

# DR-BT21G

## SERVICE MANUAL

Ver. 1.1 2007.06



*US Model  
Canadian Model  
UK Model  
E Model  
Australian Model  
Chinese Model*

### SPECIFICATIONS

#### General

##### Communication System

Bluetooth Specification version 2.0

##### Output

Bluetooth Specification Power Class 2

##### Maximum communication range

Line of sight approx. 10 m (30 ft) \*<sup>1</sup>

##### Frequency band

2.4 GHz band (2.4000 GHz – 2.4835 GHz)

##### Modulation method

FHSS

##### Compatible Bluetooth Profiles\*<sup>2</sup>

A2DP (Advanced Audio Distribution Profile)

AVRCP (Audio Video Remote Control Profile)

HSP (Headset Profile)

HFP (Hands-free Profile)

##### Supported Codecs\*<sup>3</sup>

SBC\*<sup>4</sup>, MP3

##### Transmission range (A2DP)

20 - 20,000 Hz (Sampling frequency 44.1KHz)

##### Supplied accessory

AC power adaptor (1)

Operating instruction (1)

#### Headset

##### Power source

DC 3.7 V: Built-in lithium-ion rechargeable battery

##### Mass

Approx. 63 g (2.3 oz)

##### Rated power consumption

1.5 W

#### Receiver

##### Type

Open air, dynamic

##### Driver unit

30 mm dome type

##### Reproduction frequency range

14 – 24,000 Hz

#### Microphone

##### Type

Omni directional, electret condenser

##### Effective frequency range

100 – 4,000 Hz

\*<sup>1</sup> The actual range will vary depending on factors such as obstacles between devices, magnetic fields around a microwave oven, static electricity, reception sensitivity, aerial's performance, operating system, software application, etc.

\*<sup>2</sup> Bluetooth standard profiles indicate the purpose of Bluetooth communication between devices.

\*<sup>3</sup> Codec: Audio signal compression and conversion format

\*<sup>4</sup> Subband Codec

Design and specifications are subject to change without notice.

## WIRELESS STEREO HEADSET

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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.

CAUTION

Danger of explosion if battery is incorrectly replaced.  
Replace only with the same or equivalent type.

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.)



5: LEAD FREE MARK

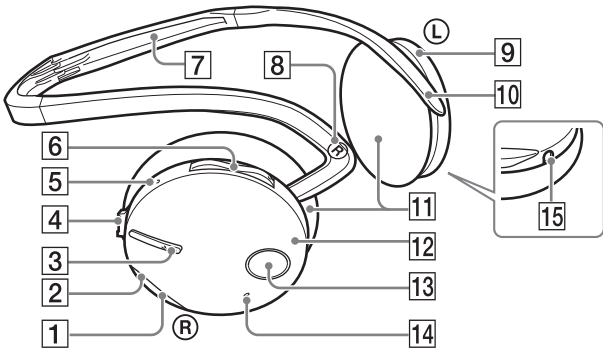
Unleaded solder has the following characteristics.

- 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.
- IC101 (CXN1450-2ABL) on MAIN board cannot be replaced individually.
- Replace it with “MAIN BOARD, COMPLETE”.

SECTION 1  
GENERAL

This section is extracted from instruction manual.

Location and Function of Parts



- 1 Indicator (blue)**  
Indicates the communication status of the unit.

**2 Indicator (red)**  
Indicates the power status of the unit.

**3 Multi function button**  
Controls various call functions. Press the button on the tactile dots.

**4 Jog switch**  
Controls various functions when listening to music.

**5 RESET button**  
Push this button when this unit does not operate properly. Pairing information is not deleted by this operation.
- 6 VOL (volume) +/- buttons**

**7 Neckband**

**8 ® (right) indication**

**9 Left unit ℒ**

**10 ℒ (left) indication**

**11 Ear pad**

**12 Right unit ®**

**13 POWER button**

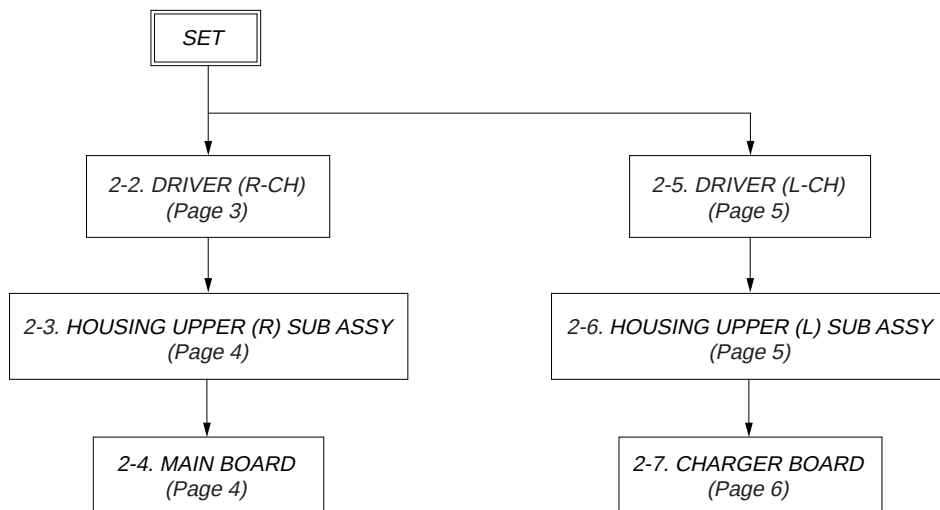
**14 Microphone**

**15 DC IN 3 V jack**
- \* This button has a tactile dot.

## SECTION 2 DISASSEMBLY

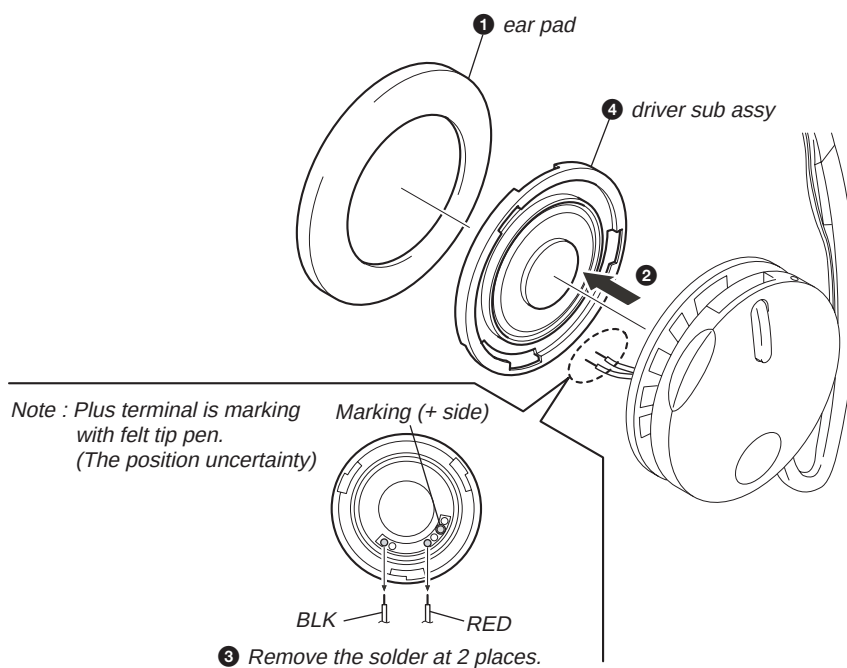
- This set can be disassembled in the order shown below.

