XP-ZV71/ZV71C/ZV77/ ZV77C/ZV77D

SERVICE MANUAL

Ver 1.3 2003. 12

Photo : XP-ZV77

US Model
XP-ZV71/ZV71C

Canadian Model
XP-ZV77

AEP Model
XP-ZV77/ZV77D

UK Model
XP-ZV77

E Model
XP-ZV77/ZV77C/ZV77D

Australian Model
XP-ZV77

Chinese Model
XP-ZV77D

Model Name Using Similar Mechanism	D-EJ760
CD Mechanism Type	CDM-3325ER
Optical Pick-up Name	DAX-25E

SPECIFICATIONS

System
Compact disc digital audio system

Laser diode properties
Material: GaAlAs
Wavelength: λ = 780 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
1bit DAC

Frequency response
20 – 20 000 Hz $^{+1}_{-2}$ dB (measured by JEITA CP-307)

Power requirements
- Two Ni-MH rechargeable batteries (size AA, 700 mAh): 2.4 V DC
- Two LR6 (size AA) batteries: 3 V DC
- AC power adaptor (DC IN 4.5 V jack): 120 V, 60 Hz

Battery life* (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.

Using two Sony alkaline batteries LR6 (SG) (produced in Japan)

	EASS 1	EASS 2
Audio disc	30	26
MP3 disc	—	32

* Measured value by the standard of JEITA (Japan electronics and Information Technology Industries Association).

Operating temperature
5˚C – 35˚C (41˚F – 95˚F)

Dimensions (w/h/d) (excluding projecting parts and controls)
Approx. 136 × 22.7 × 139 mm
(5 $^{3}/_{8}$ × $^{29}/_{32}$ × 5 $^{1}/_{2}$ in.)

Mass (excluding accessories)
Approx. 222 g (7.8 oz)

Design and specifications are subject to change without notice.

PORTABLE CD PLAYER

9-877-193-04
2003L16-1

Sony Corporation
Personal Audio Company
Published by Sony Engineering Corporation

TABLE OF CONTENTS

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

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

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.

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.

On AC poweradaptor

- Use only the commercially-available AC power adaptor whose rated output is 4.5 V DC, 500 mA. Do not use any other AC power adaptor. It may cause a malfunction.

Polarity of the plug

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.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈSES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPÉMENTS PUBLIÉS PAR SONY.

SECTION 1
SERVICING NOTE

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.

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.

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 S301. (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 S301 with a screwdriver having a thin tip as shown in Fig.1.
3. Press 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 pickup is faulty.
   In this operation, the objective lens will move up and down 4 times along with inward motion for the focus search.

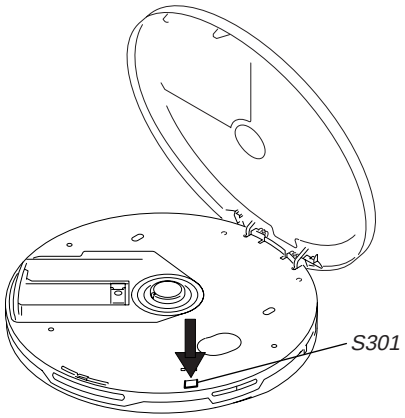


Fig. 1 Method to push the S301

SERVICE MODE

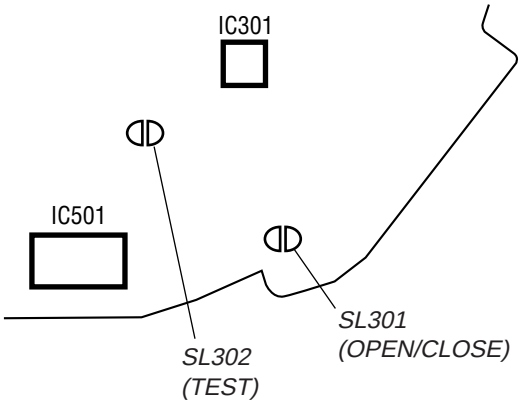
The following confirmation can be performed when the Service Mode is set.

1. How to set the Service Mode.

To set the Service Mode, the following method is available.

1) Confirm the set is not powered on.
2) Confirm the following settings.
   Solder Land (SL301) ..... SHORT
   HOLD switch (S309) ..... OFF
3) Short the solder land SL302 (TEST) on the MAIN board.
4) Turn on the main power.

– MAIN Board (SIDE A) –



2. Operation when the Service Mode is set.

When the Service Mode becomes active, “READING” is displayed and then TOC of the CD is displayed.
If CD is not set, “ERROR” is displayed and LCD on the remote control is lit off.

3. Operations by buttons or Rotary control in the Service Mode (Stop status)[TOC is displayed]

The following confirmations can be performed by operating buttons(on the CD player or the remote control) or Rotary control.

• SLED Movement Mode

By pressing the ▶▶I / I◀◀ button on the set or the ▶▶I / I◀◀ button on the remote control for few seconds, the optical pick-up is moved to outside or inside.
(LCD display on the remote control is not changed.)

Note : Be sure to keep your eyes apart from the direct emission of the Laser diode.
Do not move the optical pick-up over outermost or innermost.

• CD-DA/RW Change Over Function

By short pressing the ▶▶I button on the set or the ▶▶I button on the remote control, the terminal control for gain control is changed and gain for playing of CD-DA or CD-RW is changed over.
(LCD display on the remote control is not changed.)

• Focus Search Mode

By short pressing the VOL+ button on the set or the VOL+ button on the remote control, focus search is performed.

• Laser ON/OFF Selection Function

By short pressing the VOL– button on the set or the VOL– button on the remote control, laser is switched on or off.
Note : Be sure to keep your eyes apart from the direct emission of the Laser diode.

• Menu Mode

By short pressing the ■ button on the set or the ■ button on the remote control, the Menu mode is activated. The menu mode is not used for service, therefore press the ■ button on the set or the ■ button on the remote control for short time to exit this mode. (TOC is displayed)

4. Operations by buttons or Rotary control in the Service Mode (Play status)

Note : ▶II / ■ / ▶▶I / I◀◀ buttons are available.

• Tracking/Sled Servo ON/OFF Change Over Function

By short pressing the VOL+ button on the set or the VOL+ button on the remote control during play back, Tracking/Sled Servo is switched on or off.
(Track number is displayed on the LCD display.)

• Microcomputer Halt Function

By short pressing the VOL– button on the set or the VOL– button on the remote control during play back, the operation of the microcomputer is stopped.

After the microcomputer stopped, any key operation or display operation is not performed. Communication with the DSP is not performed. This mode is used only for checking the operation/ function of servo.

(LCD on the remote control is lit off)

Note : To exit this mode , switch off and then switch on.

5. How to exit the Service Mode

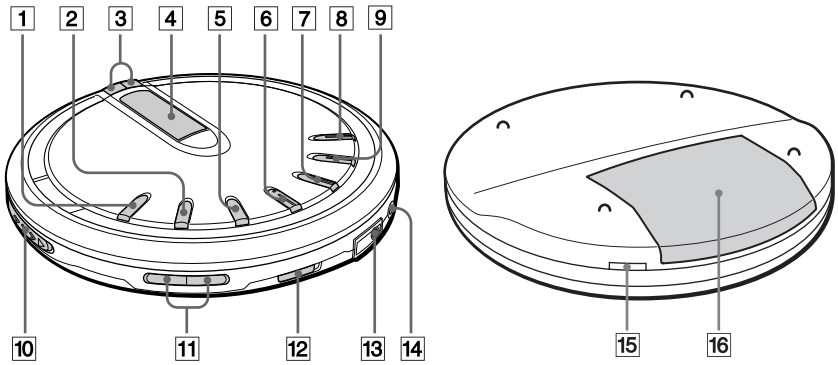
1) Turn off the power.
2) Open the solder land SL302 (TEST) on the MAIN board.

Note : The solder should be removed clean.

SECTION 2
GENERAL

This section is extracted from instruction manual.

Locating the controls

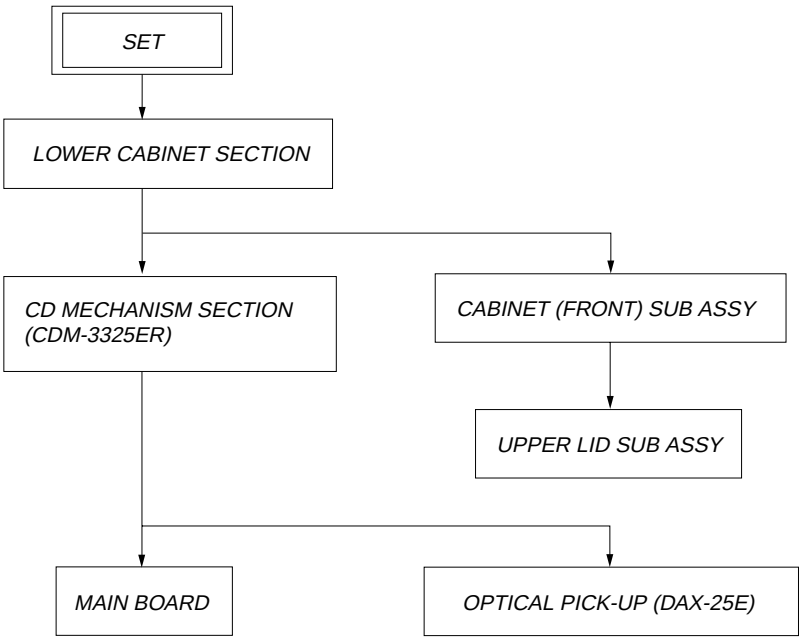


1 P-MODE/↪ button
2 SOUND button
3 FOLDER SKIP – /+ buttons
4 Display
5 DISPLAY buttons
6 ca /ENTER button*
7 s /OFF/CHARGE button
8 r button
9 t button
0 OPEN switch
! VOL + */– switch
@ HOLD switch
# \ (headphones) jack
$ DC IN 4.5V jack
% Hand strap hole
^ Battery compartment

* The button has a tactile dot.

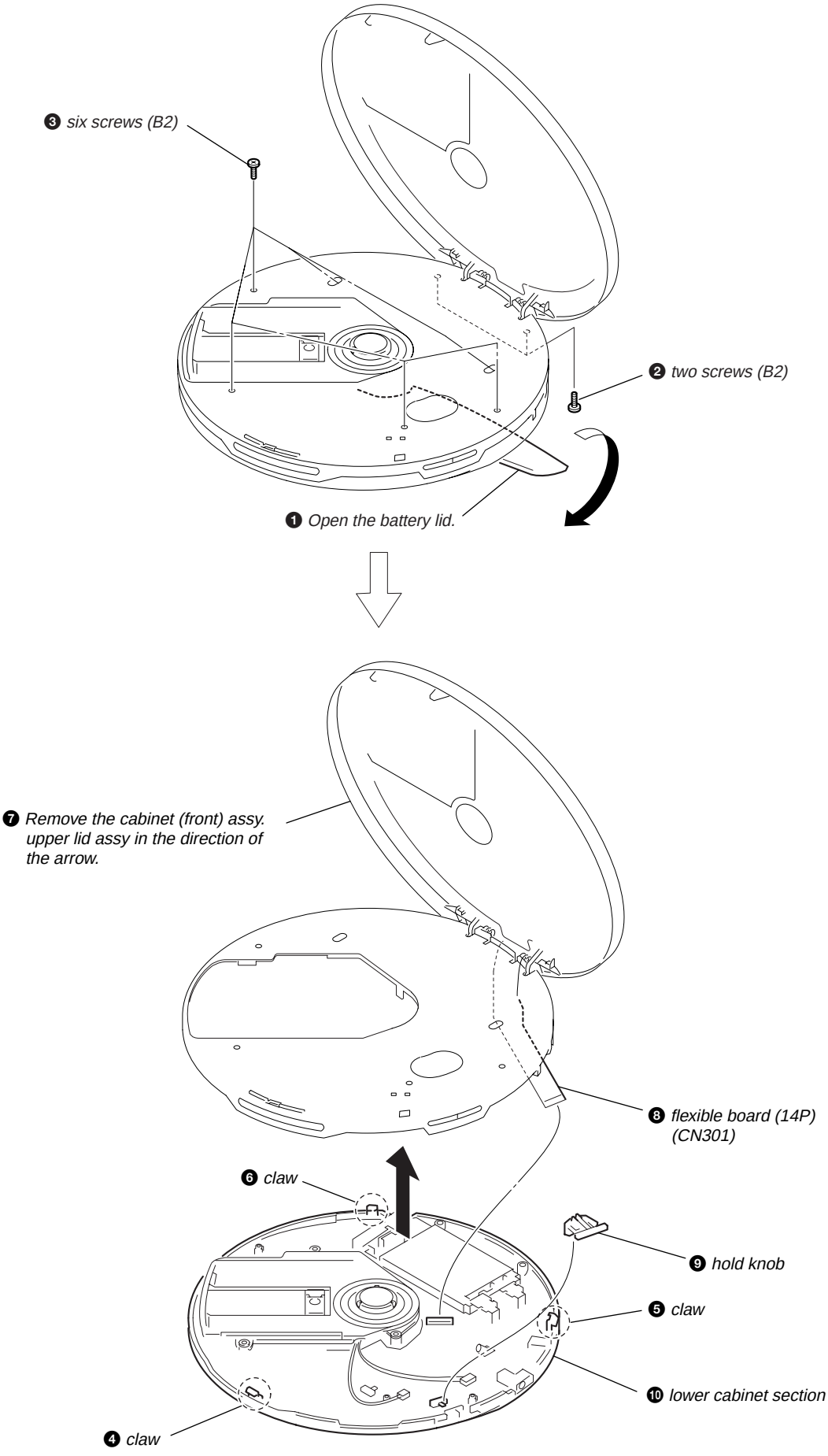
SECTION 3
DISASSEMBLY

Note : Disassemble the unit in the order as shown below.

