D-NE270

SERVICE MANUAL

AEP Model

Ver 1.0 2004.03

US and foreign patents licensed from Dolby Laboratories.

Model Name Using Similar Mechanism	NEW
CD Mechanism Type	CDM-3325ERV
Optical Pick-up Name	DAX-25EV

SPECIFICATIONS

System
Compact disc digital audio system

Laser diode properties
Material: GaAlAs
Wavelength: λ = 770 - 800 nm
Emission duration: Continuous
Laser output: Less than 44.6 µW
(This output is the value measured at a distance of 200 mm from the objective lens surface on the optical pick-up block with 7 mm aperture.)

D-A conversion
1-bit quartz time-axis control

Frequency response
20 - 20 000 Hz $^{+1}_{-2}$ dB (measured by JEITA)

Output (at 4.5 V input level)
Headphones (stereo minijack)
Approx. 5 mW + Approx. 5 mW at 16 Ω
(Approx. 1.5 mW + Approx. 1.5 mW at 16 Ω)*
*For the customers in AEP

Power requirements
- Two LR6 (size AA) batteries: 1.5 V DC × 2
- AC power adaptor (DC IN 4.5 V jack):
  220 - 230 V, 50/60 Hz

Battery life*1 (approx. hours)
When you use the CD player on a flat and stable surface.
Playing time varies depending on how the CD player is used.

When using two Sony alkaline batteries LR6 (SG) (produced in Japan)

	G-PROTECTION "G-PRO 1"	G-PROTECTION "G-PRO 2"
Audio CD	50	45
ATRAC CD*2	85	85
MP3 CD*3	65	65

*1 Measured value by the standard of JEITA (Japan Electronics and Information Technology Industries Association)
*2 Recorded at 48 kbps
*3 Recorded at 128 kbps

Operating temperature
5°C - 35°C (41°F - 95°F)

Dimensions (w/h/d) (excluding projecting parts and controls)
Approx. 135.8 × 30.7 × 135.8 mm
(5 3/8 × 1 1/4 × 5 3/8 in.)

Mass (excluding accessories)
Approx. 177 g (6.3 oz.)

Supplied accessories
Earphones (1)
CD-ROM*1 (SonicStage) (1)
User's guide for SonicStage (1)

*1 Do not play a CD-ROM on an audio CD player.

Design and specifications are subject to change without notice.

PORTABLE CD PLAYER

9-877-695-01
2004C05-1

Sony Corporation
Personal Audio Company
Published by Sony Engineering Corporation

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.

Notes on chip component replacement

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

Flexible Circuit Board Repairing

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

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

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 viscou-s (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.

About CD-Rs/RWs

This CD player can play CD-Rs/RWs recorded in the ATRAC3plus/ATRAC3, MP3 or CDDA* format, but playback capability may vary depending on the quality of the disc and the condition of the recording device.
* CDDA is the abbreviation for Compact Disc Digital Audio. It is a recording standard used for the Audio CDs.

On AC power adaptor

Use only the AC power adaptor supplied. If your CD player is not supplied with the one, use the AC-E45HG AC power adaptor. Do not use any other AC power adaptor. It may cause a malfunction.

Polarity of the plug

SECTION 1
SERVICING NOTES

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

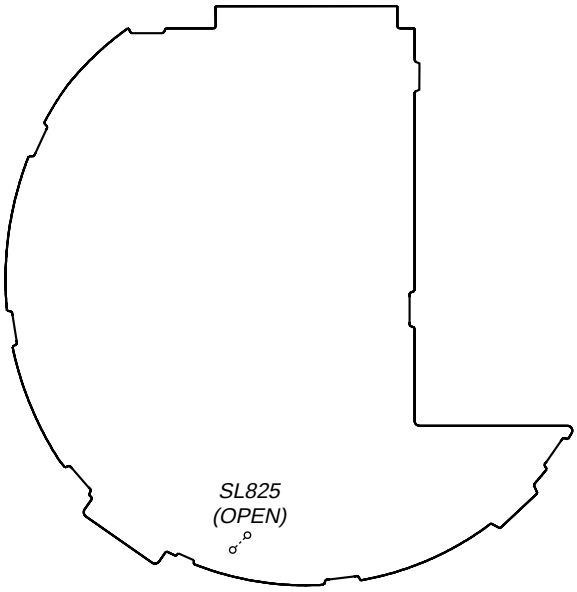
The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body. During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter 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.

- In performing the repair with the power supplied to the set, removing the MAIN board causes the set to be disabled.
  In such a case, make a solder bridge to short SL825 (OPEN/CLOSE DETECT) on the MAIN board in advance.

– MAIN Board (Component Side) –



BEFORE REPLACING THE OPTICAL PICK-UP BLOCK

Please be sure to check thoroughly the parameters as par the "Optical Pick-Up Block Checking Procedures" (Part No.: 9-960-027-11) issued separately before replacing the optical pick-up block. Note and specifications required to check are given below.

- FOK output: IC601 ⑮ pin
  When checking FOK, remove the lead wire to disc motor.
- RF signal P-to-P value: 0.45 to 0.65 Vp-p

LASER DIODE AND FOCUS SEARCH OPERATION CHECK

During normal operation of the equipment, emission of the laser diode is prohibited unless the upper lid is closed while turning ON the S820. (push switch type)
The following checking method for the laser diode is operable.

- **Method:**
  Emission of the laser diode is visually checked.

1. Open the upper lid.
2. With a disc not set, turn on the S820 with a screwdriver having a thin tip as shown in Fig.1.
3. Push the ►II button.
4. Observing the objective lens, check that the laser diode emits light.
   When the laser diode does not emit light, automatic power control circuit or optical pick-up is faulty.
   In this operation, the objective lens will move up and down 4 times along with inward motion for the focus search.

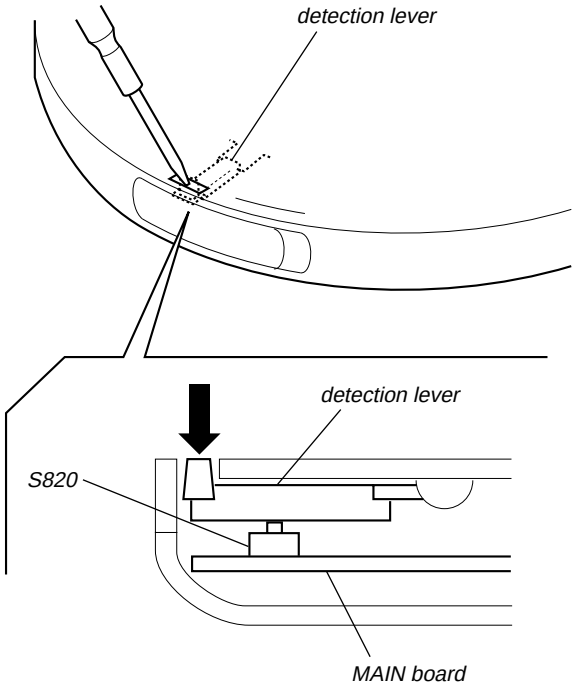


Fig. 1 Method to push the S820

System requirements

The following hardware and software specifications are required in order to use the SonicStage Simple Burner software.

Computer	IBM PC/AT or Compatible CPU: Pentium II 300 MHz or higher (Pentium III 600 MHz or higher is recommended.) Hard disk drive space: System folder (on boot disc) 200 MB or more/ Temporary folder 200 MB or more (The amount of free space required differs according to the size of the audio files that you want to handle. 1.5 GB of free space or more is recommended.) RAM: 64 MB or more (128 MB or more is recommended)	
	Others	CD-R/RW drive (capable of digital playback by WDM) Sound Board
Operating System	Factory installed: Windows XP Home Edition/Windows XP Professional/Windows Millennium Edition/Windows 2000 Professional/Windows 98 Second Edition	
Display	High Color (16 bit) or higher, 800 × 600 dots or better	
Others	Internet access: for Web registration and CDDB services Adobe Acrobat Reader installed for viewing the PDF manual	

This software is not supported by the following environments:

NEC PC-98 series or compatible machines, Macintosh systems
Windows XP versions other than Home Edition or Professional
Windows 2000 versions other than Professional
Windows 98 versions other than Second Edition
Windows NT
Windows 95
Personally constructed PCs or operating systems
An environment that is an upgrade of the original manufacturer-installed operating system
Multi-boot environment
Multi-monitor environment

Notes

We do not ensure trouble-free operation on all computers that satisfy the system requirements.
We do not ensure trouble-free operation of the system suspend, sleep, or hibernation function on all computers.

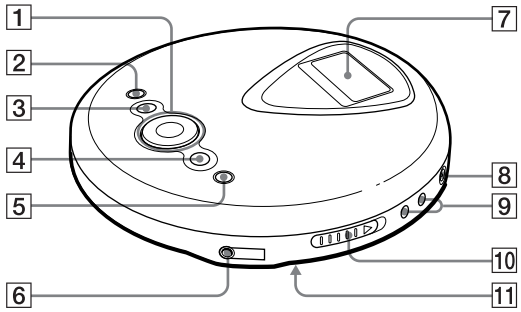
SECTION 2
GENERAL

This section is extracted from instruction manual.

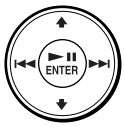
Locating the controls

CD player

For details, see the pages in parentheses.



1 Operation button



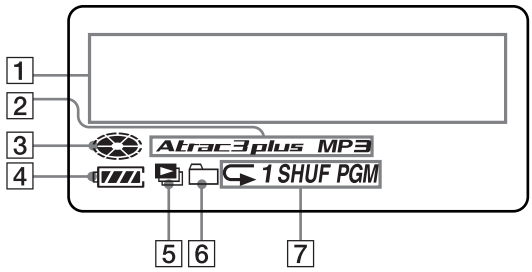
►II[*1]/ENTER: play/pause/enter
I◄◄: AMS[*2]/rewind
►►I: AMS/fast forward
▲/▼: Use to select a file, play mode, etc.

2 ■ (stop) button
3 🗀 (group) – butto
4 🗀 (group) + button
5 DISPLAY/MENU button
Use to enter the menu. Also use to enter the selection as well as ►II/ENTER.
6 🎧 (headphones) jack
7 Display
8 DC IN 4.5 V (external power input) jack
9 VOL (volume) +[*1]/– buttons
10 OPEN switch
Slide the switch to open the CD player lid.
11 HOLD switch (rear)
Slide the switch in the direction of the arrow to disable the buttons on the CD player.

*1 The button has a tactile dot.
*2 Automatic Music Sensor

Display

For details, see the pages in parentheses.

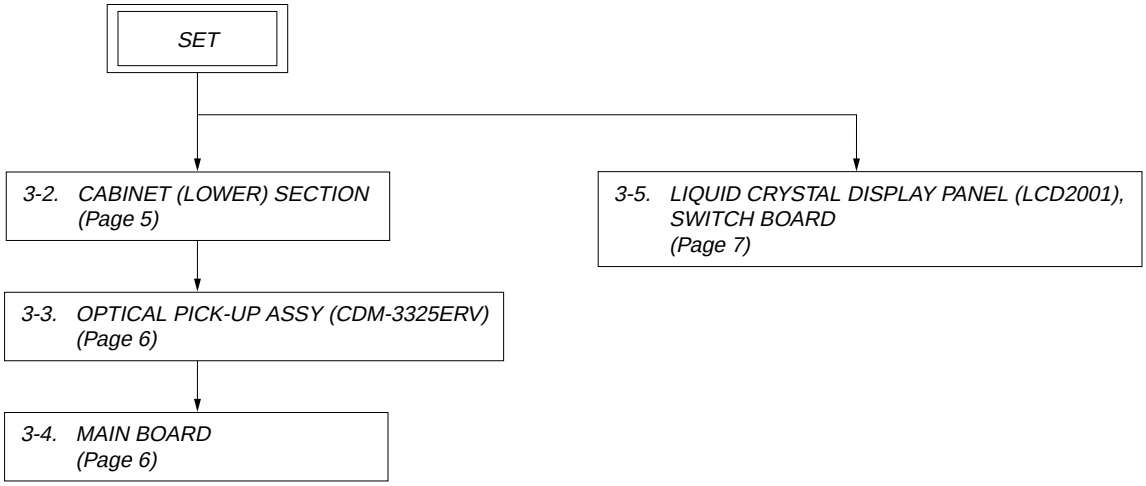


1 Character information display
While playing an audio CD, disc name, track name, etc. appear on the 2 lines of the display, if recorded on the CD.
While playing an ATRAC CD/MP3 CD, group name, file name, etc. appear on the 2 lines of the display, if recorded on the CD.
Menu items also appear in this display.
2 Atrac3plus/MP3 indication
3 Disc indication
Lights up while the CD player is playing.
4 Battery indication
Roughly shows the remaining power of the battery. If "▭" flashes, the batteries are depleted.
5 Play list indication
For MP3 CD only
6 Group indication
For ATRAC CD/MP3 CD only
7 Play mode indication
Shows various play modes such as shuffle play and program play. "↻" shows repeat play.

SECTION 3
DISASSEMBLY

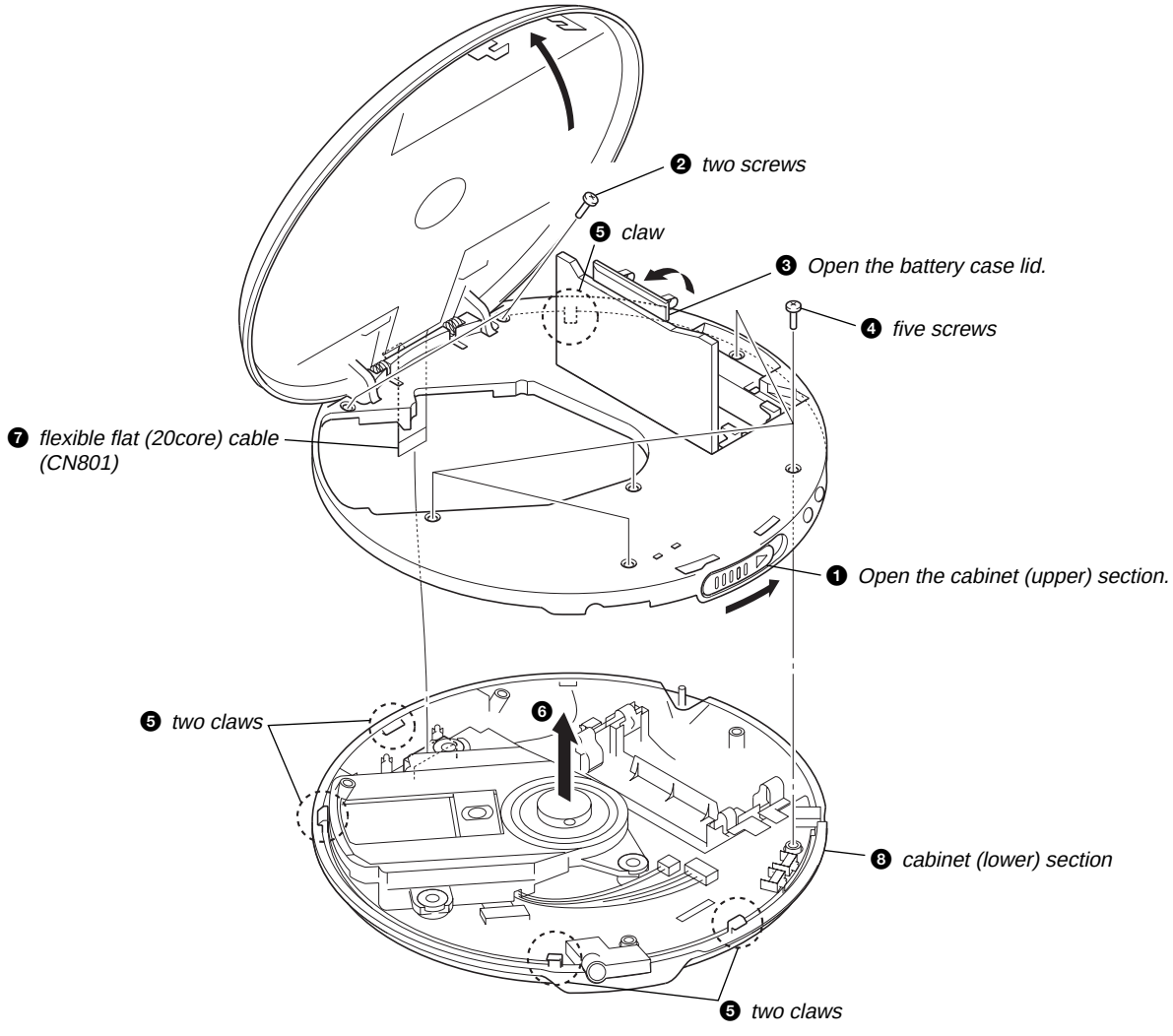
• This set can be disassembled in the order shown below.

