

D-SJ15/SJ17CK

SERVICE MANUAL

Ver. 1.2 2005.07



Photo : D-SJ15

US Model
Canadian Model
D-SJ15/SJ17CK
AEP Model
UK Model
E Model
Australian Model
D-SJ15

| | |
|------------------------------------|-------------|
| Model Name Using Similar Mechanism | D-EJ715 |
| CD Mechanism Type | CDM-3123EBA |
| Optical Pick-up Type | DAX-23E |

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

40 - 20,000 Hz ± 1 dB (measured by EIAJ CP-307)

Output (at 4.5 V input level)

Headphones (stereo minijack)
Approx. 5 mW + Approx. 5 mW at 16 Ω

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-WM2AA rechargeable batteries: 2.4 V DC,
- Two LR6 (size AA) batteries: 3 V DC
- AC power adaptor (DC IN 4.5 V jack):
US, Canadian model: 120 V, 60 Hz
AEP, FR, E model:
220 - 230 V, 50/60 Hz
UK model: 230 - 240 V, 50 Hz
AUS model: 240 V, 50 Hz
- Sony DCC-E345 car battery cord for use on car battery : 4.5V DC

SPECIFICATIONS

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 function | |
|---|-----------------------|-----|
| | on | off |
| NH-WM2AA (charged for about 5 hours**) | 23 | 25 |
| Two Sony alkaline batteries LR6 (SG) | 37 | 40 |

* Measured value by the standard of EIAL (Electronic Industries Association of Japan).

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

Operating temperature

5°C - 35°C (41°F - 95°F)

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

Approx. 143 x 37 x 136 mm
(5 3/4 x 1 1/2 x 5 3/8 in.)

Mass (excluding accessories)

Approx. 343 g (12.1 oz)

Design and specifications are subject to change without notice.

- Abbreviation
AUS : Australian
FR : French

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Sony Corporation
Personal Audio Group
Published by Sony Engineering Corporation

PORTABLE CD PLAYER

SONY®

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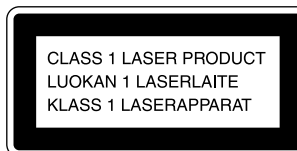
DANGER

Invisible laser radiation when open and interlock failed or defeated.
Avoid direct exposure to beam.

CAUTION

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

Laser component in this product is capable of emitting radiation exceeding the limit for Class 1.



This Compact Disc player is classified as a CLASS 1 LASER product.

The CLASS 1 LASER PRODUCT label is located on the rear exterior.

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.

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.

SECTION 1

SERVICING NOTES

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

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body. During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts. The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30cm 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 Procedure" (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 ③ pin
When checking FOK, remove the lead wire to disc motor.
- RF signal P-to-P value : 0.4 to 0.5Vp-p

Laser Diode Checking Methods

During normal operation of the equipment, emission of the laser diode is prohibited unless the upper panel is closed while turning ON the S801 (push switch type).

The following two checking methods for the laser diode are operable.

Method :

Emission of the laser diode is visually checked.

1. Open the upper lid.
2. Push the S801 as shown in Fig. 1 .
3. Check the object lens for confirming normal emission of the laser diode. If not emitting, there is a trouble in the automatic power control circuit or the optical pick-up. During normal operation, the laser diode is turned ON about 2.5 seconds for focus searching.

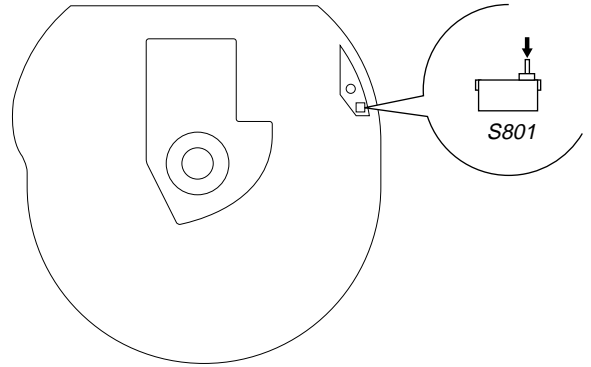


Fig.1 Method to push S801

SECTION 2 GENERAL

This section is extracted from instruction manual.

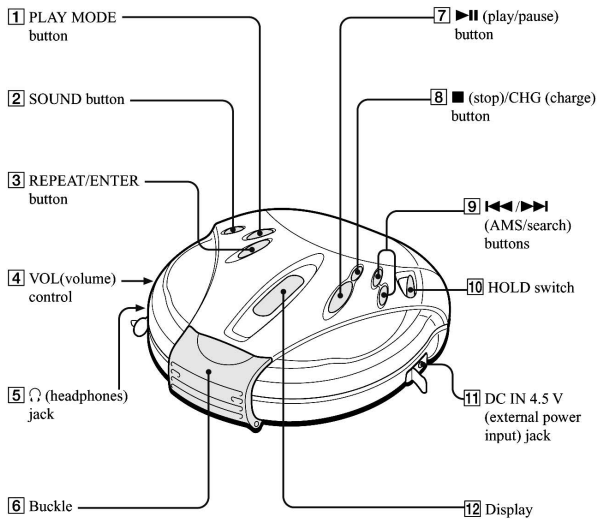
LOCATING THE CONTROLS

Getting started

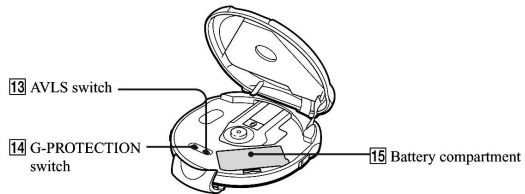
Locating the Controls

For details, see pages in parentheses.

CD player (front)



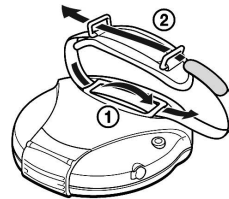
CD player (inside)



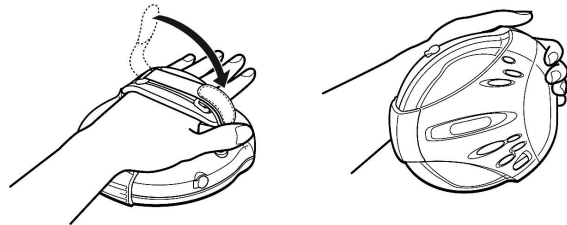
Using the hand strap

During active uses, use the supplied hand strap.

1 Pass the strap through the hooks.

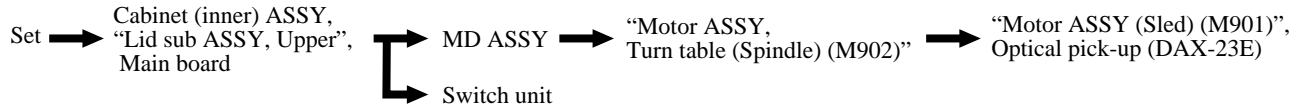


2 Put your hand between the player and the strap, then adjust the length of the strap and fix it using the Velcro tapes.



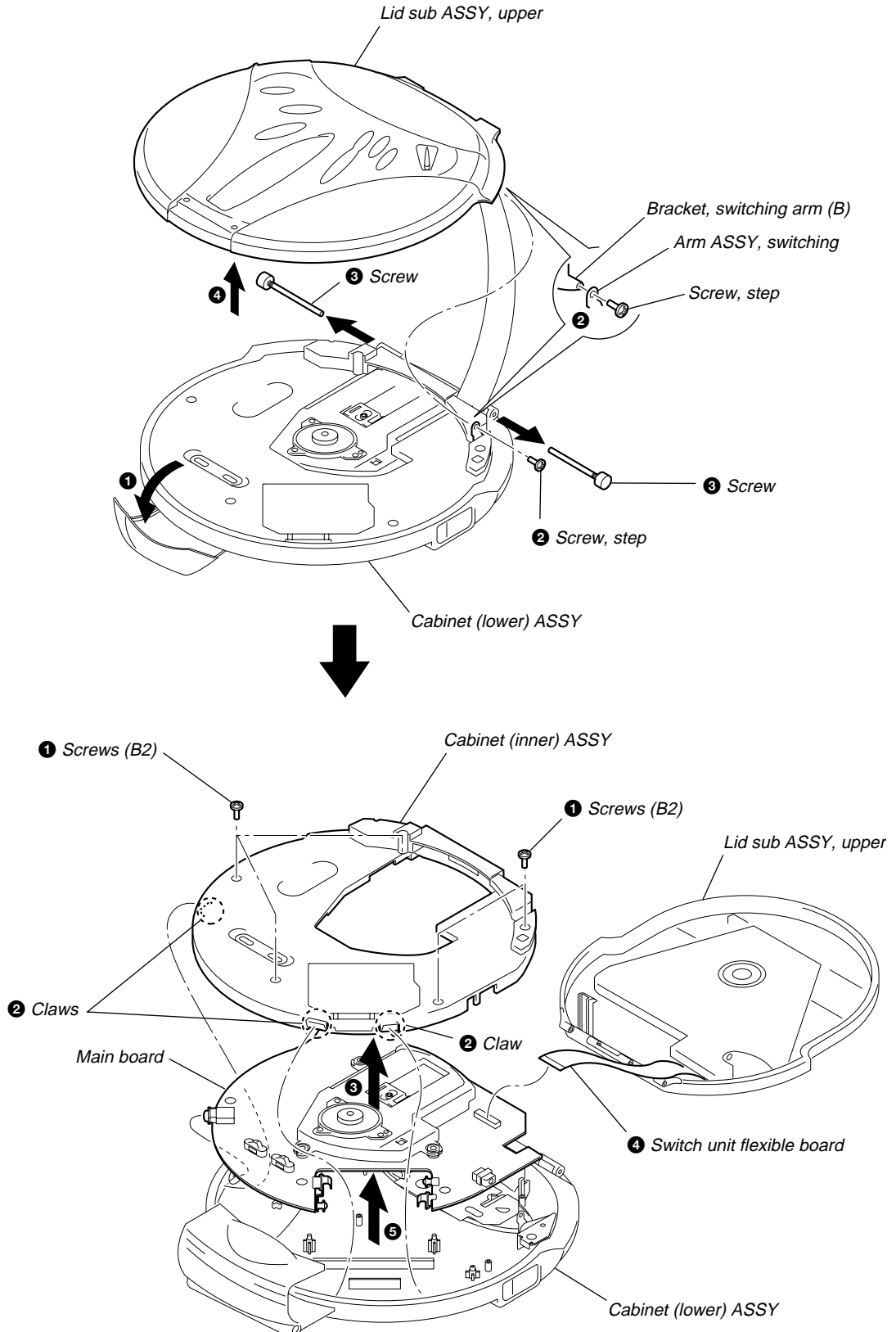
SECTION 3 DISASSEMBLY

- The equipment can be removed using the following procedure.

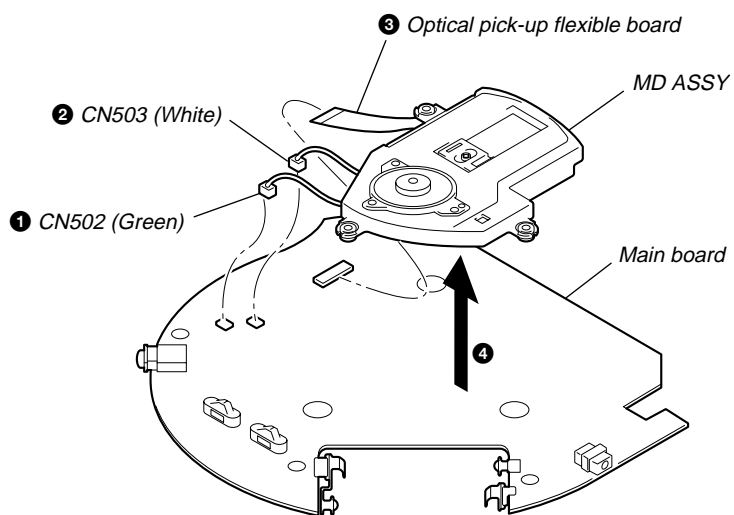


Note : Follow the disassembly procedure in the numerical order given.

