

XA-300

SERVICE MANUAL

Ver 1.1 2002.08

US Model
Canadian Model
AEP Model
UK Model
E Model



SPECIFICATIONS

Power requirement	12 V DC car battery (negative earth)
Current drain	340 mA
Operating temperature	-10°C to +55°C (14° F to 131° F)
Dimensions	Approx. 148 × 34 × 101 mm (5 ⁷ / ₈ × 1 ³ / ₈ × 4 in.) (w/h/d)
Mass	Approx. 470 g (1 lb 16 oz.)
Supplied accessories	BUS cable RCA pin cord Velcro tape

Design and specifications are subject to change without notice.

FEATURES

The XA-300 is an external selector for connecting a Sony BUS system-compatible CD/MD device or a non-compatible portable device (such as a DVD player, MD Walkman, or laptop computer) to a Sony BUS system-compatible master unit. Enjoy the sound of portable media in your car.

WALKMAN is trademark of Sony Corporation.

AUX-IN SELECTOR

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Sony Corporation
e Vehicle Company
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SONY®

TABLE OF CONTENTS

1. SERVICING NOTES 2

2. GENERAL 3

3. DIAGRAMS

3-1. Note for Printed Wiring Board and Schematic Diagram 3

3-2. Printed Wiring Board 4

3-3. Schematic Diagram 5

3-4. IC Pin Function Description 6

4. EXPLODED VIEW 7

5. ELECTRICAL PARTS LIST 8

**SECTION 1
SERVICING NOTES**

Connection to repair

This set is controlled by master unit with serial communication.



Therefore, to operate this set, connect master unit as shown below.

Connecting via USB

This set can be connected via its USB connector to a personal computer with USB port.

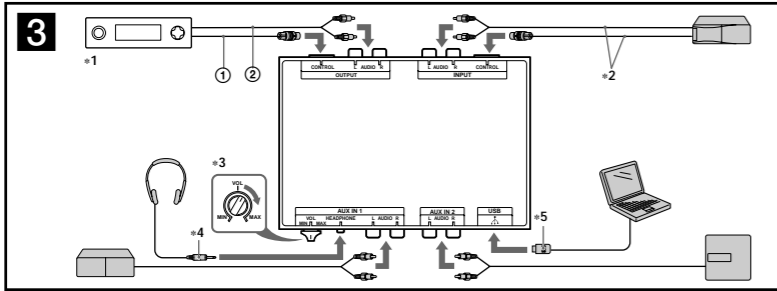
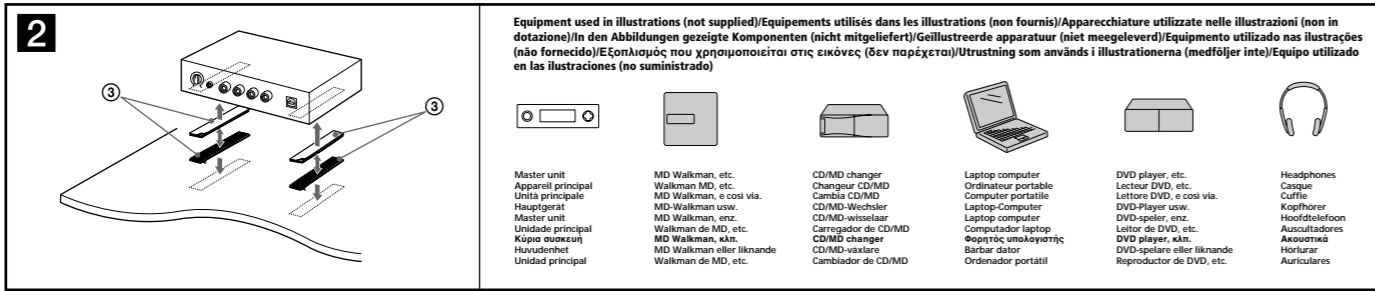
- Compatible operating systems
 - Windows® 98 Second Edition / Windows® Me / Windows® 2000 (Windows® 2000 recommended)
 - Mac OS 8.6 or later (Mac OS 9.0 or later recommended)

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.

**SECTION 2
GENERAL**

This section is extracted from instruction manual.



3-1. NOTE FOR PRINTED WIRING BOARD AND SCHEMATIC DIAGRAM

Note on Printed Wiring Board:

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

Caution:

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

Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. pF: μF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $1/4\text{ W}$ or less unless otherwise specified.
- △ : internal component.
- : panel designation.
- : B+ Line.
- : adjustment for repair.
- Power voltage is dc 14.4V and fed with regulated dc power supply to master unit.
- Voltages and waveforms are dc with respect to ground under the condition that master unit is connected.
no mark : CD - C
() : AUX 1
[] : AUX 2
<< >> : USB
- Voltages are taken with a VOM (Input impedance 10 M Ω). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
⇒ : AUDIO
Σ : USB IN
➤ : USB OUT

Place the unit under the passenger seat, etc. (2)

Before installation

- Choose the installation location carefully so that the unit does not interfere with normal driving operations.
- Avoid installing the unit where it would be subject to:
 - high temperatures, such as from direct sunlight or hot air from the heater.
 - draft, rain or moisture.
 - dust or dirt.
 - magnetic fields.
- Use only the supplied mounting hardware for a safe and secure installation.

If you have any questions or problems concerning your unit that are not covered in this manual, please consult your nearest Sony dealer.

Stick one piece of the Velcro tape provided to the bottom of the unit and the other to the surface of the car where you want to place it (such as the carpet underneath the passenger seat) in order to hold the unit in position. After removing the dust and dirt from the surface of Velcro tapes, stick them together.