3-1. DISASSEMBLY FLOW

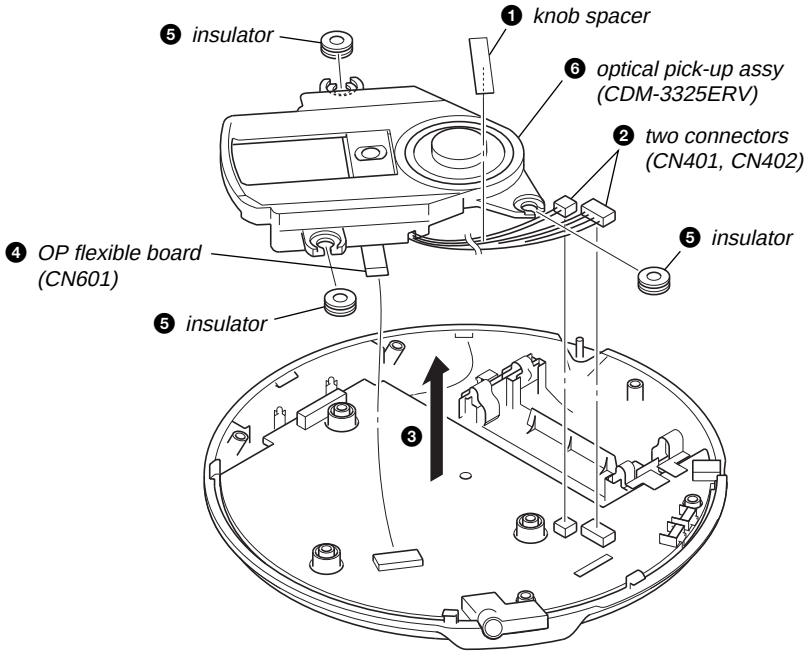


Note: Follow the disassembly procedure in the numerical order given.

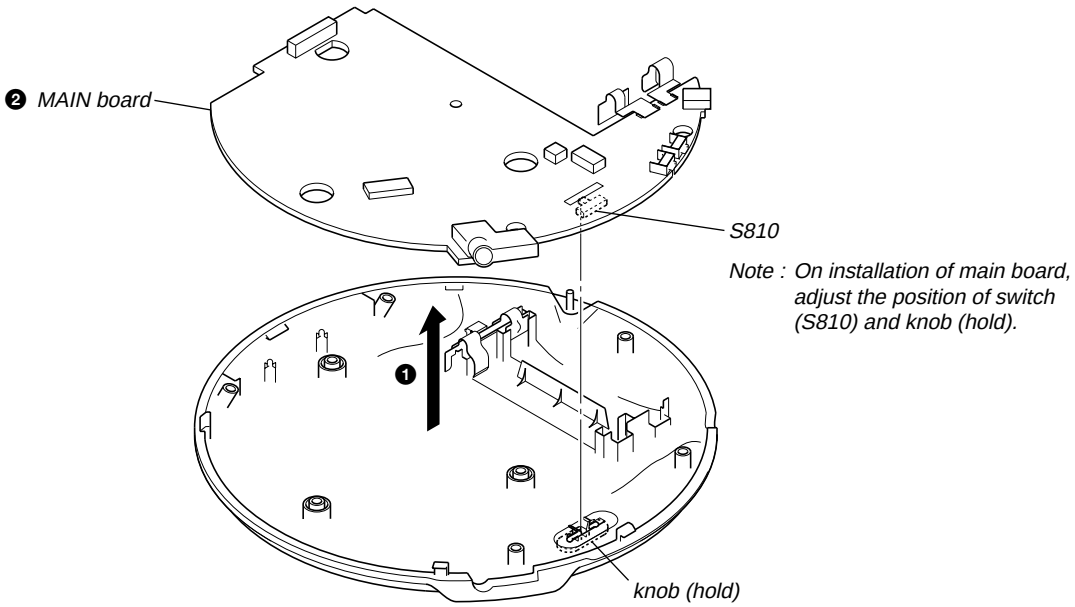
3-2. CABINET (LOWER) SECTION



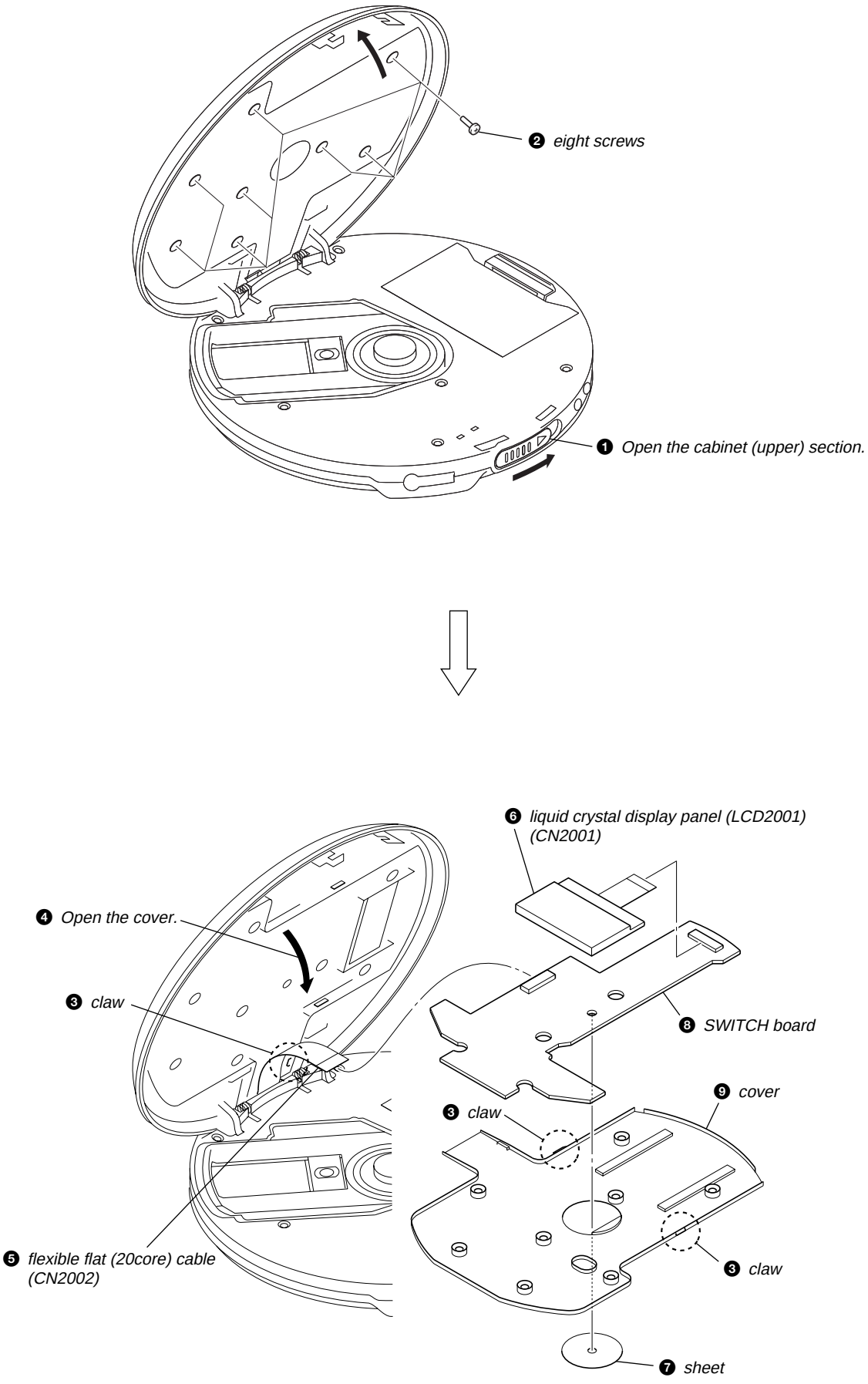
3-3. OPTICAL PICK-UP ASSY (CDM-3325ERV)



3-4. MAIN BOARD



3-5. LIQUID CRYSTAL DISPLAY PANEL (LCD2001), SWITCH BOARD



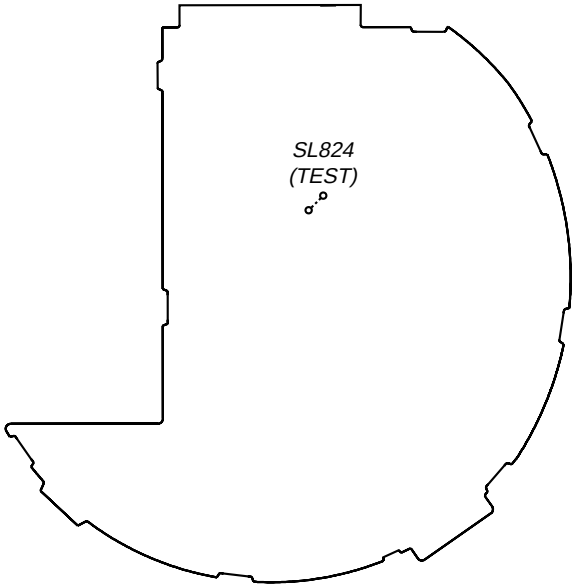
SECTION 4
TEST MODE

In the test mode, this set can check the microcomputer version and liquid crystal display.

1) Short SL824 (TEST) on the MAIN board with a solder bridge. Then, turn on the power.
2) Microcomputer version is displayed on the liquid crystal display, and the liquid crystal display is all lighted.
3) Turn off the power and open the solder bridge on SL824 (TEST) on the MAIN board.

Note: Remove the solders completely. Remaining could be shorted with the chassis, etc.

– MAIN Board (Conductor Side) –



SECTION 5
ELECTRICAL CHECK

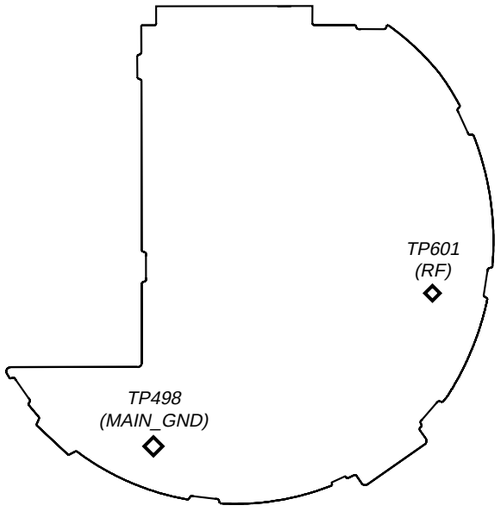
The CD section adjustments are done automatically in this set.
In case of operation check, confirm that focus bias.

Precautions for Check

1. Perform check in the order given.
2. Use YEDS-18 disc (Part No.: 3-702-101-01) unless otherwise indicated.
3. Power supply voltage requirement: DC4.5 V in DC IN jack. (J401)
   HOLD switch : OFF

Connecting and Checking Location:

– MAIN Board (Conductor Side) –

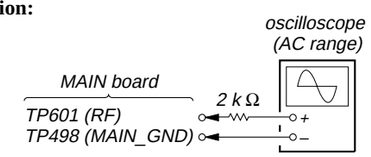


Focus Bias Check

Condition:

• Hold the set in horizontal state.

Connection:

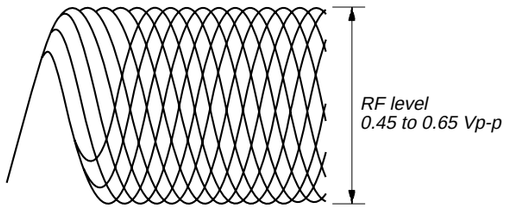


Procedure:

1. Connect the oscilloscope to the test points TP601 (RF) and TP498 (MAIN_GND) on the MAIN board.
2. Set a disc. (YEDS-18)
3. Push the ►II button.
4. Check the oscilloscope waveform is as shown below.
   A good eye pattern means that the diamond shape (◊) in the center of the waveform can be clearly distinguished.