## 2-1. DISASSEMBLY FLOW

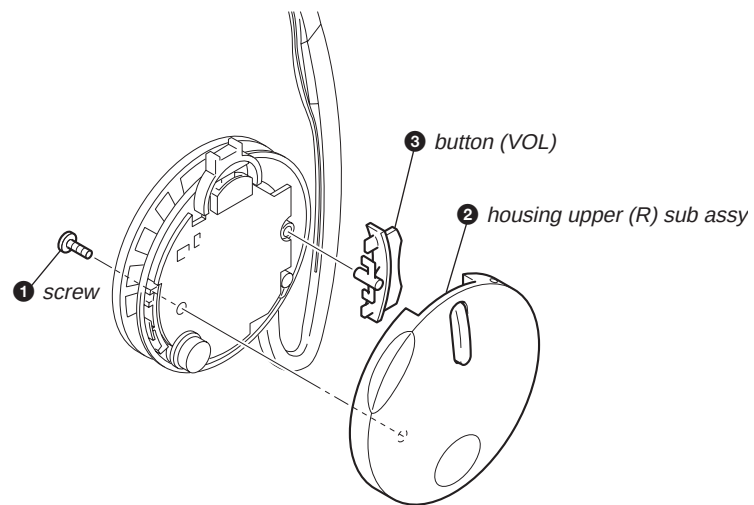


**Note:** Follow the disassembly procedure in the numerical order given.

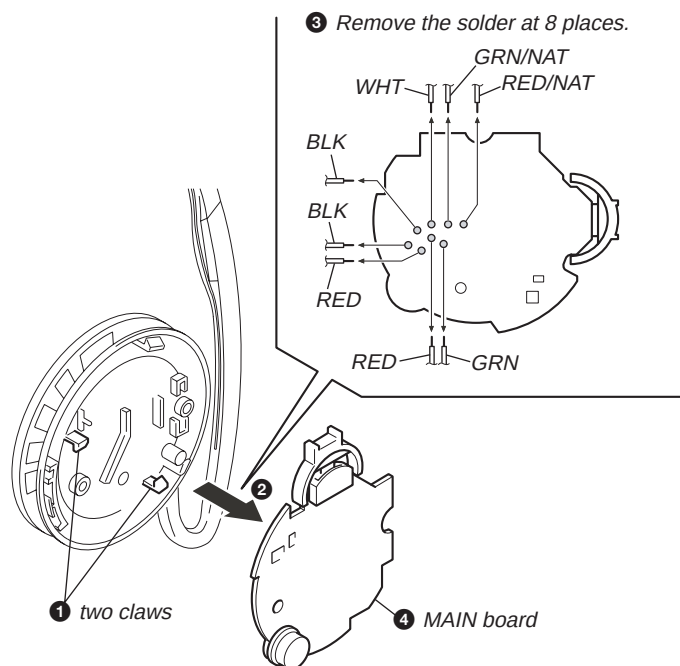
## 2-2. DRIVER (R-CH)



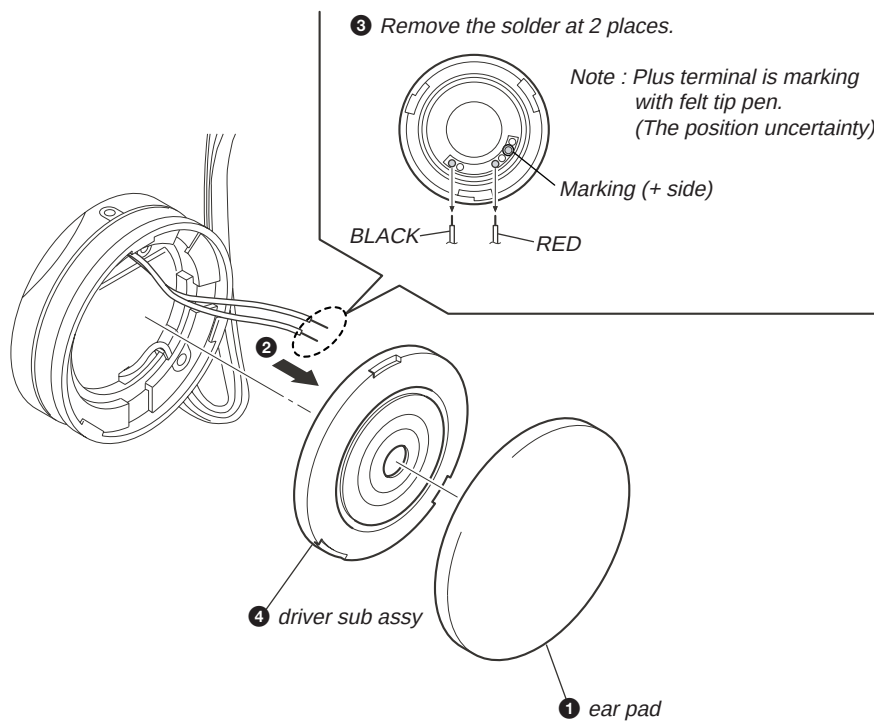
### 2-3. HOUSING UPPER (R) SUB ASSY



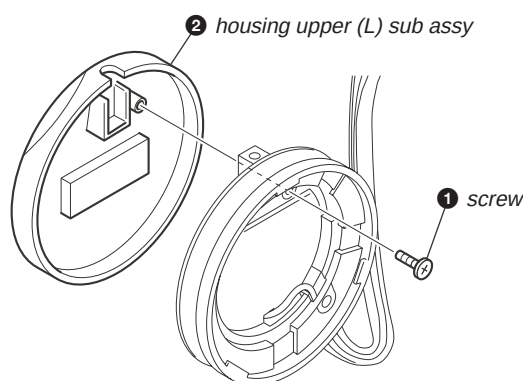
### 2-4. MAIN BOARD



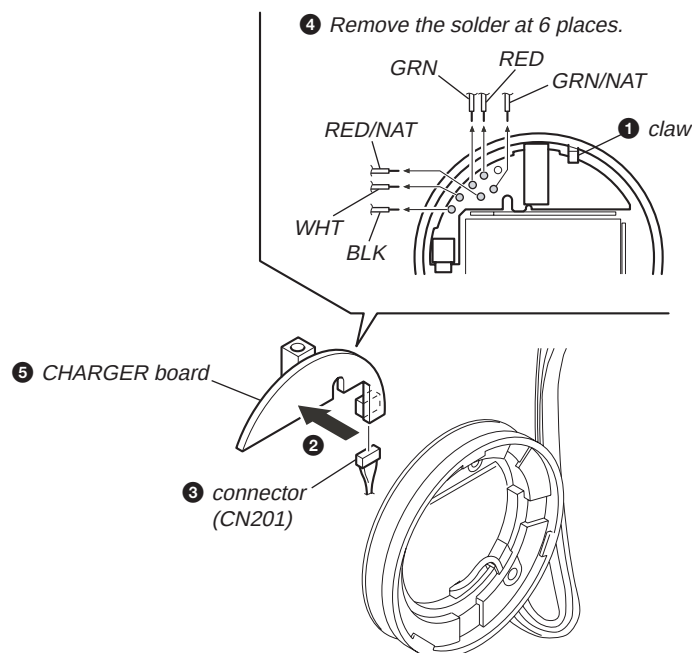
## 2-5. DRIVER (L-CH)



## 2-6. HOUSING UPPER (L) SUB ASSY



## 2-7. CHARGER BOARD



SECTION 3  
DIAGRAMS

NOTE FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.

For schematic diagrams.

- Note:**
- All capacitors are in  $\mu\text{F}$  unless otherwise noted. (p: pF)
  - 50 WV or less are not indicated except for electrolytics and tantalums.
  - All resistors are in  $\Omega$  and  $\frac{1}{4}W$  or less unless otherwise specified.
  - % : indicates tolerance.
  - : panel designation.
  - : B+ Line.
  - Power voltage are dc 3.7 V and fed with regulated dc power supply from battery terminal.
  - Voltages are dc with respect to ground under tolerances.  
no mark : STANDBY  
( ) : AC ADAPTOR IN
  - Voltages are taken with a VOM (Input impedance 10 M $\Omega$ ).  
Voltage variations may be noted due to normal production tolerances.
  - Signal path.
  - : AUDIO
- 
- IC101 (CXN1450-2ABL) on MAIN board cannot be replaced individually.  
Replace it with “MAIN BOARD, COMPLETE”.
  - The voltage of IC101 cannot be measured.

For printed wiring boards.