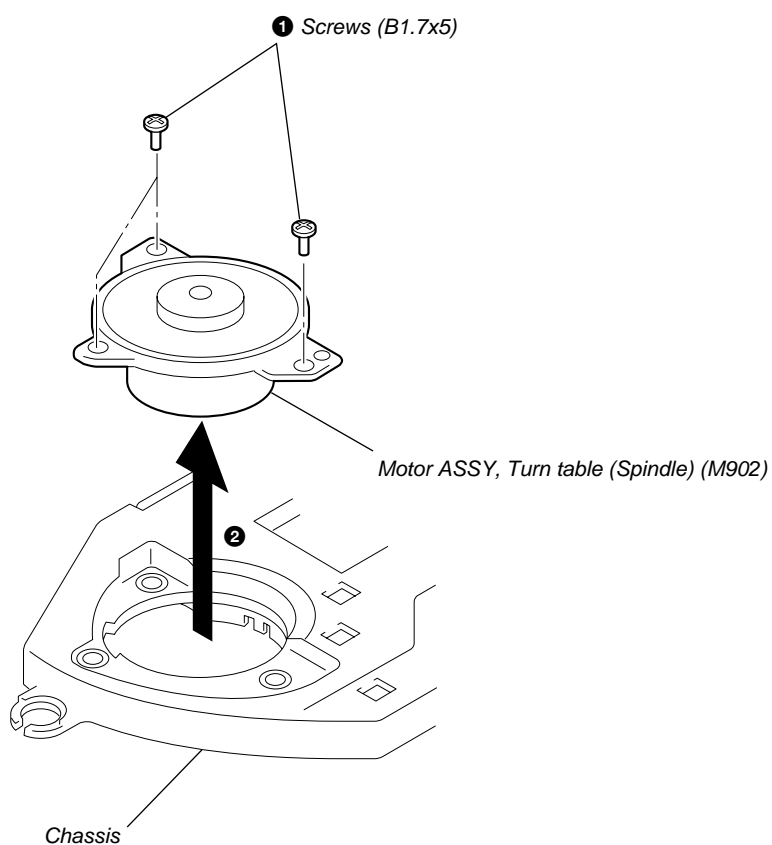
3-1. CABINET (INNER) ASSY, "LID SUB ASSY, UPPER", MAIN BOARD



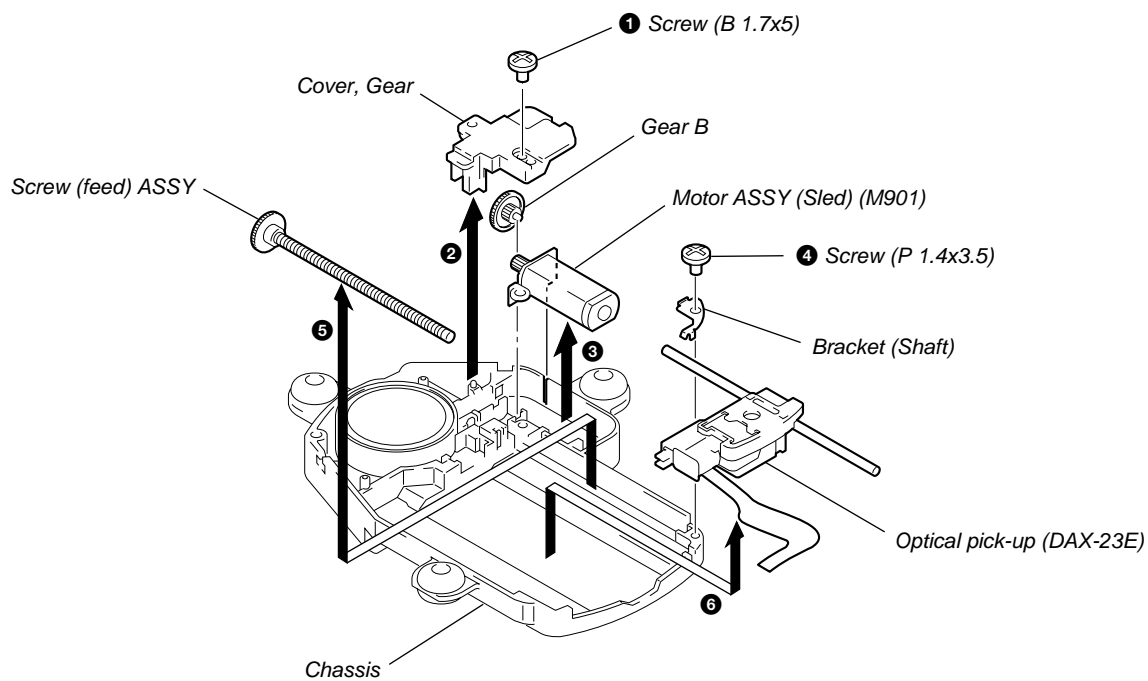
3-2. MD ASSY



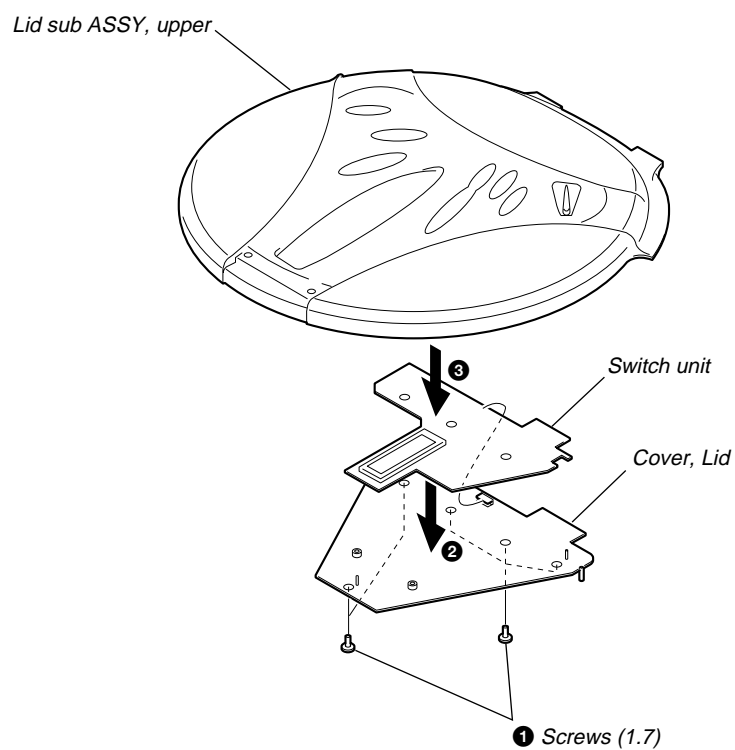
3-3. “MOTOR ASSY, TURN TABLE (SPINDLE) (M902)”



3-4. "MOTOR ASSY (SLED) (M901)", OPTICAL PICK-UP (DAX-23E)



3-5. SWITCH UNIT



SECTION 4

ELECTRICAL ADJUSTMENTS

The CD section adjustments are done automatically in this set.

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.

VOLUME button : Minimum

AVLS switch : NORM

HOLD switch : OFF

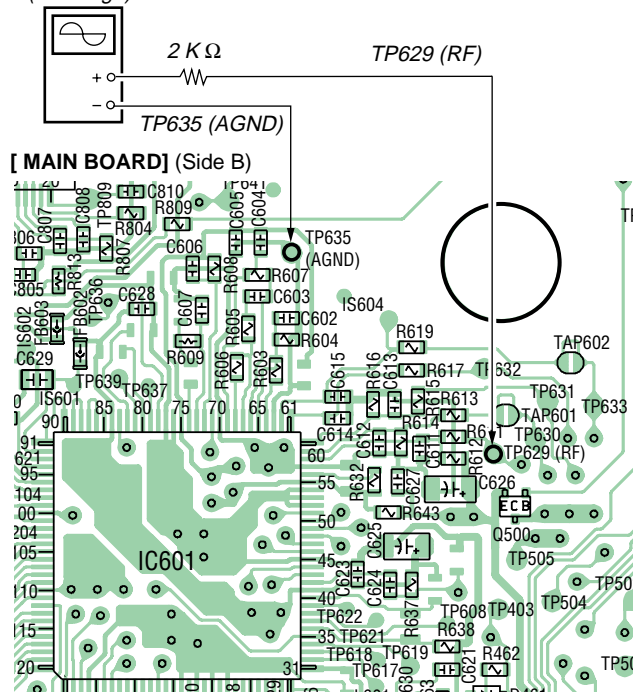
Focus bias Check

Condition:


- Hold the set in horizontal state.

Connection:

oscilloscope
(AC range)

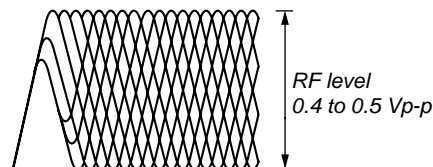


Procedure:

1. Connect the oscilloscope to the test points TP629 (RF) and TP635 (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 (\diamond) 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 : 500ns



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

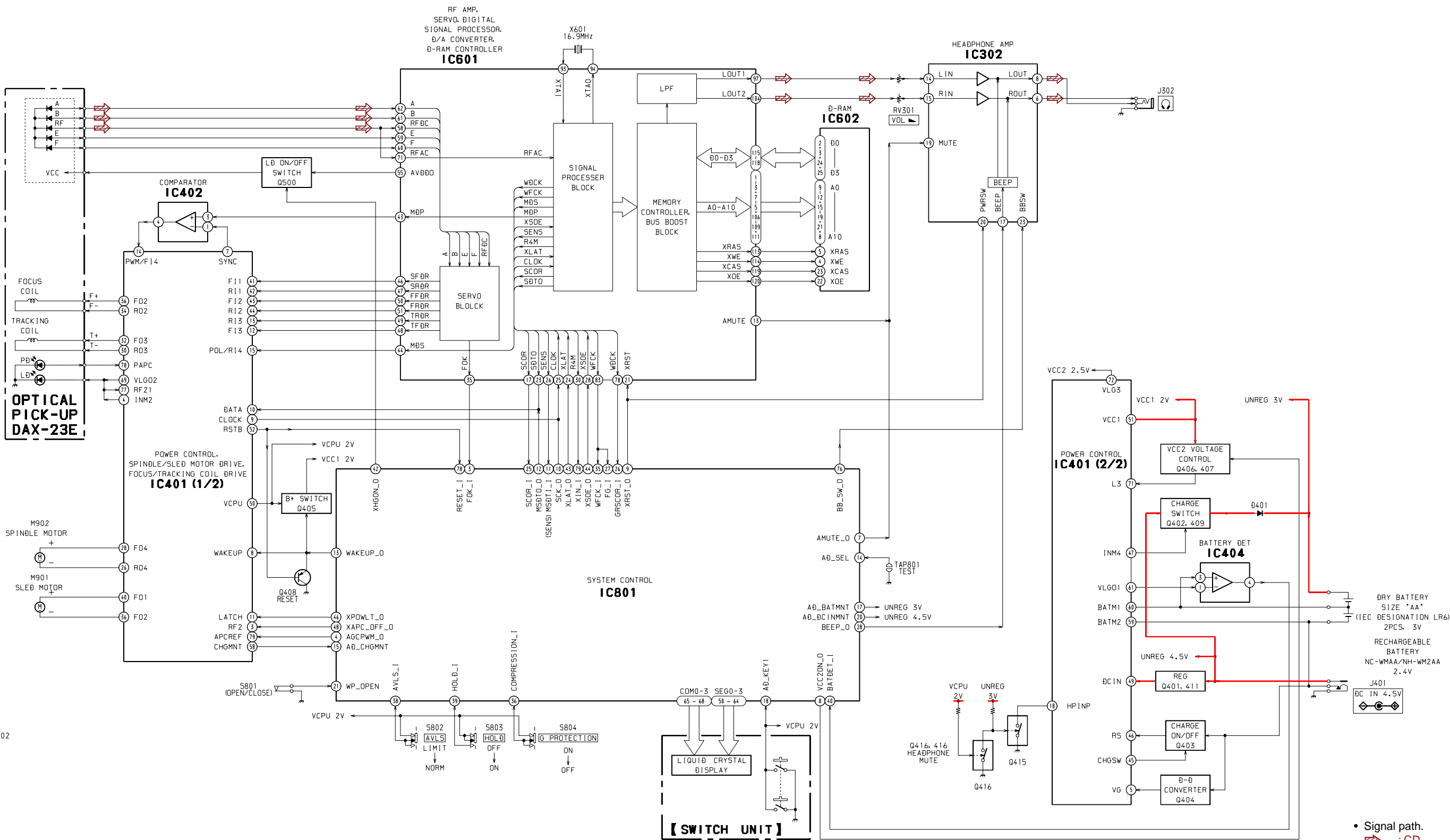
5-1. EXPLANATION OF IC TERMINALS

IC801 (SYSTEM CONTROLLER) TMP88CM22F-1A56

| Pin No. | Pin name | I/O | Description |
|---------|-------------|-----|---|
| 1 | VSS | — | Ground terminal. |
| 2 | IRRMCO | — | Not used (OPEN). |
| 3 | FOKI | I | Focus OK signal input from the digital servo processor (IC601). “L”: NG, “H”: OK |
| 4 | AGCPWM | O | AGC control pulse signal output terminal. |
| 5 | RESERVE | — | Not used (OPEN). |
| 6 | RESERVE | — | Not used (OPEN). |
| 7 | AMUTE | O | Analog audio muting ON/OFF control signal output terminal. “H”: muting ON |
| 8 | VCC2 ON | O | VCC2 voltage control signal output terminal. |
| 9 | XRST | O | Reset signal output to IC601. “L”: reset |
| 10 | SCK | O | Serial data transfer clock signal output to IC601. |
| 11 | MSDTI | I | Serial data input from the IC601. |
| 12 | MSDTO | O | Serial data output to IC601. |
| 13 | WAKE UP | O | WAKE-UP control signal output terminal (for system standby reset). |
| 14 | SEL | I | Plug-in detection signal input terminal of LINE OUT/OPTICAL OUT. |
| 15 | CHGMNT | I | Battery charge voltage detection input from the power control (IC401). |
| 16 | — | — | Not used (Fixed at “H”). |
| 17 | BATMNT | I | Battery voltage detection signal input terminal |
| 18 | KEY1 | I | Key input terminal. |
| 19 | — | — | Not used (Fixed at “L”). |
| 20 | DCINMNT | I | DC input voltage detection input terminal (A/D input) and DC input jack use/no use detection input terminal. |
| 21 | WP OPEN | I | CD door open/close detection switch (S801) input terminal. The stop status is reset with the falling edge of input signal. |
| 22 | VREFL | I | Reference voltage input terminal (0V) for A/D converter. |
| 23 | VREFH | I | Reference voltage input terminal (+2V) for A/D converter. |
| 24 | VDD | — | Power supply terminal (+2V). |
| 25 | SCOR | I | Sub-code sync (S0+S1) detection signal input from the IC601. |
| 26 | GRSCOR | I | GRSCOR signal input from the IC601. |
| 27 | FG | I | FG pulse signal input. |
| 28 | BEEP | O | Beep sound output to the headphone amplifier (IC302). |
| 29 | RESERVE | — | Not used (Fixed at “H”). |
| 30 - 31 | — | — | Not used (Fixed at “H”). |
| 32 - 34 | — | — | Not used (Fixed at “L”). |
| 35 | WFCKI | I | WFCK signal input from the IC601. |
| 36 | COMPRESSION | I | G PROTECTION switch input. |
| 37 | SLVCD | I | Not used (Fixed at “H”). |
| 38 | AVLS | I | AVLS (Automatic Volume Limiter System) switch (S803) input terminal. “L”: normal mode, “H”: limit mode |
| 39 | HOLD | I | HOLD switch (S803) input terminal. “L”: hold ON, “H”: hold OFF |
| 40 | BATT DET | I | External battery detection signal input terminal. |
| 41 | X3037 | O | Mode select terminal for IC601. |
| 42 | XHGOM | O | Optical pick-up power ON/OFF control signal output terminal. “L”: ON |
| 43 | XLAT | O | Serial data latch pulse signal output to IC601. |
| 44 | XSOE | O | Serial data output enable signal output terminal. |
| 45 | SEG15 | — | Not used (open). |

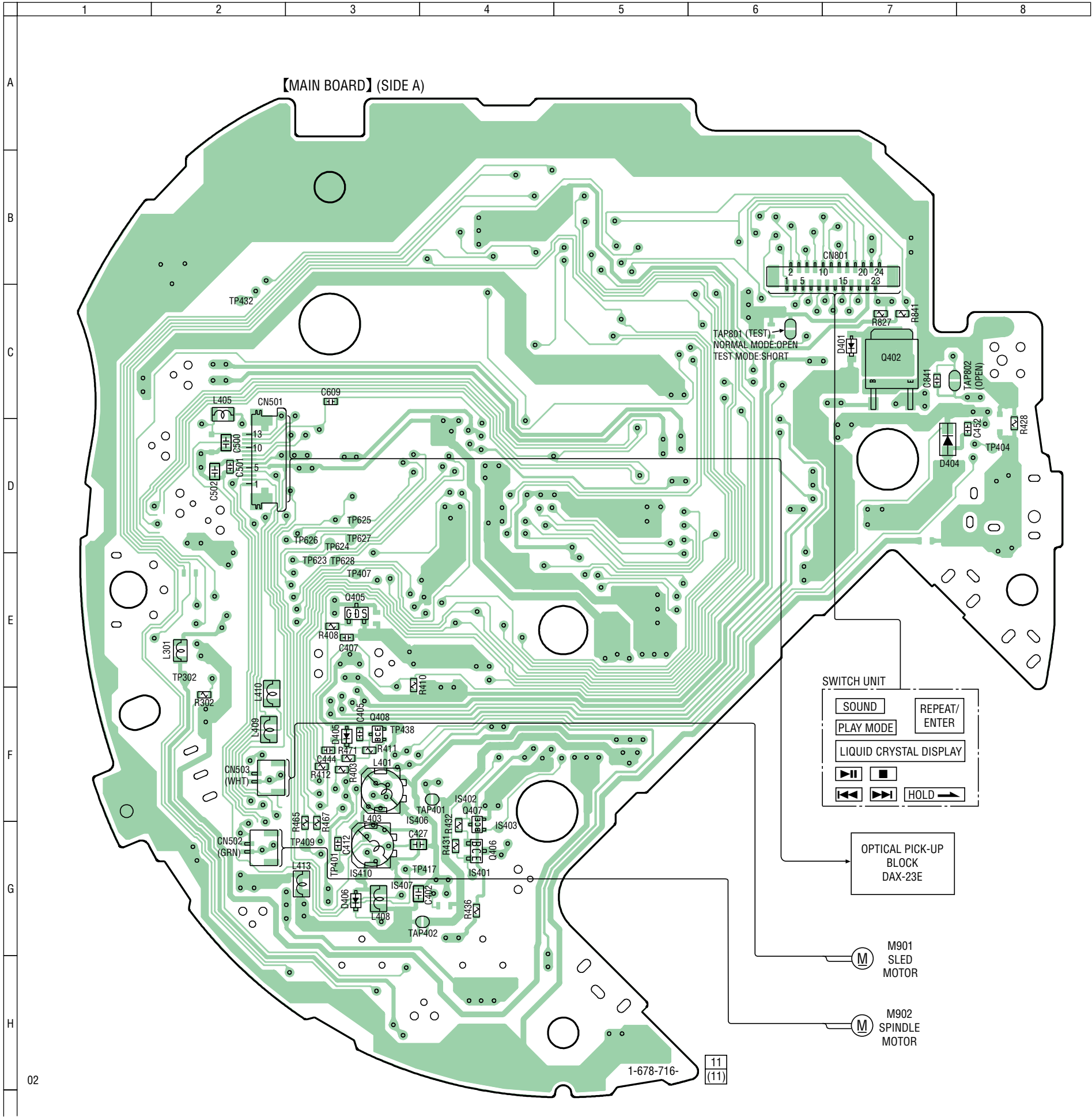
| Pin No. | Pin name | I/O | Description |
|----------|---------------|-----|---|
| 46 | XPOWLT | O | Latch signal output to the power control (IC401). |
| 47 | RESERVE | O | Not used (Fixed at “H”). |
| 48 | XAPC OFF | O | APC mute signal output terminal. “L”: mute |
| 49 | ———— | — | Not used (open). |
| 50 to 64 | SEG14 to SEG0 | O | Segment drive signal output to the liquid crystal display. |
| 65 to 68 | COM3 to COM0 | O | Common drive signal output to the liquid crystal display. |
| 69 to 71 | V3 to V1 | O | Bias signal output to the liquid crystal display driver. |
| 72, 73 | C1, C0 | O | Capacitor connected terminal for the liquid crystal display driver voltage-up. |
| 74 | STOP | O | VCD control stop signal output terminal. Not used (Fixed at “L”). |
| 75 | TEST | I | Test terminal for IC (Fixed at “L”). |
| 76 | BBSW | O | ON/OFF control signal output to the headphone amplifier (IC302). |
| 77 | ———— | — | Not used (open). |
| 78 | RESET | I | System reset signal input from the power control (IC401). “L”: reset For several hundreds msec. after the power supply rises, “L” is input, then it changes to “H” |
| 79 | XIN | I | System clock input terminal. |
| 80 | XOUT | — | Not used (OPEN). |

