

D-EJ2000

SERVICE MANUAL

Ver 1.1 2002.12

*US Model
Canadian Model
AEP Model
UK Model
E Model
Chinese Model
Tourist Model*



Photo : SILVER TYPE

Model Name Using Similar Mechanism	NEW
CD Mechanism Type	CDM-3325ES2
Optical Pick-up Name	DAX-25E

- Abbreviation
E18 : 100 – 230 V AC area in E model
HK : Hong Kong model
JE : Tourist model
KR : Korean model
EE : East European model

SPECIFICATIONS

System

Compact disc digital audio system

Laser diode properties

Material: GaAlAs
Wavelength: $\lambda = 780$ nm
Emission duration: Continuous
Laser output: Less than $44.6 \mu\text{W}$
(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 $_{-2}^{+1}$ dB (measured by JEITA CP-307)

Output (at 3 V input level)

Line output (stereo minijack)
Output level 0.7 V rms at 47 k Ω
Recommended load impedance over 10 k Ω
Headphones (stereo minijack)
Approx. 5 mW + Approx. 5 mW at 16 Ω
(Approx. 0.5 mW + Approx. 0.5 mW at 16 Ω)*
*For the customers in Europe
Optical digital output (optical output connector)
Output level: -21 - -15 dBm
Wavelength: 630 - 690 nm at peak level

Power requirements

For the area code of the model you purchased, check the upper left side of the bar code on the package.

- Sony NH-14WM (A) rechargeable battery: 1.2 V DC
- LR6 (size AA) battery: 1.5 V DC
- AC power adaptor (DC IN 3 V jack):
US, Canadian models: 120 V, 60 Hz
UK model: 230 V, 50 Hz
Australian model: 240 V, 50 Hz
AEP, JE, E18, KR and EE models:
100 - 240 V, 50/60 Hz
HK model: 230 V, 50 Hz
Chinese model: 220 V, 50 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.

When using	G-PROTECTION	
	"1"	"2"
NH-14WM (A) (charged for about 5 hours**)	25	22
External battery case (alkaline battery***)	39	34
NH-14WM (A) and external battery case (alkaline battery***)	63	55

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

** Charging time varies depending on how the rechargeable battery is used.

*** When using a Sony alkaline battery LR6 (SG) (produced in Japan)

Operating temperature

5°C - 35°C (41°F - 95°F)

Dimensions (w/h/d) (excluding projecting parts and controls)

Approx. 127.0 × 133.8 × 13.4 mm
(5 × 5 $\frac{3}{8}$ × 1 $\frac{17}{32}$ in.)

Mass (excluding accessories)

Approx. 118 g (4.2 oz)

Design and specifications are subject to change without notice.

PORTABLE CD PLAYER

9-874-158-02
2002L1600-1

Sony Corporation
Personal Audio Company

SONY®

TABLE OF CONTENTS

1. SERVICING NOTE	3
2. GENERAL	6
3. DISASSEMBLY	7
3-1. Upper Lid Section	7
3-2. Cabinet (Middle) Section	8
3-3. MAIN Board, Optical Pick-Up Section (CDM-3325ES2)	8
3-4. Motor Assy Turn Table (M902), Optical Pick-Up Assy (DAX-25E)	9
4. ELECTRICAL ADJUSTMENT	10
5. DIAGRAMS	11
5-1. Block Diagram – Main (1/2) Section –	12
5-2. Block Diagram – Main (2/2) Section –	13
5-3. Block Diagram – Power Supply Section –	14
5-4. Printed Wiring Board – MAIN Board (Side A) –	15
5-5. Printed Wiring Board – MAIN Board (Side B), SUB Board –	16
5-6. Schematic Diagram – MAIN Board (1/3) –	17
5-7. Schematic Diagram – MAIN Board (2/3) –	18
5-8. Schematic Diagram – MAIN Board (3/3) –	19
5-9. IC Block Diagram	20
5-10. IC Pin Function Description	21
6. EXPLODED VIEWS	23
7. ELECTRICAL PARTS LIST	26

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK \triangle OR DOTTED LINE WITH MARK \triangle ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

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

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 power adaptor

- Use only the AC power adaptor supplied or recommended in "Accessories (supplied/ optional)." Do not use any other AC power adaptor. It may cause a malfunction.

Polarity of the plug



Unleaded solder

Boards requiring use of unleaded solder are printed with the lead-free mark (LF) indicating the solder contains no lead. (Caution: Some printed circuit boards may not come printed with the lead free mark due to their particular size.)



: LEAD FREE MARK

Unleaded solder has the following characteristics.

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

SECTION 1 SERVICING 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 per 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 ⑨ pin
When checking FOK, remove the lead wire to disc motor.
- RF signal P-to-P value: 0.34 to 0.74 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 S804. (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 S804 with a screwdriver having a thin tip as shown in Fig.1.
 3. Press the  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.

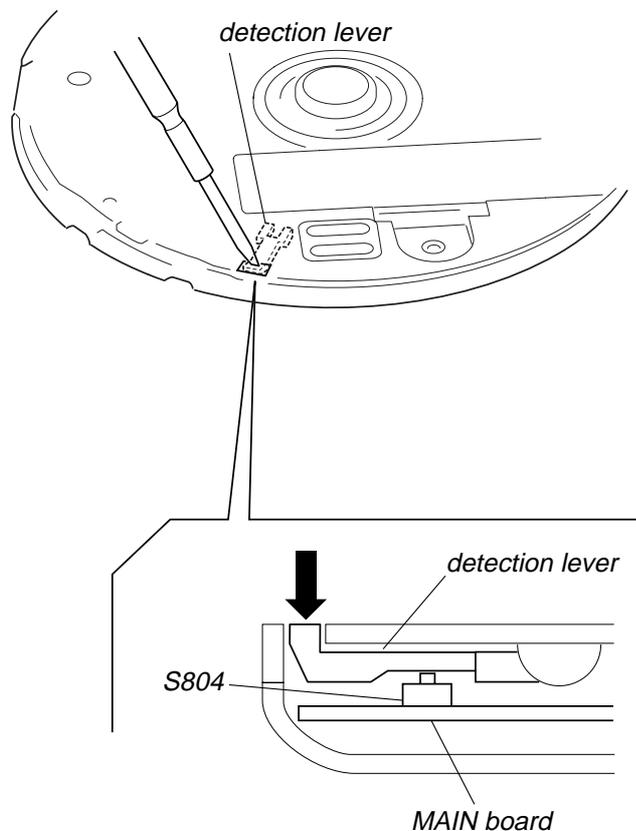


Fig. 1 Method to push the S804

SERVICE MODE

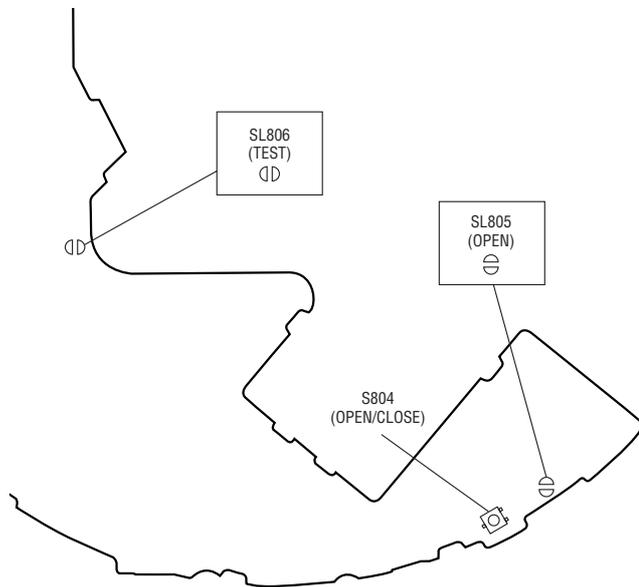
The following confirmation can be performed when the Service Mode is set.

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.
 - OPEN/CLOSE detect switch (S804) OFF
 - Solder Land (SL805) OPEN
 - [AVLS] switch (S802) NORM
 - [HOLD] switch (S801) OFF
 - [G-PROTECTION] switch (S803) 1
- 3) Short the solder land SL806 (TEST) on the MAIN board.
- 4) Turn on the main power.

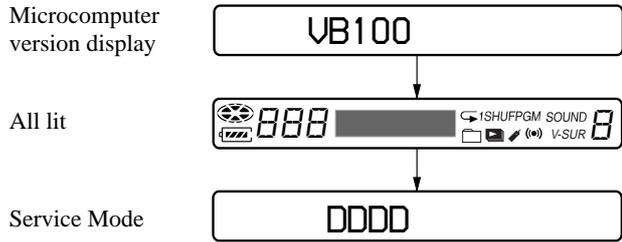
– MAIN Board (Component side) –



2. Operation when the Service Mode is set.

When the Service Mode becomes active, following messages are displayed on the remote control LCD.

Remote control LCD display



3. Operations by buttons or Rotary control in the Service Mode.

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

- (Operation when a CD is not placed in the CD player)
- / button (the CD player) or / Rotary control (the remote control)
 Motion of the optical pick-up (to outside or inside)
 Tracking/Sled servo off
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.

(Operation when a CD is placed in the CD player)

Procedure :

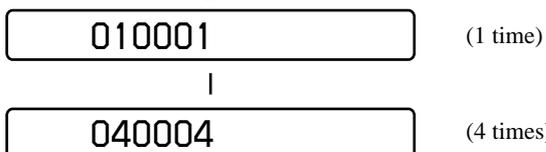
- 1) Confirm the set is not powered on.
- 2) Keep short the solder land SL806 (TEST) on the MAIN board.
- 3) After turning on the power, set a CD in the player.
 Then press / [ENT] button (the remote control)

Remote control LCD display



- button (the CD player) or button (the remote control)
All servos (Focus/Tracking/Sled) off
- / button (the CD player) or / Rotary control (the remote control)
Motion of the optical pick-up (to outside or inside)
Tracking/Sled servo off
- button (the CD player) or VOL + / VOL - Rotary control (the remote control)
Two step volume setting
- button (the remote control)
Every pressing the button changes CLV (the rotation velocity) 1 to 4 times.
Tracking/Sled servo on

Remote control LCD display



(To cancel this mode, turn off the power. Then set in the Service Mode again.)

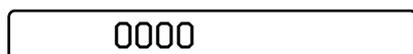
- button (the remote control)
Automatic adjustment of servo

4. Error rate display

C1 error rate is displayed when the following operation are performed during playing in the Service Mode.

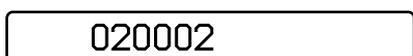
- 1) Cancel the other Service Mode by turning off the power.
- 2) After turning on the power, set a CD in the player.
Then press / button (the remote control).

Remote control LCD display



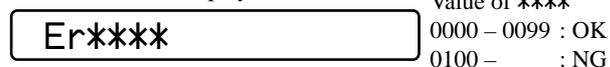
- 3) Set the automatic servo adjustment by pressing button (the remote control).
- 4) Press button (the remote control) twice.

Remote control LCD display



- 5) C1 error rate display mode is active by pressing button (the remote control).
The remote control LCD displays the following message.

Remote control LCD display

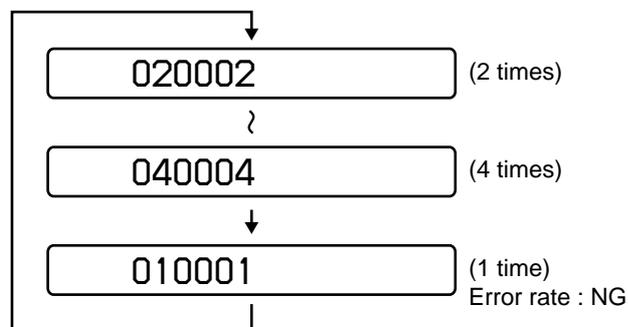


- Note :** Press button before pressing button during playing a CD.
By pressing in a wrong order, the value of Er**** becomes very big.

- 6) When button (the remote control) is pressed, button is effective again. Then the value of CLV (the rotation velocity) becomes changeable.

- Note :** Error rate display at x1 speed is not available, therefore skip "010001" (x1 speed) quickly.

Remote control LCD display



- 7) C1 error rate is displayed on the LCD by pressing button (the remote control).

Remote control LCD display



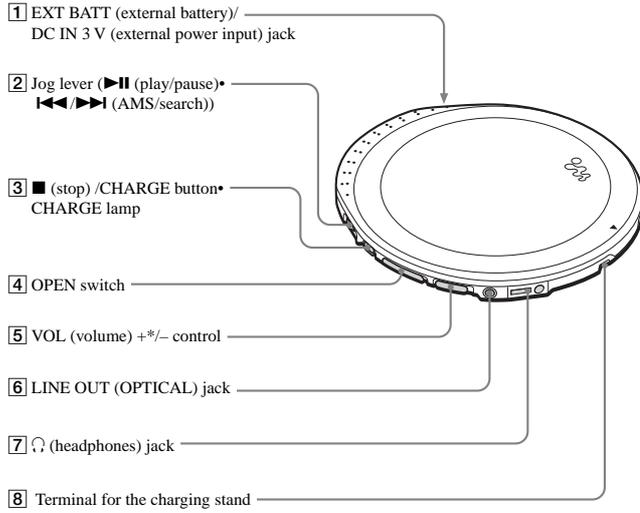
- 8) Turn off the power.
- 9) Open the solder land SL806 (TEST) on the MAIN board.
Note : The solder should be removed clean.

SECTION 2
GENERAL

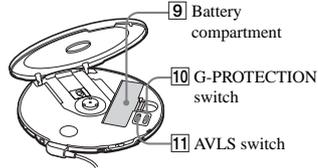
This section is extracted from instruction manual.

