pin15:
- pin16: E-GND
- pin17: E+4V
- pin18: M-GND
- pin19: M+7V
- pin20: VCC-GND
- pin21: VCC+9V

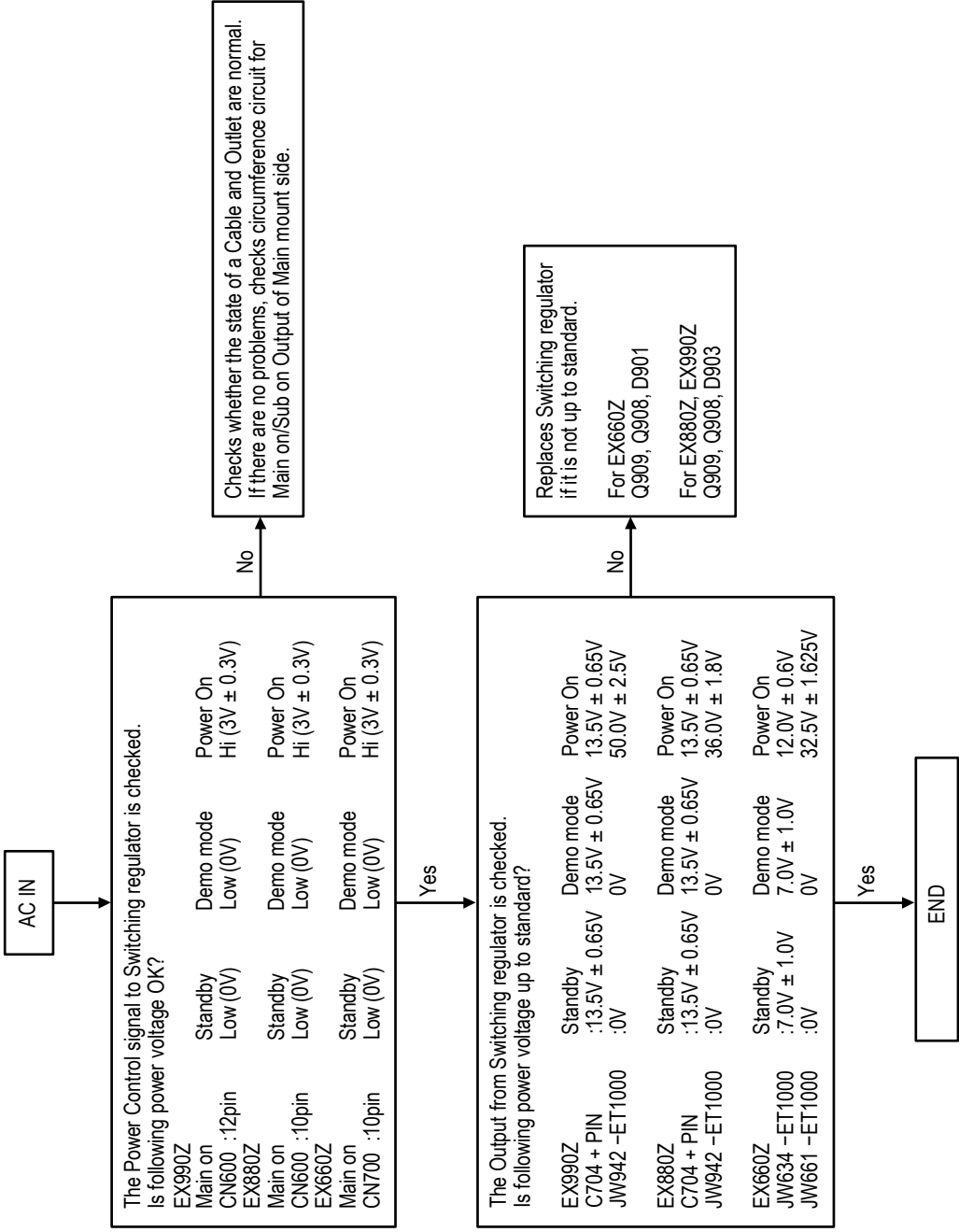
Switching Regulator (AMP-SMPS) Diagnosis Flow (2/3)

(EX880Z/EX990Z)