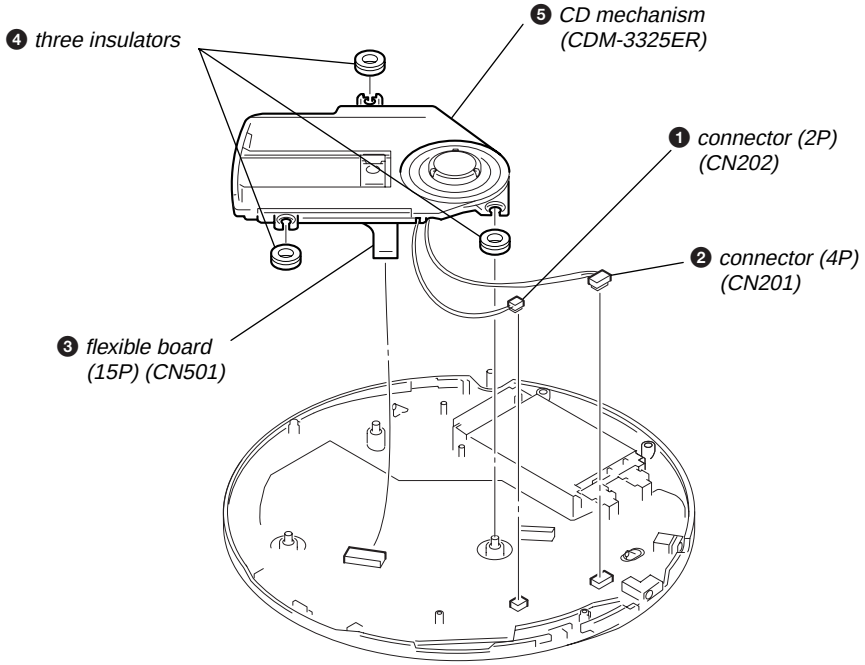


Note : Follow the disassembly procedure in the numerical order given.

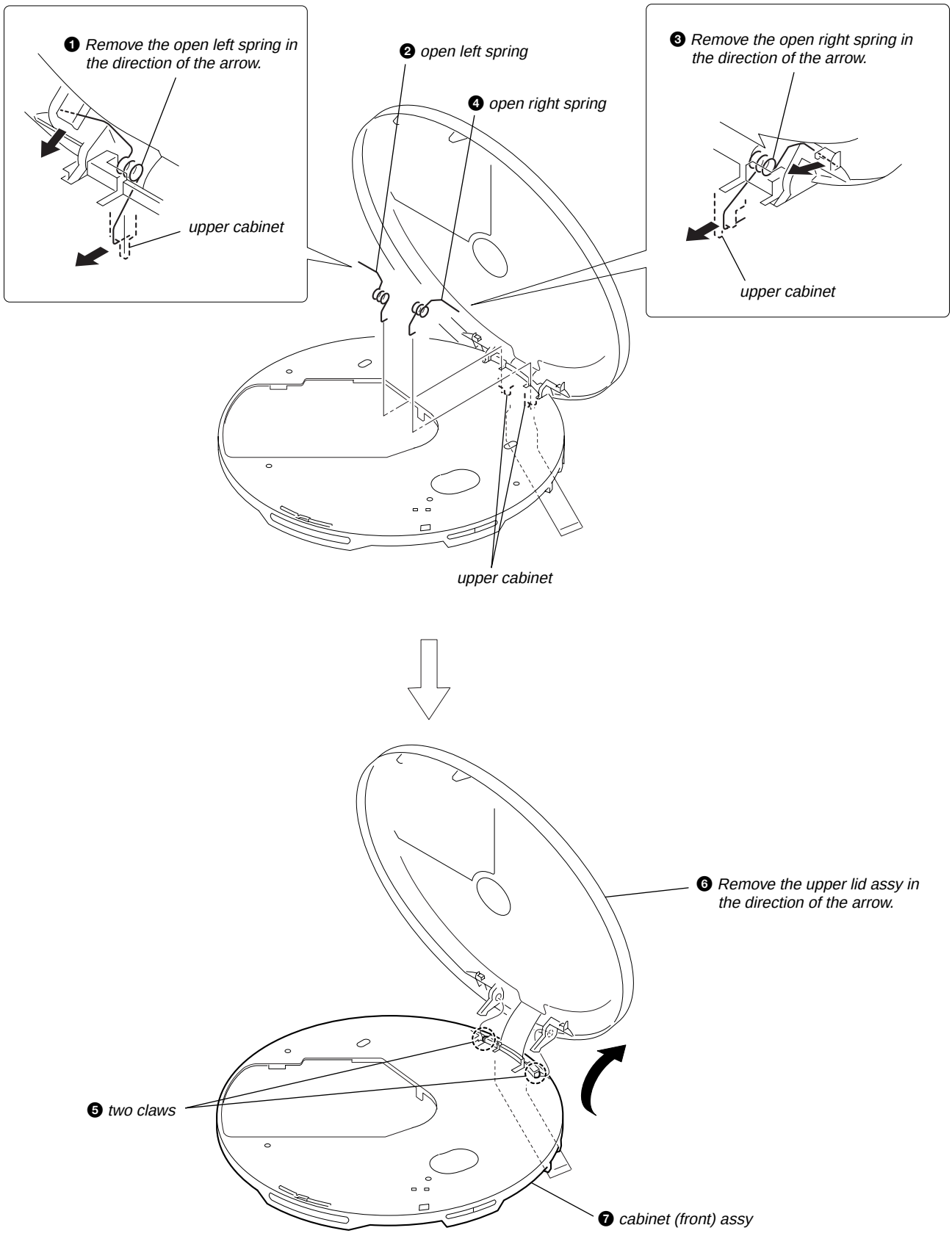
3-1. Lower Cabinet Section



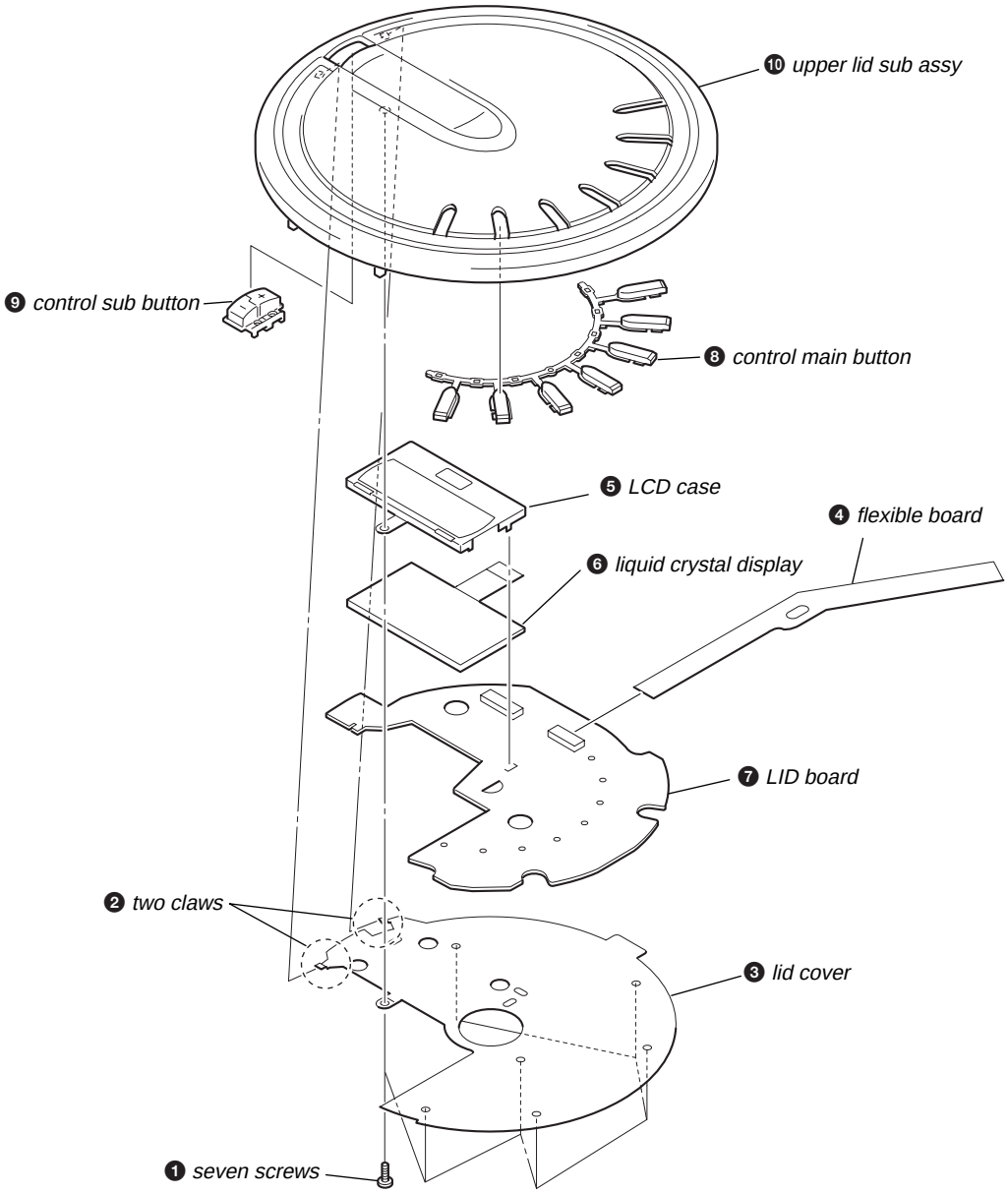
3-2. CD Mechanism Section (CDM-3325ER)



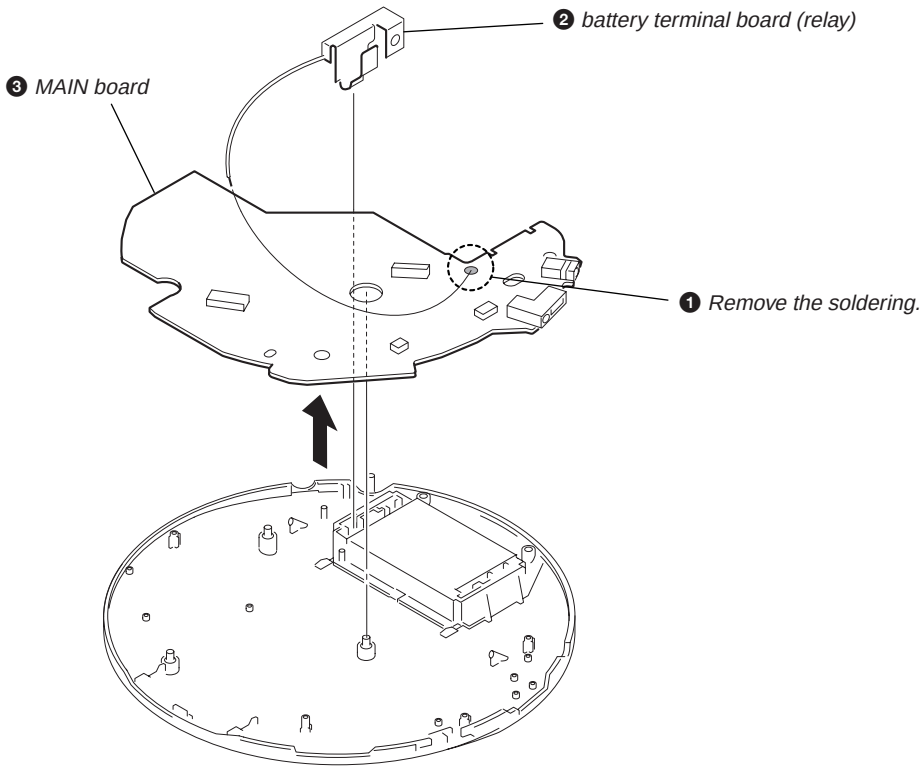
3-3. Cabinet (front) Sub Assy



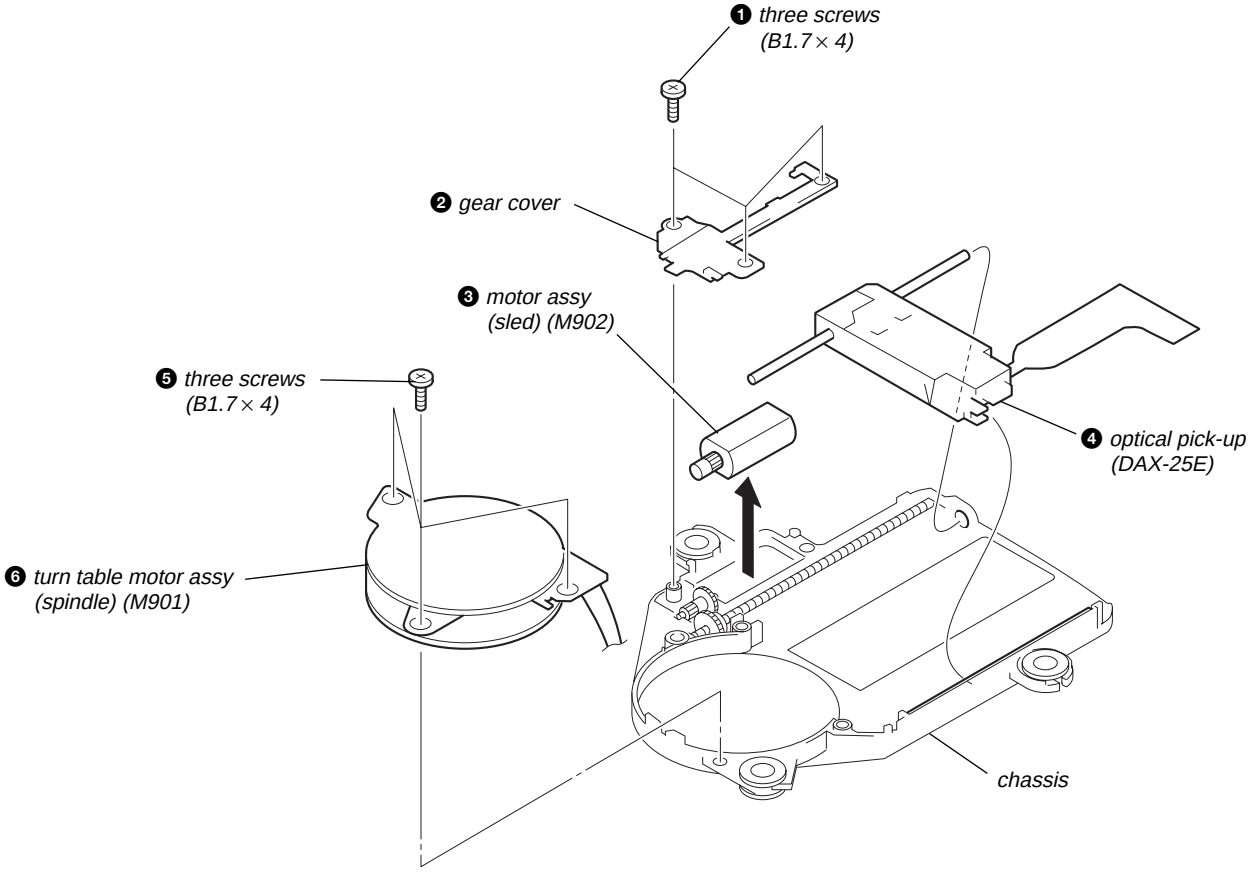
3-4. Upper Lid Sub Assy



3-5. MAIN Board



3-6. Optical Pick-up (DAX-25E)



SECTION 4
ELECTRICAL CHECKING

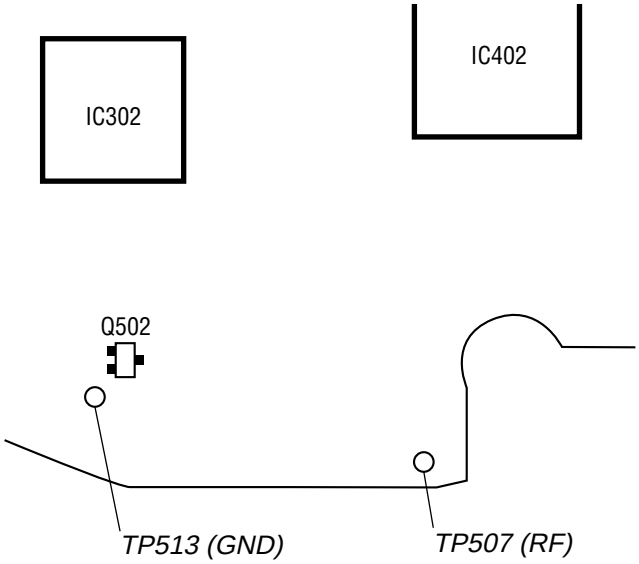
The CD section adjustments are done automatically in this set.
In case of operation check, confirm that RF level.

