NW-MS6

SERVICE MANUAL

Chinese Model

Ver 1.0 2001.06

SPECIFICATIONS

Recording time (when using the supplied 32MB "MagicGate Memory Stick")

Approx. 30 min. (132kbps)
Approx. 40 min. (105kbps)
Approx. 60 min. (66kbps)

Sampling frequency response

44.1kHz

Recording format

ATRAC3

Frequency response

20 to 20,000 Hz (single signal measurement)

Output

Headphone/earphone: stereo mini-jack

Signal-to-noise ratio (S/N)

More than 80dB (excluding 66 kbps)

Dynamic range

More than 85dB (excluding 66 kbps)

Operating temperature

5˚C to 35˚C (-41˚F to 95˚F)

Power source

- DC IN 1.2V (rechargeable Ni-Cd battery NC-6WM)
- Power for USB (supplies from the computer through supplied USB cable)

Battery life

Approx. 4 hours (continuous playback)

Dimensions (approx.)

36 × 81.4 × 14.1 mm (1 7/16 × 3 1/4 × 9/16 inches) (w/h/d, projecting parts not included)

Mass (approx.)

67g (2.4 oz) (includes "Memory Stick" and battery NC-6WM)

Supplied accessories

32MB "MagicGate Memory Stick" (1)
Rechargeable battery (1)
Battery charger (1)
Earphones (1)
USB cable (1)
"Memory Stick" storage case (1)
Rechargeable battery carrying case (1)
CD-ROM (OpenMG Jukebox installation disc) (1)
NW-MS6 Operating Instructions (1)
OpenMG Jukebox Operating Instructions (1)

Design and specifications are subject to change without notice.

PORTABLE MEMORY STICK AUDIO PLAYER

9-873-180-01
2001F0500-1

Sony Corporation
Personal Audio Company
Shinagawa Tec Service Manual Production Group

SONY®

TABLE OF CONTENTS

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ 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.

Other features

- Compact size, light weight.
- Skip-proof: you can enjoy uninterrupted enjoyment of music during physical activities such as jogging or commuting.
- Approximately 4 hours of continuous playback with a rechargeable nickel-cadmium battery.
- Recordable time: up to 30 min., 40 min., 60 min.**, on the supplied 32MB “MagicGate Memory Stick.”
- Backlight LCD screen: song titles and artist names can be displayed.
- High speed data transfer using the supplied USB cable.
- OpenMG Jukebox software enables you to record compact discs using the ATRAC3 format (high sound quality, high compression) to the hard drive.

* The copyright protection technology of Network Walkman conforms to the SDMI (Secure Digital Music Initiative) specifications.
**Differs according to the bit rate when recording. In this case, the figures for the recordable time are when recording on a 32MB “MagicGate Memory Stick” at 132kbps, 105kbps, and 66kbps.

NOTES:
- The recorded music is limited to private use only. Use of the music beyond this limit requires permission of the copyright holders.
- Sony is not responsible for music files that are not saved on your computer due to unsuccessful recording from CD or music downloading.

Notes on chip component replacement

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

Flexible Circuit Board Repairing

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

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.

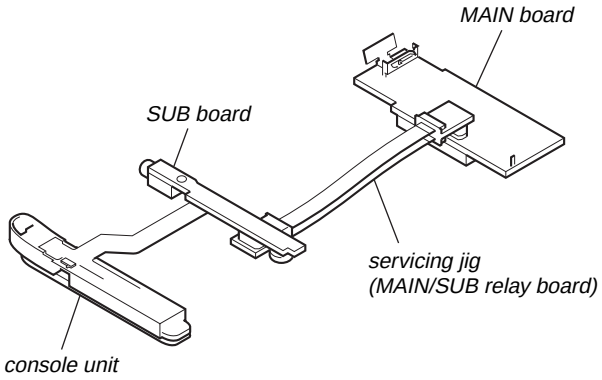
- Unleaded solder melts at a temperature about 40 ˚C higher than ordinary solder.
  Ordinary soldering irons can be used but the iron tip has to be applied to the solder joint for a slightly longer time.
  Soldering irons using a temperature regulator should be set to about 350 ˚C .
  Caution: The printed 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.

SECTION 1
SERVICING NOTES

- **NOTE FOR REPLACING THE EEPROM (IC6002)**
  In case of replacing the EEPROM (IC6002) when repairing this set, it is necessary to write the setting for destination.
  When replacing the EEPROM (IC6002), write the setting for destination, referring to "4. TEST MODE, Items to Check in the Test Mode, 3-2. Writing Destination".

- Replacement of MBM29LV400BC-90PBT (IC5000), HY62UF16201ALLF (IC5600), CXD9534BGG (IC7001) and CXD1859GA (IC8000) used in this set requires a special tool.

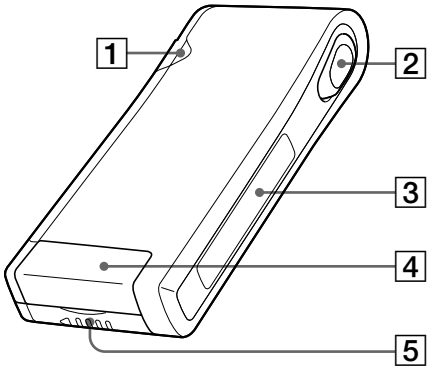
- To check the operation when the MAIN board and SUB board are removed, check it after connecting CN100 on the MAIN board and CN200 on the SUB board with the servicing jig (relay board between the MAIN board and SUB board) as shown below.



Looking at the controls

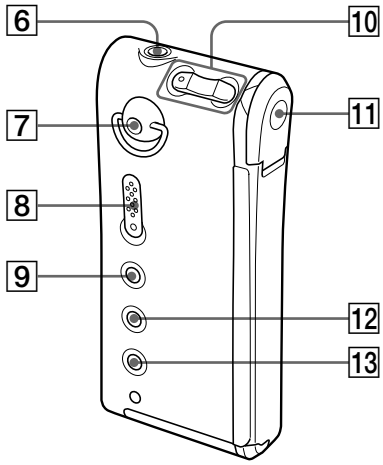
Network Walkman

(front)



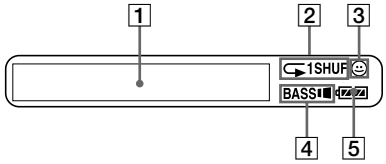
1 Access lamp (page 9)
2 Seesaw key (page 11-14, 16-22)
3 Display (page 12, 15)
4 Memory Stick slot (page 9, 11)
5 Battery compartment (page 8)

(rear)



6 ∩ (Headphones/earphones) jack (page 11)
7 Hole for attaching the strap (The strap is not supplied)
8 HOLD switch (page 16)
9 MEGA BASS/AVLS button (page 14)
10 VOLUME +/– buttons (page 11, 16)
11 Dedicated USB jack (page 9)
12 MENU button (page 13, 16-22)
13 DISPLAY button (page 12, 15)

Display

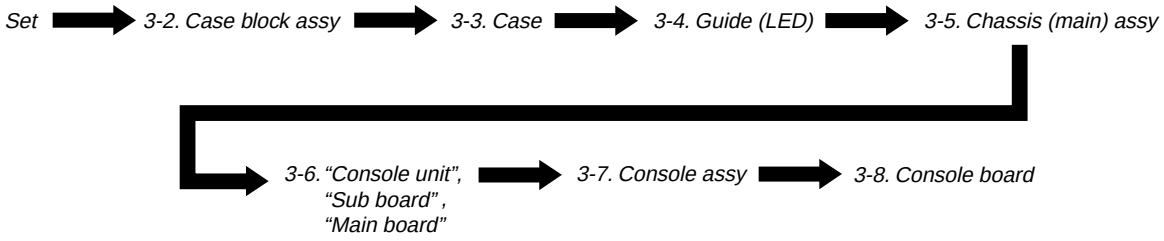


1 Text/graphic information display (page 15)
2 Playback mode indication (page 13)
3 AVLS indication (page 14)
4 MEGA BASS indication (page 14)
5 Battery remain indication (page 8)

SECTION 3
DISASSEMBLY

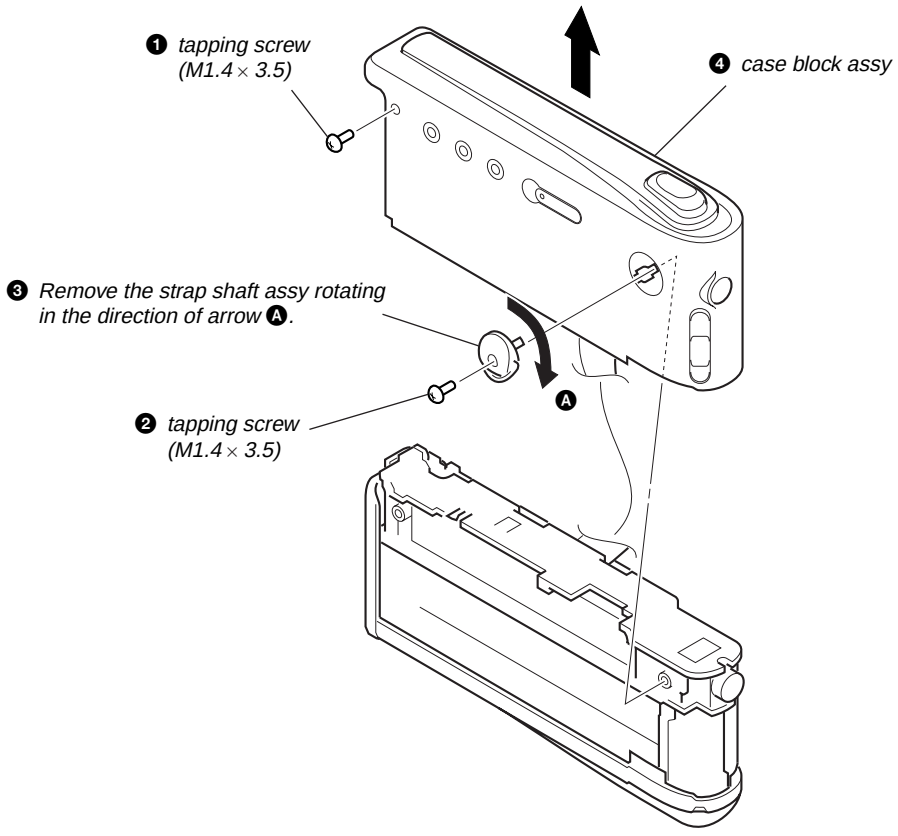
• This set can be disassembled in the order shown below.

3-1. DISASSEMBLY FLOW

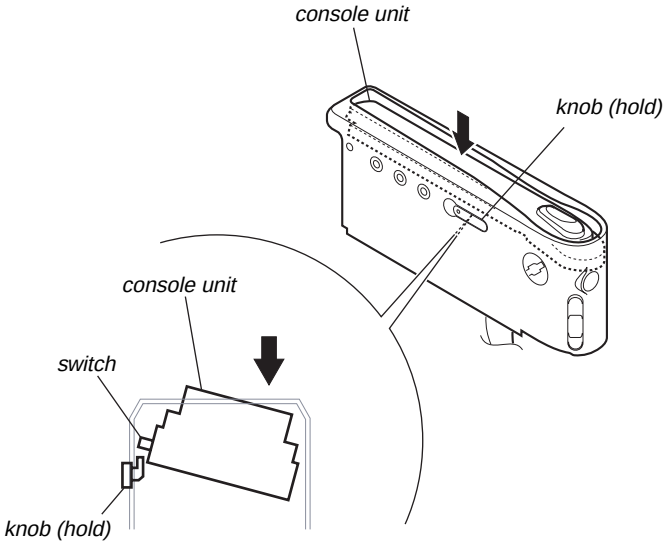


Note: Follow the disassembly procedure in the numerical order given.

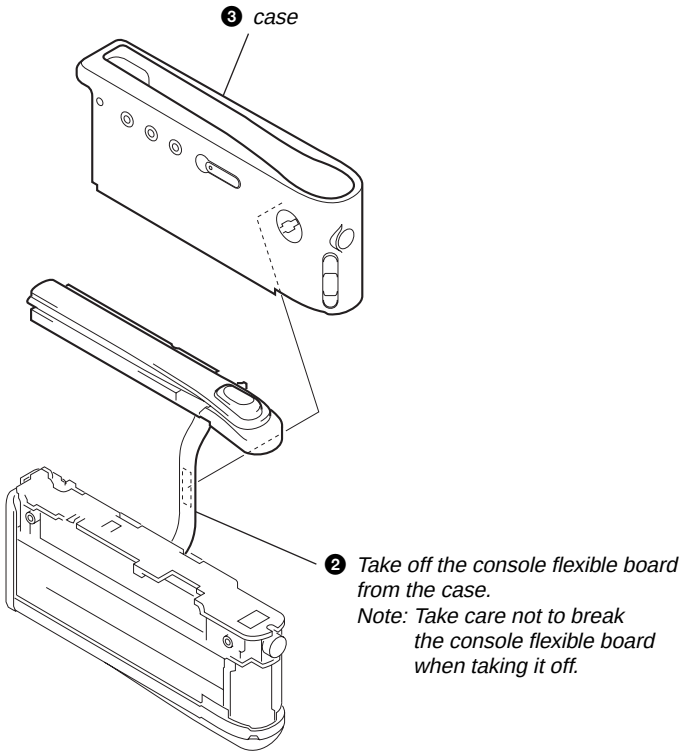
3-2. CASE BLOCK ASSY



3-3. CASE

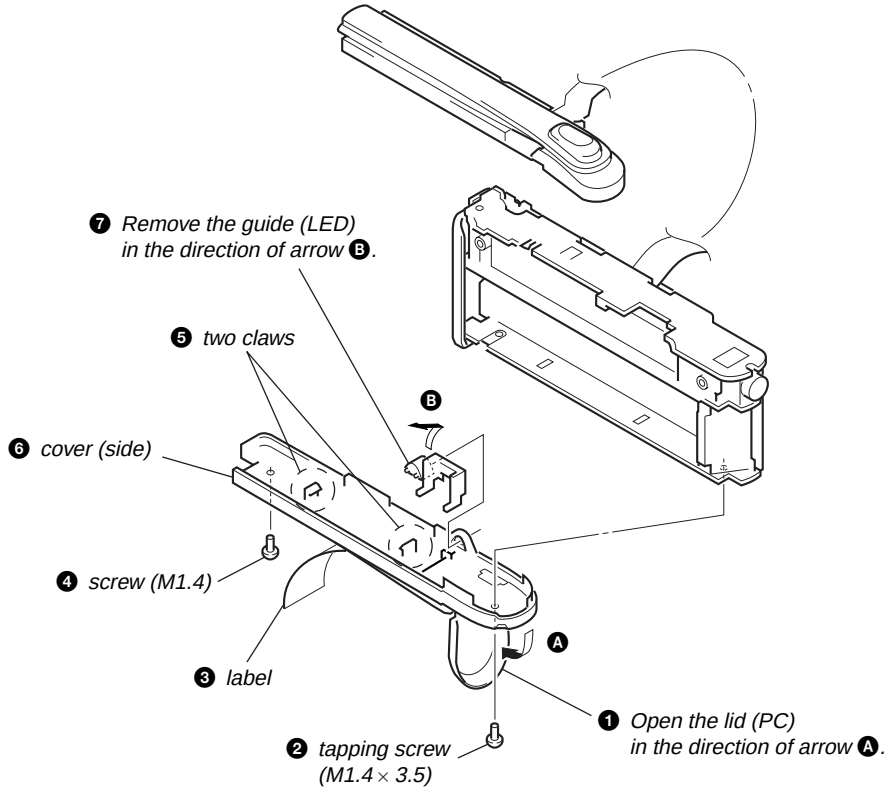


❶ *Inclining the console unit in the direction of arrow, remove the switch from the knob (hold).*

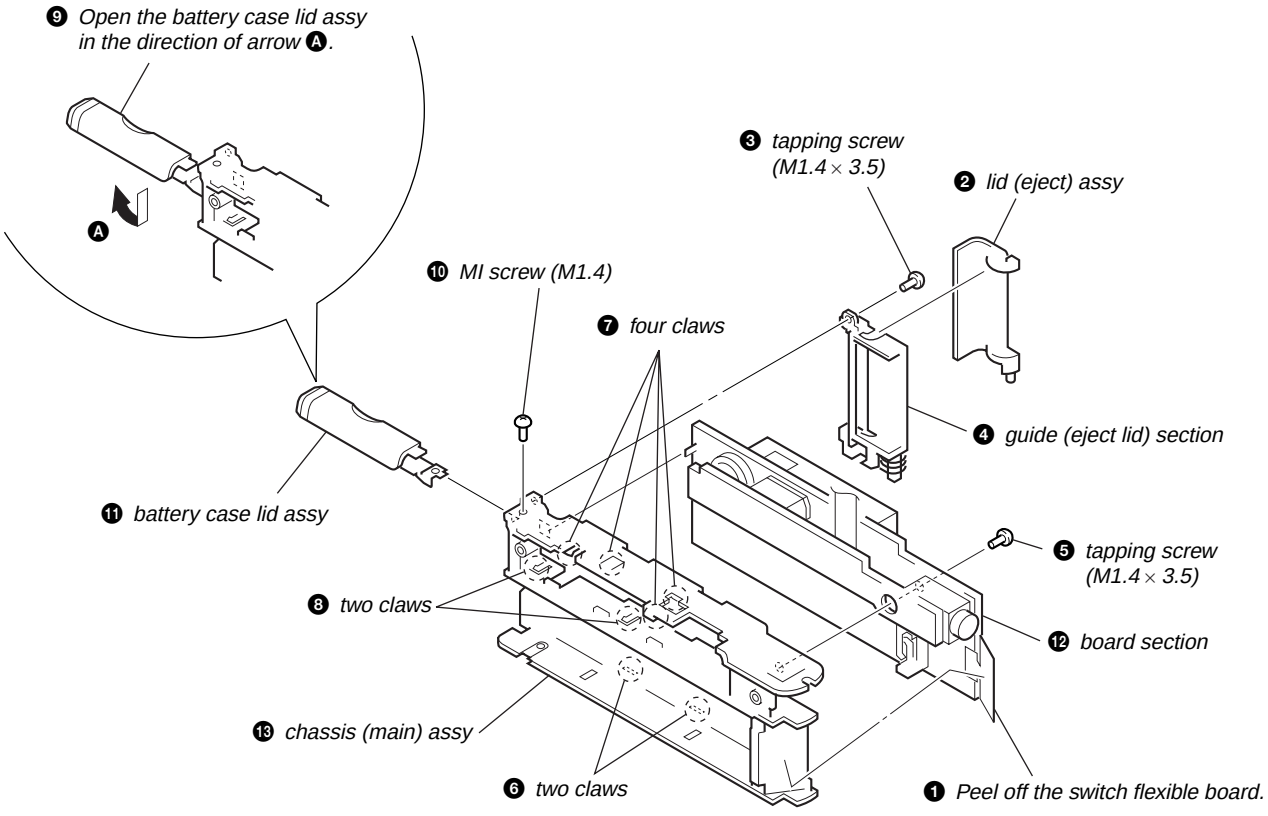


❷ *Take off the console flexible board from the case.*
Note: Take care not to break the console flexible board when taking it off.