Connection example (3)

- *1 You can connect the source selector (XA-C30, etc.) compatible with the Sony BUS system.
For details, refer to the user's manual for the source selector you are using.
- *2 Supplied with the CD/MD changer
- *3 Volume control for headphones connected to AUX IN 1.
- *4 Stereo mini-plug
- *5 USB connector
 - Computer with USB port
 - Compatible operating systems
 - Windows® 98 Second Edition/Windows® Me/Windows® 2000 (Windows® 2000 recommended)
 - Mac OS 8.6 or later (Mac OS 9.0 or later recommended)

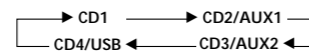
Note

Depending on the device to be connected, you might need to buy a different connector cord. For further details, read the operating manual of the device to be connected or ask your local dealer.

To select a device connected to the unit by the master unit

- Press **(SOURCE)** repeatedly until "CD" is selected.
- Press **(MODE)** repeatedly until the device you want to listen to is selected.

Example: Master unit display window



Tip

When you select a Sony BUS system-compatible device, it will automatically start playing.

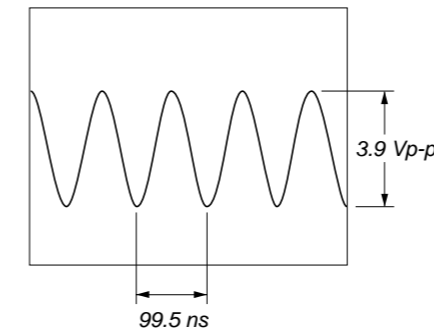
- Start playing the device selected in 2.
For the playback method of the selected device, refer to its operating manual.
- Adjust the volume of the master unit and selected device.

Notes

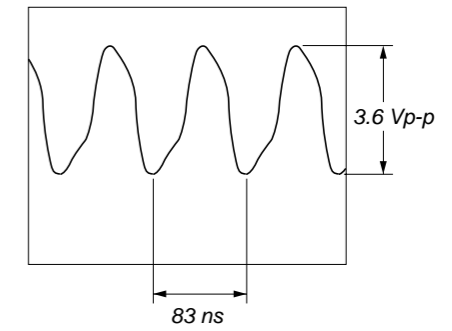
- Follow the steps below to play the audio file of the computer connected to the USB jack of this unit.
 - Press the **MODE** button of the master unit to select "USB."
 - Open the playback software (Windows Media Player, etc.) on your computer.
 - Play the audio file (MP3, etc.).
 After playing the audio file on the computer, if you select "USB" mode on the display of the master unit, this unit may not recognize the signal and sound may not come out.
- As the volume settings of each connected device may differ, adjust the volume on each device separately. As the sound output differs on AUX IN 1 and AUX IN 2, connect the Sony car audio DVD changer to AUX IN 1, and connect a portable device (such as MD WALKMAN, etc.) to AUX IN 2.
- While playing audio file in a device connected to AUX IN 1, AUX IN 2, or the USB jack on this unit, do not change any settings of the CD CUSTOM FILE function. If trouble occurs, press the **SOURCE** button again on the master unit to select the device you want.

Waveforms

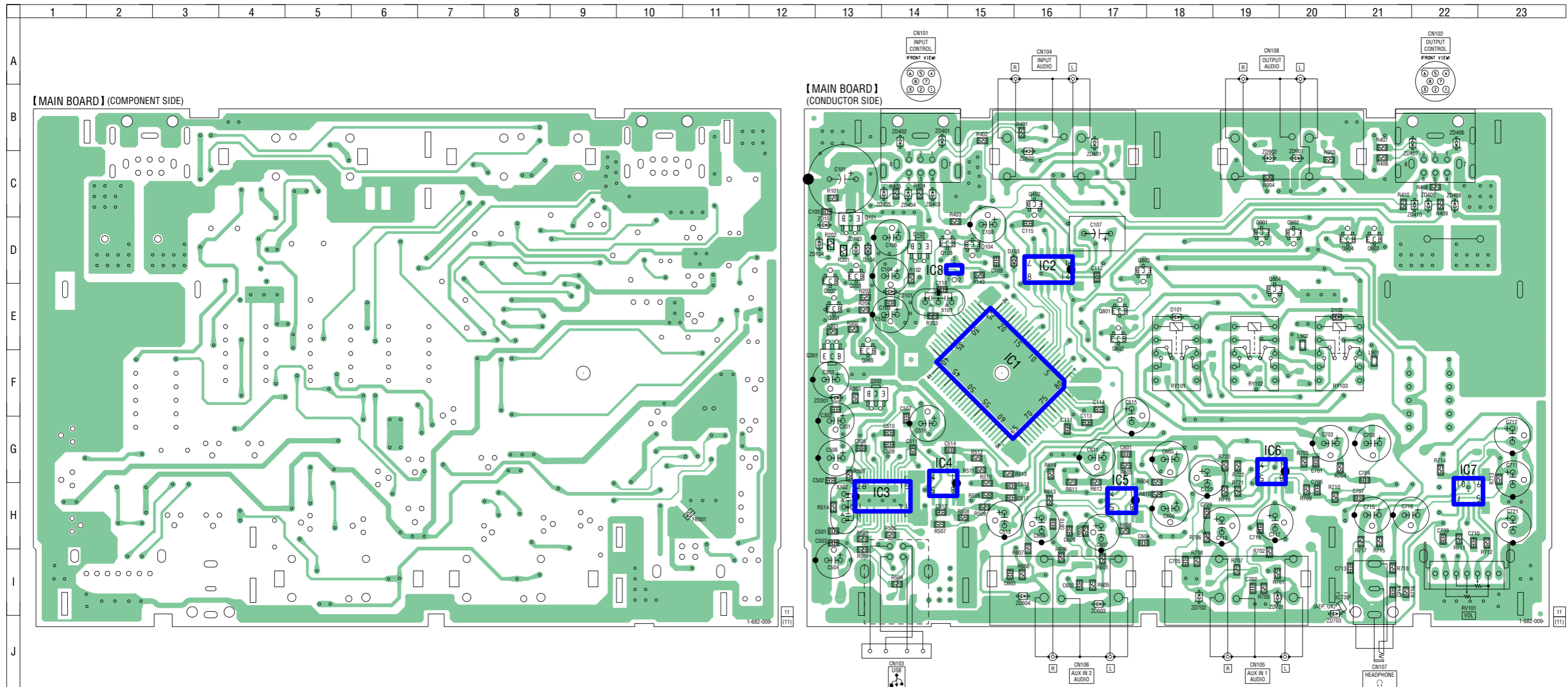
1 IC1 (XTAL)