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. (J101)
   VOLUME button : Minimum
   HOLD switch : OFF

Checking Location:

– MAIN board (SIDE A) –

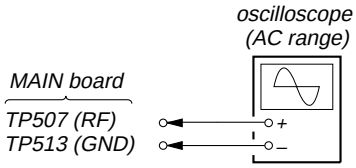


RF Level Check

Condition:

• Hold the set in horizontal state.

Connection:

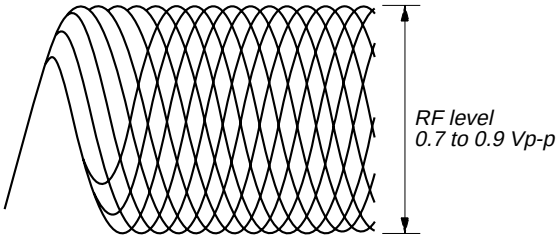


Procedure:

1. Connect the oscilloscope to the test points TP507 (RF) and TP513 (GND) on the MAIN board.
2. Set a disc. (YEDS-18)
3. Press 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 5
DIAGRAMS

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.
- ▬ : Pattern from the side which enables seeing.

(The other layers' patterns are not indicated.)

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

- MAIN board is multi-layer printed board. However, the patterns of intermediate-layer have not been included in the diagram.

Note on Schematic Diagram:

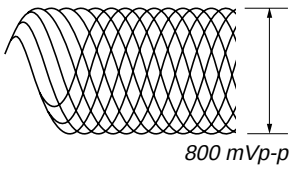
- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- % : indicates tolerance.
- ▭ : panel designation.

Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

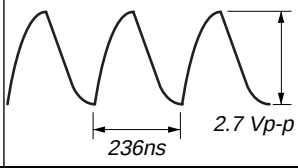
- ▬ : B+ Line.
- Total current is measured with CD installed.
- Power voltage is dc 4.5 V and fed with regulated dc power supply from DC IN jack (J101).
- Voltages and waveforms are dc with respect to ground in playback mode.
  no mark : CD PLAY
- Voltages are taken with a VOM (Input impedance 10 MΩ).
  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 (ANALOG OUT)
- Abbreviation
  CH : Chinese model
  KR : Korean model
  HK : Hong Kong model
  TW : Taiwan model
  E18 : 100-240V AC Area in E model

• WAVEFORMS

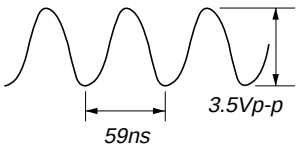
① IC501 ⑨ ARF
200mV/DIV, 400ns/DIV



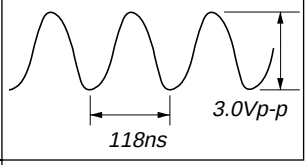
⑤ IC301 ⑩ MCLK
1V/DIV, 100ns/DIV



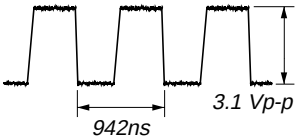
② IC402 ⑯ X2
1V/DIV, 20ns/DIV



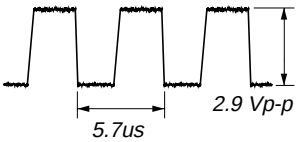
⑥ IC302 ⑫ OSC2
1V/DIV, 40ns/DIV



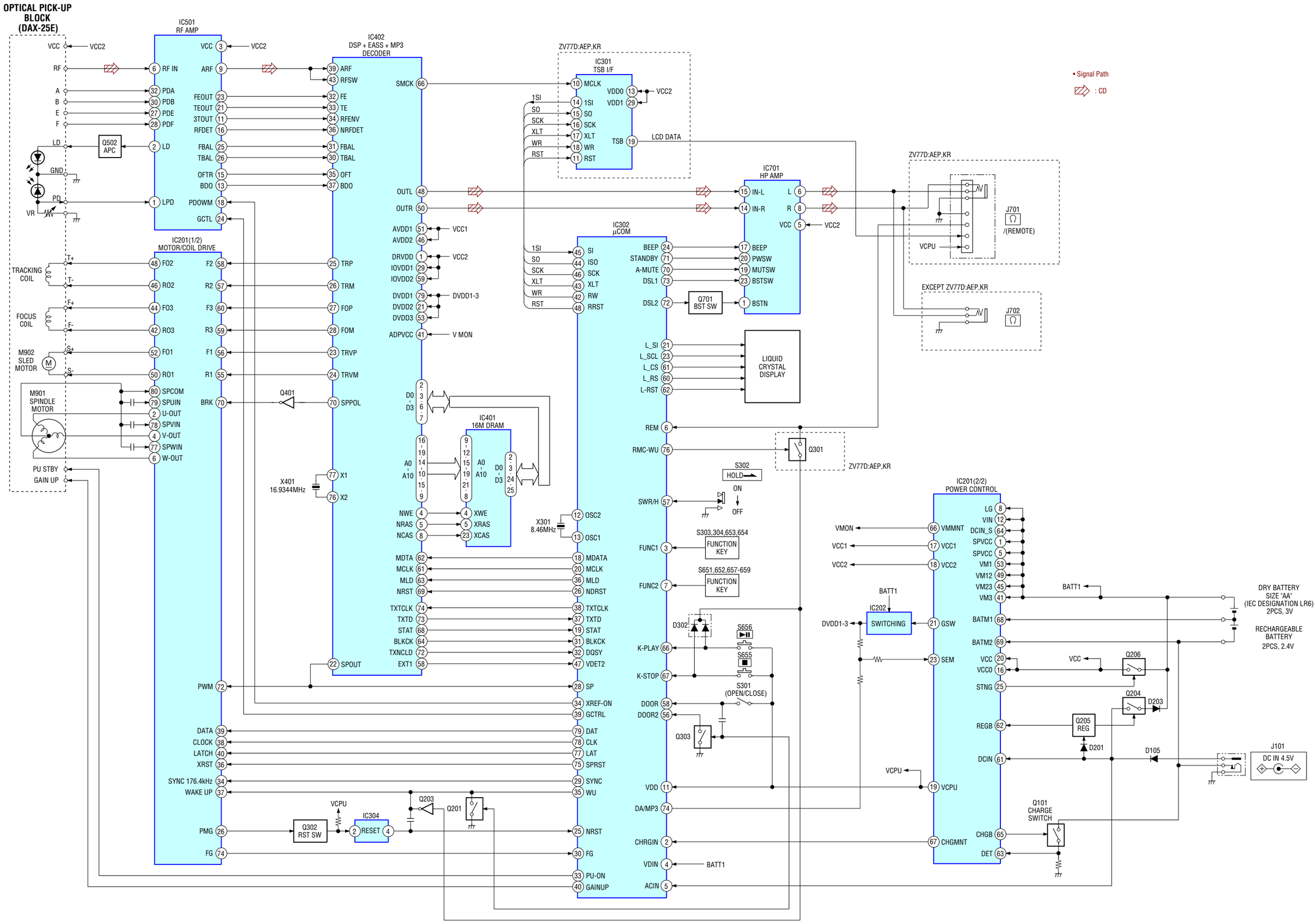
③ IC402 ⑥① MCLK
1V/DIV, 400ns/DIV



④ IC201 ㉞ SYNC176.4KHZ
1V/DIV, 2us/DIV

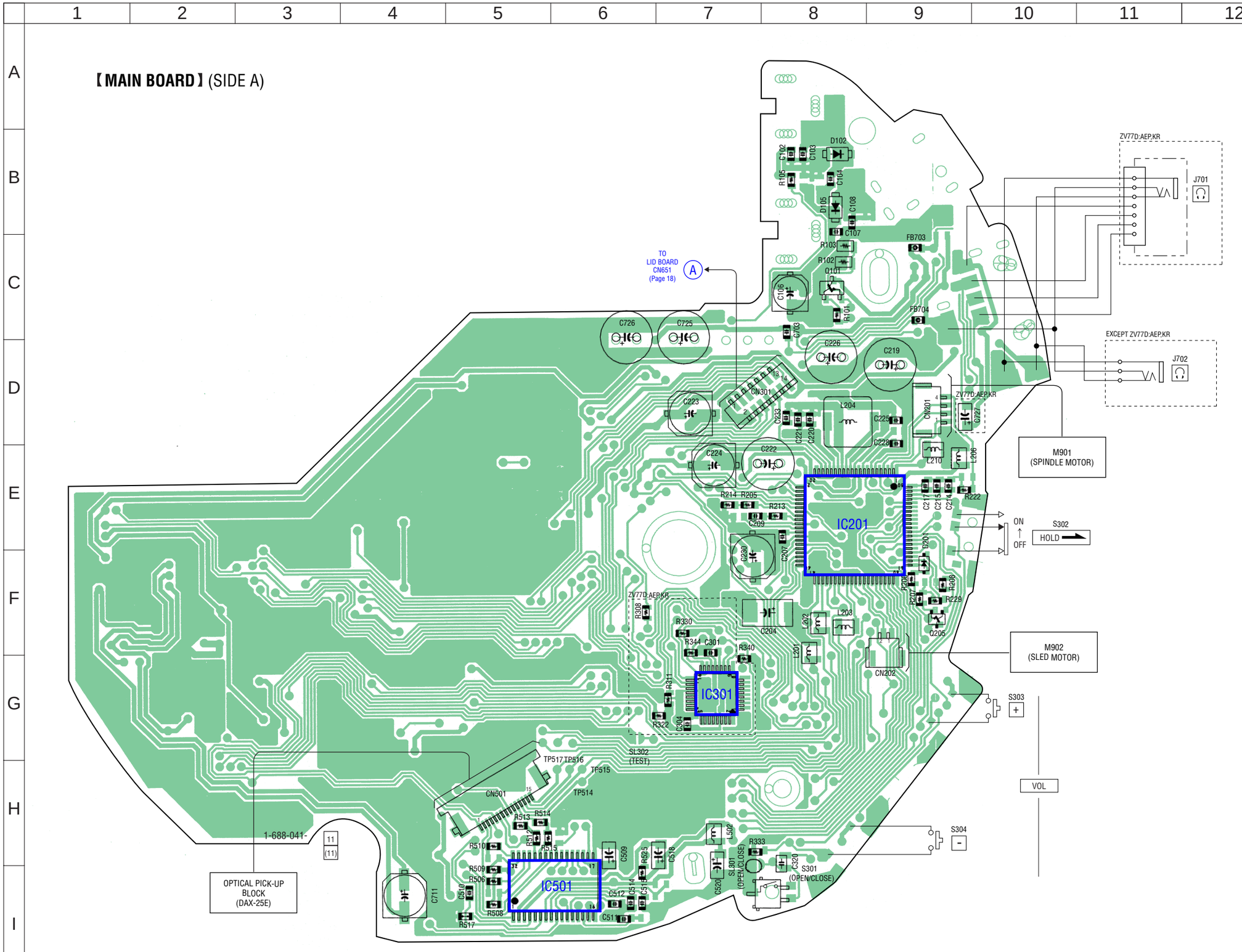


5-1. Block Diagram



5-2. Printed Wiring Board – MAIN Board (Side A) –

【MAIN BOARD】(SIDE A)