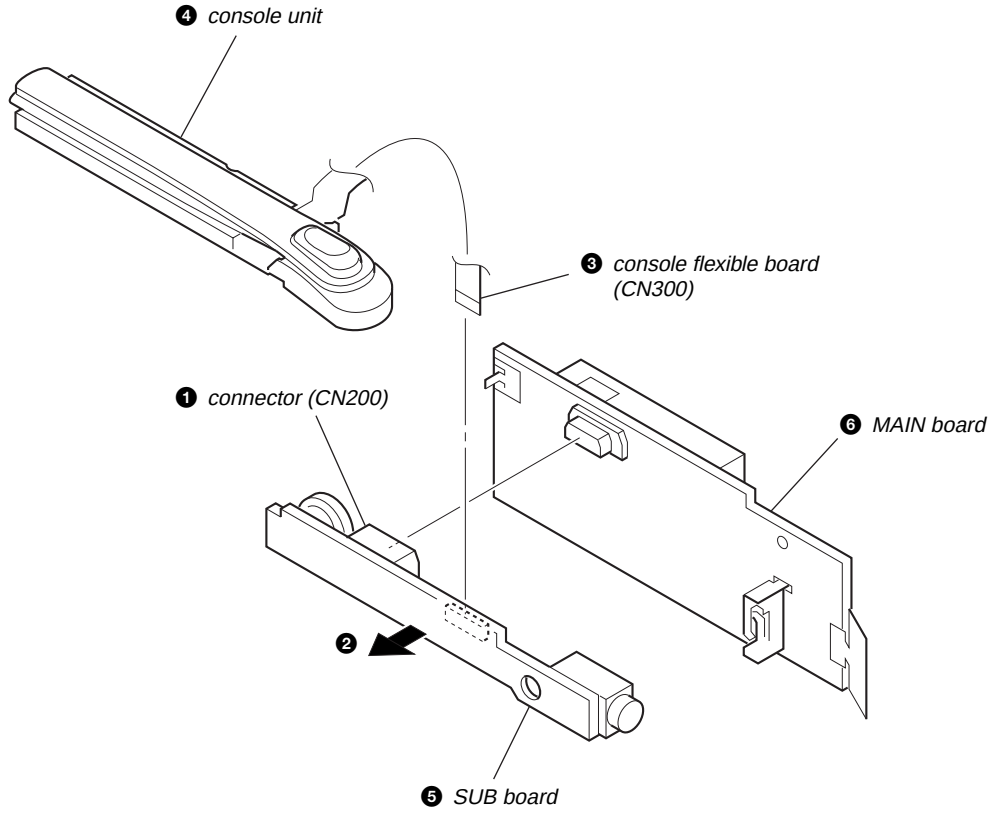
3-4. GUIDE (LED)



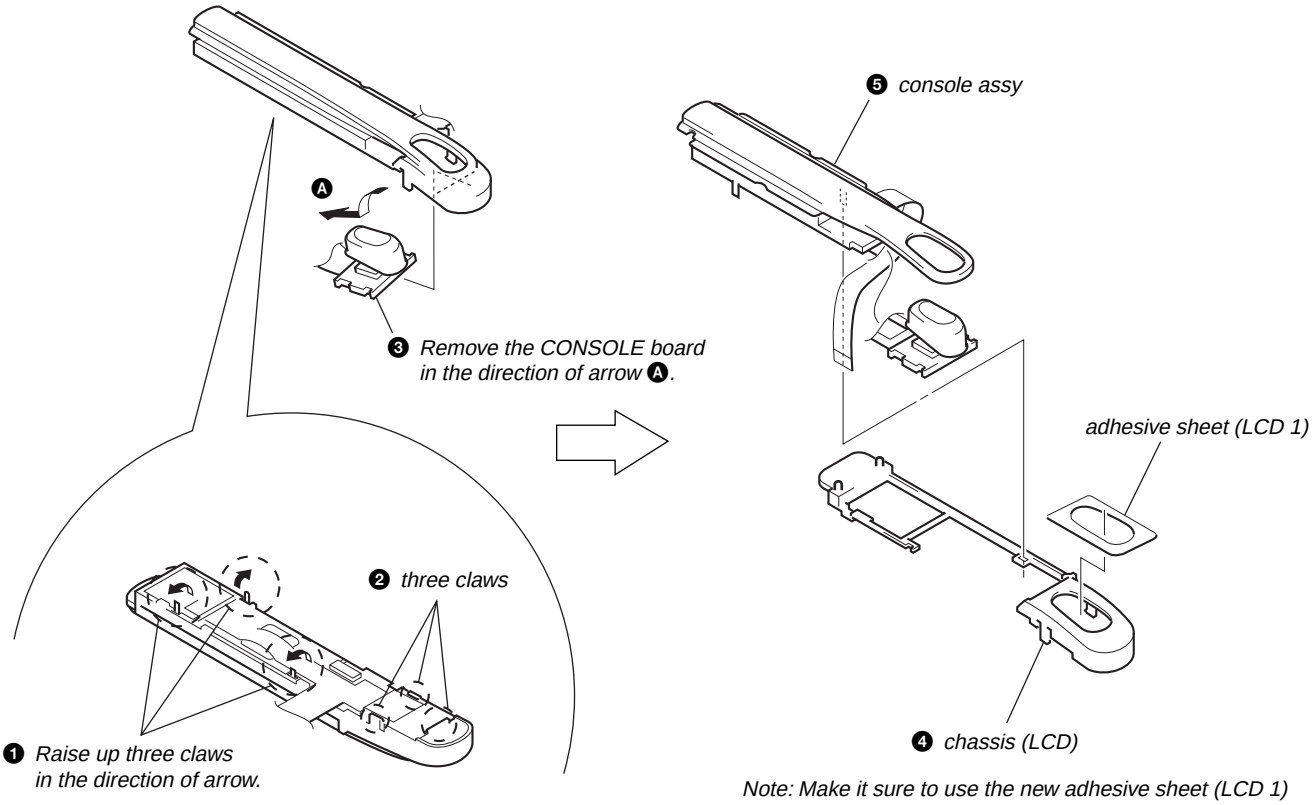
3-5. CHASSIS (MAIN) ASSY



3-6. "CONSOLE UNIT", "SUB BOARD", "MAIN BOARD"

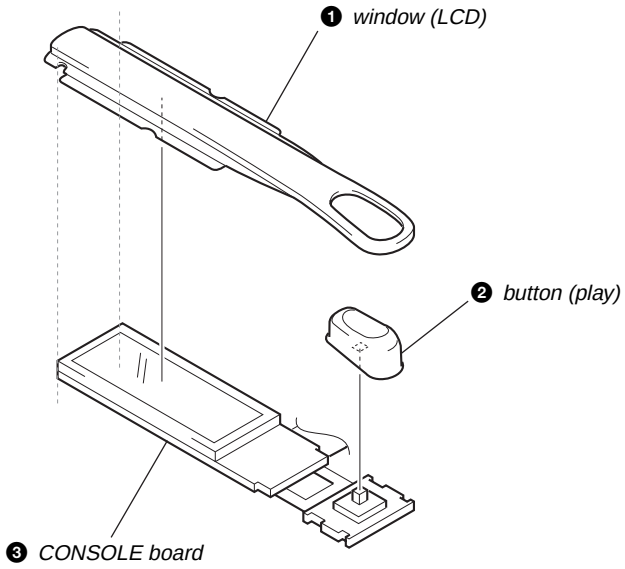


3-7. CONSOLE ASSY



Note: Make it sure to use the new adhesive sheet (LCD 1) when the console assy is installed.

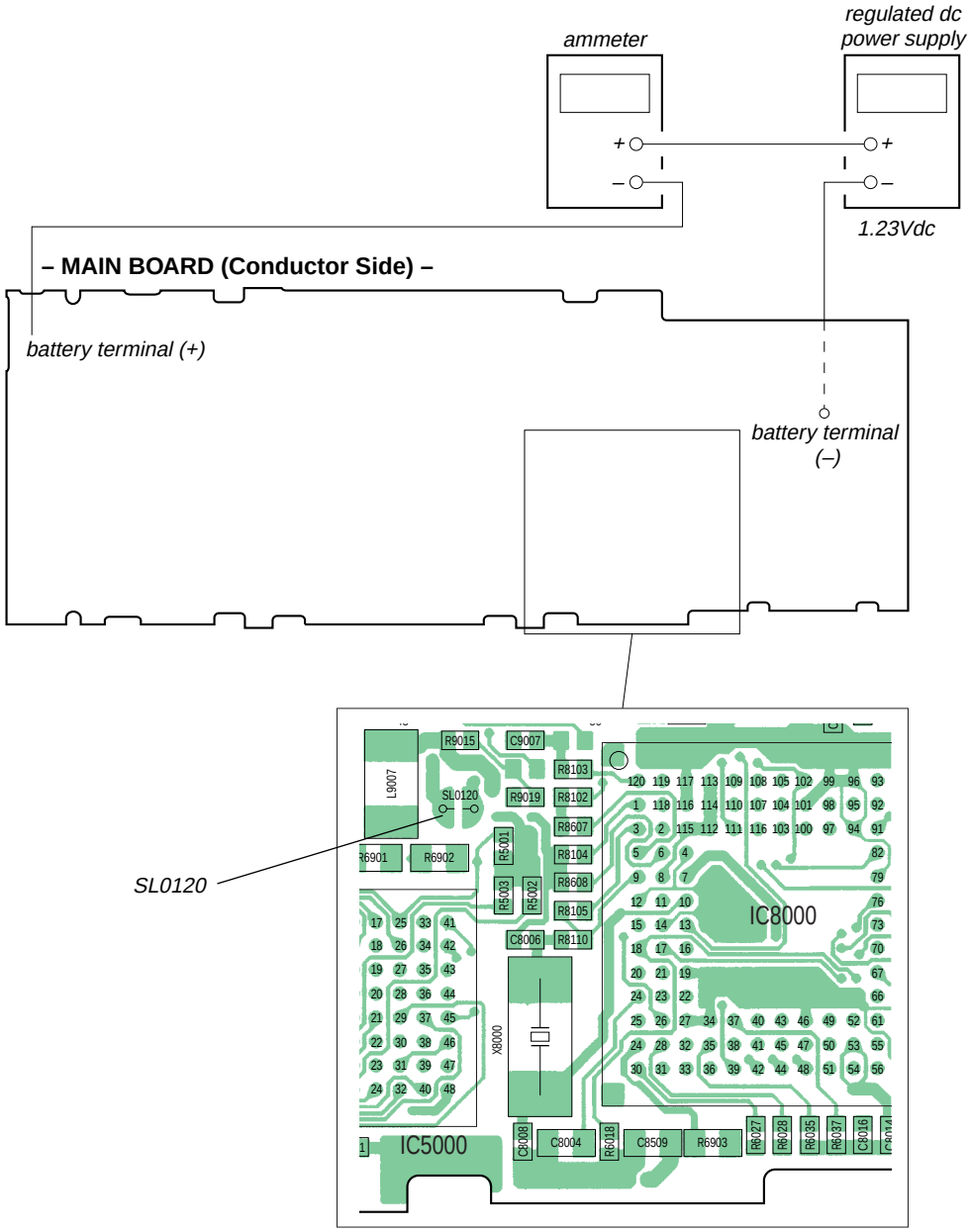
3-8. CONSOLE BOARD



SECTION 4
TEST MODE

[Preparation]

Checking consumed electric current is one of the items to check. Connect an ammeter before setting the test mode.
(Refer to the following figure)



[Setting the Test Mode]

There are following two methods of entering the test mode.

Method 1:

Short the short lands (SL0120) on the MAIN board with a solder bridge, then turn on the power.

Method 2:

Turn on the power with the HOLD switch OFF. If the set is left as it is, the LCD display becomes on, and after for a while, it changes into the sleep status (LCD off). Before the status of the display changes into the sleep status, turn ON the HOLD switch and press ▷□ → MEGA BASS → ▷□ → VOLUME– → ▷□ → VOLUME+ keys in this order.

[Releasing the Test Mode]

There are following two methods of releasing the test mode.

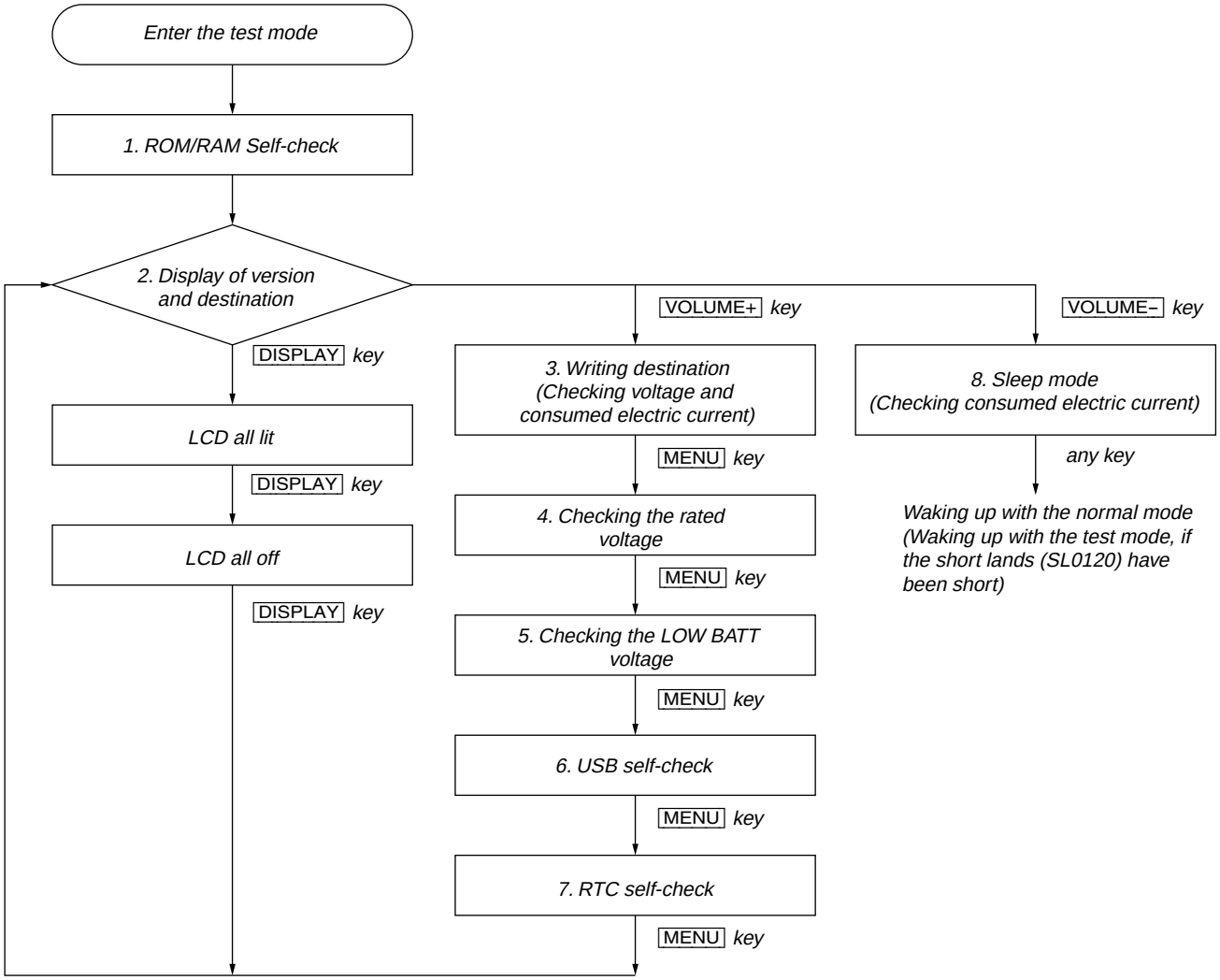
In case of enter the test mode with the method 1:

Turn off the power and open the solder bridge on the short lands (SL0120) on the MAIN board.

In case of enter the test mode with the method 2:

Turn off the power.

[Flow Chart of Operations in the Test Mode]



[Items to Check in the Test Mode]

1. ROM/RAM Self-check

After entering the test mode, ROM/RAM self-check is performed automatically in the first place. By entering the test mode with key input, however, no RAM check is performed.

① **Result of the ROM/RAM check is OK:**
The LCD back light turns on, and version and destination is displayed automatically.

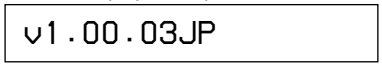
② **Result of the ROM check is NG:**
"BAD ROM" is displayed on the LCD, and the LCD back light keeps blinking.

③ **Result of the RAM check is NG:**
Nothing is displayed on the LCD, and the LCD back light keeps blinking

2. Display of Version and Destination

Version and destination are displayed as follows.

display example



Every time the DISPLAY key is pressed, the display changes as "version and destination → LCD all lit → LCD all off → version and destination...".

Also, pressing the VOLUME+ key changes the mode to writing destination, and if pressing the VOLUME– key, the unit goes into the sleep mode.

3. Writing Destination (Checking Voltage and Consumed Electric Current)

After entering this mode, display of version and destination blinks. (The LCD back light turns off)

3-1. Checking voltage and consumed electric current

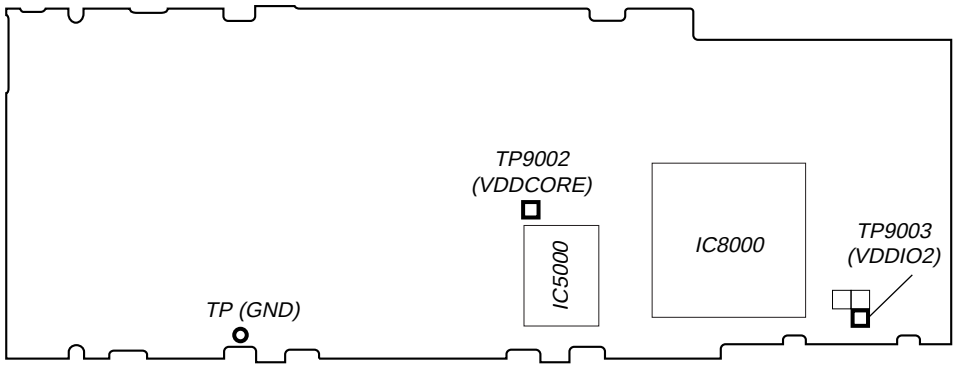
Note: Perform checking voltage and consumed electric current with the LCD back light off.

Specified value :

VDDCORE voltage : 1.8 to 2.0 V (voltage between TP9002 (VDDCORE) and TP (GND))
VDDIO2 voltage : 2.7 to 2.9 V (voltage between TP9003 (VDDIO2) and TP (GND))
Consumed electric current : below 200 mA

Connecting Location:

– MAIN BOARD (Conductor Side) –



3-2. Writing destination

Note: When the displayed destination is correct, writing destination is no needed. But when the EEPROM check is performed, leave the display as it is and press the DISPLAY key to perform this check.
After replacing the EEPROM, make it sure to write destination.

Every time the MEGA BASS key is pressed, the display changes as → "JP → US → EU → X → JP →...".
Select the destination*, and press the DISPLAY key to fix. Then the LCD display changes from blinking to being on. Also at the same time, checking destination written on the EEPROM is performed, and when the result is OK, the LCD back light turns on, and if not, starts blinking.

*) JP : Japanese model
US : US model
EU : AEP, UK, E, Hong Kong, Korean, Chinese models
X : French model

4. Checking the Rated Voltage

Note: Before entering this mode, check that the input voltage is the specified value (1.23 V).

Press the MENU key after "3-2. Writing Destination" to enter this mode. The check is started automatically.

display

```
1.HLFBT >
```

When the result is OK, "1. HLFBT >OK" is displayed on the LCD. And if the result is NG, "1. HLFBT >NG" is displayed.

5. Checking LOW BATT Voltage

Note: Before entering this mode, adjust the input voltage to the LOW BATT voltage value (0.95 V).

Press the MENU key after "4. Checking the rated voltage" to enter this mode. The check is started automatically.

display

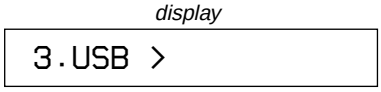
```
2.LOWBT >
```

When the result is OK, "2. LOWBT >OK" is displayed on the LCD. And if the result is NG, "2. LOWBT >NG" is displayed.
Press the MENU key to go to the next USB self-check.

6. USB Self-check

The indication is displayed as below after entering this mode.

display

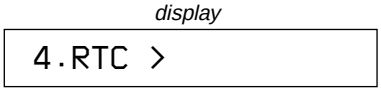


This mode is not used in servicing.
Press the MENU key to go to the next RTC self-check.

7. RTC Self-check

The indication is displayed as below after entering this mode.

display



The check on writing/reading real time clock is performed automatically and when the result is OK, “4. RTC >OK” is displayed on the LCD and LCD back light turns on. If the result is NG, “4. RTC >NG” is displayed and the LCD back light blinks.
Press the MENU key to go back to “2. Display of Version and Destination”.