Locating the controls

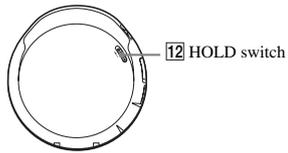
CD player (front)



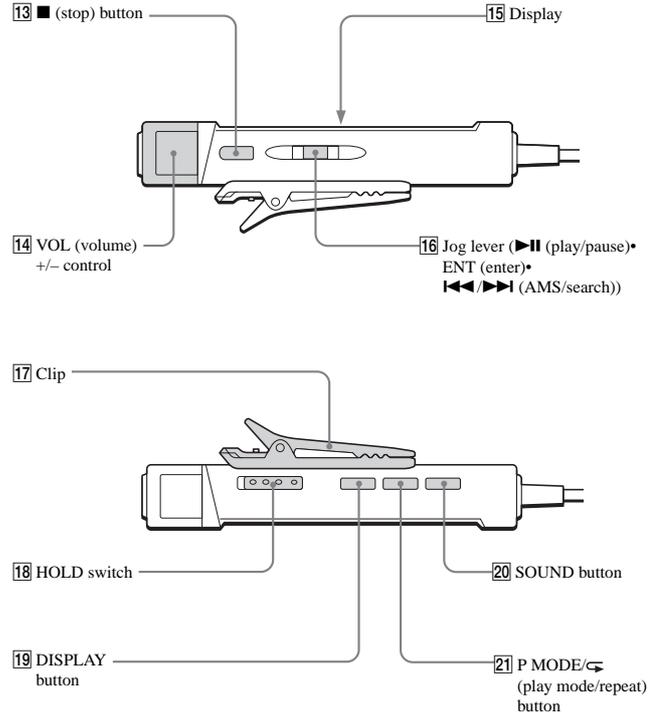
CD player (inside)



CD player (rear)



Remote control



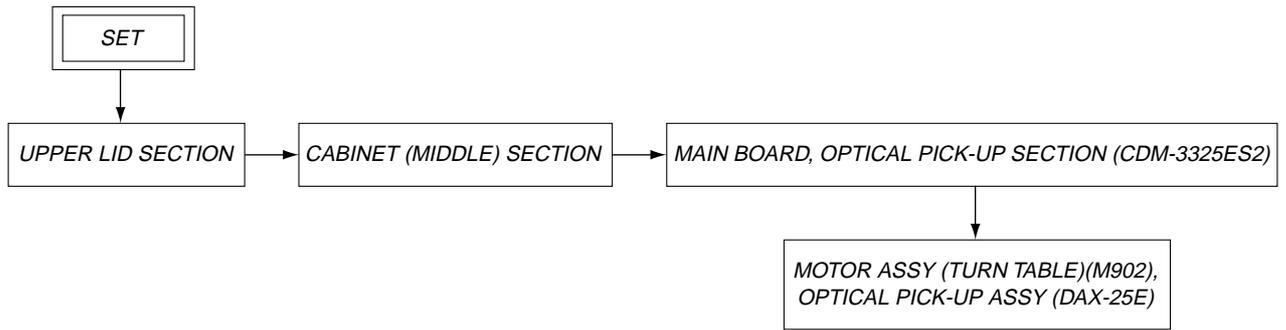
Note

Use only the supplied remote control. You cannot operate this CD player with the remote control supplied with other CD players.

*There is a tactile dot beside + to show the direction to turn up the volume.

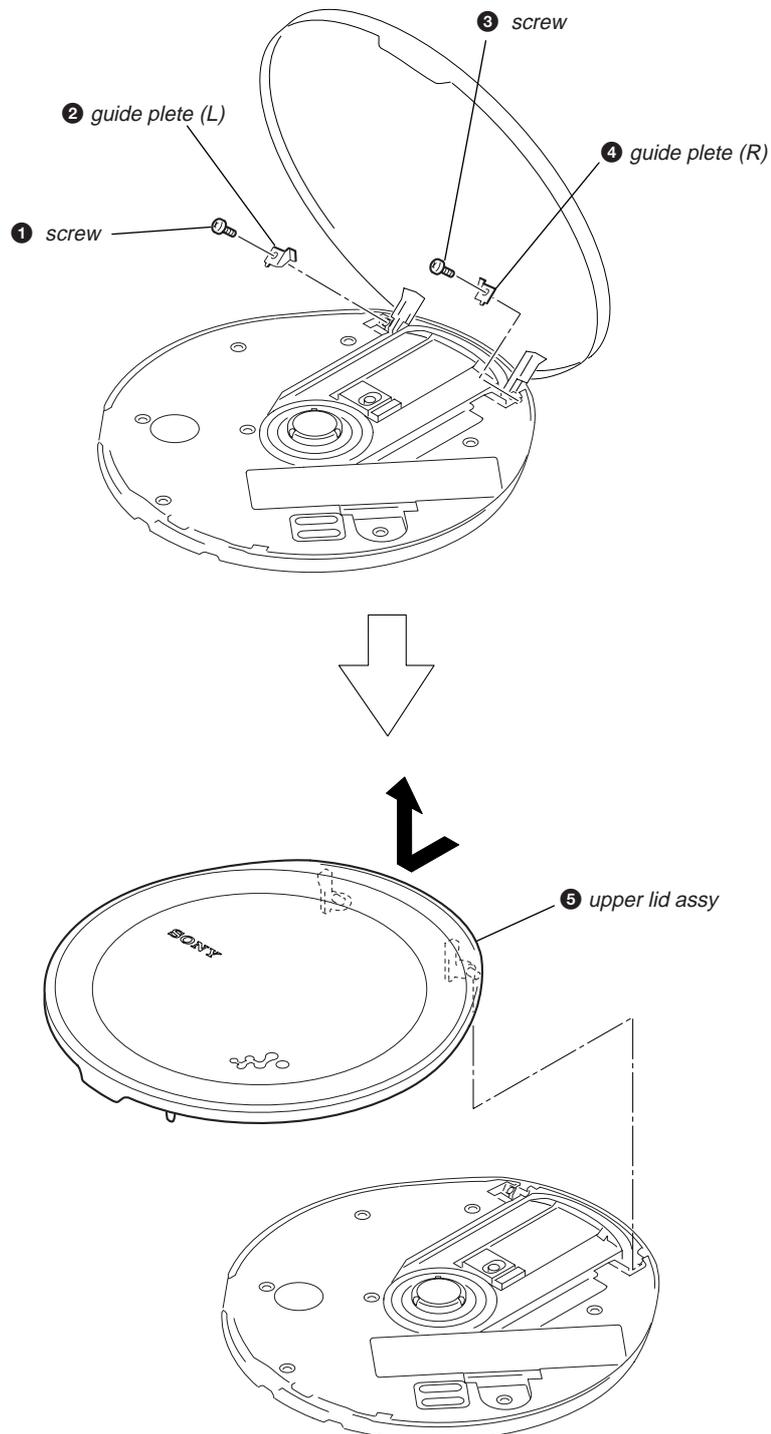
SECTION 3 DISASSEMBLY

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

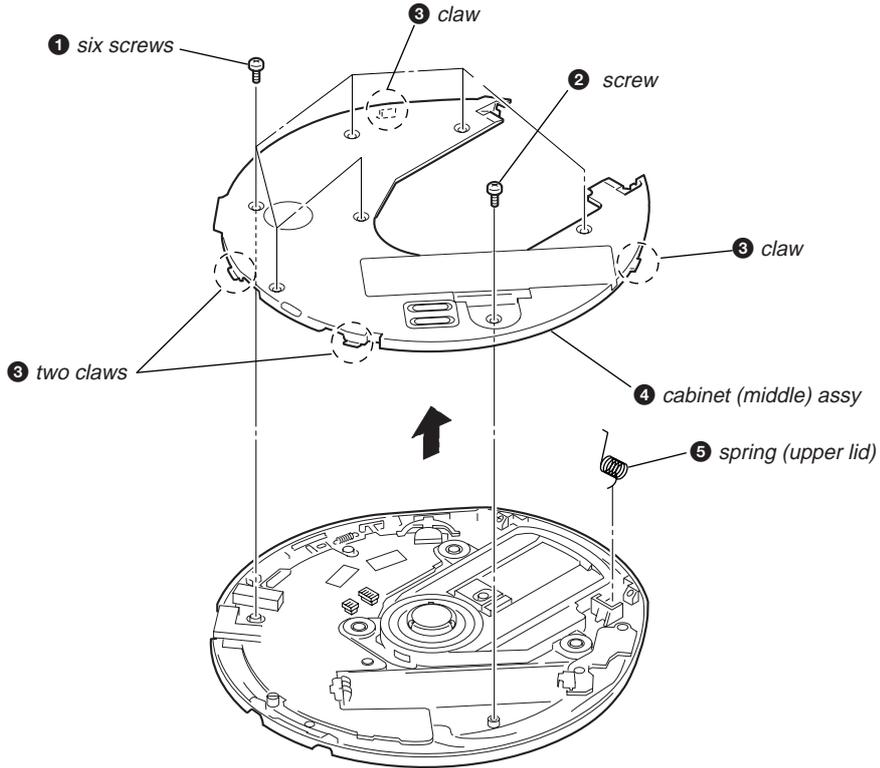


Note : Follow the disassembly procedure in the numerical order given.

3-1. Upper Lid Section

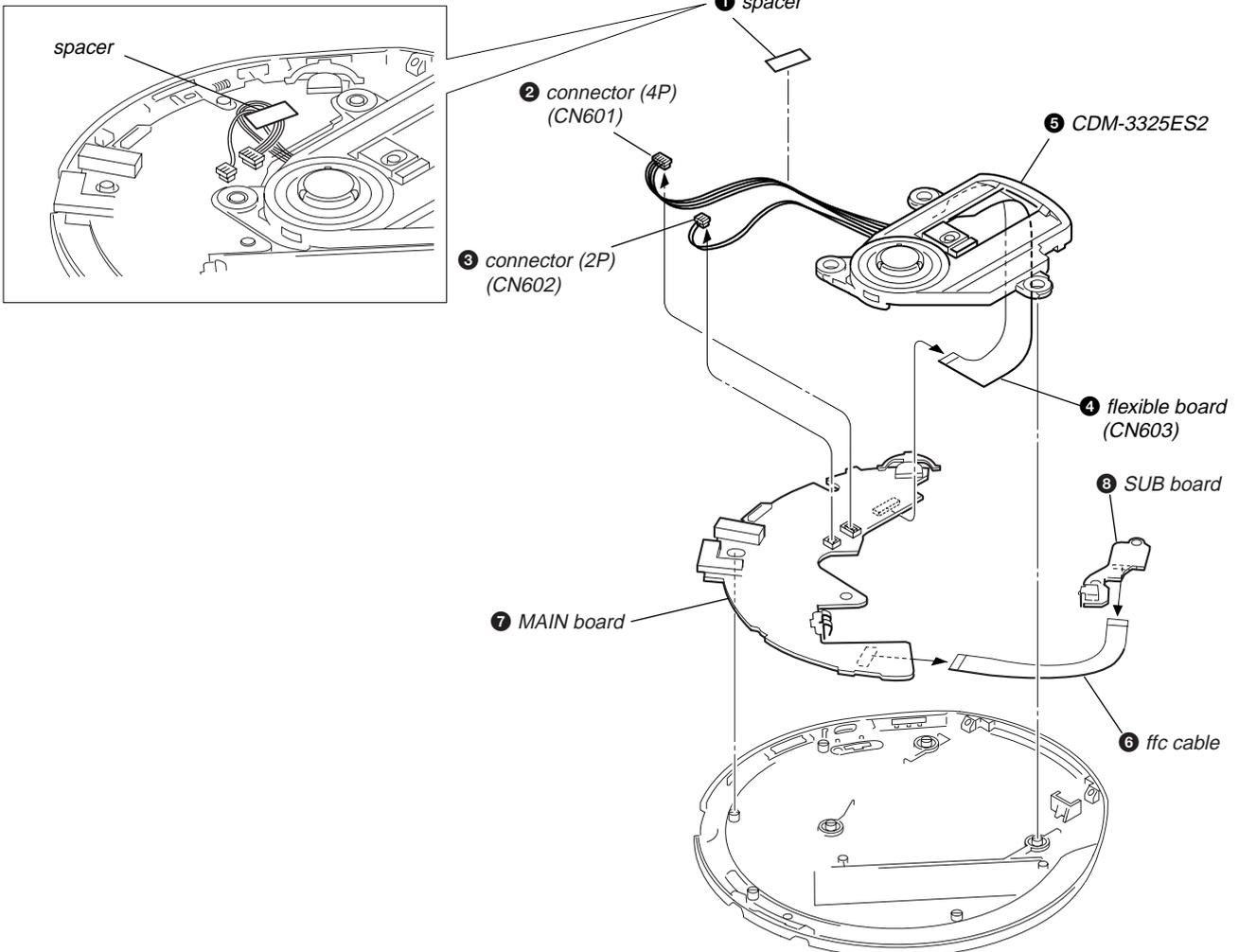


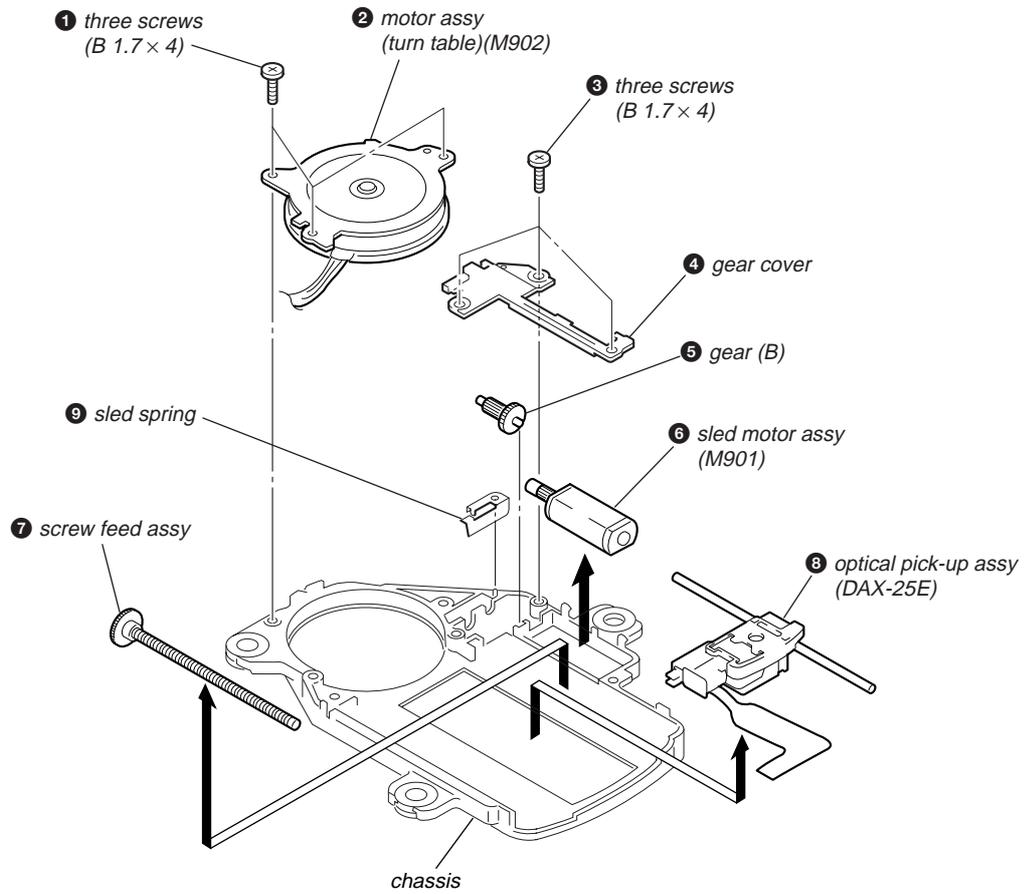
3-2. Cabinet (Middle) Section



3-3. MAIN Board, Optical Pick-Up Section (CDM-3325ES2)