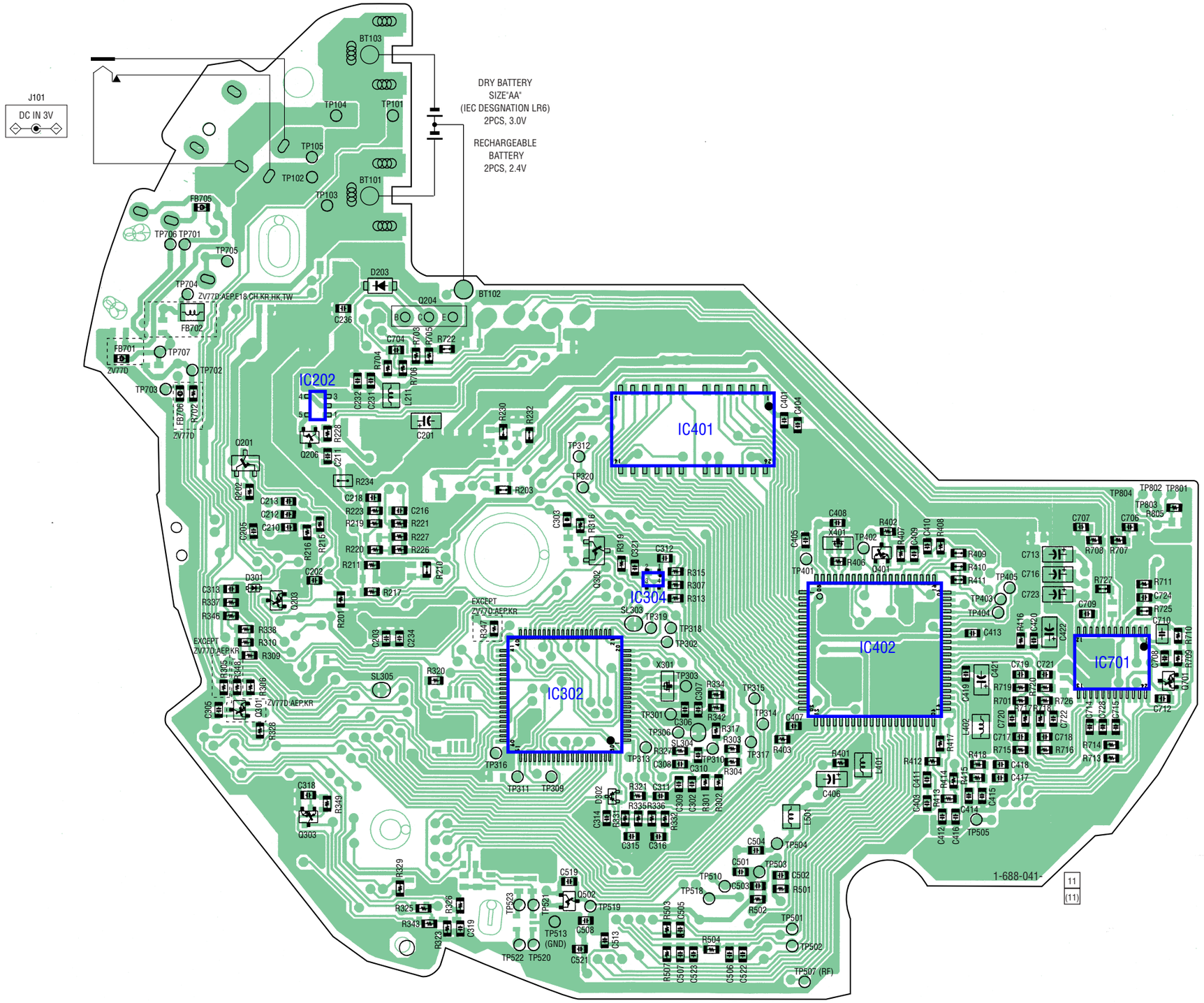


- **Semiconductor Location**

Ref. No.	Location
D102	A-8
D105	B-8
D201	F-9
IC201	E-8
IC301	G-7
IC501	I-6
Q101	C-8
Q205	F-9

5-3. Printed Wiring Board – MAIN Board (Side B) –

【MAIN BOARD】(SIDE B)



- **Semiconductor Location**

Ref. No.	Location
D203	D-5
D301	F-4
D302	H-7
IC202	D-4
IC302	G-6
IC304	F-7
IC401	E-8
IC402	G-9
IC701	G-11
Q201	E-4
Q203	F-4
Q204	D-5
Q206	E-4
Q301	G-4
Q302	F-7
Q303	H-4
Q401	F-9
Q502	I-7
Q701	G-12

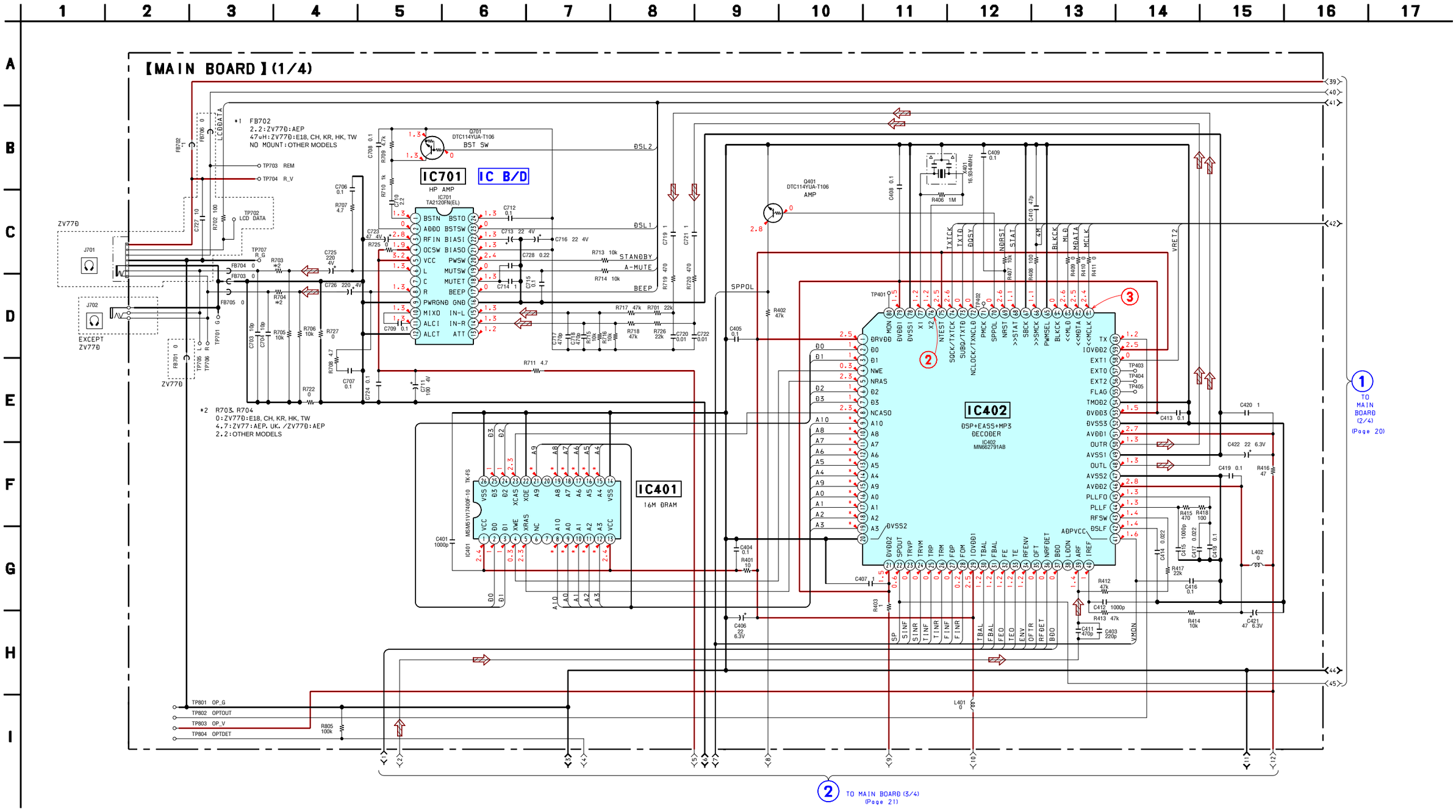
5-4. Printed Wiring Board – LID Board –

【LID BOARD】

S659
P-MODE /
S658
SOUND
S657
DISPLAY
R607
R608
S656
ENTER / ▶II
R617
R611
S655
OFF/CHG/■
R609
R606
R619
R618
R601
S654
S653
C601
C602
C603
C604
C605
C611
R605
R610
C608
C612
R603
CN651
CN601
C607
C614
R602
R616
R615
R614
R613
R612
R604
S651
FOLDER
SKIP
S652
1-688-042-
11
(11)
LIQUID CRYSTAL
DISPLAY
TO
MAIN BOARD
CN301
(Page 16)

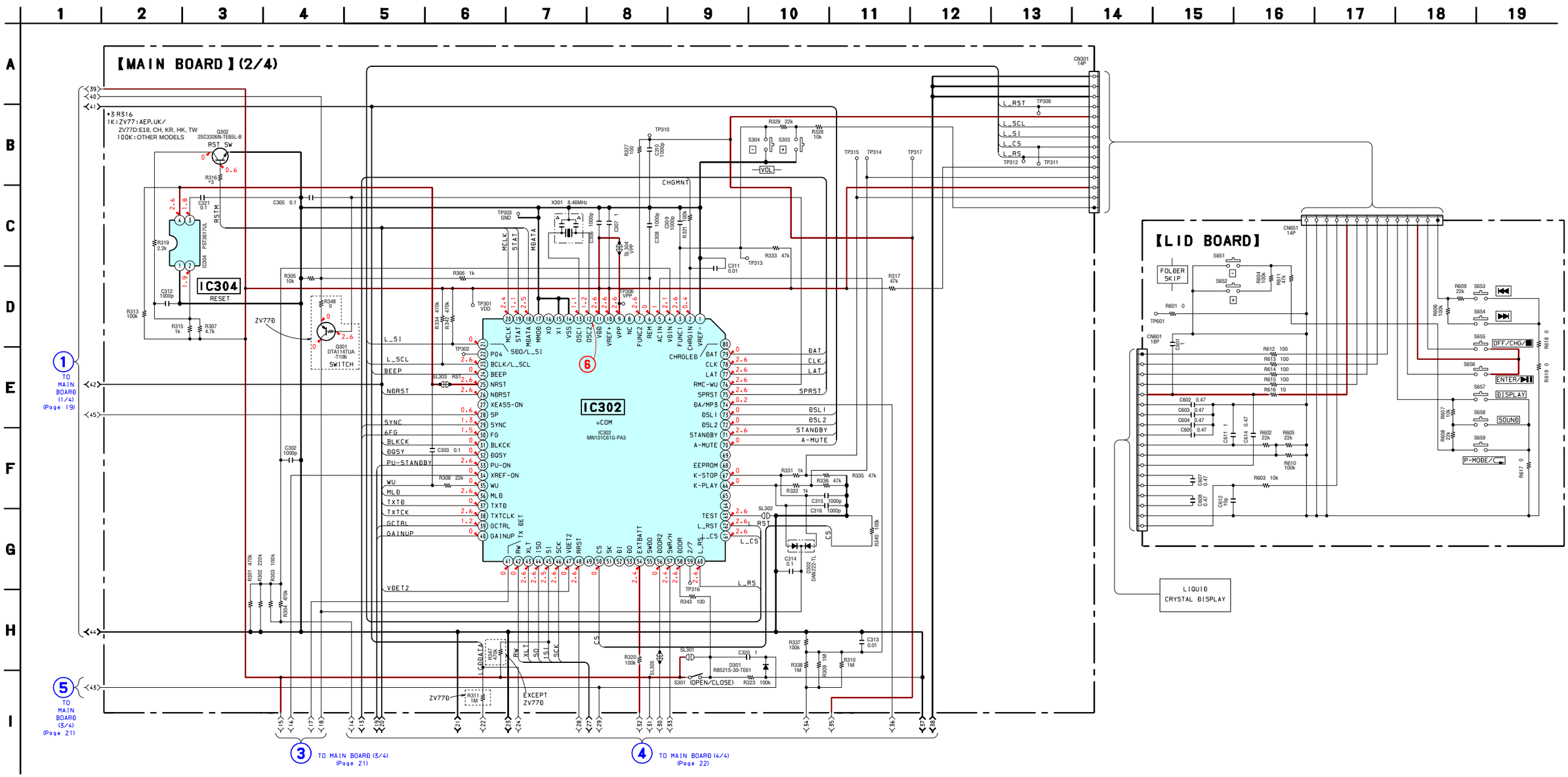
5-5. Schematic Diagram – MAIN Board (1/4) –

• See page 14 for Waveforms. • See page 23 for IC Block Diagram.



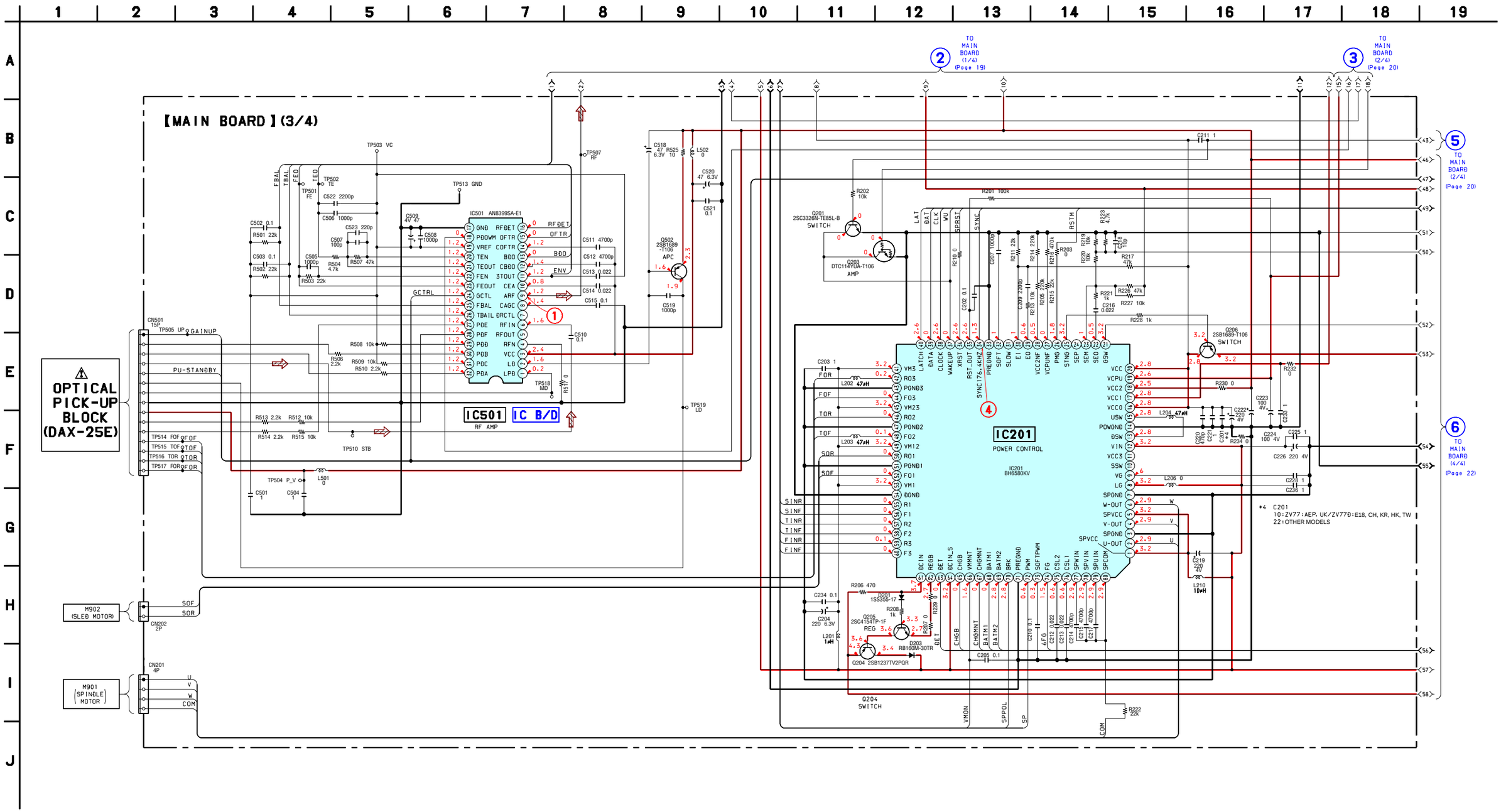
5-6. Schematic Diagram – MAIN Board (2/4), LID Board –

• See page 14 for Waveform.