RF Signal reference Waveform (Eye Pattern)

VOLT/DIV : 100 mV (With the 10:1 probe in use)
TIME/DIV : 500 ns

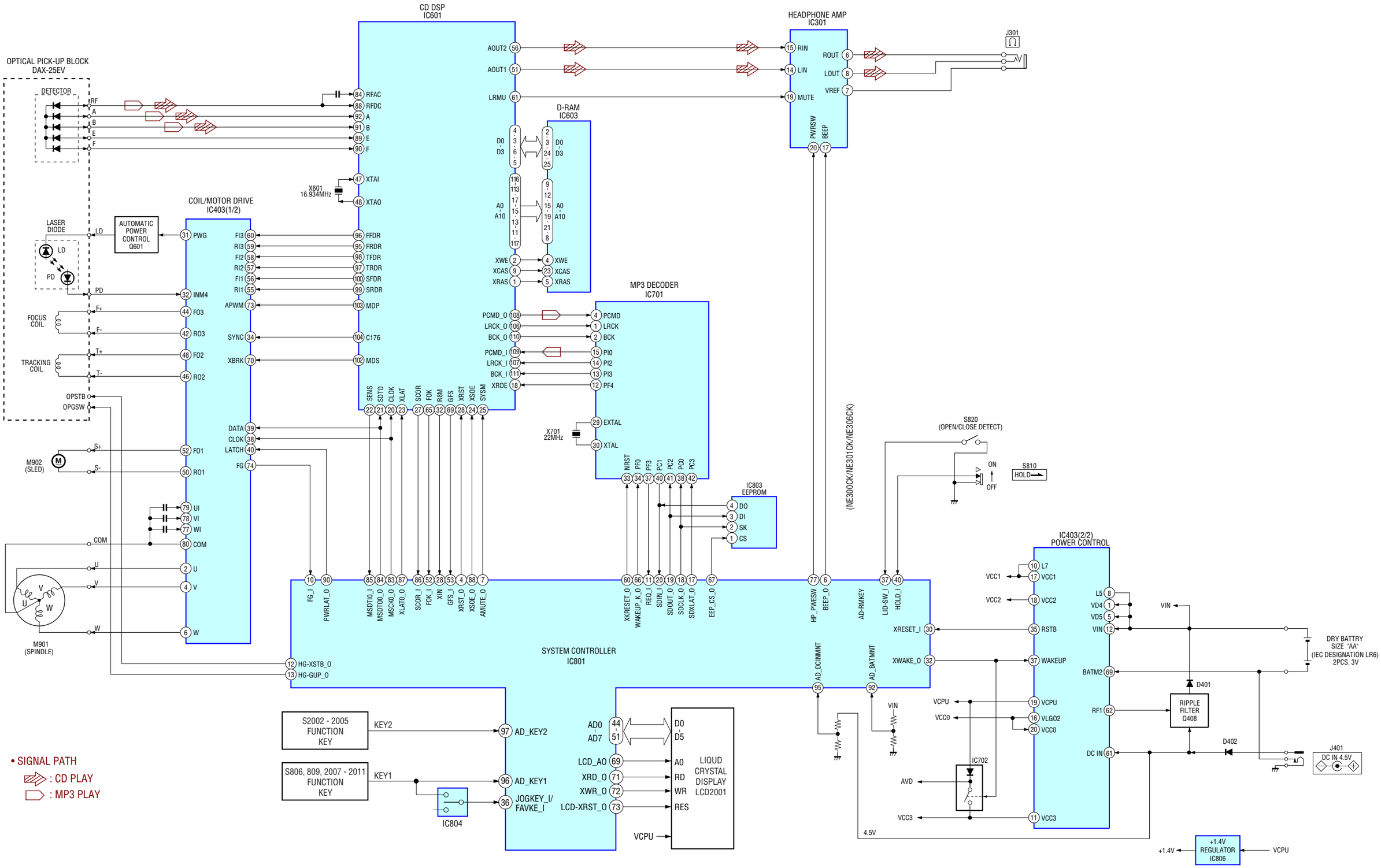


To watch the eye pattern, set the oscilloscope to AC range and increase the vertical sensitivity of the oscilloscope for easy watching.

5. Stop revolving of the disc motor by pressing the ■ button.

SECTION 6
DIAGRAMS

6-1. BLOCK DIAGRAM



6-2. NOTE FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

Note on Printed Wiring Board

- ○——— : parts extracted from the component side.
- ——— : parts extracted from the conductor side.
- ● : Through hole.
- △ : internal component.
- ▬ : 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.

Note on Schematic Diagram:

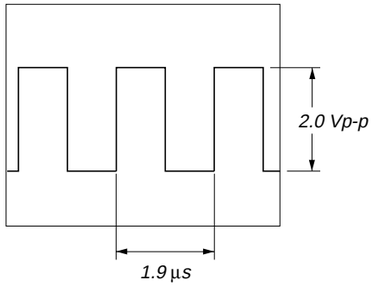
- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- ▭ : panel designation.

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

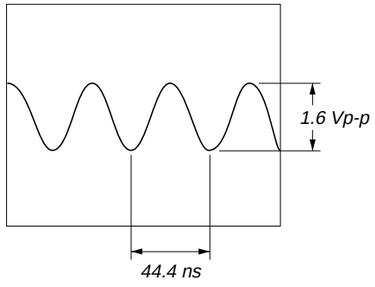
- ▬ : B+ Line.
- Power voltage is dc 4.5 V and fed with regulated dc power supply from DC IN jack (J401).
- Voltages and waveforms are dc with respect to ground in no-signal conditions.
  no mark : CD PLAY
  ( ) : MP3 PLAY
  ✻ : Impossible to measure
- Voltages are taken with a VOM (Input impedance 10 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.
  ⇨ : CD PLAY
  ⇨ : MP3 PLAY

• Waveforms
– MAIN Board –

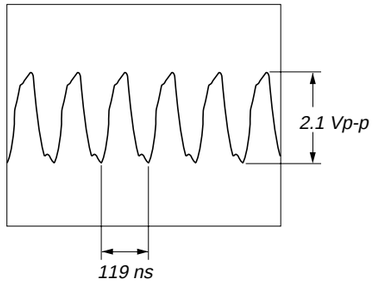
① IC601 ⑳ (CLOK)



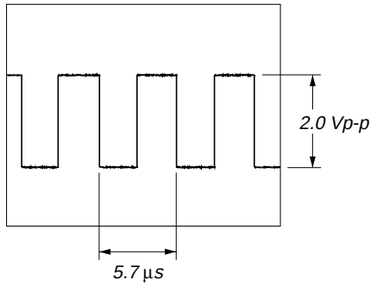
⑥ IC701 ㉚ (XTAL) (MP3 play mode)



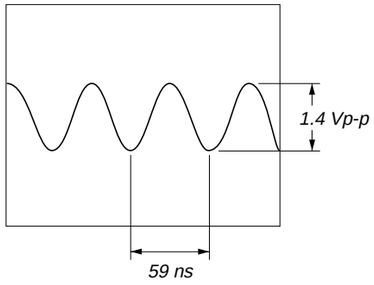
② IC601 ㉜ (R8M)



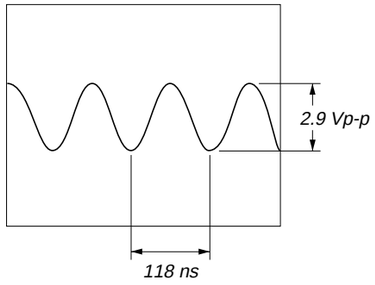
⑦ IC403 ㉞ (SYNC)



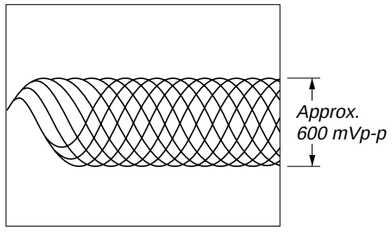
③ IC601 ㊽ (XTAO)



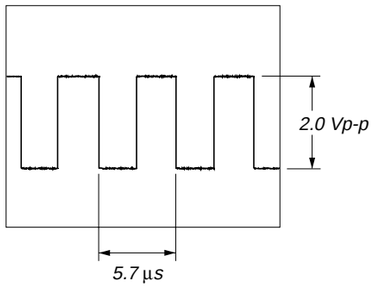
⑧ IC801 ㉘ (XIN)



④ IC601 ㉞ (RFAC)



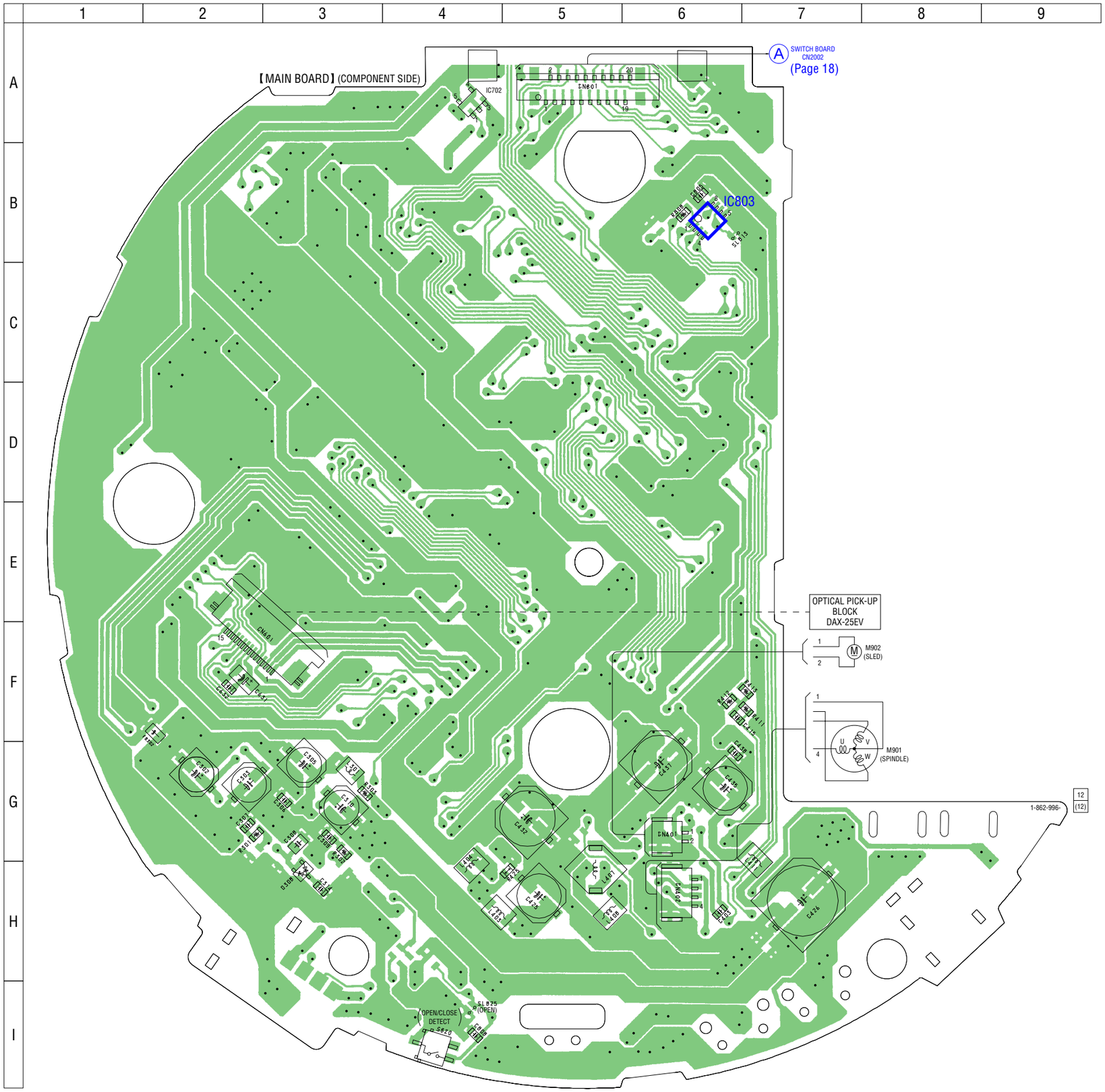
⑤ IC601 ⑯ (C176)



6-3. PRINTED WIRING BOARD – MAIN Board (Component Side) – :Uses unleaded solder.

- **Semiconductor Location**

Ref. No.	Location
D308	H-3
IC702	A-4
IC803	B-6



6-4. PRINTED WIRING BOARD – MAIN Board (Conductor Side) – :Uses unleaded solder.

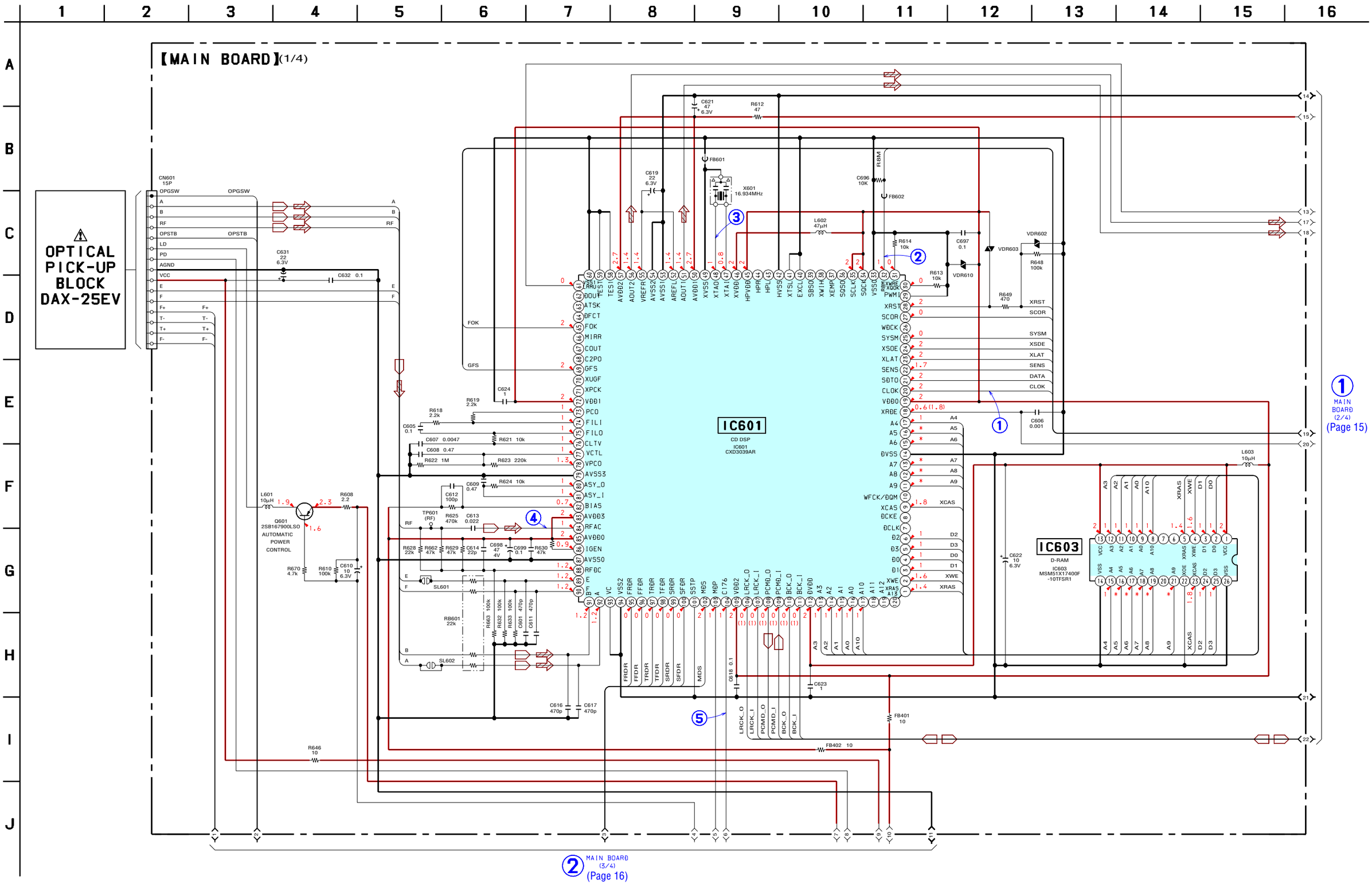
- **Semiconductor Location**

Ref. No.	Location
D307	H-6
D401	G-3
D402	G-3
D403	H-2
D421	E-5
D422	E-5
IC301	G-7
IC403	G-4
IC601	E-7
IC603	C-8
IC701	B-6
IC801	C-4
IC804	E-4
IC806	B-5
Q408	H-3
Q601	G-7

@ When IC803 is damaged, replace the MAIN board.