8. Sleep Mode (Checking Consumed Electric Current)

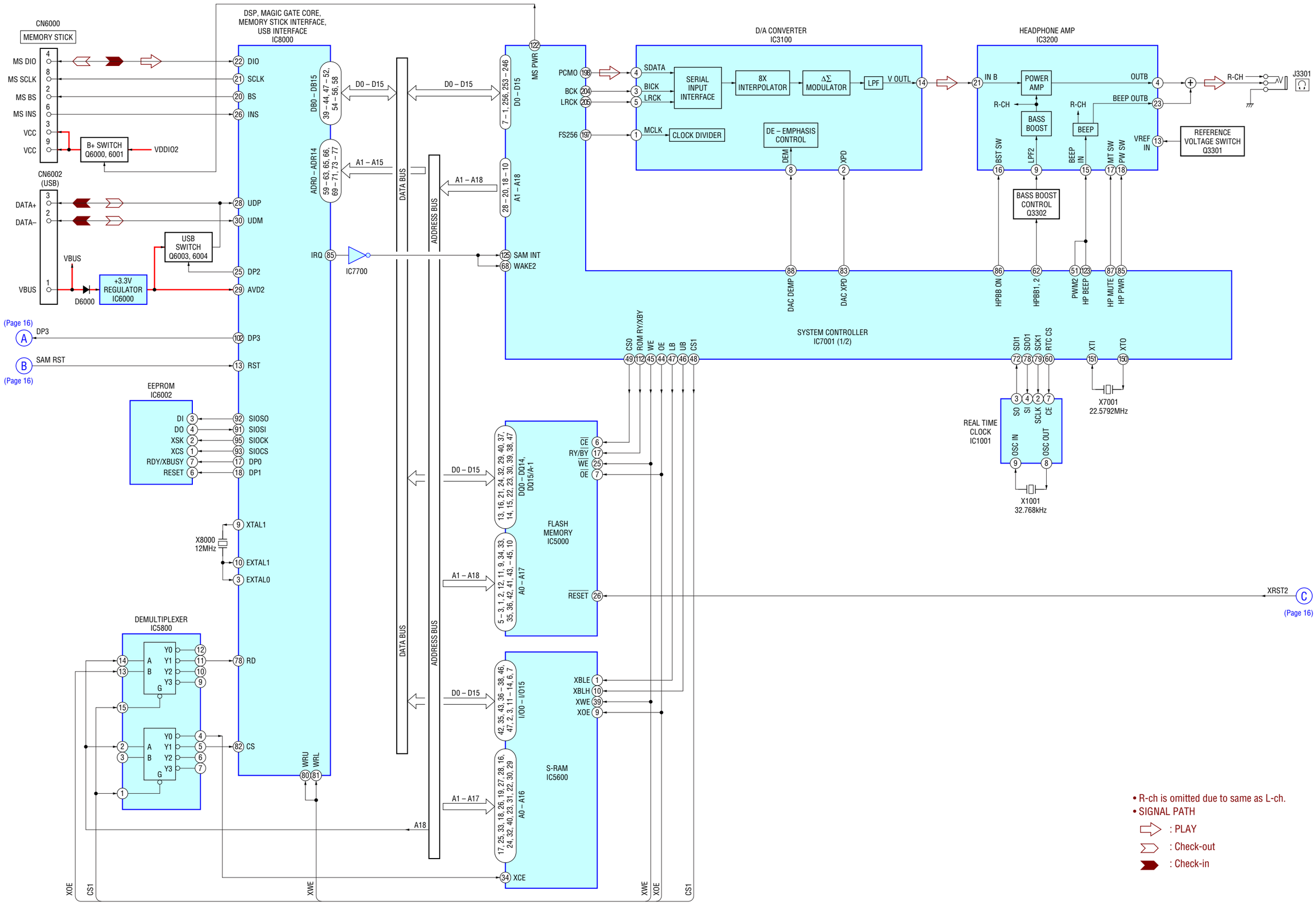
When the VOLUME– key is pressed at “2. Display of Version and Destination”, the unit goes into sleep mode.
Once entering this mode, the LCD turns off and the unit goes into the sleep (standby) status. After being into the sleep status, check that consumed electric current is within the specified value.
Specified value : below 1 mA

The unit is waked up with normal mode with pressing any key. If the short lands (SL0120)) has been short, however, waked up and enters this test mode again.

MEMO

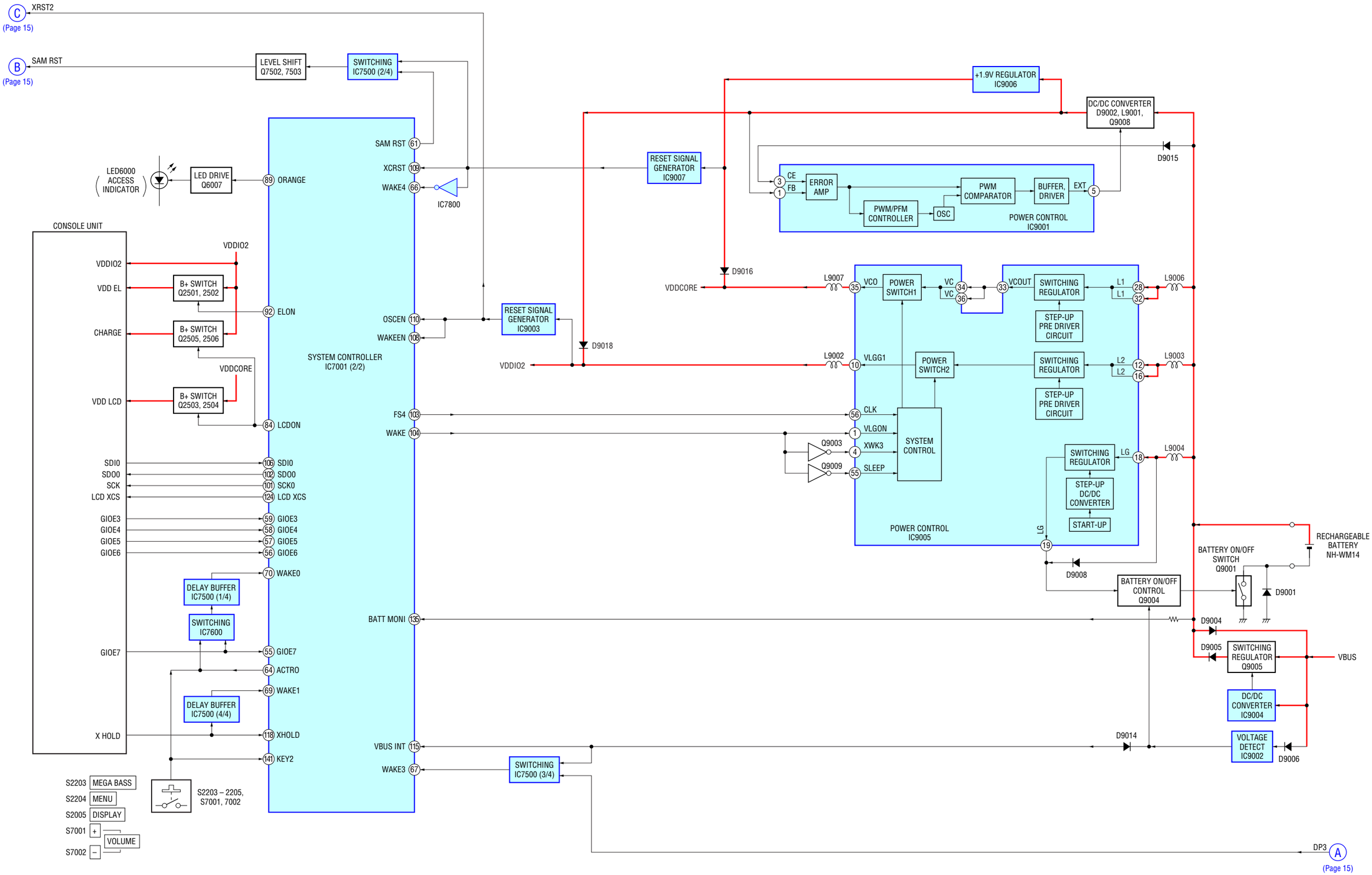
SECTION 5
DIAGRAMS

5-1. BLOCK DIAGRAM – MAIN Section –



- R-ch is omitted due to same as L-ch.
- SIGNAL PATH
  - : PLAY
  - : Check-out
  - : Check-in

5-2. BLOCK DIAGRAM – DISPLAY/POWER SUPPLY Section –



5-3. NOTE FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

Note on Printed Wiring Boards:

- ⚬——— : parts extracted from the component side.
- ——— : parts extracted from the conductor side.
- ▬ : Pattern from the side which enables seeing.

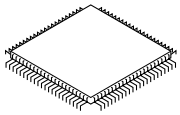
(The other layers' patterns are not indicated.)

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

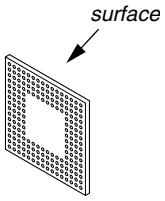
- MAIN board and SUB board are six-layer printed boards. However, the patterns of layers 2 to 5 have not been included in these diagrams.

* Replacement of C5000, IC5600, IC7001and IC8000 used in this set requires a special tool.

- Lead Layouts



Lead layout of conventional IC



CSP (chip size package)

Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. pF: μμF 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.
- % : indicates tolerance.
- ▬ : B+ Line.
- Power voltage is dc 1.2 V and fed with regulated dc power supply from battery terminal.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
- no mark : PLAYBACK
  ( ) : when USB connection
- Voltages are taken with a VOM (Input impedance 10 MΩ). 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.
  ⇨ : PLAYBACK
  Σ : Check-out
  ➡ : Check-in

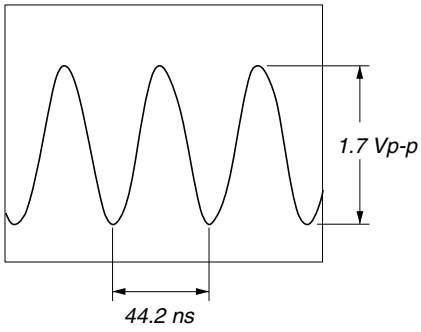
* Replacement of IC5000, IC5600, IC7001and IC8000 used in this set requires a special tool.

- The voltage and waveform of CSP (chip size package) cannot be measured, because its lead layout is different form that of conventional IC.

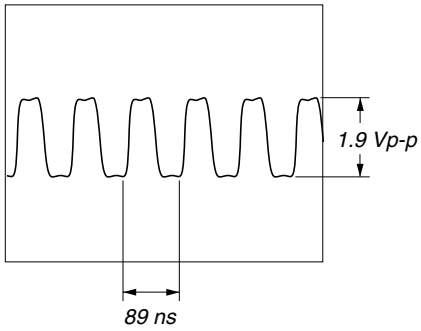
• **Waveforms**

– MAIN board –

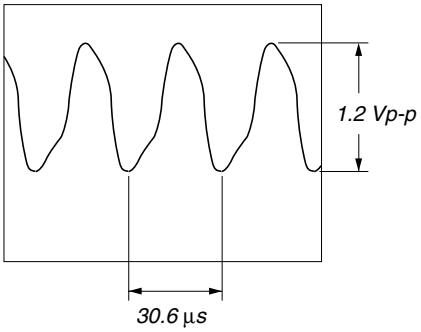
❶ IC7001 ⑲ (XTO)
500 mV/DIV, 20 ns/DIV



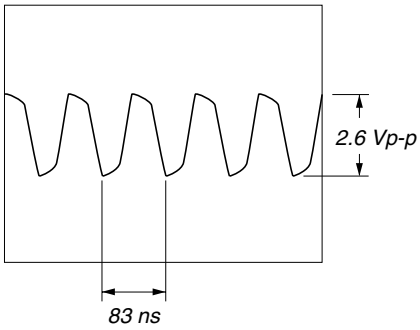
❷ IC7001 ⑰ (FS256)
500 mV/DIV, 50 ns/DIV



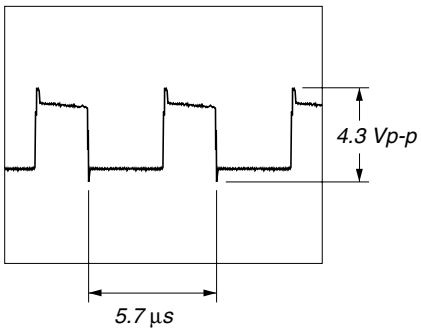
❸ IC1001 ⑧ (OSCOUT)
500 mV/DIV, 10 µs/DIV



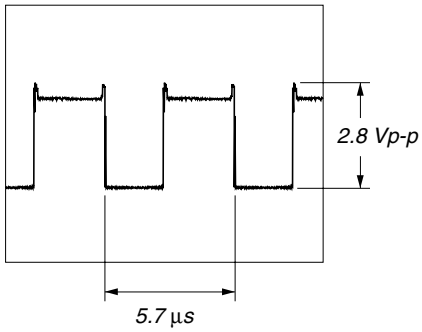
❹ IC8000 ⑨ (XTAL1)
1 V/DIV, 50 ns/DIV



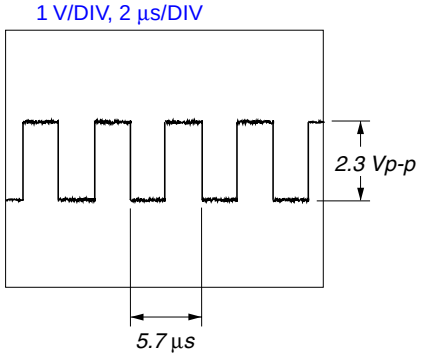
❺ IC9005 ⑫, ⑯ (L2)
2 V/DIV, 2 µs/DIV



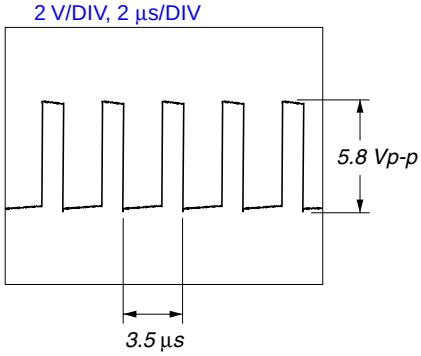
❻ IC9005 ㉘, ㉜ (L1)
2 V/DIV, 2 µs/DIV



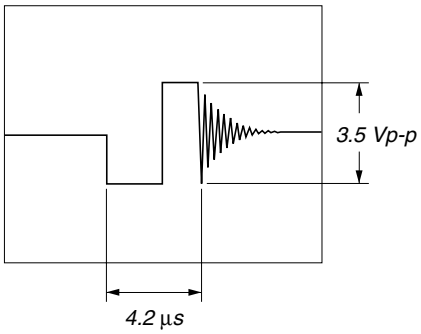
❼ IC9005 ㊻ (CLK)
1 V/DIV, 2 µs/DIV



❽ Q9005 (drain) (USB connection)
2 V/DIV, 2 µs/DIV

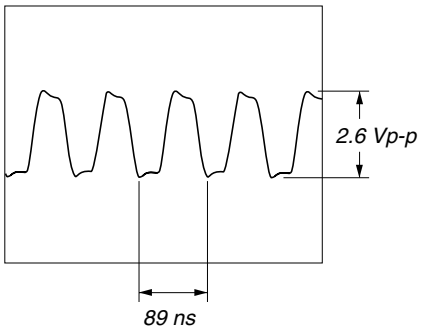


❾ Q9008 (drain)
2 V/DIV, 2 µs/DIV

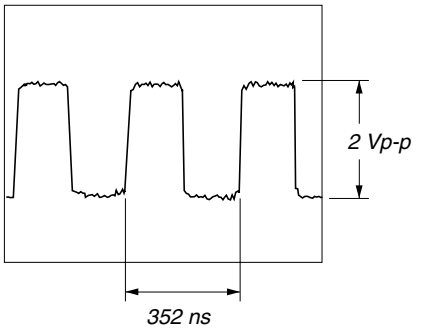


– SUB board –

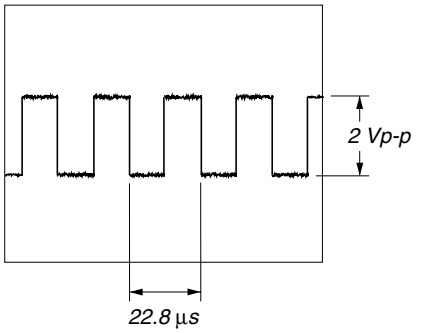
⓫ IC3100 ① (MCLK)
1 V/DIV, 50 ns/DIV



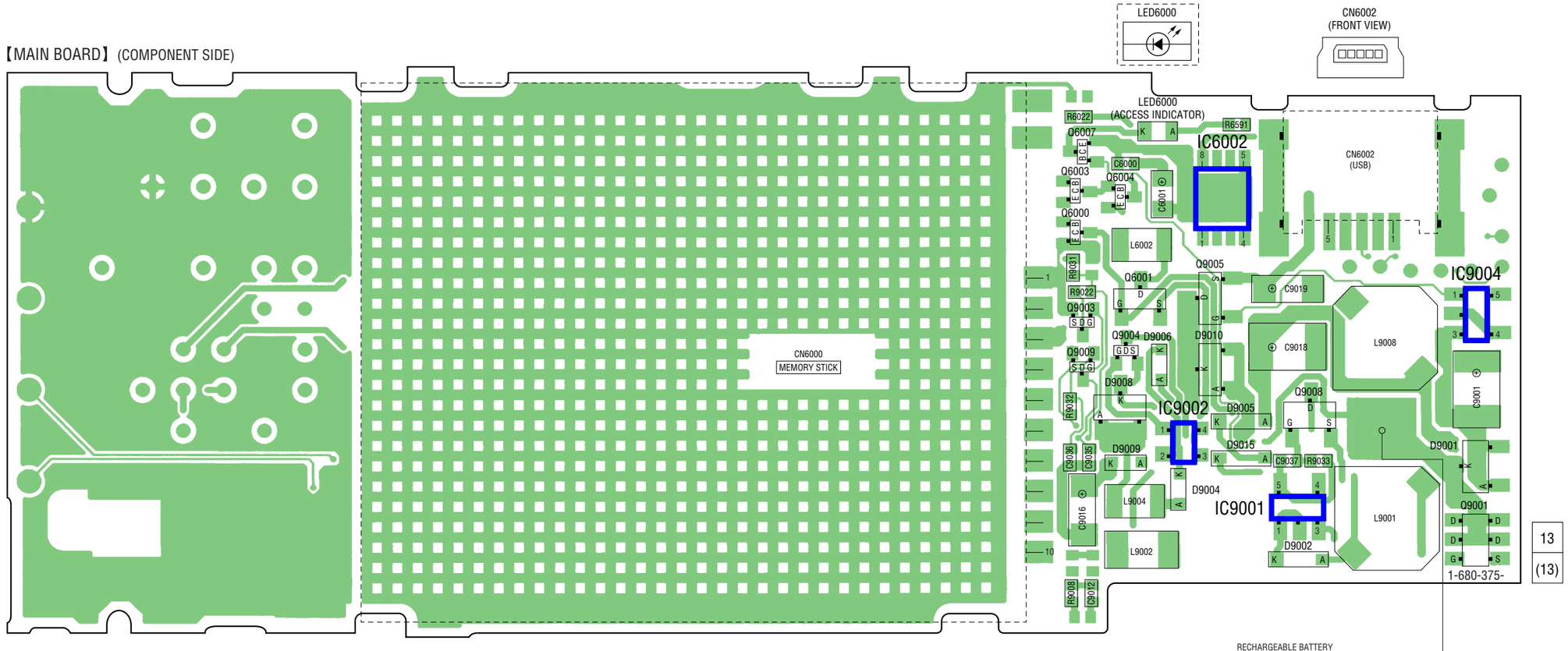
⓬ IC3100 ③ (BICK)
1 V/DIV, 200 ns/DIV



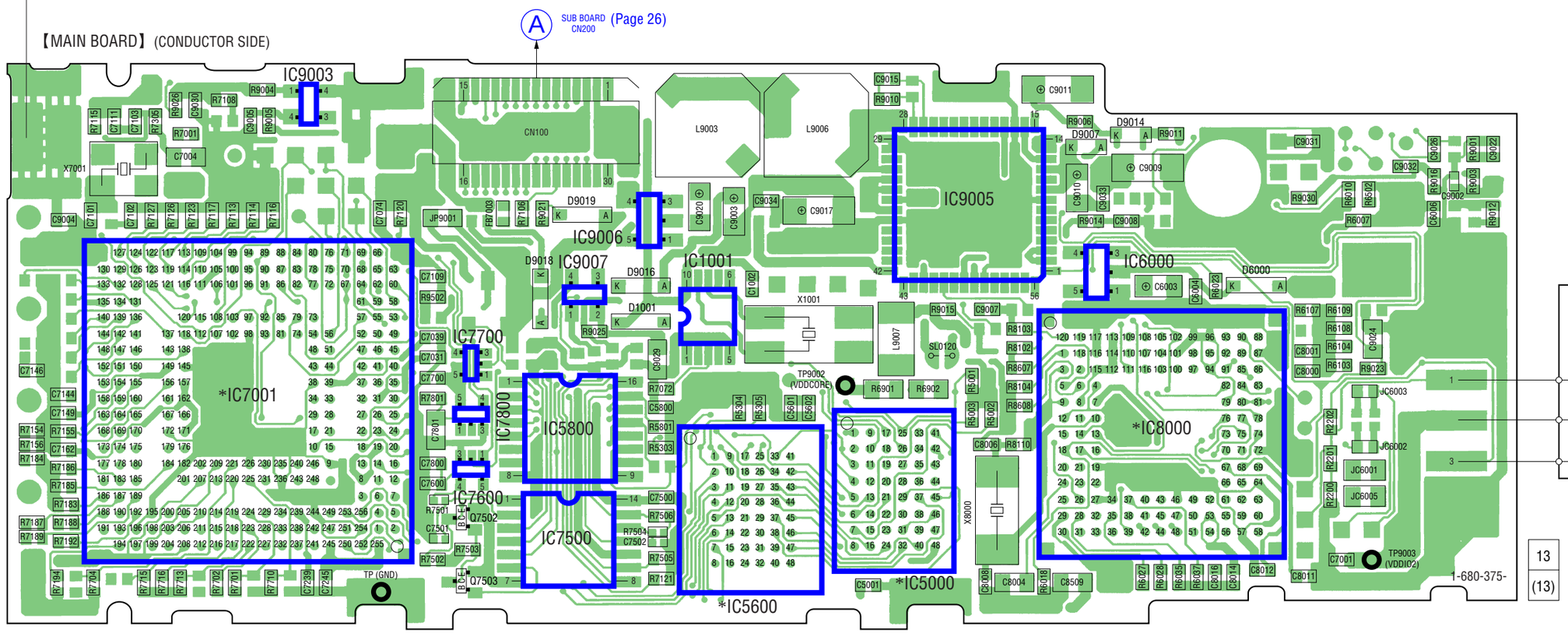
⓭ IC3100 ⑤ (LRCK)
1 V/DIV, 10 µs/DIV



【MAIN BOARD】(COMPONENT SIDE)