2 IC3 (XTO)



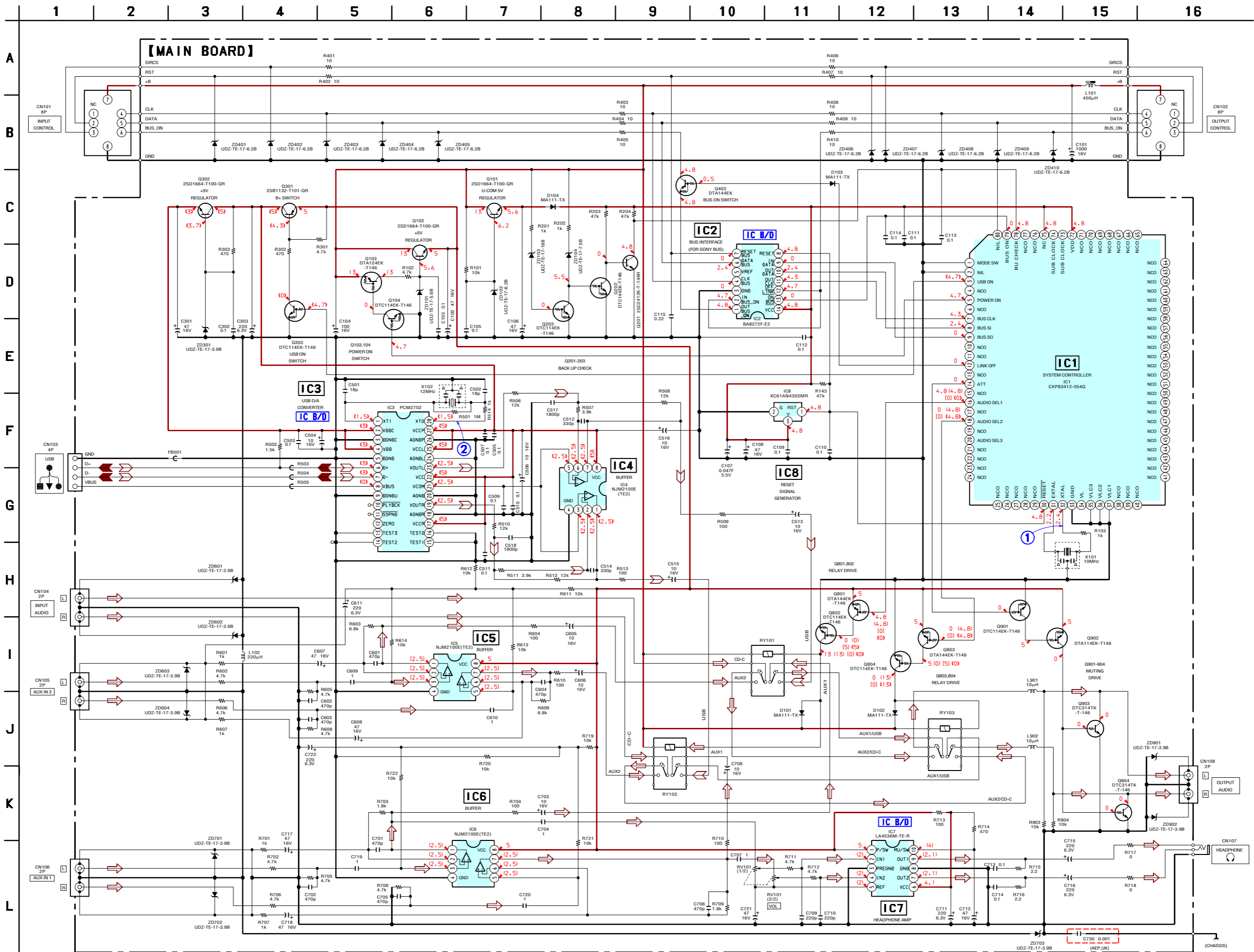
3-2. PRINTED WIRING BOARD



• Semiconductor Location

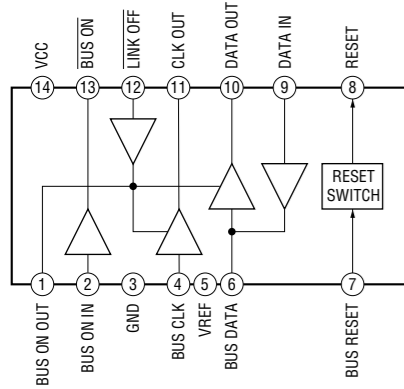
Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D101	E-18	Q102	D-14	Q902	D-20	ZD407	B-22
D102	E-20	Q103	D-13	Q903	D-21	ZD408	C-22
D103	D-15	Q104	D-15	Q904	D-21	ZD409	C-22
D104	D-13	Q201	E-13	ZD101	E-14	ZD410	C-22
		Q202	D-13	ZD102	D-13	ZD601	B-17
IC1	F-15	Q203	D-13	ZD103	D-13	ZD602	C-16
IC2	D-16	Q301	F-13	ZD104	D-13	ZD603	I-17
IC3	H-13	Q302	F-13	ZD301	F-13	ZD604	I-16
IC4	G-14	Q303	F-13	ZD401	B-14	ZD701	I-19
IC5	H-17	Q402	C-16	ZD402	B-14	ZD702	I-18
IC6	G-19	Q801	E-17	ZD403	B-14	ZD703	I-20
IC7	H-22	Q802	E-17	ZD404	C-14	ZD901	C-20
IC8	D-15	Q803	D-17	ZD405	C-14	ZD902	C-19
		Q804	E-19	ZD406	B-22		
Q101	D-13	Q901	D-19				

3-3. SCHEMATIC DIAGRAM • See page 3 for Waveforms. • See page 6 for IC Block Diagram.