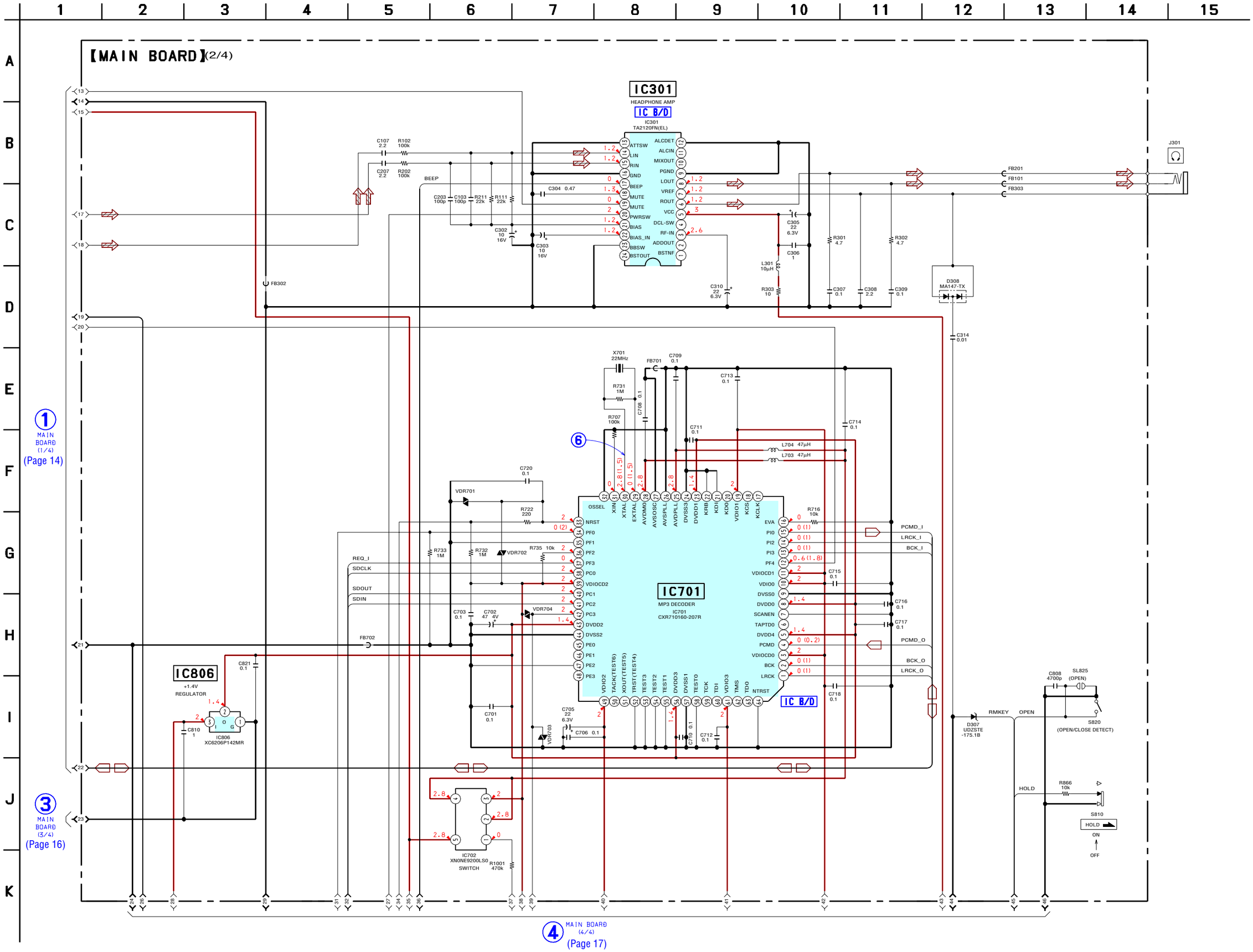
6-5. SCHEMATIC DIAGRAM – MAIN Board (1/4) –

• See page 11 for Waveforms. • See page 21 for IC Pin Function Description.



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

6-6. SCHEMATIC DIAGRAM – MAIN Board (2/4) – • See page 11 for Waveform. • See page 20 for IC Block Diagrams.



6-7. SCHEMATIC DIAGRAM – MAIN Board (3/4) – • See page 11 for Waveform. • See page 20 for IC Block Diagram.

【MAIN BOARD】(3/4)

2 MAIN BOARD (1/4) (Page 14)
3 MAIN BOARD (2/4) (Page 15)
5 MAIN BOARD (4/4) (Page 17)

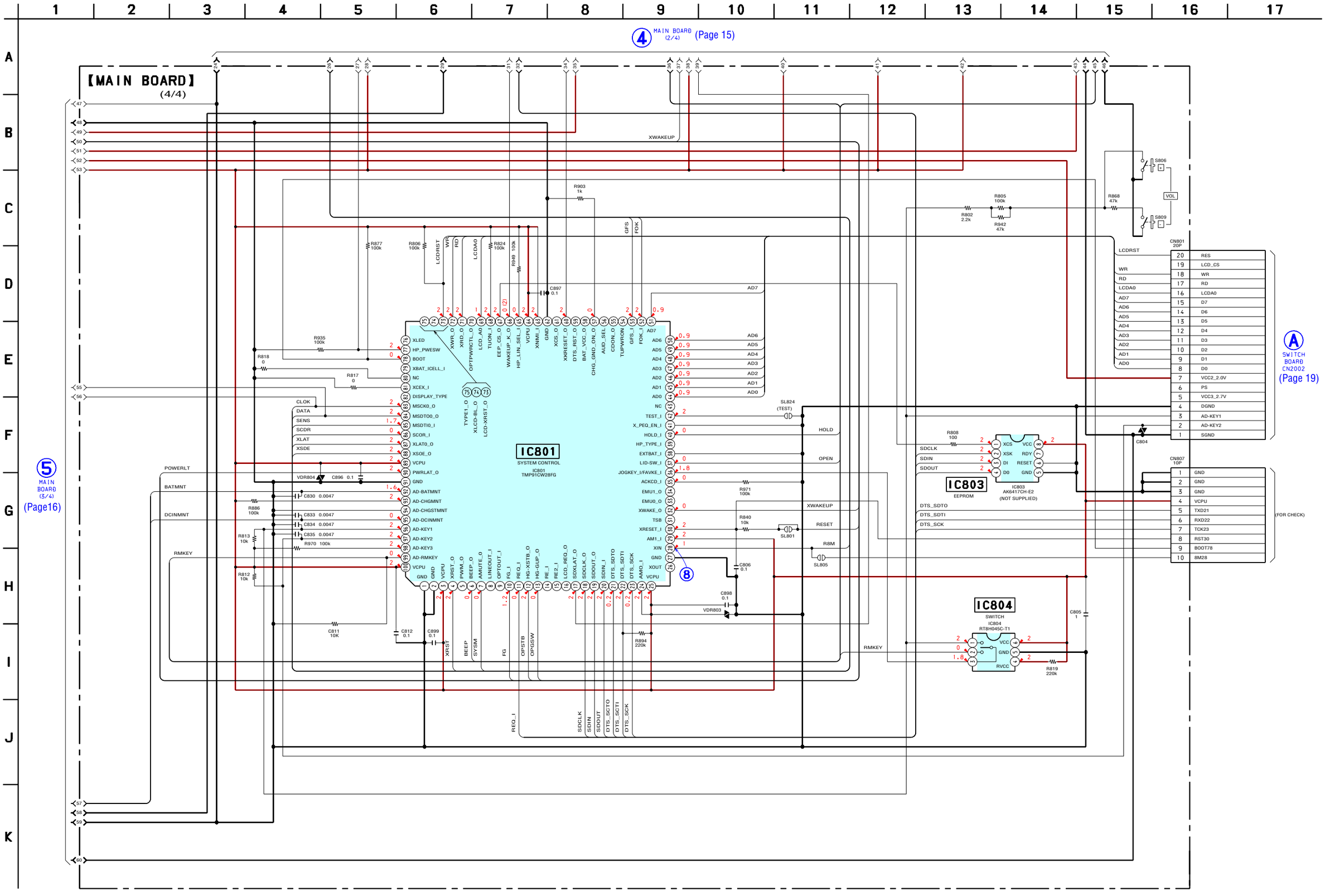
IC403
COIL/MOTOR DRIVE, POWER CONTROL
IC403
TB2138AFG

IC B/D

M902 (SLED)
M901 (SPINDLE)
CN401 2P
CN402 4P
Q408 2SB16990LSO
D401 RB160M-30TR
D402 RB160M-30TR
D403 RB160M-30TR
L401 4.7µH
L402 4.7µH
L403 47µH
L404 220µH
L406 47µH
L407 100µH
L408 220µH
L409 47µH
L411 47µH
FB413
R452 220k
R415 470k
R453 1M
D421 1SS355TE-17
D422 1SS355TE-17
C416 4.7
C403 470p
C438 1
C435 47 6.3V
C446 1
R440 1M
R427 10k
R460 100
C458 1
C455 0.0047
R459 100k
C454 0.1
C419 0.1
C420 0.1
C421 0.001
C422 0.001
C423 0.001
R419 47k
C406 2.2
C425 47 6.3V
C432 220 4V
R425
C433 1
C428 4.7 16V
C429 0.1
C450 1
C434 10 6.3V
C436 10 6.3V
C437 220 6.3V
C424 4.7
C427 0.1
C447 0.001
R480 1M
R406 2.2M
C440 0.0022
R438 10k
C430 2200p
C404 0.1
R417 100k
C415 0.22
R413 22k
R411 220k
R412 47k
C417 0.1
R418 100k
C426 220 6.3V
C405 1
C460 0.1
C410 1
BT401
BT403
DRY BATTERY SIZE"AA" (IEC DESIGNATION LR6) 2PCS, 3V
•TOTAL CURRENT PLAY:63mA STOP:19mA FF/FR:80mA
J401 DC IN 4.5V
VDR401
VDR402
VDR403
VDR407

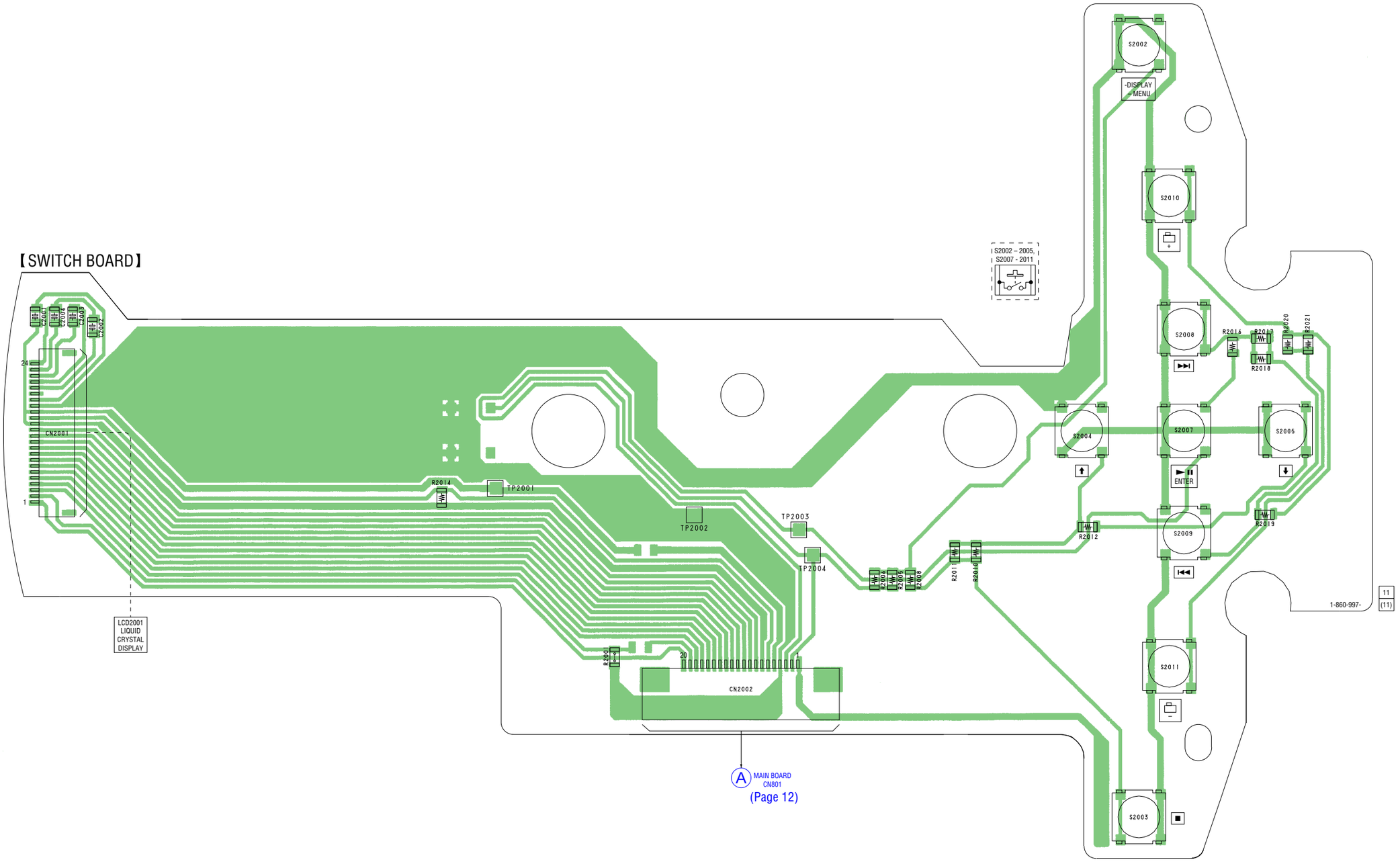
DCIN, RF1, RS, INM1, CHGSW, INP1, CHGMNT, BATM1, BATM2, XBRK, PGND2, PWM, APWM, FG, DTC2, DTC3, WI, VI, UI, COM
VD4, U, MGND4, V, VD5, W, MGND5, L5, VG, L7, VCC3, VIN, L2H, PGND1, L2L, VLGD2, VCC1, VCC2, VCPU, VCCO
FI3, RI3, FI2, RI2, FI1, RI1, DEF, VD1, FO1, MGND1, RO1, VD12, FO2, MGND2, RO2, VD23, FO3, MGND3, RO3, VD3
LATCH, DATA, CLOCK, WAKEUP, OUT4, RSTB, SYNC, GND, INM4, PWG, INM2, RF2, PWS, INP2, VREF, STNG, INP3, INM3, RF3, PWM3
FFDR, FRDR, TFDR, TRDR, SFDR, SRDR
T+, T-, F+, F-
MDS
FG
POWERLT
XWAKEUP
RESET
DCINMNT
BATMNT

6-8. SCHEMATIC DIAGRAM – MAIN Board (4/4) – • See page 11 for Waveform. • See page 21 for IC Pin Function Description.