5-2. BLOCK DIAGRAM



• Signal path.
⇒ : CD

5-3. PRINTED WIRING BOARDS (1/2) (Last digit -11)



● Semiconductor Location

| Ref. No. | Location |
|----------|----------|
| D401 | C-7 |
| D404 | D-7 |
| D405 | F-3 |
| D406 | G-3 |
| Q402 | C-7 |
| Q405 | E-3 |
| Q406 | G-4 |
| Q407 | G-4 |
| Q408 | F-3 |

Note:

- : parts extracted from the component side.
- : Through hole.
- : 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. |

5-4. PRINTED WIRING BOARDS (2/2) (Last digit -11)

● Semiconductor Location

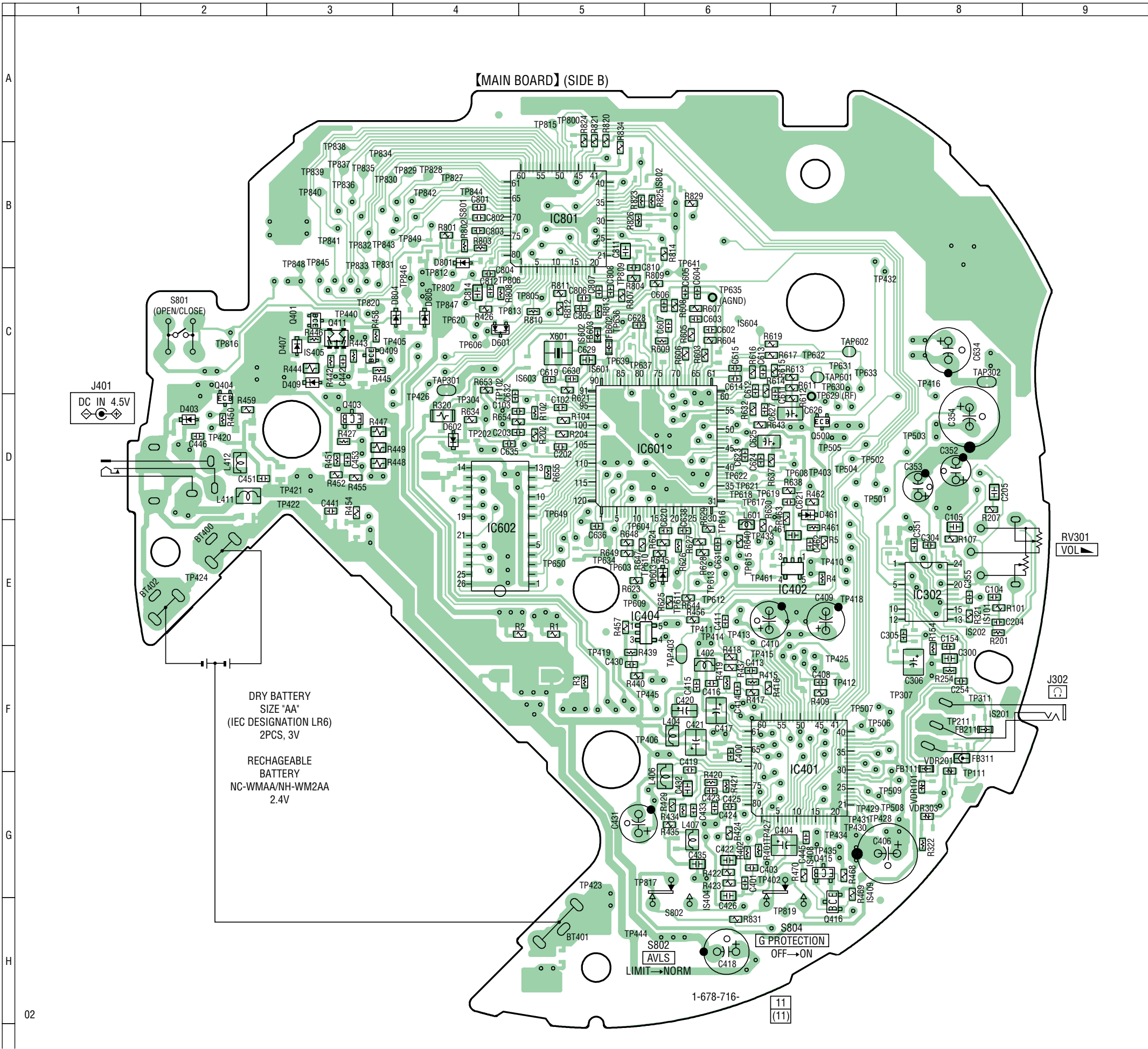
| Ref. No. | Location |
|----------|----------|
| D403 | D-2 |
| D407 | C-3 |
| D409 | C-3 |
| D461 | D-7 |
| D601 | C-4 |
| D602 | D-4 |
| D603 | E-6 |
| D801 | B-4 |
| D804 | C-4 |
| D805 | C-4 |
| IC302 | E-8 |
| IC401 | F-7 |
| IC402 | E-7 |
| IC404 | E-6 |
| IC601 | D-6 |
| IC602 | E-4 |
| IC801 | B-5 |
| Q401 | C-3 |
| Q403 | D-3 |
| Q404 | D-2 |
| Q409 | C-3 |
| Q411 | C-3 |
| Q415 | G-7 |
| Q416 | F-7 |
| Q500 | D-7 |

Note:

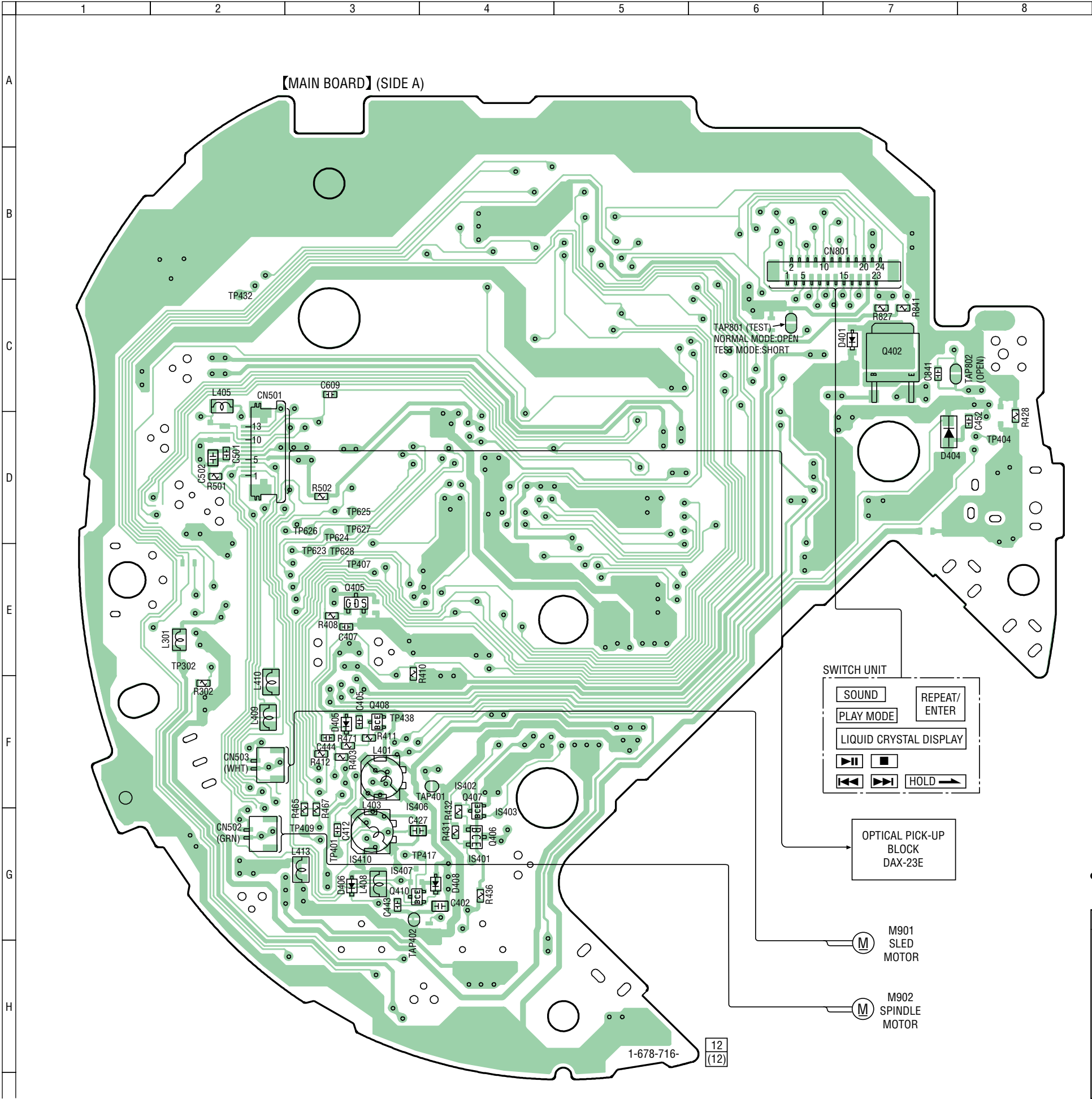
-  : parts extracted from the component side.
-  : Through hole.
- : Pattern from the side which enables seeing.
(The other layers' patterns are not indicated.)

Caution:

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



5-5. PRINTED WIRING BOARDS (1/2) (Last digit -12)



● Semiconductor Location

| Ref. No. | Location |
|----------|----------|
| D401 | C-7 |
| D404 | D-7 |
| D405 | F-3 |
| D406 | G-3 |
| D408 | G-4 |
| Q402 | C-7 |
| Q405 | E-3 |
| Q406 | G-4 |
| Q407 | G-4 |
| Q408 | F-3 |
| Q410 | G-4 |

Note:

- : parts extracted from the component side.
- : Through hole.
- : 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.

5-6. PRINTED WIRING BOARDS (2/2) (Last digit -12)

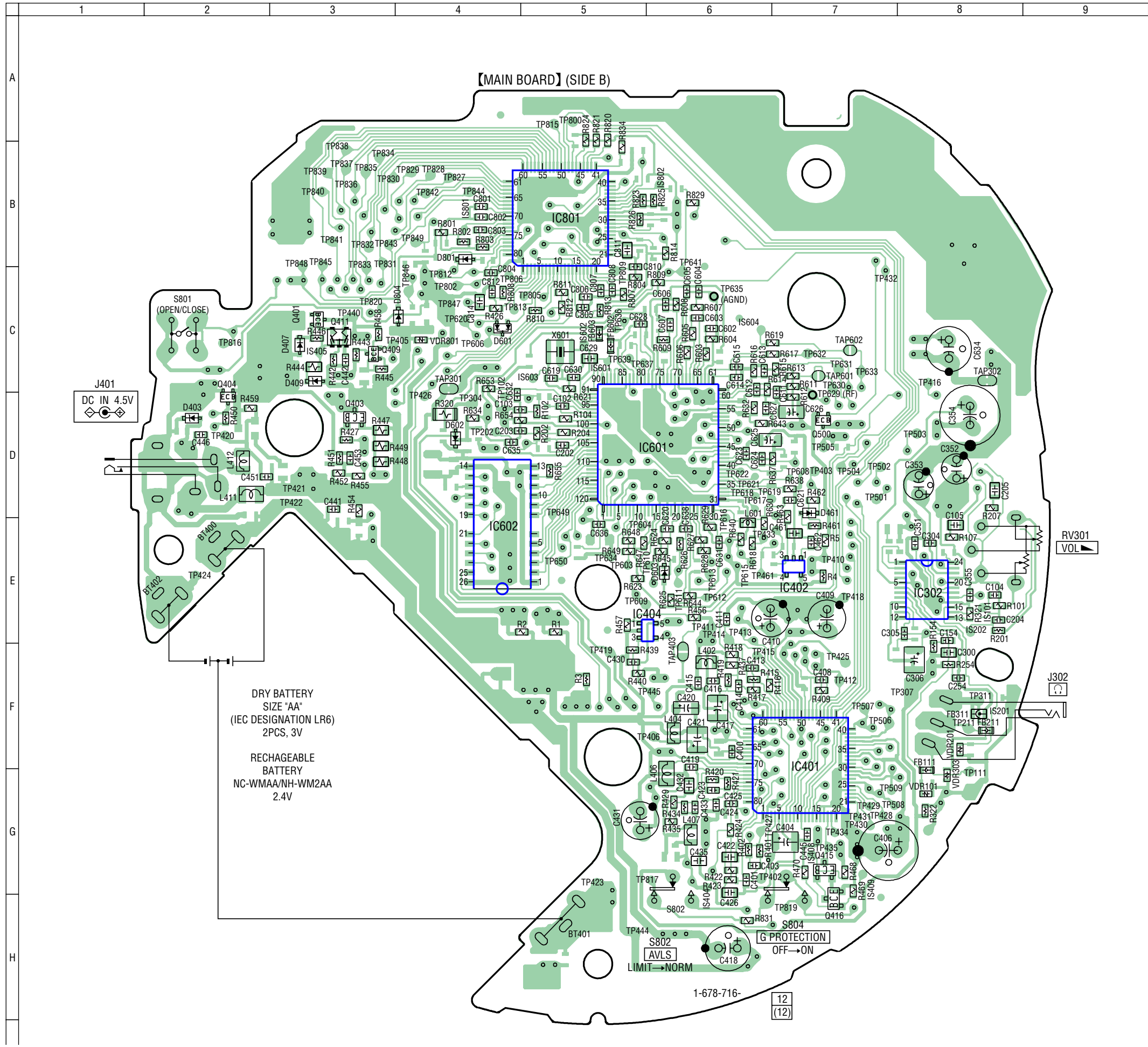
| ● Semiconductor Location | |
|--------------------------|----------|
| Ref. No. | Location |
| D403 | D-2 |
| D407 | C-3 |
| D409 | C-3 |
| D461 | D-7 |
| D601 | C-4 |
| | |
| D602 | D-4 |
| D603 | E-6 |
| D801 | B-4 |
| D804 | C-4 |
| | |
| IC302 | E-8 |
| IC401 | F-7 |
| IC402 | E-7 |
| IC404 | E-6 |
| IC601 | D-6 |
| | |
| IC602 | E-4 |
| IC801 | B-5 |
| | |
| Q401 | C-3 |
| Q403 | D-3 |
| Q404 | D-2 |
| Q409 | C-3 |
| Q411 | C-3 |
| | |
| Q415 | G-7 |
| Q416 | F-7 |
| Q500 | D-7 |