The cautions at the time of attachment



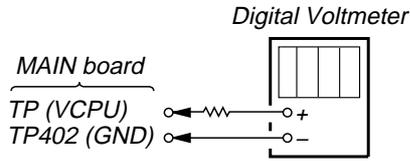
3-4. Motor Assy (Turn Table)(M902), Optical Pick-Up Assy (DAX-25E)

SECTION 4 ELECTRICAL ADJUSTMENT

Adjustment of VCPU

Connection :

- DC 3 V in DC IN jack (J402)



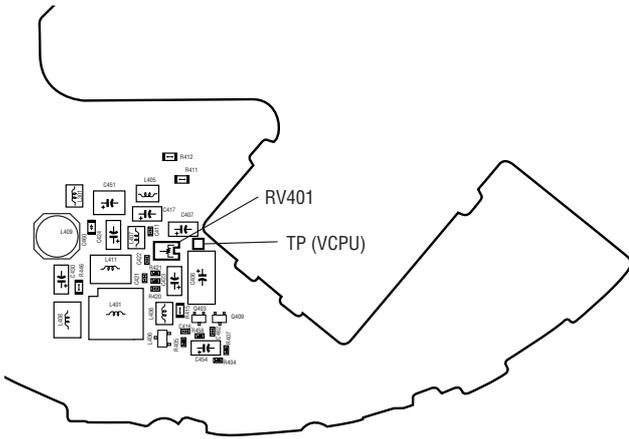
Procedure :

1. Connect a digital voltmeter to the test points TP (VCPU) and TP402 (GND).
2. Supply DC 3 V in DC IN jack (J402).
3. Adjust the RV401 so that the reading of the digital voltmeter becomes 1.9V+0.05/-0.0V.

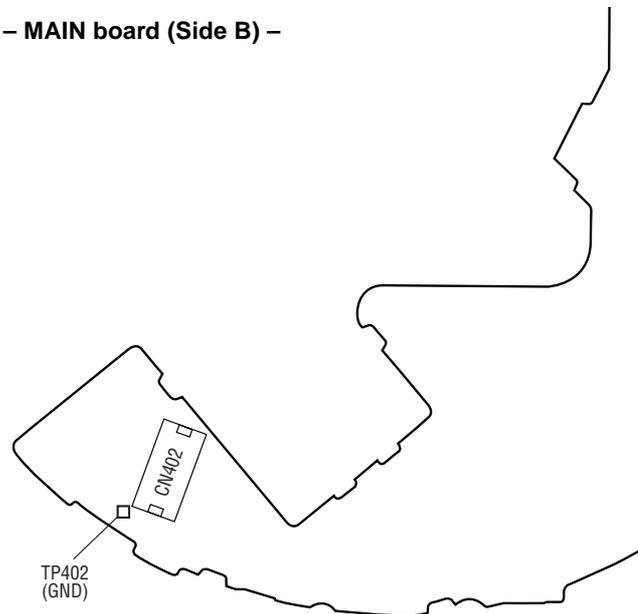
- Adjustment value : VCPU = $1.9V \pm_{0.0}^{0.05} V$ (1.90V to 1.95V)

Connecting points and adjusting point :

– MAIN board (Side A) –



– MAIN board (Side B) –



SECTION 5 DIAGRAMS

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

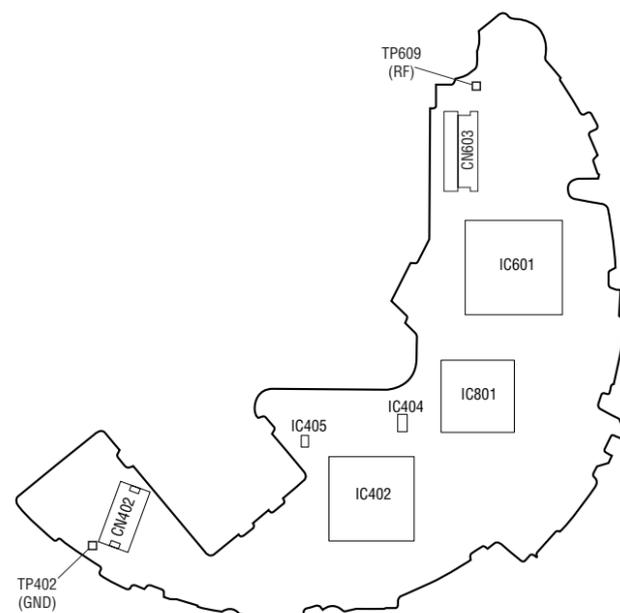
Precautions for Check

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 : DC3 V in DC IN jack.
(J402)

VOLUME button : Minimum
AVLS switch : NORM
HOLD switch : OFF
G-PROTECTION switch : 1

Checking Location:

– MAIN board (Side B) –

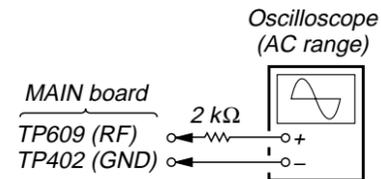


RF Level Check

Condition:

- Hold the set in horizontal state.

Connection:

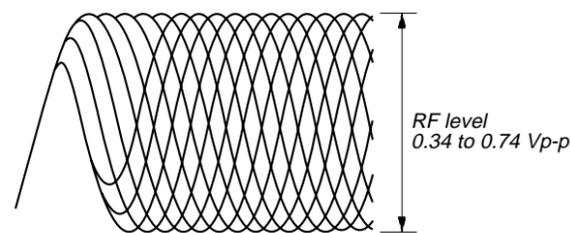


Procedure:

1. Connect the oscilloscope to the test points TP609 (RF) and TP402 (GND) on the MAIN board.
2. Set a disc. (YEDS-18)
3. Press the 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.

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: Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: 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.

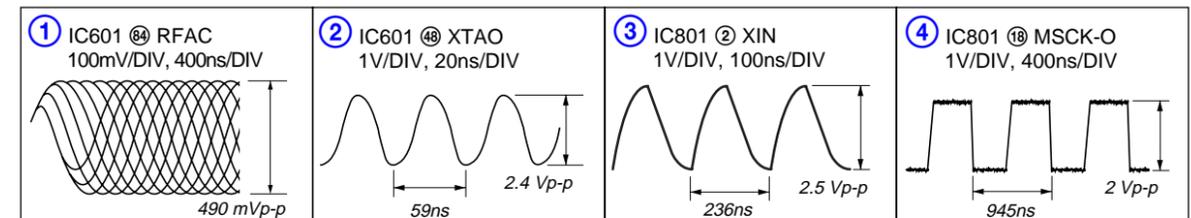
Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. pF: μF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4}\text{W}$ or less unless otherwise specified.
- % : indicates tolerance.
- : panel designation.
- : adjustment for repair.

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

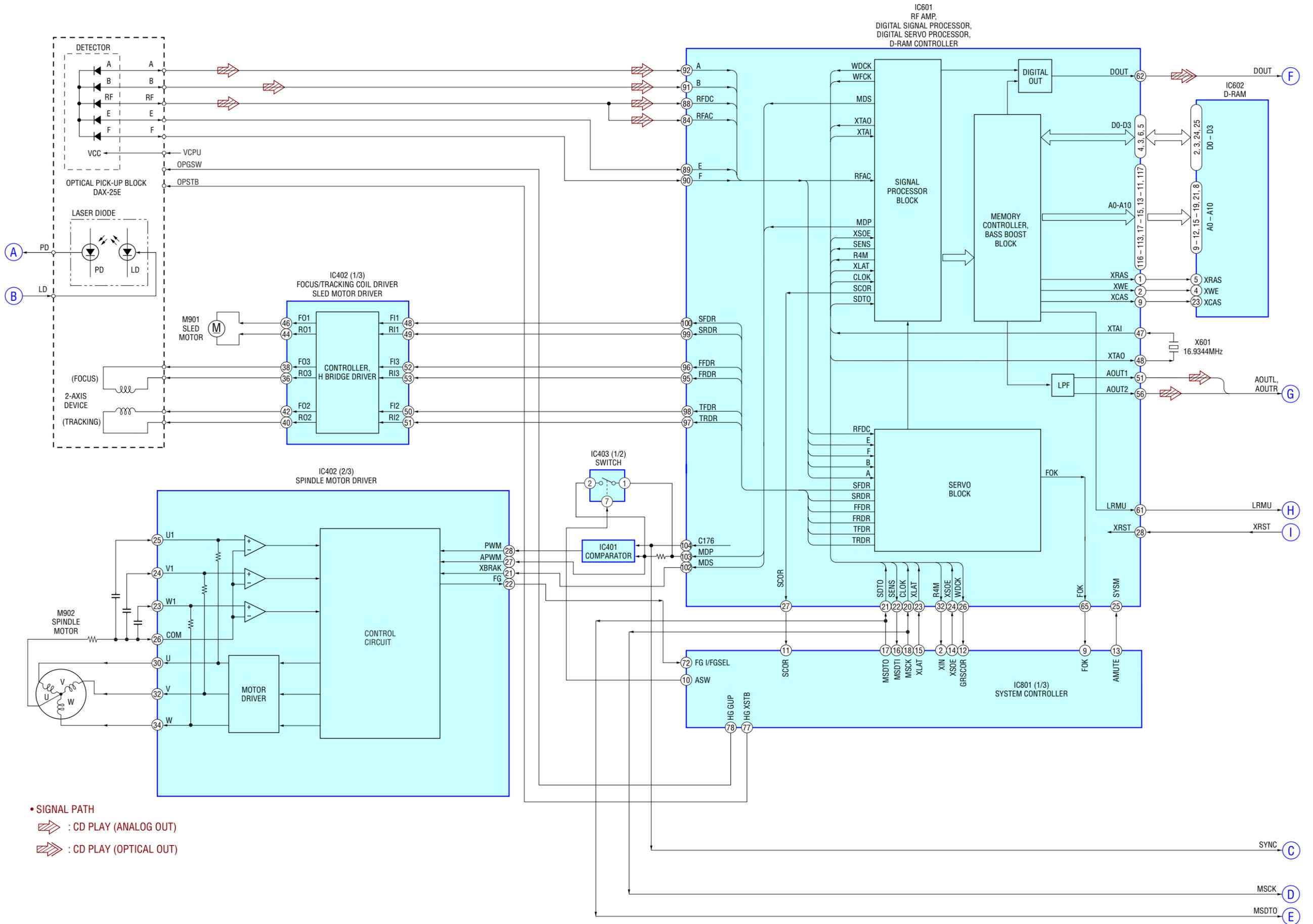
- : B+ Line.
- Total current is measured with CD installed.
- Power voltage is dc 3 V and fed with regulated dc power supply from DC IN jack (J402).
- Voltages and waveforms are dc with respect to ground in playback mode.
no mark : CD PLAY
- Voltages are taken with a VOM (Input impedance 10 M Ω).
Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
 : CD PLAY (ANALOG OUT)
 : CD PLAY (OPTICAL OUT)