【MAIN BOARD】(CONDUCTOR SIDE)

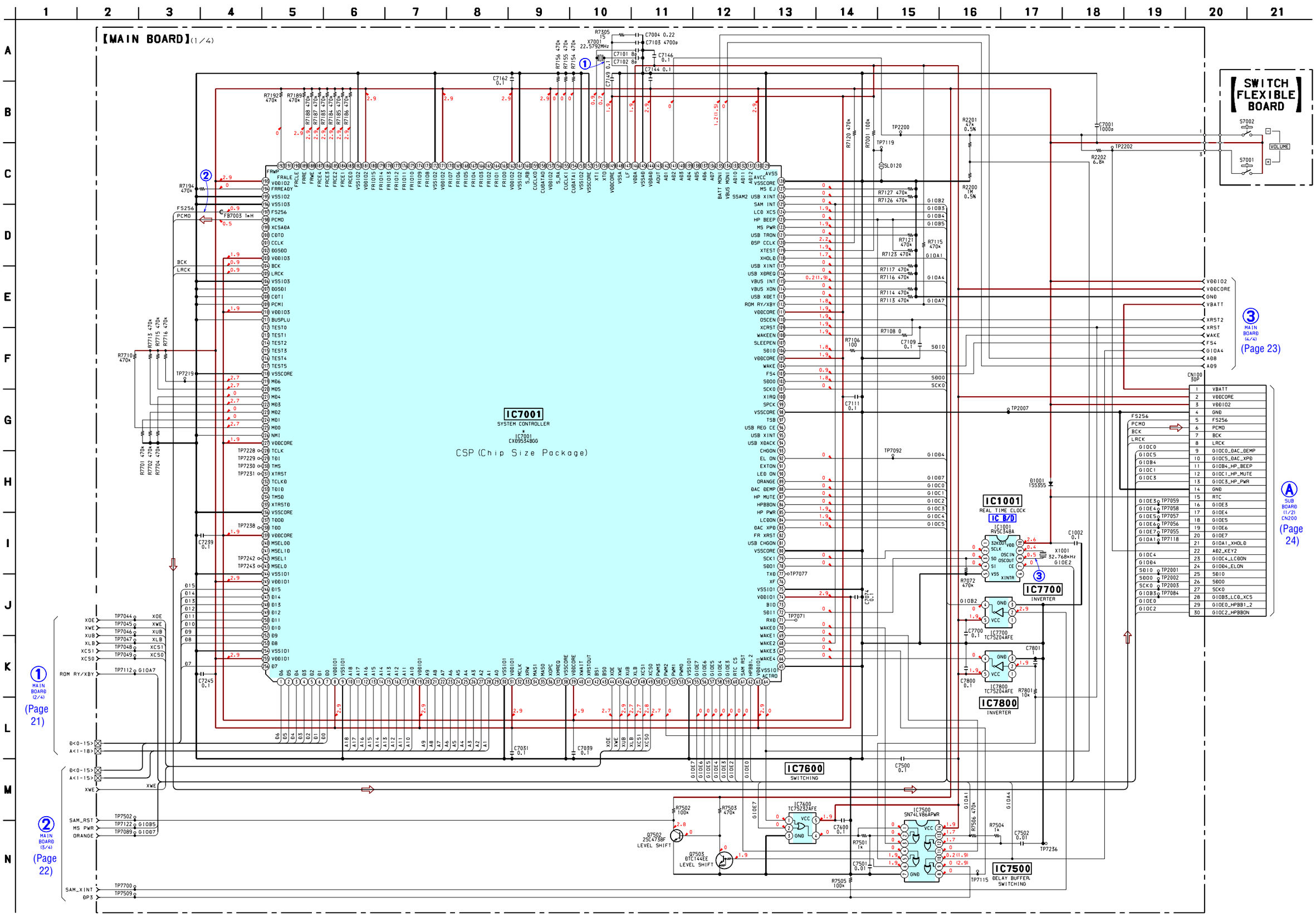


- **Semiconductor Location**

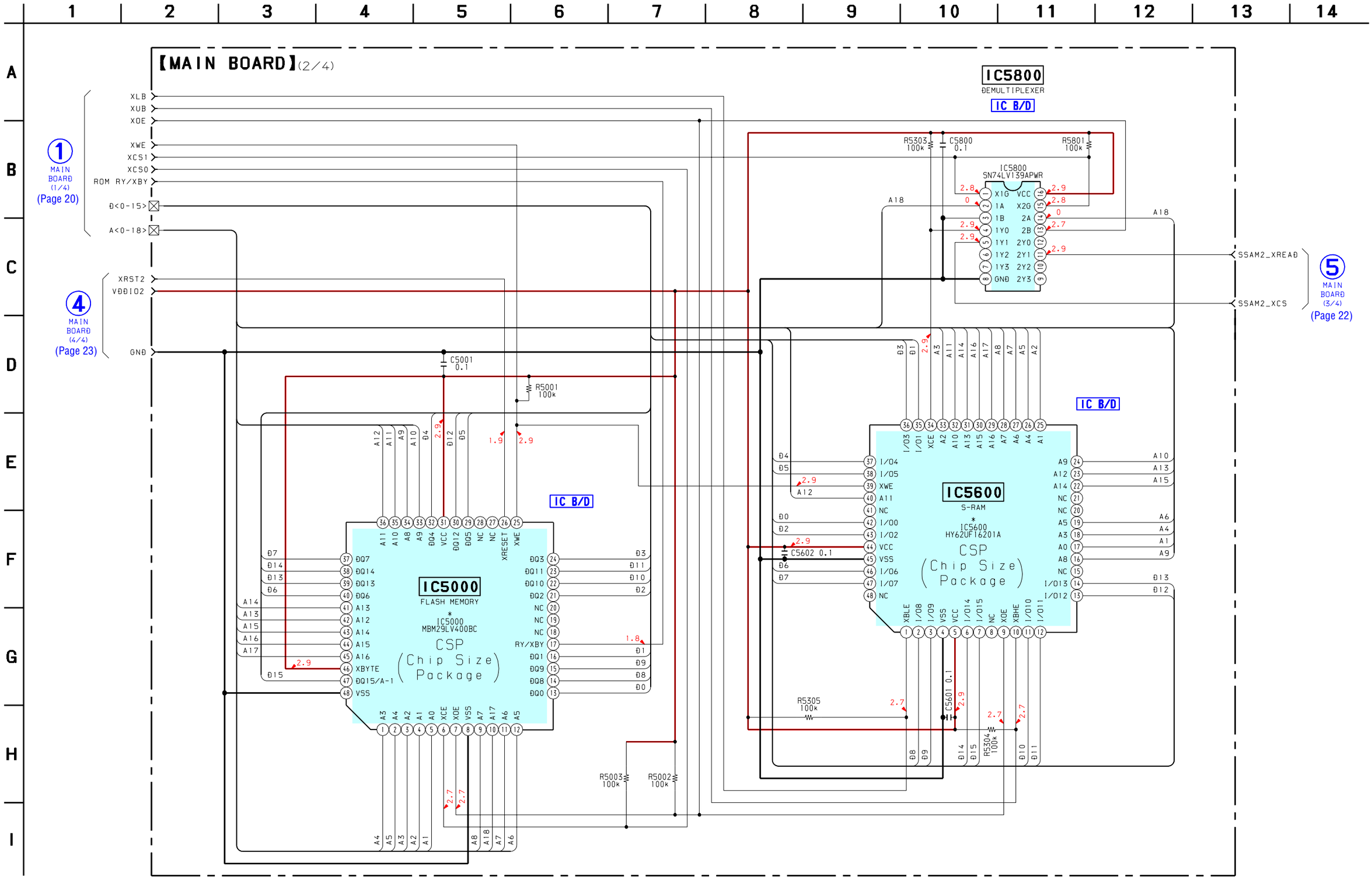
Ref. No.	Location
D1001	I-6
D6000	H-11
D9001	D-12
D9002	E-11
D9004	E-10
D9005	D-11
D9006	D-10
D9007	G-9
D9008	D-10
D9009	D-10
D9010	D-10
D9014	G-10
D9015	D-11
D9016	H-6
D9018	I-5
D9019	H-5
IC1001	I-6
IC5000	J-8
IC5600	J-7
IC5800	J-5
IC6000	H-9
IC6002	B-10
IC7001	I-3
IC7500	J-5
IC7600	J-5
IC7700	I-5
IC7800	I-5
IC8000	J-10
IC9001	E-11
IC9002	D-10
IC9003	G-3
IC9004	C-12
IC9005	H-8
IC9006	H-6
IC9007	H-5
LED6000	B-10
Q6000	C-9
Q6001	C-10
Q6003	B-9
Q6004	B-10
Q6007	B-9
Q7502	J-4
Q7503	J-4
Q9001	E-12
Q9003	C-9
Q9004	C-10
Q9005	C-10
Q9008	D-11
Q9009	D-9

5-5. SCHEMATIC DIAGRAM – MAIN Section (1/4) –

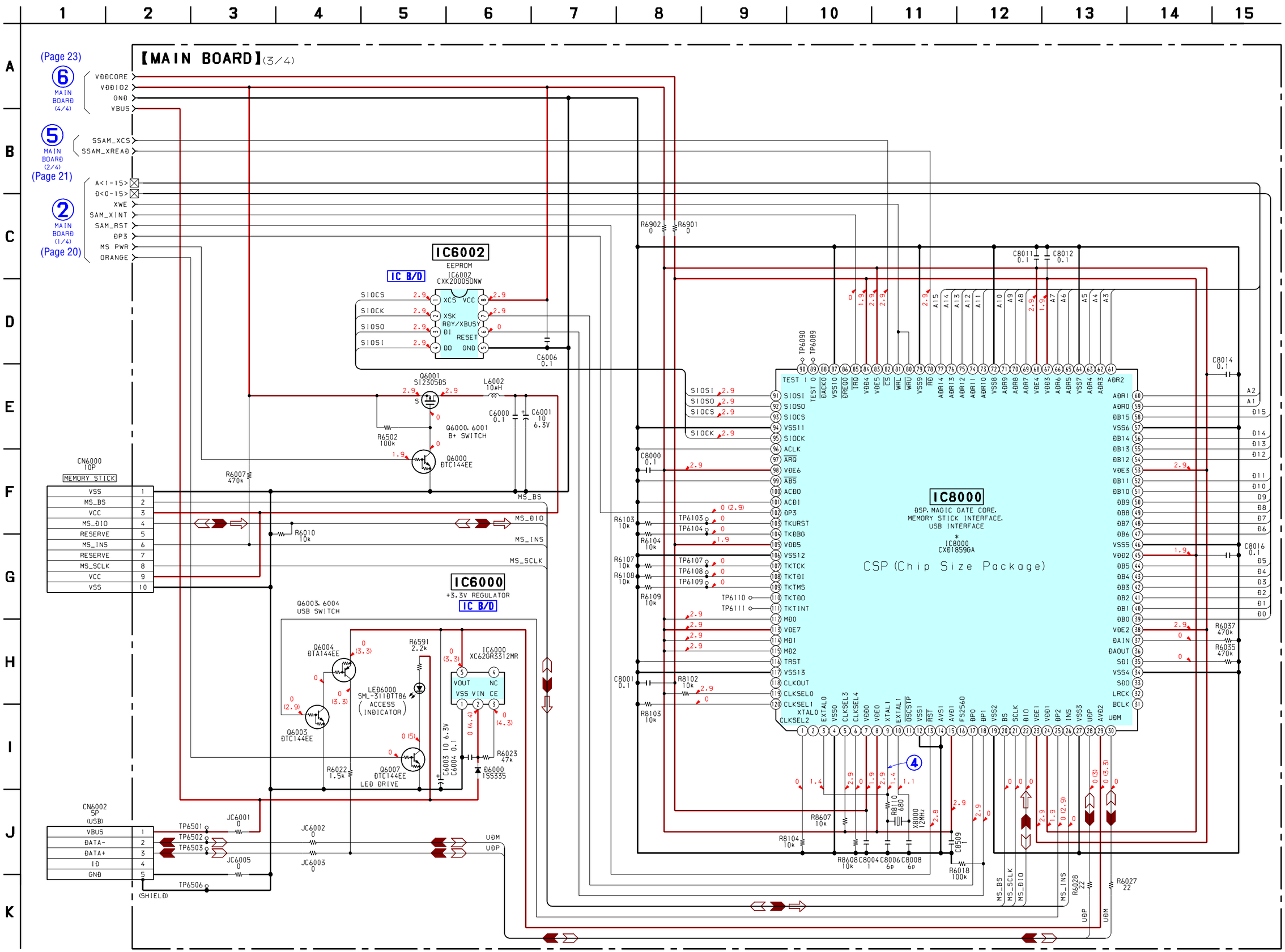
• See page 18 for Waveforms. • See page 27 for IC Block Diagram.



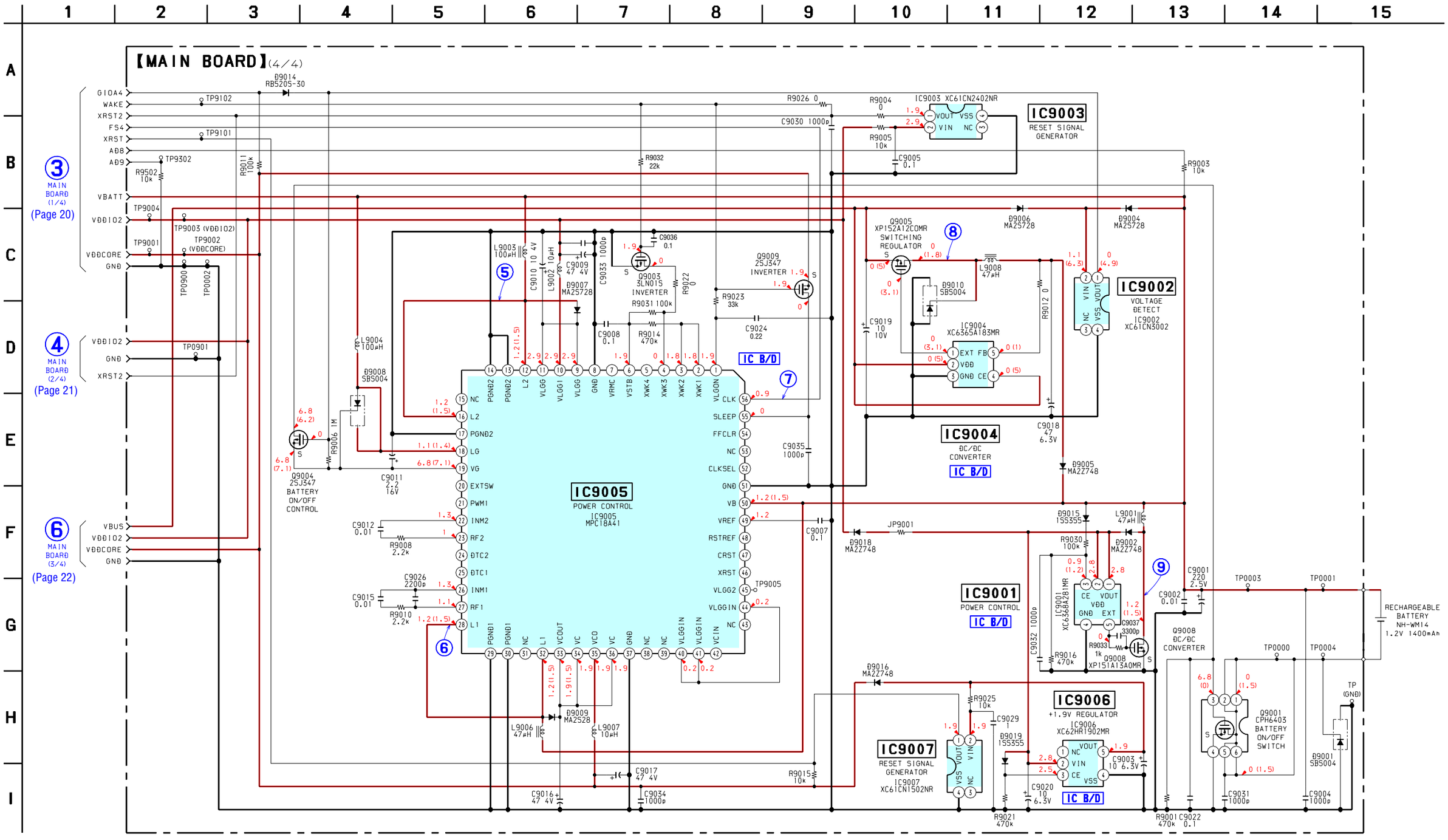
5-6. SCHEMATIC DIAGRAM – MAIN Section (2/4) – • See page 27 for IC Block Diagrams.