Note:

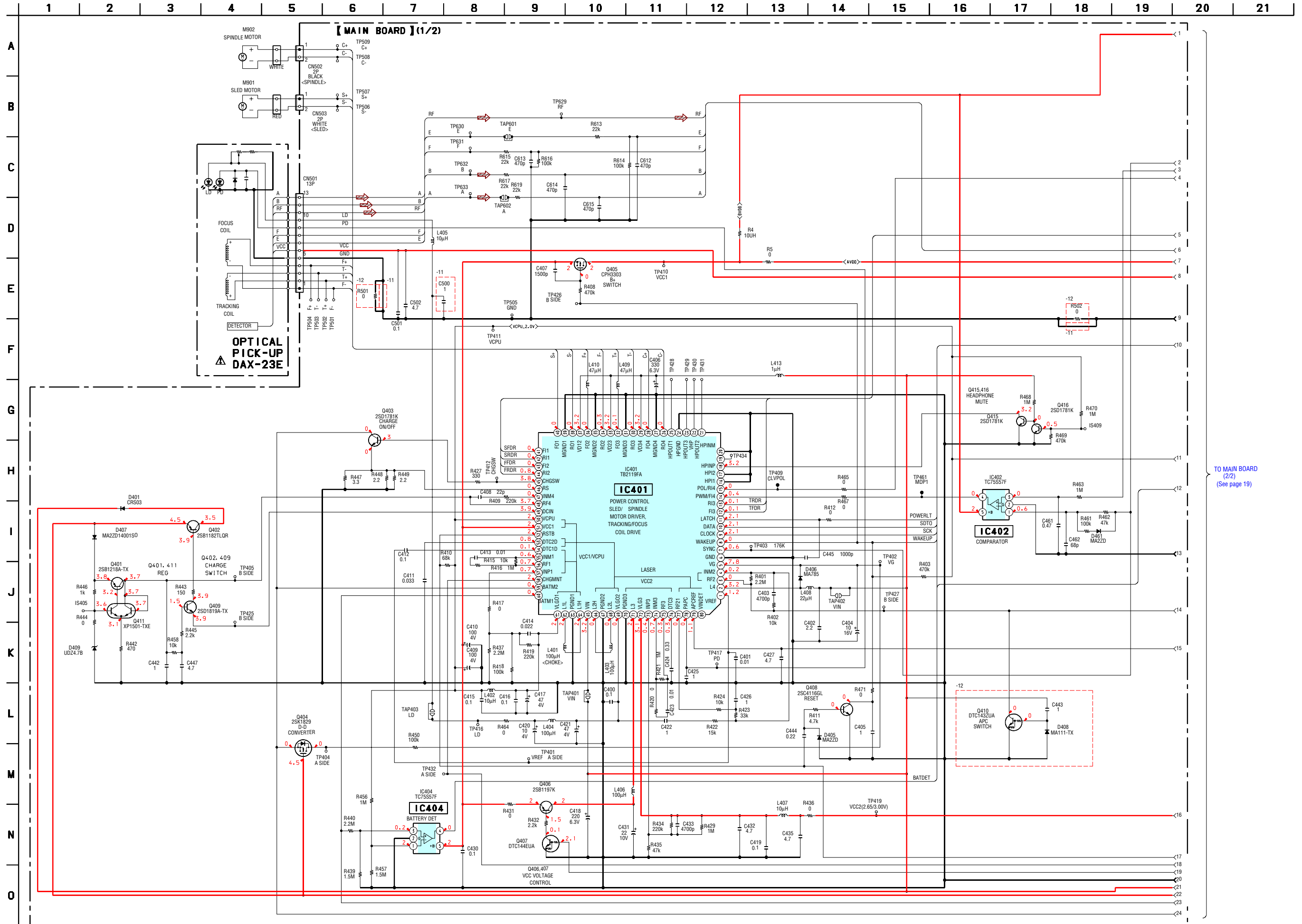
- : parts extracted from the component side.
- : Through hole.
- : Pattern from the side which enables seeing. (The other layers' patterns are not indicated.)

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. |



5-7. SCHEMATIC DIAGRAM (1/2) (Last digit -11, -12) • Refer to page 34 – 35 for IC Block Diagrams. • Refer to page 33 for Waveforms. • Refer to page 33 for Notes.



TO MAIN BOARD
(2/2)
(See page 19)

| | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
|--|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|






【MAIN BOARD】(SIDE A)

The diagram illustrates the main board (SIDE A) with various components and test points. Key components include:

- Test Points:** TP432, TP625, TP626, TP627, TP624, TP623, TP628, TP407, TP408, TP409, TP410, TP417, TP401, TP402, TP403, TP404, TP405, TP406, TP407, TP408, TP409, TP410, TP411, TP412, TP413, TP414, TP415, TP416, TP417, TP418, TP419, TP420, TP421, TP422, TP423, TP424, TP425, TP426, TP427, TP428, TP429, TP430, TP431, TP432, TP433, TP434, TP435, TP436, TP437, TP438, TP439, TP440, TP441, TP442, TP443, TP444, TP445, TP446, TP447, TP448, TP449, TP450, TP451, TP452, TP453, TP454, TP455, TP456, TP457, TP458, TP459, TP460, TP461, TP462, TP463, TP464, TP465, TP466, TP467, TP468, TP469, TP470, TP471, TP472, TP473, TP474, TP475, TP476, TP477, TP478, TP479, TP480, TP481, TP482, TP483, TP484, TP485, TP486, TP487, TP488, TP489, TP490, TP491, TP492, TP493, TP494, TP495, TP496, TP497, TP498, TP499, TP500.
- Components:** Q402, Q403, Q404, Q405, Q406, Q407, Q408, Q409, Q410, Q411, Q412, Q413, Q414, Q415, Q416, Q417, Q418, Q419, Q420, Q421, Q422, Q423, Q424, Q425, Q426, Q427, Q428, Q429, Q430, Q431, Q432, Q433, Q434, Q435, Q436, Q437, Q438, Q439, Q440, Q441, Q442, Q443, Q444, Q445, Q446, Q447, Q448, Q449, Q450, Q451, Q452, Q453, Q454, Q455, Q456, Q457, Q458, Q459, Q460, Q461, Q462, Q463, Q464, Q465, Q466, Q467, Q468, Q469, Q470, Q471, Q472, Q473, Q474, Q475, Q476, Q477, Q478, Q479, Q480, Q481, Q482, Q483, Q484, Q485, Q486, Q487, Q488, Q489, Q490, Q491, Q492, Q493, Q494, Q495, Q496, Q497, Q498, Q499, Q500.
- Connections:** The board is connected to the **SWITCH UNIT** (SOUND, REPEAT/ENTER, PLAY MODE, LIQUID CRYSTAL DISPLAY, and various control buttons), the **OPTICAL PICK-UP BLOCK DAX-23E**, and the **M901 SLED MOTOR** and **M902 SPINDLE MOTOR**.

1-678-716- (13)

| Ref. No. | Location |
|----------|----------|
| D401 | C-7 |
| D404 | D-7 |
| D405 | F-3 |
| D406 | G-3 |
| | |
| Q402 | C-7 |
| Q405 | E-3 |
| Q406 | G-4 |
| Q407 | G-4 |
| Q408 | F-3 |
| Q410 | G-4 |




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

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

- **Semiconductor Location**

| Ref. No. | Location |
|----------|----------|
| D403 | D-2 |
| D407 | C-3 |
| D409 | C-3 |
| D461 | D-7 |
| D601 | C-4 |
| D602 | D-4 |
| D603 | E-6 |
| D801 | B-4 |
| D804 | C-4 |
| IC302 | E-8 |
| IC401 | F-7 |
| IC402 | E-7 |
| IC404 | E-6 |
| IC601 | D-6 |
| IC602 | E-4 |
| IC801 | B-5 |
| Q401 | C-3 |
| Q403 | D-3 |
| Q404 | D-2 |
| Q409 | C-3 |
| Q411 | C-3 |
| Q415 | G-7 |
| Q416 | F-7 |
| Q500 | D-7 |

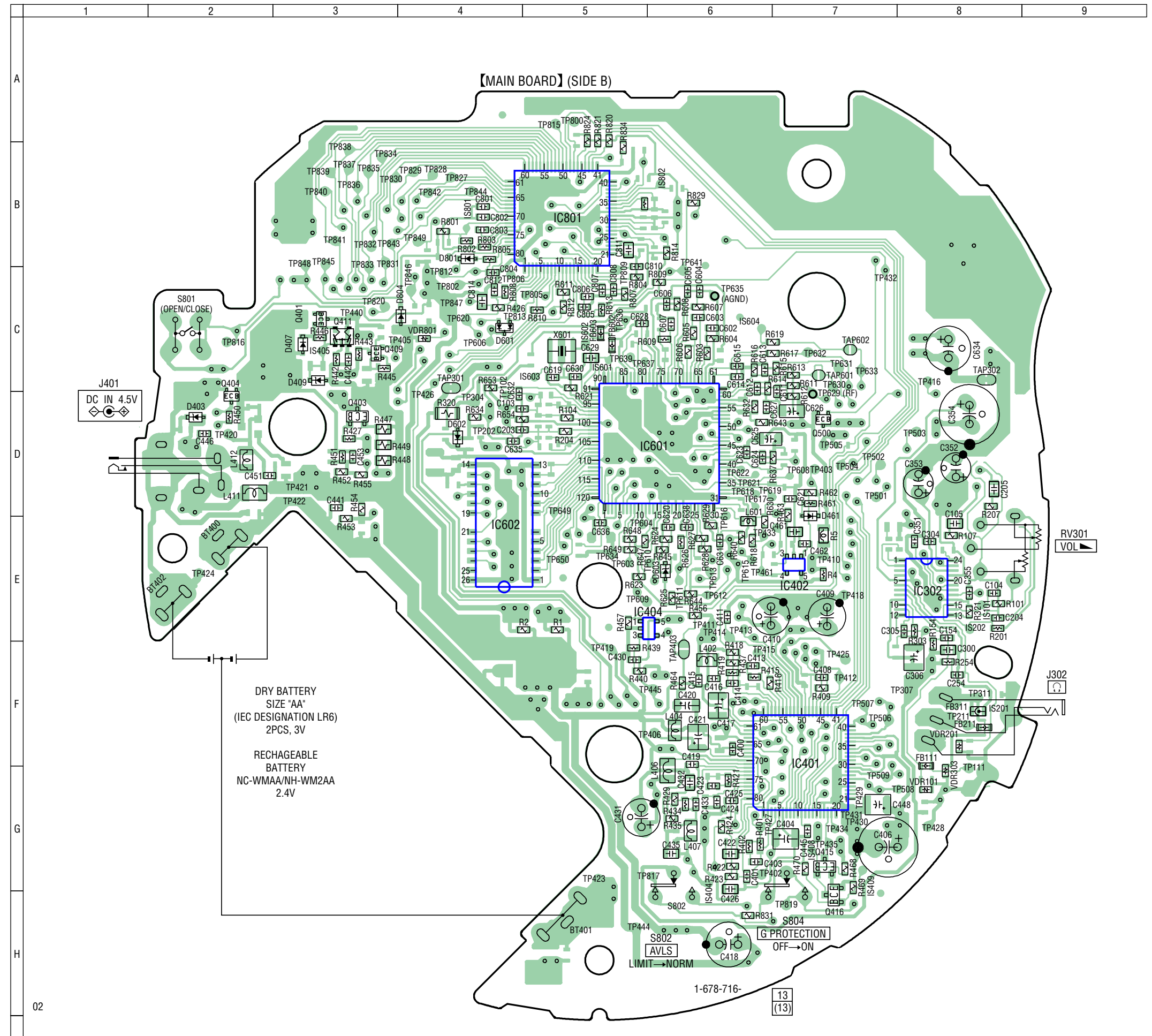
Note:

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

Caution:

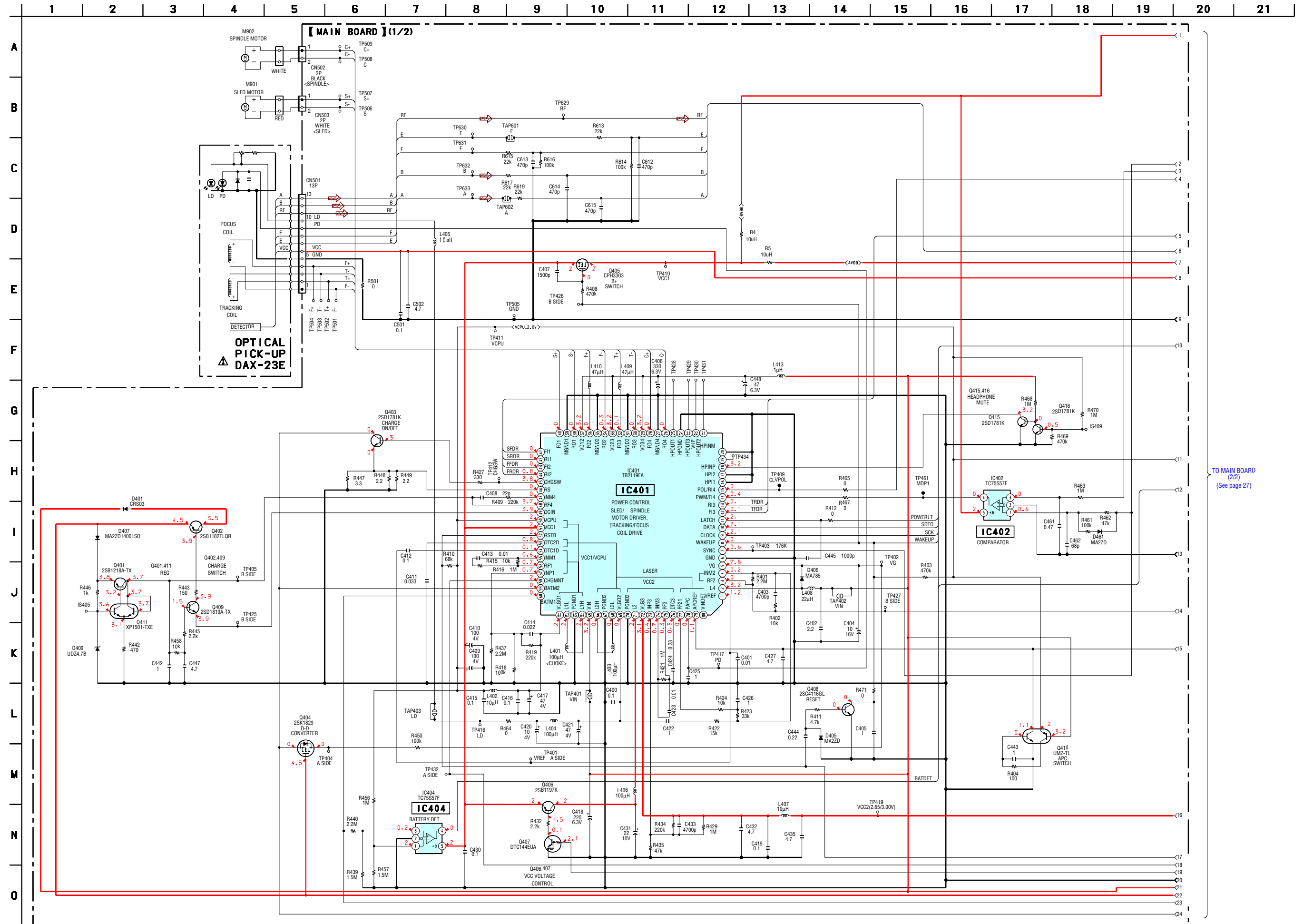
Pattern face side: Parts on the pattern face side seen from the pattern face are indicated.