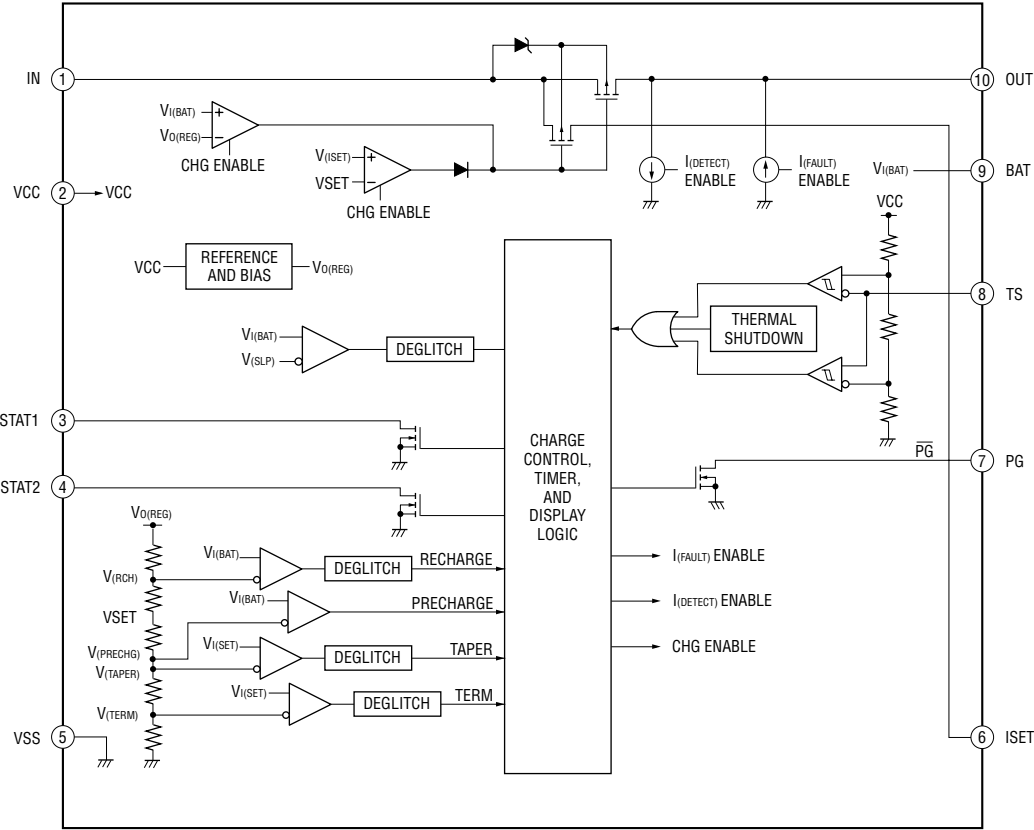
- Note:**
- : parts extracted from the component side.
  - : parts extracted from the conductor side.
  - : Pattern from the side which enables seeing.  
(The other layers' patterns are not indicated.)
- Caution:**

|                                |                                                                          |
|--------------------------------|--------------------------------------------------------------------------|
| Parts face side:<br>(Side A)   | Parts on the parts face side seen from the parts face are indicated.     |
| Pattern face side:<br>(Side B) | Parts on the pattern face side seen from the pattern face are indicated. |
- 
- MAIN board is four-layer printed board. However, the patterns of layer 2 and 3 have not been included in this diagrams.