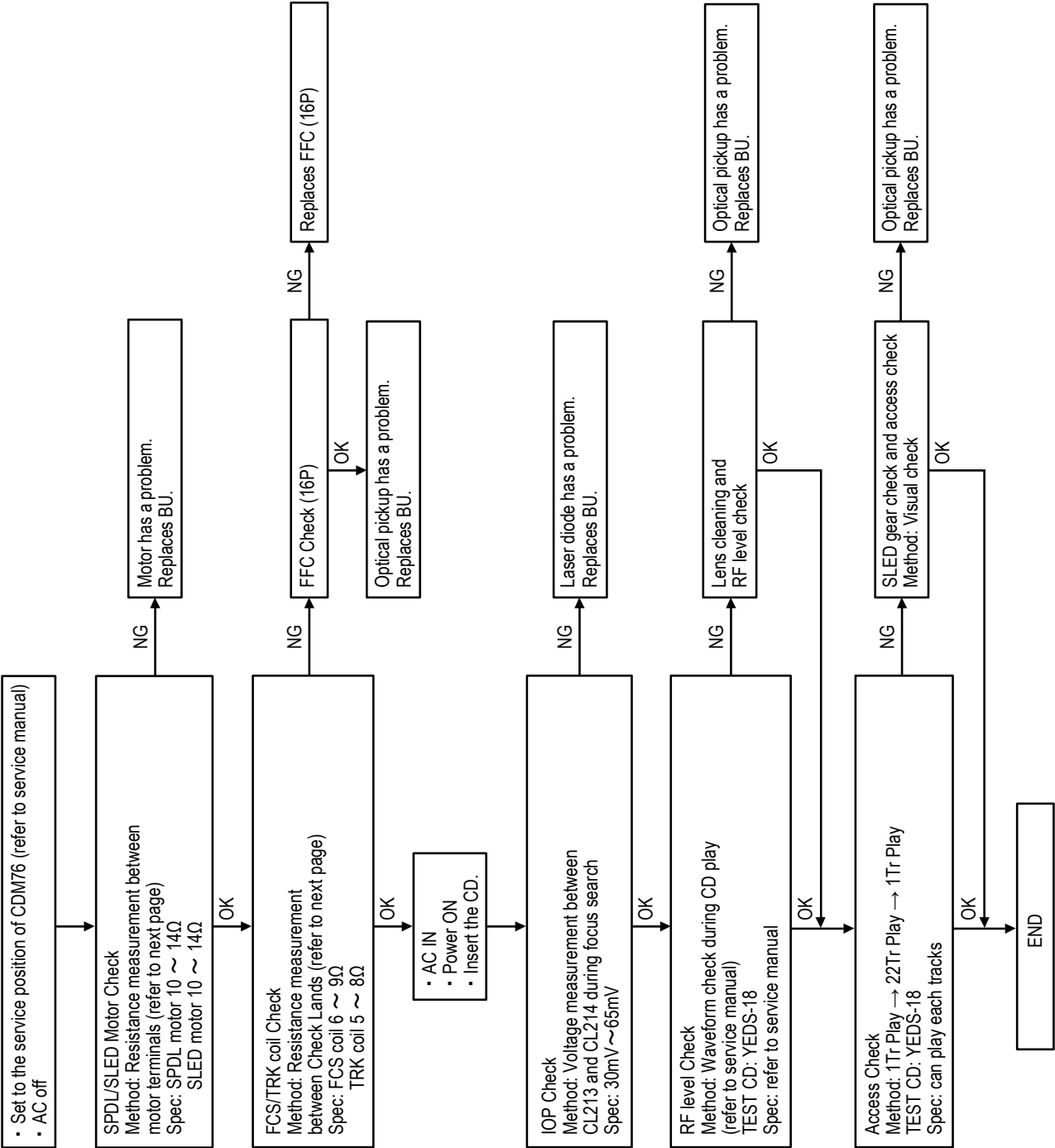


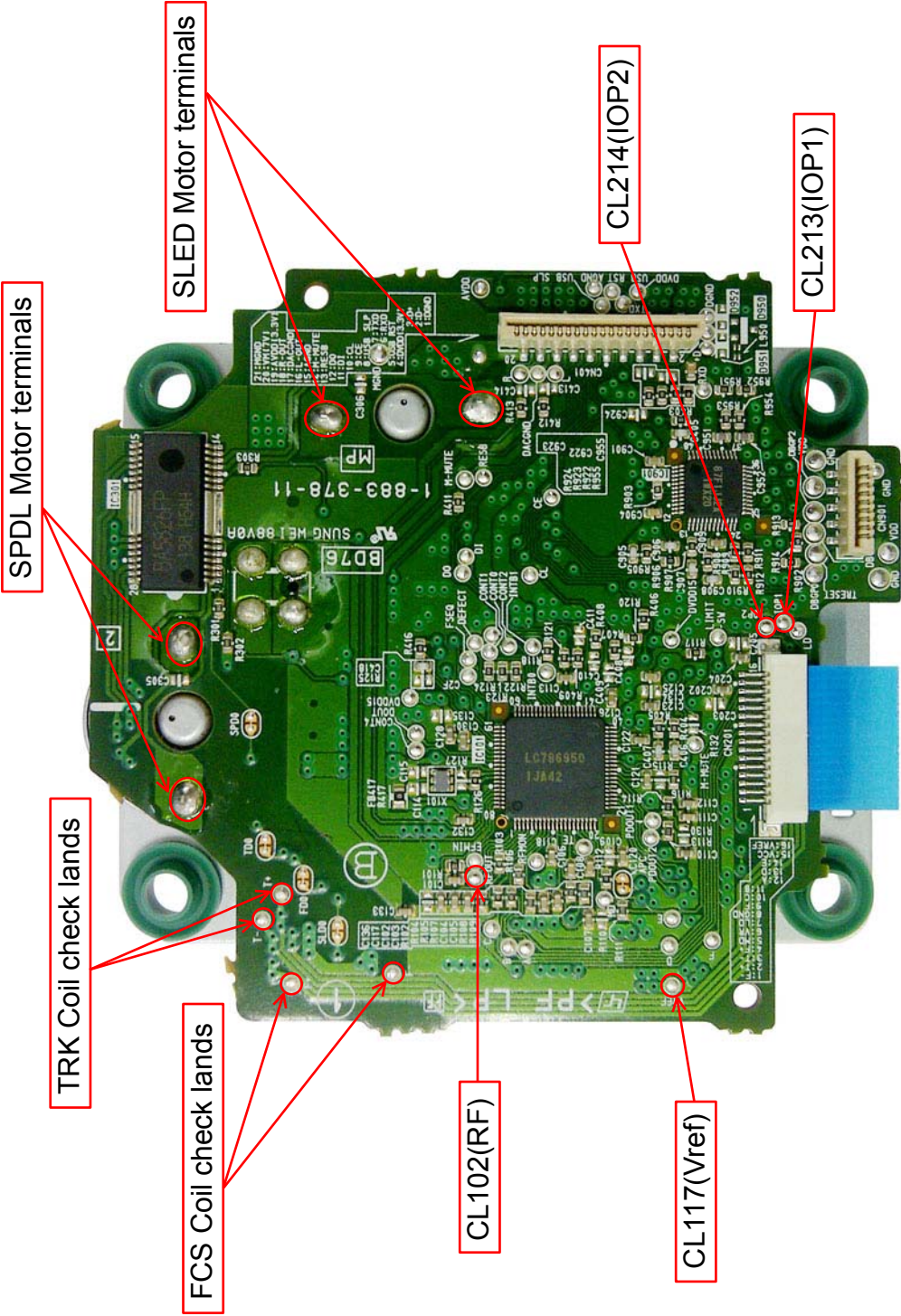
- (1) CN901 AC Input
 - (2) F901 AC Fuse
 - (3) A930 Main Primary Heat Sink ASSY
 - (4) T901 Main Switching Transformer
 - (5) A931 Main Secondary Diode Heat Sink
 - (6) IC965 Sub Primary Switching IC
 - (7) T903 Sub Switching Transformer
 - (8) D1001 Sub Secondary Rectifier Diode
 - (9) ET1000 for PVDD(-)
 - (10) JW942 / JW940 / JW652 / JW634 for PVDD(+)
 - (11) C704 for Sub Output Voltage Line
 - (12) CN600 Connector
- pin 1: GND
pin 2:
pin 3: GND
pin 4:
pin 5:
pin 6:
pin 7:
pin 8: Protect S
pin 9: Protect F
pin10: Main ON
pin11: Sub ON
pin12:
pin13:
pin14:
pin15:
pin16: E-GND
pin17: E+4V
pin18: M-GND
pin19: M7V
pin20: VCC-GND
pin21: VCC9V