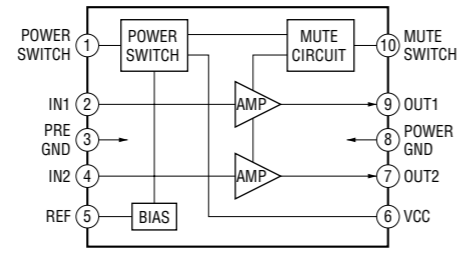


• IC Block Diagrams

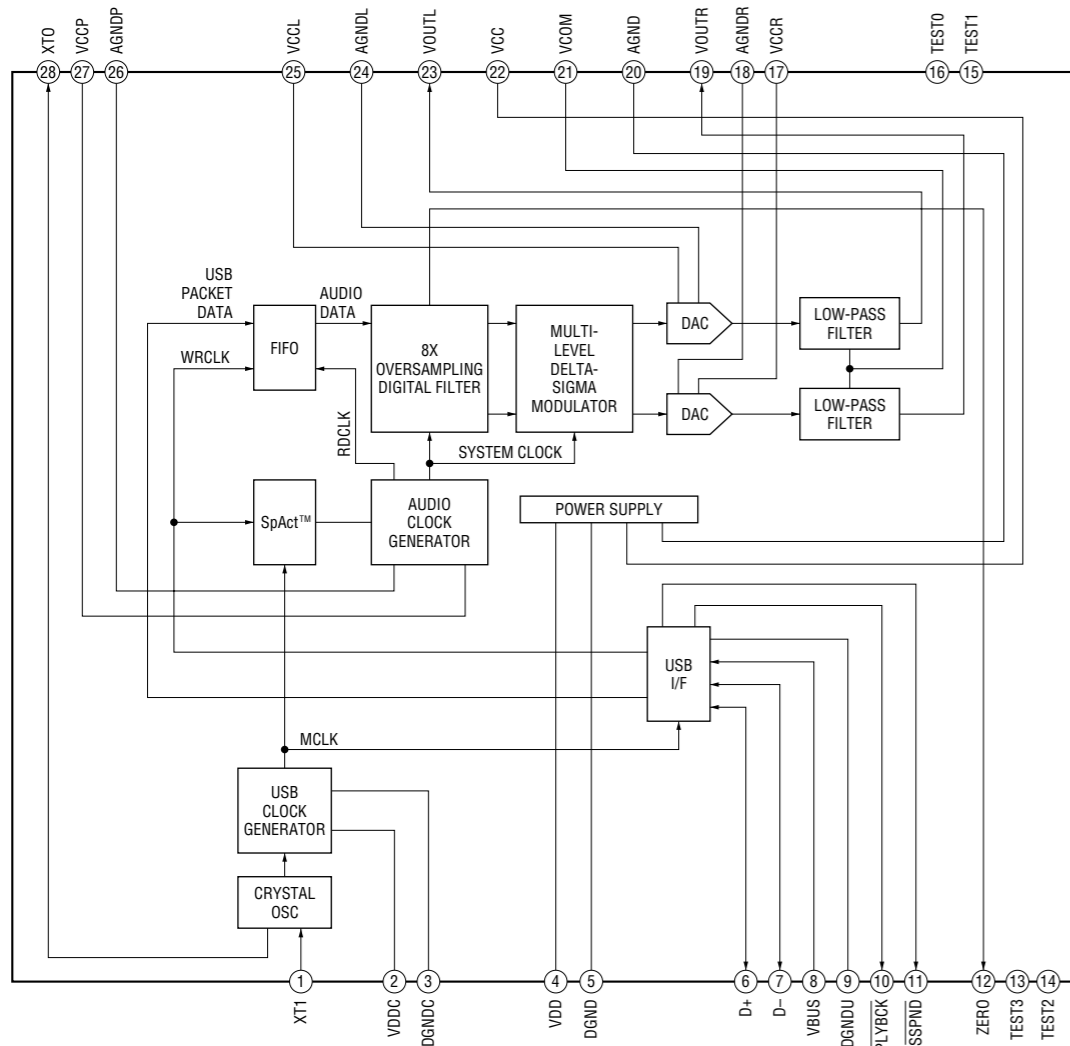
IC2 BA8272F-E2



IC7 LA4536M-TE-R



IC3 PCM2702E/2K



3-4. IC PIN FUNCTION DESCRIPTION

• IC1 CXP83412-053Q (SYSTEM CONTROLLER)