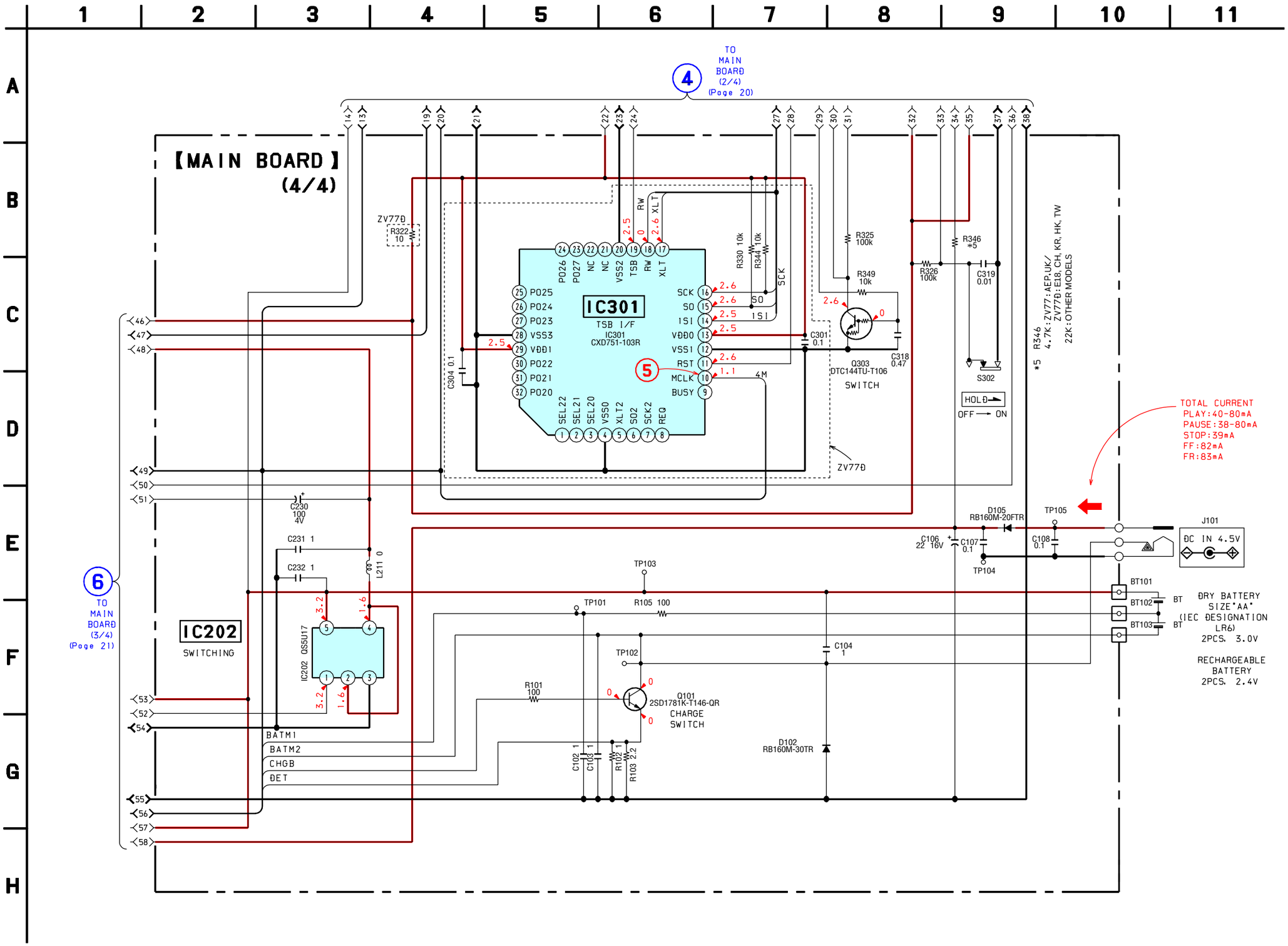
5-7. Schematic Diagram – MAIN Board (3/4) –

• See page 14 for Waveforms. • See page 23 for IC Block Diagram.



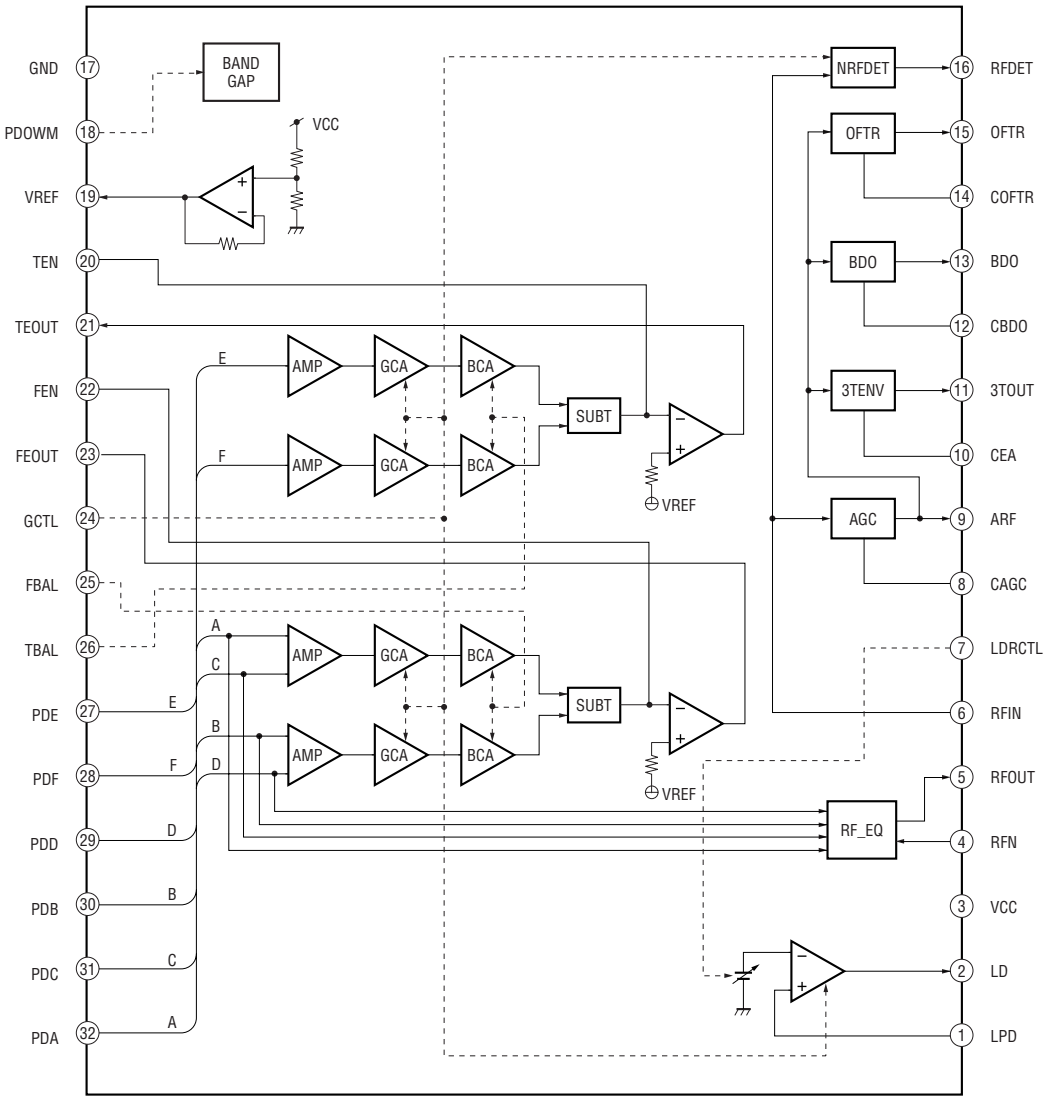
5-8. Schematic Diagram – MAIN Board (4/4) –

• See page 14 for Waveform.

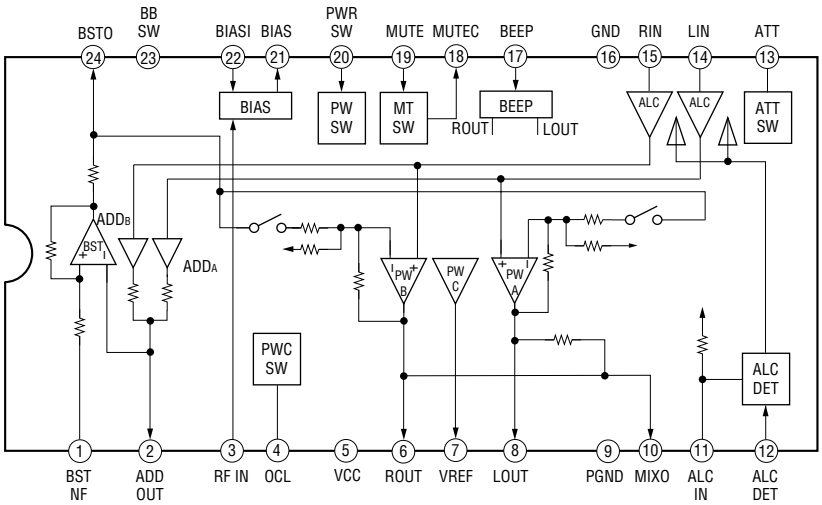


5-9. IC Block Diagrams

IC501 AN8399SA-E1



IC701 TA2120FN (EL)



5-10. IC Pin Function Descriptions

• IC302 MN101C61G-PA3 (SYSTEM CONTROLLER)

Pin No.	Pin Name	I/O	Description
1	VREF-	—	Reference voltage terminal for A/D converter (connected to the ground)
2	CHRGIN	I	Charge voltage A/D input
3	FUNC1	I	Function key (S303, 304, 653, 654) signal input
4	VDIN	I	Battery voltage A/D input
5	ACIN	I	AC adaptor detection signal input (HIDCIN detection)
6	REM	I	Remote commander key A/D input
7	FUNC2	I	Function key (S651, 652, 657-659) signal input
8	NC	—	Not used (open)
9	VPP	—	Connected to VDD (supply 5V to VPP at writing the flash memory)
10	VREF+	—	Reference voltage terminal for A/D converter (connected to VDD)
11	VDD	—	Power supply terminal (microcomputer)
12	OSC2	O	Clock output (8.4672MHz)
13	OSC1	I	Clock input (8.4672MHz)
14	VSS	—	Ground terminal (microcomputer)
15	XI	—	Not used (connected to the ground)
16	XO	—	Not used (open)
17	MMOD	—	Not used (connected to the ground)
18	MDATA	O	MDATA output to the DSP (IC402)
19	STAT	I	STAT input from the DSP (IC402)
20	MCLK	O	MCLK output to the DSP (IC402)
21	SDO/L_SI	O	Data output to the liquid crystal display
22	P04	O	Not used (open)
23	BCLK/L_SCL	O	Clock output to the liquid crystal display
24	BEEP	O	Beep signal ouput
25	NRST	I	Microcomputer reset signal input “L” : reset
26	NDRST	O	Reset signal output to the DSP (IC402) “L” : reset
27	XEASS-ON	O	Equalizer selection signal output in case of MP3 “H” : on
28	SP	I	PWM signal input from the DSP (IC402)
29	SYNC	O	Clock (176.4kHz) output to the driver/power controller (IC201)
30	FG	I	FG pulse input from the driver/power controller (IC201)
31	BLKCK	I	BLKCK input from the DSP (IC402)
32	DQSY	I	DQSY input from the DSP (IC402)
33	PU-ON	O	Pick-up standby control signal output “H” : on
34	XREF-ON	O	Standby control signal output to the RF amplifier (IC501) “L” : on
35	WU	O	WAKEUP signal output to the driver/power controller (IC201) “L” : wakeup
36	MLD	O	MLD signal output to the DSP (IC402)
37	TXTD	I	CD text data input from the DSP (IC402)
38	TXTCK	O	Clock for CD text output to the DSP (IC402)
39	GCTRL	O	Gain control and LD auto power control signal output to the RF amplifier (IC501) “Hi-z” : LD on, “L” : off
40	GAINUP	O	RF amplifier gain control signal to the optical pick-up “H” : up
41	TX DET	I	TX connector detection signal input “H” : connector in Not used (fixed at “L”)
42	RW	O	TSB RW signal output to the TSB interface (IC301)
43	XLT	O	TSB XLT signal output to the TSB interface (IC301)
44	1SO	O	Serial data output to the TSB interface (IC301)
45	SI	I	Serial data input to the TSB interface (IC301)
46	SCK	O	Serial clock output to the TSB interface (IC301)
47	VDET2	I	VDET2 signal input from the DSP (IC402)
48	RRST	O	Reset signal output to the TSB interface (IC301)
49	NC	O	Not used (open)
50	CS	O	Chip select signal output to the EEPROM Not used (open)