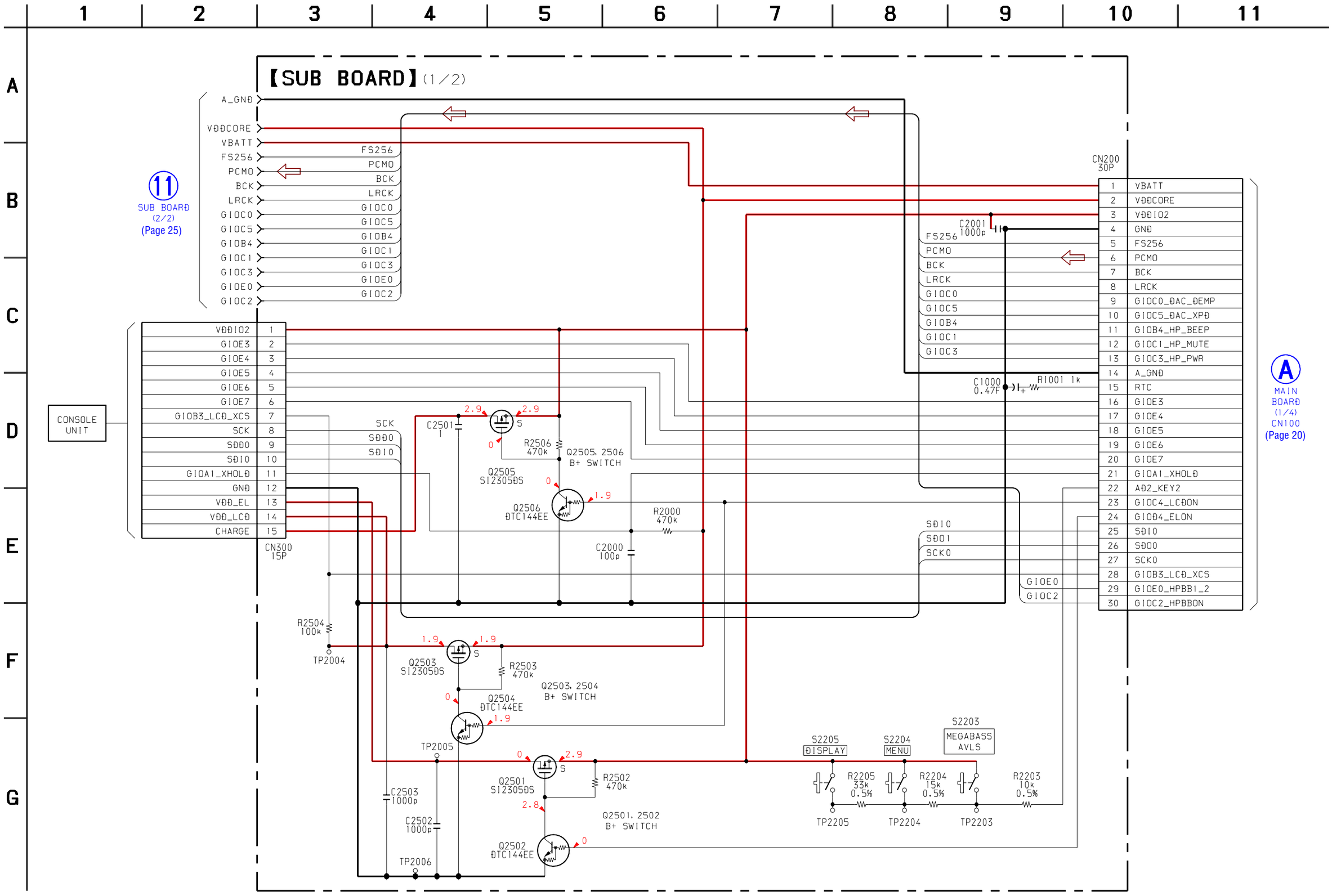
5-7. SCHEMATIC DIAGRAM – MAIN Section (3/4) – • See page 18 for Waveform. • See page 28 for IC Block Diagrams.



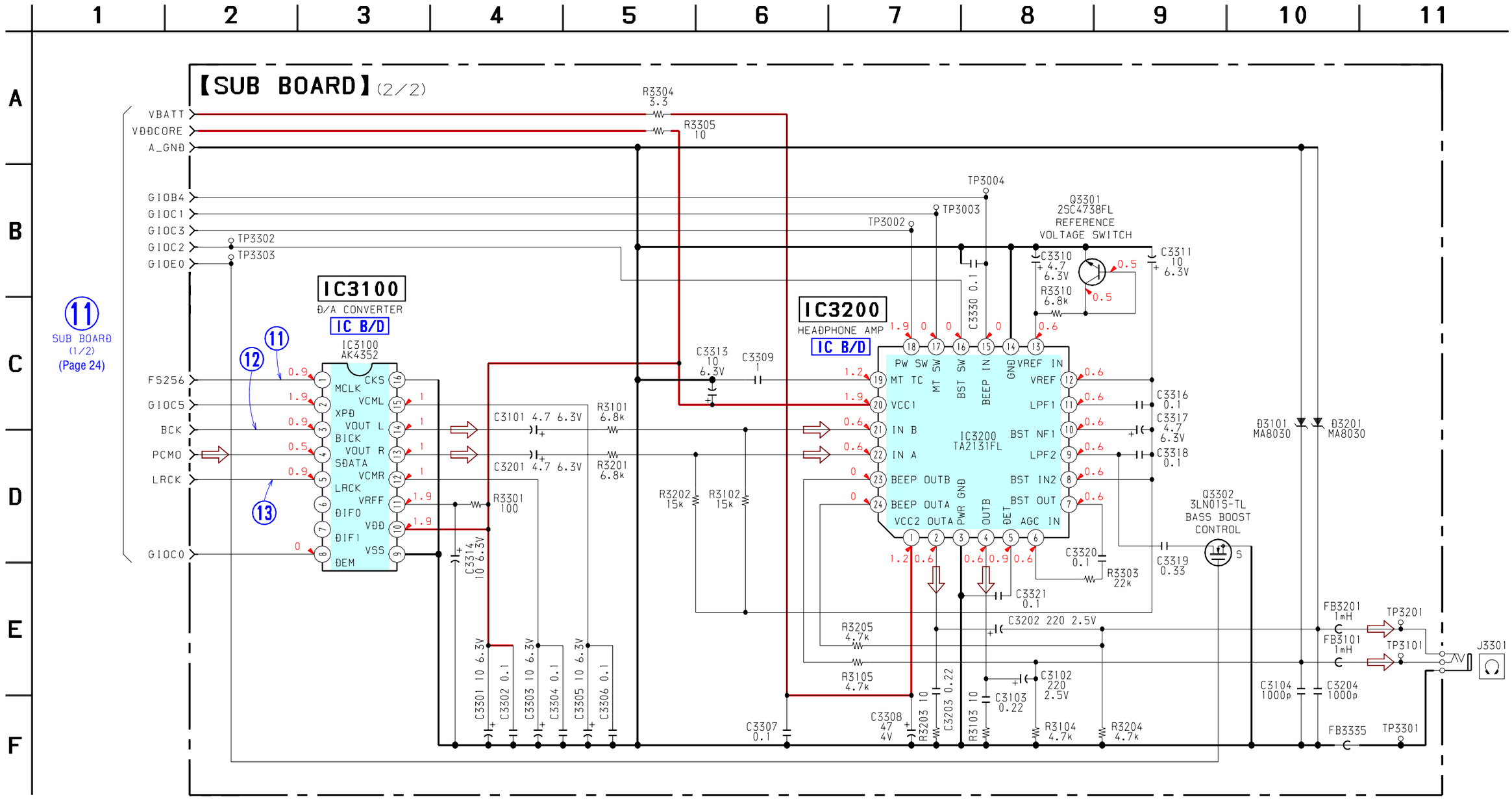
5-8. SCHEMATIC DIAGRAM – MAIN Section (4/4) – • See page 18 for Waveforms. • See page 29 for IC Block Diagrams.



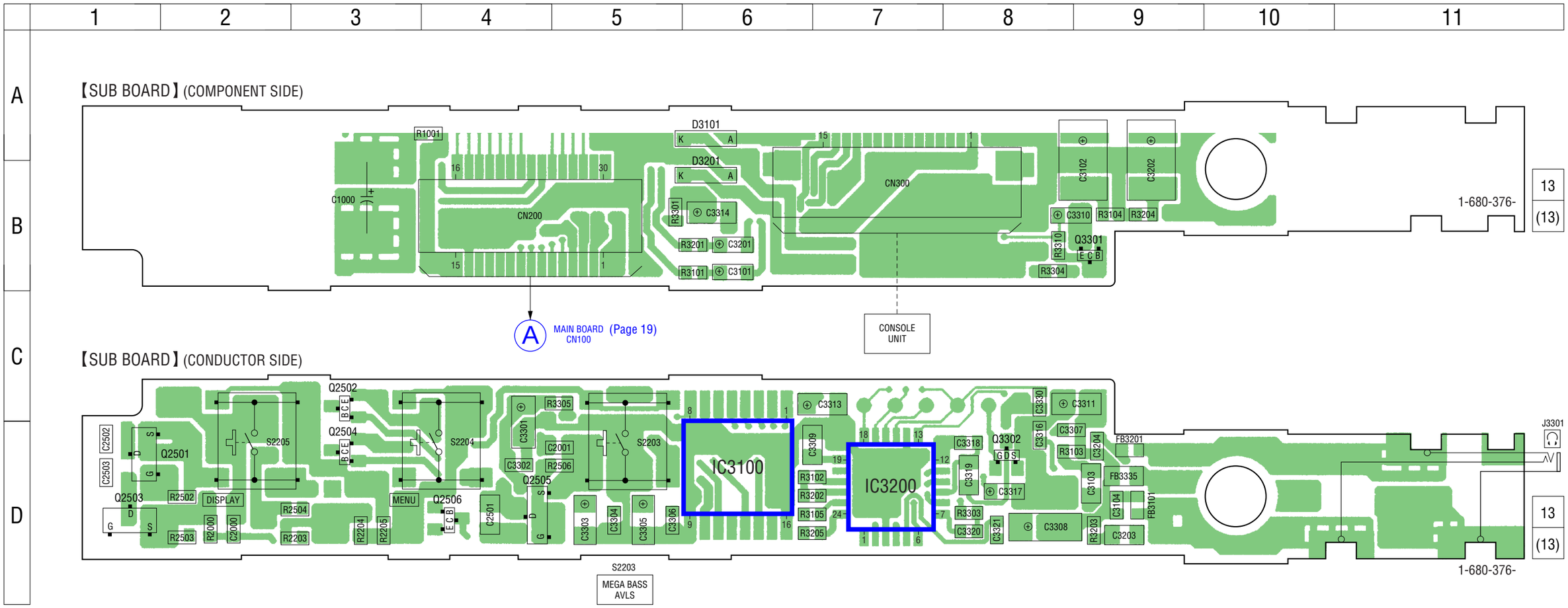
5-9. SCHEMATIC DIAGRAM – SUB Section (1/2) –



5-10. SCHEMATIC DIAGRAM – SUB Section (2/2) – **• See page 18 for Waveforms.** **• See page 30 for IC Block Diagrams.**



5-11. PRINTED WIRING BOARD – SUB Section – :Uses unleaded solder.

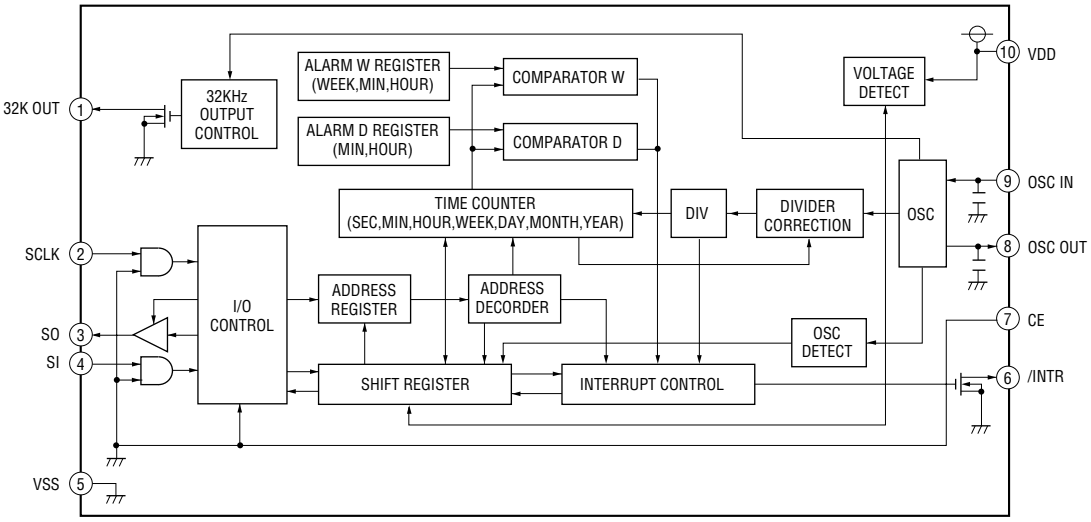


- **Semiconductor Location**

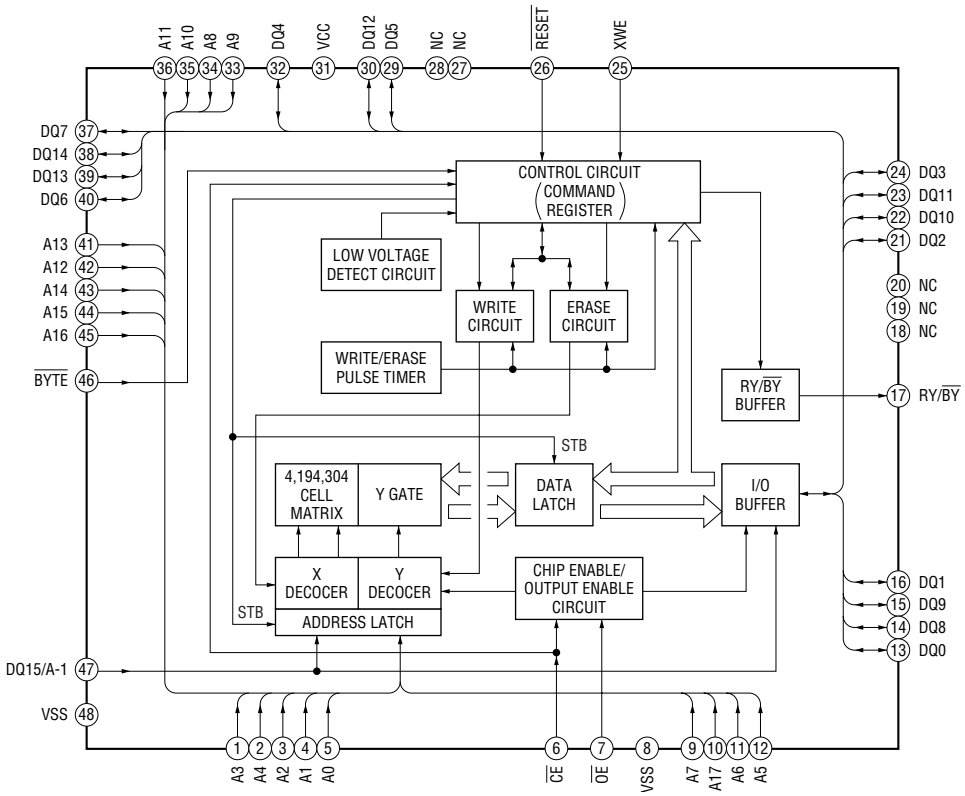
Ref. No.	Location
D3101	A-6
D3201	B-6
IC3100	D-6
IC3200	D-7
Q2501	D-1
Q2502	C-3
Q2503	D-1
Q2504	D-3
Q2505	D-4
Q2506	D-4
Q3301	B-9
Q3302	D-8