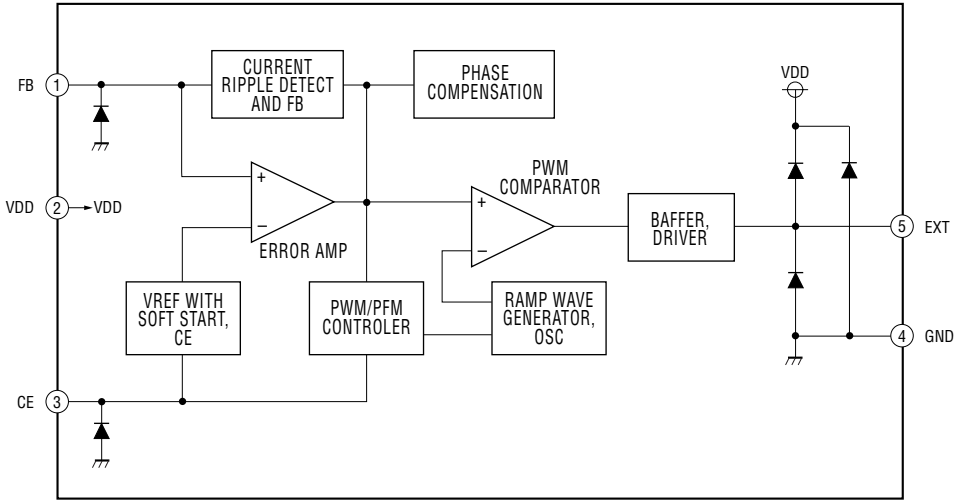
• IC Block Diagram

- CHARGER Board -

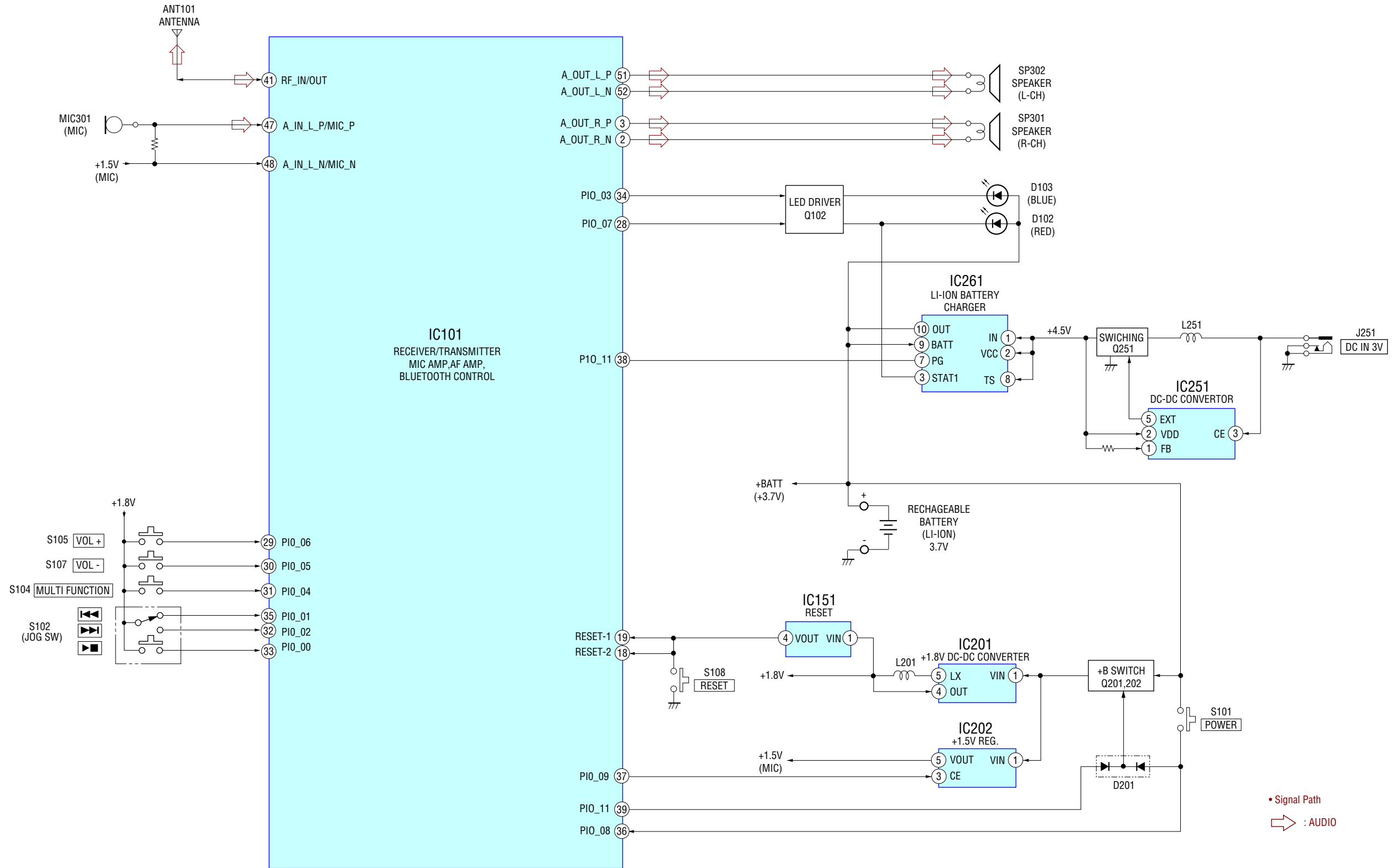
IC261 BQ24010ADRCR



IC251 XC9103D093MR



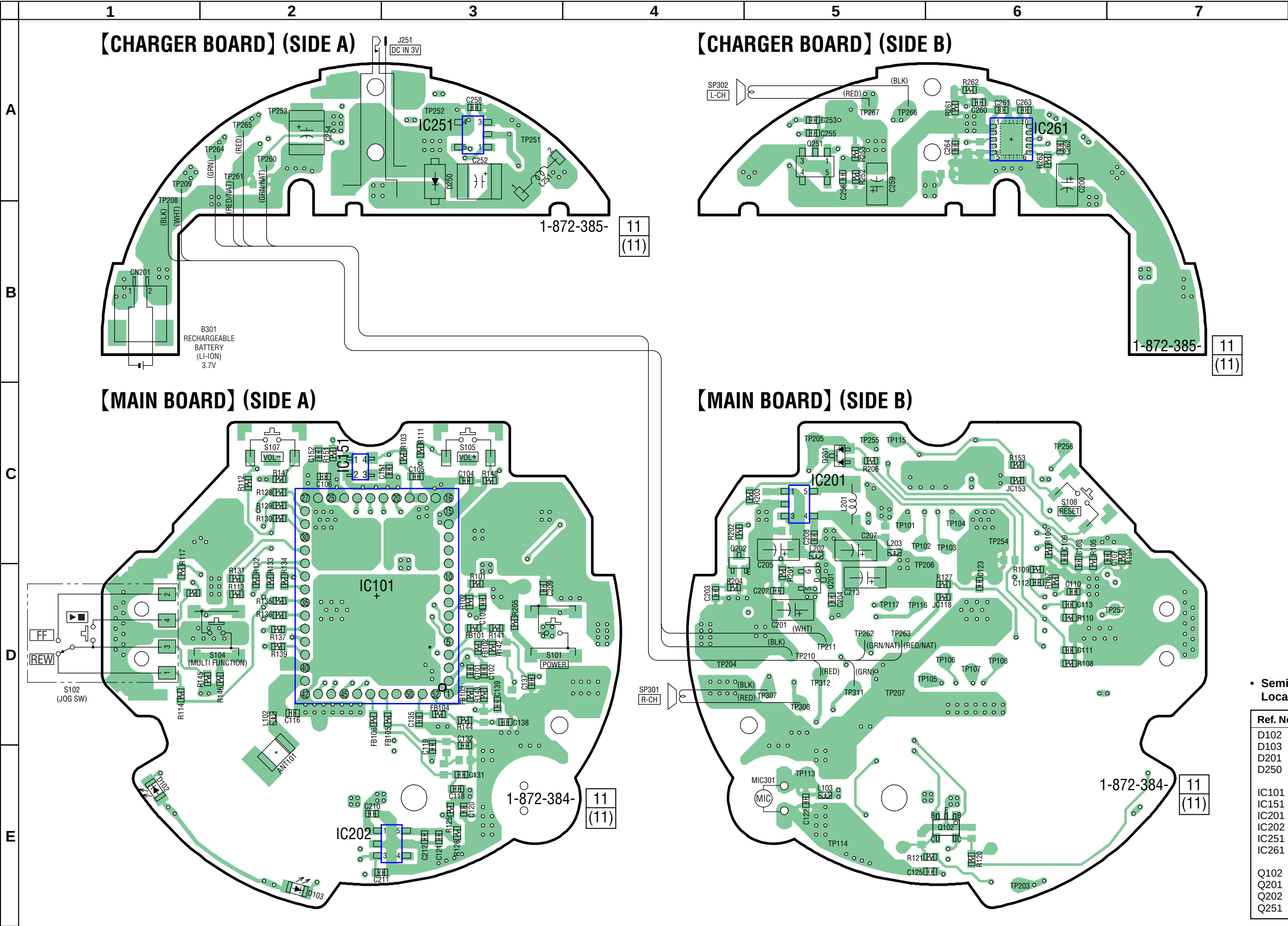
### 3-1. BLOCK DIAGRAM





3-2. PRINTED WIRING BOARDS

 : Uses unleaded solder.

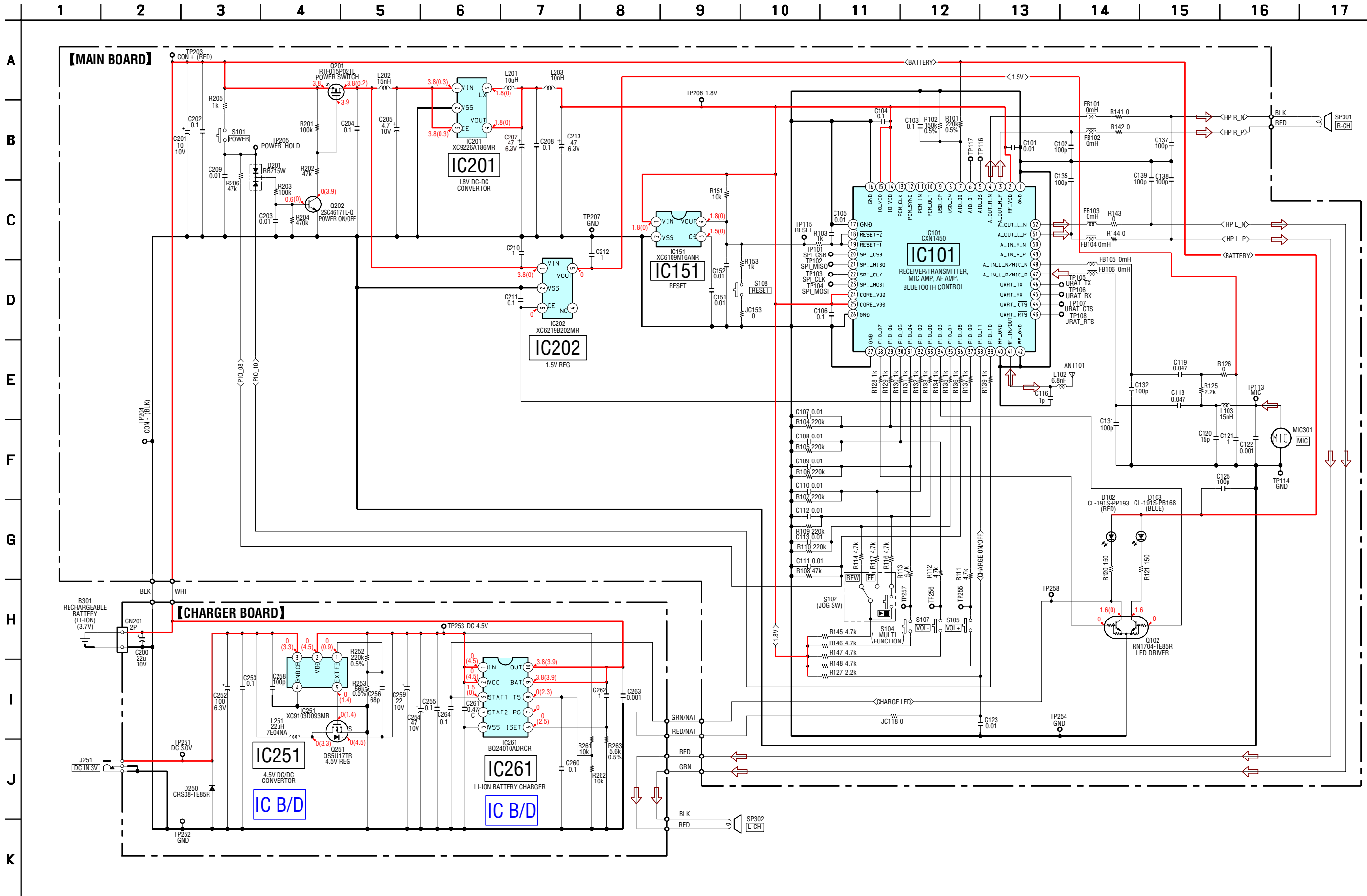


• Semiconductor Location

| Ref. No. | Location |
|----------|----------|
| D102     | E-1      |
| D103     | E-2      |
| D201     | C-5      |
| D250     | A-3      |
| IC101    | D-2      |
| IC151    | C-2      |
| IC201    | C-5      |
| IC202    | E-3      |
| IC251    | A-3      |
| IC261    | A-6      |
| Q102     | E-6      |
| Q201     | D-5      |
| Q202     | C-4      |
| Q251     | A-5      |

### 3-3. SCHEMATIC DIAGRAM

- See page 7 for IC Block Diagrams.