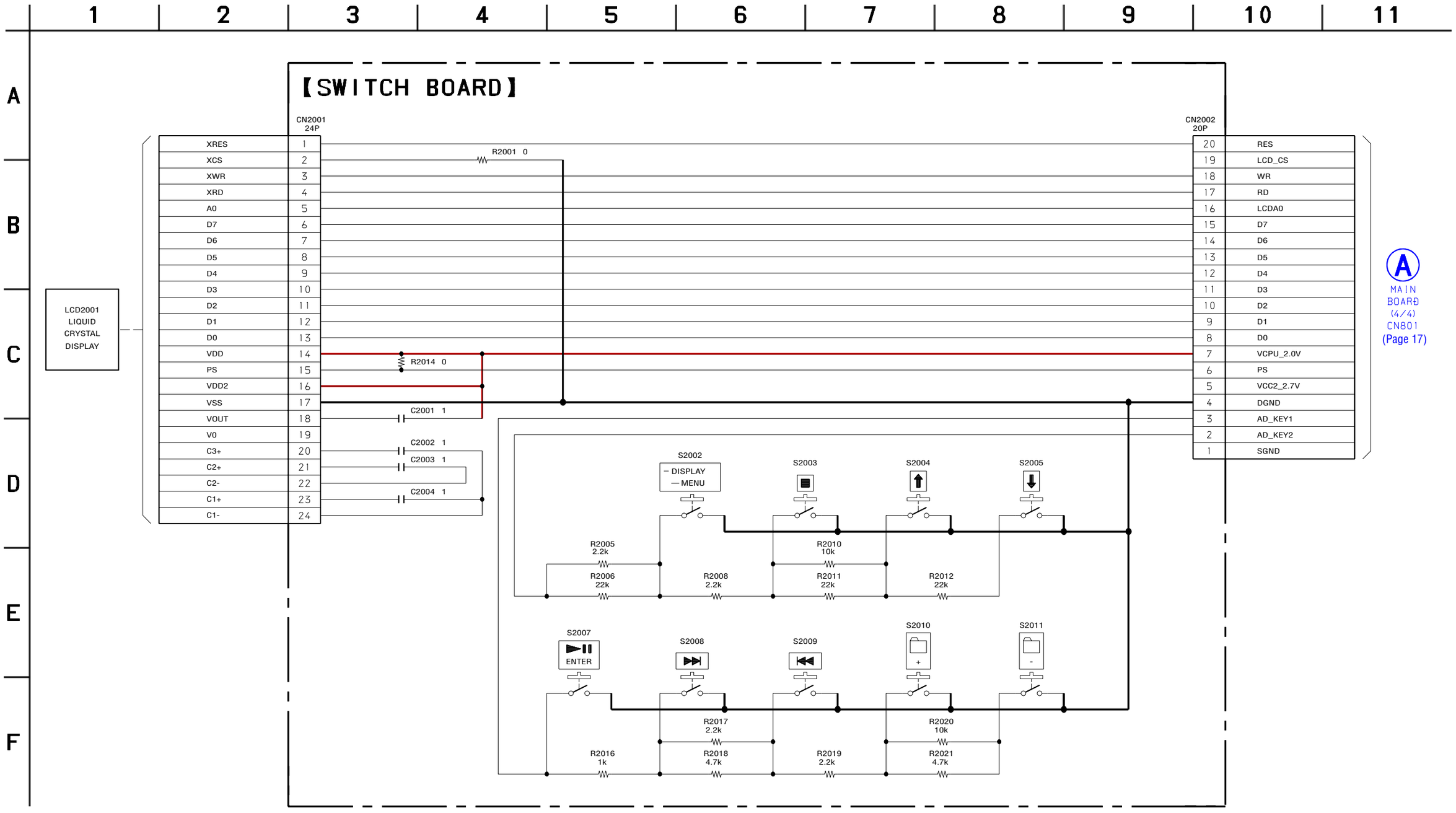


@ When IC803 is damaged, replace the MAIN board.

6-9. PRINTED WIRING BOARD – SWITCH Board – :Uses unleaded solder.



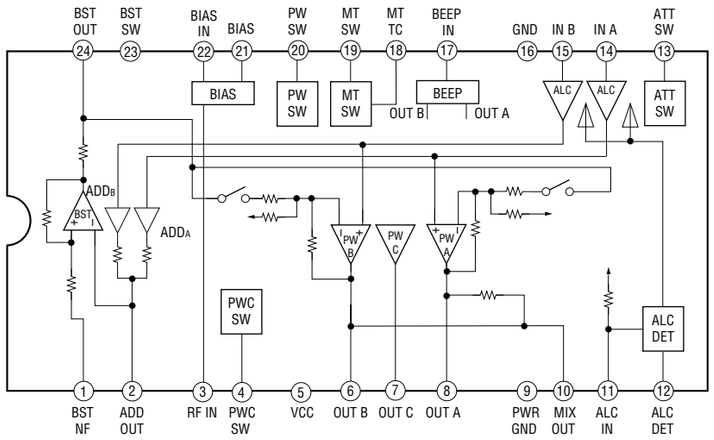
6-10. SCHEMATIC DIAGRAM – SWITCH Board –



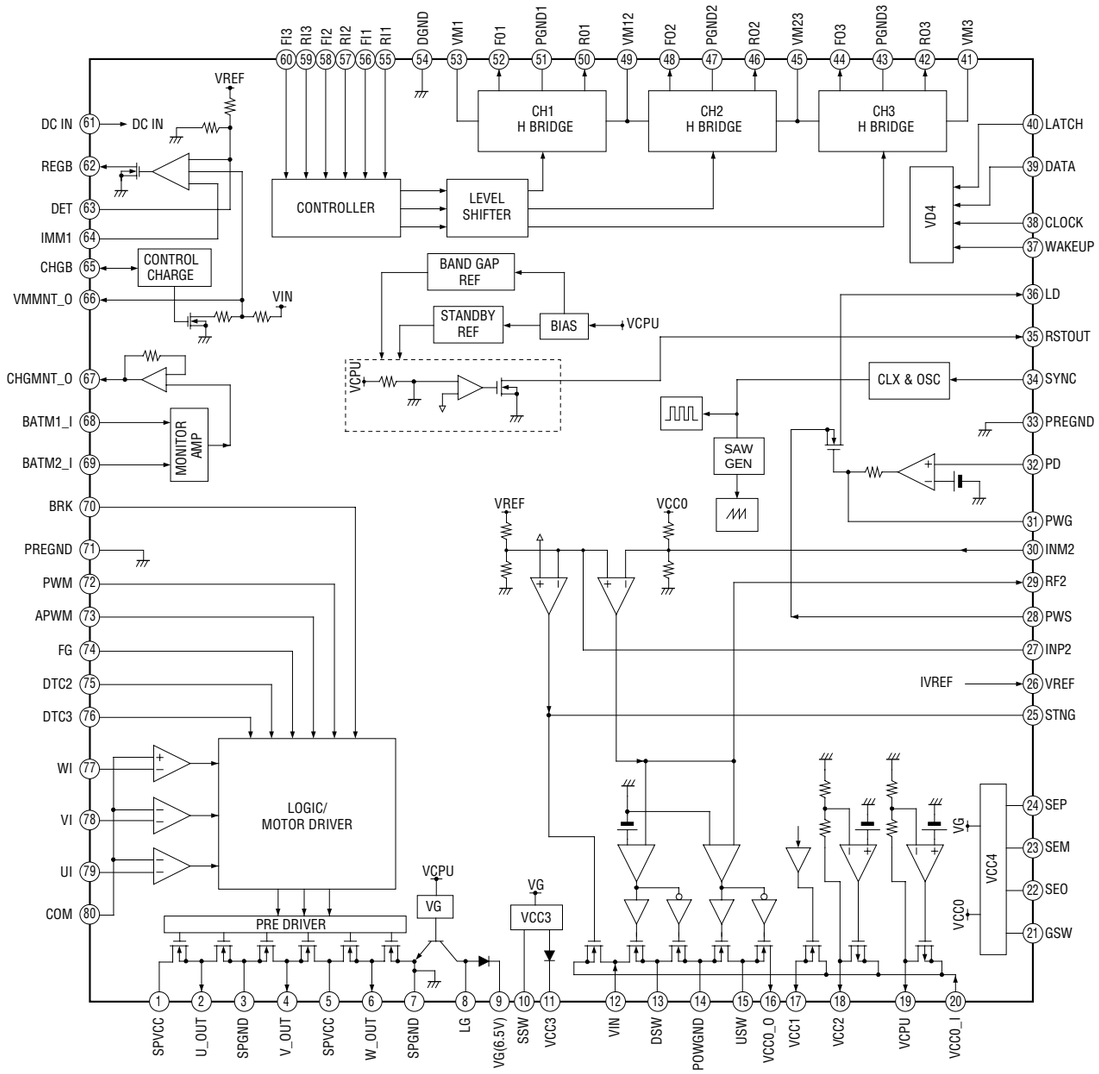
- **IC Block Diagrams**

– MAIN Board –

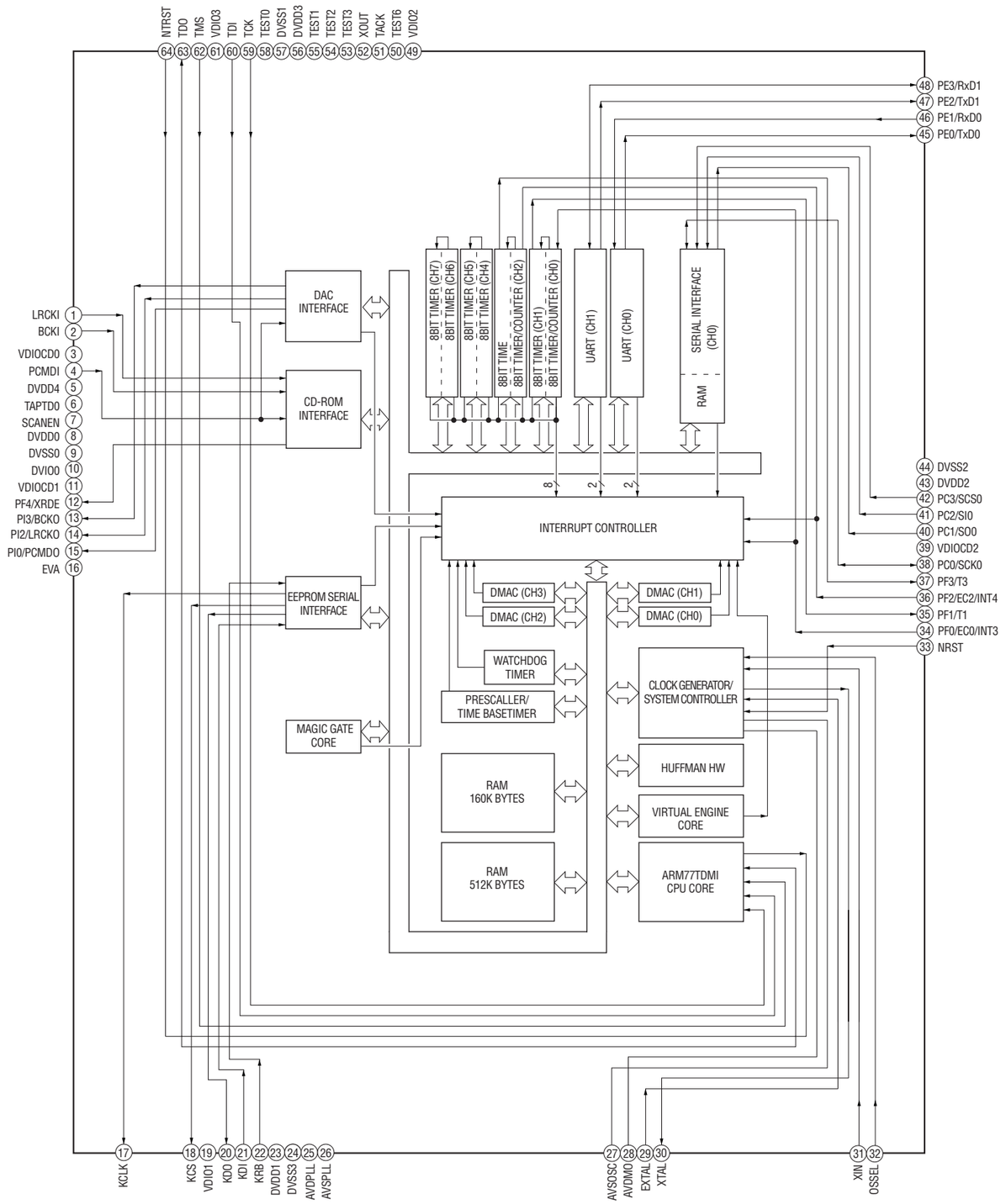
IC301 AN75315A



IC403 TB2138AFG



IC701 CXR710160-207R



- **IC Pin Function Description**

IC601 CDX3039AR (CD DSP)

Pin No.	Pin Name	I/O	Description
1	XRAS	O	Row address strobe signal output to the D-RAM
2	XWE	O	Data input enable signal output to the D-RAM
3 to 6	D1, D0, D3, D2	I/O	Two-way data bus with the D-RAM
7	DCLK	O	Not used
8	DCKE	O	Not used
9	XCAS	O	Column address strobe signal output to the D-RAM
10	WFCK/DQM	O	Not used
11 to 13	A9 to A7	O	Address signal output to the D-RAM
14	DVSS	—	Ground terminal
15 to 17	A6 to A4	O	Address signal output to the D-RAM
18	XRDE	I	D-RAM read enable signal input terminal
19	VDD0	—	Power supply terminal (+2.1V)
20	CLOK	I	Serial data transfer clock signal input from the system controller
21	SDTO	I	Serial data input from the system controller
22	SENS	O	SENS signal output to the system controller
23	XLAT	I	Serial data latch pulse signal input from the system controller
24	XSOE	I	Serial data output enable signal input from the system controller
25	SYSM	I	Analog muting on/off control signal input from the system controller “H”: muting on
26	WDCK	O	Not used
27	SCOR	O	Subcode sync (S0+S1) detection signal output to the system controller
28	XRST	I	Reset signal input from the system controller “L”: reset
29	PWMI	I	Not used
30	XQOK	I	Not used
31	XWRE	I	Not used
32	R8M	O	System clock output to the system controller
33	VSS0	—	Ground terminal
34	SQCK	I	SQSO readout clock signal input terminal Not used
35	SCLK	I	SENS serial data read clock signal input terminal Not used
36	SQSO	O	Not used
37	XEMP	O	Not used
38	XWIH	O	Not used
39	SBSO	O	Not used
40	EXCK	O	SQSO readout clock signal output terminal Not used
41	XTSL	I	Input terminal for the system clock frequency setting fixed at “L” in this set
42	HVSS	—	Ground terminal
43	HPL	O	Not used
44	HPR	O	Not used
45	HPVDD	—	Power supply terminal (+2.1V)
46	XVDD	—	Power supply terminal (+2.1V)
47	XTAI	I	System clock input terminal (16.934 MHz)
48	XTAO	O	System clock output terminal (16.934 MHz)
49	XVSS	—	Ground terminal
50	AVDD1	—	Power supply terminal (+2.8V)
51	AOUT1	O	L-ch analog audio signal output terminal
52	VREFL	O	L-ch reference voltage output terminal
53, 54	AVSS1, AVSS2	—	Ground terminal