Pin No.	Pin Name	I/O	Description
1	MODE_SW	I	CD, AUX display change "H": CD (fixed at "L" in this set)
2	NIL	I	Not used (fixed at "L")
3	USB_ON	O	USB power supply switch (Turn on the power when USB in selected by PAS)
4	NCO	O	Not used (open)
5	POWER ON	O	Power on signal output terminal (Turn on the power when AUX1, AUX2 or USB is selected)
6	NCO	O	Not used (open)
7	BUS_CLK	I	Serial data transfer clock signal input from the SONY bus interface (IC2)
8	BUS_SI	I	Serial data input from the SONY bus interface (IC2)
9	BUS_SO	O	Serial data output the SONY bus interface (IC2)
10, 11	NCO	O	Not used (open)
12	LINK_OFF	O	Bus link off control signal output terminal
13	NCO	O	Not used (open)
14	ATT	O	Audio line muting on/off control signal output terminal "H": muting on
15	NCO	O	Not used (open)
16	AUDIO_SEL1	O	Audio signal selector control *1
17	NCO	O	Not used (open)
18	AUDIO_SEL2	O	Audio signal selector control *1
19	NCO	O	Not used (open)
20	AUDIO_SEL3	O	Not used (open)
20 to 29	NCO	O	Not used (open)
30	RESET	I	System reset signal input from the reset signal generator (IC8) "L": reset
31	EXTAL	I	Main system clock input terminal (10MHz)
32	XTAL	O	Main system clock output terminal (10MHz)
33	GND	—	Ground terminal
34	VL	O	Not used (open)
35 to 37	VLC3-1	I	Not used (Ground connection)
38 to 71	NCO	O	Not used (open)
72	VDD	—	Power supply terminal (+5V)
73	SUB CLOCK	O	Sub system clock output terminal Not used (open)
74	SUB CLOCK	I	Sub system clock input terminal Not used (open)
75	NC	—	Connected to the power supply (+5V)
76	NCO	O	Not used (open)
77	NCO	O	Not used (open)
78	BU_CHECK	I	Backup power supply detection signal input terminal "H": active
79	BUS_ON	I	Bus on/off control signal input from the SONY bus interface (IC2)
80	NIL	I	Not used (fixed at "L")

*1

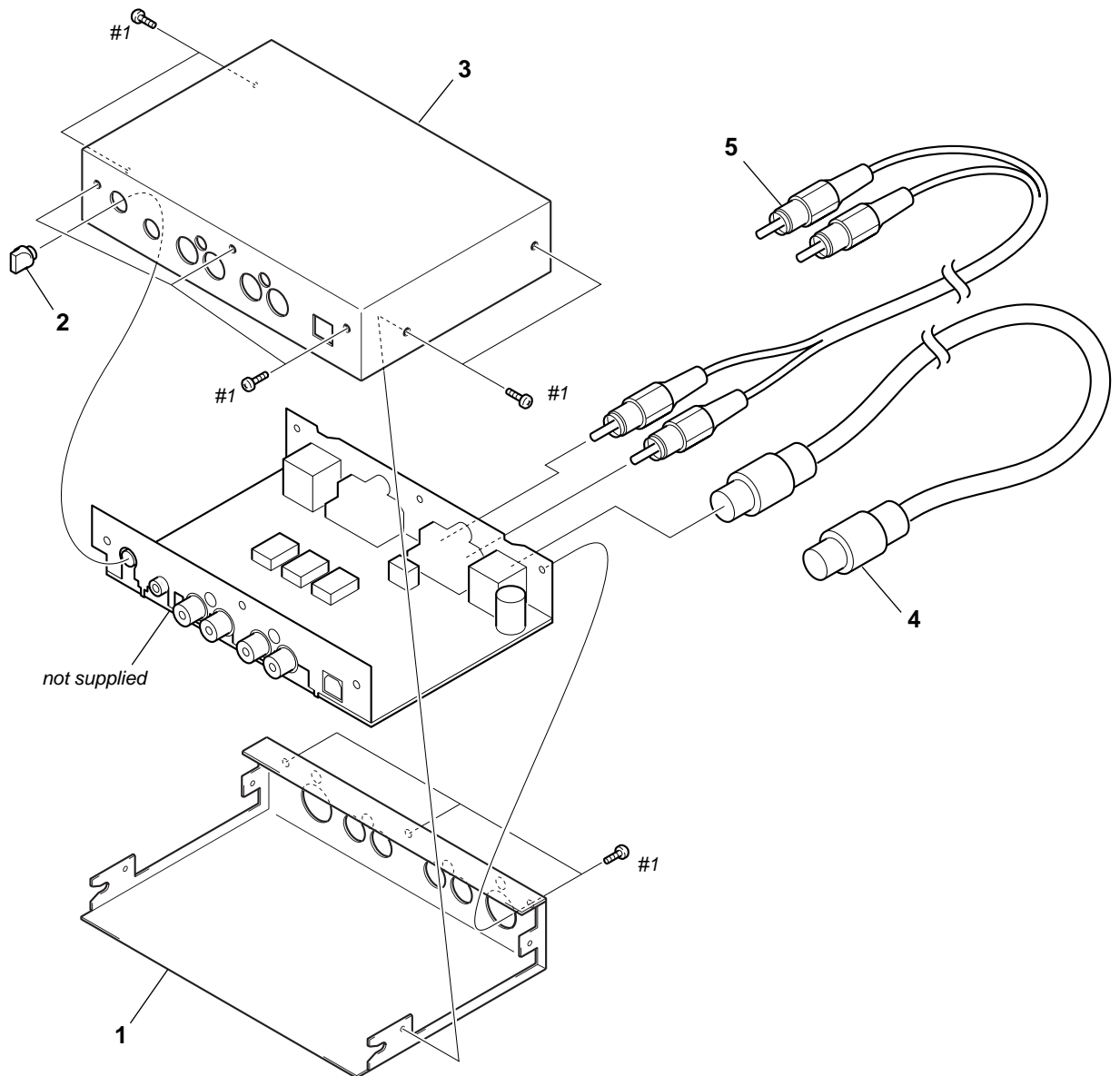
Terminal \ Source mode	AUX1	AUX2	USB	CD-C
AUDIO_SEL1 (pin 16)	"H"	"L"	"L"	"H"
AUDIO_SEL2 (pin 18)	"H"	"L"	"H"	"L"

SECTION 4 EXPLODED VIEW

NOTE:

- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
Example:
KNOB, BALANCE (WHITE) . . . (RED)
 ↑ ↑
 Parts Color Cabinet's Color

- 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.
- Accessories and packing materials are given in the last of the electrical parts list.
- Accessories are given in the last of the electrical parts list.