• **IC Block Diagrams**
– MAIN Board –

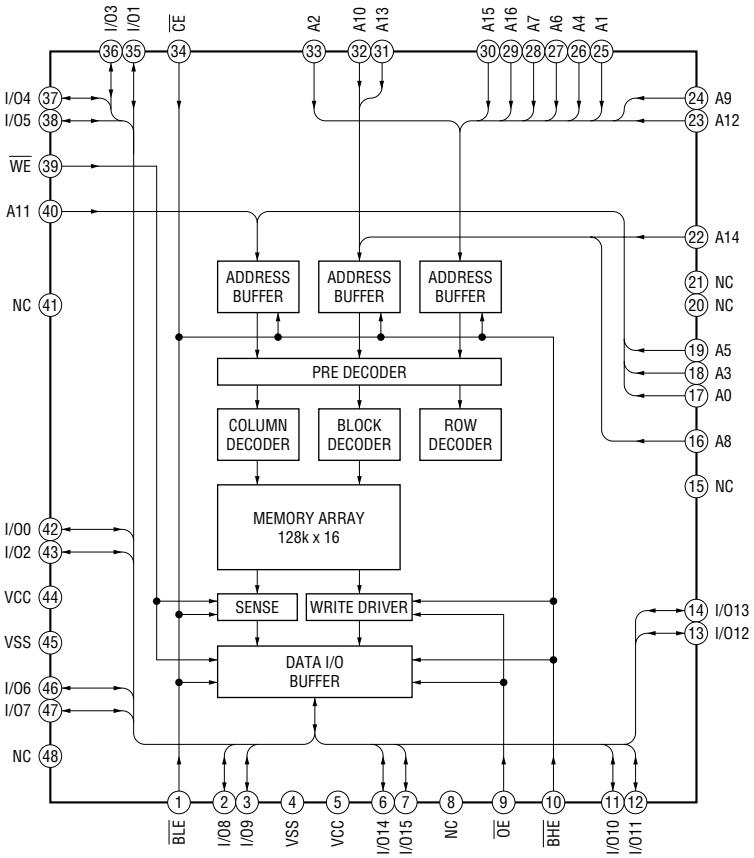
IC1001 RV5C348A-E2



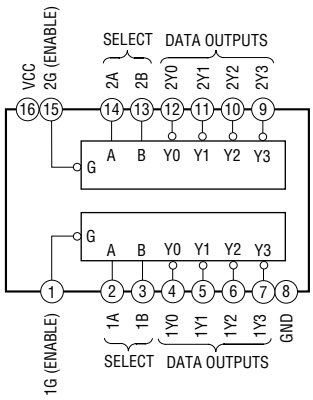
IC5000 MBM29LV400BC-90PBT-SJDE1-4



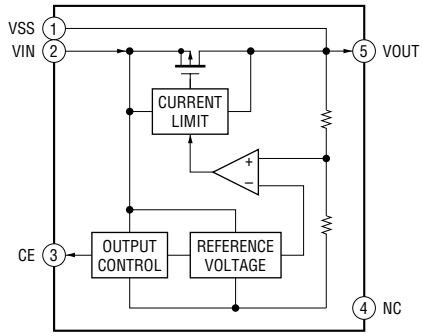
IC5600 HY62UF16201ALLF-85I



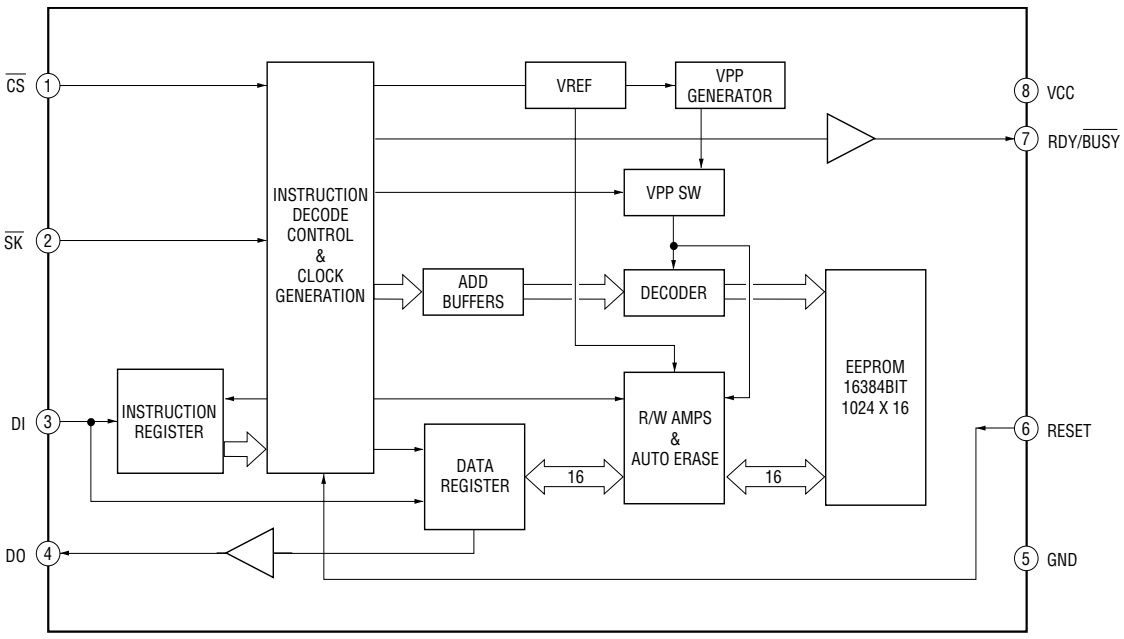
IC5800 SN74LV139APWR



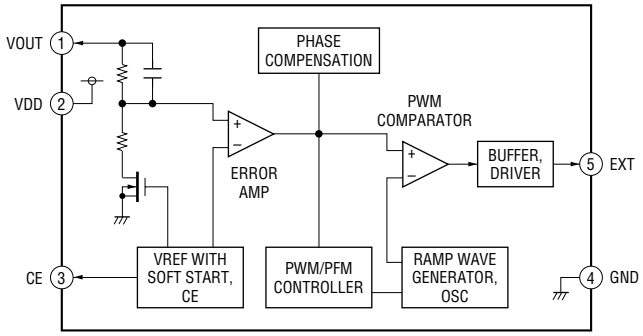
IC6000 XC62GR3312MR



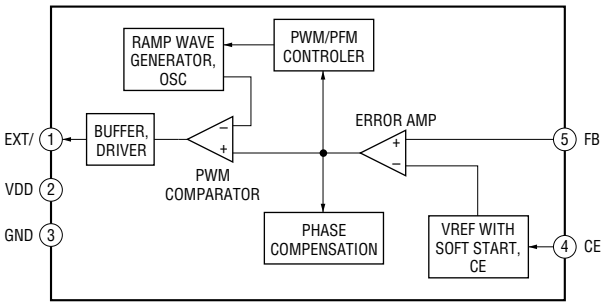
IC6002 CXK2000EN-T2



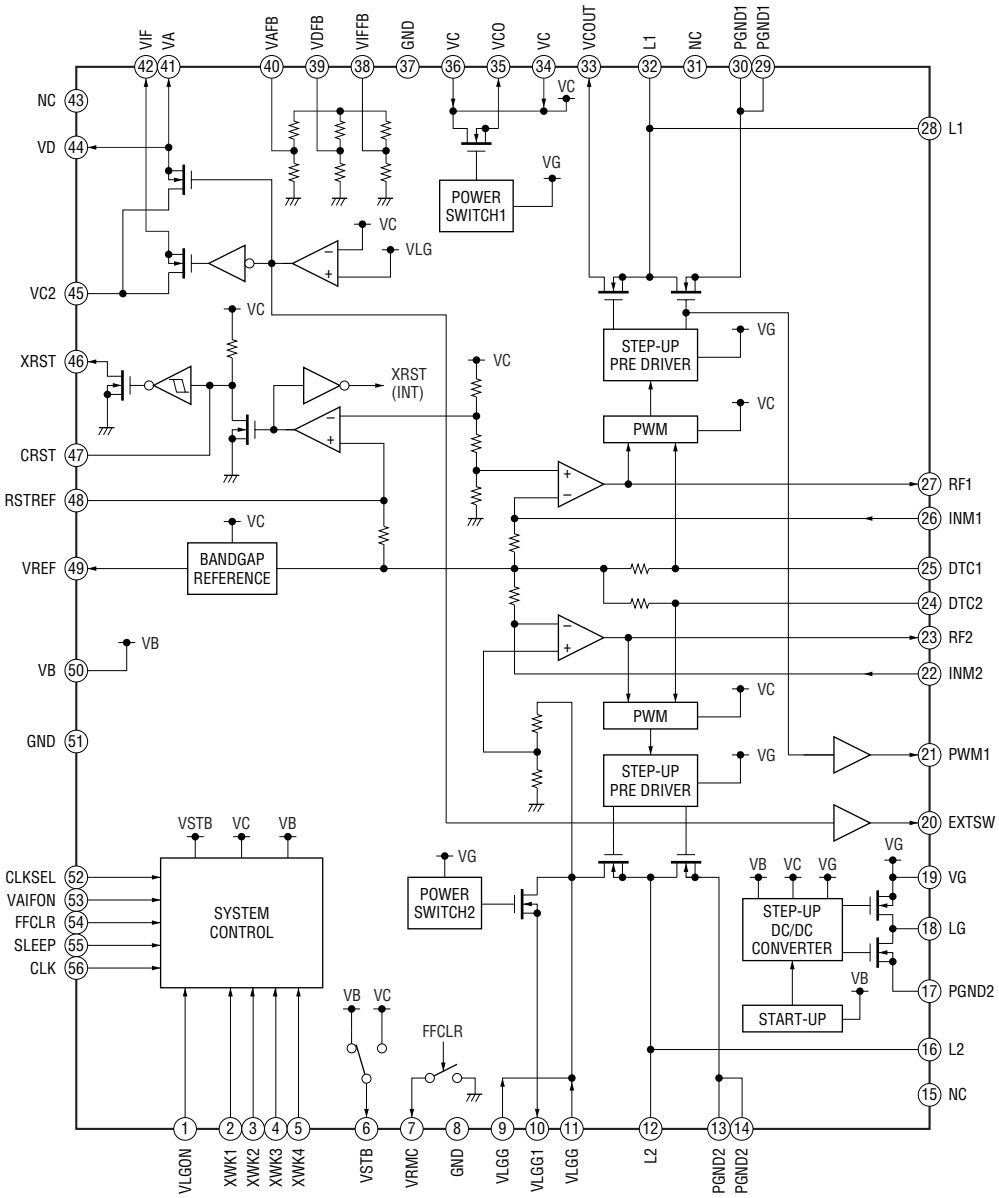
IC9001 XC6368A281MR



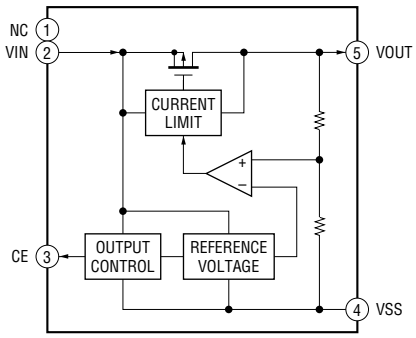
IC9004 XC6365A183MR



IC9005 MPC18A41FCR2

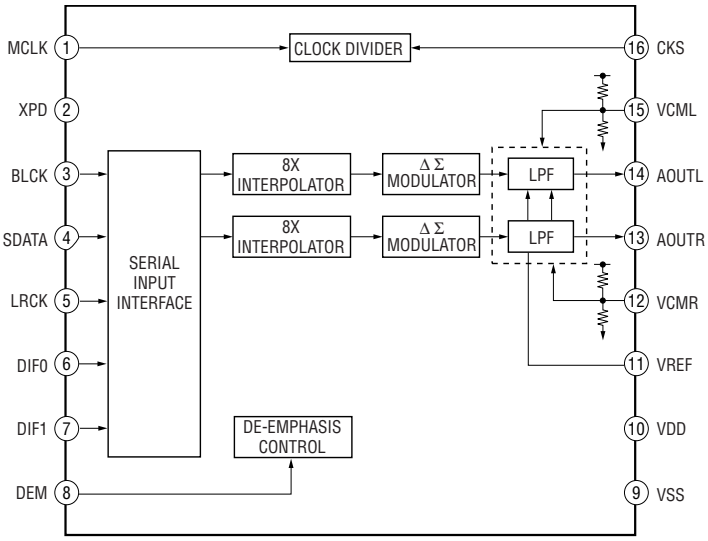


IC9006 XC62HR1902MR

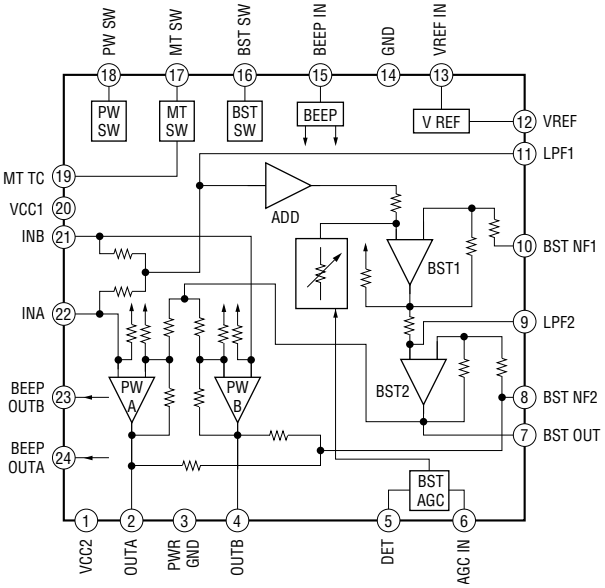


– SUB Board –

IC3100 AK4352VT-E2



IC3200 TA2131FL (EL)



5-12. IC PIN FUNCTION DESCRIPTION

• MAIN BOARD IC7001 CXD9534BGG (SYSTEM CONTROLLER)

Pin No.	Pin Name	I/O	Description
1 to 7	D6 to D0	I/O	Two-way data bus with the flash memory (IC5000), S-RAM (IC5600) and CXD1859GA (IC8000)
8	VDDIO1	—	Power supply terminal (+2.8V)
9	VSSIO1	—	Ground terminal
10 to 18	A18 to A10	O	Address signal output to the flash memory (IC5000), S-RAM (IC5600) and CXD1859GA (IC8000)
19	VDDIO1	—	Power supply terminal (+2.8V)
20 to 28	A9 to A1	O	Address signal output to the flash memory (IC5000), S-RAM (IC5600) and CXD1859GA (IC8000)
29	A0	O	Address signal output terminal Not used (open)
30	VSSIO1	—	Ground terminal
31	VDDIO1	—	Power supply terminal (+2.8V)
32	MCLK	O	Not used (open)
33	XRW	O	Not used (open)
34, 35	MAS1, MAS0	O	Not used (open)
36	XOPC	O	Not used (open)
37	XMREQ	O	Not used (open)
38	VSSCORE	—	Ground terminal
39	VDDCORE	—	Power supply terminal (+1.8V)
40	XWAIT	O	Not used (open)
41	XRSTOUT	O	Reset signal output terminal “L”: reset Not used (open)
42, 43	BS1, BS0	O	Not used (open)
44	XOE	O	Output enable signal output to the flash memory (IC5000), S-RAM (IC5600) and CXD1859GA (IC8000) “L” active
45	XWE	O	Write enable signal output to the flash memory (IC5000), S-RAM (IC5600) and CXD1859GA (IC8000) “L” active
46	XUB	O	Write enable signal output to the S-RAM (IC5600) (upper byte) “L” active
47	XLB	O	Write enable signal output to the S-RAM (IC5600) (lower byte) “L” active
48	XCS1	O	Chip select signal output to the demultiplexer (IC5800)
49	XCS0	O	Chip select signal output to the flash memory (IC5000)
50	PWM3	O	Not used (open)
51	PWM2	O	Beep sound control signal output
52, 53	PWM1, PWM0	O	Not used (open)
54	VSSIO1	—	Ground terminal
55 to 59	GIOE7 to GIOE3	I	Key input from the console unit
60	RTC CS	O	Chip select signal output to the RV5C348A (IC1001)
61	SAM RST	O	Reset signal output to the CXD1859GA (IC8000)
62	HPBB1, 2	O	Bass boost level control signal output to the headphone amplifier (IC3200)
63	VDDIO1	—	Power supply terminal (+2.8V)
64	ATCRO	O	System wake up signal output to the WAKE0 (pin ⑦⓪)
65	VSSIO1	—	Ground terminal
66	WAKE4	I	System wake up signal from the reset signal generator (IC9007) Input the signal, when inserts the rechargeable battery
67	WAKE3	I	System wake up signal from the CXD1859GA (IC8000) or voltage detector (IC9002) Input the signal, when input the USB power
68	WAKE2	I	Interrupt request signal input from the CXD1859GA (IC8000)

Pin No.	Pin Name	I/O	Description
69	WAKE1	I	System hold off signal input from the HOLD switch of console unit The signal input, when switch position is changed from on to off
70	WAKE0	I	System wake up signal input by any key is pressed
71	RXD	I	Not used (open)
72	SDI1	I	Serial data input from the RV5C348A (IC1001)
73	BIO	I	Not used (open)
74	VDDIO1	—	Power supply terminal (+2.8V)
75	VSSIO1	—	Ground terminal
76	XF	O	Not used (open)
77	TXD	O	Not used (open)
78	SDO1	O	Serial data output to the RV5C348A (IC1001)
79	SCK1	O	Serial data transfer clock signal output to the RV5C348A (IC1001)
80	VSSCORE	—	Ground terminal
81	USB CHGON	O	Not used (open)
82	FR XRST	O	Not used (open)
83	DAC XPD	O	Power on/off control signal output to the D/A converter (IC3100)
84	LCDON	O	Power on/off control signal output for the liauid crystal display unit “H”: LCD on
85	HP PWR	O	Power on/off control signal output to the headphone amplifier (IC3200)
86	HPBBON	O	Bass boost on/off control signal output to the headphone amplifier (IC3200)
87	HPMUTE	O	Muting on/off control signal output to the headphone amplifier (IC3200)
88	DAC DEMP	O	Emphasis control signal output to the D/A converter (IC3100)
89	ORANGE	O	LED drive signal output for access indicator (LED6000) “H”: LED on
90	LED ON	O	LED drive signal output terminal Not used (open)
91	$\overline{\text{EXTON}}$	O	Not used (open)
92	EL ON	O	Power on/off control signal output for the back light of liquid crystal display unit “H”: back light on
93	CHGON	O	Not used (open)
94	USB XDACK	O	Not used (open)
95	USB XINT	O	Not used (open)
96	$\overline{\text{USB REG CE}}$	O	Not used (open)
97	TSB	I/O	Not used (open)
98	VSSCORE	—	Ground terminal
99	SPCK	O	Not used (open)
100	XIRQ	O	Not used (open)
101	SCK0	O	Serial data transfer clock signal output for liquid crystal display drive to the console unit
102	SDO0	O	Serial data output for liquid crystal display drive to the console unit
103	FS4	O	Clock signal output to the power controller (IC9005)
104	WAKE	O	Power wake up request signal output to the power controller (IC9005)
105	VDDCORE	—	Power supply terminal (+1.8V)
106	SDI0	O	Serial data output for liquid crystal display drive to the console unit
107	SLEEPEN	I	Not used (open)
108	WAKEEN	I	Wake up enable signal input from the reset signal generator (IC9003)
109	XCRST	I	System reset signal input from the reset signal generator (IC9007) “L”: reset For several hundreds msec. after the power supply rises, “L” is input, then it changes to “H”
110	OSCEN	I	OSC enable signal input from the reset signal generator (IC9003)
111	VDDCORE	—	Power supply terminal (+1.8V)
112	ROM RY/XBY	O	Ready/busy signal output to the flash memory (IC5000) “L”: busy, “H”: ready

Pin No.	Pin Name	I/O	Description
113	USB XDET	I	Not used (open)
114	VBUS XON	I	Not used (open)
115	VBUS INT	I	USB connect detection signal input from the voltage detector (IC9003)
116	USB XDREQ	I	Not used (fixed at “L”)
117	USB XINT	I	Not used (fixed at “L”)
118	XHOLD	I	System hold signal input from the HOLD switch of console unit
119	XTEST	I	Input terminal for the test mode setting “L”: test mode, normally fixed at “H”
120	DSP CCLK	I	Not used (fixed at “H”)
121	USB TRON	I	Not used (fixed at “L”)
122	MS PWR	O	Power on/off control signal output to a memory stick
123	HP BEEP	O	Beep sound control signal output to the headphone amplifier (IC3200)
124	LCD XCS	O	Chip select signal output for liquid crystal display drive to the console unit
125	SAM INT	I	Interrupt request signal input from the CXD1859GA (IC8000)
126	SSAM2 USB XINT	I	Not used (fixed at “L”)
127	MS EJ	I	Not used (fixed at “L”)
128	VSSCORE	—	Ground terminal
129	AVSS	—	Ground terminal (for analog system)
130	AVCC	—	Power supply terminal (+2.8V) (for analog system)
131 to 133	AD12 to AD10	I	Not used (fixed at “L”)
134	VBUS MONI	I	USB power voltage monitor input terminal (A/D input) Not used (fixed at “L”)
135	BATT MONI	I	Battery voltage monitor input terminal (A/D input) Not used (fixed at “L”)
136 to 140	AD7 to AD3	I	Not used (fixed at “L”)
141	KEY2	I	Key input terminal (A/D input) S2203 to S2205, S7001, S7002 (MEGA BASS, MENU, DISPLAY, VOLUME+, VOLUME–) keys input
142	AD1	I	Not used (fixed at “L”)
143	AOUT	O	Not used (open)
144	VDDAD	—	Power supply terminal (+2.8V) (for A/D converter)
145	VSSAD	—	Ground terminal (for A/D converter)
146	VDDA	—	Power supply terminal (+1.8V)
147	LF	—	Low-pass filter connecting terminal
148	VSSA	—	Ground terminal
149	VDDCORE	—	Power supply terminal (+1.8V)
150	XTO	O	System clock output terminal (22.5792MHz)
151	XTI	I	System clock input terminal (22.5792MHz)
152	VSSCORE	—	Ground terminal
153	VSSIO2	—	Ground terminal
154	CUDATAI	I	Not used (fixed at “L”)
155	CUCLKI	I	Not used (fixed at “L”)
156	S RA	I	Not used (fixed at “L”)
157	VDDIO2	—	Power supply terminal (+2.8V)
158	CUDATAO	O	Not used (open)
159	CUCLKO	O	Not used (open)
160	S RB	O	Not used (open)
161	VSSIO2	—	Ground terminal
162	VDDIO2	—	Power supply terminal (+2.8V)
163 to 170	FRIO0 to FRIO7	I/O	Not used (open)

Pin No.	Pin Name	I/O	Description
171	VDDIO2	—	Power supply terminal (+2.8V)
172	VSSIO2	—	Ground terminal
173 to 180	FRIO8 to FRIO15	I/O	Not used (open)
181	VDDIO2	—	Power supply terminal (+2.8V)
182	VSSIO2	—	Ground terminal
183 to 187	FRCE0 to FRCE4	O	Not used (pull up)
188	FRWE	O	Not used (pull up)
189	FRRE	O	Not used (pull up)
190	FRCLE	O	Not used (open)
191	FRALE	O	Not used (open)
192	FRWP	O	Not used (pull up)
193	VDDIO2	—	Power supply terminal (+2.8V)
194	FRREADY	I	Not used (fixed at “L”)
195	VSSIO2	—	Ground terminal
196	VSSIO3	—	Ground terminal
197	FS256	O	Clock signal (11.2896 MHz) output to the D/A converter (IC3100)
198	PCMO	O	Digital audio signal output to the D/A converter (IC3100)
199	XCSADA	—	Not used (open)
200	CDTO	O	Not used (open)
201	CCLK	—	Not used (open)
202	DGSDO	O	Not used (open)
203	VDDIO3	—	Power supply terminal (+1.8V)
204	BCK	O	Bit clock signal output to the D/A converter (IC3100)
205	LRCK	O	L/R sampling clock signal output to the D/A converter (IC3100)
206	VSSIO3	—	Ground terminal
207	DGSDI	I	Not used (fixed at “L”)
208	CDTI	I	Not used (fixed at “L”)
209	PCMI	I	Not used (fixed at “L”)
210	VDDIO3	—	Power supply terminal (+1.8V)
211	BUSPLU	I	Not used (fixed at “L”)
212 to 217	TEST0 to TEST5	I	For test terminal Normally open
218	VSSCORE	—	Ground terminal
219, 220	MD6, MD5	I	Mode setting input terminal Fixed at “H” in this set
221	MD4	I	Mode setting input terminal Fixed at “L” in this set
222	MD3	I	Mode setting input terminal Fixed at “H” in this set
223, 224	MD2, MD1	I	Mode setting input terminal Fixed at “L” in this set
225	MD0	I	Mode setting input terminal Fixed at “H” in this set
226	NMI	I	Not used (fixed at “L”)
227	VDDCORE	—	Power supply terminal (+1.8V)
228	TCLK	I	Not used (open)
229	TDI	I	Not used (open)
230	TMS	I	Not used (open)
231	XTRST	I	Not used (open)
232	TCLKD	I	Not used (open)
233	TDID	I	Not used (open)
234	TMSD	I	Not used (open)

Pin No.	Pin Name	I/O	Description
235	XTRSTD	I	Not used (open)
236	VSSCORE	—	Ground terminal
237	TDOD	O	Not used (open)
238	TDO	O	Not used (open)
239	VDDCORE	—	Power supply terminal (+1.8V)
240, 241	MSEL0D, MSEL1D	I/O	Not used (open)
242, 243	MSEL1, MSEL0	I/O	Not used (open)
244	VSSIO1	—	Ground terminal
245	VDDIO1	—	Power supply terminal (+2.8V)
246 to 253	D15 to D8	I/O	Two-way data bus with the flash memory (IC5000), S-RAM (IC5600) and CXD1859GA (IC8000)
254	VSSIO1	—	Ground terminal
255	VDDIO1	—	Power supply terminal (+2.8V)
256	D7	I/O	Two-way data bus with the flash memory (IC5000), S-RAM (IC5600) and CXD1859GA (IC8000)

• **MAIN BOARD IC8000 CXD1859GA**
(DIGITAL SIGNAL PROCESSOR, MAGIC GATE CORE, MEMORY STICK INTERFACE, USB INTERFACE)