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



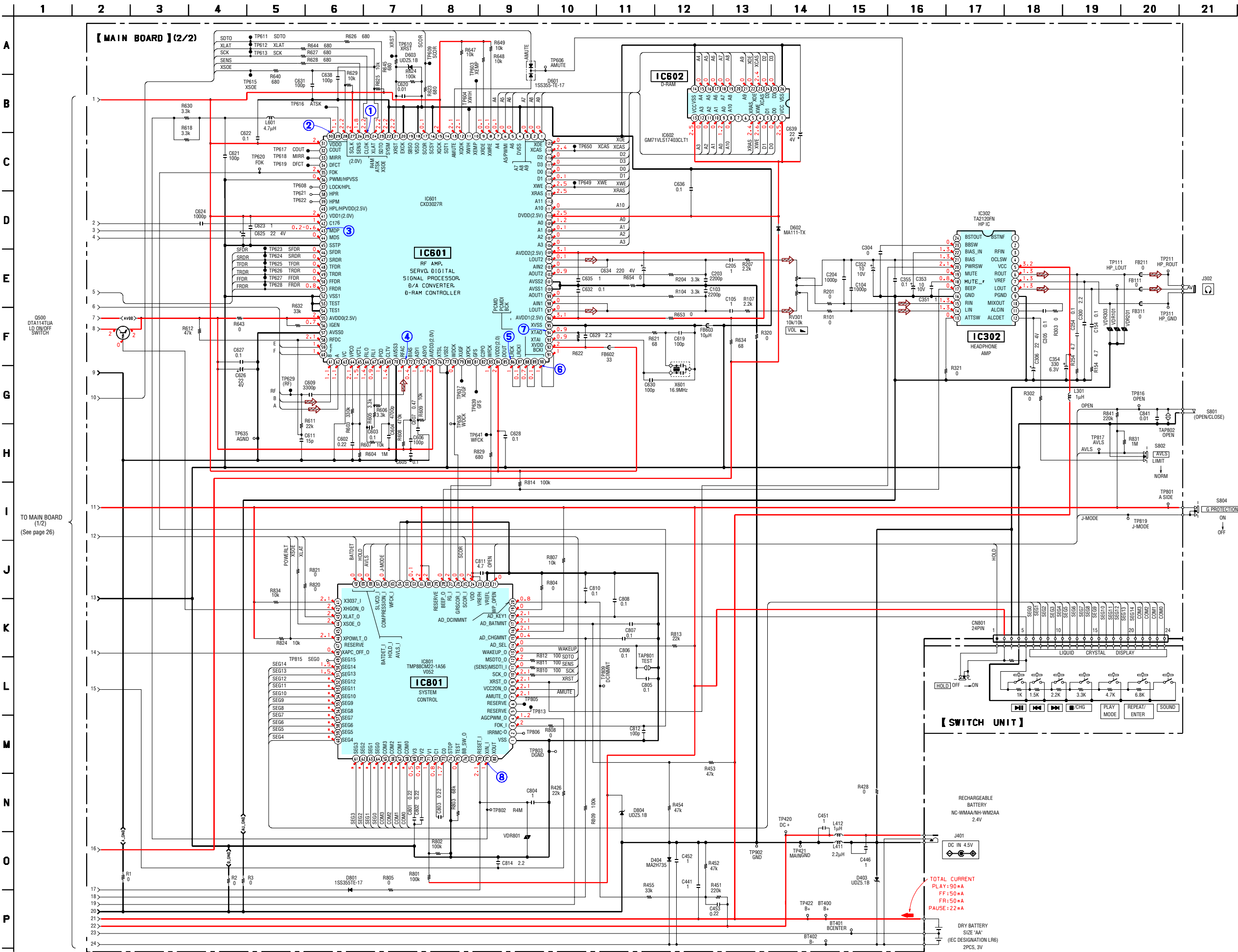
5-11. SCHEMATIC DIAGRAM (1/2) (Last digit -13)

● Refer to page 34 – 35 for IC Block Diagrams. ● Refer to page 33 for Waveforms. ● Refer to page 33 for Notes.

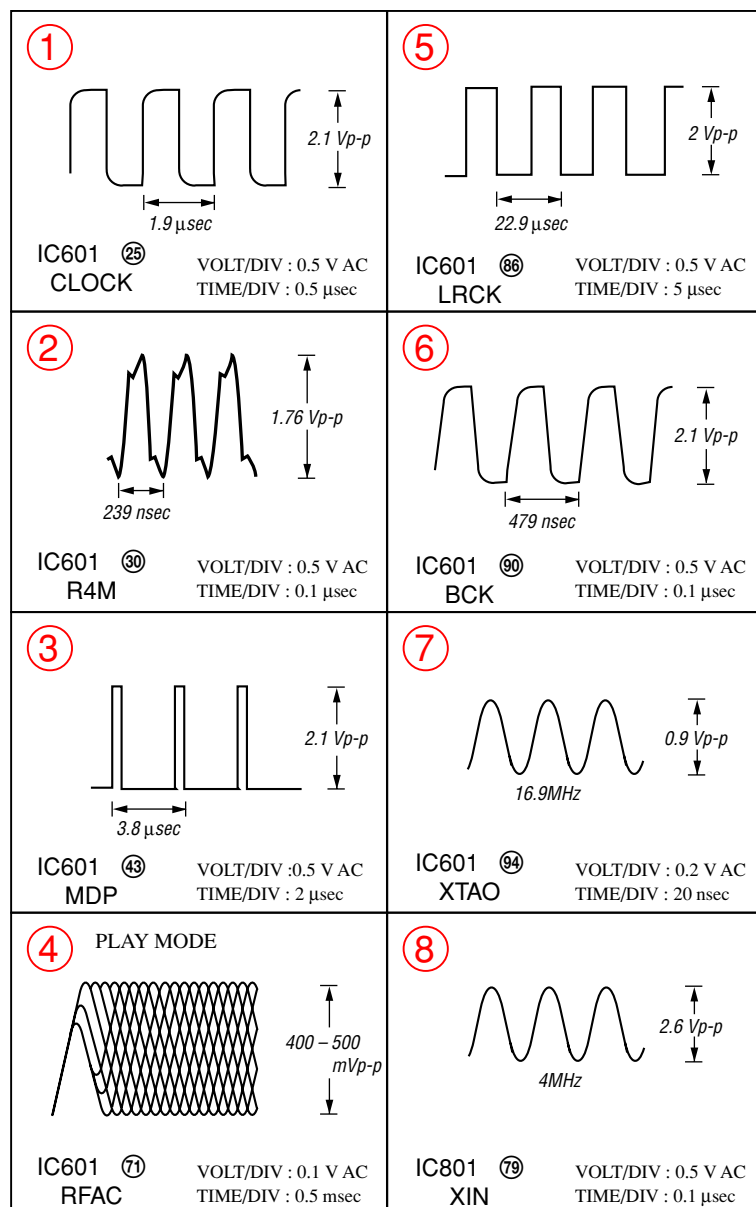


TO MAIN BOARD
(2/2)
(See page 27)

5-12. SCHEMATIC DIAGRAM (2/2) (Last digit -13) ● Refer to page 34 – 35 for IC Block Diagrams. ● Refer to page 33 for Waveforms. ● Refer to page 33 for Notes.



● Waveforms



Note:

- All capacitors are in μF unless otherwise noted. pF : $\mu\mu\text{F}$ 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.

Note:

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

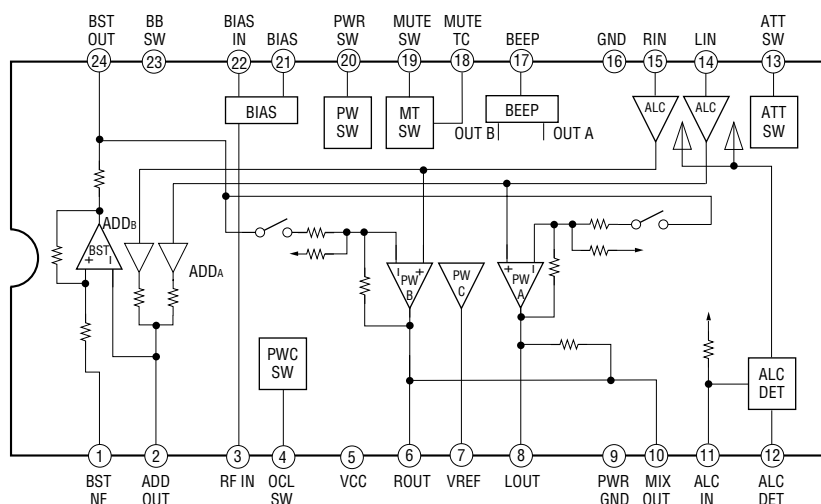
Note:

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

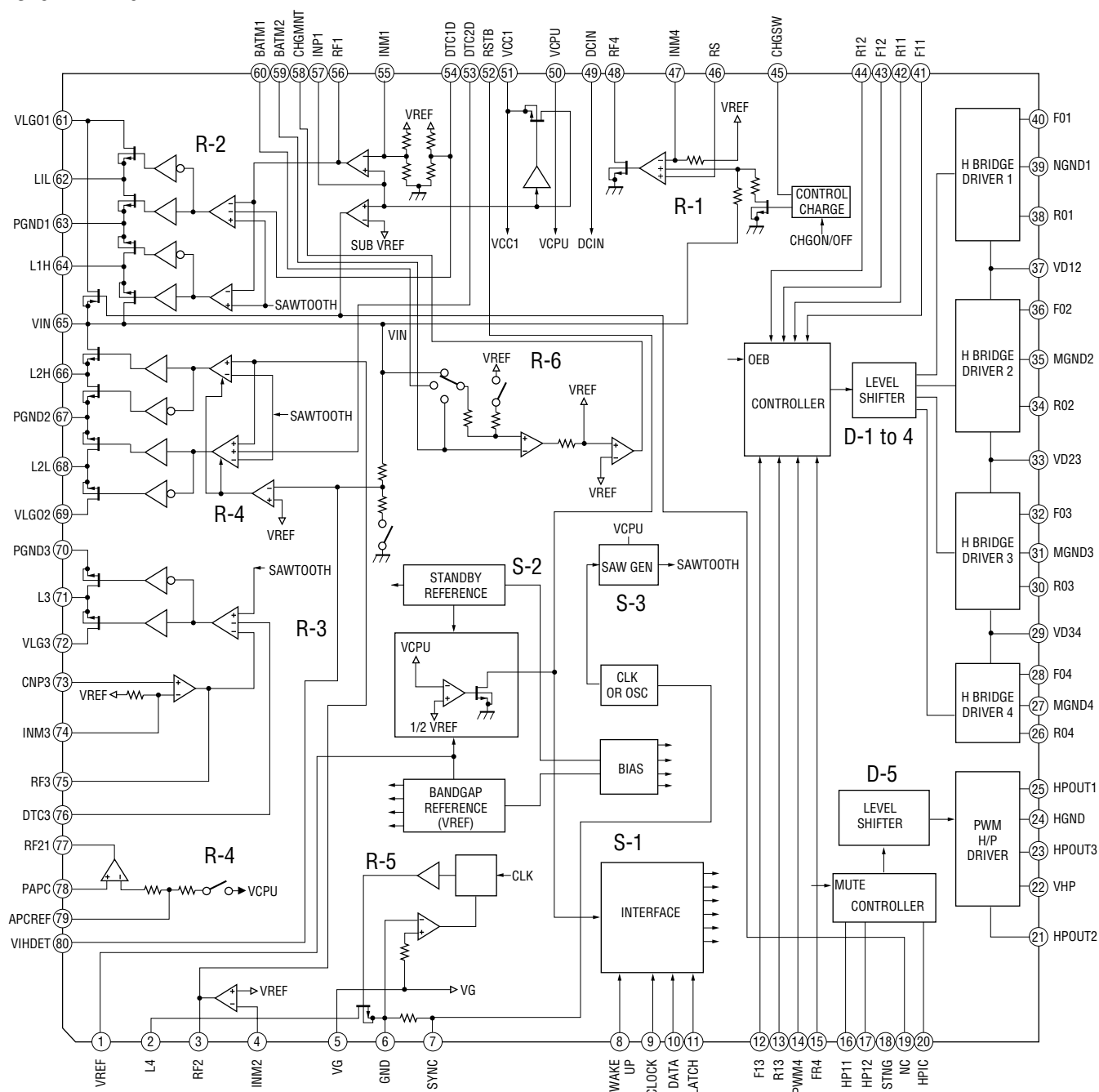
- — : B+ Line.
- Power voltage is dc 4.5V and fed with regulated dc power supply from external power voltage jack (J401).
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
no mark : PLAY
* : Impossible to measure
- Voltages are taken with a VOM (Input impedance 10 $\text{M}\Omega$). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with an oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
⇒ : CD