Switching Regulator (AMP-SMPS) Diagnosis Flow (3/3)

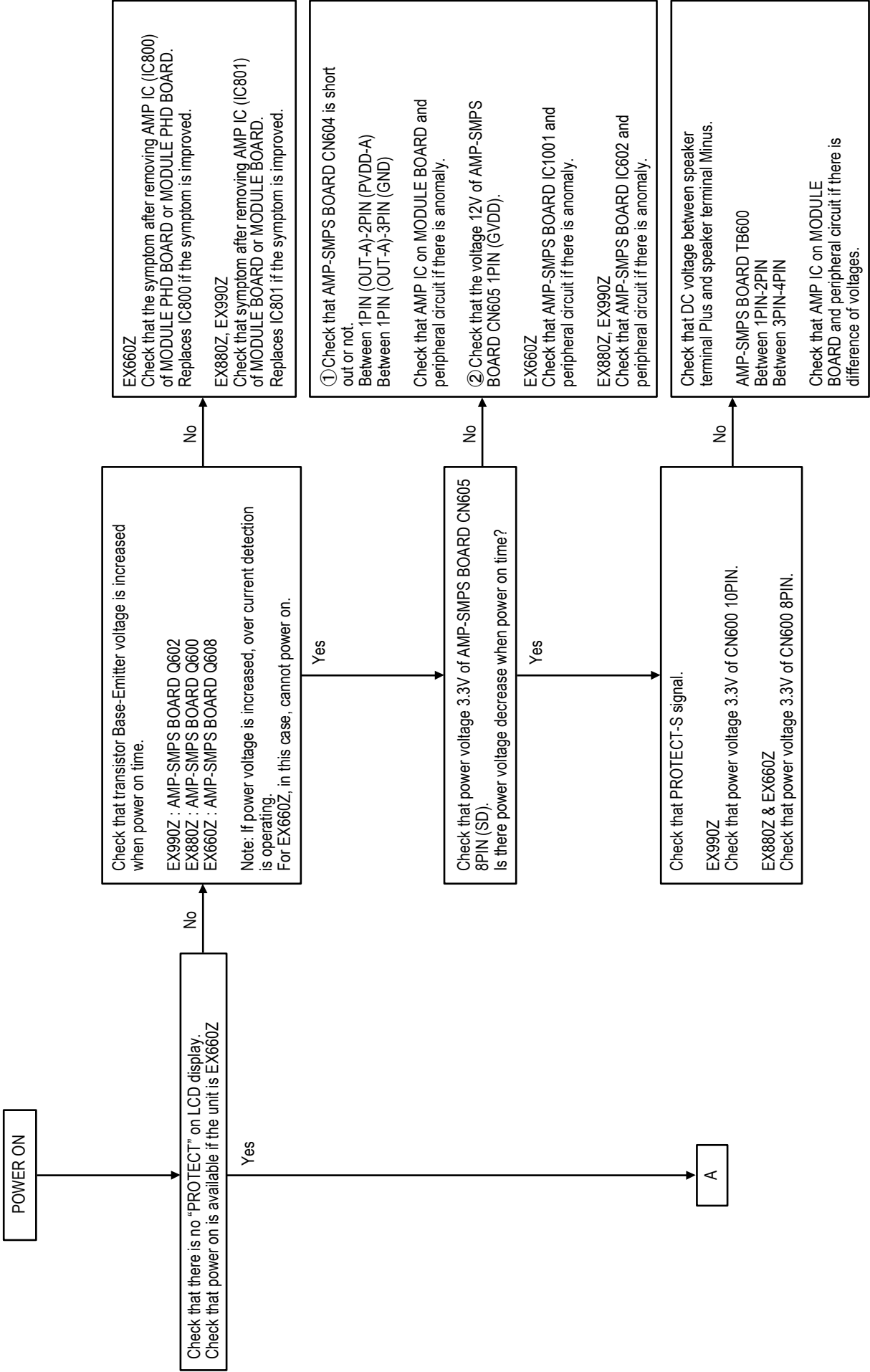


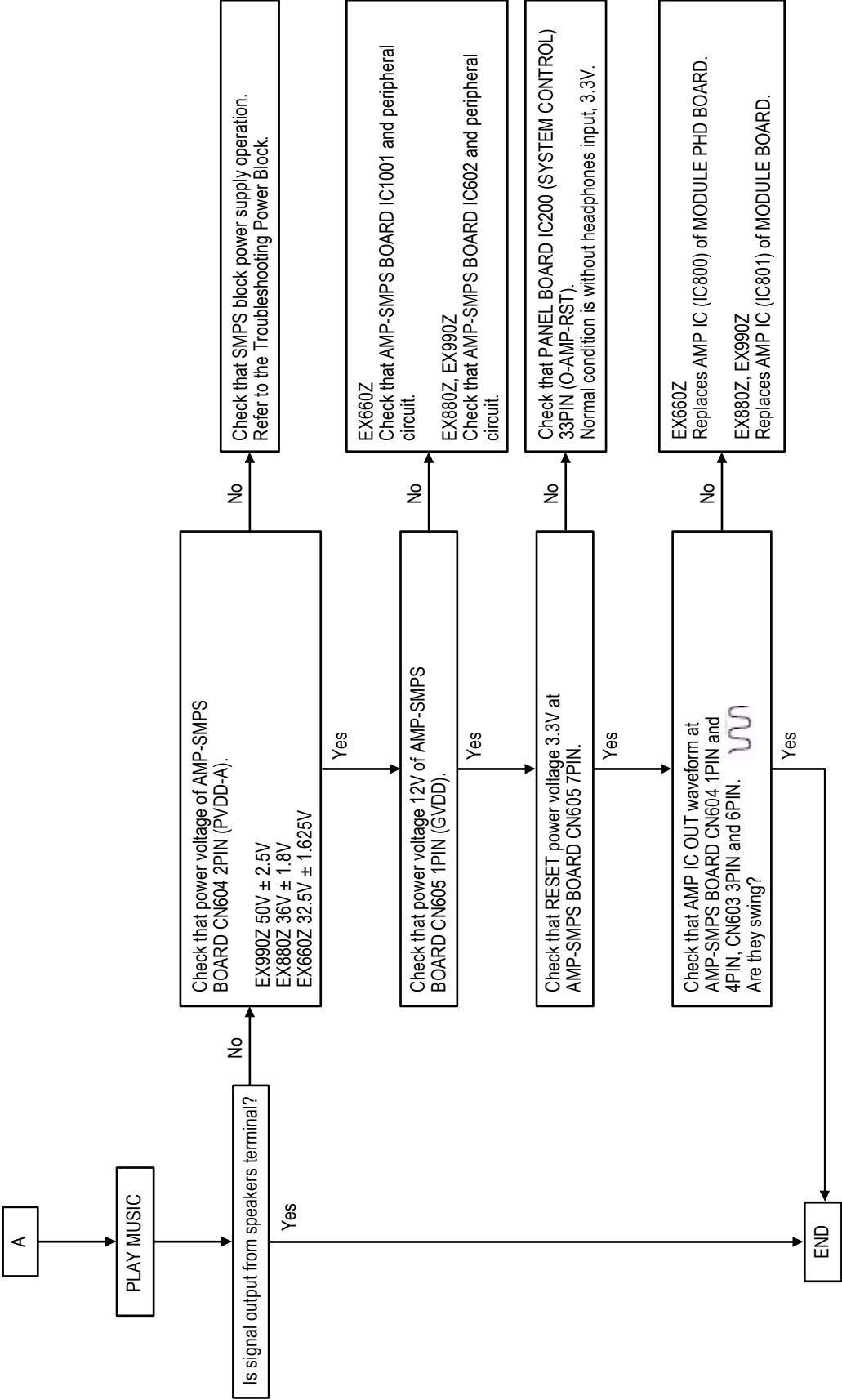
BU Check Flow for BD76





D-AMP Mount Diagnosis Flow (1/2)





MEMO

REVISION HISTORY

Checking the version allows you to jump to the revised page.

Also, clicking the version at the top of the revised page allows you to jump to the next revised page.

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