Pin No.	Pin Name	I/O	Description
1	CLKSEL2	I	Clock mode setting terminal Fixed at "L" in this set
2	XTAL0	O	Sub system clock output terminal (22.5MHz) Not used (open)
3	EXTAL0	I	Sub system clock input terminal (12MHz) Connected to XTAL1 (pin⑨) in this set
4	VSS0	—	Ground terminal
5	CLKSEL3	I	Clock mode setting terminal Fixed at "H" in this set
6	CLKSEL4	I	Clock mode setting terminal Fixed at "L" in this set
7	VDD0	—	Power supply terminal (+1.8V)
8	VDE0	—	Power supply terminal (+2.8V)
9	XTAL1	O	Main system clock output terminal (12MHz)
10	EXTAL1	I	Main system clock input terminal (12MHz)
11	$\overline{\text{OSCSTP}}$	O	Stop oscillating signal output terminal "L": stop oscillating Not used (open)
12	VSS1	—	Ground terminal
13	$\overline{\text{RST}}$	I	Reset signal input from the system controller (IC7001) or reset signal generator (IC9007)
14	AVS1	—	Ground terminal (for PLL)
15	AVD1	—	Power supply terminal (+2.8V) (for PLL)
16	FS256O	O	Clock signal (11.2896 MHz) output terminal Not used (open)
17	DP0	O	Ready/busy signal output to the EEPROM (IC6002) "L": busy, "H": ready
18	DP1	O	Reset signal output to the EEPROM (IC6002)
19	VSS2	—	Ground terminal
20	BS	O	Bus state signal output to a memory stick
21	SCLK	O	Clock signal output to a memory stick
22	DIO	I/O	Two-way data bus with a memory stick
23	VDE1	—	Power supply terminal (+2.8V)
24	VDD1	—	Power supply terminal (+1.8V)
25	DP2	O	USB communication on/off control signal output "H": USB communication on
26	INS	I	Memory stick in/out detection signal input "L": memory stick is inserted
27	VSS3	—	Ground terminal
28	UDP	I/O	Two-way data bus of UBS data
29	AVD2	—	Power supply terminal (+2.8V)
30	UDM	I/O	Two-way data bus of UBS data
31	BCLK	I	Bit clock signal input terminal Not used (open)
32	LRCK	I	L/R sampling clock signal input terminal Not used (open)
33	SDO	O	Audio signal output terminal Not used (open)
34	VSS4	—	Ground terminal
35	SDI	I	Audio signal input terminal Not used (fixed at "L")
36	DAOUT	O	Digital audio signal output terminal Not used (open)
37	DAIN	I	Digital audio signal input terminal Not used (fixed at "L")
38	VDE2	—	Power supply terminal (+2.8V)
39 to 44	DB0 to DB5	I/O	Two-way data bus with the flash memory (IC5000), S-RAM (IC5600) and system controller (IC7001)
45	VDD2	—	Power supply terminal (+1.8V)
46	VSS5	—	Ground terminal
47 to 52	DB6 to DB11	I/O	Two-way data bus with the flash memory (IC5000), S-RAM (IC5600) and system controller (IC7001)
53	VDE3	—	Power supply terminal (+2.8V)

Pin No.	Pin Name	I/O	Description
54 to 56	DB12 to DB14	I/O	Two-way data bus with the flash memory (IC5000), S-RAM (IC5600) and system controller (IC7001)
57	VSS6	—	Ground terminal
58	DB15	I/O	Two-way data bus with the flash memory (IC5000), S-RAM (IC5600) and system controller (IC7001)
59 to 63	ADR0 to ADR4	I	Address signal input from the system controller (IC7001)
64	VSS7	—	Ground terminal
65, 66	ADR5, ADR6	I	Address signal input from the system controller (IC7001)
67	VDD3	—	Power supply terminal (+1.8V)
68	VDE4	—	Power supply terminal (+2.8V)
69 to 71	ADR7 to ADR9	I	Address signal input from the system controller (IC7001)
72	VSS8	—	Ground terminal
73 to 77	ADR10 to ADR14	I	Address signal input from the system controller (IC7001)
78	$\overline{\text{RD}}$	I	Read enable signal input from the system controller (IC7001)
79	VSS9	—	Ground terminal
80	$\overline{\text{WRU}}$	I	Write enable signal input from the system controller (IC7001) (upper byte)
81	$\overline{\text{WRL}}$	I	Write enable signal input from the system controller (IC7001) (lower byte)
82	$\overline{\text{CS}}$	I	Chip select signal input from the system controller (IC7001)
83	$\overline{\text{VDE5}}$	—	Power supply terminal (+2.8V)
84	VDD4	—	Power supply terminal (+1.8V)
85	$\overline{\text{IRQ}}$	O	Interrupt request signal output to the system controller (IC7001)
86	$\overline{\text{DREQ0}}$	O	USB DMA request signal output terminal Not used (open)
87	VSS10	—	Ground terminal
88	$\overline{\text{DACK0}}$	I	USB DMA acknowledge signal input terminal Not used (open)
89	TEST0	O	For test terminal Normally open
90	TEST1	I	For test terminal Normally open
91	SIOSI	I	Serial data input from the EEPROM (IC6002)
92	SIOSO	O	Serial data output to the EEPROM (IC6002)
93	SIOCS	O	Chip select signal output to the EEPROM (IC6002)
94	VSS11	—	Ground terminal
95	SIOCK	O	Serial data transfer clock signal output to the EEPROM (IC6002)
96	ACLK	I	ATRAC3 data transfer clock signal input terminal Not used (fixed at “L”)
97	$\overline{\text{ARQ}}$	O	ATRAC3 data request signal output terminal Not used (open)
98	VDE6	—	Power supply terminal (+2.8V)
99	$\overline{\text{ABS}}$	I	ATRAC3 data request signal input terminal Not used (fixed at “L”)
100	ACDO	O	ATRAC3 data output terminal Not used (open)
101	ACDI	I	ATRAC3 data input terminal Not used (fixed at “L”)
102	DP3	O	System wake up request signal output to the system controller (IC7001)
103	TKURST	I	Not used (fixed at “L”)
104	TKDBG	I	Not used (fixed at “L”)
105	VDD5	—	Power supply terminal (+1.8V)
106	VSS12	—	Ground terminal
107	TKTCK	I	Not used (fixed at “L”)
108	TKTDI	I	Not used (fixed at “L”)
109	TKTMS	I	Not used (fixed at “L”)
110	TKTDO	O	Not used (open)

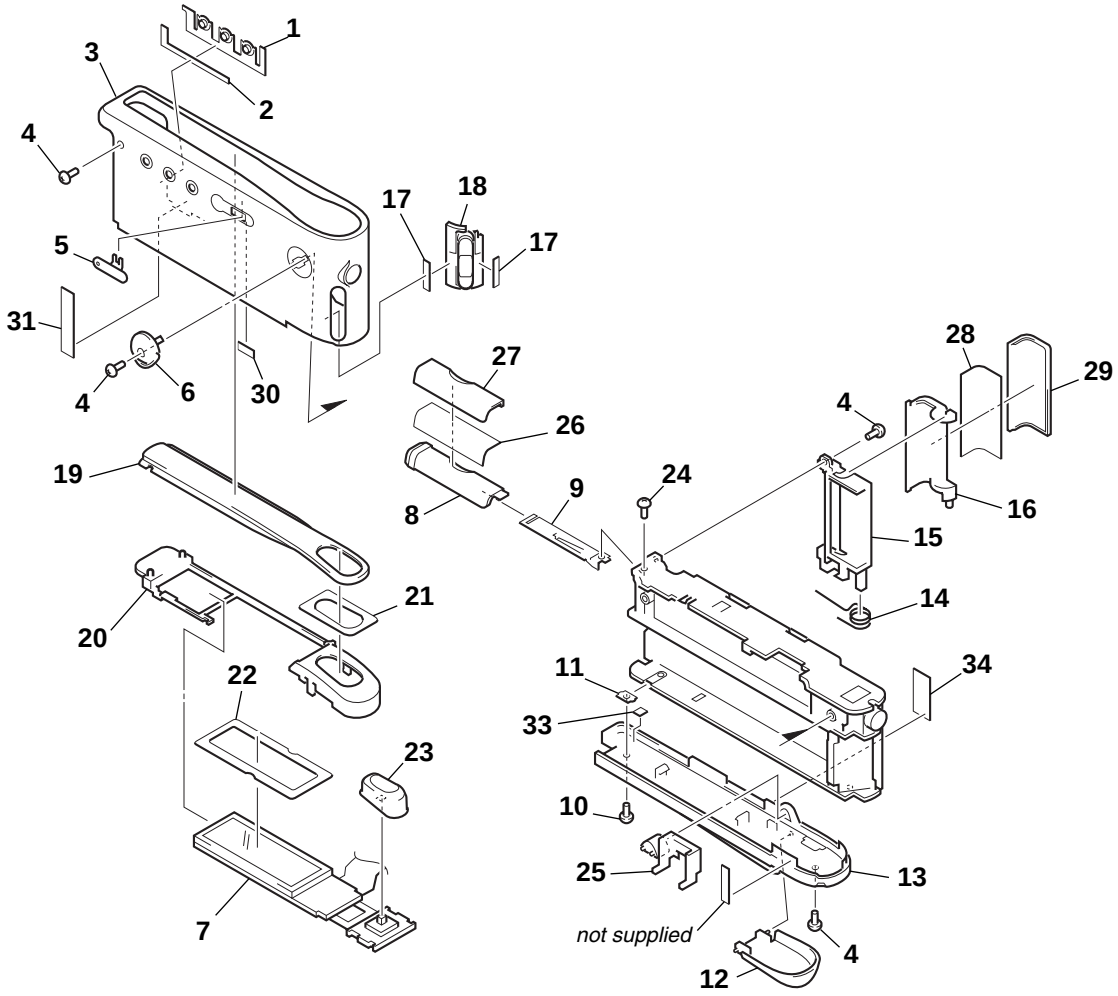
Pin No.	Pin Name	I/O	Description
111	TKTINT	O	Not used (open)
112	MD0	I	Mode setting terminal Fixed at “H” in this set
113	VDE7	—	Power supply terminal (+2.8V)
114, 115	MD1, MD2	I	Mode setting terminal Fixed at “H” in this set
116	TRST	I	Not used (fixed at “L”)
117	VSS13	—	Ground terminal
118	CLKOUT	O	System clock signal output terminal Not used (open)
119	CLKSEL0	I	Clock mode setting terminal Fixed at “H” in this set
120	CLKSEL1	I	Clock mode setting terminal Fixed at “L” in this set

SECTION 6
EXPLODED VIEWS

NOTE:

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

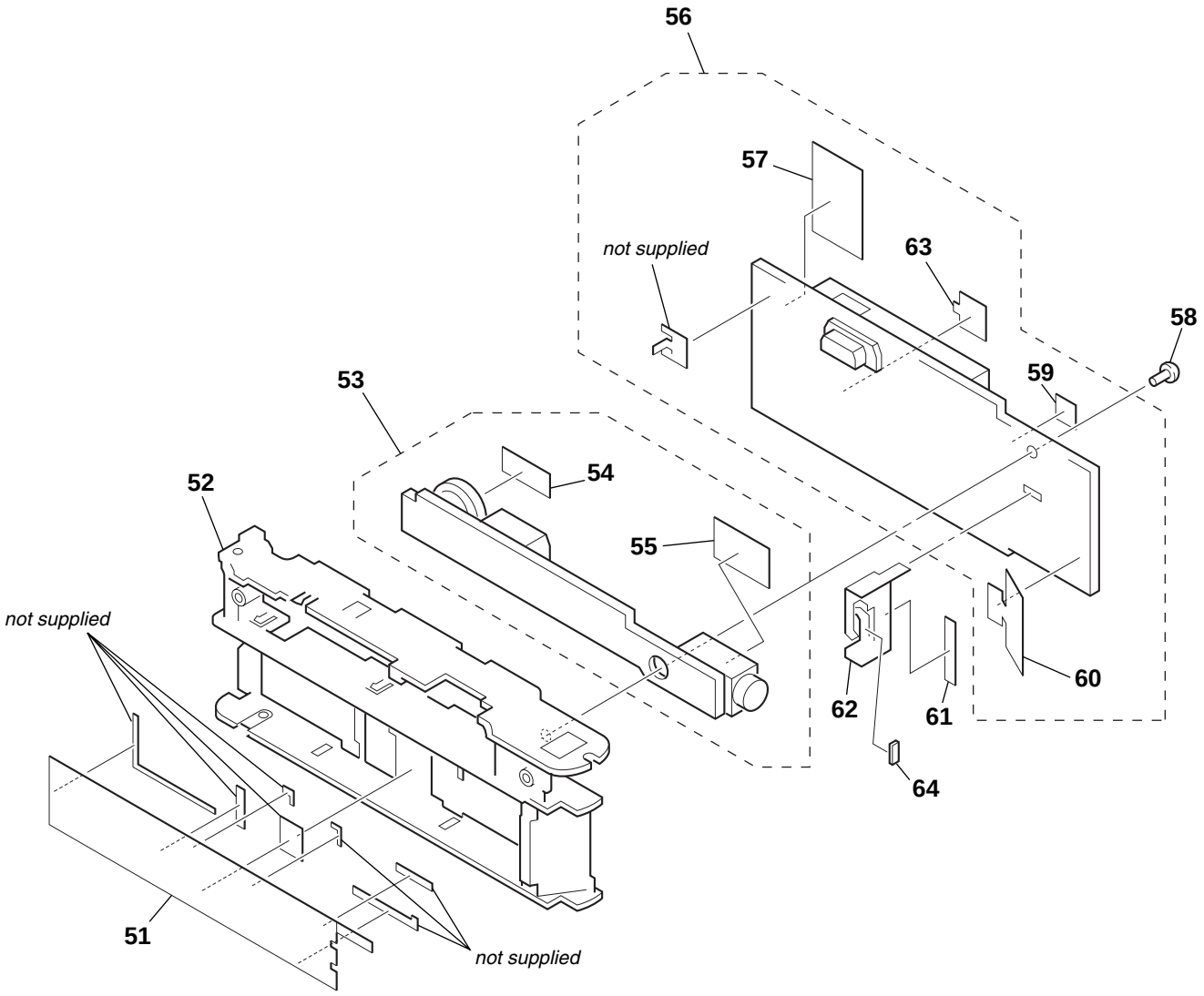
6-1. GENERAL SECTION



Ref. No.	Part No.	Description	Remark
1	3-225-304-01	BUTTON (SUB)	
2	3-225-306-01	SHEET (SUB), ADHESIVE	
3	3-225-303-11	CASE	
4	3-348-998-51	SCREW (M1.4X3.5), TAPPING, PAN	
5	3-225-333-01	KNOB (HOLD)	
6	X-3379-873-1	SHAFT ASSY, STRAP	
* 7	A-3323-646-A	CONSOLE BOARD, COMPLETE	
8	3-225-330-01	LID, BATTERY CASE	
9	X-3379-871-1	TERMINAL (+) ASSY, BATTERY	
10	4-963-883-21	SCREW (M1.4), PRECISION PAN	
11	3-225-704-01	PLATE, FIXED	
12	3-225-334-01	LID (PC)	
13	3-225-326-01	COVER (SIDE)	
14	3-225-325-01	SPRING (EJECT), TORSION	
15	3-225-316-01	GUIDE (EJECT LID)	
16	3-225-322-01	LID (EJECT)	
17	3-225-307-01	SHEET (VOL), ADHESIVE	

Ref. No.	Part No.	Description	Remark
18	3-225-305-01	BUTTON (VOL)	
19	3-225-313-01	WINDOW (LCD)	
20	3-225-308-01	CHASSIS (LCD)	
21	3-225-310-01	SHEET (LCD 1), ADHESIVE	
22	3-225-312-01	CUSHION (LCD)	
23	3-225-309-01	BUTTON (PLAY)	
24	4-218-233-15	SCREW (1.4), MI	
25	3-225-327-01	GUIDE (LED)	
26	3-225-331-01	SHEET, ADHESIVE	
27	3-225-332-01	COVER (BATTERY CASE LID)	
28	3-225-323-01	SHEET (EJECT LID), ADHESIVE	
29	3-225-324-01	COVER (EJECT LID)	
30	3-229-572-01	SHEET (HOLD)	
31	3-229-571-01	SHEET (EJECT)	
33	3-327-119-01	SHEET, AZIMUTH	
34	3-309-595-11	SHEET, INSULATING, PACK	

6-2. MAIN BOARD SECTION



Ref. No.	Part No.	Description	Remark
51	3-225-318-01	SHEET (BATTERY), INSULATING	
52	3-225-317-01	CHASSIS (MAIN)	
* 53	A-3323-648-A	SUB BOARD, COMPLETE	
54	3-226-544-01	SHEET (CAPACITY), INSULATING	
55	3-226-543-01	SHEET (H/P), INSULATING	
* 56	A-3323-647-A	MAIN BOARD, COMPLETE	
57	3-225-315-01	SHEET (EJECT)	
58	3-348-998-51	SCREW (M1.4X3.5), TAPPING, PAN	
59	3-485-343-11	CUSHION, CABINET UPPER 10X7X0.3	
60	1-680-378-11	SWITCH FLEXIBLE BOARD	
61	3-227-510-01	SHEET, INSULATING	
62	3-225-319-01	TERMINAL (-), BATTERY	
63	3-228-745-02	SHEET, ELECTROSTATIC	
64	3-228-768-01	CUSHION (BATTERY TERMINAL)	

SECTION 7
ELECTRICAL PARTS LIST

MAIN

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. . : µA. . uPA. . : µPA. .
  uPB. . : µPB. . uPC. . : µPC. .
  uPD. . : µPD. .
- CAPACITORS
  uF: µF
- COILS
  uH: µH

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

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

Ref. No.	Part No.	Description			Remark
*	A-3323-647-A	MAIN BOARD, COMPLETE			
		**********			
	1-680-378-11	SWITCH FLEXIBLE BOARD			
	3-225-315-01	SHEET (EJECT)			
	3-228-745-02	SHEET, ELECTROSTATIC			
	3-485-343-11	CUSHION, CABINET UPPER 10X7X0.3			
		< CAPACITOR >			
C1002	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C5001	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C5601	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C5602	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C5800	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C6000	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C6001	1-117-919-11	TANTALUM CHIP	10uF	20%	6.3V
C6003	1-117-919-11	TANTALUM CHIP	10uF	20%	6.3V
C6004	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C6006	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C7001	1-164-937-11	CERAMIC CHIP	0.001uF	10%	16V
C7004	1-165-128-11	CERAMIC CHIP	0.22uF		16V
C7031	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C7039	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C7074	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C7101	1-164-848-11	CERAMIC CHIP	8PF	0.5PF	16V
C7102	1-164-848-11	CERAMIC CHIP	8PF	0.5PF	16V
C7103	1-164-941-11	CERAMIC CHIP	0.0047uF	10%	16V
C7109	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C7111	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C7144	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C7146	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C7149	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C7162	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C7239	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C7245	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C7500	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C7501	1-128-639-11	CERAMIC CHIP	0.01uF		10V
C7502	1-128-639-11	CERAMIC CHIP	0.01uF		10V
C7600	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C7700	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C7800	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C7801	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C8000	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C8001	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C8004	1-115-156-11	CERAMIC CHIP	1uF		10V
C8006	1-164-846-11	CERAMIC CHIP	6PF	0.5PF	16V
C8008	1-164-846-11	CERAMIC CHIP	6PF	0.5PF	16V
C8011	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C8012	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C8014	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C8016	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C8509	1-115-156-11	CERAMIC CHIP	1uF		10V
C9001	1-135-868-11	TANTALUM CHIP	220uF	20%	2.5V
C9002	1-128-639-11	CERAMIC CHIP	0.01uF		10V
C9003	1-117-919-11	TANTALUM CHIP	10uF	20%	6.3V
C9004	1-164-937-11	CERAMIC CHIP	0.001uF	10%	16V
C9005	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C9007	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C9008	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C9009	1-131-862-11	TANTALUM CHIP	47uF	20%	4V
C9010	1-137-762-11	TANTALUM	10uF	20%	4V
C9011	1-104-915-11	TANTALUM CHIP	2.2uF	20%	16V
C9012	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C9015	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C9016	1-131-862-11	TANTALUM CHIP	47uF	20%	4V
C9017	1-131-862-11	TANTALUM CHIP	47uF	20%	4V
C9018	1-110-569-11	TANTALUM CHIP	47uF	20%	6.3V
C9019	1-104-851-11	TANTALUM CHIP	10uF	20%	10V
C9020	1-117-919-11	TANTALUM CHIP	10uF	20%	6.3V
C9022	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C9024	1-127-715-11	CERAMIC CHIP	0.22uF	10%	16V
C9026	1-164-939-11	CERAMIC CHIP	0.0022uF	10%	16V
C9029	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C9030	1-164-937-11	CERAMIC CHIP	0.001uF	10%	16V
C9031	1-164-937-11	CERAMIC CHIP	0.001uF	10%	16V
C9032	1-164-937-11	CERAMIC CHIP	0.001uF	10%	16V
C9033	1-164-937-11	CERAMIC CHIP	0.001uF	10%	16V
C9034	1-164-937-11	CERAMIC CHIP	0.001uF	10%	16V
C9035	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C9036	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C9037	1-164-940-11	CERAMIC CHIP	0.0033uF	10%	16V
		< CONNECTOR >			
* CN100	1-815-150-11	CONNECTOR, B TO B (HEADER) 30P			
CN6000	1-815-152-12	CONNECTOR, MEMORY STICK			(MEMORY STICK)
CN6002	1-815-153-11	CONNECTOR (USB) 5P (USB)			