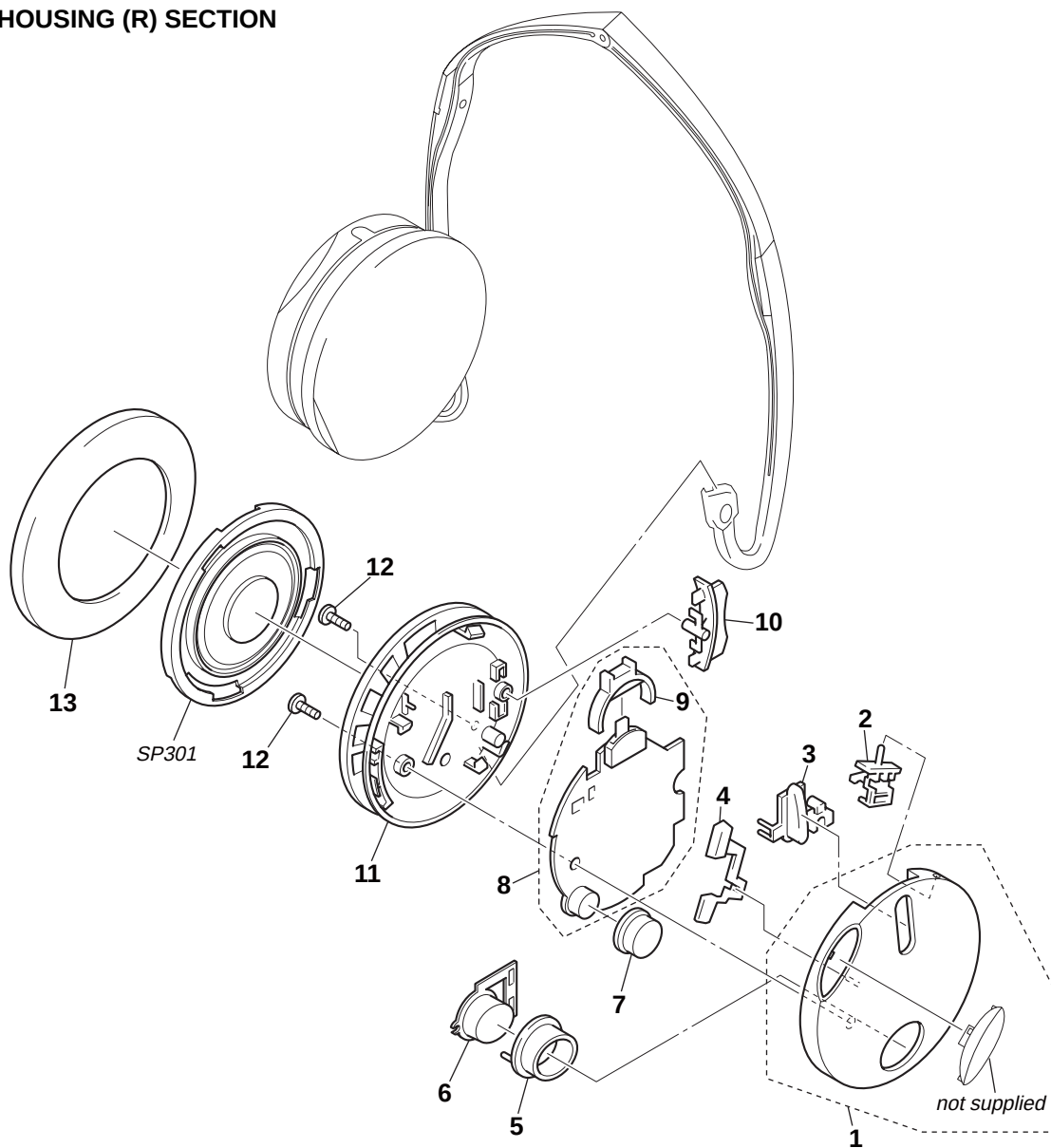
## SECTION 4

### EXPLODED VIEWS

**NOTE:**

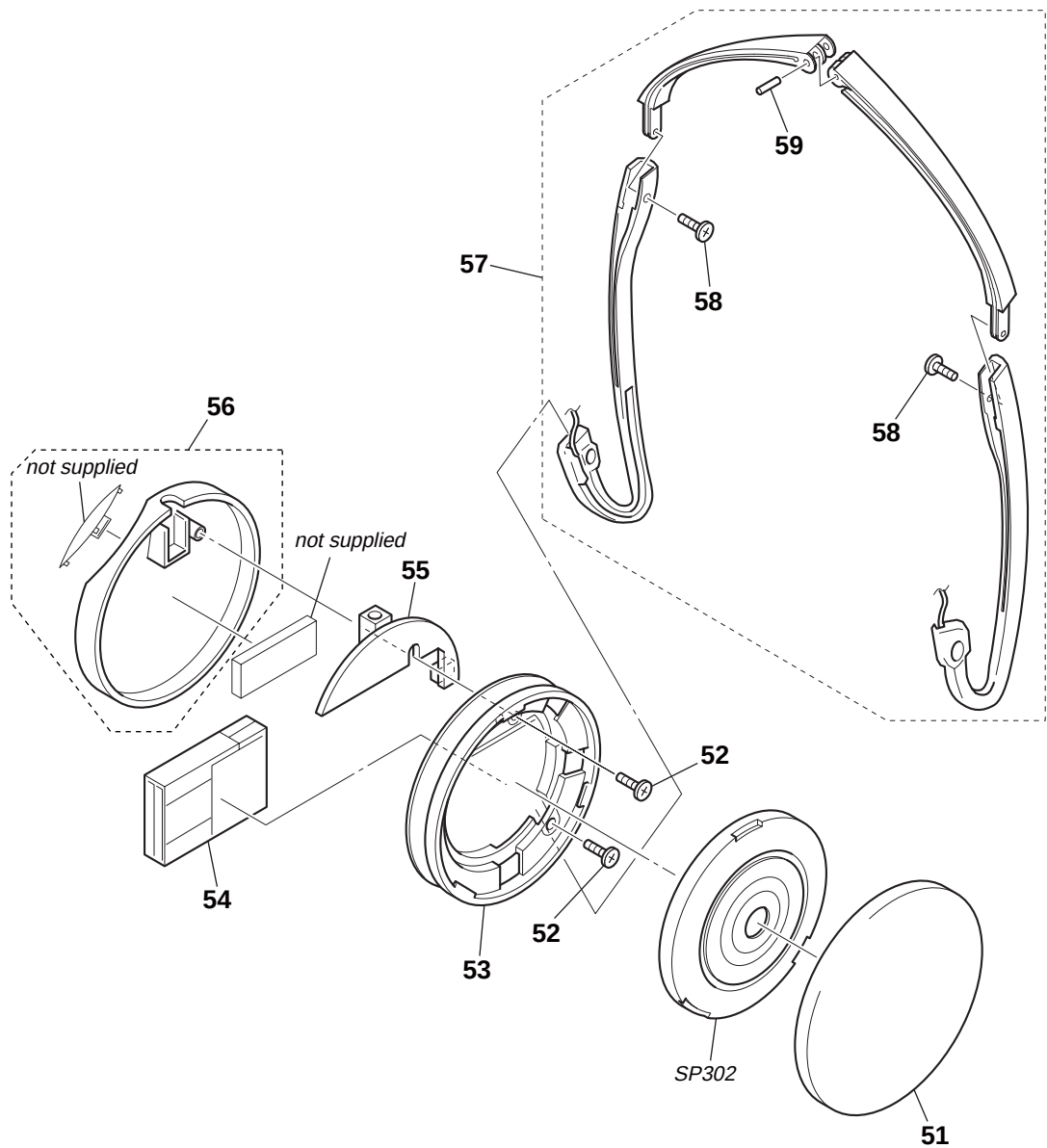
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Color indication of Appearance Parts  
Example :  
KNOB, BALANCE (WHITE) ... (RED)  
                  ↑                  ↑  
         Parts color  Cabinet's color
- Items marked "\*" are not stocked since they 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.