Pin No.	Pin Name	I/O	Description
55	VREFR	O	R-ch reference voltage output terminal
56	AOUT2	O	R-ch analog audio signal output terminal
57	AVDD2	—	Power supply terminal (+2.8V)
58	TES1	I	Input terminal for the test (fixed at “L”)
59	TEST	I	Input terminal for the test (fixed at “L”)
60	VSS1	—	Ground terminal
61	LRMU	O	Muting on/off control signal output to the headphone amprifier
62	DOUT	O	Not used
63	ATSK	I/O	Not used
64	DFCT	I/O	Not used
65	FOK	O	Focus OK signal output to the system controller
66	MIRR	I/O	Not used
67	COUT	I/O	Not used
68	C2PO	O	Not used
69	GFS	O	GFS signal output to the system controller
70	XUGF	O	Not used
71	XPCK	O	Not used
72	VDD1	—	Power supply terminal (+2.1V)
73	PCO	O	Charge pump output terminal for master PLL
74	FILI	I	Filter input terminal for master PLL
75	FILO	O	Filter output terminal for master PLL
76	CLTV	I	VCO1 control voltage input terminal for multiplier
77	VCTL	I	VCO2 control voltage input terminal for broad-band EFM PLL
78	VPCO	O	Charge pump output terminal for broad-band EFM PLL
79	AVSS3	—	Ground terminal
80	ASY_O	O	EFM full-swing output terminal
81	ASY_I	I	Asymmetry comparator voltage input terminal
82	BIAS	I	Asymmetry circuit constant current input terminal
83	AVDD3	—	Power supply terminal (+2.1V)
84	RFAC	I	EFM signal input from the optical pick-up
85	AVDD0	—	Power supply terminal (+2.1V)
86	IGEN	I	Stabilized current input terminal
87	AVSS0	—	Ground terminal
88	RFDC	I	RF signal input from the optical pick-up block
89	E	I	E signal input from the optical pick-up block
90	F	I	F signal input from the optical pick-up block
91	B	I	B signal input from the optical pick-up block
92	A	I	A signal iuput from the optical pick-up block
93	VC	I	Middle point voltage input terminal Not used
94	VSS2	—	Ground terminal
95	FRDR	O	Focus servo drive signal (–) output to the coil/motor drive
96	FFDR	O	Focus setvo drive signal (+) output to the coil/motor drive
97	TRDR	O	Tracking servo drive signal (–) output to the coil/motor drive
98	TFDR	O	Tracking servo drive signal (+) output to the coil/motor drive
99	SRDR	O	Sled servo drive signal (–) output to the coil/motor drive
100	SFDR	O	Sled servo drive signal (+) output to the coil/motor drive
101	SSTP	I	Disc inner position detection signal input terminal Not used

Pin No.	Pin Name	I/O	Description
102	MDS	O	Spindle motor drive signal output terminal
103	MDP	O	Spindle motor servo control signal output terminal
104	C176	O	176.4 kHz clock signal output to coil/motor drive
105	VDD2	—	Power supply terminal (+2.1V)
106	LRCK_O	O	L/R sampling clock signal output to the MP3 decoder
107	LRCK_I	I	L/R sampling clock signal input from the MP3 decoder
108	PCMD_O	O	Serial data output to the MP3 decoder
109	PCMD_I	I	Serial data input from the MP3 decoder
110	BCK_O	O	Bit clock signal output to the MP3 decoder
111	BCK_I	I	Bit clock signal input from the MP3 decoder
112	DVDD	—	Power supply terminal (+2.1V)
113 to 117	A3 to A0, A10	O	Address signal output to the D-RAM
118 to 120	A11 to A13	O	Not used

IC801 TMP91CY28FG-2772-01 (SYSTEM CONTROLLER)

Pin No.	Pin Name	I/O	Description
1, 2	GND	—	Ground terminal
3	VCPU	—	Power supply terminal (+2.0V)
4	XRST_O	O	System reset signal output to the CD DSP
5	PWM_O	O	Power on/off signal output terminal Not used
6	BEEP_O	O	Beep signal output to the electrical volume
7	AMUTE_O	O	Analog muting on/off control signal output to the CD DSP "H": muting on
8	LINEOUT_I	I	Not used
9	OPTOUT_I	I	Not used
10	FG_I	I	Motor flag monitor input from the power control
11	REQ_I	I	Request signal input from the MP3 decoder
12	HG-XSTB_O	O	Strobe signal output to optical pick-up block
13	HG-GUP_O	O	Guide-up signal output to optical pick-up block
14, 15	RE1_I, RE2_I	I	Encode signal input terminal Not used
16	LCD_REQ_O	O	Request signal output terminal Not used
17	SDXLAT_O	O	Data latch signal output to the MP3 decoder
18	SDCLK_O	O	Serial data transfer clock output to the MP3 decoder and EEPROM
19	SDOUT_O	O	Serial data output to the MP3 decoder and EEPROM
20	SDIN_I	I	Serial data input from the MP3 decoder and EEPROM
21	DTS_SDTO	O	Serial data output terminal Not used
22	DTS_SDTI	I	Serial data input from terminal Not used
23	DTS_SCK	O	Serial data transfer clock output terminal Not used
24	AMO_I	I	Not used
25	VCPU	—	Power supply terminal (+2.0V)
26	XOUT	O	Not used
27	GND	—	Ground terminal
28	XIN	I	System clock signal input from the CD DSP
29	AM1_I	I	Not used
30	XRESET_I	I	System reset signal input from the power control
31	TSB	I	Not used
32	XWAKE_O	O	WAKE-UP signal output to the power control
33	EMU0_O	O	Not used
34	EMU1_O	O	Not used
35	ACKCD_I	I	CD acknowledge signal input terminal Not used
36	JOGKEY_I/ FAVKE_I	I	KEY interrupt signal input terminal
37	LID-SW_I	I	CD lid switch signal input terminal
38	EXTBAT_I	I	Not used
39	HP_TYPE_I	I	Not used
40	HOLD_I	I	HOLD switch signal input terminal
41	X_PEQ_EN_I	I	Not used
42	TEST_I	I	Test mode setting input terminal "L": test mode, Normally: "H"
43	NC	—	Not used
44 to 51	AD0 to AD7	I/O	Address and data input/output with the LCD unit
52	FOK_I	I	Focus OK signal input from the CD DSP
53	GFS_I	I	GFS signal input from the CD DSP
54	TUPWRON_O	O	Tuner power on/off control signal output terminal Not used

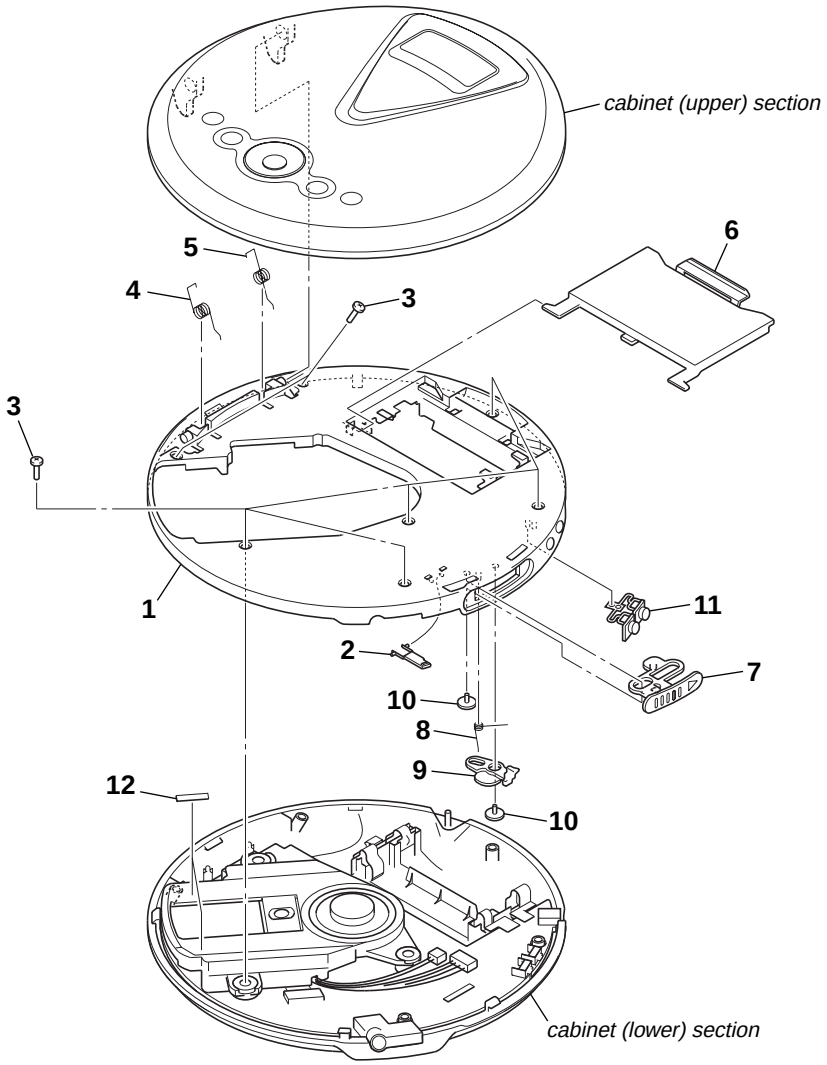
Pin No.	Pin Name	I/O	Description
55	CDON_O	O	CD on request signal output terminal Not used
56	AUD_SEL	O	Audio data selection signal output terminal Not used
57	CHGGND_ON_O	O	Not used
58	BAT_VCC_ON_O	O	Not used
59	DTS_RST_O	O	Reset signal output terminal Not used
60	XKRESET	O	Reset signal output to the MP3 decoder
61	XCS_O	O	P/S signal output terminal Not used
62	GND	—	Ground terminal
63	XNMI_I	I	Not used
64	VCPU	—	Power supply terminal (+2.0V)
65	HP_LIN_SEL_I	I	Line/headphone out selection signal input terminal Not used
66	WAKEUP_K_O	O	Interrupt signal output to the MP3 decoder
67	EEP_CS_O	O	Chip select signal output to the EEPROM
68	TUON_I	I	Tuner on request signal input terminal Not used
69	LCD_AO	O	AO signal output to the LCD unit
70	OPTPWRCTL_O	O	Not used
71	XRD_O	O	Read signal output to the LCD unit
72	XWR_O	O	Write signal output to the LCD unit
73	LCD-XRST_O	O	Reset signal output to the LCD unit
74	XLCD-BL_O	O	Not used
75	TYPE1_O	O	Not used
76	XLED	O	Not used
77	HP_PWRSW	I	Power on/off control signal output to the headphone amplifier
78	BOOT	I	Single boot setup terminal
79	XBATT_ICELL_I	I	Not used
80	NC	I	Not used
81	XCEX_I	I	Not used
82	DISPLAY_TYPE	I	Not used
83	MSCK0_O	O	Serial data transfer clock output to the CD DSP and power control
84	MSDTO0_O	O	Serial data output to the CD DSP and power control
85	MSDTI0_I	I	SENS signal input from the CD DSP
86	SCOR_I	I	Sub-code sync (S0+S1) detect signal input from the CD DSP
87	XLAT0_O	O	Latch signal output to the CD DSP
88	XSOE_O	O	Serial data output enable signal output to the CD DSP
89	VCPU	—	Power supply terminal (+2.0V)
90	PWRLAT_O	O	Data Latch signal output to the power control
91	GND	—	Ground terminal
92	AD-BATMNT	I	Battery voltage level monitor input terminal
93	AD-CHGMNT	I	Not used
94	AD-CHGSTMNT	I	Not used
95	AD-DCINMNT	I	DC IN voltage level monitor input terminal
96, 97	AD-KEY1, AD-KEY2	I	Key input terminal
98	AD-KEY3	I	Key input terminal Not used
99	AD-RMKEY	I	Key input terminal for the remote commander Not used
100	VCPU	—	Power supply terminal (+2.0V)

SECTION 7
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 are given in the last of the electrical parts list.