Pin No.	Pin Name	I/O	Description
51	SK	O	Serial clock output to the EEPROM Not used (open)
52	DI	O	Serial data output to the EEPROM Not used (open)
53	DO	I	Serial data input from the EEPROM Not used (open)
54	EXTBATT	I	External battery connection detection signal input "L" : external battery is set Not used (fixed at "H")
55	SWDO	I	TX output changeover signal input (fixed at "L")
56	DOOR2	I	Door (open to close) detection signal input "L" just after cancellation of reset : door open to close
57	SWR/H	I	Hold switch signal input "L" : hold switch on
58	DOOR	I	CD door switch detection signal input "L" : door close
59	2/7	I	CHP-2/DHP-7 detection input "L" : CHP-2 (open)
60	L_RS	O	Register selection signal output to the liquid crystal display
61	L_CS	O	Chip selection signal output to the liquid crystal display
62	L_RST	O	Reset signal output to the liquid crystal display
63	TEST	I	Test mode setting input terminal "L" : test mode
64, 65	NC	O	Not used (open)
66	K-PLAY	I	Play key on the set signal input "H" : play key on
67	K-STOP	I	Stop key on the set signal input "H" : stop key on
68	EEPROM	I	EEPROM discrimination signal input terminal Not used (open)
69	NC	I	Not used (open)
70	A-MUTE	O	Muting control signal output to the headphone amplifier (IC701) "H" : muting on
71	STANDBY	O	Standby control signal output to the headphone amplifier (IC701) "L" : standby
72	DSL2	O	Bass boost control 2 signal output "H" : DSL2 on
73	DSL1	O	Bass boost control 1 signal output "H" : DSL1 on
74	DA/MP3	O	DSP output voltage changeover signal output "L" : MP3, "Hi-z" : DA
75	SPRST	O	Reset signal output to the driver/power controller (IC201)
76	RMC-WU	O	Remote commander AD line changeover signal output "L" : on
77	LAT	O	Latch signal output to the driver/power controller (IC201)
78	CLK	O	Clock output to the driver/power controller (IC201)
79	DAT	O	Data output to the driver/power controller (IC201)
80	CHRGLED	O	Charge LED control signal output "L" : on Not used (open)

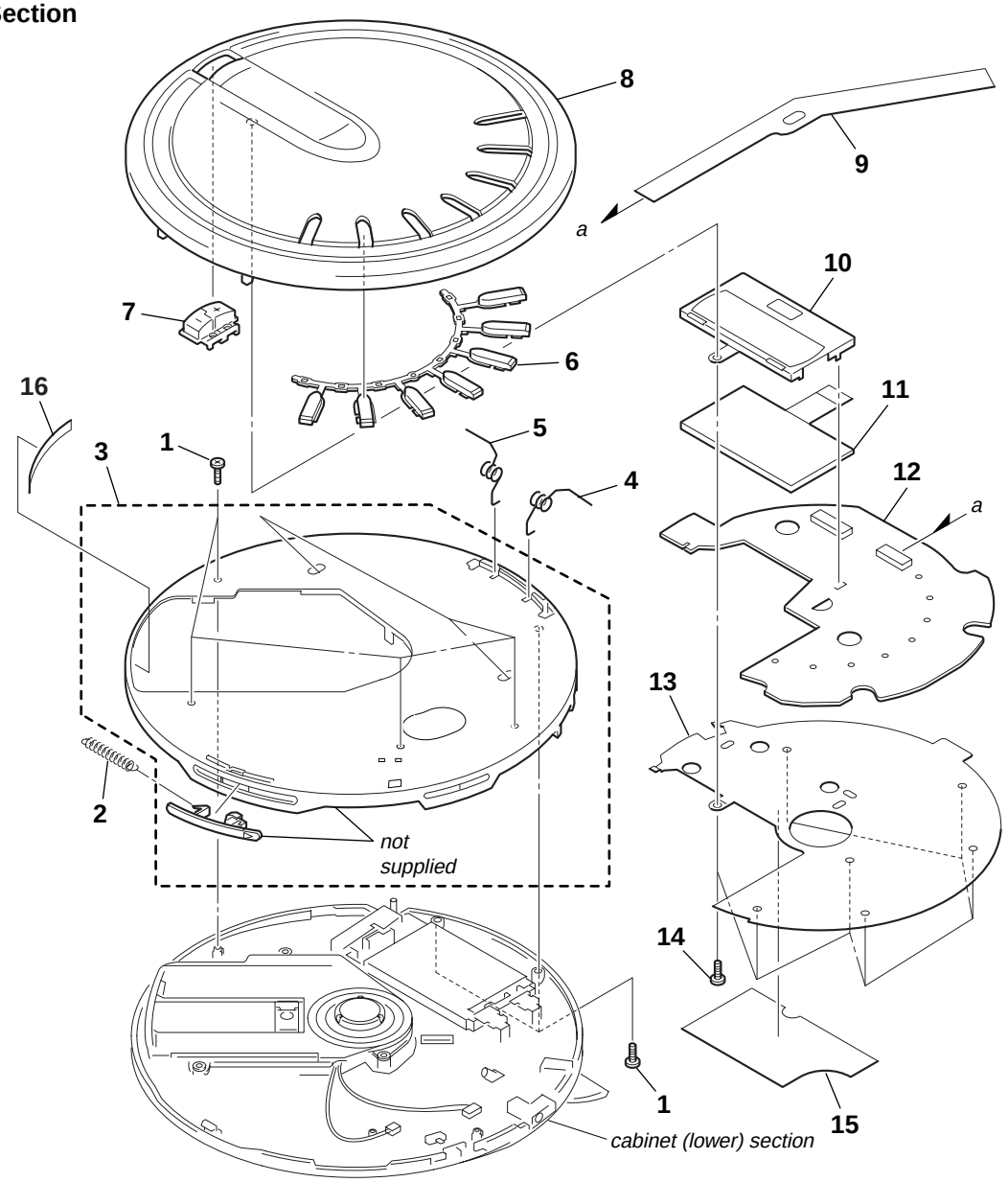
SECTION 6
EXPLODED VIEWS

NOTE:
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Accessories and packing materials are given in the last of this parts list.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Abbreviation
  AUS : Australian model
  CH : Chinese model
  E18 : 100-240V AC Area in E model
  E33 : 100-240V AC Area in E model (without VS)
  CND : Canadian model
  KR : Korean model
  HK : Hong Kong model
  TW : Taiwan model

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

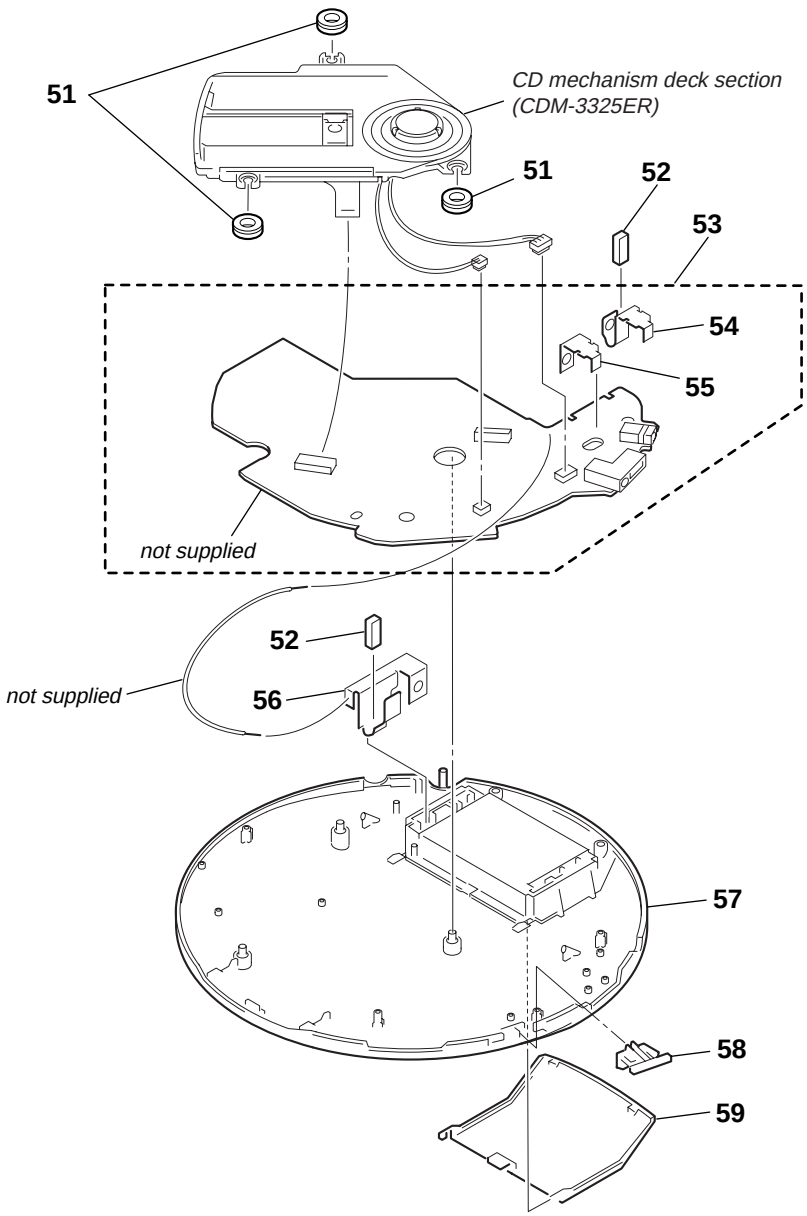
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

6-1. Cabinet (upper) Section



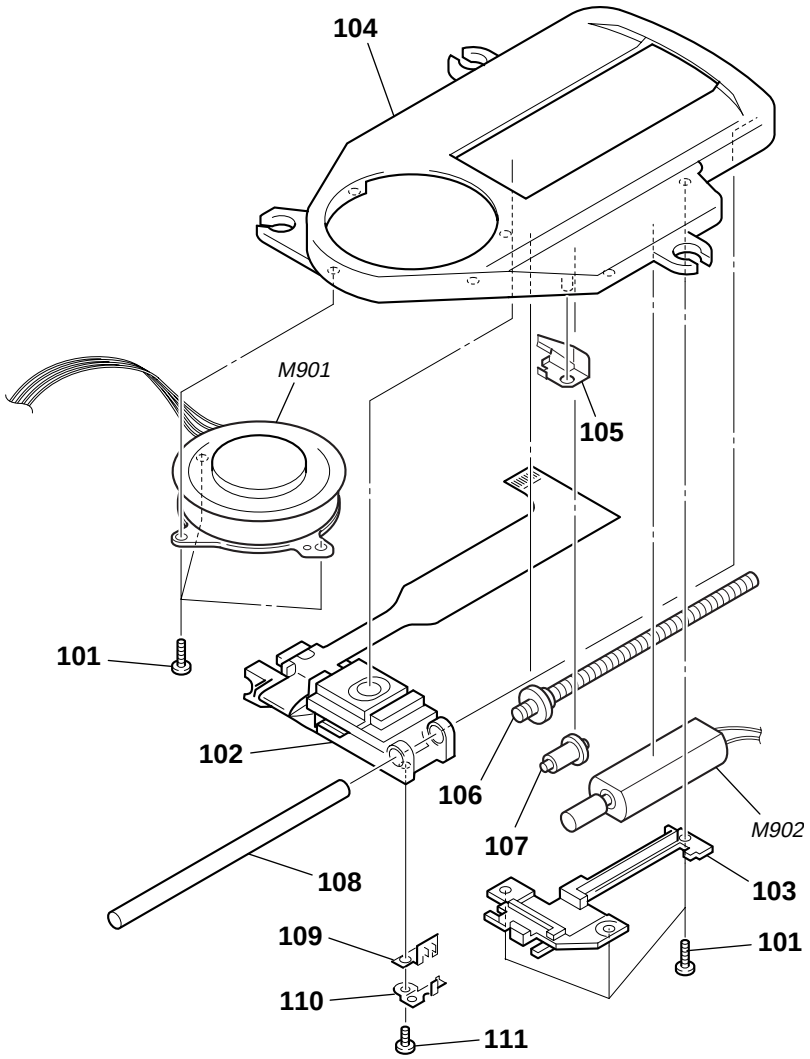
Ref. No.	Part No.	Description	Remarks
1	3-245-862-31	SCREW (B2), TAPPING	
2	3-249-069-01	SPRING, TENSION	
3	X-3383-301-1	CABINET (FRONT) SUB ASSY (EXCEPT ZV77D:AEP,CH,KR)	
3	X-3383-428-1	CABINET (FRONT) SUB ASSY (ZV77D:AEP,CH,KR)	
4	3-249-954-01	SPRING,FULL OPEN RIGHT	
5	3-249-953-01	SPRING,FULL OPEN LEFT	
6	3-249-948-01	BUTTON,CONTROL MAIN	
7	3-249-951-01	BUTTON,CONTROL SUB	
8	X-3383-302-1	LID SUB ASSY, UPPER (ZV71)	
8	X-3383-377-1	LID SUB ASSY, UPPER (ZV71C)	
8	X-3383-426-1	LID SUB ASSY, UPPER (ZV77/ZV77D:E18,E33)	
8	X-3383-427-1	LID SUB ASSY, UPPER (ZV77D:AEP,CH,KR)	
8	X-3383-461-1	LID SUB ASSY, UPPER (ZV77C)	
9	1-688-839-11	PWB, FLEXIBLE	
10	3-249-956-01	CASE,LCD	
11	1-805-178-11	DISPLAY PANEL, LIQUID CRYSTAL	
* 12	A-3683-496-A	LID BOARD COMPLETE	
13	3-249-949-01	COVER,LID	
14	3-355-424-81	SCREW, TAPPING	
15	3-255-466-01	SHEET(COVER,LID),ADH	
16	3-254-597-01	CUSHON, CABI	

6-2. Cabinet (lower) Section



Ref. No.	Part No.	Description	Remarks
51	3-245-331-02	INSULATOR	
52	3-254-581-01	CUSHON,COMTACT	
* 53	A-3683-561-A	MAIN BOARD COMPLETE (ZV71/ZV71C/ZV77:CND, E18,E33,AUS/ZV77C)	
* 53	A-3683-662-A	MAIN BOARD COMPLETE (ZV77D:AEP)	
* 53	A-3683-688-A	MAIN BOARD COMPLETE (ZV77:AEP,UK)	
* 53	A-3683-692-A	MAIN BOARD COMPLETE (ZV77D:E18,CH,KR,HK,TW)	
54	3-249-065-01	TERMINAL BOARD (-), BATTERY	
55	3-249-064-01	TERMINAL BOARD (+), BATTERY	
56	3-249-066-01	TERMINAL BOARD (RELAY),BATTERY	
57	3-249-054-31	CABINET, LOWER (EXCEPT ZV77D:AEP,CH,KR)	
57	3-249-054-41	CABINET, LOWER (ZV77D:AEP,CH,KR)	
58	3-249-059-11	KNOB, HOLD	
59	3-249-055-11	LID, BATTERY	