#### 4-1. HOUSING (R) SECTION



| Ref. No. | Part No.     | Description                        | Remarks | Ref. No. | Part No.     | Description                   | Remarks |
|----------|--------------|------------------------------------|---------|----------|--------------|-------------------------------|---------|
| 1        | X-2178-265-1 | HOUSING UPPER (R) SUB ASSY (BLACK) |         | 8        | A-1231-959-A | MAIN BOARD, COMPLETE (BLACK)  |         |
| 1        | X-2178-267-1 | HOUSING UPPER (R) SUB ASSY (WHITE) |         | 8        | A-1237-035-A | MAIN BOARD, COMPLETE (WHITE)  |         |
| 2        | 2-898-743-01 | BUTTON (RESET) (BLACK)             |         | 9        | 2-898-738-01 | KNOB (JOG) (BLACK)            |         |
| 2        | 2-898-743-11 | BUTTON (RESET) (WHITE)             |         | 9        | 2-898-738-11 | KNOB (JOG) (WHITE)            |         |
| 3        | 2-898-739-01 | BUTTON (MF) (BLACK)                |         |          |              |                               |         |
| 3        | 2-898-739-11 | BUTTON (MF) (WHITE)                |         | 10       | 2-898-740-01 | BUTTON (VOL) (BLACK)          |         |
| 4        | 2-898-745-01 | LIGHT GUIDE                        |         | 10       | 2-898-740-11 | BUTTON (VOL) (WHITE)          |         |
| 5        | 2-898-742-01 | RING                               |         | 11       | X-2176-453-1 | PLATE, FRONT (R) ASSY (BLACK) |         |
| 6        | 2-898-741-01 | BUTTON (POWER) (BLACK)             |         | 11       | X-2176-702-1 | PLATE, FRONT (R) ASSY (WHITE) |         |
| 6        | 2-898-741-11 | BUTTON (POWER) (WHITE)             |         | 12       | 3-252-825-01 | SCREW (1.7)                   |         |
|          |              |                                    |         |          |              |                               |         |
|          |              |                                    |         | 13       | 4-994-324-01 | PAD, EAR                      |         |
| 7        | 2-898-746-01 | CUSHION (MIC)                      |         | SP301    | X-2178-262-1 | DRIVER (030F041Q) SUB ASSY    |         |

4-2. HOUSING (L) SECTION



| Ref. No. | Part No.     | Description                             | Remarks | Ref. No. | Part No.     | Description                        | Remarks |
|----------|--------------|-----------------------------------------|---------|----------|--------------|------------------------------------|---------|
| 51       | 4-994-324-01 | PAD, EAR                                |         | 56       | X-2178-264-1 | HOUSING UPPER (L) SUB ASSY (BLACK) |         |
| 52       | 3-252-825-01 | SCREW (1.7)                             |         | 56       | X-2178-266-1 | HOUSING UPPER (L) SUB ASSY (WHITE) |         |
| 53       | X-2176-454-1 | PLATE, FRONT (L) ASSY (BLACK)           |         | 57       | A-1229-411-A | NECKBAND ASSY                      |         |
| 53       | X-2176-703-1 | PLATE, FRONT (L) ASSY (WHITE)           |         | 58       | 3-252-824-11 | SCREW (1.4)                        |         |
| 54       | X-2178-263-1 | BATTERY, LITHIUM (ION) STORAGE SUB ASSY |         | 59       | 7-626-305-31 | SPRING-PIN 1X8                     |         |
| 55       | A-1231-898-A | CHARGER BOARD, COMPLETE                 |         | SP302    | X-2178-262-1 | DRIVER (030F041Q) SUB ASSY         |         |

## SECTION 5

### ELECTRICAL PARTS LIST

CHARGER

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.
- Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- CAPACITORS:  
uF:  $\mu$ F

- RESISTORS  
All resistors are in ohms.  
METAL: metal-film resistor  
METAL OXIDE: Metal Oxide-film resistor  
F: nonflammable
- COILS  
uH:  $\mu$ H
- SEMICONDUCTORS  
In each case, u:  $\mu$ , for example:  
uA...,  $\mu$ A..., uPA...,  $\mu$ PA...,  
uPB...,  $\mu$ PB..., uPC...,  $\mu$ PC...,  
uPD...,  $\mu$ PD...
- Abbreviation  
CND: Canadian model    CH: Chinese model  
AUS: Australian model    TW: Taiwan model  
KR: Korean model

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

Les composants identifiés par une marque  $\Delta$  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 name.