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	3-229-695-01	CASE (LOWER)		4	1-590-519-72	CORD (WITH CONNECTOR) (BUS)	
2	3-229-698-01	KNOB (VOL)		5	1-696-287-41	CORD, CONNECTION (RCA)	
3	3-229-694-01	CASE (UPPER)		#1	7-685-792-09	SCREW +PTT 2.6X6 (S)	

SECTION 5
ELECTRICAL PARTS LIST

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.
- **RESISTORS**
All resistors are in ohms.
METAL: Metal-film resistor.
METAL OXIDE: Metal oxide-film resistor.
F: nonflammable

- Items marked "***" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- **SEMICONDUCTORS**
In each case, u: μ , for example:
uA. . . : μ A. . . uPA. . . : μ PA. . .
uPB. . . : μ PB. . . uPC. . . : μ PC. . .
uPD. . . : μ PD. . .
- **CAPACITORS**
uF: μ F
- **COILS**
uH: μ H

Ref. No.	Part No.	Description	Remark
		MAIN BOARD *****	
	7-685-535-19	SCREW +BTP 2.6X10 TYPE2 N-S	
		< CAPACITOR >	
C101	1-126-767-11	ELECT 1000uF	20% 16V
C102	1-124-589-11	ELECT 47uF	20% 16V
C103	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C104	1-126-382-11	ELECT 100uF	20% 16V
C105	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C106	1-124-589-11	ELECT 47uF	20% 16V
C107	1-110-654-11	ELECT (BLOCK) 0.047F	5.5V
C108	1-124-589-11	ELECT 47uF	20% 16V
C109	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C110	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C111	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C112	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C113	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C114	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C115	1-115-467-11	CERAMIC CHIP 0.22uF	10% 10V
C301	1-124-589-11	ELECT 47uF	20% 16V
C302	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C303	1-124-635-00	ELECT 220uF	20% 6.3V
C501	1-162-918-11	CERAMIC CHIP 18PF	5% 50V
C502	1-162-918-11	CERAMIC CHIP 18PF	5% 50V
C503	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C504	1-124-233-11	ELECT 10uF	20% 16V
C505	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C506	1-124-233-11	ELECT 10uF	20% 16V
C507	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C509	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C510	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C511	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C512	1-162-961-11	CERAMIC CHIP 330PF	10% 50V
C513	1-124-233-11	ELECT 10uF	20% 16V
C514	1-162-961-11	CERAMIC CHIP 330PF	10% 50V
C515	1-124-233-11	ELECT 10uF	20% 16V
C516	1-124-233-11	ELECT 10uF	20% 16V
C517	1-162-977-11	CERAMIC CHIP 0.0018uF	10% 50V
C518	1-162-977-11	CERAMIC CHIP 0.0018uF	10% 50V
C601	1-162-962-11	CERAMIC CHIP 470PF	10% 50V
C602	1-162-962-11	CERAMIC CHIP 470PF	10% 50V
C603	1-162-962-11	CERAMIC CHIP 470PF	10% 50V

Ref. No.	Part No.	Description	Remark
C604	1-162-962-11	CERAMIC CHIP 470PF	10% 50V
C605	1-124-233-11	ELECT 10uF	20% 16V
C606	1-124-233-11	ELECT 10uF	20% 16V
C607	1-124-589-11	ELECT 47uF	20% 16V
C608	1-124-589-11	ELECT 47uF	20% 16V
C609	1-125-837-11	CERAMIC CHIP 1uF	10% 6.3V
C610	1-125-837-11	CERAMIC CHIP 1uF	10% 6.3V
C611	1-124-635-00	ELECT 220uF	20% 6.3V
C701	1-162-962-11	CERAMIC CHIP 470PF	10% 50V
C702	1-162-962-11	CERAMIC CHIP 470PF	10% 50V
C703	1-124-233-11	ELECT 10uF	20% 16V
C704	1-125-837-11	CERAMIC CHIP 1uF	10% 6.3V
C705	1-162-962-11	CERAMIC CHIP 470PF	10% 50V
C706	1-162-962-11	CERAMIC CHIP 470PF	10% 50V
C707	1-125-837-11	CERAMIC CHIP 1uF	10% 6.3V
C708	1-124-233-11	ELECT 10uF	20% 16V
C709	1-162-960-11	CERAMIC CHIP 220PF	10% 50V
C710	1-162-960-11	CERAMIC CHIP 220PF	10% 50V
C711	1-124-635-00	ELECT 220uF	20% 6.3V
C712	1-124-589-11	ELECT 47uF	20% 16V
C713	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C714	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C715	1-124-635-00	ELECT 220uF	20% 6.3V
C716	1-124-635-00	ELECT 220uF	20% 6.3V
C717	1-124-589-11	ELECT 47uF	20% 16V
C718	1-124-589-11	ELECT 47uF	20% 16V
C719	1-125-837-11	CERAMIC CHIP 1uF	10% 6.3V
C720	1-125-837-11	CERAMIC CHIP 1uF	10% 6.3V
C721	1-124-589-11	ELECT 47uF	20% 16V
C722	1-124-635-00	ELECT 220uF	20% 6.3V
C730	1-162-964-11	CERAMIC CHIP 0.001uF	10% 50V (AEP, UK)

< CONNECTOR >

CN101	1-580-907-31	PLUG, CONNECTOR (INPUT CONTROL)	
CN102	1-580-907-31	PLUG, CONNECTOR (OUTPUT CONTROL)	
CN103	1-815-194-11	CONNECTOR, USB (B) (USB)	
CN104	1-778-940-11	JACK 2P (INPUT AUDIO)	
CN105	1-764-593-21	JACK 2P (AUX IN 2)	
CN106	1-764-593-21	JACK 2P (AUX IN 1)	
CN107	1-764-270-21	JACK, STEREO MINIATURE (DIA.3.5) (\odot HEADPHONE)	
CN108	1-778-940-11	JACK 2P (OUTPUT AUDIO)	