• WAVEFORMS

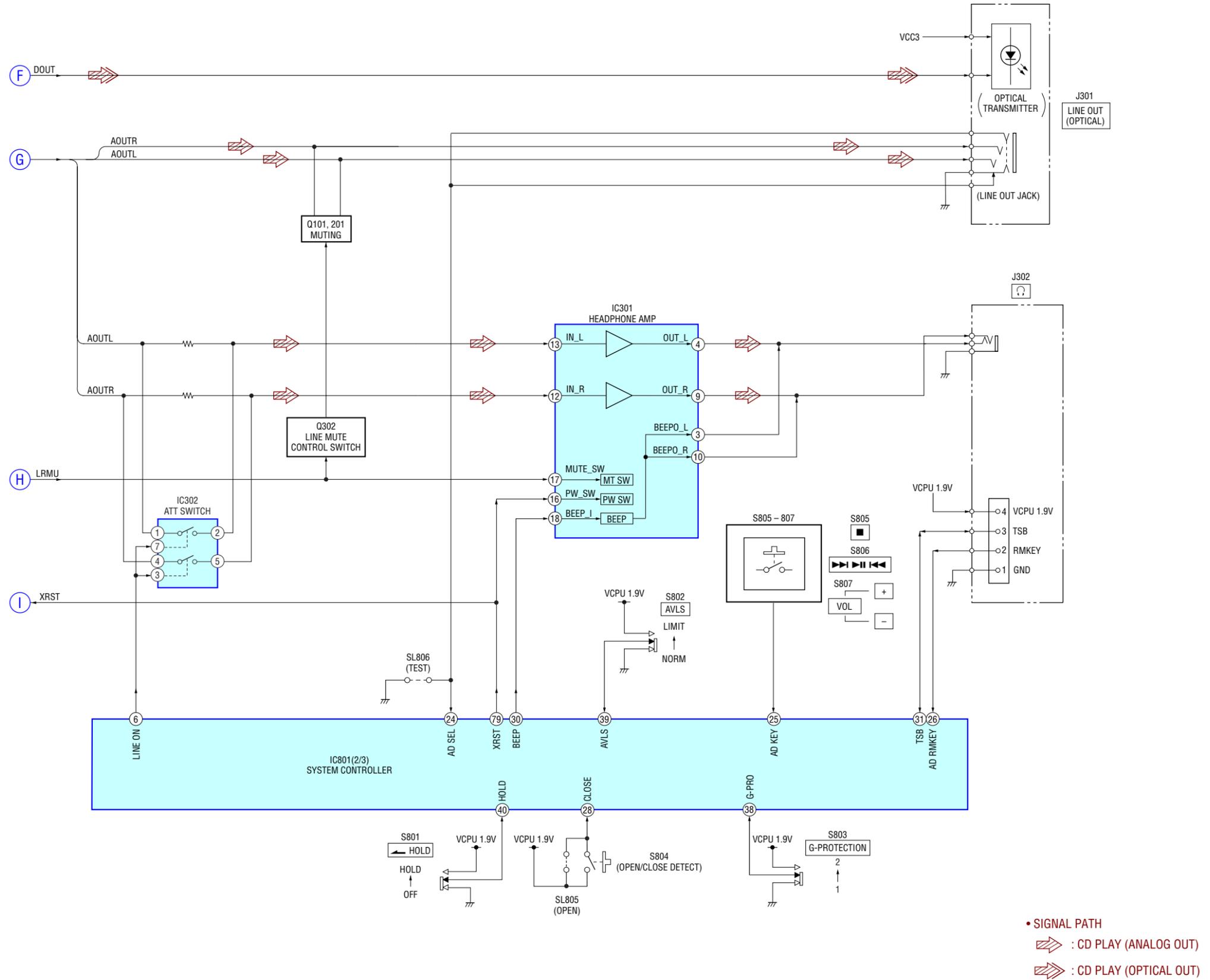


D-EJ2000

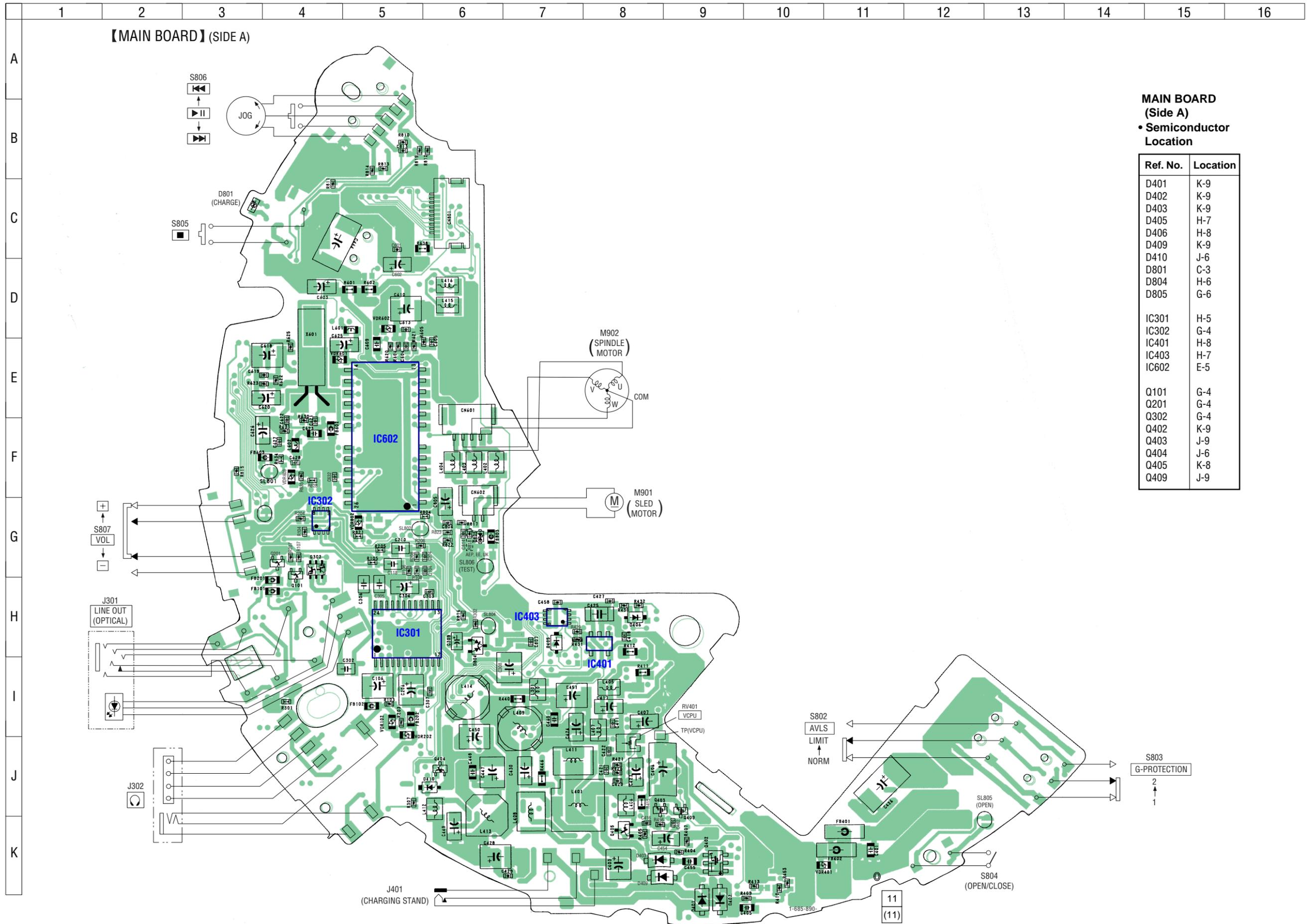
5-1. Block Diagram – Main Section (1/2) –



5-2. Block Diagram – Main Section (2/2) –

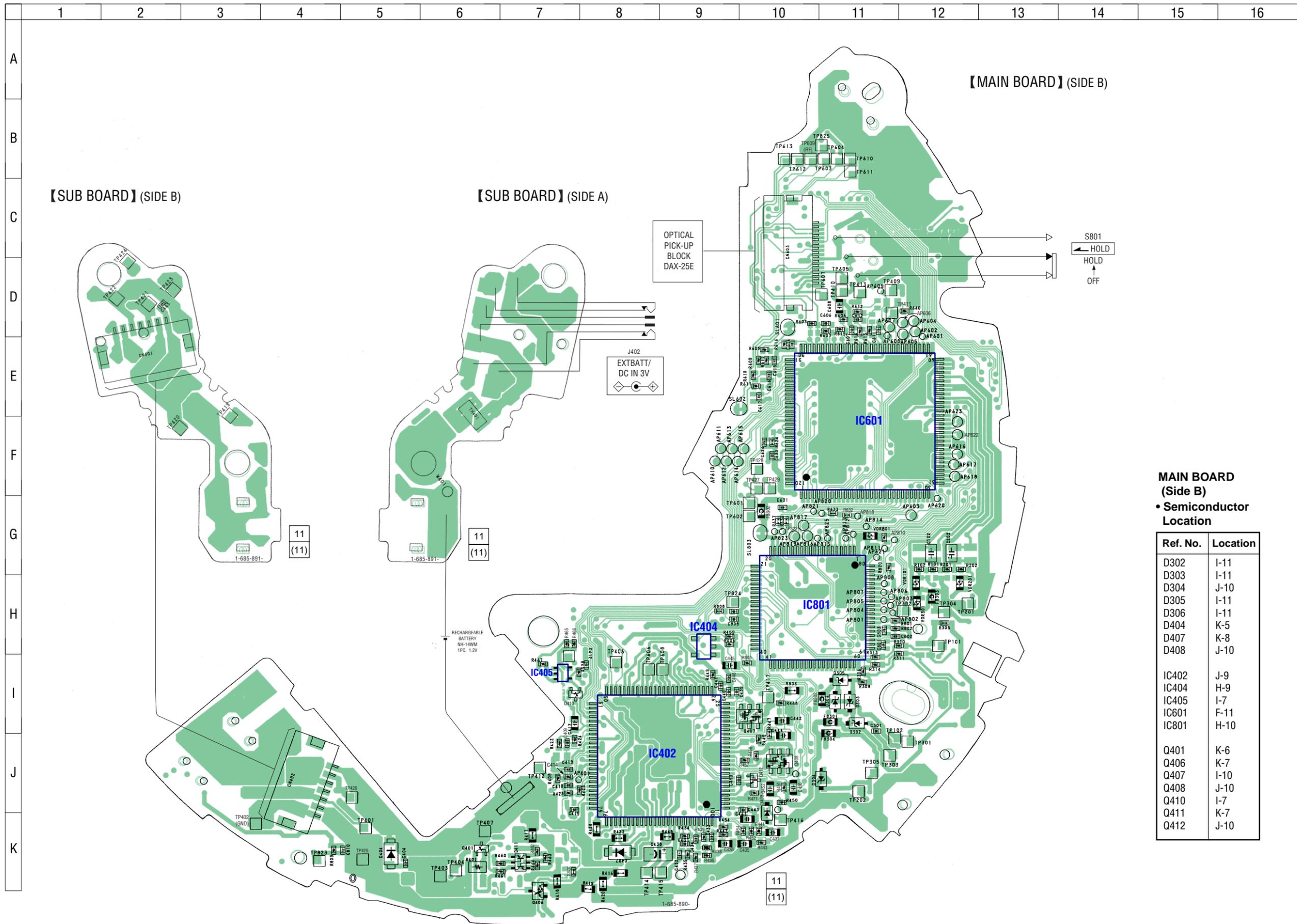


5-4. Printed Wiring Board – MAIN Board (Side A) –  : Uses unleaded solder.



**MAIN BOARD
(Side A)
• Semiconductor
Location**

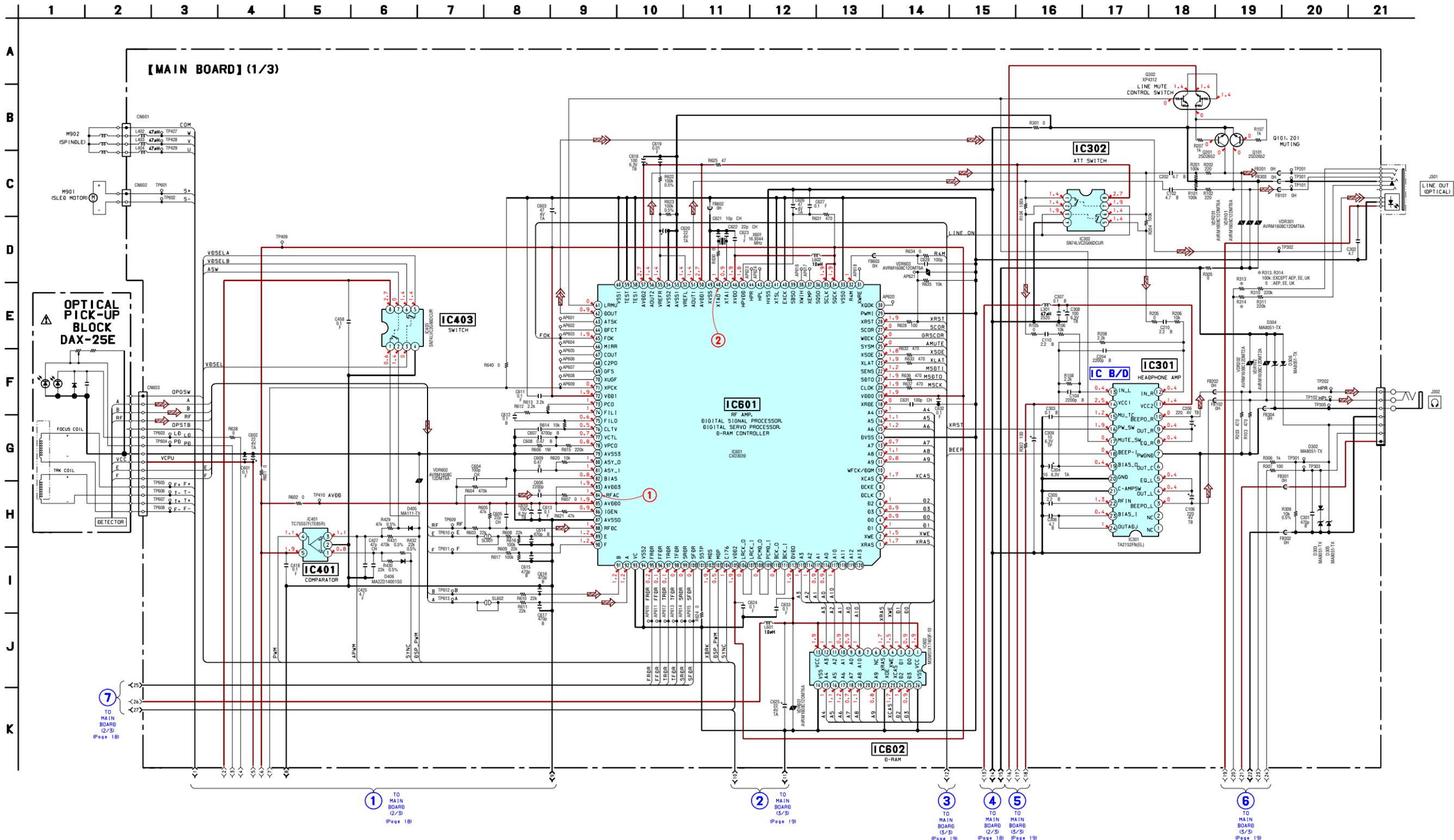
Ref. No.	Location
D401	K-9
D402	K-9
D403	K-9
D405	H-7
D406	H-8
D409	K-9
D410	J-6
D801	C-3
D804	H-6
D805	G-6
IC301	H-5
IC302	G-4
IC401	H-8
IC403	H-7
IC602	E-5
Q101	G-4
Q201	G-4
Q302	G-4
Q402	K-9
Q403	J-9
Q404	J-6
Q405	K-8
Q409	J-9