• IC Block Diagrams

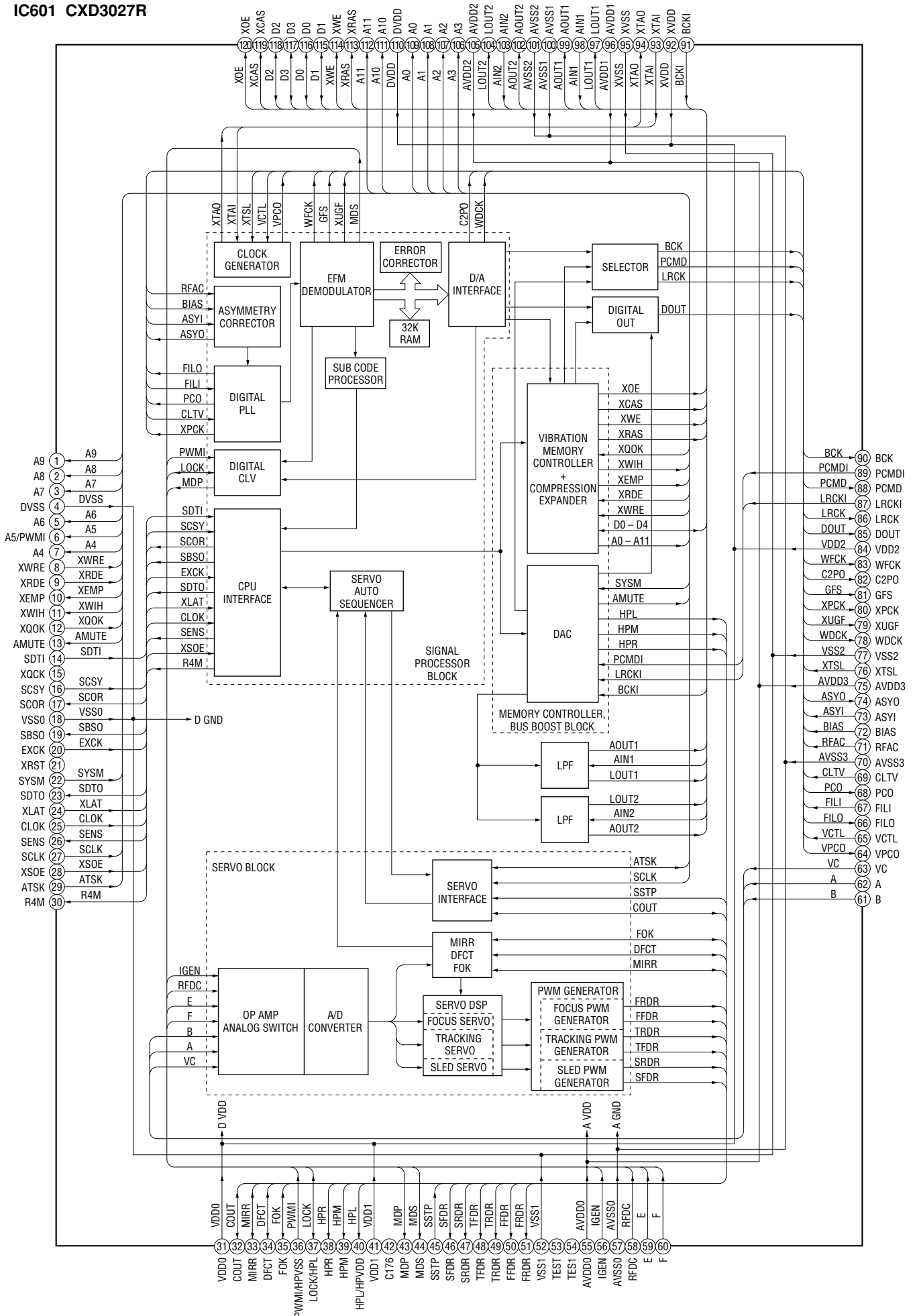
IC302 TA2120FN (EL)



IC401 TB2119FA



IC601 CXD3027R



SECTION 6

EXPLODED VIEWS



NOTE :


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

↑
Parts color

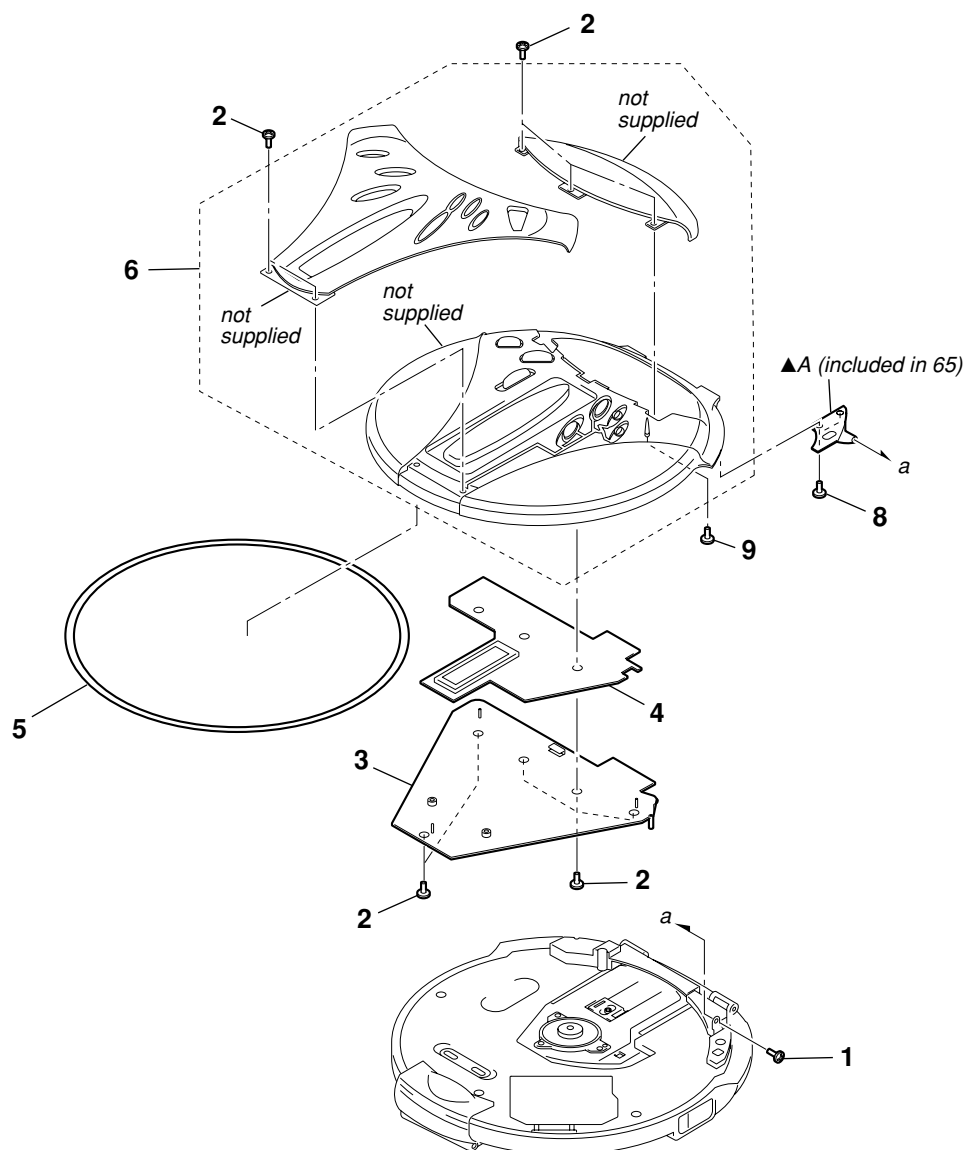
↑
Cabinet's color
- Items marked “*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.
- Abbreviation
CND : Canadian
AUS : Australian
FR : French

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

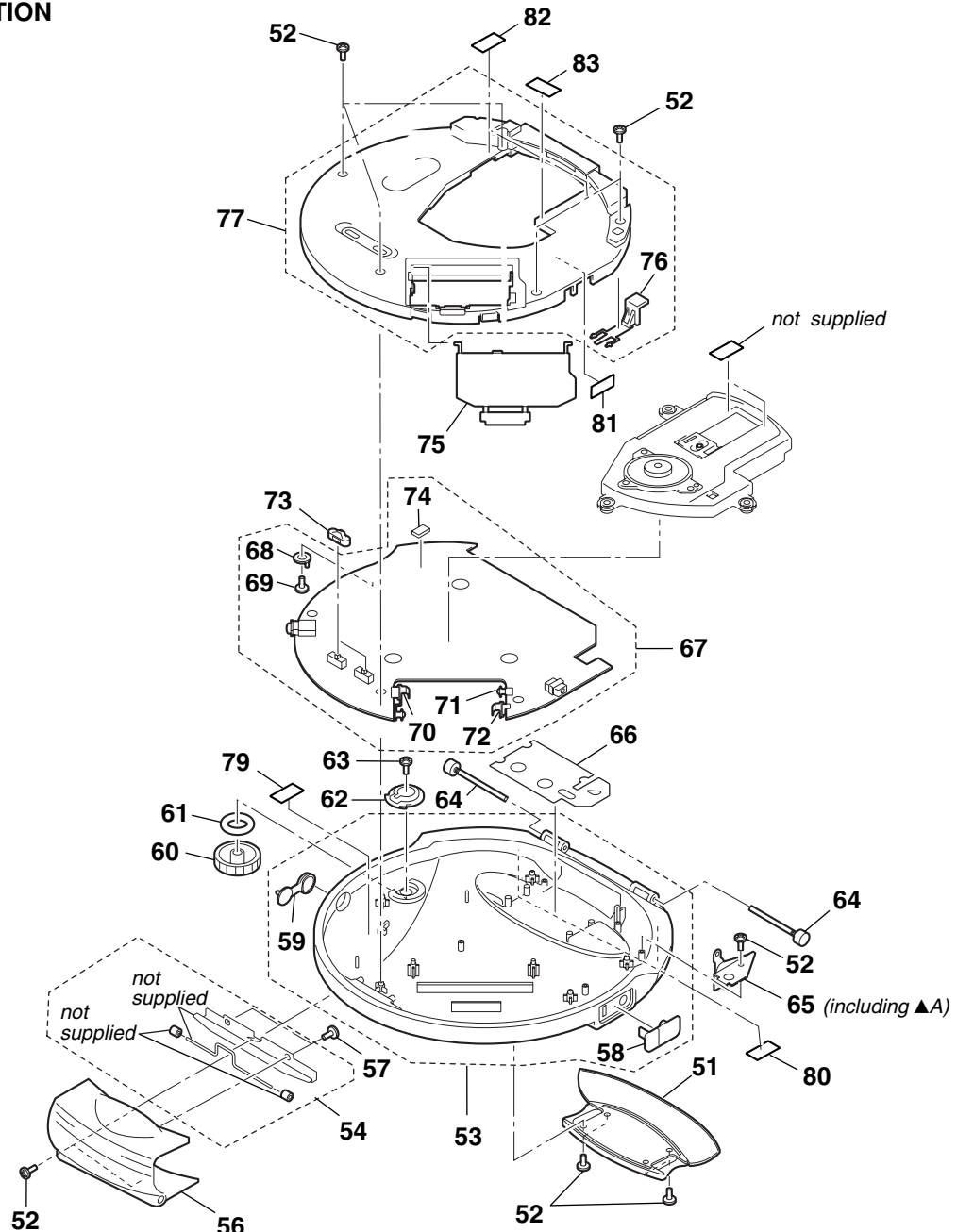
Les composants identifiés par une marque  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

6-1. UPPER LID SECTION



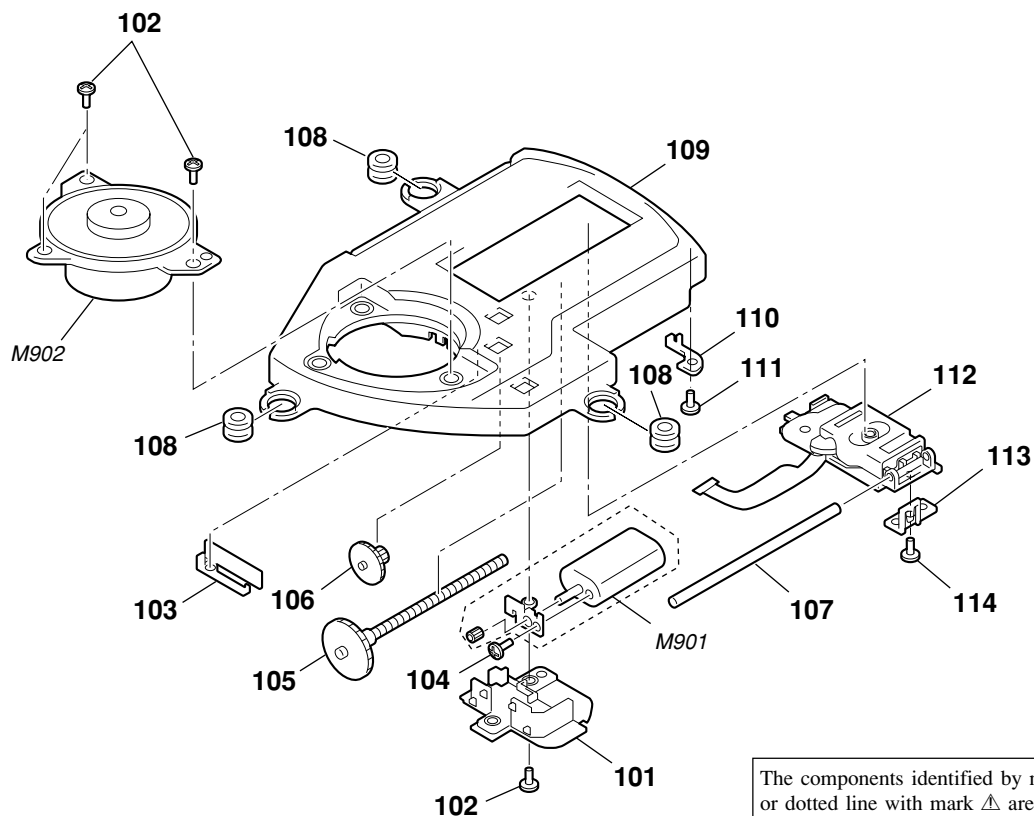
| Ref. No. | Part No. | Description | Remark | Ref. No. | Part No. | Description | Remark |
|----------|--------------|-------------------------------------|--------|----------|--------------|---|--------|
| 1 | 3-387-566-01 | SCREW, STEP | | 6 | X-3379-903-1 | LID SUBASSY,UPPER...(YELLOW) (SJ15) | |
| 2 | 3-318-382-02 | SCREW (1.7), TAPPING | | 6 | X-3379-904-1 | LID SUBASSY,UPPER...(YELLOW) (SJ15 JOG) | |
| 3 | 3-221-300-01 | COVER, LID | | 6 | X-3379-905-1 | LID SUBASSY,UPPER...(RED) (SJ17CK) | |
| 4 | 1-476-209-11 | SWITCH UNIT | | 6 | X-3380-619-1 | LID SUBASSY,UPPER...(BLUE) (SJ15:CND) | |
| 5 | 3-221-301-01 | PACKING (UPPER LID) (YELLOW) (SJ15) | | | | | |
| | | | | 8 | 3-375-114-71 | SCREW | |
| 5 | 3-221-301-21 | PACKING (UPPER LID) (RED) (SJ17CK) | | 9 | 3-318-201-31 | SCREW (B) (1.4X5), TAPPING | |

6-2. MAIN SECTION



| Ref. No. | Part No. | Description | Remark | Ref. No. | Part No. | Description | Remark |
|----------|--------------|----------------------------|--------|----------|--------------|---------------------------------|--------|
| 51 | 3-221-319-01 | BRACKET (STRAP) | | 68 | 3-221-309-01 | LEVER (VOL) (A) | |
| 52 | 4-908-792-51 | SCREW (B2) | | 69 | 4-223-413-01 | SCREW (M1.4X3) | |
| 53 | X-3379-585-1 | CABINET (LOWER) ASSY | | 70 | 3-221-308-01 | TERMINAL BOARD (RELAY), BATTERY | |
| 54 | X-3379-447-1 | BRACKET (ROLLER) ASSY | | 71 | 4-223-585-01 | TERMINAL BOARD (+), BATTERY | |
| 56 | X-3379-392-1 | BUCKLE ASSY | | 72 | 3-221-307-01 | TERMINAL BOARD (-), BATTERY | |
| 57 | 3-338-687-21 | SCREW (M1.4X2), TAPPING | | 73 | 4-223-609-01 | KNOB (JOGGABLE) | |
| 58 | 3-221-312-01 | PACKING (DC-IN) | | 74 | 3-224-185-01 | SPACER (MD) | |
| 59 | 3-221-311-01 | PACKING (H/P) | | 75 | X-3380-356-1 | LID ASSY, BATTERY CASE | |
| 60 | 3-221-321-01 | KNOB (VOL) | | 76 | 3-221-318-01 | LEVER, DETECTION | |
| 61 | 3-221-329-01 | RING, O | | 77 | X-3379-446-1 | CABINET (INNER) ASSY | |
| 62 | 3-221-310-01 | LEVER (BOL) (B) | | 79 | 3-225-461-01 | SPACER (HP) | |
| 63 | 3-318-201-51 | SCREW (B) (1.4X4), TAPPING | | 80 | 3-224-633-01 | SHEET (BRACKET), ADHESIVE | |
| 64 | 3-326-536-11 | SCREW, TAPPING | | 81 | 3-224-858-01 | SPACER | |
| 65 | X-3379-391-1 | ARM ASSY, SWITCHING | | 82 | 3-224-719-01 | SPACER (C) | |
| 66 | 3-224-699-01 | SHEET, RADIATION | | 83 | 3-225-462-01 | SPACER (D) | |
| * 67 | A-3323-593-A | MAIN BOARD, COMPLETE | | | | | |

6-3. OPTICAL PICK-UP SECTION (CDM-3123EBA)



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

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

| Ref. No. | Part No. | Description | Remark | Ref. No. | Part No. | Description | Remark |
|----------|--------------|-------------------------|--------|-----------------|--------------|-----------------------------------|--------|
| - 101 | 4-218-825-01 | SPRING, SLED | | 110 | 4-218-827-01 | RETAINER, SHAFT | |
| 102 | 3-318-203-71 | SCREW (B1.7X5), TAPPING | | 111 | 3-686-458-03 | SCREW (P1.4X3.5), TAPPING | |
| 103 | 4-218-821-01 | COVER, GEAR | | \triangle 112 | X-4952-506-1 | OPTICAL PICK-UP (DAX-23E) | |
| 104 | 4-964-564-01 | SCREW (M1.2X1.6) | | 113 | 4-223-600-01 | RACK | |
| 105 | A-3328-628-A | SCREW (FEED) ASSY | | 114 | 3-895-823-61 | SCREW (B1.4X2.3), TAPPING | |
| 106 | 4-218-823-01 | GEAR (B) | | M901 | A-3328-627-A | MOTOR ASSY, SLED (Including gear) | |
| 107 | 4-220-645-01 | SHAFT, STANDARD | | M902 | A-3328-759-A | MOTOR ASSY, TURN TABLE (SPINDLE) | |
| 108 | 4-222-765-01 | INSULATOR | | | | | |
| 109 | 4-218-820-01 | CHASSIS | | | | | |

SECTION 7

ELECTRICAL PARTS LIST

MAIN
NOTE :

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- XX, -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
CND : Canadian
AUS : Australian
FR : French
- 11, -12, -13 :last digit of main board

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.