| Ref. No. | Part No.     | Description             | Remarks |      |       | Ref. No. | Part No.     | Description                  | Remarks |        |       |
|----------|--------------|-------------------------|---------|------|-------|----------|--------------|------------------------------|---------|--------|-------|
|          | A-1231-898-A | CHARGER BOARD, COMPLETE | *****   |      |       | R263     | 1-208-905-11 | METAL CHIP                   | 5.6K    | 0.5%   | 1/16W |
|          |              | < CAPACITOR >           |         |      |       |          |              |                              |         |        |       |
| C200     | 1-165-897-11 | TANTAL. CHIP            | 22uF    | 20%  | 10V   |          | A-1231-959-A | MAIN BOARD, COMPLETE (BLACK) |         |        |       |
| C252     | 1-128-964-91 | TANTAL. CHIP            | 100uF   | 20%  | 6.3V  |          | A-1237-035-A | MAIN BOARD, COMPLETE (WHITE) |         |        |       |
| C253     | 1-125-777-11 | CERAMIC CHIP            | 0.1uF   | 10%  | 10V   |          |              | *****                        |         |        |       |
| C254     | 1-137-934-91 | TANTAL. CHIP            | 47uF    | 20%  | 10V   |          | 2-898-738-01 | KNOB (JOG) (BLACK)           |         |        |       |
| C255     | 1-125-777-11 | CERAMIC CHIP            | 0.1uF   | 10%  | 10V   |          | 2-898-738-11 | KNOB (JOG) (WHITE)           |         |        |       |
|          |              | < ANTENNA >             |         |      |       |          |              |                              |         |        |       |
| C256     | 1-164-870-11 | CERAMIC CHIP            | 68PF    | 5%   | 50V   | ANT101   | 1-754-380-11 | HELICAL ANTENNA              |         |        |       |
| C258     | 1-164-874-11 | CERAMIC CHIP            | 100PF   | 5%   | 50V   |          |              | < CAPACITOR >                |         |        |       |
| C259     | 1-165-897-11 | TANTAL. CHIP            | 22uF    | 20%  | 10V   | C101     | 1-164-943-81 | CERAMIC CHIP                 | 0.01uF  | 10%    | 16V   |
| C260     | 1-125-777-11 | CERAMIC CHIP            | 0.1uF   | 10%  | 10V   | C102     | 1-164-874-11 | CERAMIC CHIP                 | 100PF   | 5%     | 50V   |
| C261     | 1-112-324-91 | CERAMIC CHIP            | 0.47uF  | 20%  | 10V   | C103     | 1-125-777-11 | CERAMIC CHIP                 | 0.1uF   | 10%    | 10V   |
| C262     | 1-100-506-91 | CERAMIC CHIP            | 1uF     | 20%  | 6.3V  | C104     | 1-125-777-11 | CERAMIC CHIP                 | 0.1uF   | 10%    | 10V   |
| C263     | 1-164-937-11 | CERAMIC CHIP            | 0.001uF | 10%  | 50V   | C105     | 1-164-943-81 | CERAMIC CHIP                 | 0.01uF  | 10%    | 16V   |
| C264     | 1-125-777-11 | CERAMIC CHIP            | 0.1uF   | 10%  | 10V   |          |              |                              |         |        |       |
|          |              | < CONNECTOR >           |         |      |       |          |              |                              |         |        |       |
| CN201    | 1-770-619-11 | PIN, CONNECTOR 2P       |         |      |       | C106     | 1-125-777-11 | CERAMIC CHIP                 | 0.1uF   | 10%    | 10V   |
|          |              | < DIODE >               |         |      |       |          |              |                              |         |        |       |
|          |              |                         |         |      |       |          |              |                              |         |        |       |
| D250     | 6-500-453-01 | DIODE CRS08-TE85R       |         |      |       | C107     | 1-164-943-81 | CERAMIC CHIP                 | 0.01uF  | 10%    | 16V   |
|          |              | < IC >                  |         |      |       |          |              |                              |         |        |       |
|          |              |                         |         |      |       |          |              |                              |         |        |       |
| IC251    | 6-709-933-01 | IC XC9103D093MR         |         |      |       | C108     | 1-164-943-81 | CERAMIC CHIP                 | 0.01uF  | 10%    | 16V   |
| IC261    | 6-704-354-02 | IC BQ24010ADRCR         |         |      |       | C109     | 1-164-943-81 | CERAMIC CHIP                 | 0.01uF  | 10%    | 16V   |
|          |              | < JACK >                |         |      |       |          |              |                              |         |        |       |
|          |              |                         |         |      |       |          |              |                              |         |        |       |
| J251     | 1-820-573-11 | JACK, DC (DC IN 3V)     |         |      |       | C110     | 1-164-943-81 | CERAMIC CHIP                 | 0.01uF  | 10%    | 16V   |
|          |              | < COIL >                |         |      |       |          |              |                              |         |        |       |
|          |              |                         |         |      |       |          |              |                              |         |        |       |
| L251     | 1-457-422-11 | INDUCTOR                |         | 22uH |       | C111     | 1-164-943-81 | CERAMIC CHIP                 | 0.01uF  | 10%    | 16V   |
|          |              | < TRANSISTOR >          |         |      |       |          |              |                              |         |        |       |
|          |              |                         |         |      |       |          |              |                              |         |        |       |
| Q251     | 6-551-556-01 | TRANSISTOR QS5U17TR     |         |      |       | C112     | 1-164-943-81 | CERAMIC CHIP                 | 0.01uF  | 10%    | 16V   |
|          |              | < RESISTOR >            |         |      |       |          |              |                              |         |        |       |
|          |              |                         |         |      |       |          |              |                              |         |        |       |
| R252     | 1-208-943-11 | METAL CHIP              | 220K    | 0.5% | 1/16W | C113     | 1-164-943-81 | CERAMIC CHIP                 | 0.01uF  | 10%    | 16V   |
| R253     | 1-208-929-81 | METAL CHIP              | 56K     | 0.5% | 1/16W | C116     | 1-164-840-11 | CERAMIC CHIP                 | 1PF     | 0.25PF | 50V   |
| R261     | 1-218-965-11 | RES-CHIP                | 10K     | 5%   | 1/16W | C118     | 1-119-923-11 | CERAMIC CHIP                 | 0.047uF | 10%    | 10V   |
| R262     | 1-218-965-11 | RES-CHIP                | 10K     | 5%   | 1/16W |          |              |                              |         |        |       |
|          |              |                         |         |      |       |          |              |                              |         |        |       |
|          |              |                         |         |      |       |          |              |                              |         |        |       |
|          |              |                         |         |      |       |          |              |                              |         |        |       |
|          |              |                         |         |      |       |          |              |                              |         |        |       |
|          |              |                         |         |      |       |          |              |                              |         |        |       |
|          |              |                         |         |      |       |          |              |                              |         |        |       |
|          |              |                         |         |      |       |          |              |                              |         |        |       |
|          |              |                         |         |      |       |          |              |                              |         |        |       |
|          |              |                         |         |      |       |          |              |                              |         |        |       |
|          |              |                         |         |      |       |          |              |                              |         |        |       |
|          |              |                         |         |      |       |          |              |                              |         |        |       |
|          |              |                         |         |      |       |          |              |                              |         |        |       |
|          |              |                         |         |      |       |          |              |                              |         |        |       |
|          |              |                         |         |      |       |          |              |                              |         |        |       |
|          |              |                         |         |      |       |          |              |                              |         |        |       |
|          |              |                         |         |      |       |          |              |                              |         |        |       |
|          |              |                         |         |      |       |          |              |                              |         |        |       |
|          |              |                         |         |      |       |          |              |                              |         |        |       |
|          |              |                         |         |      |       |          |              |                              |         |        |       |
|          |              |                         |         |      |       |          |              |                              |         |        |       |
|          |              |                         |         |      |       |          |              |                              |         |        |       |
|          |              |                         |         |      |       |          |              |                              |         |        |       |
|          |              |                         |         |      |       |          |              |                              |         |        |       |
|          |              |                         |         |      |       |          |              |                              |         |        |       |
|          |              |                         |         |      |       |          |              |                              |         |        |       |
|          |              |                         |         |      |       |          |              |                              |         |        |       |
|          |              |                         |         |      |       |          |              |                              |         |        |       |
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MAIN

| Ref. No.            | Part No.       | Description                   | Remarks           |      |       |
|---------------------|----------------|-------------------------------|-------------------|------|-------|
| C202                | 1-125-777-11   | CERAMIC CHIP                  | 0.1uF             | 10%  | 10V   |
| C203                | 1-164-943-81   | CERAMIC CHIP                  | 0.01uF            | 10%  | 16V   |
| C204                | 1-125-777-11   | CERAMIC CHIP                  | 0.1uF             | 10%  | 10V   |
| C205                | 1-135-210-11   | TANTAL. CHIP                  | 4.7uF             | 20%  | 10V   |
| C207                | 1-100-539-91   | TANTAL. CHIP                  | 47uF              | 20%  | 6.3V  |
| C208                | 1-125-777-11   | CERAMIC CHIP                  | 0.1uF             | 10%  | 10V   |
| C209                | 1-164-943-81   | CERAMIC CHIP                  | 0.01uF            | 10%  | 16V   |
| C210                | 1-100-506-91   | CERAMIC CHIP                  | 1uF               | 20%  | 6.3V  |
| C211                | 1-125-777-11   | CERAMIC CHIP                  | 0.1uF             | 10%  | 10V   |
| C212                | 1-100-506-91   | CERAMIC CHIP                  | 1uF               | 20%  | 6.3V  |
| C213                | 1-100-539-91   | TANTAL. CHIP                  | 47uF              | 20%  | 6.3V  |
| < DIODE >           |                |                               |                   |      |       |
| D102                | 6-501-537-01   | DIODE                         | CL-191S-PP193-D-T |      |       |
| D103                | 6-501-538-01   | DIODE                         | CL-191S-PB168-D-T |      |       |
| D201                | 8-719-082-45   | DIODE                         | RB715W-TL         |      |       |
| < FERRITE BEAD >    |                |                               |                   |      |       |
| FB101               | 1-469-084-21   | FERRITE                       | 0mH               |      |       |
| FB102               | 1-469-084-21   | FERRITE                       | 0mH               |      |       |
| FB103               | 1-469-084-21   | FERRITE                       | 0mH               |      |       |
| FB104               | 1-469-084-21   | FERRITE                       | 0mH               |      |       |
| FB105               | 1-469-084-21   | FERRITE                       | 0mH               |      |       |
| FB106               | 1-469-084-21   | FERRITE                       | 0mH               |      |       |
| < IC >              |                |                               |                   |      |       |
| IC101               | (Not supplied) | IC                            | CXN1450-2ABL      |      |       |
| IC151               | 6-709-935-01   | IC                            | XC6109N16ANR      |      |       |
| IC201               | 6-709-718-01   | IC                            | XC9226A186MR      |      |       |
| IC202               | 6-708-084-01   | IC                            | XC6219B202MR      |      |       |
| < JUMPER RESISTOR > |                |                               |                   |      |       |
| JC118               | 1-218-990-11   | SHORT CHIP                    | 0                 |      |       |
| JC153               | 1-218-990-11   | SHORT CHIP                    | 0                 |      |       |
| < COIL >            |                |                               |                   |      |       |
| L102                | 1-481-261-11   | INDUCTOR                      | 6.8nH             |      |       |
| L103                | 1-414-842-21   | INDUCTOR                      | 15nH              |      |       |
| L201                | 1-481-168-11   | INDUCTOR                      | 10uH              |      |       |
| L202                | 1-414-842-21   | INDUCTOR                      | 15nH              |      |       |
| L203                | 1-414-840-21   | INDUCTOR                      | 10nH              |      |       |
| < MICROPHONE >      |                |                               |                   |      |       |
| MIC301              | 1-542-707-11   | ELECTRET CONDENSER MICROPHONE |                   |      |       |
| < TRANSISTOR >      |                |                               |                   |      |       |
| Q102                | 6-550-974-01   | TRANSISTOR                    | RN1704 (TE85R.F)  |      |       |
| Q201                | 6-551-067-01   | TRANSISTOR                    | RTF015P02TL       |      |       |
| Q202                | 8-729-927-99   | TRANSISTOR                    | 2SC4617R          |      |       |
| < RESISTOR >        |                |                               |                   |      |       |
| R101                | 1-208-943-11   | METAL CHIP                    | 220K              | 0.5% | 1/16W |
| R102                | 1-208-939-11   | METAL CHIP                    | 150K              | 0.5% | 1/16W |
| R103                | 1-218-953-11   | RES-CHIP                      | 1K                | 5%   | 1/16W |
| R104                | 1-218-981-11   | RES-CHIP                      | 220K              | 5%   | 1/16W |
| R105                | 1-218-981-11   | RES-CHIP                      | 220K              | 5%   | 1/16W |
| R106                | 1-218-981-11   | RES-CHIP                      | 220K              | 5%   | 1/16W |