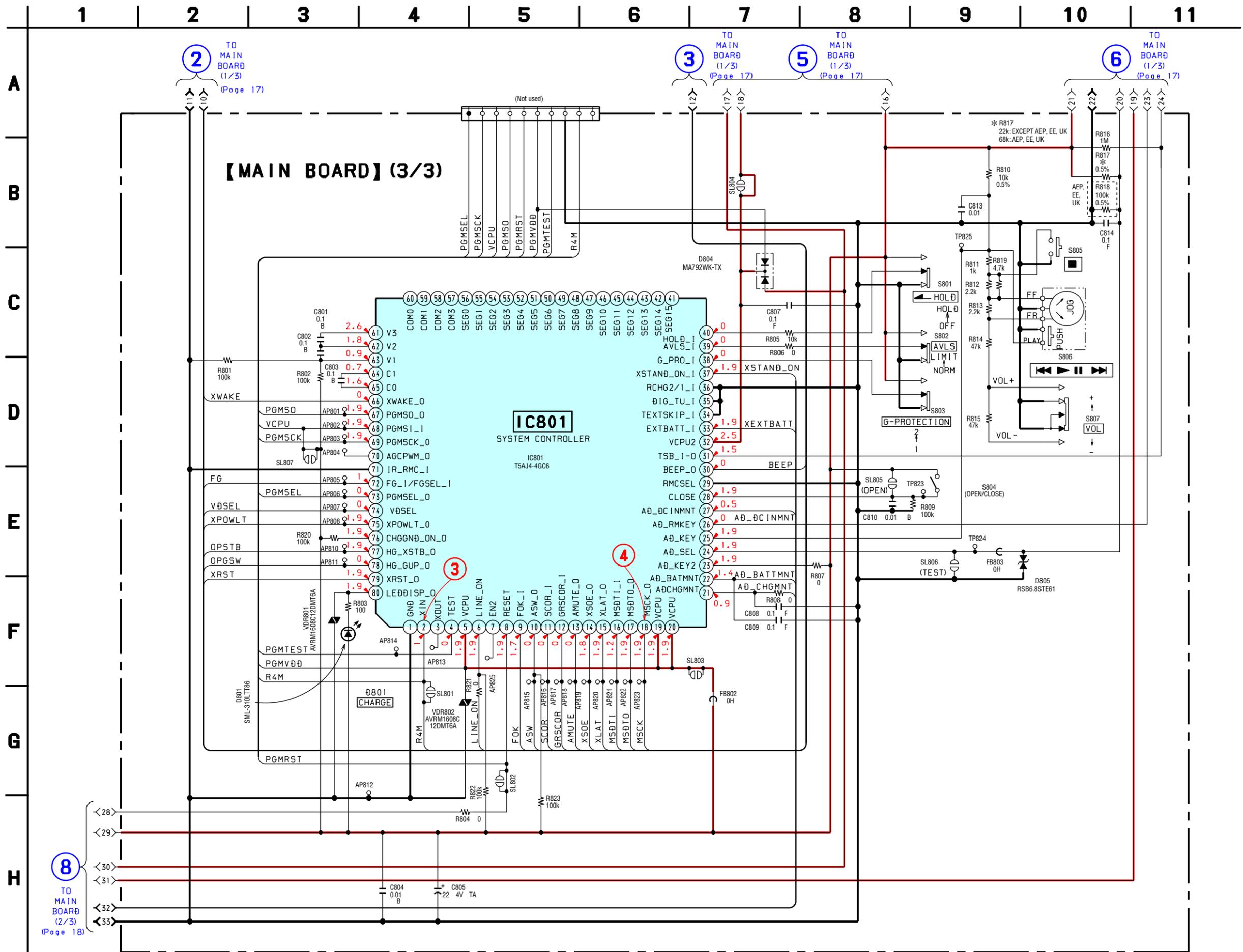
MAIN BOARD (Side B)
 • Semiconductor Location

Ref. No.	Location
D302	I-11
D303	I-11
D304	J-10
D305	I-11
D306	I-11
D404	K-5
D407	K-8
D408	J-10
IC402	J-9
IC404	H-9
IC405	I-7
IC601	F-11
IC801	H-10
Q401	K-6
Q406	K-7
Q407	I-10
Q408	J-10
Q410	I-7
Q411	K-7
Q412	J-10

5-6. Schematic Diagram – MAIN Board (1/3) – • See page 11 for Waveform. • See page 20 for IC Block Diagrams.

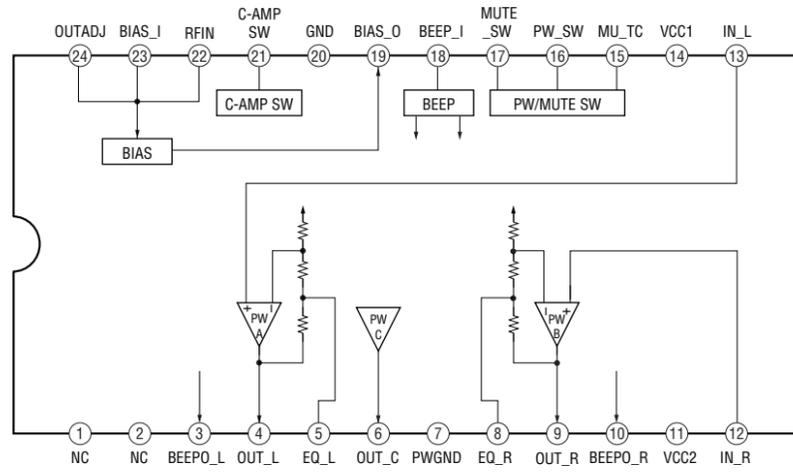


5-8. Schematic Diagram – MAIN Board (3/3) – • See page 11 for Waveforms.

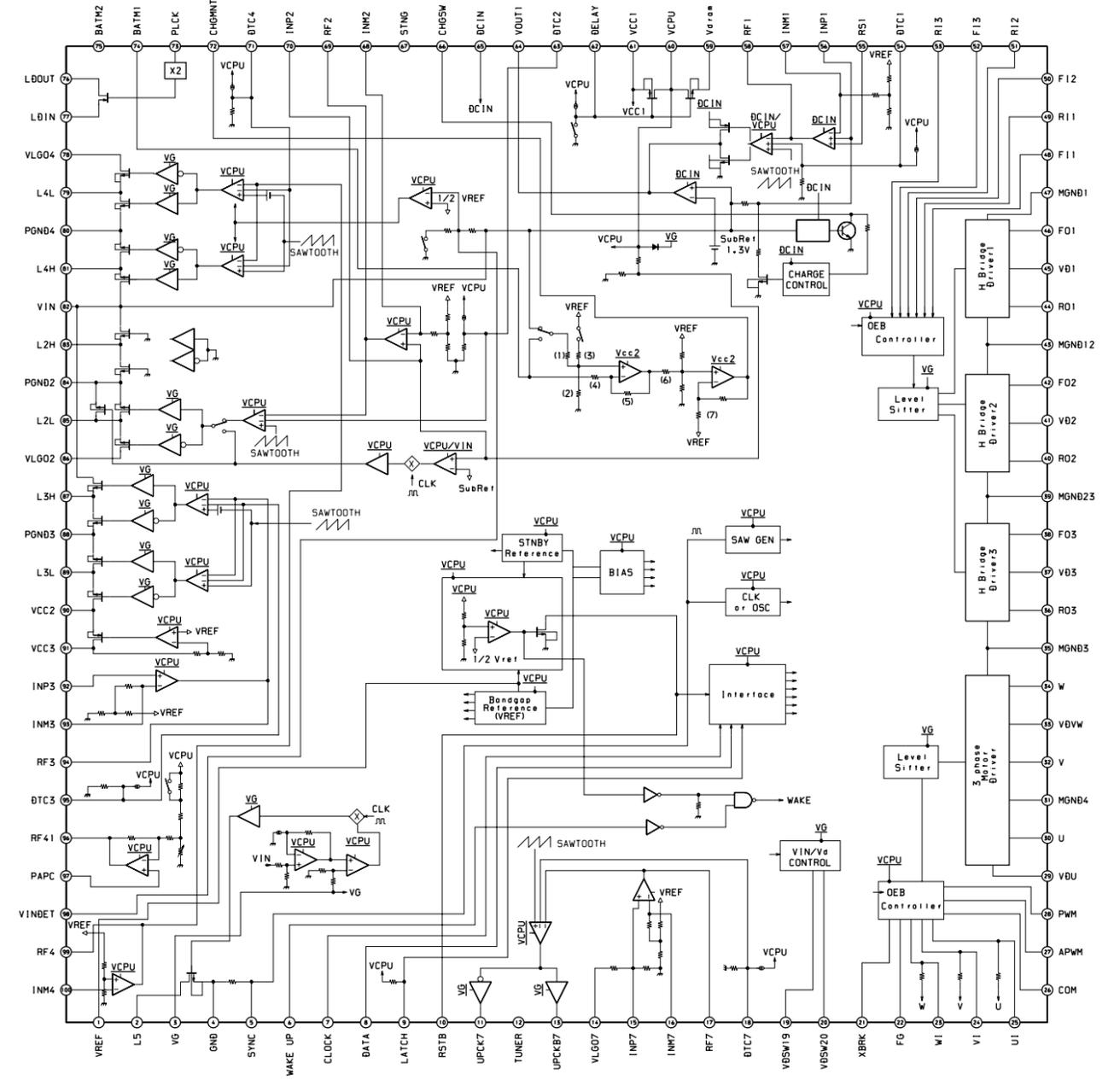


5-9. IC Block Diagram

IC301 TA2152FN (EL)



IC402 TB2136F



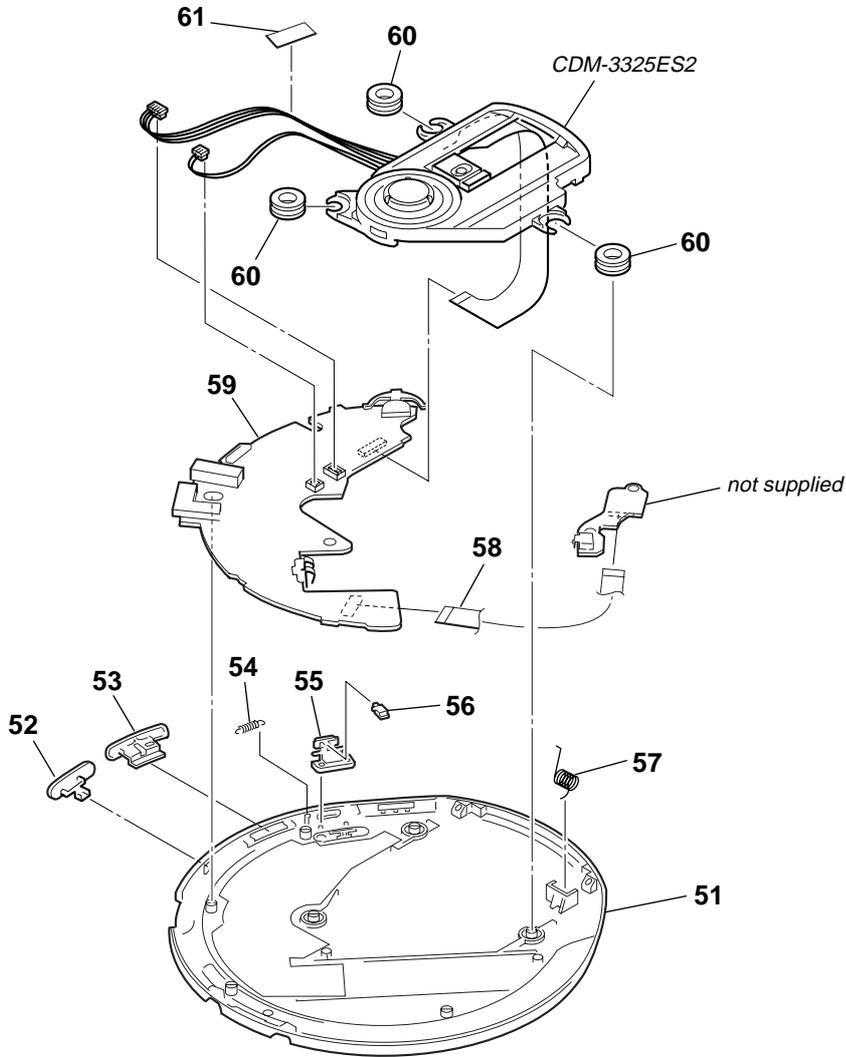
5-10. IC Pin Funvntion Description

• IC801 T5AJ4-4GC6 (SYSTEM CONTROLLER)