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

| Ref. No. | Part No. | Description | Remark | Ref. No. | Part No. | Description | Remark |
|----------|--------------|--------------------------------|-----------|----------|--------------|---------------------------|----------------|
| * | A-3323-593-A | MAIN BOARD, COMPLETE | | C409 | 1-124-584-00 | ELECT 100uF 20% | 10V |
| | | ***** | | C410 | 1-124-584-00 | ELECT 100uF 20% | 10V |
| | 3-221-307-01 | TERMINAL BOARD (-), BATTERY | | C411 | 1-164-677-11 | CERAMIC CHIP 0.033uF 10% | 16V |
| | 3-221-308-01 | TERMINAL BOARD (RELAY),BATTERY | | C412 | 1-164-156-11 | CERAMIC CHIP 0.1uF | 25V |
| | 3-221-309-01 | LEVER (VOL) (A) | | C413 | 1-162-970-11 | CERAMIC CHIP 0.01uF 10% | 25V |
| | 3-224-185-01 | SPACER (MD) | | C414 | 1-164-227-11 | CERAMIC CHIP 0.022uF 10% | 25V |
| | 4-223-413-01 | SCREW (M1.4X3) | | C415 | 1-164-156-11 | CERAMIC CHIP 0.1uF | 25V |
| | 4-223-585-01 | TERMINAL BOARD (+), BATTERY | | C416 | 1-164-156-11 | CERAMIC CHIP 0.1uF | 25V |
| | | < CAPACITOR > | | C417 | 1-110-569-21 | TANTAL. CHIP 47uF 20% | 4V |
| C102 | 1-216-864-11 | METAL CHIP 0 5% 1/16W | (-11,-12) | C418 | 1-124-635-00 | ELECT 220uF 20% | 6.3V |
| C103 | 1-162-966-11 | CERAMIC CHIP 0.0022uF 10% | 50V | C419 | 1-164-156-11 | CERAMIC CHIP 0.1uF | 25V |
| C104 | 1-162-964-11 | CERAMIC CHIP 0.001uF 10% | 50V | C420 | 1-135-201-11 | TANTALUM CHIP 10uF 20% | 4V |
| C105 | 1-109-982-11 | CERAMIC CHIP 1uF 10% | 10V | C421 | 1-110-569-21 | TANTAL. CHIP 47uF 20% | 4V |
| C154 | 1-164-156-11 | CERAMIC CHIP 0.1uF | 25V | C422 | 1-109-982-11 | CERAMIC CHIP 1uF 10% | 10V |
| C202 | 1-216-864-11 | METAL CHIP 0 5% 1/16W | (-11,-12) | C423 | 1-162-970-11 | CERAMIC CHIP 0.01uF 10% | 25V |
| C203 | 1-162-966-11 | CERAMIC CHIP 0.0022uF 10% | 50V | C424 | 1-165-112-11 | CERAMIC CHIP 0.33uF | 16V |
| C204 | 1-162-964-11 | CERAMIC CHIP 0.001uF 10% | 50V | C425 | 1-115-156-11 | CERAMIC CHIP 1uF | 10V |
| C205 | 1-109-982-11 | CERAMIC CHIP 1uF 10% | 10V | C426 | 1-109-982-11 | CERAMIC CHIP 1uF 10% | 10V |
| C254 | 1-164-156-11 | CERAMIC CHIP 0.1uF | 25V | C427 | 1-117-720-11 | CERAMIC CHIP 4.7uF | 10V |
| C300 | 1-164-505-11 | CERAMIC CHIP 2.2uF | 16V | C430 | 1-164-156-11 | CERAMIC CHIP 0.1uF | 25V |
| C304 | 1-216-864-11 | METAL CHIP 0 5% 1/16W | | C431 | 1-124-234-00 | ELECT 22uF 20% | 16V |
| C305 | 1-164-156-11 | CERAMIC CHIP 0.1uF | 25V | C432 | 1-117-720-11 | CERAMIC CHIP 4.7uF | 10V |
| C306 | 1-104-847-11 | TANTAL. CHIP 22uF 20% | 4V | C433 | 1-162-968-11 | CERAMIC CHIP 0.0047uF 10% | 50V |
| C351 | 1-115-156-11 | CERAMIC CHIP 1uF | 10V | C435 | 1-117-720-11 | CERAMIC CHIP 4.7uF | 10V |
| C352 | 1-124-261-00 | ELECT 10uF 20% | 50V | C441 | 1-115-156-11 | CERAMIC CHIP 1uF | 10V |
| C353 | 1-124-261-00 | ELECT 10uF 20% | 50V | C442 | 1-115-156-11 | CERAMIC CHIP 1uF | 10V |
| C354 | 1-128-057-11 | ELECT 330uF 20% | 6.3V | C443 | 1-125-837-11 | CERAMIC CHIP 1uF 10% | 6.3V (-12,-13) |
| C355 | 1-164-156-11 | CERAMIC CHIP 0.1uF | 25V | C444 | 1-115-467-11 | CERAMIC CHIP 0.22uF 10% | 10V |
| C400 | 1-164-156-11 | CERAMIC CHIP 0.1uF | 25V | C445 | 1-162-964-11 | CERAMIC CHIP 0.001uF 10% | 50V |
| C401 | 1-162-970-11 | CERAMIC CHIP 0.01uF 10% | 25V | C446 | 1-115-156-11 | CERAMIC CHIP 1uF | 10V |
| C402 | 1-164-505-11 | CERAMIC CHIP 2.2uF | 16V | C447 | 1-117-720-11 | CERAMIC CHIP 4.7uF | 10V |
| C403 | 1-162-968-11 | CERAMIC CHIP 0.0047uF 10% | 50V | C448 | 1-117-720-11 | CERAMIC CHIP 4.7uF | 10V (-13) |
| C404 | 1-104-913-11 | TANTAL. CHIP 10uF 20% | 16V | C451 | 1-115-156-11 | CERAMIC CHIP 1uF | 10V |
| C405 | 1-115-156-11 | CERAMIC CHIP 1uF | 10V | C452 | 1-115-156-11 | CERAMIC CHIP 1uF | 10V |
| C406 | 1-128-057-11 | ELECT 330uF 20% | 6.3V | C453 | 1-115-467-11 | CERAMIC CHIP 0.22uF 10% | 10V |
| C407 | 1-162-965-11 | CERAMIC CHIP 0.0015uF 10% | 50V | C461 | 1-107-823-11 | CERAMIC CHIP 0.47uF 10% | 16V |
| C408 | 1-162-919-11 | CERAMIC CHIP 22PF 5% | 50V | C462 | 1-162-925-11 | CERAMIC CHIP 68PF 5% | 50V |
| | | | | C500 | 1-109-982-11 | CERAMIC CHIP 1uF 10% | 10V (-11) |
| | | | | C501 | 1-164-156-11 | CERAMIC CHIP 0.1uF | 25V |
| | | | | C502 | 1-117-720-11 | CERAMIC CHIP 4.7uF | 10V |

MAIN

| Ref. No. | Part No. | Description | Remark | | | Ref. No. | Part No. | Description | Remark | | |
|---------------|--------------|------------------------------|-----------------|-----|-----|------------------|--------------|------------------------------------|----------------------|----|--------------|
| C602 | 1-115-467-11 | CERAMIC CHIP | 0.22uF | 10% | 10V | D407 | 8-719-072-70 | DIODE | MA2ZD14001S0 | | |
| C603 | 1-107-826-11 | CERAMIC CHIP | 0.1uF | 10% | 16V | D408 | 8-719-404-50 | DIODE | MA111-TX (-12) | | |
| C604 | 1-162-968-11 | CERAMIC CHIP | 0.0047uF | 10% | 50V | D409 | 8-719-976-96 | DIODE | DTZ4.7C | | |
| C605 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V | D461 | 8-719-072-70 | DIODE | MA2ZD14001S0 | | |
| C606 | 1-162-927-11 | CERAMIC CHIP | 100PF | 5% | 50V | D601 | 8-719-044-74 | DIODE | MA792WK-TX | | |
| C607 | 1-125-891-11 | CERAMIC CHIP | 0.47uF | 10% | 10V | D602 | 8-719-073-01 | DIODE | MA111-(K8).S0 | | |
| C609 | 1-162-967-11 | CERAMIC CHIP | 0.0033uF | 10% | 50V | D603 | 8-719-069-54 | DIODE | UDZS-TE17-5.1B | | |
| C611 | 1-162-917-11 | CERAMIC CHIP | 15PF | 5% | 50V | D801 | 8-719-072-70 | DIODE | MA2ZD14001S0 | | |
| C612 | 1-162-962-11 | CERAMIC CHIP | 470PF | 10% | 50V | D804 | 8-719-069-54 | DIODE | UDZS-TE17-5.1B | | |
| C613 | 1-162-962-11 | CERAMIC CHIP | 470PF | 10% | 50V | D805 | 8-719-069-54 | DIODE | UDZS-TE17-5.1B (-11) | | |
| C614 | 1-162-962-11 | CERAMIC CHIP | 470PF | 10% | 50V | < FERRITE BEAD > | | | | | |
| C615 | 1-162-962-11 | CERAMIC CHIP | 470PF | 10% | 50V | FB111 | 1-414-760-21 | FERRITE | 0uH | | |
| C619 | 1-162-927-11 | CERAMIC CHIP | 100PF | 5% | 50V | FB211 | 1-414-760-21 | FERRITE | 0uH | | |
| C620 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V | FB311 | 1-469-145-21 | FERRITE | 0uH | | |
| C621 | 1-162-927-11 | CERAMIC CHIP | 100PF | 5% | 50V | FB602 | 1-216-803-11 | METAL CHIP | 33 | 5% | 1/16W |
| C622 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V | FB603 | 1-412-979-21 | INDUCTOR | 1uH (-11) | | |
| C623 | 1-115-156-11 | CERAMIC CHIP | 1uF | | 10V | FB603 | 1-469-525-91 | INDUCTOR | 10uH (-12,-13) | | |
| C624 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V | < IC > | | | | | |
| C625 | 1-104-847-11 | TANTAL. CHIP | 22uF | 20% | 4V | IC302 | 8-759-681-65 | IC | TA2120FN(EL) | | |
| C626 | 1-104-847-11 | TANTAL. CHIP | 22uF | 20% | 4V | IC401 | 8-759-670-16 | IC | TB2119FA | | |
| C627 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V | IC402 | 8-759-594-55 | IC | TC75S57F(TE85R) | | |
| C628 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V | IC404 | 8-759-594-55 | IC | TC75S57F(TE85R) | | |
| C629 | 1-164-505-11 | CERAMIC CHIP | 2.2uF | | 16V | IC601 | 8-752-398-18 | IC | CXD3027R | | |
| C630 | 1-162-927-11 | CERAMIC CHIP | 100PF | 5% | 50V | IC602 | 8-759-538-44 | IC | KM44V4100CS-6 | | |
| C631 | 1-162-927-11 | CERAMIC CHIP | 100PF | 5% | 50V | IC801 | 8-759-649-82 | IC | TMP88CM22F-1A56 | | |
| C632 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V | < JACK > | | | | | |
| C634 | 1-126-176-11 | ELECT | 220uF | 20% | 10V | J302 | 1-778-224-31 | JACK (SMALL TYPE) (WATERPROOF) (㊦) | | | |
| C635 | 1-115-156-11 | CERAMIC CHIP | 1uF | | 10V | J401 | 1-778-153-21 | JACK,DC(POLARITY UNIFIED TYPE) | | | (DC IN 4.5V) |
| C636 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V | < COIL > | | | | | |
| C638 | 1-162-927-11 | CERAMIC CHIP | 100PF | 5% | 50V | L301 | 1-469-522-11 | INDUCTOR | 1uH | | |
| C801 | 1-165-128-11 | CERAMIC CHIP | 0.22uF | | 16V | L401 | 1-419-188-21 | INDUCTOR | 100uH | | |
| C802 | 1-165-128-11 | CERAMIC CHIP | 0.22uF | | 16V | L402 | 1-469-525-91 | INDUCTOR | 10uH | | |
| C803 | 1-165-128-11 | CERAMIC CHIP | 0.22uF | | 16V | L403 | 1-419-188-21 | INDUCTOR | 100uH | | |
| C804 | 1-115-156-11 | CERAMIC CHIP | 1uF | | 10V | L404 | 1-469-528-91 | INDUCTOR | 100uH | | |
| C805 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V | L405 | 1-469-525-91 | INDUCTOR | 10uH | | |
| C806 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V | L406 | 1-414-404-11 | INDUCTOR | 100uH | | |
| C807 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V | L407 | 1-469-525-91 | INDUCTOR | 10uH | | |
| C808 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V | L408 | 1-414-400-41 | INDUCTOR | 22uH | | |
| C810 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V | L409 | 1-414-402-11 | INDUCTOR | 47uH | | |
| C811 | 1-117-720-11 | CERAMIC CHIP | 4.7uF | | 10V | L410 | 1-414-402-11 | INDUCTOR | 47uH | | |
| C812 | 1-162-927-11 | CERAMIC CHIP | 100PF | 5% | 50V | L411 | 1-414-394-11 | INDUCTOR | 2.2uH | | |
| C814 | 1-164-505-11 | CERAMIC CHIP | 2.2uF | | 16V | L412 | 1-414-392-21 | INDUCTOR | 1uH | | |
| C841 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V | L413 | 1-469-522-11 | INDUCTOR | 1uH | | |
| < CONNECTOR > | | | | | | L601 | 1-412-002-31 | INDUCTOR | 4.7uH | | |
| CN501 | 1-573-353-11 | CONNECTOR, FFC/FPC 13P | | | | < TRANSISTOR > | | | | | |
| CN502 | 1-784-342-31 | HOUSING, CONNECTOR 2P | | | | Q401 | 8-729-052-27 | TRANSISTOR | 2SA1241-Y | | |
| CN503 | 1-784-342-21 | HOUSING, CONNECTOR 2P | | | | Q402 | 8-729-920-82 | TRANSISTOR | 2SB1188-QR | | |
| * CN801 | 1-794-641-11 | CONNECTOR, FFC/FPC (ZIF) 24P | | | | Q403 | 8-729-921-73 | TRANSISTOR | 2SD1781K-QR | | |
| < DIODE > | | | | | | Q404 | 8-729-028-26 | TRANSISTOR | 2SK1829(TE85L) | | |
| D401 | 8-719-077-01 | DIODE | CRS03(TE85L) | | | Q405 | 8-729-047-36 | TRANSISTOR | CPH3303-TL | | |
| D403 | 8-719-069-54 | DIODE | UDZS-TE17-5.1B | | | Q406 | 8-729-904-86 | TRANSISTOR | 2SB1197K-Q | | |
| D404 | 8-719-067-42 | DIODE | MA2H735-(TX).S0 | | | | | | | | |
| D405 | 8-719-072-70 | DIODE | MA2ZD14001S0 | | | | | | | | |
| D406 | 8-719-071-87 | DIODE | MA785-(TX).S0 | | | | | | | | |