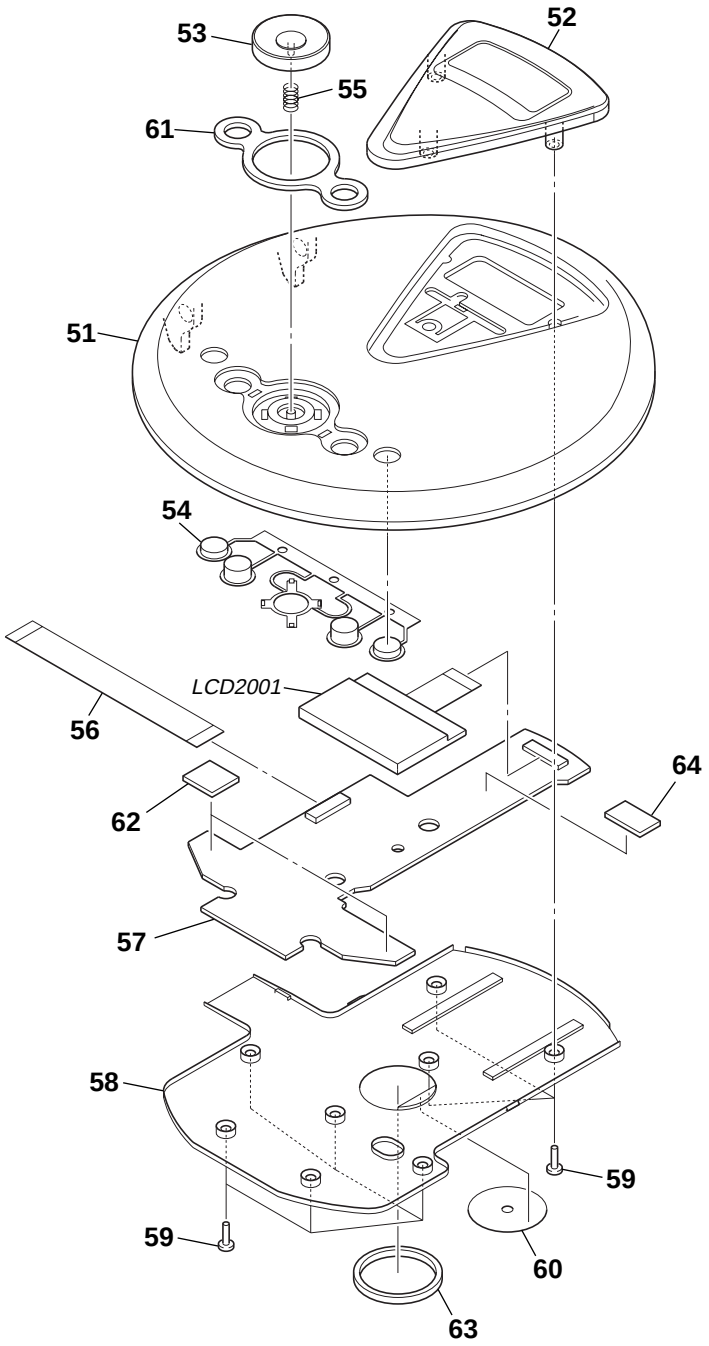
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

7-1. CABINET (INNER) SECTION



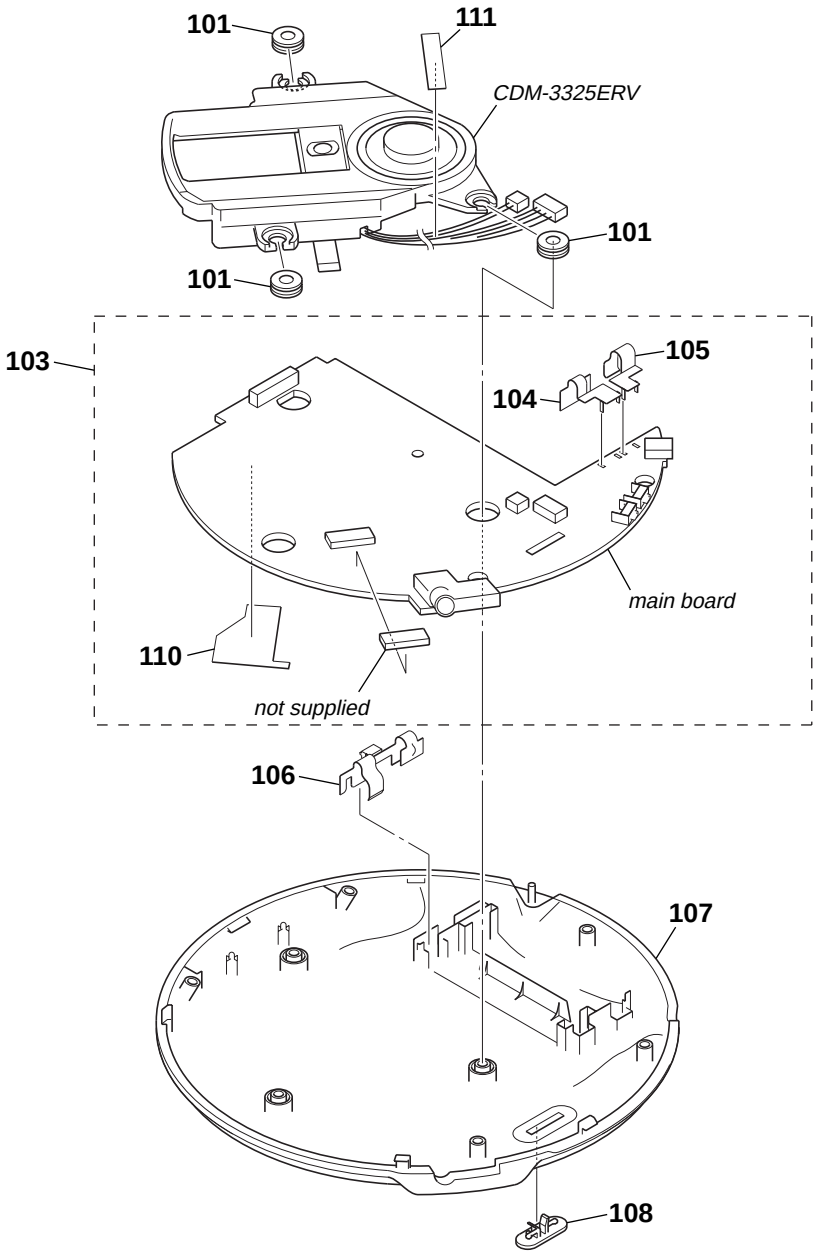
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	3-261-235-01	CABINET (UPPER)		7	3-261-239-01	KNOB (OPEN)	
2	3-261-240-01	LEVER (DETECTION)		8	3-261-251-02	SPRING (OPEN)	
3	3-254-070-11	SCREW		9	3-261-250-01	LOCK, OPEN	
4	3-262-707-01	SPRING, FULL OPEN (L)		10	3-034-792-11	SCREW, TAPPING (B2.0)	
5	3-262-708-01	SPRING, FULL OPEN (R)		11	3-261-237-01	BUTTON (VOL)	
6	3-261-258-01	LID, BATTERY CASE		12	3-266-622-01	SHEET (CDM)	

7-2. CABINET (UPPER) SECTION



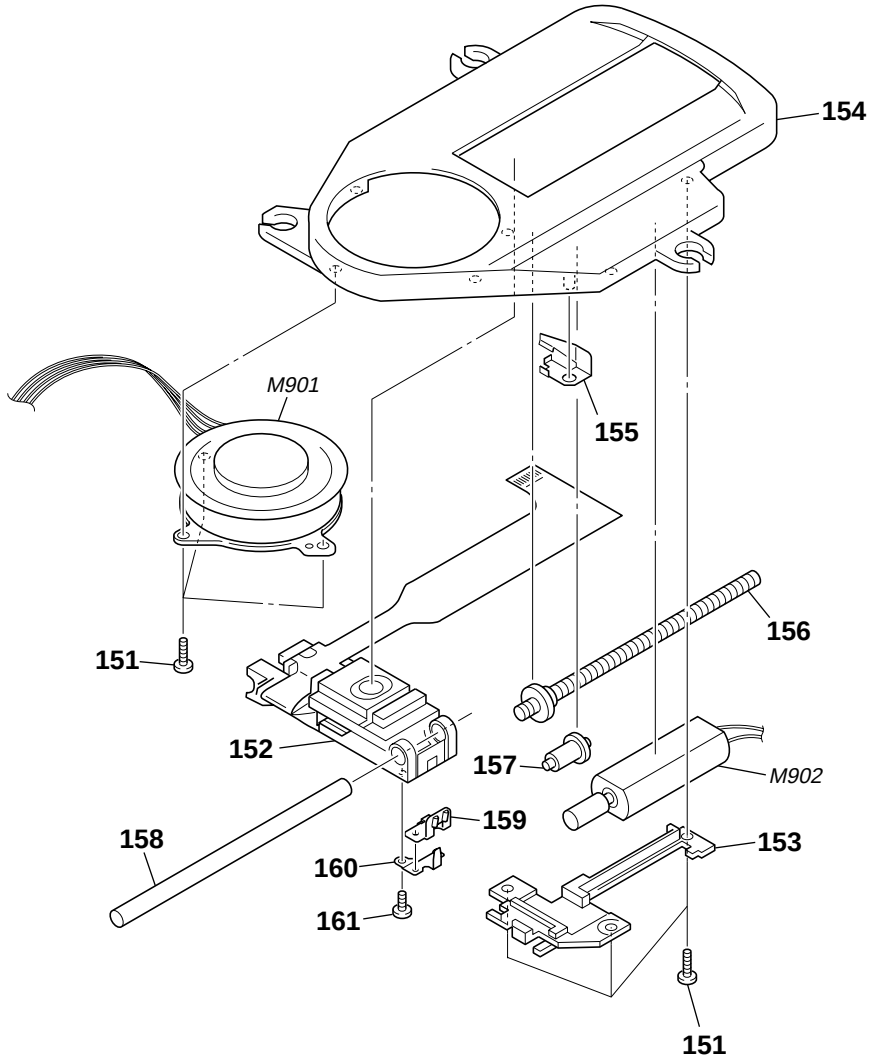
Ref. No.	Part No.	Description	Remark
51	3-260-851-91	LID, UPPER	
52	3-260-852-31	WINDOW, LCD	
53	3-261-438-11	LID (1) (KNOB), UPPER	
54	3-261-439-11	LID (2) (KNOB), UPPER	
55	3-260-913-01	SPRING (BUTTON)	
56	1-827-979-21	CABLE, FLEXIBLE FLAT (20 CORE)	
* 57	A-4541-652-A	SWITCH BOARD, COMPLETE	
58	3-260-850-01	COVER	
59	3-254-003-01	SCREW	
60	3-266-394-01	SHEET (COLOR)	
61	3-260-853-31	ESCUTCHEON	
62	3-266-393-02	SHEET (PREVENTION STATIC)	
63	3-266-395-01	SHEET (COVER)	
64	2-025-451-01	CUSHION	
LCD2001	1-805-467-12	DISPLAY PANEL, LIQUID CRYSTAL	

7-3. CABINET (LOWER) SECTION



Ref. No.	Part No.	Description	Remark
101	3-245-331-02	INSULATOR	
* 103	X-2021-368-1	MAIN BOARD, COMPLETE (for service)	
104	3-261-252-01	TERMINAL, BATTERY (+)	
105	3-261-253-01	TERMINAL, BATTERY (–)	
106	3-261-254-01	TERMINAL, BATTERY LINK	
107	3-261-236-01	CABINET (LOWER)	
108	3-261-238-01	KNOB (HOLD)	
110	3-266-079-01	LEAF (PWB), COPPER (2)	
111	3-842-929-01	SPACER, KNOB	

7-4. OPTICAL PICK-UP SECTION (CDM-3325ERV)



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

Ref. No.	Part No.	Description	Remark
151	3-318-203-61	SCREW (B1.7X4), TAPPING	
⚠152	X-3383-995-1	OPTICAL PICK-UP (DAX-25EV)	
153	3-221-473-01	COVER, GEAR	
154	3-221-472-02	CHASSIS	
155	3-221-474-01	SPRING, SLED	
156	A-3180-952-A	FEED ASSY, SCREW	
157	3-221-268-01	GEAR (B)	
158	3-221-475-01	SHAFT, STANDARD	
159	3-222-298-01	RACK	
160	3-222-299-01	SPRING, RACK RETAINER	
161	3-348-998-31	SCREW (M1.4X2.5), TAPPING, PAN	
M901	A-3180-953-A	MOTOR ASSY, TURN TABLE (SPINDLE)	
M902	A-3180-951-A	MOTOR ASSY, SLED	

SECTION 8
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
	X-2021-368-1	MAIN BOARD, COMPLETE (for service)			
		**********			
	3-261-252-01	TERMINAL, BATTERY (+)			
	3-261-253-01	TERMINAL, BATTERY (–)			
	3-266-079-01	LEAF (PWB), COPPER (2)			
		< CAPACITOR/RESISTOR/VARISTOR >			
C103	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C107	1-125-838-11	CERAMIC CHIP	2.2uF	10%	6.3V
C203	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C207	1-125-838-11	CERAMIC CHIP	2.2uF	10%	6.3V
C302	1-124-779-00	ELECT CHIP	10uF	20%	16V
C303	1-124-779-00	ELECT CHIP	10uF	20%	16V
C304	1-117-863-11	CERAMIC CHIP	0.47uF	10%	6.3V
C305	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C306	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C307	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C308	1-125-838-11	CERAMIC CHIP	2.2uF	10%	6.3V
C309	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C310	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C314	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C403	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C404	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C405	1-115-156-11	CERAMIC CHIP	1uF		10V
C406	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C410	1-115-156-11	CERAMIC CHIP	1uF		10V
C415	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C416	1-127-760-11	CERAMIC CHIP	4.7uF	10%	6.3V
C417	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C419	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C420	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C421	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C422	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C423	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C424	1-127-760-11	CERAMIC CHIP	4.7uF	10%	6.3V
C425	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C426	1-128-390-11	ELECT CHIP	220uF	20%	6.3V
C427	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C428	1-107-686-11	TANTALUM CHIP	4.7uF	20%	16V
C429	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C430	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C432	1-126-246-11	ELECT CHIP	220uF	20%	4V
C433	1-115-156-11	CERAMIC CHIP	1uF		10V
C434	1-165-851-11	TANTALUM CHIP	10uF	20%	6.3V
C435	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C436	1-127-688-21	TANTALUM CHIP	10uF	20%	6.3V
C437	1-126-246-11	ELECT CHIP	220uF	20%	4V
C438	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C440	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C446	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C447	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C450	1-115-156-11	CERAMIC CHIP	1uF		10V
C454	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C455	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C458	1-127-573-11	CERAMIC CHIP	1uF	10%	16V
C460	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C601	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C605	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C606	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C607	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C608	1-117-863-11	CERAMIC CHIP	0.47uF	10%	6.3V
C609	1-117-863-11	CERAMIC CHIP	0.47uF	10%	6.3V
C610	1-127-688-21	TANTALUM CHIP	10uF	20%	6.3V
C611	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C612	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C613	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C614	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C616	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C617	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C618	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C619	1-119-750-11	TANTALUM CHIP	22uF	20%	6.3V
C621	1-110-569-11	TANTALUM CHIP	47uF	20%	6.3V
C622	1-127-688-21	TANTALUM CHIP	10uF	20%	6.3V
C623	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C624	1-115-156-11	CERAMIC CHIP	1uF		10V
C631	1-119-750-11	TANTALUM CHIP	22uF	20%	6.3V
C632	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C696	1-216-833-11	METAL CHIP	10K	5%	1/10W
C697	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C698	1-131-862-11	TANTALUM CHIP	47uF	20%	4V
C699	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C701	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C702	1-131-862-11	TANTALUM CHIP	47uF	20%	4V
C703	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C705	1-119-750-11	TANTALUM CHIP	22uF	20%	6.3V
C706	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C708	1-164-360-11	CERAMIC CHIP	0.1uF		16V