Pin No.	Pin Name	I/O	Description
1	GND	—	Ground (digital)
2	XIN	I	System clock input from CXD3039AR (IC601)
3	XOUT	O	Crystal oscillator output terminal Not used (open)
4	TEST	I	Test terminal for IC Not used (open)
5	VCPU	—	Power supply (+1.9V)(digital)
6	LINE ON	O	Circuit selection signal output during LINE ON
7	EN2	O	Not used (open)
8	RESET	I	System reset signal input from the power control (IC402)(“L” : reset)
9	FOK	I	Focus OK signal input from the digital servo processor (IC601)(“L” : NG, “H” : OK)
10	ASW	O	ASW signal output
11	SCOR	I	Subcode sync S0 or S1 detection signal input from CXD3039AR (IC601)
12	GRSCOR	I	GRSCOR signal input from CXD3039AR (IC601)
13	AMUTE	O	Analog muting ON/OFF control signal output (“H” : muting ON)
14	XSOE	O	Serial data output enable signal output
15	XLAT	O	Serial data latch pulse signal output to CXD3039AR (IC601)
16	MSDTI	I	Serial data input from CXD3039AR (IC601)
17	MSDTO	O	Serial data output to the power control (IC402) and CXD3039AR (IC601)
18	MSCK	O	Serial data transfer clock output to the power control (IC402) and CXD3039AR (IC601)
19 to 20	VCPU	—	Power supply (+1.9V)
21	AD CHGMNT	I	Battery charging voltage detection signal input from the power control (IC402)
22	AD BATMNT	I	Battery voltage detection signal input
23	AD KEY2	I	Key input terminal Not used (fixed at “H”)
24	AD SEL	I	LINE OUT/OPTICAL OUT plug-in detection signal input
25	AD KEY	I	Key input from S805 to S807 (■, ►►► ►►► ◀◀◀, VOLUME +/-)
26	AD RMKEY	I	Key input (A/D) from the headphone with the remote controller
27	AD DCINMNT	I	DC IN voltage detection input terminal (A/D) also using detection of DC IN existence
28	CLOSE	I	CD DOOR OPEN/CLOSE detection switch (S804) signal input
29	RMCSEL	—	Not used (ground)
30	BEEP	O	Beep sound output terminal to the headphone amplifier (IC301)
31	TSB	I/O	Communication data bus input or output to the headphone with the remote controller
32	VCPU2	—	Power supply
33	EXT BATT	I	External battery detection signal input
34	TEXTSKIP	I	Not used (ground)
35	DIG TU	I	Not used (ground)
36	RCHG2/1	I	Not used (ground)
37	XSTAND ON	I	Detection of setting on the charging stand signal input
38	G-PRO	I	G-PROTECTION switch (S803) signal input (“H” : G-PROTECTION 2)
39	AVLS	I	AVLS (Automatic Volume Limiter System) switch (S802) signal input (“L” : normal, “H” : limit)
40	HOLD	I	HOLD switch (S804) signal input (“L” : HOLD OFF, “H” : HOLD)
41 to 56	SEG15 to 0	O	LCD segments drive signal output Not used (open)
57 to 60	COM3 to 0	O	LCD common drive signal output Not used (open)
61 to 63	V3 to 1	O	LCD driver bias output
64, 65	C1, C0	O	Capacitor connection terminal for LCD driver voltage step-up
66	XWAKE	O	WAKE-UP control signal output (signal for reset the condition of the system stand-by) “L” : Wake
67	PGMSO	O	Not used (open)
68	PGMSI	I	Not used (open)
69	PGMSCK	O	Not used (open)
70	AGCPWM	O	AGC control pulse output Not used (open)
71	IR RMC	I	Not used (ground)
72	FG I/FGSEL	I	FG pulse signal input from the spindle motor driver (IC402)

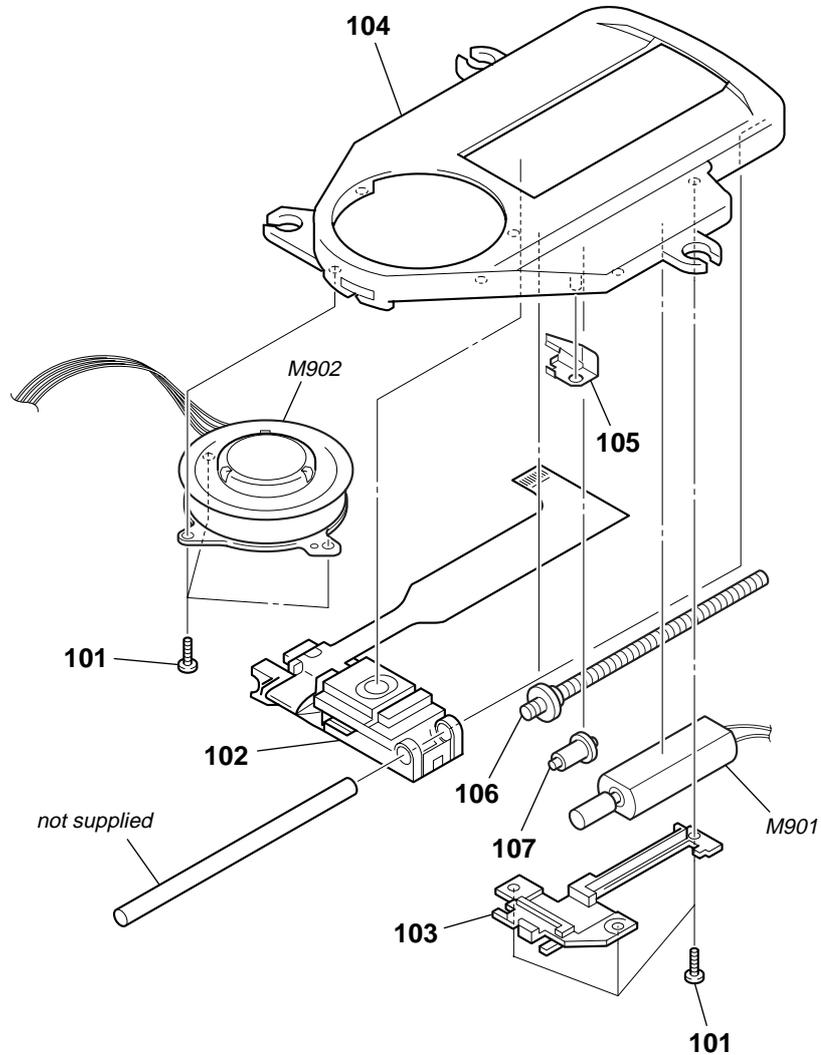
Pin No.	Pin Name	I/O	Description
73	PGMSEL	O	Not used (open)
74	VDSEL	O	VD control signal output
75	XPOWLT	O	Latch signal output to the power control (IC402)
76	CHGGND ON	O	Ground control signal output at charging the rechargeable battery (fixed at "H")
77	HG XSTB	O	Hologram control signal output ("L" : stop)
78	HG GUP	O	Gain control signal output for a CD-RW ("H" : gain up)
79	XRST	O	Reset signal output to the headphone amplifier (IC301) and CXD3039AR (IC601)
80	LEDDISP	O	CHARGE Not used (open) Not used (open) LED (D801) ON/OFF control signal output ("L" : light on)

6-2. Cabinet (Lower) Section



Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
51	X-3382-726-1	CABINET (LOWER) ASSY (B)(BLACK)	(EXCEPT KR)	56	3-245-319-01	WINDOW (LED)	
51	X-3382-727-1	CABINET (LOWER) ASSY (S)(SILVER)	(EXCEPT KR)	57	3-245-323-01	SPRING (UPPER LID)	
51	X-3382-728-1	CABINET (LOWER) ASSY (S-Y)(SILVER)	(WITH INDICATION OF COUNTRY OF ORIGIN)(KR)	* 59	A-3178-852-A	MAIN BOARD, COMPLETE (EXCEPT AEP,EE,UK)	(FOR BLACK)
52	3-245-313-01	KNOB (VOL)		* 59	A-3347-405-A	MAIN BOARD, COMPLETE (EXCEPT AEP,EE,UK)	(FOR SILVER)
53	3-245-314-01	KNOB (OPEN)		* 59	A-3178-858-A	MAIN BOARD, COMPLETE (AEP,EE,UK)	
54	3-245-329-01	SPRING, TENSION		60	3-245-331-01	INSULATOR	
55	3-245-318-01	BUTTON (STOP)		61	3-831-441-99	SPACER	

6-3. Optical Pick-Up Section (CDM-3325ES2)



Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
101	3-318-203-61	SCREW (B1.7X4), TAPPING		106	A-3052-734-A	FEED ASSY, SCREW	
△ 102	X-3380-950-1	OPTICAL PICK-UP (DAX-25E)		107	3-221-268-01	GEAR (B)	
103	3-221-473-01	COVER, GEAR		M901	A-3174-850-A	MOTOR ASSY, SLED	
104	3-221-472-02	CHASSIS		M902	A-3174-853-A	MOTOR ASSY, TURN TABLE	
105	3-221-474-01	SPRING, SLED					

<p>The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.</p>	<p>Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.</p>
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SECTION 7 ELECTRICAL PARTS LIST

NOTE:

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

- SEMICONDUCTORS
In each case, u: μ , for example:
uA. . : μ A. . uPA. . : μ PA. .
uPB. . : μ PB. . uPC. . : μ PC. .
uPD. . : μ PD. .
- CAPACITORS
uF: μ F
- COILS
uH: μ H
- Abbreviation
E18 : 100 – 240 V AC area in E model
HK : Hong Kong model
JE : Tourist model
KR : Korean model
CND: Canadian model
EE : East European model
FR : French model

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

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

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

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
*	A-3178-852-A	MAIN BOARD,COMPLETE (EXCEPT AEP,EE,UK) (FOR BLACK)		C421	1-107-820-11	CERAMIC CHIP 0.1uF	16V
				C422	1-107-820-11	CERAMIC CHIP 0.1uF	16V
*	A-3347-405-A	MAIN BOARD,COMPLETE (EXCEPT AEP,EE,UK) (FOR SILVER)		C423	1-137-739-91	TANTAL. CHIP 22uF	20% 6.3V
				C424	1-131-862-91	TANTAL. CHIP 47uF	20% 4V
*	A-3178-858-A	MAIN BOARD,COMPLETE (AEP,EE,UK) *****		C425	1-164-506-11	CERAMIC CHIP 4.7uF	16V
		< CAPACITOR >		C426	1-128-829-91	TANTAL. CHIP 220uF	20% 6.3V
				C427	1-164-866-11	CERAMIC CHIP 47PF	5.00% 50V
				C428	1-128-964-91	TANTAL. CHIP 100uF	20% 6.3V
C102	1-127-760-11	CERAMIC CHIP 4.7uF	10% 6.3V	C429	1-107-820-11	CERAMIC CHIP 0.1uF	16V
C104	1-164-939-11	CERAMIC CHIP 0.0022uF	10.00% 50V	C430	1-100-213-91	TANTAL. CHIP 47uF	20% 6.3V
C106	1-137-859-11	TANTAL. CHIP 220uF	20% 4V				
C110	1-125-838-11	CERAMIC CHIP 2.2uF	10% 6.3V	C431	1-164-943-11	CERAMIC CHIP 0.01uF	10.00% 16V
C202	1-127-760-11	CERAMIC CHIP 4.7uF	10% 6.3V	C432	1-164-943-11	CERAMIC CHIP 0.01uF	10.00% 16V
				C433	1-125-777-11	CERAMIC CHIP 0.1uF	10.00% 10V
C204	1-164-939-11	CERAMIC CHIP 0.0022uF	10.00% 50V	C434	1-119-923-81	CERAMIC CHIP 0.047uF	10.00% 10V
C206	1-137-859-11	TANTAL. CHIP 220uF	20% 4V	C435	1-125-837-91	CERAMIC CHIP 1uF	10% 6.3V
C210	1-125-838-11	CERAMIC CHIP 2.2uF	10% 6.3V				
C301	1-164-935-11	CERAMIC CHIP 470PF	10.00% 50V	C436	1-125-837-91	CERAMIC CHIP 1uF	10% 6.3V
C302	1-117-720-11	CERAMIC CHIP 4.7uF	10V	C437	1-125-837-91	CERAMIC CHIP 1uF	10% 6.3V
				C438	1-135-259-11	TANTAL. CHIP 10uF	20.00% 6.3V
C303	1-125-777-11	CERAMIC CHIP 0.1uF	10.00% 10V	C439	1-164-937-11	CERAMIC CHIP 0.001uF	10.00% 50V
C304	1-135-259-11	TANTAL. CHIP 10uF	20.00% 6.3V	C440	1-164-937-11	CERAMIC CHIP 0.001uF	10.00% 50V
C305	1-125-838-11	CERAMIC CHIP 2.2uF	10% 6.3V				
C306	1-127-760-11	CERAMIC CHIP 4.7uF	10% 6.3V	C441	1-164-937-11	CERAMIC CHIP 0.001uF	10.00% 50V
C307	1-125-777-11	CERAMIC CHIP 0.1uF	10.00% 10V	C442	1-125-891-11	CERAMIC CHIP 0.47uF	10.00% 10V
				C443	1-125-777-11	CERAMIC CHIP 0.1uF	10.00% 10V
C308	1-128-964-91	TANTAL. CHIP 100uF	20% 6.3V	C444	1-125-837-91	CERAMIC CHIP 1uF	10% 6.3V
C309	1-117-919-91	CERAMIC 10uF	6.3V	C445	1-115-467-91	CERAMIC CHIP 0.22uF	10% 10V
C401	1-115-156-11	CERAMIC CHIP 1uF	10V				
C403	1-137-740-91	TANTALUM 47uF	20% 6.3V	C446	1-164-941-11	CERAMIC CHIP 0.0047uF	10.00% 16V
C404	1-107-820-11	CERAMIC CHIP 0.1uF	16V	C447	1-104-913-11	TANTAL. CHIP 10uF	20.00% 16V
				C448	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C405	1-115-467-11	CERAMIC CHIP 0.22uF	10.00% 10V	C449	1-104-851-11	TANTAL. CHIP 10uF	20.00% 10V
C406	1-125-899-11	TANTAL. CHIP 220uF	20.00% 4V	C450	1-137-740-91	TANTALUM 47uF	20% 6.3V
C407	1-131-862-91	TANTAL. CHIP 47uF	20% 4V				
C409	1-164-937-11	CERAMIC CHIP 0.001uF	10.00% 50V	C451	1-128-964-91	TANTAL. CHIP 100uF	20% 6.3V
C410	1-164-937-11	CERAMIC CHIP 0.001uF	10.00% 50V	C452	1-125-837-91	CERAMIC CHIP 1uF	10% 6.3V
				C453	1-125-777-81	CERAMIC CHIP 0.1uF	10% 10V
C411	1-107-820-11	CERAMIC CHIP 0.1uF	16V	C454	1-104-851-11	TANTAL. CHIP 10uF	20.00% 10V
C412	1-107-819-11	CERAMIC CHIP 0.022uF	10.00% 16V	C455	1-115-467-11	CERAMIC CHIP 0.22uF	10.00% 10V
C413	1-164-937-11	CERAMIC CHIP 0.001uF	10.00% 50V				
C414	1-218-989-81	RES-CHIP 1M	5% 1/16W	C456	1-115-467-11	CERAMIC CHIP 0.22uF	10.00% 10V
C415	1-125-777-11	CERAMIC CHIP 0.1uF	10.00% 10V	C458	1-107-820-11	CERAMIC CHIP 0.1uF	16V
				C460	1-125-837-91	CERAMIC CHIP 1uF	10% 6.3V
C416	1-107-820-11	CERAMIC CHIP 0.1uF	16V	C461	1-107-826-91	CERAMIC CHIP 0.1uF	10.00% 10V
C417	1-131-862-91	TANTAL. CHIP 47uF	20% 4V	C462	1-164-937-11	CERAMIC CHIP 0.001uF	10.00% 50V
C418	1-107-820-11	CERAMIC CHIP 0.1uF	16V				
C419	1-164-935-11	CERAMIC CHIP 470PF	10.00% 50V	C464	1-125-899-91	TANTAL. CHIP 220uF	20% 4V
C420	1-164-939-11	CERAMIC CHIP 0.0022uF	10.00% 50V	C601	1-107-820-11	CERAMIC CHIP 0.1uF	16V