MAIN

Ref. No.	Part No.	Description			Remark
		< DIODE >			
D1001	8-719-988-61	DIODE	1SS355TE-17		
D6000	8-719-988-61	DIODE	1SS355TE-17		
D9001	8-719-076-80	DIODE	SBS004-TL		
D9002	8-719-072-27	DIODE	MA2Z748001S0		
D9004	8-719-046-85	DIODE	MA2S728- (K8).SO		
D9005	8-719-072-27	DIODE	MA2Z748001S0		
D9006	8-719-046-85	DIODE	MA2S728- (K8).SO		
D9007	8-719-046-85	DIODE	MA2S728- (K8).SO		
D9008	8-719-076-80	DIODE	SBS004-TL		
D9009	8-719-046-85	DIODE	MA2S728- (K8).SO		
D9010	8-719-076-80	DIODE	SBS004-TL		
D9014	8-719-069-29	DIODE	RB520S-30TE61		
D9015	8-719-988-61	DIODE	1SS355TE-17		
D9016	8-719-072-27	DIODE	MA2Z748001S0		
D9018	8-719-072-27	DIODE	MA2Z748001S0		
D9019	8-719-988-61	DIODE	1SS355TE-17		
		< FERRITE BEAD >			
FB7003	1-469-084-21	FERRITE 1mH			
		< IC >			
IC1001	8-759-641-91	IC	RV5C348A-E2		
@ IC5000	6-800-118-01	IC	MBM29LV400BC-90PBT-SJDE1-4		
@ IC5600	8-759-825-64	IC	HY62UF16201ALLF-85I		
IC5800	8-759-549-05	IC	SN74LV139APWR		
IC6000	8-759-653-54	IC	XC62GR3312MR		
IC6002	8-752-405-25	IC	CXK2000EN-T2		
@ IC7001	8-759-699-70	IC	CXD9534BGG		
IC7500	8-759-549-24	IC	SN74LV86APWR		
IC7600	8-759-825-65	IC	TC7SZ32AFE (TE85R)		
IC7700	8-759-698-30	IC	TC7SZ04AFE (TE85R)		
IC7800	8-759-698-30	IC	TC7SZ04AFE (TE85R)		
@ IC8000	8-752-405-03	IC	CXD1859GA		
IC9001	8-759-825-69	IC	XC6368A281MR		
IC9002	8-759-824-57	IC	XC61CN3002NR		
IC9003	8-759-824-61	IC	XC61CN2402NR		
IC9004	8-759-824-58	IC	XC6365A183MR		
IC9005	8-759-824-59	IC	MPC18A41FCR2		
IC9006	8-759-825-71	IC	XC62HR1902MR		
IC9007	8-759-825-21	IC	XC61CN1502NR		
		< RESISTOR >			
JC6001	1-216-864-11	METAL CHIP	0	5%	1/16W
JC6002	1-218-990-11	SHORT	0		
JC6003	1-218-990-11	SHORT	0		
JC6005	1-216-864-11	METAL CHIP	0	5%	1/16W
JP9001	1-216-295-11	SHORT	0		
		< COIL >			
L6002	1-469-525-11	INDUCTOR	10uH		
L9001	1-419-384-21	INDUCTOR	47uH		
L9002	1-469-535-21	INDUCTOR	10uH		
L9003	1-419-393-21	INDUCTOR	100uH		
L9004	1-469-528-91	INDUCTOR	100uH		
L9006	1-419-384-21	INDUCTOR	47uH		
L9007	1-469-535-21	INDUCTOR	10uH		

Ref. No.	Part No.	Description			Remark
L9008	1-419-384-21	INDUCTOR	47uH		
		< LED >			
LED6000	8-719-060-93	LED	SML-311DTT86 (ACCESS INDICATOR)		
		< TRANSISTOR >			
Q6000	8-729-928-81	TRANSISTOR	DTC144EE-TL		
Q6001	8-759-593-78	FET	SI2305DS-T1		
Q6003	8-729-928-81	TRANSISTOR	DTC144EE-TL		
Q6004	8-729-928-27	TRANSISTOR	DTA144EE-TL		
Q6007	8-729-928-81	TRANSISTOR	DTC144EE-TL		
Q7502	8-729-037-52	TRANSISTOR	2SC4738F-Y/GR (TPL3)		
Q7503	8-729-928-81	TRANSISTOR	DTC144EE-TL		
Q9001	8-729-049-15	FET	CPH6403-TL		
Q9003	8-729-048-04	FET	3LN01S-TL		
Q9004	8-729-032-62	FET	2SJ347-TE85L		
Q9005	8-729-051-50	FET	XP152A12C0MR		
Q9008	8-729-052-37	FET	XP151A13A0MR		
Q9009	8-729-032-62	FET	2SJ347-TE85L		
		< RESISTOR >			
R2200	1-218-989-11	METAL CHIP	1M	0.5%	1/16W
R2201	1-208-927-11	METAL CHIP	47K	0.5%	1/16W
R2202	1-208-703-11	METAL CHIP	6.8K	0.5%	1/16W
R5001	1-218-977-11	RES-CHIP	100K	5%	1/16W
R5002	1-218-977-11	RES-CHIP	100K	5%	1/16W
R5003	1-218-977-11	RES-CHIP	100K	5%	1/16W
R5303	1-218-977-11	RES-CHIP	100K	5%	1/16W
R5304	1-218-977-11	RES-CHIP	100K	5%	1/16W
R5305	1-218-977-11	RES-CHIP	100K	5%	1/16W
R5801	1-218-977-11	RES-CHIP	100K	5%	1/16W
R6007	1-218-985-11	RES-CHIP	470K	5%	1/16W
R6010	1-218-965-11	RES-CHIP	10K	5%	1/16W
R6018	1-218-977-11	RES-CHIP	100K	5%	1/16W
R6022	1-218-955-11	RES-CHIP	1.5K	5%	1/16W
R6023	1-218-973-11	RES-CHIP	47K	5%	1/16W
R6027	1-208-643-11	RES-CHIP	22	5%	1/16W
R6028	1-208-643-11	RES-CHIP	22	5%	1/16W
R6035	1-218-985-11	RES-CHIP	470K	5%	1/16W
R6037	1-218-985-11	RES-CHIP	470K	5%	1/16W
R6103	1-218-965-11	RES-CHIP	10K	5%	1/16W
R6104	1-218-965-11	RES-CHIP	10K	5%	1/16W
R6107	1-218-965-11	RES-CHIP	10K	5%	1/16W
R6108	1-218-965-11	RES-CHIP	10K	5%	1/16W
R6109	1-218-965-11	RES-CHIP	10K	5%	1/16W
R6502	1-218-977-11	RES-CHIP	100K	5%	1/16W
R6591	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R6901	1-216-864-11	METAL CHIP	0	5%	1/16W
R6902	1-216-864-11	METAL CHIP	0	5%	1/16W
R7001	1-218-977-11	RES-CHIP	100K	5%	1/16W
R7072	1-218-985-11	RES-CHIP	470K	5%	1/16W
R7106	1-218-941-11	RES-CHIP	100	5%	1/16W
R7108	1-218-990-11	SHORT	0		
R7113	1-218-985-11	RES-CHIP	470K	5%	1/16W
R7114	1-218-985-11	RES-CHIP	470K	5%	1/16W
R7115	1-218-985-11	RES-CHIP	470K	5%	1/16W
R7116	1-218-985-11	RES-CHIP	470K	5%	1/16W

@ Replacement of IC5000, IC5600, IC7001 and IC8000 used in this set requires a special tool.

MAIN SUB

Ref. No.	Part No.	Description			Remark
R7117	1-218-985-11	RES-CHIP	470K	5%	1/16W
R7120	1-218-985-11	RES-CHIP	470K	5%	1/16W
R7121	1-218-985-11	RES-CHIP	470K	5%	1/16W
R7123	1-218-985-11	RES-CHIP	470K	5%	1/16W
R7126	1-218-985-11	RES-CHIP	470K	5%	1/16W
R7127	1-218-985-11	RES-CHIP	470K	5%	1/16W
R7154	1-218-985-11	RES-CHIP	470K	5%	1/16W
R7155	1-218-985-11	RES-CHIP	470K	5%	1/16W
R7156	1-218-985-11	RES-CHIP	470K	5%	1/16W
R7183	1-218-985-11	RES-CHIP	470K	5%	1/16W
R7184	1-218-985-11	RES-CHIP	470K	5%	1/16W
R7185	1-218-985-11	RES-CHIP	470K	5%	1/16W
R7186	1-218-985-11	RES-CHIP	470K	5%	1/16W
R7187	1-218-985-11	RES-CHIP	470K	5%	1/16W
R7188	1-218-985-11	RES-CHIP	470K	5%	1/16W
R7189	1-218-985-11	RES-CHIP	470K	5%	1/16W
R7192	1-218-985-11	RES-CHIP	470K	5%	1/16W
R7194	1-218-985-11	RES-CHIP	470K	5%	1/16W
R7305	1-218-931-11	RES-CHIP	15	5%	1/16W
R7501	1-240-695-11	METAL CHIP	1K	5%	1/20W
R7502	1-218-977-11	RES-CHIP	100K	5%	1/16W
R7503	1-218-985-11	RES-CHIP	470K	5%	1/16W
R7504	1-240-695-11	METAL CHIP	1K	5%	1/20W
R7505	1-218-977-11	RES-CHIP	100K	5%	1/16W
R7506	1-218-985-11	RES-CHIP	470K	5%	1/16W
R7701	1-218-985-11	RES-CHIP	470K	5%	1/16W
R7702	1-218-985-11	RES-CHIP	470K	5%	1/16W
R7704	1-218-985-11	RES-CHIP	470K	5%	1/16W
R7710	1-218-985-11	RES-CHIP	470K	5%	1/16W
R7713	1-218-985-11	RES-CHIP	470K	5%	1/16W
R7715	1-218-985-11	RES-CHIP	470K	5%	1/16W
R7716	1-218-985-11	RES-CHIP	470K	5%	1/16W
R7801	1-218-965-11	RES-CHIP	10K	5%	1/16W
R8102	1-218-965-11	RES-CHIP	10K	5%	1/16W
R8103	1-218-965-11	RES-CHIP	10K	5%	1/16W
R8104	1-218-965-11	RES-CHIP	10K	5%	1/16W
R8110	1-218-951-11	RES-CHIP	680	5%	1/16W
R8607	1-218-965-11	RES-CHIP	10K	5%	1/16W
R8608	1-218-965-11	RES-CHIP	10K	5%	1/16W
R9001	1-218-985-11	RES-CHIP	470K	5%	1/16W
R9003	1-218-965-11	RES-CHIP	10K	5%	1/16W
R9004	1-218-990-11	SHORT	0		
R9005	1-218-965-11	RES-CHIP	10K	5%	1/16W
R9006	1-218-989-11	RES-CHIP	1M	5%	1/16W
R9008	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R9010	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R9011	1-218-977-11	RES-CHIP	100K	5%	1/16W
R9012	1-218-990-11	SHORT	0		
R9014	1-218-985-11	RES-CHIP	470K	5%	1/16W
R9015	1-218-965-11	RES-CHIP	10K	5%	1/16W
R9016	1-218-985-11	RES-CHIP	470K	5%	1/16W
R9021	1-218-985-11	RES-CHIP	470K	5%	1/16W
R9022	1-218-990-11	SHORT	0		
R9023	1-218-971-11	RES-CHIP	33K	5%	1/16W
R9025	1-218-965-11	RES-CHIP	10K	5%	1/16W
R9026	1-218-965-11	RES-CHIP	10K	5%	1/16W
R9030	1-218-977-11	RES-CHIP	100K	5%	1/16W
R9031	1-218-977-11	RES-CHIP	100K	5%	1/16W
R9032	1-218-969-11	RES-CHIP	22K	5%	1/16W
R9033	1-218-953-11	RES-CHIP	1K	5%	1/16W
R9502	1-218-965-11	RES-CHIP	10K	5%	1/16W
		< VIBRATOR >			
X1001	1-781-647-21	VIBRATOR, CRYSTAL (32.768kHz)			
X7001	1-781-556-21	VIBRATOR, CRYSTAL (22.5792MHz)			
X8000	1-781-651-21	VIBRATOR, CRYSTAL (12MHz)			
**********					
*	A-3323-648-A	SUB BOARD, COMPLETE			
		**********			
	3-226-543-01	SHEET (H/P), INSULATING			
	3-226-544-01	SHEET (CAPACITY), INSULATING			
		< CAPACITOR >			
C1000	1-137-795-11	DOUBLE LAYER	0.47F		2.5V
C2000	1-164-931-11	CERAMIC CHIP	100PF	10%	16V
C2001	1-164-937-11	CERAMIC CHIP	0.001uF	10%	16V
C2501	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C2502	1-164-937-11	CERAMIC CHIP	0.001uF	10%	16V
C2503	1-164-937-11	CERAMIC CHIP	0.001uF	10%	16V
C3101	1-135-869-11	TANTALUM CHIP	4.7uF	20%	6.3V
C3102	1-135-868-11	TANTALUM CHIP	220uF	20%	2.5V
C3103	1-165-128-11	CERAMIC CHIP	0.22uF		16V
C3104	1-164-937-11	CERAMIC CHIP	0.001uF	10%	16V
C3201	1-135-869-11	TANTALUM CHIP	4.7uF	20%	6.3V
C3202	1-135-868-11	TANTALUM CHIP	220uF	20%	2.5V
C3203	1-165-128-11	CERAMIC CHIP	0.22uF		16V
C3204	1-164-937-11	CERAMIC CHIP	0.001uF	10%	16V
C3301	1-117-919-11	TANTALUM CHIP	10uF	20%	6.3V
C3302	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C3303	1-117-919-11	TANTALUM CHIP	10uF	20%	6.3V
C3304	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C3305	1-117-919-11	TANTALUM CHIP	10uF	20%	6.3V
C3306	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C3307	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C3308	1-131-862-11	TANTALUM CHIP	47uF	20%	4V
C3309	1-115-156-11	CERAMIC CHIP	1uF		10V
C3310	1-135-869-11	TANTALUM CHIP	4.7uF	20%	6.3V
C3311	1-117-919-11	TANTALUM CHIP	10uF	20%	6.3V
C3313	1-117-919-11	TANTALUM CHIP	10uF	20%	6.3V
C3314	1-117-919-11	TANTALUM CHIP	10uF	20%	6.3V
C3316	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C3317	1-135-869-11	TANTALUM CHIP	4.7uF	20%	6.3V
C3318	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C3319	1-165-112-11	CERAMIC CHIP	0.33uF	20%	10V
C3320	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C3321	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C3330	1-107-820-11	CERAMIC CHIP	0.1uF		16V
		< CONNECTOR >			
* CN200	1-815-151-11	CONNECTOR, B TO B (SOCKET) 30P			
* CN300	1-815-204-11	CONNECTOR, FFC/FPC (ZIF) 15P			
		< DIODE >			
D3101	8-719-017-76	DIODE MA8030-TX			

SUB

Ref. No.	Part No.	Description			Remark
D3201	8-719-017-76	DIODE MA8030-TX			
		< FERRITE BEAD >			
FB3101	1-469-084-21	FERRITE	1mH		
FB3201	1-469-084-21	FERRITE	1mH		
FB3335	1-400-094-22	FERRITE	0uH		
		< IC >			
IC3100	8-759-665-50	IC AK4352VT-E2			
IC3200	8-759-598-15	IC TA2131FL (EL)			
		< JACK >			
J3301	1-793-620-11	JACK (🎧)			
		< TRANSISTOR >			
Q2501	8-759-593-78	FET	SI2305DS-T1		
Q2502	8-729-928-81	TRANSISTOR	DTC144EE-TL		
Q2503	8-759-593-78	FET	SI2305DS-T1		
Q2504	8-729-928-81	TRANSISTOR	DTC144EE-TL		
Q2505	8-759-593-78	FET	SI2305DS-T1		
Q2506	8-729-928-81	TRANSISTOR	DTC144EE-TL		
Q3301	8-729-037-52	TRANSISTOR	2SC4738F-Y/GR (TPL3)		
Q3302	8-729-048-04	FET	3LN01S-TL		
		< RESISTOR >			
R1001	1-218-953-11	RES-CHIP	1K	5%	1/16W
R2000	1-218-985-11	RES-CHIP	470K	5%	1/16W
R2203	1-208-707-11	METAL CHIP	10K	0.5%	1/16W
R2204	1-208-711-11	METAL CHIP	15K	0.5%	1/16W
R2205	1-208-719-11	METAL CHIP	33K	0.5%	1/16W
R2502	1-218-985-11	RES-CHIP	470K	5%	1/16W
R2503	1-218-985-11	RES-CHIP	470K	5%	1/16W
R2504	1-218-977-11	RES-CHIP	100K	5%	1/16W
R2506	1-218-985-11	RES-CHIP	470K	5%	1/16W
R3101	1-218-963-11	RES-CHIP	6.8K	5%	1/16W
R3102	1-218-967-11	RES-CHIP	15K	5%	1/16W
R3103	1-208-635-11	RES-CHIP	10	5%	1/16W
R3104	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R3105	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R3201	1-218-963-11	RES-CHIP	6.8K	5%	1/16W
R3202	1-218-967-11	RES-CHIP	15K	5%	1/16W
R3203	1-208-635-11	RES-CHIP	10	5%	1/16W
R3204	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R3205	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R3301	1-218-941-11	RES-CHIP	100	5%	1/16W
R3303	1-218-969-11	RES-CHIP	22K	5%	1/16W
R3304	1-220-802-11	RES-CHIP	3.3	5%	1/16W
R3305	1-208-635-11	RES-CHIP	10	5%	1/16W
R3310	1-218-963-11	RES-CHIP	6.8K	5%	1/16W
		< SWITCH >			
S2203	1-771-138-21	SWITCH, KEY BOARD (MEGA BASS, AVLS)			
S2204	1-771-138-21	SWITCH, KEY BOARD (MENU)			
S2205	1-771-138-21	SWITCH, KEY BOARD (DISPLAY)			

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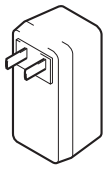
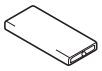
Ref. No.	Part No.	Description	Remark
		ACCESSORIES & PACKING MATERIALS	
		**********	
⚠101	1-528-822-13	BATTERY CHARGER (BC-7DN)	
102	1-528-543-11	BATTERY, NI-CD (NC-6WM)	
103	1-757-412-11	CORD, CONNECTION (USB)	
105	8-953-301-92	RECEIVER, EAR MDR-E805LP/K2	
107	3-228-138-31	SOFT (CD-ROM), APPLICATION	
108	3-008-521-01	CASE, BATTERY CHARGE	
109	3-227-797-71	MANUAL, INSTRUCTION (SIMPLIFIED CHINESE)	
109	3-234-678-11	MANUAL, INSTRUCTION (SIMPLIFIED CHINESE)	

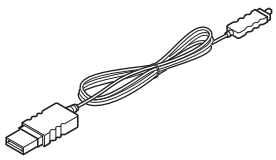
101 BATTERY CHARGER (1)



102 RECHARGEABLE BATTERY (1)

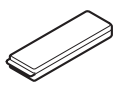


103 USB CABLE (1)



105 EARPHONES (1)

108 RECHAGEABLE BATTERY CARRYING CASE (1)



Note : Name of these illustrated parts are described as they are in the operating instructions.

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

MEMO

REVISION HISTORY

Clicking the version allows you to jump to the revised page.
Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

Ver.	Date	Description of Revision
1.0	2001.06	New