Ref. No.	Part No.	Description			Remark
C709	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C710	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C711	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C712	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C713	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C714	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C715	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C716	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C717	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C718	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C720	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C804	1-801-862-11	VARISTOR, CHIP (1608)			
C805	1-115-156-11	CERAMIC CHIP	1uF		10V
C806	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C808	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C810	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C811	1-216-833-11	METAL CHIP	10K	5%	1/10W
C812	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C821	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C830	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C833	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C834	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C835	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C896	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C897	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C898	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C899	1-164-360-11	CERAMIC CHIP	0.1uF		16V
		< CONNECTOR >			
CN401	1-784-342-21	HOUSING, CONNECTOR 2P			
* CN402	1-785-877-21	HOUSING, CONNECTOR 4P			
CN601	1-818-127-11	CONNECTOR, FFC/FPC (ZIF) 15P			
CN801	1-818-129-21	CONNECTOR, FFC/FPC (ZIF) 20P			
		< DIODE >			
D307	8-719-069-54	DIODE	UDZSTE-175.1B		
D308	8-719-421-33	DIODE	MA147		
D401	8-719-081-34	DIODE	RB160M-30TR		
D402	8-719-081-34	DIODE	RB160M-30TR		
D403	8-719-081-34	DIODE	RB160M-30TR		
D421	8-719-988-61	DIODE	1SS355TE-17		
D422	8-719-988-61	DIODE	1SS355TE-17		
		< FERRITE BEAD/RESISTOR >			
FB101	1-500-234-22	BEAD, FERRITE (CHIP) (1608)			
FB201	1-500-234-22	BEAD, FERRITE (CHIP) (1608)			
FB302	1-414-553-11	FERRITE, EMI (SMD) (2012)			
FB303	1-414-813-11	FERRITE, EMI (SMD) (2012)			
FB401	1-216-797-11	METAL CHIP	10	5%	1/10W
FB402	1-216-797-11	METAL CHIP	10	5%	1/10W
FB413	1-400-179-21	INDUCTOR, EMI FERRITE (1608)			
FB601	1-414-760-21	FERRITE, EMI (SMD) (1608)			
FB602	1-414-760-21	FERRITE, EMI (SMD) (1608)			
FB701	1-414-760-21	FERRITE, EMI (SMD) (1608)			
FB702	1-414-760-21	FERRITE, EMI (SMD) (1608)			

Ref. No.	Part No.	Description			Remark
		< IC/TRANSISTOR >			
IC301	8-759-681-65	IC	AN7531SA		
IC403	6-704-187-01	IC	TB2138AFG		
IC601	8-752-420-71	IC	CXD3039AR		
IC603	6-702-737-01	IC	MSM51X17400F-10TFSR1		
IC701	8-753-210-87	IC	CXR710160-207R		
IC702	6-550-559-01	TRANSISTOR	XN0NE9200LS0		
IC801	6-803-671-01	IC	TMP91CY28FG-2772-01		
@ IC803	(Not supplied)	IC	AK6417CH-E2		
IC804	6-706-240-01	IC	RT8H045C-T1		
IC806	6-705-397-01	IC	XC6206P142MR		
		< JACK >			
J301	1-818-051-11	JACK (🎧)			
J401	1-778-153-51	JACK, DC (POLARITY UNIFIED TYPE)			(DC IN 4.5V)
		< COIL >			
L301	1-469-525-11	INDUCTOR	10uH		
L401	1-400-373-21	INDUCTOR	4.7uH		
L402	1-400-373-21	INDUCTOR	4.7uH		
L403	1-400-387-21	INDUCTOR	47uH		
L404	1-400-388-21	INDUCTOR	220uH		
L406	1-400-145-21	INDUCTOR	47uH		
L407	1-456-178-21	INDUCTOR	100uH		
L408	1-400-388-21	INDUCTOR	220uH		
L409	1-400-145-21	INDUCTOR	47uH		
L411	1-400-387-21	INDUCTOR	47uH		
L601	1-400-389-21	INDUCTOR	10uH		
L602	1-400-390-21	INDUCTOR	47uH		
L603	1-400-389-21	INDUCTOR	10uH		
L703	1-400-390-21	INDUCTOR	47uH		
L704	1-400-390-21	INDUCTOR	47uH		
		< TRANSISTOR >			
Q408	6-550-396-01	TRANSISTOR	2SB16990LS0		
Q601	8-729-054-79	TRANSISTOR	2SB167900LS0		
		< RESISTOR/FERRITE BEAD >			
R102	1-216-845-11	METAL CHIP	100K	5%	1/10W
R111	1-216-837-11	METAL CHIP	22K	5%	1/10W
R202	1-216-845-11	METAL CHIP	100K	5%	1/10W
R211	1-216-837-11	METAL CHIP	22K	5%	1/10W
R301	1-216-793-11	METAL CHIP	4.7	5%	1/10W
R302	1-216-793-11	METAL CHIP	4.7	5%	1/10W
R303	1-216-797-11	METAL CHIP	10	5%	1/10W
R406	1-216-861-11	METAL CHIP	2.2M	5%	1/10W
R411	1-218-903-11	METAL CHIP	220K	0.5%	1/10W
R412	1-218-887-11	METAL CHIP	47K	0.5%	1/10W
R413	1-216-837-11	METAL CHIP	22K	5%	1/10W
R415	1-218-911-11	METAL CHIP	470K	0.5%	1/10W
R417	1-218-895-11	METAL CHIP	100K	0.5%	1/10W
R418	1-218-895-11	METAL CHIP	100K	0.5%	1/10W
R419	1-216-841-11	METAL CHIP	47K	5%	1/10W
R425	1-400-180-21	INDUCTOR, EMI FERRITE (1608)			
R427	1-216-845-11	METAL CHIP	100K	5%	1/10W
R438	1-216-833-11	METAL CHIP	10K	5%	1/10W
R440	1-216-857-11	METAL CHIP	1M	5%	1/10W

@ When IC803 is damaged, replace the MAIN board.

MAIN | SWITCH

Ref. No.	Part No.	Description			Remark
R452	1-218-903-11	METAL CHIP	220K	0.5%	1/10W
R453	1-216-857-11	METAL CHIP	1M	5%	1/10W
R459	1-216-845-11	METAL CHIP	100K	5%	1/10W
R460	1-216-809-11	METAL CHIP	100	5%	1/10W
R480	1-216-857-11	METAL CHIP	1M	5%	1/10W
R608	1-216-789-11	METAL CHIP	2.2	5%	1/10W
R610	1-216-845-11	METAL CHIP	100K	5%	1/10W
R612	1-216-805-11	METAL CHIP	47	5%	1/10W
R613	1-216-833-11	METAL CHIP	10K	5%	1/10W
R614	1-216-833-11	METAL CHIP	10K	5%	1/10W
R618	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R619	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R621	1-216-833-11	METAL CHIP	10K	5%	1/10W
R622	1-216-857-11	METAL CHIP	1M	5%	1/10W
R623	1-216-849-11	METAL CHIP	220K	5%	1/10W
R624	1-216-833-11	METAL CHIP	10K	5%	1/10W
R625	1-216-853-11	METAL CHIP	470K	5%	1/10W
R628	1-216-837-11	METAL CHIP	22K	5%	1/10W
R629	1-216-841-11	METAL CHIP	47K	5%	1/10W
R630	1-216-841-11	METAL CHIP	47K	5%	1/10W
R632	1-216-845-11	METAL CHIP	100K	5%	1/10W
R633	1-216-845-11	METAL CHIP	100K	5%	1/10W
R646	1-216-797-11	METAL CHIP	10	5%	1/10W
R648	1-216-845-11	METAL CHIP	100K	5%	1/10W
R649	1-216-817-11	METAL CHIP	470	5%	1/10W
R662	1-216-841-11	METAL CHIP	47K	5%	1/10W
R663	1-216-845-11	METAL CHIP	100K	5%	1/10W
R670	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R707	1-216-845-11	METAL CHIP	100K	5%	1/10W
R716	1-216-833-11	METAL CHIP	10K	5%	1/10W
R722	1-216-813-11	METAL CHIP	220	5%	1/10W
R731	1-216-857-11	METAL CHIP	1M	5%	1/10W
R732	1-216-857-11	METAL CHIP	1M	5%	1/10W
R733	1-216-857-11	METAL CHIP	1M	5%	1/10W
R735	1-216-833-11	METAL CHIP	10K	5%	1/10W
R802	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R805	1-216-845-11	METAL CHIP	100K	5%	1/10W
R806	1-216-845-11	METAL CHIP	100K	5%	1/10W
R808	1-216-809-11	METAL CHIP	100	5%	1/10W
R812	1-218-871-11	METAL CHIP	10K	0.5%	1/10W
R813	1-218-871-11	METAL CHIP	10K	0.5%	1/10W
R817	1-216-864-11	SHORT CHIP	0		
R818	1-216-864-11	SHORT CHIP	0		
R819	1-216-849-11	METAL CHIP	220K	5%	1/10W
R824	1-216-845-11	METAL CHIP	100K	5%	1/10W
R840	1-216-833-11	METAL CHIP	10K	5%	1/10W
R866	1-216-833-11	METAL CHIP	10K	5%	1/10W
R868	1-216-841-11	METAL CHIP	47K	5%	1/10W
R877	1-216-845-11	METAL CHIP	100K	5%	1/10W
R886	1-216-845-11	METAL CHIP	100K	5%	1/10W
R894	1-216-849-11	METAL CHIP	220K	5%	1/10W
R903	1-216-821-11	METAL CHIP	1K	5%	1/10W
R935	1-216-845-11	METAL CHIP	100K	5%	1/10W
R942	1-216-841-11	METAL CHIP	47K	5%	1/10W
R949	1-216-845-11	METAL CHIP	100K	5%	1/10W
R970	1-216-845-11	METAL CHIP	100K	5%	1/10W
R971	1-216-845-11	METAL CHIP	100K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R1001	1-216-853-11	METAL CHIP	470K	5%	1/10W
		< COMPOSITION CIRCUIT BLOCK >			
RB601	1-233-416-11	RES, CHIP NETWORK	22K (3216)		
		< SWITCH >			
S806	1-572-499-21	SWITCH, TACTIL (VOL +)			
S809	1-572-499-21	SWITCH, TACTIL (VOL -)			
S810	1-572-922-11	SWITCH, SLIDE (HOLD ➞)			
S820	1-762-805-41	SWITCH, PUSH (1 KEY) (OPEN/CLOSE DETECT)			
		< VARISTOR >			
VDR401	1-801-864-21	VARISTOR, CHIP (1608)			
VDR402	1-801-864-21	VARISTOR, CHIP (1608)			
VDR403	1-801-864-21	VARISTOR, CHIP (1608)			
VDR602	1-801-862-11	VARISTOR, CHIP (1608)			
VDR603	1-801-862-11	VARISTOR, CHIP (1608)			
VDR610	1-801-862-11	VARISTOR, CHIP (1608)			
VDR701	1-801-862-11	VARISTOR, CHIP (1608)			
VDR702	1-801-862-11	VARISTOR, CHIP (1608)			
VDR703	1-801-862-11	VARISTOR, CHIP (1608)			
VDR704	1-801-862-11	VARISTOR, CHIP (1608)			
VDR803	1-801-862-11	VARISTOR, CHIP (1608)			
VDR804	1-801-862-11	VARISTOR, CHIP (1608)			
		< VIBRATOR >			
X601	1-795-101-21	VIBRATOR, CERAMIC (16.934MHz)			
X701	1-795-392-41	VIBRATOR, CERAMIC (22MHz)			
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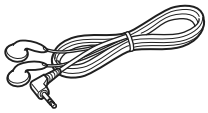
*	A-4541-652-A	SWITCH BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C2001	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C2002	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C2003	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C2004	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
		< CONNECTOR >			
CN2001	1-817-947-21	CONNECTOR, FFC/FPC (ZIF) 24P			
CN2002	1-818-128-11	CONNECTOR, FFC/FPC (ZIF) 20P			
		< RESISTOR >			
R2001	1-216-864-11	SHORT CHIP	0		
R2005	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R2006	1-216-837-11	METAL CHIP	22K	5%	1/10W
R2008	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R2010	1-216-833-11	METAL CHIP	10K	5%	1/10W
R2011	1-216-837-11	METAL CHIP	22K	5%	1/10W
R2012	1-216-837-11	METAL CHIP	22K	5%	1/10W
R2014	1-216-864-11	SHORT CHIP	0		
R2016	1-216-821-11	METAL CHIP	1K	5%	1/10W
R2017	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R2018	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R2019	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R2020	1-216-833-11	METAL CHIP	10K	5%	1/10W

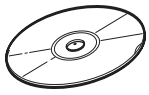
SWITCH

Ref. No.	Part No.	Description	Remark
R2021	1-216-829-11	METAL CHIP 4.7K 5%	1/10W
		< SWITCH >	
S2002	1-786-650-41	SWITCH, TACTILE (- DISPLAY, – MENU)	
S2003	1-786-650-41	SWITCH, TACTILE (■)	
S2004	1-786-650-41	SWITCH, TACTILE (▲)	
S2005	1-786-650-41	SWITCH, TACTILE (▼)	
S2007	1-786-650-41	SWITCH, TACTILE (►II ENTER)	
S2008	1-786-650-41	SWITCH, TACTILE (►►I)	
S2009	1-786-650-41	SWITCH, TACTILE (I◄◄)	
S2010	1-786-650-41	SWITCH, TACTILE (🗀 +)	
S2011	1-786-650-41	SWITCH, TACTILE (🗀 –)	
**********			
		MISCELLANEOUS	
		**********	
56	1-827-979-21	CABLE, FLEXIBLE FLAT (20 CORE)	
⚠152	X-3383-955-1	OPTICAL PICK-UP (DAX-25EV)	
LCD2001	1-805-467-12	DISPLAY PANEL, LIQUID CRYSTAL	
M901	A-3180-953-A	MOTOR ASSY, TURN TABLE (SPINDLE)	
M902	A-3180-951-A	MOTOR ASSY, SLED	
**********			
		ACCESSORIES	
		**********	
	2-023-891-01	CARD, EXPLANATION (AEP)	
	3-023-885-11	MANUAL, INSTRUCTION (ENGLISH)	
	3-023-885-21	MANUAL, INSTRUCTION (SPANISH, FRENCH,PORTUGUESE) (AEP)	
	3-023-885-31	MANUAL, INSTRUCTION (GERMAN, ITALIAN, DUTCH) (AEP)	
	3-023-885-41	MANUAL, INSTRUCTION (FINNISH, SWEDISH) (AEP)	
	3-023-885-51	MANUAL, INSTRUCTION (HUNGARIAN, POLISH, RUSSIAN) (East European)	
	3-023-885-61	MANUAL, INSTRUCTION (CZECH, SLOVAKIAN) (East European)	
	3-265-088-11	MANUAL, INSTRUCTION (Installation/operation guide) (ENGLISH)	
	3-265-088-21	MANUAL, INSTRUCTION (Installation/operation guide) (SPANISH, FRENCH, PORTUGUESE) (AEP)	
	3-265-088-31	MANUAL, INSTRUCTION (Installation/operation guide) (GERMAN, ITALIAN, DUTCH) (AEP)	
	3-265-088-41	MANUAL, INSTRUCTION (Installation/operation guide) (FINNISH, SWEDISH) (AEP)	
	3-265-088-51	MANUAL, INSTRUCTION (Installation/operation guide) (HUNGARIAN, POLISH, RUSSIAN) (East European)	
	3-265-088-61	MANUAL, INSTRUCTION (Installation/operation guide) (CZECH, SLOVAKIAN) (East European)	
501	8-954-008-93	RECEIVER, EAR MDR-E808LP/C1 SET	
502	X-3384-860-3	CD-ROM (APPLICATION) ASSY (2.0) (in case) (AEP, East European)	
502	X-3385-120-3	CD-ROM (APPLICATION) ASSY (2.0) (in envelope) (AEP)	

501
Earphones (MDR-E808LP) (1)



502
CD-ROM*
(SonicStage) (1)



*Do not play a CD-ROM on an audio CD player.

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

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	2004.03	New