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
C602	1-104-847-11	TANTAL. CHIP	22uF 20.00% 4V	D405	8-719-404-50	DIODE MA1111-TX	
C603	1-131-862-91	TANTAL. CHIP	47uF 20% 4V	D406	8-719-072-70	DIODE MA2ZD14001S0	
C604	1-164-874-11	CERAMIC CHIP	100PF 5.00% 50V	D407	6-500-430-01	DIODE MA2YD2700LS0	
C605	1-164-858-11	CERAMIC CHIP	22PF 5.00% 50V	D408	8-719-071-87	DIODE MA785- (TX),SO	
C606	1-164-939-11	CERAMIC CHIP	0.0022uF 10.00% 50V	D409	8-719-085-43	DIODE MA2YD2300LS0	
C607	1-164-941-11	CERAMIC CHIP	0.0047uF 10.00% 16V	D410	8-719-404-50	DIODE MA1111-TX	
C608	1-125-891-11	CERAMIC CHIP	0.47uF 10.00% 10V	D801	8-719-074-30	DIODE SML-310LTT86 (CHARGE)	
C609	1-125-891-11	CERAMIC CHIP	0.47uF 10.00% 10V	D804	8-719-044-74	DIODE MA792WK-TX	
C610	1-128-964-91	TANTAL. CHIP	100uF 20% 6.3V	D805	8-719-083-04	DIODE RSB6.8STE61	
C611	1-107-820-11	CERAMIC CHIP	0.1uF 16V			< FERRITE BEAD >	
C612	1-125-777-11	CERAMIC CHIP	0.1uF 10.00% 10V	FB101	1-414-760-21	FERRITE	0UH
C613	1-107-820-11	CERAMIC CHIP	0.1uF 16V	FB102	1-414-760-21	FERRITE	0UH
C614	1-164-935-11	CERAMIC CHIP	470PF 10.00% 50V	FB201	1-414-760-21	FERRITE	0UH
C615	1-164-935-11	CERAMIC CHIP	470PF 10.00% 50V	FB202	1-414-760-21	FERRITE	0UH
C616	1-164-935-11	CERAMIC CHIP	470PF 10.00% 50V	FB301	1-414-760-21	FERRITE	0UH
C617	1-164-935-11	CERAMIC CHIP	470PF 10.00% 50V	FB302	1-414-760-21	FERRITE	0UH
C618	1-128-964-91	TANTAL. CHIP	100uF 20% 6.3V	FB303	1-414-760-21	FERRITE	0UH
C619	1-164-943-81	CERAMIC CHIP	0.01uF 16V	FB304	1-414-760-21	FERRITE	0UH
C620	1-104-847-11	TANTAL. CHIP	22uF 20.00% 4V	FB401	1-500-451-11	FERRITE	0UH
C621	1-164-850-11	CERAMIC CHIP	10PF 0.50PF 50V	FB402	1-500-451-11	FERRITE	0UH
C622	1-164-858-11	CERAMIC CHIP	22PF 5.00% 50V	FB602	1-414-760-21	FERRITE	0UH
C623	1-115-156-11	CERAMIC CHIP	1uF 10V	FB603	1-414-760-21	FERRITE	0UH
C624	1-107-820-11	CERAMIC CHIP	0.1uF 16V	FB802	1-414-760-21	FERRITE	0UH
C625	1-104-847-11	TANTAL. CHIP	22uF 20.00% 4V	FB803	1-414-760-21	FERRITE	0UH
C626	1-131-862-91	TANTAL. CHIP	47uF 20% 4V			< IC >	
C627	1-107-820-11	CERAMIC CHIP	0.1uF 16V	IC301	6-700-702-01	IC TA2152FN (EL)	
C628	1-164-874-11	CERAMIC CHIP	100PF 5.00% 50V	IC302	6-703-107-01	IC SN74LVC2G66DCUR	
C631	1-164-874-11	CERAMIC CHIP	100PF 5.00% 50V	IC401	8-759-594-55	IC TC75S57F (TE85R)	
C632	1-107-820-11	CERAMIC CHIP	0.1uF 16V	IC402	6-702-741-01	IC TB2136F	
C633	1-107-820-11	CERAMIC CHIP	0.1uF 16V	IC403	6-703-107-01	IC SN74LVC2G66DCUR	
C801	1-125-777-11	CERAMIC CHIP	0.1uF 10.00% 10V	IC404	8-759-594-55	IC TC75S57F (TE85R)	
C802	1-125-777-11	CERAMIC CHIP	0.1uF 10.00% 10V	IC405	6-702-989-01	IC TC75S58FU (TE85L)	
C803	1-125-777-11	CERAMIC CHIP	0.1uF 10.00% 10V	IC601	8-752-420-71	IC CXD3039AR	
C804	1-164-943-11	CERAMIC CHIP	0.01uF 10.00% 16V	IC602	6-702-737-01	IC MSM51X17400F-10TFSR1	
C805	1-104-847-11	TANTAL. CHIP	22uF 20.00% 4V	IC801	6-802-244-01	IC T5AJ4-4GC6	
C807	1-107-820-11	CERAMIC CHIP	0.1uF 16V			< JACK >	
C808	1-107-820-11	CERAMIC CHIP	0.1uF 16V	J301	1-816-761-21	CONNECTOR,LIGHT (RECEPTACLE) (LINE OUT (OPTICAL))	
C809	1-107-820-11	CERAMIC CHIP	0.1uF 16V	J302	1-815-088-61	JACK,HEADPHONE (☪)	
C810	1-164-943-11	CERAMIC CHIP	0.01uF 10.00% 16V	J401	1-815-912-21	JACK,DC (CHARGING STAND)	
C813	1-164-943-11	CERAMIC CHIP	0.01uF 10.00% 16V			< COIL >	
C814	1-107-820-11	CERAMIC CHIP	0.1uF 16V	L301	1-400-145-21	INDUCTOR	47uH
		< CONNECTOR >		L401	1-419-354-21	INDUCTOR	22uH
* CN402	1-817-020-21	CONNECTOR,FFC/FPC (NON-ZIF) 7P		L402	1-400-145-21	INDUCTOR	47uH
* CN601	1-785-877-21	HOUSING,CONNECTOR 4P		L403	1-400-145-21	INDUCTOR	47uH
CN602	1-784-342-21	HOUSING,CONNECTOR 2P		L404	1-400-145-21	INDUCTOR	47uH
* CN603	1-815-832-21	CONNECTOR,FFC/FPC (ZIF) 15P		L405	1-400-317-21	INDUCTOR	100uH
		< DIODE >		L406	1-469-967-21	INDUCTOR	10uH
D302	8-719-422-37	DIODE MA8051-TX		L407	1-400-317-21	INDUCTOR	100uH
D303	8-719-422-37	DIODE MA8051-TX		L408	1-414-434-11	INDUCTOR	100uH
D304	8-719-422-37	DIODE MA8051-TX		L409	1-419-188-41	INDUCTOR	100uH
D305	8-719-422-37	DIODE MA8051-TX		L411	1-414-434-11	INDUCTOR	100uH
D306	8-719-422-37	DIODE MA8051-TX		L412	1-400-145-21	INDUCTOR	47uH
D401	8-719-085-43	DIODE MA2YD2300LS0		L413	1-419-949-21	INDUCTOR	22uH
D402	8-719-085-43	DIODE MA2YD2300LS0					
D403	8-719-085-43	DIODE MA2YD2300LS0					
D404	6-500-430-01	DIODE MA2YD2700LS0					

MAIN

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks		
L414	1-428-912-21	INDUCTOR	10uH	R406	1-218-977-11	RES-CHIP	100K 5% 1/16W		
L415	1-400-145-21	INDUCTOR	47uH	R407	1-218-981-11	RES-CHIP	220K 5% 1/16W		
L416	1-400-145-21	INDUCTOR	47uH	R408	1-218-977-11	RES-CHIP	100K 5% 1/16W		
L601	1-414-521-11	INDUCTOR	10uH	R409	1-208-943-11	METAL CHIP	220K 0.5% 1/16W		
L602	1-414-521-11	INDUCTOR	10uH	R410	1-208-927-11	METAL CHIP	47K 0.5% 1/16W		
< TRANSISTOR >				R411	1-216-864-11	METAL CHIP	0 5% 1/10W		
Q101	6-550-364-01	TRANSISTOR	2SD2652	R412	1-216-864-11	METAL CHIP	0 5% 1/10W		
Q201	6-550-364-01	TRANSISTOR	2SD2652	R413	1-218-973-11	RES-CHIP	47K 5% 1/16W		
Q302	8-729-429-50	TRANSISTOR	XP4312-TXE	R415	1-216-864-11	METAL CHIP	0 5% 1/10W		
Q401	6-550-364-01	TRANSISTOR	2SD2652	R416	1-216-864-11	METAL CHIP	0 5% 1/10W		
Q402	6-550-354-01	TRANSISTOR	RTQ035P02	R417	1-216-864-11	METAL CHIP	0 5% 1/10W		
Q403	8-729-044-37	TRANSISTOR	2SK3019TL	R418	1-216-864-11	METAL CHIP	0 5% 1/10W		
Q404	8-729-013-60	TRANSISTOR	UN9216J- (TX).SO	R419	1-216-864-11	METAL CHIP	0 5% 1/10W		
Q405	8-729-026-53	TRANSISTOR	2SA1576A-T106-QR	R420	1-216-864-11	METAL CHIP	0 5% 1/10W		
Q406	8-729-029-14	TRANSISTOR	DTC144EUA-T106	R421	1-218-977-11	RES-CHIP	100K 5% 1/16W		
Q407	8-729-056-57	TRANSISTOR	TPC6201 (TE85R)	R422	1-218-989-11	RES-CHIP	1M 5% 1/16W		
Q408	8-729-056-57	TRANSISTOR	TPC6201 (TE85R)	R423	1-218-965-11	RES-CHIP	10K 5% 1/16W		
Q409	8-729-044-37	TRANSISTOR	2SK3019TL	R424	1-218-965-11	RES-CHIP	10K 5% 1/16W		
Q410	8-729-037-52	TRANSISTOR	2SD2216J	R425	1-218-989-11	RES-CHIP	1M 5% 1/16W		
Q411	8-729-427-72	TRANSISTOR	XP4501-TXE	R426	1-218-981-11	RES-CHIP	220K 5% 1/16W		
Q412	8-729-044-37	TRANSISTOR	2SK3019T	R428	1-216-864-11	METAL CHIP	0 5% 1/10W		
< RESISTOR >				R429	1-208-927-11	METAL CHIP	47K 0.5% 1/16W		
R101	1-218-977-11	RES-CHIP	100K	5%	1/16W	R430	1-208-715-11	METAL CHIP	22K 0.5% 1/16W
R102	1-218-945-11	RES-CHIP	220	5%	1/16W	R431	1-218-985-11	METAL CHIP	470K 0.5% 1/16W
R103	1-218-949-11	RES-CHIP	470	5%	1/16W	R432	1-208-715-11	METAL CHIP	22K 0.5% 1/16W
R104	1-218-977-11	RES-CHIP	100K	5%	1/16W	R433	1-216-864-11	METAL CHIP	0 5% 1/10W
R105	1-218-990-11	SHORT CHIP	0			R434	1-218-989-11	RES-CHIP	1M 5% 1/16W
R106	1-218-965-11	RES-CHIP	10K	5%	1/16W	R435	1-208-951-81	METAL CHIP	470K 0.5% 1/16W
R107	1-218-953-11	RES-CHIP	1K	5%	1/16W	R436	1-208-959-81	METAL CHIP	1M 0.5% 1/16W
R108	1-218-957-11	RES-CHIP	2.2K	5%	1/16W	R437	1-208-943-11	METAL CHIP	220K 0.5% 1/16W
R201	1-218-977-11	RES-CHIP	100K	5%	1/16W	R438	1-208-927-11	METAL CHIP	47K 0.5% 1/16W
R202	1-218-945-11	RES-CHIP	220	5%	1/16W	R439	1-218-965-11	RES-CHIP	10K 5% 1/16W
R203	1-218-949-11	RES-CHIP	470	5%	1/16W	R440	1-216-864-11	METAL CHIP	0 5% 1/10W
R204	1-218-977-11	RES-CHIP	100K	5%	1/16W	R441	1-218-965-11	RES-CHIP	10K 5% 1/16W
R205	1-218-990-11	SHORT CHIP	0			R442	1-218-969-11	RES-CHIP	22K 5% 1/16W
R206	1-218-965-11	RES-CHIP	10K	5%	1/16W	R443	1-218-965-11	RES-CHIP	10K 5% 1/16W
R207	1-218-953-11	RES-CHIP	1K	5%	1/16W	R444	1-220-804-11	RES-CHIP	2.2M 5% 1/16W
R208	1-218-957-11	RES-CHIP	2.2K	5%	1/16W	R445	1-218-989-11	RES-CHIP	1M 5% 1/16W
R301	1-218-990-11	SHORT CHIP	0			R446	1-216-864-11	METAL CHIP	0 5% 1/10W
R302	1-218-941-81	RES-CHIP	100	5%	1/16W	R447	1-218-990-11	SHORT CHIP	0
R305	1-218-990-11	SHORT CHIP	0			R448	1-216-864-11	METAL CHIP	0 5% 1/10W
R306	1-218-953-11	RES-CHIP	1K	5%	1/16W	R449	1-218-973-11	RES-CHIP	47K 5% 1/16W
R307	1-218-941-81	RES-CHIP	100	5%	1/16W	R450	1-218-985-11	RES-CHIP	470K 5% 1/16W
R309	1-208-707-11	METAL CHIP	10K	0.5%	1/16W	R451	1-218-977-11	RES-CHIP	100K 5% 1/16W
R310	1-208-943-11	METAL CHIP	220K	0.5%	1/16W	R452	1-218-961-11	RES-CHIP	4.7K 5% 1/16W
R311	1-208-943-11	METAL CHIP	220K	0.5%	1/16W	R453	1-218-973-11	RES-CHIP	47K 5% 1/16W
R313	1-208-935-11	METAL CHIP	100K	0.5%	1/16W	R454	1-218-965-11	RES-CHIP	10K 5% 1/16W
(EXCEPT AEP,EE,UK)				R455	1-218-989-11	RES-CHIP	1M 5% 1/16W		
R313	1-218-990-81	SHORT CHIP	0		(AEP,EE,UK)	R456	1-218-990-11	SHORT CHIP	0
R314	1-208-935-11	METAL CHIP	100K	0.5%	1/16W	R457	1-208-935-11	METAL CHIP	100K 0.5% 1/16W
(EXCEPT AEP,EE,UK)				R458	1-218-977-11	RES-CHIP	100K 5% 1/16W		
R314	1-218-990-81	SHORT CHIP	0		(AEP,EE,UK)	R459	1-218-977-11	RES-CHIP	100K 5% 1/16W
R401	1-244-387-91	RES-CHIP	0.22	1%	1/4W	R460	1-218-969-11	RES-CHIP	22K 5% 1/16W
R404	1-218-985-11	RES-CHIP	470K	5%	1/16W	R461	1-218-945-11	RES-CHIP	220 5% 1/16W
R405	1-218-989-11	RES-CHIP	1M	5%	1/16W	R462	1-218-957-11	RES-CHIP	2.2K 5% 1/16W
						R463	1-218-957-11	RES-CHIP	2.2K 5% 1/16W
						R464	1-218-965-11	RES-CHIP	10K 5% 1/16W
						R465	1-208-959-81	METAL CHIP	1M 0.5% 1/16W