6-3. CD Mechanism Deck Section (CDM-3325ER)



Ref. No.	Part No.	Description	Remarks
101	3-318-203-61	SCREW (B1.7X4), TAPPING	
⚠102	X-3380-950-1	OPTICAL PICK-UP (DAX-25E)	
103	3-221-473-01	COVER, GEAR	
104	3-221-472-02	CHASSIS	
105	3-221-474-01	SPRING, SLED	
106	A-3180-967-A	FEED ASSY, SCREW	
107	3-221-268-01	GEAR (B)	
108	3-221-475-01	SHAFT, STANDARD	
109	3-222-298-01	RACK	
110	3-222-299-01	SPRING, RACK RETAINER	
111	3-348-998-31	SCREW (M1.4X2.5), TAPPING, PAN	
M901	A-3180-965-A	MOTOR ASSY, TURN TABLE (SPINDLE)	
M902	A-3180-966-A	MOTOR ASSY, SLED (SLED)	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

SECTION 7
ELECTRICAL PARTS LIST

LID 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. .
- Abbreviation
  AUS : Australian model
  CH : Chinese model
  E18 : 100-240V AC Area in E model
  E33 : 100-240V AC Area in E model (without VS)
  CND: Canadian model
  KR : Korean model
  HK : Hong Kong model
  TW : Taiwan model
- CAPACITORS
  uF: µF
- COILS
  uH: µH

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

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

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description			Remarks
*	A-3683-496-A	LID BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C601	1-115-156-11	CERAMIC CHIP	1uF		10V
C602	1-113-619-11	CERAMIC CHIP	0.47uF		10V
C603	1-113-619-11	CERAMIC CHIP	0.47uF		10V
C604	1-113-619-11	CERAMIC CHIP	0.47uF		10V
C605	1-113-619-11	CERAMIC CHIP	0.47uF		10V
C607	1-113-619-11	CERAMIC CHIP	0.47uF		10V
C608	1-113-619-11	CERAMIC CHIP	0.47uF		10V
C611	1-115-156-11	CERAMIC CHIP	1uF		10V
C612	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C614	1-113-619-11	CERAMIC CHIP	0.47uF		10V
		< CONNECTOR >			
CN601	1-816-276-21	CONNECTOR, FPC (ZIF) 18P			
CN651	1-817-459-11	CONNECTOR, FFC/FPC (ZIF)			
		< RESISTOR >			
R601	1-216-295-91	SHORT CHIP	0		
R602	1-216-837-11	METAL CHIP	22K	5%	1/16W
R603	1-216-833-11	METAL CHIP	10K	5%	1/16W
R604	1-216-845-11	METAL CHIP	100K	5%	1/16W
R605	1-216-837-11	METAL CHIP	22K	5%	1/16W
R606	1-216-845-11	METAL CHIP	100K	5%	1/16W
R607	1-216-833-11	METAL CHIP	10K	5%	1/16W
R608	1-216-837-11	METAL CHIP	22K	5%	1/16W
R609	1-216-837-11	METAL CHIP	22K	5%	1/16W
R610	1-216-845-11	METAL CHIP	100K	5%	1/16W
R611	1-216-841-11	METAL CHIP	47K	5%	1/16W
R612	1-216-809-11	METAL CHIP	100	5%	1/16W
R613	1-216-809-11	METAL CHIP	100	5%	1/16W
R614	1-216-809-11	METAL CHIP	100	5%	1/16W
R615	1-216-809-11	METAL CHIP	100	5%	1/16W
R616	1-216-797-11	METAL CHIP	10	5%	1/16W
R617	1-216-295-91	SHORT CHIP	0		
R618	1-216-295-91	SHORT CHIP	0		
R619	1-216-295-91	SHORT CHIP	0		
		< SWITCH >			
S651	1-771-138-21	SWITCH, KEY BOARD (-)			
S652	1-771-138-21	SWITCH, KEY BOARD (+)			
S653	1-771-138-21	SWITCH, KEY BOARD (I◀◀)			
S654	1-771-138-21	SWITCH, KEY BOARD (▶▶I)			
S655	1-771-138-21	SWITCH, KEY BOARD (■)			
S656	1-771-138-21	SWITCH, KEY BOARD (▶II)			
S657	1-771-138-21	SWITCH, KEY BOARD (DISPLAY)			
S658	1-771-138-21	SWITCH, KEY BOARD (SOUND)			
S659	1-771-138-21	SWITCH, KEY BOARD (⊂⊃)			
**********					
*	A-3683-561-A	MAIN BOARD, COMPLETE			
		(ZV71/ZV71C/ZV77:CND,E18,E33,AUS/ZV77C)			
		**********			
*	A-3683-662-A	MAIN BOARD, COMPLETE (ZV77D:AEP)			
		**********			
*	A-3683-688-A	MAIN BOARD, COMPLETE (ZV77:AEP,UK)			
		**********			
*	A-3683-692-A	MAIN BOARD, COMPLETE			
		(ZV77D:E18,CH,KR,HK,TW)			
		**********			
	3-249-064-01	TERMINAL BOARD (+), BATTERY			
	3-249-065-01	TERMINAL BOARD (-), BATTERY			
		< CAPACITOR >			
C102	1-115-156-11	CERAMIC CHIP	1uF		10V
C103	1-115-156-11	CERAMIC CHIP	1uF		10V
C104	1-115-156-11	CERAMIC CHIP	1uF		10V
C106	1-126-395-11	ELECT	22uF	20%	16V
C107	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C108	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C201	1-165-897-11	TANTAL. CHIP	22uF	20%	10V
		(EXCEPT ZV77:AEP,UK/ZV77D:E18,CH,KR,HK,TW)			
C201	1-127-692-11	CERAMIC CHIP	10uF	10.00%	6.3V
		(ZV77:AEP,UK/ZV77D:E18,CH,KR,HK,TW)			
C202	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C203	1-115-156-11	CERAMIC CHIP	1uF		10V
C204	1-128-829-91	TANTAL. CHIP	220uF	20%	6.3V
C205	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C207	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C209	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C210	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C211	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C212	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C213	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C214	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C215	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V

MAIN

Ref. No.	Part No.	Description			Remarks
C216	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C217	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C218	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C219	1-124-434-00	ELECT	220uF	20.00%	4V
C220	1-164-315-11	CERAMIC CHIP	470PF	5.00%	50V
C221	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C222	1-124-434-00	ELECT	220uF	20.00%	4V
C223	1-126-209-11	ELECT CHIP	100uF	20.00%	4V
C224	1-126-209-11	ELECT CHIP	100uF	20.00%	4V
C225	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C226	1-124-434-00	ELECT	220uF	20.00%	4V
C228	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C230	1-126-209-11	ELECT CHIP	100uF	20.00%	4V
C231	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C232	1-115-156-11	CERAMIC CHIP	1uF		10V
C233	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C234	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C236	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C301	1-164-156-11	CERAMIC CHIP	0.1uF		25V (ZV77D)
C302	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C303	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C304	1-164-156-11	CERAMIC CHIP	0.1uF		25V (ZV77D)
C305	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C306	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C307	1-115-156-11	CERAMIC CHIP	1uF		10V
C308	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C309	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C310	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C311	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C312	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C313	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C314	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C315	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C316	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C318	1-117-863-11	CERAMIC CHIP	0.47uF	10.00%	6.3V
C319	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C320	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C321	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C401	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C403	1-164-230-11	CERAMIC CHIP	220PF	5.00%	50V
C404	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C405	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C406	1-119-750-11	TANTAL. CHIP	22uF	20.00%	6.3V
C407	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C408	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C409	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C410	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C411	1-164-315-11	CERAMIC CHIP	470PF	5.00%	50V
C412	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C413	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C414	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C415	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C416	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C417	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C418	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C419	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C420	1-115-156-11	CERAMIC CHIP	1uF		10V
C421	1-100-539-91	TANTAL. CHIP	47uF	20%	6.3V
C422	1-119-750-11	TANTAL. CHIP	22uF	20.00%	6.3V

Ref. No.	Part No.	Description			Remarks
C501	1-115-156-11	CERAMIC CHIP	1uF		10V
C502	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C503	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C504	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C505	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C506	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C507	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C508	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C509	1-131-862-91	TANTAL. CHIP	47uF	20%	4V
C510	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C511	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C512	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C513	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C514	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C515	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C518	1-100-539-91	TANTAL. CHIP	47uF	20%	6.3V
C519	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C520	1-100-539-91	TANTAL. CHIP	47uF	20%	6.3V
C521	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C522	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C523	1-164-230-11	CERAMIC CHIP	220PF	5.00%	50V
C703	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C704	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C706	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C707	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C708	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C709	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C710	1-125-838-11	CERAMIC CHIP	2.2uF	10%	6.3V
C711	1-126-209-11	ELECT CHIP	100uF	20.00%	4V
C712	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C713	1-104-847-11	TANTAL. CHIP	22uF	20.00%	4V
C714	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C715	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C716	1-104-847-11	TANTAL. CHIP	22uF	20.00%	4V
C717	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C718	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C719	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C720	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C721	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C722	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C723	1-131-862-91	TANTAL. CHIP	47uF	20%	4V
C724	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C725	1-124-434-00	ELECT	220uF	20.00%	4V
C726	1-124-434-00	ELECT	220uF	20.00%	4V
C727	1-135-259-11	TANTAL. CHIP	10uF	20.00%	6.3V (ZV77D)
C728	1-115-467-11	CERAMIC CHIP	0.22uF	10.00%	10V
		< CONNECTOR >			
* CN201	1-785-877-21	HOUSING, CONNECTOR 4P			
CN202	1-784-342-21	HOUSING, CONNECTOR 2P			
CN301	1-779-331-11	CONNECTOR, FFC/FPC 14P			
CN501	1-573-355-11	CONNECTOR, FFC/FPC (ZIF) 15P			
		< DIODE >			
D102	8-719-081-34	DIODE RB160M-30TR			
D105	6-500-220-11	DIODE RB161M-20FTR			
D201	8-719-988-61	DIODE 1SS355TE-17			
D203	8-719-081-34	DIODE RB160M-30TR			
D301	8-719-071-34	DIODE RB521S-30-TE61			
D302	8-719-989-03	DIODE DAN222-TL			

Ref. No.	Part No.	Description			Remarks
		< FERRITE BEAD >			
FB701	1-216-864-11	METAL CHIP	0	5%	1/16W (ZV77D)
FB702	1-216-298-00	METAL CHIP	2.2	5%	1/10W (ZV77D:AEP)
FB702	1-400-145-21	INDUCTOR	47uH		(ZV77D:E18,CH,KR,HK,TW)
FB703	1-500-234-22	FERRITE	0uH		
FB704	1-500-234-22	FERRITE	0uH		
FB705	1-500-234-22	FERRITE	0uH		
FB706	1-216-864-11	METAL CHIP	0	5%	1/16W (ZV77D)
		< IC >			
IC201	6-703-034-01	IC BH6580KV			
IC202	6-550-573-01	TRANSISTOR QS5U17			
IC301	8-752-397-55	IC CXD751-103R (ZV77D)			
IC302	6-802-688-04	IC MN101C61G-PA3			
IC304	6-703-959-01	IC PST3617UL			
IC401	6-700-195-01	IC MSM51V17400F-10TK-FS			
IC402	6-703-713-01	IC MN662791AB			
IC501	6-703-626-01	IC AN8399SA-E1			
IC701	8-759-681-65	IC TA2120FN(EL)			
		< JACK >			
J101	1-778-153-51	JACK,DC(POLARITY UNIFIED TYPE)			(DC IN 4.5V)
J701	1-793-288-23	JACK (🎧) (ZV77D)			
J702	1-815-135-42	JACK, HEADPHONE (🎧) (EXCEPT ZV77D)			
		< COIL >			
L201	1-469-966-21	INDUCTOR	1uH		
L202	1-400-145-21	INDUCTOR	47uH		
L203	1-400-145-21	INDUCTOR	47uH		
L204	1-419-368-21	INDUCTOR	47uH		
L206	1-400-416-21	INDUCTOR	0uH		
L210	1-469-967-21	INDUCTOR	10uH		
L211	1-400-416-21	INDUCTOR	0uH		
L401	1-400-417-21	INDUCTOR	0uH		
L402	1-400-416-21	INDUCTOR	0uH		
L501	1-400-416-21	INDUCTOR	0uH		
L502	1-400-416-21	INDUCTOR	0uH		
		< TRANSISTOR >			
Q101	8-729-921-73	TRANSISTOR	2SD1781K-T146-QR		
Q201	8-729-202-38	TRANSISTOR	2SC3326N-TE85L-B		
Q203	8-729-028-99	TRANSISTOR	DTC114YUA-T106		
Q204	6-550-070-01	TRANSISTOR	2SB1237TV2PQR		
Q205	8-729-602-21	TRANSISTOR	2SC4154TP-1F		
Q206	6-550-044-01	TRANSISTOR	2SB1689-T106		
Q301	8-729-028-74	TRANSISTOR	DTA114TUA-T106 (ZV77D)		
Q302	8-729-202-38	TRANSISTOR	2SC3326N-TE85L-B		
Q303	8-729-029-15	TRANSISTOR	DTC144TU-T106		
Q401	8-729-028-99	TRANSISTOR	DTC114YUA-T106		
Q502	6-550-044-01	TRANSISTOR	2SB1689-T106		
Q701	8-729-028-99	TRANSISTOR	DTC114YUA-T106		