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
		< DIODE >		R303	1-216-817-11	METAL CHIP 470	5% 1/10W
D101	8-719-404-50	DIODE MA111-TX		R401	1-216-797-11	METAL CHIP 10	5% 1/10W
D102	8-719-404-50	DIODE MA111-TX		R402	1-216-797-11	METAL CHIP 10	5% 1/10W
D103	8-719-404-50	DIODE MA111-TX		R403	1-216-797-11	METAL CHIP 10	5% 1/10W
D104	8-719-404-50	DIODE MA111-TX		R404	1-216-797-11	METAL CHIP 10	5% 1/10W
		< FERRITE BEAD >		R405	1-216-797-11	METAL CHIP 10	5% 1/10W
FB501	1-414-813-11	FERRITE, EMI (SMD)		R406	1-216-797-11	METAL CHIP 10	5% 1/10W
		< IC >		R407	1-216-797-11	METAL CHIP 10	5% 1/10W
IC1	8-752-926-54	IC CXP83412-054Q		R408	1-216-797-11	METAL CHIP 10	5% 1/10W
IC2	8-759-444-86	IC BA8272F-E2		R409	1-216-797-11	METAL CHIP 10	5% 1/10W
IC3	8-759-713-24	IC PCM2702E/2K		R410	1-216-797-11	METAL CHIP 10	5% 1/10W
IC4	8-759-344-00	IC NJM2100E (TE2)		R501	1-216-857-11	METAL CHIP 1M	5% 1/10W
IC5	8-759-344-00	IC NJM2100E (TE2)		R502	1-216-823-11	METAL CHIP 1.5K	5% 1/10W
IC6	8-759-344-00	IC NJM2100E (TE2)		R503	1-414-813-11	FERRITE, EMI (SMD)	
IC7	8-759-052-53	IC LA4536M		R504	1-414-813-11	FERRITE, EMI (SMD)	
IC8	8-759-682-69	IC XC61AN4302MR		R505	1-414-813-11	FERRITE, EMI (SMD)	
		< COIL >		R506	1-216-834-11	METAL CHIP 12K	5% 1/10W
L101	1-421-961-11	COIL, CHOKE 450uH		R507	1-216-828-11	METAL CHIP 3.9K	5% 1/10W
L102	1-410-525-11	INDUCTOR, MICRO 220uH		R508	1-216-834-11	METAL CHIP 12K	5% 1/10W
L901	1-412-006-31	CHIP, INDUCTOR 10uH		R509	1-216-809-11	METAL CHIP 100	5% 1/10W
L902	1-412-006-31	CHIP, INDUCTOR 10uH		R510	1-216-834-11	METAL CHIP 12K	5% 1/10W
		< TRANSISTOR >		R511	1-216-828-11	METAL CHIP 3.9K	5% 1/10W
Q101	8-729-920-85	TRANSISTOR 2SD1664-T100-QR		R512	1-216-834-11	METAL CHIP 12K	5% 1/10W
Q102	8-729-920-85	TRANSISTOR 2SD1664-T100-QR		R513	1-216-809-11	METAL CHIP 100	5% 1/10W
Q103	8-729-901-05	TRANSISTOR DTA124EK-T146		R514	1-216-821-11	METAL CHIP 1K	5% 1/10W
Q104	8-729-027-43	TRANSISTOR DTC114EK-T146		R601	1-216-821-11	METAL CHIP 1K	5% 1/10W
Q201	8-729-901-81	TRANSISTOR 2SC2412K-T-146-R		R602	1-216-829-11	METAL CHIP 4.7K	5% 1/10W
Q202	1-801-806-11	TRANSISTOR DTC144EK-T146		R603	1-218-867-11	METAL CHIP 6.8K	0.5% 1/10W
Q203	8-729-027-43	TRANSISTOR DTC114EK-T146		R604	1-216-809-11	METAL CHIP 100	5% 1/10W
Q301	8-729-106-60	TRANSISTOR 2SB1132-T101-QR		R605	1-216-829-11	METAL CHIP 4.7K	5% 1/10W
Q302	8-729-920-85	TRANSISTOR 2SD1664-T100-QR		R606	1-216-829-11	METAL CHIP 4.7K	5% 1/10W
Q303	8-729-027-43	TRANSISTOR DTC114EK-T146		R607	1-216-821-11	METAL CHIP 1K	5% 1/10W
Q402	8-729-027-38	TRANSISTOR DTA144EK-T146		R608	1-216-829-11	METAL CHIP 4.7K	5% 1/10W
Q801	8-729-027-38	TRANSISTOR DTA144EK-T146		R609	1-218-867-11	METAL CHIP 6.8K	0.5% 1/10W
Q802	8-729-027-43	TRANSISTOR DTC114EK-T146		R610	1-216-809-11	METAL CHIP 100	5% 1/10W
Q803	8-729-027-38	TRANSISTOR DTA144EK-T146		R611	1-216-833-11	METAL CHIP 10K	5% 1/10W
Q804	8-729-027-43	TRANSISTOR DTC114EK-T146		R612	1-216-833-11	METAL CHIP 10K	5% 1/10W
Q901	8-729-027-43	TRANSISTOR DTC114EK-T146		R613	1-216-833-11	METAL CHIP 10K	5% 1/10W
Q902	8-729-901-04	TRANSISTOR DTA114EK-T146		R614	1-216-833-11	METAL CHIP 10K	5% 1/10W
Q903	8-729-920-21	TRANSISTOR DTC314TK-T-146		R701	1-216-821-11	METAL CHIP 1K	5% 1/10W
Q904	8-729-920-21	TRANSISTOR DTC314TK-T-146		R702	1-216-829-11	METAL CHIP 4.7K	5% 1/10W
		< RESISTOR/FRRITE BEAD >		R703	1-216-824-11	METAL CHIP 1.8K	5% 1/10W
R101	1-216-833-11	METAL CHIP 10K	5% 1/10W	R704	1-216-809-11	METAL CHIP 100	5% 1/10W
R102	1-216-829-11	METAL CHIP 4.7K	5% 1/10W	R705	1-216-829-11	METAL CHIP 4.7K	5% 1/10W
R103	1-216-821-11	METAL CHIP 1K	5% 1/10W	R706	1-216-829-11	METAL CHIP 4.7K	5% 1/10W
R143	1-216-841-11	METAL CHIP 47K	5% 1/10W	R707	1-216-821-11	METAL CHIP 1K	5% 1/10W
R201	1-216-821-11	METAL CHIP 1K	5% 1/10W	R708	1-216-829-11	METAL CHIP 4.7K	5% 1/10W
R202	1-216-821-11	METAL CHIP 1K	5% 1/10W	R709	1-216-824-11	METAL CHIP 1.8K	5% 1/10W
R203	1-216-841-11	METAL CHIP 47K	5% 1/10W	R710	1-216-809-11	METAL CHIP 100	5% 1/10W
R204	1-216-841-11	METAL CHIP 47K	5% 1/10W	R711	1-216-829-11	METAL CHIP 4.7K	5% 1/10W
R301	1-216-829-11	METAL CHIP 4.7K	5% 1/10W	R712	1-216-829-11	METAL CHIP 4.7K	5% 1/10W
R302	1-216-817-11	METAL CHIP 470	5% 1/10W	R713	1-216-809-11	METAL CHIP 100	5% 1/10W
				R714	1-216-817-11	METAL CHIP 470	5% 1/10W
				R715	1-216-789-11	METAL CHIP 2.2	5% 1/10W
				R716	1-216-789-11	METAL CHIP 2.2	5% 1/10W
				R717	1-216-864-11	SHORT	0
				R718	1-216-864-11	SHORT	0
				R719	1-216-833-11	METAL CHIP 10K	5% 1/10W