| Ref. No.      | Part No.     | Description                             | Remarks |    |       |
|---------------|--------------|-----------------------------------------|---------|----|-------|
| R107          | 1-218-981-11 | RES-CHIP                                | 220K    | 5% | 1/16W |
| R108          | 1-218-973-11 | RES-CHIP                                | 47K     | 5% | 1/16W |
| R109          | 1-218-981-11 | RES-CHIP                                | 220K    | 5% | 1/16W |
| R110          | 1-218-981-11 | RES-CHIP                                | 220K    | 5% | 1/16W |
| R111          | 1-218-961-11 | RES-CHIP                                | 4.7K    | 5% | 1/16W |
| R112          | 1-218-961-11 | RES-CHIP                                | 4.7K    | 5% | 1/16W |
| R113          | 1-218-961-11 | RES-CHIP                                | 4.7K    | 5% | 1/16W |
| R114          | 1-218-961-11 | RES-CHIP                                | 4.7K    | 5% | 1/16W |
| R116          | 1-218-961-11 | RES-CHIP                                | 4.7K    | 5% | 1/16W |
| R117          | 1-218-961-11 | RES-CHIP                                | 4.7K    | 5% | 1/16W |
| R120          | 1-218-943-11 | RES-CHIP                                | 150     | 5% | 1/16W |
| R121          | 1-218-943-11 | RES-CHIP                                | 150     | 5% | 1/16W |
| R125          | 1-218-957-11 | RES-CHIP                                | 2.2K    | 5% | 1/16W |
| R126          | 1-218-990-11 | SHORT CHIP                              | 0       |    |       |
| R127          | 1-218-957-11 | RES-CHIP                                | 2.2K    | 5% | 1/16W |
| R128          | 1-218-953-11 | RES-CHIP                                | 1K      | 5% | 1/16W |
| R129          | 1-218-953-11 | RES-CHIP                                | 1K      | 5% | 1/16W |
| R130          | 1-218-953-11 | RES-CHIP                                | 1K      | 5% | 1/16W |
| R131          | 1-218-953-11 | RES-CHIP                                | 1K      | 5% | 1/16W |
| R132          | 1-218-953-11 | RES-CHIP                                | 1K      | 5% | 1/16W |
| R133          | 1-218-953-11 | RES-CHIP                                | 1K      | 5% | 1/16W |
| R134          | 1-218-953-11 | RES-CHIP                                | 1K      | 5% | 1/16W |
| R135          | 1-218-953-11 | RES-CHIP                                | 1K      | 5% | 1/16W |
| R136          | 1-218-953-11 | RES-CHIP                                | 1K      | 5% | 1/16W |
| R137          | 1-218-953-11 | RES-CHIP                                | 1K      | 5% | 1/16W |
| R139          | 1-218-953-11 | RES-CHIP                                | 1K      | 5% | 1/16W |
| R141          | 1-218-990-11 | SHORT CHIP                              | 0       |    |       |
| R142          | 1-218-990-11 | SHORT CHIP                              | 0       |    |       |
| R143          | 1-218-990-11 | SHORT CHIP                              | 0       |    |       |
| R144          | 1-218-990-11 | SHORT CHIP                              | 0       |    |       |
| R145          | 1-218-961-11 | RES-CHIP                                | 4.7K    | 5% | 1/16W |
| R146          | 1-218-961-11 | RES-CHIP                                | 4.7K    | 5% | 1/16W |
| R147          | 1-218-961-11 | RES-CHIP                                | 4.7K    | 5% | 1/16W |
| R148          | 1-218-961-11 | RES-CHIP                                | 4.7K    | 5% | 1/16W |
| R151          | 1-218-965-11 | RES-CHIP                                | 10K     | 5% | 1/16W |
| R153          | 1-218-953-11 | RES-CHIP                                | 1K      | 5% | 1/16W |
| R201          | 1-218-977-11 | RES-CHIP                                | 100K    | 5% | 1/16W |
| R202          | 1-218-973-11 | RES-CHIP                                | 47K     | 5% | 1/16W |
| R203          | 1-218-977-11 | RES-CHIP                                | 100K    | 5% | 1/16W |
| R204          | 1-218-985-11 | RES-CHIP                                | 470K    | 5% | 1/16W |
| R205          | 1-218-953-11 | RES-CHIP                                | 1K      | 5% | 1/16W |
| R206          | 1-218-973-11 | RES-CHIP                                | 47K     | 5% | 1/16W |
| < SWITCH >    |              |                                         |         |    |       |
| S101          | 1-771-844-21 | SWITCH, TACTILE (SMD) (POWER)           |         |    |       |
| S102          | 1-786-923-11 | LEVER (SLIDE TYPE) SWITCH (JOG SW)      |         |    |       |
| S104          | 1-771-844-21 | SWITCH, TACTILE (SMD (MULTI FUNCTION))  |         |    |       |
| S105          | 1-786-722-21 | SWITCH, TACTILE (VOL +)                 |         |    |       |
| S107          | 1-786-722-21 | SWITCH, TACTILE (VOL -)                 |         |    |       |
| S108          | 1-786-722-21 | SWITCH, TACTILE (RESET)                 |         |    |       |
| *****         |              |                                         |         |    |       |
| MISCELLANEOUS |              |                                         |         |    |       |
| *****         |              |                                         |         |    |       |
| 54            | X-2178-263-1 | BATTERY, LITHIUM (ION) STORAGE SUB ASSY |         |    |       |
| SP301         | X-2178-262-1 | DRIVER (030F041Q) SUB ASSY              |         |    |       |
| SP302         | X-2178-262-1 | DRIVER (030F041Q) SUB ASSY              |         |    |       |
| *****         |              |                                         |         |    |       |

- IC101 (CXN1450-2ABL) on MAIN board cannot be replaced individually.  
Replace it with "MAIN BOARD, COMPLETE".



| Ref. No. | Part No.     | Description                                           | Remarks |
|----------|--------------|-------------------------------------------------------|---------|
|          |              | ACCESSORIES<br>*****                                  |         |
| △        | 1-478-846-12 | ADAPTOR, AC (AC-ES3010K2) (US, CND, TW)               |         |
| △        | 1-478-847-11 | ADAPTOR, AC (AC-ES3010K2) (KR)                        |         |
| △        | 1-478-848-13 | ADAPTOR, AC (AC-ES3010K2) (E)                         |         |
| △        | 1-478-849-12 | ADAPTOR, AC (AC-ES3010K2) (UK)                        |         |
| △        | 1-478-850-11 | ADAPTOR, AC (AC-ES3010K2) (AUS)                       |         |
| △        | 1-478-845-11 | ADAPTOR, AC (AC-ES3010K2) (CH)                        |         |
|          | 3-095-524-11 | MANUAL, INSTRUCTION (ENGLISH) (UK)                    |         |
|          | 3-095-524-51 | MANUAL, INSTRUCTION (ENGLISH) (US)                    |         |
|          | 3-095-524-61 | MANUAL, INSTRUCTION (ENGLISH, FRENCH)<br>(CND)        |         |
|          | 3-095-524-71 | MANUAL, INSTRUCTION (ENGLISH)<br>(E, AUS, KR, CH, TW) |         |
|          | 3-095-524-81 | MANUAL, INSTRUCTION (KOREAN) (KR)                     |         |
|          | 3-095-524-91 | MANUAL, INSTRUCTION<br>(TRADITIONAL CHINESE) (TW)     |         |
|          | 3-106-351-11 | MANUAL, INSTRUCTION<br>(SIMPLIFIED CHINESE) (CH)      |         |

## 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.

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