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
R466	1-208-951-81	METAL CHIP	470K 0.5% 1/16W	R818	1-208-935-81	RES-CHIP 100K 0.5% 1/16W	(AEP,EE,UK)
R467	1-208-959-81	METAL CHIP	1M 0.5% 1/16W	R819	1-218-961-11	RES-CHIP 4.7K 5% 1/16W	
R468	1-218-981-11	RES-CHIP	220K 5% 1/16W	R820	1-218-977-11	RES-CHIP 100K 5% 1/16W	
R471	1-218-989-11	RES-CHIP	1M 5% 1/16W	R821	1-218-990-11	SHORT CHIP 0	
R601	1-216-864-11	METAL CHIP	0 5% 1/10W	R822	1-218-977-11	RES-CHIP 100K 5% 1/16W	
R602	1-216-864-11	METAL CHIP	0 5% 1/10W	R823	1-218-977-11	RES-CHIP 100K 5% 1/16W	
R603	1-218-969-11	RES-CHIP	22K 5% 1/16W			< VARIABLE RESISTOR >	
R604	1-218-985-11	RES-CHIP	470K 5% 1/16W	RV401	1-227-412-21	RES,ADJ,CERMET 47K	
R605	1-218-973-11	RES-CHIP	47K 5% 1/16W			< SWITCH >	
R606	1-218-989-11	RES-CHIP	1M 5% 1/16W	S801	1-572-922-11	SWITCH,SLIDE (← HOLD)	
R607	1-218-990-11	SHORT CHIP	0	S802	1-572-922-11	SWITCH,SLIDE (AVLS)	
R608	1-218-969-11	RES-CHIP	22K 5% 1/16W	S803	1-572-922-11	SWITCH,SLIDE (G-PROTECTION)	
R609	1-218-969-11	RES-CHIP	22K 5% 1/16W	S804	1-762-805-41	SWITCH,PUSH (1 KEY)(OPEN/CLOSE)	
R610	1-218-969-11	RES-CHIP	22K 5% 1/16W	S805	1-771-248-11	SWITCH,TACTILE (■)	
R611	1-218-969-11	RES-CHIP	22K 5% 1/16W	S806	1-786-407-21	SWITCH,PUSH (3 DIRECTION)(I◀◀ ▶▶▶I)	(FOR BLACK)
R612	1-218-957-11	RES-CHIP	2.2K 5% 1/16W	S806	1-786-407-41	SWITCH,PUSH (3 DIRECTION)(I◀◀ ▶▶▶I)	(FOR SILVER)
R613	1-218-957-11	RES-CHIP	2.2K 5% 1/16W	S807	1-762-248-21	SWITCH,VOLUME (VOL +/-)	
R614	1-218-965-11	RES-CHIP	10K 5% 1/16W			< VARISTOR >	
R615	1-218-981-11	RES-CHIP	220K 5% 1/16W	VDR101	1-801-862-11	VARISTOR,CHIP	
R616	1-218-977-11	RES-CHIP	100K 5% 1/16W	VDR102	1-801-923-11	VARISTOR,CHIP	
R617	1-218-977-11	RES-CHIP	100K 5% 1/16W	VDR201	1-801-862-11	VARISTOR,CHIP	
R620	1-218-965-11	RES-CHIP	10K 5% 1/16W	VDR202	1-801-923-11	VARISTOR,CHIP	
R621	1-218-973-11	RES-CHIP	47K 5% 1/16W	VDR301	1-801-862-11	VARISTOR,CHIP	
R622	1-208-935-11	METAL CHIP	100K 0.5% 1/16W	VDR401	1-801-862-11	VARISTOR,CHIP	
R623	1-208-935-11	METAL CHIP	100K 0.5% 1/16W	VDR601	1-801-862-11	VARISTOR,CHIP	
R624	1-218-990-11	SHORT CHIP	0	VDR602	1-801-862-11	VARISTOR,CHIP	
R625	1-218-937-81	RES-CHIP	47 5% 1/16W	VDR603	1-801-862-11	VARISTOR,CHIP	
R628	1-218-941-81	RES-CHIP	100 5% 1/16W	VDR801	1-801-862-11	VARISTOR,CHIP	
R630	1-218-990-11	SHORT CHIP	0	VDR802	1-801-862-11	VARISTOR,CHIP	
R631	1-218-949-11	RES-CHIP	470 5% 1/16W			< TERMINAL BOARD >	
R632	1-218-949-11	RES-CHIP	470 5% 1/16W	W402	3-246-403-01	TERMINAL BOARD (-),BATTERY	
R633	1-218-949-11	RES-CHIP	470 5% 1/16W			< VIBRATOR >	
R634	1-218-990-11	SHORT CHIP	0	X601	1-795-003-21	VIBRATOR,CRYSTAL (16.9344MHZ)	
R635	1-218-965-11	RES-CHIP	10K 5% 1/16W	*****			
R636	1-218-949-11	RES-CHIP	470 5% 1/16W			SUB BOARD	
R637	1-218-949-11	RES-CHIP	470 5% 1/16W			*****	
R638	1-216-864-11	METAL CHIP	0 5% 1/10W			< CAPACITOR >	
R640	1-218-990-11	SHORT CHIP	0	C463	1-164-943-81	CERAMIC CHIP 0.01uF	16V
R801	1-218-977-11	RES-CHIP	100K 5% 1/16W			< JACK >	
R802	1-218-977-11	RES-CHIP	100K 5% 1/16W	J402	1-816-776-21	JACK,DC (POLARITY UNIFIED TYPE)	(EXT BATT/DC IN 3V)
R803	1-218-941-81	RES-CHIP	100 5% 1/16W			< CONDUCTOR >	
R804	1-218-990-11	SHORT CHIP	0	TH401	1-216-296-11	CONDUCTOR,CHIP (3216)	
R805	1-218-965-11	RES-CHIP	10K 5% 1/16W				
R806	1-216-864-11	METAL CHIP	0 5% 1/10W				
R807	1-218-990-11	SHORT CHIP	0				
R808	1-218-990-11	SHORT CHIP	0				
R809	1-218-977-11	RES-CHIP	100K 5% 1/16W				
R810	1-208-707-11	METAL CHIP	10K 0.5% 1/16W				
R811	1-218-953-11	RES-CHIP	1K 5% 1/16W				
R812	1-218-957-11	RES-CHIP	2.2K 5% 1/16W				
R813	1-218-957-11	RES-CHIP	2.2K 5% 1/16W				
R814	1-218-973-11	RES-CHIP	47K 5% 1/16W				
R815	1-218-973-11	RES-CHIP	47K 5% 1/16W				
R816	1-218-989-11	RES-CHIP	1M 5% 1/16W				
R817	1-208-919-81	METAL CHIP	22K 0.5% 1/16W				
R817	1-208-931-81	RES-CHIP	68K 0.5% 1/16W				
			(EXCEPT AEP,EE,UK)				
			(AEP,EE,UK)				

Ref. No.	Part No.	Description	Remarks
		< CONNECTOR >	
* CN401	1-817-020-21	CONNECTOR,FFC/FPC (NON-ZIF) 7P	
		< TERMINAL BOARD >	
W401	3-245-312-01	BOARD (+),TERMINAL,BATTERY	

		MISCELLANEOUS	

58	1-824-684-11	CABLE, FFC	
△ 102	X-3380-950-1	OPTICAL PICK-UP (DAX-25E)	
M901	A-3174-850-A	MOTOR ASSY,SLED	
M902	A-3174-853-A	MOTOR ASSY,TURN TABLE	

		ACCESSORIES	

	1-477-464-11	REMOTE COMMANDER (RM-MC32EL)	
△	1-477-562-11	ADAPTOR, AC (AC-ES305K) (JE)	
△	1-477-563-11	ADAPTOR, AC (AC-ES305K) (KR)	
△	1-477-564-11	ADAPTOR, AC (AC-ES305K) (CH)	
△	1-477-566-11	ADAPTOR, AC (AC-ES305K) (UK,HK)	
△	1-477-567-11	ADAPTOR, AC (AC-ES305K) (US,CND)	
△	1-477-570-11	ADAPTOR, AC (AC-ES305K) (AEP,EE,E18)	
△	1-569-007-11	ADAPTOR, CONVERSION 2P (JE)	
	1-756-120-22	BATTERY, NICKEL HYDROGEN (EXCEPT US,CND)	
	1-756-120-31	BATTERY, NICKEL HYDROGEN (US,CND)	
	1-756-293-11	EXTERNAL BATTERY CASE	
	1-756-296-11	STAND, CHARGE	
	3-008-521-01	CASE, BATTERY CHARGE	
	3-021-018-01	LABEL, FRANCE (FR)	
	3-235-292-02	POUCH, CARRYING	
	3-245-377-01	MANUAL, INSTRUCTION (JAPANESE,ENGLISH,TRADITIONAL CHINESE,KOREAN)(JE)	
	3-245-377-11	MANUAL, INSTRUCTION (SPANISH) (AEP)	
	3-245-377-21	MANUAL, INSTRUCTION (ENGLISH) (CND,AEP,EE,UK,JE)	
	3-245-377-31	MANUAL, INSTRUCTION (FRENCH) (CND,AEP)	
	3-245-377-41	MANUAL, INSTRUCTION (DUTCH) (AEP)	
	3-245-377-51	MANUAL, INSTRUCTION (SWEDISH) (AEP)	
	3-245-377-61	MANUAL, INSTRUCTION (POLISH) (AEP)	
	3-245-377-71	MANUAL, INSTRUCTION (GERMAN) (AEP)	
	3-245-377-81	MANUAL, INSTRUCTION (ITALIAN) (AEP)	
	3-245-377-91	MANUAL, INSTRUCTION (FINNISH) (AEP)	
	3-245-378-12	MANUAL, INSTRUCTION (TRADITIONAL CHINESE) (JE,HK)	
	3-245-378-21	MANUAL, INSTRUCTION (ENGLISH) (E18,HK,CH)	
	3-245-378-32	MANUAL, INSTRUCTION (SIMPLIFIED CHINESE)(E18,JE,CH)	
	3-245-379-11	MANUAL, INSTRUCTION (RUSSIAN) (EE)	
	3-245-379-21	MANUAL, INSTRUCTION (CZECH) (EE)	
	3-245-379-31	MANUAL, INSTRUCTION (HUNGARIAN) (EE)	
	3-245-379-41	MANUAL, INSTRUCTION (POLISH) (EE)	

Ref. No.	Part No.	Description	Remarks
	3-245-379-51	MANUAL, INSTRUCTION (SLOVAK) (EE)	
	3-245-379-61	MANUAL, INSTRUCTION (KOREAN) (JE,KR)	
	3-245-379-71	MANUAL, INSTRUCTION (ENGLISH) (US)	
	8-954-007-91	RECEIVER, EAR MDR-027SP/1 SET (US)	
	8-954-008-90	RECEIVER, EAR MDR-E808SP/C SET (EXCEPT US)	

The components identified by mark △ or dotted line with mark △ are critical for safety. Réplace 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.
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MEMO