MAIN

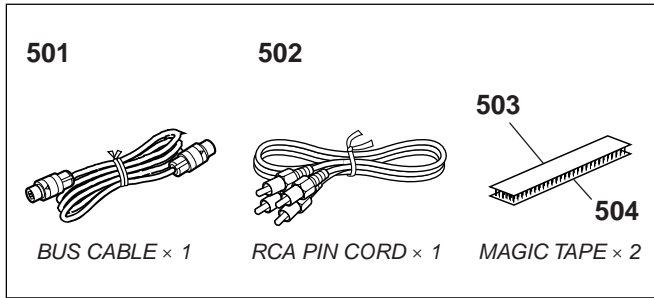
Ref. No.	Part No.	Description	Remark
R720	1-216-833-11	METAL CHIP 10K 5%	1/10W
R721	1-216-833-11	METAL CHIP 10K 5%	1/10W
R722	1-216-833-11	METAL CHIP 10K 5%	1/16W
R903	1-216-833-11	METAL CHIP 10K 5%	1/16W
R904	1-216-833-11	METAL CHIP 10K 5%	1/16W
< VARIABLE RESISTOR >			
RV101	1-227-432-11	RES, VAR (VOL)	
< RELAY >			
RY101	1-515-762-11	RELAY	
RY102	1-515-762-11	RELAY	
RY103	1-515-762-11	RELAY	
< VIBRATOR >			
X101	1-795-004-21	VIBRATOR, CERAMIC (10MHZ)	
X102	1-567-865-11	VIBRATOR, CRYSTAL (12MHZ)	
< DIODE >			
ZD101	8-719-069-55	DIODE UDZSTE-175.6B	
ZD102	8-719-069-56	DIODE UDZSTE-176.2B	
ZD103	8-719-056-93	DIODE UDZ-TE-17-18B	
ZD104	8-719-056-84	DIODE UDZSTE-177.5B	
ZD301	8-719-056-77	DIODE UDZ-TE-17-3.9B	
ZD401	8-719-069-56	DIODE UDZSTE-176.2B	
ZD402	8-719-069-56	DIODE UDZSTE-176.2B	
ZD403	8-719-069-56	DIODE UDZSTE-176.2B	
ZD404	8-719-069-56	DIODE UDZSTE-176.2B	
ZD405	8-719-069-56	DIODE UDZSTE-176.2B	
ZD406	8-719-069-56	DIODE UDZSTE-176.2B	
ZD407	8-719-069-56	DIODE UDZSTE-176.2B	
ZD408	8-719-069-56	DIODE UDZSTE-176.2B	
ZD409	8-719-069-56	DIODE UDZSTE-176.2B	
ZD410	8-719-069-56	DIODE UDZSTE-176.2B	
ZD601	8-719-056-77	DIODE UDZ-TE-17-3.9B	
ZD602	8-719-056-77	DIODE UDZ-TE-17-3.9B	
ZD603	8-719-056-77	DIODE UDZ-TE-17-3.9B	
ZD604	8-719-056-77	DIODE UDZ-TE-17-3.9B	
ZD701	8-719-056-77	DIODE UDZ-TE-17-3.9B	
ZD702	8-719-056-77	DIODE UDZ-TE-17-3.9B	
ZD703	8-719-056-77	DIODE UDZ-TE-17-3.9B	
ZD901	8-719-056-77	DIODE UDZ-TE-17-3.9B	
ZD902	8-719-056-77	DIODE UDZ-TE-17-3.9B	

Ref. No.	Part No.	Description	Remark
ACCESSORIES			

	3-232-755-12	MANUAL, INSTRUCTION (ENGLISH, FRENCH, ITALIAN, GERMAN, DUTCH, PORTUGUESE, RUSSIAN, SWEDISH, SPANISH, TRADITIONAL CHINESE)	

PARTS FOR INSTALLATION AND CONNECTION			

501	1-590-519-72	CORD (WITH CONNECTOR) (BUS)	
502	1-696-287-41	CORD, CONNECTION (RCA)	
503	3-232-468-01	TAPE, MAGIC	
504	3-233-471-01	TAPE(B), MAGIC	



MEMO