| Ref. No. | Part No. | Description | Remark | | | Ref. No. | Part No. | Description | Remark | | |
|--------------|--------------|-------------|----------------------|-------|-------|----------|--------------|-------------|-------------|-------|-----------|
| Q407 | 8-729-029-14 | TRANSISTOR | DTC144EUA-T106 | | | R428 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W |
| Q408 | 8-729-231-74 | TRANSISTOR | 2SC4116-GL | | | R429 | 1-216-857-11 | METAL CHIP | 1M | 5% | 1/16W |
| Q409 | 8-729-230-63 | TRANSISTOR | 2SC4116-YG | | | R431 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W |
| Q410 | 8-729-029-13 | TRANSISTOR | DTC143ZUA-T106 (-12) | | | | | | | | (-11,-12) |
| Q410 | 8-729-427-76 | TRANSISTOR | UMZ1-TL (-13) | | | R432 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/16W |
| Q411 | 8-729-429-44 | TRANSISTOR | XP1501 | | | R434 | 1-218-903-11 | METAL CHIP | 220K | 0.50% | 1/16W |
| Q415 | 8-729-921-73 | TRANSISTOR | 2SD1781K-QR | | | R435 | 1-218-887-11 | METAL CHIP | 47K | 0.50% | 1/16W |
| Q416 | 8-729-921-73 | TRANSISTOR | 2SD1781K-QR | | | R436 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W |
| Q500 | 8-729-028-74 | TRANSISTOR | DTA114TUA-T106 | | | | | | | | (-11,-12) |
| < RESISTOR > | | | | | | R437 | 1-216-861-11 | METAL CHIP | 2.2M | 5% | 1/16W |
| | | | | | | R439 | 1-216-859-11 | RES-CHIP | 1.5M | 5% | 1/16W |
| R1 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W | R440 | 1-216-861-11 | METAL CHIP | 2.2M | 5% | 1/16W |
| R2 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W | R442 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/16W |
| R3 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W | R443 | 1-216-811-11 | METAL CHIP | 150 | 5% | 1/16W |
| R4 | 1-414-521-21 | INDUCTOR | 10uH | | | R444 | 1-216-295-11 | SHORT | 0 (-11,-12) | | |
| R5 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W | R445 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/16W |
| | | | | | | | | | | | (-11,-12) |
| R5 | 1-469-525-91 | INDUCTOR | 10uH (-13) | | | R446 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/16W |
| R101 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W | R447 | 1-216-304-11 | METAL CHIP | 3.3 | 5% | 1/10W |
| R102 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W | R448 | 1-216-298-00 | METAL CHIP | 2.2 | 5% | 1/10W |
| | | | | | | R449 | 1-216-298-00 | METAL CHIP | 2.2 | 5% | 1/10W |
| | | | | | | R450 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/16W |
| R104 | 1-218-859-11 | METAL CHIP | 3.3K | 0.50% | 1/16W | R451 | 1-218-903-11 | METAL CHIP | 220K | 0.50% | 1/16W |
| R107 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/16W | R452 | 1-218-887-11 | METAL CHIP | 47K | 0.50% | 1/16W |
| R154 | 1-216-793-11 | RES-CHIP | 4.7 | 5% | 1/16W | R453 | 1-218-887-11 | METAL CHIP | 47K | 0.50% | 1/16W |
| R201 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W | R454 | 1-218-887-11 | METAL CHIP | 47K | 0.50% | 1/16W |
| R202 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W | R455 | 1-216-839-11 | METAL CHIP | 33K | 5% | 1/16W |
| | | | | | | | | | | | (-11,-12) |
| R204 | 1-218-859-11 | METAL CHIP | 3.3K | 0.50% | 1/16W | R456 | 1-216-857-11 | METAL CHIP | 1M | 5% | 1/16W |
| R207 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/16W | R457 | 1-216-859-11 | RES-CHIP | 1.5M | 5% | 1/16W |
| R254 | 1-216-793-11 | RES-CHIP | 4.7 | 5% | 1/16W | R458 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/16W |
| R302 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W | R459 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W |
| R303 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W | | | | | | (-11,-12) |
| R320 | 1-216-296-00 | SHORT | 0 | | | R461 | 1-218-895-11 | METAL CHIP | 100K | 0.50% | 1/16W |
| R321 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W | R462 | 1-218-887-11 | METAL CHIP | 47K | 0.50% | 1/16W |
| R401 | 1-216-861-11 | METAL CHIP | 2.2M | 5% | 1/16W | R463 | 1-216-857-11 | METAL CHIP | 1M | 5% | 1/16W |
| R402 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/16W | R464 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W |
| R403 | 1-216-853-11 | METAL CHIP | 470K | 5% | 1/16W | R465 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W |
| R404 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/16W | R467 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W |
| | | | | | | | | | | | (-13) |
| R408 | 1-216-853-11 | METAL CHIP | 470K | 5% | 1/16W | R468 | 1-216-857-11 | METAL CHIP | 1M | 5% | 1/16W |
| R409 | 1-216-849-11 | METAL CHIP | 220K | 5% | 1/16W | R469 | 1-216-853-11 | METAL CHIP | 470K | 5% | 1/16W |
| R410 | 1-216-843-11 | METAL CHIP | 68K | 5% | 1/16W | R470 | 1-216-857-11 | METAL CHIP | 1M | 5% | 1/16W |
| R411 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/16W | R471 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W |
| R412 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W | R501 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W |
| R415 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/16W | | | | | | (-12,-13) |
| R416 | 1-216-857-11 | METAL CHIP | 1M | 5% | 1/16W | R502 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W |
| R417 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W | | | | | | (-12) |
| | | | | | | R603 | 1-216-851-11 | METAL CHIP | 330K | 5% | 1/16W |
| R418 | 1-218-895-11 | METAL CHIP | 100K | 0.50% | 1/16W | R604 | 1-216-857-11 | METAL CHIP | 1M | 5% | 1/16W |
| R419 | 1-218-903-11 | METAL CHIP | 220K | 0.50% | 1/16W | R605 | 1-216-827-11 | METAL CHIP | 3.3K | 5% | 1/16W |
| R420 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W | R606 | 1-216-827-11 | METAL CHIP | 3.3K | 5% | 1/16W |
| | | | | | | | | | | | (-11,-12) |
| R421 | 1-216-857-11 | METAL CHIP | 1M | 5% | 1/16W | R607 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/16W |
| R422 | 1-216-835-11 | METAL CHIP | 15K | 5% | 1/16W | R608 | 1-216-853-11 | METAL CHIP | 470K | 5% | 1/16W |
| R423 | 1-216-839-11 | METAL CHIP | 33K | 5% | 1/16W | R609 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/16W |
| R424 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/16W | R610 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W |
| R426 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/16W | | | | | | (-11,-12) |
| R427 | 1-216-815-11 | METAL CHIP | 330 | 5% | 1/16W | R611 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/16W |
| | | | | | | R612 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/16W |
| | | | | | | R613 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/16W |
| | | | | | | R614 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/16W |

MAIN

| Ref. No. | Part No. | Description | Remark | | | Ref. No. | Part No. | Description | Remark | | |
|----------|--------------|-------------|--------|-------|-----------|----------|--------------|-----------------------------------|--------|----|-----------|
| R615 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/16W | R829 | 1-216-819-11 | METAL CHIP | 680 | 5% | 1/16W |
| R616 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/16W | | | | | | (-11,-12) |
| R617 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/16W | R831 | 1-216-857-11 | METAL CHIP | 1M | 5% | 1/16W |
| R618 | 1-218-859-11 | METAL CHIP | 3.3K | 0.50% | 1/16W | R834 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/16W |
| | | | | | (-12,-13) | R841 | 1-216-849-11 | METAL CHIP | 220K | 5% | 1/16W |
| R619 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/16W | | | < VARIABLE RESISTOR > | | | |
| R621 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W | | | | | | |
| | | | | | (-11) | RV301 | 1-230-593-11 | RES, VAR, CARBON 10K/10K (VOL ▴) | | | |
| R621 | 1-216-807-11 | METAL CHIP | 68 | 5% | 1/16W | | | < SWITCH > | | | |
| | | | | | (-12,-13) | | | | | | |
| R623 | 1-216-819-11 | METAL CHIP | 680 | 5% | 1/16W | S801 | 1-762-822-11 | SWITCH, PUSH (1 KEY) (OPEN/CLOSE) | | | |
| R624 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/16W | S802 | 1-553-977-00 | SWITCH, SLIDE (AVLS) | | | |
| R625 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/16W | S804 | 1-553-977-00 | SWITCH, SLIDE (G PROTECTION) | | | |
| R626 | 1-216-819-11 | METAL CHIP | 680 | 5% | 1/16W | | | < VARISTOR > | | | |
| R627 | 1-216-819-11 | METAL CHIP | 680 | 5% | 1/16W | | | | | | |
| R628 | 1-216-819-11 | METAL CHIP | 680 | 5% | 1/16W | VDR101 | 1-801-862-11 | VARISTOR, CHIP | | | |
| R629 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/16W | VDR201 | 1-801-862-11 | VARISTOR, CHIP | | | |
| R630 | 1-216-823-11 | METAL CHIP | 1.5K | 5% | 1/16W | VDR303 | 1-801-862-11 | VARISTOR, CHIP | | | |
| | | | | | (-11) | VDR801 | 1-801-862-11 | VARISTOR, CHIP (-12,-13) | | | |
| R630 | 1-218-859-11 | METAL CHIP | 3.3K | 0.50% | 1/16W | | | < VIBRATOR > | | | |
| | | | | | (-12,-13) | | | | | | |
| R632 | 1-216-839-11 | METAL CHIP | 33K | 5% | 1/16W | X601 | 1-781-690-21 | VIBRATOR, CERAMIC (16.9MHz) | | | |
| R634 | 1-216-807-11 | METAL CHIP | 68 | 5% | 1/16W | | | ***** | | | |
| R638 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W | | | | | | |
| | | | | | (-11,-12) | | | MISCELLANEOUS | | | |
| R640 | 1-216-819-11 | METAL CHIP | 680 | 5% | 1/16W | | | ***** | | | |
| R643 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W | | | | | | |
| R644 | 1-216-819-11 | METAL CHIP | 680 | 5% | 1/16W | | | | | | |
| R645 | 1-216-819-11 | METAL CHIP | 680 | 5% | 1/16W | 4 | 1-476-209-11 | SWITCH UNIT | | | |
| R647 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/16W | △ 112 | X-4952-506-1 | OPTICAL PICK-UP (DAX-23E) | | | |
| R648 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/16W | M901 | A-3328-627-A | MOTOR ASSY, SLED (Including gear) | | | |
| R649 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/16W | M902 | A-3328-759-A | MOTOR ASSY, TURN TABLE (SPINDLE) | | | |
| R653 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W | | | ***** | | | |
| R654 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W | | | | | | |
| R655 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W | | | ACCESSORIES & PACKING MATERIALS | | | |
| | | | | | (-11,-12) | | | ***** | | | |
| R801 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/16W | | | | | | |
| R802 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/16W | | | | | | |
| R803 | 1-216-843-11 | METAL CHIP | 68K | 5% | 1/16W | | | | | | |
| R804 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W | △ | 1-251-696-11 | CONNECTING PACK, CAR (SJ17CK) | | | |
| R805 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W | △ | 1-418-262-22 | ADAPTOR, AC (AC-E455G) (AEP,FR,E) | | | |
| R807 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/16W | △ | 1-418-264-12 | ADAPTOR, AC (AC-E455A) (AUS) | | | |
| R808 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W | △ | 1-467-009-21 | ADAPTOR, AC (AC-E455D) | | | |
| R809 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/16W | | | (SJ15:US,CND/SJ17CK) | | | |
| R810 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/16W | △ | 1-473-115-11 | ADAPTOR, AC (AC-E455F) (UK) | | | |
| R811 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/16W | | | | | | |
| R812 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/16W | | | | | | |
| R813 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/16W | | | | | | |
| R814 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/16W | | | | | | |
| R820 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W | | | | | | |
| R821 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W | | | | | | |
| R823 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W | | | | | | |
| | | | | | (-11,-12) | | | | | | |
| R824 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/16W | | | | | | |
| R825 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W | | | | | | |
| | | | | | (-11,-12) | | | | | | |
| R826 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W | | | | | | |
| | | | | | (-11,-12) | | | | | | |
| R827 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W | | | | | | |
| | | | | | (-11,-12) | | | | | | |

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 | Remark |
|----------|--------------|---|--------|
| | 3-222-450-71 | MANUAL, INSTRUCTION (GERMAN)(SJ15:AEP) | |
| | 3-222-450-81 | MANUAL, INSTRUCTION (ITALIAN)(SJ15:AEP) | |
| | 3-222-450-91 | MANUAL, INSTRUCTION (FINNISH)(SJ15:AEP) | |
| | 3-222-451-11 | MANUAL, INSTRUCTION (TRADITIONAL CHINESE) (SJ15:E) | |
| | 3-222-451-21 | MANUAL, INSTRUCTION (ENGLISH) (SJ15:E) | |
| | 3-222-452-11 | MANUAL, INSTRUCTION (ENGLISH) (SJ15:US) | |
| | 3-222-453-11 | MANUAL, INSTRUCTION (ENGLISH) (SJ17CK:US) | |
| | 3-222-454-11 | MANUAL, INSTRUCTION (ENGLISH) (SJ17CK:CND) | |
| | 3-222-454-21 | MANUAL, INSTRUCTION (FRENCH) (SJ17CK:CND) | |
| * | 4-998-554-01 | TAPE (A), M (SJ17CK) | |
| * | 4-998-554-11 | TAPE (A), M (SJ17CK) | |
| * | 4-998-555-01 | TAPE (B), M (SJ17CK) | |
| | 8-916-813-97 | CORD DCC-E2455 (SJ17CK) | |
| | 8-953-284-92 | HEADPHONE MDR-W014LP...(BLUE) (SJ15:CND) | |
| | 8-953-284-93 | HEADPHONE MDR-W014LPY...(YELLOW) (SJ15) | |
| | 8-953-284-94 | RECEIVER,EAR MDR-W014LPR (SJ17CK) | |

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.

[illegible]