Ref. No.	Part No.	Description			Remarks
		< RESISTOR >			
R101	1-216-809-11	METAL CHIP	100	5%	1/16W
R102	1-217-671-11	METAL CHIP	1	5%	1/10W
R103	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R105	1-216-809-11	METAL CHIP	100	5%	1/16W
R201	1-216-845-11	METAL CHIP	100K	5%	1/16W
R202	1-216-833-11	METAL CHIP	10K	5%	1/16W
R203	1-216-864-11	METAL CHIP	0	5%	1/16W
R205	1-216-849-11	METAL CHIP	220K	5%	1/16W
R206	1-216-817-11	METAL CHIP	470	5%	1/16W
R207	1-216-864-11	METAL CHIP	0	5%	1/16W
R208	1-216-821-11	METAL CHIP	1K	5%	1/16W
R210	1-216-864-11	METAL CHIP	0	5%	1/16W
R211	1-218-879-11	METAL CHIP	22K	0.5%	1/10W
R213	1-216-833-11	METAL CHIP	10K	5%	1/16W
R214	1-216-849-11	METAL CHIP	220K	5%	1/16W
R215	1-218-879-11	METAL CHIP	22K	0.5%	1/10W
R216	1-218-911-11	METAL CHIP	470K	0.5%	1/10W
R217	1-218-887-11	METAL CHIP	47K	0.5%	1/10W
R219	1-218-871-11	METAL CHIP	10K	0.5%	1/10W
R220	1-218-871-11	METAL CHIP	10K	0.5%	1/10W
R221	1-216-821-11	METAL CHIP	1K	5%	1/16W
R222	1-216-837-11	METAL CHIP	22K	5%	1/16W
R223	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R226	1-216-841-11	METAL CHIP	47K	5%	1/16W
R227	1-218-871-11	METAL CHIP	10K	0.5%	1/10W
R228	1-216-821-11	METAL CHIP	1K	5%	1/16W
R229	1-216-864-11	METAL CHIP	0	5%	1/16W
R230	1-216-864-11	METAL CHIP	0	5%	1/16W
R232	1-216-864-11	METAL CHIP	0	5%	1/16W
R234	1-216-295-91	SHORT CHIP	0		
R301	1-218-911-11	METAL CHIP	470K	0.5%	1/10W
R302	1-218-903-11	METAL CHIP	220K	0.5%	1/10W
R303	1-218-895-11	METAL CHIP	100K	0.5%	1/10W
R304	1-218-911-11	METAL CHIP	470K	0.5%	1/10W
R305	1-216-833-11	METAL CHIP	10K	5%	1/16W (EXCEPT ZV77D)
R305	1-218-871-11	METAL CHIP	10K	0.5%	1/10W (ZV77D)
R306	1-216-821-11	METAL CHIP	1K	5%	1/16W
R307	1-218-863-11	METAL CHIP	4.7K	0.5%	1/10W
R308	1-216-837-11	METAL CHIP	22K	5%	1/16W
R309	1-216-857-11	METAL CHIP	1M	5%	1/16W
R310	1-216-857-11	METAL CHIP	1M	5%	1/16W
R311	1-216-857-11	METAL CHIP	1M	5%	1/16W (ZV77D)
R313	1-216-845-11	METAL CHIP	100K	5%	1/16W
R315	1-218-847-11	METAL CHIP	1K	0.5%	1/10W
R316	1-216-845-11	METAL CHIP	100K	5%	1/16W (EXCEPT ZV77:AEP,UK/ZV77D:E18,CH,KR,HK,TW)
R316	1-216-821-11	METAL CHIP	1K	5%	1/16W (ZV77:AEP,UK/ZV77D:E18,CH,KR,HK,TW)
R317	1-216-841-11	METAL CHIP	47K	5%	1/16W
R319	1-218-855-11	METAL CHIP	2.2K	0.5%	1/10W
R320	1-216-845-11	METAL CHIP	100K	5%	1/16W
R321	1-216-845-11	METAL CHIP	100K	5%	1/16W

MAIN

Ref. No.	Part No.	Description			Remarks
R322	1-216-797-11	METAL CHIP	10	5%	1/16W
					(ZV77D)
R323	1-216-845-11	METAL CHIP	100K	5%	1/16W
R325	1-216-845-11	METAL CHIP	100K	5%	1/16W
R326	1-216-845-11	METAL CHIP	100K	5%	1/16W
R327	1-216-809-11	METAL CHIP	100	5%	1/16W
R328	1-216-833-11	METAL CHIP	10K	5%	1/16W
R329	1-216-837-11	METAL CHIP	22K	5%	1/16W
R330	1-216-833-11	METAL CHIP	10K	5%	1/16W
					(ZV77D)
R331	1-216-821-11	METAL CHIP	1K	5%	1/16W
R332	1-216-821-11	METAL CHIP	1K	5%	1/16W
R333	1-216-841-11	METAL CHIP	47K	5%	1/16W
R334	1-216-853-11	METAL CHIP	470K	5%	1/16W
R335	1-216-841-11	METAL CHIP	47K	5%	1/16W
R336	1-216-841-11	METAL CHIP	47K	5%	1/16W
R337	1-218-895-11	METAL CHIP	100K	0.5%	1/10W
R338	1-216-857-11	METAL CHIP	1M	5%	1/16W
R340	1-216-845-11	METAL CHIP	100K	5%	1/16W
R342	1-216-853-11	METAL CHIP	470K	5%	1/16W
R343	1-216-809-11	METAL CHIP	100	5%	1/16W
R344	1-216-833-11	METAL CHIP	10K	5%	1/16W
					(ZV77D)
R346	1-216-837-11	METAL CHIP	22K	5%	1/16W
		(EXCEPT ZV77:AEP,UK/ZV77D:E18,CH,KR,HK,TW)			
R346	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
		(ZV77:AEP,UK/ZV77D:E18,CH,KR,HK,TW)			
R347	1-216-853-11	METAL CHIP	470K	5%	1/16W
					(EXCEPT ZV77D)
R348	1-216-864-11	METAL CHIP	0	5%	1/16W
					(ZV77D)
R349	1-216-833-11	METAL CHIP	10K	5%	1/16W
R401	1-216-797-11	METAL CHIP	10	5%	1/16W
R402	1-216-841-11	METAL CHIP	47K	5%	1/16W
R403	1-218-446-11	METAL CHIP	1	5%	1/10W
R406	1-216-857-11	METAL CHIP	1M	5%	1/16W
R407	1-216-833-11	METAL CHIP	10K	5%	1/16W
R408	1-216-809-11	METAL CHIP	100	5%	1/16W
R409	1-216-864-11	METAL CHIP	0	5%	1/16W
R410	1-216-864-11	METAL CHIP	0	5%	1/16W
R411	1-216-864-11	METAL CHIP	0	5%	1/16W
R412	1-216-841-11	METAL CHIP	47K	5%	1/16W
R413	1-216-841-11	METAL CHIP	47K	5%	1/16W
R414	1-216-833-11	METAL CHIP	10K	5%	1/16W
R415	1-216-817-11	METAL CHIP	470	5%	1/16W
R416	1-216-805-11	METAL CHIP	47	5%	1/16W
R417	1-216-837-11	METAL CHIP	22K	5%	1/16W
R418	1-216-809-11	METAL CHIP	100	5%	1/16W
R501	1-216-837-11	METAL CHIP	22K	5%	1/16W
R502	1-216-837-11	METAL CHIP	22K	5%	1/16W
R503	1-216-837-11	METAL CHIP	22K	5%	1/16W
R504	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R506	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R507	1-216-841-11	METAL CHIP	47K	5%	1/16W
R508	1-216-833-11	METAL CHIP	10K	5%	1/16W
R509	1-216-833-11	METAL CHIP	10K	5%	1/16W
R510	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R512	1-218-871-11	METAL CHIP	10K	0.5%	1/10W
R513	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R514	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R515	1-218-871-11	METAL CHIP	10K	0.5%	1/10W
R517	1-216-864-11	METAL CHIP	0	5%	1/16W

Ref. No.	Part No.	Description			Remarks
R525	1-216-797-11	METAL CHIP	10	5%	1/16W
R701	1-216-837-11	METAL CHIP	22K	5%	1/16W
R702	1-216-809-11	METAL CHIP	100	5%	1/16W
					(ZV77D)
R703	1-216-789-11	METAL CHIP	2.2	5%	1/16W
		(ZV71/ZV71C/ZV77:CND,E18,E33,AUS/ZV77C)			
R703	1-216-864-11	METAL CHIP	0	5%	1/16W
			(ZV77D:E18,CH,KR,HK,TW)		
R703	1-216-793-11	METAL CHIP	4.7	5%	1/10W
			(ZV77:AEP,UK/ZV77D:AEP)		
R704	1-216-789-11	METAL CHIP	2.2	5%	1/16W
		(ZV71/ZV71C/ZV77:CND,E18,E33,AUS/ZV77C)			
R704	1-216-864-11	METAL CHIP	0	5%	1/16W
			(ZV77D:E18,CH,KR,HK,TW)		
R704	1-216-793-11	METAL CHIP	4.7	5%	1/10W
			(ZV77:AEP,UK/ZV77D:AEP)		
R705	1-216-833-11	METAL CHIP	10K	5%	1/16W
R706	1-216-833-11	METAL CHIP	10K	5%	1/16W
R707	1-216-793-11	METAL CHIP	4.7	5%	1/10W
R708	1-216-793-11	METAL CHIP	4.7	5%	1/10W
R709	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R710	1-216-821-11	METAL CHIP	1K	5%	1/16W
R711	1-216-793-11	METAL CHIP	4.7	5%	1/10W
R713	1-216-833-11	METAL CHIP	10K	5%	1/16W
R714	1-216-833-11	METAL CHIP	10K	5%	1/16W
R715	1-216-833-11	METAL CHIP	10K	5%	1/16W
R716	1-216-833-11	METAL CHIP	10K	5%	1/16W
R717	1-216-841-11	METAL CHIP	47K	5%	1/16W
R718	1-216-841-11	METAL CHIP	47K	5%	1/16W
R719	1-216-817-11	METAL CHIP	470	5%	1/16W
R720	1-216-817-11	METAL CHIP	470	5%	1/16W
R722	1-216-864-11	METAL CHIP	0	5%	1/16W
R725	1-216-864-11	METAL CHIP	0	5%	1/16W
R726	1-216-837-11	METAL CHIP	22K	5%	1/16W
R727	1-216-864-11	METAL CHIP	0	5%	1/16W
R805	1-216-845-11	METAL CHIP	100K	5%	1/16W
		< SWITCH >			
S301	1-762-805-41	SWITCH, PUSH (1 KEY)			
S302	1-572-922-11	SWITCH, SLIDE (HOLD➡)			
S303	1-771-248-11	SWITCH, TACTILE (VOL+)			
S304	1-771-248-11	SWITCH, TACTILE (VOL-)			
		< VIBRATOR >			
X301	1-795-909-11	VIBRATOR, CERAMIC (SMD) 8.46MHz			
X401	1-795-561-21	VIBRATOR, CERAMIC 16.9344MHz			

****

		MISCELLANEOUS
		**********
9	1-688-839-11	PWB, FLEXIBLE
11	1-805-178-11	DISPLAY PANEL, LIQUID CRYSTAL
⚠102	X-3380-950-1	OPTICAL PICK-UP (DAX-25E)
M901	A-3180-965-A	MOTOR ASSY, TURN TABLE (SPINDLE)
M902	A-3180-966-A	MOTOR ASSY, SLED (SLED)

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remarks
		ACCESSORIES	
		**********	
	1-417-362-11	CONNECTING PACK, CAR (ZV71C,ZV77C)	
⚠	1-477-496-21	ADAPTOR, AC (AC-ES455K) (E33)	
⚠	1-477-497-21	ADAPTOR, AC (AC-ES455K) (ZV77D:KR)	
⚠	1-477-499-21	ADAPTOR, AC (AC-ES455K) (CH)	
⚠	1-477-500-21	ADAPTOR, AC (AC-ES455K) (ZV77:AEP,E18/ZV77D:AEP,E18)	
⚠	1-477-501-21	ADAPTOR, AC (AC-ES455K) (ZV77:UK/ZV77D:HK)	
⚠	1-477-502-21	ADAPTOR, AC (AC-ES455K) (ZV77:CND/ZV77D:TW)	
⚠	1-477-503-21	ADAPTOR, AC (AC-ES455K) (ZV77:AUS)	
	1-477-744-12	REMOTE COMMANDER (RC-Z1C002) (ZV77D)	
	1-542-514-11	HEADPHONE (HP-M070) (ZV77/ZV77C)	
	1-542-516-11	HEADPHONE (HP-M061) (ZV71C)	
	1-542-517-11	HEADPHONE (HP-M046S) (ZV71)	
	1-542-529-11	HEADPHONE (HP-170) (ZV77D)	
⚠	1-569-007-12	ADAPTOR, CONVERSION 2P (E33)	
	1-792-970-41	CORD, CAR BATTERY (DCC-E2455) (ZV71C,ZV77C)	
	3-252-375-01	TAPE,MAGIC (ZV71C,ZV77C)	
	3-252-434-11	MANUAL, INSTRUCTION (CAR KIT) (ZV71C,ZV77C)	
	3-253-769-11	MANUAL, INSTRUCTION(A) (ENGLISH,FRENCH) (ZV77:AEP,UK,E33,AUS/ZV77C/ZV77D:AEP)	
	3-253-769-21	MANUAL, INSTRUCTION(A) (GERMAN,ITALIAN) (ZV77:AEP/ZV77D:AEP)	
	3-253-769-31	MANUAL, INSTRUCTION(A) (SPANISH,PORTUGUESE) (ZV77:AEP,E33/ZV77C/ZV77D:AEP)	
	3-253-769-41	MANUAL, INSTRUCTION(A) (HUNGARIAN,POLISH) (ZV77:AEP/ZV77D:AEP)	
	3-253-769-51	MANUAL, INSTRUCTION(A) (CZECH,RUSSIAN) (ZV77:AEP/ZV77D:AEP)	
	3-253-771-11	MANUAL, INSTRUCTION(C) (ENGLISH,FRENCH) (ZV77:CND)	
	3-253-771-21	MANUAL, INSTRUCTION(C) (ENGLISH) (ZV71/ZV71C)	
	3-253-910-11	MANUAL, INSTRUCTION (TRADTIONAL CHINESE) (HK,TW)	
	3-253-910-21	MANUAL, INSTRUCTION (CHINESE) (ZV77:E18/ZV77D:E18,CH)	
	3-253-910-31	MANUAL, INSTRUCTION (KOREAN) (ZV77D:KR)	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

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	2003.04	New
1.1	2003.06	Addition of E33 / E33 / Hong Kong, Taiwan models (XP-ZV77 / ZV77C / ZV77D)
1.2	2003.08	Addition of Chinese model (XP-ZV77D)
1.3	2003.12	Change of Part No. for Ref. No. IC302 (RPC-03003)